



# LoneStar

Group

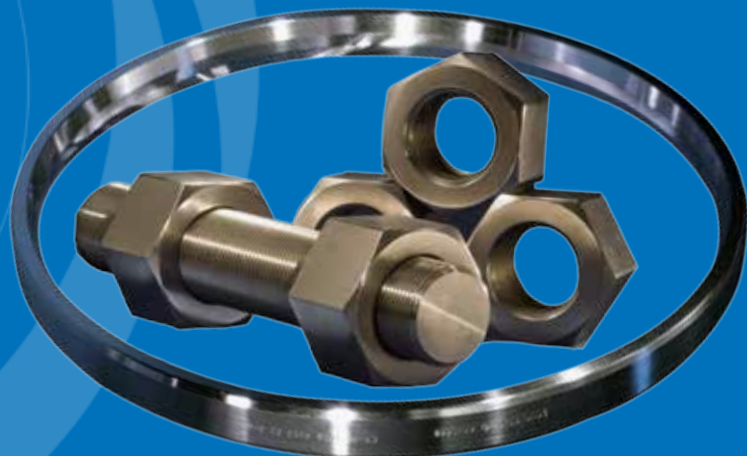


Speciality Coatings & Plating

High Performance Fasteners

Precision Machined Components

Industrial Gaskets & Seals



# The LoneStar Group

The LoneStar Group is a global manufacturer and supplier of fasteners and sealing technologies. We have been in operation since the 1960s and until recently operated as a number of stand-alone business, trading independently in their respected markets. Today, LoneStar Group serves the globe from fully operational manufacturing and distribution facilities in the United States, Western and Eastern Europe, the United Arab Emirates, China and India.

All LoneStar Group companies operate Quality Systems to the requirements of BS EN ISO 9001:2008, we have test centers across the world ensuring we meet international and client specific standards.

Our global footprint services clients in oil and gas, petrochemical, renewable energy and power generation markets while our local people provide the technical expertise to service complex fastener and sealing needs from our vast stock and manufacturing capabilities.



## PRODUCTS BUILT TO PERFORM

LoneStar Fasteners and Sealing Technologies, in Houston, Texas, is the only global provider of customized, high performance fasteners, gaskets and flow control components to leading OEMs and distributors in the global oil and gas, hydrocarbon processing, power generation, general industrial and military markets. Because our products are process-critical, they must operate without failure under extremely harsh conditions that vary widely between applications and across industries. You can be confident that we go to every extreme to ensure that our product line, from the most common bolts to speciality fasteners, are built to perform.

## YOUR ONE STOP SUPPLY CHAIN SOLUTION

LoneStar's global presence provides a "one-stop" supply chain solution for customers and offers numerous distinct advantages, including the ability to service global contracts, access to lower-cost product and material sourcing, large inventory, expedited delivery, and enhanced service levels before and after the sale.

Our flexible, cost-effective manufacturing capabilities allow us to produce low volume, high mix products from a variety of raw materials, and for the modification of semi-finished materials to meet individual specifications through hot forging, roll and cut threading, CNC machining, heat treating, water jet cutting and the application of speciality coatings.

LoneStar offers stock management and supply chain management programs that can help save you time and reduce the cost of purchasing, receiving and moving inventory. We can tailor a simple system that works for you.

### VALUE ADDED SERVICES INCLUDE:

- Dedicated stock production
- Consignment stock on and off-site
- Custom packaging
- Kitting & speciality packaging scheduled deliveries
- Bar coding of products and shipment
- Product traceability by lot
- Product serialization
- E-commerce
- EDI links
- Monthly reporting

## UNRIVALLED QUALITY CONTROL & CERTIFICATION

To ensure the highest possible product quality LoneStar operates a fully registered quality management system to ISO 9001:2008 standards in all facilities and consistently implements rigorous destructive and non-destructive performance testing. On the manufacturing level, regular conformance checking is conducted by quality control specialists in order to monitor product consistency. Once Quality approves the products they are stamped with a unique 3-letter heat code to ensure product traceability.

### QUALITY

- In-house Certified Testing Laboratory
- Tensile/Proof Load Capacity to 300,000 lbs.
- Charpy Impact Test to -150 °F
- Hardness/Heat/Material Testing
- Spectrochemical Analysis & Portable PMI
- ASTM B117 Salt Fog Testing
- Magnetic/Metallurgical Examination
- Liquid Penetration Examination
- 3-Letter Heat Code Traceability



LoneStar is certified by QMI, IQ NET, AFAQ and API and holds membership affiliations with ASTM, AWHEM, NACE, VMA, NFDA, PESA, SAE, and AMS. LoneStar also has representatives on several standard-setting committees.



# High Performance Fasteners

## EACH FASTENER IS UNIQUELY CREATED

When it comes to fasteners, we set the standard. Whether you need standard or high performance fasteners, or your project calls for the production of a speciality fastener built to unique specifications, LoneStar Fasteners can handle the job by delivering competitively priced components that do not compromise quality.

LoneStar Fasteners manufactures and distributes an extensive range of SAE, ASTM and ISO grade commercial, speciality and exotic alloy standard and metric fasteners, including bolts, double end, tap end and all-thread fasteners. We are widely recognized in the industry for our ability to produce speciality fasteners that endure.

Machining is also available to drawings on items such as riser bolts, turbine bolts, stems, connector rods and collar studs.



### CAPACITY

#### Forging

- › Nuts – ¼" up to 4" Diameter
- › Bolts – ¼" up to 2¼" Diameter
- › Roll Threading ¼" to 4"
- › Cut Threading ¼" to 4"
- › Milling and Drilling
- › CNC Lathes to 32"
- › In-house
  - Heat Treating Fasteners
  - Electroplating
  - Fastener Coating
- › Salt Fog Testing
- › Hardness Testing
- › Full Chemical & Machine Testing
- › Wet Mag & Ultrasonic
- › Cross Sectional Testing & Imaging

### MATERIALS

- › ASTM A-193 Grades B-7, B-7M, B16
- › ASTM A320 L-7, L-7M
- › ASTM A-194
- › Inconel™ (600/601/625/718/925)
- › Stainless Steel (All ASTM Grades)
- › Hastelloy™ B-2/C-22/C-276/G-30,X
- › Incoloy™ (800H/800HT/825)
- › Precipitation Hardening Grades (17-4/15-5/13-8)
- › Titanium™ • Monel™ (400/K500)
- › ASTM A453 660 Grades A & B
- › ASTM A354 Grades BC & BD
- › Nimonic™ • Tool Steel™
- › Alloy 20™ • Nitronic™
- › Nickel™ • Duplex™

### PRODUCTS

- › All Thread Studs
- › Tap End (Pad) & Double End Studs
- › Combination Studs
- › Specialty Studs (Per Print)
- › Socket Head Cap Screws
- › Flat & Button Socket Screws
- › 12 Point Cap Screws
- › Hex Bolts & Cap Screws
- › Heavy Hex Bolts & Cap Screws
- › Riser Bolts
- › Finished & Heavy Hex Nuts
- › Specialty Nuts (Per Print)
- › Tommy Nuts
- › Military & Aerospace Fasteners
- › Standard & Speciality Washers

## ALL BLUE BOLTS ARE NOT THE SAME

For uncompromising performance, choose coated products. We believe it is the sacrificial base coat and thickness that makes the difference. That's why our PCI-3 Coating, for example, endures 3,000+ hours in salt fog testing with a total coating thickness in excess of 1 mil. Choose from a broad range of surface coatings and treatments to meet the needs of your application, no matter how demanding.

## FASTENER COATINGS

LoneStar Fasteners is approved by Whitford Corporation to apply a complete range of high performance Xylan® baked on coatings, and has worked closely with Whitford in the transition to low VOC (Volatile Organic Compounds) topcoats without sacrificing quality or performance.

- › Reduce the coefficient of friction while providing corrosion protection
- › Enhanced Wear Resistance
- › Heavy Weight Bearing Load Resistance (for moving parts)
- › Temperature Resistant from -50 °F to 550 °F.

**PCI-3™** Coating Systems provide excellent make-up/break-out torque characteristics and corrosion resistance. PCI-3 has established itself as the de facto standard for corrosion protection in petro-chemical, refining, pipelines, offshore platforms and structures, and other applications challenged by a corrosive environment.

**PCI-3+™** contains Sermagard®, which is the ceramic metallic bonding matrix applied as a base coat. Sermagard® provides superior corrosion resistance in salt environments, especially splash zone areas, and Whitford Xylan® Fluoropolymer top-coats provide the lubricity to achieve maximum torque during make-up/break-out.

**PCI-3+S™** is an alternative to our PCI-3+ Coating System for applications where UV resistance is necessary. Like the PCI-3+ Coating System, PCI-3+S contains the ceramic metallic bonding matrix Sermagard® as its base coat. However, the PCI-3+S System incorporates a top coat of Sermagard®, aluminum filled coating offering UV resistance.

Other coatings available through our coating facility include Epoxies, Powder Coatings and Polyurethanes.



# Manufacturing Capacity

Hot Forging Presses  
with Multi Billet

Induction Heating

EDM Tool Making  
Facility

Spark Eroding  
Equipment

Thread Rolling

Centerless Grinding

Automatic Saws

CNC Machining Lathes

CNC Machining  
Centers

Water Jet Cutting

Turret Lathes

Manioni Screw Cutting

Vertical Milling  
Machines

EDM Drilling Facility

Portable Nut Tapping

Automatic Stamping  
Cell

Automatic Chamfering  
& Centering Machines

Deep Hole Drilling

Bolt Bending Capacity  
to 2"

## HOT FORGING

With a forging range of ¼" (6mm) to 4" (100mm) diameter, LoneStar Fasteners is able to produce hot forged products to customer designs, specifications and industry standards.

## HIGH CAPACITY THREAD ROLLING

On-site thread rolling capacity for Metric & Imperial thread forms in all materials up to 4".

## CNC MACHINED COMPONENTS

We combine conventional manufacturing with state-of-the-art CNC machining to ensure we meet all customer needs and expectations. Continuous investments in CNC technologies enables LoneStar Fasteners to produce high quality, cost-effective components to meet engineering standards and custom design specifications.

## HEAT TREATMENT

LoneStar Fasteners has on-site computer controlled electric and gas furnaces operating up to 2,200 °F (1,200 °C) and a capacity of 1,300 lbs for small and medium batch heat treatment of standard water and oil quench.



# Quality Control & Certification

LoneStar Group operates a fully registered quality management system to ISO 9001:2008 Standards (SAI Global, QI, AFAQ, and API). Other industry membership affiliations include: ASTM, AWHEM, NACE, VMA, NFDA, PESA, SAE and AMS.

## HEALTH & SAFETY MANAGEMENT

The number one concern for all LoneStar Group facilities globally is the health and safety of our employees and visitors. LoneStar Group facilities around the world have or are becoming ISO 14001 and OHSAS 18001:2007 accredited.

## TESTING AND LABORATORY SERVICES

LoneStar Fasteners has in-house testing and laboratory services to control and ensure our integral processes are followed to produce high quality finished products.

Integrated software allows for data to be captured to provide accurate certification, from raw material testing to verification of finished products through Destructive and Non-Destructive Testing.



### TESTING CAPABILITIES

#### TENSILE

Room Temperature  
 Elevated Temperature

#### STRESS RUPTURE

#### HARDNESS

Brinell  
 Rockwell  
 Vickers

#### IMPACT

IZOD

#### CHARPY

#### (ASTM AND BS EN):

Room temperature  
 Low temperature (-320°F)

#### CHEMISTRY ANALYSIS

Up to 24 elements by Spectrometer

#### PROOF LOAD

Up to 300,000 lb

#### NDE

MPI (Mag Particle Inspection)  
 LP (Liquid Penetrant)  
 UT (Ultra Sonic Examination)  
 Microscopic exam to ASTM F1137

# Sealing Technologies

Corrosion, high heat, pressure – no problem, we can handle it! As manufacturers and distributors of industrial gaskets for the oil and gas, and petrochemical industries, we know what it takes to produce quality that lasts and we continually monitor product lines in an effort to improve even the most proven gasket in the industry.

Utilizing a wide variety of materials, each gasket type, from ring joint, wellhead, spiral wound, heat exchanger, flange insulating to speciality cut gaskets, is manufactured to very strict tolerances to maintain sealing force in applications that are exposed to corrosive, high heat and pressure environments.

## API RING JOINT GASKETS

Ring Joint Gaskets are precision machined metallic sealing rings, suitable for elevated temperature and high pressure applications. They are manufactured as per API 6A and ASME B16.20 specifications. LoneStar can manufacture these in whatever material you or your customer may need.

**Style R** (oval or octagonal)

**Style RX**

**Style BX**

**Style SBX**

**Style SRX**

## SPIRAL WOUND GASKETS

Spiral Wounds are made of a preformed thin metallic strip combined with a soft sealing composite material wound together under pressure to energize the sealing element to act like a spring when compressed between two flange faces. The sealing element can be used as a stand-alone winding or in conjunction with inner and/or outer rings depending on the application.

Spiral Wound Gaskets are available in a full range of styles and materials and are manufactured in accordance with ASME B16.20 for use in all industry flanges, including ASME/ANSI B16.5, ASME B 16.47, Series A & B.

**Style S** — Sealing Element

**Style SI** — Sealing Element & Inner Ring

**Style CS** — Centring Ring & Sealing Element

**Style CSI** — Centring Ring, Sealing Element & Inner Ring

## PURE-TEX™ EXPANDED PTFE PRODUCTS

Pure-Tex is made of an expanded virgin PTFE that is known for its chemical resistance.

**Style 5002** — Expanded PTFE sheet

**Style 5002-HD** — High Density Expanded PTFE sheet

**Style 5100** — Expanded PTFE Joint Sealant

## TETRA-STAR™ RESTRUCTURED PTFE PRODUCTS

Tetra Star is made from PTFE material which is suitable for a wide variety of sealing applications. It is known for its exceptional mechanical and electrical properties, as well as its chemical resistance and durability.

**Style 4902** — Glass Microsphere Blend

**Style 4908** — Barium Sulfate Blend

**Style 4911** — Silica Blend

## LS SERIES GRAPHITE SHEET

LoneStar Sealing Technologies graphite sheet is made from exfoliated graphite flake with high carbon content. It is chemically treated, expanded under high temperature and pressed for rolling.

**LSP** — Plain

**LSF** — Stainless Steel Foil Reinforced

**LST** — Stainless Steel Tanged Reinforced





## COMPRESSED SHEET/DIE-CUT

LoneStar Sealing Technologies has the ability to cut virtually any type of sheet material, both metallic and non-metallic, in any shape or size to customer specifications. We offer a selection of compressed gasket sheet materials manufactured utilizing the hot calendared process. This process combines select fibers and fillers blended with suitable heat resisting binders which are vulcanized into sheets of homogeneous composition and uniform thickness for a wide variety of sealing applications.

**Style 8033** — SBR, Aramid Fiber

**Style 8137** — NBR, Aramid Fiber

**Style 8445** — NBR, Carbon Fiber

## FLANGE INSULATION GASKETS & KITS

LoneStar Sealing Technologies offers a variety of sealing selections for applications where cathodic corrosion is a concern. Gaskets are produced in accordance with ANSI B16.5 specifications and can be supplied individually or assembled in a kit with sleeves and washers.

### PRODUCT LIST

- API Ring Joint Gaskets
- Spiral Wound Gaskets
- Proprietary Gaskets
- Pure-Tex Products
- Tetra-Star Products
- LS Series Graphite
- Compressed Sheet
- Water-Jet Cutting Services
- Flange Insulation Kit
- Heat Exchanger Gaskets
- Corrugated Gaskets
- KamproStar Gaskets



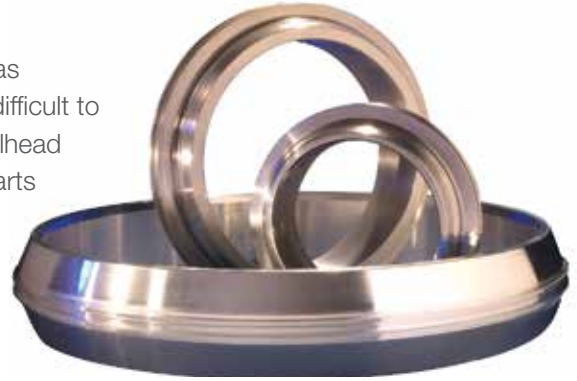
# Precision Machined Components

## LATEST TECHNOLOGY

LoneStar can produce products to precise tolerances and has carved out a niche in manufacturing exotic alloys and other difficult to machine alloys. Engineered components can range from wellhead lock screws, valve stems, valve gates, and other threaded parts to far larger components such as wellhead bodies. With our diverse capacity, we can machine up to 35 inches in diameter and up to 59 inches in length.

Our fully equipped facilities includes wire and spark erosion machines, the latest CNC machining centers and slant and flatbed CNC lathes. Combined with our conventional machining equipment we are able to offer efficiency, reliable capacity which is totally flexible and responsive to the needs of our customers.

LoneStar also offers a broad range of surface coatings and treatments, assembly and pressure testing in addition to a complete range of machining services.



## CUSTOM MACHINED PRODUCTS & SERVICES

- LoneStar manufactures custom parts from all types of steels, stainless steels and high nickel alloys machined to very strict tolerances.
- All custom products are manufactured using CNC machine tools.
- LoneStar manufactures all custom products with a variety of different tools, from small diameter bar-fed machines to large horizontal CNC lathes.
- LoneStar is API certified in 3 facilities in the U.S.A., U.K. and India.
- All facilities are certified to ISO 9001:2008 standards.
- Surface finishing and treatment, including Xylan/Phosphate coatings, advanced high phosphorous electroless nickel plating, pickling, shot peening, honing and polishing are available.
- Upon completion, each part goes through CMM inspection and compliance reports are generated.
- All products are stencilled with specific clientele information including serialization when required.
- Full traceability using unique heat code systems can be delivered with material certification upon request.

## Group Overview



### A COMPANY ON THE MOVE

In 2004 LoneStar commenced a period of expansion, adopting a deliberate policy which aims to match our locations closely with those of our key clients. This has resulted in a network of 16 manufacturing and distribution centers globally today, and plans are in place for further expansion.

Lone Star Group companies have established themselves as market leaders and suppliers of special nuts, bolts, machined components, gaskets and seals to the energy sector and heavy engineering industries across the globe.

Employing approximately 1000+ people across its manufacturing and stockholding facilities worldwide the group offers a unique service of logistical supply and product management to industries requiring quality and safety critical products with full traceability.

LoneStar Group companies are committed to continual investment in their manufacturing capability and technical and computerized support to offer their customers quality products.

- ISO 9001:2008 Certified
- OHSAS 18001
- API 6A & 17D
- Quality driven, safety focus
- Wide range of precision machined components
- On time delivery
- Sourcing, inspection and stock holding operation
- Worldwide approvals
- Over 16 global locations
- 7 manufacturing facilities
- In-house testing laboratory



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