



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding





# **CAT 4660**

Parflex® Thermoplastic & Fluoropolymer Products Hose, Tubing, Fittings & Accessories, Aug. 2014





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This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

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# Welcome to The Parflex® Division



As part of the Parker Fluid Connectors Group, the Parflex® Division is responsible for the design and manufacture of hoses and tubing to handle extreme applications. Products include thermoplastic and fluoropolymer hose and tubing, hose bundles, harnesses and accessories.

The Parflex® Division includes the Ravenna division headquarters in Ohio, and manufacturing facilities in:

- Manitowoc, WI
- Fort Worth, TX
- Houston, TX
- Randleman, NC
- Monterrey, Mexico



# Notes





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# Partner with Parflex®

## We customize our extreme hose and tubing solutions every day to meet your needs.



We specialize in designing products to meet specific needs for increased profitability and efficiency. We customize our products every day to meet your needs.

## The Parflex® Advantage

One stop shopping for high value conveyance solutions.

Thermoplastic and Fluoropolymer Hose, Tubing, Fittings and Accessories for extreme applications.

#### Hose

When compared to wire reinforced rubber hose or even metal tubing, thermoplastic hose offers a significant added value. Thermoplastic provides extreme chemical compatibility, noise-level reduction and ultraviolet and corrosion resistance, while fiber reinforcement retains flexibility — even at low temperatures. In addition, Parflex has long-length capabilities resulting in less scrap being generated during assembly....fewer connections, results in fewer potential leak points.

For fluoropolymer hose, Parflex has expanded its PTFE Hose line to include the PAGE product line, manufactured in Fort Worth, TX. PAGE products are comprised of fluoropolymer hoses with specialty braid and construction options. These hoses are designed to handle high temperatures in chemical and corrosive environments for the pharmaceutical and food and beverage markets. Specialty products like PAGE-flex® SBFTM (a hose with 1/2 the minimum bend radius of a conventional smooth bore hose) and EPDM rubber covered hoses are now available. We also design a full range of Parflex and PAGE hose fittings.

And that's just the beginning...

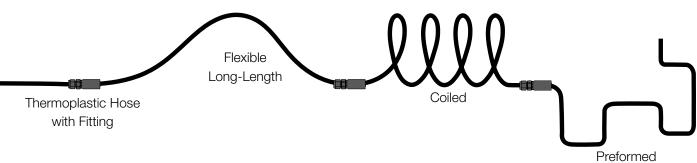
#### **Tubing**

Parflex has also expanded the tubing line to include PTFE, FEP, PFA and PVDF tubing. All are available in a smoothbore design and others are available in beading, heat shrinkable tubing and convoluted tubing. This tubing operates in high temperatures (up to 500°F/260°C) and in cryogenic applications with temperatures as low as -100°F/-75°C. Extrusions are resistant to UV radiation and moisture and offer the lowest coefficient of friction of any material available.

Additionally, ALL Parflex tubing products are made from resins and colors that are certified to be free of mercury, heavy metals and other materials that are restricted in accordance with the RoHS directive.

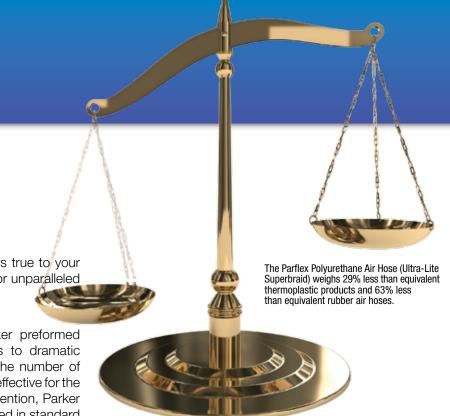
#### **Unique Preforming Capabilities**

Parflex preforming combines the precision of steel tubing with the flexibility of a hose. Preformed products profile complex shapes and long lengths, offering a working





For detailed ordering information, please consult price list or contact Parflex® Division.



rigidity that ensures that the hose stays true to your lines and a superior flexibility to allow for unparalleled alignment compensation.

In addition to installation ease, Parker preformed products increase productivity thanks to dramatic reductions in weight, leak paths and the number of components. They also are highly cost effective for the manufacturer. With excellent shape retention, Parker products can be easily coiled and packed in standard boxes, saving on shipping costs and inventory space.

#### Thermoplastic vs. Rubber Hose Weight\*

Size	Typical 100R7 Hose (Thermoplastic)	Typical 100R1 Hose (Rubber)
-4	0.052	0.170
-6	0.096	0.250
-8	0.148	0.300
-12	0.188	0.460
-16	0.269	0.660

<sup>\*</sup>Weight: pounds/foot

#### Thermoplastic vs. Rubber Hose O.D.\*

Size	Typical 100R7 Hose (Thermoplastic)	Typical 100R1 Hose (Rubber)
-4	0.47	0.53
-6	0.63	0.69
-8	0.81	0.81
-12	1.08	1.09
-16	1.32	1.41

<sup>\*</sup>Outside Diameter: inches

#### **Extremely Lightweight**

Compared to rubber equivalents, Parflex products are lighter in weight due to their fiber reinforcements. In fact, a Parflex hose can weigh more than 70% less than a comparable rubber hose assembly. As a result of this greater strength-to-weight ratio, thermoplastics are easier to work with. Operator handling becomes less fatiguing and it is quicker and easier to route hoses onto equipment.

#### **Economical Small Bore**

Prior to thermoplastics, system designers had to use hoses that were oversized for certain applications. More economical, small-bore rubber hose was simply not available in sizes smaller than 1/4" for applications with flows less than 3 gallons per minute. The use of oversized hoses resulted in substantial waste in systems; costing more, reducing response times and increasing installation times.

Today, system designers have a wealth of options to the 1/4" rubber hose. In fact, thermoplastic hose manufacturers have established full lines of hose for every application. With sizes that include 1/4", 3/16", 1/8", and 3/32", Parflex compact designs allow tighter bend radius characteristics, work well in smaller enveloped areas and give excellent fluid compatibility and higher abrasion resistance.



#### **Superior Abrasion and Fatigue Resistant**

Thermoplastic products are known for having superior abrasion resistance over their rubber equivalents. Providing significantly longer wear, they offer as much as 100 to 30,000 times the abrasion resistance. Fiber braided thermoplastic hose also maintains better fatigue resistance than a wire-reinforced hose.

Parflex offers a choice of wire or fiber braid reinforced hose products. All hoses are specially designed to withstand abrasion and the abuse of constant flexing, assuring a longer service life without breaking or weakening. This makes them ideal for over-the-sheave applications and boom trucks, as well as an excellent option for abrasive environments like construction, forestry, mining and refuse.

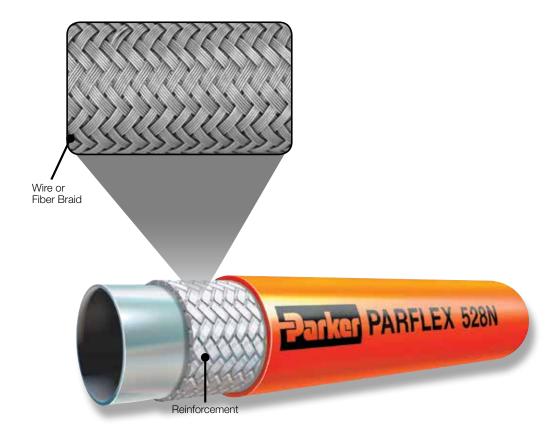
#### **Bonded Hose**

Bonded assemblies help prevent hose-to-hose abrasion at high stress levels. By bonding 2 to 10 varying-sized hoses (maximum 10" O.D.) together, bonded assemblies keep hoses from rubbing

against each other or tangling. They are particularly beneficial for long runs, such as cable tracks. Parflex hose bonding keeps hoses straight for easier and more stable routing while improving quality by maintaining continuous hoses from end to end.

#### **Convenient Harness and Bundle Integration**

Similar to bonding, Parflex harnesses and bundles ensure quick assembly, eliminate waste and improve throughput. Custom engineered to meet the exact requirements of each manufacturer, Parflex harnesses reduce labor by supplying a pre-designed bundle of tubes to fit a customer's specific application. With all the connections secured together, the preformed harness decreases overall installation time, waste and human error, while improving part consistency for a neater and cleaner design. Companies can then re-allocate excess resources to bottleneck areas – increasing their overall throughput.











#### **Cleanliness and Safety**

Parflex products are designed with safety and cleanliness in mind. The erosion resistant core maintains long-term system cleanliness with mandrel free construction to ensure zero lubricant contamination. And with fiber reinforced Parflex thermoplastic hose, there's little to no contamination due to cutting because they do not require a hose saw.

While cleanliness is inherent in thermoplastic core tubes, some Parflex hoses also maintain non-conductivity, keeping the operator safe from electric shock. Most hoses feature a UV and ozone resistant cover, which resists cracking and UV damage, thus extending the service life of the hose.

Parflex has developed specific products that focus on safety. The 944B/955B high pressure PTFE hoses handle pressures up to 5,500 psi and are available with fire sleeves to facilitate safer operator handling.









#### **Environmental Concerns**

In addition to being innovative and safe, Parflex is committed to being environmentally conscious as a company and global manufacturer and continues to develop environmental solutions for emerging markets such as compressed natural gas (CNG), oil and gas and wind power.

Within the CNG market, Parflex has designed a special CNG hose and bonded assemblies for use with CNG dispensers, transfer applications and transportation refill trailers. New fluoropolymer hoses have also been designed to target the oil and gas market. Finally, Parflex engineers have assembled comprehensive hydraulic and lubrication systems for the wind power sector. These systems include preformed, twinline, HLB lubrication hoses and hose bundles.

Existing markets will continue to change and new markets will emerge. And as they do, Parflex Engineers will be there to help you develop solutions for the new challenges and obstacles that arise. Parflex offers complete engineering support, including custom design solutions, on-site prototyping, pre-production fit-up and print creation.



#### **Environmental Sustainability**

Parflex is committed to managing our business, products and manufacturing activities in an environmentally conscious and sustainable method.

Parflex manufacturing locations are either ISO 14001 certified or ISO 14001 ready. The ISO 14001 Environmental Management System (EMS), developed by the International Standards Organization (ISO), provides a framework for companies to minimize the environmental impact of their operations, ensure compliance with applicable laws and regulations and to ensure continual improvement.

Utilizing the ISO 14001 system, Parflex has made significant progress towards reducing its carbon foot print through; reduced energy consumption, increased recycling activities and the reduction of raw material consumption through innovative product design, material selection and manufacturing technologies.

Parflex ensures consistent quality and faster implementation – all to save you time and money.





# How to Use This Catalog

#### **Table of Contents**

For quick, easy listing of topics covered by section, reference the Table of Contents on pg. 1.

#### Information by Part Number

See the Part Number Index in Section G pg. i

#### Information by Type of Part

See the Key Word Index in Section G pg. v or check the Section Table of Contents/Visual Index found on the first page of each section in the catalog.

#### Information by Fitting End Configuration

See Standard Fitting Configurations by Connection and End Code in Section E, pg. 4. This list identifies the cataloged fittings by a description of the end configuration and the fitting end code.

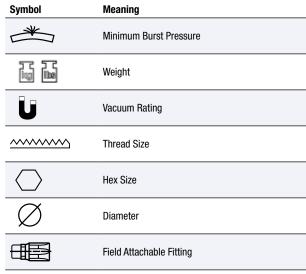
#### The Parker Part Numbering System

The part numbering system for hose, fittings and tubing is explained on pgs. 12 & 13. Specific nomenclature sheets are located in the Hose Section on pgs. A-18: A-21. In the Tubing Section, part number information is included on each product page.

#### International Symbols

An explanation of the symbols and their meaning used in the product tables can be found below.

Symbol	Meaning	Symbol
#	Part Number	*
0	Hose Inner Diameter (I.D.)	
$\bigcirc$	Hose Outer Diameter (0.D.)	U
	Working Pressure	
$\mathcal{A}_{\mathbf{k}}$	Minimum Bend Radius	$\bigcirc$
	Crimp Die	$\overline{\emptyset}$
	Crimp Fitting	





# ICON Identification Key



Agriculture



Industrial Pneumatic



Personnel Equipment



Automotive



Machine Tool



Pharmaceutical



Compressed Gas



Marine



RV & Bus



Construction



Material Handling



Semiconductor



Electrical



Medical



Sewer Hose



Fluid Handling



Military



Transportation



Food/Beverage



Mining



Utility Equipment



Forestry



Oilfield Service



Waste Refuse



Grounds/Bldg. Mtn.



Paint



Industrial



Paving & Road Maintenance



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# Selecting the Right Hose

## **Choosing Your Hose**

**Before selecting** hoses from Catalog 4660, it will be easier if you familiarize yourself with the basics of thermoplastic and fluoropolymer hoses. If you review the symbols on pg. 8 and the "How to Build A Hose Assembly" on pages 12 & 13 you will have a foundation for selecting your hose. Also, the Parflex Hose Selections Charts (located in Section A) will help pinpoint the hose you require. It will help you identify individual hoses by:

- Brief general description
- Specific size with corresponding working pressure
- Industry specification (ie. SAE)
- Core tube material
- Reinforcement/type of construction
- Cover material
- Specific page number where further detailed product information can be found

For fittings, refer to the visual indexes in Section E.







Construction standards may vary between specific thermoplastic hoses.



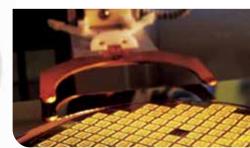
Parflex bonds hose layers to provide maximum kink resistance and flexibility through a wide range of applications. Specific braid materials, wire reinforcements, spiral reinforcements and distinguishing features are clearly called out with each hose product. Perforated and non-perforated hoses are available based on application.

WITH NOTED EXCEPTIONS, Parflex hoses are engineered and manufactured to a 4:1 burst pressure to working pressure ratio that follows SAE design standards. Never operate a hose beyond its published working pressure. [Working Pressure x 4 = Minimum Burst]



# 







#### "STAMPED"

#### Size

The appropriate inside and outside diameters and length of the hose should be determined

## **T**emperature

The ambient and/or maximum temperature of the material being conveyed

## **A**pplication

External conditions including abrasion, climate, heat, flexing, crushing, kinking, and degrees of bending

#### Media

The composition of the substance being conveyed and chemical compatibility with the hose inner core and, if applicable, the outer cover

#### Pressure

The maximum pressure of the system, including pressure spikes

#### **E**nds

The appropriate end connection and attachment method for the application

## **D**elivery

Testing, quality, packaging, and delivery requirements



# Hose, Fittings & Tubing Part Numbers

To make ordering of Parflex products easier, a part number description section has been added for hose, tubing and fitting products. For additional nomenclature information, refer to the following pages:

Hose - Section A ......pgs. A-18 : A-21
 Tubing - Section B .....See specific product page - Fluoropolymer pgs. B-52 : B-53
 Fittings - Section E .....pgs. E-2

#### **Hose Part Numbers**

Parflex has expanded the Hose section to include the PAGE Fluoropolymer product line. The PAGE product line is comprised of fluoropolymer hoses with specialty braid and construction options.

#### Thermoplastic & Fluoropolymer

Example: 520N - 8

**520N** – 8 – **Hose type** (General Hydraulic Hose)

520N - 8 - Hose inside diameter dash size (1/2")

#### Parflex PAGE Fluoropolymer

Example: 16-SCW

**16**-SCW - **Hose inside diameter** dash size (1")

16-SCW - Hose type (Seamless Convoluted with Stainless Steel Braid)

## **Hose Assembly Part Numbers**

#### Example: F540N0639080808C-30"

This assembly example reflects a 1/2" I.D., 540N hose with a female JIC 37° swivel straight fitting on the first end and a female JIC 37° - swivel - 90° elbow fitting on the other. The fittings are stainless steel and crimped (permanently attached) onto the hose. The overall length is 30".

- 1. Prefix
- F540N0639080808C-30"
- F = Crimp R = Field Attachable
- A = 54 Series Factory
- 2. Hose type F540N0639080808C-30"
- General Hydraulic Hose

- 3. Fitting 1st End
- F540N0639080808C-30"
- SAE 1/2" female JIC 37°
- swivel straight fitting
- 4. Fitting 2<sup>nd</sup> End
- F540N0639080808C-30"
- SAE 1/2" 90° female JIC 37° swivel elbow fitting

- 5. Size 1st End
- F540N0639080808C-30"
- 1/2"

- 7. Hose End Dash Size
  - F540N0639080808C-30"
  - 1/2"
- 6. Size 2<sup>nd</sup> End
- F540N0639080808C-30'
- 1/2"

- 8. Fitting Material
- F540N0639080808C-30"
- Blank = Steel (unless noted)C = Stainless
- B = Brass
- 9. Length

F540N0639080808C-30"

30" overall length

A complete nomenclature guide for Parflex PAGE hoses is located in Section A on pg. A-21.



## **Hose Fittings Part Numbers**

Parflex has expanded the Fitting Section to include the new 56 Series fittings, designed for global availability and with a smaller, compact O.D.

#### Example: 10356-8-6

This example describes a permanent crimp 1/2" Male JIC 37° Rigid hose end with a 3/8" hose end. This fitting is constructed of steel since the designated material is blank.

```
10356-8-6 - Fitting Type (1 = Permanent/Crimp)

10356-8-6 - End Configuration Code

(Male JIC 37° Rigid)

10356-8-6 - Fitting Series (Series 55)

10356-8-6 - End Size (1/2")

10356-8-6 - Hose Size (3/8")
```

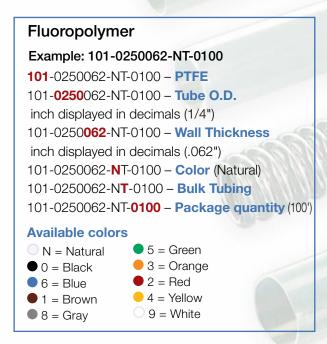
#### **Fitting Material**

- Blank = Steel (unless otherwise noted)
- B = All Brass
- C = Stainless Steel
- S = All Carbon Steel Used only with PTFE Fittings

## **Tubing Part Numbers**

Parflex has expanded the Tubing Section to include the TexLoc® Fluoropolymer product line. In addition to smooth bore tubing, TexLoc products include beading, convoluted tubing and heat shrinkable tubing. This tubing is supplied in natural and colors are available upon request. For a detailed fluoropolymer nomenclature guide, review Section B, pgs. B-52: B-53.







# Why Use Thermoplastic Tubing?



#### Benefits of Thermoplastic Tubing Materials and Applications\*

Nylon	Strength Chemical Compatibility	Instrumentation Food & Beverage
Polyethylene	Food/Water Contact Cost	Potable Water Chemical Transfer
Polyurethane	Flexibility	Pneumatics
Polypropylene	Food Contact Chemical Transfer Chlorinated Water	Robotics Machine Tools Lubrication
Vinyl	Cost Flexibility Food Contact Clarity	Pest Control Lines Semiconductor Marine Applications Weld Spatter/Spark Environments

<sup>\*</sup>Certain materials perform better in particular applications. Contact Customer Service for details.



# Why Use Fluoropolymer Tubing?



#### Benefits of Fluoropolymer Tubing Materials and Applications\*

All	Self extinguishing Nonwetting FDA & USP Class VI compliant	Pharmaceutical Solar Panels	
PTFE	Operates up to 500°F Lowest coefficient of friction	Pulp & Paper Food Processing	
FEP	Operates up to 400°F Long, continuous lengths	- Environmental Sampling Chemical Delivery	
PFA	Operates up to 500°F Long, continuous lengths High purity resins available	Chromatography Paint Equipment Instrumentation	
PVDF	Operates up to 265°F Food Contact Chemical Transfer Chlorinated Water	Heat Exchanger Ink Rollers Medical Devices	

<sup>\*</sup>Certain materials perform better in particular applications. Contact Customer Service for details.



# Mobile Hydraulics

- Construction Equipment

- Agricultural Equipment

- Refuse Haulers



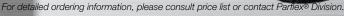
Parflex Mobile Hydraulic products meet the needs of four primary market segments: aerial lift, agriculture, construction and material handling. Why are Parflex products so popular? Namely, cleanliness, highimpulse hybrid hoses, low volumetric expansion, lightweight and long-length manufacturing, as well as, ease of service and preformed capabilities.

Within the aerial lift market, Parflex products range from the eXtreme™ Duty hose to twin and multi-bonded hoses to preformed products and crimping. For the agriculture market,

Parflex products are used for oil return lines on tractors, polyethylene transfer tubes for sprayer application and grease lines on harvesters. In the construction market, Parflex products help save you money by replacing single-line rubber hoses with non-abrasive, lighter weight bonded thermoplastics on equipment. Finally, in material handling, Parflex products answer over-the-sheave and cold/refrigerated challenges.

- General Hydraulics
   Off-Road Construction
- Earth Moving Equipment
- Lift TrucksMaterial Handling
- Lubrication lines
- Over-the-sheave applications
- Power steering
- Compressor discharge
- General hydraulics
- Hydraulic & pneumatic systems
- Commercial refrigeration
- Cold storage
- Testing labs
- Material handling
- Conveyor equipment
- Mower attachments
- Implement hydraulic power
- Diagnostics/Gaging
- PTO's
- Aerial Lift Hydraulic Tools
- Pilot Control Lines
- Turbo Drain Lines

















# Fluid Handling



Parflex Fluid Handling products are categorized by their thermoplastic and fluoropolymer (PTFE) makeup. Thermoplastic products service lubrication, carpet (power) cleaning, sewer cleaning, breathing air, media transfer, and refrigeration markets while Fluoropolymer (PTFE) products meet a wide array of needs as a result of PTFE's unique material benefits.

Fluoropolymer (PTFE) products – which include smooth bore & convoluted hose, as well as steel, stainless steel, and brass fittings – service automotive, oil & gas, power generation, packaging/chemical transfer, and pulp & paper markets and applications. All of these markets and applications greatly benefit from PTFE's chemical resistance, extreme temperature range, low friction, non-stick and flexibility. They also take advantage of PTFE's

unlimited shelf life, high purity and natural FDAcompliant and black static dissipative core tube.

The Parflex PAGE fluoropolymer hose line extends the PTFE hose selection even further with convoluted hose assemblies, PTFE encapsulated fittings and PTFE flare-thru fittings for the pharmaceutical and food and beverage market.

- Car care
- Semi-conductor (Pure air or gas transfer)
- Pharmaceutical dispensing
- Lubrication systems
  - Forklift
  - Machine tool
- Heavy equipment
- Breathing air systems
- Chemical dispensing
- Sewer cleaning
- Alternative Fuels
- Potable water delivery
- Carpet (Power) cleaning
- Coolant lines
- Agricultural spraying
- Oil & Gas transfer (Petrochemical)
- Food and Beverage
- Chemical and Gas Transfer





### **Markets**

- Industrial Equipment
- Utilities (CNG)
- Semiconductor
- Chemical
- Commercial Refrigeration
- Water Treatment
- Power Cleaning
- Power Generation
- Car Care
- Pharmaceutical
- Bio-Pharmaceutical
- Pulp & Paper
- Oil & Gas











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# **Industrial Pneumatics**



Parflex Industrial Pneumatics provide high-quality air tool, robotic and coiled thermoplastic solutions. A diverse product line includes lightweight, non-marring, flexible hose and thermoplastic or fluoropolymer tubing.

Ideal for construction, carpentry, automotive and aerospace industries, Parflex air hose assemblies are a smart investment over rubber counterparts. Parflex hoses are lighter weight, feature a no-mar, easy-clean outer cover and can be coiled or uncoiled down to -40°F without memory effect. All of which helps to improve worker safety, reduce property damage, lessen equipment repair/replacement, and, most importantly, increase productivity.

Parflex additionally offers products specifically designed for robotic applications, such as low-pressure 83FR hose and HUFR tubing. Tubing and hose bundling products for general robotics reduce installation time and promote longer life. For coiled thermoplastic solutions, look no further than Parflex tough, abrasion and kink-resistant coiled hoses.

The Parflex coiled selection includes Fast-Stor® coils and Ultra-Lite Superbraid, designed for markets like transportation, manufacturing and robotics.



- Air tools
- Robotic welding
- End-of-arm tooling
- Metal working
- Automotive maintenance
- General robotics





# Industrial Hydraulics



Parflex Industrial Hydraulics develops thermoplastic hose and fitting products – from fiber, wire and Aramid fiber reinforced products to steel, stainless steel, and brass fittings to equipment & accessories – for today's fastest growing markets.

Parflex provides the power generation market with hose, tubing and bundles for turbine control valves, fuel systems and steam monitoring and thermoplastic hose and bonded hose assemblies for car & truck wash applications. In addition, Parflex manufactures hose reels for service

garages, auto and truck dealers, construction service shops and farm equipment service centers.

Parflex also provides hydraulic product equipment, such as MiniKrimp™ machines, to rental yards and forklift service companies. Ideal for field repairs, the lightweight, economical MiniKrimp™ hand pump and air/hydraulic models can crimp a majority of Parker thermoplastic, rubber, hybrid and PTFE hoses up to 3/4" I.D.

- Injection molding
- Patient handling
- Car care
- Lubrication systems
- Molding and transfer lines for plastics
- Hydraulic or vacuum connections
- General hydraulic lines
- Metal cutting
- Metal forming
- Vertical machining centers
- Hand brakes
- Press brakes
- Bending machines
- Automotive maintenance
- Rescue tools





# Transportation 🕞 🚍 💷 🚊 📻











Parflex Transportation products have been specifically designed to meet the needs of trucks, specialty trucks (such as military, fire and terminal), buses and RVs, engines, and trailers.

An extensive line of transportation products includes a selection of air brake tubing for standard distribution and large OEMs, air brake harnesses, coils, fuel tubing and 100% pressure-tested fleet tubing for use with diesel fuel.

Steering lines on transit buses run from the back engine all the way to the front steering gear, which can require up to 40 feet of stainless steel tubing. Parflex offers a more manageable solution:

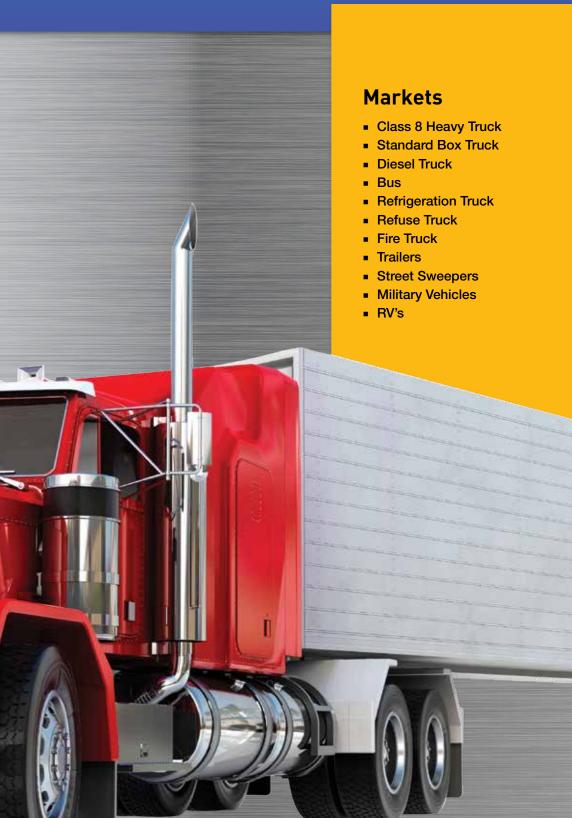
the eXtreme™ Duty Hose. Parflex also supplies products for turbo supply/drain and other coolant lines, from smooth bore to convoluted, lightweight lubricant systems, and flexible metal hose.

Parflex metal hose assemblies are built, tested, cleaned and packaged to suit customer requirements. With zero permeation, excellent chemical resistance and a full vacuum rating, Parflex metal hose handles temperatures that simply aren't compatible with rubber or other thermoplastics!

- Fuel lines
- Power steering
- Coiled air brake
- Exhaust and AC lines
- Lubrication systems
- Mini hydraulics
- Compressor discharge
- Fast response
- Compressed natural gas
- Fuel transfer

















# Life Science 🍞 🙈 🧖







Parflex has extended the selection of medical tubing capabilities through the TexMed® side of the TexLoc® business unit in Fort Worth, TX. TexMed specializes in the extrusion of precision tolerances for custom tubing and custom profiles of PTFE, ePTFE, FEP, PFA, and ETFE. Coupled with the traditional line of thermoplastic tubing in Vinyl, Polypropylene and Nylon Pure Air tubing, Parflex has a tube for almost every medical application.

With an emphasis on partnering, Parflex Engineers work closely with our customer's engineers to create tubing products with increased performance. The newest development is a medical grade FEP Heat Shrink for catheter forming. Unlike typical FEP heat shrink, which often wrinkles, twist or grows up to 20% in length when shrinking, the new heat shrink has a uniform recovery and a maximum constrained elongation up to +5%. And with a faster recovery time, medical grade FEP Heat Shrink is very responsive in reflow applications for catheter manufacturing.

Parker/TexMed Advantages include:

- Application and Material Engineering Support
- Precision tolerance tubing
- Ability to handle low volume start up projects
- Class 10,000 clean room
- Complete traceability on each lot of product
- Wide range of US Class VI compliant materials

In the value added service department, specialty operations such as laser marking, tube cutting, scoring, slitting, marking, flanging, flaring, tipping and other services are available.

## **Applications**

- Catheter construction
- Sheathing
- Forming devices
- Introducers
- Dental equipment
- Endoscopic instruments
- Tracheotomy tubes
- Blood analyzer
- Lab instruments
- General robotics
- Air and gas transport
- Packaging





For detailed ordering information, please consult price list or contact Parflex® Division.

# **Markets**

- Medical Device
- Medical Equipment
- Dental











# Food & Beverage





Parflex Hose and Tubing for the Food and Beverage market is comprised of FDA compliant thermoplastic tubing and fluoropolymer hose and tubing. Tubing is available in Polyethylene, Polypropylene, Vinyl and Fluoropolymers, consisting of PTFE, FEP, PFA & PVDF.

One of the more unique hoses, PAGE-flex® SBF™, offers a superior bend radius (1/2 the bend radius of conventional fluoropolymer braided hoses) coupled with superior kink and vacuum resistance.

Parflex PAGE high temperature food processing hoses are available in several types and sizes. All of these hoses offer a seamless tube that resists the collection of bacteria, preserve taste and are very easy to clean. For added strength and durability, each hose has an added reinforcement that withstands internal pressures, a helical wire for full vacuum capabilities, and a high-grade weather and abrasion resistant cover for longevity.

All of the Parflex PAGE Food Transfer Hoses are compliant with FDA, 3A and USDA product standards. Additional compliance for specialty hoses includes PMPO (Grade A Pasteurized Milk Ordinance) and CFIA (Canadian Food Inspection Agency).

- Transport of edible oils, syrup, milk and other food products
- Dispensing equipment
- Tank transfer of raw products
- In-plant transfer for processing





# **Markets**

- Food
- Beverage











# Notes



# Hose

Thermoplastic

Fluoropolymer































# 

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S40/S40B Heavy Wall PTFE Hose, Nominal I.D., Natural & Static Dissipative Core Tube	
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SBFW/SBFB PTFE Hose, PAGE-flex® SBF™, Natural & Static Dissipative Core Tube	
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# Parflex® Hose Visual Index

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Parker PASSELLS						
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# Parflex® Hose Visual Index (cont.)

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# **Understanding Parflex® Hoses**

Parflex® hoses are designed to handle extremes. They are used in some of the harshest applications around, such as over-the-sheave or aerial lift because they are specifically designed to handle extreme abrasion, temperatures, flexing, impulse and other factors that cause many hoses to fail.

## **Hydraulic & Pneumatic Hose Selection**

Parflex® offers several lines of hydraulic and pneumatic hoses; General Hydraulic, Specialty and Hybrid® hoses. Specialty hoses were designed to solve specific application problems. Hybrid® Hoses belong specifically to Parflex, with no exact competitor equivalents. These hoses were developed to cross typical SAE boundaries and meet specific challenges our customers were bringing to us.

The visual index and hose pages indicate which hoses are Hybrid® designs.

Review the STAMPED guide (Size, Temperature, Media, Application, Pressure, End Configuration, and Delivery Preferences) on page 11 to help narrow your search for the desired product.

## Fluoropolymer Selection

Parflex® offers two lines of Fluoropolymer Hoses; the traditional Parflex® PTFE hoses, many that meet 100R14 standards, and the PAGE hose line, comprised of specialty braid and construction options.

Hoses in PAGE product line are manufactured with materials that are compliant to the following standards:

FDA 21 CFR 177.1550 and 177.2600 USP Class VI Pharmacopoeia 3.1.9 ISO 10093, Sections 5, 6 10 and 11 USDA Standards 3A Standards

The visual index and hose pages indicate which hoses are from the PAGE product line.

### **Hose Assemblies**

To determine hose part numbers for assemblies use the following nomenclature pages:

- Parflex® Thermoplastic Hose Assembly Nomenclature pg. A-18
- Parflex® PTFE Hose Assembly Nomenclature pg. A-19
- PAGE Product Line Industrial S30 & S40 Hose Assembly Nomenclature pg. A-20
- PAGE Product Line "True-Bore" & Convoluted Hose Assembly Nomenclature pg. A-21



# How to Read the Hose Section

1		2		3		4		5		6	7
Part Number	Non I.	ninal D.	Maxi 0.		Wor	mum king sure	g Ber		Wei	ight	Permanent Fitting Series
#		)	(	$\bigcirc$			4	$\mathcal{Y}$	lbs		
	inch	mm	inch	mm	psi/73°F	bar/23°C	inch	mm	lbs./ft.	kg./mtr.	
D604	1/4	6	.51	13	3,000	20.7	2.00 51		.12	.18	43/HY

Base part number example.

**NOTE:** The primary dimensions are in black. The metric/inch equivalents appear in blue.

### 1 Part Number

Hose Series Part Number - When two part numbers are listed, the second number is the static-dissipative or non-conductive design.

## 2 Inside Diameter

A critical value along with pressure when calculating fluid flow rate and pressure drop.

#### **Outside Diameter**

A critical measurement when considering hose fittings and applications where envelope size is limited.

#### Working Pressure

Working pressure rating must meet or exceed the maximum operating pressure of the system including pressure spikes.

#### 5 Minimum Bend Radius

Minimum radius that the hose can be bent. Exceeding the bend radius can cause kinking, inner tube washout, or excessive stress on reinforcement resulting in shortened service life.

## 6 Weight

Provided where weight is a critical parameter in the design of the system.

## 7 Approved Fitting

Permanent or field attachable fitting series approved for selected hose. Products with no fitting selection are only available in factory built assemblies.



# **Hose Constructions**

## **Thermoplastic Hose Construction**

#### 1. Core

Contains Media

Materials: Nylon, Polyethylene, Polyurethane, Copolyester



Provides Resistance to Internal Pressure Materials: Fiber (Nylon, Polyester, Aramid), Steel, Stainless Steel



**Protects Reinforcement** 

Advantages: Aesthetics, Color and Marking

Materials: Polyurethane, Nylon, Synthetic Rubber, Copolyester,

Polyurethane, Proprietary Blend (PFX)



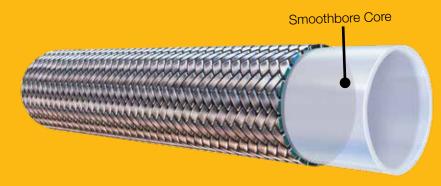
Cover

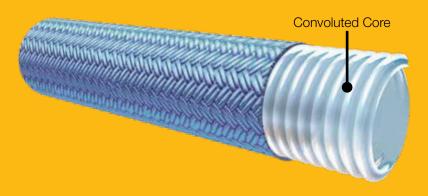
Parker PARFLEX 540N

Reinforcement

Core

### **Fluoropolymer Hose Construction**







#### 1. Core

Contains Media

Materials: PTFE Smoothbore or Convoluted, PFA

#### 2. Reinforcement

Provides Resistance to Internal Pressure Materials: Steel, Stainless Steel, Polypropylene, Nomex®, Proprietary Composite

#### 3. Cover or Protective Sleeve

Protects Reinforcement

Materials: Silicone, Polyolefin,
EPDM Rubber

Nomex® is a registered trademark of Dupont.



# Thermoplastic Hose Selection psi

Type			3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2
		Dash Size	-1.5	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24
2	Hose	Description	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
_	D6/D6R	· ·	μοι	μοι	μοι	-	μοι	3000	3000	3000	3000	3000	ры	μοι
		Hybrid® - Constant Pressure Hydraulic				3000								
	D6R	Hybrid® - Constant Pressure Hydraulic				3000		3000	3000	3000	3000	3000		
	H6	Constrant Pressure Hydraulic				3000	3000	3000	3000	3000	3000			
	HFS	Hybrid® - General Hydraulic				3000	3000	2500	2500		1500	1250		
	HFSR HFS2	Hybrid® - General Hydraulic Hybrid® - General Hydraulic				3000 5000	3000	2500 4000	2500 3500	2750	1500 2250	1250 2000		
	HFS2R	Hybrid® - General Hydraulic				5000		4000	3500	2750	2250	2000		
e.	R6	Constant Pressure Hydraulic				3000		3000	3000	3000	3000	3000		
Wire	M8	Hybrid® - High Pressure Hydraulic				3000		4000	4000	4000	3000	3000		
	HTB	Hybrid® - Compact High Pressure				7000		5500	5000	4000	4000	3500		
	HTBR	Hybrid® - Compact High Pressure				7000		5500	5000	4000	4000	3500		
	HJK	Hybrid® - Jackline				10000		3300	3000	4000	4000	3300		
	560/560R	General Hydraulic			3500	3250	3000	2750	2500	2000	1750			
	563	Constant Pressure Hydraulic			3300	3000	3000	3000	3000	2000	1730			
	590	General Hydraulic			5000	5000		4000	3500	3000	2500	2000		
	593	General Hydraulic			3000	3000		7000	0000	0000	3000	3250		
	510A	Industrial Refrigerant		2500	3000	2750	2500	2250	2000		1250	1000		
	510A 510C	General Hydraulic		2500	3250	3000	2500	2250	2250		1250	1000		
	518C	Non-conductive Hydraulic		2500	3250	3000	2500	2250	2250		1250	1000		
	518D	Non-conductive Hydraulic		3000	3250 2175	3000 2000	2500 1750	2250	2250 1500		1250			
	515H 520N /	Compact/Lightweight Hydraulic General Hydraulic /						1500						
	520N / 528N	Non-conductive Hydraulic			5000	5000	4500	4000	3500					
	526BA	Breathing Air Refill			6000	6000		6000						
	527BA	Breathing Air Refill			7000	7000								
	53DM / 538DM	Low Temperature Hydraulic			3000	3000	3000	3000	3000	3000	3000			
	540N	General Hydraulic		3000	3000	2750	2500	2250	2000		1250			
	540P	Specialty Water				2750		2250	2000		1250			
	55LT	Low Temperature Hydraulic		3000	3250	3000	2500	2250	2000		1250			
	56DH / 568DH	Diagnostic	6000	6000										
	569	High Pressure				10000								
ē	573X	Fast Response Hydraulic			3000							3000		
Fiber	575X	Fast Response Hydraulic			5000	5000		5000	5000		5000	5000		
	580N / 588N	General Hydraulic / Non-conductive Hydraulic				5000		4000	3500	2750	2250	2000		
	H580N	General Hydraulic										3000		
	1035A	Power Cleaning				1500	1200							
	1035HT	Power Cleaning			2000	1750	1500							
	83FR	General Purpose Air/Water				300		300	300		300			
	B9	General Purpose Air/Water			250	250	250	250	250	250				
	5CNG	Compressed Natural Gas			5000	5000		5000	5000		5000	5000		
	HLB	Lubrication		3000	3000									
	MSH	Marine Steering					1000	1000						
	PTH	Power Tilt				3000								
	S5N	Sewer Cleaning - Lateral Cleaning							4000					
	S6	Sewer Cleaning									2500	2500		
	S9	Sewer Cleaning									3000	3000		
	SLH	Sewer Cleaning Leader Hose							4000	4000	3000	3000		
	Duraflex	Aerial Lift - Hydraulic Tool						2250						

<sup>\*</sup>View Government & Agency Specifications for exceptions, pg. G-60

Legend

N – Nylon NP – Neoprene P – Copolyester PE – Polyethylene PFX - Proprietary Mat'l S - Silicone

R – Rubber U – Urethane F – Fiber



For detailed ordering information, please consult price list or contact Parflex® Division.

# Construction/Specifications

	211		0/-					Š
Core Tube	Reinforcement Material	Cover Material	SAE Specification	Additional Specifications	Page #	Description	Hose	Beinforcement
Р	Wire	R	100R17	MSHA IC-40/32	A-22	Hybrid® - Constant Pressure Hydraulic	D6	
 	Wire	R		MSHA/ ISO 11237	A-23	Hybrid® - Constant Pressure Hydraulic	D6R	
 P	Wire	P	100R17		A-28	Constrant Pressure Hydraulic	H6	
 P	Wire	R	100R1 / J1942	MSHA IC-40/32	A-24	Hybrid® - General Hydraulic	HFS	
 P	Wire	R	100R1	1110111110 10702	A-25	Hybrid® - General Hydraulic	HFSR	
 Р	Wire	R	100R2 / 100R16 / J1942	MSHA IC-40/32	A-26	Hybrid® - General Hydraulic	HFS2	
 P	Wire	R	100R16	MSHA IC-40/32	A-27	Hybrid® - General Hydraulic	HFS2R	
 Р	Wire	F	100R17		A-29	Constant Pressure Hydraulic	R6	
 Р	Wire	R	100R12	MSHA IC-40/32	A-32	Hybrid® - High Pressure Hydraulic	M8	
 Р	Wire	R	J1942	MSHA IC-40/32	A-30	Hybrid® - Compact High Pressure	НТВ	
 Р	Wire	R		MSHA IC-40/32	A-31	Hybrid® - Compact High Pressure	HTBR	
 Р	Wire	R	-	IJ-100/MSHA	A-33	Hybrid® - Jackline	HJK	
 Р	Wire	U	100R1	MSHA IC-40/32 / DNV	A-34	General Hydraulic	560/560R	
 P	Wire	U	100R17	MSHA IC-40/32	A-35	Constant Pressure Hydraulic	563	
 P	Wire	U	100R2 / 100R16	DNV/ABS*	A-36	General Hydraulic	590	
 P/N	Wire	U	100R2	MSHA IC-40/32/ABS	A-37	General Hydraulic	593	
 PFX	Fiber	U	100R7	MSHA IC-40/32*	A-38	Industrial Refrigerant	510A	
 Р	Fiber	PFX	100R7	MSHA IC-40/32*/DNV	A-39	General Hydraulic	510C	
  Р	Fiber	PFX	100R7	DNV	A-40	Non-conductive Hydraulic	518C	
 P	Fiber	PFX	100R7	DNV	A-40 A-41	Non-conductive Hydraulic	518D	
 P	Fiber	U	10007	MSHA IC-40/32	A-41 A-42	Compact/Lightweight Hydraulic	516D 515H	
 			•	MSHA IC-40/32 /		General Hydraulic /	520N/	
N	Fiber	U	100R8	DNV*	A-43	Non-conductive Hydraulic	528N	
N	Fiber	U	-	CGA / NFPA 1901	A-44	Breathing Air Refill	526BA	
N	Fiber	U	-	CGA / NFPA 1901	A-45	Breathing Air Refill	527BA	
Р	Fiber	Р	100R18		A-46	Low Temperature Hydraulic	53DM / 538DM	
N	Fiber	U	100R7	MSHA IC-40/32 / DNV	A-47	General Hydraulic	540N	
 PE	Fiber	U	100R7	FDA	A-48	Specialty Water	540P	
 Р	Fiber	Р	100R7		A-49	Low Temperature Hydraulic	55LT	
 N	Fiber	U	-	MSHA IC-40/32*	A-50	Diagnostic	56DH / 568DH	
 N	Fiber	U	-	IJ-100	A-51	High Pressure	569	
 N	Fiber	U	-	MSHA IC-40/32 / DNV*	A-52	Fast Response Hydraulic	573X	
 N	Fiber	U	-	MSHA IC-40/32 / DNV	A-53	Fast Response Hydraulic	575X	
 N	Fiber	U	100R8	MSHA IC-40/32 / DNV*	A-54	General Hydraulic / Non-conductive	580N / 588N	
 N	Fiber	U	100R8	DNV	A-54	General Hydraulic	H580N	
 PFX	Fiber	U	-	5111	A-56	Power Cleaning	1035A	
 N	Fiber	U			A-57	Power Cleaning	1035AT	
 U	Fiber	U	-	MSHA IC-40/32	A-55	General Purpose Air/Water	83FR	
 U	Fiber	U			A-58	General Purpose Air/Water	B9	
 N	Fiber	U	-	ANSI IAS NGV4.2-CSA 12.52 / ECE R110*	A-59	Compressed Natural Gas	CNG	
 Р	Fiber	U	_	MSHA IC-40/32	A-60	Lubrication	HLB	
 P	Fiber	U		WOTA 10-40/32	A-61	Marine Steering	MSH	
 	Fiber / SS Wire				A-62	Power Tilt	PTH	
 N		U	•	Wastes WPPOF 1000				
 P	Fiber	U		Wastec WRP05-1996	A-63	Sewer Cleaning - Lateral Cleaning	S5N Se	
 P	Fiber	U	-	Waster WRP05-1996	A-64	Sewer Cleaning	\$6	
 P	Fiber	U		Wastec WRP05-1996	A-65	Sewer Cleaning	S9	
 P N	Wire Fiber	R U	- 100R7		A-66 A-67	Sewer Cleaning Leader Hose  Aerial Lift - Hydraulic Tool	SLH Duraflex - 548N	



A-11

# Fluoropolymer Hose Selection psi

<b>!</b>		PSI Fluoropolymer Hose Working Pressures														
m						No	minal Si	zes								
Keinforcement Type		Fractional Size	1/8	3/16 15/64	1/4	5/16	13/32 7/16	1/2	5/8	7/8 29/32	1-1/8	1/8	1/4	3/8	1/2	5/8
He He		Dash Size	-3	-4	-5	-6	-8	-10	-12	-16	-20	-3	-4	-6	-8	-10
			psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi
	919	PTFE Hose	3000	3000	3000	2500	2000	1500	1200	1000	625					
	919B	PTFE Hose with static-dissipative core		3000	3000	2500	2000		1000							
	919J	Silicone Covered PTFE Hose		3000	3000	2500	2000	1500	1200	1000						
	919U 929	High Abrasion Resistance PTFE Hose Heavy Wall PTFE Hose		3000		2500 2500	2000		1200	1000						
		Heavy Wall PTFE Hose with static-							1000	1050						
	929B	dissipative core Silicone Covered PTFE Hose with static-		3000		2500	2000		1200	1250						
	929BJ	dissipative core		3000		2500	2000		1200	1250						
	939	Convoluted PTFE Hose												1500	1350	1000
	939B	Convoluted PTFE Hose with static- dissipative core												1500	1350	1000
	943B	High Pressure PTFE Hose with static- dissipative core				3000	3000	3000	3000	3000						
	944B	High Pressure PTFE Hose with static- dissipative core		4500		4500	4500	4500	4500	4000						
	950B	High Pressure PTFE Hose with static- dissipative core		4000		4000	4000	4000	4000	4000						
Wire	955B	High Pressure PTFE Hose with static-		5500		5500	5500	5500	5500	5500						
⋛	S30	dissipative core PAGE Ind. PTFE Hose		3000	3000	2500	2000	1750	1500	1000						
	S30B	PAGE Ind. PTFE Hose with static-		3000	3000	2500	2000	1750	1500	1000						
	S40	dissipative core			3000		2000									
		PAGE Ind. Heavy Wall PTFE Hose PAGE Ind. Heavy Wall PTFE Hose with		3000		2500		1750	1500	1000						
	S40B	static-dissipative core		3000	3000	2500	2000	1750	1500	1000						
	STW Z-STW*	PAGE Heavy Wall PTFE Hose *Double Braid										3000	3000	2000	1750	
	STB Z-STB*	PAGE Heavy Wall PTFE Hose with static- dissipative core *Double Braid										3000	3000	2000	1750	
	SCW	PAGE Convoluted PTFE Hose											1500	1500	1500	
	SCB	PAGE Convoluted PTFE Hose with static- dissipative core											1500	1500	1500	
	SCWV	PAGE Heavy Wall Convoluted PTFE Hose													1500	
	SCBV	PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core													1500	
	SCWV-FS	PAGE Flare-Seal® PTFE Hose													500	
	SCBV-FS	PAGE Flare-Seal® PTFE Hose with													500	
	PCW	static-dissipative core PAGE Convoluted PTFE Hose, PP Braid											350	350	300	
	PCB	PAGE Convoluted PTFE Hose with static- dissipative core, PP Braid											350	350	300	
<u>_</u>	PCWV	PAGE Heavy Wall Convoluted PTFE Hose,													300	
Fiber	PCBV	PAGE Heavy Wall Convoluted PTFE Hose													300	
	PCWV-FS	with static-dissipative core, PP Braid PAGE Flare-Seal® PTFE Hose, PP Braid													300	
	PCBV-FS	PAGE Flare-Seal® PTFE Hose with													300	
		static-dissipative core, PP Braid														
	RCTW	PAGE Rubber Covered EPDM PAGE Rubber Covered EPDM with static-													500	
Other Other	RCTB	dissipative core													500	
ğ	SBFW	PAGE Page-Flex® SBF™												300	300	
	SBFB	PAGE Page-Flex® SBF™ with static- dissipative core												300	300	

<sup>\*</sup>Z indicates double braid.

Legend

PTFE - Polytetrafluoroethylene

PTFE-S - Polytetrafluoroethylene, Static Dissipative

FEP - Fluorinated Ethylene Propylene

PFA - Perfluoroalkoxy



# **Construction/Specifications**

					- 10	Ji i iul	, opoly		nstruction an	а орос	mouti			nent
3/4	1	1 1/4	1 1/2	2	2-1/2	3	4					Fractional Size		Reinforcement Type
-12 psi	-16 psi	-20 psi	-24 psi	-32 psi	-40 psi	-48 psi	-64 psi	Core Tube	Reinforcement Material	Cover Material	Page #	Dash Size		Rein
<b>.</b>	P	P	p.v.	p	P	P	P	PTFE	SS Wire	_	A-65	PTFE Hose	919	
								PTFE-S	SS Wire	_	A-65	PTFE Hose with static-dissipative core	919B	
								PTFE	SS Wire	S	A-66	Silicone Covered PTFE Hose	919J	
								PTFE	SS Wire	U	A-67	High Abrasion Resistance PTFE Hose	919U	
								PTFE	SS Wire	_	A-68	Heavy Wall PTFE Hose	929	
								PTFE-S	SS Wire	_	A-68	Heavy Wall PTFE Hose with static- dissipative core	929B	
								PTFE-S	SS Wire	S	A-69	Silicone Covered PTFE Hose with static- dissipative core	929BJ	
1100	1000	1000	750	250				PTFE	SS Wire	_	A-70	Convoluted PTFE Hose	939	
1100	1000	1000	1000	1000				PTFE-S	SS Wire	_	A-70	Convoluted PTFE Hose with static- dissipative core	939B	
								PTFE-S	SS Wire	_	A-71	High Pressure PTFE Hose with static- dissipative core	943B	
								PTFE-S	SS Wire	_	A-72	High Pressure PTFE Hose with static- dissipative core	944B	
								PTFE-S	SS Wire	_	A-73	High Pressure PTFE Hose with static- dissipative core	950B	ig
								PTFE-S	SS Wire	_	A-74	High Pressure PTFE Hose with static- dissipative core	955B	Wire Braid
								PTFE	SS Wire	_	A-75	PAGE Ind. PTFE Hose	S30	Nire.
								PTFE-S	SS Wire	_	A-75	PAGE Ind. PTFE Hose with static- dissipative core	S30B	
								PTFE	SS Wire	_	A-76	PAGE Ind. Heavy Wall PTFE Hose	S40	
								PTFE-S	SS Wire	_	A-76	PAGE Ind. Heavy Wall PTFE Hose with static-dissipative core	S40B	
 1000	1000 1200*	1000*	900*					PTFE	SS Wire	_	A-77	PAGE Heavy Wall PTFE Hose *Double Braid	STW Z-STW*	
 1000	1000 1200*	1000*	900*					PTFE-S	SS Wire	_	A-77	PAGE Heavy Wall PTFE Hose with static- dissipative core *Double Braid	STB Z-STB*	
1200	1000	750	650	450				PTFE	SS Wire	_	A-82	PAGE Convoluted PTFE Hose	SCW	
1200	1000	750	650	450				PTFE-S	SS Wire	_	A-82	PAGE Convoluted PTFE Hose with static- dissipative core	SCB	
1200	1000	750	650	450	200	175	150	PTFE	SS Wire	_	A-84	PAGE Heavy Wall Convoluted PTFE Hose	SCWV	
1200	1000	750	650	450	200	175	150	PTFE-S	SS Wire	_	A-84	PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core	SCBV	
425	350	325	300	250	200	175	150	PTFE	SS Wire	_	A-86	PAGE Flare-Seal® PTFE Hose	SCWV-FS	
425	350	325	300	250	200	175	150	PTFE-S	SS Wire	_	A-86	PAGE Flare-Seal® PTFE Hose with static-dissipative core	SCBV-FS	
 250	250	200	200	200	200	200	200	PTFE	PP	_	A-83	PAGE Convoluted PTFE Hose, PP Braid	PCW	
 250	250	200	200	200	200	200	200	PTFE-S	PP	_	A-83	PAGE Convoluted PTFE Hose with static- dissipative core, PP Braid	PCB	
250	250	200	200	200	150	125	100	PTFE	PP	_	A-85	PAGE Heavy Wall Convoluted PTFE Hose, PP Braid	PCWV	Fiber
 250	250	200	200	200	150	125	100	PTFE-S	PP	_	A-85	PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core, PP Braid	PCBV	芷
250	250	200	200	200	150	125	100	PTFE	PP	_	A-87	PAGE Flare-Seal® PTFE Hose, PP Braid	PCWV-FS	
250	250	200	200	200	150	125	100	PTFE-S	PP	_	A-87	PAGE Flare-Seal® PTFE Hose with static-dissipative core, PP Braid	PCBV-FS	
500	450	375	375	300	200	200	150	FEP	Double Wire Helix	EPDM	A-88	PAGE Rubber Covered EPDM	RCTW	
500	450	375	375	300	200	200	150	PFA-S	Double Wire Helix	EPDM	A-88	PAGE Rubber Covered EPDM with static-dissipative core	RCTB	er
 250	250		200					PFA	Bonded Wire- Silicone-Fiber	_	A-78	PAGE Page-Flex® SBF™	SBFW	Other
250	250		200					PFA-S	Bonded Wire- Silicone-Fiber	_	A-78	PAGE Page-Flex® SBF™ with static- dissipative core	SBFB	

PFA-S - Perfluoroalkoxy, Static Dissipative

PP - Polypropylene

S - Silicone

U - Polyurethane



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# Thermoplastic Hose Selection MPa

MPa Thermoplastic Hose Working Pressures	nent		MPa	Therm	noplas	tic Hos	se Wor	king Pı	ressur	es						
D6/DBR   Hybride - Constant Pressure Hydraulic	rcer /pe			3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	
D6-D6R	nfo T		Dash Size	-1.5	-2	-3	-4	-5	-6	-8	-10	-12	-16	-20	-24	
D6/D6R	Rei	Hose	Description	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	psi	
D6R		D6/D6R	Hybrid® - Constant Pressure Hydraulic													
HES Constant Pressure Hydraulic HES Hybride - General Hydraulic HES Hydride - General Hydrauli			· · · · · · · · · · · · · · · · · · ·										_			
HFS Hybride - General Hydraulic   20.7   20.7   20.7   17.2   17.2   11.3   8.6   HFS2 Hybride - General Hydraulic   34.5   27.6   27.6   27.1   10.3   8.6   HFS2 Hybride - General Hydraulic   34.5   27.6   27.6   27.1   19.0   15.5   13.8   HFS2 Hybride - General Hydraulic   34.5   27.6   27.6   27.6   27.0   HFS2 Hybride - General Hydraulic   20.7   20.7   20.7   20.7   20.7   20.7   20.7   20.7   MS Hybride - General Hydraulic   20.7   20.7   20.7   20.7   20.7   20.7   20.7   HTS Hybride - Compact High Pressure   48.3   37.9   34.5   27.6   27.6   27.1   HTB Hybride - Compact High Pressure   48.3   37.9   34.5   27.6   27.6   27.1   HTB Hybride - Compact High Pressure   48.3   37.9   34.5   27.6   27.6   27.1   HUK Hybride - Lackkine   24.1   31.7   20.7   11.0   17.2   13.8   560/560R General Hydraulic   24.1   31.7   20.7   12.0   13.8   12.1   593 General Hydraulic   24.1   31.7   20.7   20.7   20.7   593 General Hydraulic   34.5   34.5   34.5   27.6   24.1   20.7   17.2   13.8   510A Industrial Refrigerant   17.2   20.7   10.3   17.2   15.5   15.5   8.6   6.9   510A Non-conductive Hydraulic   17.2   31.7   20.7   17.2   15.5   15.5   8.6   6.9   518D Non-conductive Hydraulic   30.7   31.7   20.7   17.2   15.5   15.5   8.6   6.9   520M General Hydraulic   34.3   34.5								20.7			_	_	20.7			•••••
HFSR   Hybride - General Hydraulic			· · · · · · · · · · · · · · · · · · ·						_	_	20.7		8.6			
HFS2R								_	_	_			_			
R6   Constant Pressure Hydraulic		HFS2	Hybrid® - General Hydraulic				34.5		27.6	24.1	19.0	15.5	13.8			•••••
HTB Hybride - Compact High Pressure HTBR Hybride - Jackline  600/60R General Hydraulic  563 Constant Pressure Hydraulic  599 General Hydraulic  590 General Hydraulic  593 General Hydraulic  591 General Hydraulic  590 General Hydraulic  591 General Hydraulic  591 General Hydraulic  591 General Hydraulic  592 General Hydraulic  593 General Hydraulic  594 General Hydraulic  595 General Hydraulic  596 Non-conductive Hydraulic  597 317 207 17.2 15.5 15.5 8.8 6.9  518C Non-conductive Hydraulic  518C Non-conductive Hydraulic  518D Non-conductive Hydraulic  518D Non-conductive Hydraulic  520N General Hy		HFS2R	Hybrid® - General Hydraulic				34.5		27.6	24.1	19.0	15.5	13.8			•
HTB Hybride - Compact High Pressure HTBR Hybride - Compact High Pressure HJK Hybride - Jackline S600/S60R General Hydraulic S632 Constant Pressure Hydraulic S633 Constant Pressure Hydraulic S634 Constant Pressure Hydraulic S635 General Hydraulic S636 General Hydraulic S637 General Hydraulic S638 General Hydraulic S639 General Hydraulic S630 My Gene	<u>.e</u>	R6	Constant Pressure Hydraulic				20.7		20.7	20.7	20.7	20.7	20.7			
HTBR Hybride - Compact High Pressure HJK Hybride - Jackline HJK Hybr	≥	M8	Hybrid® - High Pressure Hydraulic						27.6	27.6	27.6					
HUK Hybrids - Jackline		HTB	Hybrid® - Compact High Pressure				48.3		37.9	34.5	27.6	27.6	24.1			
Se0/Se0R   General Hydraulic   September		HTBR	Hybrid® - Compact High Pressure				48.3		37.9	34.5	27.6	27.6	24.1			
Search   Hydraulic   Search   Hydraulic   Search   Search   Hydraulic   Search   Search   Hydraulic   Search		HJK	Hybrid® - Jackline				68.9									
Second   Second   Hydraulic   Second   Second   Second   Hydraulic   Second   Second   Hydraulic   Second   Second   Hydraulic   Second		560/560R	General Hydraulic			24.1	31.7	20.7	19.0	17.2	13.8	12.1				
S93   General Hydraulic   17.2   20.7   10.3   17.2   15.5   13.8   8.6   6.9		563	Constant Pressure Hydraulic				20.7		20.7	20.7						
S10A   Industrial Refrigerant   17.2   20.7   10.3   17.2   15.5   13.8   8.6   6.9		590	General Hydraulic			34.5	34.5		27.6	24.1	20.7	17.2	13.8			
S10C   General Hydraulic   17.2   31.7   20.7   17.2   15.5   15.5   8.6   6.9		593	General Hydraulic									20.7	31.7			
S18C   Non-conductive Hydraulic   17.2   31.7   20.7   17.2   15.5   15.5   8.6   6.9		510A	Industrial Refrigerant		17.2	20.7	10.3	17.2	15.5	13.8		8.6	6.9			
S18D		510C	General Hydraulic		17.2	31.7	20.7	17.2	15.5	15.5		8.6	6.9			
S15H   Compact/Lightweight Hydraulic		518C	Non-conductive Hydraulic		17.2	31.7	20.7	17.2	15.5	15.5		8.6	6.9			
S2NN		518D	Non-conductive Hydraulic		20.7	31.7	20.7	17.2	15.5	15.5		8.6				
528N Non-conductive Hydraulic   34.5   34.3   31.0   27.5   24.1		515H	Compact/Lightweight Hydraulic			15.0	13.8	12.1	10.3	10.3						
S26BA   Breathing Air Refill   S27BA   Breathing Air Refill   S27BA   Breathing Air Refill   S27BA   S27BA   Breathing Air Refill   S20M   S20M   Low Temperature Hydraulic   S20M   S			General Hydraulic /			34.5	34.5	31.0	27.6	24.1						
S27BA   Breathing Air Refill   S39M   S39M   Cow Temperature Hydraulic   20.7			•			41.4	41.4		41.4							
S3BM/   S3BM   Low Temperature Hydraulic   20.7			· · · · · · · · · · · · · · · · · · ·				-									
Sabon   Convenient Hydraulic   Sabon								00.7	00.7	00.7	00.7	00.7				
Specialty Water   19.0   15.5   13.8   8.6			Low Temperature Hydraulic			20.7	20.7	20.7	20.7	20.7	20.7	20.7				
S5LT			<del> </del>		20.7	20.7	19.0	17.2	15.5	13.8		8.6				• • • • • • • • • • • • • • • • • • • •
Sed   Diagnostic   Sed   Sewer Cleaning							_		_	-		8.6				• • • • • • • • • • • • • • • • • • • •
Seast   Seat   Seast			Low Temperature Hydraulic		20.7	31.7	20.7	17.2	15.5	13.8		8.6				
573X   Fast Response Hydraulic   20.7		56DH / 568DH	Diagnostic	41.4	41.4											
Second Compressed Natural Gas   Second Compressed Natural Ga			High Pressure				70.0									•••••
580N / 588N       General Hydraulic / Non-conductive Hydraulic       34.5       27.6       24.1       10.3       15.5       13.8         H580N       General Hydraulic       20.7         1035A       Power Cleaning       10.3       8.3       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.9 </td <td>_</td> <td></td> <td>+ *</td> <td></td> <td></td> <td>20.7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>20.7</td> <td></td> <td></td> <td></td>	_		+ *			20.7							20.7			
580N / 588N       General Hydraulic / Non-conductive Hydraulic       34.5       27.6       24.1       10.3       15.5       13.8         H580N       General Hydraulic       20.7         1035A       Power Cleaning       10.3       8.3       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.7       50.9 </td <td>-ibe</td> <td>575X</td> <td>Fast Response Hydraulic</td> <td></td> <td></td> <td>34.5</td> <td>34.5</td> <td></td> <td>34.5</td> <td>34.5</td> <td></td> <td>34.5</td> <td>34.5</td> <td></td> <td></td> <td></td>	-ibe	575X	Fast Response Hydraulic			34.5	34.5		34.5	34.5		34.5	34.5			
H580N General Hydraulic 20.7  1035A Power Cleaning 10.3 8.3 20.7  1035HT Power Cleaning 13.8 12.1 10.3 20.7  83FR General Purpose Air/Water 2.1 2.1 2.1 2.1 2.1 2.1  B9 General Purpose Air/Water 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7  5CNG Compressed Natural Gas 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5	_		General Hydraulic /				34.5		27.6	24 1	10.3	15.5	13.8			
1035A       Power Cleaning       10.3       8.3							04.0		27.0	24.1	10.0	10.0				
1035HT   Power Cleaning   13.8   12.1   10.3			· ·										20.7			
83FR       General Purpose Air/Water       2.1       <			· · · · · · · · · · · · · · · · · · ·				_	_								
B9 General Purpose Air/Water 1.7 1.7 1.7 1.7 1.7 1.7 1.7 5CNG Compressed Natural Gas 34.5 34.5 34.5 34.5 34.5 34.5 34.5 34.5			•			13.8		10.3	0.1	0.1		0.1				
5CNG       Compressed Natural Gas       34.5       <						1.7	_	1.7		_	1.7	2.1				
HLB         Lubrication         20.7         20.7           MSH         Marine Steering         6.9         6.9           PTH         Power Tilt         20.7           S5N         Sewer Cleaning - Lateral Cleaning         27.6           S6         Sewer Cleaning         17.2								1.1			1.7					
MSH         Marine Steering         6.9		5CNG	Compressed Natural Gas			34.5	34.5		34.5	34.5		34.5	34.5			
PTH         Power Tilt         20.7         50.7		HLB	Lubrication		20.7	20.7										
S5N Sewer Cleaning - Lateral Cleaning 27.6 S6 Sewer Cleaning 17.2 17.2		MSH	Marine Steering					6.9	6.9							
S6 Sewer Cleaning 17.2 17.2		PTH					20.7									
		S5N	Sewer Cleaning - Lateral Cleaning							27.6						
S9 Sewer Cleaning 20.7 20.7		S6	· · · · · · · · · · · · · · · · · · ·									17.2	17.2			
		S9	Sewer Cleaning									20.7	20.7			
SLH Sewer Cleaning Leader Hose 27.6 27.6 20.7 20.7			· · · · · · · · · · · · · · · · · · ·							27.6	27.6	20.7	20.7			
Duraflex Aerial Lift - Hydraulic Tool 15.5		Duraflex	Aerial Lift - Hydraulic Tool						15.5							



niduT <b>B</b>
Coiled Air Hose

# **Construction/Specifications**

Core	Reinforcement	Cover	SAE	Additional	Page		
Tube	Material	Material	Specification	Specifications	#	Description	Hose
Р	Wire	R	100R17	MSHA IC-40/32	A-22	Hybrid® - Constant Pressure Hydraulic	D6
Р	Wire	R		MSHA/ ISO 11237	A-23	Hybrid® - Constant Pressure Hydraulic	D6R
Р	Wire	Р	100R17		A-28	Constrant Pressure Hydraulic	Н6
Р	Wire	R	100R1 / J1942	MSHA IC-40/32	A-24	Hybrid® - General Hydraulic	HFS
Р	Wire	R	100R1		A-25	Hybrid® - General Hydraulic	HFSR
Р	Wire	R	100R2 / 100R16 / J1942	MSHA IC-40/32	A-26	Hybrid® - General Hydraulic	HFS2
Р	Wire	R	100R16	MSHA IC-40/32	A-27	Hybrid® - General Hydraulic	HFS2R
Р	Wire	F	100R17		A-29	Constant Pressure Hydraulic	R6
Р	Wire	R	100R12	MSHA IC-40/32	A-32	Hybrid® - High Pressure Hydraulic	M8
Р	Wire	R	J1942	MSHA IC-40/32	A-30	Hybrid® - Compact High Pressure	HTB
Р	Wire	R		MSHA IC-40/32	A-31	Hybrid® - Compact High Pressure	HTBR
Р	Wire	R	-	IJ-100/MSHA	A-33	Hybrid® - Jackline	HJK
Р	Wire	U	100R1	MSHA IC-40/32 / DNV	A-34	General Hydraulic	560/560R
Р	Wire	U	100R17	MSHA IC-40/32	A-35	Constant Pressure Hydraulic	563
Р	Wire	U	100R2 / 100R16	DNV/ABS*	A-36	General Hydraulic	590
P/N	Wire	U	100R2	MSHA IC-40/32/ABS	A-37	General Hydraulic	593
PFX	Fiber	U	100R7	MSHA IC-40/32*	A-38	Industrial Refrigerant	510A
Р	Fiber	PFX	100R7	MSHA IC-40/32*/DNV	A-39	General Hydraulic	510C
Р	Fiber	PFX	100R7	DNV	A-40	Non-conductive Hydraulic	518C
N	Fiber	PFX	100R7	DNV	A-41	Non-conductive Hydraulic	518D
Р	Fiber	U	-	MSHA IC-40/32	A-42	Compact/Lightweight Hydraulic	515H
N	Fiber	U	100R8	MSHA IC-40/32 / DNV*	A-43	General Hydraulic / Non-conductive Hydraulic	520N/ 528N
N	Fiber	U	-	CGA / NFPA 1901	A-44	Breathing Air Refill	526BA
N	Fiber	U	-	CGA / NFPA 1901	A-45	Breathing Air Refill	527BA
Р	Fiber	Р	100R18		A-46	Low Temperature Hydraulic	53DM / 538DM
N	Fiber	U	100R7	MSHA IC-40/32 / DNV	A-47	General Hydraulic	540N
PE	Fiber	U	100R7	FDA	A-48	Specialty Water	540P
Р	Fiber	Р	100R7		A-49	Low Temperature Hydraulic	55LT
N	Fiber	U	-	MSHA IC-40/32*	A-50	Diagnostic	56DH / 568DH
N	Fiber	U	-	IJ-100	A-51	High Pressure	569
N	Fiber	U	-	MSHA IC-40/32 / DNV*	A-52	Fast Response Hydraulic	573X
N	Fiber	U	-	MSHA IC-40/32 / DNV	A-53	Fast Response Hydraulic	575X
N	Fiber	U	100R8	MSHA IC-40/32 / DNV*	A-54	General Hydraulic / Non-conductive	580N / 588N
N	Fiber	U	100R8	DNV	A-54	General Hydraulic	H580N
PFX	Fiber	U	-		A-56	Power Cleaning	1035A
N	Fiber	U	-		A-57	Power Cleaning	1035HT
U	Fiber	U	-	MSHA IC-40/32	A-55	General Purpose Air/Water	83FR
U	Fiber	U	-		A-58	General Purpose Air/Water	B9
N	Fiber	U	-	ANSI IAS NGV4.2-CSA 12.52 / ECE R110*	A-59	Compressed Natural Gas	CNG
Р	Fiber	U	-	MSHA IC-40/32	A-60	Lubrication	HLB
N	Fiber	U	-		A-61	Marine Steering	MSH
N	Fiber / SS Wire	U	-		A-62	Power Tilt	PTH
Р	Fiber	U	-	Wastec WRP05-1996	A-63	Sewer Cleaning - Lateral Cleaning	S5N
Р	Fiber	U	-	Wastec WRP05-1996	A-64	Sewer Cleaning	S6
Р	Fiber	U	-	Wastec WRP05-1996	A-65	Sewer Cleaning	S9

\*View Government & Agency Specifications for exceptions, pg. G-60

Legend

N – Nylon P – Copolyester NP - Neoprene PE - Polyethylene PFX - Proprietary Mat'l

R - Rubber U - Urethane

F - Fiber

For detailed ordering information, please consult price list or contact Parflex® Division.

**MPa** 

919

919B 919.1

919U 929

929B

929BJ

939

939B

943B

944B

950B

955B

S30

S30B

S40

S40B

STW Z-STW

STB Z-STB\*

SCW

**SCB** 

SCWV

SCBV

SCWV-FS

SCBV-FS

**PCW** 

PCB

Fractional Size

Dash Size

Silicone Covered PTFE Hose

Heavy Wall PTFE Hose

Convoluted PTFE Hose

dissipative core

dissipative core

dissipative core

dissipative core

PAGE Ind. PTFE Hose

static-dissipative core

PAGE Heavy Wall PTFE Hose \*Double Braid

PAGE Convoluted PTFE Hose PAGE Convoluted PTFE Hose with static-

PAGE Flare-Seal® PTFE Hose PAGE Flare-Seal® PTFE Hose with

static-dissipative core

dissipative core, PP Braid

PTFE Hose with static-dissipative core

High Abrasion Resistance PTFE Hose

Heavy Wall PTFE Hose with static-

Convoluted PTFE Hose with static-

High Pressure PTFE Hose with static-dissipative core

High Pressure PTFE Hose with static-

High Pressure PTFE Hose with static-

High Pressure PTFE Hose with static-

PAGE Ind. PTFE Hose with static-

PAGE Ind. Heavy Wall PTFE Hose

PAGE Ind. Heavy Wall PTFE Hose with

PAGE Heavy Wall PTFE Hose with static-dissipative core \*Double Braid

PAGE Heavy Wall Convoluted PTFE Hose PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core

PAGE Convoluted PTFE Hose, PP Braid PAGE Convoluted PTFE Hose with static-

Silicone Covered PTFE Hose with static-

PTFE Hose

O Colled Air Hose & Fittings

Reinforcement Type

#### PAGE Heavy Wall Convoluted PTFE Hose, **PCWV** PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core, PP Braid **PCBV** PCWV-FS PAGE Flare-Seal® PTFE Hose, PP Braid PAGE Flare-Seal® PTFE Hose with static-dissipative core, PP Braid **PCBV-FS** RCTW PAGE Rubber Covered EPDM PAGE Rubber Covered EPDM with static-**RCTB** dissipative core **SBFW** PAGE Page-Flex® SBF™ PAGE Page-Flex® SBF™ with static-**SBFB**

*Z indicates double braid.	braid.	double	indicates	*7
----------------------------	--------	--------	-----------	----

Legend

PTFE - Polytetrafluoroethylene

Fluoropolymer Hose Selection

1/8

-3

MPa

-4

MPa

20.7

20.7

20.7

20.7

20.7

31.0

27.5

37.9

20.7

20.7

20.7

20.7

20.7

20.7

20.7

20.7

MPa Fluoropolymer Hose Working Pressures

5/16

-6

MPa

17.2

17.2

17.2

17.2

17.2

17.2

17.2

20.7

31.0

27.5

37.9

17.2

17.2

17.2

17.2

1/4

-5

**MPa** 

20.7

20.7

**Nominal Sizes** 

7/16

-8

MPa

13.8

13.8

13.8

13.8

13.8

13.8

13.8

20.7

31.0

27.5

37.9

13.8

13.8

13.8

13.8

1/2

-10

MPa

10.3

10.3

20.7

31.0

27.5

37.9

12.1

12.1

12.1

12.1

5/8

-12.1

MPa

8.3

8.3

8.3

8.3

20.7

31.0

27.5

37.9

10.3

10.3

10.3

10.3

29/32

-16

MPa

6.9

6.9

9

9

20.7

27.5

27.5

37.9

6.9

6.9

6.9

6.9

1-1/8

-20

MPa

4.3

1/8

-3

MPa

1/4

-4

MPa

3/8

-6

**MPa** 

10.3

10.3

13.8

13.8

10.3

10.3

2.4

12.1

12.1

10.3

10.3

10.3

10.3

3.5

3.5

2.1

2.1

2.1

2.1

2.1

2.1

3.5

3.5

2.1

2.1

20.7

20.7

10.3

10.3

2.4

20.7

20.7

1/2

-8

MPa

9.3

5/8

-10.3

MPa

6.9

6.9

FEP - Fluorinated Ethylene Propylene

2.1

2.1

PTFE-S - Polytetrafluoroethylene, Static Dissipative

PFA - Perfluoroalkoxy





A-17

# **Construction/Specifications**

					p	si Fluc	ropoly	mer Co	nstruction an	d Spec	ificati	ons		nent
3/4	1	1 1/4	1 1/2	2	2-1/2	3	4					Fractional Size		Reinforcement Type
-12. psi	-16 psi	-20 psi	-24 psi	-32 psi	-40 psi	-48 psi	-64 psi	Core Tube	Reinforcement Material	Cover Material	Page #	Dash Size		Rein
ры	poi	ры	poi	ροι	ροι	μσι	poi	PTFE	SS Wire	_	A-65	PTFE Hose	919	
								PTFE-S	SS Wire	_	A-65	PTFE Hose with static-dissipative core	919B	
								PTFE	SS Wire	S	A-66	Silicone Covered PTFE Hose	919J	
								PTFE	SS Wire	U	A-67	High Abrasion Resistance PTFE Hose	919U	
								PTFE	SS Wire	_	A-68	Heavy Wall PTFE Hose	929	
								PTFE-S	SS Wire	_	A-68	Heavy Wall PTFE Hose with static- dissipative core	929B	
								PTFE-S	SS Wire	S	A-69	Silicone Covered PTFE Hose with static- dissipative core	929BJ	
7.6	6.9	6.9	5.2	1.7				PTFE	SS Wire	_	A-70	Convoluted PTFE Hose	939	
 7.6	6.9	6.9	5.2	1.7				PTFE-S	SS Wire	_	A-70	Convoluted PTFE Hose with static- dissipative core	939B	
								PTFE-S	SS Wire	_	A-71	High Pressure PTFE Hose with static- dissipative core	943B	
								PTFE-S	SS Wire	_	A-72	High Pressure PTFE Hose with static- dissipative core	944B	
								PTFE-S	SS Wire	_	A-73	High Pressure PTFE Hose with static- dissipative core	950B	pi
								PTFE-S	SS Wire	_	A-74	High Pressure PTFE Hose with static- dissipative core	955B	Wire Braid
								PTFE	SS Wire	_	A-75	PAGE Ind. PTFE Hose	S30	Ä
								PTFE-S	SS Wire	_	A-75	PAGE Ind. PTFE Hose with static- dissipative core	S30B	
								PTFE	SS Wire	_	A-76	PAGE Ind. Heavy Wall PTFE Hose	S40	
								PTFE-S	SS Wire	_	A-76	PAGE Ind. Heavy Wall PTFE Hose with static-dissipative core	S40B	
6.9	6.9 8.3*	6.9*	6.2*					PTFE	SS Wire	_	A-77	PAGE Heavy Wall PTFE Hose *Double Braid	STW Z-STW*	
6.9	6.9 8.3*	6.9*	6.2*					PTFE-S	SS Wire	_	A-77	PAGE Heavy Wall PTFE Hose with static- dissipative core *Double Braid	STB Z-STB*	
8.3	6.9	5.2	4.5	3.1				PTFE	SS Wire	_	A-82	PAGE Convoluted PTFE Hose	SCW	
8.3	6.9	5.2	4.5	3.1				PTFE-S	SS Wire	_	A-82	PAGE Convoluted PTFE Hose with static- dissipative core	SCB	
8.3	6.9	5.2	4.5	3.1	1.4	1.2	1.0	PTFE	SS Wire	_	A-84	PAGE Heavy Wall Convoluted PTFE Hose	SCWV	
8.3	6.9	5.2	4.5	3.1	1.4	1.2	1.0	PTFE-S	SS Wire	_	A-84	PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core	SCBV	
2.9	2.4	2.2	2.1	1.7	1.4	1.2	1.0	PTFE	SS Wire	_	A-86	PAGE Flare-Seal® PTFE Hose	SCWV-FS	
2.9	2.4	2.2	2.1	1.7	1.4	1.2	1.0	PTFE-S	SS Wire	_	A-86	PAGE Flare-Seal® PTFE Hose with static-dissipative core	SCBV-FS	
1.7	1.7	1.4	1.4	1.4	1.4	1.4	1.4	PTFE	PP	_	A-83	PAGE Convoluted PTFE Hose, PP Braid	PCW	
1.7	1.7	1.4	1.4	1.4	1.4	1.4	1.4	PTFE-S	PP	_	A-83	PAGE Convoluted PTFE Hose with static- dissipative core, PP Braid	PCB	
1.7	1.7	1.4	1.4	1.4	1.0	.86	.69	PTFE	PP	_	A-85	PAGE Heavy Wall Convoluted PTFE Hose, PP Braid	PCWV	Fiber
1.7	1.7	1.4	1.4	1.4	1.0	.86	.69	PTFE-S	PP	_	A-85	PAGE Heavy Wall Convoluted PTFE Hose with static-dissipative core, PP Braid	PCBV	正
1.7	1.7	1.4	1.4	1.4	1.0	.86	.69	PTFE	PP	_	A-87	PAGE Flare-Seal® PTFE Hose, PP Braid	PCWV-FS	
1.7	1.7	1.4	1.4	1.4	1.0	.86	.69	PTFE-S	PP	_	A-87	PAGE Flare-Seal® PTFE Hose with static-dissipative core, PP Braid	PCBV-FS	
3.5	3.1	2.6	2.6	2.1	1.4	1.4	1.0	FEP	Double Wire Helix	EPDM	A-88	PAGE Rubber Covered EPDM	RCTW	
3.5	3.1	2.6	2.6	2.1	1.4	1.4	1.0	PFA-S	Double Wire Helix	EPDM	A-88	PAGE Rubber Covered EPDM with static- dissipative core	RCTB	Other
1.7	1.7		1.4					PFA	Bonded Wire- Silicone-Fiber	_	A-78	PAGE Page-Flex® SBF™	SBFW	₹
1.7	1.7		1.4					PFA-S	Bonded Wire- Silicone-Fiber	_	A-78	PAGE Page-Flex® SBF™ with static- dissipative core	SBFB	

PFA-S - Perfluoroalkoxy, Static Dissipative

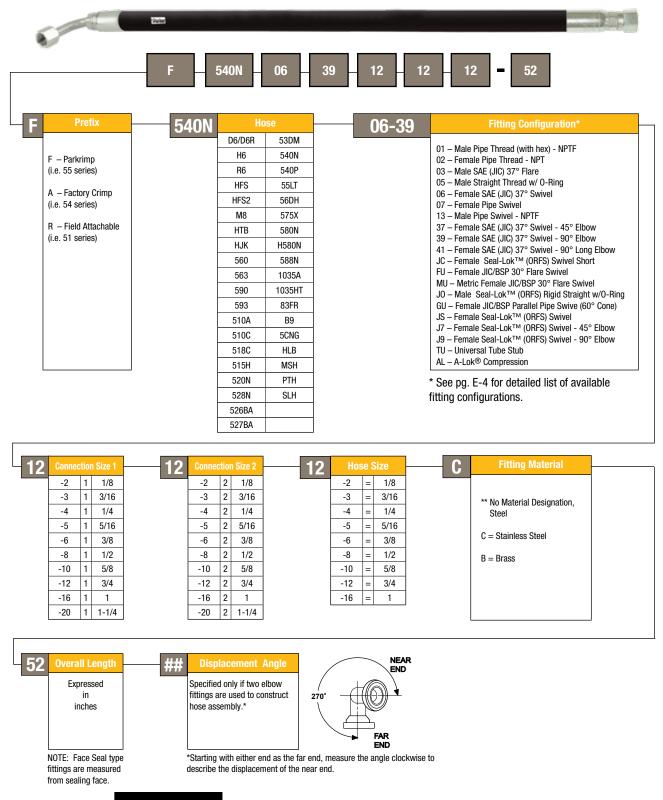
PP - Polypropylene U - Polyurethane



S - Silicone

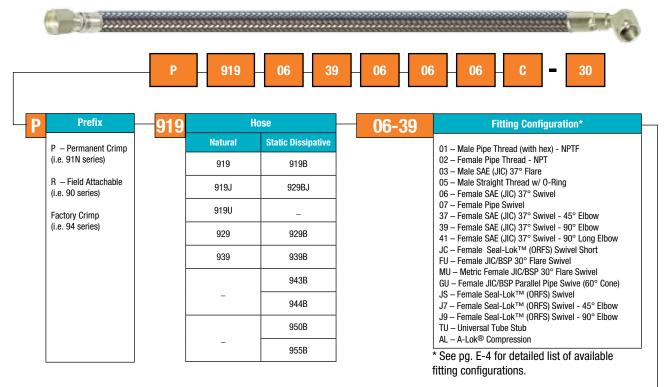
# Parflex® Thermoplastic Hoses

## Parflex® Thermoplastic Hose Assembly Nomenclature

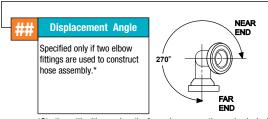


# Parflex® PTFE Hoses

## **Parflex® PTFE Hose Assembly Nomenclature**



6	Connec	tior	Size 1	06	Conne	ction	ı Size 2	06	Ho	se S	Size	C	Fitting Material	30	Overall Length
	-2	1	1/8		-2	2	1/8		-2	=	1/8				
	-3	1	3/16		-3	2	3/16		-3	=	3/16		** No Material Designation		Expressed in Inches
	-4	1	1/4		-4	2	1/4		-4	=	1/4		No Material Designation		liiolios
	-5	1	5/16		-5	2	5/16		-5	=	5/16		C = Stainless Steel		OAL measured
	-6	1	3/8		-6	2	3/8		-6	=	3/8		B = Brass (91N)		from centerline of fitting seat if
L	-8	1	1/2		-8	2	1/2		-8	=	1/2		D = DI455 (91N)		elbow fittings
	-10	1	5/8		-10	2	5/8		-10	=	5/8		S = All Steel (91N)		are used.
	-12	1	3/4		-12	2	3/4		-12	=	3/4				
	-16	1	1		-16	2	1		-16	=	1				
	-20	1	1-1/4		-20	2	1-1/4		-20	=	1-1/4				
	-24	1	1-1/2		-24	2	1-1/2		-24	=	1-1/2			•	NOTE: Face Seal typ
	-32	1	2		-32	2	2		-32	=	2				fittings are measure from sealing face.



\*Starting with either end as the far end, measure the angle clockwise to describe the displacement of the near end.



# Parflex® PAGE Product Line

## PAGE Industrial S30 & S40 Hose Assembly Nomenclature





Assembly Code	
Permanently Attached	Х
Field Attachable	FA

Si Co	ze de
1/4"	05
5/16"	06
13/32"	08
1/2"	10
5/8"	12
7/8"	16
1-1/8"	20

	Hose Code
S30	S
S30B	SB
S40	Н
S40B	HB
ZS40	R
ZS40B	RB
944B	944B
955B	955B

Fitting Code						
Pipe Thread Fittings						
Male Pipe NPT Hex	10					
Male Pipe NPT Step Up	15					
Male Pipe NPT Step Down	20					
Male Union	11					
Male Union 45°	14					
Male Union 90°	19					
Male Union Step Up	16					
Male Union Step Down	21					
Female Pipe NPT Hex	55					
Female Pipe Step Up	58					
Female Pipe Step Down	59					
Female Union	80					
Female Union Step Up	84					
Female Union Step Down	88					
JIC Fittings						
JIC Female Swivel	68					
JIC Female 45° Elbow	66					
JIC Female 90° Elbow	67					
SAE Female Swivel	69					
SAE Female 45° Elbow	70					
SAE Female 90° Elbow	71					
JIC Female Step Up	64 65					
JIC Female Step Down	65					
Tube Stub Fittings	0.4					
Tube Stub Tube Stub Step Up	91 93					
• •	93 95					
Tube Stub Step Down SAE Male Compression	95 96					
Inverted Flare & Power Trim Fit						
Male Straight	<b>ungs</b> 76					
iviale straight	70					

Fitting Material	
Stainless (SS) Brass	S B
Carbon Steel	С

А	ccessory Code	
None		
Spring Guar	rd	S
Armour Gua	ard	Α
End Bend R	estrictors	Е
Fire Sleeve		F
Rubber Slee	eve	Н
FEP Heat Sh	nrink	T
Polyolefin H	leat Shrink	Р
Silicone Sle		M
Internal Spr	· ·	I
Vacuum Sp	ring Wire	W
Specials		X

**Example:** X08H10S68S0-0300 **Size:** 08 (13/32 I.D.) **Style:** S40

Braid: SS Single Braid

Core: Heavy Wall Smoothbore Convoluted PTFE

End 1: 1/2" 316 SS Male NPT

End 2: 1/2" 316 SS Female 37° Seat JIC Swivel

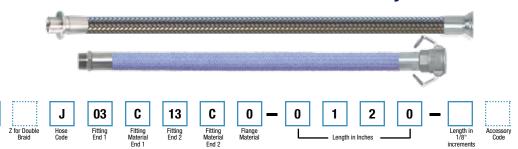
Length: 300" from end of Male Pipe to seat of Female JIC

**NOTE:** Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



# Parflex® PAGE Product Line

## "True-Bore" & Convoluted Hose Assembly Nomenclature



Size Code	
3/16"	03
1/4"	04
5/16"	05
3/8"	06
1/2"	08
5/8"	10
3/4"	12
7/8"	14
1"	16
1-1/4	20
1-1/2"	24
2"	32
2-1/2"	40
3"	48
4"	64

	lose
	Code
ACW	Α
CBV	BV
CWV	٧
KCB	RB
KCW	R
NCB	MB
NCW	M
PCB	NB
PCBV	PB
PCW	N
PCWV	Р
RCTB	GB
RCTW	G
SBFW	SBF
SCB	TB
SCBV	JB
SCW	T
SCWV	J
STB	SB
STW	S

illuustilai Illicuu	
Male Pipe NPT Hex	03
Female Pipe NPT Hex	06
Male Pipe NPT Step Down	13
Male Pipe NPT Step Up	23
Male Union Step Up	34
Male Union Step Down	35
JIC Female Swivel	30
Male JIC 37°	31
JIC Female Step Up	32
Male Union	33
Female Union	36
Female NPSH	27
Female ORFS Swivel	80
Male ORFS	81
Male 0-Ring Boss	86
Flanges	
Flange Retainer	05
Flare-Seal® Flange Retainer	29
Cam Lock	
Female Cam Lock	07
With Locking Handles	17
Male Cam Lock	80
Sanitary	
Sanitary Tri Clamp	40
Sanitary Tri Clamp 45°	4K
Sanitary Tri Clamp 90°	4L
Sanitary 1-Step Up	4A
Sanitary 2-Step Up	4B
Sanitary 3-Step Up	4C
Sanitary Flare Seal™	4F
Sanitary Mini	42

Sanitary Mini Step Up I-Line Male

I-Line Female

Bevel Seat Female Bevel Seat Male

PAGElok™ Tube

PAGElok™ Tube Adapter

Compression Fitting

Standard Cuffed Ends

Non Standard Fitting

**Tube and Vacuum** 

**Special Ends** 

Code

Industrial Thread

Fitting Material	
304 Stainless (SS 304)	4
316 Stainless (SS 316) 316 Stainless (SS 15Ra)	6
Electropolished to 15Ra	E
Carbon Steel PFA Encapsulated	C T
Hastelloy	Н
Monel	M

Flange Material	
None	0
Carbon Steel Epoxy Coated	D
304SS	4
316SS	6
Kynar	K
Polypropylene	Р
Non Standard	Χ

Example: 32J03C13C0-0120-A Size: 2" Style: SCWV Braid: 316 SS Single Braid

Core: Heavy Wall Open Pitch Convoluted PTFE

End 1: 2" Male Pipe NPT Hex End 2: 2" Male Pipe NPT Step Down

Length: 120" from end of Male NPT to end of Male Step

Accessory

Code

S

Ε

F

Н

T P

W

Χ

Spring Guard

Armour Guard End Bend Restrictors

Fire Sleeve

Rubber Sleeve

**FEP Heat Shrink** 

Polyolefin Heat Shrink Silicone Sleeve

Vacuum Spring Wire Specials

Down

48

49 45

46

38

39

90

99

**NOTE:** Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.

The part numbering system shows the entire product line offered by the Parker PAGE International business unit. This catalog section only displays a few common hoses. To order items not listed in this catalog, please contact Parker PAGE Customer Service direct at (800) 847-7280 or email pagesales@parker.com.



# D6 - Hybrid Hose



#### **Features**

 Ideally suited for inventory consolidations to cover all SAE 100R1 pressure and many SAE 100R2 pressure requirements.

#### **Certifications**

- Exceeds SAE 100R17
- MSHA Accepted

## **Applications/Markets**











 Agricultural Equipment Construction Equipment

Medium pressure hydraulic applications

Part		Nominal	Maximum	Maxin
	9	6	<ul><li>Lubrica</li><li>Transp</li></ul>	O

Part Number	11011	ninal D.		mum D.	Maxi Wor Pres	king	Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	0	9	0	9			$\mathcal{A}_{\star}$			lbs		
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
D604	1/4	6	.51	13	3,000	20.7	2.00	51	28	.12	.18	43**HY***
D606	3/8	10	.67	17	3,000	20.7	2.50	64	28	.19	.28	58/43**/HY***
D608	1/2	13	.82	21	3,000	20.7	3.50	89	28	.29	.43	58/43**/HY***
D610*	5/8	16	1.02	26	3,000	20.7	4.00	102	28	.47	.70	58/HY***
D612*	3/4	19	1.20	30	3,000 20.7		4.80	122	28	.73	1.09	43**/HY***
D616*	1	25	1.50	38	3,000	20.7	6.00	152	28	1.01	1.50	43**/HY***

#### Construction

**Tube: Copolyester** 

Reinforcement: One or two braids of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in length at working pressure is +2% to -4%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

58 Series - pg. E-12

43 Series - (\*\*43 Fittings available from Parker

Hose Products Division)

HY Series - pg. E-107 (\*\*\*HY Fittings available from Parker

Hose Products Division)

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Black

#### **Notes**

\*Two wire braid



## D6R - Hybrid Hose



## **Applications/Markets**









- Medium pressure hydraulic applications
- Agricultural Equipment
- Construction Equipment
- Lubricating Oils
- Transportation

#### **Features**

- Long continuous package lengths available
- Up to 40% lighter than comparable rubber hoses
- Wide range of fluid compatibility
- Compact hose construction
- Bend radius less than half of conventional SAE 100R1 & 100R2 hoses
- UV resistant cover
- Low force to flex
- 3,000 psi working pressure

#### Certifications

- ISO 11237 Type R17
- SAE 100R17
- MSHA accepted

Part Number	Nom I.		Maxi 0.	mum D.	Wor	Maximum Working Pressure		mum nd lius	d Weight		Permanent Fitting Series
#	(	9	(	9		7	*	$\mathcal{L}$			
	inch	mm	inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./m.	
D6R04	1/4	6	.46	12	3,000	21.0	1.5	38	0.10	0.14	55/56
D6R05	5/16	8	.55	14	3,000	21.0	2.25	57	0.14	0.21	55/56
D6R06	3/8	10	.61	16	3,000	21.0	2	51	0.17	0.24	55/56
D6R08	1/2	13	.76	19	3,000 21.0		3	76	0.26	0.37	55/56
D6R10	5/8	16	.96	24	3,000			89	0.42	0.62	56

#### Construction

Tube: Copolyester

Reinforcement: Steel wire Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +250°F (-40°C to +121°C)

Synthetic, synthetic blend, water, and water/oil emulsion hydraulic fluids up to +185°F (+85°C)

Water/glycol hydraulic fluids up to +135°F (+57°C)

Vacuum Rating: 28 inch Hg Change in Working Length @ Max. Working Pressure: +2/-4%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12

56 Series - pg. E-36

HY\* Series - pg. E-107

(HY Fittings available from Parker Hose Products Division) \*HY fittings are only approved on an adjustable crimper

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Color



#### Notes

Reference Parflex Safety Guide in Catalog 4660 for complete guidelines on hose selection and maintenance



# HFS - Fire-Screen® Hybrid Hose



#### **Features**

- Excellent flexibility
- Consistent long-lengths
- Lightweight
- Compact design

#### **Certifications**

- Exceeds SAE 100R1
- Marine Applications (SAE J1942 listed)
- MSHA Accepted

## **Applications/Markets**







- Used in high temperature (to +250° F), medium pressure hydraulic applications
- Mobile Equipment
- Machine Tools
- Agricultural Equipment

Part Number		ninal D.		mum D.	Maxi Wor Pres	king	Mini Be Rac	nd	Vac. Rating Hg./73°F	Weight		Weight		Permanent Fitting Series	Field Attachable Series
#	(	9	(	9			*	9	Ĺ			<del></del>			
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.				
HFS04	1/4	6	.51	13	3,000	20.7	2.00	51	28	.12	.18	43*/HY**	ВА		
HFS05	5/16	8	.59	15	3,000	20.7	2.25	57	28	.17	.25	HY**	-		
HFS06	3/8	10	.67	17	2,500	17.2	2.50	64	28	.19	.28	58/43*/HY**	ВА		
HFS08	1/2	13	.79	20	2,500	17.2	3.50	89	28	.25	.37	58/43*/HY**	BA		
HFS12	3/4	19	1.07	27	1,500	10.3	5.00	127	28	.37	.55	43*/HY**	-		
HFS16	1	25	1.37	35	1,250	8.6	10.00	254	28	.53	.79	HY**	-		

#### Construction

Tube: Copolyester

Reinforcement: One braid of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in length at Max. Working Pressure: +2% to -4%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

58 Series - pg. E-12

BA Series - pg. E-99

43 Series - (\*43 Series Fittings available from Parker

Hose Products Division)

HY Series - pg. E-107 (\*\*HY Fittings available from Parker

Hose Products Division)

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**





# **HFSR Hybrid Hose with Rubber Cover**



## Features

- Long package lengths typical, up to 500 foot
- Increased oil, ozone and impulse resistance
- Up to 40% lighter than comparable rubber hoses
- UV resistant cover
- Low force to flex
- Low length change under pressure
- Patented process that bonds the core to the reinforcement
  - resists kinking
  - resists core wash out

## **Applications/Markets**









- Material Handling
- Construction
- Waste & Refuse
- There is a
- Utility Equipment
- Paving and road maintenance

#### **Certifications**

- Meets or exceeds SAE J517-100R1
- Meets or exceeds ISO Pressure standards

Part Number		ninal D.	Maxi 0.	mum D.	Wor	mum king ssure	Bu	mum Irst Ssure	Minimum Bend Radius		Wei	ight	Permanent Fitting Series
#	(	9	(	9		<b>7</b>		*	*	$\mathcal{D}$	lke		<del></del>
	inch	mm	inch	mm	psi@73°C	MPa@23°F	psi@73°F	MPa@23°C	inch	mm	lbs./ft.	kg./m.	
HFSR04	1/4	6	.46	12	3,000	20.6	12,000	82.7	1-1/2	38	0.10	0.14	55/56/HY*
HFSR05	5/16	8	.52	13	3,000	20.6	12,000	82.7	1-3/4	45	0.12	0.18	55/56/HY*
HFSR06	3/8	10	.61	16	2,500	17.2	10,000	68.9	2	51	0.17	0.25	55/56/HY*
HFSR08	1/2	13	.74	19	2,500	17.2	10,000	68.9	3	76	0.21	0.32	55/56/HY*
HFSR12	3/4	19	1.02	26	1,500	10.3	6,000	41.3	4-1/4	108	0.31	0.46	55/56/HY*
HFSR16	1	25	1.31	33	1,250	8.6	5,000	34.4	7-1/2	191	0.44	0.66	55/56/HY*

#### Construction

Tube: Copolyester Reinforcement: Steel wire Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +250°F (-40°C to +121°C)

-Synthetic, synthetic blend, water, and water/oil emulsion hydraulic fluids up to  $+185^{\circ}F$  ( $+85^{\circ}C$ )

-Water/glycol hydraulic fluids up to +135°F (+57°C)

Vacuum Rating: 28 inch Hg

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

HY\* Series - pg. E-107

\*HY fittings are only approved on an adjustable crimper

Crimp information can be found online, for most Parker products, at www.parker.com/crimpsource

HY Series – pg. E-107 (HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Color

Black

#### Notes

Reference Parflex Safety Guide in Catalog 4660 for complete guidelines on hose selection and maintenance



# **G** General Technical

# HFS2 - Fire-Screen II<sup>®</sup> Hybrid Hose



#### **Features**

- Excellent flexibility
- Consistent long-lengths
- Lightweight
- Compact design

#### **Certifications**

- Meets/Exceeds SAE 100R2 & 100R16
- Marine Applications (SAE J1942 listed)
- MSHA Accepted

## **Applications/Markets**







- Medium pressure hydraulic applications
- Mobile Equipment
- Machine Tools
- Agricultural Equipment

Part Number	Non I.	ninal D.	Maxi 0.	mum D.	Wor	mum king sure	Be	mum end lius	Vac. Rating Hg./73°F	Weight		Permanent Fitting Series	Field Attachable Series
#	(	9	(	9			7	$\mathcal{I}$	Ū			<del></del>	<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
HFS204*	1/4	6	.57	14	5,000	34.5	2.00	51	28	.21	.31	43**/HY***	BA
HFS206	3/8	10	.68	17	4,000	27.6	2.50	64	28	.23	.34	58/43**/HY***	BA
HFS208	1/2	13	.82	21	3,500	24.1	3.50	89	28	.29	.43	58/43**/HY***	BA
HFS210	5/8	16	.97	25	2,750	19.0	4.00	102	28	.38	.57	43**/HY***	-
HFS212	3/4	19	1.10	28	2,250	15.5	4.75	121	28	.45	.67	43**/HY***	ВА
HFS216*	1	25	1.45	37	2,000	13.8	6.00	152	28	.80	1.19	43**/HY***	BA

#### Construction

**Tube: Copolyester** 

Reinforcement: One or two braids of high tensile steel wire Cover: Smooth synthetic rubber

## **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

**Fittings** 

BA Series - pg. E-99 58 Series - pg. E-12

43 Series - (\*\*43 Series Fittings available from Parker Hose Products Division)

HY Series - pg. E-107 (\*\*\*HY Fittings available from Parker Hose Products Division) \*HY fittings are only approved on an adjustable crimper

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**



#### **Notes**

\*Two wire braid



# HFS2R - Fire-Screen II® Hybrid Hose



#### **Features**

- Excellent flexibility
- Consistent long-lengths
- Lightweight
- Compact design

#### **Certifications**

- Meets/Exceeds SAE 100R16
- MSHA Accepted

## **Applications/Markets**







- Medium pressure hydraulic applications
- Mobile Equipment
- Machine Tools
- Agricultural Equipment



Part Number		ninal D.	Maxi 0.	mum D.	Maxi Wor Pres	king	Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	(	9	(	9					$\mathcal{A}$			<del>==</del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
HFS2R04	1/4	6	.54	14	5,000	34.5	2.00	51	28	.21	.31	55/56
HFS2R06	3/8	10	.64	16	4,000	27.6	2.50	64	28	.23	.34	55/56/HY*
HFS2R08	1/2	13	.76	19	3,500	24.1	3.50	89	28	.29	.43	55/56/HY*
HFS2R10	5/8	16	.93	24	2,750	19.0	4.00	102	28	.38	.57	55/56/HY*
HFS2R12	3/4	19	1.07	27	2,250 15.5		4.75	121	28	.45	.67	56/HY*
HFS2R16	1	25	1.40	35	2,000	13.8	6.00	152	28	.80	1.19	56/HY*

#### Construction

**Tube: Copolyester** 

Reinforcement: One or two braids of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

Petroleum base hydraulic fluids and lubricating oils within a temperature range of -40°F to +250°F (-40°C to +121°C)

Synthetic, synthetic blend, water, and water/oil emulsion hydraulic fluids up to +185°F (+85°C)

Water/glycol hydraulic fluids up to +135°F (+57°C)

Change in length at Max. Working Pressure: +2% to -4%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

HY\* Series - pg. E-107

(HY Fittings available from Parker Hose Products Division)

\*HY fittings are only approved on an adjustable crimper

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black



# **H6 – High Performance Hydraulic Hose**



#### **Features**

- Largest temperature range in a medium pressure hydraulic hose
- Low length change capability under pressure
- Ideally suited for inventory consolidations to cover all SAE 100R1 pressure and many SAE 100R2 pressure and abrasion requirements

#### **Certifications**

■ Exceeds SAE 100R17 Requirements

## **Applications/Markets**







- Medium pressure hydraulic applications
- Over-the-sheave and boom hose applications



Part Number		ninal D.	Maxi 0.	mum D.	Wor	mum king sure	Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	(	5	(	9			7	$\mathcal{I}$			kg	#⊡
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
H604	1/4	6	.49	12	3,000	20.7	2.00	51	28	.12	.18	56
H605	5/16	8	.56	14	3,000	20.7	2.25	57	28	.14	.21	HY***
H606	3/8	10	.65	17	3,000	20.7	2.50	64	28	.19	.28	56/43**
H608	1/2	13	.78	20	3,000	20.7	3.50	89	28	.29	.43	56
H610*	5/8	16	1.00	25	3,000	20.7	4.00	102	28	.47	.70	HY***
H612*	3/4	19	1.17	30	3,000	20.7	4.75	121	28	.69	1.03	HY***

#### Construction

Tube: Copolyester

Reinforcement: One or two braids of high tensile steel wire Cover: Abrasion-resistant copolymer

#### **Operating Parameters**

Temperature Range:

(H604 thru H608) -70°F to +250°F (-57°C to +121°C) (H610 thru H612) -50°F to +250°F (-45°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

56 Series - pg. E-36

43 Series - (\*\*43 Fittings available from Parker Hose Products Division)

HY Series – pg. E-107 (\*\*\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### **Notes**

\*Two wire braid Twin line hose available Preformed assemblies



# R6 – Abrasion King® Hose



#### **Features**

- Excellent abrasion resistance
- Blue plait provides hose identification

#### Certifications

■ Exceeds SAE 100R17 Requirements

## **Applications/Markets**







- Medium pressure hydraulic applications
- Agricultural Equipment

Part Number		ninal D.	Maxi 0.	mum D.	Wor	rking Minimum rking Bend ssure Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series	
#	(	9	(	9					Ū	lbs		<del>===</del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
R604	1/4	6	.53	13	3000	20.7	2.00	51	28	.11	.16	HY***
R606	3/8	10	.69	18	3000	20.7	2.50	64	28	.20	.30	58/HY***
R608	1/2	13	.84	21	3000	20.7	3.50	89	28	.27	.40	58/HY***
R610*	5/8	16	1.09	28	3000	20.7	4.00	102	28	.51	.76	HY***
R612*	3/4	19	1.24	31	3000	20.7	4.75	121	28	.71	1.06	HY***
R616*	1	25	1.55	39	3000	20.7	6.00	152	28	1.00	1.49	43**

#### Construction

Tube: Copolyester

Reinforcement: One or two braids of high tensile steel wire Cover: Abrasion-resistant nylon fabric

#### **Operating Parameters**

Temperature Range:

(R604 thru R610) -50°F to +250°F (-46°C to +121°C) (R612 thru R616) -50°F to +212°F (-45°C to +100°C) (Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: +2% to -4% Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

58 Series - pg. E-12

 $43\,Series$  – (\*\*43 Series Fittings available from Parker Hose Products Division)

HY Series – pg. E-107 (\*\*\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Black

#### **Notes**

\*Two wire braid



# HTB - Eliminator® Hybrid Hose



#### **Features**

- Four-spiral wire hose performance in a high tensile two-wire braid construction
- Excellent flexibility
- Consistent long-lengths

#### **Certifications**

- Marine Applications (SAE J1942 listed)
- MSHA Accepted

## **Applications/Markets**







High-pressure hydraulic applications typically reserved for spiral wire reinforced







Part Number	Nom I.		Maximum O.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	0	9	$\odot$				₹		U Ibs			
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
HTB04	1/4	6	.62	16	7,000	48.3	4.00	102	28	.27	.40	HY**
HTB06	3/8	10	.76	19	5,500	37.9	6.00	152	28	.37	.55	43***
HTB08	1/2	13	.90	23	5,000	34.5	7.00	178	28	.46	.68	43***
HTB10	5/8	16	1.03	26	4,000	27.6	8.00	203	28	.52	.77	43***
HTB12	3/4	20	1.20	30	4,000	27.6	9.50	241	28	.73	1.09	43***
HTB16	1	25	1.50	38	3,500	24.1	12.00	305	28	1.01	1.50	43***

#### Construction

Tube: Copolyester

Reinforcement: Two braids of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in working length @ Rated WPSI: +2%/-4%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

43 Series – (\*\*\*43 Series Fittings available from Parker Hose Products Division)

HY Series – pg. E-107 (\*\*HY Fittings available from Parker Hose Products Division)

Crimp information can be found online, for most Parker products, at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### Notes

HTB04 cover must be skived prior to fitting attachment



# HTBR - Eliminator® Hybrid Hose



#### **Features**

- 3500 psi to 7000 psi working pressures
- Wide range of fluid compatibility
- Compact O.D.
- Low force to flex
- UV & Ozone resistant cover
- Low length change under pressure

#### Certifications

MSHA Accepted

## **Applications/Markets**









- **General Hydraulic Applications**
- Lubricating Oils
- Construction Equipment
- Agriculture Equipment

Part Number		ninal D.	Maximum 0.D.		Maxi Wor Pres	Minimum Bend Radius		Wei	ight	Permanent Fitting Series	
#	(	9	0				*	$\mathcal{D}$	lke		#⊡
	inch	mm	inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./m.	
HTBR4	1/4	6	.57	14	7,000	48.2	4	102	0.25	0.37	43
HTBR6	3/8	10	.72	18	5,500	37.9	6	152	0.33	0.50	43
HTBR8	1/2	13	.85	21	5,000	34.4	7	178	0.43	0.63	43
HTBR10	5/8	16	1.01	26	4,000	27.5	8	203	0.52	0.77	43
HTBR12	3/4	19	1.16	29	4,000	27.5	9-1/2	241	0.71	1.06	43
HTBR16	1	25	1.43	36	3,500	24.1	12	305	0.91	1.35	43

#### Construction

**Tube: Copolyester** 

Reinforcement: Two braids of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Petroleum base hydraulic fluids and lubricating oils within a temperature range -40°F to +212°F  $(-40^{\circ}\text{C to } +100^{\circ}\text{C})$ 

Synthetic, synthetic blend, water, and water/oil emulsion hydraulic fluids up to +185°F (+85°C)

Water/glycol hydraulic fluids up to +135°F (+57°C)

Vacuum Rating: 28 inch Hg

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

43 Series - (43 Series Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black



# M8 – E-Z FLEX™ Hybrid Hose



#### **Features**

- Four-spiral wire hose performance in a high tensile two-wire braid construction
- Excellent flexibility
- Consistent long-lengths

#### **Certifications**

- Meets/Exceeds SAE 100R12
- MSHA Accepted

## **Applications/Markets**







- - Medium pressure hydraulic applications
  - Agricultural Equipment
  - Construction Equipment
  - Lubricating Oils
  - Transportation

Part Number	Nom I.I	ninal D.	Maximum 0.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	(	9	0	$\odot$				*		lbs	87	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
M806	3/8	10	.76	19	4,000	27.6	2.50	64	28	.37	.55	43*
M808	1/2	13	.90	23	4,000	27.6	3.50	89	28	.46	.68	43*
M810	5/8	16	1.07	27	4,000	27.6	4.00	102	28	.63	.94	43*

#### Construction

**Tube: Copolyester** 

Reinforcement: Two braids of high tensile steel wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

43 Series - (\*43 Series Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black



# HJK - Highjack® Jackline Hybrid Hose



#### **Features**

■ 10,000 psi Jack Hose

#### **Certifications**

- MSHA Accepted
- Meets I J-100 Requirements

## **Applications/Markets**



- Used for high pressure jackline applications
- Not for high impulse applications

Part Number	Nom I.I	ninal D.	Maximum 0.D.		Maxi Wor Pres	В	imum end dius	Vac. Rating Hg./73°F	Wei	ight	
#	(	0	(	$\bigcirc$	7	*	$\mathcal{N}$	Ū	lbs		
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.
HJK04	1/4	6	.62	16	10,000	69	4.0	102	28	.27	.40

#### Construction

**Tube: Copolyester** 

Reinforcement: Two braids of High Tensile Wire

Cover: Smooth synthetic rubber

#### **Operating Parameters**

Temperature Range:

-40°F to +150°F (-40°C to +65°C)

(Limited to  $+135^{\circ}F$  ( $+57^{\circ}C$ ) for synthetic hydraulic fluids

and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 3x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

HY Series – pg. E-107 (HY Fittings available from Parker Hose Products Division)

Connection configurations limited to:

-Male Pipe (01)

#### **Colors**

Black

#### Notes

Factory-made assemblies only



# 560/560R - General Hydraulic Hose



#### **Features**

- Twin or multi-line available. Lighter and smaller than 100R1 with longer lengths
- Fast response hose
- Polyurethane cover for best abrasion resistance

#### Certifications

- Meets/Exceeds SAE 100R1
- MSHA Accepted

## **Applications/Markets**







- Hydraulic circuits and systems wherever 100R1 hose is specified
- Most synthetic hydraulic fluids, water and wide range of chemicals
- Industrial equipment
- **Machine Tools**

Part Number	Nom I.I		Maximum O.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	0				$\mathcal{A}$		Ù	lbs	kg	<del>=</del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
560-3	3/16	5	.44	11	3,500	24.1	0.75	19	28	.07	.11	55/56
560-4	1/4	6	.51	13	3,250	22.4	1.75	44	28	.10	.15	55/56
560-5	5/16	8	.58	15	3,000	20.7	2.00	51	28	.12	.19	55
560-6	3/8	10	.65	17	2,750	19.0	2.25	57	28	.15	.22	55/56
560-8	1/2	13	.81	21	2,500	17.2	3.25	83	28	.20	.30	55
560R-8	1/2	13	.75	19	2,500	17.2	3.00	76	28	.19	.29	55/56
560-10	5/8	16	.94	24	2,000	13.8	6.00	152	28	.30	.44	55/56
560-12	3/4	19	1.13	29	1,750	12.1	7.00	178	28	.41	.61	58

#### **Construction**

**Tube: Copolyester** 

Reinforcement: High tensile steel wire braid

Cover: Polyurethane

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12

56 Series - pg. E-36

58 Series - pg. E-12

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### **Notes**

Non-perforated cover



# 563 - General Hydraulic Hose



#### **Features**

Polyurethane cover for best abrasion resistance

#### Certifications

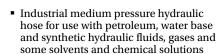
- Meets/Exceeds SAE 100R17
- MSHA Accepted

## **Applications/Markets**













Part Number	Nom I.I		Maximum O.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	(	9	(	0				<b>*</b>		bs W		<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
563-4	1/4	6	.49	12	3,000	20.7	2.00	51	28	.12	.18	55/HY*
563-6	3/8	10	.65	17	3,000	20.7	2.50	64	28	.19	.28	55/HY*
563-8	1/2	13	.78	20	3,000	20.7	3.50	89	28	.29	.42	55/HY*

#### Construction

Tube: Copolyester

Reinforcement: High tensile steel wire braid

Cover: Polyurethane

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F [212°F for size -8] (-40°C to +121°C) [100°C for size -8]

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12

HY Series - pg. E-107 (\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### **Notes**

Non-perforated cover



# 590 - General Hydraulic Hose



#### **Features**

- Two wire strength, one wire construction, improved bend radius results
- Twin and multi-line available
- Polyurethane cover for best abrasion resistance

#### **Certifications**

- Meets/Exceeds SAE 100R2 / 100R16
- MSHA Accepted
- \*ABS Approved 590-4, 590-6, and 590-8

## **Applications/Markets**







- - **Construction Equipment**
  - **Machine Tools**
  - Hydrostatic Transmission







- Refuse Vehicles
  - Agriculture Equipment

Part Number		ninal D.	Maximum 0.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Weight		Permanent Fitting Series
#	(	9	0				$\nearrow$		Ĺ	5 C S C Ibs		<b>(1)</b>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
590-3	3/16	5	.44	11	5,000	34.5	1.50	38	28	.10	.15	55
590-4*	1/4	6	.53	13	5,000	34.5	1.75	44	28	.14	.21	55
590-6*	3/8	10	.65	17	4,000	27.6	2.25	57	28	.20	.30	55/56
590-8*	1/2	13	.78	20	3,500	24.1	3.25	82	28	.26	.38	55/56
590-10	5/8	16	.98	25	3,000	20.7	6.00	152	28	.39	.57	56/58
590-12	3/4	19	1.11	28	2,500	17.2	7.00	178	28	.45	.67	58
590-16	1	25	1.43	36	2,000	13.8	8.00	203	28	.59	.88	58

#### Construction

**Tube: Copolyester** 

Reinforcement: Aramid fiber, high tensile wire braid

Cover: Polyurethane

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids

and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

58 Series - pg. E-12

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### Notes

Non-perforated cover



# 593 - General Hydraulic Hose



#### **Features**

- Works with synthetic hydraulic fluids, water and a range of chemicals
- Two wire strength with one braid flexibility
- Polyurethane cover for best abrasion resistance

#### **Certifications**

- Meets/Exceeds SAE 100R2 Pressure Requirements
- MSHA Accepted
- ABS Approved

## **Applications/Markets**







■ General Hydraulic Service







Part Number		ninal D.		Maximum O.D.		Maximum Working Pressure		Minimum Bend Radius		Weight		Permanent Fitting Series
#	(	9	(	9				9	C	lbs		
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
593-12	3/4	20	1.10	28	3000	20.7	7.00	178	28	.47	.70	LV
593-16	1	25	1.45	37	3250	22.4	8.00	203	28	.69	1.02	LV

#### Construction

Tube: 12 - Copolyester, 16 - Nylon

Reinforcement: Aramid fiber, high tensile steel wire braid

Cover: Polyurethane

#### **Operating Parameters**

Temperature Range:

-40°F to +250°F (-40°C to +121°C)

(Size -12 only limited to +135°F (+57°C) for synthetic

hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

LV Series – pg. E-124

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**



#### **Notes**

Non-perforated cover



# **G** General Technical

# 510A - Refrigerant Hose



#### **Features**

- Excellent impulse life
- · Compatible with most common hydraulic and refrigeration fluids

#### **Certifications**

- Meets/Exceeds SAE 100R7 except -2
- MSHA Accepted except -4, -5, -6

## **Applications/Markets**





- Medium pressure service for both field attachable and permanent fittings
- Used with most common refrigerants





Part Number	Nom I.I		Maximum 0.D.		Maximum Working Pressure		Be	Minimum Bend Radius		Weight		Permanent Fitting Series	Field Attachable Series
#	(	9	(	9			7	9	Ū	kg	5 C lbs	<del>==</del>	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
510A-2	1/8	3	.34	9	2,500	17.2	0.50	13	28	.03	.05	57	-
510A-3	3/16	5	.43	11	3,000	20.7	2.00	51	28	.05	.07	55/56	51
510A-4	1/4	6	.47	12	2,750	19.0	2.50	64	28	.05	.08	55/56	51
510A-5	5/16	8	.57	14	2,500	17.2	3.00	76	28	.08	.12	55/56	51
510A-6	3/8	10	.64	16	2,250	15.5	4.00	102	28	.08	.13	55/56	51
510A-8	1/2	13	.81	21	2,000	13.8	5.50	140	28	.13	.20	55/56	51
510A-12	3/4	19	1.10	28	1,250	8.6	7.50	191	28	.19	.29	-	51
510A-16	1	25	1.40	36	1,000	6.9	10.00	254	28	.28	.41	-	51

#### Construction

Tube: Proprietary nylon blend

Reinforcement: Fiber Cover: Polyurethane

#### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±3%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

51 Series - pg. E-5

55 Series - pg. E-12

56 Series - pg. E-36

57 Series - pg. E-58

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**



#### **Notes**

Perforated cover

51 Series field attachable couplings are not intended for use on hose that has previously been in service



### 510C - General Hydraulic Hose



### **Features**

- Superior abrasion resistance
- Extreme flexibility
- Medium pressure service for permanent and field attachable fittings

### **Certifications**

- Meets/Exceeds SAE 100R7 except -2
- MSHA Accepted except -4

### **Applications/Markets**





- Medium pressure service for both field attachable and permanent fittings
- Used with most common refrigerants





Part Number	Nom I.			mum D.	Maxi Worl Pres	king	Be	mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series	Field Attachable Series
#	(	9	(	9		<b>7</b>	\$	$\mathcal{I}$	Ū	S C (lbs)		⊕	<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
510C-2	1/8	3	.34	9	2,500	17.2	0.50	13	28	.03	.05	57	-
510C-3*	3/16	5	.43	11	3,250	22.4	0.75	19	28	.05	.07	55/56	51
510C-4*	1/4	6	.47	12	3,000	20.7	1.50	38	28	.05	.08	55/56	51
510C-5	5/16	8	.57	14	2,500	17.2	1.75	44	28	.08	.11	55/56	51
510C-6	3/8	10	.64	16	2,250	15.5	2.00	51	28	.10	.14	55/56	51
510C-8	1/2	13	.81	21	2,250	15.5	3.00	76	28	.15	.22	55/56	51
510C-12	3/4	19	1.09	28	1,250	8.6	5.00	127	28	.21	.31	55/56	51
510C-16	1	25	1.32	34	1,000	6.9	8.00	203	28	.27	.40	55/56	51

### Construction

Tube: Copolyester Reinforcement: Fiber

Cover: Proprietary Blend (PFX)

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

51 Series – pg. E-5 55 Series – pg. E-12 56 Series – pg. E-36 57 Series – pg. E-58

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors

Black

#### **Notes**

Perforated cover

 $^*3/16"$  and 1/4" working pressure reduced to 3,000 and 2,750 psi respectively when using field attachable couplings

51 Series field attachable couplings are not intended for use on hose that has previously been in service



### 518C - Non-Conductive Hose



### **Features**

- Twin or multi-line constructions available
- High density braid for maximum impulse life without loss of flexibility

### **Certifications**

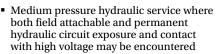
- Meets SAE J517 for less than 50 micro-amps leakage under 75,000 volts per ft.
- Meets/Exceeds SAE 100R7 specifications and Electrical Standards except 518C-2 with respect to maximum working pressure
- ANSI A92.2

### **Applications/Markets**









Part Number		ninal D.	Maxi 0.		ANSI ANSI Max. W	orking		00R7 /orking sure	Be	mum nd lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series	Field Attachable Series
#	(	9	(	9		<b>7</b> )		<b>7</b>	7	9	Ū	lbs		<del></del>	<b>=</b>
	inch	mm	inch	mm	psi	MPa	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
518C-2	1/8	3	.34	9	3,150	21.7	2,500	17.2	0.50	13	28	.03	.05	57	-
518C-3*	3/16	5	.43	11	3,250	22.4	3,250	20.7	0.75	19	28	.05	.07	55/56	51
518C-4*	1/4	6	.47	12	3,150	21.7	3,000	19.0	1.50	38	28	.05	.08	55/56	51
518C-5	5/16	8	.57	14	3,150	21.7	2,500	17.2	1.75	44	28	.08	.11	55/56	51
518C-6	3/8	10	.64	16	3,000	20.7	2,250	15.5	2.00	51	28	.10	.14	55/56	51
518C-8	1/2	13	.81	21	3,000	20.7	2,250	15.5	3.00	76	28	.15	.22	55/56	51
518C-12	3/4	19	1.09	28	1,660	11.5	1,250	8.6	5.00	127	28	.21	.31	55/56	51
518C-16	1	25	1.32	34	1,330	9.2	1,000	6.9	8.00	203	28	.27	.40	55/56	51

#### Construction

Tube: Copolyester Reinforcement: Fiber

Cover: Proprietary Blend (PFX)

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

#### Min. Burst Pressure:

- 4:1 Design Factor is required if hose failure will result in movement of aerial device
- 3:1 Design Factor is acceptable if hose failure will not result in movement of aerial device

SAE requires 4:1 Design Factor



#### Colors

Orange

#### **Fittings**

51 Series – pg. E-5 55 Series – pg. E-12

56 Series - pg. E-36 57 Series - pg. E-58

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Notes**

Non-perforated cover

Lay lines on this hose will have both ANSI and SAE maximum working pressure listed. ANSI A92.2

"Vehicle Mounted Elevating and Rotating Aerial Devices"

\*3/16" and 1/4" working pressure reduced to 3,000 and 2,750 psi respectively when using field attachable couplings

51 Series field attachable couplings are not intended for use on hose that has previously been in service

For detailed ordering information, please consult price list or contact Parflex® Division.

### 518D - Non-Conductive Hose



### **Features**

- Nylon core for maximum resistance to permeable fluids.
- Heavier cover for super high abrasion resistance. (518D-4)
- Heavier cover makes splitting bonded hose easier. (518D-4)
- Super high density braid allows smaller braid O.D. (518D-4)
- Twin or multi-line constructions available.

### **Certifications**

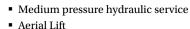
- Meets SAE J517 for less than 50 micro-amps leakage under 75,000 volts per ft.
- Meets/Exceeds SAE 100R7 specifications
- ANSI A92.2

### **Applications/Markets**















Part Number	Nom I.I			mum D.	ANSI Max. W Pres 73°F/	orking sure	Max. W Pres	OOR7 Orking Sure 23°C	Be	mum Ind lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	(	9		<b>7</b>		<b>7</b>	7	$\mathcal{I}$	Ū	lbs	lag S	<del></del>
	inch	mm	inch	mm	psi	MPa	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
518D-2	1/8	3	.34	9	3,150	21.7	3,000	20.7	0.50	13	28	.03	.05	57
518D-3	3/16	5	.43	11	3,250	22.4	3,250	22.4	0.75	19	28	.05	.07	55/56
518D-4	1/4	6	.47	12	3,150	21.7	3,000	20.7	1.50	38	28	.06	.09	55/56
518D-5	5/16	8	.57	14	3,150	21.7	2,500	17.2	1.75	44	28	.08	.11	55/56
518D-6	3/8	10	.64	16	3,000	20.7	2,250	15.5	2.00	51	28	.10	.14	55/56
518D-8	1/2	13	.81	21	3,000	20.7	2,250	15.5	3.00	76	28	.15	.22	55/56
518D-12	3/4	19	1.09	28	1,660	11.5	1,250	8.6	5.00	127	28	.21	.31	55

### Construction

Tube: Nylon

Reinforcement: High Strength Synthetic Fiber

Cover: Proprietary Blend (PFX)

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure:

4:1 Design Factor is required if hose failure will result in movement of aerial device

3:1 Design Factor is acceptable if hose failure will not result in movement of aerial device

SAE requires 4:1 Design Factor

#### Colors

Orange

#### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

57 Series - pg. E-58 58 Series - pg. E-12

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Notes

Non-perforated cover

Lay lines on this hose will have both ANSI and SAE maximum working pressure listed. ANSI A92.2 "Vehicle Mounted Elevating and Rotating Aerial Devices"



### 515H - Compact/Light Weight Hose



### **Features**

- Twin or multi-line available
- Compact OD, light weight, flexible
- Special order colors for system color coding

### Certifications

■ MSHA Accepted

### **Applications/Markets**







- Hydraulic and pneumatic systems where a small O.D. hose is necessary
- Pilot Lines







Joystick Controls

Part Number	Non I.	ninal D.		mum D.	Maxi Wor Pres			mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#			0	inch mm			5	9	Ę	lbs		<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
515H-3*	3/16	5	.34	9	2,175	15.0	0.75	19	28	.03	.04	54
515H-4	1/4	6	.41	10	2,000	13.8	1.50	38	28	.04	.05	54
515H-5*	5/16	8	.49	12	1,750	12.0	1.75	44	28	.05	.07	54
515H-6	3/8	10	.56	14	1,500	10.3	2.00	51	28	.05	.08	54
515H-8*	1/2	13	.71	18	1,500	10.3	3.00	76	28	.11	.16	54

### Construction

Tube: Copolyester Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

(Limited to  $+135^{\circ}F$  ( $+57^{\circ}C$ ) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

54 Series - pg. E-8

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### **Notes**

\*Factory-made assemblies only -3, -5 and -8 Approved with rapid assembly fitting system Perforated cover



### 520N/528N - General Hydraulic Hose





### **Features**

- Twin and multi-line available
- Fast response, lighter and smaller O.D. than 100R2 hose

### **Certifications**

- Meets/Exceeds SAE 100R8
- 520N MSHA Accepted
- 528N Meets SAE J517 for less than 50 micro-amps leakage under 75,000 volts per foot

### **Applications/Markets**





- Hydraulic and pneumatic circuits and systems
- Ideal in hot water applications





	art nber	Nom I.		Maxi 0.		Maxi Wor Pres	king		mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	inch mm		(	9			7	9	Ū	lbs		<del></del>
Natural	Non-Conductive	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
520N-3	528N-3	3/16	5	.43	11	5,000	34.5	1.50	38	28	.05	.07	55/56
520N-4	528N-4	1/4	6	.51	13	5,000	34.5	2.00	51	28	.07	.10	55/56
520N-5	528N-5	5/16	8	.57	14	4,500	31.0	2.50	64	28	.08	.12	55/56
520N-6	528N-6	3/8	10	.65	17	4,000	27.6	2.50	64	28	.08	.13	55/56
520N-8	528N-8	1/2	13	.81	21	3,500	24.1	4.00	102	28	.14	.20	55/56
520N-10	528N-10	5/8	16	.92	23	2,750	19.0	6.00	152	28	.17	.25	55

### Construction

Tube: Nylon

Reinforcement: Aramid fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series – pg. E-12 56 Series – pg. E-36

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Black

Orange (Non-Conductive)

#### Notes

Perforated cover - 520N Non-perforated cover - 528N



### 526BA - Breathing Air Refill Hose



### **Features**

• 6000 psi Constant Pressure

### **Certifications** (Complies with:)

- CGA G7.1-1 Grade E Breathing Air Standards
- NFPA 1901

### **Applications/Markets**



- Integrated containment fill stations
- Mobile and stationary systems with or without cascade controls



Mobile Trailer/Truck SystemsPortable SCBA Fill

Part Number	Nom I.I		Maxi 0.		Wor	mum king sure	Be	mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	(	9	0	9			7	Ð	Ç	lbs	87	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
526BA-3	3/16	5	.42	11	6,000	41.4	1.50	38	28	.05	.07	55
526BA-4	1/4	6	.50	13	6,000	41.4	2.00	51	28	.07	.10	55
526BA-6	3/8	10	.64	16	6,000	41.4	3.00	76	28	.09	.13	55

### Construction

Tube: Nylon

Reinforcement: Aramid fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +180°F (-40°C to +82°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Gray

#### **Notes**

Perforated cover

Not for use as part of a SCBA systems

This hose is not for use between a pressure reducing regulator and breathing mask

For fitting attachment lubricate only with water or non-toxic lubricant. Do not assemble with petroleum or hydrocarbon based lubricants. Do not flush with solvents of any kind

This hose does not contain a conductive element; therefore, it should not be used with explosive gases such as pure oxygen and hydrogen

Hose is compliant with CGA Grade E Breathing Air Standards, however air quality is dependent upon all system components



### 527BA - Breathing Air Refill Hose



### **Features**

7000 psi constant pressure

### **Certifications** (Complies with:)

- CGA G7.1-1 Grade E Breathing Air Standards
- NFPA 1901

### **Applications/Markets**



- Integrated containment fill stations
- Mobile and stationary systems with or without cascade controls



Mobile Trailer/Truck SystemsPortable SCBA Fill

Part Number	Nom I.	inal D.	Maxi 0.	mum D.	Maxi Wor Pres	king	Be	mum end dius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	(	9	0	$\odot$			4	$\mathcal{Y}$	Ū	lbs		<b>⊕</b>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
527BA-3	3/16	5	.43	11	7,000	48.3	1.50	38	28	.05	.07	55
527BA-4	1/4	6	.52	13	7,000	48.3	2.00	51	28	.07	.11	55

### Construction

Tube: Nylon

Reinforcement: Aramid fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +180°F (-40°C to +82°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12

Connection configurations limited to:

- -Male Pipe (01)
- -Female Pipe (02)
- -Male JIC (03, 3E)
- -Female JIC Swivel (06, 37, 39, 41, L9)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Blue

#### **Notes**

Perforated cover

Not for use as part of a SCBA systems

This hose is not for use between a pressure reducing regulator and breathing mask

For fitting attachment lubricate only with water or non-toxic lubricant. Do not assemble with petroleum or hydrocarbon based lubricants. Do not flush with solvents of any kind

This hose does not contain a conductive element; therefore, it should not be used with explosive gases such as pure oxygen and hydrogen

Hose is compliant with CGA Grade E Breathing Air Standards, however air quality is dependent upon all system components



### 53DM/538DM - DuraMax™ Low Temperature





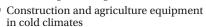
### **Applications/Markets**







- Excellent over-the-sheave in lift truck applications
- Cold storage or refrigerated areas



### **Features**

- Matte cover for low coefficient of friction
- Superior flexibility in cold temperature applications
- Better bend radius than SAE J517 and 100R7
- Smaller O.D.s than 100R7 and 100R18
- 3000 psi constant pressure

### **Certifications**

- Meets/Exceeds SAE 100R18
- 538DM Meets SAE J517 for less than 50 micro-amps leakage under 75,000 volts per foot

	art nber	Nom I.	ninal D.	Maxi 0.	mum D.	Maxi Worl Pres	king	Mini Be Rac	nd	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	inch mm		(	$\overline{)}$		<b>7</b>	\$	9	U	lbs	5 C [kg]	<del></del>
Natural	Non-Conductive	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
53DM-3	538DM-3	3/16	5	.43	11	3,000	20.7	1.00	25	28	.06	.08	55/56
53DM-4	538DM-4	1/4	6	.49	12	3,000	20.7	1.25	32	28	.07	.10	55/56
53DM-5	538DM-5	5/16	8	.60	15	3,000	20.7	2.00	51	28	.10	.15	58/HY*
53DM-6	538DM-6	3/8	10	.66	17	3,000	20.7	2.00	51	28	.11	.16	55/56
53DM-8	538DM-8	1/2	13	.84	21	3,000	20.7	3.50	89	28	.17	.26	55/56
53DM-10	538DM-10	5/8	16	1.03	26	3,000	20.7	4.00	102	28	.22	.33	58
53DM-12	-	3/4	19	1.13	29	3,000	20.7	6.50	165	28	.26	.39	58H

### Construction

Tube: Copolyester Reinforcement: Fiber Cover: Copolyester

### **Operating Parameters**

Temperature Range:

-70°F to +212°F (-57°C to +100°C)

For use with water and water-based hydraulic fluids to +135°F (+57°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12
 56 Series - pg. E-36
 58 Series - pg. E-12
 58H Series - pg. E-61

HY Series - pg. E-107 (\*HY Fittings available from Parker

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors

Black

Orange (Non-Conductive)

### Notes

Perforated cover - 53DM Non-perforated cover - 538DM



### 540N - General Hydraulic Hose



### **Features**

- Matte cover for low coefficient of friction
- Special order colors
- Twin or multi-line available
- Excellent chemical compatibility
- Greater range of fluid compatibility than SAE 100R1 hose

### Certifications

- Meets/Exceeds SAE 100R7
- MSHA Accepted

### **Applications/Markets**





- Hydraulic and pneumatic systems
- Agricultural Spraying
- Polyurethane Foam Mixers
- Fire-resistant Fluid
- Hot Water

Part Number	Nom I.		Maxi 0.		Maxi Wor Pres	king	Be	mum nd lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	(	9			7	9	C	lbs		<del>===</del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
540N-2	1/8	3	.34	9	3,000	20.7	0.50	13	28	.03	.05	57
540N-3	3/16	5	.44	11	3,000	20.7	0.75	19	28	.04	.06	55/56
540N-4	1/4	6	.50	13	2,750	19.0	1.50	38	28	.07	.10	55/56
540N-5	5/16	8	.58	15	2,500	17.2	1.75	44	28	.07	.10	55/56
540N-6	3/8	10	.65	17	2,250	15.5	2.00	51	28	.09	.13	55/56
540N-8	1/2	13	.81	21	2,000	13.8	3.00	76	28	.13	.19	55/56
540N-12	3/4	19	1.05	27	1,250	8.6	6.00	152	28	.17	.25	55/56

### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

57 Series - pg. E-58

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

### **Notes**

Perforated cover



### 540P - Specialty Water Hose



### **Features**

- Plasticizer free non-leaching core tube
- Low-moisture permeability

### **Certifications**

- Meets/Exceeds SAE 100R7
- Core tube compliant with FDA Title 21

### **Applications/Markets**





- Potable water delivery to remote sites
- Distilled and de-ionized water

Part Number	Non I.	ninal D.	Maxi 0.	mum D.	Maxi Wor Pres	king	Minii Be Rac	nd	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	(	9			7	$\mathcal{I}$	Ū	lbs	kg L	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
540P-4	1/4	6	.50	13	2,750	19.0	1.25	32	28	.05	.08	55/56
540P-6	3/8	10	.65	17	2,250	15.5	2.00	51	28	.09	.13	55/56
540P-8	1/2	13	.81	21	2,000	13.8	3.00	76	28	.13	.19	55/56
540P-12	3/4	19	1.05	27	1,250	8.6	5.00	127	28	.19	.28	55/56

### Construction

Tube: Polyethylene Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +150°F (-40°C to +66°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors



#### **Notes**

Perforated cover



### 55LT - Low Temperature Hose



### **Features**

- Twin and multi-line available
- Superior flexibility in cold temperature applications

### **Certifications**

Meets/Exceeds SAE 100R7

### **Applications/Markets**







- Hydraulic systems exposed to very low temperatures
- Excellent over-the-sheave in lift truck applications
- Cold storage or refrigerated areas
- Construction and agriculture equipment in cold climates

Part Number		ninal D.	Maxi 0.	mum D.	Wor	mum king sure	Be	mum Ind lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	(	9	(	9			4	$\mathcal{Y}$	Ū	lbs	kg C	<del>==</del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
55LT-2	1/8	3	.34	9	3,000	20.7	0.50	13	28	.03	.05	57
55LT-3	3/16	5	.43	11	3,250	22.4	0.75	19	28	.05	.08	55/56
55LT-4	1/4	6	.51	13	3,000	20.7	1.25	32	28	.07	.10	55/56
55LT-5	5/16	8	.57	14	2,500	17.2	1.75	44	28	.09	.13	55/56
55LT-6	3/8	10	.66	17	2,250	15.5	2.00	51	28	.10	.14	55/56
55LT-8	1/2	13	.81	21	2,500	17.2	3.00	76	28	.14	.21	55/56
55LT-12	3/4	19	1.09	28	1,250	8.6	5.00	127	28	.21	.31	55

#### Construction

**Tube: Copolyester** Reinforcement: Fiber Cover: Copolyester

### **Operating Parameters**

Temperature Range:

-70°F to +212°F (-57°C to +100°C)

For use with water and water-based hydraulic fluids

to +135°F (+57°C)

Change in length at Max. Working Pressure: ±2% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

57 Series - pg. E-58

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### **Notes**

Perforated cover



### 56DH/568DH - Diagnostic Hose





### **Features**

- Twin or multi-line available
- Compact O.D.
- Light weight
- Flexible

### **Certifications**

■ MSHA Accepted for -2 only

### **Applications/Markets**







- Hydraulic and pneumatic systems where a small O.D. hose is necessary
- Diagnostic hydraulic lines

_	art mber	Non I.	ninal D.	Maxi 0.		Wor	mum king sure	Mini Be Rac		We	ight	Permanent Fitting Series
#	#	0		0	$\odot$			\$	9	[lbs]		<del></del>
Natural	Non-Conductive	inch mm		inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./mtr.	
56DH-1.5	568DH-1.5	.09	2	.20	5	6,000	41.4	0.25	6	.02	.01	SF
56DH-2	568DH-2	.14	4	.32	8	6,000	41.4	0.50	13	.03	.05	CY

### Construction

Tube: Nylon

Reinforcement: Aramid fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +200°F (-40°C to +93°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

CY Series - pg. E-101

SF Series - pg. E-105

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Black

Orange (Non-Conductive)

#### **Notes**

Perforated cover - 56DH

Non-perforated cover - 568DH



### 569 High Pressure Hydraulic Hose



### **Features**

- 10,000 psi working pressure
- Lightweight aramid fiber construction
- (20-45% lighter than comparable hoses)
- Bonded construction available
- Compact O.D. for improved routing and handling
- Excellent kink resistance

### **Certifications**

• IJ-100 Requirements

### **Applications/Markets**





- Hydraulic tools
- High pressure hydraulics
- High pressure pumps
- Jacking systems
- Emerging markets (Oil & Gas)

Part Number	Non I.	ninal D.	Maxi 0.	mum D.	Wor	mum king sure	Mini Be Rac	nd	Wei	ight
#	(	9	(	$\bigcirc$			- *	$\mathcal{Y}$	De l	kg L
	inch	mm	inch	mm	psi@73°F	MPa@23°F	inch	mm	lbs./ft.	kg./m.
569-4	1/4	6	.54	14	10,000	69.0	2	51	.08	.122

### Construction

Tube: Nylon

Reinforcement: Aramid fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +176°F (-40°C to +80°C)

Vacuum Rating: 28 inch Hg

Change in length at Max. Working Pressure: ±2% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

58 Series - pg. E-12

Connection configurations limited to:

- Male Taper Pipe Rigid Straight (10158-4-4, 10158-6-4)
- Metric Swivel Female DIN 20078 Light Series Straight (1C358-8-4)

### Fittings (cont.)

- Seal-Lok (O-ring Face Seal) Female Swivel Straight (1JS58-4-4)
- Seal-Lok (O-ring Face Seal) Female Swivel Short Straight (1JC58-4-4)
- Male Straight Thread with O-ring (O-ring Boss) Straight (10558-4-4)

### Colors



#### **Notes**

Not to be used for pneumatic or gaseous service

Not to be used with chlorinated solvents

Factory built assembly only or assembled by Parker certified assembler

Assemblies require bend restrictors (HG569-4) to reduce the risk of exceeding the minimum hose bending radius at the fitting

Warning tag (569-4-TAG) required for all assemblies

Non-perforated cover



### **573X - Fast Response Hose**



### **Features**

- Fast response even over longer lengths
- 3000 psi constant pressure

### **Certifications**

■ MSHA Accepted -3 only

### **Applications/Markets**





- Marine, offshore drilling
- Applications requiring fast and accurate response time



Part Number	Nom I.		Maxi 0.	mum D.		mum king sure	Minii Be Rad	nd	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	(	9	(	9			$\mathcal{A}$		Ū	lbs	kg	<del>===</del>
	inch	mm	inch	mm	psi	psi MPa		mm	inch	lbs./ft.	kg./mtr.	
573X-3	3/16	5	.34	9	3,000	20.7	2.00	51	28	.03	.04	LV
573X-16	1	25	1.46	37	3,000	20.7	10.00	254	28	.41	.60	LV

#### Construction

Tube: Nylon

Reinforcement: Aramid fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +200°F (-40°C to +93°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

LV Series - pg. E-124

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource.

Access instructions are on pg. G-13

### **Colors**

Black

### **Notes**

Non-perforated cover

Factory-made assemblies only



### **575X – Fast Response Hose**



### **Features**

- Fast response even over longer lengths
- 5000 psi constant pressure

### Certifications

■ MSHA Accepted

### **Applications/Markets**







- Marine, offshore drilling
- Applications requiring fast and accurate response time





Part Number	Nom I.I		Maximum O.D.		Maximum Working Pressure		Mini Be Rad		Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	0				\$	9	Ū	lbs	kg	#⊡
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
575X-3	3/16	5	.43	11	5,000	34.5	1.50	38	28	.05	.07	55
575X-4	1/4	6	.51	13	5,000	34.5	2.00	51	28	.07	.10	55
575X-6	3/8	10	.64	16	5,000	34.5	3.00	76	28	.09	.13	55
575X-8	1/2	13	.81	21	5,000	34.5	4.00	102	28	.14	.21	55
575X-12	3/4	19	1.15	29	5,000	34.5	8.00	203	28	.24	.36	58H
575X-16	1	25	1.59	40	5,000	34.5	10.00	254	28	.36	.54	58H

### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure:  $\pm 2\%$ 

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12

58H Series - pg. E-61

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**



### **Notes**

Non-perforated cover



### 580N/H580N/588N - High Pressure Hose





### **Features**

- Twin and multi-line available
- Lighter weight and smaller O.D. than 100R2

### Certifications

- Meets/Exceeds SAE 100R8 specifications
- 580N MSHA Approved
- 588N Meets SAE J517 for less than 50 micro-amps leakage under 75,000 volts per foot

### **Applications/Markets**







- Hydraulic and pneumatic circuits and systems
- Replaces 100R2 rubber hose wherever greater flexibility, fluid compatibility, and cover durability are required

	art nber	Nominal I.D.		Maxi 0.	mum D.	Maxi Wor Pres		Minii Be Rad	nd	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	0		0			<u></u>	5	9	Ū	lbs	lag lag	<del>==</del>
Natural	Non-Conductive	inch mm		inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
580N-4	588N-4	1/4 6		.62	16	5,000	34.5	2.00	51	28	.11	.16	58
580N-6	588N-6	3/8	10	.77	20	4,000	27.6	2.50	64	28	.15	.22	58
580N-8	588N-8	1/2	13	.89	23	3,500	24.1	4.00	102	28	.21	.31	56/58
580N-10	588N-10	5/8	16	.98	25	2,750	19.0	6.00	152	28	.21	.31	56/58
580N-12	588N-12	3/4	19	1.15	29	2,250	15.5	8.00	203	28	.23	.35	56/58
580N-16	588N-16	1	25	1.47	37	2,000	13.8	10.00	254	28	.38	.56	56/58
H580N-16*	-	1	25	1.58	40	3,000	20.7	10.00	254	28	.53	.79	58H

### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

58 Series - pg. E-12

56 Series - pg. E-36

58H Series - pg. E-61

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Black

Orange (Non-Conductive)

#### Notes

Perforated cover - 580N

\*Non-perforated cover -588N, H580N-16



### 83FR - DuraGard™ General Purpose Polyurethane



### **Features**

- Weld spatter resistant
- Excellent abrasion resistance
- Extreme flexibility
- Compact bend radius
- Specially formulated polyurethane tube
- Twin-line or multi-line constructions available

### Certifications

- MSHA Accepted
- Non-conductive per SAEJ343 test procedures for thermoplastic hose
- **UL94HB** compliant

### **Applications/Markets**







General purpose air and water hose often used in robotic welding applications





Part Number	Nom I.I	ninal D.	Maximum 0.D.		Maximum Working Pressure			mum nd lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series	PushLok Fitting*
#	(	$\bigcirc$	0				7	$\mathcal{I}$	Ù	lbs	lag	<del>===</del>	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
83FR-4*	1/4	6	.48	12	300	2.1	1.00	25	28	.05	.07	55/56	82**
83FR-6	3/8	10	.60	15	300	2.1	2.00	51	28	.08	.11	55/56	82**
83FR-8	1/2	13	.76	19	300	2.1	2.50	64	28	.12	.17	55/56	82**
83FR-12	3/4	19	1.04	26	300	2.1	3.50	89	28	.19	.28	55/56	82**

#### Construction

Tube: Specially formulated polyurethane

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-20°F to +200°F (-29°C to +93°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12

56 Series - pg. E-36

82 Series - (\*\*82 Series Fittings available from Parker

Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors

- Black (BLK)
- Blue (BLU)
- Brown (BRN)
- Green (GRN)
- Gray (GRA)
- Red (RED)

\*Temperature and pressure reduced with 82 series

**Push-Lok Fitting:** 

-20°F to +145°F (-29°C to +63°C)

175 psi maximum working pressure

For -4 hose with 56 series fitting, use die P04J

Non-perforated cover



### 1035A - Power Cleaning



### **Features**

- Non-marring
- Extremely flexible

### **Applications/Markets**



- Pressure Washers (low pressure)
- Carpet Cleaning

Part Number	Non I.	ninal D.	Maxi 0.		Maximum Working Pressure		Minii Be Rac	nd	Vac. Rating Hg./73°F	Wei	ght	Permanent Fitting Series
#	(	9	0	$\odot$			7	$\mathcal{I}$	Ū	lbs		
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
1035A-4	1/4	6	.51	13	1,500	10.3	.63	16	28	.08	.13	55
1035A-6	3/8	10	.62	16	1,200	8.3	.88	22	28	.10	.15	55

### Construction

Tube: Special PFX compound Reinforcement: Fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-25°F to +212°F (-32°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors



### Notes

Perforated cover

No chlorinated solvents should be used

HBR (Hose Bend Restrictor) suggested for carpet cleaning applications - See Hose Guard in Tooling Equipment and Accessories Section pg. F-18



### 1035HT - High Temperature Power Cleaning



### **Features**

- Non-marring
- Broad temperature range

### **Applications/Markets**



- Pressure Washers (low pressure)
- Carpet Cleaning

Part Number	Non I.	ninal D.	Maxi 0.	mum D.	Maximum Working Pressure		Mini Be Rac	nd	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	(	9	(	9	<b>7</b>		\$	Ð	Ū	lbs		#⊡
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
1035HT-3	3/16	5	.43	11	2,000	13.8	0.75	19	28	.04	.06	55
1035HT-4	1/4	6	.50	13	1,750	12.1	1.50	38	28	.06	.08	55/56
1035HT-6	3/8	10	.65	17	1,500	10.3	2.00	51	28	.09	.13	55/56

### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +230°F (-40°C to +110°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series – pg. E-12 56 Series – pg. E-36

For most Parker products, Crimp Die Selection charts can be

found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Yellow

### Notes

Perforated cover

No chlorinated solvents should be used

HBR (Hose Bend Restrictor) suggested for carpet cleaning applications - See Hose Guard in Tooling Equipment and Accessories Section pg. F-18



## General Technical G

### **B9 - General Purpose Transfer Hose**



### **Features**

Excellent flexibility

### **Applications/Markets**







Low pressure transmission of air, oil, water, and coolants



Part Number	Nom I.I		Maximum O.D.		Maximum Working Pressure		Be	mum nd lius	We	ight	Vac. Rating Hg./73°F	Permanent Fitting Series	Field Attachable Series
#	(	9	0				7	9	lbs	lag lag	Ū	#⊡	
	inch	mm	inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./mtr.	inch		
B903	3/16	5	.39	10	250	1.7	1.00	25	.04	.06	28	55/56	-
B904	1/4	6	.46	12	250	1.7	1.50	38	.05	.07	28	55/56	82*
B905	5/16	8	.55	14	250	1.7	2.00	51	.08	.12	28	55/56	-
B906	3/8	10	.64	16	250	1.7	3.00	76	.09	.13	28	55/56	82*
B908	1/2	13	.78	20	250	1.7	3.00	76	.13	.19	28	55/56	82*
B910	5/8	16	.93	24	250	1.7	4.00	102	.20	.30	28	55/56/HY***	82*

### Construction

Tube: Specially formulated polyurethane

Reinforcement: Fiber

Cover: Specially formulated polyurethane

### Operating Parameters

Temperature Range:

-40°F to +200°F (-40° C to +93° C)

(Limited to +130°F (+54°C) for water and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

55 Series - pg. E-12 56 Series - pg. E-36

82 Series - (\*82 Series Fittings available from Parker

Hose Products Division)

HY Series - pg. E-107 (\*\*HY Fittings available from Parker

Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Red

Black (BK)

#### **Notes**

\*Temperature and pressure reduced with 82 series

Push-Lok Fitting:

-20°F to +100°F (-29°C to +38°C)

100 psi maximum working pressure

Non-perforated cover



# CNG - Electrically Conductive Compressed Natural Gas Hose



### **Features**

Twin constructions available

### **Certifications**

#### Conforms to:

- NFPA 52
- ANSI/IAS NGV 4.2
- ECE R110 Sizes -4 and -8 only for assemblies purchased through Parker Polyflex (Europe)
- CSA12.52

### **Applications/Markets**







- CNG Dispenser/Refueling
- Fleet Transit/On-Vehicle
- CNG Fuel Transfer
- At-Home CNG Refueling

Part Number	Nominal I.D.		Maxi 0.	mum D.	Maxi Wor Pres	king	Mini Be Rac	nd	We	ight
#	(	0		$\odot$			7	$\mathscr{D}$	lbs	kg C
	inch	mm	inch mm		psi	MPa	inch	mm	lbs./ft.	kg./mtr.
5CNG-4	1/4	6	.55	14	5,000	34.5	2.00	51	.08	.11
5CNG-6	3/8	10	.65	16	5,000	34.5	3.00	76	.09	.13
5CNG-8	1/2	13	.90	23	5,000	34.5	4.00	102	.21	.31
5CNG-12	3/4	19	1.15	29	5,000	34.5	7.50	191	.24	.36
5CNG-16	1	25	1.59	40	5,000	34.5	10.00	254	.36	.53

### Construction

Tube: Electrically conductive nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +180°F (-40°C to +82°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

Factory-made assemblies only

55 Series – pg. E-12 58 Series – pg. E-12

58H Series - pg. E-61

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**



#### Notes

Perforated cover

CNG hose must be assembled at the factory or by a Parflex approved facility

Wire spring guards must be used on ANSI/CSA design certified CNG dispenser hose assembly sizes -4 through -8: single and multi-line bonded assemblies - pg. F-21

### **Accessories**

PSG - Wire spring guard

CNGG - Vinyl hose guard

Consult Parflex CAT. 4660 for CNG guard selection



### **HLB – Lubrication Line Hose**



### **Features**

- HLB remote lubrication system versus 1/4" rubber hoses can save money per line in reduced component and instal-
- Unique GK bulkhead hose fittings with integrated nipple can save money per zerk connection in unnecessary adapter
- Compact 1/8" hoses save hundreds of dollars of waste in your operation by eliminating gallons of unnecessary "in-line" grease versus larger bore rubber hoses

### Certifications

■ MSHA Accepted







Applications/Markets











- Grease and lubrication lines Agriculture
- Construction
- Industrial
- Material Handling

•	Mobile Equipment
---	------------------

Transportation

Part Number	Nom I.I		Maxi 0.	mum D.	Wor	Maximum Working Pressure		mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series	Field Attachable Series
#	(	9	0	$\odot$	<b>1</b>		4	$\mathcal{Y}$	Ĺ	[lbs]			
	inch	mm	inch	mm	psi	psi MPa		mm	inch	lbs./ft.	kg./mtr.		
HLB02*	1/8	3.2	.32	8	3,000 20.7		.50	13	28	.03	.04	CY	BU
HLB03**	3/16	4.8	.41	10	3,000 20.7		.75	19	28	.06	.08	CY	BU

### Construction

**Tube: Copolyester** Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C) with CY fittings (Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

BU Series Field Attachable Fitting limited to 120°F Change in length at Max. Working Pressure: ±3%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

BU Series - pg. E-100 CY Series - pg. E-101

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors



#### **Notes**

Not for use as a whip hose on hand-operated grease guns Bend restrictions are available only for permanent fittings. HBR (Hose Bend Restrictor) available for Marine Steering Hose Assemblies. See Hose Guard in Tooling Equipment and Accessories Section pg. F-18

\*HLB-2 - Guard P.N. CY02-652317

\*\*HLB-3 - Guard P.N. 3PSG-4



### MSH - Marine Steering Fast Response Hose



### **Features**

- Fast, accurate response
- Permanent or field attachable
- Salt water, corrosion resistant

### **Applications/Markets**



- Wide range of marine applications
- Marine hydraulic steering systems

Part Number	Non I.		Maxi 0.	mum D.	Maxi Worl Pres		Mini Be Rac		Vac. Rating Hg./73°F	Wei	ght	Permanent Fitting Series	Field Attachable Series
#	(	9	(	9			4	$\mathcal{I}$	Ę	bs			
	inch	mm	inch	mm	psi	psi MPa		mm	inch	lbs./ft.	kg./mtr.		
MSH-5	5/16	8	.48	12	1,000	6.9	2.25	57	28	.05	.07	MS	MS
MSH-6	3/8	10	.59	15	1,000	6.9	3.00	76	28	.07	.11	MS	MS

### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +200°F (-40°C to +93°C)

(Limited to +135°F (+57°C) for synthetic hydraulic fluids and water-based fluids)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

MS Series - pg. E-125

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Black

#### Notes

Non-perforated cover

Bend restrictions are available only for permanent fittings. HBR (Hose Bend Restrictor) available for Marine Steering Hose Assemblies. See Hose Guard in Tooling Equipment and Accessories Section pg. F-18



### **PTH - Marine Power Tilt Hose**



### **Features**

- Compact design
- Abrasion resistant polyurethane cover
- Excellent flexibility
- Corrosion resistant

### **Applications/Markets**



- Power tilt mechanisms for outboard and stern drive engines
- Trim Tab assemblies
- Jack Plate assemblies

Part Number	Nom I.I	inal D.		mum D.	Maxi Wor Pres	king	Vac. Rating Hg./73°F	Minii Be Rad	nd	We	ight	Permanent Fitting Series
#	0	9	(	$\odot$			Ū	5	9	lbs		
	inch	mm	inch	mm	psi	MPa	inch	inch	mm	lbs./ft.	kg./mtr.	
PTH-3	3/16	5	.43	11	3,000	20.7	28	0.75	19	.08	.11	92

### Construction

Tube: Nylon

Reinforcement: Fiber and Stainless Steel braid

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

92 Series - pg. E-85

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### Colors

O Clear

#### **Notes**

Non-perforated cover

Also available as custom order with black cover



### **S5N - Predator® Hose** (Water Jetting/Lateral Cleaning)



### **Features**

- Easily identified lime green cover signifies 4000 psi constant pressure
- Slim profile and light weight provide easy handling and routing

### Certifications

- NSWMA (National Solid Waste Management Assoc.)
- WASTEC (Waste Equipment Technology Assoc.)
- WEMI (Waste Equipment Management Inst.)
- Specifications for repair/inspection procedures for high pressure hose used in conjunction with sewer/ catch basin cleaning equipment

56 Series - pg. E-36

### **Applications/Markets**



- High-pressure water equipment for cleaning or debris removal in lateral sewer lines
- Lines provide connection from commercial, industrial or residential structure to the main sewer line located under the streets
- Lateral lines are smaller in diameter than the main lines, and rely more on water pressure than water volume to clear residue and obstructions
- For water/slurry applications, contact Parflex for chemical compatibility recommendations

Part Number	Non I.	ninal D.	Maxi 0.	mum D.		mum king sure	Mini Be Rac		Wei	ight	Permanent Fitting Series
#	(	9	(	9			4	$\mathcal{I}$	lbs	kg	#⊡
	inch	mm	inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./mtr.	
S508N	1/2	13	.81	21	4000	28	4.00	102	.16	.24	55/56

#### Construction

**Tube: Gray Copolyester** Reinforcement: Aramid Fiber

Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +135°F for water (-40°C to +57°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

**Fittings** 

55 Series - pg. E-12



#### Notes

Factory-made assemblies only Not for use in hydraulic applications

Access instructions are on pg. G-13

Perforated cover



### **S6 - Predator® Hose** (Sewer Cleaning)



### **Features**

- Easily identified orange cover signifies 2500 psi constant pressure
- Bonded construction provides excellent kink resistance and flexibility

### **Certifications**

- NSWMA (National Solid Waste Management Assoc.)
- WASTEC (Waste Equipment Technology Assoc.)
- WEMI (Waste Equipment Management Inst.)
- Specifications for repair/inspection procedures for high pressure hose used in conjunction with sewer/ catch basin cleaning equipment

### **Applications/Markets**



- · High-pressure and high-volume water equipment for cleaning or debris removal in large sewer lines
- For water/slurry applications, contact Parflex for chemical compatibility recommendations

Part Number		inal D.		mum D.	Wor	mum king sure	Be	mum nd lius	Wei	ight	Permanent Fitting Series
#	(	9	0				5	9	lbs		<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	lbs./ft.	kg./mtr.	
S612	3/4	19	1.14	29	2,500	17.2	4.00	102	.29	.43	58/SQ/HY*
S616	1	25	1.41	36	2,500	17.2	6.00	152	.38	.57	58/SQ/HY*

### Construction

Tube: Gray Copolyester, S624 - Gray Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +135°F (-40°C to +57°C)

Min. Burst Pressure is 2.5x Max. Working Pressure at 73°F (23°C)

### **Fittings**

58 Series - pg. E-12

SQ Series (Swage Only)- pg. E-127

HY Series – pg. E-107 (\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Orange

#### Notes

Factory-made assemblies only

All standard assembly lengths coupled with rigid male pipe each end

Not for use in hydraulic applications

Perforated cover - S612, S616



### **S9 - Predator® Hose** (Sewer Cleaning)



### **Features**

- Easily identified blue cover signifies 3000 psi constant pressure
- Bonded construction provides excellent kink resistance and flexibility

### Certifications

- NSWMA (National Solid Waste Management Assoc.)
- WASTEC (Waste Equipment Technology Assoc.)
- WEMI (Waste Equipment Management Inst.)
- Specifications for repair/inspection procedures for high pressure hose used in conjunction with sewer/ catch basin cleaning equipment

### **Applications/Markets**



- High-pressure and high-volume water equipment for cleaning or debris removal in large sewer lines
- For water/slurry applications, contact Parflex for chemical compatibility recommendations

Part Number		inal D.	Maxi 0.		Maxi Wor Pres		Mini Be Rac	nd	Wei	ight	Permanent Fitting Series
#	(	0		9			7	9	lbs		
	inch	th mm inch mm psi		psi	MPa	inch	mm	lbs./ft.	kg./mtr.		
S912	3/4	19	1.15	29	3,000	20.7	4.00	102	.30	.45	58/SQ/HY*
S916	1	25	1.47	37	3,000	20.7	8.00	203	.46	.68	58/SQ/HY*

### Construction

Tube: Gray Copolyester Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +135°F for water (-40°C to +57°C)

Min. Burst Pressure is 2.5x Max. Working Pressure at 73°F (23°C)

### **Fittings**

58 Series – pg. E-12

SQ Series (Swage Only)- pg. E-127

HY Series – pg. E-107 (\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors



#### **Notes**

Factory-made assemblies only

All standard assembly lengths coupled with rigid male pipe each end

Not for use in hydraulic applications

Perforated cover



### **SLH – Sewer Leader Hose**



### **Features**

Easily identified black cover indicates termination of hose

### **Certifications**

- NSWMA (National Solid Waste Management Assoc.)
- WASTEC (Waste Equipment Technology Assoc.)
- WEMI (Waste Equipment Management Inst.)

### **Applications/Markets**



Leader hose for S5/S6/S9 high-pressure sewer cleaning hose

Part Number	Nom I.I		Maxi 0.		Maxi Wor Pres	king	Be	mum nd lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	0	9	(	$\odot$			4	$\mathcal{I}$	Ū	lbs	<u> </u>	<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
SLH-8	1/2	13	0.77	20	4,000	27.6	3.50	89	28	.25	.37	58/HY*
SLH-10	5/8	16	0.95	24	4,000	27.6	4.00	102	28	.38	.57	HY*
SLH-12	3/4	19	1.08	27	3,000	20.7	4.80	122	28	.45	.67	HY*
SLH-16	1	25	1.43	36	3,000	20.7	6.00	152	28	.80	1.19	HY*

### Construction

Tube: Gray Copolyester Reinforcement: Wire

Cover: Smooth synthetic rubber

### **Operating Parameters**

Temperature Range:

-40°F to +135°F (-40°C to +57°C)

Min. Burst Pressure is 2.5x Max. Working Pressure at 73°F (23°C)

### **Fittings**

58 Series - pg. E-12

HY Series – pg. E-107 (\*HY Fittings available from Parker Hose Products Division)

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

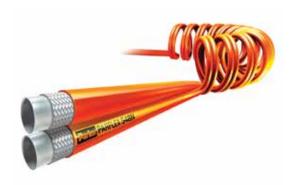
Black

### **Notes**

Not for use in hydraulic applications Non-perforated cover



### **Duraflex™ Hydraulic Hose Coil**



### **Features**

- Bonded twin-line construction
- Self retracting coil design

### Certifications

- Meets/Exceeds SAE 100R7
- Meets SAE J517 for less than 50 microamps leakage under 75,000 volts per foot

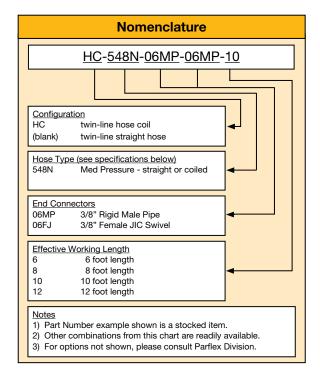
### **Applications/Markets**





- Hydraulic tool hose for aerial lift applications
- General Hydraulics

Part Number		ninal D.	Maxi 0.		Maxi Wor Pres	king	Mini Be Rac	nd	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	9	(	9			4	$\mathcal{I}$	Ū	lbs	kg	<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
548N-6	3/8	10	.65	17	2,250	15.5	2.00	51	28	.09	.13	55/56



### Construction

Tube: Nylon

Reinforcement: Fiber Cover: Polyurethane

### **Operating Parameters**

Temperature Range:

-40°F to +212°F (-40°C to +100°C)

Change in length at Max. Working Pressure:  $\pm 2\%$ 

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

#### **Fittings**

55 Series – pg. E-12 56 Series – pg. E-36

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Orange (Non-Conductive)

#### Notes

Non-perforated cover



# **G** General Technical

### 919/919B - PTFE Hose



### **Applications/Markets**









- Chemical Transfer Lines
- General Hydraulics
- Compressed Air/Gases
- Adhesive Dispensing
- Coolant Lines
- Medical Gases

### **Features**

- Excellent chemical compatibility
- Handles extreme temperatures to +450°F
- Environmentally safe
- Resists moisture
- Low friction minimizes pressure drops and deposits

### Certifications

- Meets/Exceeds SAE 100R14A 919
- Meets/Exceeds SAE 100R14B 919B
- FDA CFR 177.1550 (Natural tube)

	art nber	Nom I.I		Maxi 0.		Wor	mum king sure	Mini Be Rac		Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series	Field Attachable Series
#	#	0	9)	0	9			5	9	Ū	lbs			
Natural	Conductive	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.		
919-3	-	1/8	3	.25	6	3,000	20.7	1.50	38	28	.04	.06	91	_
919-4	919B-4	3/16	5	.32	8	3,000	20.7	2.00	51	28	.06	.09	91N	90
919-5	919B-5	1/4	6	.38	10	3,000	20.7	3.00	76	28	.09	.13	91N	90
919-6	919B-6	5/16	8	.44	11	2,500	17.2	4.00	102	28	.10	.15	91N	90
919-8	919B-8	13/32	10	.53	13	2,000	13.8	5.00	127	28	.13	.19	91N	90
919-10	-	1/2	13	.63	16	1,500	10.3	6.50	165	28	.15	.22	91N	90
919-12	-	5/8	16	.75	19	1,200	8.3	7.50	191	12	.19	.28	91N	90
919-16	-	7/8	22	1.03	26	1,000	6.9	9.00	229	14	.27	.40	91N	90
919-20	-	1-1/8	29	1.28	33	625	4.3	16.00	406	10	.39	.58	91	90

### **Construction**

Tube: 919 - Natural FDA Compliant PTFE 919B - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

90 Series - pg. E-65

91/91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Notes**

Use hose type 919B with static-dissipative core tube when conveying non-conducting fluids such as oils, paints, fuels, steam, etc.



### 919J - Silicone Covered PTFE Hose



### **Features**

- Silicone cover provides a clean, smooth cover to protect the stainless steel wire reinforcement against wear, fraying and contaminants
- Steam cleanable

### **Certifications**

- Meets/Exceeds SAE 100R14A
- FDA CFR 177.1550

### **Applications/Markets**









- Chemical Transfer Lines
- General Hydraulics
- Compressed Air/Gases
- Adhesive Dispensing
- Coolant Lines
- Medical Gases

Part Number	Nom I.I		Maxi 0.		Maxi Wor Pres	king	Mini Be Rac	nd	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	0	9	0	0			5	9	Ū	lbs		<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
919J-4-RED	3/16	5	.45	11	3,000	20.7	2.00	51	28	.12	.18	91N
919J-5-RED	1/4	6	.52	13	3,000	20.7	3.00	76	28	.14	.21	91N
919J-6-RED	5/16	8	.58	15	2,500	17.2	4.00	102	28	.17	.25	91N
919J-8-RED	13/32	10	.68	17	2,000	13.8	5.00	127	28	.20	.30	91N
919J-10-RED	1/2	13	.78	20	1,500	10.3	6.50	165	28	.24	.35	91N
919J-12-RED	5/8	16	.91	23	1,200	8.3	7.50	191	12	.29	.43	91N

### Construction

Tube: Natural FDA compliant PTFE Reinforcement: 304 Stainless Steel braid

Cover: Extruded silicone

### **Operating Parameters**

Temperature Range:

-40°F to +450°F (-40°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

### **Colors**

Red

#### **Notes**

Cover must be skived prior to fitting attachment

### 919U - High Abrasion Resistance PTFE Hose



### **Features**

 Non-Marring, abrasion resistant polyurethane cover protects the stainless steel wire reinforcement against wear, fraying and contaminants

### Certifications

- Meets/Exceeds SAE 100R14A but operates at a temperature range of -40°F to +275°F
- FDA CFR 177.1550

### **Applications/Markets**









- Chemical Transfer Lines
- General Hydraulics
- Compressed Air/Gases



- Adhesive Dispensing **Coolant Lines**
- Medical Gases

Part Number	Nom I.I	ninal D.	Maxi 0.	mum D.	Maxi Wor Pres	king	Ве	mum end dius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	0	9	0	9	riessure		5	9	Ū	lbs		<del></del>
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
919U-4	3/16	5	.37	9	3,000	20.7	2.00	51	28	.08	.13	91N
919U-6	5/16	8	.51	13	2,500	17.2	4.00	102	28	.13	.20	91N
919U-8	13/32	10	.61	15	2,000	13.8	5.00	127	28	.15	.22	91N
919U-12	5/8	16	.84	21	1,200	8.3	7.50	191	12	.22	.33	91N
919U-16	7/8	22	1.12	28	1,000	6.9	9.00	229	14	.31	.47	91N

### Construction

Tube: Natural FDA compliant PTFE Reinforcement: 304 Stainless Steel braid

Cover: Polyurethane

### Operating Parameters

Temperature Range:

-40°F to +275°F (-40°C to +135°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Colors

Black

#### Notes

Cover must be skived prior to fitting attachment Other colors available upon request



### 929/929B - Heavy Wall PTFE Hose



### **Applications/Markets**









- Chemical Transfer Lines
- General Hydraulics
- Compressed Air/Gases
- Adhesive Dispensing
- Coolant Lines

### **Features**

- Tight bend radius
- Excellent kink resistance
- Enhanced resistance to gas permeation due to increased PTFE wall thickness (.040")

### **Certifications**

- Meets/Exceeds SAE 100R14A 929
- Meets/Exceeds SAE 100R14B 929B
- FDA CFR 177.1550 (Natural tube)
- Medical Gases
- 919 (100R14) hose applications requiring tight routings

	art nber		ninal D.	Maxi 0.	mum D.	Maxi Wor Pres	king	Be	mum nd lius	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	#	0	9	0	9			5	9	Ç	lbs		<del></del>
Natural	Conductive	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
929-4	929B-4	3/16	5	.34	9	3,000	20.7	2.00	51	28	.08	.12	91N
929-6	929B-6	5/16	8	.47	12	2,500	17.2	4.00	102	28	.12	.18	91N
929-8	929B-8	13/32	10	.59	15	2,000	13.8	4.60	117	28	.16	.23	91N
-	929B-12	5/8	16	.81	21	1,200	8.3	6.50	165	12	.19	.28	91N
-	929B-16	7/8	22	1.14	29	1,250	8.6	7.40	188	12	.49	.73	91N

### Construction

Tube: 929 - Natural FDA Compliant PTFE 929B - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Notes

Use hose type 929B with static-dissipative core tube when conveying non-conducting fluids such as oils, paints, fuels, steam, etc.



# **929BJ** - Silicone Covered PTFE Hose (with Static-Dissipative Tube)



### **Features**

- Silicone cover protects SS wire reinforcement against wear and fraying, up to 450°F
- Silicone cover provides clean, smooth cover and prevents contaminants from accumulating in braid
- Tight bend radius
- Excellent kink resistance
- Enhanced resistance to gas permeation due to increased PTFE wall thickness
- Steam cleanable

### **Applications/Markets**







- Vacuum lines for high temperature autoclaves
- General Hydraulics
- Compressed Air/Gases

Part Number	Nom I.I		Maxi 0.		Tu W		Maxi Wor Pres	king	Minii Be Rac	nd	Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	(	$\odot$	(	$\odot$					*	$\mathcal{I}$	٦	lbs	kg	⊞
	inch	mm	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
929BJ-4	3/16	5	.58	15	.040	1.02	3,000	20.7	2.00	51	28	.17	.25	91N
929BJ-6	5/16	8	.70	18	.040	1.02	2,500	17.2	4.00	102	28	.23	.34	91N
929BJ-8	13/32	10	.81	20	.044	1.12	2,000	13.8	4.60	117	28	.29	.43	91N

#### Construction

Tube: Black static-dissipative PTFE Reinforcement: 304 Stainless Steel braid

Cover: Silicone cover

### **Operating Parameters**

Temperature Range:

-65°F to +450°F (-54°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Colors**

Brown

#### **Notes**

Cover must be skived prior to fitting attachment



### 939/939B - Convoluted PTFE Hose





### **Features**

- Excellent flexibility
- Exceptional kink resistance

### **Certifications**

• FDA CFR 177.1550 (Natural tube)

### **Applications/Markets**







- Chemical Transfer
- General Hydraulics
- Hose applications requiring tight routings



	art nber	Nom I.I		Maxi 0.	mum D.	Wor	mum king sure	Be	mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	(	9	(	9		<u></u>	5	9	Ū	lbs	kg	<del></del>
Natural	Conductive	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.	
939-6	939B-6	3/8	10	.59	15	1,500	10.3	2.25	57	28	.12	.18	93N
939-8	939B-8	1/2	13	.79	20	1,350	9.3	2.88	73	28	.21	.31	93N
939-10	939B-10	5/8	16	.88	22	1,000	6.9	3.00	76	28	.24	.36	93N
939-12	939B-12	3/4	19	1.09	28	1,100	7.6	3.75	95	28	.32	.47	93N
939-16	939B-16	1	25	1.33	34	1,000	6.9	5.00	127	28	.45	.67	93N
939-20	939B-20	1-1/4	32	1.75	44	1,000	6.9	6.25	159	20*	.70	1.04	93N
939-24	939B-24	1-1/2	38	2.05	52	750	5.2	7.50	191	12*	.80	1.18	93N
939-32	939B-32	2	51	2.56	65	250	1.7	10.00	254	5*	1.01	1.50	93N

#### Construction

Tube: 939 - Natural FDA Compliant PTFE 939B - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

93N Series - pg. E-87

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Notes**

Use hose type 939B with static-dissipative core tube when conveying non-conducting fluids such as oils, paints, fuels, steam, etc.

Not suggested for steam-cold water cycling applications \* 28 in/Hg can be obtained by using 2799 internal spring guard. See pg. F-20



### 943B - 3,000 psi W.P. High Temp Hose



### **Features**

- High temperature hydraulic hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

### Certifications

Meets/Exceeds SAE 100R7 and SAE 100R17

### **Applications/Markets**



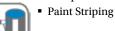




- High temp hydraulic applications
- Chemical Transfer
- Compressed Air/Gases







Part Number	Nominal I.D.		Maximum 0.D.		Maximum Working Pressure		Minimum Bend Radius		Vac. Rating Hg./73°F	Weight	
#	0		$\odot$				<b>*</b>		Ĺ	lbs	
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.
943B-6	5/16	8	.49	12	3,000	20.7	2.50	64	28	.18	.26
943B-8	13/32	10	.62	16	3,000	20.7	2.88	73	28	.24	.35
943B-10	1/2	13	.73	19	3,000	20.7	3.25	83	28	.32	.46
943B-12	5/8	16	.99	25	3,000	20.7	4.00	102	28	.70	1.01
943B-16	29/32	23	1.25	32	3,000	20.7	5.00	127	28	1.02	1.53

### Construction

Tube: Black static-dissipative PTFE Reinforcement: 304 Stainless Steel braid

### **Operating Parameters**

Temperature Range:

-65°F to +400°F (-54°C to +204°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

### **Fittings**

94 Series - pg. E-90

#### Notes

Factory-made assemblies only Not suggested for steam-cold water cycling applications



### 944B - 4,000-4,500 psi W.P. High Temp Hose



#### **Features**

- High temperature hydraulic hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

#### **Applications/Markets**







- General Hydraulics
- Chemical Transfer
- Compressed Air/Gases



Part Number	Nom I.I	ninal D.		mum D.	Wor	mum king sure	Ве	mum nd lius	Vac. Rating Hg./73°F	We	ight
#	(	9	0				5	J_	Ū	lbs	lag lag
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.
944B-4	15/64	6	.39	10	4,500	31.0	1.50	38	28	.11	.16
944B-6	5/16	8	.49	12	4,500	31.0	2.50	64	28	.17	.24
944B-8	7/16	11	.62	16	4,500	31.0	2.88	73	28	.25	.35
944B-10	1/2	13	.73	19	4,000	27.6	3.25	83	28	.31	.45
944B-12	5/8	16	.99	25	4,000	27.6	4.00	102	28	.74	1.05
944B-16	29/32	23	1.25	32	4,000 27.6		5.00 127		28	1.09	1.55

#### **Construction**

Tube: Black static-dissipative PTFE Reinforcement: 304 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-65°F to +400°F (-54°C to +204°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 3x Max. Working Pressure at  $73^{\circ}F$  ( $23^{\circ}C$ )

#### **Fittings**

94 Series - pg. E-90

#### **Notes**

Factory-made assemblies only

Not suggested for steam-cold water cycling applications Reduce pressure to 3,000 psi (20.7MPa) for pressure impulse applications



### 950B - 4,000 psi W.P. High Temp Hose



#### **Features**

- High temperature hydraulic hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

#### **Applications/Markets**







- High temp hydraulic applications
- Chemical Transfer
- Compressed Air/Gases





•	Ground	Suppor

Part Number	Nom I.			Maximum O.D.		mum king sure	Mini Be Rac		Vac. Rating Hg./73°F	Weight	
#	(	9	(	9			- <del>1</del>	$\mathcal{N}$	Ū	lbs	by
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.
950B-4	15/64	6	.50	13	4,000	27.6	3.00	76	28	.20	.27
950B-6	5/16	8	.62	16	4,000	27.6	5.00	127	28	.24	.36
950B-8	7/16	11	.75	19	4,000	27.6	5.75	146	28	.45	.68
950B-12	5/8	16	1.08	27	4,000	27.6	7.75	197	28	.96	1.43
950B-16	29/32	23	1.36	34	4,000	27.6	9.63	245	28	1.30	1.93

#### Construction

Tube: Black static-dissipative PTFE Reinforcement: Multiple high density braids of 304 Stainless Steel

#### **Fittings**

95 Series - pg. E-90

#### Notes

Factory-made assemblies only

#### **Operating Parameters**

Temperature Range:

-65°F to +400°F (-54°C to +204°C)

Change in length at Max. Working Pressure: ±2%

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)



### 955B - 5,500 psi W.P. High Temp Hose



#### **Features**

- High temperature hydraulic hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

#### **Applications/Markets**







- General Hydraulics
- Chemical Transfer
- Compressed Air/Gases
- Ground Support

Part	Nomi

Part Number	Nom I.I			mum D.	Wor	mum king sure		mum nd lius	Vac. Rating Hg./73°F	Weight	
#	(	9	$\odot$		7		4	$\mathcal{I}$	Ĺ	lbs	kg kg
	inch	mm	inch	mm	psi	MPa	inch	mm	inch	lbs./ft.	kg./mtr.
955B-4	15/64	6	.50	13	5,500	37.9	3.00	76	28	.23	.34
955B-6	5/16	8	.62	16	5,500 37.9		5.00	127	28	.24	.35
955B-8	7/16	11	.75	19	5,500	37.9	5.75	146	28	.46	.68
955B-10	1/2	13	.91	23	5,500	37.9	6.50	165	28	.91	1.34
955B-12	5/8	16	1.08	27	5,500	37.9	7.75	197	28	.92	1.36
955B-16	29/32	23	1.36	34	5,500	37.9	9.63	245	28	1.20	1.77

#### Construction

Tube: Black static-dissipative PTFE

Reinforcement: Multiple high density braids of 304 Stainless

#### **Operating Parameters**

Temperature Range:

-65°F to +400°F (-54°C to +204°C)

Change in length at Max. Working Pressure: ±2% Min. Burst Pressure is 16,000 psi at 73°F (23°C)

#### **Fittings**

95 Series - pg. E-90

#### **Notes**

Factory-made assemblies only

Not suggested for steam-cold water cycling applications Reduce operating pressure to 4000 psi (27.6 MPa) for

impulse service applications



# **G** General Technical

### S30/S30B - Industrial .030" wall PTFE Hose, Stainless Steel Braid



#### **Features**

- High temperature hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

#### Compliances

- FDA 21 CFR 177.1550 (Natural tube)
- SAE J517 (100R14)

#### **Applications/Markets**







- Fluid Handling Chemical Transfer
  - Paint
  - Pharmaceutical
  - Food & Beverage
  - Cosmetics

	art nber	Nom I.	ninal D.	Nominal O.D.		Maximum Working Pressure		Mini Be Rac	nd	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series	Field Attachable Series
#	#	(	9	(	0			5	9	Ū	lbs	kg	#⊡	
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.		
03-S30	03-S30B	1/8	3	.250	6	3,000	207	1-1/2	38	28	.05	.08	91	-
04-S30	04-S30B	3/16	5	.305	8	3,000	207	2	51	28	.06	.09	91N	90
05-S30	05-S30B	1/4	6	.375	10	3,000	207	3	76	28	.11	.16	91N	90
06-S30	06-S30B	5/16	8	.430	11	2,500	172	4	102	28	.13	.20	91N	90
08-S30	08-S30B	13/32	10	.535	14	2,000	138	5	127	28	.15	.22	91N	90
10-S30	10-S30B	1/2	13	.636	16	1,750	121	6-1/2	165	28	.19	.28	91N	90
12-S30	12-S30B	5/8	16	.765	19	1,500	103	7-1/2	191	12	.24	.36	91N	90
16-S30	16-S30B	7/8	22	1.030	1.030 26		69	9	229	14	.31	.47	91N	90

#### Construction

Tube: S30 - Natural FDA Compliant PTFE S30B - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

90 Series - pg. E-65

91/91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Notes

See pg. A-20 for part numbering system



# **S40/S40B - Industrial .040 wall**Heavy Wall PTFE Hose, Stainless Steel Braid



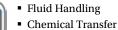


#### **Applications/Markets**









- Paint
- Pharmaceutical
- Food & Beverage
- Cosmetics

#### **Features**

- 33% more PTFE
- High temperature hose
- Excellent chemical compatibility
- Improved bend radius
- Decreased gas permeation
- Low friction minimizes pressure drops and deposits

#### **Compliances**

- FDA 21 CFR 177.1550 (Natural tube)
- SAE J517 (100R14)

	art nber	Nominal I.D.		Nominal 0.D.		Wor	Maximum Working Pressure		mum nd lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	0		$\odot$		(		$\mathcal{A}$		Ū	lbs	kg	<del></del>
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
04-S40	04-S40B	3/16	5	.320	8	3,000	207	2	51	28	.08	.13	91N
05-S40	05-S40B	1/4	6	.375	10	3,000	207	3	76	28	.11	.16	91N
06-S40	06-S40B	5/16	8	.435	11	2,500	172	4	102	28	.12	.18	91N
08-S40	08-S40B	13/32	10	.565	14	2,000	138	5	127	28	.16	.23	91N
10-S40	10-S40B	1/2	13	.656	17	1,750	121	6-1/2	165	28	.17	.25	91N
12-S40	12-S40B	5/8	16	.780	20	1,500	103	7-1/2	191	12	.19	.28	91N
16-S40	16-S40B	7/8	22	1.05	27	1.000	69	9	229	14	.49	.73	91N

#### Construction

Tube: S40 - Natural FDA Compliant PTFE S40B - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

91N Series - pg. E-72

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Notes**

See pg. A-20 for part numbering system



# **G** General Technical

# STW/STB - "TRUE BORE" Smoothbore PTFE Hose, Stainless Steel Braid



#### **Applications/Markets**







- Fluid Handling
- Chemical Transfer
- Paint
- Pharmaceutical
- Food & Beverage
- Cosmetics

#### **Features**

- High temperature hose
- Excellent chemical compatibility
- Resists moisture
- Low friction minimizes pressure drops and deposits

#### **Compliances**

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

	art nber	Nominal I.D.		Nominal 0.D.		Maximum Working Pressure 73°F/ 23°C		Minimum Bend Radius		Vac. Rating Hg./73°F	Wei	ight	Permanent Fitting Series
#	#	O mm		$\odot$				$\sim$		Ū	lbs	lug lug	<b>—</b>
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
04-STW	04-STB	1/4	6	.37	9	3,000	207	3	76	28	.08	.13	PAGE
06-STW	06-STB	3/8	10	.51	13	2,000	138	5	127	28	.11	.16	PAGE
08-STW	08-STB	1/2	13	.63	16	1,750	121	6-1/2	165	28	.16	.24	PAGE
12-STW	12-STB	3/4	19	.88	22	1,000	69	8.5	216	28	.20	.30	PAGE
16-STW	16-STB	1	25	1.13	29	1,000	69	12	305	20	.33	.49	PAGE
16Z-STW	16Z-STB	1	25	1.22	31	1,000	69	12	305	20	.56	.83	PAGE
20Z-STW	20Z-STB	1-1/4	32	1.52	38	1,000	69	14	356	18	.68	1.02	PAGE
24Z-STW	24Z-STB	1-1/2	38	1.73	44	900	62	15	381	15	.79	1.18	PAGE

#### Construction

Tube: STW - Natural FDA Compliant PTFE STB - Black Static-Dissipative PTFE Reinforcement: 304 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +450°F (-73°C to +232°C)

Change in length at Max. Working Pressure: +2% to -4% Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

Uses crimp collar ST300, see pg. E-92

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### **Notes**

"Z" indicates double braid See pg. A-21 for part numbering system Cannot be used with 90 or 91N series fittings



# SBFW/SBFB - PAGE-flex® SBF™ Extra Flexible Fluoropolymer Hose



#### **Features**

- Half the minimum bend radius of conventional smoothbore products
- Kink and vacuum resistant
- Easily cleaned
- PPIH full line of optional reinforcement types
- Cooler outside temperatures reduces operator burns
- Reduces environment temperatures in confined areas
- Available with white Silicone cover

#### Compliances

- FDA 21 CFR 177.1550
- USP Class VI Certified
- ISO 10993 Sections 5, 6, 10, 11

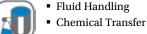


#### **Applications/Markets**









- Paint
- Pharmaceutical
- Food & Beverage
- Cosmetics

	art nber	Nominal I.D.		Nominal 0.D.		Maxi Wor Pres 73°F/	king sure	Mini Be Rac	nd	Vac. Rating Hg./73°F	Wei	ight
#	#	0		0		(		7	$\mathscr{D}$	Ū	[lbs	kg
Natural	Conductive	inch mm		inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.
06-SBFW	06-SBFB	3/8	10	.63	16	300	21	2	51	28	.16	.24
08-SBFW	08-SBFB	1/2	13	.76	19	300	21	2-1/2	64	28	.23	.34
12-SBFW	12-SBFB	3/4	19	1.04	26	250	17	3	76	28	.37	.55
16-SBFW	16-SBFB	1	25	1.29	33	250	17	4	102	28	.54	.80
24-SBFW	24-SBFB	1-1/2 38		1.85	47	200	14	7	178	28	.83	1.23

#### Construction

Tube: SBFW - Natural PFA tube

SBFB - Black Static-dissipative PFA tube

Reinforcement: bonded wire braid - silicone - textile braided composite with 316 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-65°F to +325°F (-54°C to +163°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

Complete line of standard PPIH crimp fittings

#### Notes

Factory-made assemblies only SBFB - Special order only Available with white silicone cover See pg. A-21 for part numbering system



## SCW/SCB - Convoluted PTFE Hose 316 Stainless Steel Braid



#### **Features**

- High temperature hose
- Excellent corrosion resistance
- Seamless
- Open pitch
- Self draining
- Withstands extreme flexing
- Environmentally safe; low effusion
- Long life expectancy

#### Compliances

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

#### **Applications/Markets**







- Fluid Handling Chemical Transfer
  - Paint
  - Semiconductor

	art nber	Nom I.I		Nominal O.D.		Wor Pres	Maximum Working Pressure 73°F/ 23°C		Minimum Bend Radius		We	ight	Permanent Fitting Series
#	#	0		$\odot$				$\sim$		Ū	[lbs]	by	<del></del>
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
04-SCW	04-SCB	1/4	6	.46	12	1,500	104	3/4	19	28	.08	.11	PAGE
06-SCW	06-SCB	3/8	10	.54	14	1,500	104	1	25	28	.14	.21	PAGE
08-SCW	08-SCB	1/2	13	.72	18	1,500	104	1-1/2	38	28	.16	.23	PAGE
12-SCW	12-SCB	3/4	19	1.02	26	1,200	83	2	51	28	.27	.40	PAGE
16-SCW	16-SCB	1	25	1.31	33	1,000	69	2-1/2	64	28	.37	.55	PAGE
20-SCW	20-SCB	1-1/4	32	1.73	44	750	52	3	76	28	.46	.68	PAGE
24-SCW	24-SCB	1-1/2	38	1.93	49	650	45	3-3/4	95	28	.55	.81	PAGE
32-SCW	32-SCB	2	51	2.42	62	450	31	4-3/4	121	28	.90	1.4	PAGE

#### Construction

Tube: SCW - Natural FDA Compliant PTFE SCB - Black Static-Dissipative PTFE Reinforcement: 316 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +500°F (-73°C to +260°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

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Uses crimp collar SC300, see pg. E-92

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

Not suggested for steam-cold water cycling applications See pg. A-21 for part numbering system Cannot be used with 90 or 91N series fittings



## PCW/PCB - Convoluted PTFE Hose Polypropylene Braid



#### **Features**

- Personal handling safety
- Excellent corrosion resistance
- Seamless
- Open pitch
- Self draining
- Withstands extreme flexing
- Environmentally safe; low effusion
- Long life expectancy

#### Compliances

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

#### **Applications/Markets**







- Fluid Handling
- Chemical Transfer
- Paint
- Pharmaceutical
- Food & Beverage

	Part Number		Nominal I.D.		Nominal O.D.		Maximum Working Pressure 73°F/ 23°C		Minimum Bend Radius		Weight		Permanent Fitting Series
#	#	0	9	0				\$	$\mathcal{A}$		lbs	kg kg	<del></del>
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
04-PCW	04-PCB	1/4	6	.55	14	350	59	3/4	19	28	.03	.05	PAGE
06-PCW	06-PCB	3/8	10	.64	16	350	59	1	25	28	.06	.09	PAGE
08-PCW	08-PCB	1/2	13	.84	21	300	21	1-1/2	38	28	.15	.22	PAGE
12-PCW	12-PCB	3/4	19	1.15	29	250	17	2	51	28	.18	.27	PAGE
16-PCW	16-PCB	1	25	1.50	38	250	17	2-1/2	64	28	.26	.39	PAGE
20-PCW	20-PCB	1-1/4	32	1.92	49	200	14	3	76	28	.37	.55	PAGE
24-PCW	24-PCB	1-1/2	38	2.12	54	200	14	3-3/4	95	28	.42	.63	PAGE
32-PCW	32-PCB	2	51	2.65	67	200	14	4-3/4	121	28	.56	.83	PAGE

#### Construction

Tube: PCW - Natural FDA Compliant PTFE PCB - Black Static-Dissipative PTFE

Reinforcement: Polypropylene

#### **Operating Parameters**

Temperature Range:

0°F to +212°F (-18°C to +100°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 72°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

Uses crimp collar PC300, see pg. E-92

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Notes

Not suggested for steam-cold water cycling applications See pg. A-21 for part numbering system Cannot be used with 90 or 91N series fittings



### SCWV/SCBV Stainless Steel Braid, Heavy Wall Convoluted PTFE Hose



### **Applications/Markets**







- Fluid Handling
- Chemical Transfer
- Paint
- Semiconductor

#### **Features**

- High temperature hose
- Open pitch
- Thicker wall
- Handles vacuum applications at elevated temperatures
- Excellent chemical compatibility
- Easy Cleaning
- Non Adhesive

#### **Compliances**

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

	art nber	Nominal I.D.		Nominal 0.D.		Wor Pres	Maximum Working Pressure 73°F/ 23°C		mum nd lius	Vac. Rating Hg./73°F	Wei	ight
#	#	O mm		$\odot$				$\searrow$		Ĺ	] [bs	kg
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.
08-SCWV	08-SCBV	1/2	13	.75	19	1,500	104	2	51	28	.17	.26
12-SCWV	12-SCBV	3/4	19	1.04	26	1,200	83	2-3/4	70	28	.33	.49
16-SCWV	16-SCBV	1	25	1.25	32	1,000	69	4	102	28	.37	.55
20-SCWV	20-SCBV	1-1/4	32	1.66	42	750	52	5-1/2	140	28	.56	.83
24-SCWV	24-SCBV	1-1/2	38	1.92	49	650	45	7	178	28	.64	.95
32-SCWV	32-SCBV	2	51	2.49	63	450	31	8-1/2	216	28	.84	1.24
40-SCWV	40-SCBV	2-1/2	64	3.25	83	200	14	12	305	28	1.52	2.26
48-SCWV	48-SCBV	3	76	3.80	97	175	12	14	356	28	1.82	2.71
64-SCWV	64-SCBV	4	102	4.76	121	150	10	16	406	28	2.10	3.13

#### Construction

Tube: SCWV - Heavy Wall Natural FDA Compliant PTFE SCBV - Heavy Wall Black Static-dissipative PTFE

Reinforcement: 316 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +500°F (-73°C to +260°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F(23°C) All ratings based on 72°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

#### **Notes**

Factory-made assemblies only Not suggested for steam-cold water cycling applications See pg. A-21 for part numbering system Cannot be used with 90 or 91N series fittings Vacuum wire recommended for 2-1/2, 3 and 4 inch



### PCWV/PCBV Polypropylene Braid, Heavy Wall Convoluted PTFE Hose





#### **Applications/Markets**









- Fluid Handling
- Chemical Transfer
- Paint
- Pharmaceutical
- Food & Beverage

#### **Features**

- Personal handling safety
- Open pitch
- Thicker wall
- Handles vacuum applications at elevated temperatures
- Excellent chemical compatibility
- Easy Cleaning
- Non Adhesive

#### **Compliances**

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

	art nber	Nominal I.D.		Nominal 0.D.		Wor Pres	mum king sure ' 23°C	Be	mum end lius	Vac. Rating Hg./73°F	Weight	
#	#	0	9	$\odot$					$\sim$		lbs	
Natural	Conductive	inch mm		inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.
08-PCWV	08-PCBV	1/2	13	.81	21	300	21	3	76	28	.14	.20
12-PCWV	12-PCBV	3/4	19	1.30	33	250	17	3-1/2	89	28	.22	.32
16-PCWV	16-PCBV	1	25	1.44	36	250	17	4-1/2	114	28	.32	.47
20-PCWV	20-PCBV	1-1/4	32	1.86	47	200	14	5	127	28	.40	.59
24-PCWV	24-PCBV	1-1/2	38	2.10	53	200	14	6	152	28	.49	.73
32-PCWV	32-PCBV	2	51	2.66	68	200	14	8-1/2	216	28	.66	.99
40-PCWV	40-PCBV	2-1/2	2-1/2 64		91	150	10	12	305	28	1.21	1.80
48-PCWV	48-PCBV	3	76	3.92	100	125	9	14	356	28	1.45	2.16
64-PCWV	64-PCBV	4	102	4.92	125	100	7	16	406	28	1.68	2.50

#### Construction

Tube: PCWV - Heavy Wall Natural FDA Compliant PTFE

PCBV - Heavy Wall Black Static-dissipative PTFE

Reinforcement: Polypropylene

#### **Operating Parameters**

Temperature Range:

0°F to +212°F (-18°C to +100°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C)

All ratings based on 72°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

#### **Notes**

Factory-made assemblies only Not suggested for steam-cold water cycling applications See pg. A-21 for part numbering system Cannot be used with 90 or 91N series fittings Vacuum wire recommended for 2-1/2, 3 and 4 inch



# **G** General Technical

### SCWV-FS/SCBV-FS - Flare-Seal® Stainless Steel Braid



#### **Applications/Markets**







- Fluid Handling
- Chemical Transfer
- Paint
- Pharmaceutical
- Food & Beverage

#### **Features**

- Flare Seal fitting Continuous PTFE through fitting; no area for bacterial entrapment
- Increased flow
- Thicker wall
- Excellent chemical compatibility
- Easy Cleaning
- Non Adhesive

#### **Compliances**

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

	art nber	Nominal I.D.		Nominal O.D.		Wor Pres	mum king ssure / 23°C	Be	mum end lius	Vac. Rating Hg./73°F		Veight	
#	#	0		(	$\odot$				$\sim$		lbs	kg	
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
08-SCWV-FS	08-SCBV-FS	1/2	13	.75	19	500	35	2	51	28	.17	.26	
12-SCWV-FS	12-SCBV-FS	3/4	19	1.04	26	425	29	2-3/4	70	28	.33	.49	
16-SCWV-FS	16-SCBV-FS	1	25	1.25	32	350	24	4	102	28	.37	.55	
20-SCWV-FS	20-SCBV-FS	1-1/4	32	1.66	42	325	22	5-1/2	140	28	.56	.83	
24-SCWV-FS	24-SCBV-FS	1-1/2	38	1.92	49	300	21	7	178	28	.64	.95	
32-SCWV-FS	32-SCBV-FS	2	51	2.49	63	250	17	8-1/2	216	28	.84	1.24	
40-SCWV-FS	40-SCBV-FS	CBV-FS 2-1/2 64 3.25		83	200	14	12	305	28	1.52	2.26		
48-SCWV-FS	48-SCBV-FS	48-SCBV-FS 3 76 3.80 97		97	175 12		14 356		28	1.82	2.71		
64-SCWV-FS	64-SCWV-FS 64-SCBV-FS		102	4.76	121	150	10	16	406	28	2.10	3.13	

#### Construction

Tube: SCWV -FS- Heavy Wall Natural FDA Compliant PTFE SCBV-FS - Heavy Wall Black Static-dissipative PTFE Reinforcement: 316 Stainless Steel braid

#### **Operating Parameters**

Temperature Range:

-100°F to +500°F (-73°C to +260°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 73°F/23°C

#### **Fittings**

PAGE Fittings – pg. E-91

#### Notes

Factory-made assemblies only

Not suggested for steam-cold water cycling applications

All dimensions nominal

See pg. A-21 for part numbering system

Cannot be used with 90 or 91N series fittings



## PCWV-FS/PCBV-FS - Flare-Seal® Polypropylene Braid





#### **Applications/Markets**







- Fluid Handling
- Chemical Transfer
- Paint
- Pharmaceutical
- Food & Beverage

#### **Features**

- Flare Seal fitting Continuous PTFE through fitting; no area for bacterial entrapment
- Increased flow
- Personal handling safety
- Good chemical compatibility
- Easy Cleaning
- Non Adhesive

#### **Compliances**

- FDA 21 CFR 177.1550
- USP Class VI
- ISO 10993 Sections 5, 6, 10, 11

	art nber	Nominal I.D.		Nominal O.D.		Wor Pres	mum king ssure ' 23°C	Be	mum end dius	Vac. Rating Hg./73°F	Weight	
#	# #		0		$\odot$				$\sim$		lbs	kg
Natural	Conductive	inch	mm	inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.
08-PCWV-FS	08-PCBV-FS	1/2	13	.810	21	300	21	3	76	28	.14	.20
12-PCWV-FS	12-PCBV-FS	3/4	19	1.10	28	250	17	3-1/2	89	28	.22	.32
16-PCWV-FS	16-PCBV-FS	1	25	1.44	36	250	17	4-1/2	114	28	.31	.47
20-PCWV-FS	20-PCBV-FS	1-1/4	32	1.86	47	200	14	5	127	28	.40	.59
24-PCWV-FS	24-PCBV-FS	1-1/2	38	2.10	53	200	14	6	152	28	.49	.73
32-PCWV-FS	32-PCBV-FS	2	51	2.66	68	200	14	8-1/2	216	28	.66	.99
40-PCWV-FS	40-PCBV-FS	2-1/2	64	3.42	87	150	10	12	305	28	1.21	1.80
48-PCWV-FS	48-PCBV-FS	'-FS 3 76		3.92	100	125	9	14	356	28	1.45	2.16
64-PCWV-FS	64-PCWV-FS 64-PCBV-FS		102	4.92	125	100	7	16	406	28	1.68	2.50

#### Construction

Tube: PCWV-FS - Heavy Wall Natural FDA Compliant PTFE PCBV-FS- Heavy Wall Black Static-dissipative PTFE

Reinforcement: Polypropylene

#### **Operating Parameters**

Temperature Range:

 $0^{\circ}\text{F}$  to +212°F (-18°C to +100°C)

Min. Burst Pressure is 4x Max. Working Pressure at 73°F (23°C) All ratings based on 73°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

#### **Notes**

Factory-made assemblies only

Not suggested for steam-cold water cycling applications

See pg. A-21 for part numbering system

Cannot be used with 90 or 91N series fittings



### RCTW/RCTB EPDM Rubber Covered

#### Fluoropolymer Hose





#### **Features**

- Personal handling safety
- Handles full vacuum
- Good chemical compatibility
- Easy Cleaning
- Non Adhesive

#### **Compliances**

- FDA 21 CFR 177.1550 (FEP core)
- USP Class VI Certified
- ISO 10993 Sections 5, 6, 10, 11

#### **Applications/Markets**









- Food & Beverage
- Pharmaceutical
- Fluid Handling
- Chemical
- Ground Support
- Industrial
- Paint
- Semiconductor

	art nber		ninal D.	Non O.	ninal D.	Wor Pres	mum king sure '23°C	Be	mum end lius	Vac. Rating Hg./73°F	We	ight	Permanent Fitting Series
#	#	(	9	(	9			\$	9	Ū	lbs	lag lag	
Natural	Conductive	inch mm		inch	mm	psi	bar	inch	mm	inch	lbs./ft.	kg./mtr.	
08-RCTW	08-RCTB	1/2	13	.95	24	500	35	2-1/2	64	30	.33	.49	PAGE
12-RCTW	12-RCTB	3/4	19	1.25	32	500	35	3	76	30	.51	.76	PAGE
16-RCTW	16-RCTB	1	25	1.53	39	450	31	4	102	30	.67	1.00	PAGE
20-RCTW	20-RCTB	1-1/4	32	1.74	44	375	26	7	178	30	.72	1.07	PAGE
24-RCTW	24-RCTB	1-1/2	38	2.13	54	375	26	9	229	30	1.10	1.51	PAGE
32-RCTW	32-RCTB	2	51	2.68	68	300	21	10-1/2	267	30	1.54	2.30	PAGE
40-RCTW	40-RCTB	2-1/2	64	3.30	84	200	14	15	381	30	2.07	3.09	PAGE
48-RCTW	48-RCTB	3	76	3.88	99	200	14	18	457	30	2.99	4.46	PAGE
64-RCTWV	64-RCTB	4	102	4.98	127	150	10	22-1/2	572	30	4.33	6.46	PAGE

#### Construction

Tube: RCTW - Natural FEP tube

RCTB - Static-dissipative PFA tube

Reinforcement: Double wire helix - multi layered rubber

Cover: Textile reinforced EPDM

#### **Operating Parameters**

Temperature Range:

-40°F to +300°F (-40°C to +149°C) Decrease working pressure one percent for every 2°F above 212°F.

Operating pressures shown are for non-impulse service All ratings based on 73°F/23°C

#### **Fittings**

PAGE Fittings - pg. E-91

Uses crimp collar RC300, see pg. E-92

For most Parker products, Crimp Die Selection charts can be found online at www.parker.com/crimpsource

Access instructions are on pg. G-13

#### Notes

RCTB - Special order only

See pg. A-21 for part numbering system

Cannot be used with 90 or 91N series fittings



## **Tubing**

### **Thermoplastic**

Polyethylene

Nylon

Parprene™ TPE

Polypropylene

Polyurethane

Clear Vinyl

### Fluoropolymer

PTFE

**FEP** 

PFA

PVDF





























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### **Parflex Tubing Introduction**

#### **Parflex New, Tubing Product**

Parflex has expanded the tubing line to include:



Parprene TPE, a thermoplastic elastomer formulated to withstand the rigors of peristaltic pump applications and yet, be safe enough for food and beverage applications. pgs. B-28: B-31



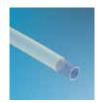
Convoluted tubing for applications where flexibility is needed. Available in PTFE, FEP and PFA materials. pgs. B-76: B-80, B-90: B-92



FEP Roll Cover, a protective sleeve for rollers used with ink or in paper mills. pg. B-88



Corrugated tubing is the most flexible tubing available and is capable of turning sharp corners without reducing the inside diameter of the tube. Available in FEP and PFA. pg. B-94



Double Shrink Heat Shrink protects cables and other objects by totally encapsulating the parts as the FEP melts during the PTFE shrinking process. pg. B-89



Fluoroplastic coiled tubing is a spiral formed tube, consisting of a single or double retractable coil in a single tube. Available in FEP and PFA. pg. B-96

#### **Parflex Tubing Tutorial**

- Review the general attributes of Parflex thermoplastic and fluoropolymer tubing – this provides an excellent overview for the tubing product line.
- Review the application symbols this will help you clear up any questions you may have on the product tables within the section. The market/applications table identifies and provides a "good fit" summary.
- Review the pressure bar graph provides relative pressure ratings for the entire line of thermoplastic tubing. For fluoropolymer tubing, please contact Customer Service.
- Review the STAMPED guide (Size, Temperature, Media, Application, Pressure, End Configuration, and Delivery Preferences) on pg. 11 to help narrow your search for the desired product.
- Specific nomenclature, features, advantages and benefits can be found at the beginning page of each product line.
- Text appears in 2 colors. The primary dimensions are in black. As a courtesy, the metric/inch equivalent has been added and appears in blue.



### **Tubing Introduction**

#### **Tube Line Fabrication Guide for Leak Free Systems**

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance and general appearance of any system.

Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting, consider the following in the design of your system:

- Accessibility of joints
- Proper routing of lines
- Adequate tube line supports
- Available fabricating tools

#### **Routing of Lines**

Routing of lines is probably the most difficult, yet most significant, of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.

#### **Applications/Markets**



Fluid Handling



Construction



Transportation



**Industrial Pneumatic** 



**Electrical** 



Military



**General Industrial** 



**Compressed Gas** 



Medical



Semiconductor



Food & Beverage



**Pharmaceutical** 

### **Parflex Tubing Introduction**

Tu	hing Compatibility				Parriex Thermoplastic Tubing												
Ch	bing Compatibility art		Ind	ustrial Tı	ıbing Seı	ries (Outs	ide Dian	neter Sho	own)			al Tubing .D. show					
	ker Tubing / Hose Capability n Parker FSC Fittings	Polyethylene E & EB Inch (4,5,6,8,10) Metric (6,8,10,12)	PE ,4,5,6,8)	æ	30	J .2.5,3,4,5,6,8) Metric (4mm -	12)		չ РРВ ,10)	Polyurethane U (90 - 95 Shore A) Inch (2,3,4,6,8,9,12) Metric (4,6,8,10,12)	Polyurethane HU & HUM (>95 Shore A) Inch (2,2.5,4,6,8,12) Metric (4,6,8,10,12)	(Weld Tubing)	2")				
	Product Sizes (inch)	Polyethylene E & Inch (4,5,6,8,10)	Polyethylene PE Inch (2,2.5,3,4,5	Polyethylene PEFR Inch (2.5,4,6,8)	Polyethylene HDPE Inch (4,6)	Nylon N Inch (2,2.5,3,4,5 20mm)	Nylon PAT Inch (2,4,6,8,10,12)	Nylon NR Inch (2,3,4,5,6,8)	Polypropylene PP & F Inch (2,3,4,5,6,8,10)	Polyurethane U (( Inch (2,3,4,6,8,9,	Polyurethane HU Inch (2,2.5,4,6,8,	Polyurethane FR (Weld Tubing) Inch (4,5,6,8)	Clear Vinyl Inch (1/8" - 2 1/2")				
	Compression - Inch (2,3,4,5,6,7,8,10,12,14)	PS TS	PS TS	PS TS	PS TS	PS TS	PS TS	PS TS	PS TS								
<u>e</u>	Compress-Align - Inch (2,3,4,5,6,8,10,12,14,16)	TS	TS	TS	TS	TS	TS	TS	TS								
& Flare	Metru-Lok - Metric (4,6,8,10,12,14,16,18,22)	TS	TS														
sion &	Poly-Tite - Inch (2,3,4,5,6,8)					BS			BS								
Compression	Hi-Duty - Inch (2,3,4,5,6,8,10)	TS	TS	TS	TS	TS	TS	TS	TS								
Com	45 degree flare - Inch (2,3,4,5,6,8,10,12,14)																
	Inverted Flare - Inch (2,3,4,5,6,8,10,12,14)																
	Fast & Tite - Inch (4,5,6,8,10)									TS	TS		TS				
	Flow Controls - Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)																
Connect	Prestolok Brass - Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)																
Push-to-Connect	Prestolok Composite Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)																
_ Pu	Liquifit - Inch (4,6,8)																
	TrueSeal - Inch (4,5,6,8)									TS	TS		TS				
	Par-Barb - Inch (2,3,4,5,6,8,10,12)									CL			CL				

PS = Plastic sleeve & tube support recommended

TS = Tube support is recommended

BS = Brass sleeve recommended

SAE Cartridges - Inch (2.5,4,6,8,10,12)

CL = Clamp required

PTC - Inch (4,6,8,10,12)

Manifolds - Inch (4,6,8)

Dubl-Barb - Inch (2.5,4,6,8)

NTA - Inch (3,4,6,8,10,12) Transmission Fittings - Inch (2,2.5) Air Brake - Inch (4,6,8,10,12,16) Air Brake Hose - Inch (6,8) Vibra-Lok - Inch (2,3,4,5,6,8,10,12) Prestomatic - Inch (2,2.5,3,4,6,8,10,12) Metric (6,8,10,12,16)

Garden Hose

Hose Barb - Inch (2,3,4,5,6,8,10,12,16)



CL

								SVSTAMS	
1	ransporta	tion Tubi	ng					Systems	
12)	on 12) 3,18)			PFA Fluoropolymer Inch (3/32" - 1") Metric (4mm - 12mm)	lymer ") Metric (3mm - 12mm)	PTFE Fluoropolymer Inch (3/32" - 1.1") Metric (3mm - 16mm)	9	Every hydraulic, pneumatic and lubrication of fabrication and fitting installation for comple are essential for the overall efficiency, leak france of any system.	tion. F
PFT Air Brake (SAE J844) Inch (2,2.5,3,4,5,6,8,10,12)	Air Brake DIN 74324 (Nylon 12) Metric (4,6,8,10,12,15,16,18)			r Aetric (.	r etric (3)	er ) Metric	PVDF Fluoropolymer Inch (2,3,4,5,6,8,10,12,1	Start by planning ahead. After sizing the tub style of fitting, consider the following in the o	
SAI 9,4,5,6	1743 ,10,1	uel 0,12	Fuel 0,12	lyme 1") N	olyme 1") Mi	olym 1.1	oolym ,6,8,1		
Brak 2.5,3	ke DII (4,6,8	sel F ,6,8,1	iesel ,6,8,1	orop( /32" -	orop( /8" -	luoro /32" -	luoro ,3,4,5		
FT Air	ir Bra letric	PFT Diesel Fuel Sizes 4,6,8,10,12	HTFL Diesel Fuel Sizes 4,6,8,10,12	FA Fit	FEP Fluoropolymer Inch (1/8" - 1") Me	7FE F	VDF F Ich (2	Double to the Company of the Company	
~ 느	∢≥	_ ~ ⊗	±σ	PS	PS	PS PS	₽.⊑	Product Sizes (inch)  Compression Linch (2.3.4.5.6.7.8.10.13.14)	
				TS	TS	TS		Compression - Inch (2,3,4,5,6,7,8,10,12,14)	
				TS	TS	TS		Compress-Align - Inch (2,3,4,5,6,8,10,12,14,16)	Co
								Metru-Lok - Metric (4,6,8,10,12,14,16,18,22)	Compression & Flare
								Poly-Tite - Inch (2,3,4,5,6,8)	ssior
								Hi-Duty - Inch (2,3,4,5,6,8,10)	&  -  -
								45 degree flare - Inch (2,3,4,5,6,8,10,12,14)	lare
								Inverted Flare - Inch (2,3,4,5,6,8,10,12,14)	
								Fast & Tite - Inch (4,5,6,8,10)	
								Flow Controls - Inch (2,2.5,4,5,6,8) Metric (4,6,8,10,12)	
								Prestolok Brass - Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	oush-t
								Prestolok Composite Inch (2,2.5,3,4,5,6,8) Metric (4,5,6,8,10,12,14)	Push-to-Connect
								Liquifit - Inch (4,6,8)	ect
								TrueSeal - Inch (4,5,6,8)	
								Par-Barb - Inch (2,3,4,5,6,8,10,12)	
								Dubl-Barb - Inch (2.5,4,6,8)	
								Hose Barb - Inch (2,3,4,5,6,8,10,12,16) Inside Diameter	Barb
								Garden Hose	
								NTA - Inch (3,4,6,8,10,12)	
								Transmission Fittings - Inch (2,2.5)	
								Air Brake - Inch (4,6,8,10,12,16)	DC
								Air Brake Hose - Inch (6,8)	)T Tra
								Vibra-Lok - Inch (2,3,4,5,6,8,10,12)	nspo
								Prestomatic - Inch (2,2.5,3,4,6,8,10,12) Metric (6,8,10,12,16)	DOT Transportation
								PTC - Inch (4,6,8,10,12)	3
								SAE Cartridges - Inch (2.5,4,6,8,10,12)	
								Manifolds - Inch (4,6,8)	

### **Tube Line Fabrication Guide for Leak Free**

em requires some form of tube line Proper fabrication and installation erformance, and general appear-

es and selecting the appropriate n of your system:

- 1. Accessibility of joints
- 2. Proper routing of lines
- 3. Adequate tube line supports
- 4. Available fabricating tools

PS = Plastic sleeve & tube support recommended

TS = Tube support is recommended

BS = Brass sleeve recommended

CL = Clamp required



# General Technical

### Thermoplastic Tubing

#### **Polyethylene**

- Parflex polyethylene tubing meets FDA, NSF Standard 51 for all food contact applications and NSF-61 for potable water applications.
- E-Series tubing is made of 100% virgin resin material.
- Polyethylene tubing meets ASTM D-1693 (10% IGEPAL) for stress crack resistance.
- Parflex also offers special PE tubing: PEFR (flame retardant) and HDPE (high density).

#### **Nylon**

- Flexible nylon tubing is constructed of high-grade resins for strength and flexibility for routing in tight spaces.
- Semi-rigid high strength nylon is constructed of high-grade resins without the addition of plasticizers for higher pressure tubing applications.
- Pure Air Tubing (PAT) is the tubing choice for pure air systems (semiconductor) due to its cleanliness; in addition, it offers excellent chemical and UV light resistance.
- NTNA Tubing meets NSF Standard 51 for all food contact applications and may be used for instrumentation lines, lubrication and process piping systems and oil and refrigerant lines.

#### Parprene™ (thermoplastic elastomer)

- Excellent flexural fatigue resistance.
- Resistant to environmental stress cracking.
- Series F meets FDA, NSF Standard 51 and 3-A approved for all food contact applications.

#### **Polypropylene**

- Polypropylene tubing meets FDA, NSF Standard 51 for all food contact applications.
- Polypropylene tubing exhibits excellent chemical resistance to chlorinated water applications.
- Black Polypropylene tubing is commonly used in outdoor applications where UV light stabilization is required.

#### **Polyurethane**

- Polyurethane tubing is a flexible, kink-resistant and abrasion-resistant material commonly used in pneumatic applications.
- Polyurethane is available in multiple transparent and opaque colors for system color coding.
- Polyurethane is available in the following durometers (measurement of material hardness): Medium durometer: (90 - 95) High durometer: (>95) for higher pressures

#### **Polyvinyl Chloride (PVC)**

- PVC tubing is made from 100% virgin resin material and meets all FDA specifications for materials in contact with food and
- PVC tubing is a very flexible, 70 durometer tubing. It is crystal-clear and ideal for situations where visible fluid flow is necessary (i.e. sight gauges for tank identification).

All plastic tubing dimensions are laser monitored to ensure overall quality product. Most tubing sizes are packaged in convenient 100-ft., 250-ft., 500-ft. and 1,000-ft. lengths.

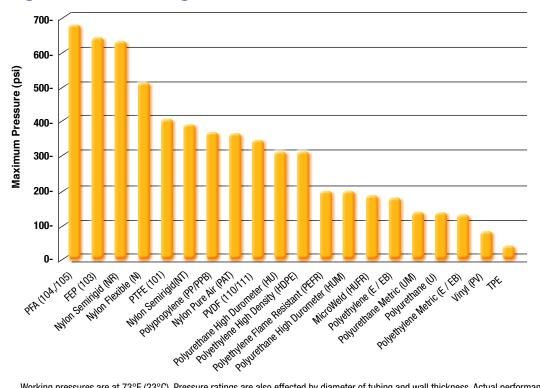


### **Thermoplastic Tubing**

#### **Typical Applications**

Product Family	Series	Suggested Markets and Applications
	E and EB	Potable water, chemical transfer, and low-cost, low-pressure pneumatics, NSF-51 & NSF-61
Polyethylene	PEFR	Pneumatic controls in HVAC
	HDPE	Chemical transfer and low-cost pneumatics
	N	Pneumatic and petroleum-based chemical transfer
Mulan	PAT	Pure air and gas distribution systems, semiconductor
Nylon	NR	High pressure pneumatic, low pressure lubrication and hydraulic, marine control systems
	NTNA	Instrumentation lines, lubrication and process piping systems, oil and refrigerant lines, NSF-51
Polypropylene	PP and PPB	Food contact and chemical transfer applications, chlorinated water, NSF-51
Urethane	U and UM	Pneumatic controls requiring high flexibility, kink resistance and movement
Oremane	HU and HUM	High-pressure pneumatics requiring flexibility and kink resistance, robotics
DornronoTM	TPE, Series G	Thermoplastic elastomer, black, general industrial tubing
Parprene <sup>TM</sup>	TPE, Series F	Thermoplastic elastomer, tan, food & dairy FDA compliant tubing
Vinyl	PV	Low-pressure chemical and medical applications requiring high clarity and flexibility, FDA

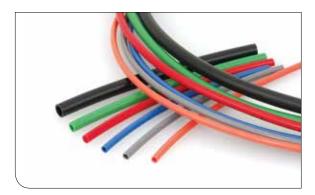
#### **Tubing Pressure Ranges**



Working pressures are at 73°F (23°C). Pressure ratings are also effected by diameter of tubing and wall thickness. Actual performance may vary with different media and working conditions. Use this information for comparison only.



**Polyethylene Tubing**Series E: Instrument Grade – FDA, NSF Listed Series EB: Ultraviolet Light Resistant



#### **Applications/Markets**





- Potable water
- Chemical transfer
- Low-pressure pneumatics



#### **Features**

- Made from 100% virgin resin material
- Chemically resistant and flexible
- High molecular weight resin provides increased dimensional stability, uniformity and long-term strength
- Economical system solution

#### **Certifications**

- FDA compliant for food contact
- ASTM D-1693 (10% IGEPAL) for stress crack resistance
- NSF 51
- NSF 61

Part Number	Part Number	Tu O.	be D.		be D.	W	rage all (ness	Wor Pres at 73°	sure	Bu	mum rst F /23°C	Package Quantity	Minimum Bend Radius		Weight	
#	#				$\bigcirc$	(	<b>)</b> -		7			Package quantities vary by size and color	- X	$\mathcal{S}$	lbs	ling T
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
E-43-XXXX	EB-43-XXXX	1/4	6.4	.170	4.3	.040	1.0	120	8.3	480	33.1	0100, 0500, 1000	1.00	25.4	.011	.016
E-53-XXXX	EB-53-XXXX	5/16	7.9	.187	4.8	.062	1.6	145	10.0	580	40.0	0100, 0500	1.13	28.7	.020	.030
E-64-XXXX	EB-64-XXXX	3/8	9.5	.250	6.4	.062	1.6	125	8.6	500	34.5	0100, 0500	1.25	31.8	.025	.037
E-86-XXXX	EB-86-XXXX	1/2	12.7	.375	9.5	.062	1.6	90	6.2	360	24.8	0100, 0500	2.50	63.5	.034	.051
E-108-XXXX	EB-108-XXXX	5/8	15.9	.500	12.7	.062	1.6	70	4.8	280 19.3		0100	4.00	101.6	.044	.065

Standard black is not NSF approved.



#### **Order Information**

Example: E-64-Y-0500

E-64-Y-0500 - Polyethylene

E-64-Y-0500 – **Tube O.D.** in sixteenths of an inch **(3/8")** 

E-64-Y-0500 - **Tube I.D.** in sixteenths of an inch **(.250")** 

E-64-Y-0500 – Color, i.e. Yellow (Omit for Natural and Black)

**E-**64-0500 – Natural Polyethylene **EB**-64-0500 – Black Polyethylene

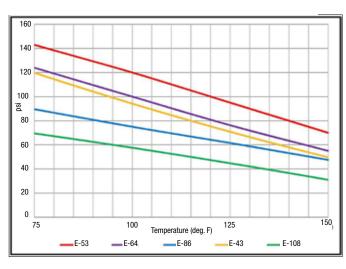
E-64-Y-0500 - Package Quantity in feet (500')

Available in black as well as nine other colors, as recommended by the Instrument Society of America

	Color Code	
	-	Natural
•	-	Black
•	В	Blue
•	G	Green
•	0	Orange
•	Р	Purple
•	R	Red
	GRA	Gray
•	Y	Yellow
0	WHT	White

#### Polyethylene Tubing (Series E)

#### **Maximum Working Pressure (psig)**



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Flow Control
- Prestolok Brass
- Prestolok Composite
- Liquifit
- TrueSeal<sup>™</sup>
- Dubl-Barb<sup>®</sup>
- Prestomatic
- SAE Cartridge

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

- FDA, NSF-51 and NSF-61 compliant black polyethylene tubing is also available.
   Add -NSF suffix to the EB part number (ie. EB-64-0500-NSF)
- E series natural and colored tubing meet FDA, NSF-51 requirements for food contact applications and NSF-61 for potable water
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- Black (EB) tubing contains an ultraviolet inhibitor which is recommended for use in sunlit areas and in close proximity to high ultraviolet light sources
- All tubing conforms to ASTM D-1248, Type I, Class A, Category 4, Grade E5
- The recommended operating temperature range for service at rated pressures with compatible fluids is -80°F to +150°F (-62°C to +66°C)

#### Colors

See Color Code Table



Metric Polyethylene Tubing
Series E: Instrument Grade – FDA, NSF Listed

Series EB: Ultraviolet Light Resistant



### **Applications/Markets**





- Potable water
- Chemical transfer
- Low-pressure pneumatics



#### **Features**

- Made from 100% virgin resin material
- Chemically resistant and flexible
- High molecular weight resin provides increased dimensional stability, uniformity and long-term strength
- Economical system solution

#### **Certifications**

- FDA compliant for food contact
- ASTM D-1693 (10% IGEPAL) for stress crack resistance
- NSF 51
- NSF 61

Part Number	Part Number		Tube 0.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		mum rst = /23°C	Package Quantity	Minimum Bend Radius		Weight	
#	#		0		0 (		<u></u>						<i>A</i>		8 7	lbs
Natural	Black	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	mm	inch	kg./mtr.	lbs./ft.
E-6X1-0100	EB-6X1-0100	6	.236	4	.157	1.00	.039	8.6	125	34.5	500	0100	25	1.00	.019	.013
E-8X1-0100	EB-8X1-0100	8	.315	6	.236	1.00	.039	6.9	100	27.6	400	0100	38	1.50	.021	.014
E-10X1.5-0100	EB-10X1.5-0100	10	.393	7	.276	1.50	.059	8.6	125	34.5	500	0100	38	1.50	.039	.026
E-12X1.5-0100	EB-12X1.5-0100	12	.472	9	.354	1.50	.059	6.2	100	24.8	400	0100	63	2.50	.048	.032

Standard black is not NSF approved.



#### **Order Information**

Example: E-8x1-0100

E-8x1-0100 – Metric Polyethylene (Natural)

**EB**-8x1-0100 – Metric Polyethylene (Black)

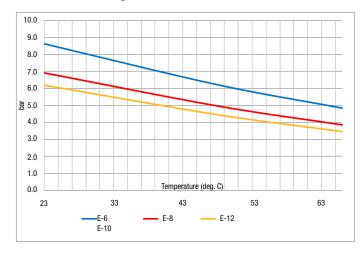
**E-8**x1-0100 – **Tube O.D.** in millimeters **(8 mm)** 

E-8x1-0100 - Tube Wall Thickness in millimeters (1 mm)

E-8x1-0100 - Package Quantity in feet (100')

#### Metric Polyethylene Tubing (Series E)

#### Maximum Working Pressure (bar)



#### **Fitting Recommendations**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Metru-Lok™
- Flow Control
- Prestolok Brass
- Prestolok Composite
- Prestomatic

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

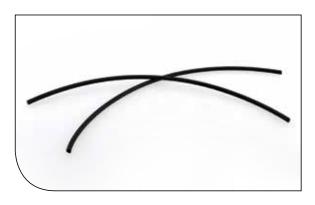
- E series natural and colored tubing listed below meet FDA, NSF-51 requirements for food contact applications and NSF-61 for potable water
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- Black (EB) tubing contains an ultraviolet inhibitor which is recommended for use in sunlit areas and in close proximity to high ultraviolet light sources
- All tubing conforms to ASTM D-1248, Type I, Class A, Category 4, Grade E5
- The recommended operating temperature range for service at rated pressures with compatible fluids is -80°F to +150°F (-62°C to +66°C)

#### Colors

- Natural
- Black



# **Polyethylene Tubing** Series PEFR: Flame Resistant



#### **Features**

Excellent stress crack resistance

#### **Certifications**

- UL 94 V-2
- ASTM D-1693 (10% IGEPAL) for stress crack resistance

#### **Applications/Markets**





Pneumatic controls in HVAC applications

Part Number	Tu O.	be D.	Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minimum Bend Radius		Weight	
#			0		()				*			<i>₹</i>		lbs	bg c
Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
PEFR-2.5-XXXX	5/32	4.0	.096	2.4	.030	0.76	185	12.8	740	51.0	0500	.50	12.7	.006	.009
PEFR-4-XXXX	1/4	6.4	.170	4.3	.040	1.0	140	9.7	560	38.6	0500, 1000	.75	17.4	.012	.018
PEFR-6-XXXX	3/8	9.5	.250	6.4	.062	1.6	155	10.7	620	42.8	0500	1.50	36.1	.029	.043
PEFR-8-XXXX	1/2	12.7	.375	9.5	.062	1.6	100	6.9	400	27.6	0250	1.75	39.1	.041	.061



#### **Order Information**

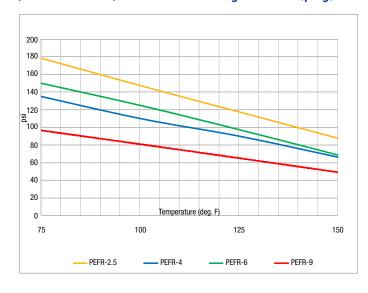
Example: PEFR-4-0500

PEFR-4-0500 - Flame Resistant Polyethylene

PEFR-4-0500 - Tube O.D. in sixteenths of an inch (1/4")

PEFR-4-0500 - Package Quantity in feet (500')

#### Flame Resistant Polyethylene Tubing (Series PEFR) Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

- FSC Product Families:
- Compression
- Compress-Align®
- Hi-Duty
- Fast & Tite
- Flow Control
- Prestolok Brass
- Dubl-Barb\*

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

Using the same base linear low-density polyethylene (LLDPE) as the E-Series tubing, Parker Hannifin, Parflex Division's PEFR tubing has the following advantages:

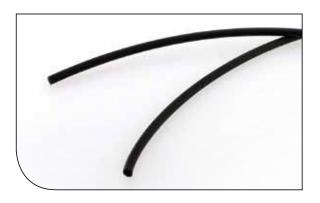
- Resistant to environmental stress cracking exceeding that of ordinary polyethylene tubing as measured by ASTM D-1693 (10% IGEPAL)
- The recommended operating temperature range for service at rated pressures with compatible fluids is -85°F to +150°F (-65°C to +66°C)

#### Colors

Black



# Polyethylene Tubing Series HDPE: High Density



#### **Features**

- Manufactured from high strength, high density polyethylene
- Semi-rigid tubing that is inherently resistant to most chemicals, less easily cut or damaged and has a higher burst pressure rating than Series E tubing
- Economical system solution

#### **Applications/Markets**





- Potable water
- · Chemical transfer
- Low-pressure pneumatics



Part Number	Tu O.	be D.	Tu I.I		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Package Quantity	Minii Be Rad	nd	Wei	ight
#		9			$\bigcirc$	-			*			<i>₹</i>		lbs	
Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
HDPE-43-XXXX	1/4	6.4	.170	4.3	.040	1.0	300	20.7	1200	82.7	0250, 0500	1.50	38.1	.011	.016
HDPE-64-XXXX	3/8	8.5	.250	6.4	.062	1.6	300	20.7	1200	82.7	0250, 0500	2.50	63.5	.025	.037

Only available in black.



#### **Order Information**

Example: HDPE-43-0500

**HDPE**-43-0500 – **High Density Polyethylene** 

HDPE-43-0500 - Tube O.D. in sixteenths of an inch (1/4")

HDPE-43-0500 - Tube I.D. in sixteenths of an inch (.170")

HDPE-43-0500 - Package Quantity in feet (500')

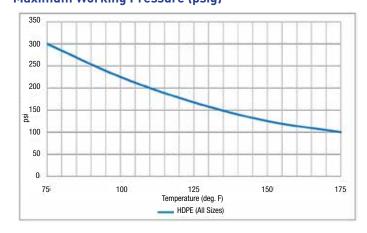
#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

- FSC Product Families:
- Compression
- Compress-Align®
- Dubl-Barb
- Hi-Duty
- Fast & Tite
- Prestolok Brass

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

### High Density Polyethylene Tubing (Series HDPE) Maximum Working Pressure (psig)



#### **Notes**

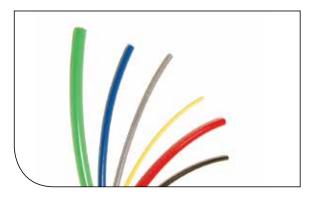
 Recommended operating temperature range for service at rated pressures with compatible fluids is -80°F to +175°F (-62°C to +80°C)

#### Colors

Black



## **Nylon Tubing** Series N: Flexible



#### **Features**

- Flexible nylon tubing uses high-grade resins for strength and flexibility for routing in tight spaces
- Made from abrasion-resistant, heat and light-stabilized nylon
- Exhibits low-level water absorption
- Chemically resistant

#### **Applications/Markets**





- Robotics
- Machine tool
- General pneumatics
- Lubrication
- Petroleum-based chemical transfer
- Pest control lines



Part Number	Part Number	Tu O.		Tu I.I	be D.	Average Wall Thicknes		Pressure		Minimum Burst at 73°F /23°C		Reel Length	Be	mum nd lius	Weight	
#	#		$\bigcirc$	(	)	(	<b>)</b> -			*			- *	$\mathcal{S}$	lbs	bgg C
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
NN-2-016	NB-2-016	1/8	3.2	.093	2.4	.016	0.41	250	17.2	1000	69.0	0100, 0250	.25	4.6	.003	.005
NN-2-031	NB-2-031	1/8	3.2	.064	1.6	.031	0.79	500	34.5	2000	137.9	0100, 0250	.25	4.6	.004	.006
NN-2.5-025	NB-2.5-025	5/32	4.0	.106	2.7	.025	0.64	300	20.7	1200	82.7	0100, 0250	.50	12.7	.005	.007
NN-3-025	NB-3-025	3/16	4.8	.138	3.5	.025	0.64	250	17.2	1000	69.0	0100, 0250	.63	16.0	.006	.009
NN-3-046	NB-3-046	3/16	4.8	.096	2.4	.046	1.2	500	34.5	2000	137.9	0100, 0250	.44	11.2	.009	.013
NN-4-035	NB-4-035	1/4	6.4	.180	4.6	.035	0.89	250	17.2	1000	69.0	0100, 0250	.88	22.4	.011	.016
NN-4-040	NB-4-040	1/4	6.4	.170	4.3	.040	1.0	310	21.4	1250	86.2	0100, 0250	.88	22.4	.012	.018
NN-4-062	NB-4-062	1/4	6.4	.127	3.2	.062	1.6	500	34.5	2000	137.9	0100, 0250	.50	12.7	.017	.025
NN-5-040	NB-5-040	5/16	7.9	.233	5.9	.040	1.0	250	17.2	1000	69.0	0100, 0250	1.13	28.7	.016	.024
NN-6-050	NB-6-050	3/8	9.5	.275	7.0	.050	1.3	250	17.2	1000	69.0	0100, 0250	1.13	28.7	.023	.034
NN-6-093	NB-6-093	3/8	9.5	.190	4.8	.093	2.4	500	34.5	2000	137.9	0100, 0250	.75	19.0	.038	.056
NN-8-062	NB-8-062	1/2	12.7	.375	9.5	.062	1.6	250	17.2	1000	69.0	0100, 0250	1.25	31.8	.039	.058
NN-8-124	NB-8-124	1/2	12.7	.253	6.4	.124	3.2	500	34.5	2000	137.9	0100, 0250	1.00	25.4	.067	.099



#### **Order Information**

Example: N-2-016-RED-0100

**N**-2-016-RED-0100 – **Nylon** 

N-2-016-RED-0100 - **Tube O.D.** in sixteenths of an inch (1/8")

N-2-016-RED-0100 - Wall Thickness in inches (.016")

N-2-016-**RED**-0100 – **Colors** (Omit for Natural and Black)

**NN**-2-016-0100 - Natural Nylon **NB**-2-016-0100 - Black Nylon

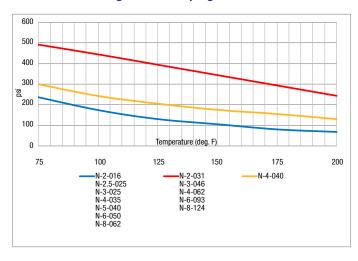
N-2-016-RED-**0100** – **Package Quantity** in feet **(100')** 

(Omit quantity number after color for 250' reel length)

Color Code											
0	NN	Natural									
•	NB	Black									
•	BLU	Blue									
•	GRN	Green									
•	RED	Red									
•	YEL	Yellow									

#### Nylon Tubing (Series N)

#### Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Flow Control
- Prestolok Brass
- Prestolok Composite
- TrueSeal<sup>™</sup>
- NTA®
- Transmission
- Prestomatic
- SAE Cartridge

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

- The recommended operating temperature range for service at rated pressures with compatible fluids, depending upon conditions, is -65°F to +200°F (-54°C to +93°C)
- Black tubing suggested for use in sunlit areas and in close proximity to high ultraviolet light sources

#### Colors

See Color Code Table



### **Metric Nylon Tubing**

Series N: Flexible



#### **Features**

- Flexible nylon tubing uses high-grade resins for strength and flexibility for routing in tight spaces
- Made from abrasion-resistant, heat and light-stabilized nylon
- Exhibits low-level water absorption
- Chemically resistant

#### **Applications/Markets**





- Robotics
- Machine tool
- General pneumatics
- Lubrication
- Petroleum-based chemical transfer
- Pest control lines



Part Number	Part Number	Tube O.D.		Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#	#				0		( <del>)</del> -						<i>₹</i>			lbs
Natural	Black	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	mm	inch	kg./mtr.	lbs./ft.
NN4X.65	NB4X.65	4	.157	2.7	.107	0.65	.026	20.7	300	82.7	1200	100	14	.550	.007	.005
NN6X1	NB6X1	6	.236	4.0	.157	1.00	.039	23.5	341	94	1363	100	22	.866	.016	.011
NN8X1	NB8X1	8	.315	6.0	.236	1.00	.039	17.0	247	68	986	100	29	1.14	.024	.016
NN10X1	NB10X1	10	.393	8.0	.315	1.00	.039	12.5	181	50	725	100	34	1.34	030	.020
NN12X1	NB12X1	12	.472	10.0	.393	1.00	.039	11.0	160	44	638	100	45	1.77	.036	.024
NN14X1.5	NB14X1.5	14	.551	11.0	.433	1.50	.059	15.0	218	60	870	100	57	2.24	.063	.042
NN16X1.5	NB16X1.5	16	.630	13.0	.512	1.50	.059	12.5	181	50	725	100	74	2.91	.073	.049
NN18X1.5	NB18X1.5	18	.709	15.0	.591	1.50	.059	10.5	152	42	609	100	92	3.62	.082	.055
NN20X1.5	NB20X1.5	20	.787	17.0	.669	1.50	.059	9.5	138	38	551	100	112	4.41	.092	.062



#### **Order Information**

Example: NN4x.65

NN4x.65 – Natural Nylon

NN4x.65 – Tube O.D. in millimeters (4mm)

NN4x.65 – Wall Thickness in millimeters (0.65mm)

#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

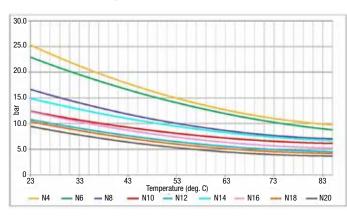
#### FSC Product Families:

- Metru-Lok™
- Flow Control
- Prestolok Brass
- Prestolok Composite
- Prestomatic

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### Metric Nylon Tubing (Series N)

#### Maximum Working Pressure (bar)



#### **Notes**

- The recommended operating temperature range for service at rated pressures with compatible fluids, depending upon conditions, is -54°C to +93°C (-65°F to +200°F)
- Black tubing suggested for use in sunlit areas and in close proximity to high ultraviolet light sources

#### **Colors**

- Natural
- Black

# Series F

### **Nylon Pure Air Tubing**

Series PAT: Ultra Pure, UV Resistant



#### **Features**

- The tubing choice for pure air systems (semiconductor) due to its cleanliness and excellent chemical and UV light resistance
- Maintains good resistance to high ambient temperatures with low moisture absorption
- Manufactured from a specially formulated nylon for use in pure air and gas distribution systems
- Provides high tensile strength with excellent coupling retention in high pressure, temperature and vibration environments
- Sizes -2 and -4 are single wall tubing construction
- Sizes -6 through -12 are reinforced tubing construction

#### **Applications/Markets**





- Pure air and gas distribution systems
- Semi-conductor



Part Number	Tu O.	be D.	Tube I.D.		Average Wall Thickness		Working Pressure at 73°F /23°C		Minimum Burst at 73°F /23°C		Reel Length	Minimum Bend Radius		Weight	
#		$\bigcirc$	(		()				*			<b>A</b>		lbs	
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
PAT2	1/8	3.2	.079	2.0	.023	0.58	250	17.2	1000	69.0	1000	.37	9.4	.035	.052
PAT4	1/4	6.4	.170	4.3	.040	1.0	300	20.7	1200	82.7	1000	1.00	25.4	.124	.185
PAT6	3/8	9.5	.251	6.4	.062	1.6	350	24.1	1400	96.4	500	1.50	38.1	.282	.420
PAT8	1/2	12.7	.376	9.6	.062	1.6	235	16.2	950	65.5	500	2.00	50.8	.395	.588
PAT10	5/8	15.9	.441	11.2	.092	2.3	225	15.5	900	62.1	250	2.50	63.5	.702	1.04
PAT12	3/4	19.1	.566	14.4	.092	2.3	200	13.8	800	55.2	250	3.00	76.2	.872	1.30



Example: PAT4-BLK-0250

PAT4-BLK-0250 – Pure Air Tubing

PAT4-BLK-0250 - Tube O.D. in sixteenths of an inch (1/4")

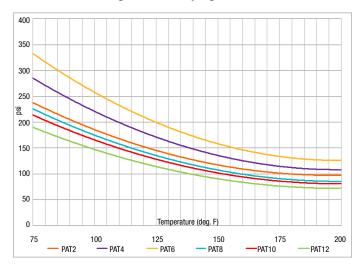
PAT4-BLK-0250 - Color (Black)

PAT4-BLK-0250 - Package Quantity in feet (250')

	Color Code									
•	BLK	Black								
•	BRN	Brown								
	SIL	Silver								

## **Pure Air Nylon Tubing (Series PAT)**

#### Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

FSC Product Families:

- Compression
- Compress-Align®
- Hi-Duty
- Fast & Tite
- NTA®

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

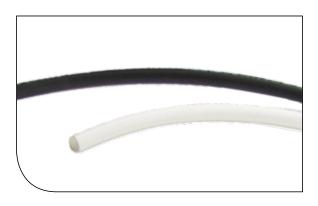
- Packaged on corrugated plastic reel with ends capped and shipped in a plastic-lined container
- The suggested operating temperature range for service at rated pressures with compatible fluids is -70°F to +200°F (-57°C to +93°C)
- PAT tubing is rated for full vacuum service at 28 inch Hg

#### Colors

See Color Code Table



# **Nylon Tubing**Series NR: Semi-rigid High Strength



## **Features**

- High grade nylon resins without the addition of plasticizers for higher pressure tubing applications
- Better chemical resistance than Series N, good resistance to high ambient temperature and low moisture absorption
- High tensile strength and excellent coupling retention in high pressure, temperature and vibration environments

## **Applications/Markets**





- High-pressure pneumatics and oils
- Lubrication systems
- Marine control systems



Process lines for chemicals

Part Number	Part Number	Tu O.	be D.	Tu I.I		Ave W Thick		Wor Pres at 73°		Bu	mum rst F /23°C	Reel Length	Mini Be Rac		We	ight
#	#	(	$\overline{)}$	(	$\overline{)}$	(	<u> </u>	(	<u></u>	-	K		*	$\mathcal{S}$	lbs	[03]
Natural	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
NNR-2-017	NBR-2-017	1/8	3.2	.091	2.3	.017	0.43	425	29.3	1700	117.2	0100, 0500	.50	12.7	.003	.005
NNR-2-026	NBR-2-026	1/8	3.2	.073	1.9	.026	0.66	625	43.1	2500	172.4	0100, 0500	.38	9.7	.004	.006
NNR-3-024	NBR-3-024	3/16	4.8	.140	3.6	.024	0.61	425	29.3	1700	117.2	0100, 0500	.75	19.0	.006	.009
NNR-3-039	NBR-3-039	3/16	4.8	.110	2.8	.039	0.99	625	43.1	2500	172.4	0100, 0500	.63	16.0	.008	.012
NNR-4-035	NBR-4-035	1/4	6.4	.180	4.6	.035	0.89	425	29.3	1700	117.2	0100, 0250	1.00	25.4	.011	.016
NNR-4-050	NBR-4-050	1/4	6.4	.150	3.9	.050	1.3	625	43.1	2500	172.4	0100, 0250	.88	22.3	.014	.021
NNR-5-040	NBR-5-040	5/16	7.9	.233	5.9	.040	1.0	425	29.3	1700	117.2	0100, 0250	1.50	38.1	.015	.022
NNR-6-048	NBR-6-048	3/8	9.5	.279	7.1	.048	1.2	425	29.3	1700	117.2	0100, 0250	1.75	44.5	.022	.033
NNR-6-075	NBR-6-075	3/8	9.5	.225	5.7	.075	1.9	625	43.1	2500	172.4	0100, 0250	1.50	38.1	.032	.048
NNR-8-062	NBR-8-062	1/2	12.7	.375	9.5	.062	1.6	375	26	1500	103.4	0100, 0250	2.38	60.5	.038	.057
NNR-8-075	NBR-8-075	1/2	12.7	.350	8.9	.075	1.9	625	43.1	2500	172.4	0100, 0250	2.50	63.5	.045	.067



Example: NBR-2-017-0100

NBR-2-017-0100 - Nylon

NBR-2-017-0100 - Color (Black)

NBR-2-017-0100 - Rigid

NBR-2-017-0100 - Tube O.D. in sixteenths of an inch (1/8")

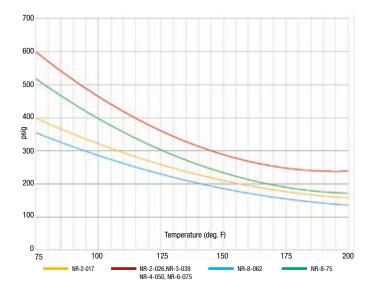
NBR-2-017-0100 - Wall Thickness in inches (.017")

NBR-2-017-0100 - Package Quantity in feet (100')

(Omit for other package quantities)

## Semi-rigid Nylon Tubing (Series NR)

#### Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- Hi-Duty
- Fast & Tite
- Flow Control
- Prestolok Brass
- Prestolok Composite
- TrueSeal<sup>™</sup>

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

 Suggested operating temperature range for service at rated pressures with compatible fluids is -60°F to +200°F (-51°C to +93°C)

#### Colors

- Natural
- Black



# **Nylon Tubing**Series NTNA: Semi-rigid Nylon Tubing



## **Features**

- High grade nylon resins without the addition of plasticizers
- High tensile strength and excellent coupling retention in high pressure, temperature and vibration environments
- Excellent chemical resistance
- Rugged construction resists vermin attack

## **Certifications**

■ NSF-51

## **Applications/Markets**





- Instrumentation lines
- Lubrication systems
- Process piping systems





Refrigerant lines

Part Number	Tu O.		Tu I.I	be D.	W.	rage all (ness	Wor Pres at 73°		Bu	mum Irst F/23°C	Reel Length		mum nd lius	We	ight
#	0		(		(	<b>)</b> -			-			5	9	lbs	<u>s</u>
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
22NTNA	1/8	3.2	.091	2.3	.017	0.4	375	25.9	1,500	103.4	500	0.50	12.7	.003	.005
532NTNA	5/32	4.0	.113	2.9	.022	0.6	375	25.9	1,500	103.4	500	0.63	16.0	.004	.006
33NTNA	3/16	4.8	.139	3.5	.024	0.6	375	25.9	1,500	103.4	350	0.75	19.0	.006	.009
44NTNA	1/4	6.4	.184	4.7	.033	0.8	375	25.9	1,500	103.4	200	1.00	25.4	.010	.015
55NTNA	5/16	7.9	.232	5.8	.040	1.0	375	25.9	1,500	103.4	150	1.50	38.1	.015	.022
66NTNA	3/8	9.5	.282	7.1	.048	1.2	375	25.9	1,500	103.4	100	1.75	44.4	.022	.033
88NTNA	1/2	12.7	.375	9.5	.062	1.6	375	25.9	1,500	103.4	100	2.38	60.5	.032	.048



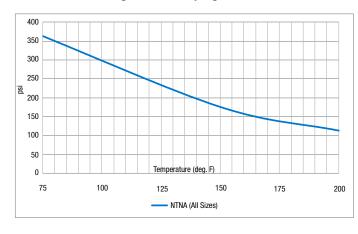
## **Example: 44NTNA**

44NTNA - Tube O.D. in sixteenths of an inch (1/4")

44NTNA - Nylon Tubing 44NTNA - Color (Natural)

## Semi-rigid Nylon Tubing (Series NTNA)

#### Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Flow Control
- NTA
- Prestolok Brass
- Prestolok Composite
- Prestomatic
- SAE Cartridges
- Transmission
- TrueSeal<sup>™</sup>

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

 Suggested operating temperature range from -60°F to +212°F (-51°C to +100°C)

#### **Colors**

Natural



# General Technical

# TPE Parprene<sup>TM</sup> Tubing Series G: General Industrial



## **Features**

- Excellent flexural fatigue resistance
- Ozone and UV light resistant
- Temperatures from (-75°F to 275°F)
- Abrasion resistant
- · Resistant to environmental stress cracking
- Lot-to-lot traceability
- Chemically compatible with common sanitizers and cleaners
- Extensive range of compatible Parker fittings and couplers

## **Applications/Markets**





- Wastewater Sampling
- Cable Insulation
- Caustic Dispensing
- Ink and toner feed lines
- Chemical Transfer

Part Number	Tul O. (Re	D.	Tul 1.1		Wa Thick		Pres	king sure F /23°C	Mini Be Rad	nd	Stan Co		Weigh 100	
#	0	9	0	9	((	<u></u>			5	9				
	inch	mm	inch	mm	inch	mm	psi	bar	inch	mm	feet	mtr.	lb.	kg.
G64-31	0.188	5	0.062	2	0.062	1.59	34	2.34	1/4	6	50	15.2	1.03	0.47
G64-42	0.250	6	0.125	3	0.062	1.59	19	1.31	1/2	13	50	15.2	1.55	0.70
G64-53	0.312	8	0.188	5	0.062	1.59	13	0.90	3/4	19	50	15.2	2.06	0.93
G64-64	0.375	10	0.250	6	0.062	1.59	10	0.69	1-1/4	32	50	15.2	2.58	1.17
G64-75	0.438	11	0.312	8	0.062	1.59	8	0.55	1-1/2	38	50	15.2	3.10	1.41
G64-84	0.500	13	0.250	6	0.125	3.18	19	1.31	3/4	19	50	15.2	6.19	2.81
G64-86	0.500	13	0.375	10	0.062	1.59	7	0.48	2-1/4	57	50	15.2	3.61	1.64
G64-106	0.625	16	0.375	10	0.125	3.18	13	0.90	1-1/4	32	50	15.2	8.26	3.75
G64-128	0.750	19	0.500	13	0.125	3.18	10	0.69	2	51	50	15.2	10.32	4.68
G64-1410	0.875	22	0.625	16	0.125	3.18	8	0.55	3-1/4	83	50	15.2	12.39	5.62
G64-1612	1.000	25	0.750	19	0.125	3.18	7	0.48	4	102	50	15.2	14.45	6.56



Example: G64-31

**G**64-31 – **TPE**, **General Series** 

**G64-31 – Hardness Durometer (64 Shore A)** 

G64-31 - Tube O.D. in sixteenths of an inch (3/16")

G64-31 - Tube I.D. in sixteenths of an inch (1/16")

#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Par-Barb<sup>™</sup> Thermoplastic
- Dubl-Barb®
- Hose Barb

## **Couplings**

Parker couplings available from: Quick Coupling Division Minneapolis, MN (763) 544-7781 (763) 544-3418 FAX

#### QCD Product Families:

- Spectrum Series
- PPM Series
- PPL Series

#### **Notes**

- TPE is a thermoplastic elastomer formulated to withstand the rigors of peristaltic pump applications and yet, be safe enough for food and beverage applications.
- Suggested operating temperature range for service at rated pressures with compatible fluids is -75°F to +275°F (-59°C to 135°C)
- Packaged 50 foot coils sealed clear polyethylene bag, barcoded, 1 per box for lot traceability
- Special lengths available, contact Parflex division

#### Colors

Black



## **TPE Parprene™ Tubing**

Series F: Food & Dairy



## **Applications/Markets**





- Hot/Cold beverage dispensing
- Food and dairy processing lines
- Chemical transfer
- Water purification lines
- Soap dispensing

## **Features**

- Excellent flexural fatigue resistance
- Ozone and UV light resistant
- Temperatures from (-75°F to 275°F)
- Abrasion resistant
- Resistant to environmental stress cracking
- · Lot-to-lot traceability
- Chemically compatible with common sanitizers and cleaners
- Extensive range of compatible Parker fittings and couplers

## **Certifications**

- FDA compliant for food contact
- NSF-51 Approved
- 3-A Approved

Part Number	Tul O. (Re	D.	Tu I.I			all iness	Pres	king sure F /23°C	Minii Be Rad		Standard Coil		Weight per 100 feet	
#	0	9	0	9		<b>—</b>			5	9				
	inch	mm	inch	mm	inch	mm	psi	bar	inch	mm	feet	mtr.	lb.	kg.
F64-31	0.188	5	0.062	2	0.062	1.59	34	2.34	1/4	6	50	15.2	1.03	0.47
F64-42	0.250	6	0.125	3	0.062	1.59	19	1.31	1/2	13	50	15.2	1.55	0.70
F64-53	0.312	8	0.188	5	0.062	1.59	13	0.90	3/4	19	50	15.2	2.06	0.93
F64-64	0.375	10	0.250	6	0.062	1.59	10	0.69	1-1/4	32	50	15.2	2.58	1.17
F64-75	0.438	11	0.312	8	0.062	1.59	19	1.31	1-1/2	38	50	15.2	3.10	1.41
F64-84	0.500	13	0.250	6	0.125	3.18	8	0.55	3/4	19	50	15.2	6.19	2.81
F64-86	0.500	13	0.375	10	0.062	1.59	7	0.48	2-1/4	57	50	15.2	3.61	1.64
F64-106	0.625	16	0.375	10	0.125	3.18	13	0.90	1-1/4	32	50	15.2	8.26	3.75
F64-128	0.750	19	0.500	13	0.125	3.18	10	0.69	2	51	50	15.2	10.32	4.68
F64-1410	0.875	22	0.625	16	0.125	3.18	8	0.55	3-1/4	83	50	15.2	12.39	5.62
F64-1612	1.000	25	0.750	19	0.125	3.18	7	0.48	4	102	50	15.2	14.45	6.56



Example: F64-31

F64-31 – TPE, General Series

F64-31 – Hardness Durometer (64 Shore A)

F64-31 - Tube O.D. in sixteenths of an inch (3/16")

F64-31 - Tube I.D. in sixteenths of an inch (1/16")

#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Par-Barb<sup>™</sup> Thermoplastic
- Dubl-Barb®
- Hose Barb

## **Couplings**

Parker couplings available from: Quick Coupling Division Minneapolis, MN (763) 544-7781 (763) 544-3418 FAX

#### QCD Product Families:

- Spectrum Series
- PPM Series
- PPL Series

#### **Notes**

- TPE is a thermoplastic elastomer formulated to withstand the rigors of peristaltic pump applications and yet, be safe enough for food and beverage applications.
- Suggested operating temperature range for service at rated pressures with compatible fluids is -75°F to +275°F (-59°C to +135°C)
- Packaged 50 foot coils sealed clear polyethylene bag, barcoded, 1 per box for lot traceability
- Special lengths available, contact Parflex division

#### **Colors**

Tan



B-31

Polypropylene Tubing
Series PP: Laboratory Grade – FDA, NSF Listed Series PPB: Ultraviolet Light Resistant



## **Applications/Markets**





- Food contact White only
- Chemical transfer
- Chlorinated water



## **Features**

- · Acid and chemically resistant
- May be used in higher temperatures and working pressures than polyethylene tubing
- Excellent compatibility with high temperature water
- Low water absorption (less than .01%)
- Good compatibility with vegetable oils
- Excellent resistance to environmental stress cracking

## Certifications

- FDA Both in white; NSF also in
- special black part numbers NSF-51

Part Number	Part Number	Tu O.	be D.		be D.	W:	rage all (ness		king sure F/23°C	Bu	mum Irst F /23°C	Reel Length	Be	mum end dius	We	ight
#	#		9	(		(	)-			- 3			- *	$\mathcal{S}$	lbs	pg C
White	Black	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
PP-21-1000	PPB-21-1000	1/8	3.2	.079	2.0	.023	0.58	350	24.1	1400	96.4	1000	.50	12.7	.003	.005
PP-32-0500	PPB-32-0500	3/16	4.8	.120	3.1	.034	0.86	350	24.1	1400	96.4	0500	.75	14.4	.006	.009
PP-43-0500	PPB-43-0500	1/4	6.4	.170	4.3	.040	1.0	300	20.7	1200	82.7	0500	1.00	25.4	.010	.019
PP-53-0500	PPB-53-0500	5/16	7.9	.188	4.8	.062	1.6	350	24.1	1400	96.4	0500	1.25	31.8	.019	.028
PP-64-0500	PPB-64-0500	3/8	9.5	.250	6.4	.062	1.6	300	20.7	1200	82.7	0500	1.25	31.8	.024	.036
PP-86-0250	PPB-86-0250	1/2	12.7	.375	9.5	.062	1.6	225	15.5	900	62.1	0250	2.50	63.5	.033	.049
PP-108-0100	PPB-108-0100	5/8	15.9	.500	12.7	.062	1.6	175	12.1	700	48.3	0100	4.00	101.6	.042	.062



Example: PP-86-0250

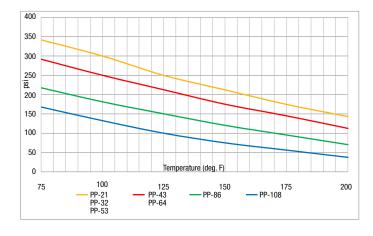
PP-86-0250 - Polypropylene

PP-**8**6-0250 – **Tube O.D.** in sixteenths of an inch **(1/2")** 

PP-86-0250 - **Tube I.D.** in sixteenths of an inch **(.375")** 

PP-86-0250 - Package Quantity in feet (250')

# Polypropylene Tubing (Series PP & PPB) Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- Poly-Tite
- Hi-Duty
- Fast & Tite
- Prestolok Brass
- Liquifit
- TrueSeal<sup>™</sup>

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

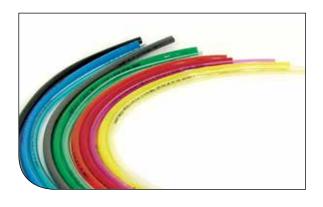
- NSF black polypropylene tubing is available upon special request. Add -FDA suffix to PPB part number
- Suggested operating temperature range for service at rated pressures with compatible fluids is 0°F to +200°F (-18°C to +93°C)

#### **Colors**

- O White
- Black

# **Polyurethane Tubing**

## Series U: Polyether Base



## **Features**

- 90 to 95 Shore A durometer
- · Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

## **Applications/Markets**





- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number		be D.	Tu I.	be D.	W	rage all (ness	Wor Pres at 73°		Bu	mum rst F /23°C	Reel Length	We	ight
#	(	$\bigcirc$	(	$\overline{)}$	(	)-	(					Ibs	
Natural	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	lbs./ft.	kg./mtr.
U-21-XXXX	1/8	3.2	.063	1.6	.031	0.79	125	8.6	375	25.9	0050, 0250, 0500, 1000	.005	.007
U-32-XXXX	3/16	4.8	.125	3.2	.031	0.79	125	8.6	375	25.9	0050, 0250, 0500	.008	.012
U-42-XXXX	1/4	6.4	.125	3.2	.063	1.6	125	8.6	375	25.9	0050, 0250, 0500, 1000	.018	.027
U-64-XXXX	3/8	9.5	.250	6.4	.063	1.6	125	8.6	375	25.9	0050, 0250, 0500, 1000	.030	.045
U-85-XXXX	1/2	12.7	.328	8.3	.086	2.2	125	8.6	375	25.9	0050, 0250, 0500	.044	.065
U-86-XXXX	1/2	12.7	.375	9.5	.063	1.6	85	5.9	255	17.6	0050, 0250, 0500	.042	.062
U-96-XXXX	9/16	14.3	.375	9.5	.094	2.4	125	8.6	375	25.9	0050, 0100	.068	.101
U-128-XXXX	3/4	19.1	.500	12.7	.125	3.2	125	8.6	375	25.9	0050, 0100	.120	.179

Also available in coils



Example: U-21-BLK-0500

U-21-BLK-0500 – Polyurethane

U-21-BLK-0500 – **Tube O.D.** in sixteenths of an inch **(1/8")** 

U-21-BLK-0500 – **Tube I.D.** in sixteenths of an inch **(.063")** 

U-21-BLK-0500 - Color (Black) (Omit for Natural)

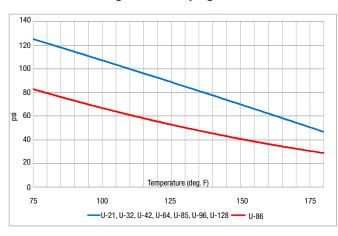
U-21-BLK-0500 - Package Quantity in feet (500')

Opaque Color Code									
0	-	Natural							
•	BLK	Black							
•	BLU	Blue							
•	GRA	Gray							
•	GRN	Green							
•	ORG	Orange							
•	RED	Red							
0	WHT	White							
•	YEL	Yellow							

Transparent Color Code									
•	TBLU	Transparent Blue							
•	TGRN	Transparent Green							
•	TORG	Transparent Orange							
•	TRED	Transparent Red							
•	TYEL	Transparent Yellow							

## Polyurethane Tubing (Series U)

#### Maximum Working Pressure (psig)



### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Fast & Tite
- Flow Control
- Prestolok Brass
- TrueSeal<sup>™</sup>
- Par-Barb™

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

 Suggested operating temperature range for service at rated pressures with compatible fluids is -40°F to +180°F (-40°C to +82°C)

#### Colors

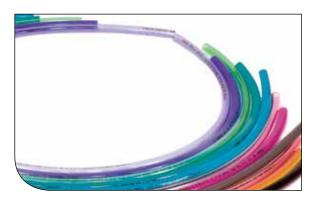
See Color Code Table



# General Technical

## **Metric Polyurethane Tubing**

Series UM: Polyether Base



## **Features**

- 90 to 95 Shore A durometer
- · Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

## **Applications/Markets**





- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number	Tu O.	be D.	Tu I.I	be D.		rage all kness	Pres	king sure F /23°C	Minii Bu at 73°1		Reel Length	Wei	ight
#				$\bigcirc$	(	-	C						lbs
Natural	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	kg./mtr.	lbs./ft.
UM4x2.5-XXXX	4	.157	2.5	.098	0.75	.030	9.0	131	26.0	377	0100, 0250, 0500	.009	.006
UM6x4-XXXX	6	.236	4.0	.157	1.00	.039	9.0	131	26.0	377	0100, 0250, 0500	.018	.012
UM8x5-XXXX	8	.315	5.0	.196	1.50	.059	9.0	131	26.0	377	0100, 0250, 0500	.036	.024
UM10x6.5-XXXX	10	.393	6.5	.256	1.75	.069	9.0	131	26.0	377	0100, 0250	.053	.036
UM12x8-XXXX	12	.472	8.0	.315	2.00	.079	9.0	131	26.0	377	0100, 0250	.073	.049



Example: UM6x4-BLK-0100

**UM**6X4-BLK-0100 – **Polyurethane Metric** 

UM6X4-BLK-0100 – **Tube O.D.** in millimeters **(6 mm)** 

UM6X4-BLK-0100 – **Tube I.D.** in millimeters (4 mm)

UM6X4-BLK-0100 - Color (Black) (Omit for Natural)

UM6X4-BLK-0100 - Package Quantity in feet (100')

Opaque Color Code									
0	-	Natural							
•	BLK	Black							
•	BLU	Blue							
	GRA	Gray							
•	GRN	Green							
•	ORG	Orange							
•	RED	Red							
•	YEL	Yellow							

1	Transparent Color Code									
•	TBLU	Transparent Blue								
•	TGRN	Transparent Green								
•	TORG	Transparent Orange								
•	TRED	Transparent Red								
•	TYEL	Transparent Yellow								

#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Prestolok Brass
- Par-Barb

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

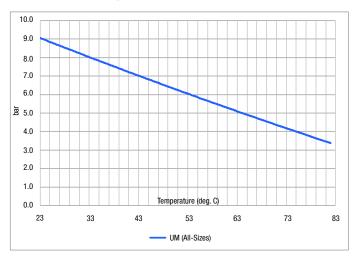
■ The recommended operating temperature range for service at rated pressures with compatible fluids is -40°F to +180°F (-40°C to +82°C)

#### Colors

■ See Color Code Table

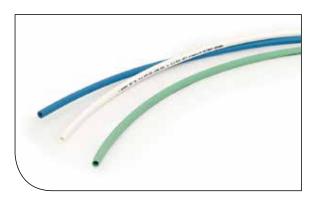
## Metric Polyurethane Tubing (Series UM)

#### Maximum Working Pressure (bar)



# General Technical

## **HUFR MicroWeld<sup>™</sup> Tubing**



## **Features**

- Mono-wall construction eliminates the need for skiving tools or knives, reducing installation time
- Excellent abrasion resistance
- Silicone and halogen free
- Weighs 36% less than equivalent covered tubing

## **Certifications**

■ UL 94 V2 compliant

## **Applications/Markets**





- Robotics
- Welding
- General automation

Part Number		be D.	Tu I.I	be D.	W	rage all (ness	Pres	king sure F/23°C		mum irst F /23°C	Reel Length	Minii Be Rad		We	ight
#			(		(	)-	(		7	<b>K</b>		7	$\mathcal{D}$	lbs	log Bog
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	inch	mm	lbs./ft.	kg./mtr.
HUFR-4-045-XX-0500	1/4	6.4	.160	4.1	.045	1.1	175	12.1	525	36.2	0500	.50	12.7	.016	.024
HUFR-6-062-XX-0500	3/8	9.5	.251	6.4	.062	1.6	150	10.3	450	31.0	0500	.75	19.1	.033	.049
HUFR-8-090-XX-0250	1/2	12.7	.320	8.1	.090	2.3	160	11.0	475	32.7	0250	1.00	25.4	.063	.094



Example: HUFR-4-045-BL-0500

HUFR-4-045-BL-0500 - MicroWeld™ Polyurethane

HUFR-4-045-BL-0500 - **Tube O.D.** in sixteenths of an inch (1/4")

HUFR-4-045-BL-0500 - Wall Thickness in inches (.045")

HUFR-4-045-BL-0500 - Color (Blue)

HUFR-4-045-BL-0500 - Package Quantity in feet (500')

Color Code									
•	● BK Black								
•	BL	Blue							
•	GN	Green							
•	RD	Red							
0	WH	White							

### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

**FSC Product Families:** 

■ Prestolok PLM

#### **Notes**

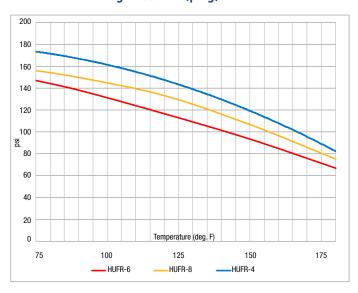
 Suggested operating temperature range for service at rated pressures with compatible fluids is -40°F to +180°F (-40°C to +82°C)

#### Colors

See Color Code Table

## MicroWeld™ Tubing (Series HUFR)

#### Maximum Working Pressure (psig)



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

B-39

# General Technical

# **Polyurethane Tubing**Series HU: High Durometer Polyether Base



## **Features**

- 95 Shore A durometer or greater
- · Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

## **Applications/Markets**





- Pneumatic controls
  - Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number		be .D.	Tu I.I	be D.	W	rage all kness	Pres	king sure F /23°C	Bu	mum rst F /23°C	Reel Length	We	eight
#		$\bigcirc$				-	(		1			lbs	<b>E</b>
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	feet	lbs./ft.	kg./mtr.
HU-2-XXXX	1/8	3.2	.063	1.6	.031	0.79	300	20.7	900	62.1	0100, 0250, 0500	.005	.007
HU-2.5-XXXX	5/32	4.0	.094	2.4	.031	0.79	210	14.5	630	43.4	0100, 0500	.006	.009
HU-4-XXXX	1/4	6.4	.160	4.1	.045	1.1	180	12.4	540	37.2	0100, 0500	.014	.021
HU-6-XXXX	3/8	9.5	.250	6.4	.062	1.6	180	12.4	540	37.2	0100, 0500	.030	.045
HU-8-XXXX	1/2	12.7	.320	8.1	.090	2.3	180	12.4	540	37.2	0100, 0250	.057	.085
HU-12-XXXX	3/4	19.1	.467	11.9	.142	3.6	180	12.4	540	37.2	0100, 0250	.133	.198



Example: HU-2-BLK-0500

**HU**-2-BLK-0500 – **High Durometer Polyurethane** 

HU-2-BLK-0500 - Tube O.D. in sixteenths of an inch (1/8")

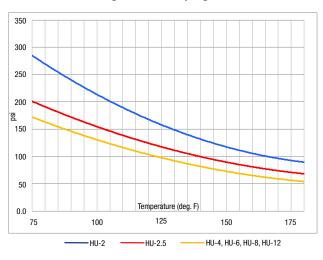
HU-2-BLK-0500 - Color (Black)

HU-2-BLK-0500 - Package Quantity in feet (500')

Color Code									
● BLK Black									
•	BLU	Blue							
•	DBL	Dark Blue							
•	RED	Red							
•	YEL	Yellow							

## Polyurethane Tubing (Series HU)

#### Maximum Working Pressure (psig)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Fast & Tite
- Flow Control
- Prestolok Brass
- Prestolok Composite
- TrueSeal™

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

 Suggested operating temperature range for service at rated pressures with compatible fluids is -40°F to +180°F (-40°C to +82°C)

#### Colors

See Color Code Table



# Metric Polyurethane Tubing Series HUM: High Durometer (Metric) Polyether Base



## **Features**

- 95 Shore A durometer or greater
- · Excellent kink and abrasion resistance
- Excellent hydrolytic stability
- Flexible and easy to assemble onto designated fittings
- Polyurethane tubing exhibits the elongation and recovery characteristics of rubber and the chemical resistance associated with plastics

## **Applications/Markets**





- Pneumatic controls
- Robotics
- Machine tools
- General pneumatics
- Vacuum equipment
- Analytical instrumentation
- Semiconductor equipment
- Medical and laboratory applications

Part Number		be D.		be D.		rage all (ness		king sure F /23°C	Bu	mum rst F /23°C	Reel Length	Wei	ght
#		$\bigcirc$				)-			-			lggl	lbs
	mm	inch	mm	inch	mm	inch	bar	psi	bar	psi	feet	kg./mtr.	lbs./ft.
HUM-4-XXXX	4	.157	2.4	.094	0.80	.031	12.4	180	37.2	540	0100, 0500	.009	.006
HUM-6-XXXX	6	.236	4.0	.157	1.00	.039	12.4	180	37.2	540	0100, 0500	.018	.012
HUM-8-XXXX	8	.315	5.0	.196	1.50	.059	12.4	180	37.2	540	0100, 0500	.036	.024
HUM-10-XXXX	10	.393	6.5	.256	1.75	.069	12.4	180	37.2	540	0100, 0250	.053	.036
HUM-12-XXXX	12	.472	8.0	.315	2.00	.079	12.4	180	37.2	540	0100, 0250	.073	.049



Example: HUM-6-BLK-0100

**HUM**-6-BLK-0100 – **High Durometer Metric Polyurethane** 

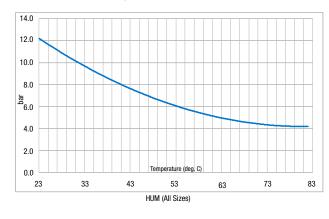
HUM-6-BLK-0100 – **Tube O.D.** in millimeters **(6mm)** 

HUM-6-BLK-0100 - Color (Black)

HUM-6-BLK-0100 - Package Quantity in feet (100')

## Metric Polyurethane Tubing (Series HUM)

#### Maximum Working Pressure (bar)



#### **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### FSC Product Families:

- Flow Control
- Prestolok Brass
- Prestolok Composite

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

 Suggested operating temperature range for service at rated pressures with compatible fluids is -40°F to +180°F (-40°C to +82°C)

#### Colors

- Natural
- Black

## Vinyl Tubing Series PV: Clear Vinyl Tubing



## **Features**

- Made from a virgin clear PVC (polyvinyl chloride) resin; specifically formulated for exceptional purity, clarity and flexibility
- 70 durometer for soft, easy handling and bending without tubing collapse

## Certifications

■ FDA compliant

## **Applications/Markets**





- Low-pressure chemicals
- Pneumatics
- Low-pressure sight flow indicator

## **Order Information**

Example: PV108-1

**PV**108-1 – **Poly-Vinyl Tubing** 

PV108-1 - Tube O.D. in sixteenths of an inch (5/8")

PV108-1 - Tube I.D. in sixteenths of an inch (1/2")

PV108-1 - Formula V-1 FDA Approved Formulation

## **Fittings**

Parker fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

#### **FSC Product Families:**

- Poly-Tite
- Fast & Tite
- TrueSeal<sup>™</sup>
- Par-Barb®
- Hose Barb
- Garden Fitting

A tube support should be used with this tubing for maximum holding power where end loading, vibration or pressure spikes may occur. Reference Tubing/Fitting Compatibility Chart (pg. B-6)

#### **Notes**

- Formula V-1 tubing fully meets all specifications called out by the United States Food and Drug Administration (FDA) for materials in contact with food and drugs for human consumption
- Suggested operating temperature range for service at rated pressures with compatible fluids is -40°F to +150°F (-40°C to +65°C)



Part Number	Tul O.		Tu I.I			rage all kness		king sure F /23°C	Std. Coil	We	ight
#			$\bigcirc$			<b>)</b> -				5 C lbs	bg c
	inch	mm	inch	mm	inch	mm	psi	bar	feet	lbs./ft.	kg./mtr.
PV21-1	1/8	3.2	.063	1.6	.031	.79	35	2.4	100	.005	.007
PV32-1	.170	4.3	.125	3.2	.025	.64	35	2.4	100	.006	.009
PV42-1	1/4	6.4	.125	3.2	.063	1.6	65	4.5	100	.025	.037
PV43-1	1/4	6.4	.170	4.3	.040	1.2	55	3.8	100	.014	.021
PV403-1	1/4	6.4	.188	4.8	.031	.79	22	1.5	100	.011	.016
PV53-1	5/16	7.9	.188	4.8	.063	1.6	55	3.8	100	.025	.037
PV63-1	3/8	9.5	.188	4.8	.094	2.4	65	4.5	100	.043	.064
PV73-1	7/16	11.1	.188	4.8	.125	3.2	75	5.2	100	.063	.094
PV54-1	5/16	7.9	.250	6.4	.031	.79	20	1.4	100	.014	.021
PV64-1	3/8	9.5	.250	6.4	.064	1.6	55	3.8	100	.032	.048
PV74-1	7/16	11.1	.250	6.4	.094	2.4	60	4.1	100	.052	.077
PV84-1	1/2	12.7	.250	6.4	.125	3.2	70	4.8	100	.076	.113
PV75-1	7/16	11.1	.313	7.9	.063	1.6	50	3.4	100	.038	.057
PV85-1	1/2	12.7	.313	7.9	.094	2.4	60	4.1	100	.062	.092
PV95-1	9/16	14.3	.313	7.9	.125	3.2	70	4.8	100	.088	.131
PV86-1	1/2	12.7	.375	9.5	.063	1.6	45	3.1	100	.044	.065
PV96-1	9/16	14.3	.375	9.5	.094	2.4	50	3.4	100	.071	.106
PV106-1	5/8	15.9	.375	9.5	.125	3.2	60	4.1	100	.101	.150
PV97-1	9/16	14.3	.438	11.1	.063	1.6	40	2.8	100	.050	.074
PV107-1	5/8	15.9	.438	11.1	.094	2.4	45	3.1	100	.080	.119
PV117-1	11/16	17.5	.438	11.1	.125	3.2	50	3.4	100	.115	.171
PV108-1	5/8	15.9	.500	12.7	.063	1.6	30	2.1	100	.057	.085
PV118-1	11/16	17.5	.500	12.7	.094	2.4	40	2.8	100	.089	.132
PV128-1	3/4	19.1	.500	12.7	.125	3.2	45	3.1	100	.126	.187
PV138-1	13/16	20.7	.500	12.7	.156	4.0	60	4.1	100	.167	.248
PV129-1	3/4	19.1	.563	14.3	.094	2.4	40	2.8	100	.099	.147
PV139-1	13/16	20.7	.563	14.3	.125	3.2	45	3.1	100	.138	.205



# Vinyl Tubing (cont.) Series PV: Clear Vinyl Tubing

Part Number	Tu O.	be D.	Tul 1.1			rage all kness	Pres	king sure F/23°C	Std. Coil	We	ight
#			(		(	<del>)</del> -				lbs	pg C
	inch	mm	inch	mm	inch	mm	psi	bar	feet	lbs./ft.	kg./mtr.
PV1310-1	13/16	26.7	.625	15.9	.094	2.4	35	2.4	100	.108	.161
PV1410-1	7/8	22.2	.625	15.9	.125	3.2	40	2.8	100	.151	.225
PV1510-1	15/16	23.8	.625	15.9	.156	4.0	50	3.5	100	.196	.292
PV1411-1	7/8	22.2	.688	17.5	.094	2.4	30	2.1	100	.118	.176
PV1611-1	1	25.4	.688	17.5	.156	4.0	45	3.1	100	.213	.317
PV1612-1	1	25.4	.750	19.1	.125	3.2	35	2.4	100	.176	.262
PV1712-1	1-1/16	27.0	.750	19.1	.156	4.0	35	2.4	100	.228	.339
PV1812-1	1-1/8	28.6	.750	19.1	.188	4.8	50	3.5	100	.283	.421
PV2012-1	1-1/4	31.8	.750	19.1	.250	6.4	55	3.8	50	.409	.609
PV1814-1	1-1/8	27.0	.875	22.2	.125	3.2	30	2.1	50	.201	.299
PV1914-1	1-3/16	30.2	.875	22.2	.156	4.0	35	2.4	100	.259	.385
PV2014-1	1-1/4	31.8	.875	22.2	.188	4.8	45	3.1	50	.321	.478
PV2016-1	1-1/4	31.8	1.000	25.4	.125	3.2	25	1.7	50	.230	.342
PV2116-1	1-5/16	33.4	1.000	25.4	.156	4.0	30	2.1	50	.291	.433
PV2216-1	1-3/8	34.9	1.000	25.4	.188	4.8	40	2.8	50	.359	.534
PV2416-1	1-1/2	38.1	1.000	25.4	.250	6.4	45	3.1	50	.514	.765
PV2218-1	1-3/8	34.9	1.125	28.6	.125	3.2	25	1.7	50	.252	.375
PV2420-1	1-1/2	38.1	1.250	31.8	.125	3.2	20	1.4	50	.277	.412
PV2620-1	1-5/8	41.3	1.250	31.8	.188	4.8	35	2.4	50	.434	.646
PV2820-1	1-3/4	44.4	1.250	31.8	.250	6.4	45	3.1	50	.604	.899
PV3024-1	1-7/8	47.6	1.500	38.1	.188	4.8	30	2.1	50	.510	.759
PV3224-1	2	50.8	1.500	38.1	.250	6.4	40	2.8	50	.705	1.05
PV3628-1	2-1/4	57.2	1.750	11.1	.250	6.4	30	2.1	50	.806	1.20
PV4032-1	2-1/2	63.5	2.000	50.8	.250	6.4	35	2.4	50	.906	1.35



Notes	

## **Fluoropolymer Tubing**

Fluoropolymer tubing features a low coefficient of friction and anti-stick properties, high temperature capabilities and the most corrosion and chemical resistance of all polymers. Within normal use temperatures, fluoropolymers are attacked by so few chemicals that it is easier to describe the exceptions rather than list the chemicals they are compatible with (see Chemical Resistance Summary, pg. B-50). These chemically inert tubes are non-wetting and non-leaching, making them ideal for a wide range of fluid and material handling applications.

Parker fluoropolymer tubing is available in PTFE, FEP, PFA and PVDF with some materials operating at temperatures up to 500°F (260°C). Each material has specific dominant characteristics, but all operate in high-temperature, corrosive environments.

- Parflex PTFE, FEP, PFA and PVDF tubing complies with European Standard RoHs and are also FDA compliant to FDA regulation 21 CFR 177.1550, making these products suitable for use in food and beverage applications.
- Parflex PTFE, FEP and PFA are listed VW-1 in the burning test for Underwriters Laboratories and pass the UL-83 vertical flame test. In a flame situation, PTFE, FEP and PFA tubing resist combustion and do not promote flame spread.

All fluoropolymer tubing dimensions are continuosly monitored to ensure an overall quality product. Most tubing sizes are packaged in convenient 25-ft., 50-ft., 100-ft. and 1,000-ft. lengths.

## PTFE

- PTFE (Polytetrafluorethylene) is offered in beading, smoothbore tubing, heat shrinkable, spiral wrap and convoluted tubing.
- PTFE tubing features unmatched chemical resistance and a non-stick surface that facilitates flow and eliminates media buildup.

## **FEP**

- FEP (Fluorinated Ethylene Propylene) is available in smoothbore tubing, heat shrinkable, convoluted, corrugated and retractable coil tubing.
- FEP tubing offers the highest clarity in the fluoropolymer market and is a close second to PTFE in chemical resistance.
- FEP is available in long, continuous lengths (1,000 feet and longer) whereas the longest lengths for PTFE range from 200 to 1,000 feet depending on size and wall thickness.

## PFA

- PFA (Perfluoroalkoxy) is available in smoothbore tubing.
- When temperature and clarity are both factors. PFA is the resin of choice because it offers the hightemperature attributes of PTFE, long continuous lengths, and almost as much clarity as FEP.
- High purity resins available.
- Low permeability.



Product Family	Туре	Se	ries	Sugges Applicat		Suggested Markets
	Beading	TFB		Pull Cord O-Ring Seals	Spacers Woven Filter	Chemical High-Temp
	Smoothbore	re TFH TFT		Electrical Insulation Protective Cover	Circuit Board Wire Insulation	Food Instrumentation Laboratory
PTFE	Smoothbore		201	Electrical Insulation Fluid Transfer	Gas Sampling Laboratory	Gas Sampling Electrical Insulation
PIFE	Heat Shrink	HS2T	HS4T TSSS/L	Electrical Insulation Protective Cover	Circuit Board Rollers	Fluid Handling Industrial Equipment Ground Support
	Convoluted	CVL CVL	CVH 81914	Fluid Transport Wire Harness	Protection/Cable Core Robotics	
	Spiral Wrap	TSWTF		Cable Harnessing	Wiring closets	Aerospace Automotive
	Smoothbore	103	203	Nitrogen Filling Downhole Pump Ozone Sampling	Hearing Aid Optical Sensors	UV Applications Chemical Instrumentation
FEP	Heat Shrink	HS1.3 HS1.6 HS1.25	TSSS TSSL	Protective Covering UV Light Covering Product Testing	Paper Rollers Ink Rollers	Laboratory Gas Dispensing Gas Sampling
	Convoluted	CV	81914	Fluid Transport Wire Harness	Protection/Cable Core Robotics	Robotics Fluid Handling Food & Beverage
	Corrugated	CR		Vacuum Applications Wet Bench DNA Sequencer	Fluid Transfer Robotics	Semiconductor Pharmaceutical Electrical
	Retractable	703		Lab Equipment Gas Dispensing	Wet Bench Dual Containment	Industrial Equipment Medical
PFA	Smoothbore	104	204	Air Sampling Gas Purge Wet Bench	Flow Monitoring Steam Plant	Chemical Laboratory Semiconductor Instrumentation
H.P. PFA	PFA   Smoothbore   105   205   High Purity Apps.		Flow Monitoring Systems High Purity Apps. DI Water Dispensers	DI Recirculators Heat Exchangers Pure Chemical Dispensers	Food Environmental Fluid Handling	
PFA H.P. PFA				Wet Bench Dual Containment	Gas Service Pharmaceutical Medical	
PVDF	Smoothbore	110	111	Outdoor/Extreme Conditiions Applications with long cycle life	Thermal Cycling Water Systems	Chemical Food Gas/Enviromental

## **High Purity PFA**

- H.P. PFA (Perfluoroalkoxy) has the highest molecular weight available.
- Withstands corrosive surfactants for longer periods of time than standard products.
- Lowest level of extractables.

#### **PVDF**

- PVDF (Polyvinylidene Fluoride) is available in flexible and super flexible smoothbore tubing.
- PVDF offers a combination of properties beneficial for use in many critical applications requiring chemical resistance with low permeability.
- PVDF exhibits low extractable levels while providing high mechanical strength and abrasion resistance.



## Fluoropolymer - Quick Reference

#### PTFE (Polytetrafluoroethylene)

Working Temperature: 500°F (260°C) Color: Opaque to translucent

- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Excellent flexlife
- Laser markable

#### PFA (Perfluoroalkoxy)

Working Temperature: 500°F (260°C) Color: Clear with light blue or tint

- High purity resins available
- Low permeation resins available
- Use when you need the temperature range of PTFE and the clarity of FEP
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Good flexlife

#### **FEP (Fluorinated Ethylene Propylene)**

Working Temperature: 400°F (204°C) Color: Clear

- Excellent chemical resistance
- Non-wetting
- Weldable
- Tubes can be sealed by melting
- Long continuous lengths
- Low refractive index
- Improved clarity over PFA Lower cost alternative to PFA

#### **PVDF (Polyvinylidene Fluoride)**

Working Temperature: 265°F (130°C) Color: Varies

- Very good chemical resistance
- Excellent resistance to creep and fatigue
- **UV Resistant**
- Exceptional corrosion resistance for chlorine, fluorine, or bromine environments

## **Chemical Resistance Summary**



Within normal use, temperatures, fluoroplastics are attacked by so few chemicals that it is easier to describe the exceptions rather than list the chemicals they are compatible with.

#### DO NOT USE FLUOROPLASTICS WITH THE FOLLOWING:

- Alkali metals such as elemental sodium, potassium, lithium, etc. The alkali metals remove fluorine from the polymer molecule.
- Extremely potent oxidizers, fluorine (F2) and related compounds (e.g., chlorine trifluoride, CIF3). These can be handled by fluoropolymers, but only with great care, as fluorine is absorbed into the resins, and the mixture becomes sensitive to a source of ignition such as impact.
- 80% NaOH (Sodium Hydroxide) or KOH (Potassium Hydroxide), metal hydrides such as Borances (e.g., B2H6), Aluminum Chloride, Ammonia (NH3), certain Amines (R-NH2) and imines (R=NH) and 70% Nitric Acid at temperatures near the suggested service limit.



## WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.



The table below lists a generally accepted summary of properties that we believe to be reliable. Please note that many of these resins are produced in several varieties and property characteristics may vary. Therefore, determination of resin is dependent on the application and this table is only meant to serve as a general guideline.

Properties*	ASTM or	PTFE	FEP	PFA	High Purity <b>PFA</b>	PVDF	ETFE
	Unit						
MECHANICAL PROPERTIES							
Specific Gravity	D792 D3307	2.13-2.22 -	2.12-2.17 -	2.12-2.17 -	- 2.14-2.16	1.76-1.82 -	1.74 -
Elongation %	D638 D3307	200-450 -	250-330 -	280-400 -	- 370	100-800	430 -
Tensile Strength (psi)	D638(psi) D3307(psi)	2000-7000	2800-4000 -	4000-5000 -	- 4693	2000-5000	6962 -
Flexural Strength (psi)	D790	no break	no break	no break	no break	1500-5000	5500
Compressive Strength (psi)	D695	700-900	725-2200	725-810	na	2000-6000	2500
Tensile Elastic Modulus (Young's Modulus) (psi)	D638	57,000 -	50,000 -	72,500- 87,000	na	35,000-220,000	116,030
Flexural Modulus	D790(psi) D790 103MPa (103kgf/cm2)	71,000-85,000 0.5-0.6 (5.0-6.0)	78,000-92,000 0.5-0.6 (5.5-6.4)	94,000-99,000 0.6-0.7 (6.6-7.0)	- 647-686 -	90,000-168,000 280,00-110,000	130,534 - -
Flex Life (MIT cycles)	D2176	>1,000,000	5,000-80,000	10,000-500,000	2000 x 10 <sup>3</sup>	na	na
Hardness Durometer Shore D	D2240	D50-65	D55	D55-D60	D60	D55-D75	D67
Coefficient of Friction	(on steel)	0.02	0.05	0.04-0.06	0.05	0.33-0.49	0.20
Abrasion Resistance 1000 cycles	Taber	8-90	14-20	0.00-96.75	na	16-33	0.005
Impact Strength IZO.D. 73°F (23°C) notched ft/lbs/in	D256	3	no break	no break	no break	4	no break
THERMAL PROPERTIES				<u> </u>			
Melting Point	°C °F	327 621	260 500	305 582	305 582	125 257	260 500
Upper Service	°C	260	204	260	260	130	180
Temperature(20000h)	°F	500	400	500	500	265	356
Flammability	UL 94	V-0	V-0	V-0	V-0	V-0	V-0
Thermal Conductivity BTU-in/hr-ft², o	F	1.7-2.08	1.4	1.3	na	1.00-1.25	1.65
Thermal Conductivity Cal-cm/sec-cn	n², ºC	6 x 10-4	6 x 10-4	6 x 10-6	na	na	5.7 x 10-4
Linear Coefficient of Thermal Expansion Min/in°F 73.4-140°F	D696	55.6	46.1-58.3	66.7	na	7.00-10.8	9.4 (10 <sup>-5/</sup> °C)
Heat of Fusion	BTU/LB	29-37	4-35	13	na	0.28-0.36	20
Heat of Combustion	BTU/LB °F	2200	2200	2300	na	na	8100
Low Temperature Embrittlement	°C °F	-268 -450	-268 -450	-268 -450	-268 -450	-62 -80	-76 -105
ELECTRICAL PROPERTIES							
Dielectric Constant	D150/10 <sup>3</sup> Hz D150/10 <sup>6</sup> Hz	2.1 2.1	2.1 2.1	2.1 2.1	2.1 2.1	3.5 10.6	2.6
Dielectric Strength	D149/125 MIL D149/10 MIL	500 ≥1400	508 >610	500 ≥1400	500 - 600 na	0.8 1.5	na
Volume Resistivity	D257/ohm-cm	>10 <sup>18</sup>	>10 <sup>18</sup>	>10 <sup>18</sup>	na	2 x 10 <sup>14</sup>	10 <sup>17</sup>
Surface Resistivity	D257/ohm-cm	>10 <sup>18</sup>	>10 <sup>17</sup>	>10 <sup>17</sup>	na	5 x 10 <sup>14</sup>	>10 <sup>15</sup>
GENERAL PROPERTIES							
Chemical/Solvent Resistance	D543	Excellent	Excellent	Excellent	Excellent	Very Good	Excellent
Refractive Index		1.35	1.338	1.34	1.34	1.42	1.447
Limiting Oxygen Index, %	D2868	>95	>95	≥95	na	42/75 <sup>2</sup>	31
Water Contact Angle	Angle to Level	110	114	115	na	92	na
Water Absorption 24h,%	D570	<0.01	<0.01	<0.03	<0.01	0.03-0.05	0.03
Weatherability		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

<sup>\*</sup>General resin properties; Tubing properties may vary.

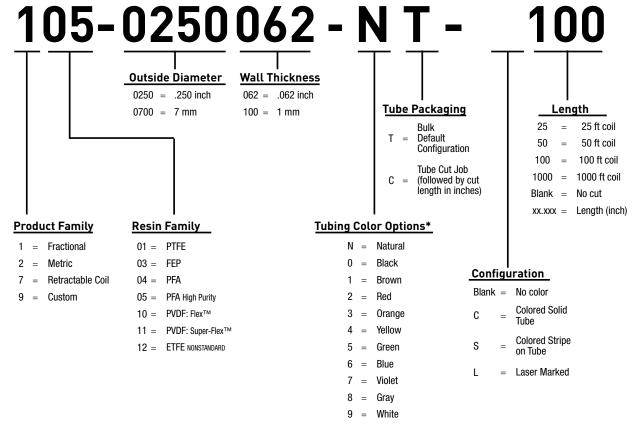
## **Tubing Pressure Ranges**

Tubing pressures vary by material, tubing size and wall thickness. Please contact Customer Service for specific pressures.



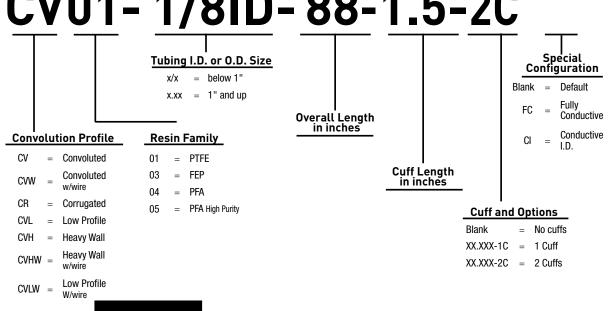
## **Fluoropolymer Tubing Nomenclature**

Smoothbore Fractional and Metric Tubing



## **Convoluted and Corrugated Tubing**





# Fluoropolymer Tubing Nomenclature Heat Shrink, Electrical Insulation Tubing and Beading

# HS2\*\* T F T 1/8

## **Resin Family**

PTFE

FEP PFA

**ETFE** 

#### Tubing Sizes\*\*

for AWG size 0-30

Fractional sizes 1/8 to 1.00 inch

### **Tube Packaging**

Bulk Default Configuration

**Tube Cut Job** (followed by cut length in inches -if cut, go to Other Options)

### Other Options

Blank = Not required

add cut length XX.XXX = in inches.

## **Special Configurations**

Blank if Smooth Bore

HS<sub>2</sub> = 2:1 Ratio PTFE

HS4 4:1 Ratio PTFE

HS1.3 = 1.3/1:1 Ratio FEP

HS1.6 = 1.67:1 Ratio FEP

HS1.25 = 1.25:1 Ratio FEP

#### **Tubing Configurations**

Heavy Wall

Standard Wall

Thin Wall

Light Wall

Industrial Wall

Beading

## **Tubing Color Options\***

Natural

Black

Brown

Red

Orange

Yellow

Green Blue

Violet

Grav

White

#### Configuration

Blank = No color

Colored Solid

Colored Stripe on Tube



<sup>\*</sup>When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC...ie HS2TFT1/8-2TC ..ie HS1.3FEP24-0CC48.000

<sup>\*\*</sup>This first configuration is only used for heat shrinkable tubing or spiral wrap. For example, electrical insulation tubing part number would read TFT-1/8-NT.

<sup>\*\*\*</sup>When changing to cut length, replace the T with C and specify the length in inches. If this part was cut to 4 feet, part number would read TFT-1/8-NC48.000.

<sup>\*\*\*\*</sup>Sizes for heat shrink designate the size of the heat shrink tube as stated by the applicable specification. The actual O.D. of the tubing does not always match the size. Review actual tables to see the true expanded dimension of the tube.

## PTFE Tubing

Series Fractional & Metric: 101, 201



## **Features**

- Virgin Polytetrafluoroethylene resin
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Excellent flexlife
- Laser markable

## **Applications/Markets**





- Cable Liner
- Electrical Insulation
- Oxygen Sensor





- Paint Transfer
- Gas Sampling
- Laboratory

## **Certifications/Compliance**

- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

## **Order Information**

Example: 101-0188062-0TC-100

**101-**0188062-0TC-100 - **PTFE** 

101-0188062-0TC-100 - Tube O.D. in inches (3/16")

101-0188062-0TC-100 - Tube Wall Thickness in inches (.062")

101-0188062-0TC-100 - Black

101-0188062-0TC-100 - Bulk Tubing

101-0188062-0TC-100 - Solid Color Tube

101-0188062-0TC-100 - Package Quantity in feet (100')

#### **Notes**

- Working Temperature: 500°F (260°C)
- Working pressure calculated using a Design Factor of 4
- Custom packaging and sizes are quoted upon request
- Package quantities are not continuous

## **Fittings**

Fittings available for sizes 3/32" up to 1.1"

Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

#### FSC Product Families:

- Compression
- Compress-Align®
- TrueSeal™

## Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

		Colo	or
0	N	Natural	
•	0	Black	
•	1	Brown	
•	2	Red	
•	3	Orange	
•	4	Yellow	

;	Code								
	•	5	Green						
	•	6	Blue						
	•	7	Violet						
		8	Gray						
	0	9	White						
•									



## 101 PTFE Industrial Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.			Refer Wa		Wor Pres	king sure	Bu Pres		Min. E Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>→</b>		0			5	7		[[ba	ligg]
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
101-0094031	3/32	0.094	± 0.005	2.40	± 0.13	0.031	± 0.002	0.79	± 0.05	0.031	0.79	390	27	1560	108	0.500	13	28	0.006	0.009
101-0125031	1/8	0.125	± 0.005	3.18	± 0.13	0.063	± 0.003	1.57	± 0.05	0.031	0.79	290	20	1160	80	0.500	13	28	0.009	0.013
101-0156031	5/32	0.156	± 0.005	3.99	± 0.13	0.094	± 0.004	2.39	± 0.08	0.031	0.79	220	15	880	61	0.625	16	28	0.011	0.017
101-0188031	3/16	0.188	± 0.005	4.78	± 0.13	0.125	± 0.005	3.18	± 0.13	0.031	0.79	180	12	720	50	0.750	19	28	0.014	0.021
101-0250031	1/4	0.250	± 0.005	6.35	± 0.13	0.190	± 0.005	4.83	± 0.13	0.031	0.79	130	9	520	36	1.000	25	28	0.020	0.030
101-0312031	5/16	0.312	± 0.005	7.92	± 0.13	0.250	± 0.007	6.35	± 0.18	0.031	0.79	100	7	400	28	2.250	57	28	0.026	0.038
101-0375031	3/8	0.375	± 0.005	9.52	± 0.13	0.312	± 0.006	7.92	± 0.15	0.031	0.79	80	6	320	22	2.750	70	28	0.032	0.047
101-0438031	7/16	0.438	± 0.005	11.13	± 0.13	0.375	± 0.007	9.52	± 0.18	0.031	0.79	70	5	280	19	4.000	102	28	0.037	0.056
101-0500031	1/2	0.500	± 0.006	12.70	± 0.15	0.438	± 0.008	11.13	± 0.20	0.031	0.79	60	4	240	17	4.000	102	28	0.043	0.064
101-0563031	9/16	0.563	± 0.007	14.30	± 0.18	0.500	± 0.010	12.70	± 0.25	0.031	0.79	55	4	220	15	5.000	127	28	0.049	0.073
101-0625031	5/8	0.625	± 0.007	15.88	± 0.18	0.563	± 0.010	14.30	± 0.25	0.031	0.79	50	3	200	14	5.500	140	28	0.054	0.081
101-0688031	11/16	0.688	± 0.010	17.48	± 0.25	0.625	± 0.012	15.88	± 0.31	0.031	0.79	45	3	180	12	6.250	159	28	0.060	0.090
101-0750032	3/4	0.750	± 0.010	19.05	± 0.25	0.688	± 0.012	17.48	± 0.31	0.032	0.81	40	3	160	11	6.500	165	28	0.068	0.101
101-0830040	0.830	0.830	± 0.014	21.08	± 0.36	0.750	± 0.014	19.05	± 0.36	0.040	1.02	45	3	180	12	8.000	203	28	0.093	0.139
101-0965045	0.965	0.965	± 0.016	24.51	± 0.41	0.875	± 0.016	22.22	± 0.41	0.045	1.14	45	3	180	12	12.000	305	28	0.122	0.182
101-1100050	1.100	1.100	±0 .020	27.94	± 0.51	1.000	± 0.020	25.40	± 0.51	0.050	1.27	40	3	160	11	18.000	457	28	0.155	0.231

Continued on next page



PTFE Tubing
Series Fractional & Metric: 101, 201 (cont.)

101 PTFE Heavy Wall Fractional Size Tubing

Part Number	Order Size		Norr O.			Nominal I.D.			Reference Wall		Working Pressure		Burst Pressure		Min. Bend Radius		Vac. Rating	We	ight	
#			(	9			(	9		(	<del>)</del> -	(	2			5	7		[lbs]	
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
101-0188062	3/16	.188	± .005	4.78	± 0.13	0.063	± 0.003	1.57	± 0.05	0.062	1.57	390	27	1560	108	0.250	6	28	0.023	0.034
101-0250047	1/4	.250	± .005	6.35	± 0.13	0.157	± 0.005	3.99	± 0.13	0.047	1.19	210	14	840	58	0.625	16	28	0.028	0.042
101-0250062	1/4	.250	± .005	6.35	± 0.13	0.125	± 0.005	3.18	± 0.13	0.062	1.57	290	20	1160	80	0.500	13	28	0.034	0.051
101-0312062	5/16	.312	± .005	7.92	± 0.13	0.188	± 0.006	4.76	± 0.15	0.062	1.57	222	15	888	61	0.875	22	28	0.046	0.068
101-0375062	3/8	.375	± .005	9.52	± 0.13	0.250	± 0.005	6.35	± 0.13	0.062	1.57	180	12	720	50	1.000	25	28	0.057	0.085
101-0438062	7/16	.438	± .005	11.13	± 0.13	0.312	± 0.007	7.92	± 0.18	0.062	1.57	150	10	600	41	2.250	57	28	0.069	0.103
101-0500062	1/2	.500	± .005	12.70	± 0.13	0.375	± 0.005	9.52	± 0.13	0.062	1.57	130	9	520	36	2.250	57	28	0.080	0.120
101-0563062	9/16	.563	± .007	14.30	± 0.18	0.437	± 0.008	11.13	± 0.20	0.062	1.57	110	8	440	30	2.750	70	28	0.092	0.137
101-0625062	5/8	.625	± .007	15.88	± 0.18	0.500	± 0.010	12.70	± 0.25	0.062	1.57	100	7	400	28	3.000	76	28	0.103	0.154
101-0688062	11/16	.688	± .010	17.48	± 0.25	0.563	± 0.010	14.30	± 0.25	0.062	1.57	90	6	360	25	5.000	127	28	0.115	0.171
101-0750062	3/4	.750	± .010	19.05	± 0.25	0.625	± 0.010	15.88	± 0.25	0.062	1.57	80	6	320	22	6.000	152	28	0.126	0.188
101-0875062	7/8	.875	± .014	22.22	± 0.36	0.750	± 0.014	19.05	± 0.36	0.062	1.57	70	5	280	19	7.250	184	28	0.149	0.222
101-1000062	1	1.000	± .016	25.40	± 0.25	0.875	± 0.016	22.22	± 0.36	0.062	1.57	100	6.9	400	28	8.000	203	28	0.172	0.256

201 Metric PTFE T	ubina
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Part Number	Order Size			ninal .D.				ninal D.			rence all		king sure	Bu Pres	rst sure		Bend dius	Vac. Rating	We	ight
#			(	9			(	9		((	<b>)</b> -	(	7		<u> </u>	*	$\mathcal{S}$		ligg	iba Iba
	mm	mm	tol.	inch	tol.	mm	tol.	inch	tol.	mm	inch	bar 23°C	psi 73°F	bar 23°C	psi 73°F	mm	inch	at 73°F	kg. per m.	lb. per ft.
201-0300100	3	3	± 0.11	0.118	± 0.004	1	± 0.11	0.039	± 0.004	1	0.039	390	27	108	1560	13	0.500	28	0.014	0.009
201-0400100	4	4	± 0.11	0.157	± 0.004	2	± 0.11	0.074	± 0.004	1	0.039	290	20	80	1160	13	0.500	28	0.020	0.014
201-0500100	5	5	± 0.11	0.197	± 0.004	3	± 0.11	0.118	± 0.004	1	0.039	220	15	61	880	19	0.750	28	0.027	0.018
201-0600100	6	6	± 0.13	0.236	± 0.005	4	± 0.13	0.157	± 0.005	1	0.039	180	12	50	720	25	1.000	28	0.034	0.023
201-0700100	7	7	± 0.13	0.276	± 0.005	5	± 0.13	0.197	± 0.005	1	0.039	150	10	41	600	38	1.500	28	0.041	0.027
201-0800100	8	8	± 0.13	0.315	± 0.005	6	± 0.13	0.236	± 0.005	1	0.039	130	9	36	520	51	2.000	28	0.048	0.032
201-0900100	9	9	± 0.13	0.354	± 0.005	7	± 0.13	0.276	± 0.005	1	0.039	110	8	30	440	57	2.250	28	0.055	0.037
201-1000100	10	10	± 0.13	0.394	± 0.005	8	± 0.13	0.315	± 0.005	1	0.039	100	7	28	400	64	2.500	28	0.061	0.041
201-1200100	12	12	± 0.15	0.472	± 0.006	10	± 0.15	0.394	± 0.006	1	0.039	80	6	22	320	76	3.000	28	0.075	0.050
201-1400100	14	14	± 0.15	0.551	± 0.006	12	± 0.15	0.472	± 0.006	1	0.039	70	5	19	280	89	3.500	28	0.089	0.060
201-1600100	16	16	± 0.15	0.630	± 0.006	14	± 0.15	0.551	± 0.006	1	0.039	60	4	17	240	108	4.250	28	0.102	0.069

## PTFE Tubing

## Series Fractional: TFL, TFS, TFT



## **Features**

- Virgin Polytetrafluoroethylene resin
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Excellent flexlife
- Laser markable

## **Applications/Markets**





- Electrical Insulation
- Protective Cover
- Cable Liner
- Spacer

## **Certifications/Compliance**

- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant
- Light Wall (TFL) ASTM D3295 Class 1, AMS 3654C
- Thin Wall (TFT) ASTM D3295 Class 2, AMS 3655B
- Standard Wall (TFS) ASTM D3295 Class 3, MIL-I-22129C

#### **Order Information**

Example: TFS1/2-NT

TFS1/2-NT - PTFE

TFS1/2-NT - Standard Wall

TFS1/2-NT - Tube O.D. in inches (1/2")

TFS1/2-NT - Natural

TFS1/2-NT - Bulk Tubing

### **Notes**

- Working Temperature: 500°F (260°C)
- Package quantities are not continuous Fractional tubing is supplied in random length coils, with a minimum coil length of 15 feet.

Green

Blue

Violet

Gray

White

Custom packaging, sizes and lengths are quoted upon request.

## **Fittings**

Fittings available for sizes 3/32" up to 1.1" Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

**FSC Product Families:** 

TrueSeal™

## Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

		Colo	or Code							
0	N	Natural		•	5					
•	0	Black		•	6					
•	1	Brown		•	7					
•	2	Red		•	8					
•	3	Orange	ĺ	0	9					
•	4	Yellow	•							

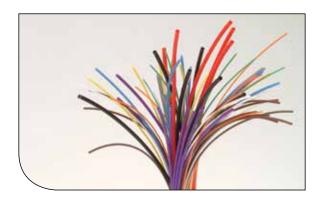


#### **TFS, TFT & TFL PTFE Fractional Tubing**

Size		ninal D.	Stan	dard Wall		TI	nin Wall		Li	ght Wall		Standard
	'	D.	Part Number		ninal all	Part Number	Nom W	ninal all	Part Number	Nominal Wall		Packaging
	0		#	<u></u>		# 9-		<u>)</u> -	#	(	<del>)</del> -	
inch	inch	mm	Natural	inch	mm	Natural	inch	mm	Natural	inch	mm	
1/8	0.125	3.18	TFS1/8	0.020	0.51	TFT1/8	0.015	0.38	TFL1/8	0.008	0.20	Random Length Coil
3/16	0.188	4.78	TFS3/16	0.020	0.51	TFT3/16	0.015	0.38	TFL3/16	0.010	0.25	Random Length Coil
1/4	0.250	6.35	TFS1/4	0.020	0.51	TFT1/4	0.015	0.38	TFL1/4	0.010	0.25	Random Length Coil
5/16	0.318	7.92	TFS5/16	0.020	0.51	TFT5/16	0.015	0.38	TFL5/16	0.012	0.30	Random Length Coil
3/8	0.381	9.52	TFS3/8	0.025	0.64	TFT3/8	0.015	0.38	TFL3/8	0.015	0.38	Random Length Coil
7/16	0.444	11.13	TFS7/16	0.025	0.64	TFT7/16	0.018	0.46	TFL7/16	0.018	0.46	Random Length Coil
1/2	0.507	12.70	TFS1/2	0.025	0.64	TFT1/2	0.018	0.46	TFL1/2	0.018	0.46	Random Length Coil
5/8	0.632	15.88	TFS5/8	0.025	0.64	TFT5/8	0.020	0.51	-	-	-	Random Length Coil
3/4	0.760	19.05	TFS3/4	0.030	0.76	TFT3/4	0.025	0.64	-	-	-	Random Length Coil
7/8	0.885	22.22	TFS7/8	0.035	0.89	-	-	-	-	-	-	Random Length Coil
1	1.010	25.40	TFS1.00	0.035	0.89	-	-	-	-	-	-	Random Length Coil

# PTFE Tubing

Series AWG: TFH, TFS, TFT, TFL



#### **Features**

- Virgin Polytetrafluoroethylene resin
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Excellent flexlife
- Laser markable

# **Applications/Markets**





- Electrical Insulation
- Protective Cover
- Circuit Board

- Wire Insulation
- Strain Relief
- Introducer
- Stent Delivery

# **Certifications/Compliance**

- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant
- Light Wall (TFL) ASTM D3295 Class 1, AMS 3654C UL-224 150V 200°C
- Thin Wall (TFT) ASTM D3295 Class 2, AMS 3655B, UL-224 300V 200°C, CSA 9032-01 300V
- Standard Wall (TFS) ASTM D3295 Class 3, MIL-I-22129C, UL-224 600V 200°C, CSA 9032-01 600V
- Heavy Wall (TFH) ASTM D3295, Class 4

#### **Order Information**

Example: TFH13-2TC

TFH13-2TC - PTFE

TFH13-2TC - Heavy Wall

TFH13-2TC - AWG Size

TFH13-2TC - Red

TFH13-2TC - Bulk Tubing

TFH13-2TC - Solid Color Tube

#### **Notes**

- Working Temperature: 500°F (260°C)
- AWG Spaghetti tubing is supplied in random lengths with a minimum length of 25 feet
- Continuous lengths and colors quoted upon request
- AWG spaghetti tubing is also available in FEP and PFA
- Consult factory for pricing and minimum lengths

#### Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

		Cold	or C	ode		
0	N	Natural		•	5	Green
•	0	Black		•	6	Blue
•	1	Brown		•	7	Violet
•	2	Red			8	Gray
•	3	Orange		0	9	White
•	4	Yellow				



TFH	<b>PTFE</b>	<b>AWG</b>	Heavy	Wall
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Part Number	Order Size		ninal D.	Minimum I.D.		Maxi I.	mum D.	Nom Wa		Standard Packaging
#		(	9	0		(	9	(	-	
	AWG	inch	mm	inch	mm	inch	mm	inch	mm	
TFH24	24	0.022	0.56	0.020	0.51	0.026	0.66	0.016 ± 0.003	0.41 ± 0.08	1,000 ft. Spool
TFH23	23	0.026	0.66	0.023	0.58	0.029	0.74	0.016 ± 0.003	0.41 ± 0.08	1,000 ft. Spool
TFH22	22	0.028	0.71	0.025	0.64	0.032	0.81	0.016 ± 0.003	0.41 ± 0.08	1,000 ft. Spool
TFH21	21	0.032	0.81	0.029	0.74	0.035	0.89	0.016 ± 0.003	.0.41 ± 0.08	1,000 ft. Spool
TFH20	20	0.034	0.86	0.032	0.81	0.040	1.02	0.018 ± 0.003	$0.46 \pm 0.08$	1,000 ft. Spool
TFH19	19	0.038	0.97	0.036	0.91	0.044	1.12	0.020 ± 0.004	0.51 ± 0.10	1,000 ft. Spool
TFH18	18	0.042	1.07	0.040	1.02	0.049	1.25	0.020 ± 0.004	0.51 ± 0.10	1,000 ft. Spool
TFH17	17	0.048	1.22	0.045	1.14	0.054	1.37	0.020 ± 0.004	0.51 ± 0.10	1,000 ft. Spool
TFH16	16	0.053	1.35	0.051	1.30	0.061	1.55	0.020 ± 0.004	0.51 ± 0.10	1,000 ft. Spool
TFH15	15	0.059	1.50	0.057	1.45	0.067	1.70	0.020 ± 0.004	0.51 ± 0.10	1,000 ft. Spool
TFH14	14	0.066	1.68	0.064	1.63	0.074	1.88	0.020 ± 0.004	0.51 ± 0.10	500 ft. Spool
TFH13	13	0.076	1.93	0.072	1.83	0.082	2.08	0.020 ± 0.004	0.51 ± 0.10	500 ft. Spool
TFH12	12	0.085	2.16	0.081	2.06	0.091	2.31	0.020 ± 0.004	0.51 ± 0.10	500 ft. Spool
TFH11	11	0.095	2.41	0.091	2.31	0.101	2.57	0.020 ± 0.004	0.51 ± 0.10	500 ft. Spool
TFH10	10	0.106	2.69	0.102	2.59	0.112	2.84	0.025 ± 0.005	$0.64 \pm 0.13$	500 ft. Spool
TFH09	9	0.118	3.00	0.114	2.90	0.124	3.15	0.025 ± 0.005	$0.64 \pm 0.13$	500 ft. Spool
TFH08	8	0.133	3.38	0.129	3.28	0.141	3.58	0.030 ± 0.005	0.76 ± 0.13	Random Length Coil
TFH07	7	0.148	3.76	0.144	3.66	0.158	4.01	$0.030 \pm 0.005$ $0.76 \pm 0.1$		Random Length Coil
TFH06	6	0.166	4.22	0.162	4.11	0.178	4.52	$0.030 \pm 0.005$ $0.76 \pm 0.13$		Random Length Coil
TFH05	5	0.185	4.70	0.182	4.62	0.196	4.98	0.032 ± 0.005	0.81 ± 0.13	Random Length Coil

- ASTM D3295 Class 4
- AMS 3653E
- FDA Compliant
- USP Class VI Compliant



PTFE Tubing
Series AWG: TFH, TFL, TFS, TFT (cont.)

#### **TFS PTFE AWG Standard Wall**

Part Number	Order Size		ninal D.	Minii I.	mum D.	Maxi I.	mum D.		ninal all	Standard Packaging	
#		(	9	(	9	(	9		-		
	AWG	inch	mm	inch	mm	inch	mm	inch	mm		
TFS30	30	0.012	0.31	0.010	0.25	0.015	0.38	$.009 \pm .002$	$0.23 \pm 0.51$	1,000 ft. Spool	
TFS28	28	0.015	0.38	0.013	0.33	0.018	0.46	.009 ± .002	$0.23 \pm 0.51$	1,000 ft. Spool	
TFS26	26	0.018	0.46	0.016	0.41	0.022	0.56	.009 ± .002	$0.23 \pm 0.51$	1,000 ft. Spool	
TFS24	24	0.022	0.56	0.020	0.51	0.026	0.66	.012 ± .003	$0.31 \pm 0.08$	1,000 ft. Spool	
TFS23	23	0.026	0.66	0.023	0.58	0.029	0.74	.012 ± .003	$0.31 \pm 0.08$	1,000 ft. Spool	
TFS22	22	0.028	0.71	0.025	0.64	0.032	0.81	.012 ± .003	$0.31 \pm 0.08$	1,000 ft. Spool	
TFS21	21	0.032	0.81	0.029	0.74	0.035	0.89	.012 ± .003	0.31 ± 0.08	1,000 ft. Spool	
TFS20	20	0.034	0.86	0.032	0.81	0.040	1.02	.016 ± .003	0.41 ± .0.08	1,000 ft. Spool	
TFS19	19	0.038	0.97	0.036	0.91	0.044	1.12	.016 ± .003	0.41 ± .0.08	1,000 ft. Spool	
TFS18	18	0.042	1.07	0.040	1.02	0.049	1.25	.016 ± .003	0.41 ± .0.08	1,000 ft. Spool	
TFS17	17	0.048	1.22	0.045	1.14	0.054	1.37	.016 ± .003	0.41 ± .0.08	1,000 ft. Spool	
TFS16	16	0.053	1.35	0.051	1.30	0.061	1.55	.016 ± .003	0.41 ± .0.08	1,000 ft. Spool	
TFS15	15	0.059	1.50	0.057	1.45	0.067	1.70	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS14	14	0.066	1.68	0.064	1.63	0.074	1.88	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS13	13	0.076	1.93	0.072	1.83	0.082	2.08	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS12	12	0.085	2.16	0.081	2.06	0.091	2.31	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS11	11	0.095	2.41	0.091	2.31	0.101	2.57	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS10	10	0.106	2.69	0.102	2.59	0.112	2.84	.016 ± .003	0.41 ± .0.08	500 ft. Spool	
TFS09	9	0.118	3.00	0.114	2.90	0.124	3.15	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS08	8	0.133	3.38	0.129	3.28	0.141	3.58	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS07	7	0.148	3.76	0.144	3.66	0.158	4.01	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS06	6	0.166	4.22	0.162	4.11	0.178	4.52	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS05	5	0.185	4.70	0.182	4.62	0.196	4.98	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS04	4	0.208	5.28	0.204	5.18	0.224	5.69	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS03	3	0.234	5.94	0.229	5.82	0.249	6.32	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS02	2	0.263	6.68	0.258	6.55	0.278	7.06	.020 ± .004		Random Length Coil	
TFS01	1	0.294	7.47	0.289	7.34	0.311	7.90	.020 ± .004	0.51 ± .0.10	Random Length Coil	
TFS00	0	0.330	8.38	0.325	8.25	0.347	8.81	.020 ± .004	0.51 ± .0.10	Random Length Coil	

- ASTM D3295 Class 3
- MIL-I-22129C
- AMS 3653E
- UL-224 600V 200°C
- CSA 9032-01 600V
- FDA Compliant



#### **TFT PTFE AWG Thin Wall**

Part Number	Order Size	Nom I.	ninal D.		mum D.		mum D.	Nom Wa	Standard Packaging		
#		(	9	(	9	(	9	(-	-		
	AWG	inch	mm	inch	mm	inch	mm	inch	mm		
TFT32	32	.010	0.25	.008	0.20	.012	0.31	$0.007 \pm 0.002$	$0.18 \pm 0.05$	1,000 ft. Spool Only	
TFT30	30	.012	0.31	.010	0.25	.015	0.38	$0.009 \pm 0.002$	$0.23 \pm 0.05$	1,000 ft. Spool	
TFT28	28	.015	0.38	.013	0.33	.018	0.46	$0.009 \pm 0.002$	$0.23 \pm 0.05$	1,000 ft. Spool	
TFT26	26	.018	0.46	.016	0.41	.022	0.56	$0.009 \pm 0.002$	$0.23 \pm 0.05$	1,000 ft. Spool	
TFT24	24	.022	0.56	.020	0.51	.026	0.66	$0.010 \pm 0.003$	$0.25 \pm 0.08$	1,000 ft. Spool	
TFT23	23	.026	0.66	.023	0.58	.029	0.74	$0.010 \pm 0.003$	$0.25 \pm 0.08$	1,000 ft. Spool	
TFT22	22	.028	0.71	.025	0.64	.032	0.81	$0.010 \pm 0.003$	$0.25 \pm 0.08$	1,000 ft. Spool	
TFT21	21	.032	0.81	.029	0.74	.035	0.89	$0.010 \pm 0.003$	$0.25 \pm 0.08$	1,000 ft. Spool	
TFT20	20	.034	0.86	.032	0.81	.040	1.02	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT19	19	.038	0.97	.036	0.91	.044	1.12	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT18	18	.042	1.07	.040	1.02	.049	1.25	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT17	17	.048	1.22	.045	1.14	.054	1.37	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT16	16	.053	1.35	.051	1.30	.061	1.55	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT15	15	.059	1.50	.057	1.45	.067	1.70	$0.012 \pm 0.003$	$0.31 \pm 0.08$	1,000 ft. Spool	
TFT14	14	.066	1.68	.064	1.63	.074	1.88	$0.012 \pm 0.003$	$0.31 \pm 0.08$	500 ft. Spool	
TFT13	13	.076	1.93	.072	1.83	.082	2.08	$0.012 \pm 0.003$	$0.31 \pm 0.08$	500 ft. Spool	
TFT12	12	.085	2.16	.081	2.06	.091	2.31	$0.012 \pm 0.003$	$0.31 \pm 0.08$	500 ft. Spool	
TFT11	11	.095	2.41	.091	2.31	.101	2.57	$0.012 \pm 0.003$	$0.31 \pm 0.08$	500 ft. Spool	
TFT10	10	.106	2.69	.102	2.59	.112	2.84	$0.012 \pm 0.003$	$0.31 \pm 0.08$	500 ft. Spool	
TFT09	9	.118	3.00	.114	2.90	.124	3.15	$0.015 \pm 0.003$	$0.38 \pm 0.08$	500 ft. Spool	
TFT08	8	.133	3.38	.129	3.28	.141	3.58	0.015 ± 0.003	$0.38 \pm 0.08$	Random Length Coil	
TFT07	7	.148	3.76	.144	3.66	.158	4.01	$0.015 \pm 0.003$	$0.38 \pm 0.08$	Random Length Coil	
TFT06	6	.166	4.22	.162	4.11	.178	4.52	$0.015 \pm 0.003$	$0.38 \pm 0.08$	Random Length Coil	
TFT05	5	.185	4.70	.182	4.62	.196	4.98	$0.015 \pm 0.003$	$0.38 \pm 0.08$	Random Length Coil	
TFT04	4	.208	5.28	.204	5.18	.224	5.69	0.015 ± 0.003	$0.38 \pm 0.08$	Random Length Coil	
TFT03	3	.234	5.94	.229	5.82	.249	6.32	0.015 ± 0.003	$0.38 \pm 0.08$	Random Length Coil	
TFT02	2	.263	6.68	.258	6.55	.278	7.06	0.015 ± 0.003		Random Length Coi	
TFT01	1	.294	7.47	.289	7.34	.311	7.90	$0.015 \pm 0.003$	$0.38 \pm 0.08$	8 Random Length Coil	
TFT00	0	.330	8.38	.325	8.25	.347	8.81	$0.015 \pm 0.003$	$0.38 \pm 0.08$	Random Length Coil	

- ASTM D3295 Class 2
- CSA 9032-01 300V
- AMS 3653E
- FDA Compliant
- AMS 3655B
- USP Class VI Compliant
- UL-224 300V 200°C



PTFE Tubing
Series AWG: TFH, TFL, TFS, TFT (cont.)

**TFL PTFE AWG Light Wall** 

Part Number	Order Size	Nom I.I		Minii I.	mum D.	Maxi I.	mum D.	Nom Wa	inal all	Standard Packaging		
#		(	9	(	9	0		0		(-	-	
	AWG	inch	mm	inch	mm	inch	mm	inch	mm			
TFL32	32	0.010	0.25	0.008	0.20	0.012	0.31	$0.005 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool Only		
TFL30	30	0.012	0.31	0.010	0.25	0.015	0.38	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL28	28	0.015	0.38	0.013	0.33	0.018	0.46	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL26	26	0.018	0.46	0.016	0.41	0.022	0.56	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL24	24	0.022	0.56	0.020	0.51	0.026	0.66	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL23	23	0.026	0.66	0.023	0.58	0.029	0.74	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL22	22	0.028	0.71	0.025	0.64	0.032	0.81	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL21	21	0.032	0.81	0.029	0.74	0.035	0.89	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL20	20	0.034	0.86	0.032	0.81	0.040	1.02	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL19	19	0.038	0.97	0.036	0.91	0.044	1.12	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL18	18	0.042	1.07	0.040	1.02	0.049	1.25	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL17	17	0.048	1.22	0.045	1.14	0.054	1.37	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL16	16	0.053	1.35	0.051	1.30	0.061	1.55	$0.006 \pm 0.002$	0.13 ± 0.05	1,000 ft. Spool		
TFL15	15	0.059	1.50	0.057	1.45	0.067	1.70	$0.006 \pm 0.002$	$0.13 \pm 0.05$	1,000 ft. Spool		
TFL14	14	0.066	1.68	0.064	1.63	0.074	1.88	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL13	13	0.076	1.93	0.072	1.83	0.082	2.08	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL12	12	0.085	2.16	0.081	2.06	0.091	2.31	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL11	11	0.095	2.41	0.091	2.31	0.101	2.57	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL10	10	0.106	2.69	0.102	2.59	0.112	2.84	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL09	9	0.118	3.00	0.114	2.90	0.124	3.15	$0.008 \pm 0.002$	$0.20 \pm 0.05$	500 ft. Spool		
TFL08	8	0.133	3.38	0.129	3.28	0.141	3.58	$0.008 \pm 0.002$	$0.20 \pm 0.05$	Random Length Coil		
TFL07	7	0.148	3.76	0.144	3.66	0.158	4.01	$0.008 \pm 0.002$	$0.20 \pm 0.05$	Random Length Coil		
TFL06	6	0.166	4.22	0.162	4.11	0.178	4.52	$0.010 \pm 0.003$	$0.25 \pm 0.08$	Random Length Coil		
TFL05	5	0.185	4.70	0.182	4.62	0.196	4.98	$0.010 \pm 0.003$	$0.25 \pm 0.08$	Random Length Coil		
TFL04	4	0.208	5.28	0.204	5.18	0.224	5.69	0.010 ± 0.003	$0.25 \pm 0.08$	Random Length Coil		
TFL03	3	0.234	5.94	0.229	5.82	0.249	6.32	0.010 ± 0.003	$0.25 \pm 0.08$	Random Length Coil		
TFL02	2	0.263	6.68	0.258	6.55	0.278	7.06	0.010 ± 0.003	$0.25 \pm 0.08$	Random Length Coil		
TFL01	1	0.294	7.47	0.289	7.34	0.311	7.90	0.012 ± 0.003	0.31 ± 0.08	Random Length Coil		
TFL00	0	0.330	8.38	0.325	8.25	0.347	8.81	$0.012 \pm 0.003$	$0.31 \pm 0.08$	Random Length Coil		

- ASTM D3295 Class 1
- FDA Compliant
- AMS 3653E
- USP Class VI Compliant
- AMS 3654C
- UL-224 150V 200°C



# PTFE Beading Series Fractional: TFB



# **Applications/Markets**





- Pull Cord
- O-ring Seals
- Spacers
- Woven Filter

#### **TFB PTFE Beading**

Part Number	Diameter		Tole	rance	Standard Packaging		
#	0	9					
	inch	mm	inch	mm			
TFB015	0.015	0.38	± 0.002	± 0.05	1,000 ft. Spool		
TFB020	0.020	0.51	± 0.002	± 0.05	1,000 ft. Spool		
TFB025	0.025	0.64	± 0.002	± 0.05	1,000 ft. Spool		
TFB028	0.028	0.71	± 0.002	± 0.05	1,000 ft. Spool		
TFB031	0.031	0.79	± 0.002	± 0.05	1,000 ft. Spool		
TFB035	0.035	0.89	± 0.002	± 0.05	1,000 ft. Spool		
TFB039	0.039	0.99	± 0.002	± 0.05	1,000 ft. Spool		
TFB043	0.043	1.09	± 0.002	± 0.05	1,000 ft. Spool		
TFB047	0.047	1.19	± 0.002	± 0.05	1,000 ft. Spool		
TFB050	0.050	1.27	± 0.002	± 0.05	1,000 ft. Spool		
TFB055	0.055	1.40	± 0.003	± 0.08	1,000 ft. Spool		
TFB060	0.060	1.52	± 0.003	± 0.08	1,000 ft. Spool		
TFB062	0.062	1.57	± 0.003	± 0.08	1,000 ft. Spool		
TFB070	0.070	1.78	± 0.003	± 0.08	1,000 ft. Spool		
TFB072	0.072	1.83	± 0.003	± 0.08	1,000 ft. Spool		
TFB078	0.078	1.98	± 0.004	± 0.10	500 ft. Spool		
TFB080	0.080	2.03	± 0.004	± 0.10	500 ft. Spool		
TFB084	0.084	2.13	± 0.004	± 0.10	500 ft. Spool		
TFB090	0.090	2.29	± 0.004	± 0.10	500 ft. Spool		
TFB094	0.094	2.39	± 0.004	± 0.10	500 ft. Spool		
TFB100	0.100	2.54	± 0.004	± 0.10	500 ft. Spool		
TFB109	0.109	2.77	± 0.004	± 0.10	500 ft. Spool		
TFB115	0.115	2.92	± 0.004	± 0.10	500 ft. Spool		
TFB125	0.125	3.18	± 0.004	± 0.10	Random Length		
TFB150	0.150	3.81	± 0.004	± 0.10	Random Length		
TFB188	0.188	4.78	± 0.004	± 0.10	Random Length		

#### **Features**

- Virgin Polytetrafluoroethylene resin
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting
- Excellent flexlife
- Laser markable

## **Certifications**

- ASTM D1710, Type 1, Grade 1, Class B
- ASTM D3295
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

#### **Notes**

- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Package quantities are not continuous

#### **Colors**

- ○ Natural, Translucent
- Colors available as custom run, see color code table

5

6

7

8

9

Green

Blue

Violet

Gray

White

		Cold	or Code
0	N	Natural	
•	0	Black	
•	1	Brown	
•	2	Red	
•	3	Orange	
•	4	Yellow	

#### Order Information

Example: TFB028-NT

TFB028-NT - PTFE Beading

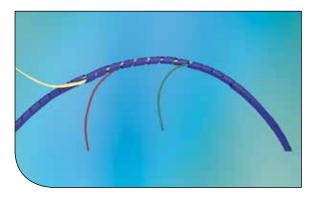
TFB028-NT - Beading O.D. in inches (.028")

TFB028-NT - Natural

TFB028-NT - Bulk Tubing

# PTFE Spiral Cut Cable Wrap

**Series: TSWTF** 



# **Applications/Markets**





- Cable harnessing
- Wiring closets
- Aerospace



Automotive

#### Order Information

Example: TSWTF-3/8-5T

TSWTF-3/8-5T - Spiral Wrap

TSWTF-3/8-5T - Material (PTFE)

TSWTF-3/8-5T - O.D. in inches (.375")

TSWTF-3/8-5T - Green

TSWTF-3/8-5T - Bulk Tubing

#### **Features**

- Provides harnessing for wires and cable while allowing leads at various points
- Exceptional heat resistance
- Self extinguishing
- Flexible
- Superior dielectric strength

#### **Certifications**

- A-A-59602
- AMS 3653E
- ASTM D3295
- VW1, UL-83 (natural)

#### **Notes**

- Available in left- or right-hand cut. Please specify with proper suffix at end of part number (i.e. TSWTF-18-NT-R)
- Working Temperature: 500°F (260°C)
- 100 ft. is the minimum item quantity sold
- Stock packaging for sizes 1/8" to 1/2" is 100- and 500-ft. noncontinuous spools and, for sizes greater than 1/2", 100-ft. non-continuous spools
- Custom packaging, sizes and colors are available upon request
- Spiral cut cable wrap is also quoted in FEP upon request
- Package quantities are not continuous
- Colors available as custom run, see color code table

#### Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

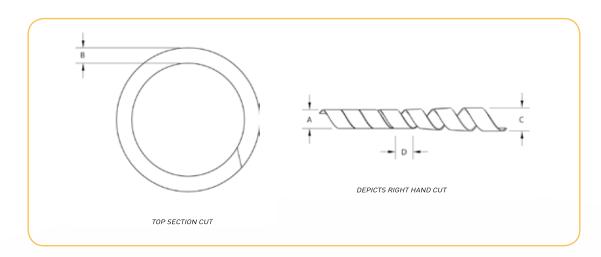
		Colo
0	N	Natural
•	0	Black
•	1	Brown
•	2	Red
•	3	Orange
•	4	Yellow

C	ode		
	•	5	Green
	•	6	Blue
	•	7	Violet
		8	Gray
	0	9	White



#### **PTFE Spiral Wrap**

Part Number	0.D. "A"		tolerance 0.D.			Wall "B"		tolerance Wall		Pitch "D"		tolerance Pitch		Max Bundle O.D. "C"	
#	0				<u></u>								0		
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
TSWTF-1/8-NT	0.125	3.18	± 0.005	0.127	0.020	0.508	± 0.008	0.203	0.212	5.38	± 0.015	0.381	1/2	12.70	
TSWTF-3/16-NT	0.188	4.78	± 0.005	0.127	0.030	0.762	± 0.008	0.203	0.312	7.92	± 0.015	0.381	1	25.40	
TSWTF-1/4-NT	0.250	6.35	± 0.005	0.127	0.030	0.762	± 0.008	0.203	0.375	9.52	± 0.015	0.381	2	50.80	
TSWTF-3/8-NT	0.375	9.52	± 0.005	0.127	0.030	0.762	± 0.008	0.203	0.437	11.10	± 0.015	0.381	2-1/2	63.50	
TSWTF-1/2-NT	0.500	12.70	± 0.005	0.127	0.030	0.762	± 0.008	0.203	0.562	14.27	± 0.015	0.381	3	76.20	
TSWTF-3/4-NT	0.750	19.05	± 0.005	0.127	0.040	1.02	± 0.008	0.203	0.875	22.22	± 0.015	0.381	4	101.60	
TSWTF-1.00-NT	1	25.40	± 0.005	0.127	0.040	1.02	± 0.008	0.203	1	25.40	± 0.015	0.381	6	152.40	





# PTFE Heat Shrinkable Tubing

Series 2:1 Fractional: HS2TFS, HS2TFT, HS2TFL, HS2TFI



# **Applications/Markets**







- Electrical Insulation
- Protective Cover
- Electronic Harness
- Laboratory

#### **Order Information**

Example: HS2TFI7/8-NT

**HS**2TFI7/8-NT – **Heat Shrink** 

HS2TFI7/8-NT - Shrink Ratio (2:1)

HS2TFI7/8-NT - PTFE

HS2TFI7/8-NT - Wall Type (Industrial Wall)

HS2TFI7/8-NT - Heat Shrink Size in inches (7/8")

HS2TFI7/8-NT - Natural

HS2TFI7/8-NT - Bulk Tubing

#### **Notes**

- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Shrink Temperature: 662°F (350°C) for 10 minutes per AMS-DTL-23053/12A
- \*Dielectric Strength: ≥ 1,400 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- PTFE Fractional Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request

#### **Features**

- Virgin Polytetrafluoroethylene resin
- 2:1 Shrink Ratio
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting

#### **Certifications**

- ASTM D2902 Type I
- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant
- Light Wall (HS2TFL) AMS-DTL-23053/12A Class 4
- Thin Wall (HS2TFT) AMS-DTL-23053/12A Class 3, AMS 3585
- Standard Wall (HS2TFS) AMS-DTL-23053/12A Class 2, AMS 3586
- Heavy Wall (HS2TFH) AMS-DTL-23053/12A Class 1 (Custom Order only)

#### **Colors**

- ○ Natural, Opaque to translucent
- Colors available as custom run, see color code table

When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC

ie HS2TFI7/8-2TC ie HS2TFI7/8-0CC48.000

		Colo	r
0	N	Natural	
•	0	Black	
•	1	Brown	
•	2	Red	
•	3	Orange	
•	4	Yellow	

r C	ode		
	•	5	Green
	•	6	Blue
	•	7	Violet
		8	Gray
	0	9	White

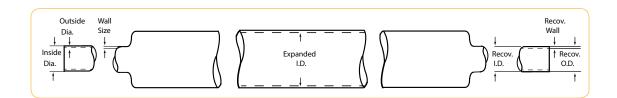


#### HS2TFS & HS2TFT PTFE Fractional Heat Shrink Tubing (2:1) SW & TW

Order	Mini		Maxi			Standard	Wall			Thin V	<i>V</i> all	
Size	Expa I.I		Recov I.I		Mil Spec*	Part	Nominal Recovered Wall		Mil Spec*	Part	Nomi Recover	
inch	inch	mm	inch	mm		Number	inch	mm		Number	inch	mm
1/8	0.215	05.5	0.130	3.3	23053/12A-215	HS2TFS1/8	$0.020 \pm 0.004$	$0.51 \pm 0.10$	23053/12A-319	HS2TFT1/8	0.015 ± 0.003	$0.38 \pm 0.08$
1/4	0.410	10.4	0.260	6.6	23053/12A-222	HS2TFS1/4	$0.020 \pm 0.004$	$0.51 \pm 0.10$	23053/12A-326	HS2TFT1/4	0.015 ± 0.004	$0.38 \pm 0.10$
5/16	0.470	11.9	0.329	8.4	23053/12A-225	HS2TFS5/16	0.020 ± 0.004	$0.51 \pm 0.10$	23053/12A-329	HS2TFT5/16	0.015 ± 0.004	$0.38 \pm 0.10$
3/8	0.560	14.2	0.399	10.1	23053/12A-228	HS2TFS3/8	0.025 ± 0.006	$0.64 \pm 0.15$	-	HS2TF 3/8	0.015 ± 0.004	$0.38 \pm 0.10$
7/16	0.655	16.6	0.462	11.7	23053/12A-229	HS2TFS7/16	0.025 ± 0.006	$0.64 \pm 0.15$	-	HS2TFT7/16	0.018 ± 0.004	$0.46 \pm 0.10$
1/2	0.750	19.1	0.524	13.3	23053/12A-230	HS2TFS1/2	$0.025 \pm 0.006$	$0.64 \pm 0.15$	-	HS2TFT1/2	0.018 ± 0.004	$0.46 \pm 0.10$
5/8	0.930	23.6	0.655	16.6	23053/12A-231	HS2TFS5/8	$0.030 \pm 0.006$	$0.76 \pm 0.15$	-	HS2TF 5/8	$0.020 \pm 0.004$	$0.51 \pm 0.10$
3/4	1.125	28.6	0.786	20.0	23053/12A-232	HS2TFS3/4	$0.035 \pm 0.008$	$0.89 \pm 0.20$	-	HS2TFT3/4	$0.025 \pm 0.004$	$0.64 \pm 0.10$
7/8	1.130	28.7	0.911	23.1	23053/12A-233	HS2TFS7/8	$0.035 \pm 0.008$	$0.89 \pm 0.20$	-	HS2TFT7/8	0.025 ± 0.004	$0.64 \pm 0.10$
1	1.500	38.1	1.036	26.3	23053/12A-234	HS2TFS1.00	$0.035 \pm 0.008$	$0.89 \pm 0.20$	-	HS2TFT1.00	0.025 ± 0.004	$0.64 \pm 0.10$

#### **HS2TFL PTFE Fractional Heat Shrink Tubing (2:1) LW**

Order	Mini		Maxi		Light Wall						
Size		_		Expanded I.D.			Mil Spec*	Part	Nom Recove	inal red Wall	
inch	inch	mm	inch	mm		Number	inch	mm			
1/8	0.215	5.5	0.130	3.3	23053/12A-415	HS2TFL1/8	$0.008 \pm 0.002$	$0.20 \pm 0.05$			
1/4	0.410	10.4	0.260	6.6	23053/12A-422	HS2TFL1/4	$0.010 \pm 0.003$	$0.25 \pm 0.08$			
5/16	0.470	11.9	0.329	8.4	23053/12A-425	HS2TFL5/16	$0.012 \pm 0.003$	$0.31 \pm 0.08$			



#### **HS2TFI PTFE Fractional Heat Shrink Tubing (2:1), Ind. Heavy Wall**

Part Number	Order Size	Mil Spec*	Expa	Minimum Expanded I.D.		mum vered D.	Nominal Recovered Wall	
	inch		inch	mm	inch	mm	inch	mm
HS2TFI1/8	1/8	23053/12A-101	0.166	4.2	0.130	3.3	$0.030 \pm 0.005$	$0.76 \pm 0.13$
HS2TFI3/16	3/16	23053/12A-102	0.250	6.4	0.193	4.9	$0.030 \pm 0.005$	$0.76 \pm 0.13$
HS2TFI1/4	1/4	23053/12A-103	0.333	8.4	0.257	6.5	$0.030 \pm 0.005$	$0.76 \pm 0.13$
HS2TFI5/16	5/16	23053/12A-104	0.415	10.5	0.320	8.1	$0.030 \pm 0.005$	$0.76 \pm 0.13$
HS2TFI3/8	3/8	23053/12A-105	0.498	12.6	0.383	9.7	$0.030 \pm 0.005$	$0.76 \pm 0.13$
HS2TFI7/16	7/16	23053/12A-106	0.580	14.7	0.448	11.4	$0.030 \pm 0.006$	$0.76 \pm 0.15$
HS2TFI1/2	1/2	23053/12A-107	0.666	16.9	0.510	13.0	$0.030 \pm 0.006$	$0.76 \pm 0.15$
HS2TFI9/16	9/16	23053/12A-108	0.748	19.0	0.572	14.5	$0.030 \pm 0.006$	$0.76 \pm 0.15$
HS2TFI5/8	5/8	23053/12A-109	0.830	21.1	0.637	16.2	$0.030 \pm 0.006$	$0.76 \pm 0.15$
HS2TFI11/16	11/16	23053/12A-110	0.915	23.2	0.700	17.8	$0.032 \pm 0.006$	$0.81 \pm 0.15$
HS2TFI3/4	3/4	23053/12A-111	1.000	25.4	0.764	19.4	0.040 ± 0.007	1.02 ± 0.18
HS2TFI7/8	7/8	23053/12A-112	1.170	29.7	0.891	22.6	0.045 ± 0.007	1.14 ± 0.18
HS2TFI1.00	1	23053/12A-113	1.330	33.8	1.020	25.9	$0.050 \pm 0.008$	1.27 ± 0.20

# PTFE Heat ShrinkableTubing

Series 2:1 AWG: HS2TFS, HS2TFT, HS2TFL



# **Applications/Markets**







- Electrical Insulation
- Protective Cover
- Electronic Harness
- Laboratory

#### **Features**

- Virgin Polytetrafluoroethylene resin
- 2:1 Shrink Ratio
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting

#### Certifications

- ASTM D2902 Type I
- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant
- Light Wall (HS2TFL) AMS-DTL-23053/12A Class 4
- Thin Wall (HS2TFT) AMS-DTL-23053/12A Class 3, AMS 3585
- Standard Wall (HS2TFS) AMS-DTL-23053/12A Class 2. AMS 3586
- Heavy Wall (HS2TFH) AMS-DTL-23053/12A Class 1 (Custom Order only)

#### **Order Information**

Example: HS2TFS15-4TC-500

HS2TFS15-4TC-500 - Heat Shrink

HS2TFS15-4TC-500 - Shrink Ratio (2:1)

HS2**TF**S15-4TC-500 - **PTFE** 

HS2TFS15-4TC-500 - Wall Type (Standard Wall)

HS2TFS15-4TC-500 - Heat Shrink Size in AWG (AWG15)

HS2TFS15-4TC-500 - Yellow

HS2TFS15-4TC-500 - Bulk Tubing

HS2TFS15-4TC-500 - Solid Color

HS2TFS15-4TC-500 - Package Quantity in feet (500')

#### Colors

- ○ Natural, Opaque to translucent
- Colors available as custom run, see color code table

When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC

ie HS2TFS15-2TC ie HS2TFS15-0CC48.000

		Colo
0	N	Natural
•	0	Black
•	1	Brown
•	2	Red
•	3	Orange
•	4	Yellow

r C	ode		
	•	5	Green
	•	6	Blue
	•	7	Violet
	•	8	Gray
	0	9	White

#### **Notes**

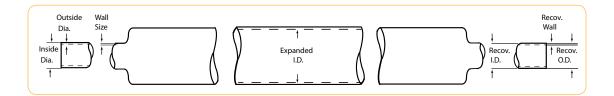
- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Shrink Temperature: 662°F (350°C) for 10 minutes AMS-DTL-23053/12A
- \*Dielectric Strength: ≥ 1,400 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- PTFE AWG Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request



**HS2TFS Standard Wall (2:1)** 

Part Number	Order Size	Mil Spec*	Minimum Expanded I.D.		Maximum Recovered I.D.		Nom Recove	ninal red Wall
	AWG		inch	mm	inch	mm	inch	mm
HS2TFS24	24	23053/12A-201	0.050	1.27	0.027	0.69	$0.012 \pm 0.002$	$0.31 \pm 0.05$
HS2TFS22	22	23053/12A-202	0.055	1.40	0.032	0.81	0.012 ± 0.002	$0.31 \pm 0.05$
HS2TFS20	20	23053/12A-203	0.060	1.52	0.039	0.99	0.016 ± 0.003	0.41 ± 0.08
HS2TFS19	19	23053/12A-204	0.065	1.65	0.043	1.09	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS18	18	23053/12A-205	0.076	1.93	0.049	1.25	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS17	17	23053/12A-206	0.085	2.16	0.054	1.37	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS16	16	-	0.093	2.36	0.061	1.55	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS15	15	23053/12A-207	0.110	2.79	0.067	1.70	0.016 ± 0.003	0.41 ± 0.08
HS2TFS14	14	23053/12A-208	0.120	3.05	0.072	1.83	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS13	13	23053/12A-210	0.140	3.56	0.080	2.03	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS12	12	23053/12A-211	0.150	3.81	0.089	2.26	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS11	11	23053/12A-212	0.170	4.32	0.101	2.57	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS10	10	23053/12A-213	0.191	4.85	0.112	2.84	$0.016 \pm 0.003$	$0.41 \pm 0.08$
HS2TFS09	9	23053/12A-214	0.205	5.21	0.124	3.15	$0.020 \pm 0.004$	$0.51 \pm 0.10$
HS2TFS08	8	23053/12A-216	0.240	6.10	0.141	3.58	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS07	7	23053/12A-217	0.270	6.86	0.158	4.01	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS06	6	23053/12A-218	0.302	7.67	0.178	4.52	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS05	5	23053/12A-219	0.320	8.13	0.198	5.03	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS04	4	23053/12A-220	0.370	9.40	0.224	5.69	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS03	3	23053/12A-221	0.390	9.91	0.249	6.32	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS02	2	23053/12A-223	0.430	10.9	0.278	7.06	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS01	1	23053/12A-224	0.450	11.4	0.311	7.90	$0.020 \pm 0.004$	0.51 ± 0.10
HS2TFS00	0	23053/12A-226	0.470	11.9	0.347	8.81	$0.020 \pm 0.004$	$0.51 \pm 0.10$

- AMS-DTL-23053/12A, Class 3
- AMS 3585
- ASTM D2902 Type I
- FDA Compliant
- USP Class VI Compliant



# PTFE Heat ShrinkableTubing Series 2:1 AWG: HS2TFS, HS2TFT, HS2TFL (cont.)

**HS2TFT Thin Wall (2:1)** 

Part Number	Order Size	Mil Spec*	Mini Expand	mum led I.D.		mum ered I.D.	Nom Recove	inal red Wall
	AWG		inch	mm	inch	mm	inch	mm
HS2TFT30	30	23053/12A-301	0.034	0.86	0.015	0.38	$0.009 \pm 0.002$	$0.23 \pm 0.05$
HS2TFT28	28	23053/12A-302	0.038	0.97	0.018	0.46	$0.009 \pm 0.002$	$0.23 \pm 0.05$
HS2TFT26	26	23053/12A-303	0.046	1.16	0.022	0.56	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFT24	24	23053/12A-304	0.050	1.27	0.027	0.69	$0.010 \pm 0.002$	$0.25 \pm 0.08$
HS2TFT22	22	23053/12A-305	0.055	1.40	0.032	0.81	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT20	20	23053/12A-306	0.060	1.52	0.039	0.99	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT19	19	23053/12A-307	0.065	1.65	0.043	1.09	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT18	18	23053/12A-308	0.076	1.93	0.049	1.25	$0.012 \pm 0.003$	$0.31 \pm 0.08$
HS2TFT17	17	23053/12A-309	0.085	2.16	0.054	1.37	$0.012 \pm 0.003$	$0.31 \pm 0.08$
HS2TFT16	16	23053/12A-310	0.093	2.36	0.061	1.55	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT15	15	23053/12A-311	0.110	2.79	0.067	1.70	$0.012 \pm 0.003$	$0.31 \pm 0.08$
HS2TFT14	14	23053/12A-312	0.120	3.05	0.072	1.83	$0.012 \pm 0.003$	$0.31 \pm 0.08$
HS2TFT13	13	23053/12A-313	0.140	3.56	0.080	2.03	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT12	12	23053/12A-314	0.150	3.81	0.089	2.26	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT11	11	23053/12A-316	0.170	4.32	0.101	2.57	0.012 ± 0.003	$0.31 \pm 0.08$
HS2TFT10	10	23053/12A-317	0.191	4.85	0.112	2.84	$0.012 \pm 0.003$	$0.31 \pm 0.08$
HS2TFT09	9	23053/12A-318	0.205	5.21	0.124	3.15	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT08	8	23053/12A-320	0.240	6.10	0.141	3.58	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT07	7	23053/12A-321	0.270	6.86	0.158	4.01	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT06	6	23053/12A-322	0.302	7.67	0.178	4.52	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT05	5	23053/12A-323	0.320	8.13	0.198	5.03	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT04	4	23053/12A-324	0.370	9.40	0.224	5.69	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT03	3	23053/12A-325	0.390	9.91	0.249	6.32	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT02	2	23053/12A-327	0.430	10.9	0.278	7.06	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT01	1	23053/12A-328	0.450	11.4	0.311	7.90	0.015 ± 0.004	$0.38 \pm 0.10$
HS2TFT00	0	23053/12A-330	0.470	11.9	0.347	8.81	$0.015 \pm 0.004$	$0.38 \pm 0.10$

<sup>\*</sup>Dielectric Strength: ≥ 1,400 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)

- AMS-DTL-23053/12A, Class 3
- AMS 3585
- ASTM D2902 Type I
- FDA Compliant
- USP Class VI Compliant

#### **HS2TFL Light Wall (2:1)**

Part Number	Order Size	Mil Spec*	Minimum Expanded I.D.		Maximum Recovered I.D.		Nominal Recovered Wall	
	AWG		inch	mm	inch	mm	inch	mm
HS2TFL24	24	23053/12A-404	0.050	1.27	0.025	0.64	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL22	22	23053/12A-405	0.055	1.40	0.031	0.79	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL20	20	23053/12A-406	0.060	1.52	0.038	0.97	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL19	19	23053/12A-407	0.065	1.65	0.043	1.09	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL18	18	23053/12A-408	0.076	1.93	0.046	1.17	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL17	17	23053/12A-409	0.085	2.16	0.054	1.37	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL16	16	23053/12A-410	0.093	2.36	0.057	1.45	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL15	15	23053/12A-411	0.110	2.79	0.063	1.60	$0.006 \pm 0.002$	$0.15 \pm 0.05$
HS2TFL14	14	23053/12A-412	0.120	3.05	0.072	1.83	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL13	13	23053/12A-413	0.140	3.56	0.080	2.03	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL12	12	23053/12A-414	0.150	3.81	0.089	2.26	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL11	11	23053/12A-416	0.170	4.32	0.099	2.51	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL10	10	23053/12A-417	0.191	4.85	0.110	2.79	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL09	9	23053/12A-418	0.205	5.21	0.122	3.10	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL08	8	23053/12A-420	0.240	6.10	0.139	3.53	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL07	7	23053/12A-421	0.270	6.86	0.154	3.91	$0.008 \pm 0.002$	$0.20 \pm 0.05$
HS2TFL06	6	23053/12A-422	0.302	7.67	0.172	4.37	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL05	5	23053/12A-423	0.320	8.13	0.192	4.88	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL04	4	23053/12A-424	0.370	9.40	0.214	5.44	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL03	3	23053/12A-425	0.390	9.91	0.241	6.12	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL02	2	23053/12A-427	0.430	10.9	0.270	6.88	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL01	1	23053/12A-428	0.450	11.4	0.301	7.65	$0.010 \pm 0.003$	$0.25 \pm 0.08$
HS2TFL00	0	23053/12A-430	0.470	11.9	0.347	8.81	$0.012 \pm 0.003$	$0.31 \pm 0.08$

<sup>\*</sup>Dielectric Strength: ≥ 1,400 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)

- AMS-DTL-23053/12A, Class 4
- ASTM D2902 Type I
- FDA Compliant
- USP Class VI Compliant



# PTFE Heat Shrinkable Tubing

Series 4:1 HS4TFI



### **Features**

- Virgin Polytetrafluoroethylene resin
- 4:1 Shrink Ratio
- Chemically inert
- Lowest coefficient of friction
- Superior dielectric strength
- Exceptional heat resistance
- Self extinguishing
- Non-wetting

# **Applications/Markets**





- Electrical Insulation
- Protective Cover
- Rollers
- Bulb Protection

#### **Certifications**

- AMS-DTL-23053/12A, Class 5
- ASTM D2902 Type I
- AMS 3584A
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

#### **Order Information**

Example: HS4TFI5/8-NT

HS4TFI5/8-NT - Heat Shrink

HS4TFI5/8-NT - Shrink Ratio (4:1)

HS4TFI5/8-NT - PTFE

HS4TFI5/8-NT - Wall Type (Industrial Wall)

HS4TFI5/8-NT - Heat Shrink Size in inches (5/8")

HS4TFI5/8-NT - Natural

HS4TFI5/8-NT - Bulk Tubing

#### Colors

- ○ Natural, Opaque to translucent
- Colors available as custom run, see color code table

When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC

ie HS4TFI5/8-2TC ie HS4TFI5/8-0CC48.0000

		Cole
0	N	Natural
•	0	Black
•	1	Brown
•	2	Red
•	3	Orange
•	4	Yellow

,oae		
•	5	Green
•	6	Blue
•	7	Violet
•	8	Gray
0	9	White

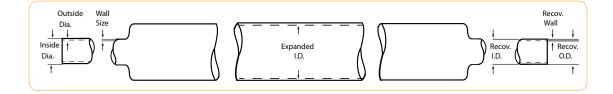
#### **Notes**

- Working Temperature: -500°F (260°C)
- Shrink Temperature: 662°F (350°C) for 10 minutes AMS-DTL-23053/12A
- For full recovery, expanded diameter should be 50% larger than the diameter of the object to be recovered over
- \*Dielectric Strength: ≥ 1,400 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- PTFE Fractional Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request



**HS4TFI PTFE Industrial Wall Heat Shrink Tubing (4:1)** 

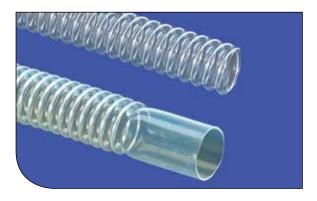
Part Number	Order Size	Mil Spec*		Minimum Expanded I.D.		mum ered I.D.	Nominal Recovered Wall			
	inch		inch	mm	inch	mm	inch	mm		
HS4TFI5/64	5/64	23053/12A-501	0.078	1.98	0.025	0.64	$0.009 \pm 0.002$	$0.23 \pm 0.05$		
HS4TFI1/8	1/8	23053/12A-502	0.125	3.18	0.037	0.94	0.012 ± 0.002	$0.31 \pm 0.05$		
HS4TFI3/16	3/16	23053/12A-503	0.187	4.75	0.050	1.27	$0.012 \pm 0.002$	$0.31 \pm 0.05$		
HS4TFI1/4	1/4	23053/12A-504	0.250	6.35	0.063	1.60	0.012 ± 0.002	$0.31 \pm 0.05$		
HS4TFI5/16	5/16	23053/12A-505	0.312	7.92	0.078	1.98	0.012 ± 0.002	$0.31 \pm 0.05$		
HS4TFI3/8	3/8	23053/12A-506	0.375	9.52	0.096	2.44	0.012 ± 0.002	$0.31 \pm 0.05$		
HS4TFI7/16	7/16	23053/12A-507	0.438	11.1	0.112	2.84	$0.012 \pm 0.002$	$0.31 \pm 0.05$		
HS4TFI1/2	1/2	23053/12A-508	0.500	12.7	0.144	3.66	0.015 ± 0.004	$0.38 \pm 0.10$		
HS4TFI5/8	5/8	23053/12A-510	0.625	15.9	0.178	4.52	0.015 ± 0.004	$0.38 \pm 0.10$		
HS4TFI3/4	3/4	23053/12A-512	0.750	19.1	0.224	5.70	0.015 ± 0.004	$0.38 \pm 0.10$		
HS4TFI7/8	7/8	23053/12A-513	0.875	22.2	0.244	6.20	0.015 ± 0.004	$0.38 \pm 0.10$		
HS4TFI1.00	1	23053/12A-514	1.000	25.4	0.278	7.06	0.015 ± 0.004	$0.38 \pm 0.10$		
HS4TFI1.25	1-1/4	23053/12A-515	1.250	31.8	0.347	8.81	0.015 ± 0.004	$0.38 \pm 0.10$		



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# **PTFE Convoluted**

**Series Convo-Tex®** 



### **Features**

- Chemically inert
- Low coefficient of friction
- Very flexible
- Self extinguishing
- Non-wetting

## **Certifications**

- AMS 3653E
- VW1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

# **Applications/Markets**













- Fluid Transport
- Wire Harness
- Protection/Cable Core
- Robotics

#### **Order Information**

Example: CV01-1/8-NT

CV01-1/8-NT - Convoluted

CV**01-**1/8-NT - **PTFE** 

CV01-1/8-NT - Size to Order (1/8")

CV01-1/8-NT - Color (N=Natural)

CV01-1/8-NT- "T" is bulk (for cuffed tubing, remove

"T" and add length, ie. CV01-1/8-N1200 = 1" Convo,

natural, cut 12" long)

# **Colors**

- ○ Natural, Opaque to Translucent
- Colors available as custom run, see color code table

		Colo				
0	N	Natural				
•	0	Black				
•	1	Brown				
•	2	Red				
•	3	Orange				
•	4	Yellow				

or C	ode		
	•	5	Green
	•	6	Blue
	•	7	Violet
	•	8	Gray
	0	9	White

#### **Notes**

- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Standard cuffs for Convo-Tex are sized on the Inside Diameter
- Wire wrap reinforcement can be added for increased pressure applications or when a tighter bend radius is needed
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request



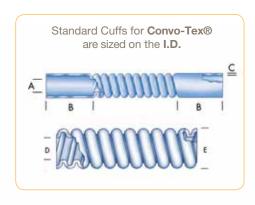
#### PTFE Convo-Tex® Convoluted

(Standard tubing is natural)

Part Number	Size To Order	Stan Cuff "/	I.D.	Len	Standard Cuff Length "B"		Wall Thickness "C"		Min. Inside Diameter "D"		Max. Inside Diameter "D"		Outside neter E"	**Min. Bend Radius	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
CV01-1/8-NT	CONV-2	1/8	3.18	3/4	19.1	0.010	0.25	0.130	3.3	0.140	3.6	0.235	5.9	3/8	9.5
CV01-1/4-NT	CONV-4	1/4	6.35	3/4	19.1	0.015	0.38	0.181	4.6	0.188	4.8	0.320	8.1	1/2	12.7
CV01-5/16-NT	CONV-5	5/16	7.94	1	25.4	0.020	0.51	0.273	6.9	0.281	7.1	0.414	10.5	3/4	19.1
CV01-3/8-NT	CONV-6	3/8	9.53	1	25.4	0.020	0.51	0.303	7.7	0.312	7.9	0.450	11.4	1-3/4	44.4
CV01-1/2-NT	CONV-8	1/2	12.7	1	25.4	0.020	0.51	0.425	10.8	0.437	11.1	0.590	15.0	1-1/4	31.2
CV01-5/8-NT	CONV-10	5/8	15.9	1-1/4	31.8	0.025	0.64	0.485	12.3	0.500	12.7	0.660	16.8	1-1/2	38.1
CV01-3/4-NT	CONV-12	3/4	19.1	1-1/2	38.1	0.023	0.58	0.608	15.4	0.625	15.9	0.780	19.8	1-3/4	44.4
CV01-1.00-NT	CONV-16	1	25.4	2	50.8	0.030	0.76	0.849	21.6	0.875	22.2	1.100	27.9	2-1/4	57.2
CV01-1.25-NT	CONV-20	1-1/4	31.8	2-1/2	63.5	0.035	0.89	1.150	29.2	1.190	30.2	1.560	39.6	2-3/4	69.9
CV01-1.50-NT	CONV-24	1-1/2	38.1	2-1/2	63.5	0.040	1.02	1.410	35.8	1.490	37.8	1.910	48.5	3	76.2
CV01-2.00-NT	CONV-32	2	50.8	2-1/2	63.5	0.043	1.09	1.955	49.7	1.985	50.4	2.450	62.2	4-1/4	107.9
CV01-2.50-NT	CONV-40	2-1/2	63.5	2-1/2	63.5	0.062	1.57	2.460	62.5	2.540	64.5	3.210	81.6	5	127
CV01-3.00-NT	CONV-48	3	76.2	2-1/2	63.5	0.070	1.78	2.940	74.7	3.060	77.7	3.750	95.3	7	177.8
CV01-4.00-NT	CONV-64	4	101.6	2-1/2	63.5	0.070	1.78	3.940	100.1	4.060	103.1	4.750	120.6	9	228.6

<sup>\*\*</sup> Minimum 36" length.

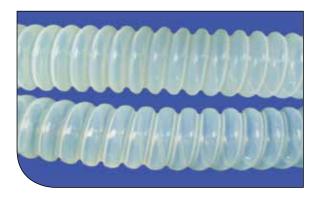






# **PTFE Convoluted**

# Series Low Profile and Heavy Wall



# **Applications/Markets**







- Fluid Handling
- Harnesses
- Lab Equipment
- Robotics

#### **Features**

- Chemically inert
- Low coefficient of friction
- Very flexible
- Self extinguishing
- Non-wetting

#### Low Profile

- Larger inside diameter
- Increased Flow

#### **Heavy Wall**

- Reinforces the strength of the tube allowing for braiding or covering, flanging or flaring
- Handles higher vacuum

# **Certifications**

- AMS 3653E
- VW1, UL-83
- FDA Compliant
- USP Class VI Compliant

## **Order Information**

Example: CVH01-1/8-NT

CVH01-1/8-NT - CVH - Heavywall Convoluted

- CVL Low Profile Convoluted

CVH**01-**1/8-NT - **PTFE** 

CVH01-1/8-NT - Size to Order (1/8")

CVH01-1/8-NT - Color (N=Natural)

CVH01-1/8-NT- "T" is bulk (for cuffed tubing, remove

"T" and add length, ie. CVH01-1/8-N1200 = 1"Heavy

Wall Convo, natural, cut 12" long)

#### Colors

- ○ Natural, Opaque to Translucent
- Colors available as custom run, see color code table

		Colo
0	N	Natural
•	0	Black
•	1	Brown
•	2	Red
•	3	Orange
•	4	Yellow

or C	ode		
	•	5	Green
	•	6	Blue
	•	7	Violet
	•	8	Gray
	0	9	White

#### Notes

- Working Temperature: 500°F (260°C)
- Standard cuffs for Convo-Tex are sized on the
- Wire wrap reinforcement can be added for increased pressure applications or when a tighter bend radius is needed
- Minimum quantities may apply
- Custom packaging, sizes, lengths, cuffs and colors are quoted upon request

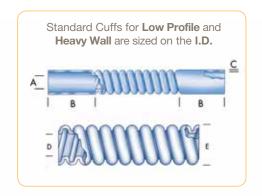


#### **PTFE Low Profile Convoluted**

(Standard tubing is natural)

Part Number	Size To	Min. Inside Diameter		Max. Inside Diameter			Outside neter	W Thick	all kness	**Min. Bend Radius		
	Order	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
CVL01-3/8-NT	3/8	0.394	10.0	0.406	10.3	0.560	14.2	0.023	0.58	1/2	13	
CVL01-1/2-NT	1/2	0.490	12.5	0.510	13.0	0.700	17.8	0.025	0.64	3/4	19	
CVL01-3/4-NT	3/4	0.740	18.8	0.760	19.3	0.980	24.9	0.035	0.89	1.88	48	
CVL01-1.00-NT	1	0.990	25.1	1.010	25.7	1.260	32.0	0.035	0.89	2-1/4	57	
CVL01-1.25-NT	1-1/4	1.210	30.7	1.250	31.8	1.539	39.1	0.035	0.89	3	76	
CVL01-1.50-NT	1-1/2	1.520	38.6	1.540	39.1	1.870	47.5	0.044	1.12	3-1/2	89	
CVL01-1.75-NT	1-3/4	1.690	42.9	1.750	44.5	2.100	53.3	0.040	1.02	4-1/4	108	
CVL01-2.00-NT	2	2.010	51.1	2.030	51.6	2.370	60.2	0.043	1.09	4-3/4	121	

<sup>\*\*</sup> Minimum 36 length.



#### **PTFE Heavy Wall Convoluted**

(Standard tubing is natural)

Part Number	Size To Order		nside neter		Inside neter		Outside neter		all kness	**Min. Bend Radius		
	Oruei	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
CVH01-1/4-NT	1/4	0.257	6.5	0.265	6.7	0.415	10.5	0.025	0.38	3/4	19	
CVH01-3/8-NT	3/8	0.335	8.5	0.345	8.8	0.510	13.0	0.025	0.64	1	25	
CVH01-1/2-NT	1/2	0.454	11.5	0.466	11.8	0.700	17.8	0.035	0.89	1-1/2	38	
CVH01-3/4-NT	3/4	0.683	17.4	0.701	17.8	1.010	25.7	0.050	1.27	1.88	48	
CVH01-1.00-NT	1	0.841	21.4	0.859	21.8	1.210	30.7	0.053	1.35	2-1/2	64	
CVH01-1.25-NT	1-1/4	1.125	28.6	1.145	29.1	1.610	40.9	0.062	1.57	3.13	79	
CVH01-1.50-NT	1-1/2	1.420	36.1	1.480	37.6	1.880	47.8	0.062	1.57	3-3/4	95	
CVH01-1.75-NT	1-3/4	1.540	39.1	1.600	40.6	2.100	53.3	0.062	1.57	4-1/2	114	
CVH01-2.00-NT	2	1.770	45.0	1.830	46.5	2.432	61.8	0.062	1.57	4-3/4	120	
CVH01-2.50-NT	2-1/2	2.460	62.5	2.540	64.5	3.210	81.5	0.062	1.57	5	127	
CVH01-3.00-NT	3	2.940	74.7	3.060	77.7	3.750	95.3	0.062	1.57	7	178	
CVH01-4.00-NT	4	3.90	100	4.060	103	4.750	121	0.070	1.77	9	229	

<sup>\*\*</sup> Minimum 36 length.



# **PTFE Convoluted**

# Series SAE AS81914/1 and SAE AS81914/2



# **Applications/Markets**







- Fluid Handling
- Harnesses
- Crush Resistant Cover
- Robotics

#### **Features**

- Chemically inert
- Low coefficient of friction
- Very flexible
- Self extinguishing
- Non-wetting

#### Certifications

- AMS 3653E
- SAE AS81914/1
- SAE AS81914/2
- FDA Compliant

#### **Order Information**

Example: 81914/1-1010-0TC

81914/1-1010-0TC - SAE AS81914 Convoluted

81914/1-1010-0TC - PTFE

81914/1**-10**10-0TC - **Helical Convolutions** 

81914/1-1010-0TC - Size (10=1.000")

81914/1-1010-0TC - Color (0=Black)

81914/1-1010-0**TC** - "T" is bulk - (for cuffed tubing,

remove "T" and add length, ie. 81914/1-1010-01200 = 187"

Convo, black, cut 12" long

#### **Notes**

- Working Temperature: 500°F (260°C)
- Tubing is provided in black without cuffs direct from inventory
- Stock packaging is random coils
- Also availabe in close convolution 81914/2
- Minimum quantities may apply
- · Custom packaging, sizes, lengths, cuffs and colors are quoted upon request

#### Colors

- Black
- Colors available as custom run, see color code table

When ordering convoluted tubing in colors, the "N" designation for natural should be replaced by the correct color designator;

ie 81914/1-101-0T (black bulk tubing) ie 81914/1-101-01200 (black tubing - 12 inches long)

Green

Blue

Violet

Gray

White

		Cold	or C	ode	
0	N	Natural		•	5
•	0	Black		•	6
•	1	Brown		•	7
•	2	Red		•	8
•	3	Orange		0	9
•	4	Yellow			

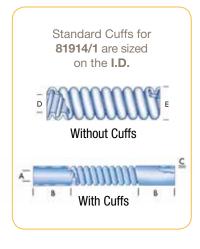


#### PTFE Convoluted Tubing (SAE AS81914/1)

(Standard tubing is black)

Part Number	MIL Spec*	Ins	Maximum Inside Diameter		Minimum Inside Diameter		Maximum Outside Diameter		Maximum Wall Thickness		mum nd lius	Pitch Weig		eight
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	±1	lb./100 ft.	kg./100 mtr.
81914/1-1001-0TC	-1	0.188	4.78	0.181	4.6	0.320	8.13	0.023	0.584	1/2	13	8	2	2.98
81914/1-1002-0TC	-2	0.281	7.14	0.273	6.93	0.414	10.5	0.027	0.686	3/4	19	7.5	2.9	4.31
81914/1-1003-0TC	-3	0.312	7.93	0.303	7.7	0.450	11.4	0.027	0.686	7/8	22	7.5	3.6	5.36
81914/1-1004-0TC	-4	0.375	9.53	0.364	9.25	0.530	13.5	0.029	0.737	1	25	7	4.2	6.25
81914/1-1005-0TC	-5	0.437	11.1	0.425	10.8	0.590	15.0	0.029	0.737	1-1/4	32	7	4.9	7.29
81914/1-1006-0TC	-6	0.500	12.7	0.485	12.3	0.660	16.8	0.029	0.737	1-1/2	38	7	5.2	7.74
81914/1-1007-0TC	-7	0.625	15.9	0.608	15.4	0.780	19.9	0.035	0.889	1-3/4	44	7	6.9	10.3
81914/1-1008-0TC	-8	0.750	19.1	0.730	18.5	0.975	24.8	0.035	0.889	1.88	48	6	10.4	15.5
81914/1-1009-0TC	-9	0.875	22.2	0.850	21.6	1.100	27.9	0.035	0.889	2-1/4	57	6	11.3	16.8
81914/1-1010-0TC	-10	1.000	25.4	0.975	24.8	1.260	32.0	0.035	0.889	2-1/2	64	4.5	12.6	18.8
81914/1-1011-0TC	-11	1.125	28.6	1.100	27.9	1.390	35.3	0.035	0.889	2-3/4	70	4.5	13.8	20.5
81914/1-1012-0TC	-12	1.250	31.8	1.210	30.7	1.539	39.1	0.035	0.889	3	76	4	15.5	23.1
81914/1-1013-0TC	-13	1.500	38.1	1.440	36.6	1.850	47.0	0.040	1.020	3.75	95	4	21.7	32.3
81914/1-1014-0TC	-14	1.750	44.5	1.690	42.9	2.100	53.3	0.045	1.140	4.25	108	4	25.3	37.6
81914/1-1015-0TC	-15	2.000	50.8	1.940	49.3	2.350	59.7	0.045	1.140	4.75	121	4	29	43.2

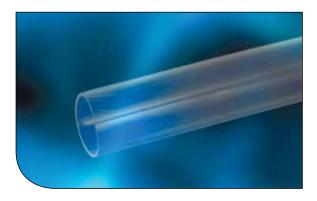
\*PTFE convoluted tubing is provided in BLACK without cuffs direct from the factory. Black part numbers are designated with "OT" and Natural part numbers are designated with "NT" after the Mil Spec number (ie 81914/1-1014-0T).





# **FEP Tubing**

Series Fractional & Metric: 103, 203



# **Applications/Markets**









- Nitrogen Transfer
- Ozone Sampling
- Optical Sensor
- Laboratory
- Down Hole Pump
- Food & Beverage
- Catheter Repair
- Syringe Tips

#### **Features**

- Virgin Fluorinated Ethylene Propylene resin
- Translucent
- Chemically inert
- Long continuous lengths
- Low coefficient of friction
- Self extinguishing
- Non-wetting
- Weldable

## **Certifications/Compliance**

- ASTM D3307-10
- USP Class VI Compliant
- ASTM D2116-07
- VW-1, UL-83 (natural)
- FDA Compliant

#### **Order Information**

Example: 103-0250031-N-100

103-0250031-N-100 - Fractional

103-0250031-N-100 - FEP

103-0250031-N-100 - Tube O.D. in inches (1/4")

103-0250**031**-N-100 - **Tube Wall Thickness** in inches **(.031")** 

103-0250031-N-100 - Natural

103-0250031-N-100 - Package Quantity in feet (100')

#### **Notes**

- Working Temperature: -100°F to 400°F (-75°C to 204°C)
- Working pressure calculated using a Design Factor of 4 at 73°F (23°C)
- Custom packaging and sizes are quoted upon request
- Package quantities are not continuous

## Fittings

Fittings available for sizes 1/8" up to 1"

Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

#### **FSC Product Families:**

- Compression
- Compress-Align®
- TrueSeal™

#### **Options**

- Smoothbore
- Convoluted
- Corrugated
- Retractable Coils
- Paratubing

#### **Colors**

- ○ Natural, Translucent
- Colors available as custom run, see color code table

		Colo	or C	ode		
0	N	Natural		•	5	Green
•	0	Black		•	6	Blue
•	1	Brown		•	7	Violet
•	2	Red		•	8	Gray
•	3	Orange		0	9	White
•	4	Yellow				



#### 103 FEP Industrial Wall Fractional Size Tubing

Part Number	Order Size		Nom O.			Nominal I.D.			Reference Wall		Working Pressure		Burst Pressure		Min. Bend Radius		Vac. Rating	Wei	ight	
#			(	9		0				()-		$\bigcirc$		*		\$	9			
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
103-0094031	3/32	0.094	± 0.005	2.40	± 0.127	0.031	± 0.002	0.79	± 0.051	0.031	0.79	630	43	2520	174	0.500	13	28	0.006	0.009
103-0125031	1/8	0.125	± 0.003	3.18	± 0.076	0.062	± 0.003	1.57	± 0.076	0.031	0.79	470	32	1880	130	0.375	10	28	0.009	0.013
103-0156031	5/32	0.157	± 0.005	3.99	± 0.127	0.094	± 0.005	2.39	± 0.127	0.031	0.79	360	25	1440	99	0.375	10	28	0.011	0.017
103-0188031	3/16	0.188	± 0.005	4.78	± 0.127	0.125	± 0.005	3.18	± 0.127	0.031	0.79	290	20	1160	80	0.750	19	28	0.014	0.021
103-0250031	1/4	0.250	± 0.005	6.35	± 0.127	0.188	± 0.005	4.78	± 0.127	0.031	0.79	210	14	840	58	1.750	44	28	0.020	0.030
103-0312031	5/16	0.312	± 0.005	7.92	± 0.127	0.250	± 0.005	6.35	± 0.127	0.031	0.79	160	11	640	44	2.250	57	28	0.025	0.038
103-0375031	3/8	0.375	± 0.005	9.52	± 0.127	0.312	± 0.005	7.92	± 0.127	0.031	0.79	130	9	520	36	2.750	70	28	0.031	0.047
103-0438031	7/16	0.438	± 0.005	11.13	± 0.127	0.375	± 0.005	9.52	± 0.127	0.031	0.79	110	8	440	30	4.000	102	28	0.037	0.055
103-0500031	1/2	0.500	± 0.006	12.70	± 0.152	0.438	± 0.006	11.13	± 0.152	0.031	0.79	90	6	360	25	4.000	102	28	0.043	0.063
103-0563031	9/16	0.563	± 0.006	14.30	± 0.152	0.500	± 0.006	12.70	± 0.152	0.031	0.79	80	6	320	22	5.000	127	28	0.054	0.080

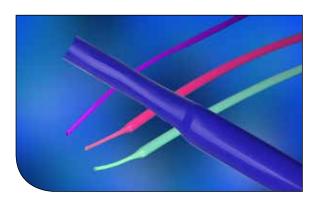
#### 103 FEP Heavy Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nominal I.D.			Reference Wall			king sure	Bu Pres		Min. Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -		0			5	$\mathcal{D}$		[[ba	
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
103-0188062	3/16	0.188	± 0.005	4.78	± 0.127	0.064	± 0.005	1.63	± 0.127	0.062	1.57	630	43	2520	174	0.250	6	28	0.023	0.034
103-0250040	1/4	0.250	± 0.005	6.35	± 0.127	0.170	± 0.005	4.32	± 0.127	0.040	1.02	280	19	1120	77	1.250	32	28	0.025	0.037
103-0250047	1/4	0.250	± 0.005	6.35	± 0.127	0.156	± 0.005	3.96	± 0.127	0.047	1.19	340	23	1360	94	0.750	19	28	0.028	0.042
103-0250062	1/4	0.250	± 0.005	6.35	± 0.127	0.125	± 0.005	3.18	± 0.127	0.062	1.57	470	32	1880	130	0.750	19	28	0.034	0.051
103-0312062	5/16	0.312	± 0.005	7.92	± 0.127	0.188	± 0.005	4.78	± 0.127	0.062	1.57	360	25	1440	99	1.375	35	28	0.045	0.068
103-0375062	3/8	0.375	± 0.005	9.52	± 0.127	0.250	± 0.005	6.35	± 0.127	0.062	1.57	290	20	1160	80	1.500	38	28	0.057	0.085
103-0438062	7/16	0.438	± 0.005	11.13	± 0.127	0.312	± 0.005	7.92	± 0.127	0.062	1.57	250	17	1000	69	2.625	67	28	0.068	0.102
103-0500062	1/2	0.500	± 0.005	12.70	± 0.127	0.375	± 0.005	9.53	± 0.127	0.062	1.57	210	14	840	58	2.125	54	28	0.079	0.119
103-0625062	5/8	0.625	± 0.006	15.88	± 0.152	0.500	± 0.006	12.70	± 0.152	0.062	1.57	160	11	640	44	3.000	76	28	0.102	0.152
103-0750062	3/4	0.750	± 0.006	19.05	± 0.152	0.625	± 0.006	15.88	± 0.152	0.062	1.57	130	9	520	36	6.000	152	28	0.125	0.186
103-1000062	1	1.000	± 0.010	25.40	± 0.254	0.875	± 0.010	22.22	± 0.254	0.062	1.57	90	6	360	25	8.000	203	28	0.170	0.254

#### 203 Metric FEP Tubing

Part Number	Order Size			ninal .D.				ninal D.			rence all		king sure		rst sure		Bend dius	Vac. Rating	We	ight
#			0	)			(	9		((	<u> </u>	(	2		J	*	$\varnothing$			
	mm	mm	tol.	inch	tol.	mm	tol.	inch	tol.	mm	inch	bar 23°C	psi 73°F	bar 23°C	psi 73°F	mm	inch	at 73°F	kg. per m.	lb. per ft.
203-0300100	3	3	± 0.11	0.118	± 0.004	1	± 0.11	0.039	± 0.004	1	0.039	27	390	108	1560	6	0.250	28	0.014	0.009
203-0400100	4	4	± 0.11	0.157	± 0.004	2	± 0.11	0.079	± 0.004	1	0.039	20	290	80	1160	13	0.500	28	0.020	0.014
203-0500100	5	5	± 0.11	0.197	± 0.004	3	± 0.11	0.118	± 0.004	1	0.039	15	220	61	880	19	0.750	28	0.027	0.018
203-0600100	6	6	± 0.13	0.236	± 0.005	4	± 0.13	0.157	± 0.005	1	0.039	12	180	50	720	29	1.125	28	0.034	0.023
203-0700100	7	7	± 0.13	0.276	± 0.005	5	± 0.13	0.197	± 0.005	1	0.039	10	150	41	600	44	1.750	28	0.041	0.027
203-0800100	8	8	± 0.13	0.315	± 0.005	6	± 0.13	0.236	± 0.005	1	0.039	9	130	36	520	51	2.000	28	0.047	0.032
203-0900100	9	9	± 0.13	0.354	± 0.005	7	± 0.13	0.275	± 0.005	1	0.039	8	110	30	440	54	2.125	28	0.054	0.036
203-1000100	10	10	± 0.13	0.393	± 0.005	8	± 0.13	0.315	± 0.005	1	0.039	7	100	28	400	70	2.750	28	0.061	0.041
203-1200100	12	12	± 0.15	0.472	± 0.006	10	± 0.15	0.394	± 0.006	1	0.039	6	80	22	320	76	3.000	28	0.074	0.050

# FEP Heat Shrinkable Tubing Series 1.3:1 HS1.3FEP



# **Applications/Markets**









- Protective Cover
- UV Light Covering
- Product Testing
- Rollers

#### **Features**

- Easier to shrink than PTFE
- Chemically inert
- Low coefficient of friction
- Superior dielectric strength
- Good heat resistance
- Self extinguishing
- Non-wetting

#### Certifications

- AMS-DTL-23053/11A, Class 1
- ASTM D2902 Type II
- ASTM D3296-03
- VW-1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

#### **Order Information**

Example: HS1.3FEP24-0CC48.000

HS1.3FEP24-0CC48.000 - Heat Shrink

HS1.3FEP24-0CC48.000 - Shrink Ratio (1.3:1)

HS1.3FEP24-0CC48.000 - FEP

HS1.3FEP24-0CC48.000 - Heat Shrink Size in AWG

(AWG 24) (For inch size use inch (3/8")

HS1.3FEP24-0CC48.000 - Black

HS1.3FEP24-0CC48.000 - Package Quantity in feet (48")

## **Colors**

- ○ Natural, Translucent
- Colors available as custom run, see color code table

When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC

ie HS1.3FEP24-2TC

ie HS1.3FEP24-0CC48.000

		Colo
0	N	Natural
•	0	Black
•	1	Brown
•	2	Red
•	3	Orange
•	4	Yellow

olo	or C	ode		
		•	5	Green
		•	6	Blue
		•	7	Violet
			8	Gray
!		0	9	White

#### **Notes**

■ Working Temperature: 400°F (204°C)

Shrink Temperature:

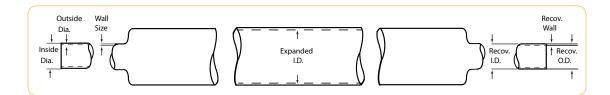
1" Dia. and below: 410°F (210°C) Over 1" Dia.: 430°F (221°C)

- \*Dielectric Strength: ≥ 2,000 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request



#### **HS1.3FEP AWG Heat Shrink Tubing (1.3:1)**

Part Number	Order Size	Mil Spec*	Minimum Expanded I.D.		Maxi Recove	mum red I.D.	Nominal Recovered Wall		
	AWG		inch	mm	inch	mm	inch	mm	
HS1.3FEP24	24	23053/11A-101	0.031	0.79	0.027	0.69	0.008 ± 0.002	$0.20 \pm 0.05$	
HS1.3FEP22	22	23053/11A-102	0.036	0.91	0.032	0.81	0.008 ± 0.002	$0.20 \pm 0.05$	
HS1.3FEP20	20	23053/11A-103	0.045	1.14	0.039	0.99	0.008 ± 0.002	$0.20 \pm 0.05$	
HS1.3FEP18	18	23053/11A-104	0.060	1.52	0.049	1.25	0.008 ± 0.002	$0.20 \pm 0.05$	
HS1.3FEP16	16	23053/11A-105	0.075	1.90	0.061	1.55	0.009 ± 0.002	$0.23 \pm 0.05$	
HS1.3FEP14	14	23053/11A-106	0.092	2.34	0.072	1.83	0.009 ± 0.002	$0.23 \pm 0.05$	
HS1.3FEP12	12	23053/11A-107	0.115	2.92	0.089	2.26	0.009 ± 0.002	$0.23 \pm 0.05$	
HS1.3FEP10	10	23053/11A-108	0.141	3.58	0.114	2.90	$0.010 \pm 0.003$	$0.25 \pm 0.08$	
HS1.3FEP09	9	23053/11A-109	0.158	4.01	0.124	3.15	0.010 ± 0.003	$0.25 \pm 0.08$	
HS1.3FEP08	8	23053/11A-110	0.180	4.57	0.143	3.63	0.010 ± 0.003	$0.25 \pm 0.08$	
HS1.3FEP07	7	23053/11A-111	0.197	5.00	0.158	4.01	0.011 ± 0.004	0.28 ± 0.10	
HS1.3FEP06	6	23053/11A-112	0.225	5.72	0.180	4.57	0.011 ± 0.004	0.28 ± 0.10	
HS1.3FEP05	5	23053/11A-113	0.248	6.30	0.198	5.03	0.011 ± 0.004	0.28 ± 0.10	
HS1.3FEP04	4	23053/11A-114	0.290	7.37	0.226	5.74	0.011 ± 0.004	0.28 ± 0.10	
HS1.3FEP03	3	23053/11A-115	0.310	7.87	0.249	6.32	0.011 ± 0.003	$0.28 \pm 0.08$	
HS1.3FEP02	2	23053/11A-116	0.365	9.27	0.280	7.11	0.012 ± 0.004	0.31 ± 0.10	
HS1.3FEP01	1	23053/11A-117	0.400	10.2	0.311	7.90	0.012 ± 0.004	0.31 ± 0.10	
HS1.3FEP00	0	23053/11A-118	0.440	11.2	0.349	8.86	0.012 ± 0.004	0.31 ± 0.10	

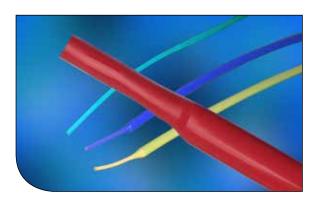


#### **HS1.3FEP Fractional Heat Shrink Tubing (1.3:1)**

Part Number	Order Size	Mil Spec*		mum ded I.D.	Maximum Recovered I.D.		Nom Recover	
	inch		inch	mm	inch	mm	inch	mm
HS1.3FEP3/8	3/8	23053/11A-119	0.500	12.7	0.383	9.73	0.015 ± 0.004	$0.38 \pm 0.10$
HS1.3FEP7/16	7/16	23053/11A-120	0.580	14.7	0.448	11.4	0.020 ± 0.004	0.51 ± 0.10
HS1.3FEP1/2	1/2	23053/11A-121	0.666	16.9	0.510	13.0	0.020 ± 0.004	0.51 ± 0.10
HS1.3FEP5/8	5/8	23053/11A-122	0.830	21.1	0.637	16.2	0.025 ± 0.004	$0.64 \pm 0.10$
HS1.3FEP3/4	3/4	23053/11A-123	1.000	25.4	0.764	19.4	$0.030 \pm 0.004$	$0.76 \pm 0.10$
HS1.3FEP7/8	7/8	23053/11A-124	1.170	29.7	0.891	22.6	0.035 ± 0.004	$0.89 \pm 0.10$
HS1.3FEP1.00	1	23053/11A-126	1.330	33.8	1.020	25.9	0.035 ± 0.004	$0.89 \pm 0.10$
HS1.3FEP1.13	1-1/8	23053/11A-133	1.500	38.1	1.145	29.1	0.035 ± 0.004	$0.89 \pm 0.10$
HS1.3FEP1.25	1-1/4	23053/11A-134	1.666	42.3	1.270	32.3	0.035 ± 0.004	$0.89 \pm 0.10$
HS1.3FEP1.38	1-3/8	23053/11A-135	1.833	46.6	1.390	35.3	0.035 ± 0.004	$0.89 \pm 0.10$
HS1.3FEP1.50	1-1/2	23053/11A-136	2.000	50.8	1.520	38.6	0.035 ± 0.004	$0.89 \pm 0.10$

# FEP Heat Shrinkable Tubing

Series 1.67:1 HS1.6FEP



# **Applications/Markets**







- Protective Cover
- UV Light Covering
- Product Testing
- Rollers

#### **Features**

- Easier to shrink than PTFE
- Chemically inert
- Low coefficient of friction
- Superior dielectric strength
- Good heat resistance
- Self extinguishing
- Non-wetting

#### **Certifications**

- AMS-DTL-23053/11A, Class 2
- ASTM 2902 Type II
- ASTM D3296-03
- VW-1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

#### **Order Information**

Example: HS1.6FEP3/32-NC48.000

HS1.6FEP3/32-NC48.000 - Heat Shrink

HS1.6FEP3/32-NC48.000 - Shrink Ratio (1.67:1)

HS1.6FEP3/32-NC48.000 - FEP

HS1.6FEP3/32-NC48.000 - Heat Shrink Size in inches (3/32")

HS1.6FEP3/32-NC48.000 - Natural

HS1.6FEP3/32-NC48.000 - Cut Tubing

HS1.6FEP3/32-NC48.000 - Package Quantity in feet (48")

#### Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

When ordering coiled tubing in colors, the color code is always followed by TC; when ordering cut lengths, the color code is followed by CC

ie HS1.6FEP3/32-2TC

ie HS1.6FEP3/32-0CC48.000

M-1	
Notes	

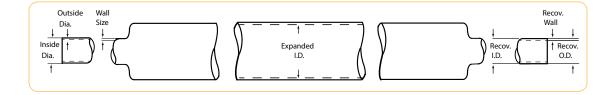
- Working Temperature: 400°F (204°C)
- Shrink Temperature: 1" Dia. and below: 410°F (210°C) Over 1" Dia.: 430°F (221°C)
- \*Dielectric Strength: ≥ 2,000 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon request

	Color Code										
0	N	Natural		•	5	Green					
•	0	Black		•	6	Blue					
•	1	Brown		•	7	Violet					
•	2	Red			8	Gray					
•	3	Orange		0	9	White					
•	4	Yellow									



**HS1.6FEP Fractional Heat Shrink Tubing (1.67:1)** 

Part Number	Order Size	Mil Spec*	Minimum Expanded I.D.			mum red I.D.	Nominal Recovered Wall		
	inch		inch	mm	inch	mm	inch	mm	
HS1.6FEP3/32	3/32	23053/11A-201	0.093	2.36	0.056	1.42	0.008 ± 0.003	$0.20 \pm 0.08$	
HS1.6FEP1/8	1/8	23053/11A-202	0.125	3.18	0.075	1.90	0.010 ± 0.003	$0.25 \pm 0.08$	
HS1.6FEP3/16	3/16	23053/11A-203	0.188	4.78	0.115	2.92	0.010 ± 0.003	0.25 ± 0.08	
HS1.6FEP1/4	1/4	23053/11A-204	0.250	6.35	0.150	3.81	0.010 ± 0.003	0.25 ± 0.08	
HS1.6FEP3/8	3/8	23053/11A-205	0.375	9.52	0.225	5.72	0.012 ± 0.003	0.31 ± 0.08	
HS1.6FEP1/2	1/2	23053/11A-206	0.500	12.7	0.300	7.62	0.015 ± 0.004	0.38 ± 0.10	
HS1.6FEP3/4	3/4	23053/11A-207	0.750	19.1	0.450	11.4	0.020 ± 0.004	0.51 ± 0.10	
HS1.6FEP1.00	1	23053/11A-208	1.000	25.4	0.600	15.2	0.025 ± 0.005	0.64 ± 0.13	
HS1.6FEP1.50	1-1/2	23053/11A-209	1.500	38.1	0.900	22.9	0.030 ± 0.005	0.76 ± 0.13	
HS1.6FEP2.00	2	23053/11A-210	2.000	50.8	1.200	30.5	$0.030 \pm 0.005$	$0.76 \pm 0.13$	



# FEP Heat Shrinkable Roll Cover

Series 1.25:1 HS1.25FEP



#### **Features**

- Extends roller life
- · Eliiminates roller build up and picking
- Low coefficient of friction
- Flexible
- Good heat resistance

#### Certifications

- ASTM D2902 Type II
- VW-1, UL-83 (natural)

# **Applications/Markets**



- Protective Cover
- Rollers

#### **Order Information**

#### Example: HS1.25FEP3.50-NC48.000

HS1.25FEP3.50-NC48.000 - Heat Shrink

HS1.25FEP3.50-NC48.000 - Shrink Ratio (1.25:1)

HS1.25FEP3.50-NC48.000 - FEP

HS1.25FEP3.50-NC48.000 - Heat Shrink Expanded

Size inches (3 1/2 in)

HS1.25FEP3.50-NC48.000 - Natural

HS1.25FEP3.50-NC48.000 - Cut Tubing

HS1.25FEP3.50-NC48.000 - Package Quantity in feet (48")

#### **Notes**

- Working Temperature: 400°F (204°C)
- Shrink Temperature: 347°F (175°Ĉ) for 10 minutes - For high temperatures 500°F (260°C), PFA roll covers are available
- Dielectric Strength: ≥ 2,000 V/M, per ASTM D 149 short term test of 10 MIL thickness (Volts/MIL)
- Roll Cover is available in stock packaging of 4-ft. straight lengths
- Custom packaging, sizes, lengths and colors are quoted upon request
- For adhesion purposes, roll covers must be etched; Etching is available on the inside diameter, outside diameter or both
- Minimum quantities may apply

#### Colors

■ ○ Natural, Translucent

#### HS1.25.1 FEP Roll Cover

Part Number	Order Size		mum nded D.	Maxi Reco	vered	Nominal Recovered Wall			
	inch	inch	mm	inch	mm	inch	mm		
HS1.25FEP1/2	1/2	0.550	14.0	0.440	11.2	$0.020 \pm 0.004$	0.508 <u>+</u> 0.10		
HS1.25FEP5/8	5/8	0.700	17.8	0.540	13.7	$0.020 \pm 0.004$	0.508 ±0.10		
HS1.25FEP3/4	3/4	0.800	20.3	0.640	16.3	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP7/8	7/8	0.950	24.1	0.760	19.3	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP1.00	1	1.100	27.9	0.880	22.4	0.020 ± 0.004	0.508 <u>+</u> 0.10		
HS1.25FEP1.25	1 1/4	1.300	33.0	1.000	25.4	0.020 ± 0.004	0.508 <u>+</u> 0.10		
HS1.25FEP1.50	1-1/2	1.700	43.2	1.300	33.0	0.020 ± 0.004	0.508 <u>+</u> 0.10		
HS1.25FEP2.00	2	2.100	53.3	1.700	43.2	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP2.25	2-1/4	2.260	59.7	2.000	50.8	$0.020 \pm 0.004$	0.508 ±0.10		
HS1.25FEP2.50	2-1/2	2.600	66.0	2.100	53.3	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP3.00	3	3.100	78.7	2.600	66.0	0.020 ± 0.004	0.508 <u>+</u> 0.10		
HS1.25FEP3.50	3-1/2	3.500	88.9	3.100	78.7	$0.020 \pm 0.004$	0.508 <u>+</u> 0.10		
HS1.25FEP4.00	4	4.300	109.2	3.500	88.9	0.020 ± 0.004	0.508 <u>+</u> 0.10		
HS1.25FEP5.00	5	5.200	132.1	4.300	109.3	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP6.00	6	6.200	157.5	5.200	132.1	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP7.00	7	7.200	182.9	6.200	157.5	0.020 ± 0.004	0.508 ±0.10		
HS1.25FEP8.00	8	8.300	210.8	7.200	182.9	$0.020 \pm 0.004$	0.508 <u>+</u> 0.10		



# FEP/PTFE Heat Shrinkable Double Shrink

## Series TSSS and TSSL



#### **Features**

- Double Shrink encapsulates your parts as the FEP melts during the PTFE shrinking process
- Protects cables, tubes and other objects from moisture and dirt
- Self extinguishing

### **Certifications**

VW-1, UL-83 (natural)

# **Applications/Markets**





- Encapsulates fittings

#### **FEP/PTFE Double Shrink Tubing**

<u> </u>											
Part Number		Minimum Expanded I.D.		mum red I.D.	Nominal Recovered Wall						
	inch	mm	inch	mm	inch	mm					
Standard Wall											
TSSS036	0.036	0.91	0.00	0.00	0.023	0.584					
TSSS060	0.060	1.52	0.00	0.00	0.028	0.711					
TSSS130	0.130	3.30	0.00	0.00	0.032	0.813					
TSSS160	0.160	4.06	0.00	0.00	0.032	0.813					
TSSS190	0.190	4.83	0.061	1.55	0.035	0.889					
TSSS250	0.250	6.35	0.125	3.18	0.035	0.889					
TSSS350	0.350	8.89	0.190	4.83	0.035	0.889					
TSSS450	0.450	11.4	0.312	7.92	0.055	1.400					
TSSS700	0.700	17.8	0.440	11.2	0.055	1.400					
TSSS950	0.950	24.1	0.680	17.3	0.065	1.650					

Light Wall						
TSSL065	0.065	1.65	0.00	0.00	0.015	0.381
TSSL115	0.115	2.92	0.045	1.14	0.015	0.381
TSSL130	0.130	3.30	0.060	1.52	0.015	0.381
TSSL180	0.180	4.57	0.065	1.65	0.015	0.381
TSSL190	0.190	4.83	0.070	1.78	0.015	0.381
TSSL240	0.240	6.10	0.150	3.81	0.020	0.508
TSSL350	0.350	8.89	0.210	5.33	0.025	0.635
TSSL480	0.480	12.2	0.315	8.00	0.032	0.813
TSSL700	0.700	17.8	0.500	12.7	0.040	1.020
TSSL1000	1	25.4	0.700	17.8	0.045	1.140

#### **Order Information**

Example: TSSL036-NC48.000

TSSL036-NC48.000 - Double Shrink

TSSL036-NC48.000 - Light Wall

TSSL036-NC48.000 - Size in inches (0.036")

TSSL036-NC48.000 - Natural

TSSL036-NC48.000 - Cut Tubing

TSSL036-NC48.000 - Package Quantity

in feet (48")

#### Notes

- Working Temperature: 450°F (231°C)
- Shrink Temperature: 680°F (360°C)
- Longitudinal Change: +/- 10%
- Heat Shrink tubing is available in stock packaging of 4-ft. straight lengths
- Custom packaging, sizes, lengths and colors are quoted upon request
- Minimum quantities may apply

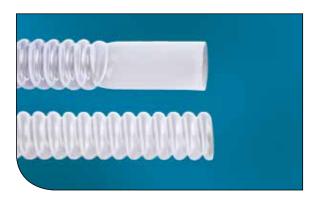
#### Colors

■ ○ Natural, Translucent



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# FEP Convoluted Tubing Series: CV03 and Convo-Flon™



#### **Features**

- Cuffs are sized on the I.D.
- Very flexible
- Long continuous lengths
- Translucent
- Chemically inert
- Good flexlife

# **Certifications/Compliance**

- ASTM D3296-03
- VW-1, UL-83 (natural)

# **Applications/Markets**











- Fluid Transport Vascular Graft
- Laboratory
- Robotics





#### **Order Information**

Example: CV03-1-1/2-NT

CV03-1-1/2-NT - Convoluted Tubing

CV03-1-1/2-NT - FEP

CV03-1-1/2-NT - Tube Size in inches (1-1/2")

CV03-1-1/2-NT- Natural

#### **Notes**

■ Working Temperature: -100°F to 400°F (-75°C to 204°C)

#### Colors

■ ○ Natural, Translucent



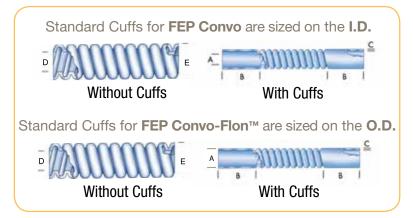
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#### **FEP Convoluted**

(Standard tubing is natural)

Part Number	Order Size	Standard Cuff I.D. "A"		Standard Cuff Length "B"		Wall Thickness "C"		Min. Inside Diameter "D"		Max. Inside Diameter "D"		Max. Outside Diameter "E"		**Min. Bend Radius	
	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
CV03-1/4-NT	1/4	1/4	6.35	3/4	19.1	0.020	0.508	0.251	6.38	0.265	6.73	0.405	10.3	0.365	9
CV03-5/16-NT	5/16	5/16	7.94	1	25.4	0.023	0.584	0.273	6.93	0.281	7.14	0.424	10.8	0.500	13
CV03-3/8-NT	3/8	3/8	9.53	1	25.4	0.023	0.584	0.364	9.25	0.375	9.53	0.530	13.5	0.875	22
CV03-1/2-NT	1/2	1/2	12.7	1	25.4	0.025	0.635	0.485	12.3	0.500	12.7	0.660	16.8	0.625	16
CV03-5/8-NT	5/8	5/8	15.9	1-1/4	31.8	0.025	0.635	0.609	15.5	0.625	15.9	0.780	19.8	1.500	38
CV03-3/4-NT	3/4	3/4	19.1	1-1/2	38.1	0.025	0.635	0.730	18.5	0.750	19.1	0.975	24.8	3.500	89
CV03-1.00-NT	1	1	25.4	2	50.8	0.030	0.762	0.975	24.8	1.000	25.4	1.260	32.0	2.250	57
CV03-1.25-NT	1-1/4	1-1/4	31.8	2-1/2	63.5	0.040	1.02	1.210	30.7	1.250	31.8	1.540	39.1	2.500	64
CV03-1.50-NT	1-1/2	1-1/2	38.1	2-1/2	63.5	0.045	1.14	1.490	37.8	1.530	38.9	1.940	49.2	3.000	76
CV03-2.00-NT	2	2	50.8	2-1/2	63.5	0.045	1.14	1.990	50.5	2.020	51.3	2.370	60.2	4.250	108
CV03-2.50-NT	2-1/2	2-1/2	63.5	3	73.2	0.065	1.65	2.440	61.9	2.500	63.5	3.000	76.2	6.500	165
CV03-3.00-NT	3	3	76.2	3	73.2	0.065	1.65	2.92	74.2	3.02	76.7	3.74	95.0	7.50	191

<sup>\*\*</sup> Minimum 36" length.



#### **FEP Convo-Flon™ Convoluted**

(Standard tubing is natural)

Part Number	Order Size	Standard Cuff O.D. "A"		Standard Cuff Length "E"		Wall Thickness "C"		Min. Inside Diameter "B"		Max. Inside Diameter "B"		Max. Outside Diameter "A"		**Min. Bend Radius	
	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
Contact	1/4 x 3/8	1/4	6.35	3/4	19.1	0.020	0.508	0.251	6.38	0.265	6.73	0.375	9.53	0.625	16
	3/8 x 1/2	5/16	7.94	1	25.4	0.023	0.584	0.364	9.25	0.375	9.53	0.500	12.7	0.875	22
	1/2 x 5/8	3/8	9.53	1	25.4	0.025	0.635	0.480	12.2	0.500	12.7	0.625	15.9	1.250	32
Customer	5/8 x 3/4	1	25.4	2	50.8	0.025	0.635	0.609	15.5	0.625	15.9	0.750	19.1	1.500	38
Service	3/4 x 7/8	1-1/4	31.8	2-1/2	63.5	0.025	0.635	0.730	18.5	0.750	19.1	0.875	22.2	1.750	44
	.800 x 1	1-1/2	38.1	2-1/2	63.5	0.030	0.762	0.800	20.3	0.820	2.80	1.000	25.4	2.250	57
	1-1/4 1-1/2	Conta	ct Cust	omer S	ervice	for actu	ual dim	ensions	S.						

<sup>\*\*</sup> Minimum 36" length.



# **FEP Convoluted**

# Series SAE AS81914/3 and SAE AS81914/4



# **Applications/Markets**





- Fluid Handling
- Harnesses
- Lab Equipment
- Robotics

#### **Features**

- Longer lengths than PTFE
- Excellent clarity
- Chemically inert
- Low coefficient of friction
- Superior dielectric strength
- Good heat resistance
- Self extinguishing
- Non-wetting

#### Certifications

- SAE AS81914/3
- SAE AS81914/4
- ASTM D3296-03
- FDA Compliant
- USP Class VI Compliant
- VW-1, UL-83 (natural)

#### Order Information

Example: 81914/3-1001-NT

81914/3-1001-NT - SAE AS81914 Convoluted

81914/3-1001-NT - FEP

81914/3-1001-NT - Helical Convolutions

81914/3-1001-NT - Size (01=0.187")

81914/3-1001-NT - Color (N=Natural)

81914/3-1001-NT - "T" is bulk (for cut tubing remove "T", add length, ie. 81914/3-1001-N1200 = 187" Convo, natural, cut 12" long)

#### **Notes**

- Working Temperature: 392°F (200°C)
- Tubing is provided in natural without cuffs direct from inventory
- Stock packaging is random coils
- Also availabe in close convolution 81914/4
- Minimum quantities may apply
- Custom packaging, sizes, lengths, cuffs and colors are quoted upon request

#### **Colors**

- ○ Natural, Translucent
- Colors available as custom run, see color code table

When ordering convoluted tubing in colors, the "N" designation for natural should be replaced by the correct color designator;

ie 81914/3-1001-0T (black bulk tubing) ie 81914/3-1001-01200 (black tubing - 12 inches long)

	Colo											
0	N	Natural										
•	0	Black										
•	1	Brown										
•	2	Red										
•	3	Orange										
•	4	Yellow										

I	Natural		•	5	Gree
)	Black		•	6	Blue
	Brown		•	7	Viole
2	Red			8	Gray
3	Orange		0	9	White
	V/ II	1			

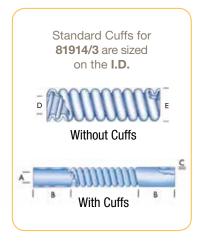


### FEP Convoluted Tubing (SAE AS81914/3)

(Standard tubing is natural)

Part Number	MIL Spec	Maximum Inside Diameter		Minimum Inside Diameter		Maximum Outside Diameter		Maximum Wall Thickness		Minimum Bend Radius		Pitch	Weight	
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	±1	lb./100 ft.	kg./100 mtr.
81914/3-1001-NT	-01	0.187	4.75	0.181	4.60	0.320	8.13	0.018	0.457	1/2	13	8	1.5	2.23
81914/3-1002-NT	-02	0.281	7.14	0.273	6.93	0.414	10.5	0.018	0.457	3/4	19	8	1.7	2.53
81914/3-1003-NT	-03	0.312	7.93	0.306	7.77	0.450	11.4	0.018	0.457	3/4	19	8	1.9	2.83
81914/3-1004-NT	-04	0.375	9.53	0.364	9.25	0.510	13.0	0.018	0.457	7/8	22	8	2.2	3.27
81914/3-1005-NT	-05	0.437	11.1	0.427	10.9	0.571	14.5	0.018	0.457	7/8	22	8	3.1	4.61
81914/3-1006-NT	-06	0.500	12.7	0.485	12.3	0.650	16.5	0.023	0.584	1-1/4	32	7	4.0	5.95
81914/3-1007-NT	-07	0.625	15.9	0.608	15.4	0.770	19.6	0.023	0.584	1-1/2	38	7	4.8	7.14
81914/3-1008-NT	-08	0.750	19.1	0.730	18.5	0.930	23.6	0.023	0.584	1-3/4	44	6	6.1	9.07
81914/3-1009-NT	-09	0.875	22.2	0.860	21.8	1.073	27.3	0.023	0.584	2	51	5	7.0	10.4
81914/3-1010-NT	-10	1.000	25.4	0.975	24.8	1.226	31.1	0.023	0.584	2.370	60	5	8.5	12.7
81914/3-1011-NT	-11	1.125	28.6	1.105	28.1	1.390	35.3	0.023	0.584	2.370	60	5	9.3	13.8
81914/3-1012-NT	-12	1.250	31.8	1.210	30.7	1.539	39.1	0.023	0.584	2-3/4	70	4	10.9	16.2
81914/3-1013-NT	-13	1.500	38.1	1.437	36.5	1.832	46.5	0.023	0.584	3.380	86	4	12.6	18.8
81914/3-1014-NT	-14	1.750	44.5	1.688	42.9	2.082	52.9	0.023	0.584	3.880	98	4	14.8	22.0
81914/3-1015-NT	-15	2.000	50.8	1.937	49.2	2.332	59.2	0.023	0.584	4.250	108	4	16.8	25.0

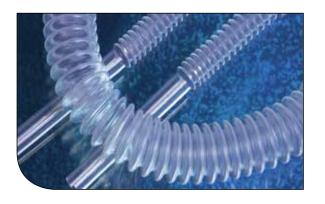
FEP convoluted tubing is provided in NATURAL without cuffs direct from the factory. Natural part numbers are designated with "NT" after the Mil Spec number (ie 81914/3-1014-NT).





# FEP/PFA Corrugated

# Extra Flexible Fluoropolymer Tubing, Series CR03



#### **Features**

- Capable of turning sharp corners without reducing the inside diameter of the tube
- Extremely flexible
- Kink resistant
- Non stick surface allows for easy cleaning
- Excellent clarity
- Chemically inert
- Available in FEP, PFA and High Purity PFA

# **Applications/Markets**











- Vacuum Applications
- Robotics
- Instrumentation
- DNA Sequencer
- Fluid Transfer
- Pharmaceutical
- Wet Bench

## **Certifications**

- FEP ASTM D3296-03
- USP Class VI Compliant
- PFA ASTM D3307-10
- VW-1, UL-83 (natural)
- FDA Compliant

#### **Order Information**

Example: CR03-3/4-NT

CR03-3/4-NT - Corrugated Tubing

CR03-3/4-NT - FEP

CR03-3/4-NT - Tube I.D. when cuffed in inches (3/4")

CR03-3/4-NT - Color (N=Natural)

CR03-3/4-NT - "T" is bulk - for cuffed tubing add length,

ie. CR03-3/4-N1200 = 1" Corr, natural, cut 12" long

#### Colors

■ ○ Natural, Translucent

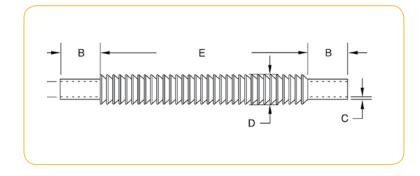
#### **Notes**

- Working Temperature: 200°F (93°C) @ 0 pressure For higher temperatures, request PFA Corrugated 300°F (148°C) @ 0 pressure
- Vacuum Service: 29.9 IN. Hg (759M Hg)
- Extension-Compression Length Ratio: Approximately 2:1
- · Tubing is provided in natural without cuffs direct from inventory or with cuffs, as requested at time of order
- Stock packaging is random coils
- Minimum quantities may apply
- · Corrugated tubing is also available in specialty configurations where corrugated and straight tubing run intermittently along the
- Custom packaging, sizes, lengths and colors are quoted upon request



# **FEP Tex-Flex® Corrugated**

Part Number	Size To Order	Maxii Cuff "#	I.D.		dard ength 3"	Wa Thick "(	iness		utside neter )"	Corrugated Length "E"	Ве	mum nd lius
		inch	mm	inch	mm	inch	mm	inch	mm	±1	inch	mm
CR03-1/4-NT	1/4	0.250	6.35	3/4	19.1	0.015	0.38	0.375	9.53		0.125	3.18
CR03-3/8-NT	3/8	0.375	9.53	1	25.4	0.020	0.51	0.625	15.9		0.187	4.76
CR03-1/2-NT	1/2	0.500	12.7	1	25.4	0.025	0.64	0.750	19.0		0.250	6.35
CR03-5/8-NT	5/8	0.625	15.9	1	25.4	0.025	0.64	0.938	23.8		0.312	7.94
CR03-3/4-NT	3/4	0.750	19.1	1-1/2	38.1	0.030	0.76	1.063	26.9		0.375	9.53
CR03-7/8-NT	7/8	0.875	22.2	1-1/2	38.1	0.030	0.76	1.250	31.8	To be specified at time of order	0.438	11.1
CR03-1.00-NT	1	1.000	24.8	2	50.8	0.035	0.89	1.438	36.5	or order	0.500	12.7
CR03-1.25-NT	1-1/4	1.250	31.8	2	50.8	0.035	0.89	1.625	41.3		0.625	15.9
CR03-1.50-NT	1-1/2	1.500	38.1	2	50.8	0.035	0.89	1.813	46.1		0.750	19.1
CR03-2.00-NT	2	2.000	50.8	2	50.8	0.040	1.02	2.625	66.7		1.000	25.4
CR03-2.50-NT	2-1/2	2.5000	63.8	2-1/2	63.5	0.070	1.78	3.360	85.3		2.500	63.5

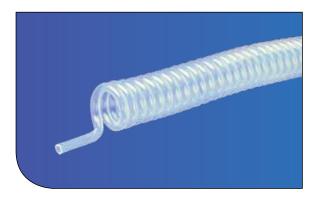




# **O** General Technical

# Retractable Coiled Tubing

Single or Dual Containment, Series 703, 704, 705



# **Features**

- Extremely flexible
- Excellent clarity
- Chemically inert
- Low coefficient of friction
- Self extinguishing
- Non-wetting
- Available in FEP, PFA and High Purity PFA

# **Applications/Markets**











- Fluid Handling
- Wet Bench
- Lab Equipment
- Gas Dispensing
- Medical

# Certifications

- FEP ASTM D3296-03
- PFA ASTM D3307-10
- FDA Compliant
- USP Class VI Compliant
- VW-1, UL-83 (natural)

# **Order Information**

Example: 704-0312062-xx0012

704-0312062-xx0012 - Retractable tubing

70**4**-0312062-xx0012 - **PFA** 

704-0312062-xx0012 - Tube O.D. in inches (3/16")

704-0312**062-**xx0012 - Wall (0.062")

704-0312062-xx0012 - **Custom Options** (when needed)

704-0312062-xx0012 - Length 12"

# **Fittings**

Fittings available for sizes 3/16" up to 1/2" Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550 (269) 692-6634 FAX

### FSC Product Families:

- Compression
- Compress-Align®
- TrueSeal<sup>™</sup>

### Colors

■ ○ Natural, Translucent

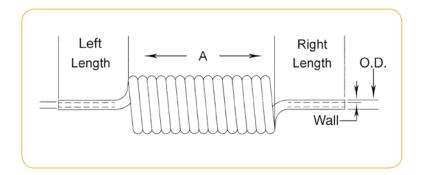
### **Notes**

- Working Temperature: 200°F (93°C) @ 0 pressure For higher temperatures, request PFA 300°F (148°C) @ 0 pressure; above these temperatures, the coils dimensions are not stable and the coils will lose their shape
- "X" denotes resin type Replace "X" with 3 for FEP, 4 for PFA and 5 for HP PFA
- "xx" denotes custom options Use when needed
- Standard left/right tail length is 6 inches
- Minimum quantities may apply
- Custom packaging, sizes, lengths and colors are quoted upon



# **Retractable Tubing**

Part Number	Size To Order		nside neter		d Length A"		nded gth
	O.D. x Wall	inch	mm	inch	mm	inch	mm
70X-0188062-xx0003	3/16" x 1/16"	0.750	19.1	3	76	12	305
70X-0188062-xx0006	3/16" x 1/16"	0.750	19.1	6	152	24	610
70X-0188062-xx0012	3/16" x 1/16"	0.750	19.1	12	305	48	1219
70X-0188062-xx0018	3/16" x 1/16"	0.750	19.1	18	457	72	1829
70X-0250062-xx0003	1/4" x 1/8"	1	25.4	3	76	12	305
70X-0250062-xx0006	1/4" x 1/8"	1	25.4	6	152	24	610
70X-0250062-xx0012	1/4" x 1/8"	1	25.4	12	305	48	1219
70X-0250062-xx0018	1/4" x 1/8"	1	25.4	18	457	72	1829
70X-0312062-xx0003	5/16" x 3/16"	1.625	41.3	3	76	12	305
70X-0312062-xx0006	5/16" x 3/16"	1.625	41.3	6	152	24	610
70X-0312062-xx0012	5/16" x 3/16"	1.625	41.3	12	305	48	1219
70X-0312062-xx0018	5/16" x 3/16"	1.625	41.3	18	457	72	1829
70X-0375062-xx0003	3/8" x 1/4"	1.625	41.3	3	76	12	305
70X-0375062-xx0006	3/8" x 1/4"	1.625	41.3	6	152	24	610
70X-0375062-xx0012	3/8" x 1/4"	1.625	41.3	12	305	48	1219
70X-0375062-xx0018	3/8" x 1/4"	1.625	41.3	18	457	72	1829
70X-0438062-xx0003	7/16" x 5/16"	3	76.2	3	76	12	305
70X-0438062-xx0006	7/16" x 5/16"	3	76.2	6	152	24	610
70X-0438062-xx0012	7/16" x 5/16"	3	76.2	12	305	48	1219
70X-0500062-xx0003	1/2" x 3/8"	3	76.2	3	76	12	305
70X-0500062-xx0006	1/2" x 3/8"	3	76.2	6	152	24	610
70X-0500062-xx0012	1/2" x 3/8"	3	76.2	12	305	48	1219







# **PFA Tubing**

Series Fractional & Metric: 104, 204



# **Features**

- Virgin Perfluoroalkoxy
- Translucent
- High purity resins available
- Low permeability
- Exceptional heat resistance
- Chemically inert
- Long continuous lengths
- Low coefficient of friction
- Self extinguishing
- Non-wetting
- Non leaching

# **Applications/Markets**









- Air Sampling
- Gas Sampling
- Fluid Transfer
- Laboratory
- Wet Bench
- Flow Monitoring
- Steam Plant

# **Certifications/Compliance**

- ASTM D3307-10
- VW-1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

### **Order Information**

Example: 104-0188062-N-100

**1**04-0188062-N-100 – **Fractional** 

1**04**-0188062-N-100 – **PFA** 

104-0188062-N-100 - Tube O.D. in inches (3/16")

104-0188**062-**N-100 - **Tube Wall Thickness** in inches **(.062")** 

104-0188062-**N**-100 – **Natural** 

104-0188062-N-100 - Package Quantity in feet (100')

# **Fittings**

Fittings available for sizes 3/32" up to 1"

Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

### FSC Product Families:

- Compression
- Compress-Align®
- TrueSeal<sup>™</sup>

### Notes

- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Working pressure calculated using a Design Factor of 4 at 73°F (23°C)
- Custom packaging and sizes are quoted upon request
- Package quantities are not continuous

### **Options**

- Smoothbore
- Convoluted
- Corrugated
- Retractable Coils
- Heat Shrink

# Colors

- ○ Natural, Translucent
- Colors available as custom run, see color code table

		Cold	or C	ode		
0	N	Natural		•	5	Green
•	0	Black		•	6	Blue
•	1	Brown		•	7	Violet
•	2	Red		•	8	Gray
•	3	Orange		0	9	White
•	4	Yellow				



104 PFA Industrial Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Non I.			Refer Wa			king sure	Bu Pres		Min. Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(			0			5	9		[lbs	
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
104-0094031	3/32	0.094	± 0.004	2.40	± 0.102	0.031	± 0.002	0.79	± 0.051	0.031	0.79	680	47	2720	188	0.250	6	28	0.006	0.009
104-0125031	1/8	0.125	± 0.004	3.18	± 0.102	0.064	± 0.004	1.63	± 0.102	0.031	0.79	500	34	2000	138	0.375	10	28	0.009	0.013
104-0156031	5/32	0.157	± 0.005	3.99	± 0.127	0.094	± 0.003	2.39	± 0.076	0.031	0.79	390	27	1560	108	0.625	16	28	0.011	0.017
104-0188031	3/16	0.188	± 0.005	4.78	± 0.127	0.125	± 0.005	3.18	± 0.127	0.031	0.79	320	22	1280	88	0.625	16	28	0.014	0.021
104-0250031	1/4	0.250	± 0.005	6.35	± 0.127	0.188	± 0.005	4.78	± 0.127	0.031	0.79	230	16	920	63	0.875	22	28	0.020	0.030
104-0312031	5/16	0.312	± 0.005	7.92	± 0.127	0.250	± 0.005	6.35	± 0.127	0.031	0.79	180	12	720	50	1.750	44	28	0.025	0.038
104-0375031	3/8	0.375	± 0.005	9.52	± 0.127	0.312	± 0.005	7.92	± 0.127	0.031	0.79	140	10	560	39	3.250	83	28	0.031	0.047
104-0438031	7/16	0.438	± 0.005	11.13	± 0.127	0.375	± 0.005	9.53	± 0.127	0.031	0.79	120	8	480	33	3.250	83	28	0.037	0.055
104-0500031	1/2	0.500	± 0.005	12.70	± 0.127	0.438	± 0.005	11.13	± 0.127	0.031	0.79	100	7	400	28	4.750	121	28	0.043	0.063
104-0563031	9/16	0.563	± 0.006	14.30	± 0.152	0.500	± 0.006	12.70	± 0.152	0.031	0.79	80	6	320	22	5.000	127	28	0.048	0.072

104 PFA Heavy Wall Fractional Size Tubing

IUTITALI	,						9													
Part Number	Order Size		Nom O.				Nom I.			Refer Wa			king sure	Bu Pres	rst sure	Min. Rac	Bend lius	Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -		0	7		*	$\mathcal{D}$		[[ba]	
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
104-0188062	3/16	0.188	± 0.005	4.78	± 0.127	0.062	± 0.005	1.57	± 0.127	0.062	1.57	680	47	2720	188	0.500	13	28	0.023	0.034
104-0250040	1/4	0.250	± 0.005	6.35	± 0.127	0.170	± 0.005	4.32	± 0.127	0.040	1.02	300	21	1200	83	0.875	22	28	0.025	0.037
104-0250047	1/4	0.250	± 0.005	6.35	± 0.127	0.156	± 0.005	3.96	± 0.127	0.047	1.19	370	26	1480	102	1.000	25	28	0.028	0.042
104-0250062	1/4	0.250	± 0.005	6.35	± 0.127	0.125	± 0.005	3.18	± 0.127	0.062	1.57	500	34	2000	138	0.500	13	28	0.034	0.051
104-0312062	5/16	0.312	± 0.005	7.92	± 0.127	0.188	± 0.005	4.78	± 0.127	0.062	1.57	390	27	1560	108	0.750	19	28	0.045	0.068
104-0375062	3/8	0.375	± 0.005	9.52	± 0.127	0.250	± 0.005	6.35	± 0.127	0.062	1.57	320	22	1280	88	1.250	32	28	0.057	0.085
104-0438062	7/16	0.438	± 0.005	11.13	± 0.127	0.312	± 0.005	7.92	± 0.127	0.062	1.57	270	19	1080	74	2.625	67	28	0.068	0.102
104-0500062	1/2	0.500	± 0.005	12.70	± 0.127	0.375	± 0.005	9.53	± 0.127	0.062	1.57	230	16	920	63	3.000	76	28	0.079	0.119
104-0750062	3/4	0.750	± 0.006	19.05	± 0.152	0.625	± 0.006	15.88	± 0.152	0.062	1.57	140	10	560	39	6.000	152	28	0.125	0.186
104-1000062	1	1.000	± 0.010	25.40	± 0.254	0.875	± 0.010	22.22	± 0.254	0.062	1.57	100	7	400	28	8.000	203	28	0.170	0.254

# 204 Metric PFA Tubing

Part Number	Order Size			ninal .D.				ninal D.			rence all	Wor Pres	king sure		ırst sure		Bend dius	Vac. Rating	We	ight
#			0	9			(	9		(	<u></u>	(	0		J	*	$\mathcal{S}$		igg	
	mm	mm	tol.	inch	tol.	mm	tol.	inch	tol.	mm	inch	bar 23°C	psi 73°F	bar 23°C	psi 73°F	mm	inch	at 73°F	kg. per m.	lb. per ft.
204-0400100	4	4	± 0.11	.157	± 0.004	2	± 0.11	.079	0.250	1	0.039	34	500	138	2000	6	0.250	28	0.020	0.014
204-0600100	6	6	± 0.11	.236	± 0.004	4	± 0.11	.157	± 0.004	1	0.039	22	320	88	1280	25	1.000	28	0.034	0.023
204-0800100	8	8	± 0.11	.315	± 0.004	6	± 0.11	.236	± 0.004	1	0.039	16	230	63	920	51	2.000	28	0.047	0.032
204-1000100	10	10	± 0.11	.393	± 0.004	8	± 0.11	.315	± 0.004	1	0.039	12	180	50	720	70	2.750	28	0.061	0.041
204-1200100	12	12	± 0.15	.472	± 0.006	10	± 0.15	.393	± 0.006	1	0.039	10	140	39	560	89	3.500	28	0.074	0.050

# High Purity PFA Tubing Series Fractional & Metric: 105, 205



# **Features**

- Withstands corrosive surfactants for longer periods of time
- Highest molecular weight
- Lowest level of extractables
- Low permeability
- Exceptional heat resistance
- · Chemically inert
- Long continuous lengths
- Low coefficient of friction
- Self extinguishing
- Non leaching

# **Certifications/Compliance**

- ASTM D3307-10
- VW-1, UL-83 (natural)
- FDA Compliant
- USP Class VI Compliant

# **Applications/Markets**











- Gas Transfer Food
  - Wet Bench
  - DI Water Dispensers
  - DI Recirculators

Flow Monitoring

- Heat Exchangers
- Pure Chemical Dispensers
- High Purity Applications

# Order Information

Example: 105-0375031-N-100

105-0375031-N-100 - Fractional

105-0375031-N-100 – High Purity PFA

105-0375031-N-100 - Tube O.D. in millimeters (3/8")

105-0375031-N-100 - Tube Wall Thickness in millimeters (.031")

105-0375031-N-100 - Natural

105-0375031-N-100 - Package Quantity in feet (100')

### **Fittings**

Fittings available for sizes 4mm up to 12mm

Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

### **FSC Product Families:**

- Compression
- Compress-Align®
- TrueSeal<sup>™</sup>

### Notes

- Working Temperature: -100°F to 500°F (-75°C to 260°C)
- Working pressure calculated using a Design Factor of 4 at
- Custom packaging and sizes are quoted upon request
- Package quantities are not continuous

### **Options**

- Smoothbore
- Convoluted
- Corrugated
- Retractable Coils

### Colors

O Natural, Translucent



105 High Purity PFA Industrial Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.I			Refer Wa		Wor Pres	king sure	Bu Pres		Min. Rad	Bend lius	Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -		0			\$	9			
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
105-0125031	1/8	0.125	± 0.004	3.18	± 0.102	0.064	± 0.004	1.63	± 0.102	0.031	0.79	500	34	2000	138	0.500	13	28	0.009	0.013
105-0188031	3/16	0.188	± 0.005	4.78	± 0.127	0.125	± 0.005	3.18	± 0.127	0.031	0.79	320	22	1280	88	0.750	19	28	0.014	0.021
105-0250031	1/4	0.250	± 0.005	6.35	± 0.127	0.188	± 0.005	4.78	± 0.127	0.031	0.79	230	16	920	63	1.000	25	28	0.020	0.030
105-0375031	3/8	0.375	± 0.005	9.52	± 0.127	0.312	± 0.005	7.92	± 0.127	0.031	0.79	140	10	560	39	3.500	89	28	0.031	0.047

105 High Purity PFA Heavy Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.			Refer Wa			king sure	Bu Pres		Min. I Rad		Vac. Rating	Wei	ight
#							(	9			<b>)</b> -		0			\$	0			ligg]
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
105-0250040	1/4	0.250	± 0.005	6.35	± 0.127	0.170	± 0.005	4.32	± 0.127	0.040	1.02	300	21	1200	83	0.938	24	28	0.025	0.037
105-0250047	1/4	0.250	± 0.005	6.35	± 0.127	0.156	± 0.005	3.96	± 0.127	0.047	1.19	370	26	1480	102	0.500	13	28	0.028	0.042
105-0250062	1/4	0.250	± 0.005	6.35	± 0.127	0.125	± 0.005	3.18	± 0.127	0.062	1.57	500	34	2000	138	0.625	16	28	0.034	0.051
105-0375062	3/8	0.375	± 0.005	9.52	± 0.127	0.250	± 0.005	6.35	± 0.127	0.062	1.57	320	22	1280	88	1.125	29	28	0.057	0.085
105-0500062	1/2	0.500	± 0.005	12.70	± 0.127	0.375	± 0.005	9.53	± 0.127	0.062	1.57	230	16	920	63	2.250	57	28	0.079	0.119
105-0750062	3/4	0.750	± 0.006	19.05	± 0.152	0.625	± 0.006	15.88	± 0.152	0.062	1.57	140	10	560	39	4.250	108	28	0.125	0.186
105-1000062	1	1.000	± 0.010	25.40	± 0.254	0.875	± 0.010	22.22	± 0.254	0.062	1.57	100	7	400	28	8.000	203	*	0.170	0.254

## 205 Metric High PFA Tubing

Part Number	Order Size			ninal .D.				ninal D.			rence 'all		king sure		rst sure	Min. Rad	Bend lius	Vac. Rating	We	ight
#			(	9			(	9		(	<u></u>	(	0			¥ 2	$\mathcal{D}$		ing)	S C
	mm	mm	tol.	inch	tol.	mm	tol.	inch	tol.	mm	inch	bar 23°C	psi 73°F	bar 23°C	psi 73°F	mm	inch	at 73°F	kg. per m.	lb. per ft.
205-0300100	3	3	± 0.11	0.118	± 0.004	1	± 0.11	0.039	± 0.004	1	0.039	47	680	188	2720	13	0.500	28	0.014	0.009
205-0400100	4	4	± 0.11	0.157	± 0.004	2	± 0.11	0.079	± 0.004	1	0.039	34	500	138	2000	13	0.500	28	0.020	0.020
205-0600100	6	6	± 0.11	0.236	± 0.004	4	± 0.11	0.157	± 0.004	1	0.039	22	320	88	1280	22	0.875	28	0.034	0.023
205-0800100	8	8	± 0.11	0.315	± 0.004	6	± 0.11	0.236	± 0.004	1	0.039	16	230	63	920	35	1.375	28	0.047	0.032
205-1000100	10	10	± 0.11	0.393	± 0.004	8	± 0.11	0.315	± 0.004	1	0.039	12	180	50	720	51	2.000	28	0.061	0.041
205-1200100	12	12	± 0.15	0.472	± 0.006	10	± 0.15	0.394	± 0.006	1	0.039	10	140	39	560	89	3.500	28	0.074	0.050

B-101

# **PVDF Tubing** Polyvinylidene Fluoride

Series PVDF Flex™: 110, Series PVDF Super-Flex™: 111



# **Features**

- Low extractable levels
- High mechanical strength
- Good chemical resistance
- · High abrasion resistance
- Exceptional thermal stability
- Low permeability
- Self extinguishing Weather resistant

Green

Blue

Violet

Gray White

# **Certifications**

- ASTM D3222
- FDA Compliant

# **Applications/Markets**





- Applications with long cycle life
  - Gas
  - Food
- Thermal cycling
- Outdoor/extreme conditions
- Water systems

- Ground water monitoring
- Fluid and handling

# **Order Information**

Example: 110-0312062-NT-100

110-0312062-NT-100 - PVDF Flex

110-0312062-NT-100 - Tube O.D. in inches (5/16")

110-0312062-NT-100 - Tube Wall Thickness in inches (.062")

110-0312062-NT-100 - Natural

110-0312062-NT-100 - Bulk Tubing

110-0312062-NT-100 - Package Quantity in feet (100')

### **Notes**

- Working Temperature: -80°F to 265°F (-62°C to 130°C)
- Working pressure calculated using a Design Factor of 4 at 73°F (23°C)
- Custom packaging and sizes are quoted upon request

# **Fittings**

Fittings available for sizes 1/8" up to 1"

Parker Fittings available from: Fluid System Connectors Division Otsego, MI

(269) 694-2550

(269) 692-6634 FAX

### **FSC Product Families:**

- Compression
- Compress-Align®
- TrueSeal<sup>™</sup>

# Colors

Off-white

		Colo	or C	ode
0	N	Natural		•
•	0	Black		•
•	1	Brown		•
•	2	Red		•
•	3	Orange		0
•	4	Yellow		

		00.0	,, ,	ouo	
0	N	Natural		•	5
•	0	Black		•	6
•	1	Brown		•	7
•	2	Red		•	8
•	3	Orange		0	9
•	4	Yellow			



## 110 PVDF Flex™ Industrial Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.			Refer Wa		Wor Pres	king sure	Bu Pres		Min. E Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -		2			5	7			[kg]
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
110-0125031	1/8	0.125	± 0.005	3.18	± 0.13	0.062	± 0.005	1.57	± 0.13	0.031	0.79	267	18.4	1068	73.6	0.500	13	28	0.007	0.011
110-0188031	3/16	0.188	± 0.005	4.78	± 0.13	0.125	± 0.005	3.18	± 0.13	0.031	0.79	180	12.4	720	49.6	0.750	19	28	0.012	0.018
110-0250031	1/4	0.250	± 0.005	6.35	± 0.13	0.188	± 0.005	4.78	± 0.13	0.031	0.79	170	11.7	680	46.8	1.000	25	28	0.016	0.025
110-0375031	3/8	0.375	± 0.005	9.52	± 0.13	0.312	± 0.005	7.92	± 0.13	0.031	0.79	93	6.4	372	25.6	2.500	64	28	0.026	0.039
110-0500031	1/2	0.500	± 0.005	12.70	± 0.13	0.438	± 0.005	11.13	± 0.13	0.031	0.79	83	5.7	332	22.9	4.000	102	28	0.035	0.053

110 PVDF Flex™ Heavy Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.			Refer Wa			king sure	Bu Pres		Min. E Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -		9			5	7		[ba]	
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
110-0250047	1/4	0.250	± 0.005	6.35	± 0.13	0.156	± 0.005	3.96	± 0.13	.047	1.19	208	14.3	832	57.4	0.750	19	28	0.023	0.034
110-0250062	1/4	0.250	± 0.005	6.35	± 0.13	0.125	± 0.005	3.18	± 0.13	.062	1.57	330	22.8	1320	91.0	0.500	13	28	0.028	0.042
110-0312062	5/16	0.312	± 0.005	7.92	± 0.13	0.188	± 0.005	4.78	± 0.13	.062	1.57	219	15.1	876	60.4	0.875	22	28	0.038	0.056
110-0375062	3/8	0.375	± 0.005	9.52	± 0.13	0.250	± 0.005	6.35	± 0.13	.062	1.57	224	15.4	896	61.8	1.000	25	28	0.047	0.070
110-0500062	1/2	0.500	± 0.005	12.70	± 0.13	0.370	± 0.005	9.40	± 0.13	.062	1.57	169	11.7	676	46.6	2.000	51	28	0.066	0.098
110-0625062	5/8	0.625	± 0.005	15.88	± 0.13	0.500	± 0.005	12.70	± 0.13	.062	1.57	136	9.3	544	37.5	3.000	76	28	0.085	0.126
110-0750062	3/4	0.750	± 0.006	19.05	± 0.15	0.625	± 0.006	15.88	± 0.15	.062	1.57	114	7.9	456	31.4	6.000	152	28	0.103	0.154
110-1000062	1	1.000	± 0.010	25.40	± 0.25	0.875	± 0.008	22.22	± 0.25	.062	1.57	86	5.9	344	23.7	8.000	203	28	0.141	0.210

### 111 PVDF Super-Flex™ Industrial Wall Fractional Size Tubing

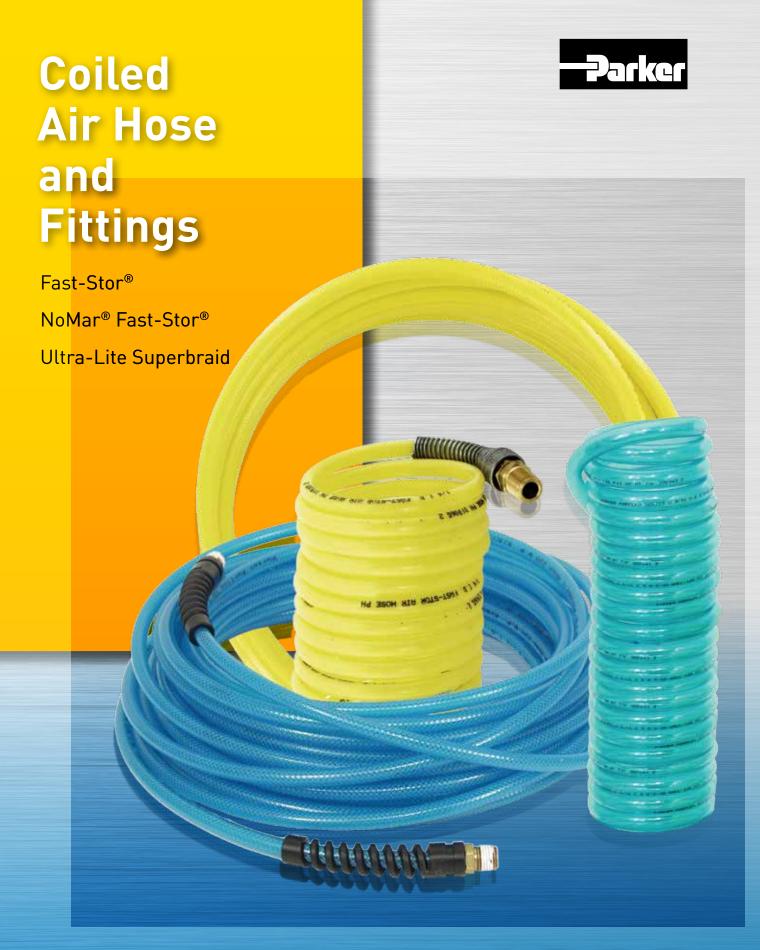
Part Number	Order Size		Nom O.				Nom I.I			Refer Wa			king sure	Bu Pres	rst sure	Min. E Rad		Vac. Rating	Wei	ight
#			0	9			(	9		(	<b>—</b>		0			5	7			jeg C
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
111-0188031	3/16	0.188	± 0.005	4.78	± 0.13	0.125	± 0.005	3.18	± 0.13	0.031	0.79	180	12.4	720	50	0.750	19	28	0.012	0.018
111-0250031	1/4	0.250	± 0.005	6.35	± 0.13	0.188	± 0.005	4.78	± 0.13	0.031	0.79	170	11.7	680	47	0.750	19	28	0.016	0.025
111-0375031	3/8	0.375	± 0.005	9.53	± 0.13	0.312	± 0.005	7.92	± 0.13	0.031	0.79	93	6.4	372	26	2.500	64	28	0.026	0.039

# 111 PVDF Super-Flex™ Heavy Wall Fractional Size Tubing

Part Number	Order Size		Nom O.				Nom I.I			Refer Wa			king sure	Bu Pres		Min. E Rad		Vac. Rating	Wei	ight
#			(	9			(	9		(	<b>)</b> -	(	0			5	7			
	inch	inch	tol.	mm	tol.	inch	tol.	mm	tol.	inch	mm	psi 73°F	bar 23°C	psi 73°F	bar 23°C	inch	mm	at 73°F	lb. per ft.	kg. per m.
111-0250062	1/4	0.250	± 0.005	6.35	± 0.13	0.125	± 0.005	3.18	± 0.13	0.062	1.57	330	22.8	1320	91	0.375	10	28	0.028	0.042
111-0375062	3/8	0.375	± 0.005	9.52	± 0.13	0.250	± 0.005	6.35	± 0.13	0.062	1.57	224	15.4	896	62	0.750	19	28	0.038	0.056
111-0500062	1/2	0.500	± 0.005	12.7	± 0.13	0.375	± 0.005	9.52	± 0.13	0.062	1.57	169	11.7	676	47	1.500	38	28	0.066	0.098

Notes	













# **Table of Contents**

# **Hose & Tubing**

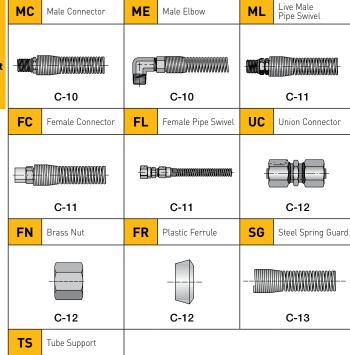
Introduction	C-4
Fast-Stor® Air Hose Fast-Stor® Air Hose Assemblies, A0 Bulk Air Hose, FS	
NoMar® Fast-Stor® Urethane Coiled Assemblies, AUFS	C-14
NoMar® Fast-Stor® High Durometer Urethane Coiled Assemblies, AHUFS	C-17
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Fittings	
Fast-Stor® Fittings	C-10 : C-12
Fast-Stor® Replacement Parts	C-12 : C-13
NoMar® Fast-Stor® Fittings	
Technical	
Assembly Instructions NoMar® Fast-Stor® Fittings	C-19
Assembly Instructions Fast-Stor® Hose	C-13
Measuring Fast-Stor® Bulk Hose	
Cita Calaction Dragadura	C 5



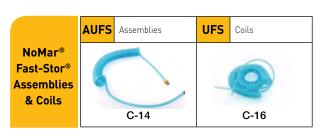
# Coiled Air Hose Visual Index

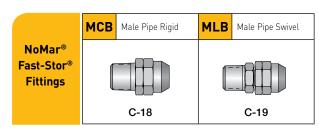




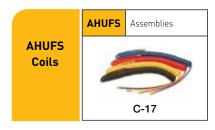












C-13

# Air Hose

Every hydraulic, pneumatic and lubrication system requires some form of tube line fabrication and fitting installation for completion. Proper fabrication and installation are essential for the overall efficiency, leak free performance, and general appearance of any system.

Start by planning ahead. After sizing the tube lines and selecting the appropriate style of fitting, consider the following in the design of your system:

- · Accessibility of joints
- Proper routing of lines
- Adequate tube line supports
- Available fabricating tools

# **Routing of Lines**

Routing of lines is probably the most difficult, yet most significant, of these system design considerations. Proper routing involves getting a connecting line from one point to another through the most logical path.

Always try to leave fitting joints as accessible as possible. Hard to reach joints are hard to assemble and tighten properly. Inaccessible joints are also more difficult and time consuming to service.



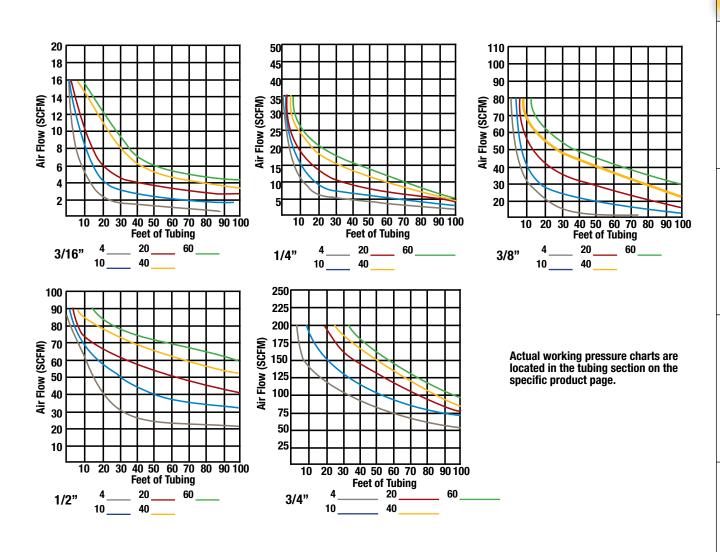


# Size Selection Procedure

Proper size selection is extremely important in choosing any air hose in order to prevent "starvation" of the air tool and to ensure maximum torque and tool speed. Starved tools don't produce!

### Steps in size selection:

- 1. Determine air flow rate and pressure required by following air-tool manufacturers recommendations.
- 2. Refer to "Air Flow Characteristics" graphs, shown below. Find air flow requirement in standard cubic feet per minute (SCFM) on vertical line to left of graph. Now follow horizontal line on same graph to determine total extended length of hose required. Follow vertical line above hose length to intersection with the horizontal air flow SCFM line.
- 3. Note pressure drop above curve nearest to intersection of SCFM and hose length lines. Pressure drop, subtracted from line pressure, equals "available pressure" at the selected SCFM flow rate and hose length.
- 4. If "available pressure" is below the tool manufacturers' recommendations, refer to chart for successively larger hose sizes until an acceptable "available pressure" is found. Choose this size Fast-Stor® Air Hose for your application.
- 5. Refer to "working pressure vs. temperature" chart (pg. B-9) to be sure your application falls within the working range of Fast-Stor® Air Hose.

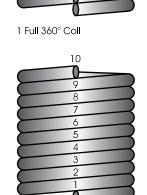


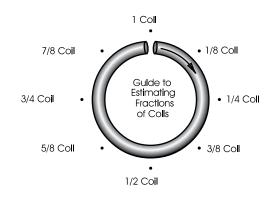
# Measuring Fast-Stor® Bulk Hose

Measuring Fast-Stor® hose is quick and easy and may be accomplished by either of two accurate methods:

# 1. Counting

То	otal Leng of Hose				of Coils Needed Net Extended Le		
			3/16 I.D. Fast-Stor®	1/4 I.D. Fast-Stor®	3/8 I.D. Fast-Stor®	1/2 I.D. Fast-Stor®	3/4 I.D. Fast-Stor®
ft.	inch	mtr.	coils	coils	coils	coils	coils
3	36	.91	5-1/8	3-1/2	2-1/4	1-5/8	7/8
3	36	.91	5-1/8	3-1/2	2-1/4	1-5/8	7/8
5	60	1.52	8-1/2	5-3/4	3-7/8	2-5/8	1-1/2
7	84	2.13	12	8-1/8	5-3/4	3-3/4	1-1/8
10	120	3.05	17-1/8	11-1/2	7-3/4	5-3/8	3
12	144	3.66	20-1/2	13-7/8	9-1/4	6-1/2	3-1/2
15	180	4.57	25-3/4	17-3/8	11-1/2	8	4-1/2
16	192	4.88	27-3/8	18-1/2	12-3/8	8-5/8	4-3/4
17	204	5.18	29-1/8	19-5/8	13-1/8	9-1/8	5
19	216	5.79	30-7/8	20-3/4	13-7/8	9-5/8	5-3/8
20	240	6.10	34-1/4	23-1/8	15-3/8	10-3/4	6
25	300	7.62	42-7/8	28-7/8	19-1/4	13-3/8	7-1/2
30	360	9.14	51-3/8	34-5/8	23-1/8	16-1/8	8-7/8
33	396	10.06	56-1/2	38-1/8	25-3/8	17-3/4	9-3/4
50	600	15.24	85-5/8	57-3/4	38-1/2	26-7/8	14-7/8





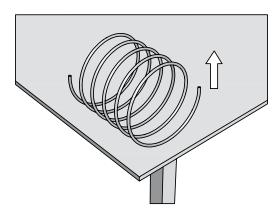


# 2. Division into Even Numbers of Lengths

Bulk retracted lengths of Fast-Stor® hose are always exactly 100 feet long when shipped from the factory. Some diameter expansion of the coils may occur in shipment due to temperature and storage conditions. This may appear to have shortened a given 100 foot retracted length slightly in relation to other 100 foot retracted lengths in the same master carton. The shorter appearance should not be mistaken for any actual shortage in extended length. A bulk retracted length may be easily divided into smaller lengths by first measuring the tightly retracted length in inches, and dividing by 4 to determine the cut-off length for 25 feet, by 3 for 33 feet, by 8 for 12-1/2 feet, etc. Pieces should be tagged with their proper length before returning to storage.

### Cutting Bulk Length Coils

To cut bulk length coils, position coils on work table extending away from you, cut end-up in 12 o'clock position.



# G General Technical

# Fast-Stor® Air Hose



# **Applications/Markets**





- Blow Guns
- Construction
- Mfg. Air Drops
- Machine Tool Lubrication
- Water Hose

# **Features**

- Manufactured from tough, abrasion-resistant nylon
- Excellent memory characteristics over a wide temperature range
- Long service life in rugged applications
- Desirable Safety Yellow color per U.S. Government OSHA directives
- Optimal retail packaging available\*

# Fast-Stor® Assemblies

Popular Stock Assemblies

Assembly Part Number	Ho I.I			tal igth	Wor Ler	king igth	Com	ninal pact gth		oil D.	Wor Pres	mum king sure /23°C	Burs	mum st at /23°C	End Fittings
#	(	0							(					[K	
	inch	mm	ft.	mtr.	ft.	mtr.	inch	mm	inch	mm	psi	MPa	psi	MPa	
A0312-MC4-ML4	3/16	5	12	3.7	9	2.7	4.8	122	2	51	225	1.55	680	4.69	1/4" NPT
A0325-MC4-ML4	3/16	5	25	7.6	18	5.5	9.6	244	2	51	225	1.55	680	4.69	1/4" NPT
A0350-MC4-ML4	3/16	5	50	15.2	38	11.6	20.2	513	2	51	225	1.55	680	4.69	1/4" NPT
A0412-MC4-ML4*	1/4	6	12	3.7	9	2.7	4.3	109	3	76	225	1.55	680	4.69	1/4" NPT
A0425-MC4-ML4*	1/4	6	25	7.6	18	5.5	8.6	218	3	76	225	1.55	680	4.69	1/4" NPT
A0450-MC4-ML4	1/4	6	50	15.2	38	11.6	18.1	460	3	76	225	1.55	680	4.69	1/4" NPT
A0612-MC6-ML6*	3/8	10	12	3.7	9	2.7	4.3	109	4.5	114	225	1.55	680	4.69	3/8" NPT
A0625-MC6-ML6	3/8	10	25	7.6	18	5.5	8.5	216	4.5	114	225	1.55	680	4.69	3/8" NPT
A0650-MC6-ML6	3/8	10	50	15.2	38	11.6	17.9	455	4.5	114	225	1.55	680	4.69	3/8" NPT
A0812-MC8-ML8	1/2	13	12	3.7	9	2.7	4.3	109	6.5	165	225	1.55	680	4.69	1/2" NPT
A0825-MC8-ML8	1/2	13	25	7.6	18	5.5	8.5	216	6.5	165	225	1.55	680	4.69	1/2" NPT
A0850-MC8-ML8	1/2	13	50	15.2	38	11.6	16.8	427	6.5	165	225	1.55	680	4.69	1/2" NPT

### Construction

Tube: Yellow PFX Nylon Spring Guard: Steel Fittings: Brass

### **Operating Parameters**

Service temperature range: -40°F to +200°F (-40°C to +93°C)

Maximum working pressure based on safety factor of 3:1 over burst

\*Retail packaging available - Add "R" suffix when ordering



# Fast-Stor® Bulk Air Hose



Assembly Part Number	Nom Tu I.	be	Tu	ninal be D.	Tu Wa Thick			oil D.	Co O.	oil D.		tal igth		king igth	Mas Car Qua	ton	Pres	mum king sure /23°C	Minir Burs 73°F/	st at
#	(		(	$\bigcirc$			(		(	$\bigcirc$									- A	¥
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	ft.	mtr.	ft.	mtr.	ft.	mtr.	psi	MPa	psi	MPa
FS-03-100	3/16	5	.233	6	.023	.58	2	51	2.5	64	100	30.5	75	22.9	600	183	225	160	680	469
FS-04-100	1/4	6	.310	8	.030	.76	3	76	3.7	94	100	30.5	75	22.9	600	183	225	160	680	469
FS-06-100	3/8	10	.460	12	.045	1.1	4.5	114	5.5	140	100	30.5	75	22.9	400	122	225	160	680	469
FS-08-100	1/2	13	.620	16	.062	1.6	6.5	165	7.8	198	100	30.5	75	22.9	400	122	225	160	680	469
FS-12-100	3/4	19	.897	23	.075	1.9	11	305	13.0	330	100	30.5	75	22.9	100	30	200	140	600	414

### **Construction**

Tube: Yellow PFX Nylon

# **Operating Parameters**

Service temperature range: -40°F to +200°F (-40°C to +93°C)
Maximum working pressure based on safety factor of 3:1 over burst

# **Order Information**

Example: A0412-MC4-ML4

**A**O412-MC4-ML4 - **Assembly** 

A**04**12-MC4-ML4 - **Tube ID (1/4")** 

A0412-MC4-ML4 - Total Length (12')

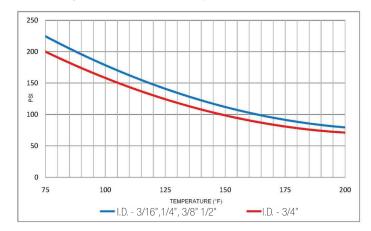
A0412-MC4-ML4 – End 1 Fitting Size & Type

(1/4" Male NPT)

A0412-MC4-ML4 - End 2 Fitting Size & Type

(1/4" Male NPT, Swivel)

# **Working Pressure to Temperature**

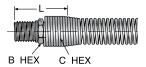


# Fast-Stor® Fittings

Fittings for Fast-Stor® hose are constructed from heavy duty brass with built in insert-supports. Fitting bodies are SAE Standard sizes. Hose entry length into the fittings is the longest in the industry due to Parflex's SAE body design and size standardization, assuring a strong grip on the hose.

All fitting part numbers include body, nut, ferrule and spring guard. For body only, use Prefix B.

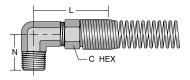
# MC - Male Connector



Part Number	Thread Size	Ho I.	se D.	ı	-	E Ho		( He	
#	<u>~~~~~</u>	(	9				$\supset$		$\supset$
		inch	mm	inch	mm	inch	mm	inch	mm
MC-03-2	1/8	3/16	5	1-3/8	35	9/16	14	1/2	13
MC-03-4	1/4	3/16	5	1-9/16	40	9/16	14	1/2	13
MC-04-2	1/8	1/4	6	1-3/8	35	9/16	14	9/16	14
MC-04-4	1/4	1/4	6	1-9/16	40	9/16	14	9/16	14
MC-06-6	3/8	3/8	10	1-13/16	46	11/16	17	13/16	21
MC-08-6	3/8	1/2	13	2-1/8	54	7/8	22	15/16	24
MC-08-8	1/2	1/2	13	2-1/8	54	7/8	22	15/16	24
*MC-12-12	3/4	3/4	19	2-1/4	57	1-1/4	32	1-3/8	35

<sup>\*</sup>No spring guard required.

# ME - Male 90° Elbow



Part Number	Thread Size	Ho I.	se D.	I	-	ı	ı	(He	
#	<u>~~~~~</u>	(	$\bigcirc$						$\supset$
		inch	mm	inch	mm	inch	mm	inch	mm
ME-03-4	1/4	3/16	5	1-1/4	32	15/16	24	9/16	14
ME-04-4	1/4	1/4	6	1-13/16	46	15/16	24	9/16	14
ME-06-6	3/8	3/8	10	1-9/16	40	1-1/8	29	13/16	21
ME-08-8	1/2	1/2	13	1-3/4	44	1-3/8	35	15/16	24

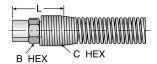


# ML - Live Male Pipe Swivel



Part Number	Thread Size	Ho I.I	se D.	l	L	E Ho		(He	
#	<u>~~~~~</u>	(	9				$\supset$		$\supset$
		inch	mm	inch	mm	inch	mm	inch	mm
ML-03-4	1/4	3/16	5	1-1/16	27	9/16	14	1/2	13
ML-04-4	1/4	1/4	6	1-9/16	40	9/16	14	9/16	14
ML-06-6	3/8	3/8	10	1-7/8	47	3/4	19	13/16	21
ML-08-8	1/2	1/2	13	2-3/8	60	7/8	22	15/16	24

# FC - Female Connector FPT



Part Number	Thread Size		se D.	L	-	E He	-	() He	
#	<u>~~~~~</u>	(	9				$\supset$		$\supset$
		inch	mm	inch	mm	inch	mm	inch	mm
FC-04-4	1/4	1/4	6	1-9/16	40	11/16	17	9/16	14
FC-06-6	3/8	3/8	10	1-3/4	44	13/16	21	13/16	21

# FL - Female Pipe Swivel\*



Part Number	Thread Size		se D.	ı	-	E He		(He		Box Quantity		
#		(	0			(	$\supset$	(	$\supset$			
		inch	inch mm		inch mm		mm	inch	mm	inch	mm	
FL-04-4	1/4	1/4	6	1-3/4	44	5/8	16	9/16	14	20		

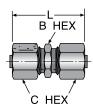
<sup>\*</sup>Fitting does not swivel after assembly.



# **G** General Technical

# **Fast-Stor® Union Connector**

# **UC - Union Connector**



Part Number	Thread Size	Hose I.D.		I	-		3 ex	C Hex			
#	<u>~~~~~</u>	0					$\supset$	$\bigcirc$			
		inch	inch mm		inch mm		mm	inch	mm	inch	mm
UC-04-4	1/4 x 1/4 l.D.	1/4 6		1-7/8	48	1/2	13	9/16	14		
UC-06-6	3/8 x 3/8 I.D.	3/8	10	2-5/8	67	11/16	17	13/16	21		

# **Fast-Stor® Replacement Parts**

# FN - Brass Nut



Part Number		se D.						
#	0							
	inch mm							
FN-03	3/16	5						
FN-04	1/4	6						
FN-06	3/8	10						
FN-08	1/2 13							
FN-12	3/4	19						

# FR - Plastic Ferrule



Part Number		se D.
#	(	9
	inch	mm
FR-03	3/16	5
FR-04	1/4	6
FR-06	3/8	10
FR-08	1/2	13
FR-12*	3/4	19

<sup>\*</sup> Brass.



# SG - Steel Spring Guard



Part Number		se D.						
#	0							
	inch mm							
SG-03	3/16	5						
SG-04	1/4	6						
3u-04	3/8 10							
SG-06								

# **TS - Tube Support**



Part Number	Ho I.	se D.							
#	0								
	inch mm								
TS-03	3/16	5							
TS-04	1/4	6							
TS-06	3/8	10							
TS-08	1/2 13								
TS-12	3/4	19							

# How to Assemble Fast-Stor® Hose

- 1. Using a Parker Model 316 cutoff tool, Parflex PHC hand cutter or other sharp cutter, cut hose squarely to correct length.
- 2. Install SG spring guard on hose as shown. A guard is not required on size -12 hose.
- 3. Slide FN nut on hose and insert TS tube support.
- 4. Slide FR plastic ferrule over hose with taper side toward cut end of hose. Size -12 hose uses a brass ferrule and requires the hose end to be dipped in clean water for lubrication.
- 5. Push hose into fitting body until bottomed. Slide nut and ferrule up to fitting body an tighten nut by hand. With a wrench, tighten the nut additional 2 to 2-1/2 turns.
- 6. Slide spring guard over nut until the lead coil snaps between the nut and fitting body hex.











Parflex NoMar® Fast-Stor® Assemblies AUFS



# **Features**

- Manufactured from durable, abrasion-resistant Polyurethane
- Excellent memory characteristics over a wide temperature range
- Field-attachable fittings
- Available in bulk or factory-made assemblies

# **Applications/Markets**





- Auto Repair
- Blow Guns
- Construction
- Blow Guns
- Mfg. Air Drops
- Marine
- Water Hose





- Carpentry
- Furniture Manufacturing

# **Urethane Fast-Stor® Assemblies**

Includes live male end and rigid male end

Assembly Part Number	Ho 0.			Hose I.D.		Working Length		Nominal Compact Length		Nominal Coil I.D.		Maximum Working Pressure 73°F/23°C		mum st at /23°C	End Fittings
#	0	$\bigcirc$	(	<u>)</u>						0			*		
	inch	mm	inch	mm	ft.	mtr.	inch	mm	inch	mm	psi	MPa	psi	MPa	
AUFS-32-TBLU-010**	3/16	5	1/8	3	10	3.0	6.6	167	3/4	19	135	.93	405	2.79	1/8" NPT
AUFS-32-TBLU-025**	3/16	5	1/8	3	25	7.6	19	482	3/4	19	135	.93	405	2.79	1/8" NPT
AUFS-42-TBLU-010	1/4	6	1/8	3	10	3.0	8.3	210	3/4	19	175	1.21	525	3.62	1/4" NPT
AUFS-42-TBLU-025	1/4	6	1/8	3	25	7.6	23.9	607	3/4	19	175	1.21	525	3.62	1/4" NPT
AUFS-64-TBLU-010*	3/8	10	1/4	6	10	3.0	5.6	142	1-3/4	44	180	1.24	540	3.72	1/4" NPT
AUFS-64-TBLU-015*	3/8	10	1/4	6	15	4.6	9.3	236	1-3/4	44	180	1.24	540	3.72	1/4" NPT
AUFS-64-TBLU-020	3/8	10	1/4	6	20	6.1	13	330	1-3/4	44	180	1.24	540	3.72	1/4" NPT
AUFS-64-TBLU-025*	3/8	10	1/4	6	25	7.6	16	406	1-3/4	44	180	1.24	540	3.72	1/4" NPT
AUFS-85-TBLU-010	1/2	13	21/64	8	10	3.0	5.5	140	2-1/2	64	150	1.03	450	3.10	3./8" NPT
AUFS-85-TBLU-015	1/2	13	21/64	8	15	4.6	9	229	2-1/2	64	150	1.03	450	3.10	3./8" NPT
AUFS-85-TBLU-020	1/2	13	21/64	8	20	6.1	12.5	317	2-1/2	64	150	1.03	450	3.10	3./8" NPT
AUFS-85-TBLU-025	1/2	13	21/64	8	25	7.6	16	406	2-1/2	64	150	1.03	450	3.10	3./8" NPT
AUFS-86-TBLU-010	1/2	13	3/8	10	10	3.0	5.5	140	2-1/2	64	110	.76	330	2.28	3/8" NPT
AUFS-86-TBLU-020	1/2	13	3/8	10	20	6.1	12.5	317	2-1/2	64	110	.76	330	2.28	3/8" NPT
AUFS-96-TBLU-010	9/16	14	3/8	10	10	3.0	6.1	155	2-1/2	64	140	.97	420	2.90	3/8" NPT
AUFS-96-TBLU-015	9/16	14	3/8	10	15	4.6	9.9	251	2-1/2	64	140	.97	420	2.90	3/8" NPT
AUFS-96-TBLU-020	9/16	14	3/8	10	20	6.1	13.7	348	2-1/2	64	140	.97	420	2.90	3/8" NPT
AUFS-96-TBLU-025	9/16	14	3/8	10	25	7.6	17.5	444	2-1/2	64	140	.97	420	2.90	3/8" NPT



Assembly Part Number	Ho O.		Hose I.D.		Total Length		Nominal Compact Length		Nominal Coil I.D.				Minimum Burst at 73°F/23°C		End Fittings
#	(	$\supseteq$	(	<u>)</u>					(	9					
	inch	mm	inch	mm	ft.	mtr.	inch	mm	inch	mm	psi	MPa	psi	MPa	
AUFS-128-TBLU-010	3/4	19	1/2	13	10	3.0	7.5	190	3	76	125	.86	375	2.59	1/2" NPT
AUFS-128-TBLU-015	3/4	19	1/2	13	15	4.6	11.2	284	3	76	125	.86	375	2.59	1/2" NPT
AUFS-128-TBLU-020	3/4	19	1/2	13	20	6.1	15	381	3	76	125	.86	375	2.59	1/2" NPT
AUFS-128-TBLU-025	3/4	19	1/2	13	25	7.6	19.5	495	3	76	125	.86	375	2.59	1/2" NPT

### Construction

Tube: Transparent Blue Polyurethane

Fittings: Brass

### **Operating Parameters**

Service temperature range:  $-40^{\circ}F$  to  $+180^{\circ}F$  ( $-40^{\circ}C$  to  $+82^{\circ}C$ )

### Notes

Pigtail Lengths - 16" swivel end, 8" rigid end

\*Retail packaging available - Add "R" suffix when ordering

\*\*Size -32 comes standard with two rigid ends

Other sizes available upon request

### Colors

	Co	lor Code
•	TBLU	Transparent Blue

Other colors available upon request - consult factory

# **Order Information**

Example: AUFS-64-TBLU-025

**AUFS**-64-TBLU-025 - **Assembled Urethane Fast-Stor** 

AUFS-64-TBLU-025 - Tube OD (3/8")

AUFS-64-TBLU-025 - Tube ID (1/4")

**AUFS-64-TBLU-025 - Color (Transparent Blue)** 

AUFS-64-TBLU-025 - Total Length (25')



■ Auto Repair Blow Guns Construction Carpentry

# Features

- Manufactured from durable, abrasion-resistant Polyurethane
- Excellent memory characteristics over a wide temperature range
- Long service life in rugged applications

# **Applications/Markets**

- Marine
  - Water Hose

Mfg. Air Drops

Parflex NoMar® Fast-Stor® Coiled Tubing UFS

Furniture Manufacturing

Assembly Part Number		ose .D.		se D.	Working Length	Nominal Coil I.D.		Maximum Working Pressure 73°F/23°C		Minimum Burst at 73°F/23°C	
#	0	9	(C			(	0				<b>K</b>
	inch	mm	inch	mm	feet	inch	mm	psi	MPa	psi	MPa
UFS-32-TBLU-xxx	3/16	5	1/8	3	010, 025	3/4	19	135	.93	405	2.79
UFS-42-TBLU-xxx	1/4	6	1/8	3	010, 025	3/4	19	175	1.21	525	3.62
UFS-64-TBLU-xxx	3/8	10	1/4	6	010, 015, 020, 025	1-3/4	44	180	1.24	540	3.72
UFS-85-TBLU-xxx	1/2	13	21/64	8	010, 015, 020, 025	2-1/2	64	150	1.03	450	3.10
UFS-86-TBLU-xxx	1/2	13	3/8	10	010, 020	2-1/2	64	110	.76	330	2.28
UFS-96-TBLU-xxx	9/16	17	3/8	10	010, 015, 020, 025	2-1/2	64	140	.97	420	2.90
UFS-128-TBLU-xxx	3/4	19	1/2	13	010, 015, 020, 025	3	76	125	.86	375	2.59

### Construction

Tube: Transparent Blue Polyurethane

# Operating Parameters

Service temperature range: -40°F to +180°F (-40°C to +82°C)

Maximum working pressure based on safety factor of 3:1 over burst

# **Order Information**

Example: UFS-86-TBLU-010

**UFS**-86-TBLU-010 - **Assembled NoMar® Fast-Stor®** 

UFS-86-TBLU-010 - Tube OD (1/2")

UFS-86-TBLU-010 - Tube ID (3/8")

UFS-86-TBLU-010 - Color (Transparent Blue)

UFS-86-TBLU-010 - Total Length (10')

### Notes

xxx- Denotes Hose Length (feet) Pigtail Lengths - 16" End #1, 8" End #2 Other sizes available upon request

# Colors

	Co	lor Code
•	TBLU	Transparent Blue

Other colors available upon request consult factory



# Parflex NoMar® Fast-Stor® Coiled Assembly AHUFS



### **Features**

- Manufactured from durable, abrasion-resistant 98 Durometer Polyurethane
- Excellent memory characteristics over a wide temperature range
- Long service life in rugged applications

# Applications/Markets





- Auto Repair
- Blow Guns
- Construction
- Marine
- Water Hose

Mfg. Air Drops





- Carpentry
- Furniture Manufacturing

Assembly Part Number	Ho O.	se D.		Hose I.D.		Working Length		Nominal Compact Length		Coil I.D.		mum king sure /23°C	Minimum Burst at 73°F/23°C	
#	(	$\odot$	(	0						0			*	
	inch	mm	inch	mm	ft.	mtr.	inch	mm	inch	mm	psi	MPa	psi	MPa
AHUFS-6-xxx-015	3/8	10	1/4	6	15	4.6	13	330	1-1/4	32	180	1.24	540	3.72
AHUFS-6-xxx-025	3/8	10	1/4	6	25	6.7	22	559	1-1/4	32	180	1.24	540	3.72

### Construction

Tube: 98 Durometer Polyurethane Fitting: Brass

### **Operating Parameters**

Service temperature range: -40°F to +180°F (-40°C to +82°C)

Maximum working pressure based on safety factor of 3:1 over burst.

### **Notes**

xxx- Denotes Color

Retail packaging available - Add "R" suffix when ordering Pigtail Lengths – 16" End #1, 8" End #2 Other sizes available upon request

### Colors

Color Code									
•	BLK	Black							
•	BLU	Blue							
•	RED	Red							
•	YEL	Yellow							

Other colors available upon request - consult factory

# **Order Information**

Example: AHUFS-6-BLK-015

AHUFS-6-BLK-015 – Assembled High Durometer

**Urethane Fast-Stor** 

AHUFS-6-BLK-015 – Tube OD (3/8") AHUFS-6-BLK-015 – Color (Black)

AHUFS-6-BLK-015 - Total Length (15')

# Parflex NoMar® Fast-Stor® Fittings

Parflex NoMar® Fast-Stor® fittings are manufactured from a heavy brass construction utilizing all standards for NPTF pipe threads. The engineered barb design generates the maximum gripping and sealing power when combined with the socket.

# MCB Male Pipe Rigid



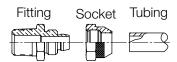
Part Number	Hose Part Number	Thread Size		Hose I.D.		L		Cufoff M		C Hex		F Hex	
#	#	<u>~~~~~</u>	(	0						$\bigcirc$		$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
MCB-3x2-2	UFS-32	1/8 NPT	0.11	2.8	0.94	23.8	0.72	18.3	7/16	11	7/16	11	
MCB-4x2-2	UFS-42	1/8 NPT	0.12	3.0	1.00	25.4	0.74	18.8	7/16	-11	7/16	11	
MCB-4x2-4	UFS-42	1/4 NPT	0.12	3.0	1.16	29.5	0.90	22.9	9/16	14	7/16	11	
MCB-6x4-4	UFS-64	1/4 NPT	0.23	5.8	1.16	29.5	0.90	22.9	5/8	16	5/8	16	
MCB-6x4-6	UFS-64	3/8 NPT	0.23	5.8	1.20	30.5	0.94	23.9	3/4	19	5/8	16	
MCB-8x5-6	UFS-85	3/8 NPT	0.27	6.9	1.29	32.8	0.99	25.1	3/4	19	3/4	19	
MCB-8x6-4	UFS-86	1/4 NPT	0.28	7.1	1.29	32.8	1.03	26.1	3/4	19	3/4	19	
MCB-8x6-6	UFS-86	3/8 NPT	0.34	6.6	1.30	33.0	1.04	26.4	3/4	19	3/4	19	
MCB-9x6-6	UFS-96	3/8 NPT	0.31	7.9	1.47	37.3	1.10	27.9	7/8	22	7/8	22	
MCB-9x6-8	UFS-96	1/2 NPT	0.32	8.1	1.61	40.9	1.24	31.5	7/8	22	7/8	22	
MCB-12x8-8	UFS-128	1/2 NPT	0.42	10.7	1.98	50.0	0.94	24.0	1	25	1	25	

# **MLB Male Live Swivel**



Part Number	Hose Part Number	Thread Size		Hose I.D.		L		Cufoff M		C Hex		E Hex		F Hex	
#	#	<u>~~~~~</u>	0	0										$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
MLB-4x2-4	UFS-42	1/4 NPT	0.12	3.0	1.37	34.8	1.11	28.2	9/16	14	7/16	11	9/16	14	
MLB-6x4-4	UFS-64	1/4 NPT	0.22	5.6	1.37	34.8	1.11	28.2	9/16	14	5/8	16	5/8	16	
MLB-6x4-6	UFS-64	3/8 NPT	0.23	5.8	1.58	40.1	1.32	33.5	3/4	19	5/8	16	5/8	16	
MLB-8x5-6	UFS-85	3/8 NPT	0.27	6.9	1.68	42.7	1.38	35.1	3/4	19	3/4	19	3/4	19	
MLB-8x6-6	UFS-86	3/8 NPT	0.33	8.4	1.71	43.4	1.45	36.8	3/4	19	3/4	19	3/4	19	
MLB-9x6-6	UFS-96	3/8 NPT	0.31	7.9	1.87	47.5	1.50	38.1	3/4	19	7/8	22	7/8	22	
MLB-9x6-8	UFS-96	1/2 NPT	0.31	7.9	1.95	49.5	1.58	40.1	15/16	24	7/8	22	7/8	22	
MLB-12x8-8	UFS-128	1/2 NPT	0.42	10.7	2.30	56.5	1.26	32.0	7/8	22	1	25	1	25	

# **Assembly Instructions**



- 1. Slide the socket on the tubing with threads facing the end of the tubing.
- 2. Press the tubing over the Tube Support portion of the fitting until the tube bottoms out. Do not use a lubricant.
- 3. Push the socket up to meet the mating threads on the fitting, finger tighten the socket onto the fitting.
- 4. Tighten the fitting and socket until the fitting hex and socket hex meet.



# **G** General Technical

# **Ultra-Lite Superbraid® Hose**



# **Features**

- More than 20% lighter than similar braided polyurethane hoses
- Extremely tough and abrasion resistant
- State-of-the-art strain relief system allows the hose to bend freely without kinking at the fitting
- · Features lightweight, non-marring jacket

# **Applications/Markets**





- Auto Repair
- Blow Guns
- Construction
- Marine
- Water Hose

Mfg. Air Drops





Carpentry

Furniture Manufacturing

Part Number		ninal D.	Nominal 0.D.		Total Length	Wor Pres	mum king sure /23°C	Fitting Size & Type
#	0	9	0	9				
	inch	mm	inch	mm	feet	psi	МРа	
SB-4-B-xxx-ML4 SB-4-Y-xxx-ML4	1/4	6	3/8	10	025, 050, 100	220	1.52	1/4" Male NPT, Swivel
SB-5-B-xxx-ML6 SB-5-Y-xxx-ML6	5/16	8	15/32	12	025, 050, 100	185	1.28	3/8" Male NPT, Swivel
SB-6-Y-xxx-ML4	3/8	10	.515	13	025, 050, 100	200	1.38	1/4" Male NPT, Swivel
SB-6-Y-xxx-ML6	3/8	10	.515	13	025, 050, 100	200	1.38	3/8" Male NPT, Swivel
SB-6-Y-xxx-MC4	3/8	10	.515	13	025, 050, 100	200	1.38	1/4" Male NPT, Rigid
SB-6-Y-xxx-MC6	3/8	10	.515	13	025, 050, 100	200	1.38	3/8" Male NPT, Rigid

### Construction

Tube: Polyurethane Reinforcement: Polyester Cover: Polyurethane Fittings: Brass

O-rings: Buna-N

Strain Relief Sleeves: Acetal

### **Operating Parameters**

Temperature Range: -40°F to +165°F  $(-40^{\circ}\text{C to} + 74^{\circ}\text{C})$ 

### Notes

xxx- Denotes Hose Length

### **Fittings**

Parker Fittings available from:

Fluid System Connectors Division

Otsego, MI (269) 692-6555

(269) 694-4614 FAX

# Field Attachable Fittings

Hose Size	Fitting Size	Fitting Type	F.A. Fitting	F.A. Fitting & Strain Relief		
Inch	Inch		Part Number*	Part Number**		
1/4	1/4	Male NPT, Swivel	06244S	07244S		
5/16	1/4	Male NPT, Swivel	06254S	-		
5/16	3/8	Male NPT, Swivel	06256S	-		
3/8	1/4	Male NPT, Rigid	06264RU	07264RU		
3/8	1/4	Male NPT, Swivel	06264SU	07264SU		
3/8	3/8	Male NPT, Swivel	06266SU	07266SU		
1/4	-	Hose Splicer	06244-HS	-		
3/8	-	Hose Splicer	06266-HSU	-		

Includes Fitting & Nut (No Strain Relief).

\*\* Includes Fitting & Nut with permanently attached strain relief.









Parflex Field Attachable Fittings do not require inserts or ferrules that become deformed during installation, so the fittings can be used over again without replacing any components. In addition, only two wrenches are needed to complete a safe and secure connection, making fitting replacement quick and easy!



**SB - Bulk Hose Without Fittings** 

Part Number	Nominal I.D.		Nom O.		Working Length	Maximum Working Pressure		
#	(	0		)				
	inch	mm	inch mm		feet	psi MPa		
SB-4-B-xxx SB-4-Y-xxx	1/4	6	3/8	10	025, 050,100, 500	220	1.52	
SB-5-B-xxx SB-5-Y-xxx	5/16	8	15/32	12	025, 050,100, 300	185	1.28	
SB-6-Y-xxx	3/8	10	.515	13	025, 050,100, 500	200	1.38	

# **Order Information**

Example: SB-4-Y-050-ML4

SB-4-Y-050-ML4 - Super Braid

SB-4-Y-050-ML4 - Hose ID (1/4")

SB-4-Y-050-ML4 - Color (Yellow)

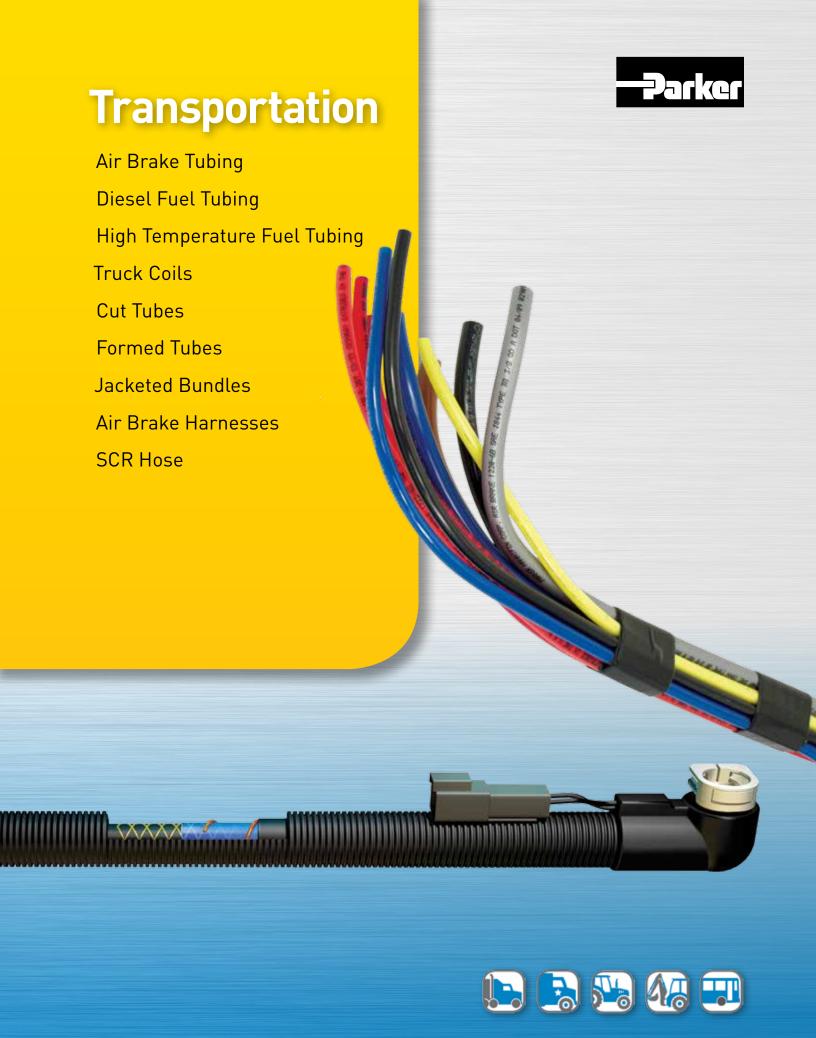
SB-4-Y-050-ML4 - Total Length (50')

SB-4-Y-050-ML4 – Fittings Size & Type (1/4' Male NPT, Swivel)

	Color Code									
Color Code										
•	TBLU	Transparent Blue								
	YEL	Yellow								







# **Table of Contents**

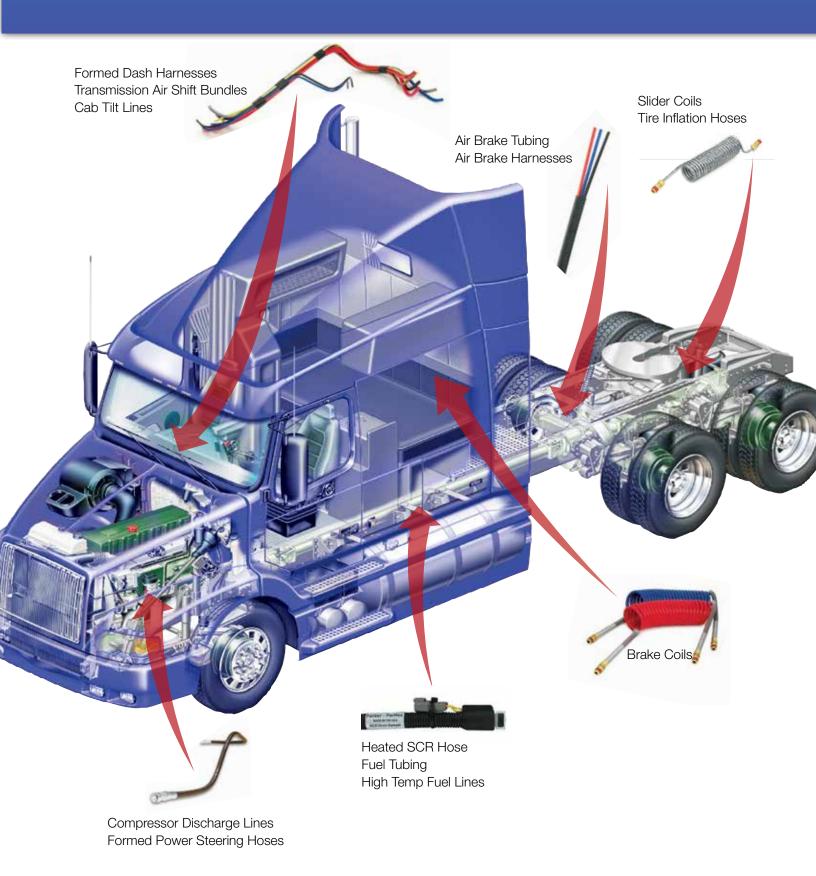
Air Brake Tubing	D-4
PFT-FL Diesel Fuel Tubing	D-5
HTFL Diesel Fuel Tubing, High Temp	
BRAKCoil®	D-7
Duo-Coil™	D-8
DollyCoil™	D-9
,	
SliderCoil <sup>TM</sup>	D-10
Fifth Wheel Slider	D-11
Cut Tubes	
Formed Tubes and Hoses	D-12
Jacketed Bundles	
Straight Harnesses	D-12
g	
Formed Harnesses	D-12
SCR Hose	D-13

# **Transportation Visual Index**

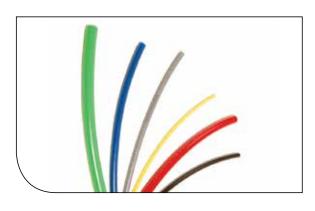
	Air Brake Tubing	PFT-FL Diesel Fuel Tubing	HTFL High-Temperature Diesel Fuel Tubing	BRAKCoil®	Duo-Coil <sup>®</sup>
Transportation Products			D-6	D-7	D-8
	DollyCoil™	SliderCoil™	Fifth Wheel Slider	Cut Tubes	Formed Tubes & Hoses
	D-9	D-10	D-11	D-12	D-12
	Jacketed Bundles	Straight Harnesses	Formed Harnesses	SCR Hose	
				Section 2	
	D-12	D-12	D-12	D-13	



# **Parflex Transportation Products**



# 1120 Nylon Air Brake Tubing



# **Features**

- 100% Pressure Tested
- Excellent UV Stability
- Abrasion Resistant
- Kink Resistant

# **Certifications**

- Meets SAE Specification J844
- Meets DOT FMVSS 49CFR 571.106
   \*2A, 3A, and 5A are not DOT sizes

# **Applications/Markets**







Air brake lines

Part Number	Tube 0.D.	Outs Diam		Ins Diam		Nom Wa Thick	all	Bu Pres at 73°1	sure	Ве	mum nd lius	We	ight		dard eel	Stan Pa	dard llet
#	$\bigcirc$			0	0	(	$\overline{\mathfrak{H}}$		<b>K</b>	4	$\mathcal{D}$	lbs	kg]				
	inch	inch	mm	inch	mm	inch	mm	psi	bar	inch	mm	lbs./100 ft.	kg./31 mtr.	feet	meter	feet	meter
1120-2A-XXX-1000*	1/8	.125	3.2	.079	2.0	.023	0.6	1000	69.0	.370	9.4	.340	.154	1000	305	24,000	7315
1120-2.5A-XXX-1000	5/32	.156	4.0	.092	2.3	.032	0.8	1200	82.7	.500	12.7	.570	.259	1000	305	24,000	7315
1120-3A-XXX-1000*	3/16	.188	4.8	.118	3.0	.035	0.9	1200	82.7	.750	19.1	.770	.349	1000	305	24,000	7315
1120-4A-XXX-1000	1/4	.250	6.4	.170	4.3	.040	1.0	1200	82.7	1.00	25.4	1.21	.549	1000	305	24,000	7315
PFT-5A-BLK-500*	5/16	.313	7.9	.232	5.9	.040	1.0	1000	69.0	1.25	31.8	1.57	.712	500	152	12,000	3658
1120-6B-XXX-500	3/8	.375	9.5	.251	6.4	.062	1.6	1400	96.5	1.50	38.1	2.70	1.22	500	152	12,000	3658
1120-8B-XXX-500	1/2	.500	12.7	.376	9.6	.062	1.6	950	65.5	2.00	50.8	3.90	1.77	500	152	6,000	3658
1120-10B-XXX-250	5/8	.625	15.9	.441	11.2	.092	2.3	900	62.1	2.50	63.5	7.00	3.18	250	76	3,000	914
1120-12B-XXX-250	3/4	.750	19.1	.566	14.4	.092	2.3	800	55.2	3.00	76.2	8.60	3.90	250	76	3,000	914

XXX represents color code.

# Construction

Material:

Type A - Single-wall extruded Nylon (polyamide)

Type B – Nylon (polyamide) core, fiber reinforcement, Nylon (polyamide) cover/sheath

### **Operating Parameters**

Temperature Range:

-40°F to +200°F (-40°C to +93°C)

Working Pressure: 150 psi (10.3 bar)

## **Fittings**

Parker Fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

FSC Product Families:

■ NTA

PMT

PTC

### **Colors**

	Color Code			
•	BLK	Black		
•	BLU	Blue		
•	BRN	Brown		
•	GRN	Green		
•	ORG	Orange		
•	PUR	Purple		
•	RED	Red		
•	SIL	Silver		
•	TAN	Tan		
•	YEL	Yellow		
0	WHT	White		



# Parflex Diesel Fuel Tubing



#### **Features**

- Nylon tubing designed for use in tractor, trailer and other mobile fuel systems
- Heat and light stabilized
- 100% quality controlled 100% pressure tested
- Saves weight and labor in comparison with hose and hard-line tubing

#### **Approvals**

- Compatible with JP-5 (MIL-DTL-5624) and JP-8 (MIL-DTL-83133)
- Compatible with Biodiesel per Parflex PPB PL-18 hard-line tubing

## **Applications/Markets**







■ D.O.T. diesel fuel applications

Part Number	Nom Tu O.	be	al Nominal Tube I.D.			mum nd lius	Wei	ight	Standard Reel		
#					$\mathcal{A}$		lbs				
	inch	inch mm		mm	inch	mm	lbs./ft.	kg./mtr.	feet	meter	
PFT-4A-XXX-1000-FL	1/4	6	.170	4	1	25	.012	.005	1000	305	
PFT-6B-XXX-500-FL	3/8	10	.251	6	1-1/2	38	.027	.012	500	152	
PFT-8B-XXX-500-FL	1/2	13	.376	10	2	51	.039	.018	500	152	
PFT-10B-XXX-250-FL	5/8	5/8 16		11	2-1/2	64	.070	.032	250	76	
PFT-12B-XXX-250-FL	3/4	3/4 19		14	3	76	.086	.039	250	76	

XXX represents color code.

#### Construction

Heat and light stabilized seamless extruded nylon core reinforced with fibrous reinforcement and bonded with a protective blue nylon cover sheath

#### **Operating Parameters**

Temperature Range:

-40°F to +200°F (-40°C to +93°C)

Maximum Working Pressure: 150 psi (10.3 bar) Do not exceed temperature and pressure ranges

#### Color



Blue is standard Consult division for additional colors

#### **Fittings**

Parker Fittings available from: Fluid System Connectors Division Otsego, MI (269) 692-6555 (269) 694-4614 FAX

**FSC Product Families:** 

- NTA
- DF (Diesel Fuel Only)

#### **Notes**

Contact Parflex Division for application review

Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# **G** General Technical

# HTFL Diesel Fuel Line Tubing (High-Temperature)



#### **Features**

- Heat and UV stabilized
- For use in high temperature applications
- 100% Pressure Tested
- Lightweight
- Pre-formed tubes available

#### **Applications/Markets**







Part Number	Nominal Tube O.D.		Tube		Tube		Nom Tu I.I	be	Nom Wa Thick	all	Wor Pres		Bu	Minimum Burst at 73°F /23°C		mum nd lius	Weight		Standard Reel	
#				$\bigcirc$		<u></u>				¥	\$	9	lbs	S C [logg						
	inch	mm	inch	mm	inch	mm	psi	bar	psi	bar	inch	mm	lbs./ft.	kg./mtr.	feet	meter				
HTFL-6B-BRN-500	3/8	10	.251	6	.062	1.6	175	12.1	1,400	96.5	1-1/2	38	.028	.013	500	152				
HTFL-8B-BRN-500	1/2	13	.376	10	.062	1.6	155	10.7	950	65.5	2	51	.039	.018	500	152				
HTFL-10B-BRN-250	5/8	16	.441	11	.092	1.6	140	9.7	900	62.1	2-7/8	73	.071	.032	250	76				
HTFL-12B-BRN-250	3/4	19	.566	14	.092	1.6	150	10.3	800	55.1	3	76	.086	.039	250	76				

#### Construction

Tube: High-temperature and chemical-resistant special polyamide

Reinforcement: High-strength yarn fiber Cover: High-temperature and UV-resistant special polyamide

#### **Operating Parameters**

Temperature Range:  $-50^{\circ}$ F to  $+266^{\circ}$ F ( $-46^{\circ}$ C to  $+130^{\circ}$ C) Vacuum Rating: 28 inch Hg

#### **Fittings**

Parker Fittings available from: Fluid System Connectors Division Otsego, MI (269)692-6555(269) 694-4614 FAX

FSC Product Families:

NTA

#### Color



Brown is standard Consult division for additional colors

#### **Notes**

Compatible with JP-5 (MIL-DTL-5624) and JP-8 (MIL-DTL-83133)

Compatible with Biodiesel per Parflex PPB PL-18



## **BRAKCOIL®**



#### **Features**

- Tractor-to-trailer coiled nylon air-brake connections
- Maintenance-free performance designed for trouble-free service on your rig
- Years of city delivery and line haul testing
- Heavy-duty plated spring guards are rust-resistant for added protection
- More coils offer you maximum working lengths
- No need for pogo sticks or spring hangers
- Color coding gives you mistake-free hook-ups blue for service, red for emergency

#### Certifications

 Meets or exceeds SAE J844 and D.O.T. FMVSS 106 Specifications at -70°F to +200°F

#### **Applications/Markets**





Tractor to Trailer

Kit Coil Number	Individual Coil Part Number	Tube 0.D.		Ta	lve ail igth		(NI	ale End PT)			king igth	Number of Coils
Numbor	Humbor				Longui		Valve		hand			
#	#											
		inch	mm	inch	mm	inch	mm	inch	mm	feet	meter	
731516	731512-Red 731512-Blue	-8	13	12	305	1/2	13	1/2	13	15	4.6	21-1/2
751597	731611-Red 731611-Blue	-8	13	12	305	3/8	10	1/2	13	15	4.6	21-1/2
731522	731513-Red 731513-Blue	-8	13	40	1016	1/2	13	1/2	13	15	4.6	21-1/2
741526	731612-Red 731612-Blue	-8	13	40	1016	3/8	10	1/2	13	15	4.6	21-1/2
751641	741590-Red 741590-Blue	-8 13		6	152	1/2	13	1/2	13	12	3.7	18-1/2
751655	751656-Blk Black Only	-8	-8 13		152	3/8	10	1/2	13	12	3.7	18-1/2

#### **Order Information**

BRAKCOIL® kits are supplied complete – **Parker pre-assembled**, with everything needed, including spring guards and male pipe NTA brass fittings, **ready to install**.

Special pipe thread sealant is factory applied. No cutting or assembly necessary. Just attach the gladhands (sold separately or pre-assembled). They are available in kits or as separate lines. A kit consists of both a red and blue tube assembly.

#### Construction

Tube: Coiled Nylon Air Brake Tubing

#### **Operating Parameters**

Temperature Range: -70°F to +200°F (-57°C to +93°C)

#### **Options**

Extended BRAKCOIL\* handle available, part no. 771164

Gladhands available

- Blue Part # GH9211
- Red Part # GH9212



# **G** General Technical

# **Duo-Coil™ Features**



#### **Features**

- Duo-Coil combines both tractor-to-trailer lines (service and emergency) into a strong single unit
- Designed for quick hook-up and trouble-free service on your rig
- Reverse winding of the coiled air brake lines eliminates the possibility of tangling
- Installation swivel fittings make hook-up a snap
- The inner red emergency coil is wound inside the blue service coil offering added protection to the driver
- The single unit provides clean and neat installation

#### **Certifications**

 Meets or exceeds SAE J844 and D.O.T. FMVSS 106 Specifications at -70°F to +200°F

#### **Applications/Markets**





Tractor to Trailer

Kit Coil Number		be D.		lve ail gth	le Ends T) Glad		Wor Len	king igth	Number of Coils		
#		$\overline{)}$									
	inch	mm	inch	mm	inch	mm	inch	mm	feet	meter	
801048	-8	13	12	305	1/2	13	1/2	13	15	4.6	21-1/2
801632	-8	13	6	152	1/2	13	1/2	13	12	3.7	18-1/2
801595	-8	13	40	40 1016		13	1/2	13	15	4.6	21-1/2

#### Order Information

Duo-Coil™ kits are supplied complete -

Parker pre-assembled, with everything needed, including spring guards and pipe end NTA fittings, ready to install. Special pipe thread sealant is factory applied. No cutting or fitting assembly is necessary. Just attach the gladhands (sold separately or pre-assembled).

#### Construction

Tube: Coiled Nylon Air Brake Tubing

#### **Operating Parameters**

Temperature Range: -70°F to +200°F (-57°C to +93°C)

#### Options

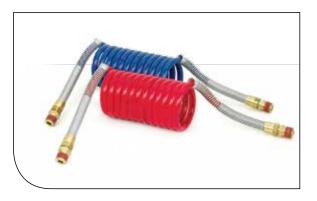
Extended BRAKCOIL® handle available, part no. 771164

Gladhands available

- Blue Part # GH9211
- Red Part # GH9212



# DollyCoil™



#### **Features**

- No need to install springs or hangers
- Will retract to its original shape even after long periods of extended use

#### **Certifications**

 Meets or exceeds SAE J844 and D.O.T. FMVSS 106 Specifications at -70°F to +200°F

#### **Applications/Markets**





- Multiple Trailers
- Converter Dollies

Kit Coil Number		be D.	Ta	lve nil gth		(Ni		hand ' End	Wor	dard king gth	Number of Coils
#											
	inch	mm	inch	mm	inch	mm	inch	mm	feet	meter	
751634	-8	13	8 13		1/2	13	1/2 13		6	1.83	12

#### **Order Information**

DollyCoil™ kits are supplied complete -

Parker pre-assembled, with everything needed, including spring guards and male pipe end NTA fittings, ready to install. Special pipe thread sealant is factory applied. No cutting or assembly necessary. Just attach the gladhands (sold separately or pre-assembled). They are available in kits or as separate lines. A kit consists of both a red and blue tube assembly.

#### Construction

Tube: Coiled Nylon Air Brake Tubing

#### **Operating Parameters**

Temperature Range: -70°F to +200°F (-57°C to +93°C)

#### **Options**

Extended BRAKCOIL® handle available, part no. 771164

Gladhands available

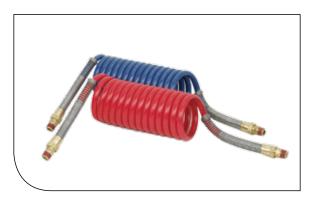
- Blue Part # GH9211
- Red Part # GH9212



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# **G** General Technical

## SliderCoil™



#### **Features**

- Used between an adjustable rear trailer axle and the final point on a trailer chassis
- No need to install springs or hangers
- Will retract to its original shape even after long periods of extended use

#### **Certifications**

 Meets or exceeds SAE I844 and D.O.T. FMVSS 106 Specifications at -70°F to +200°F

#### **Applications/Markets**





- Tractor Trailers (Sliding)
- Tractor Trailers (Axles)

Kit Coil Number	Individual Coil Part Number		be D.	Ta	lve ail igth	Va			hand End		king ngth	Number of Coils
#	#											
		inch	inch mm		mm	inch	mm	inch	mm	feet	meter	
751657	751657-BLU, 751657-RED	-8	-8 13		13	1/4	6	1/4	6	9	2.7	13-1/2
751659	751659-BLU, 751659-RED	-8	-8 13		13	3/8	10	3/8	10	9	2.7	13-1/2

#### **Order Information**

SliderCoil™ kits are supplied complete -

Parker pre-assembled, with everything needed, including spring guards and male pipe end NTA fittings, ready to install. Special pipe thread sealant is factory applied. No cutting or assembly necessary. They are available in kits or as separate lines. A kit consists of both a red and blue coil assemblies.

#### Construction

Tube: Coiled Nylon Air Brake Tubing

#### **Operating Parameters**

Temperature Range: -70°F to +200°F (-57°C to +93°C)

#### Color

- Blue
- Red

#### **Options**

Extended BRAKCOIL\* handle available, part no. 771164



#### Fifth Wheel Slider Coil



#### **Features**

- Clutter-free hook-up and maintenance-free performance of adjustable length pneumatic tubing for fifth wheel sliding action
- Self-adjusts from 10" to fully extended 74" working length
- Universal, ready for immediate installation
- No maintenance required stays on the job at peak performance through years of trouble-free life
- Coil set is strong and permanent Even after prolonged use in fully extended position, coils will retract to shorter length without sagging and eliminating hazards of chafing and wear

#### Certifications

- Conforms to SAE Specification J844 Type A
- Meets D.O.T. FMVSS 106

#### **Applications/Markets**





- Double Trailers
- Convert, Dollies

Part Number	Fittings	Pig Len	tail gth	Exte	ax. nded gth	Retracted Length		
#								
		inch	mm	inch	mm	inch	mm	
811537	(2)68NTA-4-4	2	51	74	1880	10	254	
811537-NF-BLK	-	2	51	74	1880	10	254	

#### **Order Information**

Fifth Wheel Slider Coil part# 811537 comes complete with fittings. Part# 811537-NF-BLK does not include fittings.

#### Construction

Tube: 1/4" O.D. extruded Nylon, heat and light stabilized, single wall

#### **Operating Parameters**

Temperature Range: -40°F to +200°F (-40°C to +93°C)

#### Color



#### **Options**

Available with or without fittings

# General Technical G

# Custom Harness, Bundles & Tubing

#### **Order Information**

Several different harnesses may be required on a single unit depending upon the model of the vehicle, wheel base and options available. To determine your harness application needs:

- 1. Recognize the cost savings available to you through the use of harnesses. How many dollars will be saved on tubing installation alone? On scrap reduction?
- 2. Call Parker. Have one of our application engineers study your application.
- 3. Have Parker engineers design and build a prototype harness for your approval.
- 4. Approve the prototype as our basis to engineer your production model harness.
- 5. Implement the harness into your Purchasing and Production systems one harness, one part number instead of multiple part numbers you once had for each air brake line.

#### **Features**

- Preformed, pre-bundled tubing or hose custom designed to reduce installation time and improve throughput
- Your production line will run faster and be virtually free from tubing scrap
- Individual tubes are pre-cut and assembled into a single unit

#### Certifications

- Designed and engineered to meet the exacting requirements of each bus or truck manufacturer
- The air brake tubing used in a Parflex Harness conforms to SAE J844 type 3A and 3B and also D.O.T. FMVSS 106
- Parflex Division is third party certified for ISO 14001 and
- 6mm Nylon, 5.5mm EPDM, and 4mm EPDM are IP6X, IPX8, and IPX9K Certified

#### Tubing

#### Construction

Tube: Nylon Air Brake Tubing

#### **Operating Parameters**

Temperature Range: -40°F to +200°F (-40°C to +93°C) Working Pressure: 150 psi (10.3 bar)

#### **Options**

Each tube can be color-coded and/or numbered Each harness may contain any number of tube sizes ranging from 1/8" O.D. to 3/4" O.D.

The harness can be supplied with special clamps, brackets and fittings to meet any need required by the customer

Contact Parflex Customer Service for custom formed hoses and hose assemblies



#### **Cut Tubes**

Any tube offered by Parflex can be cut-to-length, with options for additional marking



#### **Straight Harnesses**

Combine multiple cut tubes into a harness built specifically for your application



#### Formed Tubes

Tubes can be formed into shapes for ease of installation



#### Formed Harnesses

Combine multiple formed tubes to create a repeatable tubing routing solution



#### Jacketed Bundles

Two or more tubes can be bundled together with an extruded thermoplastic jacket

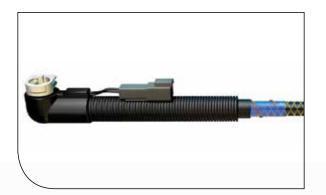


#### Formed Assemblies

Most Parflex thermoplastic hoses can be formed into application specific shapes



# **SCR Hose Assemblies for Tier IV Compliance**



#### **Features**

- Consistent thaw more reliable than coolant heated lines
- Multiple options available to fit every application
- Protective Overmolding
  - Protection against water ingression and damage of electrical components
  - Bolsters fitting strength and impact resistance
- Corrugated heat shield offers abrasion and heat resistance
- Assembled and designed in USA

#### **Applications/Markets**











Certifications

 Parflex Division is third party certified for ISO 14001 and TS 16949

6mm Nylon, 5.5mm EPDM, and 4mm EPDM are IP6X, IPX8, and IPX9K Certified

With Electrically Heated SCR Hose Assemblies from Parker's Parflex Division, a cleaner exhaust system means a cleaner environment. Designed for heating and conveying DEF (Diesel Exhaust Fluid) throughout the SCR system on commercial vehicles, Parflex hoses are made to handle both on-road and off-road applications while helping you stay Tier IV and EPA '10 compliant. Combine these hoses with other high value Parflex fluid conveyance products (pilot lines, grease lines, hydraulic hoses, etc.) so your customer can enjoy best in class durability and performance.

All Parflex SCR hose assemblies have multiple options that allow customization by the equipment manufacturer and the end user

SCR hoses are available with several different options. These include, but are not limited to: different electrical connectors, including options for heat and abrasion shield over lead wires; 1/4, 5/16, and 3/8 fittings; wide variety of lengths; 12V or 24V; etc. Parflex also has designs for other sizes and core tubes for SCR hoses. These designs ensure that Parflex hoses can be utilized on SCR systems from multiple suppliers.

U.S. Patent No. 8,819,922

Check www.scrhose.com for product updates

#### S0/S1/S2

Suction/Throttle Line Design



#### Parflex SCR Hose Assembly Polyamide Suction/Throttle Line

- Thermoplastic core tube with fabric reinforcement
- Extruded thermoplastic jacket
- Optional heat/abrasion shield

#### Certifications

- TS 16949
- ISO 14001

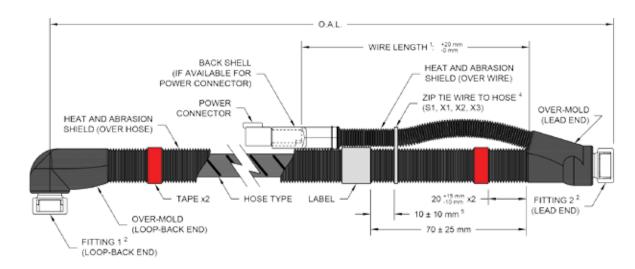
Base Part	_	ninal D	0.	.D.	Shi	with Shield (opt)		Max. Oper. Pressure		Min. Burst Pressure		Vacuum Resistance		nd lius	Standard Lengths*
Number	mm	inch	mm	inch	mm	inch	psi	bar	psi	bar	inch	Hg/bar	inch	mm	mtr
S0	6	.24	14	.55	21	.827	145	10	600	40	8.9	300m	2	51	1/2, 1, 1-1/2 or 2
S1	6	.24	14	.55	21	.827	145	10	600	40	8.9	300m	2	51	1/2 , 1, 1-1/2 or 2

Many custom options available, please contact Parflex for details.

- S0 No abrasion guard
- S1 Abrasion guard, hose only
- S2 Abrasion guard on hose and wire

#### Operating Parameters

- Temperature Range: -40°F to 158°F (-40°C to 70°C) Spikes to 221°F (105°C)
- Available in 12VDC or 24VDC design



#### P1/P2

Polyamide Pressure Line Design



#### Parflex SCR Hose Assembly Polyamide Pressure Line

- Specialty high temperature polyamide
- core with fabric reinforcement
- Stainless steel heating wire
- Extruded high temperature thermoplastic jacket
- Heat/abrasion shield

Base Part	I.	D	0.D.		with Shield (opt)		Max. Oper. Pressure		Min. Burst Pressure		Bend Radius		Standard Lengths*	
Number	mm	inch	mm	inch	mm	inch	psi	bar	psi	bar	inch	mm	mtr	
S0	6	.24	13	.51	21	.827	145	10	600	40	2	51	1/2, 1, 1.5, 2, 2.5, 3	

Many custom options available, please contact Parflex for details.

P1 - Abrasion guard, hose only

P2 - Abrasion guard on hose and wire

#### **Operating Parameters**

- Temperature Range: -40°F to 248°F (-40°C to 120°C) Spikes to 284°F (140°C)
- Internal/Fluid Temp: 140°F (60°C) Max., per Cummins AEB
- Available in 12VDC or 24VDC design



# **Hose Fittings**

-Parker

Permanent/Crimp Field Attachable/Reusable



























# **Q** General Technical

# **Table of Contents**

#### Intro

Hose Fitting Nomenclature	E-3
Fitting Configurations by Connection and End Code	E-4

#### Permanent/Crimp

54 Series	E-8
55/58 Series	E-12
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57 Series	E-58
58H Series	E-61
91N/91 Series	E-72
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93N Series	
94/95 Series	E-90
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CY Series	
SF Series	
HY Series	
LV Series	E-12 <sup>4</sup>
MS Series	E-125
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#### Field Attachable/Reuseable

51 Series	E-5
90 Series	
BA Series	
BU Series	
MS Series	



# Parflex Fittings

Parflex has expanded the Fitting Section to include the new, Global 56 Series.

#### Shorter and more compact than 55/58 Series

- -Weight reduction up to 20%
- -Easier handling/installation in tight installation areas
- -Short length may allow use of hose routing to replace current elbow fittings

#### Faster & easier hose crimping

-Full length crimp of the sleeve (no marking of crimp length needed), therefore easier, safer and faster crimping vs. 55 series

Current 55 series dies are qualified and can be used with the 56 series

#### Consolidation of 2 series into one

- (55 and 58 = 56) thus reducing the customer inventory
- Easy to choose product range
- Global fitting series/Global availability
- Global part numbering with metric & inch hex and end connections

# Parker Legacy Fitting Nomenclature

#### Example: 10356-8-6

This example describes a permanent crimp 1/2" Male JIC 37° with a 3/8" I.D. hose size. This fitting is constructed of steel since the designated material is blank.

**1**0356-8-6 - **Fitting Type** (1 = Permanent/Crimp)

(2 = Field Attachable Fitting)

10356-8-6 – End Configuration Code (Male JIC 37°)

103**56**-8-6 - Fitting Series (Series 56)

10356-8-6 - End Size (1/2")

10356-8-6 - Hose I.D. (3/8")

10356-8-6C - Alternate Material

Fitting part numbers that start with a "2" are field attachable fittings

#### **Legacy Fitting Material Selection**

- Blank = Steel (unless otherwise noted)
- B = All Brass
- C = Stainless Steel
- S = All Carbon Steel Used only with PTFE Fittings

# PAGE Fitting Nomenclature

#### Example: 08-16SAN-S

This example describes a permanent sanitary flange step down, 1/2" I.D. hose with a 1" sanitary flange. This fitting is constructed of stainless steel since the designated material is -S.

As demonstrated below, the nomenclature associated with the PAGE fitting is not consistent with the traditional Parker products, as the end size and hose I.D. are reversed and located at the front of the part construction.

**08**-16SAN-S – **Hose I.D.** (1/2")

08-**16**SAN-S – **End Size** (1")

08-16SAN-S – End Configuration Code (Sanitary Flange)

#### **PAGE Fitting Material Selection**

- B = All Brass
- C = Carbon Steel
- S = Stainless Steel

**NOTE:** The PAGE fittings, which are designed for use with traditional PAGE fluoropolymer hoses only, are a two piece crimp connection and need to be combined with the corresponding crimp collars located on page E-92.



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

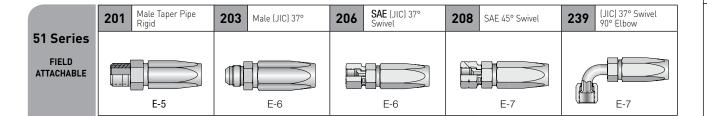
# **Standard Fitting Configurations by Connection and End Code**

	Description	End Code
	Male NPTF Pipe - Rigid - Straight	01
	Male NPTF Pipe - Swivel - Straight	13
Pipe	Male NPTF Pipe - Swivel - 90° Elbow	1L
_	Female NPTF Pipe - Rigid - Straight	02
	Female NPSM Pipe - Swivel - Straight (60° Cone)	07
g.	Male SAE Straight Thread with O-ring - Rigid - Straight	05
r. Tr	Male SAE Straight Thread with 0-ring - Swivel - Straight	0G
SAE Str. Trd.	Male SAE Straight Thread with 0-ring - Swivel - 90° Elbow	0L
SA	Male SAE Straight Thread with 0-ring - Adjustable - 90° Elbow	35
	Male JIC 37° - Rigid - Straight	03
	Male JIC 37° - Bulkhead without Locknut - Straight	LB
	Female JIC 37° - Swivel - Straight	06
	Female JIC 37° - Swivel - 45° Elbow - Short Drop	37
	Female JIC 37° - Swivel - 45° Elbow - Medium Drop	L7
	Female JIC 37° - Swivel - 90° Elbow - Short Drop	39
re	Female JIC 37° - Swivel - 90° Elbow - Medium Drop	L9
Flare	Female JIC 37° - Swivel - 90° Elbow - Long Drop	41
	Male SAE 45° - Rigid - Straight	04
	Female SAE 45° - Swivel - Straight	08
	Female SAE 45 / Swivel - 45° Elbow	77
	Female SAE 45 / Swivel - 90° Elbow	79
	Female SAE 45 / Swivel - 90° Elbow - Long Drop	81
	Female JIC 37°/SAE 45° Dual Flare - Swivel - Straight	06
ıre	Male Inverted SAE 45° - Swivel - Straight	28
Inverted Flare	Male Inverted SAE 45° - Swivel - 45° Elbow	67
ertec	Male Inverted SAE 45° - Swivel - 90° Elbow	69
luve	Female Inverted SAE 45° - Rigid - Straight	29
	Male Seal-Lok - Rigid - Straight (with O-ring)	J0
	Male Seal-Lok - Bulkhead without Locknut-Straight (with 0-ring)	JB
	Female Seal-Lok - Swivel - Straight - Long	JS
ok	Female Seal-Lok - Swivel - Straight - Short	JC
Seal-Lok	Female Seal-Lok - Swivel - 30° Elbow	J2
Se	Female Seal-Lok - Swivel - 22 1/2° Elbow	J6
	Female Seal-Lok - Swivel - 45° Elbow	J7
	Female Seal-Lok - Swivel - 90° Elbow - Short Drop	J9
	Female Seal-Lok - Swivel - 90° Elbow - Medium Drop	J5
	Female Seal-Lok - Swivel - 90° Elbow - Long Drop	J1
	Female Metric Swivel - Straight (30° Flare)	MU
S	Female BSP Parallel Pipe - Swivel - Straight (30° Flare)	FU
SIC	Male BSP Taper Pipe - Rigid - Straight (60° Cone)	UT
	Female BSP Parallel Pipe - Swivel - Straight (60° Cone)	GU
	Female BSP Parallel Pipe - Swivel - 45° Elbow (60° Cone)	G1
C)	Female BSP Parallel Pipe - Swivel - 90° Elbow (60° Cone)	G2
Metric	Male Metric L - Rigid - Straight (24° Cone)	D0
		1

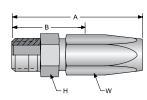
	Description	End Code
	Female Metric L - Swivel - Straight (Ball Nose)	C3
	Female Metric L - Swivel - 45° Elbow (Ball Nose)	C4
	Female Metric L - Swivel - 90° Elbow (Ball Nose)	C5
	Female Metric L - Swivel - Straight (24° Cone with 0-ring)	CA
	Female Metric L - Swivel - 45° Elbow (24° Cone with O-ring)	CE
ر د	Female Metric L - Swivel - 90° Elbow (24° Cone with 0-ring) -	CF
Metric	Male Metric S - Rigid - Straight (24° Cone)	D2
Σ	Male Standpipe Metric S - Rigid - Straight	3D
	Female Metric S - Swivel - Straight (Ball Nose)	C6
	Female Metric S - Swivel - 45° Elbow (Ball Nose)	C7
	Female Metric S - Swivel - 90° Elbow (Ball Nose)	C8
	Female Metric S - Swivel - Straight (24° Cone with 0-ring)	C9
	Female Metric S - Swivel - 45° Elbow (24° Cone with 0-ring)	0C
	Female Metric S - Swivel - 90° Elbow (24° Cone with 0-ring)	1C
	Male BSP Taper Pipe - Rigid - Straight	91
	Female BSP Parallel Pipe - Swivel - Straight (60° Cone)	92
	Male BSP Parallel Pipe - Rigid - Straight (60° Cone)	D9
BSP	Female BSP Parallel Pipe - Swivel - 45° Elbow (60° Cone)	B1
ä	Female BSP Parallel Pipe - Swivel - 90° Elbow (60° Cone)	B2
	Female BSP Parallel Pipe - Swivel - 90° Elbow Block Type (60° Cone)	B4
	Female BSP Parallel Pipe - Swivel - Straight (Flat Seat)	B5
	Male BSP Taper Pipe - Rigid - 45° Elbow	BV
Fr. Gaz	Male BSP Taper Pipe - Rigid - 90° Elbow or Side Outlet	BZ
Fr.	Male French Gaz Series - Rigid - Straight (24° Cone)	FG
	Female French Gaz Series - Swivel - Straight (Ball Nose)	F4
	Male Ferulok Flareless-Rigid-Straight (24° Cone with Nut & Ferrule)	11
	Female Ferulok Flareless - Swivel - Straight (24° Cone)	12
	DIN Metric Banjo - Straight	49
	ANSI B16.5 Flange	4K
	Female A-Lok® Compression	AL
	Female Cam & Groove	FC
	Sanitary Flange & Step Downs	FN
alty	Mini Sanitary Flange	FV
Specialty	Bulkhead w/Zerk Port Integrated	GK
S	Male I-Line® Sanitary	H1
	Female I-Line® Sanitary	H2
	Male Sanitary Bevel Seat	H4
	Female Sanitary Bevel Seat	H5
	Male Standpipe - Rigid - Straight (Inch Size Tube 0.D.)	34
	Male Standpipe - Rigid - Straight with V-Notch	TW
	Universal Tube Stub	TU
	Male Rapid Assembly, Straight	WU
	Male Rapid Assembly, 45° Elbow	WW
	Male Rapid Assembly, 90° Elbow	WY



#### 51 Series Visual Index



#### 20151 Male Taper Pipe Rigid



Part Number	Thread Size		se D.	A	Ą	Cutoff E		H Hex	W Hex
#	<u>~~~~~</u>	0	9					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
20151-2-3	1/8-27	3/16	5	1.71	43	1	25	7/16	5/8
20151-4-3	1/4-18	3/16	5	1.90	48	1-1/8	29	9/16	5/8
20151-2-4	1/8-27	1/4	6	1.90	48	1	25	1/2	5/8
20151-4-4	1/4-18	1/4	6	2.08	53	1-3/16	30	9/16	5/8
20151-4-5	1/4-18	5/16	8	2.17	55	1-7/16	37	9/16	3/4
20151-6-5	3/8-18	5/16	8	2.17	55	1-7/16	37	3/4	3/4
20151-4-6	1/4-18	3/8	10	2.61	66	1-7/16	37	3/4	7/8
20151-6-6	3/8-18	3/8	10	2.61	66	1-7/16	37	3/4	7/8
20151-8-6	1/2-14	3/8	10	2.80	71	1-9/16	40	7/8	7/8
20151-6-8	3/8-18	1/2	13	2.99	76	1-1/2	38	7/8	1-1/16
20151-8-8	1/2-14	1/2	13	3.17	81	1-11/16	43	7/8	1-1/16
20151-12-12	3/4-14	3/4	19	3.42	87	1-3/4	44	1-1/8	1-3/8
20151-16-16	1-11-1/2	1	25	3.74	95	2-1/4	57	1-3/8	1-9/16

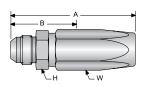
Construction: Steel.

Add "C" for Stainless Steel.

51 series field attachable couplings are not intended for use on hose that has previously been in service.



# 20351 Male (JIC) 37° - Rigid



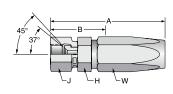
Part Number	Thread Size	Hose I.D.		F	4	Cutoff B		H Hex	W Hex						
#	<u>~~~~~</u>	0		0		0		$\odot$						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch						
20351-4-3	7/16-20	3/16	5	1.88	48	1-1/8	29	1/2	5/8						
20351-5-4	1/2-20	1/4	6	2.06	52	1-1/8	29	9/16	5/8						
20351-6-5	9/16-18	5/16	8	2.16	55	1-5/16	33	5/8	3/4						
20351-6-6	9/16-18	3/8	10	2.61	66	1-7/16	37	3/4	7/8						
20351-8-6	3/4-16	3/8	10	2.71	69	1-7/16	37	13/16	7/8						
20351-8-8	3/4-16	1/2	13	3.08	78	1-5/8	41	7/8	1-1/16						

Construction: Steel.

Add "C" for Stainless Steel.

51 series field attachable couplings are not intended for use on hose that has previously been in service.

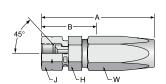
# 20651 SAE (JIC) 37° Swivel



Part Number	Thread Size		se D.	I	4	Cutoff E		H Hex	J Hex	W Hex
#	<u>~~~~~</u>	(	$\odot$					$\bigcirc$	$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch	inch
20651-4-3	7/16-20	3/16	5	1.99	51	1-1/4	32	9/16	9/16	5/8
20651-4-4	7/16-20	1/4	6	2.18	55	1-1/4	32	9/16	9/16	5/8
20651-5-4	1/2-20	1/4	6	2.24	57	1-7/16	37	5/8	5/8	5/8
20651-6-4	9/16-18	1/4	6	2.34	59	1-7/16	37	11/16	11/16	5/8
20651-6-5	9/16-18	5/16	8	2.37	60	1-1/2	38	11/16	11/16	3/4
20651-6-6	9/16-18	3/8	10	2.74	70	1-7/16	37	11/16	11/16	7/8
20651-8-6	3/4-16	3/8	10	2.88	73	1-5/8	41	7/8	7/8	7/8
20651-8-8	3/4-16	1/2	13	3.25	83	1-3/4	44	7/8	7/8	1-1/16
20651-10-8	7/8-14	1/2	13	3.37	86	1-7/8	48	1	1	1-1/16
20651-12-12	1-1/16-12	3/4	19	3.75	95	2-1/8	54	1-1/4	1-1/4	1-3/8
20651-16-16	1/5/16-12	1	25	3.93	100	2-7/16	62	1-1/2	1-1/2	1-9/16



#### 20851 SAE 45° Swivel



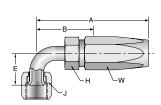
Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		H Hex	J Hex	W Hex
#	<u>~~~~</u>	0						$\bigcirc$	$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch	inch
20851-6-6	5/8-18	3/8	10	2.82	72	1-9/16	40	3/4	3/4	7/8

Construction: Steel.

Add "C" for Stainless Steel.

51 series field attachable couplings are not intended for use on hose that has previously been in service.

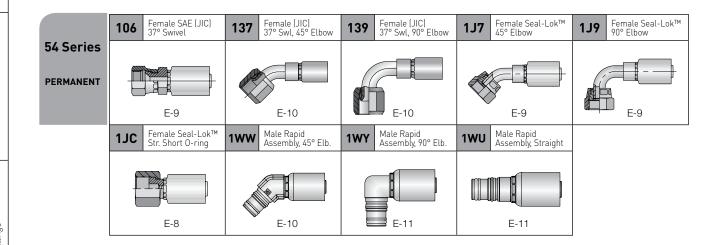
# 23951 JIC 37° Swivel 90° Elbow Short Drop

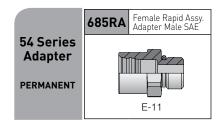


Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		Е		H Hex	J Hex	W Hex
#	<u>~~~~</u>	0	0							$\bigcirc$	$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch
23951-4-3	7/16-20	3/16	5	1.77	45	1	25	0.83	21	3/8	9/16	5/8
23951-6-6	9/16-18	3/8	10	2.70	69	1-7/16	37	0.85	22	9/16	11/16	7/8
	3/4-16	3/8	10	2.90	74	1-5/8	41	1.09	28	11/16	7/8	7/8

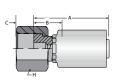


#### 54 Series Visual Index





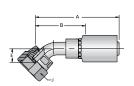
# 1JC54 Female Seal-Lok™ Straight Short O-ring Face Seal ISO 12151-1 SWSA



Part Number	Thread Size	Hose I.D.		A		Cutoff E	Allow.	(	H Hex	
#	<u>~~~~~</u>	0							$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1JC54-4-4	9/16-18	1/4	6	1.38	35	5/8	16	.32	8	11/16
1JC54-6-6	11/16-16	3/8	10	1.58	40	9/16	14	.32	8	13/16



# 1J754 Female Seal-Lok<sup>™</sup> 45° Elbow 0-ring Face Seal ISO 12151-1 SWE45

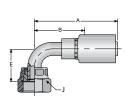


Part Number	Thread Size	Hose I.D.		ŀ	A		Allow.	E	J Hex	
#	<u>~~~~~</u>	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J754-4-4	9/16-18	1/4	6	2.16	55	1-3/8	35	0.41	10	11/16

Construction: Steel.

Add "C" for Stainless Steel.

# 1J954 Female Seal-Lok™ 90° Elbow O-ring Face Seal Short Drop ISO 12151-1 SWES90

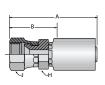


Part Number	Thread Size	Hose I.D.		Α		Cutoff E	Allow.	E	J Hex	
#	<u>~~~~~</u>	0							$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J954-4-4	9/16-18	1/4	6	2.14	54	1-3/8	35	0.83	21	11/16
1J954-6-6	11/16-16	3/8	10	2.32	59	1-3/8	35	0.90	23	13/16

Construction: Steel.

Add "C" for Stainless Steel.

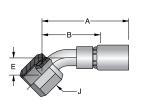
#### 10654 Female SAE (JIC) 37° Swivel



Part Number	Thread Size	Hose I.D.		,	А		Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0	9					$\bigcirc$	$\bigcirc$
		inch mm		inch	mm	inch	mm	inch	inch
10654-4-4	7/16-20	1/4	6	1.75	45	1	25	9/16	9/16
10654-6-6	9/16-18	3/8	10	2.13	54	1-3/16	30	11/16	11/16



#### 13754 Female JIC 37° Swivel 45° Elbow

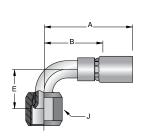


Part Number	Thread Size	Hose I.D.		А		Cutoff E	Allow.	E	J Hex	
#	<u>~~~~~</u>	0							$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13754-4-4	7/16-20	1/4	6	2.08	53	1-1/4	32	.33	8	9/16

Construction: Steel.

Add "C" for Stainless Steel.

## 13954 Female JIC 37° Swivel 90° Elbow Short Drop

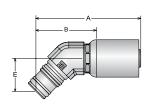


Part Number	Thread Size	Hose I.D.		,	4	Cutoff E	Allow.	i	J Hex	
#	<u>~~~~~</u>	(	0							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13954-4-4	7/16-20	1/4	6	1.97	50	1-3/16	30	.68	17	9/16
13954-6-6	9/16-18	3/8	10	2.30	59	1-5/8	41	.85	22	11/16

Construction: Steel.

Add "C" for Stainless Steel.

#### 1WW54 Male Rapid Assembly - 45° Elbow



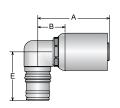
Part Number	Ste	em D.		Hose I.D.		А		Allow.	E		
#		$\bigcirc$	(	0							
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
1WW54-4-4	1/4	6	1/4	6	1.97	50	1-3/16	30	.67	17	
1WW54-6-6	3/8	10	3/8	10	2.19	56	1-3/16	30	.69	18	

Construction: Brass nipple, steel plated shell, Nitrile O-ring.

NOTE: Use with mating adapter PN 685RA.



#### 1WY54 Male Rapid Assembly - 90° Elbow

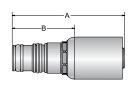


Part Number	Ste			Hose I.D.		4	Cutoff E	Allow.	E	
#	(	<u></u>	(	0						
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1WY54-4-4	1/4	6	1/4	6	1.27	32	1/2	13	.90	23
1WY54-6-6	3/8	10	3/8	10	1.49	38	1/2	13	1.00	25

Construction: Brass nipple, steel plated shell, Nitrile O-ring.

NOTE: Use with mating adapter PN 685RA.

#### 1WU54 Male Rapid Assembly - Straight

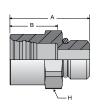


Part Number	Stem 0.D.			se D.	1	4	Cutoff E	Allow.
#	(	9	(	5				
	inch	mm	inch	mm	inch	mm	inch	mm
1WU54-4-4	1/4	6	1/4	6	1.85	47	1-1/16	27
1WU54-6-6	3/8	3/8 10		3/8 10		0 2.13 54		29

Construction: Brass nipple, steel plated shell, Nitrile O-ring.

NOTE: Use with mating adapter PN 685RA.

# 685RA Adapter Female Rapid Assembly - Male SAE Straight Thread ORB



Part Number	Ste 0.	em D.	Thread Size	A	1	H Hex
#	0		<u>~~~~~</u>			$\bigcirc$
	inch	mm		inch	mm	inch
685RA-4-4	1/4	6	7/16-20	1.05	27	11/16
685RA-6-4	3/8	10	7/16-20	1.15	29	3/4
685RA-4-6	1/4	6	9/16-18	1.12	28	3/4
685RA-6-6	3/8 10		9/16-18	1.15	29	3/4

Construction: Brass nipple, Nitrile O-ring.

NOTE: Use with mating fittings 1WU54, 1WW54, 1WY54.

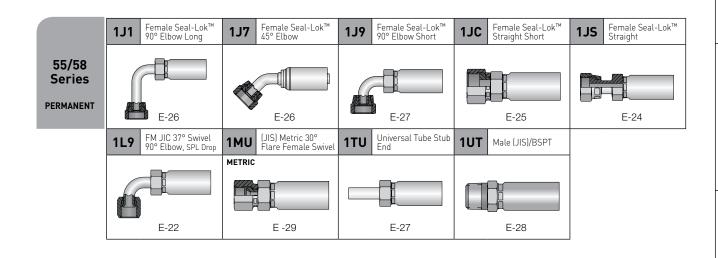


55/58 Series

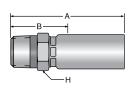
### 55/58 Series Visual Index

Male Str. Thread Male Taper Pipe Female Taper Pipe 101 102 103 Male (JIC) 37° 104 Male SAE 45° 105 E-15 E-13 E-14 E-14 E-16 Female SAE 45° SAE Flareless SAE (JIC) 37° Swivel 107 Female Pipe Swivel 108 112 106 111 Ferrul-Fix E-17 Male Pipe Swivel 90° Elbow FM JIC 37° Swivel FM JIC 37° Swivel 113 Male Pipe Swivel 11D Standpipe Light 11L 137 139 45° Elbow 90° Elbow METRIC E-20 E-19 E-33 E-21 E-19 FM JIC 37° Swivel 90° Lg Elbow SAE Male Inverted 45° Elbow Male (JIC) 37° Long 167 13D 13E 155 Hose Splicer 141 Standpipe Heavy METRIC E-23 E-34 E-15 E-22 E-23 Female BSP Pipe Swivel - Str. (60° Cone) Female BSP Pipe Swive 45° Elb. (60° Cone) Female BSP Pipe Swivel SAE Male Inverted A-Lok® 192 **1B2** 1AL 90° Elbow Compression 90° Elb. (60° Cone) E-24 E-34 E-28 E-35 E-35 Female Swivel DIN 20078 HW O-ring Female Swivel DIN Male Stud DIN Male Stud DIN 1D9 Male BSPP **1C6 1C9** 1D0 1D2 20078 Heavy 20078 HW w/o O-ring 20078 Light METRIC METRIC METRIC METRIC METRIC E-32 F-31 E-31 F-32 F-33 (JIS)/BSP 30° Flare (JIS)/BSP 60° Cone (JIS)/BSP 60° Cone (JIS)/BSP 60° Cone Male Seal-Lok™ 1G2 1FU 1G1 1GU **1J0** Female Swivel FM Swivel 45° Elb. FM Swivel 90° Elb. Female Swivel E-29 E-25 E-29 E-30





#### 10155/10158 Male Taper Pipe Rigid

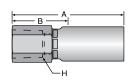


Part Number	Part Number	Thread Size		se D.	,	4	Cutoff E	Allow.	H Hex
#	#	<u>~~~~~</u>	(	9					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch
10155-2-3	_	1/8-27	3/16	5	1.94	49	1	25	9/16
10155-2-4	10158-2-4	1/8-27	1/4	6	2.13	54	1	25	5/8
10155-4-3	_	1/4-18	3/16	5	2.12	54	1-3/16	30	11/16
10155-4-4	10158-4-4	1/4-18	1/4	6	2.31	59	1-3/16	30	11/16
10155-4-5	_	1/4-18	5/16	8	2.37	60	1-3/16	30	11/16
10155-4-6	10158-4-6	1/4-18	3/8	10	2.66	68	1-5/16	33	3/4
10155-6-3	_	3/8-18	3/16	5	2.21	56	1-3/16	30	3/4
10155-6-4	10158-6-4	3/8-18	1/4	6	2.41	61	1-5/16	33	3/4
10155-6-5	_	3/8-18	5/16	8	2.47	63	1-5/16	33	3/4
10155-6-6	10158-6-6	3/8-18	3/8	10	2.66	68	1-5/16	33	3/4
10155-6-8	10158-6-8	3/8-18	1/2	13	2.85	72	1-5/16	33	7/8
10155-8-6	10158-8-6	1/2-14	3/8	10	2.91	74	1-9/16	40	15/16
10155-8-8	10158-8-8	1/2-14	1/2	13	3.09	78	1-9/16	40	15/16
10155-8-10	10158-8-10	1/2-14	5/8	16	3.20	81	1-1/2	38	1
10155-12-10	_	3/4-14	5/8	16	3.20	81	1-1/2	38	1-1/8
10155-12-12	10158-12-12	3/4-14	3/4	19	3.29	84	1-9/16	40	1-1/8
10155-16-16	10158-16-16	1-11-1/2	1	25	3.97	101	1-3/4	44	1-3/8

Construction: Steel. Add "B" for Brass.



#### 10255/10258 Female Taper Pipe Rigid



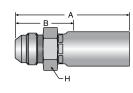
Part Number	Part Number	Thread Size	Hose I.D.		P	1	Cutoff E	Allow.	H Hex
#	#	~~~~	0		0				$\bigcirc$
55 Series	58 Series		inch mm		inch	mm	inch	mm	inch
10255-4-4	10258-4-4	1/4-18	1/4	1/4 6		61	1-1/4	32	3/4
10255-6-4	_	3/8-18	1/4	6	2.60	66	1-1/2	38	7/8
10255-6-6	10258-6-6	3/8-18	3/8	10	2.84	72	1-1/2	38	7/8
10255-8-6	_	1/2-14	3/8 10		2.87	73	1-3/8	35	1-1/16
10255-8-8	10258-8-8	1/2-14	1/2	1/2 13		73	1-3/8	35	1-1/16

Construction: Steel.

Add "B" for Brass.

Add "C" for Stainless Steel.

## 10355/10358 Male (JIC) 37° - Rigid



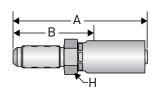
Part Number	Part Number	Thread Size		se D.	<i>I</i>	4	Cutoff E		H Hex
#	#	<u>*****</u>	0	$\odot$					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch
10355-4-3		7/16-20	3/16	5	2.17	55	1-3/16	30	9/16
10355-4-4	10358-4-4	7/16-20	1/4	6	2.31	58	1-3/16	30	5/8
10355-5-4	_	1/2-20	1/4	6	2.30	58	1-3/16	30	5/8
10355-5-5	1	1/2-20	5/16	8	2.30	58	1-3/16	30	5/8
10355-6-4	_	9/16-18	1/4	6	2.30	58	1-3/16	30	11/16
10355-6-5	1	9/16-18	5/16	8	2.30	58	1-3/16	30	11/16
10355-6-6	10358-6-6	9/16-18	3/8	10	2.65	67	1-1/4	32	3/4
10355-8-6	10358-8-6	3/4-16	3/8	10	2.68	68	1-3/8	35	13/16
10355-8-8	10358-8-8	3/4-16	1/2	13	2.87	73	1-3/8	35	7/8
10355-8-10	10358-8-10	3/4-16	5/8	16	3.10	79	1-7/16	36	1
10355-10-8	10358-10-8	7/8-14	1/2	13	3.03	77	1-9/16	40	15/16
_	10358-10-10	7/8-14	5/8	16	3.20	81	1-9/16	40	1
10355-12-10	10358-12-10	1-1/16-12	5/8	16	3.31	84	1-5/8	41	1-1/8
10355-12-12	10358-12-12	1-1/16-12	3/4	19	3.32	84	1-11/16	43	1-1/8
10355-16-16	10358-16-16	1-5/16-12	1	25	3.93	100	1-3/4	44	1-3/8

Construction: Steel.

Add "B" for Brass.



#### 13E55/13E58 Male (JIC) 37° Long



Part Number	Part Number	Thread Size	Hose I.D.		Δ				H Hex
#	#	~~~~	0						$\bigcirc$
55 Series	58 Series		inch	inch mm		mm	inch	mm	inch
13E55-4-4	_	7/16-20	1/4	6	2.93	74	1-13/16	46	5/8
13E55-6-6	_	9/16-18	3/8	10	3.38	86	2	51	3/4
13E55-8-8	_	3/4-16	1/2	1/2 13		95	2-1/8	54	7/8

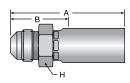
Construction: Steel.

Add "B" for Brass.

Add "C" for Stainless Steel.

**NOTE:** Bulkhead Locknut sold separately. WLN Locknuts are Manufactured by the Tube Fittings Division. Refer to Catalog 4300 for additional information.

#### 10455/10458 Male SAE 45° - Rigid



Part Number	Part Number	Thread Size		Hose I.D.		4	Cutoff .		H Hex
#	#	<u>~~~~~</u>	0						$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch
10455-4-3	_	7/16-20	3/16	5	2.06	52	1-1/8	29	9/16
10455-5-4	_	1/2-20	1/4	6	2.34	59	1-1/8	29	5/8
10455-6-5	_	5/8-18	5/16	8	2.55	65	1-1/4	32	3/4
10455-6-6	10458-6-6	5/8-18	3/8	10	2.74	70	1-1/4	32	3/4
10455-6-8	_	5/8-18	1/2	13	2.90	74	1-1/4	32	7/8
10455-8-8	10458-8-8	3/4-16	1/2 13		3.04	77	1-3/8	35	7/8
10455-12-12	10458-12-12	1-1/16-14	3/4	19	3.54	90	1-11/16	43	1-1/4

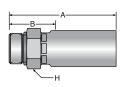
 $Construction: \ Steel.$ 

Add "B" for Brass.



# **O** General Technical

#### 10555/10558 Male Straight Thread O-ring (BUNA N O-ring included)

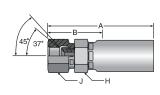


Part Number	Part Number	Thread Size		se D.	,	4	Cutoff E		H Hex
#	#	<u>~~~~~</u>	0	ingh mm					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch
10555-4-3	_	7/16-20	3/16	4	1.98	50	1-1/8	29	9/16
10555-4-4	_	7/16-20	1/4	6	2.11	54	1	25	5/8
10555-4-5	_	7/16-20	5/16	8	2.11	54	1	25	5/8
10555-5-4	10558-5-4	1/2-20	1/4	6	2.11	54	1	25	5/8
10555-5-5	_	1/2-20	5/16	8	2.11	54	1	25	5/8
10555-6-3	_	9/16-18	3/16	4	1.89	48	1	25	11/16
10555-6-4	10558-6-4	9/16-18	1/4	6	2.14	54	1	25	11/16
10555-6-6	10558-6-6	9/16-18	3/8	10	2.42	61	1-1/8	29	3/4
10555-8-6	_	3/4-16	3/8	10	2.46	62	1-1/8	29	7/8
10555-8-8	10558-8-8	3/4-16	1/2	13	2.65	67	1-3/16	30	7/8
10555-10-8	10558-10-8	7/8-14	1/2	13	2.77	70	1-5/16	33	1

Construction: Steel. Add "B" for Brass.

Add "C" for Stainless Steel.

#### 10655/10658 SAE (JIC) 37° Swivel



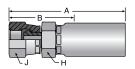
Part Number	Part Number	Thread Size		se D.	A	4	Cutoff		H Hex	J Hex
#	#	~~~~	0	9					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	inch
10655-3-3	_	3/8-24	3/16	5	2.23	57	1-5/16	33	9/16	9/16
10655-4-3	_	7/16-20	3/16	5	2.23	57	1-1/4	32	9/16	9/16
10655-5-3	_	1/2-20	3/16	5	2.24	57	1-1/4	32	9/16	5/8
10655-4-4	10658-4-4	7/16-20	1/4	6	2.36	60	1-3/16	30	5/8	9/16
10655-5-4	10658-5-4	1/2-20	1/4	6	2.43	62	1-1/4	32	5/8	5/8
10655-6-4	10658-6-4	9/16-18	1/4	6	2.45	62	1-5/16	33	5/8	11/16
10655-5-5	10658-5-5	1/2-20	5/16	8	2.46	62	1-1/4	32	5/8	5/8
10655-6-5	10658-6-5	9/16-18	5/16	8	2.48	63	1-1/4	32	5/8	11/16
10655-6-6	10658-6-6	9/16-18	3/8	10	2.70	69	1-5/16	33	11/16	11/16
10655-8-6	10658-8-6	3/4-16	3/8	10	2.89	73	1-1/2	38	11/16	7/8
10655-6-8	10658-6-8	9/16-18	1/2	13	2.96	75	1-3/8	35	7/8	11/16
10655-8-8	10658-8-8	3/4-16	1/2	13	3.08	78	1-1/2	38	7/8	7/8
10655-8-10	10658-8-10	3/4-16	5/8	16	3.30	84	1-5/8	41	1	15/16
10655-10-8	10658-10-8	7/8-14	1/2	13	3.12	79	1-5/8	41	7/8	1-1/16
10655-12-8	10658-12-8	1-1/16-12	1/2	13	3.21	82	1-3/4	44	1	1-1/4
10655-10-10	10658-10-10	7/8-14	5/8	16	3.30	84	1-5/8	41	1	1-1/16
10655-12-10	10658-12-10	1-1/16-12	5/8	16	3.40	86	1-3/4	44	1-1/8	1-5/16
10655-10-12	10658-10-12	7/8-14	3/4	19	3.36	85	1-11/16	43	1-1/8	1-1/16
10655-12-12	10658-12-12	1-1/16-12	3/4	19	3.40	86	1-3/4	44	1-1/8	1-1/4
_	10658-16-12	1-5/16-12	3/4	19	3.55	90	1-13/16	46	1-3/8	1-1/2
10655-16-16	10658-16-16	1-5/16-12	1	25	4.02	102	1-3/4	44	1-3/8	1-1/2

Construction: Steel. Add "B" for Brass. Add "C" for Stainless Steel.

NOTE: Sizes -4, -5,-8 and -10 incorporate a dual seat.



#### 10755/10758 Female Pipe Swivel

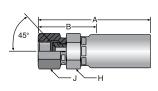


Part Number	Part Number	Thread Size			А		Cutoff .		H Hex	J Hex
#	#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	inch
10755-4-4	10758-4-4	1/4-18	1/4	6	2.43	62	1-1/4	32	5/8	11/16
10755-4-5	_	1/4-18	5/16	8	2.39	61	1-3/16	30	11/16	11/16
10755-6-6	10758-6-6	3/8-18	3/8	10	2.61	66	1-3/16	30	11/16	7/8
10755-8-8	10758-8-8	1/2-14	1/2	13	2.93	74	1-5/16	33	7/8	1
_	10758-12-12	3/4-14	3/4	19	3.48	88	1-3/4	44	1-1/8	1-1/4
10755-16-16	10758-16-16	1-11-1/2	1	25	4.00	102	1-13/16	46	1-3/8	1-1/2

Construction: Steel.
Add "B" for Brass.

Add "C" for Stainless Steel.

#### 10855/10858 Female SAE 45° Swivel



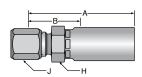
Part Number	Part Number	Thread Size		Hose I.D.		4	Cutoff E		H Hex	J Hex
#	#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	inch mm		mm	inch	mm	inch	inch
10855-6-4	_	5/8-18	1/4	6	2.55	65	1-3/8	35	5/8	3/4
10855-6-5	_	5/8-18	5/16	8	2.61	66	1-3/8	35	5/8	3/4
10855-6-6	10858-6-6	5/8-18	3/8	10	2.75	70	1-5/16	33	3/4	3/4
10855-12-12	10858-12-12	1-1/16-14	3/4	19	3.40	86	1-11/16	43	1-1/8	1-1/4

Construction: Steel.
Add "B" for Brass.

 $\label{eq:Add "C" for Stainless Steel.} Add "C" for Stainless Steel.$ 

# **G** General Technical

#### 11155 Ferrul-Fix (Nut and Sleeve included)



Part Number	Thread Size	Tu 0.	be D.		se D.	A	Ą	Cutoff E		H Hex	J Hex
#	*****	0	9	0	9					$\bigcirc$	$\bigcirc$
55 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
11155-6-4	9/16-18	3/8	10	1/4	6	2.34	59	1-1/8	32	11/16	11/16
11155-6-6	9/16-18	3/8	10	3/8	10	2.53	64	1-1/8	32	3/4	11/16
11155-8-6	3/4-16	1/2	13	3/8	10	2.63	67	1-5/16	33	7/8	7/8

Construction: Steel.

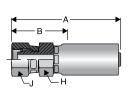
Add "C" for Stainless Steel.

"Ferrul-Fix" affords salvaging of bent tube section of combination tube-hose assemblies and quick, easy repair on the job. See page G-41 for Ferrule-Fix installation instructions.

NOTE: Nut Part Number is 111-size. Sleeve Part Number is 110-size.

Nut and Sleeve are Manufactured by the Tube Fittings Division. Refer to Catalog 4300 for additional informa-

#### 11255 SAE Flareless Swivel

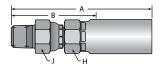


	Part Number	Thread Size	Hose I.D.		ı	4	Cutoff E		H Hex	J Hex
	#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
	55 Series		inch mm		inch	mm	inch	mm	inch	inch
Ī	11255-6-4	9/16-18	1/4	6	2.62	67	1-1/2	38	11/16	3/4
	11255-6-6	9/16-18	3/8	10	2.82	72	1-1/2	38	3/4	3/4
	11255-8-6	3/4-16	3/8	10	2.92	74	1-5/8	41	7/8	15/16

Construction: Steel. Add "B" for Brass.



#### 11355/11358 Male Pipe Swivel\*



Part Number	Part Number	Thread Size		ose D.	,	4	Cutoff E		H Hex	J Hex
#	#	<u>~~~~~</u>	(	9					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	inch
11355-4-3	_	1/4-18	3/16	5	2.72	69	1-3/4	44	5/8	11/16
11355-4-4	11358-4-4	1/4-18	1/4	6	2.84	72	1-3/4	44	5/8	11/16
11355-4-5	_	1/4-18	5/16	8	2.84	72	1-3/4	44	5/8	11/16
11355-6-6	11358-6-6	3/8-18	3/8	10	3.12	79	1-13/16	46	3/4	3/4
11355-8-6	_	1/2-14	3/8	10	3.37	86	2-1/16	52	3/4	15/16
11355-8-8	11358-8-8	1/2-14	1/2	13	3.56	90	2-1/16	52	7/8	15/16
11355-12-12	11358-12-12	3/4-14	3/4	19	3.81	97	2-1/8	54	1-1/8	1-1/8
11355-16-16	11358-16-16	1-11-1/2	1	25	5.06	129	2-13/16	71	1-1/2	1-1/2

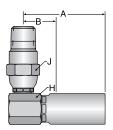
Construction: Steel.

Add "C" for Stainless Steel.

NOTE: \*For use with petroleum based fluids.

**WARNING:** Fittings allow minor movement to relieve stress on hose but are not recommended for continued or extensive swiveling. Not recommended for use in CNG applications.

#### 11L55/11L58 Male Pipe Swivel 90° Elbow\*



Part Number	Part Number	Thread Size	Ho I.I	se D.	,	Ą	Cutoff E	Allow.	H Hex	J Hex
#	#	*****	(	9					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	inch
11L55-4-4	_	1/4-18	1/4	6	1.94	49	13/16	21	11/16	11/16

Construction: Steel.

Add "C" for Stainless Steel.

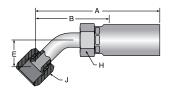
\*For use with petroleum based fluids.

**NOTE:** Use crimp Die Ring 80C-R1L with Parkrimp 1 Machine; crimp Die Ring 82C-R1L with KarryKrimp or MiniKrimp.

**WARNING:** Fittings allow minor movement under pressure to relieve stress on hose but are not recommended for continued or extensive swiveling. Fittings not recommended for use in CNG applications.



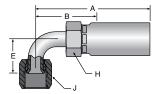
#### 13755/13758 Female JIC 37° Swivel 45° Elbow



Part Number	Part Number	Thread Size	Hose I.D.		Į.	4	Cutoff Allow. B		E		H Hex	J Hex
#	#	<u>~~~~~</u>	0	9							$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
13755-4-3	_	7/16-20	3/16	5	2.49	63	1-1/2	38	0.33	8	9/16	9/16
13755-4-4	13758-4-4	7/16-20	1/4	6	2.49	63	1-1/2	38	0.33	8	5/8	9/16
13755-5-4	_	1/2-20	1/4	6	2.49	63	1-1/2	38	0.36	9	5/8	5/8
13755-6-5	_	9/16-18	5/16	8	2.73	69	1-9/16	40	0.39	10	5/8	11/16
13755-6-6	13758-6-6	9/16-18	3/8	10	2.91	74	1-9/16	40	0.39	10	3/4	11/16
13755-8-6	13758-8-6	3/4-16	3/8	10	3.18	81	1-13/16	46	0.55	14	3/4	7/8
13755-8-8	13758-8-8	3/4-16	1/2	13	3.37	86	1-13/16	46	0.55	14	7/8	7/8
13755-10-8	13758-10-8	7/8-14	1/2	13	3.42	87	1-7/8	48	0.63	16	7/8	1
_	13758-10-10	7/8-14	5/8	16	3.44	87	1-3/4	44	0.64	16	1-1/16	1
13755-12-12	13758-12-12	1-1/16-12	3/4	19	4.05	103	2-3/8	60	0.78	20	1-1/8	1-1/4
13755-16-16	13758-16-16	1-5/16-12	1	25	4.57	116	2-5/16	59	0.89	23	1-3/8	1-1/2



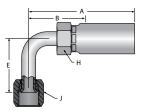
# 13955/13958 Female JIC 37° Swivel 90° Elbow Short Drop



Part Number	Part Number	Thread Size		se D.	,	4	Cutoff E		ı	Ē	H Hex	J Hex
#	#	<u>~~~~~</u>	0	0							$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
13955-4-3	_	7/16-20	3/16	5	2.49	63	1-3/8	35	0.68	17	9/16	9/16
13955-4-4	13958-4-4	7/16-20	1/4	6	2.49	63	1-3/8	35	0.68	17	5/8	9/16
13955-5-4	_	1/2-20	1/4	6	2.49	63	1-9/16	40	0.77	20	5/8	5/8
13955-6-4	_	9/16-18	1/4	6	2.57	65	1-9/16	36	0.85	22	5/8	11/16
13955-6-5	_	9/16-18	5/16	8	2.73	69	1-1/2	38	0.85	22	5/8	11/16
13955-6-6	13958-6-6	9/16-18	3/8	10	2.91	74	1-1/2	38	0.91	23	11/16	11/16
13955-8-6	13958-8-6	3/4-16	3/8	10	3.18	81	1-9/16	40	1.14	29	3/4	7/8
13955-8-8	13958-8-8	3/4-16	1/2	13	3.37	86	1-5/8	41	1.09	28	7/8	7/8
13955-10-8	13958-10-8	7/8-14	1/2	13	3.42	87	1-3/4	44	1.23	31	7/8	1
_	13958-10-10	7/8-14	5/8	16	3.28	83	1-5/8	41	1.23	31	1-1/16	1
13955-12-12	13958-12-12	1-1/16-12	3/4	19	4.05	103	2-1/4	57	1.81	46	1-1/8	1-1/4
13955-16-16	13958-16-16	1-5/16-12	1	25	4.57	116	2-9/16	65	2.14	54	1-3/8	1-1/2



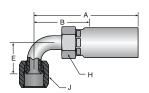
# 14155/14158 Female JIC 37° Swivel 90° Elbow Long Drop



Part Number	Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		E		H Hex	J Hex
#	#	<u>~~~~~</u>	0								$\Diamond$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
14155-4-3	_	7/16-20	3/16	5	2.37	60	1-3/8	35	1.80	46	9/16	9/16
14155-4-4	_	7/16-20	1/4	6	2.57	65	1-7/16	36	1.80	46	5/8	9/16
14155-5-4	_	1/2-20	1/4	6	2.51	64	1-3/8	35	1.80	46	5/8	5/8
14155-6-5	_	9/16-18	5/16	8	2.73	69	1-9/16	40	2.13	54	5/8	11/16
14155-6-6	14158-6-6	9/16-18	3/8	10	2.92	74	1-9/16	40	2.13	54	11/16	11/16
14155-8-6	14158-8-6	3/4-16	3/8	10	3.00	76	1-5/8	41	2.52	64	3/4	7/8
14155-8-8	14158-8-8	3/4-16	1/2	13	3.18	81	1-5/8	41	2.43	62	7/8	7/8
14155-10-8	14158-10-8	7/8-14	1/2	13	3.39	86	1-13/16	46	2.57	65	7/8	1
14155-12-12	14158-12-12	1-1/16-12	3/4	19	3.91	99	2-3/16	56	3.73	95	1-1/8	1-1/4
14155-16-16	14158-16-16	1-5/16-12	1	25	4.62	117	2-3/8	60	4.33	110	1-3/8	1-1/2

Construction: Steel. Add "C" for Stainless Steel.

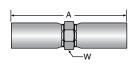
# 1L955/1L958 Female JIC 37° Swivel 90° Elbow Special Drop



Part Number	Part Number	Thread Size		se D.	,	1	Cutoff E		í		H Hex	J Hex
#	#	*****	0	9							$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1L955-4-3	_	7/16-20	3/16	5	2.31	59	1-3/8	35	0.88	22	9/16	9/16
1L955-4-4	_	7/16-20	1/4	6	2.47	63	1-3/8	35	0.88	22	5/8	9/16
1L955-5-4	_	1/2-20	1/4	6	2.53	64	1-7/16	36	0.88	22	5/8	5/8
1L955-6-5	_	9/16-18	5/16	8	2.69	68	1-1/2	38	1.12	28	5/8	11/16
1L955-6-6	1L958-6-6	9/16-18	3/8	10	2.88	73	1-7/16	36	1.12	28	11/16	11/16
1L955-8-6	1L958-8-6	3/4-16	3/8	10	3.00	76	1-5/8	41	1.61	41	3/4	7/8
1L955-8-8	1L958-8-8	3/4-16	1/2	13	3.16	80	1-5/8	41	1.61	41	7/8	7/8
1L955-10-8	1L958-10-8	7/8-14	1/2	13	3.68	93	2-1/8	54	1.75	44	7/8	1
1L955-12-12	1L958-12-12	1-1/16-12	3/4	19	4.29	109	2-1/2	64	2.06	52	1-1/8	1-1/4
1L955-16-16	1L958-16-16	1-5/16-12	1	25	5.14	131	2-3/4	70	2.50	64	1-3/8	1-1/2



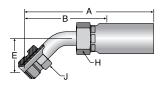
#### 15555/15858 Hose Splicer



55 Series	58 Series		Hose I.D. A		W Hex	
#	#	0	9			$\bigcirc$
Part Number	Part Number	inch mm		inch	mm	inch
15555-4-4		1/4	6	3.25	83	11/16
15555-5-5		5/16	8	325	83	3/4
15555-6-6		3/8	10	3.62	92	13/16
15555-8-8	15858-8-8	1/2	13	4.00	102	1
15555-12-12	15858-12-12	3/4	19	4.50	114	1-5/16
15555-16-16	15858-16-16	1	25	5.54	141	1-9/16

Construction: Steel

#### 16755/16758 SAE Male Inverted Swivel 45° Elbow



55 Series	Thread Size	Tu 0.	be D.		se D.	A	١	Cutoff E	Allow.	i		H Hex	J Hex
#	<u>~~~~~</u>	(	$\bigcirc$	0	9							$\bigcirc$	$\bigcirc$
Part Number		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
16755-6-6	5/8-18	3/8	10	3/8	10	3.48	88	2-1/8	54	0.94	24	3/4	5/8

Construction: Steel.

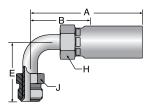
Add "C" for Stainless Steel.



E-23

# **O** General Technical

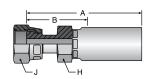
#### 16955/16958 SAE Male Inverted Swivel 90° Elbow



Part Number	Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		Е		H Hex	J Hex
#	#	<u>~~~~~</u>	0								$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
16955-6-6	_	5/8-18	3/8	10	3.48	88	1-3/4	27	1.69	43	3/4	5/8

Construction: Steel. Add "C" for Stainless Steel.

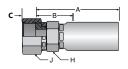
#### 1JS55/1JS58 Female Seal-Lok™ Straight ISO 12151-1-SWSB



Part Number	Part Number	Thread Size	Hose I.D.		А		Cutoff Allow. B		H Hex	J Hex
#	#	~~~~	0		)				$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	inch
1JS55-4-3	_	9/16-18	3/16	5	2.23	57	1-1/4	32	9/16	11/16
1JS55-4-4	_	9/16-18	1/4	6	2.42	61	1-1/4	32	5/8	11/16
1JS55-6-4	_	11/16-16	1/4	6	2.48	63	1-1/4	32	11/16	13/16
1JS55-6-5	_	11/16-16	5/16	8	2.54	65	1-5/16	33	11/16	13/16
1JS55-6-6	1JS58-6-6	11/16-16	3/8	10	2.73	69	1-5/16	33	11/16	13/16
1JS55-8-6	_	13/16-16	3/8	10	3.00	76	1-5/8	41	7/8	15/16
1JS55-8-8	1JS58-8-8	13/16-16	1/2	13	3.20	81	1-5/8	41	7/8	15/16
1JS55-10-10	1JS58-10-10	1-14	5/8	16	3.53	90	1-7/8	48	1-1/8	1-1/8
1JS55-12-12	1JS58-12-12	1-3/16-12	3/4	19	3.75	95	2	51	1-1/4	1-3/8



# 1JC55/1JC58 Female Seal-Lok<sup>™</sup> Straight - Swivel - Short ISO 12151-1-SWSA

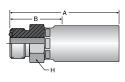


Part Number	Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		C		H Hex	J Hex
#	#	<u>~~~~~</u>	0								$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch (mm)	inch (mm)
1JC55-4-3	_	9/16-18	3/16	5	1.88	48	15/16	24	.32	8	9/16	11/16
1JC55-4-4	1JC58-4-4	9/16-18	1/4	6	2.16	55	1-1/16	25	.32	8	5/8	11/16
1JC55-6-4	1JC58-6-4	11/16-16	1/4	6	2.22	56	1-1/16	27	.32	8	11/16	13/16
1JC55-4-5	1JC58-4-5	9/16-18	5/16	8	2.22	56	1	27	.32	8	5/8	11/16
1JC55-6-5	1JC58-6-5	11/16-16	5/16	8	2.28	58	1-1/16	27	.32	8	11/16	13/16
1JC55-6-6	1JC58-6-6	11/16-16	3/8	10	2.47	63	1-1/16	27	.32	8	11/16	13/16
1JC55-6-6-SM	1JC58-6-6-SM	11/16-16	3/8	10	2.47	63	1-1/16	27	.32	8	(19)	(22)
1JC55-8-6	1JC58-8-6	13/16-16	3/8	10	2.56	65	1-3/16	30	.43	11	7/8	15/16
1JC55-8-6-SM	1JC58-8-6-SM	13/16-16	3/8	10	2.56	65	1-3/16	30	.43	11	(24)	(24)
1JC55-8-8	1JC58-8-8	13/16-16	1/2	13	2.75	70	1-3/16	30	.43	11	7/8	15/16
1JC55-10-8	1JC58-10-8	1-14	1/2	13	2.95	75	1-3/8	35	.53	13	1-1/8	1-1/8
_	1JC58-10-10	1-14	5/8	16	3.05	77	1-3/8	35	.53	13	1-1/8	1-1/8
1JC55-10-12	1JC58-10-12	1-14	3/4	19	3.15	80	1-3/8	35	.53	13	1-1/8	1-1/8
1JC55-12-8		1-3/16-12	1/2	13	3.00	76	1-7/16	36	.57	14	1-1/4	1-3/8
1JC55-12-10	1JC58-12-10	1-3/16-12	5/8	16	3.10	79	1-7/16	36	.57	14	1-1/4	1-3/8
1JC55-12-12	1JC58-12-12	1-3/16-12	3/4	19	3.20	81	1-7/16	36	.57	14	1-1/4	1-3/8
1JC55-16-16	1JC58-16-16	1-7/16-12	1	25	3.74	95	1-1/2	38	.58	15	1-1/2	1-5/8
_	1JC58-20-16	1-11/16-12	1	25	3.78	96	1-9/16	40	.59	15	1-5/8	1-3/8

Construction: Steel.

Add "C" for Stainless Steel.

# 1J055/1J058 Male Seal-Lok™ Rigid Straight (with Buna N 0-ring) ISO 12151-1-S

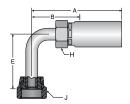


Part Number	Part Number	Thread Size	Hose I.D.		Α		Cutoff E		H Hex
#	#	<u>~~~~~</u>	0						$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch (mm)
1J055-4-4	_	9/16-18	1/4	6	2.20	56	1-1/16	27	5/8
1J055-4-4-SM	_	9/16-18	1/4	6	2.20	56	1-1/16	27	(17)
1J055-6-6	1J058-6-6	11/16-16	3/8	10	2.53	63	1-1/8	29	3/4
1J055-6-6-SM	1J058-6-6-SM	11/16-16	3/8	10	2.47	63	1-1/8	29	(19)
1J055-8-6	_	13/16-16	3/8	10	2.62	67	1-1/4	32	7/8
1J055-8-6 -SM	_	13/16-16	3/8	10	2.62	67	1-1/4	32	(24)
1J055-8-8	1J058-8-8	13/16-16	1/2	13	2.75	70	1-1/4	32	15/16
1J055-8-8 -SM	1J058-8-8-SM	13/16-16	1/2	13	2.75	70	1-1/4	32	(24)



# **Q** General Technical

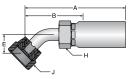
#### 1J155/1J158 Female Seal-Lok™ Swivel 90° Elbow Long Drop ISO 12151-1-SWEL90



Part Number	Part Number	Thread Size	Hose I.D.		А		Cutoff Allow. B		Е		H Hex	J Hex
#	#	<u>~~~~~</u>	0								$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J155-4-3	_	9/16-18	3/16	5	2.30	58	1-5/16	33	1.80	46	9/16	11/16
1J155-4-4	_	9/16-18	1/4	6	2.45	62	1-5/16	46	1.80	46	9/16	11/16
1J155-6-6	1J158-6-6	11/16-16	3/8	10	2.94	75	1-3/4	44	2.13	54	11/16	13/16
1J155-8-6	_	13/16-16	3/8	10	2.94	75	1-5/8	41	2.52	64	3/4	15/16
1J155-8-8	1J158-8-8	13/16-16	1/2	13	3.21	82	1-11/16	43	2.52	64	7/8	15/16
_	1J158-10-10	1-14	5/8	16	3.35	85	1-11/16	43	2.76	70	1-1/16	1-1/8
1J155-12-12	1J158-12-12	1-3/16-12	3/4	19	3.86	98	2-1/8	54	3.78	96	1-1/8	1-3/8
1J155-16-16	1J158-16-16	1-7/16-12	1	25	4.42	112	2-3/8	60	4.50	114	1-3/8	1-5/8

Construction: Steel. Add "C" for Stainless Steel.

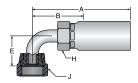
#### 1J755/1J758 Female Seal-Lok™ Swivel 45° Elbow ISO 12151-1-SWE45



Part Number	Part Number	Thread Size	Hose I.D.		А		Cutoff Allow. B		E		H Hex	J Hex
#	#	<u>~~~~~</u>	0								$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J755-4-4	1J758-4-4	9/16-18	1/4	6	2.66	68	1-1/2	38	0.41	10	5/8	11/16
1J755-6-4	_	11/16-16	1/4	6	2.74	70	1-5/8	41	0.43	11	5/8	13/16
1J755-6-6	1J758-6-6	11/16-16	3/8	10	2.98	76	1-5/8	43	0.43	11	3/4	13/16
1J755-8-6	_	13/16-16	3/8	10	3.23	82	1-15/16	49	0.59	15	3/4	15/16
1J755-8-8	1J758-8-8	13/16-16	1/2	13	3.43	87	1-15/16	49	0.59	15	7/8	15/16
_	1J758-10-10	1-14	5/8	16	3.56	90	1-7/8	48	0.65	17	1-1/16	1
1J755-12-12	1J758-12-12	1-3/16-12	3/4	19	3.67	93	2	51	0.81	21	1-1/8	1-3/8
1J755-16-16	1J758-16-16	1-7/16-12	1	25	5.10	130	2-7/8	73	0.94	24	1-3/8	1-5/8



## 1J955/1J958 Female Seal-Lok<sup>™</sup> Swivel 90° Elbow Short Drop ISO 12151-1-SWES90

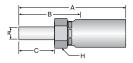


Part Number	Part Number	Thread Size	Ho I.I	se D.	ı	4	Cutoff A		E		H Hex	J Hex
#	#	<u>~~~~~</u>	0	$\odot$							$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J955-4-4	_	9/16-18	1/4	6	2.49	63	1-3/8	35	0.82	21	5/8	11/16
1J955-6-4	_	11/16-16	1/4	6	2.59	66	1-7/16	36	0.90	23	5/8	13/16
1J955-6-5	_	11/16-16	5/16	8	2.66	68	1-1/2	38	0.90	23	5/8	13/16
1J955-6-6	1J958-6-6	11/16-16	3/8	10	2.85	72	1-1/2	38	0.91	23	3/4	13/16
1J955-8-6		13/16-16	1/2	13	3.15	80	1-5/8	41	1.14	29	3/4	15/16
_	1J958-8-8	13/16-16	1/2	13	3.15	80	1-5/8	41	1.14	29	7/8	15/16
_	1J958-10-10	1-14	5/8	16	3.26	83	1-5/8	41	1.27	32	1-1/16	1
1J955-12-12	1J958-12-12	1-3/16-12	3/4	19	3.82	89	2-1/8	54	1.85	47	1-3/8	1-3/8
1J955-16-16	1J958-16-16	1-7/16-12	1	25	5.03	128	2-15/16	75	2.21	56	1-3/8	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

#### 1TU55/1TU58 Universal Inch Tube Stub End



Part Number	Part Number	Diameter R		ose D.	F	4	Cutoff E		(		H Hex
#	#	$\varnothing$	0	$\odot$							$\bigcirc$
55 Series	58 Series	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch
1TU55-4-4	1TU58-4-4	1/4	1/4	6	2.60	66	1-1/2	38	0.72	18	5/8
1TU55-6-6	1TU58-6-6	3/8	3/8	10	2.91	74	1-1/2	38	0.78	20	3/4
1TU55-8-8	1TU58-8-8	1/2	1/2	13	3.35	85	1-13/16	46	1.03	26	7/8
1TU55-12-12	1TU58-12-12	3/4	3/4 19		3.66	93	1-15/16	49	1.03	26	1-1/8
1TU55-16-16	1TU58-16-16	1	1	25	4.41	112	2-3/16	56	1.29	33	1-3/8

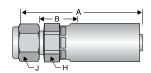
Construction: Steel.

Add "C" for Stainless Steel.

**NOTE:** Use with A-Lok & CPI nuts, sleeves and adapters. These components are manufactured by Parker's Instrumentation Connectors Division. Refer to catalogs 4230 & 4233 for additional information.



#### 1AL55/1AL58 A-LOK® Compression (With Nut and Ferrule)



Part Number	Part Number	Thread Size	Tube 0.D.		Hose I.D.		4	Cutoff E		H Hex	J Hex
#	#	<u>~~~~</u>	$\bigcirc$	0						$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	inch mm		inch	mm	inch	mm	inch	inch
1AL55-4-4	1AL58-4-4	7/16-20	1/4	1/4	6	2.16	55	11/16	17	5/8	9/16
1AL55-6-6	1AL58-6-6	9/16-20	3/8	3/8	10	2.56	65	13/16	21	3/4	11/16
1AL55-8-8	1AL58-8-8	3/4-20	1/2	<b>1/2</b> 13		2.81	71	3/4	19	15/16	7/8

Construction: 316 Stainless nipple and shell.

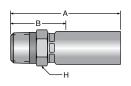
NOTE: Nut part No. is XNUX or XNUX-316 for stainless steel.

Front ferrule part No. is **XFFX** or **XFFX-316** for stainless steel. Back ferrule part No. is **XBFX** or **XBFX-316** for stainless steel.

X denotes dash size.

Nuts and Ferrules are Manufactured by the Instrumentation Products Division. Refer to Catalog 4300 for additional information.

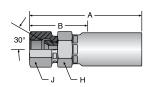
### 1UT55/1UT58 Male Rigid (JIS)/BSPT



Part Number	Part Number	Thread Size		se D.	I	4	Cutoff E	Allow.	H Hex
#	#	<u>~~~~~</u>	0	$\odot$					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm
1UT55-4-3	_	PT 1/4-19	3/16	5	2.20	56	1-1/4	32	19
1UT55-4-4	_	PT 1/4-19	1/4	6	2.36	60	1-1/4	32	19



## 1FU55/1FU58 (JIS)/BSP 30° Flare Female Swivel ISO 228-1

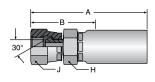


Part Number	Part Number	Thread Size	Ho I.I	se D.	ŀ	4	Cutoff .		H Hex	J Hex
#	#	<u>~~~~~</u>	(	9					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm	mm
1FU55-4-4	1FU58-4-4	PF 1/4-19	1/4	6	2.48	63	1-9/16	40	19	19
1FU55-6-6	1FU58-6-6	PF 3/8-19	3/8	10	2.88	73	1-11/16	43	22	22
1FU55-8-8	1FU58-8-8	PF 1/2-14	1/2	13	3.27	83	1-7/8	48	27	27
1FU55-12-12	1FU58-12-12	PF 3/4-14	3/4	19	3.58	91	1-3/16	31	36	36
1FU55-16-16	1FU58-16-16	PF 1-11	1	25	4.22	107	1-3/8	35	41	41

Construction: Steel.

Add "C" for Stainless Steel.

## 1GU55/1GU58 (JIS)/BSP 60° Cone Female Swivel ISO 228-1

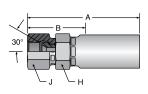


Part Number	Part Number	Thread Size		se D.	A	4	Cutoff .		H Hex	J Hex				
#	#	<u>~~~~~</u>	0	0		0		0					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm	mm				
1GU55-4-4	_	PF 1/4-19	1/4	6	2.44	62	1-1/4	32	19	19				
1GU55-6-6	1GU58-6-6	PF 3/8-19	3/8	10	2.76	70	1-3/8	35	22	22				
1GU55-8-8	_	PF 1/2-14	1/2	13	3.24	82	1-11/16	43	27	27				
1GU55-12-12	_	PF 3/4-14	3/4	19	3.46	88	1-13/16	46	27	36				

Construction: Steel.

Add "C" for Stainless Steel.

### 1MU55/1MU58 (JIS) Metric 30° Flare Female Swivel



Part Number	Part Number	Thread Size		se D.	A	4	Cutoff E		H Hex	J Hex
#	#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch mm		inch	mm	inch	mm	mm	mm
1MU55-4-4	_	M14 x 1,5	1/4 6		2.41	61	1-5/16	33	19	19
1MU55-4-6	_	M14 x 1,5	3/8	10	2.75	70	1-3/8	35	19	19
1MU55-6-6	_	M18 x 1,5	3/8 10		2.86	73	1-1/2	38	22	24
1MU55-8-8	_	M22 x 1,5	<b>1/2</b> 13		3.19	81	1.63	41	27	27

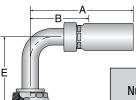


#### 1G155/1G158 (JIS)/BSP 60° Cone Female Swivel 45° Elbow ISO 228-1

Part Number	Part Number	Thread Size	Hose I.D.		,	4	Cutoff .		E	Ē	J Hex
#	#	<u>~~~~~</u>	0								$\Diamond$
55 Series	58 Series		inch mm		inch mm		inch	mm	inch	mm	mm
1G155-4-4	_	PF 1/4-19	inch mm 1/4 6		3.30	84	2-3/16	56	0.79	20	19
1G155-6-6	_	PF 3/8-19	3/8 10		3.48	88	2-1/8	54	0.82	21	22
1G155-8-8	_	PF 1/2-14	1/2 13		4.27	108	2-11/16	68	1.16	30	27

Construction: Steel. Add "C" for Stainless Steel.

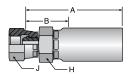
#### 1G255/1G258 (JIS)/BSP 60° Cone Female Swivel 90° Elbow ISO 228-1



Part Number	Part Number	Thread Size	Hose I.D.  inch mm 1/4 6		l l	4	Cutoff	Allow.	E		J Hex
#	#	*****	0								$\bigcirc$
55 Series	58 Series		inch mm		inch	mm	inch	mm	inch	mm	mm
1G255-4-4	_	PF 1/4-19	1/4			65	1-7/16	37	0.94	24	19
1G255-6-6	_	PF 3/8-19	3/8 10		3.06	78	1-9/16	40	1.50	38	22
1G255-8-8	_	PF 1/2-14	1/2	13	3.26	83	1-11/16	43	1.81	46	27



## 1C655/1C658 Female Metric Swivel DIN 20078 Heavy Series (Without 0-ring) ISO 8434-1

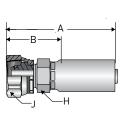


Part Number	Part Number	Thread Size		se D.	ļ	4	Cutoff .		H Hex	J Hex
#	#	<u>~~~~~</u>	0	9					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm	mm
1C655-8-3	_	M16 x 1,5	3/16	5	2.25	57	1-3/8	35	19	19
1C655-10-4	1C658-10-4	M18 x 1,5	1/4	6	2.50	64	1-3/8	35	19	22
1C655-12-5	_	M20 x 1,5	5/16	8	2.57	65	1-7/16	37	24	24
1C655-14-6	_	M22 x 1,5	3/8	10	3.02	77	1-5/8	41	27	27
1C655-16-8	1C658-16-8	M24 x 1,5	1/2	13	3.19	81	1-5/8	41	27	30
1C655-20-12	_	M30 x 2	3/4	19	3.46	88	1-11/16	43	36	36
_	1C658-25-12	M36x2	3/4	19	3.64	92	1-7/8	48	41	46

Construction: Steel.

Add "C" for Stainless Steel.

## 1C955/1C958 Female Metric Swivel DIN 20078 Heavy Series (With 0-ring) ISO 12151-2-SWS

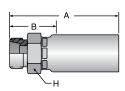


Part Number	Part Number	Thread Size		se D.	,	Ą	Cutoff		H Hex	J Hex
#	#	<u>~~~~~</u>	0	$\odot$					$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm	mm
1C955-8-3	_	M16 x 1,5	3/16	5	2.15	55	1-1/4	32	19	19
1C955-10-4	1C958-10-4	M18 x 1,5	1/4	6	2.46	63	1-5/16	33	19	22
1C955-12-5	1C958-12-5	M20 x 1,5	5/16	8	2.54	65	1-7/16	37	24	24
1C955-14-6	1C958-14-6	M22 x 1,5	3/8	10	2.95	75	1-9/16	40	27	27
1C955-16-8	1C958-16-8	M24 x 1,5	1/2	13	3.18	81	1-9/16	40	24	30
10955-20-12	1C958-20-12	M30 x 2	3/4	19	3.33	85	1-9/16	40	36	36
10955-25-12	1C958-25-12	M36 x 2	3/4	19	3.55	90	1-13/16	46	41	46



## **O** General Technical

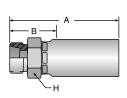
#### 1D055/1D058 Male Stud DIN 20078 Light Series ISO 8434-1



Part Number	Part Number	Thread Size		se D.	,	A	Cutoff E	H Hex	
#	#	<u>~~~~~</u>	0	$\odot$					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm
1D055-6-3	_	M12 x 1,5	3/16	5	1.93	49	1	25	15
1D055-8-4	_	M14 x 1,5	1/4	6	2.17	55	1	25	19
1D055-12-5	_	M18 x 1,5	5/16	8	2.32	59	1-1/16	27	22
1D055-10-6	1D058-10-6	M16 x 1,5	3/8	10	2.52	64	1	26	22
1D055-12-6	1D058-12-6	M18 x 1,5	3/8	10	2.52	64	1-1/16	27	22
1D055-15-8	1D058-15-8	M22 x 1,5	1/2 13		2.80	71	1-3/16	30	27
_	1D058-22-12	M30x2	3/4 19		3.11	79	1-1/4	32	36

Construction: Steel. Add "C" for Stainless Steel.

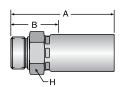
#### 1D255/1D258 Male Stud DIN 20078 Heavy Series ISO 8434-1



Part Number	Part Number	Thread Size		ose D.	ļ	4	Cutoff E		H Hex
#	#	<u>~~~~~</u>	0	9					$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm
1D255-10-4	1D258-10-4	M18 x 1,5	1/4	6	2.28	58	1-1/8	29	22
1D255-12-5	_	M20 x 1,5	5/16	8	2.44	62	1-3/16	30	24
1D255-12-6	_	M20 x 1,5	3/8	10	2.64	67	1-3/16	30	24
1D255-14-6	1D258-14-6	M22 x 1,5	3/8	10	2.72	69	1-1/4	32	27
1D255-16-8	1D258-16-8	M24 x 1,5	1/2	13	2.87	73	1-1/4	32	27
1D255-20-12	1D258-20-12	M30 x 2	3/4	19	3.19	81	1-5/16	33	36
_	1D258-25-12	M36x2	3/4	19	3.27	83	1-3/8	35	41



## **1D955/1D958 Male BSPP - Rigid** ISO 228-1



Part Number	Part Number	Thread Size		se D.	A	4	Cutoff E		H Hex
#	#	<u>~~~~~</u>	0						$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	mm
1D955-4-4	_	PF 1/4-19	1/4	6	2.30	59	1-1/8	29	19
1D955-6-6	_	PF 3/8-19	3/8	10	2.52	64	1-1/16	27	22
1D955-8-8	_	PF 1/2-14	1/2	12	2.87	73	1-1/4	32	27
_	1D958-16-16	PF 1-11	1	25	3.74	95	1-3/8	35	41

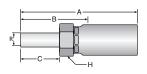
Construction: Steel.

Add "C" for Stainless Steel.

NOTE: When used in a port, a bonded seal must be used. Purchase from Parker's Tube Fittings Division.

Ref. P/N D9DT-SIZE.

## 11D55/11D58 Metric Standpipe Light Series ISO 8434-1



Part Number	Part Number	Dian F	neter R		se D.	A	4	Cutoff .		(	3	H Hex
#	#		7	(	$\odot$							$\bigcirc$
55 Series	58 Series	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	mm
11D55-6-3	_	6	.236	3/16	5	2.37	60	1-7/16	36	0.87	22	14
11D55-8-4	_	8	.315	1/4	6	2.64	67	1-1/2	38	0.87	22	17
11D55-10-6	11D58-10-6	10	.394	3/8	10	2.95	75	1-9/16	40	0.91	23	19
11D55-12-6	_	12	.472	3/8	10	3.15	80	1-3/4	45	1.02	26	19
11D55-15-8	11D58-15-8	15	.591	1/2	13	3.23	82	1-11/16	43	0.98	25	22
11D55-18-12	11D58-18-12	18	.709	3/4	19	3.66	93	1-7/8	48	0.98	25	30
11D55-22-12	11D58-22-12	22	.866	3/4	19	3.66	93	1-7/8	48	1.10	28	30
11D55-28-16	11D58-28-16	28	1.10	1	25	4.21	107	1-5/16	33	1.18	30	36

 $Construction: \ Steel.$ 

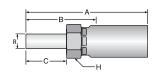
Add "C" for Stainless Steel.

NOTE: Mates with Parker's Tube Fittings Division EO "L" Series Adapters.



# **O** General Technical

#### 13D55/13D58 Metric Standpipe Heavy Series ISO 8434-1

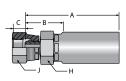


Part Number	Part Number	Diam F	neter R	Ho I.I		ŀ	4	Cutoff .		(		H Hex
#	#	(	7	(	9							$\bigcirc$
55 Series	58 Series	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	mm
13D55-8-3	_	8	.315	3/16	5	2.45	62	1-1/2	38	0.94	24	14
13D55-10-4	_	10	.394	1/4	6	2.80	71	1-11/16	43	0.94	24	17
13D55-12-5	_	12	.472	5/16	8	2.86	73	1-11/16	43	1.02	26	17
13D55-12-6	_	12	.472	3/8	10	3.05	77	1-11/16	43	1.02	26	19
13D55-14-6	_	14	.551	3/8	10	3.17	81	1-13/16	46	1.02	26	19
13D55-16-8	_	16	.630	1/2	13	3.44	87	1-7/8	48	1.18	30	22

Construction: Steel. Add "C" for Stainless Steel.

NOTE: Mates with Parker's Tube Fittings Division EO "S" Series Adapters.

#### 19255/19258 Female BSP Parallel Pipe Swivel Straight (60° Cone)



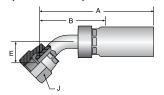
Part Number	Part Number	Thread Size		se D.	A	4	Cutoff B		(	;	H Hex	J Hex
#	#	<u>~~~~~</u>	(	9							$\bigcirc$	$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	mm	mm
19255-4-3	_	PF 1/4-19	3/16	5	2.01	51	1-1/16	27	0.22	6	17	19
19255-4-4	19258-4-4	PF 1/4-19	1/4	6	2.20	56	1-1/16	27	0.22	6	17	19
19255-6-5	_	PF 3/8-19	5/16	8	2.25	57	1-1/16	27	0.26	7	19	22
19255-6-6	19258-6-6	PF 3/8-19	3/8	10	2.44	62	1-1/16	27	0.26	7	19	22
19255-8-8	19258-8-8	PF 1/2-14	1/2	13	2.78	71	1-3/16	31	0.28	7	24	27
19255-12-12	19258-12-12	PF 3/4-14	3/4	19	3.06	78	1-5/16	33	0.36	9	32	32
19255-16-16	19258-16-16	PF 1-11	1	25	3.72	94	1-1/2	37	0.44	11	36	41

Construction: Steel. Add "C" for Stainless Steel.

NOTE: When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cut-off allowance.



## 1B155/1B158 Female BSP Parallel Pipe Swivel 45° Elbow (60° Cone) ISO 228-1

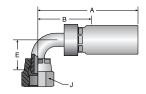


Part Number	Part Number	Thread Size		be D.		se D.	A	4	Cutoff A		Е	<b>.</b>	J Hex
#	#	<u>~~~~~</u>	0	9	0	9							$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
1B155-4-4	_	PF 1/4-19	1/4	6	1/4	6	3.03	77	1-7/8	48	.61	16	19
1B155-6-5	_	PF 3/8-19	3/8	10	5/16	8	3.60	91	2-1/4	57	.67	17	22
1B155-6-6	_	PF 3/8-19	3/8	10	3/8	10	3.60	91	2-1/4	57	.67	17	22
1B155-8-8	_	PF 1/2-14	1/2	13	1/2	13	4.28	109	2-11/16	68	.79	20	27

Construction: Steel.

Add "C" for Stainless Steel.

## 1B255/1B258 Female BSP Parallel Pipe Swivel 90° Elbow (60° Cone) ISO 228-1



Part Number	Part Number	Thread Size	Tu 0.	be D.		se D.	1	4	Cutoff .		Е		J Hex
#	#	<u>~~~~~</u>	0	$\bigcirc$	0	$\bigcirc$							$\bigcirc$
55 Series	58 Series		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
1B255-4-4	_	PF 1/4-19	1/4	6	1/4	6	2.39	61	1-1/4	32	1.14	29	19
1B255-6-5	_	PF 3/8-19	3/8	10	5/16	8	2.72	69	1-3/8	35	1.34	34	22
1B255-6-6	_	PF 3/8-19	3/8	10	3/8	10	2.81	71	1-1/2	38	1.37	35	22
1B255-8-8	_	PF 1/2-14	1/2	13	1/2	13	3.27	83	1-9/16	40	1.57	40	27
1B255-10-8	_	PF 5/8-14	1/2	13	1/2	13	3.28	83	1-11/16	43	1.89	48	30
1B255-12-12	_	PF 3/4-14	3/4	19	3/4	19	4.20	107	2-7/16	62	2.54	65	36

Construction: Steel.

Add "C" for Stainless Steel.

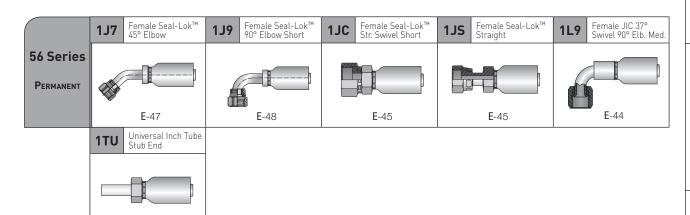


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## **56 Series Visual Index**

	101	Male Taper Pipe Rigid	102	Female Taper Pipe Rigid	103	Male (JIC) 37° Rigid	104	Male SAE 45° Rigid	105	Male Str. Thread 0-ring
56 Series		9.2		9.2						1 - 1 9
PERMANENT				7, 1						
		E-37		E-37		E-38		E-38		E-39
	106	SAE (JIC) 37° Swivel	107	Female Pipe Swivel	108	Female SAE 45° Swivel	10C	M FM Swivel 24° O-ring 45° Elb. Lt.	11C	M FM Swivel 24° O-ring 90° Elb. Lt.
							METRIC		METRIC	
							W.			
		E-39		E-40		E-40		E-49		E-49
	113	Male Pipe Swivel	13E	Male (JIC) 37° Long	137	FM JIC 37° Swivel 45° Elbow	139	FM JIC 37° Swivel 90° Elb. Short Drop	141	Female JIC 37° Swivel 90° Elbow-Lg
		E-41		E-41		E-42		E-42		E-43
	149	M Banjo Union	192	FM BSP Parallel Pipe Swivel Str.	1AL	A-Lok Compression	1B1	Female BSP Pipe Swivel 45° Elb. (60° Cone)	1B2	Female BSP Pipe Swivel 90° Elb. (60° Cone)
			METRIC					5.50		
		E-44  FM BSP Swivel 90° Elb.		E-50 M FM Swivel Nut		E-49 M FM Swivel 45°		E-50 M FM Swivel 90°		E-51 M FM Swivel DIN
	1B4	Block Type (60° Cone)	1C3	Light	1C4	Elbow Lt.	1C5	Elbow Lt.	1C6	20078 HW w/o 0-ring
		E-51		E-52	METRIC	E-52	METRI	E-53	METRIC	E-53
	1C9	M FM Swivel DIN 20078 HW O-ring	1CA	M FM Swivel 24° Lt. O-ring	1CE	M FM Swivel 24° O-ring 45° Elb.	1CF	M FM Swivel 24° Oring 90° Elb.	1D0	M Male Stud DIN 20078 Lt.
	METRIC	;	METRIC		METRI	С	METRI	C	METR	IC
						5.55				5.50
	1D2	E-54  M Male Stud 24° Lt.	1D9	E-54 Male BSPP - Str.	1J0	E-55 Male Seal-Lok™	1J1	E-55 Female Seal-Lok™	1J2	E-56 Female Seal-Lok™
	METRIC		METRIC	(60° Cone)	130	Rigid Str. w/O-ring	131	90° Elbow Long	132	30° Elbow
	PIETRIC		HETRIC							
		E-56		E-57		E-46		E-46		E-46





#### 10156 Male Taper Pipe Rigid

E-48



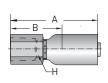
Part Number	Thread Size		ose D.	A	A		Allow. 3	H Hex
#	<u>~~~~~</u>		$\bigcirc$					
		inch	mm	inch	mm	inch	mm	inch
10156-2-3	1/8-27	3/16	5	1.60	41	7/8	22	9/16
10156-4-3	1/4-18	3/16	5	1.82	46	1-1/8	28	9/16
10156-4-4	1/4-18	1/4	6	2.09	53	1-1/8	28	9/16
10156-4-6	1/4-18	3/8	10	2.16	55	1-3/16	30	11/16
10156-6-6	3/8-18	3/8	10	2.16	55	1-3/16	30	3/4
10156-8-8	1/2-14	1/2	13	2.55	65	1-7/16	37	7/8
10156-12-10	3/4-14	5/8	16	2.88	73	1-9/16	40	1-1/8
10156-12-12	3/4-14	3/4	19	2.97	75	1-5/8	41	1-1/16
10156-16-16	1-11-1/2	1	25	3.76	96	1-7/8	48	1-3/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

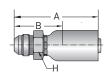
#### 10256 Female Taper Pipe Rigid



Part Number	Thread Size	Hose I.D.		1	Ą	Cutoff E	Allow.	H Hex
#	<u>~~~~~</u>		0					$\bigcirc$
		inch mm		inch	mm	inch	mm	inch
10256-4-4	1/4-18	1/4 6		1.99	51	1	25	11/16



### 10356 Male (JIC) 37° - Rigid



Part Number	Thread Size	Hose I.D.		A	4	Cutoff E	Allow.	H Hex
#	<u>~~~~~</u>		$\bigcirc$					
		inch	mm	inch	mm	inch	mm	inch
10356-4-3	7/16-20	3/16	5	1.83	46	1-1/8	28	9/16
10356-4-4	7/16-20	1/4	6	2.10	53	1-1/8	28	9/16
10356-5-4	1/2-20	1/4	6	2.10	53	1-1/8	28	9/16
10356-6-4	9/16-18	1/4	6	2.14	54	1-3/16	30	11/16
10356-6-5	9/16-18	5/16	8	2.22	56	1-3/16	30	11/16
10356-5-6	1/2-20	3/8	10	2.14	54	1-1/8	28	5/8
10356-6-6	9/16-18	3/8	10	2.15	55	1-3/16	30	5/8
10356-8-6	3/4-16	3/8	10	2.25	57	1-1/4	32	13/16
10356-8-8	3/4-16	1/2	13	2.40	61	1-5/16	33	7/8
10356-10-8	7/8-14	1/2	13	2.60	66	1-1/2	38	15/16
10356-12-10	1-1/16-12	5/8	16	2.97	75	1-5/8	42	1-1/8
10356-12-12	1-1/16-12	3/4	19	3.07	78	1-3/4	44	1-1/8
10356-16-16	1-5/16-12	1	25	3.66	93	1-3/4	44	1-3/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

### 10456 Male SAE 45° - Rigid



Part Number	Thread Size	Ho I.I	se D.	ı	A	Cutoff B		H Hex
#	<u>~~~~~</u>	0						
		inch	mm	inch	mm	inch	mm	inch
10456-4-3	7/16-20	3/16	5	1.71	43	1	25	9/16
10456-5-4	1/2-20	1/4	6	2.11	54	1-1/8	28	9/16
10456-6-5	5/8-18	5/16	8	2.18	55	1-3/16	30	11/16
10456-6-6	5/8-18	1/2	13	2.16	55	1-3/16	30	11/16
10456-6-8	5/8-18	1/2	13	2.37	60	1-1/4	32	3/4
10456-8-8	3/4-16	1/2	13	0.25	64	1-3/8	35	7/8
10456-12-12	1-1/16-14	3/4	19	3.11	79	1-3/4	44	1-1/8



## **10556 Male Straight Thread O-ring** (BUNA N O-ring included)



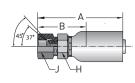
Part Number	Thread Size		se D.	A	Ą	Cutoff E		H Hex
#	<u>~~~~~</u>	0						
		inch	mm	inch	mm	inch	mm	inch
10556-4-3	7/16-20	3/16	4	1.61	41	15/16	24	9/16
10556-6-3	9/16-18	3/16	4	1.64	42	15/16	24	11/16
10556-4-4	7/16-20	1/4	6	1.84	47	7/8	22	9/16
10556-5-4	1/2-20	1/4	6	1.84	47	7/8	22	5/8
10556-6-4	9/16-18	1/4	6	1.91	49	15/16	24	11/16
10556-4-5	7/16-20	5/16	8	1.91	49	7/8	22	5/8
10556-5-5	1/2-20	5/16	8	1.91	49	7/8	22	5/8
10556-6-6	9/16-18	3/8	10	1.95	50	15/16	24	11/16
10556-8-6	3/4-16	3/8	10	1.98	50	1	25	7/8
10556-8-8	3/4-16	1/2	12	2.21	56	1-1/8	28	7/8
10556-10-8	7/8-14	1/2	12	2.28	58	1-3/16	30	1

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

#### 10656 SAE (JIC) 37° Swivel



Part Number	Thread Size		se D.	A	4	Cutoff A		H Hex	J Hex
#	<u>~~~~~</u>	(							
		inch	mm	inch	mm	inch	mm	inch	inch
10656-3-3	3/8-24	3/16	5	1.91	49	1-3/16	30	1/2	1/2
10656-4-3	7/16-20	3/16	5	1.78	45	1-1/16	27	9/16	9/16
10656-5-3	1/2-20	3/16	5	1.84	47	1-1/8	28	9/16	5/8
10656-2-4	3/8-24	1/4	6	1.98	50	1	25	1/2	7/16
10656-4-4	7/16-20	1/4	6	2.05	52	1-1/16	27	9/16	9/16
10656-5-4	1/2-20	1/4	6	2.12	54	1-1/8	28	9/16	5/8
10656-6-4	9/16-18	1/4	6	2.14	54	1-3/16	30	11/16	9/16
10656-4-5	7/16-20	5/16	8	2.10	53	1-1/16	27	9/16	9/16
10656-5-5	1/2-20	5/16	8	2.21	56	1-3/16	30	5/8	5/8
10656-6-5	9/16-18	5/16	8	2.23	57	1-3/16	30	5/8	11/16
10656-4-6	7/16-20	3/8	10	2.09	53	1-1/8	28	9/16	9/16
10656-5-6	1/2-20	3/8	10	2.23	57	1-1/4	32	5/8	5/8
10656-6-6	9/16-18	3/8	10	2.22	56	1-1/4	32	11/16	11/16
10656-8-6	3/4-16	3/8	10	2.37	60	1-3/8	35	11/16	7/8
10656-6-8	9/16-18	1/2	13	2.42	61	1-5/16	33	3/4	11/16
10656-8-8	3/4-16	1/2	13	2.54	64	1-7/16	36	13/16	7/8
10656-10-8	7/8-14	1/2	13	2.64	67	1-1/2	38	7/8	1
10656-8-10	3/4-16	5/8	16	2.73	69	1-7/16	36	15/16	7/8
10656-10-10	7/8-14	5/8	16	2.99	76	1-11/16	43	15/16	1
10656-12-10	1-1/16-12	5/8	16	3.06	78	1-3/4	44	1-1/16	1-1/4
10656-10-12	7/8-14	3/4	19	2.88	73	1-1/2	38	1-1/16	1
10656-12-12	1-1/16-12	3/4	19	3.06	78	1-3/4	44	1-1/16	1-1/4
10656-16-12	1-5/16-12	3/4	19	3.27	83	1-15/16	49	1-1/4	1-1/2
10656-16-16	1-5/16-12	1	25	3.81	97	1-15/16	49	1-3/8	1-1/2
10656-20-16	1-5/8-12	1	25	3.96	101	2-1/16	52	1-5/8	2

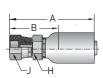
Construction: Steel. Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request. Sizes -4, -5, -8 and -10 incorporate a dual seat.



# **Q** General Technical

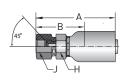
### 10756 Female Pipe Swivel



Part Number	Thread Size		Hose I.D.		Ą	Cutoff Allow. B		H Hex	J Hex
#	<u>~~~~~</u>	0						$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	inch
10756-4-4	1/4-18	1/4	6	2.03	52	1-1/16	27	9/16	11/16
10756-4-5	1/4-18	5/16	8	2.09	53	1-1/16	27	9/16	11/16
10756-6-6	3/8-18	3/8	10	2.13	54	1-1/8	28	11/16	7/8
10756-8-8	1/2-14	1/2	13	2.40	61	1-5/16	33	7/8	1
10756-12-12	3/4-14	3/4	19	2.98	76	1-5/8	41	1-1/16	1-1/4
10756-16-16	1-11-1/2	1	25	3.74	95	1-7/8	48	1-3/8	1-1/2

Construction: Steel. Add "C" for Stainless Steel.

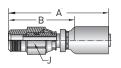
#### 10856 Female SAE 45° Swivel



Part Number	Thread Size		Hose I.D.		A	Cutoff A		H Hex	J Hex
#	<u>~~~~~</u>		0				$\bigcirc$		
		inch	mm	inch	mm	inch	mm	inch	inch
10856-6-4	5/8-18	1/4	6	2.19	56	1-1/4	32	11/16	3/4
10856-6-5	5/8-18	5/16	8	2.28	58	1-1/4	32	11/16	3/4
10856-6-6	5/8-18	3/8	10	2.36	60	1-3/8	35	11/16	3/4
10856-12-12	1-1/16-14	3/4	19	3.06	78	1-3/4	44	1-1/16	1-1/4



#### 11356 Male Pipe Swivel



Part Number	Thread Size		se D.	,	4	Cutoff A		J Hex
#	<u>~~~~~</u>	(	<u> </u>					
		inch	mm	inch	mm	inch	mm	inch
11356-2-3	1/8-27	3/16	5	2.85	73	2-1/8	54	5/8
11356-4-3	1/4-18	3/16	5	2.59	66	1-7/8	48	5/8
11356-4-4	1/4-18	1/4	6	2.95	75	2	50	5/8
11356-4-5	1/4-18	5/16	8	2.95	75	1-15/16	49	5/8
11356-6-6	3/8-18	3/8	10	3.06	78	2-1/16	52	3/4
11356-8-6	1/2-14	3/8	10	3.24	82	2-1/4	57	7/8
11356-8-8	1/2-14	1/2	13	3.37	86	2-1/4	57	7/8
11356-12-12	3/4-14	3/4 19		3.71	94	2-3/8	60	1-1/4
11356-16-16	1-11-1/2	1	25	4.64	118	2-3/4	70	1-1/2

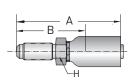
Construction: Steel.

Add "C" for Stainless Steel.

NOTE: For use with petroleum based fluids.

WARNING: Fittings allow minor movement to relieve stress on hose but are not recommended for continued or extensive swiveling. Not recommended for use in CNG applications.

#### 13E56 Male (JIC) 37° Long



Part Number	Thread Size	Hose I.D.		,	A	Cutoff E	H Hex	
#	<u>~~~~~</u>	$\bigcirc$	$\bigcirc$					
		inch	mm	inch	mm	inch	mm	inch
13E56-4-4	7/16-20	1/4	6	2.80	71	1-13/16	46	5/8
13E56-6-5	9/16-18	5/16	8	2.97	75	1-15/16	49	3/4
13E56-6-6	9/16-18	<b>3/8</b> 10		2.97	75	2	50	7/8
13E56-8-8	3/4-16	1/2	13	3.24 82		2-1/8	7/8	

Construction: Steel.

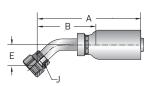
Add "C" for Stainless Steel.

NOTE: Bulkhead Locknut sold separately. WLN Locknuts are manufactured by the Tube Fittings Division. Refer to Catalog 4300 for additional information.



## **O** General Technical

### 13756 Female JIC 37° Swivel 45° Elbow

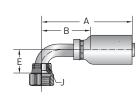


Part Number	Thread Size		se D.	A	A	Cutoff / B		E	<b>=</b>	J Hex
#		(	$\overline{)}$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13756-4-3	7/16-20	3/16	5	1.93	49	1-1/4	32	.39	10	9/16
13756-4-4	7/16-20	1/4	6	2.19	56	1-1/4	32	.39	10	9/16
13756-5-4	1/2-20	1/4	6	2.46	62	1-1/2	38	.39	10	5/8
13756-6-4	9/16-18	1/4	6	2.24	57	1-1/4	32	.43	11	11/16
13756-6-5	9/16-18	5/16	8	2.53	64	1-1/2	38	.43	11	11/16
13756-6-6	9/16-18	3/8	10	2.57	65	1-9/16	40	.43	11	11/16
13756-8-6	3/4-16	3/8	10	2.76	70	1-3/4	44	.59	15	7/8
13756-8-8	3/4-16	1/2	13	2.72	69	1-5/8	41	.59	15	7/8
13756-10-8	7/8-14	1/2	13	2.87	73	1-3/4	45	.63	16	1
13756-10-10	7/8-14	5/8	16	3.23	83	2	50	.63	16	1
13756-12-10	1-1/16-12	5/8	16	3.74	95	2.40	61	.83	21	1-1/4
13756-12-12	1-1/16-12	3/4	19	4.03	102	2-11/16	68	.83	21	1-1/4
13756-16-16	1-5/16-12	1	25	4.72	120	2.81	72	.94	24	1-1/2

Construction: Steel. Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

### 13956 Female JIC 37° Swivel 90° Elbow Short Drop



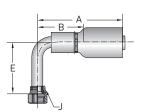
Part Number	Thread Size		se D.	A	4	Cutoff B		E	<b>.</b>	J Hex
#	<u>~~~~~</u>	(	$\overline{)}$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13956-4-3	7/16-20	3/16	5	1.75	44	1-1/16	27	.83	21	9/16
13956-4-4	7/16-20	1/4	6	2.01	51	1-1/16	27	.83	21	9/16
13956-5-4	1/2-20	1/4	6	2.01	51	1-1/16	27	.83	21	5/8
13956-6-4	9/16-18	1/4	6	2.01	51	1-1/16	27	.91	23	11/16
13956-6-5	9/16-18	5/16	8	2.14	54	1-1/8	28	.91	23	11/16
13956-6-6	9/16-18	3/8	10	2.22	56	1-1/4	32	.91	23	11/16
13956-8-6	3/4-16	3/8	10	2.55	65	1-9/16	40	1.14	29	7/8
13956-8-8	3/4-16	1/2	13	2.48	63	1-3/8	35	1.14	29	7/8
13956-10-8	7/8-14	1/2	13	2.60	66	1-1/2	38	1.26	32	1
13956-10-10	7/8-14	5/8	16	3.08	78	1-3/4	45	1.26	32	1
13956-12-10	1-1/16-12	5/8	19	3.39	86	2-1/16	52	1.89	48	1-1/4
13956-12-12	1-1/16-12	3/4	19	3.89	99	2-9/16	65	1.89	48	1-1/4
13956-16-16	1-5/16-12	1	25	4.66	118	2-3/4	70	2.20	56	1-1/2

Construction: Steel. Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.



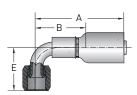
### 14156 Female JIC 37° Swivel 90° Elbow Long Drop



Part Number	Thread Size		se D.	A	Ą	Cutoff E	-	I	<b>=</b>	J Hex
#		(								
		inch	mm	inch	mm	inch	mm	inch	mm	inch
14156-4-3	7/16-20	3/16	5	2.00	51	1-5/16	33	1.81	46	9/16
14156-4-4	7/16-20	1/4	6	2.31	59	1-3/8	35	1.81	46	9/16
14156-5-4	1/2-20	1/4	6	2.34	60	1-3/8	35	1.81	46	5/8
14156-6-4	9/16-18	1/4	6	2.39	61	1-7/16	36	2.13	54	11/16
14156-6-5	9/16-18	5/16	8	2.36	60	1-5/16	33	2.13	54	11/16
14156-6-6	9/16-18	3/8	10	2.39	61	1-3/8	35	2.13	54	11/16
14156-8-6	3/4-16	3/8	10	2.49	63	1-1/2	38	2.52	64	7/8
14156-8-8	3/4-16	1/2	13	2.61	66	1-1/2	38	2.52	64	7/8
14156-10-8	7/8-14	1/2	13	2.48	63	1-3/8	35	2.76	70	1
14156-12-12	1-1/16-12	3/4	19	3.59	91	2-1/4	57	3.78	96	1-1/4
14156-16-16	1-5/16-12	1	25	4.36	111	2-1/2	63	4.49	114	1-1/2



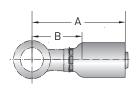
### 1L956 Female JIC 37° Swivel 90° Elbow Medium Drop



Part Number	Thread Size		se D.	A	Ą	Cutoff E		E	<b>.</b>	J Hex
#			$\overline{)}$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1L956-4-3	7/16-20	3/16	5	1.97	50	1-1/4	32	1.26	32	9/16
1L956-4-4	7/16-20	1/4	6	2.29	58	1-5/16	34	1.26	32	9/16
1L956-5-4	1/2-20	1/4	6	2.31	59	1-3/8	35	1.26	32	5/8
1L956-6-5	9/16-18	5/16	8	2.33	59	1-5/16	34	1.50	38	11/16
1L956-6-6	9/16-18	3/8	10	2.36	60	1-1/4	31	1.50	38	11/16
1L956-8-6	3/4-16	3/8	10	2.44	62	1-7/16	37	1.61	41	7/8
1L956-8-8	3/4-16	1/2	13	2.57	65	1-7/16	37	1.61	41	7/8
1L956-10-8	7/8-14	1/2	13	2.48	63	1-3/8	35	1.85	47	1
1L956-12-12	1-1/16-12	3/4	19	3.89	99	2-9/16	65	2.28	58	1-1/4
1L956-16-16	1-5/16-12	1	25	4.66	118	2-3/4	70	2.80	71	1-1/2

Construction: Steel. Add "C" for Stainless Steel.

## 14956 - Banjo Union DIN 7642

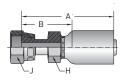


Part Number	Diameter R		se D.	A	4	Cutoff Allow		
#	$\boxtimes$	0						
	mm	mm	inch	mm	inch	mm	inch	
14956-14-3	14	5	3/16	49	1.93	31	1.22	
14956-12-4	12	6	1/4	50	1.97	25	1.50	
14956-14-4	14	6	1/4	56	2.20	32	1.26	
14956-12-5	12	8	5/16	54	2.13	29	1.14	
14956-14-5	14	8	5/16	53	2.09	27	1.06	
14956-16-6	16	10 3/8		58	2.28	33	1.30	
14956-17-6	17	10	3/8	55	2.17	29	1.14	

Construction: Steel.



## 1JS56 Female Seal-Lok™ Straight ISO 12151-1-SWSB

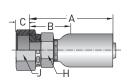


Part Number	Thread Size	Hose I.D.		ļ ,	Ą	Cutoff A		H Hex	J Hex
#	<u>~~~~~</u>	(	$\bigcirc$					$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	inch
1JS56-4-3	9/16-18	3/16	5	1.89	48	1-3/16	30	9/16	11/16
1JS56-4-4	9/16-18	1/4	6	2.17	51	1-3/16	30	9/16	11/16
1JS56-6-4	11/16-16	1/4	6	2.24	57	1-1/4	32	11/16	13/16
1JS56-6-5	11/16-16	5/16	8	2.29	58	1-1/4	32	11/16	13/16
1JS56-6-6	11/16-16	3/8	10	2.28	58	1-5/16	33	11/16	13/16
1JS56-8-6	13/16-16	3/8	10	2.40	61	1-7/16	36	13/16	15/16
1JS56-6-8	11/16-16	1/2	13	2.40	61	1-5/16	33	3/4	13/16
1JS56-8-8	13/16-16	1/2	13	2.52	64	1-3/8	35	13/16	15/16
1JS56-10-8	1-14	1/2	13	2.68	68	1-9/16	40	15/16	1-1/8
1JS56-10-10	1-14	5/8	16	2.92	74	1-5/8	41	15/16	1-1/8
1JS56-12-12	1-3/16-12	3/4	19	3.17	81	1-13/16	46	1-1/8	1-3/8
1JS56-16-16	1-7/16-12	1	25	3.76	96	1-7/8	48	1-3/8	1-5/8

Construction: Steel. Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

## 1JC56 Female Seal-Lok™ Straight - Swivel - Short ISO 12151-1-SWSA



Part Number	Thread Size		Hose I.D.		А		Allow.	(		H Hex	J Hex
#		(	<u>)</u>								
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1JC56-4-3	9/16-18	3/16	5	1.58	40	7/8	22	.32	8	9/16	11/16
1JC56-4-4	9/16-18	1/4	6	1.86	47	7/8	22	.32	8	9/16	11/16
1JC56-6-4	11/16-16	1/4	6	1.90	48	15/16	24	.34	9	11/16	13/16
1JC56-4-5	9/16-18	5/16	8	1.81	46	13/16	21	.32	8	11/16	11/16
1JC56-6-5	11/16-16	5/16	8	1.95	49	15/16	24	.34	9	11/16	13/16
1JC56-4-6	9/16-18	3/8	10	1.91	48	15/16	24	.32	8	5/8	11/16
1JC56-6-6	11/16-16	3/8	19	1.89	48	7/8	22	.34	9	11/16	13/16
1JC56-8-6	13/16-16	3/8	10	2.00	51	1	25	.43	11	13/16	15/16
1JC56-8-8	13/16-16	1/2	13	2.13	54	1	25	.43	11	13/16	15/16
1JC56-10-8	1-14	1/2	13	2.30	58	1-3/16	30	.48	12	15/16	1-1/8
1JC56-10-10	1-14	5/8	16	2.48	63	1-3/16	30	.48	12	15/16	1-1/8
1JC56-12-10	1-3/16-12	5/8	16	2.61	66	1-5/16	33	.55	14	1-1/8	1-3/8
1JC56-10-12	1-14	3/4	19	2.50	64	1-3/16	30	.48	12	1-1/8	1-1/8
1JC56-12-12	1-3/16-12	3/4	19	2.54	65	1-3/16	30	.55	14	1-1/8	1-3/8
1JC56-16-16	1-7/16-12	1	25	3.21	82	1-5/16	33	.56	14	1-3/8	1-5/8

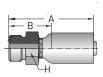
Construction: Steel. Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

## 1J056 Male Seal-Lok<sup>™</sup> Rigid Straight w/O-ring ISO 12151-1-S



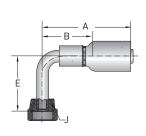
Part Number	Thread Size		se D.	Α		Cutoff E	H Hex	
#		0						
		inch	mm	inch	mm	inch	mm	inch
1J056-4-4	9/16-18	1/4	6	1.93	49	15/16	24	5/8
1J056-6-4	11/16-16	1/4	6	2.01	51	1-1/16	27	3/4
1J056-6-6	11/16-16	3/8	10	1.98	50	1	25	3/4
1J056-8-6	13/16-16	1/2	13	2.16	55	1-3/16	30	7/8
1J056-8-8	13/16-16	1/2	13	2.18	55	1-1/16	27	7/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

## 1J156 Female Seal-Lok™ Swivel 90° Elbow Long Drop ISO 12151-1-SWEL90



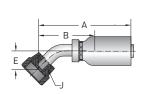
Part Number	Thread Size		se D.	А		Cutoff Allow. B		Е		J Hex
#	<u>~~~~~</u>	(	$\bigcirc$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J156-4-3	9/16-18	3/16	5	2.05	52	1-3/8	35	1.81	46	11/16
1J156-4-4	9/16-18	1/4	6	2.37	60	1-3/8	35	1.81	46	11/16
1J156-6-4	11/16-16	1/4	6	2.45	62	1-1/2	38	2.13	54	13/16
1J156-6-6	11/16-16	3/8	10	2.45	62	1-7/16	37	2.13	54	13/16
1J156-8-6	13/16-16	3/8	10	2.53	64	1-7/16	37	2.52	64	15/16
1J156-8-8	13/16-16	1/2	13	2.67	68	1-9/16	40	2.52	64	15/16
1J156-12-12	1-3/16-12	3/4	19	3.59	91	2-1/4	57	3.78	96	1-3/8
1J156-16-16	1-7/16-12	1	25	4.36	111	2-1/2	63	4.49	114	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

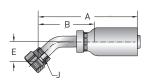
#### 1J256 Female Seal-Lok™ Swivel 30° Elbow



Part Number	Thread Size		Hose I.D.		A	Cutoff	Allow.	ı	<b>=</b>	J Hex
#		(	0							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J256-8-8	13/16-16	1/2	13	2.84	72	1-11/16	43	.43	11	15/16



## 1J756 Female Seal-Lok<sup>™</sup> Swivel 45° Elbow ISO 12151-1-SWE45



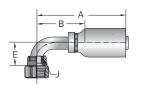
Part Number	Thread Size	Ho I.I	se D.	1	A	Cutoff E		ı	Ē	J Hex
#		(	$\bigcirc$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J756-4-3	9/16-18	3/16	5	2.00	51	1-5/16	33	.39	10	11/16
1J756-4-4	9/16-18	1/4	6	2.25	57	1-1/4	32	.39	10	11/16
1J756-6-4	11/16-16	1/4	6	2.27	58	1-5/16	33	.43	11	13/16
1J756-6-5	11/16-16	5/16	8	2.32	59	1-3/8	35	.43	11	13/16
1J756-4-6	9/16-18	3/8	10	2.25	57	1-1/4	32	.39	10	11/16
1J756-6-6	11/16-16	3/8	10	2.35	60	1-3/8	35	.43	11	13/16
1J756-8-6	13/16-16	3/8	10	2.54	65	1-9/16	40	.59	15	15/16
1J756-8-8	13/16-16	1/2	13	2.72	69	1-5/8	41	.59	15	15/16
1J756-10-10	1-14	5/8	16	3.27	83	2	50	.63	16	1-1/8
1J756-12-12	1-3/16-12	3/4	19	4.03	102	2-11/16	68	.83	21	1-3/8
1J756-16-16	1-7/16-12	1	25	4.73	120	2-13/16	72	.94	24	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

## 1J956 Female Seal-Lok™ Swivel 90° Elbow Short Drop ISO 12151-1-SWES90



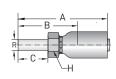
Part Number	Thread Size	Hose I.D.		1	А		Allow.	Е		J Hex
#		(	$\bigcirc$							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J956-4-3	9/16-18	3/16	5	1.89	48	1-3/16	30	.83	21	11/16
1J956-4-4	9/16-18	1/4	6	2.14	53	1-1/8	28	.83	21	11/16
1J956-6-4	11/16-16	1/4	6	2.14	55	1-3/16	30	.91	23	13/16
1J956-6-5	11/16-16	5/16	8	2.28	58	1-1/4	32	.91	23	13/16
1J956-6-6	11/16-16	3/8	10	2.22	56	1-1/4	32	.91	23	13/16
1J956-8-6	13/16-16	3/8	10	2.22	56	1-1/4	32	1.14	29	15/16
1J956-8-8	13/16-16	1/2	13	2.48	63	1-3/8	35	1.14	29	15/16
1J956-10-8	1-14	1/2	13	2.48	63	1-3/8	35	1.26	32	1-1/8
1J956-10-10	1-14	5/8	16	3.14	80	1-13/16	30	1.26	32	1-1/8
1J956-12-12	1-3/16-12	3/4	19	3.89	99	2-9/16	65	1.89	48	1-3/8
1J956-16-16	1-7/16-12	1	25	4.66	118	2-3/4	70	2.20	56	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

Note: Metric hex parts are available upon request.

#### 1TU56 Universal Inch Tube Stub End



Part Number	Diameter R		ose D.	A		Cutoff E		(	H Hex	
#	$\varnothing$		$\bigcirc$	)						
	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch
1TU56-4-4	1/4	1/4	6	2.35	60	1-3/8	35	.72	18	5/8
1TU56-6-4	3/8	1/4	6	2.41	61	1-7/16	36	.78	20	11/16
1TU56-6-6	3/8	3/8	10	2.46	62	1-7/16	36	.78	20	3/4
1TU56-8-8	1/2	1/2	13	2.68	68	1-9/16	40	1.03	26	3/4
1TU56-12-12	3/4	3/4	19	2.88	73	1-9/16	40	1.03	26	1
1TU56-16-16	1	1	25	4.03	102	1-7/8	48	1.03	26	1-1/4

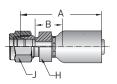
Construction: Steel.

Add "C" for Stainless Steel.

Note: Use with A-Lok & CPI nuts, sleeves and adapters. These components are manufactured by Parker's Instrumentation Connectors Division. Refer to catalogs 4230 & 4233 for additional information.



#### 1AL56 A-LOK® Compression (With Nut and Ferrule)



Part Number	Thread Size	Tube 0.D.		Hose I.D.		А		Cutoff Allow. B		H Hex	J Hex
#		0		0							
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1AL56-4-4	7/16-20	1/4	6	1/4	6	1.91	49	5/8	16	9/16	9/16
1AL56-6-6	9/16-20	3/8	10	3/8	10	2.09	53	11/16	17	11/16	11/16
1AL56-8-8	3/4-20	1/2	13	3/8	10	2.21	56	5/8	16	7/8	7/8

Construction: 316 Stainless nipple and shell.

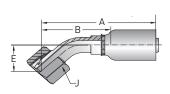
NOTE: Nut part No. is XNUX or XNUX-316 for stainless steel.

Front ferrule part No. is XFFX or XFFX-316 for stainless steel.

Back ferrule part No. is XBFX or XBFX-316 for stainless steel.

X denotes dash size.

## 10C56 - Metric Female Swivel 24° With 0-ring 45° Elbow Heavy Series, ISO 12151-2

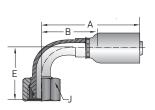


Part Number	Thread Size		se D.	,	А		Cutoff Allow. B		E	
#		(	0							
		mm	inch	mm	inch	mm	inch	mm	inch	mm
10C56-6-3	M14x1.5	5.0	3/16	58	2.28	40	1.57	16	0.63	17
10C56-8-3	M16x1.5	5	3/16	59	2.32	41	1.61	18	0.71	19
10C56-10-4	M18x1.5	6	1/4	64	2.52	40	1.57	17	0.67	22
10C56-12-5	M20x1.5	8	5/16	69	2.72	43	1.69	17	0.67	24
10C56-12-6	M20x1.5	10	3/8	75	2.95	49	1.93	20	0.79	24
10C56-16-8	M24x1.5	13	1/2	80	3.15	51	2.01	23	0.91	30

Construction: Steel.

Add "C" for Stainless Steel.

## 11C56 - Metric Female Swivel 24° With 0-ring 90° Elbow Heavy Series, ISO 12151-2



Part Number	Thread Size		se D.	,	A		Cutoff Allow. B		E	
#	<u>~~~~~</u>	0								
		mm	inch	mm	inch	mm	inch	mm	inch	mm
11C56-8-3	M16x1.5	5	3/16	48	1.89	30	1.18	29	1.14	19
11C56-10-4	M18x1.5	6	1/4	53	2.09	29	1.14	32	1.26	22
11C56-12-5	M20x1.5	8	5/16	65	2.56	39	1.54	34	1.34	24
11C56-12-6	M20x1.5	10	3/8	63	2.48	38	1.50	37	1.46	24
11C56-16-8	M24x1.5	13	1/2	68	2.68	40	1.57	45	1.77	30

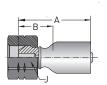
Construction: Steel.

Add "C" for Stainless Steel.



## **O** General Technical

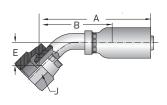
## 19256 Female BSP Parallel Pipe Swivel Straight (60° Cone)



Part Number	Thread Size		se D.	,	A	Cutoff E	Allow.
#		(	$\bigcirc$				
		mm	inch	mm	inch	mm	inch
19256-4-3	G 1/4	5	3/16	35	1.38	17	0.67
19256-2-4	G 1/8	6	1/4	43	1.69	18	0.71
19256-4-4	G 1/4	6	1/4	42	1.65	17	0.67
19256-6-4	G 3/8	6	1/4	45	1.77	20	0.79
19256-4-5	G 1/4	8	5/16	47	1.85	21	0.83
19256-6-5	G 3/8	8	5/16	46	1.81	20	0.79
19256-6-6	G 3/8	10	3/8	46	1.81	21	0.83
19256-8-6	G 1/2	10	3/8	48	1.77	23	0.91
19256-6-8	G 3/8	13	1/2	53	2.09	25	0.98
19256-8-8	G 1/2	13	1/2	51	2.01	23	0.91
19256-10-8	G 5/8	13	1/2	49	1.93	22	0.87
19256-12-12	G 3/4	19	3/4	60	2.36	26	1.02
19256-16-16	G 1	25	1	74	2.91	26	1.02

Construction: Steel. Add "C" for Stainless Steel.

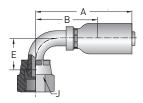
## 1B156 - Female BSP Parallel Pipe Swivel 45° Elbow (60° Cone) ISO 228-1



Part Number	Thread Size		se D.	А		ı	E	Cutoff	J Hex	
#	<u>~~~~~</u>	(								
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1B156-4-3	G 1/4	5	3/16	57	2.24	15	0.59	39	1.542	19
1B156-4-4	G 1/4	6	1/4	62	2.44	15	0.59	38	1.50	19
1B156-6-5	G 3/8	8	5/16	65	2.56	17	0.67	39	1.54	22
1B156-6-6	G 3/8	10	3/8	67	2.64	17	0.67	42	1.65	22
1B156-8-8	G 1/2	13	1/2	77	3.03	20	0.79	48	1.89	27
1B156-12-12	G 3/4	19	3/4	99	3.90	25	1.00	65	2.56	32
1B156-16-16	G 1	25	1	127	5.00	31	1.22	79	3.11	41



## 1B256 - Female BSP Parallel Pipe Swivel 90° Elbow (60° Cone) ISO 228-1

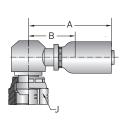


Part Number	Thread Size		ose D.	A	4	ı	Ē	Cutoff I	Allow. 3	J Hex
#	<u>~~~~~</u>	(	$\bigcirc$							$\bigcirc$
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1B256-4-3	G 1/4	5	3/16	48	1.89	28	1.10	30	1.18	19
1B256-4-4	G 1/4	6	1/4	53	2.09	28	1.10	29	1.14	19
1B256-4-5	G 1/4	8	5/16	56	2.20	34	1.34	30	1.18	19
1B256-6-5	G 3/8	8	5/16	55	2.16	30	1.18	30	1.18	22
1B256-6-6	G 3/8	10	3/8	60	2.36	33	1.30	31	1.22	22
1B256-8-8	G 1/2	13	1/2	70	2.76	40	1.57	42	1.65	27
1B256-12-12	G 3/4	19	3/4	92	3.62	52	2.05	58	2.28	32
1B256-16-16	G 1	25	1	125	4.92	68	2.68	77	3.03	41

Construction: Steel.

Add "C" for Stainless Steel.

## 1B456 – Female BSP Swivel 90° Elbow Block Type (60° Cone) ISO 228-1

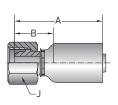


Part Number	Thread Size	Hose I.D.		,	A	Cutoff Allow. B		ı		J Hex
#	<u>~~~~~</u>	(	0							
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1B456-4-4	G 1/4	6	1/4	47	1.85	22	0.87	22	0.87	19
1B456-6-6	G 3/8	10	3/8	52	2.05	27	1.06	25	0.98	22
1B456-8-8	G 1/2	13	1/2	58	2.28	29	1.14	29	1.14	27

Construction: Steel.

## **O** General Technical

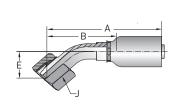
## 1C356 - Metric Female Swivel Nut Light Series, 24°/60°



Part Number	Thread Size		Hose I.D. A Cutoff Allo				J Hex	
#	<u>~~~~~</u>	$\bigcirc$						
		mm	inch	mm	inch	mm	inch	mm
1C356-6-3	M12x1.5	5	3/16	37	1.46	20	0.79	14
1C356-8-4	M14x1.5	6	1/4	44	1.73	20	0.79	17
1C356-10-4	M16x1.5	6	1/4	45	1.77	21	0.83	19
1C356-10-5	M16x1.5	8	5/16	46	1.81	20	0.79	19
1C356-12-5	M18x1.5	8	5/16	47	1.85	21	0.83	22
1C356-10-6	M16x1.5	10	3/8	46	1.81	21	0.83	19
1C356-12-6	M18x1.5	10	3/8	47	1.85	21	0.83	22
1C356-15-6	M22x1.5	10	3/8	46	1.81	21	0.83	27
1C356-15-8	M22x1.5	13	1/2	50	1.97	21	0.83	27
1C356-18-10	M26x1.5	16	5/8	57	2.24	25	0.98	32
1C356-18-12	M26x1.5	19	3/4	58	2.28	24	0.94	32
1C356-22-12	M30x2	19	3/4	60	2.36	27	1.06	36

Construction: Steel. Add "C" for Stainless Steel.

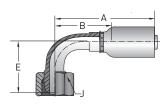
## 1C456 - Metric Female Swivel 45° Elbow Light Series, 24°/60°



Part Number	Thread Size		Hose I.D.		A		Cutoff Allow. B		E	
#		(	0							
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1C456-6-3	M12x1.5	5	3/16	57	2.24	40	1.57	16	0.63	14
1C456-8-4	M14x1.5	6	1/4	60	2.36	36	1.42	14	0.55	17
1C456-10-5	M16x1.5	8	5/16	62	2.44	37	1.46	15	0.59	19
1C456-10-6	M16x1.5	10	3/8	67	2.64	41	1.61	17	0.67	19
1C456-12-6	M18x1.5	10	3/8	72	2.83	47	1.85	18	0.71	22
1C456-15-8	M22x1.5	13	1/2	76	2.99	48	1.89	19	0.75	27



## 1C556 - Metric Female Swivel 90° Elbow Light Series, 24°/60°

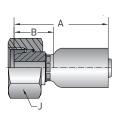


Part Number	Thread Size		se D.	,	Ą		Allow.	ı		J Hex
#	<u>~~~~~</u>	(	$\bigcirc$							
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1C556-6-3	M12x1.5	5	3/16	48	1.89	30	1.18	30	1.18	14
1C556-8-4	M14x1.5	6	1/4	53	2.09	28	1.10	26	1.02	17
1C556-10-4	M16x1.5	6	1/4	53	2.09	28	1.10	27	1.06	19
1C556-12-5	M18x1.5	8	5/16	58	2.28	33	1.30	34	1.34	22
1C556-10-6	M16x1.5	10	3/8	63	2.48	38	1.50	33	1.30	19
1C556-12-6	M18x1.5	10	3/8	63	2.48	38	1.50	34	1.34	22
1C556-15-8	M22x1.5	13	1/2	72	2.83	44	1.73	39	1.54	27
1C556-18-12	M26x1.5	19	3/4	87	3.43	53	2.09	52	2.05	32

Construction: Steel.

Add "C" for Stainless Steel.

## 1C656 Female Metric Swivel DIN 20078 Heavy Series (Without 0-ring) ISO 8434-1

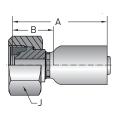


Part Number	Thread Size	Hose I.D.		,	A	Cutoff E	J Hex	
#		$\bigcirc$	0					$\bigcirc$
		mm	inch	mm	inch	mm	inch	mm
1C656-8-3	M16x1.5	5	3/16	38	1.50	20	0.79	19
1C656-10-4	M18x1.5	6	1/4	47	1.85	22	0.87	22
1C656-12-5	M20x1.5	8	5/16	50	1.97	24	0.94	24
1C656-12-6	M20x1.5	10	3/8	49	1.93	24	0.94	24
1C656-14-6	M22x1.5	10	3/8	49	1.93	23	0.89	27
1C656-16-8	M24x1.5	10	1/2	53	2.09	25	0.98	30
1C656-20-12	M30x2	13	3/4	61	2.40	27	1.06	36



## **O** General Technical

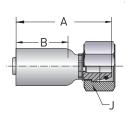
#### 1C956 Female Metric Swivel DIN 20078 Heavy Series, (With 0-ring) ISO 12151-2-SWS



Part Number	Thread Size		se D.	,	A Cutoff Allo		Cutoff Allow. B	
#	<u>~~~~~</u>	mm inch						
		mm	inch	mm	inch	mm	inch	mm
1C956-8-3	M16x1.5	5	3/16	41	1.61	23	0.91	19
1C956-8-4	M16x1.5	6	1/4	48	1.89	23	0.91	19
1C956-10-4	M18x1.5	6	1/4	48	1.89	23	0.91	22
1C956-12-4	M20x1.5	6	1/4	48	1.89	24	0.94	24
1C956-10-5	M18x1.5	8	5/16	49	1.93	23	0.91	22
10956-12-5	M20x1.5	8	5/16	50	1.97	24	0.94	24
1C956-12-6	M20x1.5	10	3/8	49	1.93	24	0.94	24
1C956-14-6	M22x1.5	10	3/8	49	1.93	24	0.94	27
1C956-16-8	M24x1.5	13	1/2	56	2.17	27	1.06	30
10956-20-12	M30x2	19	3/4	65	2.56	31	1.22	36
10956-25-12	M36x2	19	3/4	66	2.60	32	1.30	46

Construction: Steel. Add "C" for Stainless Steel.

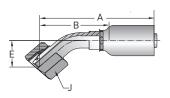
## 1CA56 - Metric Female Swivel 24° With 0-ring Light Series, ISO 12151-2-SWS



Part Number	Thread Size		se D.	,	A	Cutoff E	Allow.	J Hex
#	<u>~~~~~</u>	(	$\bigcirc$					$\bigcirc$
		mm	inch	mm	inch	mm	inch	mm
1CA56-6-3	M12x1.5	5	3/16	40	1.57	22	0.87	14
1CA56-6-4	M12x1.5	6	1/4	48	1.89	24	0.94	14
1CA56-8-4	M14x1.5	6	1/4	47	1.85	23	0.91	17
1CA56-10-4	M16x1.5	6	1/4	47	1.85	22	0.87	19
1CA56-12-4	M18x1.5	6	1/4	47	1.85	22	0.87	22
1CA56-10-5	M16x1.5	8	5/16	48	1.89	22	0.87	19
1CA56-12-5	M18x1.5	8	5/16	48	1.89	22	0.87	22
1CA56-10-6	M16x1.5	10	3/8	48	1.89	22	0.87	19
1CA56-12-6	M18x1.5	10	3/8	48	1.89	22	0.87	22
1CA56-15-6	M22x1.5	10	3/8	50	1.97	25	0.98	27
1CA56-12-8	M18x1.5	13	1/2	53	2.09	27	1.06	22
1CA56-15-8	M22x1.5	13	1/2	53	2.09	25	0.98	27
1CA56-18-8	M26x1.5	13	1/2	53	2.09	25	0.98	32
1CA56-18-10	M26x1.5	16	5/8	60	2.36	26	1.02	32
1CA56-18-12	M26x1.5	19	3/4	60	2.36	26	1.02	32
1CA56-22-12	M30x2	19	3/4	62	2.44	28	1.10	36
1CA56-28-16	M36x2	25	1	77	3.03	28	1.10	41



## 1CE56 - Metric Female Swivel 24° With 0-ring 45° Elbow Light Series, ISO 12151-2-SWE45

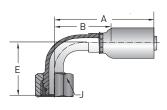


Part Number	Thread Size		se D.	A	A		Allow.	ı	Ē	J Hex
#	<u>~~~~~</u>	$\bigcirc$								
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1CE56-6-3	M12x1.5	5	3/16	58	2.28	40	1.57	17	0.67	14
1CE56-8-4	M14x1.5	6	1/4	65	2.56	40	1.57	18	0.71	17
1CE56-10-4	M16x1.5	6	1/4	62	2.44	38	1.50	16	0.63	19
1CE56-10-5	M16x1.5	8	5/16	72	2.83	46	1.81	18	0.71	19
1CE56-10-6	M16x1.5	10	3/8	75	2.95	50	1.97	19	0.75	19
1CE56-12-6	M18x1.5	10	3/8	73	2.87	48	1.89	19	0.75	22
1CE56-15-8	M22x1.5	13	1/2	78	3.07	50	1.97	22	0.87	27
1CE56-18-10	M26x1.5	16	5.8	89	3.50	56	2.20	24	0.94	32
1CE56-18-12	M26x1.5	19	3/4	101	3.74	67	2.64	27	1.06	32
1CE56-22-12	M30x2	19	3/4	100	3.94	66	2.60	26	1.02	36
1CE56-28-16	M36x2	25	1	133	5.27	85	3.35	33	1.30	41

Construction: Steel.

Add "C" for Stainless Steel.

## 1CF56 - Metric Female Swivel 24° With 0-ring 90° Elbow Light Series, ISO 12151-2-SWE90



Part Number	Thread Size		se D.	,	A		Allow.	ı	E	J Hex
#	<u>~~~~~</u>	0	$\bigcirc$							
		mm	inch	mm	inch	mm	inch	mm	inch	mm
1CF56-6-3	M12x1.5	5	3/16	48	1.89	30	1.18	30	1.18	14
1CF56-6-4	M12x1.5	6	1/6	53	2.09	29	1.14	33	1.30	14
1CF56-8-4	M14x1.5	6	1/6	55	2.17	30	1.18	29	1.14	17
1CF56-10-4	M16x1.5	6	1/6	55	2.17	31	1.22	29	1.14	17
1CF56-10-5	M16x1.5	8	5/16	66	2.60	40	1.57	29	1.14	19
1CF56-12-5	M18x1.5	8	5/16	65	2.56	40	1.57	30	1.18	22
1CF56-10-6	M16x1.5	10	3/8	64	2.52	39	1.54	37	1.46	19
1CF56-12-6	M18x1.5	10	3/8	63	2.48	38	1.50	35	1.38	22
1CF56-15-8	M22x1.5	13	1/2	68	2.68	40	1.57	43	1.69	27
1CF56-18-10	M26x1.5	16	5/8	79	3.11	45	1.77	52	2.05	32
1CF56-22-12	M30x2	19	3/4	91	3.58	57	2.24	55	2.17	36
1CF56-28-16	M36x2	25	1	122	50	74	2.91	71	2.80	41

Construction: Steel.

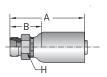
Add "C" for Stainless Steel.



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

## **O** General Technical

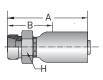
## **1D056 - Male Stud DIN 20078** Light Series, ISO 8434-1



Part Number	Thread Size		se D.	,	4		Allow.	H Hex
#	<u>~~~~~</u>	O in ab					$\bigcirc$	
		mm	inch	mm	inch	mm	inch	mm
1D056-6-3	M12x1.5	5	3/16	41	1.61	23	0.91	12
1D056-6-4	M12x1.5	6	1/4	48	1.89	23	0.91	12
1D056-8-4	M14x1.5	6	1/4	47	1.85	23	0.91	14
1D056-10-5	M16x1.5	8	5/16	50	1.97	24	0.94	17
1D056-12-5	M18x1.5	8	5/16	52	2.05	26	1.02	19
1D056-10-6	M16x1.5	10	3/8	50	1.97	24	0.94	17
1D056-12-6	M18x1.5	10	3/8	50	1.97	24	0.94	19
1D056-15-6	M22x1.5	10	3/8	52	2.05	27	1.06	22
1D056-15-8	M22x1.5	13	1/2	55	2.16	27	1.06	22
1D056-18-10	M26x1.5	16	5/8	64	2.52	30	1.18	27
1D056-22-12	M30x2	19	3/4	68	2.68	34	1.34	30
1D056-28-16	M36x2	25	1	82	3.23	34	1.34	36

Construction: Steel. Add "C" for Stainless Steel.

## 1D256 - Metric Male Stud 24° Light Series, ISO 12151-2



Part Number	Thread Size	Hose I.D.		4	Cutoff Allow. B		H Hex	
#	<u>~~~~~</u>	mm inch						$\bigcirc$
		mm	inch	mm	inch	mm	inch	mm
1D256-8-3	M16x1.5	5	3/16	42	1.65	25	0.98	17
1D256-10-4	M18x1.5	6	1/4	52	2.05	27	1.06	19
1D256-10-5	M18x1.5	8	5/16	53	2.09	27	1.06	19
1D256-12-5	M20x1.5	8	5/16	53	2.09	27	1.06	22
1D256-12-6	M20x1.5	10	3/8	53	2.09	27	1.06	22
1D256-14-6	M22x1.5	10	3/8	57	2.24	31	1.22	22
1D256-16-6	M24x1.5	10	3/8	57	2.24	31	1.22	24
1D256-16-8	M24x1.5	13	1/2	60	2.36	31	1.22	24
1D256-20-12	M30x2	19	3/4	72	2.83	38	1.50	32



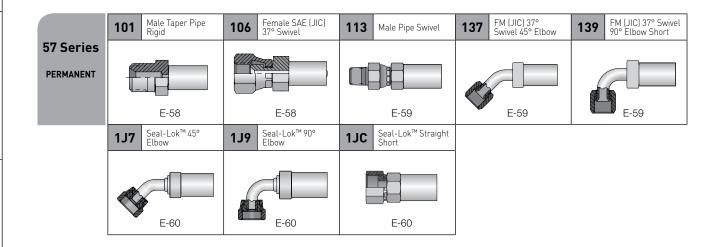
## 1D956 Male BSPP - Straight (60° Cone) ISO 228-1



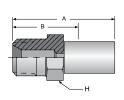
Part Number	Thread Size		se D.	,	4	Cutoff E	H Hex	
#	<u>~~~~~</u>	0						
		mm	inch	mm	inch	mm	inch	mm
1D956-4-3	G 1/4	5	3/16	44	1.73	27	1.06	19
1D956-4-4	G 1/4	6	1/4	52	2.05	27	1.06	19
1D956-6-5	G 3/8	8	5/16	53	2.09	27	1.06	22
1D956-6-6	G 3/8	10	3/8	53	2.09	28	1.10	22
1D956-8-8	G 1/2	13	1/2	60	2.36	32	1.26	27
1D956-12-12	G 3/4	19 3/4		75	2.95	41	1.61	32
1D956-16-16	G 1	25	1	91	3.58	42	1.65	41



#### **57 Series Visual Index**



#### 10157 Male Taper Pipe Rigid

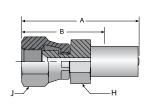


Part Number	Thread Size	Hose I.D.		1	4	Cutoff E	H Hex	
#	<u>~~~~~</u>	0					$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch
10157-2-2	1/8-27	1/8	3	1.35	34	3/4	19	1/2
10157-4-2	1/4-18	1/8	3	1.56	40	15/16	24	5/8

Construction: Steel.

Add "C" for Stainless Steel.

#### 10657 SAE (JIC) 37° Swivel



Part Number	Thread Size	Hose I.D.		A	4	Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0	9					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
10657-2-2	5/16-24	1/8	3	1.63	41	1	25	1/2	1/2
10657-3-2	3/8-24	1/8	3	1.60	41	1	25	1/2	9/16
10657-4-2	7/16-20	1/8	3	1.68	43	1	25	1/2	5/8

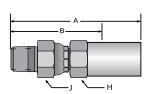
Construction: Steel.

Add "C" for Stainless Steel.

NOTE: Size -4 incorporates a dual seat.



#### 11357 Male Pipe Swivel\*



Part Number	Thread Size		Hose I.D.		А		Allow.	H Hex	J Hex
#	<u>~~~~~</u>	$\odot$	$\odot$					$\bigcirc$	$\bigcirc$
Part Number		inch	mm	inch	mm	inch	mm	inch	inch
11357-2-2	1/8-27	1/8	3	1.96	50	1-5/16	33	1/2	1/2

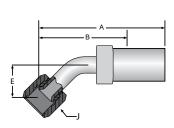
Construction: Steel.

Add "C" for Stainless Steel.

**NOTE:** \*For use with petroleum based fluids.

**WARNING:** Fittings allow minor movement to relieve stress on hose but are not recommended for continued or extensive swiveling.

#### 13757 Female JIC 37° Swivel 45° Elbow

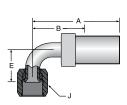


Part Number	Thread Size		Hose I.D. A Cutoff Allow. B E		J Hex					
#	<u>~~~~~</u>	0	9						$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13757-4-2	7/16-20	1/8	3	1.98	50	1-5/16	33	0.33	8	9/16

Construction: Steel.

Add "C" for Stainless Steel.

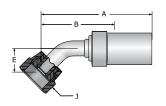
### 13957 Female JIC 37° Swivel 90° Elbow Short Drop



Part Number	Thread Size	Hose I.D.		A	A	Cutoff E	Allow.	ı	J Hex	
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
13957-4-2	7/16-20	1/8	3	1.87	48	1-1/4	32	0.68	17	9/16

## 1J757 Seal-Lok<sup>™</sup> 45° Elbow

ISO 12151-1-SWE45



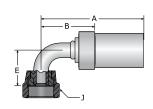
Part Number	Thread Size	Ho I.I		A	4	Cutoff	Allow.	E		J Hex
#	~~~~	0	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J757-4-2	9/16-18	1/8	3	2.07	53	1-7/16	36	0.39	10	11/16

Construction: Steel.

Add "C" for Stainless Steel.

## 1J957 Seal-Lok™ 90° Elbow

ISO 12151-1-SWE90



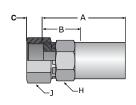
Part Number	Thread Size		se D.	,	4	Cutoff E	Allow.	E	J Hex	
#	<u>~~~~~</u>	0	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J957-4-2	9/16-18	1/8	3	2.04	52	1-7/16	36	0.83	21	11/16

Construction: Steel.

Add "C" for Stainless Steel.

## 1JC57 Seal-Lok™ Straight-Short

ISO 12151-1-SWSA



Part Number	Thread Size		Hose I.D.		А		Allow.	(		H Hex	J Hex
#	<u>~~~~~</u>	(	9							$\Diamond$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1JC57-4-2	9/16-18	1/8	3	1.34	34	3/4	19	.32	8	5/8	11/16

Construction: Steel.

Add "C" for Stainless Steel.

NOTE: When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cutoff allowance. Stainless steel fittings must be assembled with Karrykrimp2 or Parkimp2. See CrimpSource for more information.

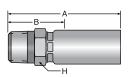


### **58H Series Visual Index**

	101	Male Taper Pipe Rigid	106	SAE (JIC) 37° Swivel	137	FemaleJIC 37° Swivel 45° Elbow	139	FemaleJIC 37° Swivel 90° Elbow Sht	1J1	Seal-Lok™ 90° Elbow Long
58H Series PERMANENT	E-62  1.17 Seal-Lok™ 45°		E-62		E-62			E-63		E-64
	1J7	Seal-Lok™ 45° Elbow	1J9	Seal-Lok™ 90° Elbow	1JC	Seal-Lok™ Straight Short	1JS	Seal-Lok™ Straight		
	E-64			E-64		E-63		E-63		



#### 10158H Male Taper Pipe Rigid

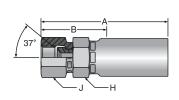


Part Number	NPTF Thread	Ho I.I		ļ ,	4	Cutoff E	H Hex	
#	<u>~~~~~</u>	0	9				$\bigcirc$	
		inch mm		inch	mm	inch	mm	inch
10158H-12-12	3/4-14	3/4 19		3.91	99	1-11/16	43	1-1/4
10158H-16-16	1-11-1/2	<b>1</b> 1		4.76	121	1-13/16	46	1-3/4

Construction: Steel.

Add "C" for Stainless Steel.

#### 10658H (JIC) 37° Swivel

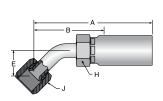


Part Number	Thread Size	Hose I.D.		A	4	Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	$\odot$	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
10658H-12-12	1-1/16-12	3/4	19	4.14	105	1-13/16	46	1-1/4	1-5/16
10658H-16-16	1-5/16-12	1	25	4.89	124	1-15/16	49	1-3/4	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

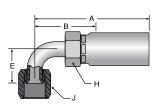
#### 13758H Female JIC 37° Swivel 45° Elbow



Part Number	Thread Size	Hose I.D.		А		Cutoff Allow. B		E		H Hex	J Hex
#	<u>~~~~</u>	0								$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
13758H-16-16	1-5/16-12	1	25	5.46	139	2-1/2	64	0.90	23	1-3/4	1-1/2



#### 13958H Female JIC 37° Swivel 90° Elbow Short Drop

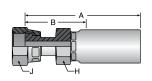


Part Number	Thread Size		Hose I.D.		A		Allow.	E		H Hex	J Hex
#	<u>~~~~~</u>	$\odot$	9							$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
13958H-12-12	1-1/16-12	3/4	19	4.57	116	2-3/8	60	1.81	46	1-1/4	1-1/4
13958H-16-16	1-5/16-12	1	25	5.42	138	2-1/2	64	2.14	54	1-3/4	1-1/2

Construction: Steel.

Add "C" for Stainless Steel.

# 1JS58H Seal-Lok™ Straight - Long ISO 12151-1-SWSB

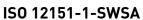


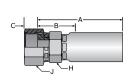
Part Number	Thread Size		Hose I.D.		4	Cutoff	Allow.	H Hex	J Hex
#	<u>~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
		inch	inch mm		mm	inch	mm	inch	inch
1JS58H-12-12	1-3/16-12	3/4	3/4 19		109	2-1/16	52	1-1/4	1-3/8
1JS58H-16-16	1-7/16-12	1	<b>1</b> 25		126	1-15/16	49	1-3/4	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

# 1JC58H Seal-Lok™ Straight-Short





Part Number	Thread Size	Hose I.D.		Α		Cutoff Allow. B		С		H Hex	J Hex
#	<u>~~~~~</u>	0	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1JC58H-12-12	1-3/16-12	3/4	19	3.86	98	1-1/2	38	.57	14	1-1/4	1-3/8
1JC58H-16-16	1-7/16-12	1	25	4.66	119	1-11/16	43	.58	15	1-3/4	1-5/8

Construction: Steel.

Add "C" for Stainless Steel.

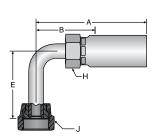
NOTE: When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cut-off allowance. Stainless steel fittings must be assembled with Karrykrimp2 or Parkimp2. See CrimpSource for more information.



# **O** General Technical

# 1J158H Seal-Lok™ 90° Elbow - Long Drop

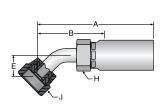
ISO 12151-1-SWEL90



Part Number	Thread Size		Hose I.D.		А		Cutoff Allow. B			H Hex	J Hex
#	<u>~~~~~</u>	0	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J158H-12-12	1-3/16-12	3/4	19	4.38	111	1-7/8	48	3.78	96	1-1/4	1-3/8
1J158H-16-16	1-7/16-12	1	25	5.35	136	1-7/8	48	4.50	114	1-3/4	1-5/8

Construction: Steel. Add "C" for Stainless Steel.

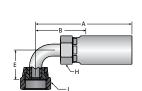
#### 1J758H Seal-Lok<sup>™</sup> 45° Elbow ISO 12151-1-SWE45



Part Number	Thread Size	Hose I.D.		А		Cutoff Allow. B		E		H Hex	J Hex
#	~~~~	(	9								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J758H-12-12	1-3/16-12	3/4	19	4.51	115	2-5/16	59	0.81	21	1-1/4	1-3/8
1J758H-16-16	1-7/16-12	1	25	5.75	146	2-13/16	71	0.94	24	1-3/4	1-5/8

Construction: Steel. Add "C" for Stainless Steel.

#### 1J958H Seal-Lok™ 90° Elbow - Short Drop ISO 12151-1-SWE90

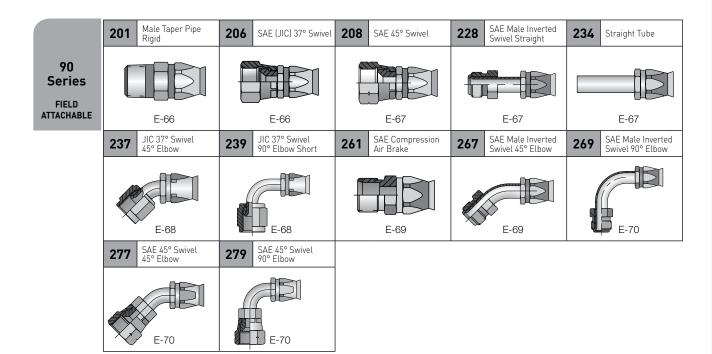


Part Number	Thread Size		Hose I.D.		А		Cutoff Allow. B		<b>.</b>	H Hex	J Hex
#	*****	0	0							$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1J958H-12-12	1-3/16-12	3/4	19	4.40	112	2-3/16	56	1.85	47	1-1/4	1-3/8
1J958H-16-16	1-7/16-12	1	25	5.70	145	2-3/4	70	2.21	56	1-3/4	1-5/8

Construction: Steel. Add "C" for Stainless Steel.



# 90 Series Visual Index



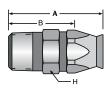
	200	Replacement Socket	090 Replacement Ferrule		60HAB SAE Compression Airbrake Sleeve		61HAB	SAE Compression Airbrake Nut
90 Series					(			
COMPONENTS		E-71		E-71		E-71		E-71



E-65

# **O** General Technical

# 20190 Male Taper Pipe Rigid

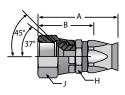


Part Number	Thread Size	Hose Size	А		Cutoff Allow. B		H Hex
#	<u>~~~~~</u>	0					$\bigcirc$
			inch	mm	inch	mm	inch
20190-2-4	1/8-27	-4	1.33	34	7/8	22	9/16
20190-4-4	1/4-18	-4	1.58	40	1-1/16	27	9/16
20190-4-5	1/4-18	-5	1.66	42	1-1/8	29	5/8
20190-4-6	1/4-18	-6	1.66	42	1-1/8	29	11/16
20190-6-6	3/8-18	-6	1.66	42	1-1/8	29	11/16
20190-6-8	3/8-18	-8	1.77	45	1-3/16	30	7/8
20190-8-8	1/2-14	-8	1.97	50	1-7/16	37	7/8
20190-8-10	1/2-14	-10	2.13	54	1-7/16	37	1
20190-12-12	3/4-14	-12	2.26	57	1-9/16	40	1-1/8
20190-12-16	3/4-14	-16	2.29	58	1-5/8	41	1-3/8
20190-16-16	1-11-1/2	-16	2.46	62	1-7/8	48	1-3/8
20190-20-20	1-1/4-11-1/2	-20	2.69	68	2-1/16	52	2

Construction: Brass nipple and ferrule, steel socket.

Add "C" for Stainless Steel.

## 20690 SAE (JIC) 37° Swivel



Part Number	Thread Size	Hose Size	l	A Cutoff Allow.			H Hex	J Hex
#	<u>~~~~~</u>	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
20690-4-4	7/16-20	-4	1.58	40	1-1/8	29	9/16	9/16
20690-5-5	1/2-20	-5	1.66	42	1-1/8	29	5/8	5/8
20690-6-6	9/16-18	-6	1.74	44	1-3/16	35	11/16	11/16
20690-8-6	3/4-16	-6	1.85	47	1-5/16	33	7/8	7/8
20690-8-8	3/4-16	-8	1.98	50	1-3/8	35	7/8	7/8
20690-8-10	3/4-16	-10	2.07	53	1-7/16	37	1	7/8
20690-10-10	7/8-14	-10	2.22	56	1-1/2	38	1	1
20690-12-12	1-1/16-12	-12	2.33	59	1-5/8	41	1-1/4	1-1/4
20690-16-16	1-5/16-12	-16	2.52	64	1-15/16	49	1-3/8	1-1/2
20690-20-20	1-5/8-12	-20	2.99	76	2-5/16	59	2	2

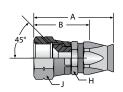
Construction: Brass nipple and ferrule, steel nut and socket.

Add "C" for Stainless Steel.

NOTE: Sizes -4, -5,-8 and -10 incorporate a dual seat.



#### 20890 SAE 45° Swivel

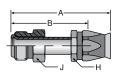


Part Number	Thread Size	Hose Size	А		Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0						$\bigcirc$
			inch	mm	inch	mm	inch	inch
20890-6-6	5/8-18	-6	1.77	45	1-1/4	32	11/16	3/4
20890-12-12	1-1/16-14	-12	2.34 59		1-11/16	43	1-1/8	1-1/4

Construction: Brass nipple and ferrule, steel nut and socket.

Add "C" for Stainless Steel.

# 22890 SAE Male Inverted Swivel-Straight

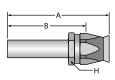


Part Number	Thread Size	Hose Size	ļ	A Cutoff Allow.		H Hex	J Hex	
#	<u>~~~~~</u>	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
22890-4-4	7/16-24	-4	2.15	55	1-11/16	43	9/16	7/16
22890-5-5	1/2-20	-5	2.21	56	1-11/16	43	5/8	1/2
22890-5-6	1/2-20	-6	2.20	56	1-11/16	43	11/16	1/2
22890-6-6	5/8-18	-6	2.22	56	1-11/16	43	11/16	5/8
22890-8-8	3/4-18	-8	2.34	59	1-13/16	46	13/16	3/4
22890-10-10	7/8-18	-10	2.53	64 1-7/8 48		48	15/16	7/8
22890-12-12	1-1/16-16	-12	3.01	76	2-3/8	60	1-1/8	1-1/16

Construction: Brass ferrule, steel tube, nut and socket.

Add "C" for Stainless Steel.

# 23490 Straight Tube



Part Number	Hose Size	Tube Size		A	4	Cutoff E	H Hex	
#	0	0						$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
23490-8-8	-8	1/2	6	3.06	78	2-1/2	64	13/16
23490-8-10	-10	1/2	8	3.15	80	2-1/2	64	1
23490-10-8	-8	5/8	8	3.26	83	2-5/8	67	13/16
23490-10-10	-10	<b>5/8</b> 10		3.28	83	2-5/8	67	1
23490-12-12	-12	3/4	13	3.28 83		2-11/16 68		1-1/8

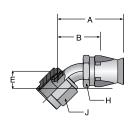
Construction: Brass nipple and ferrule, steel socket.

Add "C" for Stainless Steel.

NOTE: 26T90 fitting includes 23490 with the 60HAB sleeve and 61HAB nut.



# 23790 JIC 37° Swivel 45° Elbow

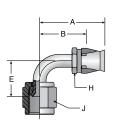


Part Number	Thread Size	Hose Size	A	4	Cutoff A		E	<b>=</b>	H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
23790-4-4	7/16-20	-4	1.79	45	1-3/8	35	0.33	8	9/16	9/16
23790-5-5	1/2-20	-5	1.86	47	1-3/8	35	0.36	9	5/8	5/8
23790-6-6	9/16-18	-6	1.96	50	1-7/16	37	0.39	10	11/16	11/16
23790-8-6	3/4-16	-6	2.11	54	1-11/16	43	0.55	14	11/16	7/8
23790-8-8	3/4-16	-8	2.40	61	1-3/4	44	0.55	14	13/16	7/8
23790-10-10	7/8-14	-10	2.45	62	1-7/8	48	0.63	16	15/16	1
23790-12-12	1-1/16-12	-12	3.04	77	2-7/16	62	0.78	20	1-1/8	1-1/4
23790-16-16	1-5/16-12	-16	3.28	83	2-11/16	68	0.90	23	1-3/8	1-1/2
23790-20-20	1-5/8-12	-20	3.70	94	3-1/16	78	1.18	30	1-3/4	2

Construction: Brass ferrule, steel tube, nut and socket.

Add "C" for Stainless Steel.

# 23990 JIC 37° Swivel 90° Elbow Short Drop

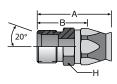


Part Number	Thread Size	Hose Size	ŀ	Ą	Cutoff .		i		H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
23990-4-4	7/16-20	-4	1.67	41	1-1/4	32	0.68	17	9/16	9/16
23990-5-5	1/2-20	-5	1.75	44	1-1/4	32	0.77	20	5/8	5/8
23990-6-6	9/16-18	-6	1.86	47	1-3/8	35	0.85	22	11/16	11/16
23990-8-6	3/4-16	-6	1.95	50	1-7/16	37	1.09	28	11/16	7/8
23990-8-8	3/4-16	-8	2.15	55	1-1/2	38	1.09	28	13/16	7/8
23990-10-10	7/8-14	-10	2.38	60	1-3/4	44	1.23	31	15/16	1
23990-12-12	1-1/16-12	-12	2.95	75	2-5/16	59	1.82	46	1-1/8	1-1/4
23990-16-16	1-5/16-12	-16	3.13	80	2-1/2	64	2.14	54	1-3/8	1-1/2
23990-20-20	1-5/8-12	-20	3.54	90	2-7/8	73	2.57	65	1-3/4	2

Construction: Brass ferrule, steel tube, nut and socket.



## 26190 SAE Compression Air Brake



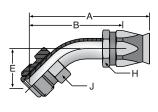
Part Number	Thread Size	Hose Size	А		Cutoff Allow. B		H Hex
#	*****	0					$\bigcirc$
			inch	mm	inch	mm	inch
26190-8-8	11/16-20	-8	1.69	43	1-1/16	27	13/16
26190-8-10	11/16-20	-10	1.86	47	1-3/16	30	1
26190-10-10	13/16-18	-10	1.92	49	1-1/4	32	1
26190-12-10	1-18	-10	2.09	53	1-7/16	37	1
26190-12-12	1-18	-12	2.09	53	1-7/16	37	1-1/8

Construction: Brass nipple and ferrule, steel socket.

Add "B" for Brass nipple and socket.

Add "C" for Stainless Steel.

#### 26790 SAE Male Inverted Swivel 45° Elbow

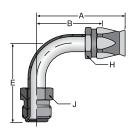


Part Number	Thread Size	Hose Size	A	4	Cutoff .		E		H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
26790-4-4	7/16-24	-4	2.11	54	1-11/16	43	0.63	16	9/16	7/16
26790-5-5	1/2-20	-5	2.51	64	2	51	0.94	24	5/8	1/2
26790-5-6	1/2-20	-6	2.55	65	2-1/16	52	0.94	24	11/16	1/2
26790-6-6	5/8-18	-6	2.61	66	2-1/8	54	0.94	24	11/16	5/8
26790-8-8	3/4-18	-8	2.97	75	2-3/8	60	0.94	24	13/16	3/4
26790-8-10	3/4-18	-10	3.05	77	2-7/16	62	0.94	24	15/16	3/4
26790-10-10	7/8-18	-10	3.43	87	2-11/16	68	1.02	26	15/16	7/8
26790-12-12	1-1/16-16	-12	3.83	97	3-3/16	81	1.15	29	1-1/8	1-1/16

Construction: Brass ferrule, steel tube, nut and socket.



#### 26990 SAE Male Inverted Swivel 90° Elbow

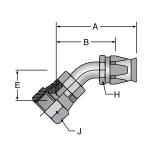


Part Number	Thread Size	Hose Size	P	4	Cutoff .		E	=	H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
26990-4-4	7/16-24	-4	1.79	45	1-5/16	33	1.19	30	9/16	7/16
26990-5-5	1/2-20	-5	2.01	51	1-1/2	38	1.65	42	5/8	1/2
26990-5-6	1/2-20	-6	2.05	52	1-9/16	40	1.65	42	11/16	1/2
26990-6-6	5/8-18	-6	2.03	52	1-1/2	38	1.70	43	11/16	5/8
26990-8-8	3/4-18	-8	2.30	58	1-11/16	43	1.78	45	13/16	3/4
26990-8-10	3/4-18	-10	2.39	61	1-3/4	44	1.78	45	15/16	3/4
26990-10-10	7/8-18	-10	3.16	80	2-1/2	64	2.18	55	15/16	7/8
26990-12-12	1-1/16-16	-12	3.56	90	2-15/16	75	2.51	64	1-1/8	1-1/16

Construction: Brass ferrule, steel tube, nut and socket.

Add "C" for Stainless Steel.

#### 27790 SAE 45° Swivel 45° Elbow

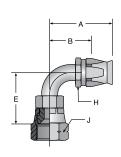


Part Number	Thread Size	Hose Size	ļ	4	Cutoff E	Allow.	E		H Hex	J Hex
#	<u>~~~~~</u>	0							$\Diamond$	$\Diamond$
			inch	mm	inch	mm	inch	mm	inch	inch
27790-6-6	5/8-18	-6	1.72	44	1-3/16	30	0.39	10	11/16	3/4
27790-12-12	1-1/16-14	-12	3.03	77	2-3/8	60	0.78	20	1-1/8	1-1/4

Construction: Brass ferrule, steel tube, nut and socket.

Add "C" for Stainless Steel.

#### 27990 SAE 45° Swivel 90° Elbow



Part Number	Thread Size	Hose Size	A	4	Cutoff E		E		H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
27990-6-6	5/8-18	-6	1.86	47	1-3/8	35	.85	22	11/16	3/4
27990-8-8	3/4-16	-8	2.09	53	1-1/2	38	1.09	28	13/16	7/8
27990-12-12	1-1/16-14	-12	2.95	75	2-5/16	39	1.82	46	1-1/8	1-1/4

Construction: Brass ferrule, steel tube, nut and socket.



#### 20090 Replacement Socket for Field Attachable Fittings



Part Number	H Hex
#	$\bigcirc$
	inch
20090-4	9/16
20090-5	5/8
20090-6	11/16
20090- 8	7/8
20090-10	1
20090-12	1-1/8
20090-16	1-3/8
20090-20	1-3/4

Construction: Steel or Stainless Steel.

Add "C" for Stainless Steel.

#### **60 HAB SAE Compression** Airbrake Sleeve



Part Number	Tu Si	L	
#	0		
	inch	inch	
60HAB-4	1/4	.250	
60HAB-6	3/8	10	.313
60HAB-8	1/2	13	.375
60HAB-10	5/8 16		.438
60HAB-12	3/4	19	.500

Construction: Brass.

NOTE: To be used with 13491N & 23490.

# 090 Replacement Ferrule for 90 Series Field Attachable Fittings 61 HAB SAE Compression Airbrake Nut



Part Number	Hose Size
#	
090-4B	-4
090-5B	-5
090-6B	-6
090- 8B	-8
090-10B	-10
090-12B	-12
090-16B	-16
090-20B	-20

Construction: Brass.

Replace "B" with "C" for Stainless Steel.



Part Number	Thread Size	Tube Size		l	-	W Hex
#	<u>~~~~~</u>	$\odot$				
		inch	mm	inch	mm	inch
61HAB-4	7/16-24	1/4	6	0.75	19	9/16
61HAB-6	7/32-24	3/8	10	1.13	29	5/8
61HAB- 8	11/16-20	1/2	13	1.25	32	13/16
61HAB-10	13/16-18	5/8	16	1.38	35	15/16
61HAB-12	1-18	3/4	19	1.56	40	1-1/8

Construction: Brass.

NOTE: To be used with 13491N & 23490 Fittings.

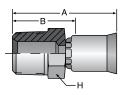


# 91N/91 Series Visual Index

	101 Male Taper Pipe Rigid	<b>103</b> Male JIC 37°	106 JIC 37° Female Swivel	106 RD JIC 37° Female Swivel w/o Nip. Hex	107 Female Pipe Swivel
91N/91 Series	E-73	E-73	E-74	E-74	E-75
	108 Female SAE 45° Swivel	128 Male Inverted Swivel Straight	134 Straight Tube	137 FemaleJIC 37° Swivel 45° Elbow	139 Female JIC 37° Swivel 90° Elbow Sht.
	E-75	E-75	E-76	E-76	E-77
	141 Female JIC 37° Swivel 90° Elb Long	161 Compression Air Brake	167 SAE Male Inverted 45° Elbow	169 SAE Male Inverted 90° Elbow	<b>177</b> SAE 45° Swivel 45° Elbow
	E-77	E-78	E-78	E-79	E-79
	179 Female SAE 45° Swivel 90° Elbow	192 Female BSP Pipe Swivel - Str. (60° Cone)	1AL A-Lok® Compression	1B2 Female BSP Pipe Swivel 90° Elb. (60° Cone)	1FN Sanitary Flange
	E-79	E-84	E-80	E-84	E-80
	<b>1J1</b> Female Seal-Lok™ 90° Elbow Long	<b>1J7</b> Female Seal-Lok™ 45° Elbow	<b>1J9</b> Female Seal-Lok™ 90° Elbow Short	<b>1JC</b> Female Seal-Lok™ Swivel Straight Short	1P6 CPI® Compression w/nut and ferrule
	E-81	E-81	E-82	E-82	E-80
	1Q1 Female Ultra Seal	1TU Universal Tube Stub			
	E-83	E-83			



# 10191N Male Taper Pipe Rigid



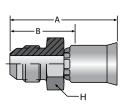
Part Number	Thread Size	Hose Size	A		Cutoff E	H Hex	
#	<u>~~~~~</u>	0				$\bigcirc$	
		inch	inch	mm	inch	mm	inch
10191N-2-4	1/8-27	-4	1.27	32	3/4	19	7/16
10191N-4-4	1/4-18	-4	1.50	38	15/16	24	9/16
10191N-4-5	1/4-18	-5	1.55	39	15/16	24	9/16
10191N-4-6	1/4-18	-6	1.60	41	15/16	24	9/16
10191N-6-6	3/8-18	-6	1.65	58	1	25	11/16
10191N-6-8	3/8-18	-8	1.71	43	1	25	11/16
10191N-8-8	1/2-14	-8	1.94	49	1-1/4	32	7/8
10191N-8-10	1/2-14	-10	1.96	50	1-1/4	32	7/8
10191N-8-12	1/2-14	-12	2.42	61	1-1/4	32	1
10191N-12-12	3/4-14	-12	2.19	56	1-3/8	35	1-1/8
10191N-16-16	1-11-1/2	-16	2.46	62	1-1/2	38	1-3/8
10191-20-20	1-1/4-11-1/2	-20	3.05	77	2-1/16	52	1-3/4

Construction: Brass nipple, steel shell.

Add "B" for Brass nipple and shell.

Add "C" for Stainless Steel.

## 10391N Male (JIC) 37°

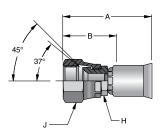


Part Number	Thread Size	Hose Size	I	4	Cutoff E	H Hex	
#	·····	0					$\bigcirc$
			inch	mm	inch	mm	inch
10391N-4-4	7/16-20	-4	1.37	35	13/16	21	1/2
10391N-5-5	1/2-20	-5	1.48	38	7/8	22	9/16
10391N-6-6	9/16-18	-6	1.64	42	1	25	11/16
10391N-8-8	3/4-16	-8	1.79	35	1-1/8	29	7/8
10391N-8-6	3/4-16	-6	1.73	44	1-1/16	27	7/8
10391N-10-10	7/8-14	-10	2.07	53	1-3/8	35	1
10391N-12-12	1-1/16-12	-12	2.10	53	1-5/16	33	1-1/8
10391N-16-16	1-5/16-12	-16	2.43	62	1-1/2	38	1-3/8

Construction: Brass nipple, steel shell. Add "B" for Brass nipple and shell. Add "C" for Stainless Steel.



## 10691N SAE (JIC) 37° Swivel



Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		H Hex	J Hex
#	<u>~~~~~</u>	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
10691N-4-4	7/16-20	-4	1.43	36	7/8	22	3/8	9/16
10691N-5-5	1/2-20	-5	1.56	40	15/16	24	7/16	5/8
10691N-6-6	9/16-18	-6	1.63	41	1	25	1/2	11/16
10691N-6-8	9/16-18	-8	1.69	43	1	25	9/16	11/16
10691N-8-8	3/4-16	-8	1.89	48	1-3/16	30	11/16	7/8
10691N-8-10	3/4-16	-10	1.86	58	1-1/8	29	3/4	7/8
10691N-10-10	7/8-14	-10	2.03	52	1-5/16	33	13/16	1
10691N-12-12	1-1/16-12	-12	2.12	54	1-5/16	33	1	1-1/4
10691N-16-16	1-5/16-12	-16	2.45	62	1-9/16	40	1-1/4	1-1/2
10691-20-20	1-5/8-12	-20	2.98	76	1-13/16	46	1-11/16	2

Construction: Brass nipple, steel nut and shell.

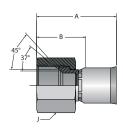
Add "B" for Brass nipple, nut and shell.

Add "S" for Steel nipple, nut and shell.

Add "C" for Stainless Steel.

NOTE: Sizes -4, -5,-8 and -10 incorporate a dual seat.

# 10691NRD SAE (JIC) 37° Swivel



Part Number	Thread Size	Hose Size	A		Cutoff E	J Hex	
#	<u>~~~~~</u>	0					$\bigcirc$
			inch	mm	inch	mm	inch
10691N-4-4-RD	7/16-20	-4	1.34	34	13/16	21	9/16
10691N-5-5-RD	1/2-20	-5	1.51	38	7/8	22	5/8
10691N-6-6-RD	9/16-18	-6	1.60	41	15/16	24	11/16
10691N-8-8-RD	3/4-16	-8	1.79	45	1-1/16	27	7/8
10691N-10-10-RD	7/8-14	-10	1.91	49	1-3/16	30	1
10691N-12-12-RD	1-1/16-12	-12	2.09	58	1-5/16	33	1-1/4
10691N-16-16-RD	1-5/16-12	-16	2.27	58	1-5/16	33	1-1/2

Construction: Brass nipple, steel nut and shell.

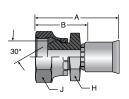
 $\label{eq:Add Barrier} \mbox{Add "B" for Brass nipple, nut and shell.}$ 

Add "C" for Stainless Steel.

NOTE: Sizes -4, -5,-8 and -10 incorporate a dual seat.



## 10791N Female Pipe Swivel



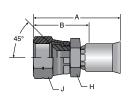
Part Number	Thread Size	Hose Size	А		Cutoff E		H Hex	J Hex
#	*****	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
10791N-4-4	1/4-18	-4	1.50	38	15/16	24	9/16	11/16
10791N-6-6	3/8-18	-6	1.67	42	1	25	5/8	7/8
10791N-8-8	1/2-14	-8	1.83	46	1-1/8	29	3/4	1
10791N-12-12	3/4-14	-12	2.09	53	1-5/16	33	1	1-1/4
10791N-16-16	1-11-1/2	-16	2.26	57	1-5/16	33	1-3/16	1-3/8

Construction: Brass nipple, steel nut and shell.

Add "B" for Brass nipple, nut and shell.

Add "C" for Stainless Steel.

#### 10891N SAE 45° Swivel



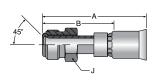
Part Number	Thread Size	Hose Size	A		Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
10891N-6-6	5/8-18	-6	1.69	43	1-1/16	27	5/8	3/4
10891N-12-12	1-1/16-14	-12	2.12	54	1-5/16	33	1	1-1/4

Construction: Brass nipple, steel nut and shell.

Add "S" for Steel nipple, nut and shell.

Add "C" for Stainless Steel.

#### 12891N Male Inverted Swivel-Straight

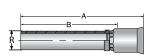


Part Number	Thread Size	Hose Size	A		Cutoff	J Hex	
#	<u>~~~~~</u>	0					$\bigcirc$
			inch	mm	inch	mm	inch
12891N-4-4	7/16-24	-4	2.09	53	1-1/2	38	7/16
12891N-5-5	1/2-20	-5	2.15	55	1-9/16	40	1/2
12891N-5-6	1/2-20	-6	2.23	57	1-9/16	40	1/2
12891N-6-6	5/8-18	-6	2.23	57	1-9/16	40	5/8
12891N-8-8	3/4-18	-8	2.31	59	1-5/8	41	3/4
12891N-10-10	7/8-18	-10	2.43	58	1-3/4	44	7/8
12891N-12-12	1-1/16-16	-12	2.50	64	1-11/16	43	1-1/16

Construction: Steel nipple, tube, nut and shell.



# 13491N Straight Tube



Part Number	Hose Size	Diameter R	ŀ	4	Cutoff E	•
#	0	$\bigotimes$				
		inch	inch mm		inch	mm
13491N-8-8	-8	1/2	2.80	71	2-1/8	54
13491N-8-10	-10	1/2	2.81	71	2-1/8	54
13491N-10-10	-10	5/8	2.96	75	2-1/4	58
13491N-12-12	-12	3/4	3.37	86	2-9/16	65

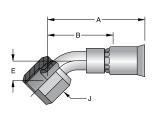
Construction: Brass nipple, steel shell.

Add "B" for Brass nipple and shell.

Add "C" for Stainless Steel.

NOTE: The 16T91N fitting includes 13491N with the 60HAB sleeve and 61HAB nut.

#### 13791N JIC 37° Swivel 45° Elbow



Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		Е		J Hex
#	<u>~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
13791N-4-4	7/16-20	-4	1.74	44	1-3/16	30	0.33	8	9/16
13791N-5-5	1/2-20	-5	1.87	47	1-1/4	32	0.36	9	5/8
13791N-6-6	9/16-18	-6	1.94	49	1-5/16	33	0.43	11	11/16
13791N-8-8	3/4-16	-8	2.28	58	1-9/16	37	0.55	14	7/8
13791N-10-10	7/8-14	-10	2.42	61	1-11/16	43	0.64	43	1
13791N-12-12	1-1/16-12	-12	2.83	58	2-1/16	52	0.78	20	1-1/4
13791N-16-16	1-5/16-12	-16	3.18	81	2-1/4	57	0.89	23	1-1/2
13791-20-20	1-5/8-12	-20	3.67	93	2-9/16	65	1.10	28	2

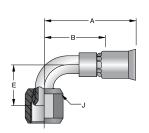
Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

Non Standard. See page ii for information on non-standard products.



# 13991N JIC 37° Swivel 90° Elbow Short Drop

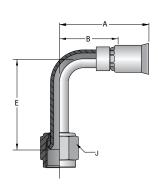


Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		E		J Hex
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
13991N-4-4	7/16-20	-4	1.62	41	1-1/16	37	0.68	17	9/16
13991N-5-5	1/2-20	-5	1.71	43	1-1/8	29	0.77	20	5/8
13991N-6-6	9/16-18	-6	1.91	49	1-1/4	32	0.91	23	11/16
13991N-8-8	3/4-16	-8	2.03	52	1-5/16	33	1.09	28	7/8
13991N-10-10	7/8-14	-10	2.27	58	1-9/16	37	1.23	43	1
13991N-12-12	1-1/16-12	-12	2.75	58	1-15/16	49	1.82	46	1-1/2
13991N-16-16	1-5/16-12	-16	3.15	80	2-3/16	56	2.14	52	1-1/2
13991-20-20	1-5/8-12	-20	3.53	90	2-7/16	62	1.18	30	2

Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

# 14191N JIC 37° Swivel 90° Elbow Long Drop

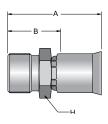


Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		E		J Hex
#	****	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
14191N-4-4	7/16-20	-4	1.66	42	1-1/8	29	1.80	46	9/16
14191N-5-5	1/2-20	-5	1.72	44	1-1/8	29	1.77	45	5/8
14191N-6-6	9/16-18	-6	1.93	49	1-5/16	33	2.13	54	11/16
14191N-8-8	3/4-16	-8	2.11	54	1-3/8	35	2.43	62	7/8
14191N-10-10	7/8-14	-10	2.34	59	1-5/8	41	2.57	65	1
14191N-12-12	1-1/16-12	-12	2.63	67	1-7/8	48	3.73	95	1-1/4
14191N-16-16	1-5/16-12	-16	3.15	80	2-3/16	56	4.33	110	1-1/2
14191-20-20	1-5/8-12	-20	4.00	102	2-15/16	75	5.28	134	2

Construction: Steel tube, nipple, nut and shell.



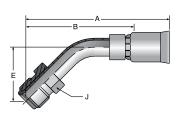
# 16191N Compression Air Brake



Part Number	Thread Size	Hose Size	A		Cutoff E	H Hex	
#	<u>~~~~~</u>	0					$\bigcirc$
			inch	mm	inch	mm	inch
16191N-8-8	11/16-20	-8	1.61	41	15/16	24	3/4
16191N-8-10	11/16-20	-10	1.61	41	15/16	24	7/8
16191N-10-10	13/16-18	-10	1.82	46	1-1/8	29	15/16
16191N-12-12	1-18	-12	1.93	49	1-1/8	29	1-1/4

Construction: Brass nipple, steel shell. Add "B" for Brass nipple and shell. Add "C" for Stainless Steel.

#### 16791N Male Inverted Swivel 45° Elbow

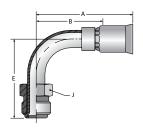


Part Number	Thread Size	Hose Size	A		Cutoff B		E	J Hex	
#	<u>~~~~~</u>	0						$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch
16791N-4-4	7/16-24	-4	2.05	52	1-1/2	38	0.63	16	7/16
16791N-5-5	1/2-20	-5	2.48	63	1-7/8	48	0.71	18	1/2
16791N-6-6	5/8-18	-6	2.60	66	1-15/16	49	0.96	24	5/8
16791N-8-8	3/4-18	-8	2.85	72	2-1/8	54	0.90	23	3/4
16791N-10-10	7/8-18	-10	3.30	84	2-5/8	67	1.02	43	7/8
16791N-12-12	1-1/16-16	-12	3.64	58	2-13/16	71	1.15	29	1-1/16

Construction: Steel tube, nipple, nut and shell.



#### 16991N Male Inverted Swivel 90° Elbow

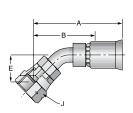


Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		E		J Hex
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
16991N-4-4	7/16-24	-4	1.72	44	1-3/16	30	1.19	30	7/16
16991N-5-5	1/2-20	-5	1.98	50	1-3/8	35	1.65	42	1/2
16991N-5-6	1/2-20	-6	2.03	52	1-7/16	37	1.65	42	1/2
16991N-6-6	5/8-18	-6	2.08	53	1-7/16	37	1.70	43	5/8
16991N-8-8	3/4-18	-8	2.18	55	1-1/2	38	1.87	43	3/4
16991N-10-10	7/8-18	-10	3.02	58	2-5/16	59	2.18	55	7/8
16991N-12-12	1-1/16-16	-12	3.36	85	2-9/16	64	2.51	64	1-1/16

Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

#### **17791N SAE 45° Swivel 45° Elbow**

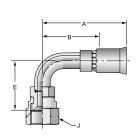


Part Number	Thread Size	Hose Size	A Cutoff Allov					<b>E</b>	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
17791N-6-6	5/8-18	3/8	2.06	52	1-5/16	33	0.39	10	3/4
17791N-12-12	1-1/16-14	3/4	3.07	78	2-7/16	62	0.78	20	1-1/4

Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

#### 17991N SAE 45° Swivel 90° Elbow



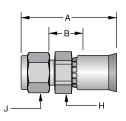
Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		ŀ	=	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
17991N-6-6	5/8-18	3/8	2.06	52	1-5/16	49	1.19	30	3/4
17991N-12-12	1-1/16-14	3/4	2.92	74	2-1/8	54	1.82	46	1-1/4

Construction: Steel tube, nipple, nut and shell.



# **G** General Technical

# 1AL91N A-LOK® Compression



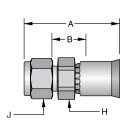
Part Number	Part Number	Hose Size	A	١	Cutoff Allow. B		H Hex	J Hex
#	#	0					$\bigcirc$	$\bigcirc$
w/nut & ferrule	w/o nut & ferrules		inch	mm	inch	mm	inch	inch
1AL91N-4-4C	1AL91N-4-4NC	-4	1.30	33	7/16	11	1/2	9/16
1AL91N-4-5C	1AL91N-4-5NC	-5	1.35	34	7/16	11	1/2	9/16
1AL91N-6-6C	1AL91N-6-6NC	-6	1.53	39	1/2	13	5/8	11/16
1AL91N-8-8C	1AL91N-8-8NC	-8	1.61	41	7/16	11	13/16	7/8
1AL91N-12-12C	1AL91N-12-12NC	-12	1.86	47	1/2	13	1-1/8	1-1/8
1AL91N-16-16C	1AL91N-16-16NC	-16	2.11	58	7/16	11	1-3/8	1-1/2

Construction: Stainless steel nipple, nut, ferrules and shell.

NOTE: Nut part No. is XNUX-316; Front ferrule part No. is XFFX-316; Back ferrule part No. is XBFX-316. X denotes dash size.

Nuts and Ferrules are Manufactured by the Instrumentation Products Division. Refer to Catalog 4230/4233 for Installation Instructions and Replacement Components.

# 1P691N CPI® Compression (With Nut and Ferrule)



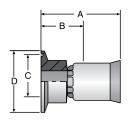
Part Number	Hose Size	I	A Cutoff Allow.				J Hex
#	0					$\bigcirc$	$\bigcirc$
w/nut & ferrules		inch	mm	inch	mm	inch	inch
1P691N-4-4C	-4	1.30	33	7/16	11	1/2	9/16
1P691N-6-6C	-6	1.53	39	1/2	13	5/8	11/16
1P691N-8-8C	-8	1.61	41	7/16	11	13/16	7/8

Construction: Stainless steel nipple and shell.

NOTE: Nut part No. is XBZ-SS Ferrule part No. is XTZ-SS; X denotes dash size.

Nuts and Ferrules are Manufactured by the Instrumentation Products Division. Refer to Catalog 4230/4233 for Installation Instructions and Replacement Components.

#### 1FN91N Sanitary Flange

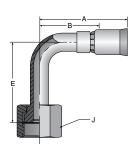


Part Number	Hose Size	ı	4	Cutoff E	Allow.	C		Flange Size D		
#	0									
		inch	mm	inch	mm	inch	mm	inch	mm	
1FN91N-16-16C	-16	1.96	50	1-1/16	27	0.87	22	1.98	50	

Construction: Stainless steel nipple and shell.



# 1J191N Female Seal-Lok™ Swivel 90° Elbow Long Drop

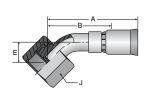


Part Number	Thread Size	Hose Size	P	4	Cutoff .		E	E	
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
1J191N-4-4	9/16-18	-4	1.66	42	1-1/16	27	1.80	46	11/16
1J191N-4-5	9/16-18	-5	1.78	45	1-1/16	27	1.80	46	11/16
1J191N-6-5	11/16-16	-5	1.92	49	1-3/16	30	2.13	54	13/16
1J191N-6-6	11/16-16	-6	1.92	49	1-3/16	30	2.13	54	13/16
1J191N-8-6	13/16-16	-6	2.00	51	1-9/16	40	2.51	43	15/16
1J191N-8-8	13/16-16	-8	2.15	58	1-7/16	37	2.51	64	15/16
1J191N-10-10	1-14	-10	1.25	32	1-9/16	40	2.76	70	1-1/8
1J191N-12-12	1-3/16-12	-12	2.65	67	1-13/16	46	3.78	96	1-3/8
1J191N-16-16	1-7/16-12	-16	3.15	80	2-1/4	57	4.50	114	1-1/2

Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

#### 1J791N Female Seal-Lok™ Swivel 45° Elbow

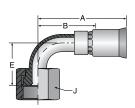


Part Number	Thread Size	Hose Size	A Cutoff Allow. B		Е		J Hex		
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
1J791N-4-4	9/16-18	-4	1.73	44	1-1/4	32	0.41	10	11/16
1J791N-4-6	9/16-18	-6	1.91	49	1-5/16	33	0.41	10	11/16
1J791N-6-6	11/16-16	-6	2.02	51	1-3/8	35	0.43	11	13/16
1J791N-8-8	13/16-16	-8	2.18	55	1-1/2	38	0.59	15	15/16
1J791N-8-10	13/16-16	-8	2.39	61	1-11/16	43	0.59	15	15/16
1J791N-10-10	1-14	-10	2.47	63	1-3/4	44	0.59	43	1-1/8
1J791N-12-12	1-3/16-12	-12	2.74	58	1-15/16	49	0.81	21	1-3/8
1J791N-16-16	1-7/16-12	-16	3.50	89	2-1/2	64	0.94	24	1-5/8

Construction: Steel tube, nipple, nut and shell.



# 1J991N Female Seal-Lok™ Swivel 90° Elbow Short Drop

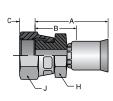


Part Number	Thread Size	Hose Size	A	4	Cutoff A		E	J Hex	
#	<u>~~~~~</u>	0						$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch
1J991N-4-4	9/16-18	-4	1.73	44	1-1/4	32	0.82	21	11/16
1J991N-6-6	11/16-16	-6	1.91	49	1-5/16	33	0.91	23	13/16
1J991N-8-8	13/16-16	-6	2.02	51	1-3/8	35	1.15	29	15/16
1J991N-10-10	1-14	-10	2.18	55	1-1/2	38	1.27	32	1-1/8
1J991N-12-12	1-3/16-12	-12	2.39	61	1-11/16	43	1.85	43	1-3/8
1J991N-16-16	1-7/16-12	-16	2.47	63	1-3/4	44	2.21	56	1-5/8

Construction: Steel tube, nipple, nut and shell.

Add "C" for Stainless Steel.

# 1JC91N Female Seal-Lok™ Swivel Straight

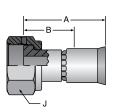


Part Number	Thread Size	Hose Size	A		Cutoff Allow. B		С		H Hex	J Hex
#	<u>~~~~~</u>	0							$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch
1JC91N-4-4	9/16-18	-4	1.46	37	5/8	16	.32	8	9/16	11/16
1JC91N-6-6	11/16-16	-6	1.62	41	11/16	17	.32	8	5/8	13/16
1JC91N-8-8	13/16-16	-8	1.93	49	13/16	21	.43	11	3/4	15/16
1JC91N-10-10	1-14	-10	2.05	52	7/8	22	.53	13	15/16	1-1/8
1JC91N-12-10	1-3/16-12	-10	2.05	52	1-1/4	32	.57	14	15/16	1-3/8
1JC91N-12-12	1-3/16-12	-12	2.05	58	1-1/4	32	.57	14	15/16	1-3/8
1JC91N-16-16	1-7/16-12	-16	2.56	65	1-1/16	27	.58	15	1-3/8	1-5/8
1JC91N-20-16	1-11/16-12	-16	2.30	58	1-3/8	35	.59	15	1-5/8	1-7/8
1JC91-20-20	1-11/16-12	-20	2.68	68	1-11/16	43	.59	15	1-11/16	1-7/8

Construction: Steel nipple, nut and shell. Add "B" for Brass nipple, nut and shell.



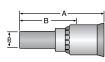
## 1Q191N Ultra Seal



Part Number	Thread Size	Hose Size	A	A Cutoff Allow.		Cutoff Allow. B	
#	<u>~~~~~</u>	0					
			inch	mm	inch	mm	inch
1Q191N-8-8C	7/8-20	-8	1.62	41	15/16	24	1

Construction: Stainless Steel.

#### 1TU91N Universal Tube Stub



Part Number	Hose Size	Diameter R	A	4	Cutoff E	_
#	0	$\varnothing$				
		inch	inch	mm	inch	mm
1TU91-2-3C	-3	1/8	1.33 34		7/8	22
1TU91-3-3C	-3	3/16	1.33	34	7/8	22
1TU91N-4-4C	-4	1/4	1.63	41	1-1/16	27
1TU91N-4-5C	-5	1/4	1.70	43	1-1/16	27
1TU91N-6-6C	-6	3/8	1.81	46	1-3/16	30
1TU91N-8-8C	-8	1/2	2.72	58	1-7/16	37
1TU91N-8-10C	-10	1/2	2.14	54	1-7/16	37
1TU91N-10-10C	-10	5/8	2.14 54		1-7/16	37
1TU91N-12-12C	-12	3/4	2.24 57		1-7/16	37
1TU91N-16-16C	-16	1	2.73 69		1-3/4	44

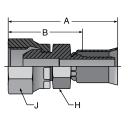
Construction: Stainless Steel.

NOTE: Use with A-Lok & CPI nuts, sleeves and adapters. These components are manufactured by Parker's Instrumentation Connectors Division. Refer to catalogs 4230 & 4233 for additional information.



# ment Fiffings

# 19291N Female BSP Parallel Pipe Swivel Straight (60° Cone)



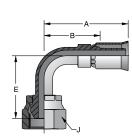
Part Number	Thread Size	Hose Size	А		Cutoff A	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0					$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	inch
19291N-8-8	PF-1/2-14	-8	1.99	51	1-5/16	33	27	27
19291N-12-12	PF-3/4-14	-12	2.35	60	1-9/16	40	36	36

Construction: Steel nipple, nut and shell.

Add "B" for Brass nipple, nut and shell.

Add "C" for Stainless Steel.

# 1B291N Female BSP Parallel Pipe Swivel - 90° Elbow (60° Cone)

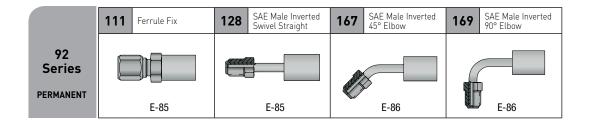


Part Number	Thread Size	Hose Size	I	4	Cutoff B		E		J Hex
#	<u>~~~~~</u>	0						$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch
1B291N-8-8	PF-1/2-14	-8	2.04	52	1-3/8	35	1.57	40	27
1B291N-12-12	PF-3/4-14	-12	2.93	74	2-1/8	54	2.54	65	36

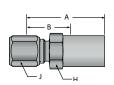
Construction: Steel nipple, nut and shell.



# 92 Series Visual Index



#### 11192 Ferrule-Fix (Nut and Sleeve Included)



Part Number	Thread Size	Hose Size		A		Cutoff E	Allow.	H Hex	J Hex
#	·····	(	9					$\bigcirc$	$\bigcirc$
		inch	inch mm		mm	inch	mm	inch	inch
11192-3-3	3/8-24	3/16 5		1.37	35	15/16 24		5/8	7/16

Construction: Steel.

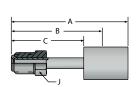
Add "C" for Stainless Steel.

"Ferrul-Fix" affords salvaging of bent tube section of combination tube-hose assemblies and quick, easy repair on the job. See page G-41 for Ferrule-Fix installation instructions.

NOTE: Nut Part Number is 111-size. Sleeve Part Number is 110-size.

Nuts and Ferrules are Manufactured by the Instrumentation Products Division. Refer to Catalog 4230/4233 for additional information.

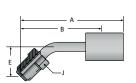
#### 12892 SAE Male Inverted Swivel Straight



Part Number	Thread Size	Hose Size		,	А		Allow.	(	J Hex	
#	~~~~	0	0							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
12892-3-3C	3/8-24	3/16	5	2.01	55	1-1/2	38	1.25	32	7/16

Construction: Stainless Steel.

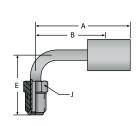
#### 16792 SAE Male Inverted Swivel 45° Elbow



Part Number	Thread Size	Ho Si	se ze	ı	4	Cutoff B	Allow.	E		J Hex
#	<u>~~~~~</u>	$\odot$	$\odot$							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
16792-3-3C	3/8-24	3/16	5	2.36	60	1-15/16	50	0.62	16	3/8

Construction: Stainless Steel.

## 16992 SAE Male Inverted Swivel 90° Elbow



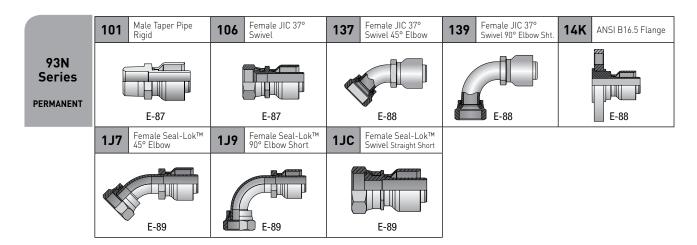
Part Number	Thread Size	Ho Si	se ze	ļ	4	Cutoff	Allow.	E		J Hex
#	~~~~	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
16992-3-3C	3/8-24	3/16	5	1.45	37	1	25	1.25	32	3/8

Construction: Stainless Steel.

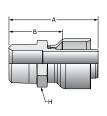


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## 93N Series Visual Index



## 10193N MaleTaper Pipe Rigid

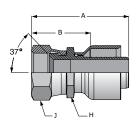


Part Number	Thread Size	Hose Size		A	4	Cutoff E	H Hex	
#	<u>~~~~~</u>	inch mm						$\bigcirc$
		inch mm		inch mm		inch	mm	inch
10193N-8-8	1/2-14	1/2	13	2.09	53	1-1/2	38	7/8
10193N-12-12	3/4-14	3/4	19	2.70	69	1-5/8	41	1-1/8
10193N-16-16	1-11-1/2	1	25	3.03	77	1-13/16	46	1-3/8
10193N-20-20	1-1/4-11-1/2	1-1/4	32	3.20	58	1-7/8	48	1-11/16
10193N-24-24	1-1/2-11-1/2	1-1/2 38		3.76	96	2-1/16	52	2
10193N-32-32	2-11-1/2	2 51		3.97	101	2-5/16	59	2-1/2

Construction: Steel nipple, nut and shell.

Add "C" for Stainless Steel.

#### 10693N (JIC) 37° Female Swivel



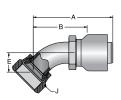
Part Number	Thread Size	Hose Size		А		Cutoff / B	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
10693N-6-6	9/16-18	3/8	10	1.69	43	1-3/32	28	3/4	11/16
10693N-8-8	3/4-16	1/2	13	2.02	51	1-3/8	35	7/8	7/8
10693N-10-10	7/8-14	5/8	16	2.51	64	1-11/16	43	1	1
10693N-12-12	1-1/16-12	3/4	19	2.86	73	1-3/4	44	1-1/8	1-1/4
10693N-16-16	1-5/16-12	1	25	3.11	79	1-13/16	46	1-3/8	1-1/2
10693N-20-20	1-5/8-12	1-1/4	32	3.28	83	2	51	1-3/4	2
10693N-24-24	1-7/8-12	1-1/2	38	3.92	58	2-1/4	57	2	2-1/4
10693N-32-32	2-1/2-12	2	2 51		105	2-7/16	62	2-1/2	2-7/8

Construction: Steel nipple, nut and shell.



# **O** General Technical

#### 13793N JIC 37° Swivel 45° Elbow

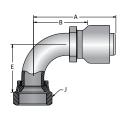


Part Number	Thread Size	Hose Size	A	4	Cutoff E		E	J Hex	
#	<u>~~~~~</u>	0						$\bigcirc$	
			inch	mm	inch	mm	inch	mm	inch
13793N-12-12	1-1/16-12	-12	3.37	86	2-1/4	57	.78	20	1-1/4
13793N-16-16	1-5/16-12	-16	3.71	94	2-5/8	67	.90	23	1-1/2
13793N-20-20	1-5/8-12	-20	4.06	103	2-3/4	70	1.18	43	2
13793N-24-24	1-7/8-12	-24	5.76	146	4-1/4	108	1.47	37	2-1/4

Construction: Steel nipple, nut and shell.

Add "C" for Stainless Steel.

# 13993N JIC 37° Swivel 90° Elbow Short Drop

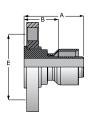


Part Number	Thread Size	Hose Size					E	J Hex	
#	<u>~~~~~</u>	0							$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch
13993N-8-8	3/4-16	-8	2.20	56	1-9/16	40	1.09	28	7/8
13993N-10-10	7/8-14	-10	2.41	61	1-11/16	43	1.23	31	1
13993N-12-12	1-1/16-12	-12	3.28	83	2-3/16	56	1.82	46	1-1/4
13993N-16-16	1-5/16-12	-16	3.71	94	2-1/2	64	2.14	54	1-1/2
13993N-20-20	1-5/8-12	-20	3.89	99	2-9/16	65	2.57	43	2
13993N-24-24	1-7/8-12	-24	5.72	58	4-1/4	108	3.17	81	2-1/4

Construction: Steel nipple, nut and shell.

Add "C" for Stainless Steel.

# 14K93N ANSI B16.5 Flange



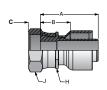
Part Number		se ze	Flange Diameter		A		Cutoff E		Bolt Spacing			
#	0	9	$\varnothing$									
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
14K93N-8-8	1/2	13	3-1/2	89	2.03	52	1-3/8	35	2-3/8	60		
14K93N-12-12	3/4	19	3-7/8	98	2.70	69	1-3/4	44	2-3/4	70		
14K93N-16-16	1	25	4-1/4	108	2.84	72	1-5/8	41	3-1/8	79		
14K93N-20-20	1-1/4	32	4-5/8	117	2.98	76	1-5/8	41	3-1/2	89		
14K93N-24-24	1-1/2	38	5	127	3.45	88	1-3/4	44	3-7/8	98		
14K93N-32-32	2	51	6	152	3.62	58	2	51	4-3/4	121		

Construction: Steel nipple and shell, stainless steel flange.

NOTE: Also available in PAGE Fittings.



# 1JC93N Seal-Lok™ Swivel Straight Short

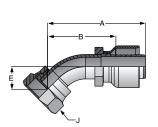


Part Number	Thread Size		Hose Size		Α		Cutoff Allow. B			H Hex	J Hex
#	<u>~~~~~</u>	0	0							$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1JC93N-12-12	1-3/16-12	3/4	19	2.30	58	1-3/8	35	.57	14	1-3/8	1-3/8
1JC93N-16-16	1-7/16-12	1	25	2.61	66	1-3/8	35	.58	15	1-3/8	1-5/8
1JC93N-20-20	1-11/16-12	1-1/4	32	2.65	67	1-5/16	33	.59	15	1-7/8	1-7/8

Construction: Steel nipple, nut and shell. Add "C" for Stainless Steel.

NOTE: Also available in PAGE Fittings. When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cut-off allowance. Stainless steel fittings must be assembled with Karrykrimp2 or Parkimp2. See CrimpSource for more information.

#### 1J793N Seal-Lok<sup>™</sup> 45° Elbow



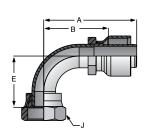
Part Number	Thread Size	Hose Size		А		Cutoff E	Allow. 3	i	J Hex	
#	<u>~~~~~</u>	0								
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J793N-20-20	1-11/16-12	1-1/4	32	4.25	108	2-15/16	75	1.00	25	1-7/8

Construction: Steel nipple, tube, nut and shell.

Add "C" for Stainless Steel.

NOTE: Also available in PAGE Fittings.

## 1J993N Seal-Lok™ 90° Elbow Short Drop



Part Number	Thread Size	Hose Size		А		Cutoff Allow. B		ŀ	J Hex	
#	<u>~~~~~</u>	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J993N-20-20	1-11/16-12	1-1/4	32	4.36	111	3-1/16	78	2.51	64	1-7/8

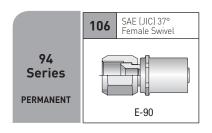
Construction: Steel nipple, tube, nut and shell.

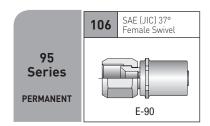
Add "C" for Stainless Steel.

NOTE: Also available in PAGE Fittings.

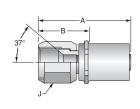


# 94/95 Series Visual Index





#### 10694 SAE (JIC) 37° Female Swivel

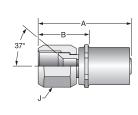


Part Number	Thread Size	Hose Size	А		Cutoff E		J Hex
#	<u>~~~~~</u>	0					
			inch	mm	inch	mm	inch
10694-6-6	9/16-18	-6	1.76	45	15/16	24	11/16
10694-8-8	3/4-16	-8	2.09	53	1-3/16	30	7/8
10694-10-10	7/8-14	-10	2.30	58	1-5/16	33	1
10694-12-12	1-1/16-12	-12	2.45	62	1-5/16	33	1-1/4
10694-16-16	1-5/16-12	-16	2.72	69	1-7/16	37	1-1/2

Construction: Steel nipple, nut and shell.

Add "C" for Stainless Steel.

#### 10695 SAE (JIC) 37° Female Swivel

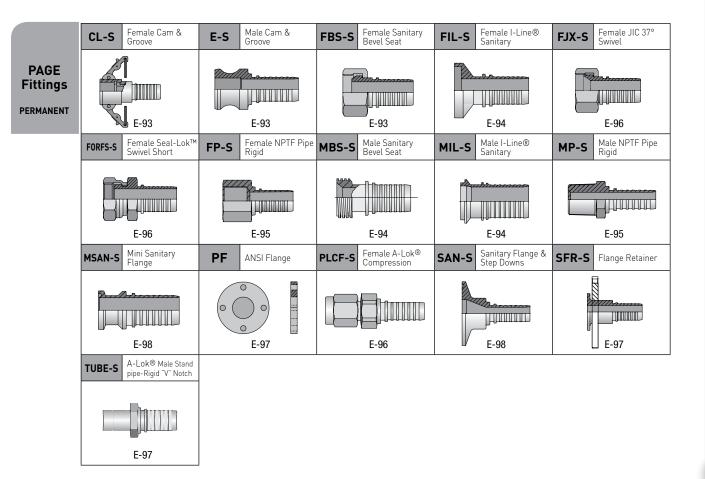


Part Number	Thread Size	Hose Size	А		Cutoff E	J Hex	
#		0					
			inch	mm	inch	mm	inch
10695-4-4	7/16-20	-4	1.76	45	15/16	24	11/16
10695-6-6	9/16-18	-6	2.09	53	1-3/16	30	7/8
10695-8-8	3/4-16	-8	2.30	58	1-5/16	33	1
10695-12-12	1-1/16-12	-12	2.45	62	1-5/16	33	1-1/4

Construction: Steel nipple, nut and shell.



# **PAGE Fittings Visual Index**



#### NOTE:

The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed.

#### PAGE fittings require a PAGE collar. See pg. E-92.

Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



# **G** General Technical

# **PAGE Fitting Collars - Size & Style**

	Hose	Collar # Size	04	06	08	12	16	20	24	32	40	48	64
PAGE	STW STB	ST300	ST300	ST300	ST300	ST300	ST300	ST300	ST300				
COLLARS	SCW SCB	SC300	SC300	SC300	SC300	SC300	SC300	SC300	SC300	SC300			
	PCW PCB	PC300	PC300	PC300	PC300	PC300	PC300	PC300	PC300	PC300			
By Size	SCWV SCBV	SC300			SC300	SC300	SC300	SC300	SC300	SC300	SC300	SC300	SC300
•	PCWV PCBV	PC300			PC300	PC300	PC300	PC300	PC300	PC300	PC300	PC300	PC300
	SBFW SBFB	SBF300		SBF300	SBF300	SBF300	SBF300		SBF300				
	RCTW	RC300			RC300	RC300	RC300	RC300	RC300	RC300	RC300	RC300	RC300

#### **Inserts & Collars Sold Separately**

If you need a Female JIC Swivel Fitting for a 08-SCW Hose (1/2" Convoluted), place an order for (1) 08-08 FJX-S and (1) 08-SC300.

If you need a Male Pipe Fitting for a 12-RCTW Hose, place an order for [1] 12-12 MP-S and [1] 12-RC300.

By Style

Size	ST300	SC300	PC300	SBF300	RC300
	For use with STW/STB	For use with SCW/SCB, SCWV/SCBV	For use with PCW/PCB, PCWV/PCBV	For use with SBFW/SBFB	For use with RCTW/RCTB
1/4"	04-ST300	04-SC300	04-PC300	_	_
3/8"	06-ST300	06-SC300	06-PC300	06-SBF300	_
1/2"	08-ST300	08-SC300	08-PC300	08-SBF300	08-RC300
3/4"	12-ST300	12-SC300	12-PC300	12-SBF300	12-RC300
1"	16-ST300	16-SC300	16-PC300	16-SBF300	16-RC300
1-1/4"	20Z-ST300	20-SC300	20-PC300	_	20-RC300
1-1/2"	24Z-ST300	24-SC300	24-PC300	24-SBF300	24-RC300
2"	_	32-SC300	32-PC300	_	32-RC300
3"	_	48-SC300	48-PC300	_	48-RC300
4"	_	64-SC300	64-PC300	_	64-RC300

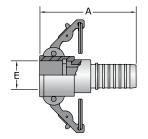
Construction: Stainless Steel.

NOTE: also available in carbon steel "CS".

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



#### **CL-S Female Cam & Groove**

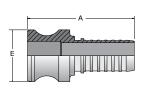


Part Number	Ho I.I	se D.	P	4	Е		
#	0	$\odot$					
	inch mm		inch	mm	inch	mm	
16-16CL-S	1	25	4.2	107	1.44	37	
24-24CL-S	1-1/2	38	5.2	132	2.10	53	
32-32CL-S	2	51	6.0	152	2.48	63	
48-48CL-S	3 76		7.2	183	3.60	91	
64-64CL-S	4	102	7.8	7.8 198		119	

Construction: Stainless Steel.

NOTE: Also available as encapsulated female cam under part number TEC-S and TECL-S.

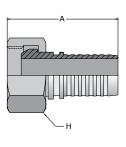
#### E-S Male Cam & Groove



Part Number	Ho I.I	se D.	A	4	Е		
#	0						
	inch	mm	inch	mm	inch	mm	
12-12E-S	3/4	19	2.60	66	1.26	32	
16-16E-S	1	25	2.91	74	1.44	37	
20-20E-S	1-1/4	32	3.64	93	1.78	45	
24-24E-S	1-1/2	38	4.03	102	2.10	53	
32-32E-S	2	51	4.75	121	2.48	63	
48-48E-S	3 76		5.75	146	3.60	91	
64-64E-S	4	102	5.88	149	4.70	119	

Construction: Stainless Steel.

#### FBS-S Female Sanitary Bevel Seat



Part Number	Acme Thread	Hose I.D.		ŀ	4
#		0			
	inch	inch	mm	inch	mm
16-16FBS-S	1-1/2-8	1	25	2.74	70
24-24FBS-S	2-8	1-1/2	38	3.41	87
32-32FBS-S	2-1/2-8	2	51	3.94	100
40-40FBS-S	3-8	2-1/2	64	4.37	110
48-48FBS-S	3-1/2-8	3	76	4.85	123
64-64FBS-S	4-5/8-6	4	102	5.24	133

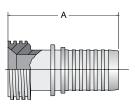
Construction: Stainless Steel.

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



# **G** General Technical

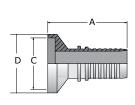
#### MBS-S Male Sanitary Bevel Seat



Part Number	Acme Thread	Hose I.D.		P	4
#		0	9		
	inch	inch mm		inch	mm
16-16MBS-S	1-1/2-8	1	25	2.74	70
24-24MBS-S	2-8	1-1/2	38	3.41	87
32-32MBS-S	2-1/2-8	2 51		3.94	100
40-40MBS-S	3-8	2-1/2	64	4.37	110
48-48MBS-S	3-1/2-8	3	76	4.85	123
64-64MBS-S	4-5/8-6	4	102	5.24	133

Construction: Stainless Steel.

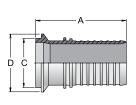
# FIL-S Female I-Line® Sanitary



Part Number	Hose I.D.		ŀ	А		e Size	D		
#	(	0							
	inch	mm	Inch	mm	Inch	mm	Inch	mm	
16-16FIL-S	1	25	2.60	66	1.25	32	2.00	51	
24-24FIL-S	1-1/2	38	3.43	87	1.76	45	2.00	51	
32-32FIL-S	2	51	4.23	107	2.26	57	2.64	67	
40-40FIL-S	2-1/2	64	4.42	112	2.76	70	3.31	84	
48-48FIL-S	3	76	4.84	123	3.31	84	3.87	98	

Construction: Stainless Steel.

## MIL-S Male I-Line® Sanitary



Part Number		Hose I.D.		А		Flange Size C		)
#	(	9						
	inch	mm	Inch	mm	Inch	mm	Inch	mm
16-16MIL-S	1	13	2.60	66	1.25	32	2.00	51
24-24MIL-S	1-1/2	19	3.43	87	1.76	45	2.00	51
32-32MIL-S	2	25	4.23	107	2.26	57	2.64	67
40-40MIL-S	2-1/2	64	4.42	112	2.76	70	3.31	84
48-48MIL-S	3	76	4.84	123	3.31	84	3.87	98

Construction: Stainless Steel.

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



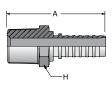
# FP-S Female NPTF Pipe-Rigid



Part Number	Thread Size		ose D.	P	H Hex	
#	<u>~~~~~</u>	0		0		
		inch	mm	inch	mm	inch
04-04FP-S	1/4-18	1/4	6	1.63	41	3/4
06-06FP-S	3/8-18	3/8	10	1.73	44	7/8
08-08FP-S	1/2-14	1/2	13	2.25	57	1-1/16
12-12FP-S	3/4-14	3/4	19	2.60	66	1-5/16
16-16FP-S	1-11 1/2	1	25	2.85	72	1-5/8
20-20FP-S	1 1/4-11 1/2	1-1/4	32	3.50	89	2
24-24FP-S	1 1/2-11 1/2	1-1/2	38	3.63	92	2-3/8
32-32FP-S	2-11 1/2	2	51	4.25	108	2-7/8

Construction: Stainless Steel.

# MP-S Male NPTF Pipe-Rigid



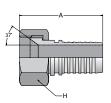
Part Number	Thread Size		se D.	Į.	H Hex	
#	<u>~~~~~</u>	0			$\bigcirc$	
		inch	mm	inch	mm	inch
04-04MP-S	1/4-18	1/4	6	1.63	41	9/16
06-06MP-S	3/8-18	3/8	10	1.76	45	11/16
08-08MP-S	1/2-14	1/2	13	2.34	59	7/8
12-12MP-S	3/4-14	3/4	19	2.59	66	1-1/8
16-16MP-S	1-11 1/2	1	25	3.00	76	1/3/8
20-20MP-S	1 1/4-11 1/2	1-1/4	32	3.39	86	1-3/4
24-24MP-S	1 1/2-11 1/2	1-1/2	38	3.89	99	2
32-32MP-S	2-11 1/2	2	51	4.58	116	2-1/2
40-40MP-S	2-1/2 8	2-1/2	64	5.28	134	3
48-48MP-S	3-8	3	76	5.93	151	3-3/4
64-64MP-S	4-8	4	102	6.82	173	4-5/8

 ${\it Construction:} \ \, {\it Stainless Steel}.$ 

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



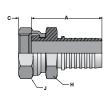
#### FJX-S Female JIC 37° Swivel



Part Number	Thread Size	Hose I.D.		,	H Hex	
#	<u>~~~~~</u>	0				$\bigcirc$
		inch	mm	inch	mm	inch
04-04FJX-S	7/16-20	1/4	6	1.44	37	9/16
06-06FJX-S	9/16-18	3/8	10	1.65	42	11/16
08-08FJX-S	3/4-16	1/2	13	2.13	54	7/8
12-12FJX-S	1-1/16-12	3/4	19	2.54	65	1-1/4
16-16FJX-S	1-5/16-12	1	25	2.76	70	1-1/2
20-20FJX-S	1-5/8-12	1-1/4	32	3.25	83	2
24-24FJX-S	1-7/8-12	1-1/2	38	3.73	95	2-1/4
32-32FJX-S	2-1/2-12	2	51	4.55	116	2-7/8
40-40FJX-S	3-12	2-1/2	64	4.76	121	3-3/8

Construction: Stainless Steel.

#### FORFS-S Female Seal-Lok® Swivel-Short

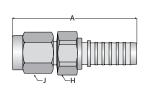


Part Number	Thread Size	Hose I.D.		A		С		H Hex	J Hex
#	****	0		0				$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
04-04F0RFS-S	9/16-18	1/4	6	1.50	38	.32	8	9/16	11/16
06-06F0RFS-S	11/16-16	3/8	10	1.85	47	.32	8	11/16	13/16
08-08F0RFS-S	13/16-16	1/2	13	2.00	51	.43	11	13/16	15/16
12-12F0RFS-S	1-3/16-12	3/4	19	2.30	58	.57	14	1-1/8	1-3/8
16-16F0RFS-S	1-7/16-12	1	25	2.50	64	.58	15	1-3/8	1-5/8
24-24F0RFS-S	2-12	1-1/2	38	3.98	101	.59	15	2	2-1/4

Construction: Stainless Steel.

NOTE: When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cut-off allowance. Stainless steel fittings must be assembled with Karrykrimp2 or Parkimp2. See CrimpSource for more information.

#### PLCF-S Female A-LOK® Compression (With Nut & Ferrules)



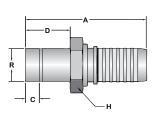
Part Number	Thread Size	Hose I.D.		Α		H Hex	J Hex
#	<u>*****</u>	0				$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	inch
04-04PLCF-S	7/16-20	1/4	6	1.52	39	9/16	9/16
06-06PLCF-S	9/16-20	3/8	10	1.63	41	11/16	11/16
08-08PLCF-S	3/4-20	1/2	13	2.05	52	7/8	7/8
12-12PLCF-S	1-20	3/4	19	2.30	58	1-1/8	1-1/8
16-16PLCF-S	1-5/16-20	1	25	2.57	65	1-3/8	1-1/2

Construction: Stainless Steel.

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



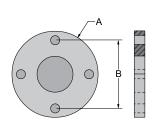
## TUBE-S A-LOK® Male Standpipe-Rigid with "V" Notch



Part Number	Diameter R		se D.	А		С		D		H Hex
#	$\varnothing$	(	9							$\bigcirc$
	inch	inch	mm	inch	mm	inch	mm	inch	mm	inch
04-04TUBE-S	1/4	1/4	6	1.75	45	.18	5	.66	17	7/16
06-06TUBE-S	3/8	3/8	10	2.06	52	.25	6	.85	2	5/8
08-08TUBE-S	1/2	1/2	13	2.56	65	.34	9	.97	25	3/4
12-12TUBE-S	3/4	3/4	19	2.86	73	.40	10	1.02	26	1-1/8
16-16TUBE-S	1	1	25	3.34	85	.52	13	1.30	33	1-3/8
20-20TUBE-S	1-1/4	1-1/4	32	4.05	10	.50	13	1.75	45	1-3/4

Construction: Stainless Steel.

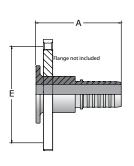
#### PF ANSI B16.5 Flange



Carbon Steel (Epoxy Coated)	316 Stainless Steel	304 Stainless Steel	Flange Diameter A		Hose A I.D.		Bolt S <sub>l</sub>	pacing 3	
#	#	#	Ø		$\varnothing$ $\bigcirc$		9		
Flange	Flange	Flange	inch	mm	inch	mm	inch	mm	
08-PF150	08-PF156	08-PF154	3-1/2 89		1/2	13	2-3/8	60	
12-PF150	12-PF156	12-PF154	3-7/8 98 3/4 19		2-3/4	70			
16-PF150	16-PF156	16-PF154	4-1/4	108	1	25	3-1/8	79	
20-PF150	20-PF156	20-PF154	4-5/8	117	1-1/4	32	3-1/2	89	
24-PF150	24-PF156	24-PF154	5	127	1-1/2	38	3-7/8	98	
32-PF150	32-PF156	32-PF154	6	152	2	51	4-3/4	120	
40-PF150	40-PF156	40-PF154	7	178	2-1/2	64	5-1/2	140	
48-PF150	48-PF156	48-PF154	7-1/2	191	3	76	6	152	
64-PF150	64-PF156	64-PF154	9	229	4	102	7-1/2	191	

NOTE: Also available in 300 lb. flange and other materials. Contact Customer Service for options.

#### SFR-S Flange Retainer



Part Number	Flange Diameter			Hose I.D.		Α		pacing
#	0	$\bigcirc$	0					
	inch	mm	inch	mm	inch	mm	inch	mm
08-08SFR-S	3-1/2	89	1/2	13	2.30	58	2-3/8	60
12-12SFR-S	3-7/8	98	3/4	19	2.60	66	2-3/4	70
16-16SFR-S	4-1/4	108	1	25	3.00	76	3-1/8	79
20-20SFR-S	4-5/8	117	1-1/4	32	3.25	83	3-1/2	89
24-24SFR-S	5	127	1-1/2	38	3.65	93	3-7/8	98
32-32SFR-S	6	152	2	51	4.25	108	4-3/4	120
40-40SFR-S	7	178	2-1/2	64	5.00	127	5-1/2	140
48-48SFR-S	7-1/2	191	3	76	5.50	140	6	152
64-64SFR-S	9	229	4	102	7.00	178	7-1/2	191

Construction: Stainless Steel.

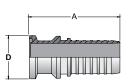
NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# **G** General Technical

#### **MSAN-S Mini Sanitary Flange**



Part Number	Ho I.I		А		Flange Size D		
#	0						
	inch	mm	inch	mm	inch	mm	
04-04MSAN-S	1/4	6	1.47	37	.98	25	
04-08MSAN-S	1/4	6	1.50	38	.98	25	
06-06MSAN-S	3/8	10	1.53	39	.98	25	
06-08MSAN-S	3/8	10	1.53	39	.98	25	
06-12MSAN-S	3/8	10	1.66	42	.98	25	
08-08MSAN-S	1/2	13	1.90	48	.98	25	
08-12MSAN-S	1/2	13	1.94	49	.98	25	
12-12MSAN-S	3/4	19	2.16	55	.98	25	
16-16MSAN-S	1	25	2.27	58	1.34	34	

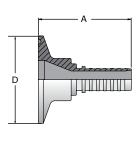
Construction: Stainless Steel.

Compliant ASME-BPE

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed.

NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed. Length calculations for PAGE hose assemblies are typically made sealing surface to sealing surface per the NAHAD Fluoropolymer Hose Assembly Specification Guidelines unless otherwise requested by customer at time of order.

#### **SAN-S Sanitary Flange & Step-Downs**



Part Number		se D.	А		Flange Size D	
#	(	0				
	inch	mm	inch	mm	inch	mm
08-08SAN-S	1/2	13	2.11	54	1.98	50
08-16SAN-S	1/2	13	2.11	54	1.98	50
08-24SAN-S	1/2	13	2.34	59	1.98	50
12-12SAN-S	3/4	19	2.32	59	1.98	50
16-16SAN-S	1	25	2.45	62	1.98	50
12-24SAN-S	3/4	19	2.34	59	1.98	50
16-24SAN-S	1	25	2.32	59	1.98	50
24-24SAN-S	1-1/2	38	3.10	79	1.98	50
24-32SAN-S	1-1/2	38	3.12	79	2.52	64
32-32SAN-S	2	51	3.67	93	2.52	64
40-40SAN-S	2-1/2	64	4.00	102	3.05	77
48-48SAN-S	3	76	4.50	114	3.58	91
64-64SAN-S	4	102	4.75	121	4.68	119

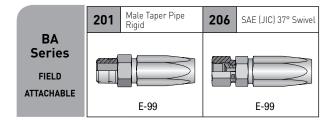
Construction: Stainless Steel.

Compliant ASME-BPE

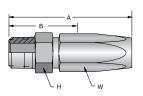
NOTE: The PAGE fitting call-out does not follow traditional Parker fitting nomenclature. The end size and hose size are reversed.



#### **BA Series Visual Index**



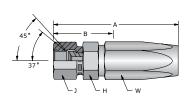
#### 201BA Male Taper Pipe Rigid



Part Number	Thread Size		Hose I.D.		4	Cutoff E	Allow.	H Hex	W Hex
#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
201BA-4-4	1/4-18	1/4	6	2.43	62	1-1/4	32	5/8	3/4
201BA-6-6	3/8-18	3/8	3/8 10		67	1-1/4	32	3/4	7/8

Construction: Steel.

#### 206BA Female SAE (JIC) 37° Swivel



Part Number	Thread Size		Hose I.D.		А		Allow.	H Hex	J Hex	W Hex
#	<u>~~~~~</u>	0	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch	inch
206BA-6-4	9/16-18	1/4	6	2.62	67	1-3/8	35	11/16	11/16	3/4
206BA-6-6	9/16-18	3/8	10	2.76	70	1-3/8	35	3/4	3/4	7/8
206BA-8-8	3/4-16	1/2	13	3.26	83	1-11/16	43	7/8	7/8	1-1/16

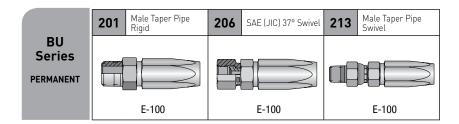
Construction: Steel.

NOTE: Size -8 incorporates a dual seat.

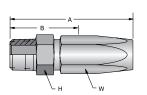


# **G** General Technical

#### **BU Series Visual Index**



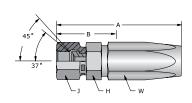
#### 201BU Male Taper Pipe Rigid



Part Number	Thread Size		Hose I.D.		4	Cutoff E	Allow.	H Hex	W Hex
#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
201BU-2-2	1/8-27	1/8 3		1.50	38	1	25	7/16	7/16

Construction: Steel.

#### 206BU Female SAE (JIC) 37° Swivel

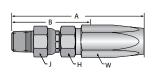


Part Number	Thread Size		Hose I.D.		A		Allow.	H Hex	J Hex	W Hex
#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$	$\Diamond$
		inch	mm	inch	mm	inch	mm	inch	inch	inch
206BU-3-2	3/8-24	1/8	3	1.72	44	1-3/16	30	1/2	9/16	7/16
206BU-4-2	7/16-20	1/8	3	1.77	45	1-3/16	30	9/16	9/16	7/16
206BU-4-3	7/16-20	3/16	5	1.89	48	1-1/16	27	9/16	9/16	7/16

Construction: Steel.

NOTE: Size -4 incorporates a dual seat.

#### 213BU Male Taper Pipe Swivel



Part Number	Thread Size		Hose I.D.		А		Allow.	H Hex	J Hex	W Hex
#	<u>~~~~~</u>	(	9					$\Diamond$	$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch	inch
213BU-2-2	1/8-27	1/8	3	2.07	53	1-1/2	38	1/2	1/2	7/16

Construction: Steel.

WARNING: Fittings allow minor movement to relieve stress on hose but are not recommended for continued or extensive swiveling. Not recommended for use in CNG applications.



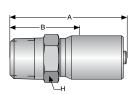
## **CY Series Visual Index**

	101	Male Taper Pipe Rigid	102	Female Pipe Thread	106	Female SAE JIC 37° Swivel	113	Male Pipe Swivel	139	Female JIC 37° Swivel 90° Elbow Sht.
CY Series PERMANENT		E-102		E-102		E-102		E-103		E-103
	1GK	Bulkhead w/Zerk Port Integrated	1J9	Female Seal-Lok™ 90° Elbow Sht.	1JC	Female Seal-Lok™ Swivel Straight Short	1LM	Male Grease		
		E-103		E-104		E-104		E-104		



E-101

#### 101CY Male Taper Pipe Rigid

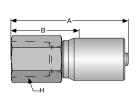


Part Number	Thread Size		Hose I.D.		\	Cutoff	H Hex		
#	<u>~~~~~</u>	0	0						
		inch	inch mm		mm	inch	mm	inch	
101CY-2-2	1/8-27	1/8	3	1.31	33	13/16	21	7/16	
101CY-2-3	1/8-27	3/16	5	1.74	44	7/8	22	1/2	
101CY-4-2	1/4-18	1/8	3	1.51	38	1	25	9/16	
101CY-4-3	1/4-18	3/16 5		1.97	50	1-1/8	28	9/16	

Construction: Steel.

Add "C" for Stainless Steel.

#### 102CY Female Pipe Thread

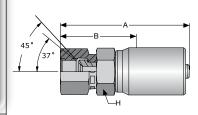


Part Number	Thread Size	Hose I.D.		ı	4	Cutoff .	Allow.	H Hex	
#	<u>*****</u>	0	9				$\bigcirc$		
		inch	mm	inch	mm	inch	mm	inch	
102CY-2-3	1/8-27	3/16 5		1.97 50		6 5 1.97 50 1-1/16 27		27	1/2

Construction: Steel.

Add "C" for Stainless Steel.

#### 106CY Female SAE (JIC) 37° Swivel



Part Number	Thread Size		Hose I.D.		A	Cutoff .		H Hex	J Hex
#		(	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
106CY-2-2	Flare 5/16-24	1/8	3	1.52	39	15/16	24	7/16	7/16
106CY-3-2	Flare 3/8-24	1/8	3	1.55	39	1	25	1/2	1/2
106CY-4-2	Flare 7/16-20	1/8	3	1.58	40	1	25	7/16	9/16
106CY-4-3	Flare 7/16-20	3/16	3/16 5		50	1-1/16	27	9/16	9/16

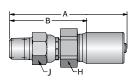
Construction: Steel.

Add "C" for Stainless Steel.

NOTE: Sizes -4 incorporates a dual seat.



#### 113CY Male Pipe Swivel\*



Part Number	Thread Size		Hose I.D.		Ą	Cutoff B		H Hex	J Hex
#		(	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
113CY-2-2	1/8-27	1/8	3	1.89	48	1-5/16	33	1/2	1/2
113CY-2-3	1/8-27	3/16	3/16 3		58	1-7/16	36	1/2	1/2

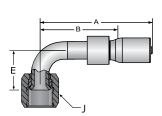
Construction: Steel.

Add "C" for Stainless Steel.

\*NOTE: For use with petroleum based fluids.

WARNING: Fittings allow minor movement to relieve stress on hose but are not recommended for continued or extensive swiveling. Not recommended for use in CNG applications.

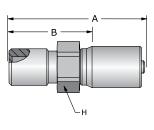
#### 139CY Female JIC 37° Swivel 90° Elbow Short Drop



Part Number	Thread Size		Hose I.D.		А		toff w. B	Ē	J Hex	
#		(	0						$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
139CY-4-2	7/16-20	1/8	3	1.61	41	1-1/8	29	0.83	21	9/16
139CY-4-3	7/16-20	3/16	5	1.90	48	1	25	0.83	21	9/16

Construction: Steel. Add "C" for Stainless Steel.

#### 1GKCY Bulkhead with Integrated Zerk Port



Part Number	Thread Size	Hose I.D.		A	4	Cutoff B		H Hex
#		(	0					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
1GKCY-2-2	1/8-27 NPSM Male w/1/4-28 UNF Female	1/8	3	1.45	37	7/8	22	1/2
1GKCY-2-3	1/8-27 NPSM Male w/1/4-28 UNF Female	3/16	5	1.86	47	1	25	1/2
1GKCY-2-2-L77*	1/8-27 NPSM Male w/1/4-28 UNF Female	1/8	3	1.71	43	1-1/4	32	1/2
1GK91N-2-4**	1/8-27 NPSM Male w/1/4-28 UNF Female	3/16	5	1.46	37	15/16	24	1/2

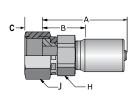
Construction: Steel. Add "C" for Stainless Steel.

NOTE: \*Long bulkhead for use with plates under 3/4" thick. Uses 2GK-NUT, sold separately. \*\*Use with 919 hoses.



Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

#### 1JCCY Female Seal-Lok™ Swivel Straight Short



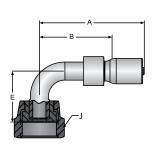
Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		С		H Hex	J Hex
#	<u>~~~~~</u>	(	$\odot$							$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1JCCY-4-2	9/16-18	1/8	3	1.29	33	3/4	19	.32	8	9/16	11/16

Construction: Steel.

Add "C" for Stainless Steel.

NOTE: When measuring overall length to the end of the nut, B+C dimensions must be used to calculate cut-off allowance. Stainless steel fittings must be assembled with Karrykrimp2 or Parkimp2. See CrimpSource for more information.

#### 1J9CY Female 0-ring Face Seal Swivel Short Drop

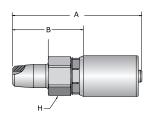


Part Number	Thread Size	Hose I.D.		А		Cuto Allov		E	J Hex	
#	<u>~~~~~</u>	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J9CY-4-2	9/16-18	1/8	3	1.81	46	1-1/4	32	.83	21	11/16

Construction: Steel.

Add "C" for Stainless Steel.

#### **1LMCY Male Grease**



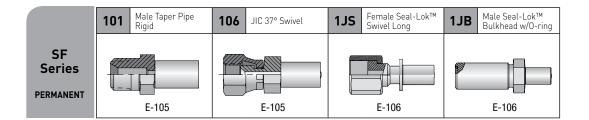
Part Number	Thread Size	Hose I.D.		A		Cutoff E	H Hex	
#	<u>~~~~~</u>	0					$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch
1LMCY-2-2	1/4-28	1/8	3	1.26	32	11/16	17	3/8

Construction: Steel.

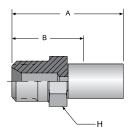
Add "C" for Stainless Steel.



## **SF Series Visual Index**



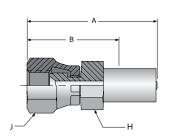
#### 101SF Male Taper Pipe Rigid



Part Number	Thread Size	Hose I.D.		А		Cutoff E	H Hex	
#	<u>~~~~~</u>	0						$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
101SF-2-1	1/8-27	.090	2.3	1.13	29	3/4	19	7/16

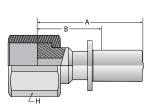
Construction: Steel

#### 106SF JIC 37° Swivel



Part Number	Thread Size	Hose I.D.		А		Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
106SF-2-1	5/16-24	.090	2.3	1.37	35	15/16	24	7/16	1/2

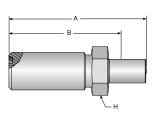
## 1JSSF Female Seal-Lok™ Swivel Long



Part Number	Thread Size	Hose I.D.		A		Cutoff E	H Hex	
#	<u>~~~~~</u>	0					$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch
1JSSF-4-1	9/16-18	.090	2.3	1.50	88	3/4	19	11/16

Construction: Steel

## 1JBSF Male Seal-Lok™ Bulkhead with 0-ring



Part Number	Thread Size	Hose I.D.		А		Cutoff E	H Hex	
#	<u>~~~~~</u>	0						$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
1JBSF-4-1	9/16-18	.090	2.3	2.06	52	1-11/16	43	5/8

Construction: Steel

NOTE: Bulkhead Locknut sold separately.

WLNL Locknuts are manufactured by the Tube Fittings Division. Refer to Catalog 4300 for additional information.



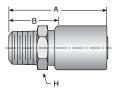
E-107

## **HY Series Visual Index**

	101 Male NPTF Pipe Rigid	102 Female NPTF Pipe Rigid	<b>103</b> Male (JIC) 37°	105 Male SAE Str. Thread Rigid w/O-ring	106 SAE (JIC) 37° Swivel
HY Series PERMANENT					
	E-108	E-109	E-109	E-110	E-111
	Female NPSM Pipe Swivel (60° cone)	108 Female SAE 45° Swivel	Male SAE Str.Thread Swivel w/0-ring	10L Male SAE Str.Thread Swivel 90° Elbow	Male Ferulok Flare- less Rigid
	E-112	E-112	E-113	E-113	E-114
	113 Male NPTF Pipe Swivel	11L Male NPTF Pipe Swivel 90° Elbow	128 Male Inverted SAE 45° Swivel	129 Male Inverted SAE 90° Swivel	134 Male Standpipe Rigid
	E-114	E-115	E-115	E-116	E-116
	<b>137</b> FM SAE (JIC) 37° Swivel 45° Elbow	139 FM SAE (JIC) 37° Swivel 90° Elbow	13D Male Standpipe Metric S Rigid	141 JIC 37° Swivel 90° Elbow Long	167 SAE Male Inverted 45° Elbow
	E-116	E-117	E-120	E-117	E-118
	169 SAE Male Inverted 90° Elbow	177 SAE 45° Swivel 45° Elbow	<b>179</b> SAE 45° Swivel 90° Elbow	193 Female (JIC) 37° Swivel 90° Elbow BT	1D0 Male Metric L Rigid
	E-118	E-118	E-119	E-119	METRIC E-119
	1D9 Male BSPP	1GJ Female Grease Connection - SPL	<b>1J0</b> Male Seal-Lok™ Rigid Str. w/O-ring	<b>1J1</b> Seal-Lok™ 90° Elbow Long	<b>1J7</b> Seal-Lok™ 45° Elbow
	E-120	E-120	E-123	E-121	E-121
	C - 1 1 - 1 TM 000	Cool LokTM Cumual	C IIIITMC : I	L 121	L 121
	1J9 Seat-Lokin 90° Elbow	1JC Short	1JS   Seal-Lokim Swivel Long		
	E-122	E-122	E-123		
	, r-125	L-122	L-123		



## 101HY Male NPTF Pipe Rigid



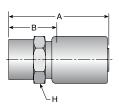
Part Number	Thread Size	Hose I.D.		Α		Cutoff Allow. B		H Hex
#	<u>~~~~~</u>	(	$\bigcirc$					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
101HY-2-4	1/8x27	1/4	6	2.34	59	1.00	25	5/8
101HY-4-4	1/4x18	1/4	6	2.53	64	1.19	30	9/16
101HY-4-5	1/4x18	5/16	8	2.56	65	1.22	31	11/16
101HY-4-6	1/4x18	3/8	10	2.55	65	1.19	30	11/16
101HY-6-4	3/8x18	1/4	6	2.53	64	1.19	30	3/4
101HY-6-5	3/8x18	5/16	8	2.56	65	1.22	31	3/4
101HY-6-6	3/8x18	3/8	10	2.55	65	1.19	30	3/4
101HY-6-8	3/8x18	1/2	13	2.72	69	1.38	35	7/8
101HY-8-4	1/2x14	1/4	6	2.72	69	1.38	35	7/8
101HY-8-6	1/2x14	3/8	10	2.73	69	1.38	35	7/8
101HY-8-7	1/2x14	13/32	10	2.73	69	1.38	35	7/8
101HY-8-8	1/2x14	1/2	13	2.91	74	1.41	40	7/8
101HY-8-10	1/2x14	5/8	16	2.94	75	1.59	40	1-1/8
101HY-8-12	1/2x14	3/4	19	3.08	78	1.50	38	1-1/4
101HY-12-8	3/4x14	1/2	13	2.91	74	1.56	40	1-1/16
101HY-12-10	3/4x14	5/8	16	2.98	76	1.59	40	1-1/8
101HY-12-12	3/4x14	3/4	19	3.08	78	1.50	38	1-1/4
101HY-12-16	3/4x14	1	25	3.23	82	1.63	41	1-3/8
101HY-16-12	1x11-1/2	3/4	19	3.27	83	1.69	43	1-3/8
101HY-16-14	1x11-1/2	7/8	22	3.27	83	1.78	43	1-3/8
101HY-16-16	1x11-1/2	1	25	3.42	87	1.81	46	1-3/8
101HY-20-20	1-1/4x11-1/2	1-1/4	32	3.84	98	2.00	51	1-3/4

Construction: Steel
Add "C" for Stainless Steel.

NOTE: Stainless steel fittings must be assembled with Karrykrimp 2 or Parkrimp 2. See CrimpSource for more information.



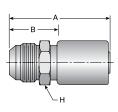
#### 102HY Female NPTF Pipe Rigid



Part Number	Thread Size	Ho I.I	se D.	A		Cutoff Allow. B		H Hex
#	<u>~~~~~</u>	(	9					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
102HY-2-4	1/8x27	1/4	6	2.34	59	1.00	25	5/8
102HY-4-4	1/4x18	1/4	6	2.47	63	1.13	29	11/16
102HY-4-6	1/4x18	3/8	10	2.48	63	1.13	29	11/16
102HY-6-4	3/8x18	1/4	6	2.47	63	1.13	29	7/8
102HY-6-6	3/8x18	3/8	10	2.48	63	1.13	29	7/8
102HY-8-6	1/2x14	3/8	10	2.75	70	1.41	36	1
102HY-8-8	1/2x14	1/2	13	2.84	72	1.50	38	1
102HY-12-12	3/4x14	3/4	19	2.83	72	1.25	32	1-1/4
102HY-16-16	1x11-1/2	1	25	3.27	83	1.66	42	1-1/2

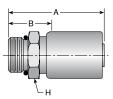
Construction: Steel

## 103HY Male JIC 37° Rigid



Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		H Hex
#	<u>~~~~~</u>	(	9					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
103HY-4-4	7/16x20	1/4	6	2.52	64	1.19	30	5/8
103HY-5-4	1/2x20	1/4	6	2.52	64	1.19	30	5/8
103HY-6-4	9/16x18	1/4	6	2.53	64	1.19	30	11/16
103HY-6-5	9/16x18	5/16	8	2.56	65	1.22	31	11/16
103HY-6-6	9/16x18	3/8	10	2.54	65	1.19	30	11/16
103HY-6-8	9/16x18	1/2	13	2.72	69	1.38	35	7/8
103HY-8-6	3/4x16	3/8	10	2.64	67	1.28	33	13/16
103HY-8-8	3/4x16	1/2	13	2.81	71	1.47	37	7/8
103HY-10-6	7/8x14	3/8	10	2.81	71	1.47	37	1
103HY-10-8	7/8x14	1/2	13	2.91	74	1.56	40	1
103HY-10-10	7/8x14	5/8	16	2.98	76	1.59	40	1-1/8
103HY-10-12	7/8x14	3/4	19	3.08	78	1.50	38	1-1/4
103HY-12-8	1-1/16x12	1/2	13	3.02	77	1.66	42	1-1/8
103HY-12-10	1-1/16x12	5/8	16	3.09	78	1.72	44	1-1/8
103HY-12-12	1-1/16x12	3/4	19	3.19	81	1.63	41	1-1/4
103HY-14-12	1-3/16x12	3/4	19	3.19	81	1.63	41	1-1/4
103HY-16-12	1-5/16x12	3/4	19	3.23	82	1.66	42	1-3/8
103HY-16-16	1-5/16x12	1	25	3.39	86	1.78	45	1-3/8
103HY-20-16	1-5/8x12	1	25	3.44	87	1.81	46	1-3/4
103HY-20-20	1-5/8x12	1-1/4	32	3.83	97	2.00	51	1-3/4

#### 105HY Male SAE Straight Thread Rigid (with 0-ring)



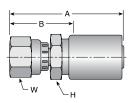
Part Number	Thread Size	Hose I.D.		A	А		Cutoff Allow. B	
#	<u>~~~~~</u>	(	$\bigcirc$					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
105HY-4-4	7/16x20	1/4	6	2.33	59	0.97	25	9/16
105HY-5-4	1/2x20	1/4	6	2.33	59	0.97	25	5/8
105HY-6-4	9/16x18	1/4	6	2.42	61	1.06	27	11/16
105HY-6-6	9/16x18	3/8	10	2.38	60	1.03	26	11/16
105HY-8-6	3/4x16	3/8	10	2.42	61	1.06	27	7/8
105HY-8-8	3/4x16	1/2	13	2.59	66	1.25	32	7/8
105HY-10-6	7/8x14	3/8	10	2.55	65	1.19	30	1
105HY-10-8	7/8x14	1/2	13	2.66	68	1.31	33	1
105HY-10-10	7/8x14	5/8	16	2.80	71	1.41	36	1-1/8
105HY-12-8	1-1/16x12	1/2	13	2.81	71	1.47	37	1-1/4
105HY-12-10	1-1/16x12	5/8	16	2.83	72	1.44	37	1-1/4
105HY-12-12	1-1/16x12	3/4	19	2.92	74	1.34	34	1-1/4
105HY-16-12	1-5/16x12	3/4	19	2.92	74	1.34	34	1-1/2
105HY-16-16	1-5/16x12	1	25	3.08	78	1.47	37	1-1/2

Construction: Steel

NOTE: 0-ring not compatible with Phospate Ester fluids.



#### 106HY Female JIC 37°Swivel

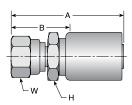


Part Number	Thread Size	Hose I.D.		А			Allow.	H Hex	W Hex
#	<u>~~~~</u>	(	9					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
106HY-3-4	3/8x24	1/4	6	2.58	66	1.22	31	9/16	1/2
106HY-4-4	7/16x20	1/4	6	2.60	66	1.25	32	9/16	9/16
106HY-4-6	7/16x20	3/8	10	2.67	68	1.31	33	3/4	9/16
106HY-5-4	1/2x20	1/4	6	2.65	67	1.31	33	9/16	5/8
106HY-5-5	1/2x20	5/16	8	2.69	68	1.34	34	5/8	5/8
106HY-5-6	1/2x20	3/8	10	2.73	69	1.38	35	3/4	5/8
106HY-6-4	9/16x18	1/4	6	2.67	68	1.31	33	9/16	11/16
106HY-6-5	9/16x18	5/16	8	2.70	69	1.34	34	5/8	11/16
106HY-6-6	9/16x18	3/8	10	2.69	68	1.34	34	11/16	11/16
106HY-8-6	3/4x16	3/8	10	2.72	69	1.38	35	7/8	7/8
106HY-8-8	3/4x16	1/2	13	2.90	74	1.41	40	7/8	7/8
106HY-8-10	3/4x16	5/8	16	2.98	76	1.59	40	1-1/8	7/8
106HY-8-12	3/4x16	3/4	19	3.08	78	1.53	39	1-1/4	7/8
106HY-10-6	7/8x14	3/8	10	2.81	71	1.47	37	7/8	1
106HY-10-8	7/8x14	1/2	13	2.98	76	1.63	41	1	1
106HY-10-10	7/8x14	5/8	16	3.06	78	1.69	43	1-1/8	1
106HY-10-12	7/8x14	3/4	19	3.16	80	1.59	40	1-1/4	1
106HY-12-6	1-1/16x12	3/8	10	3.00	76	1.66	42	1-1/8	1-1/4
106HY-12-8	1-1/16x12	1/2	13	3.05	77	1.69	43	1-1/8	1-1/4
106HY-12-10	1-1/16x12	5/8	16	3.12	79	1.75	44	1-1/8	1-1/4
106HY-12-12	1-1/16x12	3/4	19	3.22	82	1.66	42	1-1/4	1-1/4
106HY-12-16	1-1/16x12	1	25	3.38	86	1.75	44	1-3/8	1-1/4
106HY-14-12	1-3/16x12	3/4	19	3.23	82	1.66	42	1-1/4	1 3/8
106HY-16-12	1-5/16x12	3/4	19	3.30	84	1.72	44	1-3/8	1-1/2
106HY-16-14	1-5/16x12	7/8	22	3.30	84	1.72	44	1-3/8	1-1/2
106HY-16-16	1-5/16x12	1	25	3.45	88	1.84	47	1-3/8	1-1/2
106HY-16-20	1-5/16x12	1-1/4	32	3.84	98	2.00	51	1-3/4	1-1/2
106HY-20-16	1-5/8x12	1	25	3.70	94	2.09	53	1-3/4	2
106HY-20-20	1-5/8x12	1-1/4	32	4.09	104	2.25	57	2	2



# **Q** General Technical

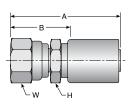
#### 107HY Female NPSM Pipe Swivel (60° Cone)



Part Number	Thread Size	Hose I.D.		A		Cutoff E	Allow. 3	H Hex	W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
107HY-4-4	1/4x18	1/4	6	2.66	68	1.31	33	9/16	11/16
107HY-6-4	3/8x18	1/4	6	2.72	69	1.38	35	3/4	7/8
107HY-6-6	3/8x18	3/8	10	2.55	65	1.19	30	3/4	7/8
107HY-8-8	1/2x14	1/2	13	2.91	74	1.56	40	1	1
107HY-12-8	3/4x14	1/2	13	3.05	77	1.69	43	1-1/4	1-1/4
107HY-12-12	3/4x14	3/4 19		3.22	82	1.66	42	1-1/4	1-1/4
107HY-16-16	1x11-1/2	1	25	3.39	86	1.78	45	1-3/8	1-1/2

Construction: Steel

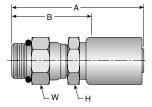
#### 108HY Female SAE 45° Swivel



Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		H Hex	W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
108HY-4-4	7/16x20	1/4	6	2.60	66	1.26	32	9/16	9/16
108HY-5-4	1/2x20	1/4	6	2.66	68	1.31	33	9/16	5/8
108HY-5-5	1/2x20	5/16	8	2.68	68	1.34	34	5/8	5/8
108HY-6-4	5/8x18	1/4	6	2.73	69	1.38	35	11/16	3/4
108HY-6-5	5/8x18	5/16	8	2.76	70	1.41	36	5/8	3/4
108HY-6-6	5/8x18	3/8	10	2.75	70	1.41	36	11/16	3/4
108HY-8-6	3/4x16	3/8	10	2.73	69	1.38	35	13/16	7/8
108HY-8-8	3/4x16	1/2	13	2.90	74	1.56	40	7/8	7/8
108HY-8-12	3/4x16	3/4	19	3.17	81	1.59	40	1-1/4	7/8
108HY-10-8	7/8x14	1/2	13	2.98	76	1.63	41	1	1
108HY-10-10	7/8x14	5/8	16	3.06	78	1.69	43	1-1/8	1
108HY-12-10	1-1/16x12	5/8	16	3.33	85	1.94	49	1-1/8	1-1/4
108HY-12-12	1-1/16x12	3/4	19	3.41	87	1.84	47	1-1/4	1-1/4



#### 10GHY Male SAE Straight Thread Swivel (with 0-ring)

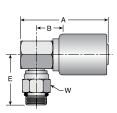


Part Number	Thread Size	Hose I.D.		А		Cutoff E	Allow.	H Hex	W Hex
#		0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
10GHY-4-4*	7/16x20	1/4	6	3.00	76	1.66	42	9/16	5/8
10GHY-5-4*	1/2x20	1/4	6	3.00	76	1.66	42	9/16	5/8
10GHY-6-4	9/16x18	1/4	6	3.16	80	1.81	46	5/8	11/16
10GHY-6-6	9/16x18	3/8	10	3.14	80	1.78	45	11/16	11/16
10GHY-8-6	3/4x16	3/8	10	3.24	82	1.88	48	13/16	7/8
10GHY-8-8	3/4x16	1/2	13	3.36	85	2.00	51	7/8	7/8
10GHY-10-8	7/8x14	1/2	13	3.44	87	2.09	53	1	1
10GHY-12-8	1-1/16x12	1/2	13	3.66	93	2.31	59	1-1/4	1-1/4
10GHY-12-12	1-1/16x12	3/4	19	3.89	99	2.31	59	1-1/4	1-1/4
10GHY-16-16	1-5/16x12	1	25	3.95	100	2.34	59	1-3/8	1-1/2

Construction: Steel

NOTE: Fitting allows minor movement under pressure to relieve stress on hose but is not to be used on extensive or continuous swiveling. O-ring not compatible with Phospate Ester fluids.

#### 10LHY Male SAE Straight Thread Swivel 90° Elbow (with 0-ring)



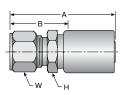
Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		E		W Hex
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
10LHY-4-4	7/16x20	1/4	6	2.31	59	0.97	25	1.63	41	11/16
10LHY-6-4	9/16x18	1/4	6	2.31	59	0.97	25	1.66	42	7/8
10LHY-6-6	9/16x18	3/8	10	2.33	59	0.97	25	1.66	42	11/16
10LHY-8-4	3/4x16	1/4	6	2.31	59	0.94	24	1.75	44	7/8
10LHY-8-6	3/4x16	3/8	10	2.33	59	0.97	25	1.73	44	7/8
10LHY-8-8	3/4x16	1/2	13	3.00	76	1.09	28	1.80	46	7/8
10LHY-10-8	7/8x14	1/2	13	3.00	76	1.09	28	1.88	48	1
10LHY-12-12	1-1/16x12	3/4	19	2.77	70	1.19	30	2.23	57	1-1/4

Construction: Steel

NOTE: Fitting allows minor movement under pressure to relieve stress on hose but is not to be used on extensive or continuous swiveling.



#### 111HY Male Ferulok Flareless Rigid (24° Cone w/Nut and Ferrule)

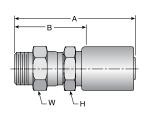


Part Number	Thread Size	Hose I.D.		A		Cutoff E	Allow. 3	H Hex	W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
111HY-4-4	7/16x20	1/4	6	2.42	61	1.06	27	9/16	9/16
111HY-4-6	7/16x20	3/8	10	2.44	62	1.09	28	3/4	9/16
111HY-5-6	1/2x20	3/8	10	2.44	62	1.09	28	3/4	5/8
111HY-6-4	9/16x18	1/4	6	2.44	62	1.09	28	5/8	11/16
111HY-6-6	9/16x18	3/8	10	2.45	62	1.09	28	11/16	11/16
111HY-8-6	3/4x16	3/8	10	2.61	66	1.25	32	7/8	7/8
111HY-8-8	3/4x16	1/2	13	2.72	69	1.38	35	7/8	7/8
111HY-10-8	7/8x14	1/2	13	2.78	71	1.44	37	1	1
111HY-12-12	1-1/16x12	3/4	19	3.02	77	1.44	37	1-1/4	1-1/4

Construction: Steel

NOTE: The Parker Ferrule-Fix fitting makes it possible to salvage the bent tube section from a hose assembly for quick, easy on the job repairs. See page G-41 for Ferrule-Fix installation instructions.

#### 113HY Male NPTF Pipe Swivel



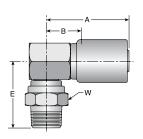
Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		H Hex	W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
113HY-2-4	1/8x27	1/4	6	2.97	75	1.63	41	9/16	5/8
113HY-4-4	1/4x18	1/4	6	3.06	78	1.72	44	9/16	5/8
113HY-4-6	1/4x18	3/8	10	3.17	81	1.81	46	11/16	11/16
113HY-6-4	3/8x18	1/4	6	3.13	80	1.78	45	5/8	11/16
113HY-6-6	3/8x18	3/8	10	3.11	79	1.75	44	11/16	11/16
113HY-6-8	3/8x18	1/2	13	3.31	84	1.97	50	7/8	7/8
113HY-8-6	1/2x14	3/8	10	3.38	86	2.03	52	7/8	7/8
113HY-8-8	1/2x14	1/2	13	3.50	89	2.16	55	7/8	7/8
113HY-12-12*	3/4x14	3/4	25	3.95	100	2.38	60	1-1/4	1-1/4
113HY-16-16*	1x11-1/2	1	25	4.23	107	2.63	67	1-1/2	1-1/2

Construction: Steel

NOTE: Fitting allows minor movement under pressure to relieve stress on hose but is not to be used for continuous swiveling. See Hose Products Catalog 4400 for pressure limitations.



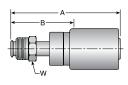
#### 11LHY Male NPTF Pipe Swivel 90° Elbow



Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		E		W Hex
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
11LHY-2-4	1/8x27	1/4	6	2.31	59	0.97	25	1.50	38	5/8
11LHY-4-4	1/4x18	1/4	6	2.31	59	0.97	25	1.69	43	11/16
11LHY-4-6	1/4x18	3/8	10	2.33	59	0.97	25	1.69	43	11/16
11LHY-6-4	3/8x18	1/4	6	2.31	59	0.97	25	1.63	41	11/16
11LHY-6-6	3/8x8	3/8	10	2.33	59	0.97	25	1.63	41	11/16
11LHY-8-6	1/2x14	3/8	10	2.73	69	0.97	25	1.88	48	7/8
11LHY-8-8	1/2x14	1/2	13	3.00	76	1.09	28	1.93	49	7/8

Construction: Steel

#### 128HY Male Inverted SAE 45° Swivel



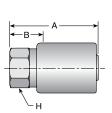
Part Number	Thread Size	Hose I.D.		А		Cutoff E	W Hex	
#	<u>~~~~~</u>	inch mm					$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch
128HY-3-4	3/8x24	1/4	6	3.09	78	1.75	44	3/8
128HY-4-4	7/16x24	1/4	6	3.28	83	1.94	49	7/16
128HY-5-4	1/2x20	1/4	6	3.34	85	2.00	51	1/2
128HY-5-6	1/2x20	3/8	10	3.17	81	1.81	46	1/2
128HY-6-5	5/8x18	5/16	8	3.75	95	2.41	61	5/8
128HY-6-6	5/8x18	3/8	10	3.73	95	2.38	60	5/8
128HY-7-6	11/16x18	3/8	10	3.73	95	2.38	60	11/16
128HY-8-6	3/4x18	3/8	10	3.42	87	2.06	52	3/4
128HY-8-8	3/4x18	1/2	13	3.66	93	2.31	59	3/4

Construction: Steel

Parker Hannifin Corporation | Parflex® Division | Ravenna, Ohio | parker.com/pfd

# **O** General Technical

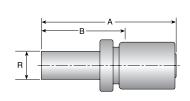
#### 129HY Female Inverted SAE 45° Rigid



Part Number		Thread Size	Hose I.D.		,	4	Cutoff E	H Hex	
#		<u>*****</u>	0					$\bigcirc$	
			inch mm		inch	mm	inch	mm	inch
129HY-5-	4	1/2x20	1/4	6	2.25	57	0.91	23	5/8
129HY-6-0	6	5/8x18	3/8	10	2.25	57	0.91	23	7/8

Construction: Steel

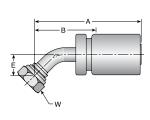
#### 134HY Male Standpipe Rigid (Inch Size Tube O.D.)



Part Number	_	Diameter R		se D.	ı	4	Cutoff Allow. B		
#	$\langle$	7	0						
	inch	mm	inch	mm	inch	mm	inch	mm	
134HY-6-6	3/8	10	<b>3/8</b> 10		3.17 81		1.81	46	
134HY-8-6	1/2	13	3/8	10	3.33	85	1.97	50	
134HY-12-12	3/4	19	3/4	19	3.89 99		2.31	59	

Construction: Steel

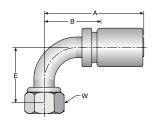
## 137HY Female JIC 37° Swivel 45° Elbow Short Drop



Part Number	Thread Size	Hose I.D.		A		Cutoff Allow. B		E		W Hex
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
137HY-4-4	7/16x20	1/4	6	2.59	66	1.32	34	0.39	10	9/16
137HY-5-4	1/2x20	1/4	6	3.27	83	1.91	49	0.36	9	5/8
137HY-6-4	9/16x18	1/4	6	2.70	69	1.43	36	0.43	10	3/4
137HY-6-5	9/16x18	5/16	8	3.34	85	2.00	51	0.39	11	11/16
137HY-6-6	9/16x18	3/8	10	2.72	69	1.44	37	0.43	11	11/16
137HY-8-6	3/4x16	3/8	10	2.88	73	1.60	41	0.58	15	7/8
137HY-8-8	3/4x16	1/2	13	3.10	79	1.81	46	0.59	15	7/8
137HY-10-8	7/8x14	1/2	13	3.20	81	1.91	49	0.63	16	1
137HY-10-10	7/8x14	5/8	16	3.29	84	1.93	49	0.63	16	1
137HY-12-10	1-1/16x12	5/8	16	3.94	100	2.56	65	0.77	20	1-1/8
137HY-12-12	1-1/16x12	3/4	19	3.82	97	2.29	58	0.83	21	1-1/4
137HY-16-12	1-5/16x12	3/4	19	4.35	110	2.78	71	0.89	23	1-1/2
137HY-16-16	1-5/16x12	1	25	4.31	109	2.69	68	0.89	23	1-1/2



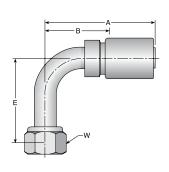
#### 139HY Female JIC 37° Swivel 90° Elbow Short Drop



Part Number	Size		se D.	I	4		Allow. 3	i		Hex
#	<u>~~~~~</u>	(	0							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
139HY-4-4	7/16x20	1/4	6	2.40	61	1.13	29	0.83	21	9/16
139HY-5-4	1/2x20	1/4	6	2.50	64	1.23	31	0.83	21	5/8
139HY-6-4	9/16x18	1/4	6	2.65	67	1.38	35	0.91	23	3/4
139HY-6-5	9/16x18	5/16	8	3.25	83	1.91	49	0.86	22	11/16
139HY-6-6	9/16x18	3/8	10	2.57	65	1.29	33	0.91	23	11/16
139HY-6-8	9/16x18	1/2	13	3.41	87	2.06	52	0.86	22	11/16
139HY-8-6	3/4x16	3/8	10	2.64	67	1.37	35	1.14	29	7/8
139HY-8-8	3/4x16	1/2	13	2.85	72	1.56	40	1.14	29	7/8
139HY-10-8	7/8x14	1/2	13	3.01	76	1.72	44	1.26	32	1
139HY-10-10	7/8x14	5/8	16	3.09	78	1.73	44	1.26	32	1
139HY-10-12	7/8x14	3/4	19	3.25	83	1.69	43	1.23	31	1
139HY-12-8	1-1/16x12	1/2	13	3.61	92	2.25	57	1.83	46	1-1/4
139HY-12-10	1-1/16x12	5/8	16	3.61	92	2.25	57	1.89	48	1-1/4
139HY-12-12	1-1/16x12	3/4	19	3.68	93	2.15	55	1.89	48	1-1/4
139HY-16-12	1-5/16x12	3/4	19	4.33	110	2.78	71	2.14	54	1-1/2
139HY-16-16	1-5/16x12	1	25	4.31	109	2.69	68	2.31	59	1-1/2

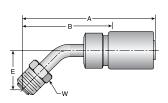
Construction: Steel

## 141HY Female JIC 37° Swivel 90° Elbow Long Drop



Part Number	Thread Size	Hose I.D. A Cutoff Allow.		ŀ	W Hex					
#	<u>~~~~~</u>	(	$\bigcirc$							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
141HY-4-4	7/16x20	1/4	6	2.68	68	1.41	36	1.81	46	9/16
141HY-5-4	1/2x20	1/4	6	3.16	80	1.81	46	1.77	45	5/8
141HY-6-4	9/16x18	1/4	6	2.89	73	1.62	41	2.13	54	11/16
141HY-6-6	9/16x18	3/8	10	2.76	70	1.49	39	2.13	54	11/16
141HY-8-6	3/4x16	3/8	10	2.85	72	1.58	40	2.52	64	7/8
141HY-8-8	3/4x16	1/2	13	2.89	73	1.60	41	2.52	64	7/8
141HY-10-8	7/8x14	1/2	13	3.01	76	1.72	44	2.76	70	1
141HY-12-12	1-1/16x12	3/4	19	3.59	91	2.03	52	3.73	95	1-1/4
141HY-16-16	1-5/16x12	1	25	4.56	116	2.94	75	4.33	110	1-1/2

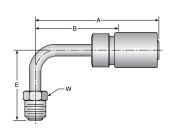
#### 167HY Male Inverted SAE 45° Swivel 45° Elbow



Part Number	Thread Size	Hose I.D.		A		Cutoff E		E	W Hex	
#	<u>~~~~~</u>	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
167HY-4-4	7/16x24	1/4	6	3.31	84	1.97	50	0.78	20	7/16
167HY-5-4	1/2x20	1/4	6	3.55	90	2.19	56	0.88	22	1/2
167HY-5-6	1/2x20	3/8	10	3.38	86	2.03	52	0.88	22	1/2
167HY-6-6	5/8x18	3/8	10	4.16	106	2.81	71	0.94	24	5/8
167HY-8-8	3/4x18	1/2	13	4.22	107	2.88	73	1.06	27	3/4

Construction: Steel

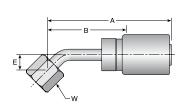
#### 169HY Male Inverted SAE 45° Swivel 90° Elbow



Part Number	Thread Size		se D.	1	Ą	Cutoff E	Allow.	ŀ	E	
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
169HY-3-4	3/8x24	1/4	6	3.09	78	1.75	44	1.38	35	3/8
169HY-4-4	7/16x24	1/4	6	3.28	83	1.94	49	1.47	37	7/16
169HY-4-6	7/16x24	3/8	10	3.11	79	1.75	44	1.47	37	7/16
169HY-5-4	1/2x20	1/4	6	3.52	89	2.16	55	1.66	42	1/2
169HY-5-6	1/2x20	3/8	10	3.34	85	2.00	51	1.66	42	1/2
169HY-6-5	5/8x18	5/16	8	4.05	103	2.69	68	1.69	43	5/8
169HY-6-6	5/8x18	3/8	10	4.03	102	2.69	68	1.69	43	5/8
169HY-7-6	11/16x18	3/8	10	4.16	106	2.81	71	1.69	43	11/16
169HY-8-8	3/4x18	1/2	13	4.09	104	2.75	70	1.88	48	3/4

Construction: Steel

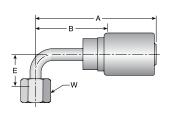
#### 177HY Female SAE 45° Swivel 45° Elbow



Part Number	Thread Size		Hose I.D.		A		Allow.	E	W Hex	
#	<u>~~~~~</u>	(	0						$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch	mm	inch
177HY-6-6	5/8x18	3/8	10	3.33	85	1.97	50	0.39	10	3/4
177HY-12-12	1-1/16x14	3/4	19	4.03	102	2.44	62	0.77	20	1-1/4



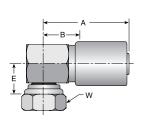
#### 179HY Female SAE 45° Swivel 90° Elbow



Part Number	Thread Size	Hose I.D.		А		Cutoff		E	W Hex	
#	<u>~~~~~</u>	(	9							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
179HY-6-5	5/8x18	5/16	8	3.25	83	1.91	49	0.86	22	3/4
179HY-6-6	5/8x18	3/8	10	3.23	82	1.88	48	0.86	22	3/4
179HY-12-12	1-1/16x14	3/4	19	3.98	101	2.39	61	1.83	46	1-1/4

Construction: Steel

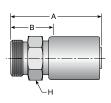
#### 193HY Female JIC 37° Swivel 90° Elbow (Block Type)



Part Number	Thread Size	Hose I.D.		P	А		Allow.	E	W Hex	
#	<u>~~~~~</u>	0	0							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
193HY-6-6	9/16x18	3/8	10	2.33	59	0.97	25	0.78	20	11/16
193HY-8-6	3/4x16	3/8	10	2.33	59	0.97	25	0.82	21	7/8
193HY-8-8	3/4x16	1/2	13	3.00	76	1.09	28	0.85	22	7/8
193HY-12-12	1-1/16x12	3/4	19	3.33	85	1.19	30	0.99	25	1-1/4

Construction: Steel

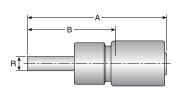
# 1D0HY Male Metric L Rigid (24° Cone) ISO 12151-2



Part Number		Thread Size		se D.	A	4		Cutoff Allow. B	
#	~	·····	(	9					$\bigcirc$
	mm		inch	mm	inch	mm	inch	mm	inch
1D0HY-6-4	6	M12x1.5	1/4	6	2.36	60	1.00	25	14
1D0HY-8-4	8	M14x1.5	1/4	6	2.36	60	1.00	25	17
1D0HY-10-4	10	M16x1.5	1/4	6	2.40	61	1.03	26	19
1D0HY-10-6	10	M16x1.5	3/8	10	2.42	61	1.06	27	19
1D0HY-12-6	12	M18x1.5	3/8	10	2.42	61	1.06	27	22
1D0HY-15-6	15	M22x1.5	3/8	10	2.52	64	1.16	29	24
1D0HY-15-8	15	M22x1.5	1/2	13	2.63	67	1.28	33	24
1D0HY-18-10	18	M26x1.5	5/8	16	2.71	69	1.31	33	27



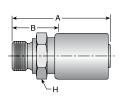
# 13DHY Male Standpipe Metric S Rigid End Connection per ISO 8434-1-SDS



Part Number	Dian F	neter R		se D.	A	4	Cutoff E	Allow.
#	Q	7	(	9				
	mm	inch	inch mm		inch	mm	inch	mm
13DHY-16-8	16	0.63	1/2	13	3.53	90	2.16	55
13DHY-30-16	30	1.18	1	25	4.15	105	2.53	64

Construction: Steel

# 1D9HY Male BSP Parallel Pipe Rigid (60° Cone) ISO 228-1

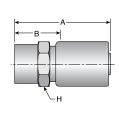


Part Number	Thread Size		se D.	ı	Ą	Cutoff E	H Hex	
#	<u>~~~~~</u>	(	9				$\bigcirc$	
		inch	mm	inch	mm	inch	mm	inch
1D9HY-4-4	1/4x19	1/4	6	2.40	61	1.03	26	13/16
1D9HY-6-6	3/8x19	3/8	10	2.55	65	1.19	30	7/8
1D9HY-8-6	1/2x14	3/8	10	2.65	67	1.28	33	1-1/16
1D9HY-8-8	1/2x14	1/2	13	2.83	72	1.47	37	1-1/16

Construction: Steel

NOTE: When used in a port, a bonded seal must be used.

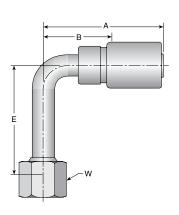
#### 1GJHY Female Grease Connection -SPL- PTF Taper Thread Rigid 1/2 x 27



Part Number	Thread Size	Hose I.D.		A	1	Cutoff E	H Hex	
#	<u>~~~~~</u>	(	9					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
1GJHY-8-4	1/2x27	1/4	6	2.41	61	1.06	27	3/4



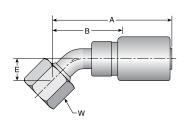
# 1J1HY Female Seal-Lok<sup>™</sup> Swivel 90° Elbow Long Drop ISO 12151-1 - SWEL90



Part Number	Thread Size	Ho I.I	se D.	Å	4	Cutoff E		E	<b>=</b>	W Hex
#	<u>~~~~~</u>	(	9							$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J1HY-4-4	9/16x18	1/4	6	2.68	68	1.41	36	1.81	46	11/16
1J1HY-6-4	11/16x16	1/4	6	2.89	73	1.62	41	2.13	54	13/16
1J1HY-6-6	11/16x16	3/8	10	2.76	70	1.49	38	2.13	54	13/16
1J1HY-8-6	13/16x16	3/8	10	2.85	72	1.58	40	2.52	64	15/16
1J1HY-8-8	13/16x16	1/2	13	2.94	75	1.65	42	2.52	64	15/16
1J1HY-10-8	1x14	1/2	13	3.01	76	1.72	44	2.76	70	1-1/8
1J1HY-10-10	1x14	5/8	16	3.42	87	2.03	52	2.76	70	1-1/8
1J1HY-12-12	1-3/16x12	3/4	19	3.68	93	2.15	55	3.78	96	1-3/8
1J1HY-16-16	1-7/16x12	1	25	4.45	113	2.84	72	4.50	114	1-5/8

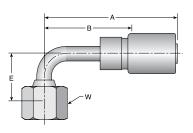
Construction: Steel

# 1J7HY Female Seal-Lok™ Swivel 45° Elbow ISO 12151-1 - SWE45



Part Number	Thread Size		Hose I.D.		Α		Cutoff Allow. B		Е	
#	<u>~~~~~</u>	(	0							
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J7HY-4-4	9/16x18	1/4	6	2.59	66	1.32	34	0.39	10	11/16
1J7HY-6-4	11/16x16	1/4	6	2.70	69	1.43	36	0.43	11	13/16
1J7HY-6-6	11/16x16	3/8	10	2.72	69	1.44	37	0.43	11	13/16
1J7HY-6-8	11/16x16	1/2	13	3.41	87	2.06	52	0.44	11	13/16
1J7HY-8-4	13/16x16	1/4	6	2.95	75	1.68	43	0.59	15	15/16
1J7HY-8-6	13/16x16	3/8	10	2.89	73	1.62	41	0.59	15	15/16
1J7HY-8-8	13/16x16	1/2	13	3.10	79	1.81	46	0.59	15	15/16
1J7HY-10-8	1x14	1/2	13	3.20	81	1.91	49	0.63	16	1-1/8
1J7HY-10-10	1x14	5/8	16	3.29	84	1.93	49	0.63	16	1-1/8
1J7HY-10-12	1x14	3/4	19	3.69	94	2.13	54	0.69	18	1-1/8
1J7HY-12-10	1-3/16x12	5/8	16	3.74	104	2.38	60	0.83	21	1-3/8
1J7HY-12-12	1-3/16x12	3/4	19	3.82	97	2.29	58	0.83	21	1-3/8
1J7HY-16-12	1-7/16x12	3/4	19	4.39	112	2.84	72	0.97	25	1-5/8
1J7HY-16-16	1-7/16x12	1	25	4.55	116	2.94	75	0.97	25	1-5/8

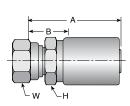
# 1J9HY Female Seal-Lok™ Swivel 90° Elbow Short Drop ISO 12151-1 - SWES90



Part Number	Thread Size	Hose I.D.		,	А		Cutoff Allow. B		Е	
#	<u>~~~~~</u>	0								$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	mm	inch
1J9HY-4-4	9/16x18	1/4	6	2.40	61	1.13	29	0.83	21	11/16
1J9HY-4-6	9/16x18	3/8	10	3.08	78	1.72	44	0.83	21	11/16
1J9HY-6-4	11/16x16	1/4	6	2.65	67	1.38	35	0.91	23	13/16
1J9HY-6-5	11/16x16	5/16	8	3/14	80	1.72	44	0.91	23	13/16
1J9HY-6-6	11/16x16	3/8	10	2.57	65	1.29	33	0.91	23	13/16
1J9HY-6-8	11/16x16	1/2	13	2.77	70	1.48	38	0.91	23	13/16
1J9HY-8-6	13/16x16	3/8	10	2.64	67	1.37	35	1.14	29	15/16
1J9HY-8-8	13/16x16	1/2	13	2.85	72	1.56	40	1.14	29	15/16
1J9HY-10-8	1x14	1/2	13	3.01	76	1.72	44	1.26	32	1-1/8
1J9HY-10-10	1x14	5/8	16	3.09	78	1.73	44	1.26	32	1-1/8
1J9HY-10-12	1x14	3/4	19	3.52	89	1.97	50	1.33	34	1-1/8
1J9HY-12-8	1-3/16x12	1/2	13	3.84	98	2.39	61	1.89	48	1-3/8
1J9HY-12-10	1-3/16x12	5/8	16	3.61	92	2.25	57	1.89	48	1-3/8
1J9HY-12-12	1-3/16x12	3/4	19	3.68	93	2.15	55	1.89	48	1-3/8
1J9HY-16-12	1-7/16x12	3/4	19	4.27	108	2.69	68	2.25	57	1-5/8
1J9HY-16-16	1-7/16x12	1	25	4.45	113	2.84	72	2.25	57	1-5/8
1J9HY-20-16	1-11/16x12	1	25	4.77	121	3.16	80	2.51	64	1-7/8

Construction: Steel

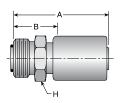
# 1JCHY Female Seal-Lok™ Swivel Short ISO 12151-1 - SWSA



Part Number	Thread Size	Hose I.D.		Α		Cutoff E	Allow.	H Hex	W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
1JCHY-4-4	9/16x18	1/4	6	2.61	66	0.94	24	9/16	11/16
1JCHY-6-6	11/16x16	3/8	10	2.69	68	0.94	24	11/16	13/16
1JCHY-8-8	13/16x16	1/2	13	2.91	74	1.13	29	7/8	15/16
1JCHY-12-12	1-3/16x12	3/4 19		3.31	84	1.13	29	1-1/4	1-3/8



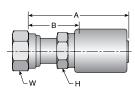
#### 1JOHY Male Seal-Lok™ Rigid (with 0-ring) ISO 1215-1 - S



Part Number	Thread Size		se D.	,	4	Cutoff E		H Hex
#	<u>~~~~~</u>	(	inch mm					$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch
1J0HY-4-4	9/16x18	1/4	6	2.36	60	1.00	25	5/8
1J0HY-6-6	11/16x16	3/8	10	2.49	63	1.13	29	3/4
1J0HY-8-8	13/16x16	1/2	13	2.69	68	1.34	34	7/8
1J0HY-12-8	1-3/16x12	1/2	13	2.91	74	1.56	40	1-1/4

Construction: Steel

#### 1JSHY Female Seal-Lok™ Swivel Long ISO 12151-1 - SWSB



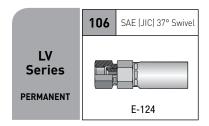
Part Number	Thread Size		Hose I.D.		Α		Cutoff Allow. B		W Hex
#	<u>~~~~~</u>	0						$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
1JSHY-4-4	9/16x18	1/4	6	2.59	66	1.25	32	9/16	11/16
1JSHY-6-4	11/16x16	1/4	6	2.67	68	1.31	33	5/8	13/16
1JSHY-6-5	11/16x16	5/16	8	2.70	69	1.34	34	5/8	13/16
1JSHY-6-6	11/16x16	3/8	10	2.75	70	1.34	34	11/16	13/16
1JSHY-8-6	13/16x16	3/8	10	2.84	72	1.50	38	7/8	15/16
1JSHY-8-8	13/16x16	1/2	13	2.95	75	1.59	40	7/8	15/16
1JSHY-10-8	1x14	1/2	13	3.16	80	1.81	46	15/16	1-1/8
1JSHY-10-10	1x14	5/8	16	3.17	81	1.78	45	1-1/8	1-1/8
1JSHY-10-12	1x14	3/4	19	3.27	83	1.69	43	1-1/4	1-1/8
1JSHY-12-10	1-3/16x12	5/8	16	3.20	81	1.81	46	1-1/8	1-3/8
1JSHY-12-12	1-3/16x12	3/4	19	3.30	84	1.72	44	1-1/4	1-3/8
1JSHY-16-12	1-7/16x12	3/4	19	3.44	87	1.88	48	1-3/8	1-5/8
1JSHY-16-16	1-7/16x12	1	25	3.59	91	1.97	50	1-3/8	1-5/8
1JSHY-20-16	1-11/16x12	1	25	3.47	88	1.75	59	1-5/8	1-7/8
1JSHY-20-20	1-11/16x12	1-1/4	32	3.98	101	2.16	55	1-3/4	1-7/8

Construction: Steel

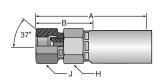


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#### LV Series Visual Index



#### 106LV SAE (JIC) 37° Swivel



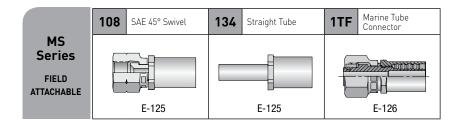
Part Number	Thread Size		Hose I.D.		4	Cutoff E	Allow.	H Hex	J Hex
#	<u>~~~~~</u>	0	0					$\bigcirc$	$\bigcirc$
		inch	mm	inch	mm	inch	mm	inch	inch
106LV-4-3	7/16-20	3/16	6	1.93	49	15/16	24	9/16	9/16
106LV-12-12	1-1/16-12	3/4	3/4 19		105	1-13/16	46	1-1/8	1-1/4
106LV-16-16	1-5/16-12	1	<b>1</b> 25		122	1-13/16	46	1-3/8	1-1/2

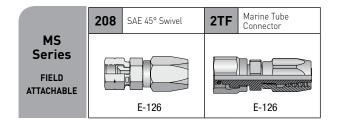
Construction: Steel nipple, nut and shell.

Add "C" for Stainless Steel.

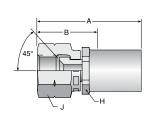


#### **MS Series Visual Index**





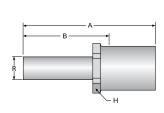
#### 108MS Permanent SAE 45° Swivel (Brass)



Part Number	Thread Size		Hose I.D.		A	Cutoff E		H Hex	J Hex
#	*****	0	0					$\bigcirc$	$\bigcirc$
		inch	inch mm		mm	inch	mm	inch	inch
108MS-6-5B	5/8-18	5/16	5/16 8		45	1-1/8	29	5/8	13/16
108MS-6-6B	5/8-18	<b>3/8</b> 10		1.82	46	1-1/16	27	3/4	13/16

Construction: Brass.

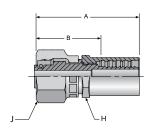
#### 134MS Permanent Straight Tube (Brass)



Part Number		Diameter R		Hose I.D.		4	Cutoff E	H Hex	
#	$\langle$	7	7 (						$\bigcirc$
	inch	mm	inch	mm	inch	mm	inch	mm	inch
134MS-6-5B	3/8	10	5/16	8	2.00	51	1-3/8	35	5/8
134MS-6-6B	3/8	10	3/8	10	2.08	53	1-3/8	35	3/4

Construction: Brass.

#### 1TFMS Permanent Marine Tube Connector (Brass)

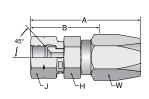


Part Number	Thread Size	Ho I.I	se D.	A	1	Cutoff E	Allow.	J Hex	H Hex
#	<u>~~~~~</u>	(	9					$\bigcirc$	$\bigcirc$
		inch	inch mm		mm	inch	mm	inch	inch
1TFMS-6-5B	9/16-24	5/16 8		1.70	43	1 1/16	27	3/4	5/8

Construction: Brass.

NOTE: Connector Mates are Manufactured by the Fluid Systems Connection Division. Refer to Catalog 3501E for Ordering, Installation Instructions and Replacement Components.

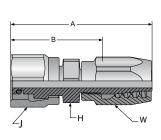
#### 208MS Field-Attachable SAE 45° Swivel (Brass)



	Part Number	Thread Size		Hose I.D.		А		Allow.	J Hex	H Hex	W Hex
	#	~~~~	0	0					$\bigcirc$	$\bigcirc$	$\bigcirc$
			inch	inch mm		mm	inch	mm	inch	inch	inch
ſ	208MS-6-5B	5/8-18	5/16	8	2.06	52	1 5/16	33	13/16	5/8	13/16
	208MS-6-6B	5/8-18	3/8	3/8 10		60	1 7/16	37	13/16	5/8	13/16

Construction: Brass.

#### 2TFMS Field-Attachable Marine Tube Connector (Brass)



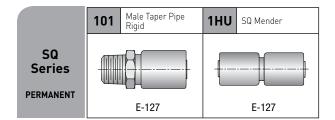
Part Number		Thread Size		Hose I.D.		А		Allow.	J Hex	H Hex	W Hex
#		<u>~~~~~</u>	(	0					$\bigcirc$	$\bigcirc$	$\bigcirc$
			inch	mm	inch	mm	inch	mm	inch	inch	inch
2TFMS-6-5	БВ	9/16-24	5/16	8	2.02	51	1 5/16	33	3/4	5/8	3/4

Construction: Brass.

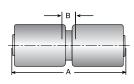
NOTE: Connector Mates are Manufactured by the Fluid Systems Connection Division. Refer to Catalog 3501E for more information.



#### **SQ Series Visual Index**



#### 1HUSQ Mender

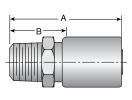


1	Part Number		se D.	,	4	Cutoff Allow. B		
	#	0	9					
Hose		inch	mm	inch	mm	inch	mm	
S612	1HUSQ-12-12	3/4	19	3.70	94	9/16	14	
S616	1HUSQ-16-16	1	25	3.99	101	9/16	14	
S912	1HUSQ-12-12	3/4	19	3.70	94	9/16	14	
S916	1HUSQ-16-16	1	25	3.99	101	9/16 14		

Construction: Steel

NOTE: See pg. G-42 for swage die selection.

#### 101SQ Male Taper Pipe Rigid



Part Number		Hose I.D.		А		Cutoff Allow. B	
#		0					
Hose		inch	mm	inch	mm	inch	mm
S612	101SQ-12-12	3/4	19	3.08	78	1-1/2	38
S616	101SQ-16-16	1	25	3.42	87	1-13/16	46
S912	101SQ-12-12	3/4	19	3.08	78	1-1/2	38
S916	101SQ-16-16	1	25	3.42	87	1-13/16	46

Construction: Steel

NOTE: See pg. G-42 for swage die selection.



notes	



**Tooling Equipment &** Accessories

**-Parker** 

MiniKrimp™

Karrykrimp

Karrykrimp 2

Parkrimp2

**Pumps** 

Accessories



























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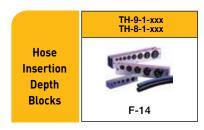
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	MG External Anti-Kink	PSG and SSG	PSG	PV	r-16 SG
	Casing	Pre-Made Spring	Parker Spiral Guard	Clear Vinyl	Steel Spring Guard
		COMMUNICATION	Charles of the last of the las		
	F-20*	F-19	F-23	F-18	F-19
	2613 Internal Flat Spring	2625 External Round Spring	2740 External Flat Spring	2799 Internal Round Spring	
	ZZZZZZZ		TITITITE		* Items on page F-20 are for PTFE hose.
	F-20*	F-20*	F-20*	F-20*	



## Crimping Machines

## MiniKrimp™ Hand Pump Model

Part No. 94C-001-PFD

The Parker Hannifin MiniKrimp is the best portable crimper on the market. By utilizing a one-piece, high-strength cast aluminum frame, the MiniKrimp is light, robust and highly corrosion resistant.

For use with 54, 55, 56, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings



#### **Features**

- Lightweight, portable, compact all-in-one unit
- Unit with pump weighs only 42 pounds
- 10,000 psi and 30+ tons of force
- No gauges to set exclusive Parkalign™ feature positions the fitting correctly every time
- Removable pusher design for easy die change
- Hand pump easily removed for use with jumper hose for bench-mounted units (Part No.- 015309)
- No additional power source required for operation
- Capable of crimping a majority of thermoplastic, rubber, PTFE and specialty hoses up to 3/4" I.D.

#### **Specifications**

■ Dimensions: 6" Deep, 13" Wide, 15" High Weight: 42 lbs with hand pump

Rating: 30 tons force @ 10,000 psi maximum

■ Full Cycle Time: Approximately 30 seconds

#### **Standard Equipment**

Part Number			Individual
94C-001-PFD 94C-002 -PFD		Description	Part Number
•	•	Base unit	94C-080-PFD
•		Hand pump	015301
	•	Air over hydraulic pump kit with tubing and adapters	025399
•	•	Silver die ring	82C-R01-PFD

#### MiniKrimp™ Air Over Hydraulic Model

Part No. 94C-002-PFD

The Parker Hannifin MiniKrimp is the best portable crimper on the market. By utilizing a one-piece, highstrength cast aluminum frame, the MiniKrimp is light, robust and highly corrosion resistant.

For use with 54, 55, 56, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings



#### **Features**

- Lightweight, portable, compact all-in-one unit
- Unit with pump weighs only 45 pounds
- 10,000 psi and 30+ tons of force
- No gauges to set exclusive Parkalign™ feature positions the fitting correctly every time
- Removable pusher design for easy die change
- Air pump utilizes a rugged activation and release lever for greater durability
- Can operate with as little as 60 psi air pressure (60-100 psi, 9 CFM recommended)
- Capable of crimping a majority of thermoplastic, rubber, PTFE and specialty hoses up to 3/4" I.D.

#### **Specifications**

■ Dimensions: 6" Deep, 12" Wide, 15" High Weight: 45 lbs with air/hydraulic pump Rating: 30 tons force @ 10,000 psi maximum

■ Full Cycle Time: Approximately 30 seconds

#### **Operating Parameters**

Reference Crimpsource™ online or appropriate catalog (4660 or 4400) of the Parker division that supplies the hose for detailed crimp specifications as exceptions do occur based on the particular hose type, size, and fitting material. www.parker.com/crimpsource



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# General Technical G

## MiniKrimp™ Crimping Machine Accessories



## Upright Vise Mount Part No. 015307

- Machined and bent from high strength steel
- Mount connects to the bottom of the MiniKrimp using four 3/8-16 bolts (not included)
- Once connected, MiniKrimp can be clamped into a vise for operation



#### Table Mount Part No. 015306

- Machined and bent from high strength steel
- Mount connects to the bottom of the MiniKrimp using four 3/8-16 bolts
- MiniKrimp can then be mounted to a table using the four 3/8" clearance holes on the other side of the plate (bolts not included)



# High Pressure Hose Assembly Part No. 015309

- Parker 10,000 psi, 1/4" I.D. hose with 3/8" female JIC connections on both ends (PN HP0606060604-72")
- Hose is 6' long
- Hose is used when a flexible connection is required between the MiniKrimp and a hydraulic pressure source



## Replacement Connector Part No. 015308

- Replacement stainless-steel bent tube rigid connector
- For use with 94C-001-PFD (MiniKrimp Hand Pump Model)



# Replacement Connector Part No. 025349

- Replacement stainless-steel bent tube rigid connector
- For use with 94C-002-PFD (MiniKrimp Air Over Hydraulic Model)

Note: The hydraulic connectors shown on this page are designed exclusively for use with the MiniKrimp. No other connectors are approved for use with the MiniKrimp without expressed written consent from Parker Parflex Division's technical support. Any worn connectors should be replaced immediately.





## High Pressure Hose Assembly Part No. 045234

- Parker 10,000 psi, 1/4" I.D. hose with quick coupler
- Hose is designed to be used when mounting a hand pump to the 94C-MKS MiniKrimp stand's base

ie: HP Hose Assembly with 3000 Series quick disconnects PN HP0101040604-36 (12" guard) with 3050-2/3010-2 coupler and nippler



## Folding Stand Part No. 94C-MKS

(See pictures below for configuration examples)

- Lightweight folding stand designed exclusively for the MiniKrimp portable crimper
- Fold up design is easy to store
- Mounting hardware and safety instructions are included
- Patented design



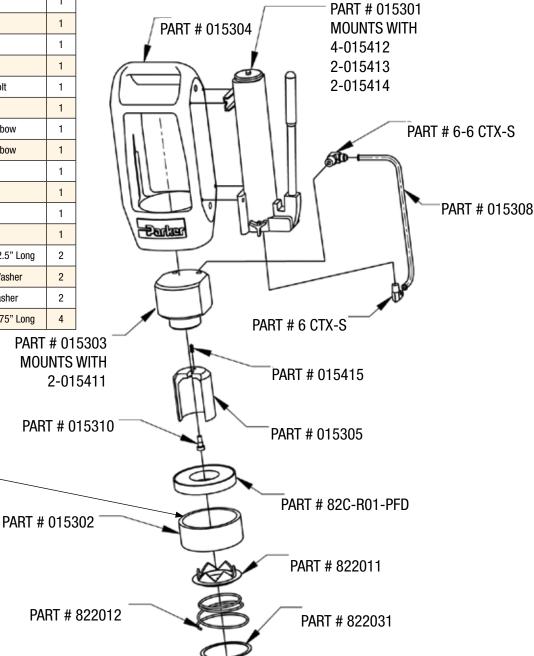


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# General Technical

# MiniKrimp™ Assembly Detail & Parts List Hand Pump Model

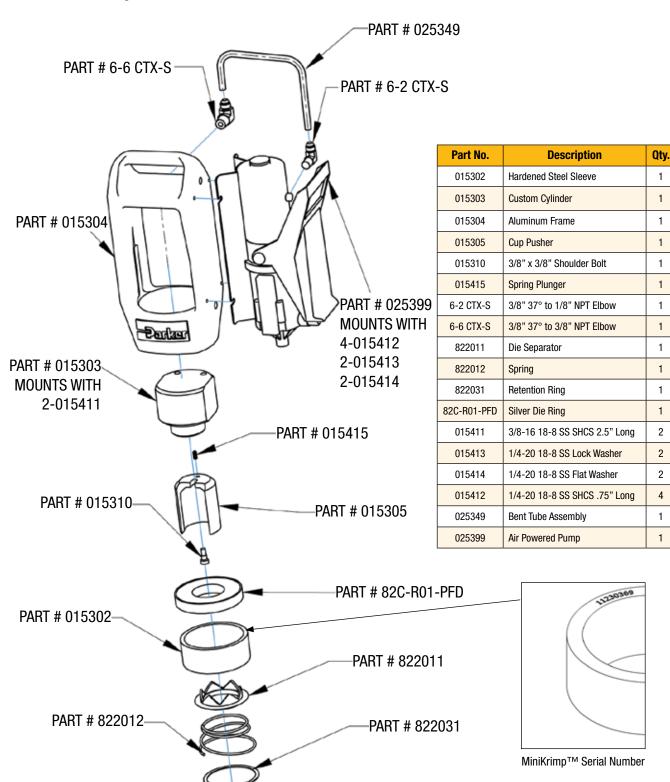
Part No.	Description	Qty.
015301	2 Speed Light Weight Hand Pump	1
015302	Hardened Steel Sleeve	1
015303	Custom Cylinder	1
015304	Aluminum Frame	1
015305	Cup Pusher	1
015306	Bent Tube Assembly	1
015310	3/8" x 3/8" Shoulder Bolt	1
015415	Spring Plunger	1
6 CTX-S	3/8" 37° to 1/4" NPT Elbow	1
6-6 CTX-S	3/8" 37° to 3/8" NPT Elbow	1
822011	Die Separator	1
822012	Spring	1
822031	Retention Ring	1
82C-R01-PFD	Silver Die Ring	1
015411	3/8-16 18-8 SS SHCS 2.5" Long	2
015413	1/4-20 18-8 SS Lock Washer	2
015414	1/4-20 18-8 SS Flat Washer	2
015412	1/4-20 18-8 SS SHCS .75" Long	4
		# 01 JNTS 2-01 T # 0





MiniKrimp™ Serial Number

## Air Over Hydraulic Model





Karrykrimp Part No. 82C-061L-PFD

The Karrykrimp is now available in a modular design with all the familiar Parkrimp System advantages.

The same unit now offers portability and bench mountability.



## **Capability**

 Crimps most hoses up to 1-1/4 I.D. (check crimpsource for details)

## **Features**

- Portable, compact rugged design
- Numerous portable power unit options available
- Pivoting pusher design for easy die change out
- Increased height enables longer bent tube fittings to be crimped
- For use with 54, 55, 56, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings

## **Specifications**

Dimensions: 15" wide, 12" deep, 30" high
Weight: 60 lbs (without power unit)
Rating: 30 ton force @ 10,000 psi maximum

■ Full Cycle Time: 30 seconds

#### **Standard Equipment**

Part Number				Individual
82C-CHD-PFD 82C-061L-PFD 82C-KKB-PFD		Description	Part Number	
	•	•	Crimp Head	82C-CHD-PFD
			Bench Power Unit Assembly	85C-1PH-PFD
			Silver die ring	82C-R01-PFD
•	•		Black die ring	82C-R02-PFD
			Hose Assembly	85C-00L-PFD
	•		Stand Assembly	85C-STD-PFD

## Karrykrimp Bench Mount Part No. 82C-KKB-PFD



## **Capability**

 Crimps most hoses up to 1-1/4 I.D. (check crimpsource for details)

## **Features**

- Faster cycle times on bench mounted units
- Pivoting pusher design for easy die change out
- Compact bench mount design
- Increased height enables longer bent tube fittings to be crimped
- For use with 54, 55, 56, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings

## **Specifications**

■ Dimensions: 17" wide, 23" deep, 27-1/2" high

■ Weight: 146 lbs

■ Rating: 30 ton force @ 10,000 psi maximum

Full Cycle Time: 11 secondsHydraulic Fluid: AW32 oil

This unit is designed to make about 400 crimps per day and is not designed to be a production crimper. Exceeding these suggested production amounts will significantly reduce the life expectancy of the crimper components.

#### Note:

Motor is dual voltage, 50/60hz suitable for 208-230/115v, 1ph, 60hz and 220-230/110v, ph, 50hz. Motor can be rewired by a qualified electrician to operate at alternate voltage.



Karrykrimp 2
Part No. 85C-061L-PFD

The Karrykrimp 2 is now available in a modular design with all the familiar Parkrimp System advantages.

The same unit now offers portability and bench mountability.



## **Capability**

■ Crimps most hoses up to 1-1/4 I.D. (check crimpsource for detail

## **Features**

- Portable, compact rugged design
- Numerous portable power unit options available
- Pivoting pusher design for easy die change out
- For use with 54, 55, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings

## **Specifications**

Dimensions: 14" wide, 14" deep, 31-1/2" high Weight: 120 lbs (without power unit) Rating: 60 ton force @ 10,000 psi maximum

■ Full Cycle Time: 20 seconds

#### **Standard Equipment**

Part Number				Individual
85C-CHD-PFD	85C-061L-PFD	85C-KKB-PFD	Description	Part Number
•	•	•	Crimp Head	85C-CHD-PFD
			Bench Power Unit Assembly	85C-1PH-PFD
	•		Silver die ring	85C-R01-PFD
	•	•	Black die ring	85C-R02-PFD
	•		Hose Assembly	85C-00L-PFD
	•		Stand Assembly	85C-STD-PFD

## Karrykrimp 2 Bench Mount Part No. 85C-KKB-PFD



## **Capability**

 Crimps most hoses up to 1-1/4 I.D. (check crimpsource for detail

### **Features**

- Faster cycle times on bench mounted units
- Pivoting pusher design for easy die change out
- Compact bench mount design
- For use with 54, 55, 57, 58, 91, 91N, 92, 93N, CY, MS, SF and HY Series fittings

## **Specifications**

Dimensions: 17" wide, 23" deep, 28" high

Weight: 208 lbs

60 ton force @ 10,000 psi maximum Rating:

• Full Cycle Time: 17 seconds ■ Hydraulic Fluid: AW32 oil

This unit is designed to make about 400 crimps per day and is not designed to be a production crimper. Exceeding these suggested production amounts will significantly reduce the life expectancy of the crimper components.

Motor is dual voltage, 50/60hz suitable for 208-230/115v, 1ph, 60hz and 220-230/110v, ph, 50hz. Motor can be rewired by a qualified electrician to operate at alternate voltage.



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# General Technical

## Parkrimp 2 Part No. 83C-081-PFD





## **Capability**

■ Crimps hoses up to 2" I.D. (reference crimp source for details)

## **Features**

- Easy to use vertical design
- Crimps full range of Parker hoses from 1/8" through 2" I.D.
- For use with 54, 55, 56, 57, 58, 58H, 91, 91N, 92, 93N, CY, LV, MS, SF and HY Series fittings

## **Specifications**

■ Dimensions: 31" wide, 24" deep, 77" high ■ Weight: 842 lbs (Head is 558 lbs and base

is 284 lbs)

• Rating: 125 ton force @ 5,000 psi maximum • Full Cycle Time: 30 seconds without adapter bowl

20 seconds with adapter bowl

• Hydraulic oil: Enerpac oil only

#### **Standard Equipment**

Part Number					Individual
83C-001-PFD	83C-081-PFD	83C-002-PFD	83C-082-PFD	Description	Part Number
•	•	•		Parkrimp 2 crimper head assembly	83C-080-PFD
		Parkrimp 2 stand assembly with 230/460 volt, 3 phase, 50/60 Hz power unit (wired for 230 volt)	83C-S40-PFD		
		•	•	Parkrimp 2 stand assemlby with 230 volt, 1 phase, 50/60 Hz power unit	83C-S20-PFD
•	•	•		Adapter bowl	83C-OCB-PFD
•	•	•	•	Spacer ring	83C-R02-PFD
	•	•		Spacer Plate	83C-R02H-PFD



## **Crimper Pumps**



(for use with the MiniKrimp, Karrykrimp and Karrykrimp 2) Lightweight pump operates with 80-110 psi shop air pressure and delivers 10,000 psi

Length: 15"
 Width: 6"
 Height: 6"
 Intake Port Size: 1/4" NPTF
 Output Port Size: 3/8" NPTF
 Weight: 14 lbs

Hydraulic Fluid: Enerpac oil only

Air/Hydraulic Pump Part No. 025399

(for use with the MiniKrimp)

Lightweight pump operates with  $80-110~\mathrm{psi}$  shop air pressure and delivers  $10,000~\mathrm{psi}$ 

Length: 13"
 Width: 4-1/2"
 Height: 5"
 Intake Port Size: 1/4" NPTF
 Output Port Size: 1/8" NPTF
 Weight: 12 lbs.

Hydraulic Fluid: Enerpac oil only





(for use with the MiniKrimp)

Ease of operation hand pump delivers 10,000 psi

Length: 13-3/8"
 Width: 3-1/4"
 Height: 3-5/8"
 Port Size: 1/4" NPTF
 Weight: 4.7 lbs.
 Hydraulic Fluid: Enerpac oil only

## **Swagers**



## SQ-101-SW Swager/Mender

Used for field assembly or repair on Predator S6 and S9 hoses

Hand Pump
Part No. 82C-0HP-PFD

(for use with the MiniKrimp, Karrykrimp and Karrykrimp 2) Ease of operation hand pump delivers 10,000 psi

Length: 13-3/8"
 Width: 3-1/4"
 Height: 3-5/8"
 Port Size: 1/4" NPTF
 Weight: 4.7 lbs.
 Hydraulic Fluid: Enerpac oil only

# Hand Pump Part No. 85C-0HP-PFD

(for use with the MiniKrimp, Karrykrimp and Karrykrimp 2) Ease of operation hand pump delivers 10,000 psi

Length: 29"
 Width: 13"
 Height: 11"
 Port Size: 3/8" NPTF
 Weight: 61 lbs

• Hydraulic Fluid: Enerpac oil only

## Electric Pump Part No. 82C-0EP-PFD

(for use with the MiniKrimp, Karrykrimp and Karrykrimp 2) Ease of operation electric pump delivers 10,000 psi



• Hydraulic Fluid: Enerpac oil only

■ 115 volt, 1 phase, 50/60 Hz, 9 amp

## Electric Pump Part No. 85C-0EP-PFD



(for use with the MiniKrimp, Karrykrimp and Karrykrimp 2) Heavy duty electric pump delivers 10,000 psi at a faster cycle time

Length: 19"
Width: 11"
Height: 17"
Port Size: 3/8" NPTF
Weight: 59 lbs
Hydraulic Fluid: Enerpac oil only
115 volt, 1 phase, 50/60 Hz, 20 amp

## Vise Blocks For Parflex Hose Sizes



Part Number	Hose Size	
VBS	-3	3/16
	-4	1/4
	-5	5/16
	-6	3/8
	-8	1/2
VBL.	-12	3/4
VDL	-16	1

## **Hose Insertion Depth Blocks**

Part No. TH9-1-xxx Part No. TH8-1-xxx

Part Number	Description
TH9-1-55_58	55 & 58 Series. All sizes.
TH9-1-56	56 Series. All sizes.
TH9-1-58H	58H Series. All sizes.
TH9-1-54A	54 Series All sizes.
TH9-1-91N	91N Series. All sizes.
TH9-1-93N_20_32	93N Series. Sizes: -20, -24, -32
TH9-1-93N_6_16	93N Series. Sizes: -6, -12, -16
TH9-1-94_95	94 & 95 Series. All sizes.
TH9-1-CY_SF	CY & SF Series. All sizes.
TH9-1-MS	MS Series. All sizes.
TH9-1-HY	HY Series. All sizes.



## Parflex Parkrimp Dies



Parkrimp dies, specifically engineered for thermoplastic and fluoropolymer hose:

- Linked die segments
- Pre-matched and assembled
- Fitting size color coded

Color Code		
Size Color		
-1.5	● GR	
-2	BR	
-3	● GR	
-4	e R	
-5	P	

Color		
Size	Color	Siz
-6	Y	-2
-8	BL	-2
-10	0	-3
-12	G	
-16	● B	

Color Code			
Size	Color		
-20	○w		
-24	e R		
-32	G		

Parkrimp Approved Silver Die Rings		
Machine	Approved Die	
Parkrimp 2	NA*	
Karrykrimp and MiniKrimp	82C-R01-PFD	
Karrykrimp 2	85C-R01-PFD	

<sup>\*</sup>No additional silver die rings required.

Note: 1) Parflex dies have been designed for use with the silver die ring. Silver die rings are to be used with all Parflex hoses unless otherwise specified.

 For most Parker products, Crimp Die information and selection charts can be found online at www.parker. com/crimpsource. Access instructions are on pg. G-13.

## Die Racks



## Die Storage Rack Part No. 80C-0DR-PFD/83C-0DR-PFD

- Holds small and large Parkimp dies
- Can be bolted together to a work bench

Description	Part No.	
Storage 3 small dies	80C-0DR-PFD	
Storage 2 large dies	83C-0DR-PFD	



## Swivel Die Rack Part No. 80C-SDR-XXXX-PFD

- Holds up to 30 Parkimp dies
- Powder coated, heavy duty steel construction
- Consist of base unit and up to 5 circular holders
- Floor or bench mounted

Description	Part No.
Swivel Die Rack and Small Die Holder	80C-SDR-SM-PFD
Swivel Die Rack and Large Die Holder	80C-SDR-LG-PFD
Swivel Die Rack Base	80C-SDR-BASE-PFD



## **Conversion Kits**



## **Hydraulic Press Kit**

## **Specifications**

- Required Height from Press Base to Press Ram: 10 inches
- Required Width of Bowl Diameter: 5 inches
- · Bowl Rating: 30 tons force maximum
- Minimum Required Press Capacity: Hose Size 1/4" to 1/2" needs a 20 ton press Hose size 5/8" to 1-1/4" needs a 30 ton press

#### **Standard Equipment**

Each component must be ordered separately	Individual
Description	Part Number
Bowl Assembly	8PC-030-PFD
Pusher	8PC-00P-PFD
Silver Die Ring	81C-R01-PFD
Black Die Ring	81C-R02-PFD



## **Weatherhead Conversion Kit**

Weatherhead T-400 crimper to utilize Parker Parkrimp No-Skive fittings.

#### Standard Equipment

oraniaana =qanpinioni						
Each component must be ordered separately	Individual					
Description	Part Number					
Bowl Assembly	8PC-030-PFD					
Pusher	8WC-00P-PFD					
Silver Die Ring	81C-R01-PFD					
Black Die Ring	81C-R02-PFD					



## **Gates Conversion Kit**

Convert Gates 701, 703 and 707 bottom loading crimpers to utilize Parker Parkrimp No-Skive fittings.

#### **Standard Equipment**

Each component must be ordered separately	Individual
Description	Part Number
Bowl Assembly	8PC-030-PFD
Silver Die Ring	81C-R01-PFD
Black Die Ring	81C-R02-PFD



## **Cutting Tools**



## **Hose Cut-Off Machine**

Part No. 332T-115V-PFD

#### **Features**

- For quick, easy cutting of spiral reinforced hose up to 1-1/4" I.D.
- Moving parts shielded by guards

### **Specifications**

- Dimensions: 13" wide x 26" long x 22" high
- Shipping Weight: 71 lbs.

#### Standard Equipment

Part Number		Individual
332T-115V-PFD	Description	Part Number
•	Hose Cut-Off Machine with 1-1/2 HP, 3450 RPM, 115/230V single phase electic motor wired for 115V	
•	Scallop Cutting Blade (8" with 5/8" arbor size)	24398-PFD

#### **Optional Equipment**

Smooth Cutting Blade (580661-PFD)



## Push-Lok Cut-Off & Assembly Tool Part No. 881540-PFD

- Combines hose cutter and toggle action press
- Cuts and assembles Parker 83FR in sizes 1/4" through 3/4" I.D.



## **Hose & Tubing Cutter**

Part No. HTC

- Special V-block design with easy adjustable blade ensures a straight, clean cut
- Minimal flattening of hose/tubing during cutting Straight, square cut enhances fitting retention
- Cuts up to 1" O.D. hose or tubing (Non-wire reinforced thermoplastic hose and tubing and rubber hose and tubing)
- Replacement blades: HTC-RB



## **Hose Cut-Off Tool** Part No. TH11-1-PFD

- Designed for quick, easy cutting of textile reinforced hose
- Squarely cuts fiber reinforced hoses in sizes 1/4" through 3/4" I.D.



## **Plastic Tube Cutter**

Part No. PTC

- Razor-edged tube cutter
- Closes automatically, assuring clean and square cuts
- May be used with most plastic tubing up to 5/8" I.D.

Description **Part Number** Replacement Blades.....PTC-001-RB

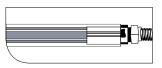


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## **Hose Guards**

Parker hose guards prolong the life of hoses that are exposed to rugged operating conditions. In addition to protecting the hose from abrasion and cutting, they limit the bending radius which prevents kinking.

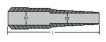
## PV - Clear Vinyl Hose Guard



Part Number	Guard I.D.		Stan Len	dard gth
#	0			
	inch mm		feet	mtr.
PV97-1	0.44	11	100	30.5
PV139-1	0.56 14		100	30.5
PV1611-1	0.68	17	100	30.5
PV2014-1	0.87	22	50	15.2
PV2420-1	1.25 32		50	15.2
PV3224-1	1.50	38	50	15.2

## HBR - Hose Bend Restrictor (Black Elastomer)

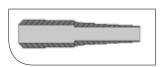




Part Number		se ze	L D1 D2		L D1		2	
#	(	9						
	inch	mm	inch	mm	inch	mm	inch	mm
HBR-4	1/4	6	5	127	.600	15	.500	13
HBR-6	3/8	10	6	152	.640	16	.625	16

Parker reserves the right to change dimensions and performance parameters without notice.

## 5CNG/CNGLT - Black Vinyl CNG Hose Guard



Hose Part Number	Hose Guard Part Number
#	#
5CNG-3	CNGG5-3
5CNG-4	CNGG5-4
5CNG-6	HBR-6
5CNG-8	CNGG5-8
5CNG/CNGLT-12	CNGG5-12
5CNG/CNGLT-16	CNGG5-16

- Use with Parflex CNG hose
- Contact Parflex Division for information on Hose Guard Kits.



## **Metallic Spring Guards**

Use Spring Guards for protection from abrasion and extreme physical abuse.

## SSG & PSG - Pre-made Spring Guards



## Plated, hard-drawn steel wire

Part Number	Hose O.D. (reference)			dard igth
#	0			
	inch mm		inch	mm
55SSG-3	0.44	11	6	152
55SSG-4	0.55	14	6	152
55SSG-5	0.61	15	6	152
55SSG-6	0.68	17	6	152
55SSG-8	0.83	21	6	152
55SSG-12	1.09	28	7	178

Special configurations available upon request. Contact factory.

## For CNG Hose (Stainless Steel)

Part Number	Hose Max. O.D.		Stan Len	dard gth
#	0			
	inch mm		inch	mm
3PSG-3	0.46	12	5.30	135
3PSG-4	0.54	14	6.25	159
5PSG-4	0.57	14	6.25	159
5PSG-6	0.68 17		6.50	165
5PSG-8	0.90	23	6.50	165

## SG - Steel Spring Guards (Plated, hard-drawn steel wire)



Part Number	Hose O.D. (reference)		Stan Len	dard gth
#	0			
	inch	mm	feet	mtr.
55SG-3	0.47	12	25	7.6
55SG-4	0.55	14	25	7.6
55SG-5	0.61	16	25	7.6
55SG-6	0.67	17	25	7.6
55SG-8	0.83	21	25	7.6
55SG-12	1.09	28	10	3
55SG-16	1.35	34	10	3
58SG-12	1.18	30	10	3
58SG-16	1.51	38	10	3

## AG - Flat Steel Armor Guards



Part Number	Guard I.D.			dard igth
#	0			
	inch	mm	feet	mtr.
55AG-3	0.47	12	25	7.6
55AG-4	0.55	14	25	7.6
55AG-5	0.61	16	25	7.6
55AG-6	0.67	17	25	7.6
55AG-8	0.83	21	25	7.6
55AG-12	1.09	28	10	3
55AG-16	1.35	34	10	3
58AG-12	1.18 30		10	3
58AG-16	1.51	38	10	3

# **Q** General Technical

## **Guards for PTFE Hoses**













2740, 2613

MG

PV

Hose		Max. O.D.	Partek Sleeve	External Round Spring	Internal Round Spring	External Flat Spring	Internal Flat Spring	Fire Sleeve	External Anti-Kink Casing	Clear Vinyl Sleeve
919/929	-3	0.25	-	2625-10	-	2740-10	-	-	-	PV75-1
	-4	0.32	-	2625-11	-	2740-11	-	FS-F-5	MG-038-015C	PV86-1
	-5	0.40	-	2625-14	-	2740-14	-	FS-F-7	MG-044-015C	PV97-1
	-6	0.46	AS-Y-11/AS-B-11	2625-15	-	2740-16	-	FS-F-8	MG-050-015C	PV108-1
	-8	0.56	AS-Y-11/AS-B-11	2625-19	-	2740-19	2613-13CR	FS-F-10	MG-062-015C	PV1310-1
	-10	0.66	AS-Y-13/AS-B-13	2625-22	-	2740-22	2613-16CR	FS-F-12	MG-075-015C	PV1411-1
	-12	0.79	AS-Y-15/AS-B-15	2625-26	-	2740-26	2613-20CR	FS-F-14	MG-081-015C	PV1814-1
	-16	1.05	AS-Y-17/AS-B-17	2625-34	-	2740-34	2613-28CR	FS-F-20	MG-112-015C*	PV2218-1
	-20	1.32	AS-Y-22/AS-B-22	2625-44	-	2740-44	2613-37CR	FS-F-24	MG-144-015C	-
939	-4	0.48	AS-Y-11/AS-B-11	2625-16	-	2740-18	-	FS-F-10	-	=
	-6	0.59	AS-Y-13/AS-B-13	2625-20	-	2740-20	-	FS-F-11	-	-
	-8	0.75	AS-Y-15/AS-B-15	2625-25	-	2740-25	-	FS-F-14	-	-
	-10	0.88	AS-Y-17/AS-B-17	2625-29	-	2740-30	-	FS-F-16	-	-
	-12	1.09	AS-Y-19/AS-B-19	2625-36	-	2740-36	-	FS-F-20	-	=
	-16	1.33	AS-Y-27/AS-B-27	2625-44	2799-16CR	2740-44	-	FS-F-24	-	-
	-20	1.75	AS-Y-35/AS-B-35	2625-58	2799-20CR	2740-58	-	FS-F-32	-	-
	-24	2.05	AS-Y-39/AS-B-39	2625-67	2799-24CR	2740-70	-	FS-F-38	-	-
	-32	2.56	AS-Y-47/AS-B-47	2625-83	2799-32CR	2740-83	-	FS-F-48	-	-
943	-6	0.49	AS-Y-11/AS-B-11	2625-17	-	2740-18	-	FS-F-10	-	-
	-8	0.62	AS-Y-13/AS-B-13	2625-21	-	2740-21	2613-13CR	FS-F-11	-	-
	-10	0.73	AS-Y-15/AS-B-15	2625-24	-	2740-23	2613-16CR	FS-F-14	-	-
	-12	0.99	AS-Y-17/AS-B-17	2625-33	-	2740-35	2613-20CR	FS-F-18	-	=
	-16	1.39	AS-Y-27/AS-B-27	2625-45	-	2740-46	2613-28CR	FS-F-24	-	-

NOTE:  $^{\star}MG-112-015C$  to be used on 919-16 only. Partek sleeves come in yellow and black. All internal guards are fabricated from 300 series stainless steel. All external guards are plated steel.



## **Spring Guards & Armor Guards**





	Armor Guards/Spring Guards										
Hose Style	55AG-3 55SG-3	55AG-4 55SG-4	55AG-5 55SG-5	55AG-6 55SG-6	55AG-8 55SG-8	55AG-12 55SG-12	55AG-16 55SG-16	58AG-12 58SG-12	58AG-16 58SG-16		
510A/510C/518C/518D	-2,-3	-4	-5	-6	-8		-16	-12			
515H	-3,-4	-5	-6		-8						
520N/528N	-3	-4	-5	-6	-8	-10					
526BA	-3	-4		-6							
527BA	-3		-4								
53DM/538DM	-3	-4		-5	-6	-8,-10		-12			
540N/540P/540R	-2,-3	-4	-5	-6	-8	-12					
55LT	-2,-3	-4	-5	-6	-8	-12					
560/560R	-3	-4	-5	-6	-8	-10		-12			
563		-4		-6	-8						
56DH/568DH	1.5,-2										
569			-4								
573X	-3										
575X	-3	-4		-6	-8			-12			
580N/H580N/588N				-4	-6	-8,-10		-12	-16		
590		-3	-4	-6	-8	-10		-12	-16		
593								-12	-16		
83FR		-4		-6	-8	-12					
1035A		-4		-6							
1035HT	-3	-4		-6							
B9	-3	-4	-5	-6	-8	-10					
D6			-4	-5	-6	-8,-10	-12		-16		
D6R		-4	-5	-6	-8	-10	-12				
H6		-4	-5	-6	-8	-10	-12				
HFS			-4	-5	-6			-12	-16		
HFSR		-4	-5	-6	-8	-12	-16				
HFS2			-4		-6	-8, -10		-12	-16		
HFS2R			-4	-6	-8			-12	-16		
HJK				-4							
HLB	-2,-3										
HTB/M8				-4	-6	-8,-10	-12		-16		
HTBR			-4		-6	-8,-10					
MSH		-5		-6							
PTH	-3										
R6			-4		-6	-8		-12			
S5N					-8						
S6/S9							-12		-16		
SLH					-8						

## **PVC Guards**



				PVC Guards			
Hose Style	PV97-1	PV139-1	PV1611-1	PV2014-1	PV2218-1	PV2420-1	PV3224-1
510A/510C/518C/518D	-2	-3	-4,-5,-6	-8	-10	-12	-16
515H	-3		-5,-6				
520N/528N		-3	-4,-5	-6,-8	-10		
526BA		-3	-4	-6			
527BA		-3	-4				
53DM/538DM		-3	-4,-5	-6	-8,-10	-12	
540N/540P/540R	-2	-3	-4,-5	-6,-8	-12		
55LT		-3	-4,-5	-6,-8		-12	
560/560R		-3	-4,-5,-6	-8	-10	-12	
563			-4	-6,-8			
56DH/568DH	-1.5, -2						
569			-4				
573X		-3					
575X		-3	-4	-6,-8		-12	
580N/H580N/588N					-8,-10	-12	
590		-3	-4	-6,-8	-10	-12	-16
593						-12	-16
83FR			-4,-6	-8	-12		
1035A			-4	-6			
1035HT		-3	-4	-6			
B9	-3		-4,-5,-6		-10		
D6			-4,-5	-6,-8	-10	-12	
D6R			-4,-5,-6	-8	-10	-12	
H6			-4,-5	-6,-8	-10	-12	
HFS			-4,-5	-6,-8	-12		-16
HFSR			-4,-5,-6	-8	-12		-16
HFS2			-4	-6,-8	-10	-12	-16
HFS2R			-4,-6	-8	-10,-12		-16
НЈК			-4				
HLB		-3					
HTB/M8			-4	-6	-8,-10	-12	
HTBR			-4	-6	-8,-10	-12	
MSH			-5,-6				
PTH		-3					
R6			-4	-6	-8	-10	-12
S5N				-8			
S6/S9						-12	-16
SLH				-8	-10	-12	-16



## **PSG - Parker Spiral Guard**



## **Features**

- High-strength and resilient, Spiral Guard protects hose and cable with superior anti-crush performance
- Exceptionally smooth facing and rounded edges prevent Spiral Guard from getting caught on rough surfaces
- Easy installation and routing
- Low friction interior minimizes wear on hose
- For bundling, organizing and protecting hose and cable, Parflex Spiral Guard is the superior solution for mining operations - In fact, it delivers more advantages than cut pipe or sleeving at a competitive price or less
- Spiral Guard is available in:
  - An MSHA/FRAS approved version for underground mining
  - A standard version (with yellow stripe) for surface applications not requiring fire-resistant, anti-static properties

## **Applications**













- Mining
- Automotive
- Mobile Equipment

	000	
W N	(000)	

Part Number			Package Qty.		1-Wire Braid Size		2-Wire Braid Size		Multi-Spiral Size		Weight	
#	0	$\bigcirc$									  bs	
	mm	inch	mtr.	feet	inch	mm	inch	mm	inch	mm	lbs./ft.	kg./mtr.
PSG 12	10 – 13	.394512	20	65.6	-		-		-		.034	.015
PSG 16 FRAS or PSG 16	12 – 17	.472669	20	65.6	1/4	6	1/4	6	-		.040	.018
PSG 20 FRAS or PSG 20	16 – 22	.630866	20	65.6	3/8	10	1/4 3/8	6 10	3/8	10	.060	.027
PSG 25 FRAS or PSG 25	22 – 28	.866-1.10	20	65.6	1/2 5/8	13 16	1/2 5/8	13 16	1/2 5/8	13 16	.101	.046
PSG 32 FRAS or PSG 32	27 – 33	1.06-1.30	20	65.6	3/4	19	5/8 3/4	16 19	5/8 3/4	16 19	.151	.068
PSG 40 FRAS or PSG 40	33 – 42	1.30-1.65	20	65.6	1	25	1	25	1	25	.235	.107
PSG 50 FRAS or PSG 50	42 – 55	1.65-2.17	20	65.6	1-1/4 1-1/2	32 38	1-1/4	32	1-1/4	32	.268	.122
PSG 63 FRAS or PSG 63	52 – 65	2.05-2.56	20	65.6	2	51	1-1/2	38	1-1/2	38	.402	.182
PSG 75 FRAS or PSG 75	65 – 80	2.56-3.15	10	32.8	-		2	51	2	51	.637	.289
PSG 90 FRAS or PSG 90	80 – 150	3.15-5.91	10	32.8	-		-		-		.771	.350
PSG 110 FRAS or PSG 110	150 – above	5.91-above	10	32.8	-		-		-		1.00	.454

Temperature Range: -148°F to 212°F (-100°C to 100°C)



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Notes		



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## General **Technical**

**Hose Assembly Instructions** 

Hose Selection, Installation & Maintenance

Die Selection & Crimp Charts

**Materials** 

**Government Agency** & Specifications



























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## **General Technical Introduction**

## **Hose Assembly Tutorial**

## **Crimping**

- Steps for crimping are clearly marked with sequences showing product distinctions between products lines.
  - Crimping section, as well as universal preparations, for all hoses appear first. The new, global 56 series fitting assembly instructions are segmented on pages G:13-G:16. Segmented instructions have also been added for the PAGE hose product line on pages G:13-G:16.
  - Field attachable assemblies appear next

## **Twin/Multi-Line Hose**

 Review twin/multi-line hose separation, pg. G-39 if applicable – this will give you information before proceeding to the assembly pages – Not following this procedure may cause permanent damage to hoses.

Please note: You must become familiar with your own specific crimper to determine its operational features. Please review thoroughly and understand your operator's manual included with your machine. Never use a crimper beyond its recommended published capacities. Crimp specifications can be found in this catalog and online by accessing Crimp Source. www.parker.com/crimpsource



<sup>\*</sup>The PARKRIMP crimping system is the same for all standard Parker portable or bench style crimpers.

## **Selection of Hose Diameter**

## From Flow Rate and Velocity

The Fluid Velocity Nomogram gives the velocity of a liquid as a function of flow rate and inside diameter of the fluid line. The commonly recommended maximum velocities for hydraulic oil systems at 200°F or less are indicated for guidance.

Example: At 10 gpm, what is the minimum size within the recommended velocity range for a hydraulic pressure line?

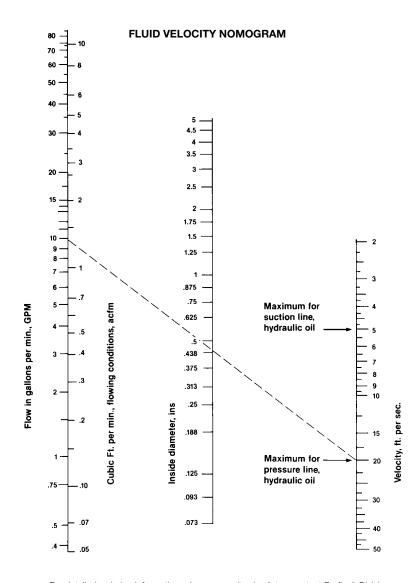
The dashed line drawn from the 10 gpm mark on the left hand line to the maximum velocity of 20 fps intersects the middle line at .438" (7/16" I. D. hose or tubing). For a hose application, use 1/2" I. D., the nearest common standard size.

This chart is based on the following formulas:

$$v_{fps} = \frac{.321Q}{\underline{b}\underline{d}^2}$$
 Q = gal per min d = hose or tube I. D. (inch)

cu. ft./min. = .1337 Q

The cu. ft. per min. value is the actual volume flow rate under flowing conditions. For air, standard cfm of free air = 7.81 actual cfm when the inlet air is at 100 psig, 68°F.



For detailed ordering information, please consult price list or contact Parflex® Division.



# The exact mechanic follows:

## **Calculation of Hose Length**

## For Over-the-Sheave Applications

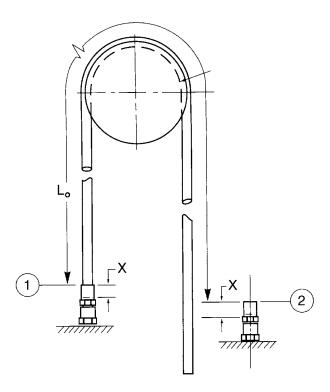
The exact cutoff length for an optimum over-the-sheave assembly depends on the particular mechanical arrangement of the machine. A method for finding an approximate starting point is as follows:

- 1. Assemble hose with one coupling as shown in diagram.
- 2. Measure hose length from point 1 to point 2 with hose taut (.985 accounts for 1.56 stretch). LO = length
- 3. Calculation of insert allowance (x) may be found from the coupling dimension tabulations in the fittings section or from direct measurement on the coupling. A 1.5% stretch allowance is provided in this formula.
- 4. Calculate hose cutoff or free length LF:

LF = 0.985 LO + 2x

Where LF includes coupling, insert allowance on both ends.

5. Couple the remaining hose end, check crimp, and assemble on the machine.





## **Volumetric Expansion of Hose**

Hydraulic hoses expand under pressure. On some applications, customers can use the differences in expansion between hoses to tune systems for better performance or even noise reduction. Parflex has tested a select list of hoses and determined the rate of expansion in cubic centimeters per foot of hose (cc/ft).

To calculate the volumetric expansion of a hose, substitute the desired pressure into the "X" values in the appropriate equation. For other hoses, please contact the division.

Hose Part		Expansion m Working sure	Equation for Volumetric Expansion		
Number	(psi)	(cc/ft)	Y=(cc/ft) X=(psi)		
510C-3/518C-3	3250	2.33	Y=0.0007X+0.0581		
510C-4/518C-4	3000	2.71	Y=0.0009X+0.0059		
510C-5/518C-5	2500	3.41	Y=0.0013X+0.1647		
510C-6/518C-6	2250	4.32	Y=0.0019X+0.0471		
510C-8/518C-8	2250	7.36	Y=0.0032X+0.1637		
510C-12/518C-12	1250	8.99	Y = 0.00745x - 0.29910		
510C-16/518C-16	1000	15.33	Y = 0.01573x - 0.44928		
520N-3/528N-3	5000	1.13	Y = 0.0002x + 0.1621		
520N-4/528N-4	5000	2.05	Y = 0.00031x + 0.47589		
520N-5/528N-5	4500	2.63	Y = 0.00048x + 0.48415		
520N-6/528N-6	4000	2.87	Y = 0.00053x + 0.75151		
520N-8/528N-8	3500	3.64	Y = 0.00086x + 0.64994		
520N-10/528N-10	2750	4.25	Y = 0.001x + 1.505		
53DM-3/538DM-3	3000	1.36	Y = 0.00039x + 0.13035		
53DM-4/538DM-4	3000	1.90	Y = 0.00062x + 0.02373		
53DM-5/538DM-5	3000	2.78	Y = 0.0009x + 0.0403		
53DM-6/538DM-6	3000	3.19	Y = 0.0010x + 0.0647		
53DM-8/538DM-8	3000	4.68	Y = 0.0016x + 0.0384		
53DM-10/538DM-10	3000	9.82	Y = 0.0033x - 0.2254		
540N-2/548N-2	3000	1.11	Y = 0.00036x + 0.04607		
540N-3/548N-3	3000	1.75	Y = 0.00057x + 0.03059		
540N-4/548N-4	2750	2.33	Y = 0.00079x + 0.14354		
540N-5/548N-5	2500	3.46	Y = 0.00124x + 0.31870		
540N-6/548N-6	2250	4.06	Y = 0.00174x + 0.15045		
540N-8/548N-8	2000	6.05	Y = 0.0030x + 0.0928		
540N-12/548N-12	1250	10.26	Y = 0.0081x - 0.2671		
560-3	3500	0.575	Y = 0.00017x + 0.00875		
560-4	3250	0.757	Y = 0.0002x + 0.1172		
560-5	3000	0.729	Y = 0.00021x + 0.09887		
560-6	2750	1.33	Y = 0.0004x + 0.1918		
560-8	2500	1.98	Y = 0.0007x + 0.2093		
560-10	2000	3.04	Y = 0.0012x + 0.5704		

Hose Part	Volumetric at Maximu Pres	Expansion m Working sure	Equation for Volumetric Expansion		
Number	(psi)	(cc/ft)	Y=(cc/ft) X=(psi)		
575X-3	5000	1.69	Y = 0.0003x + 0.2119		
575X-4	5000	2.05	Y = 0.0003x + 0.5601		
575X-6	5000	2.71	Y = 0.0004x + 0.8412		
575X-8	5000	4.59	Y = 0.00064x + 1.41795		
575X-12	5000	12.52	Y = 0.00192x + 2.92038		
575X-16	5000	16.81	Y = 0.0028x + 2.9560		
590-3	5000	0.646	Y = 0.00013x + 0.01692		
590-4	5000	0.888	Y = 0.00016x + 0.09821		
590-6	4000	1.87	Y = 0.00038x + 0.32317		
590-8	3500	2.17	Y = 0.00049x + 0.43765		
590-10	3000	3.69	Y = 0.00095x + 0.82449		
590-12	2500	4.20	Y = 0.0013x + 0.8216		
590-16	2000	6.21	Y = 0.0026x + 1.0558		
D604	3000	1.80	Y = 0.00044x + 0.51607		
D606	3000	2.00	Y = 0.0006x + 0.2892		
D608	3000	2.88	Y = 0.00057x + 1.20744		
D610	3000	2.08	Y = 0.00061x + 0.23127		
D612	3000	5.53	Y = 0.00142x + 1.21743		
D616	3000	7.33	Y = 0.00205x + 1.24905		
H604	3000	1.80	Y = 0.00044x + 0.51607		
H605	3000	1.35	Y = 0.00036x + 0.26536		
H606	3000	2.00	Y = 0.0006x + 0.2892		
H608	3000	2.88	Y = 0.00057x + 1.20744		
H610	3000	2.08	Y = 0.00061x + 0.23127		
H612	3000	5.53	Y = 0.00142x + 1.21743		

The actual volumetric expansion achieved is influenced by multiple variables including fluid properties, hose routing and application temperature. The volumetric expansion calculation is only a general guideline and must be verified by actual testing in the end-use application. No performance warranty in design is expressed or implied by this calculation. Parker recommends that the user review and understand all the precautions listed in the Parker Safety Guide for Selecting and Using Hose, Fittings and Accessories, bulletin BUL. 4400-b.1.



## Hose Permeation Data (510A)

### Permeation Rate at 120°F

(Pound per Linear Hose Foot per Year)

Hose Size	R12	R22	R507	R404A	R502	R134A
-2	-	.28	-	-	.03	-
-3	-	.30	.08	.07	-	-
-4	-	.71	.15	.10	-	-
-6	-	1.11	-	-	.87	-

#### Permeation Rate at 212°F

(Pound per Linear Hose Foot per Year)

Hose Size	R12	R22	R507	R404A	R502	R134A
-2	-	-	-	-	-	-
-3	-	1.25	-	-	-	-
-4	.08	2.32	-	-	-	.07
-6	-	-	-	-	-	-

#### Notes:

- 1. Data is for comparison only. Actual results may vary due to differences in application temperature and pressure.
- 2. Data is collected in highly controlled tests per UL1963.
- 3. Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings and Related Accessories, Section 2.6:

Permeation: Permeation (that is, seepage through the Hose) will occur from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications.

The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.

Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.



## **Pressure Rating of Hose End Connections**

The maximum dynamic working pressure of the hose assembly is the lesser of the rated working pressure of the hose and the end connections used.

PRESSURE RATINGS HOSE ASSEMBLIES - psi

#### PRESSURE OF THE HOSE AND THE END CONNECTIONS USED

Hose End	Part		Inch Size Fittings												
Connection	Number			(psi)											
Description	Codes	-2	-4	-5	-6	-8	-10	-12	-16	-20	-24	-32	-40	-48	-64
Hose End	Part		Inch Size Fittings												
Male Pipe (NPTF)	01	12,000	12,000		10,000	10,000		7,500	6,500	5,000	3,000	2,500			
Female Pipe (NPTF, NPSM)	02 & 07	7,500	7,000		6,000	5,000		4,000	3,000	2,500	2,000	2,000			
Male Pipe (BSP)	91 & D9	5,000	9,000		8,000	6,250		5,000	4,000	3,500	3,000	3,000			
Female Pipe (BSP)	92, B1, B2 & B4	5,000	9,000		8,000	6,250	5,500	5,000	4,000	3,500	3,000	3,000			
Female Pipe (JIS)	FU, GU, MU & UT		5,000		5,000	5,000		4,000	3,000	2,500	1,500	1,500			
0-Ring Swivel and 45° Flare	13, 1L, S2, 0G, 0L, 48, 08, 77 & 79		3,000	3,000	3,000	3,000	2,750	2,250	2,000	1,625	1,250	1,125			
37° Flare and Straight Thread	03, 05, 06, 37, 39, 41, L7 & L9		6,000	6,000	5,000	5,000	5,000	5,000	4,000	3,000	2,500	2,500			
Flare	04														
SAE Flareless	TU & AL		6,000	6,000	5,600	5,600	4,200	4,200	3,500	3,500	3,000	3,000			
SAE Inverted Flare	28, 67 & 69		2,750	2,500	2,250	2,000									
Seal-Lok®* (0-Ring Face Seal)	JM, JC, JS, J0, J1, J5, J7 & J9		6,000		6,000	6,000	6,000	6,000	6,000	4,000	4,000				
Specialty	TU, AL		6,000	6,000	5,600	5,600	4,200	4,200	3,500	3,500	3,000	3,000			

Hose End Connection	Part Number		Metric Fittings (psi)														
	Codes	-6	-8	-10	-12	-14	-15	-16	-18	-20	-22	-25	-28	-30	-35	-38	-42
DIN Light "L" without O-Ring	C3, C4, C5 & 1D	3,500	3,500	3,500	3,500		3,500		2,250		2,250		1,400		1,400		1,400
DIN Light "L" with 0-Ring	DO, CA, CE & CF	4,500	4,500	4,500	4,500		4,500		2,250		2,250		2,250		2,250		2,250
DIN Heavy "S" without 0-Ring	C6, C7, C8 & 3D		9,000	9,000	9,000	9,000		5,750		5,750		5,750		3,500		3,500	
DIN Heavy "S" with 0-Ring	C9, 0C, 1C & D2		9,000	9,000	9,000	9,000		6,000		6,000		6,000		6,000		4,500	

NOTE: All the above ratings are based on low carbon steel hose fittings. Higher pressure ratings can be attained with medium carbon and alloy steel hose fittings and mating adapters.

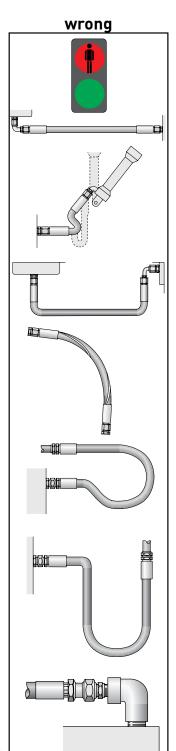
#### PRESSURE RATING OF HOSE - psi

THE MAXIMUM WORKING PRESSURES OF HOSES ARE LISTED ON PAGE A-10: A-17 WITH EACH HOSE DESCRIPTION IN SECTION A.



## Selection, Installation & Maintenance

## **Recommended Practices for Hydraulic Hose Assemblies**



The routing of the hose assembly and the environment in which the hose assembly operates directly influence the service life of the hose assembly. The following diagrams indicate the correct routing of hose assemblies that will maximize its service life and assure a safe working functionality.

When hose installation is straight, there must be enough slack in the hose to allow for changes in length that occur when pressure is applied. When pressurized, hose that is too short may pull loose from its hose fittings or stress the hose fitting connections, causing premature metallic or seal failures.

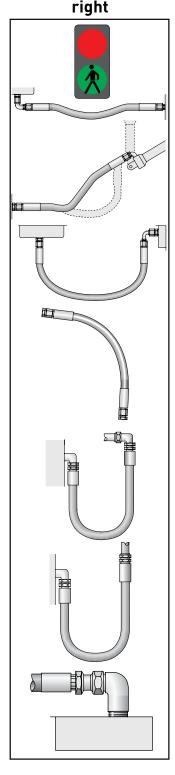
The hose length must be determined so that the hose assembly has enough slack to allow the system components to move or vibrate without creating tension in the hose.

However, do not allow too much slack and therefore introduce the risk of the hose snagging on other equipment or rubbing on other components.

Mechanical straining of the hoses needs to be avoided, so the hose must not be bent below its minimum bend radius or twisted during installation. The minimum bending radii for each hose is stated in the hose tables in the catalogue.

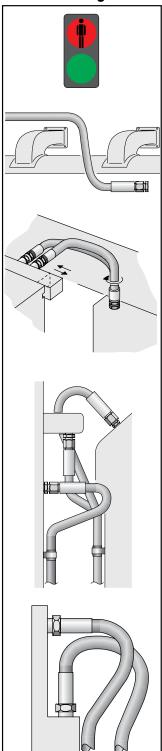
The plane of movement must also be considered and the hose routing selected accordingly.

Hose routing also plays an important role on the selection of the hose fittings, as the correct fittings can avoid straining the hoses, unnecessary hose length or multiple threaded joints.





#### wrong



Correct clamping (holding/supporting) of the hose should be exercised to securely route the hose or to avoid the hose contacting surfaces that will cause the hose damage. It is however, vital that the hose be allowed to keep its functionality as a "flexible-pipe" and not be restricted from changing in length when under pressure.

It should also be noted that hoses for high- and low-pressure lines shall not be crossed or clamped together, as the difference in changes in length could wear the hose covers.

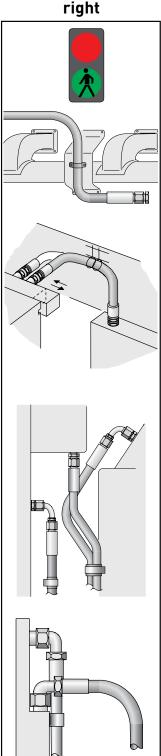
Hose should not be bent in more than one plane. If hose follows a compound bend, it shall be coupled into separate segments or clamped into segments that each flex in only one plane.

Hoses should be kept away from hot parts as high ambient temperatures shorten hose life.

Protective insulation may need to be used in unusually high ambient temperature areas.

While the importance of the functionality is primary, the aesthetics and practicality of the installation should also be considered in the design.

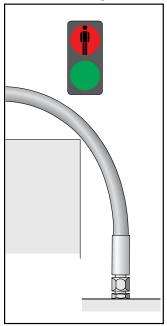
Maintenance might be necessary at some point in the future, so prohibitive design routings should be avoided.



## Selection, Installation & Maintenance (cont.)

## Recommended Practices for Hydraulic Hose Assemblies

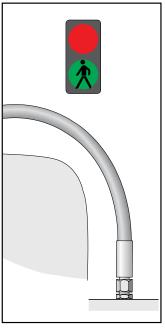
## wrong



#### Abrasive influences

In general care should be taken so that the hose is not exposed to direct surface contact that will cause abrasive wearing of the outer cover (either hose to object or hose to hose contact). If however, the application is such that this cannot be avoided, either a hose with a higher abrasion resistant hose cover or a protective sleeve need to be used.

## right



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## **Hose Assembly and Crimping**

**How To Use Crimpsource** 



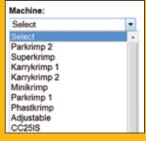


The most **up-to-date** information for crimping is located at www. parker.com/crimpsource. Not only is it accurate, but it is easy.

NOTE: If the hose does not come up, then you cannot crimp that hose on the machine you selected.

If the fitting you choose doesn't come up, then that series is not available for that hose. Same with size.





Choose the correct machine.

-

Choose the hose you are crimping.

**Note** If the hose does not come up, then the crimper chosen does not work with the selected hose



Select	•
55	
56	
56H	
57	
58	
81	- 11
91	- 11
91N	- 11
92	- 11

Choose the fitting style.



Choose the fittings size. Once you have selected values from each field, hit the search button.

**Note** If the chosen fitting/size doesn't come up, the series/size is not available for that hose.



Hose Style: Coupling Styl 540N 56		Crimper: Minikrimp	Hose Description	Meets or exceeds SAE 100R7				
Size	Die	Die Ring	Crimp Diameter	Crimp Length	Hose Insertion	Drawing		
		Parker Park	lex Crimp Dies					
-8	80C-P08	82C-R01	0.850	FULL	1-1/8	PKFull		
	Commen	ts						

Hose

PFD: Crimp diameter is measured four places, 45 degrees apart, at the top, then middle and bottom of the crimp.

Coupling Style: Crimper:

PFD: Crimp diameter tolerance on all Parkrimp Crimpers is ± 0.010" (± 0.25mm) unless otherwise specified. Crimp length tolerance is ± 0.030" (± 0.76mm).

PFD: Align measurement caliper or micrometer on the center of crimp impressions avoiding the crimp ribs.

PFD: Crimp diameter tolerance on all Adjustable Crimpers is ± 0.005" (± 0.13mm). Crimp length tolerance is ± 0.030" (± 0.76mm).

PFD: Reference Parker Fluid Connector Group (FCG) Safety Bulletin 4400

-B.1 (www.parker.com/safety)

Home

Hose Style:

Print



LENGTH

DIAMETER

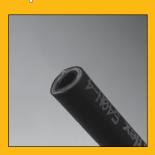
## **Hose Assembly and Crimping**

Permanent Crimp Series 56

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. **See Table of Contents for listing.** 



#### Inspection



**Hose –** Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



**Fittings** – Verify fitting series corresponds to the selected hose. Visually inspect fitting(s) for a through-hole, threads and damage.



#### Assembly Pren



Insertion Depth – Shown is a 56 series fitting. Using Parflex Depth Insertion Block (part# TH9-1-56), mark the hose with the proper insertion depth line. On some fittings such as 55 Series, this depth is represented by a dashed or knurled line on the crimp shell.



Lubrication (as required) – Using an SAE 20 weight lubricating oil, lightly lubricate inside of hose end.

#### Warning

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service, lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose it used.



#### **Assembly**



**Assemble hose** – Push hose into fitting all the way to depth insertion mark. (If fitting does not readily slide onto hose, perform the next step.)



Using Parker VBS or VBL (vise blocks) and a rubber mallet, tap fitting onto hose until bottom of fitting shell is aligned with depth insertion mark.



# Hose Assembly and Crimping Permanent Crimp Series 56 (cont.)



#### **Die Selection**



Select proper Parkrimp die set. (Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)





Crimp Die - Place die set into



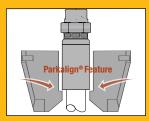
**Die Ring –** Place applicable die ring on top of die. Position ring so it is centered on die.

(Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)





Assemble hose - Insert hose and fitting from bottom of crimper and up through die set. Position fitting so bottom of fitting skirt rests on die step (PARKALIGN® feature).



While holding hose and fitting in position on die step, crimp fitting onto hose until die ring contacts base plate.

#### **Warning**

Keep fingers and hands away from die-pusher area. Failure to do so may result in personal injury.

#### Note

Pump on crimper must not exceed the rated pressure of the crimper being used. Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.



#### **Lubricate Bowl**



Grease frequently using a premium, quality, lithium-base grease. Apply a thin layer of grease on bowl of crimper base plate.

# Hose Assembly and Crimping Permanent Crimp Series 56 (cont.)



Measure and verify hose assembly



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances.

(Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)

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## MiniKrimp™ Fitting Assembly Procedures Crimp Series 54 CAUTION: There are several different sections for Hose Assembly

Permanent Crimp Series 56

and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. See Table of Contents for listing.



#### Inspection



Hose - Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



**Fittings –** Verify fitting series corresponds to the selected hose. Visually inspect fitting(s) for a through-hole, threads and damage.



#### **Assembly Prep**



Insertion Depth - Shown is a 56 series fitting. Using Parflex Depth Insertion Block (part# TH9-1-56), mark the hose with the proper insertion depth line. On some fittings such as 55 Series, this depth is represented by a dashed or knurled line on the crimp shell.



Lubrication (as required) -Using an SAE 20 weight lubricating oil, lightly lubricate inside of hose end.

#### **Warning**

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose is used.



### **Assembly**



Assemble hose - Push hose into fitting all the way to depth insertion mark. (If fitting does not readily slide onto hose, perform the next step.)



Using Parker VBS or VBL (vise blocks) and a rubber mallet, tap fitting onto hose until bottom of fitting shell is aligned with depth insertion mark.



## MiniKrimp™ Fitting Assembly Procedures

Permanent Crimp Series 56 (cont.)



#### **Die Selection**



Select proper Parkrimp die set. (Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)

**Lubricate Bowl** 

Remove pusher from shoulder bolt.

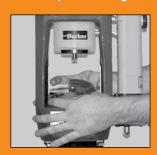
Using a premium, quality, lithium-

base grease, apply a thin layer of

grease on bowl of crimper base

# 6

Die & Spacer Ring



Crimp Die – Place die set into bowl.



**Die Ring** – Place applicable die ring on top of die. Position ring so it is centered on die.

(Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)



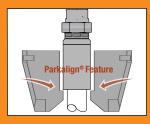
Replace pusher onto shoulder bolt.



#### Crimp



Assemble hose – Insert hose and fitting from bottom of crimper and up through die set. Position fitting so bottom of fitting skirt rests on die step (PARKALIGN® feature).



While holding hose and fitting in position on die step, crimp fitting onto hose until die ring contacts base plate.

### **Warning**

Keep fingers and hands away from die-pusher area. Failure to do so may result in personal injury

#### Note

Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.



## MiniKrimp™ Fitting Assembly Procedures Permanent Crimp Series 56 (cont.)



### Measure & Inspect



Measure and verify hose assembly



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances.

(Reference Crimp Die Selection on Crimpsource online at www.parker.com/crimpsource)



### **Hose Assembly and Crimping**

Permanent Crimp Series 54, 55, 58, 58H, 92, CY, HY, LV, MS, SF

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. **See Table of Contents for listing.** 



### Inspection



**Hose –** Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



Fittings – Verify fitting series corresponds to the selected hose. Visually inspect fitting(s) for a through-hole, threads and damage.



Assembly Pren



Insertion Depth – Shown is a 55 series fitting. See Hose Fitting Insertion Values, pg. G-43 for insertion depths of fitting series that do not incorporate an insertion depth. Mark hose end with proper insertion depth line.



Lubrication (as required) – Using an SAE 20 weight lubricating oil, lightly lubricate inside of hose end.

### Warning

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service, lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose is used.



### Assembly



**Assemble hose** – Push hose into fitting all the way to depth insertion mark. (If fitting does not readily slide onto hose, perform the next step.)



Using Parker VBS or VBL (vise blocks) and a rubber mallet, tap fitting onto hose until bottom of fitting shell is aligned with depth insertion mark.



## Hose Assembly and Crimping Permanent Crimp (cont.) Series 43, 54, 55, 58, 58H, 92, CY, HY, LV, MS, SF





Select proper Parkrimp die set. (Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)





Crimp Die - Place die set into





**Die Ring –** Place applicable die ring on top of die. Position ring so it is centered on die.

(Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)



Assemble hose – Insert

hose and fitting from bottom

of crimper and up through die

set. Position fitting so bottom

of fitting skirt rests on die step (PARKALIGN® feature).

While holding hose and fitting in position on die step, crimp fitting onto hose until die ring contacts base plate.

### Warning

Keep fingers and hands away from die-pusher area. Failure to do so may result in personal injury.

### Note

Pump on crimper must not exceed the rated pressure of the crimper being used. Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.



### **Lubricate Bowl**



Grease frequently using a premium, quality, lithium-base grease. Apply a thin layer of grease on bowl of crimper base plate.



# Hose Assembly and Crimping Permanent Crimp (cont.) Series 54, 55, 58, 58H, 92, CY, HY, LV, MS, SF



Measure and verify hose assembly



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances.

(Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)



## MiniKrimp™ Fitting Assembly Procedures CAUTION: There are several different sections for Hose Assembly

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. **See Table of Contents for listing.** 



### Inspection



**Hose –** Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



Fittings – Verify fitting series corresponds to the selected hose. Visually inspect fitting(s) for a through-hole, threads and damage.



### **Assembly Prep**



Insertion Depth – Mark hose end with proper insertion depth line. See Hose Fitting Insertion Values, pg. G-43 for insertion depths of fitting series that do not incorporate an insertion depth.



**Lubrication (as required) –**Using an SAE 20 weight lubricating oil, lightly lubricate inside of hose end.

### **Warning**

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose is used.



### **Assembly**



**Assemble hose** – Push hose into fitting all the way to depth insertion mark. (If fitting does not readily slide onto hose, perform the next step.)



Using Parker VBS or VBL (vise blocks) and a rubber mallet, tap fitting onto hose until bottom of fitting shell is aligned with depth insertion mark.



## MiniKrimp™ Fitting Assembly Procedures



### **Die Selection**



Select proper Parkrimp die set. (Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)



### **Lubricate Bowl**



Remove pusher from shoulder bolt.

Using a premium, quality, lithiumbase grease, apply a thin layer of grease on bowl of crimper base plate.



Die & Spacer Ring



Crimp Die – Place die set into bowl



**Die Ring** – Place applicable die ring on top of die. Position ring so it is centered on die.

(Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)



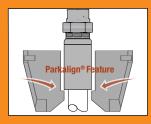
Replace pusher onto shoulder bolt.



### Crimp



Assemble hose – Insert hose and fitting from bottom of crimper and up through die set. Position fitting so bottom of fitting skirt rests on die step (PARKALIGN® feature).



While holding hose and fitting in position on die step, crimp fitting onto hose until die ring contacts base plate.

### **Warning**

Keep fingers and hands away from die-pusher area. Failure to do so may result in personal injury.

### Note

Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.



## MiniKrimp<sup>™</sup> Fitting Assembly Procedures (cont.)



### Measure & Inspect



Measure and verify hose assembly length.



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances.

(Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)

## Hose Assembly & Crimping Field Attachable

Series 51, BU & MS (Do not use these fittings on oxygen service lines)

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. See Table of Contents for listing.



### **Inspection**



**Hose –** Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



Fittings - Inspect socket for damaged or missing threads. Do not use if conditions exist.



Inspect nipple for a throughhole, damaged or missing threads and improperly crimped nut (if applicable). Do not use if these conditions exist.



### **Assembly**



Using the Parker VBS or VBL vise block, place hose in proper hole of the vise block and then clamp in a bench vise. Ensure enough hose extends from the vise block to install socket.

Ensure hose is installed in correct size hole of vise block. Clamping hose in a smaller hole will crush hose.



### **Assembly**



Using a wrench, screw socket onto hose counterclockwise until it bottoms. Ensure end of hose is against inside shoulder. Back off socket 1/4 turn clock-

Socket should be firm when tightened but not difficult to turn. If socket is difficult to install, apply lubricant that is compatible with the hose material.

Do not use a lubricant with MS series.



## Hose Assembly & Crimping Field Attachable (cont.)

Series 51, BU & MS (Do not use these fittings on oxygen service lines)



### **Assembly**



Place hex portion of socket into vise and tighten vise. Ensure socket extends past vise jaws enough to allow for installation of nipple.

When tightening socket in vise, do not over tighten vise jaws. Over tightening vise jaws will distort internal threads of socket and hamper installation of nipple.



### **Assembly**



Using an SAE 20 weight lubricating oil, generously lubricate nipple and socket, threads and hose I.D.



Using a wrench on the nipple hex, screw nipple into socket clockwise until nipple bottoms against socket shoulder.

Nipple should be firm when tightened but not difficult to turn. If nipple is difficult to install, check hose for proper lubrication. Re-apply lubricating oil as necessary. Installation of nipple without proper lubrication will damage core tube.



### **Inspection**



Measure and verify hose assembly



# Hose Assembly & Crimping PTFE Permanent Crimp Series 91, 91N & 93N CAUTION: and Crimpin the fifting or

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. See Table of Contents for listing.





Using a power hose cutoff saw, cut hose squarely.

### **Note**

PTFE Hose should be taped prior to cutting. Hose should be cut at center point of taped section.





Hose - Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires.



Fittings – Verify fitting series corresponds to the selected hose. Visually inspect fitting(s) for a through-hole, threads and damage.





**Insertion Depth - Mark hose** end with proper insertion depth line. See Hose Fitting Insertion Values, pg. G-43 for insertion depths of fitting series that do not incorporate an insertion depth. For jacketed PTFE hoses, use a sharp knife and light pressure to cut back the cover at least the length of the insertion depth of the fitting.

### Warning

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service, lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose



**Assemble hose – Push fitting** onto hose slightly and then remove tape. Continue pushing fitting onto hose until fitting reaches depth insertion mark.



# Hose Assembly & Crimping PTFE Permanent Crimp (cont.) Series 91, 91N & 93N





Select proper Parkrimp die set. (Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www.parker. com/crimpsource)





Crimp Die - Place die set into



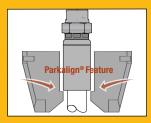
Die Ring - Place applicable die ring on top of die. Position ring so it is centered on die.

(Parflex hoses utilize silver die ring with the exception of HTB hose. Reference Crimp Die Selection Charts - pg. G-13 or Crimpsource online at www. parker.com/crimpsource)





Assemble hose - Insert hose and fitting from bottom of crimper and up through die set. Position fitting so bottom of fitting skirt rests on die step (PARKALIGN® feature).



While holding hose and fitting in position on die step, crimp fitting onto hose until die ring contacts base plate.

### Warning

Keep fingers and hands away from die-pusher area. Failure to do so may result in personal injury.

### Note

Pump on crimper must not exceed the rated pressure of the crimper being used. Parker Hannifin will not accept responsibility for the operation of or provide warranty coverage for a crimper that is operated by a power unit other than equipment supplied by Parker Hannifin for the express purpose of operating the crimper.



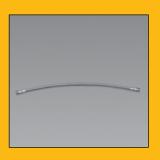
### **Lubricate Bowl**



Using a premium, quality, lithium-base grease, apply a thin layer of grease on bowl of crimper base plate.

# Hose Assembly & Crimping PTFE Permanent Crimp (cont.) Series 91, 91N & 93N





Measure and verify hose assembly



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure crimp diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify crimp diameter is within tolerances.

(Reference Crimp Die Selection Charts - pg. G-13 or Crimp-source online at www.parker. com/crimpsource)



### **Hose Assembly & Crimping**

### **PTFE Crimp**

**Series PAGE Fittings** 

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. **See Table of Contents for listing.** 



### Inspection/Marking



Obtain correct hose, fittings and collars per customer order. Inspect to make certain no defects are present on fittings, collars or hose.

Using 1" wide filament tape, apply 1 to 1½ wraps of tape tightly around hose at location to be cut. Mark tape in the middle where cut will be made. Tape will be left on during crimping so only ½" width of tape should remain.



### **Cutting**



Using a rotary power cutting saw with a smooth toothless blade, cut hose squarely to proper length. Fitting length being used in the assembly shall be taken into account when calculating hose length.



Blow ends of hose off / out to remove any debris left from cutting operation. Cut off wires or fabric extending past the end of



### **Assembly**



PAGE series fittings are not one piece but two pieces (insert + collar) and must be properly installed to assure leak free long life assemblies.

Fittings – Inspect each component for possible damage. In addition, inspect socket and nipple for a through-hole and threads.



## **Hose Assembly & Crimping**

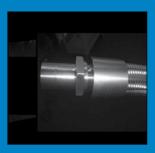
PTFE Crimp (cont.)
Series PAGE Fittings



### Assembly



a. Orient and place collar on hose end fully.



b. Using a taper punch, push punch into tube to enlarge bore of hose so insert just slides into hose

c. Push insert into hose until lock groove of insert is just at end of collar.



d. Pull collar out towards end of insert until at correct crimp position on insert of collar.



### **Assembly**



Crimp assembly only in Parker Approved adjustable crimper. Select correct die and crimp spec from Parker Crimp Source.

www.parker.com/crimpsource

- a. Place assembly into crimp dies so full collar length crimp is obtained.
- b. Check crimp dimensions in four places around the middle of the crimp circumference. Verify the average of those readings is within crimp specification tolerances. Adjust crimper up or down if needed to obtain proper dimension.
- c. Crimp opposite end following the same procedures.

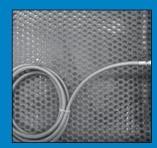


### Inspect



Inspect assembly, noting the length.

a. Test to correct test pressures to assure no leaks are observed using hydrostatic pressure unit (recommended). Air or nitrogen under water can be used with caution utilizing the proper pressure and procedures for that equipment.



Blow out all water from the assembly and recheck length.

\*\*Note any movement of length and make compensations as needed on next assembly.

Package assembly appropriately for customer requirements.



## Hose Assembly & Crimping PTFE Field Attachable CAUTION:

Series 90

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. See Table of Contents for listing.



### Inspection



Hose - Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers or wires







Fittings - Inspect each component for possible damage. In addition, inspect socket and nipple for a through-hole and threads.



### Assembly





Slide two sockets over end of hose with bottom of sockets back to back. Position sockets at each end of hose.

### Note

When installing sockets on hose, check hose ends to determine if wire braid "necks down" (bends inward). If one end "necks down" use this end to slide sockets onto hose.



### **Assembly**



Mount nipple hex in vise. Ensure nipple end extends beyond vise jaws sufficiently to allow installation of hose.



Push hose bore onto nipple to size tube and to aid in separating braid before assembling ferrule onto hose.

Once completed, remove hose from nipple.



## Hose Assembly & Crimping PTFE Field Attachable (cont.)



### Assembly



By hand, push sleeve over end of PTFE core tube and under wire braid.



To complete positioning of sleeve, push hose end with sleeve against a solid flat



**Assembly** 



Verify tube butts against inside shoulder of ferrule.



Using a tapered punch, push punch into end of sleeve and tube to set sleeve barbs into



### **Assembly**



Using SAE 20 weight oil, lubricate nipple and socket threads. For stainless steel fittings use Parker ThreadMate® or a molybdenum type lubricant.

### Warning

Do not use lubricating oil when installing fittings on hose used in oxygen service. When installing fittings on hose used in oxygen service lubricate with a non-oil based soap solution. Failure to do so may result in an explosion and personal injury when hose is used.



Assemble hose - Using a twisting motion, push hose over nipple until hose is seated against nipple chamfer.



## Hose Assembly & Crimping PTFE Field Attachable (cont.)

Series 90



### **Assembly**



Push socket forward and hand-start threading of socket to nipple.

### Caution

When tightening socket in vise, do not over tighten vise jaws. Over tightening vise jaws will distort internal threads of socket.



Remove assembly from vise and reposition with socket in vise jaws. Ensure socket extends beyond vise jaws far enough to allow nipple to be completely tightened.



### **Assembly**



Wrench tighten nipple hex until clearance between hex and socket hex is 1/32" or less.



Tighten further to align corners of nipple and socket hexes if necessary.



### Measure & Inspect



Measure and verify hose assembly



## **SQ-Swage Instructions Sewer Hose**

**CAUTION:** There are several different sections for Hose Assembly and Crimping. Be sure you are in the section that corresponds to the fitting series you are using. See Table of Contents for listing.



Inspection



Hose - Visually inspect both ends of hose for square cut. Remove any burrs, loose fibers



Fittings - Visually inspect fitting for properly crimped shells, internal barbs, a through-hole and damage.





Insertion Depth - Mark hose end with proper insertion depth



**Lubricate -** Using an SAE 20 weight oil, lightly lubricate inside of both hose ends.



Assemble hose - Push each hose end into fitting to the depth insertion mark.





Remove both die securing bolts and nuts.



Place hose and fitting assembly into position on swager.



### **SQ-Swage Instructions** (cont.)



### Assembly



Insert both die halves around hose in each end of swager.



Install both die securing bolts with nuts positioned in opening of swager plates. Tighten die securing bolts 1/4 turn past finger tight.

### Caution

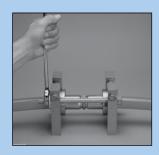
When swaging stainless steel fittings, lubricate through-hole of dies with ThreadMate®. Failure to do so may result in damage to fittings.



Assembly



**Lubricate –** Using an SAE 20 weight oil, lightly lubricate inside of both hose ends.



Assemble hose – Align swager plates in parallel and tighten nuts on swaging bolts uniformly until dies touch.

### Caution

Ensure swager plates remain in parallel when tightening swager bolts. Failure to do so will result in an improperly swaged fitting.



Assembly



Loosen swaging bolts to release pressure on dies.



Remove die securing bolts and nuts. Then remove dies.



**Assemble hose –** Remove completed hose assembly.

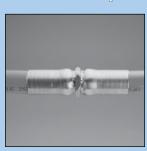
### **SQ-Swage Instructions** (cont.)



### Measure & Inspect



Measure and verify hose assembly length.



Inspect insertion depth mark at fitting ends. Insertion mark must be visible but not exceed 1/8" from end of crimped fitting shell.



Measure swage diameter of each fitting at top, middle and bottom of shell. Take measurements at a minimum of three places around shell circumference. Verify swage diameter is within tolerances.

(Reference Swage Specification & Tool Selection Chart on pg. G-42 for proper swage diameters.)



## Twin/Multi-Line Separation

Factory-built assemblies are available using twin/multi-line hoses. When field-built assemblies are preferred, the following steps must be taken.





**Set-Up** – Position twinned or multi-line hose assembly so that it lies flat on work surface without tendency to twist or turn.

2



Measure hose to length – Measure and mark the length that the hoses are to be separated (commonly referred to as Splitback Length).

3



Lubricate – Lightly lubricate the web area between the hoses. Distribute the lubricant uniformly along the web of the assembly to be separated. Any lightweight oil will suffice (SAE 10 or 20). The function of the oil is to reduce the friction of the knife blade so that it naturally seeks the center of the valley formed by the hoses. This eliminates the need for the operator to steer the knife.

### Twin/Multi-Line Separation (cont.)



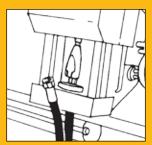


Cut Hose to Length – Press the multi-line hose assembly firmly and flat against the work surface with your free hand so that it does not move. Using a sharp utility knife, carefully draw the knife toward you with constant light to moderate pressure, and a smooth stroke. Multiple strokes will be necessary to separate the hoses.

### Note

It is important that the knife blade be perpendicular to the hose during this procedure so that the blade cuts only the center line of the web. Extreme care must be taken to avoid cutting through the cover of the hoses and thereby exposing the hose reinforcement. If this occurs, the hose assembly must be discarded (See Figure 1). If the separation length is greater than that which can be accomplished with one continuous, smooth stroke, then the procedure should be repeated over shorter distances always cutting toward the free end of the hoses.





Measure Separation – It is suggested that the separation length be sufficiently long so that the swaging or crimping operation can be accomplished without risk of kinking the hoses or tearing the web which could result in exposure of the hose reinforcement (See Figure 2).





Apply Tape – At the option of the assembler, as dictated by the installation, a nylon lashing strap or tape may be applied at the termination of the separated length to provide protection against tearing of the web or hose covers.

### **INCORRECT HANDLING**



Figure 1 – Extreme care must be taken to avoid cutting through the cover of the hoses and thereby exposing the hose reinforcement. If this occurs, the hose assembly must be discarded.



Figure 2 – The separation length must allow for the swaging or crimping operation without damaging the hose.

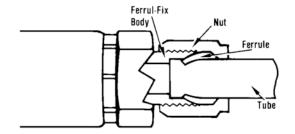


### Ferrul-Fix Installation Instructions

Fast, on-the-job repair for ruptured bent tube hose assemblies and power steering lines.

The life of the combination tube-hose assembly is often limited to the service life of the hose alone. A replacement assembly may not be available, since equipment dealers are unable to stock all of the many odd tube configurations.

Parker Ferrul-Fix hose end fitting now makes it possible to salvage the bent tube section of the original assembly for replacement. Most importantly, it gets you back into operation FAST!



### **Features**

- Gets you back in operation fast No costly delays while replacement assemblies are rushed from the factory.
- Lets you reuse expensive bent tube ends You can replace the hose at a fraction of the cost of complete assembly.
- Eliminates need for emergency brazing or welding in the field - Ferrul-Fix can be assembled without special tools or equipment.
- 3-Piece Design Body, nut, ferrule. Wedging action of ferrule, when drawn down by nut, forms seal between body and ferrule, while cutting edge of ferrule bites into tube wall forming another positive seal.
- Visible Bite Extent of bite at cutting edge of ferrule is completely visible when fitting is disassembled, an important safety feature. Self-centering action assures an even bite around circumference of tube.
- Parkerized Finish Ferrul-Fix fittings have the Parkerized black finish, providing built-in torque in make-up.

### **Assembly**

- Cut the formed tube off squarely next to the permanent hose fitting. Lightly debur the end of the tube internally and externally.
- 2. **Disassemble** the Ferrul-Fix fitting, and **lubricate** threads and both ends of the ferrule with Parker Ferulube.
- 3. **Slide** nut and ferrule onto tubing with the long, straight end of the ferrule pointing toward the tube end.
- Insert tube end into the Ferrul-Fix body until it bottoms against the shoulder. Slide ferrule inside body, and screw nut down finger tight.
- 5. **Wrench** nut down 1-3/4 turns to preset the ferrule.
- 6. **Disconnect** nut and **inspect** lead edge of ferrule to make certain that the biting edge has turned up a shoulder to a height of at least 50% of the ferrule and completely around the tube.
- Assemble Ferrul-Fix fitting to hose. Refer to assembly instructions listed in appropriate fittings section. Do not assemble to hose before steps 1-6.
- 8. **Reassemble** tubing into Ferrul-Fix end and **turn** nut down easily until a sudden increase in force is evident. **Turn** bent tube to proper position if required. Using two wrenches, one on the fitting nipple hex and the other on the nut, **tighten** nut an additional 1/6 turn (one wrench flat).

Ferrule-Fix is Manufactured by the Tube Fittings Division. Refer to Catalog 4300 for Fe $\nu$ 0 instructions.



## Die Selection & Swage Specification Chart Sewer Hose

	S	WAGE DATA FO	OR SEWER CLE	ANING HOSE (	SQ-101-SW SV	VAGE MACHINE	ONLY)	
Hose	Hose		Male Pipe		Mende	r/Splicer	Swage	Swage
Туре	I.D.	Fitting	Die	Pusher	Fitting	Die	O.D. +/-0.015	Length
	inch	P/N	P/N	P/N	P/N	P/N	inch	inch
S612	3/4	101SQ-12-12	SQ-101-12S6/S9	SQ-101-12P	1HUSQ-12-12	SQ-101-12S6/S9	1.172	1.109
S616	1	101SQ-16-16	SQ-101-16S6	SQ-101-16P	1HUSQ-16-16	SQ-101-16S6	1.445	1.156
S912	3/4	101SQ-12-12	SQ-101-12S6/S9	SQ-101-12P	1HUSQ-12-12	SQ-101-12S6/S9	1.172	1.109
S916	1	101SQ-16-16	SQ-101-16S9	SQ-101-16P	1HUSQ-16-16	SQ-101-16S9	1.488	1.156

### **Comments:**

- 1. Two dies required when swaging a mender/splicer fitting. A pusher is not required when swaging a mender/splicer fitting.
- 2. One die and one pusher required when swaging a male pipe fitting.
- 3. End fittings cannot be swaged on S4 series hose. Only mender/splicers can be swaged.
- 4. End fittings cannot be swaged on S5 series hose. Only mender/splicers can be swaged.
- 5. Fittings cannot be swaged on SLH series hose.

The information covered in the Swage Specification & Tool Selection Chart pertains to steel, stainless and brass hose fittings. Swage diameter roundness shall not vary by more than .010". Swage diameters are measured in the center to the crimp area. Parflex Division reserves the right to alter swage specifications.



## **Hose Fitting Insertion Values**

### Inch

Hose Dash Size	51	54	56	55/57/ 58	58H	91N	92	93N	BU	CY	LV/LH	MS Reusable	MS Permanent
-2				5/8					1/2	1/2			
-3	13/16	5/8	5/8	29/32		7/16	9/16		13/16	13/16	13/16		
-4	15/16	3/4	15/16	1-3/16		1/2							
-5	15/16	7/8	1	1-3/16		9/16						11/16	11/16
-6	1-5/16	15/16	1	1-5/16		5/8		7/16				15/16	3/4
-8	1-19/32	15/16	1-1/8	1-9/16		11/16		7/16			2-1/8		
-10			1-1/4	1-11/16		11/16		3/4			2-1/4		
-12	1-13/16		1-3/8	1-23/32	2-3/16	3/4		7/8			2-3/8		
-16	1-9/16		1-7/8	2-9/32	2-3/4	15/16		15/16			2-13/16		
-20						1		1					
-24								1-1/8					
-32								1-3/8					

### Metric (mm)

Hose Dash Size	51	54	56	55/57/ 58	58H	91N	92	93N	BU	CY	LV/LH	MS Reusable	MS Permanent
-2				16					13	13			
-3	21	16	16	23		11	14		21	21	21		
-4	24	19	24	30		13							
-5	24	22	25	30		14						17	17
-6	33	24	25	33		16		11				24	19
-8	40	24	28	40		17		11			54		
-10			32	43		17		19			57		
-12	46		35	44	56	19		22			60		
-16	40		48	58	70	24		24			71		
-20						25		25					
-24								29					
-32								35					

### **Hose Fitting Thread Guide**

There are more than one hundred types of threads for fittings. Below are some of the most common thread styles offered by Parflex. The end code in a fitting part number is located directly after the first digit. ie. 10355-8-8

End Code				·····•	- 5			
₽	01	03	04	05	28, 67, 69	09		JM
Dash Size	NPTF Pipe Thread Size	SAE (JIC) 37° Flare Thread Size	SAE 45° Flare Thread Size	"0" Ring Style Straight Thread Size	SAE Inverted Flare Thread Size	PTT 30° Flare Thread Size	SAE Flareless Thread Size	Seal-Lok™ Thread
2	1/8 - 27	5/16 - 24	5/16 - 24	5/16 - 24	-	-	5/16 - 24	-
3	-	3/8 - 24	3/8 - 24	3/8 - 24	3/8 - 24	-	3/8 - 24	-
4	1/4 - 18	7/16 - 20	7/16 - 20	7/16 - 20	7/16 - 18	-	7/16 - 20	9/16 - 18
5	-	1/2 - 20	1/2 - 20	1/2 - 20	1/2 - 20	-	1/2 - 20	-
6	3/8 - 18	9/16 - 18	5/8 - 18	9/16 - 18	5/8 - 18	-	9/16 - 18	11/16 - 16
8	1/2 - 14	3/4 - 16	3/4 - 16	3/4 - 16	3/4 - 18	=	3/4 - 16	13/16 - 16
10	-	7/8 - 14	7/8 - 14	7/8 - 14	7/8 - 18	-	7/8 - 14	1 - 14
12	3/4 - 14	1 1/16 - 12	1 1/16 - 14	1 1/16 - 12	1 1/16 - 16	-	1 1/16 - 12	1 3/16 - 12
14	-	1 3/16 - 12	-	1 3/16 - 12	-	-	1 3/16 - 12	-
16	1 - 11 1/2	1 5/16 - 12	-	1 5/16 - 12	=	1 5/16 - 14	1 5/16 - 12	1 7/16 - 12
20	1 1/4 - 11 1/2	1 5/8 - 12	-	1 5/8 - 12	-	1 5/8 - 14	1 5/8 - 12	-
24	1 1/2 - 11 1/2	1 7/8 - 12	-	1 7/8 - 12	-	1 7/8 - 14	1 7/8 - 12	-
32	2 - 11 1/2	2 1/2 - 12	-	2 1/2 - 12	-	2 1/2 - 12	2 1/2 - 12	-

End Code	3	56	Do	D2		92	92	F9	FG
Dash Size	Metric Swivel Female Thread Size	Metric Swivel Female Thread Size	Male Stud Thread Size	Male Stud Thread Size	Male BSPP Thread Size	BSP Swivel Female Thread Size	French Swivel Female Gas Series	French Swivel Female Metric Series	French Male Stud Gas Series
4	-	-	-	-	1/4"	1/4"	-	-	-
6	M12 x 1,5	-	M12 x 1,5	-	3/8"	3/8"	-	M12 x 1	-
8	M14 x 1,5	M16 x 1,5	M14 x 1,5	M16 x 1,5	1/2"	1/2"	-	M14 x 1,5	-
10	M16 x 1,5	M18 x 1,5	M16 x 1,5	M18 x 1,5	-	5/8"	-	M16 x 1,5	-
12	M18 x 1,5	M20 x 1,5	M18 x 1,5	M20 x 1,5	3/4"	3/4"	-	M18 x 1,5	-
-	ı	-	-	-	1	-	M20 x 1,5	-	M20 x 1,5
14	-	M22 x 1,5	-	M22 x 1,5	-	-	-	M20 x 1,5	-
15	M22 x 1,5	-	M22 x 1,5	-	-	-	-	M22 x 1,5	-
16	-	M24 x 1,5	-	M24 x 1,5	1"	1"	-	M24 x 1,5	-
-	-	-	-	-	-	-	M24 x 1,5	-	M24 x 1,5
18	M26 x 1,5	-	M26 x 1,5	-	-	-	-	M27 x 1,5	-
20	-	M30 x 2	-	M30 x 2	-	-	-	M27 x 1,5	-
-	-	-	-	-	-	-	M30 x 1,5	-	M30 x 1,5
22	M30 x 2	-	M30 x 2	-	-	-	-	M30 x 1,5	-
25	-	M36 x 2	-	M36 x 2	-	-	-	M33 x 1,5	-
-	-	-	-	-	-	-	M36 x 1,5	-	M36 x 1,5
28	M36 x 2	-	M36 x 2	-	-	-	-	-	-
30	-	M42 x 2	-	M42 x 2	-	-	-	M39 x 1,5	-
33	-	-	-	-	-	-	M45 x 1,5	-	M45 x 1,5



## Media to Fitting & Seal Compatibility

		Fitting Materia					
Media	Brass	Steel	316 SS	BUNA-N	Ethylene Propylene	Fluorocarbon	Neoprene
Acetylene	NR	F	S	S	S	S	F
Air (oil free) @ 190° F	S	F	S	S	S	S	S
Air (oil free) @ 300° F	S	F	S	F	F	S	F
Air (oil free) @ 400° F	S	F	S	NR	NR	S	NR
Alcohol, Ethyl	S	NR	NR	NR	S	NR	S
Animal Oils (Lard Oil)	F	F	F	S	F	S	F
Aromatic Fuel - 50%	ID	ID	ID	F	NR	S	NR
Aromatic Solvents	ID	ID	F	F	ID	S	NR
Asphalt	NR	NR	S	F	NR	S	F
ASTM 0il #1	S	S	S	S	NR	S	S
ASTM 0il #2	S	S	S	S	NR	S	F
ASTM 0il #3	S	S	S	S	NR	S	NR
ASTM Oil #4	S	S	S	F	NR	S	NR
ATF Oil	S	S	S	S	NR	S	F
Automotive Brake Fluid	ID	ID	ID	NR	S	NR	F
Benzene	NR	F	NR	NR	NR	S	NR
Brine (Sodium Chloride)	NR	NR	S	S	S	S	S
Butane	NR	S	S	S	NR	S	S
Carbon Dioxide	S	F	S	S	S	S	S
Carbon Monoxide	S	S	S	S	S	S	F
Chlorine (Dry)	F	F	NR	NR	ID	F	F
Compressed Air	S	F	S	S	S	S	S
Crude Oil	NR	F	S	F	NR	S	NR
Cutting Oil	ID	S	S	S	NR	S	F
Diesel Fuel	S	S	S	S	NR	S	NR
Ethanol	S	NR	NR	NR	S	NR	S
Ethers	S	S	S	NR	F	F	NR
Freon 11	S	ID	ID	F	NR	F	NR
Freon 12	S	S	NR	F	NR	S	S
Freon 22	S	NR	S	NR	NR	NR	S
Fuel Oil	NR	S	S	S	NR	S	F
Gasoline	S	F	S	S	NR	S	NR
Gas, Liquid Propane (LPG)	S	S	S	S	NR	S	F
Gas, Natural	F	S	S	S	NR	S	S
Helium	S	S	S	S	S	S	S
Hydraulic Oil, Petroleum Base	S	S	S	S	NR	S	S
Hydraulic Oil, Water Base	ID	S	S	F	S	NR	F
Hydrogen Gas	S	S	S	S	S	S	S
Jet Fuel	S	S	S	S	NR	S	NR
Kerosene	S	S	S	S	NR	S	F
Lubricating Oil SAE 10, 20, 30, 40, 50	S	S	S	S	NR	S	F



### Media to Fitting & Seal Compatibility (cont.)

		Fitting Material		Seal Material						
Media	Brass	Steel	316 SS	BUNA-N	Ethylene Propylene	Fluorocarbon	Neoprene			
Methanol	S	S	S	S	S	NR	S			
MIL-F-8192 (JP-9)	S	S	S	NR	NR	S	NR			
MIL-H-5606	S	S	S	S	NR	S	F			
MIL-H-6083	S	S	S	S	NR	S	S			
MIL-H-7083	S	S	S	S	S	F	F			
MIL-H-8446 (MLO-8515)	F	S	S	F	NR	S	S			
Mil-L-2104 & 2104B	S	S	S	S	NR	S	F			
MIL-L-7808	NR	F	S	F	NR	S	NR			
Mineral Oil	S	S	S	S	NR	S	F			
Nitrogen	S	S	S	S	S	S	S			
Petrolatum	S	S	S	S	NR	S	F			
Petroleum Oil (<250° F)	S	S	S	S	NR	S	F			
Propane	S	S	S	S	NR	S	F			
R134A	S	S	S	NR	S	NR	NR			
Sea Water	F	NR	S	S	S	S	F			
Skydrol 500, Type 2	NR	S	S	NR	S	NR	NR			
Skydrol 7000, Type 2	NR	S	S	NR	S	F	NR			
Soap Solutions	NR	NR	S	S	S	S	F			
Steam (<400° F)	F	S	S	NR	S	NR	NR			
Stoddard Solvent	F	S	S	S	NR	S	F			
Transmission Fluid (Type A)	S	S	S	S	NR	S	F			
Trichloroethane	ID	F	S	NR	NR	S	NR			
Water	S	F	S	S	S	F	F			

Table U4 - Fluid Compatibility Chart

Codes:

S = Satisfactory F = Fair

NR = Not recommended

ID = Insufficient data



### Metal Tube & Fitting Material Compatibility

As a general rule, tube and fitting materials should be the same. If different materials must be considered, the following chart can be used as a general guide. Since operating conditions differ with applications, this chart should be used only as a guide and not a firm recommendation. Before making a final

decision on material combination, it should be sufficiently tested under appropriate conditions to assure suitability for the intended application. For additional material combinations, contact the Tube Fittings Division.

								Tube	e Ma	teria	l to I	ittin	g & l	Mate	erial	Com	patib	ility		
Tube Material	Specification	Construction	Condition	Condition Maximum Hardness		Application		Seal-Lok <sup>TM</sup> ORFS (SAE J1453)			Triple-Lok® 37°	Flare (SAE J514)			Ferulok® Flareless (SAF .1514)		Intru-Lok® Flareless	E0/E0-2 Flareless (ISO 8434-1)		
					Temperature Range (7)		s	SS	В	s	SS	В	M	s	SS	M	В	S SS B, M		
	SAE J524 (ASTM A179) (8)	Seamless				High procesure	Е	NR	(6)	G	NR	(6)	NR	Е	NR	NR	NR	NR		
Carbon Steel C-1010	SAE J525 (ASTM A178) (8)	Welded & Drawn	Fully Annealed	HRB 72	-65° to 500°F -55° to 260°C	High pressure hydraulics, air, & some specialty	Е	NR	(6)	Е	NR	(6)	NR	Е	NR	NR	NR	NR		
G-1010	SAE J356	Welded & Flash Controlled				chemicals	G	NR	(6)	NR	NR	(6)	NR	G	NR	NR	NR	NR		
Carbon Steel	SAE J2467	Welded & Flash Controlled	Fully	HRB 75	-65° to 500°F	High pressure	Е	NR	(6)	NR	NR	(6)	NR	Е	NR	NR	NR	NR		
C-1021	SAE J2435	Welded & Drawn	Annealed	IND 73	-55° to 260°C	hydraulics	Е	NR	(6)	Е	NR	(6)	NR	Е	NR	NR	NR	NR		
Carbon Steel High Strength	SAE 2613	Welded & Flash Controlled	Sub-critically annealed	HRB 90	-65° to 500°F -55° to 260°C	High pressure hydraulics	E (10)	NR	(6)	NR	NR	NR	NR	NR	NR	NR	NR	NR		
Low Alloy (HSLA)	SAE J2614	Welded & Drawn	amodiod		00 10 200 0	,,,,,,,	Е	NR	(6)	NR	NR	NR	NR	NR	NR	NR	NR	NR		
Alloy Steel 4130	ASTM A519	Seamless			-65° to 500°F -55° to 260°C	High pressure hydraulics	E (4)	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR		
St 37.4 (Carbon Steel)	DIN 2391 Part 2 (Metric)	Seamless	Fully Annealed	HRB 72	-65° to 500°F -55° to 260°C	High pressure hydraulics, air, & some specialty chemicals	Е	NR	NR	G	NR	NR	NR	NR	NR	NR	NR	Е		
Stainless Steel 304	ASTM A213 ASTM A269	Seamless	Fully	HRB 90	-425° to 1200°F -255° to 650°C	High pressure, high temp, or	(6)	Е	(6)	(6)	G	(6)	NR	(6)	Е	NR	NR	NR		
& 316	ASTM A249 ASTM A269	Welded & Drawn	Annealed	HIND 90	(3)	generally corrosive media (1)	(6)	Е	(6)	(6)	Е	(6)	NR	(6)	Е	NR	NR	NR		
1.4571 1.4541 Stainless Steel	DIN 17458 Tab 8 (Metric)	Seamless	Fully Annealed	HRB 90	-425° to 120°F -255° to 650°C (3)	High pressure, high temp, or generally corrosive media (1)	(6)	Е	NR	(6)	G	NR	NR	NR	Е	NR	NR	E		
Copper	SAE J528 (ASTM B-75) (8)	Seamless	Soft Annealed Temper 0	60 Max. Rockwell 15T	-325° to 400°F -200° to 205°C	Low pressure, low temp, water, oil & air	Е	(6)	Е	G	(6)	Е	NR	G (2)	NR	NR	Е	Е		
Aluminum	ASTM-B210	Seamless	T6 Temper	HRB 56	3		-325° to 400°F te	Low pressure, low temp, water, oil, air	NR	NR	NR	G	NR	NR	NR	E (2)	NR	NR	(6)	NR
6061	AOTIVI-DZ IU	JEAITHESS	0 & T4 Temper	HRB 30	-200° to 205°C	& some specialty chemicals	E (5)	NR	NR	G	NR	NR	NR	E (2)	NR	NR	(6)	NR		

(Cont.)



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## Metal Tube & Fitting Material Compatibility (cont.)

								Tub	e Ma	teria	l to I	Fittin	g &	Mate	erial	Com	patib	ility
Tube Material	Specification	Construction	Condition	Maximum Hardness	lemperature Range (7)	Application		Seal-Lok <sup>TM</sup> ORFS (SAE J1453)			Triple-Lok® 37°	Flare (SAE J514)			Ferulok® Flareless (SAE J514)		Intru-Lok® Flareless	E0/E0-2 Flareless (ISO 8434-1)
					Pa Pa		s	ss	В	s	ss	В	M	s	ss	M	В	S SS B, M
Monel 400	ASTM-B165	Seamless	Fully Annealed	HRB 70	-400° to 800°F -240° to 425°C	Sour gas, marine & gen chemical processing media	NR	(6)	NR	NR	(6)	NR	Е	NR	(6)	Е	NR	NR
Nylon		Extruded	Flexible & Semi-Rigid		-60° to 200°F -50° to 95°C	Lube lines, chemical process controls & air	NR	NR	NR	NR	NR	NR	NR	G (2)	G (2)	G (2)	Е	G (2), (9)
Polyethylene	ASTM D-1248	Extruded	Instrument Grade		-80° to 150°F -60° to 65°C	Instrumentation lines	NR	NR	NR	NR	NR	NR	NR	G (2)	G (2)	G (2)	Е	G (2), (9)
PVC		Extruded	Instrument & Laboratory Grade		0° to 140°F -20° to 60°C	General purpose laboratory use	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	G	NR
PTFE		Extruded & Sintered			-65° to 400°F -55° to 205°C	Very high temp, fuel, lube, chemi- cal, pharma, food	NR	NR	NR	NR	NR	NR	NR	G (2)	G (2)	G (2)	G	G (2), (9)

### Table U7 - Tube and Fitting Material Compatibility

Ratings Key: Fittings Materials Code:

NR = Not Recommended S = Steel

F = Fair SS = Stainless Steel

 $\begin{aligned} G &= Good & B &= Brass \\ E &= Excellent & M &= Monel \end{aligned}$ 

### Notes:

- $1. \ \ \text{For highly corrosive media or service environment, contact the Tube Fittings Division}.$
- ${\hbox{\bf 2. Requires different assembly procedure. Contact the Tube Fittings Division.}}\\$
- 3. Low temperature limit for stainless steel Ferulok® fittings is -20°F (-30°C).
- 4. For brazing only. Grade 4130 not recommended with Parflange process.
- 5. For use with Parflange process only. Not recommended with brazing.
- 6. Use depends on specific application. Contact the Tube Fittings Division.
- 7. Applies to tube material.
- 8. Comparable specifications to SAE.
- 9. With metric version of tubing.
- 10. Not tested with Parflange. Contact the Tube Fittings Division.



### **O-Ring Material Selection**

Standard O-rings supplied with Parker tube fittings and adapters are 90 durometer hard nitrile (Buna-N) Parker compound #N0552. These O-rings are well suited for most industrial hydraulic and pneumatic systems. They have high extrusion resistance making them suitable for very high pressure static applications. Optional high temperature fluorocarbon, Parker compound #V0894, is also available for higher temperature specifications.

O-rings for other than normal hydraulic media or higher temperature applications can be selected from the following chart. The chart should be used only as a general guide. Before making final selection for a given application, it is recommended that appropriate tests be conducted to assure compatibility with the fluid, temperature, pressure and other environmental conditions.

For fluids not shown in the chart, please contact the Tube Fittings Division.

Polymer	Abbreviated Name	Parker Compound No.	Color	SAE J515 Type	Hard- ness Shore "A" <sup>7</sup>	Temperature Range	Recommended For	Not Recommended For		
		N0552		CH <sup>2</sup>	90 <sup>6</sup>	-30° to 250°F	Petroleum base oils and	Phosphate ester base		
Nitrile-Butadiene		N0674		-	70	-30° to 250°F	fluids, mineral oils, ethylene	hydraulic fluids, auto-		
	]	N0103		-	70	-65° to 225°F	glycol base fluids, silicone and di-ester base lubricants,	motive brake fluids, strong acids, ozone,		
Nitrile-Butadiene (Low compression set – N1059)	NBR	N1059	<b>●</b> B	CH <sup>2</sup>	90	-30° to 275°F	air, water under 150°F, and natural gas. Hydrogen fuel	freons, ketones, halo- genated hydrocarbons,		
,	1	N0507		-	90	-65° to 180°F	cells. Meets FDA requirements for food products.	and methanol.		
Nitrila Butadiana		N0304		-	75	-65° to 225°F	CNG Applications.			
Nitrile-Butadiene		N0508		-	75	-35° to 250°F	1			
		N0756		-	75 <sup>6</sup>	-65° to 275°F				
		E0540	<b>•</b> В	CA <sup>3</sup>	80		Phosphate ester base hydraulic fluids, hot water, steam to 400°F, silicone oils and	Petroleum base oils and di-ester base lubricants.		
Ethylene-Propylene	EPDM	EPDM E0893		$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		greases, dilute acids and alkalis, ketones, alcohols and automo-	lubricants.			
		E0962	<b>•</b> В	-	90		tive brake fluids. CO <sub>2</sub> climate control systems.			
Neoprene	CR	C0873	<b>•</b> В	-	70	-45° to 250° F	Refrigerants (freons, ammonia), high aniline point petroleum oils, mild acids and silicate ester	Phosphate ester fluids and ketones.		
меоргене	On	C0944	R <sup>1</sup>	-	70	-43 10 230 1	lubricants.			
		V0747	● B	-	75		Petroleum base oils and fluids, some phosphate ester base	Ketones, skydrol fluids, amines (VDMH), anhydrous		
Fluorocarbon	FKM <sup>5</sup> or FPM	V0884	BR¹	-	75	-15° to 400° F	fluids, silicone and silicate ester base lubricants, di-ester base lubricants, acids and haloge-	ammonia, low molecular weight esters and ethers, and hot hydrofluoric or		
		V0894	BR¹	HK⁴			HK <sup>4</sup> 90 <sup>6</sup> nated		nated hydrocarbons.	chlorosulfonic acids.
Silicone	Si	S0604	RU <sup>1</sup>	-	70	-65° to 450° F	Dry heat (air to 400°F) and high aniline point oils.	Most petroleum fluids, ketones, water and steam.		

Table U-6 – O-Ring Selection

\*Color Code: B - Black, P - Purple, R - Red, BR - Brown, RU - Rust

- 1. These Parker "Chromassure" color assurance 0-rings are available from the Parker Hannifin 0-Ring Division. They help eliminate assembly errors, reduce warranty costs and liability risks, and assure safety in aftermarket business.
- 2. Formerly SAE Type I. 3. Formerly SAE Type II.
- 4. Formerly SAE Type III.
- 5. "FKM" is the ASTM designation for fluorocarbon. Its ISO designation is "FPM".
- 6. Standard compounds available from stock.
- 7. Use 90 durometer hard 0-rings for applications with 1500 psi or higher pressures.



### **Metals Corrosion Scale**

### **Corrosion of Base Metals in Contact**

The susceptibility of different base metals to corrosion while in contact depends upon the difference between the contact potentials or the electromotive voltages of the metals involved. The greater the potential difference is, the greater is the tendency for corrosion. The metal with the higher potential forms the anode and is corroded. The larger the separation distance in the electromotive chart between the two metals in contact, the higher the contact potential and chances for corrosion. For example, zinc and aluminum are very short distance apart in the chart; therefore potential for corrosion when these two metals are in contact is very low. On the other hand, aluminum and passivated 316 stainless steel are far apart; hence, when in contact, the potential for corrosion is very high. Aluminum, being more anodic metal, will corrode in this combination.

As a general guideline, if the metals are half the length of the chart or more apart, the combination should be avoided. Also, it is not a good idea to combine an anodic metal part with thin cross section, such as thin wall tubing, with a cathodic or less anodic metal part of a heavy cross section, such as a fitting.

**Example:** A thin wall brass tube with steel fitting is a better, although not ideal, combination than a thin wall steel tube with brass fitting.

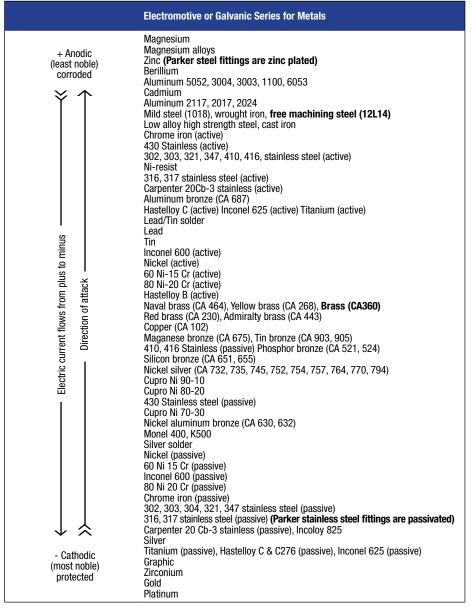


Table U5 - Electromotive or Galvanic Series for Metals



### **Materials to Parflex Part Number Guide**

### Ratings Code:

- G Good to excellent. Little or no swelling, tensile or surface changes. Preferred choice.
- Marginal or conditional. Noticeable effects but not necessarily indicating lack of serviceability. Further testing suggested for specific application. Very long-term effects such as stiffening or potential for crazing should be evaluated.
- P Poor or unsatisfactory. Not recommended without extensive and realistic testing.
- Indicates that this was not tested.
- # For fluoropolymer. Indicates good chemical resistance but potential for excessive permeation.

	permeation.
MAT	ERIAL CODE FOR HOSE CORE TUBES
Н	Copolyester
N	Nylon
NC	Nylon Copolymer
0	Copolymer
PFX	Proprietary Elastomer
TFE/PFA	Fluoropolymer PTFE/PFA
U	Polyurethane
M	ATERIAL CODE FOR HOSE COVERS
EPDM	Rubber
HF	Low Temperature Copolyester
PFX	Proprietary Elastomer
М	Silicone
U	Polyurethane
MATER	AL CODE FOR THERMOPASTIC TUBING
HDPE	High Density Polyethylene
N	Flexible Nylon
NR	Unplasticized Nylon (semi-rigid)
PE	Linear Low Density Polyethylene
PEFR	Flame Resistant Polyethylene
PP	Polypropylene
PV	Flexible Polyvinyl Chloride (PVC)
U	Polyurethane
MATERI	AL CODE FOR FLUOROPOLYMER TUBING
FEP	Fluorinated Ethylene Propylene
PFA	Perfluoroalkoxy
TFE	Polytetrafluoroethylene
PVDF	Polyvinylidene Fluoride

PARKER PRODUCT
D6, D6R, H6, R6, HFS, HFS2, HFSR, M8, HTB, HJK, 560, 563, 590, 593, 510C, 518C, 515H, 53DM/538DM, 55LT, HLB, S5N, S6, S9, SLH
510D, 518D, 520N, 526BA, 527BA, 528N, 540N, 548N, 56DH/568DH, 573X, 575X, 580N, H580N, 588N, 1035HT, 5CNG, MSH, PTH
510, 510A
540P
1035A
919/919B, 919J, 919U, 929/929B, 929BJ, 939/939B, 943B, 944B, 950B, 955B, S30/S30B, S40/S40B, STW/STWB, SCW/SCB, PCW/PCB, SBFB/SBFW, SCWV/SCBV, PCWV/PCBV, SCWV-FS/SCBV-FS, PCWV-FS/PCBV-FS
83FR, B9
PARKER PRODUCT
RCTW/RCTB (Contact Engineering for chemical resistance questions)
55LT, 53DM/538DM
510C, 518C
SWPV, 919J, 929BJ
All except 55LT, 53DM/538DM, 518C, 1035HT and PTFE hoses
PARKER PRODUCT
HDPE
N
NR
E
PEFR
PP
PV
U, HU
PARKER PRODUCT
103, 203, HS1.3FEP, HS1.6FEP,
104, 204
TFL, TFS, TFT, TFH, 101, 201, TFB, HS2TFS, HS2TFT, HS2TFL, HS2TFI, HS4TFI
110,111

PARKER PRODUCT



# General Technical

### Media to Hose Material Compatibility Guide

Media	Н	N	U/HF UFR	PV	NC	0	PFX	HFR	FEP	PTFE/ PFA
Acetaldehyde	G	L	L	Р	-	L	L	G	G	G
Acetic Acid Glacial	L	L	L	G	Р	G	L	L	L	G
Acetone	L	G	Р	Р	G	Р	Р	L	G	G
Acetylene	2	2	2	2	2	2	2	2	2	2
Air (4)	G	G	G	G	G	G	G	G	G	G
Ammonium Chloride	G	Р	G	G	Р	G	G	G	L	G
Ammonium Hydroxide	L	G	Р	L	-	G	Р	L	G	G
Anhydrous Ammonia	Р	Р	Р	Р	Р	Р	Р	Р	8	8
Aniline	Р	Р	Р	Р	Р	L	Р	Р	G	G
Animal Oils (6)	G	G	G	G	G	Р	G	G	-	G
Aromatic Hydrocarbons	L	G	L	Р	G	Р	L	L	-	G
Asphalt	G	G	G	G	G	L	G	G	L	G
Baygon (Insecticide)	L	G	Р	-	-	-	Р	L	-	G
Beer	G	G	G	G	-	G	G	G	G	G
Benzene	L	G	L	Р	L	Р	L	L	G	G
Brake Fluid (DOT #3)	-	G	Р	Р	-	Р	Р	-	-	G
Butane (2) (4)	G	G	L	L	Р	L	L	G	#	#
Butter (6)	G	G	G	G	-	G	G	G	-	G
Calcium Chloride	G	3	G	L	3	G	G	G	G	G
Carbon Dioxide (4)	G	G	G	G	G	G	G	G	#	#
Carbon Monoxide (4)	G	3	G	G	3	L	G	G	#	#
Carbon Tetrachloride	L	G	Р	L	G	Р	Р	L	G	G
Castor Oil	G	L	L	G	L	Р	L	G	-	G
Chlorinated Hydrocarbon Base Fluids	L	G	L	Р	-	-	L	L	-	G
Chlorinated Petroleum Oil	G	G	L	-	L	-	L	G	-	-
Chlorinated Solvents	Р	3	Р	L	3	L	Р	Р	-	G
Chlorine, Gaseous, Dry	Р	Р	Р	G	Р	L	Р	Р	#	#
Chlordane (Insecticide)	L	G	Р	-	-	-	Р	L	-	-
Chloroform	Р	Р	Р	Р	Р	Р	Р	Р	G	G
Chromic Acid	Р	3	Р	G	Р	3	Р	Р	L	G
Citric Acid Solutions	G	G	L	G	G	G	L	G	G	G
Crude Petroleum Oil	G	G	G	G	G	Р	G	G	-	G
Cyclohexane (2)	G	G	G	-	-	Р	G	G	G	G
Cygon (Insecticide)	L	G	Р	-	-	-	Р	L	-	-
Diazion (Insecticide)	L	-	Р	L	-	-				
Diesel Fuel (2)	G	G	G	L	G	Р	G	G	-	G
Diester Oils	L	G	Р	Р	-	Р	Р	L	-	G
Enamels	G	G	G	L	-	L	G	G	-	G
Ethanol (6)	G	G	L	L	L	G	L	G	-	G
Ethers	L	G	Р	L	G	L	Р	L	G	G
Ethylene Glycol	L	G	L	G	G	G	L	G	G	G
Ethylene Oxide	G	G	L	Р	-	L	L	G	#	#
Fatty Acids	G	G	3	G	G	L	3	G	G	G
Formaldehyde	L	L	Р	L	L	G	Р	L	G	G
Formic Acid	Р	Р	Р	G	Р	G	Р	Р	G	G

(Cont.)



## Media to Hose Material Compatibility Guide (cont.)

Media	Н	N	U/HF UFR	PV	NC	0	PFX	HFR	FEP	PTFE/ PFA
Freon 12 (5)	Р	G	L	G	G	L	L	Р	#	#
Freon 22 (5)	Р	G	L	G	G	L	L	Р	#	#
Fruit Juices	G	G	G	G	-	G	G	G	-	G
Fuel Oil (2)	G	G	L	L	G	Р	L	G	G	G
Gas (Oil) (2)	G	G	G	G	G	Р	G	G	-	G
Gas (Natural) (4)	2	2	2	2	2	2	2	2	2	2
Gasoline (2)	G	G	3	Р	G	Р	3	G	G	G
Glue	3	3	3	3	3	3	3	3	3	3
Glycerin	G	G	L	G	G	G	L	G	G	G
Glycols (to 135°F)	L	G	L	G	G	-	L	G	G	G
Grease (Petroleum base)	G	G	G	G	G	L	G	G	-	G
Heptachlor (Insecticide)	L	G	Р	L	-	Р	Р	L	-	G
Hexane (2)	G	G	G	L	G	Р	G	G	G	G
Houghto Safe-600 Series (Hydraulic fluid)	G	G	L	G	G	G	L	G	-	G
Houghto Safe-1000 Series (Phosphate esters)	L	G	Р	G	G	Р	Р	L	-	G
Hydraulic Fluid (Petroleum base)	G	G	G	G	G	L	G	G	L	G
Hydraulic Fluid (Phosphate ester base)	L	G	L	L	G	Р	Р	L	-	G
Hydraulic Fluid (Water glycol base)	G	G	G	L	G	-	G	G	-	G
Hydraulic Oil (Petroleum base)	G	G	G	G	G	L	G	G	L	G
Hydrochloric Acid	Р	L	Р	L	Р	L	Р	Р	G	G
Hydrofluoric Acid	Р	Р	Р	L	Р	L	Р	Р	G	G
Hydrogen, Gaseous (2) (4) (5)	G	G	G	G	G	G	G	#	#	
Hydrolube (Hydraulic fluid/water glycol base)	G	G	L	G	G	G	L	G	-	G
IRUS 902 (Hydraulic fluid/water-oil emulsion)	G	G	G	G	G	L	G	G	-	G
Isocyanates (2)	L	L	L	Р	-	L	L	L	-	G
IsoOctane (2)	G	G	G	L	G	L	L	G	G	G
Isopropyl Alcohol	G	G	L	L	G	G	L	G	G	G
Kerosene (2)	G	G	L	L	G	L	Р	G	G	G
Ketones	L	G	Р	Р	G	G	Р	L	G	G
Lacquer Solvents	L	G	Р	Р	3	L	Р	L	L	G
Lactic Acid	Р	G	Р	G	G	G	Р	Р	G	G
Lime (Calcium oxide)	G	G	G	G	-	G	G	G	G	G
Lindol (Hydraulic fluid/phosphate esters)	L	G	Р	-	-	-	Р	L	-	G
Linseed Oil	G	G	G	L	G	L	G	G	G	G
LP - Gas	2	2	2	2	2	2	2	2	2	2
Lubricating Oils (Diester base)	L	G	Р	-	G	-	Р	L	-	G
Lubricating Oils (Petroleum base)	G	G	G	G	G	L	G	G	G	G
Malathion (Insecticide)	L	G	Р	-	-	-	Р	L	-	G
Magnesium Hydroxide	L	G	L	G	-	G	L	L	G	G
Magnesium Salts	-	G	G	G	-	G	G	-	-	G
Mercury	G	G	G	G	G	G	G	G	G	G
Meropa Oil (Sulphur base)	G	G	-	-	-	-	-	-	-	G
Methane	2	2	2	2	2	2	2	2	2	2
Methanol	G	G	P	P	G	L	P	G	-	G
Methoxychlor (Insecticide)	L	G	P	-	-	-	P	L		G

(Cont.)



# (Cont.)

## Media to Hose Material Compatibility Guide (cont.)

Media	Н	N	U/HF UFR	PV	NC	0	PFX	HFR	FEP	PTFE/ PFA
Methyl Alcohol (6)	G	G	Р	Р	G	L	Р	G	G	G
Methylene Chloride	Р	L	Р	L	Р	L	Р	Р	G	G
Methyl Ethyl Ketone (MEK)	L	G	Р	Р	G	G	Р	L	G	G
Methyl Ethyl Ketone Peroxide (MEKP)	-	L	Р	-	-	-	Р	-	-	G
Methyl Isobutyl Ketone (MIBK)	L	G	Р	Р	G	L	Р	L	G	G
Milk (6)	G	G	G	G	-	G	G	G	G	G
Mineral Oil	G	G	G	G	G	L	G	G	G	G
Mineral Spirits	Р	-	L	Р	-	-	L	Р	-	G
Motor Oils	G	G	G	G	G	-	G	G	G	G
Naphtha	L	G	Р	Р	G	Р	Р	L	G	G
Natural Gas (4)	2	2	2	2	2	2	2	2	2	2
Nitric Acid	Р	Р	Р	L	Р	Р	Р	Р	L	G
Nitrobenzene	Р	G	Р	Р	G	Р	Р	Р	G	G
Nitrogen, Gaseous (4) (5)	G	G	G	G	G	G	G	G	G	G
Nitrous Oxide	-	L	-	G	-	L	G	-	#	#
Oil (SAE)	G	G	G	G	G	L	G	G	-	G
Oil of Turpentine	G	G	Р	G	G	Р	Р	G	-	G
Oleic Acid	G	G	G	L	G	L	G	G	G	G
OS 45 Type 3 Hydraulic Fluid (Silicate esters)	L	G	L	Р	-	Р	L	L	-	-
Oxygen, Gaseous (4) (5) (6)	G	G	G	G	G	G	G	G	G	G
Ozone	L	Р	L	G	Р	L	Р	L	G	G
Paint Solvents (Oil base)	L	G	L	Р	-	Р	L	L	-	G
Paint (Oil Base) (7)	G	G	G	Р	-	L	G	G	-	G
Pentane (2)	G	G	L	L	-	Р	L	G	G	G
Perchloric Acid	Р	Р	Р	L	Р	Р	Р	Р	L	G
Perchloroethylene	Р	Р	Р	L	Р	Р	Р	Р	-	G
Petroleum Ether	-	2	2	Р	2	Р	2	-	2	2
Petroleum Oils	G	G	G	G	G	L	G	G	-	G
Phenols	Р	Р	Р	L	Р	Р	Р	Р	-	G
Phosphate Esters (above 135°F)	Р	G	Р	Р	-	Р	Р	L	-	G
Phosphate Esters (to 135°F)	G	G	Р	Р	G	Р	Р	G	-	G
Polyol Esters	L	G	Р	Р	-	-	Р	L	-	G
Potassium Hydroxide, 50%	Р	Р	Р	L	-	L	Р	Р	G	G
Propane (4) (5)	2	2	2	2	2	2	2	2	2	2
Propylene Glycol	-	-	G	G	-	G	-	-	G	G
Pydraul F-9, 150, 160 (to 135°F)	G	G	Р	Р	G	Р	Р	G	-	G
Pydraul 312C, 625 (to 135°F)	Р	G	Р	Р	G	Р	Р	G	-	G
Quintolubric 822 Fluid	-	G	G	-	-	-	-	-	-	G
Salt Water	3	3	3	3	3	3	3	3	G	G
Sevin (Insecticides in water)	G	G	G	-	-	-	G	G	-	G
Silicone Greases	G	G	G	G	G	-	G	G	-	G
Silicone Oils	G	G	G	G	G	-	G	G	-	G
Skydrol 500 & 7000	L	G	Р	Р	G	Р	Р	L	G	G
Soap Solutions	G	G	G	G	G	G	G	G	G	G

## Media to Hose Material Compatibility Guide (cont.)

Media	Н	N	U/HF UFR	PV	NC	0	PFX	HFR	FEP	PTFE/ PFA
Soda Water	G	G	G	G	G	3	G	G	-	G
Sodium Borate	G	G	G	G	G	G	G	G	G	G
Sodium Carbonate	3	3	3	3	3	3	3	3	3	3
Sodium Chloride Solutions	G	G	G	G	3	G	G	G	G	G
Sodium Hydroxide, 50%	L	Р	Р	L	Р	L	Р	L	G	G
Sodium Hypochlorite	L	Р	Р	L	-	3	Р	L	G	G
Steam	Р	Р	Р	Р	Р	Р	Р	P	G	G
Stoddard Solvent	Р	G	P	L	G	Р	Р	Р	G	G
Straight Synthetic Oils (Phosphate esters)	L	G	Р	Р	G	-	Р	L	-	G
Sulfur	G	G	G	G	-	L	G	G	G	G
Sulfur Dioxide	Р	L	L	L	-	Р	L	Р	G	G
Sulfur Hexafluoride Gas (4) (5)	G	G	G	G	-	G	G	G	-	G
Sulphuric Acid	Р	Р	Р	3	Р	Р	Р	Р	-	G
Toluene	L	G	L	Р	G	Р	Р	L	G	G
Toloul	L	G	L	Р	G	Р	Р	L	-	G
Transmission Fluid	G	G	G	Р	G	-	G	G	-	G
Trichloroethylene	Р	L	Р	L	G	Р	Р	Р	G	G
Trisodium Phosphate Solutions	L	G	Р	G	G	G	Р	L	G	G
Turpentine	G	G	L	L	G	Р	Р	G	G	G
Ucon (Hydraulic fluid-water glycol base)	G	G	L	G	G	-	L	G	-	G
Varnish	G	G	G	Р	G	G	G	G	-	G
Vinegar (6)	L	G	L	G	G	G	L	L	G	G
Water (to 135°F) (6)	G	G	G	G	G	G	L	G	G	G
Water (above 135°F) (6)	Р	G	Р	L	-	Р	Р	Р	L	G
Water Glycols (to 135°F)	L	G	L	G	G	L	L	G	-	G
Water Glycols (above 135°F)	Р	G	Р	L	-	Р	Р	Р	-	G
Water in oil Emulsions (to 135°F)	G	G	L	G	G	-	L	G	-	G
Water in oil Emulsions (above 135°F)	Р	G	Р	L	-	-	Р	Р	-	G
Whiskey, Wines (6)	G	G	L	G	G	G	G	G	G	G
Wood Oils	G	G	L	G	G	-	G	G	-	G
Xylene	L	G	Р	Р	G	Р	Р	L	G	G
Zinc Chloride	G	G	G	G	Р	G	G	G	G	G

#### Notes:

- 1. The Fluid Compatibility Guides are simplified rating tabulations based on immersion tests at 75°F. Higher temperatures tend to reduce ratings. Since final selection depends on pressure, fluid and ambient temperature and other factors not known to Parker Hannifin Co., no performance guarantee is expressed or implied. Ratings do not imply compliance with specialized codes such as FDA, NSF, AGA or UL and do not cover possible fluid discoloration, taste or odor effects. For conveying foodstuffs, use FDA sanctioned materials and for potable water, use NSF listed materials. For chemicals not listed, or for advice on particular applications, please consult Product Engineering, Parflex Div., Ravenna, Ohio.
- 2. Hose applications for these fluids must take into account legal and insurance regulations. This does not imply AGA or UL compliance.
- $\bf 3.$  Satisfactory at some concentrations and temperatures, unsatisfactory in others.

- 4. For high pressure gases, the cover should be pinpricked and the pressure must not be released quickly. Chain or restrain the hose to prevent personal injury in the event of damage or failure.
- 5. Chemical compatibility does not imply low permeation rates. Consult the Parker factory for a suggestion for your specific requirement.
- 6. Does not imply NSF or FDA compliance.
- 7. Chemical compatibility does not imply acceptability for use in airless paint spray applications. These applications require a special conductive hose.
- 8. Fluoropolymers are chemically compatible with Anhydrous Ammonia. However, extreme caution must be used in dealing with Anhydrous Ammonia since it can cause severe injuries such as blindness and/or chemical burns.



# **Ω** General Technical

### Media to Plastic Tubing Material Compatibility **Guide**

Media	PE	HDPE	PP	N	NR	PV	U	PEFR	FEP	PFA	PTFE
Acetone	Р	L	G	G	G	Р	Р	L	G	G	G
Acetyl Bromide	L	L	L	Р	Р	Р	-	-	-	-	-
Acetyl Chloride	L	L	L	Р	Р	Р	-	-	G	G	G
Air	G	G	G	G	G	G	G	G	G	G	G
Alcohols	G	G	G	G	G	L	L	G	G	G	G
Aluminum Salts	G	G	G	G	G	G	G	G	-	ı	-
Ammonia	G	G	G	G	G	G	G	L	-	-	-
Amyl Acetate	G	G	G	G	G	P	L	-	G	G	G
Aniline	L	G	L	Р	Р	Р	Р	-	G	G	G
Animal Oils (6)	Р	L	L	G	G	G	G	-	-	-	G
Arsenic Salts	G	G	G	G	G	G	G	G	-	ı	-
Aromatic Hydrocarbons	Р	L	L	G	G	Р	L	Р	-	-	G
Barium Salts	G	G	G	G	G	G	G	G	-	ı	-
Benzaldehyde	Р	L	L	L	L	Р	L	Р	G	G	G
Benzene	Р	L	L	G	G	Р	L	Р	G	G	G
Benzyl Alcohol	Р	G	L	L	L	G	L	Р	G	G	G
Bleaching Liquors	G	L	G	L	L	L	L	-	-	1	-
Boric Acid Solutions	G	G	G	G	G	G	G	G	G	G	G
Bromine	L	L	Р	Р	Р	P	Р	-	G	L	G
Butane (2)	L	G	G	G	G	L	Р	-	#	#	#
Butanol	G	G	G	G	G	G	G	G	-	-	-
Butyl Acetate	G	G	L	G	G	Р	L	G	G	G	G
Calcium Hypochlorite	L	L	Р	Р	L	L	Р	L	G	G	G
Calcium Salts	G	G	G	G	G	G	G	G	-	-	-
Carbon Dioxide	G	G	G	G	G	G	G	G	#	#	#
Carbon Disulfide	L	L	L	L	L	Р	L	-	#	#	#
Carbon Tetrachloride	Р	Р	L	L	L	L	Р	Р	G	G	G
Caustic Potash	G	G	G	G	G	L	G	-	G	G	G
Caustic Soda	G	G	G	G	G	L	G	-	G	L	G
Chloracetic Acid	L	G	L	L	L	Р	Р	-	G	L	G
Chlorine (Dry)	L	L	L	Р	Р	G	Р	-	#	#	#
Chlorine (Wet)	L	L	L	Р	Р	G	L	-	G	G	G
Chlorobenzene	Р	L	L	L	L	Р	L	Р	G	G	G
Chloroform	Р	L	Р	Р	Р	Р	Р	Р	G	G	G
Chromic Acid	L	L	L	Р	Р	G	Р	-	L	G	G
Copper Salts	G	G	G	G	G	G	G	G	-	-	-
Cresol	Р	L	L	Р	Р	L	Р	Р	G	G	G
Cyclohexanone	L	L	L	L	L	Р	Р	-	G	G	G
Ethers	L	L	Р	G	G	L	Р	-	G	G	G
Ethyl Acetate	G	G	G	G	G	Р	L	-	G	G	G
Ethyl Alcohol	G	G	G	L	L	L	G	G	-	-	-
Ethylamine	L	G	L	L	L	Р	L	-	-	-	-
Ethyl Bromide	Р	L	L	L	L	Р	-	Р	-	-	=
Ethyl Chloride	Р	L	Р	L	L	Р	-	Р	G	G	G
Fatty Acids	L	L	L	G	G	L	L	Р	G	G	G

(Cont.)



## Media to Plastic Tubing Material Compatibility Guide (cont.)

Media	PE	HDPE	PP	N	NR	PV	U	PEFR	FEP	PFA	PTFE
Ferric Salts	G	G	G	G	G	G	G	-	-	-	-
Formaldehyde	G	G	G	L	L	L	Р	-	G	G	G
Formic Acid	G	G	G	Р	Р	G	Р	G	G	G	G
Freon	L	L	L	G	G	Р	L	-	#	#	#
Gasoline (2)	Р	G	L	G	G	Р	L	Р	G	G	G
Glucose	G	G	G	G	G	G	G	G	G	G	G
Glycerin	G	G	G	G	G	G	L	G	G	G	G
Hydriodic Acid	L	G	G	Р	Р	G	-	-	-	-	-
Hydrochloric Acid. (Conc.)	L	G	G	L	L	L	Р	-	G	L	G
Hydrochloric Acid. (Med. Conc.)	L	G	G	L	L	L	Р	-	G	L	G
Hydrofluoric Acid	L	L	G	Р	Р	L	Р	-	G	-	G
Hydrogen Peroxide (Conc.)	L	G	L	L	L	L	G	-	-	-	-
Hydrogen Peroxide (Dil.)	L	G	L	G	G	G	G	-	-	-	-
Hydrogen Sulfide	G	G	G	G	G	G	Р	-	G	G	G
lodine	L	G	G	G	G	L	L	-	G	G	G
Kerosene (2)	L	L	L	G	G	L	L	-	G	G	G
Ketones	G	G	G	G	G	Р	Р	-	G	G	G
Lacquer Solvents	L	L	L	G	G	Р	-	-	L	G	G
Lactic Acid	G	G	G	G	G	G	G	-	G	G	G
Lead Acetate	G	G	G	G	G	G	G	-	G	G	G
Linseed Oil	L	G	G	G	G	L	G	-	G	G	G
Magnesium Salts	G	G	G	G	G	G	G	-	-	-	G
Naphtha	L	L	L	G	G	Р	L	G	G	G	G
Natural Gas	L	L	L	G	G	G	G	-	2	2	2
Nickel Salts	G	G	G	G	G	G	G	-	-	-	-
Nitric Acid (Conc.)	Р	L	Р	Р	Р	L	Р	G	L	L	G
Nitric Acid (Dil.)	Р	G	L	L	L	G	Р	Р	L	L	G
Nitrobenzene	Р	L	G	L	L	Р	Р	Р	G	G	G
Nitrogen Oxides	L	L	G	L	L	G	-	-	-	-	-
Nitrous Acid	L	L	G	L	L	G	L	-	G	G	G
Oils (Animal and Mineral)	L	L	L	G	G	L	G	-	G	G	G
Oils (Vegetable)	L	L	L	G	G	L	G	-	G	G	G
Oxygen (5) (6)	G	G	G	G	G	G	G	G	G	G	G
Perchloric Acid	Р	G	L	Р	Р	L	Р	Р	L	G	G
Phenols	Р	G	G	Р	Р	L	Р	Р	-	-	G
Potassium Salts	G	G	G	G	G	G	G	G	-	-	-
Pyridine	L	L	L	L	L	Р	Р	-	G	G	G
Silver Nitrate	G	G	G	G	G	G	G	G	G	G	G
Soap Solutions	G	G	G	G	G	G	G	G	G	G	G
Sodium Salts	G	G	G	G	G	G	G	G	-	-	-
Stearic Acid	L	L	L	G	G	Р	L	-	G	G	G
Sulfur Chloride	L	L	Р	L	L	L	-	-	G	G	G
Sulfuris Acid (Conc.)	Р	G	G	Р	Р	L	Р	Р	-	-	-
Sulfuris Acid (Dil.)	Р	G	G	L	L	G	L	Р	-	-	-
Sulfurous Acid	P	G	L	L	L	G	L	P	G	G	G
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(Cont.)



## Media to Plastic Tubing Material Compatibility Guide (cont.)

Media	PE	HDPE	PP	N	NR	PV	U	PEFR	FEP	PFA	PTFE
Tannic Acid	G	G	G	G	G	G	Р	-	G	G	G
Tanning Extracts	G	G	G	G	G	G	Р	-	-	-	-
Titanium Salts	G	G	G	G	G	G	G	G	-	-	-
Toluene	Р	L	Р	G	G	Р	L	Р	G	G	G
Trichloroacetic Acid	L	L	L	Р	Р	Р	Р	-	-	-	-
Trichloroethylene	Р	L	Р	L	L	Р	Р	Р	G	G	G
Turpentine	P	P	L	G	G	L	L	-	G	G	G
Urea	G	G	G	G	G	G	G	-	G	L	G
Uric Acid	G	G	G	G	G	G	G	-	G	G	G
Water (6)	G	G	G	G	G	G	G	G	G	G	G
Xylene	P	L	P	G	G	Р	Р	Р	G	G	G
Zinc Chloride	G	G	G	G	G	G	G	-	G	L	G

#### Notes:

- 1. The Fluid Compatibility Guides are simplified rating tabulations based on immersion tests at 75°F. Higher temperatures tend to reduce ratings. Since final selection depends on pressure, fluid and ambient temperature and other factors not known to Parker Hannifin Co., no performance guarantee is expressed or implied. Ratings do not imply compliance with specialized codes such as FDA, NSF, AGA or UL and do not cover possible fluid discoloration, taste or odor effects. For conveying foodstuffs use FDA sanctioned materials, and for potable water use NSF listed materials. For chemicals not listed, or for advice on particular applications, please consult Product Engineering, Parflex Div., Ravenna, Ohio.
- Hose applications for these fluids must take into account legal and insurance regulations. This does not imply AGA or UL compliance.
- Satisfactory at some concentrations and temperatures, unsatisfactory in others.

- For high pressure gases, the cover should be pinpricked and the
  pressure must not be released quickly. Chain or restrain the hose to
  prevent personal injury in the event of damage or failure.
- Chemical compatibility does not imply low permeation rates. Consult the Parker factory for a suggestion for your specific requirement.
- 6. Does not imply NSF or FDA compliance.
- Chemical compatibility does not imply acceptability for use in airless paint spray applications. These applications require a special conductive hose.
- Fluoropolymers are chemically compatible with Anhydrous Ammonia.
   However, extreme caution must be used in dealing with Anhydrous Ammonia since it can cause severe injuries such as blindness and/or chemical burns.



### **Metric Conversion Chart**

	Er	iglish to Metric	
	To Convert From	То	Multiply By
	Sq. in. (in²)	Sq. mm (mm²)	645.16
Area	Sq. in. (in²)	Sq. cm (cm <sup>2</sup> )	6.4516
	Sq. ft. (ft²)	Sq. meters (m²)	0.0929
Density	Pounds/Cubic foot (lb.ft²)	Kilograms/Cubic meter (kg/m²)	16.02
Energy	British thermal units (Btu) (1 J=Ws=0.2388 cal)	Joules (J)	1055
Force	Pounds – force (lbf) (1N=0.102 kgf)	Newtons (N)	4.448
	Inches (in)	Milimeters (mm)	25.4
Length	Feet (ft)	Meters (m)	0.3048
	Miles (mi)	Kilometers (km)	1.609
	Ounces (oz.)	Grams (g)	28.35
Mass (Weight)	Pounds – mass (lb)	Kilograms (kg)	0.4536
Short tons (2000 lb) (tn)		Metric tons (100 kg) (t)	0.9072
Power	Horsepower (550 ft lb/s) (hp)	Kilowatts (kW)	0.7457
		Kilograms (f)/square cm (kg(f)/cm²)	0.7457
Pressure	Pounds/square inch (psi)	Kilopascals (kPa)	0.0703
		Bars (100 kPa)	6.8948
Stress	Pounds/square inch (psi) (1N/mm²=1MPa)	megapascals (MPa)	0.006895
Tempera- ture	Degrees Fahrenheit (°F)	Degrees Celsius (°C)	5/9 (after sub- tracting 32)
Torque or Bending	Pounds-force-foot (lb-ft)	Newtons-meter (Nm)	1.3567
Moment	Pounds-force-inch (lb-in)	Newtons-meter (Nm)	0.113
Velocity	Feet/second (ft/s)	Meters/second (m/s)	0.3048
	Dynamic (centipoise)	Pascal-second (Pas)	.001
Viscosity	Denematic – foot²/sec (ft²/s)	Meter²/sec (m²/s)	0.0929
	Cubic inch (in³)	Cubic centimeter (cm³) (mililiter)	16.3871
Volume	Quarts (qt)	Liters (1000 cm³)	0.9464
	Gallons (gal)	Liters	3.7854

Metric to English							
To Convert From	То	Multiply By					
Sq. mm (mm²)	Sq. in. (in²)	0.00155					
Kilograms/Cubic meter (kg/m²)	Pounds/Cubic foot (lb/ft²)	0.0624					
Joules (J)	British Thermal Units (Btu)	0.000947					
Newtons (N)	Pounds - force (lbf)	0.2248					
Milimeters (mm)	Inches (in)	0.03937					
Meters (m)	Feet (ft)	3.281					
Kilometers (km)	Miles (mi)	0.621					
Grams (g)	Ounces (oz.)	0.035					
Kilograms (kg)	Pounds - mass (lb)	2.205					
Metric tons (100 kg) (t)	Short tons (2000 lb) (tn)	1.102					
Kilowatts (kW)	Horsepower (550 ft lb/s) (hp)	1.341					
Kilograms (f)/square cm (kg(f)/cm²)		14.22					
Kilopascals (kPa)	Pounds/square inch (psi)	0.145					
Bars (100 kPa)		14.503					
megapascals (MPa)	Pounds/square inch (psi) (1N/mm²=1MPa)	145.039					
Degrees Celsius (°C)	Degrees Fahrenheit (°F)	9/5 (then add 32)					
November of the Alexander	Pounds-force-foot (lb-ft)	0.737					
Newtons-meter (Nm)	Pounds-force-inch (lb-in)	8.85					
Meters/second (m/s)	Feet/second (ft/s)	3.2808					
Pascal-second (Pas)	Dynamic (centipoise)	1000					
Meter <sup>2</sup> /sec (m <sup>2</sup> /s)	Denematic - foot²/sec (ft²/s)	10.7643					
Cubic centimeter (cm³) (mililiter)	Cubic inch (in³)	0.061					
Liters (1000 cm³)	Quarts (qt)	1.057					
Liters	Gallons (gal)	0.2642					



### **Government & Agency Specifications**

Agency and Specifications	Parflex Products
Flame Resistance:	
MSHA	83FR, D6, D6R, HFS, HFSR, HFS2, HFS2R, HTB, HTBR, M8, 560, 563, 593, 590,(except-3), 510A (except -4, -5, -6), 510C (except -4), 515H, 520N, 540N, 56DH-2, 560R, 573X-3, 575X, 580N, HLB, HJK
UL94V-2	PEFR, HUFR
UL94HB	83FR NN, NB, NNR, NBR (wall thickness above 0.033", contact Parflex for availability)
VW1, UL-83	All PFA, FEP & PTFE tubing products
Food Contact:	
FDA, CFR21 Part 177	E, F64, PP, PV, 540P, 919, 919J, 919U, 929, 939, S30, S40, STW, SBFW, SCW, PCW, SCWV, PCWV, PCWV-FS, SCWV-FS, RCTW, All natural and black PFA, FEP, PTFE & PVDF tubing products
NSF Standard 51*	E, F64, PP, NTNA, Series Tubing
Potable Water:	
NSF Standard 61*	E Series Tubing
Natural Gas Service:	
For Vehicles and Dispensing Systems ANSI IAS NGV4.2 - CSA 12.52 - NFPA 52	5CNG
European Safety Standard (TUV) Kraftfahrt-Bundesamt ECE R110	5CNG-3, 5CNG-8 (Assemblies from Parker Polyflex Europe Only)
Hydraulic Service:	
SAE 100R1	HFS, HFSR, 560, 560R
SAE 100R2	590, 593, HFS2
SAE 100R7	540N, 540P, 548N, 510C(less-2), 518C, 518D, 55LT, 510C(less-2), 943B
SAE 100R8	520N, 528N, 580N, 588N
SAE 100R12	M8
SAE 100R14A	919, 919J, 919U, 929, S30, S40
SAE 100R14B	919B, 929B, 929BJ, S30B, S40B
SAE 100R16	HFS2, HFS2R, 590
SAE 100R17	D6, D6R, H6, R6, 563, 943B
SAE 100R18	53DM, 538DM
WASTEC WRP05:	
Waste Equipment Technology Association	S5N, S6, S9, SLH
Transportation Standards:	-
SAE J844, FMVSS106 (49CFR571.106)	1120A, 1120B, BRAKCOIL <sup>®</sup> , Dollycoil™, Duo-Coil™, SliderCoil™
Electrical, Non-Conductivity:	
SAE J517	518C, 518D, 548N, 528N, 588N, 538DM
DNV (with approved fittings only)	
Det Norski (Norwegian) Veritas Marine Steel Ships, Mobile Offshore & Fixed Offshore Drilling Units	520N, 580N, 588N, H580N, 518C, 540N, 573X, 575X, 590, 593, 560, 560R
American Bureau of Shipping (ABS)Product Design Assessment:	590 (sizes -4, -6, -8), 593
Breathing Air Applications:	
CGA (Compressed Gas Association)- G-7.1 Grade E Breathing Air	526BA, 527BA
NFPA 1901	526BA, 527BA
*Indicates that products shown hav	e been tested and certified by NSF International

*Indicates that products shown have been tested and certified by NSF International
to the requirements of NSF Standards 51 and 61. NSF does not express or imply
an approval on any product.

Agency and Specifications	Parflex Products
Aerospace Material Specification	
AMS 3584A	HS2TFI
AMS 3585	HS2TFT
AMS 3586	HS2TFS
AMS 3653E	101, 201, TFS, TFL, TFH, TFT, HS2TFS, HS2TFT, HS2TFL, HS2TFI, TSWTF, CV (PTFE), CVL, CVH, 81914/1, 81914/2
AMS 3654C	TFL
AMS 3655B	TFT
MIL-DTL-27267C	PTFE Conductive Tubing
AMS-DTL-23053/11A CLASS 1	HS1.3FEP
AMS-DTL-23053/11A CLASS 2	HS1.6FEP
AMS-DTL-23053/12A CLASS 1	HS2TFH
AMS-DTL-23053/12A CLASS 2	HS2TFS
AMS-DTL-23053/12A CLASS 3	HS2TFT
AMS-DTL-23053/12A CLASS 4	HS2TFL
AMS-DTL-23053/12A CLASS 5	HS2TFI
SAE AS81914/1	81914/1
SAE AS81914/2	81914/2
SAE AS81914/3	81914/3
SAE AS81914/4	81914/4
American Society for Testing and	Materials:
ASTM D1710, TYPE 1, GRADE 1, CLASS B	TFB
ASTM D2116-07	103, 203
ASTM D2902 TYPE 1	HS2TFS, HS2TFT, HS2TFL, HS2TFI, HS2TFH
ASTM D2902 TYPE II	HS1.3FEP, HS1.6FEP, HS1.25FEP
ASTM D3222	110, 111
ASTM D3295	TFB, TSWTF
ASTM D3295, Class 1	TFL
ASTM D3295, Class 2	TFT
ASTM D3295, Class 3	TFS
ASTM D3295, Class 4	TFH
A01W 00200, 01000 4	
ASTM D3296-03	HS1.3FEP, HS1.6FEP, CV (FEP), 81914/3, 81914/4, CR (FEP), 703
ASTM D3307-10	104, 204, 105, 205, CR (PFA), 704, 705
Canadian Standards Association:	
CSA 9032-01 300V	TFT (awg)
CSA 9032-01 600V	TFS (awg)
Military Standard - US Departme	nt of Defense:
MIL-I-22129C	TFS
A-A-59602	TSWTF
Underwriters Laboratories:	
UL-224 150V 200°C	TFL (awg)
UL-224 300V 200°C	TFT (awg)
UL-224 600V 200°C	TFS (awg)
United States Pharmacopoeia:	
USP Class VI	101, 201, TFS, TFL, TFH, TFT, TFB, HS2TFS, HS2TFT, HS2TFL, HS2TFI, HS2TFH, CV, CVL, CVH, 103, 203, HS1.3FEP, HS1.6FEP, CR, 104, 204, 105, 205



### **Parker Safety Guide**

### For selecting and using Hose, Tubing, Fittings, and Related Accessories

Parker Safety Guide for Selecting and Using Hose, Tubing, Fittings and Related Accessories
Publication No. 4400-B.1
Revised: November 2007

**WARNING:** Failure or improper selection or improper use of hose, tubing, fittings, assemblies or related accessories ("Products") can cause death, personal injury and property damage. Possible consequences of failure or improper selection or improper use of these Products include but are not limited to:

- Fittings thrown off at high speed.
- · High velocity fluid discharge.
- Explosion or burning of the conveyed fluid.
- · Electrocution from high voltage electric powerlines.
- Contact with suddenly moving or falling objects that are controlled by the conveyed fluid.
- Injections by high-pressure fluid discharge.
- · Dangerously whipping Hose.
- Contact with conveyed fluids that may be hot, cold, toxic or otherwise injurious.
- Sparking or explosion caused by static electricity buildup or other sources of electricity.
- Sparking or explosion while spraying paint or flammable liquids.
- Injuries resulting from inhalation, ingestion or exposure to fluids.

Before selecting or using any of these Products, it is important that you read and follow the instructions below. Only Hose from Parker's Stratoflex Products Division is approved for in flight aerospace applications.

#### 1.0 GENERAL INSTRUCTIONS

- 1.1 Scope: This safety guide provides instructions for selecting and using (including assembling, installing, and maintaining) these Products. For convenience, all rubber and/or thermoplastic products commonly called "hose" or "tubing" are called "Hose" in this safety guide. All assemblies made with Hose are called "Hose Assemblies". All products commonly called "fittings", "couplings" or "adapters" are called "Fittings". All related accessories (including crimping and swaging machines and tooling) are called "Related Accessories". This safety guide is a supplement to and is to be used with the specific Parker publications for the specific Hose, Fittings and Related Accessories that are being considered for use. Parker publications are available at www.parker.com. SAE J1273 (www.sae.org) and ISO 17165 2 (www.ansi.org) also provide recommended practices for hydraulic Hose Assemblies.
- 1.2 Fail-Safe: Hose, Hose Assemblies and Fittings can and do fail without warning for many reasons. Design all systems and equipment in a fail safe mode, so that failure of the Hose, Hose Assembly or Fitting will not endanger persons or property.
- 1.3 Distribution: Provide a copy of this safety guide to each person responsible for selecting or using Hose and Fitting products. Do not select or use Parker Hose or Fittings without thoroughly reading and understanding this safety guide as well as the specific Parker publications for the Products.
- 1.4 User Responsibility: Due to the wide variety of operating conditions and applications for Hose and Fittings, Parker does not represent or warrant that any particular Hose or Fitting is suitable for any specific end use system. This safety guide does not analyze all technical parameters that must be considered in selecting a product. The user, through its own analysis and testing, is solely responsible for:
  - Making the final selection of the Products.
  - Assuring that the user's requirements are met and that the application presents no health or safety hazards.
  - Providing all appropriate health and safety warnings on the equipment on which the Products are used.
  - Assuring compliance with all applicable government and industry standards.
- 1.5 Additional Questions: Call the appropriate Parker technical service department if you have any questions or require any additional information. See the Parker publication for the Products being considered or used, or call 1 800 CPARKER, or go to www.parker.com, for telephone numbers of the appropriate technical service department.

#### 2.0 HOSE AND FITTING SELECTION INSTRUCTIONS

2.1 Electrical Conductivity: Certain applications require that the Hose be nonconductive to prevent electrical current flow. Other applications require the Hose and the Fittings and the Hose/Fitting interface to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting Hose and Fittings for these or any other applications in which electrical conductivity or nonconductivity is a factor.

The electrical conductivity or nonconductivity of Hose and Fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the Hose and the Fittings, Fitting finish (some Fitting finishes are electrically conductive while others are nonconductive), manufacturing methods (including moisture control), how the Fittings contact the Hose, age and amount of deterioration or damage or other changes, moisture content of the Hose at any particular time, and other factors.

The following are considerations for electrically nonconductive and conductive Hose. For other applications consult the individual catalog pages and the appropriate industry or regulatory standards for proper selection.

- 2.1.1 Electrically Nonconductive Hose: Certain applications require that the Hose be nonconductive to prevent electrical current flow or to maintain electrical isolation. For applications that require Hose to be electrically nonconductive, including but not limited to applications near high voltage electric lines, only special nonconductive Hose can be used. The manufacturer of the equipment in which the nonconductive Hose is to be used must be consulted to be certain that the Hose and Fittings that are selected are proper for the application. Do not use any Parker Hose or Fittings for any such application requiring nonconductive Hose, including but not limited to applications near high voltage electric lines, unless (i) the application is expressly approved in the Parker technical publication for the product, (ii) the Hose is marked "nonconductive", and (iii) the manufacturer of the equipment on which the Hose is to be used specifically approves the particular Parker Hose and Fittings for such use.
- 2.1.2 Electrically Conductive Hose: Parker manufactures special Hose for certain applications that require electrically conductive Hose.

Parker manufactures special Hose for conveying paint in airless paint spraying applications. This Hose is labeled "Electrically Conductive Airless Paint Spray Hose" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in all airless paint spraying applications. Do not use any other Hose for airless paint spraying, even if electrically conductive. Use of any other Hose or failure to properly connect the Hose can cause a fire or an explosion resulting in death, personal injury, and property damage.

Parker manufactures a special Hose for certain compressed natural gas ("CNG") applications where static electricity buildup may occur. Parker CNG Hose assemblies comply with the requirements of ANSI/IAS NGV 4.2-1999; CSA 12.52-M99, "Hoses for Natural Gas Vehicles and Dispensing Systems" (www.ansi.org). This Hose is labeled "Electrically Conductive for CNG Use" on its layline and packaging. This Hose must be properly connected to the appropriate Parker Fittings and properly grounded in order to dissipate dangerous static charge buildup, which occurs in, for example, high velocity CNG



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should be tested on a monthly basis for conductivity per ANSI/IAS NGV 4.2-1999; CSA 12.52-M99. Parker manufactures special Hose for aerospace in flight applications. Aerospace in flight applications employing Hose to transmit fuel, lubricating fluids and hydraulic fluids require a special Hose with a conductive inner tube. This Hose for in flight applications is available only from Parker's Stratoflex Products Division. Do not use any other Parker Hose for in flight applications, even if electrically conductive. Use of other Hoses for in flight applications or failure to properly connect or ground this Hose can cause a fire or an explosion resulting in death, personal injury and property damage.

These Hose assemblies for in flight applications must meet all applicable

aerospace industry, aircraft engine and aircraft requirements.

dispensing or transfer. Do not use any other Hose for CNG applications

where static charge buildup may occur, even if electrically conductive. Use

of other Hoses in CNG applications or failure to properly connect or ground

this Hose can cause a fire or an explosion resulting in death, personal injury,

and property damage. Care must also be taken to protect against CNG

permeation through the Hose wall. See section 2.6, Permeation, for more information. Parker CNG Hose is intended for dispenser and vehicle use at a maximum temperature of 180°F (82°C). Parker CNG Hose should not

be used in confined spaces or unventilated areas or areas exceeding 180°F

(82°C). Final assemblies must be tested for leaks. CNG Hose Assemblies

- 2.2 Pressure: Hose selection must be made so that the published maximum working pressure of the Hose and Fittings are equal to or greater than the maximum system pressure. The maximum working pressure of a Hose Assembly is the lower of the respective published maximum working pressures of the Hose and the Fittings used. Surge pressures or peak transient pressures in the system must be below the published maximum working pressure for the Hose. Surge pressures and peak pressures can usually only be determined by sensitive electrical instrumentation that measures and indicates pressures at millisecond intervals. Mechanical pressure gauges indicate only average pressures and cannot be used to determine surge pressures or peak transient pressures. Published burst pressure ratings for Hose is for manufacturing test purposes only and is no indication that the Product can be used in applications at the burst pressure or otherwise above the published maximum recommended working pressure.
- Suction: Hoses used for suction applications must be selected to insure that the Hose will withstand the vacuum and pressure of the system. Improperly selected Hose may collapse in suction application.
- 2.4 Temperature: Be certain that fluid and ambient temperatures, both steady and transient, do not exceed the limitations of the Hose. Temperatures below and above the recommended limit can degrade Hose to a point where a failure may occur and release fluid. Properly insulate and protect the Hose Assembly when routing near hot objects (e.g. manifolds). Do not use any Hose in any application where failure of the Hose could result in the conveyed fluids (or vapors or mist from the conveyed fluids) contacting any open flame, molten metal, or other potential fire ignition source that could cause burning or explosion of the conveyed fluids or vapors.
- 2.5 Fluid Compatibility: Hose Assembly selection must assure compatibility of the Hose tube, cover, reinforcement, and Fittings with the fluid media used. See the fluid compatibility chart in the Parker publication for the product being considered or used. This information is offered only as a guide. Actual service life can only be determined by the end user by testing under all extreme conditions and other analysis. Hose that is chemically compatible with a particular fluid must be assembled using Fittings and adapters containing likewise compatible seals.
- $2.6 \quad \text{Permeation: Permeation (that is, seepage through the Hose) will occur}$ from inside the Hose to outside when Hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials as helium, diesel fuel, gasoline, natural gas, or LPG). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic, and in loss of fluid. Dangerous explosions, fires, and other hazards can result when using the wrong Hose for such applications. The system designer must take into account the fact that this permeation will take place and must not use Hose if this permeation could be hazardous. The system designer must take into account all legal, government, insurance, or any other special regulations which govern the use of fuels and refrigerants. Never use a Hose even though the fluid compatibility is acceptable without considering the potential hazardous effects that can result from permeation through the Hose Assembly.

Permeation of moisture from outside the Hose to inside the Hose will also occur in Hose assemblies, regardless of internal pressure. If this moisture permeation would have detrimental effects (particularly, but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

- Size: Transmission of power by means of pressurized fluid varies with pressure and rate of flow. The size of the components must be adequate to keep pressure losses to a minimum and avoid damage due to heat generation or excessive fluid velocity.
- Routing: Attention must be given to optimum routing to minimize inherent problems (kinking or flow restriction due to Hose collapse, twisting of the Hose, proximity to hot objects or heat sources). For additional routing recommendations see SAE J1273 and ISO 17165-2. Hose Assemblies have a finite life and if possible, should be installed in a manner that allows for ease of inspection and future replacement. Rubber Hose because of its relative short life, should not be used in residential and commercial buildings for HVAC (heating, ventilating and air conditioning) applications.
- Environment: Care must be taken to insure that the Hose and Fit-29 tings are either compatible with or protected from the environment (that is, surrounding conditions) to which they are exposed. Environmental conditions including but not limited to ultraviolet radiation, sunlight, heat, ozone, moisture, water, salt water, chemicals and air pollutants can cause degradation and premature failure.
- Mechanical Loads: External forces can significantly reduce Hose life or cause failure. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type Fittings or adapters may be required to insure no twist is put into the Hose. Unusual applications may require special testing prior to Hose selection.
- Physical Damage: Care must be taken to protect Hose from wear, snagging, kinking, bending smaller that minimum bend radius and cutting, any of which can cause premature Hose failure. Any Hose that has been kinked or bent to a radius smaller than the minimum bend radius, and any Hose that has been cut or is cracked or is otherwise damaged should be removed and discarded.
- 2.12 Proper End Fitting: See instructions 3.2 through 3.5. These recommendations may be substantiated by testing to industry standards such as SAE J517 for hydraulic applications, or MIL-A-5070, AS1339, or AS3517 for Hoses from Parker's Stratoflex Products Division for aerospace applications.
- 2.13 Length: When establishing a proper Hose length, motion absorption, Hose length changes due to pressure, and Hose and machine tolerances and movement must be considered.
- 2.14 Specifications and Standards: When selecting Hose and Fittings, government, industry, and Parker specifications and recommendations must be reviewed and followed as applicable.
- 2.15 Hose Cleanliness: Hose components may vary in cleanliness levels. Care must be taken to insure that the Hose Assembly selected has an adequate level of cleanliness for the application.
- Fire Resistant Fluids: Some fire resistant fluids that are to be conveyed by Hose require use of the same type of Hose as used with petroleum base fluids. Some such fluids require a special Hose, while a few fluids will not work with any Hose at all. See instructions 2.5 and 1.5. The wrong Hose may fail after a very short service. In addition, all liquids but pure water may burn fiercely under certain conditions, and even pure water leakage may be hazardous.
- 2.17 Radiant Heat: Hose can be heated to destruction without contact by such nearby items as hot manifolds or molten metal. The same heat source may then initiate a fire. This can occur despite the presence of cool air around the Hose.
- 2.18 Welding or Brazing: When using a torch or arc welder in close proximity to hydraulic lines, the hydraulic lines should be removed or shielded with with appropriate fire resistant materials. Flame or weld spatter could



burn through the Hose and possibly ignite escaping fluid resulting in a catastrophic failure. Heating of plated parts, including Hose Fittings and adapters, above 450°F (232°C) such as during welding, brazing or soldering may emit deadly cases.

- 2.19 Atomic Radiation: Atomic radiation affects all materials used in Hose assemblies. Since the long-term effects may be unknown, do not expose Hose assemblies to atomic radiation.
- 2.20 Aerospace Applications: The only Hose and Fittings that may be used for in-flight aerospace applications are those available from Parker's Stratoflex Products Division. Do not use any other Hose or Fittings for inflight applications. Do not use any Hose or Fittings from Parker's Stratoflex Products Division with any other Hose or Fittings, unless expressly approved in writing by the engineering manager or chief engineer of Stratoflex Products Division and verified by the user's own testing and inspection to aerospace industry standards.
- **2.21 Unlocking Couplings:** Ball locking Couplings or other Fittings with quick disconnect ability can unintentionally disconnect if they are dragged over obstructions, or if the sleeve or other disconnect member is bumped or moved enough to cause disconnect. Threaded Fittings should be considered where there is a potential for accidental uncoupling.

### 3.0 HOSE AND FITTINGS ASSEMBLY AND INSTALLATION INSTRUCTIONS

- **3.1 Component Inspection:** Prior to assembly, a careful examination of the Hose and Fittings must be performed. All components must be checked for correct style, size, catalog number, and length. The Hose must be examined for cleanliness, obstructions, blisters, cover looseness, kinks, cracks, cuts or any other visible defects. Inspect the Fitting and sealing surfaces for burrs, nicks, corrosion or other imperfections. Do NOT use any component that displays any signs of nonconformance.
- **3.2** Hose and Fitting Assembly: Do not assemble a Parker Fitting on a Parker Hose that is not specifically listed by Parker for that Fitting, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division. Do not assemble a Parker Fitting on another manufacturer's Hose or a Parker Hose on another manufacturer's Fitting unless (i) the engineering manager or chief engineer of the appropriate Parker division approves the Assembly in writing or that combination is expressly approved in the appropriate Parker literature for the specific Parker product, and (ii) the user verifies the Assembly and the application through analysis and testing. For Parker Hose that does not specify a Parker Fitting, the user is solely responsible for the selection of the proper Fitting and Hose Assembly procedures. See instruction 1.4.

To prevent the possibility of problems such as leakage at the Fitting or system contamination, it is important to completely remove all debris from the cutting operation before installation of the Fittings. The Parker published instructions must be followed for assembling the Fittings on the Hose. These instructions are provided in the Parker Fitting catalog for the specific Parker Fitting being used, or by calling 1-800-CPARKER, or at www.parker.com.

- **3.3** Related Accessories: Do not crimp or swage any Parker Hose or Fitting with anything but the listed swage or crimp machine and dies in accordance with Parker published instructions. Do not crimp or swage another manufacturer's Fitting with a Parker crimp or swage die unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.
- **3.4 Parts:** Do not use any Parker Fitting part (including but not limited to socket, shell, nipple, or insert) except with the correct Parker mating parts, in accordance with Parker published instructions, unless authorized in writing by the engineering manager or chief engineer of the appropriate Parker division.
- **3.5 Field Attachable/Permanent:** Do not reuse any field attachable Hose Fitting that has blown or pulled off a Hose. Do not reuse a Parker permanent Hose Fitting (crimped or swaged) or any part thereof. Complete Hose Assemblies may only be reused after proper inspection under section 4.0. Do not assemble Fittings to any previously used hydraulic Hose that was in service, for use in a fluid power application.
- **3.6 Pre-Installation Inspection:** Prior to installation, a careful examination of the Hose Assembly must be performed. Inspect the Hose Assembly for any damage or defects. DO NOT use any Hose Assembly that displays any signs of nonconformance.

- 3.7 Minimum Bend Radius: Installation of a Hose at less than the minimum listed bend radius may significantly reduce the Hose life. Particular attention must be given to preclude sharp bending at the Hose to Fitting juncture. Any bending during installation at less than the minimum bend radius must be avoided. If any Hose is kinked during installation, the Hose must be discarded.
- **3.8 Twist Angle and Orientation:** Hose Assembly installation must be such that relative motion of machine components does not produce twisting.
- 3.9 Securement: In many applications, it may be necessary to restrain, protect, or guide the Hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to insure such restraints do not introduce additional stress or wear points.
- **3.10 Proper Connection of Ports:** Proper physical installation of the Hose Assembly requires a correctly installed port connection insuring that no twist or torque is transferred to the Hose when the Fittings are being tightened or otherwise during use.
- **3.11 External Damage:** Proper installation is not complete without insuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage or damage to sealing surfaces are corrected or eliminated. See instruction 2.10.
- 3.12 System Checkout: All air entrapment must be eliminated and the system pressurized to the maximum system pressure (at or below the Hose maximum working pressure) and checked for proper function and freedom from leaks. Personnel must stay out of potential hazardous areas while testing and using.
- **3.13 Routing:** The Hose Assembly should be routed in such a manner so if a failure does occur, the escaping media will not cause personal injury or property damage. In addition, if fluid media comes in contact with hot surfaces, open flame or sparks, a fire or explosion may occur. See section 2.4.
- **3.14 Ground Fault Equipment Protection Devices (GFEPDs):** *WARNING!* Fire and Shock Hazard. To minimize the danger of fire if the heating cable of a Multitube bundle is damaged or improperly installed, use a Ground Fault Equipment Protection Device. Electrical fault currents may be insufficient to trip a conventional circuit breaker.

For ground fault protection, the IEEE 515:1989 (www.ansi.org) standard for heating cables recommends the use of GFEPDs with a nominal 30 milliampere trip level for "piping systems in classified areas, those areas requiring a high degree of maintenance, or which may be exposed to physical abuse or corrosive atmospheres".

### 4.0 HOSE AND FITTING MAINTENANCE AND REPLACEMENT INSTRUCTIONS

- 4.1 Even with proper selection and installation, Hose life may be significantly reduced without a continuing maintenance program. The severity of the application, risk potential from a possible Hose failure, and experience with any Hose failures in the application or in similar applications should determine the frequency of the inspection and the replacement for the Products so that Products are replaced before any failure occurs. A maintenance program must be established and followed by the user and, at minimum, must include instructions 4.2 through 4.7.
- **4.2 Visual Inspection Hose/Fitting:** Any of the following conditions require immediate shut down and replacement of the Hose Assembly:
  - · Fitting slippage on Hose;
  - Damaged, cracked, cut or abraded cover (any reinforcement exposed):
  - Hard, stiff, heat cracked, or charred Hose;
  - · Cracked, damaged, or badly corroded Fittings;
  - Leaks at Fitting or in Hose;
  - · Kinked, crushed, flattened or twisted Hose; and
  - Blistered, soft, degraded, or loose cover.
- **4.3 Visual Inspection All Other:** The following items must be tightened, repaired, corrected or replaced as required:
  - Leaking port conditions;
  - Excess dirt buildup;
  - · Worn clamps, guards or shields; and
  - System fluid level, fluid type, and any air entrapment.



- Functional Test: Operate the system at maximum operating pressure and check for possible malfunctions and leaks. Personnel must avoid potential hazardous areas while testing and using the system. See section 2.2.
- Replacement Intervals: Hose assemblies and elastomeric seals used on Hose Fittings and adapters will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Hose Assemblies and elastomeric seals should be inspected and replaced at specific replacement intervals, based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime. damage, or injury risk. See section 1.2. Hose and Fittings may be subjected to internal mechanical and/or chemical wear from the conveying fluid and may fail without warning. The user must determine the product life under such circumstances by testing. Also see section 2.5.
- 4.6 Hose Inspection and Failure: Hydraulic power is accomplished by utilizing high pressure fluids to transfer energy and do work. Hoses, Fittings and Hose Assemblies all contribute to this by transmitting fluids at high pressures. Fluids under pressure can be dangerous and potentially lethal and, therefore, extreme caution must be exercised when working with fluids under pressure and handling the Hoses transporting the fluids. From time to time. Hose Assemblies will fail if they are not replaced at proper time intervals. Usually these failures are the result of some form of misapplication, abuse, wear or failure to perform proper maintenance. When Hoses fail, generally the high pressure fluids inside escape in a stream which may or may not be visible to the user. Under no circumstances should the user attempt to locate the leak by "feeling" with their hands or any other part of their body. High pressure fluids can and will penetrate the skin and cause severe tissue damage and possibly loss of limb. Even seemingly minor hydraulic fluid injection injuries must be treated immediately by a physician with knowledge of the tissue damaging properties of hydraulic fluid. If a Hose failure occurs, immediately shut down the equipment and leave the area until pressure has been completely released from the Hose Assembly. Simply shutting down the hydraulic pump may or may not eliminate the pressure in the Hose Assembly. Many times check valves, etc., are employed in a system and can cause pressure to remain in a Hose Assembly even when pumps or equipment are not operating. Tiny holes in the Hose, commonly known as pinholes, can eject small, dangerously powerful but hard to see streams of hydraulic fluid. It may take several minutes or even hours for the pressure to be relieved so that the Hose Assembly may be examined safely.

Once the pressure has been reduced to zero, the Hose Assembly may be taken off the equipment and examined. It must always be replaced if a failure has occurred. Never attempt to patch or repair a Hose Assembly that has failed. Consult the nearest Parker distributor or the appropriate Parker division for Hose Assembly replacement information.

Never touch or examine a failed Hose Assembly unless it is obvious that the Hose no longer contains fluid under pressure. The high pressure fluid is extremely dangerous and can cause serious and potentially fatal injury.

- Elastomeric seals: Elastomeric seals will eventually age, harden, wear and deteriorate under thermal cycling and compression set. Elastomeric seals should be inspected and replaced.
- 4.8 Refrigerant gases: Special care should be taken when working with refrigeration systems. Sudden escape of refrigerant gases can cause blindness if the escaping gases contact the eye and can cause freezing or other severe injuries if it contacts any other portion of the body.
- Compressed natural gas (CNG): Parker CNG Hose Assemblies should be tested after installation and before use, and at least on a monthly basis per ANSI/IAS NGV 4.2-1999; CSA 12.52-M99 Section 4.2 "Visual Inspection Hose/Fitting". The recommended procedure is to pressurize the Hose and check for leaks and to visually inspect the Hose for damage. Caution: Matches, candles, open flame or other sources of ignition shall not be used for Hose inspection. Leak check solutions should be rinsed off after use.

#### 5.0 **HOSE STORAGE**

- 5.1 Age Control: Hose and Hose Assemblies must be stored in a manner that facilitates age control and first-in and first-out usage based on manufacturing date of the Hose and Hose Assemblies. The shelf life of rubber Hose or Hose Assemblies that have passed visual inspection and a proof test is 10 years (40 quarters) from the date of manufacture. The shelf life of thermoplastic and polytetrafluoroethylene Hose or Hose Assemblies is considered to be unlimited.
- 5.2 Storage: Stored Hose and Hose Assemblies must not be subjected to damage that could reduce their expected service life and must be placed in a cool, dark and dry area with the ends capped. Stored Hose and Hose Assemblies must not be exposed to temperature extremes, ozone, oils, corrosive liquids or fumes, solvents, high humidity, rodents, insects, ultraviolet light, electromagnetic fields or radioactive materials.

### **ENERPAC Warranty Policy**

## For those ENERPAC items sold as part of the Parker Parflex Division product offering, the following warranty applies.

ENERPAC products are warranted to be free of defects in materials and workmanship under normal use for as long as they are owned by the original purchaser, subject to the exclusions and limitations described below. This warranty does not cover ordinary wear and tear, overloading, alterations, (including repairs or attempted repairs by parties other than ENERPAC or its authorized service representatives), improper fluid, use in a manner for which they are not intended or use which is contrary to instructions for the products.

THIS WARRANTY IS LIMITED TO NEW PRODUCTS SOLD THROUGH ENERPAC AUTHORIZED DISTRIBUTORS, ORIGINAL EQUIPMENT MANUFACTURERS OR OTHER DESIGNATED CHANNELS OF DISTRIBUTION. NO AGENT, EMPLOYEE, OR OTHER REPRESENTATIVE OF ENERPAC HAS THE AUTHORITY TO IN ANY WAY CHANGE OR AMEND THIS WARRANTY.

Electronic products and components are warranted against defects in material and workmanship for a period of two years from the date of purchase.

The following items supplied with ENERPAC products are excluded from this warranty:

Components not manufactured by ENERPAC, including air motors, electric motors, gasoline engines, and diesel engines. Such items are warranted to the extent of the warranty provided by the manufacturers of such items.

If the customer believes a product is defective, the product must be delivered, or shipped freight prepaid, to the nearest ENERPAC Authorized Service Center. The customer should contact ENERPAC to locate and Authorized Service Center in the customer's area.

Products that do not conform to this warranty will be returned by ground transportation, freight prepaid.

THE FOREGOING WARRANT IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The remedy of repair, replacement or refund is customer's exclusive remedy in the event of breach of this warranty.

SELLER SHALL NOT BE SUBJECT TO AND DISCLAIMS:

- (a) ANY OTHER OBLIGATIONS OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY,
- (b) ANY OBLIGATIONS WHATSOEVER ARISING FROM TORT CLAIMS (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR ARISING UNDER THEORIES OR LAW WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY SELLER OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO, AND
- (c) ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.

ENERPAC's liability in all cases is limited to, and shall not exceed, the purchase price paid.

For the nearest authorized ENERPAC SERVICE CENTER, please call ENERPAC at 1-800-558-0530 or visit the ENERPAC web site at www.Enerpac.com.



### Offer of Sale

The items described in this document and other documents or descriptions provided by Parker Hannifin Corporation, as subsidiaries and its authorized distributors are hereby offered for sale at prices to be established by Parker Hannifin Corporation, its subsidiaries and its authorized distributors. This offer and its acceptance by any customer ("Buyer") shall be governed by all of the following Terms and Conditions. Buyer's order for any such item, when communicated to Parker Hannifin Corporation, its subsidiary or an authorized distributor ("Seller") verbally or in writing, shall constitute acceptance of this offer.

- 1. Terms and Conditions of Sale: All descriptions, quotations, proposals, offers, acknowledgments, acceptances and sales of Seller's products are subject to and shall be governed exclusively by the terms and conditions stated herein. Buyer's acceptance of any offer to sell is limited to these terms and conditions. Any terms or conditions in addition to, or inconsistent with those stated herein, proposed by Buyer in any acceptance of an offer by Seller, are hereby objected to. No such additional, different or inconsistent terms and conditions shall become part of the contract between Buyer and Seller unless expressly accepted in writing by Seller. Seller's acceptance of any offer to purchase by Buyer is expressly conditional upon Buyer's assent to all the terms and conditions stated herein, including any terms in addition to, or inconsistent with those contained in Buyer's offer. Acceptance of Seller's products shall in all events constitute such assent.
- Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice thereof within 30 days after Buyer's receipt of the shipment.
- 3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.
- 4. Warranty: Seller warrants that the items sold thereunder shall be free from defects in material or workmanship for a period of 365 days from the date of shipment to Buyer, or 2,000 hours of use, whichever expires first. THIS WARRANTY COMPRISES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GAURANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER. ALL OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO, MERCHANTIBILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED. NOTWITHSTANDING THE FOREGOING, THERE ARE NO WARRANTIES WHATSOEVER ON ITEMS BUILT OR ACQUIRED WHOLELY OR PARTIALLY, TO BUYER'S DESIGNS OR SPECIFICATIONS.
- 5. Limitation Of Remedy: SELLER'S LIABILITY ARISING FROM OR IN ANY WAY CONNECTED WITH THE ITEMS SOLD OR THIS CONTRACT SHALL BE LIMITED EXCLUSIVELY TO REPAIR OR REPLACEMENT OF THE ITEMS SOLD OR REFUND OF THE PURCHASE PRICE PAID BY BUYER, AT SELLER'S SOLE OPTION. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND OR NATURE WHATSOEVER, INCLUDING BUT NOT LIMITED TO LOST PROFITS ARISING FROM OR IN ANY WAY CONNECTED WITH THIS AGREEMENT OR ITEMS SOLD HEREUNDER, WHETHER ALLEGED TO ARISE FROM BREACH OF CONTRACT, EXPRESS OR IMPLIED WARRANTY, OR IN TORT, INCLUDING WITHOUT LIMITATION, NEGLIGENCE, FAILURE TO WARN OR STRICT LIABILITY.
- 6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold herunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.
- 7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitation, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by

- Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.
- 8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.
- 9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller of if Seller is liable for the collection of such tax, the amount thereof shall be in additon to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereon which may be assessed if the items are held to be taxable.
- 10.Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter "Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes in the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder is subject to a claim that it infringes the Intellectual Property Rights of a third party, Seller may, at its sole expense and options, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights.

If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgments resulting from any claim that such item infriges any patent, trademark, copyright, trade dress, trade secret or any similiar right.

- 11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.
- 12.Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of the sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.

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### Parker's Motion & Control Product Groups

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 1 800 C-Parker (1 800 272 7537).



#### Aerospace

#### Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Redional transports

### Unmanned aerial vehicles Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
& components
Thermal management
Wheels & brakes



#### Automation

#### Key Markets Alternative energy

Conveyor & material handling Factory automation Frood & beverage Life sciences & medical Machine tools Packaging machinery Paper machinery Piaper machinery Primary metals Safety & security Semiconductor & electronics Transportation & automotive

#### **Key Products**

AC/DC drives & systems
Air preparation
Air preparation
Electric actuators, gantry
robots & slides
Human machine interfaces
Inverters
Manifolds
Miniature fluidics
Pneumatic actuators
& grippers
Pneumatic valves & controls
Rotary actuators
Stepper motors, servo motors,
drives & controls
Structural extrusions
Vacuum generators, cups
& sensors



### Climate & Industrial Controls

#### Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

#### **Key Products**

Accumulators
Advanced actuators
CO2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves



#### **Filtration**

#### Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation &
renewable energy
Process
Transportation
Water Purification

#### **Key Products**

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero
air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters
& systems



#### Fluid Connectors

#### Key Markets

Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Ragas
Tangas
Tangas
Tangas
Tangas
Tangas
Tangas
Tangas
Tangas

#### Key Products

Check valves
Connectors for low pressure
fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems &
power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings



#### Hydraulics

#### Key Markets

Aerial lift Agriculture Alternative energy Construction machinery Forestry Industrial machinery Machine tools Marine Material handling Minina Oil & gas Power generation Refuse vehicles Renewable energy Truck hydraulics Turf equipment

#### **Key Products**

Accumulators
Cartridge valves
Cartridge valves
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic systems
Hydraulic systems
Hydraulic systems
Hydraulic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators



#### Instrumentation

#### Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

#### **Key Products**

Analytical Instruments
Analytical sample conditioning
products & systems
Chemical injection fittings
& valves
Pluorpoplymer chemical
delivery fittings, valves
& pumps
High purity gas delivery
fittings, valves, regulators
& digital flow controllers
Industrial mass flow meters/
controllers
Permanent no-weld tube fittings
Precision industrial regulators
& flow controllers
Process control double
block & bleeds
Process control fittings, valves,
regulators & manifold valves



#### Seal

#### Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Tiansportation

#### **Key Products**

Dynamic seals Elastomeric o-rings Electro-medical instrument design & assembly EMI shieldina Extruded & precision-cut, fabricated elastomeric seals High temperature metal seals Homogeneous & inserted elastomeric shapes Medical device fabrication & assembly Metal & plastic retained composite seals Shielded optical windows Silicone tubing & extrusions Thermal management Vibration dampening



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