

KOBOLD Instruments Inc.
 Manufacturer of
 Innovative Instrumentation

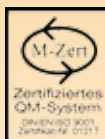
Product Summary

- Flow
- Pressure
- Level
- Temperature
- Analytics



measuring
 • monitoring
 • analyzing

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KOBOLD Instruments

For more than 35 years, KOBOLD has been a world leader in process measurement and control solutions. We offer one of the industry's broadest lines of sensors, switches, and transmitters to measure and control flow, pressure, level, and temperature. The KOBOLD brand is synonymous with quality, craftsmanship, technological advancement, and cost effectiveness. With our in-house engineering and manufacturing, we are able to customize products to match your application. Our people and our products will go the extra mile for you. Our engineers and customer service representatives are ready to help you find the ideal KOBOLD solution for your most demanding applications.

KOBOLD's product line includes:

- Flow: Flowmeters, Transmitters, and Switches Pages 4 - 19
- Pressure: Pressure Gauges, Transmitters, and Switches Pages 20 - 24
- Level: Level Gauges, Indicators, Transmitters, and Switches Pages 25 - 28
- Temperature: Temperature Gauges, Transmitters, and Switches Pages 29 - 30
- Accessories: Magnetic Filters, Needle and Regulating Valves, Control Devices, and Relays Page 31
- Analytics: ORP, pH, Conductivity, Humidity, Turbidity, and Density Page 32
- Application Showcase Pages 33 - 35

The KOBOLD Group's Production Plants Around The World

Pittsburgh, USA



Hofheim, Germany



Sindelfingen, Germany



Cologne, Germany



Kelkheim-Fischbach, Germany



Barcelona, Spain





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Flow

Variable Area - Plastic - Low Volume
 Bodies: Polycarbonate, Polysulfone
 Fittings: Stainless Steel, Brass
Model: KSV



Water: 0.04...0.4 GPH to 2...20 GPH
 Air: 0.3...3 SCFH to 10...100 SCFH
 t_{max} 250 °F; p_{max} 100 PSIG
 Connection: 1/8" NPT
 Accuracy: \pm 6% of Full Scale

Variable Area - Plastic - Low Volume
 Acrylic
Model: KFR



Water: 0.2...2 GPH to 2...20 GPM
 Air: 0.1...1 SCFH to 10...100 SCFM
 t_{max} 150 °F; p_{max} 100 PSIG
 Connection: 1/8" NPT, 1" NPT
 Accuracy: \pm 2-5% of Full Scale

Variable Area - Plastic - Low Volume
 Polyamide, Polysulfone
Model: KSK



Water:
 0.006...0.05 GPM to 0.44...4.4 GPM
 Air: 0.06...0.27 SCFM to 3.5...18.3 SCFM
 t_{max} 250 °F; p_{max} 145 PSIG
 Connection: 3/8"...1" NPT
 or Socket Glue-in Connection
 Accuracy: Cl. 4 According to VDI

Variable Area - Plastic
 Polyamide, Polysulfone
Model: KSM



Water: 0.06...0.66 GPM to 35...264 GPM
 Air: 0.5...3 SCFM to 60...400 SCFM
 t_{max} 250 °F; p_{max} 145 PSIG
 Connection: 1"...2-1/2" NPT
 or Socket Glue-in Connection
 Accuracy: Cl. 4 According to VDI

Variable Area - Low Volume Switch
 Stainless Steel, Glass Tube
Model: KSR, SVN



Water: 0.03...4 GPH
 Air: 0.1...13 SCFH
 t_{max} 160 °F; p_{max} 230 PSIG
 Connection: 1/4" NPT

Variable Area - Low Volume
 Stainless Steel
Model: KDF-9 / KDG-9



Water: 0.02...0.25 l/h to 10...100 l/h
 Air: 2...20 NI/h to 300...3000 NI/h
 t_{max} 100 °C; p_{max} 16 bar
 Connection: G 1/4, 1/4" NPT
 Accuracy: \pm 3 % q_G = 50 %

Variable Area - Low Volume
 Stainless Steel
Model: KDF-2 / KDG-2



Water: 0.025...2.5 l/h to 16...160 l/h
 Air: 0.5...5 NI/h to 500...5000 NI/h
 t_{max} 100 °C; p_{max} 16 bar
 Connection: 1/4" NPT, G 1/4
 Accuracy: \pm 2.5 % q_G = 50 %

Variable Area - Glass Tube
 Stainless Steel, POM-C
Model: UMR, UXR, URA



Water: 0.13...1.3 GPH to 4...40 GPH
 Air: 0.18...1.8 SCFH to 10...100 SCFH
 t_{max} 210 °F; p_{max} 85 PSIG
 Connection: 1/4" NPT
 Accuracy: Cl. 4 According to VDI

Variable Area - Glass Tube Thread Connection
 Stainless Steel, PVC
Model: URM



Water: 0.06...0.6 GPH to 11...110 GPM
 Air: 0.11...1.1 SCFH to 30...300 SCFM
 t_{max} 210 °F; p_{max} 270 PSI
 Connection: 1/4"...3" NPT, Hose Barb
 Accuracy: Cl. 4 According to VDI

Variable Area - Glass Tube
 PVC
Model: URB



Water: 2.6...26 GPH to 26...260 GPH
 Air: 11...110 SCFH to 110...1,100 SCFH
 t_{max} 130 °F; p_{max} 85 PSIG
 Connection: 1/2"...1-1/4" NPT
 Accuracy: Cl. 4 According to VDI

Variable Area - Glass Tube
 Stainless Steel, POM
Model: UVR, UTR



Water: 2.6...26 GPH to 52.8...528 GPH
 Air: 3.5...35 SCFH to 176...1,760 SCFH
 t_{max} 210 °F; p_{max} 230 PSI
 Connection: 3/8", 1/2" NPT
 Accuracy: Cl. 4 According to VDI

Variable Area - Glass Tube Flange
 PVC, PTFE
Model: URL



Water: 0.26...2.6 GPH to 66...660 GPH
 Air: 0.35...3.5 SCFH to 350...3,500 SCFH
 t_{max} 212 °F; p_{max} 85 PSIG
 Connection: 1/2"...1-1/2" ANSI
 Accuracy: Cl. 4 According to VDI



**Variable Area - Glass Tube
High Accuracy**
Stainless Steel, PVC, PVDF
Model: V31



Water: 0.3...3.3 GPM to 4.4...44 GPM
Air: 0.088...0.88 SCFM to 10.6...106 SCFM
 t_{max} 176 °F; p_{max} 210 PSIG
Connection: 1/4"...2" NPT or ANSI
Accuracy: \pm 1.6% Liquids \pm 2.5% Gases VDI

**Variable Area - Glass Tube
Fixed Flange**
Stainless Steel
Model: URK



Water: 0.004...0.04 GPM to 66...220 GPM
Air: 0.011...0.11 SCFM to 30...300 SCFM
 t_{max} 210 °F; p_{max} 210 PSIG
Connection: 1/2"...3" ANSI
Accuracy: Cl. 4 According to VDI

**Variable Area - Glass Tube
for Gas Burners**
Brass
Model: UTS



Water: 0.1...1.0 GPM to 1.0...10 GPM
Air: 0.25...2.5 SCFH to 10...100 SCFH
 t_{max} 130 °F; p_{max} 45 PSIG
Connection: NPT
Accuracy: Cl. 4 According to VDI

Variable Area
Brass, Stainless Steel
Model: SV



Water: 0.075...0.35 GPM to 2.5...40 GPM
Air: 0.25...1.25 SCFM to 10...150 SCFM
 t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1/4"...1-1/4" NPT
Accuracy: \pm 4% of Full Scale

Variable Area - Switch
Brass, Stainless Steel
Model: SV, DSV



Water: 0.075...0.35 GPM to 2.5...40 GPM
Air: 0.25...1.25 SCFM to 10...150 SCFM
 t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1/4"...1-1/4" NPT
Accuracy: \pm 4% of Full Scale

**Variable Area - Switch
Low Volume**
Brass, Stainless Steel
Model: SWK-11, SWK-12



Water: 0.05...0.1 L/min to 13...24 L/min
Air: on Request
 t_{max} 210 °F; p_{max} 3,600 PSIG
Connection: G 1/2
Accuracy: \pm 4% of Full Scale

**Variable Area - Switch
Low Volume**
PVC
Model: SWK-13



Water: 0.2...0.8 L/min to 13...24 L/min
Air: on Request
 t_{max} 140 °F; p_{max} 85 PSIG
Connection: G 1/2
Accuracy: \pm 4% of Full Scale

Variable Area - Low Volume
Brass, Stainless Steel
Model: SWK-21, SWK-22



Water: 0.05...0.1 L/min to 13...24 L/min
Air: on Request
 t_{max} 100 °F; p_{max} 250 PSIG
Connection: G 1/2
Accuracy: \pm 4% of Full Scale

**Variable Area - All Metal
Low Volume**
Stainless Steel
Model: KDS



Water: 0.026...0.26 GPM to 5...50 GPM
Air: 0.1...1 SCFH to 20...200 SCFH
 t_{max} 260 °F; p_{max} 230 / 580 PSIG
Connection: 1/4" NPT
Accuracy: \pm 3% of Full Scale
Option: Analog Output

**Variable Area - All Metal
Low Volume**
Stainless Steel
Model: BGK



Water: 0.026...0.26 GPM to 5...50 GPM
Air: 0.1...1 SCFH to 20...200 SCFH
 t_{max} 260 °F; p_{max} 230 / 580 PSIG
Connection: 1/2"...1" ANSI
Accuracy: \pm 3% of Full Scale
Option: Analog Output

**Variable Area - All Metal
Horizontal or Vertical Flow**
Stainless Steel, Special Materials on Request
Model: BGF



Water: 0.044...0.44 GPM to 18...175 GPM
Air: 0.17...1.7 SCFM to 65...650 SCFM
 t_{max} 660 °F; p_{max} 580
Connection: 1/2"...3" ANSI
Accuracy: \pm 1.6% of Full Scale

Variable Area - All Metal
Stainless Steel, Special Materials on Request
Model: BGN



Water: 0.002...0.02 GPM to 60...570 GPM
Air: 0.008...0.08 SCFM to 140...1,400 SCFM
 t_{max} 660 °F; p_{max} 580 PSIG
Connection: 1/2"...6" ANSI
Option: Analog Output 4-20 mA
Accuracy: \pm 1.6 - 2.2% of Full Scale



Flow

Variable Area - All Metal - High Pressure

Stainless Steel, Special Materials on Request
Model: BGN



Water: 0.002...0.02 GPM to 60...570 GPM
Air: 0.008...0.08 SCFM to 140...1,400 SCFM
 t_{max} 660 °F; p_{max} 8,700 PSIG
Connection: 1/2"...6" ANSI
Option: Analog Output, BUS-Interface, Heat Jacket
Accuracy: $\pm 1.6 - 2.2\%$ of Full Scale

Variable Area Switch - All Metal

Brass, Stainless Steel
Model: S



Water: 0.075...0.25 GPM to 1...14 GPM
Air: 0.2...1.1 SCFM to 3...70 SCFM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: $\pm 5\%$ of Full Scale

Variable Area - All Metal

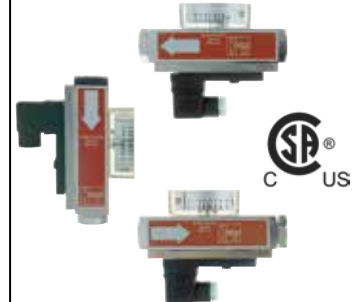
Brass, Stainless Steel
Model: SMV



Water: 0.05...0.15 GPM to 4...40 GPM
Air: 0.05...1 SCFM to 5...130 SCFM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1-1/4" NPT
Accuracy: $\pm 5\%$ of Full Scale

Variable Area - All Metal Horizontal or Vertical Flow

Brass, Stainless Steel
Model: SMO, SMW



Water: 0.04...0.6 GPM to 8...34 GPM
Air: 0.2...3.5 SCFM to 30...130 SCFM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: $\pm 5\%$ of Full Scale

Piston Type Switch - All Metal Horizontal or Vertical Flow

Brass, Stainless Steel
Model: SMN



Water: 0.4...13 GPM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1" NPT
Accuracy: $\pm 5\%$ of Full Scale

Viscosity Compensated - Plastic

Polysulfone
Model: VKP



Water: 0.5...5 GPM to 5...26 GPM
Oil: 0.5...4.5 GPM to 3...20 GPM
 t_{max} 250 °F; p_{max} 230 PSIG
Connection: 1/2", 3/4", 1" NPT,
Solder and Glue Connection Available
Accuracy: $\pm 5\%$ of Full Scale

Viscosity Compensated

Brass, Stainless Steel
Model: VKG



Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...21 GPM
 t_{max} 210 °F; p_{max} 175 PSIG
Connection: 1/4"...1" NPT
Accuracy: $\pm 4\%$ of Full Scale

Viscosity Compensated All Metal

Brass, Stainless Steel
Model: VKM



Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...20 GPM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1" NPT
Accuracy: $\pm 4\%$ of Full Scale

Viscosity Compensated All Metal

Brass, Stainless Steel
Model: VKM-...C3



Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...18 GPM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1" NPT
Accuracy: $\pm 4\%$ of Full Scale

Viscosity Compensated All Metal

Brass, Stainless Steel
Model: VKM with ADI-1



Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...18 GPM
 t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1" NPT
Accuracy: $\pm 4\%$ of Full Scale

Viscosity Compensated All Metal - OEM

Brass
Model: VKA



Viscosity Range: 30...540 cSt
Oil: 2...6.3 GPM to 8...26 GPM
 t_{max} 210 °F; p_{max} 3,600 PSIG
Connection: 1/2", 3/4" NPT
Accuracy: $\pm 4\%$ of Full Scale

Manifold Valves for Multiple Installation

Aluminum
Model: BVB



t_{max} 210 °F; p_{max} 235 PSIG
Connection: 1/2" NPT



Paddle Switch
Brass, Stainless Steel
Model: PSR



Water: 0.9...1.3 GPM to 9.2...15 GPM
 t_{max} 230 °F; p_{max} 1,450 PSIG
Connection: 1/4"...1-1/2" NPT

Paddle Switch
Brass, Stainless Steel
Model: PS / PSE



Water: 16...22 GPM to 176...237 GPM
 t_{max} 230 °F; p_{max} 1,450 PSIG
Connection: 1/2" NPT

Paddle Switch - Plastic
Polysulfone
Model: PPS



Water: 5...9.5 GPM to 19... 28.5 GPM
 t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1" NPT
Repeatability: \pm 3% of Switchpoint

Paddle Switch - HVAC
Brass
Model: LPS



Air: 400...1,800 FPM
 t_{max} 185 °F; p_{max} Atmospheric
Connection: Flange

Paddle Bellows Switch
Brass, Stainless Steel
Model: FPS



Water: 0.9...4.4 GPM to 320...730 GPM
 t_{max} 210 °F; p_{max} 450 PSIG
Connection: 1" NPT

Paddle Bellows Switch
Brass, Stainless Steel, PVC
Model: DWS / DWN



Water: 0.8...14.5 GPM to 13.2...158 GPM
 t_{max} 210 °F; p_{max} 230 PSIG
Connection: 1/2"...2" NPT, 1/2"...2" ANSI
Accuracy: \pm 3 - 5% of Full Scale

Paddle Bellows Meter/Switch
Brass, Stainless Steel, PVC
Model: DWU



Liquid: 0.26...1.3 GPM to 3,600...15,800 GPM
 t_{max} 210 °F; p_{max} 230 PSIG
Connection: 3/8"...2" NPT, 1/2"...2" ANSI,
Weld-on Flange for 1-1/2"...24" Pipe
Accuracy: \pm 3 - 5% of Full Scale

Paddle Torsion - Flowmeter
Aluminum-Bronze, Stainless Steel
Model: DPT-..C3



Water: 1.5...8 GPM to 225...500 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 3/8"...3" NPT
Accuracy: \pm 3% of Full Scale

Paddle Torsion - Flowmeter
Bronze, Stainless Steel
Model: DPT-..K



Water: 1.5...8 GPM to 225...500 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 3/8"...3" NPT
Accuracy: \pm 3% of Full Scale

Baffle Flap - Flowmeter
Brass, Stainless Steel, PVC
Model: DWD



Water: 0.26...2.6 GPM to 1,580...15,800 GPM
 t_{max} 250 °F; p_{max} 360 PSIG
Connection: 3/8"...2" NPT, 1/2"...2" ANSI,
Weld-on Flange 1-1/2"...20" Pipe
Accuracy: \pm 1.5% of Full Scale

Flap - Flowmeter
Steel, Stainless Steel, PP, PVDF,
Hastelloy®
Model: TSK



Water: 2.2...15 GPM to 880...6,600 GPM
 t_{max} 570 °F; p_{max} 580 PSIG
Connection: 1"...20" ANSI Wafer
Accuracy: \pm 2% of Reading

Flow, Humidity and Temperature Hand-Held Measuring Unit
Model: HND-F115



Measuring Range:
Water: 0.16...16 ft/sec
Air: 1.8...65 ft/sec
Humidity: 0...100% rH
Temperature: -40...250 °F, -110...480 °F
Accuracy: from \pm 0.1% of Full Scale



Flow

Turbine - Pulse Output
Brass, Stainless Steel, PPO
Model: DRS-..F5



Water: 0.6...10.5 GPM
 t_{max} 300 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Pulse or Analog Output
Brass, Stainless Steel, PPO
Model: DRS-..F3, DRS-..L3



Water: 0.6...10.5 GPM
 t_{max} 175 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Analog Output
Brass, Stainless Steel, PPO
Model: DRS-..L4 with AUF



Water: 0.6...10.5 GPM
 t_{max} 175 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Pointer Indicator
Brass, Stainless Steel, PPO
Model: DRS-..Z3



Water: 0.6...10.5 GPM
 t_{max} 175 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Compact Electronic
Brass, Stainless Steel, PPO
Model: DRS-..C3



Water: 0.6...10.5 GPM
 t_{max} 175 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Counter
Brass, Stainless Steel, PPO
Model: DRS with ZED



Water: 0.6...10.5 GPM
 t_{max} 300 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Turbine - Pulse Output
PVC, PVDF
Model: TUR



Water: 5...88 GPM to 11...440 GPM
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: $\pm 1\%$ of Full Scale

Turbine - Analog Output
PVC, PVDF
Model: TUR



Water: 5...88 GPM to 11...440 GPM
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: $\pm 1\%$ of Full Scale

Turbine - Pointer Indicator
PVC, PVDF
Model: TUR-..Z3



Water: 5.3...88 GPM to 11...440 GPM
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: $\pm 1\%$ of Full Scale

Turbine - Compact Electronics
PVC, PVDF
Model: TUR-..C3



Water: 5.3...88 GPM to 11...440 GPM
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: $\pm 1\%$ of Full Scale

Turbine - Digital Display
PVC, PVDF
Model: TUR-..K



Water: 5.3...88 GPM to 11...440 GPM
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: $\pm 1\%$ of Full Scale

Turbine Wheel - Pulse Output
Stainless Steel
Model: TUV

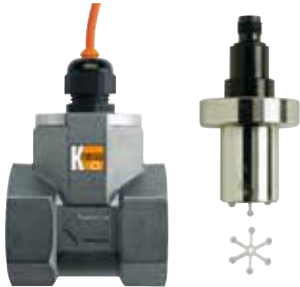


Water: 0.3...1.5 l/min to 35...400 l/min
 t_{max} 350 °C; p_{max} 640 bar
Connection: G 1/4...1-1/2
Accuracy: $\pm 1\%$ of Reading



Flow

Paddle Wheel - Pulse/Analog Output
Aluminum-Bronze, Stainless Steel
Model: DPE



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Analog Output
Aluminum-Bronze, Stainless Steel
Model: DPE with AUF



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pointer Indicator
Aluminum-Bronze, Stainless Steel
Model: DPE-..Z3



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel Compact Electronics
Aluminum-Bronze, Stainless Steel
Model: DPE-..C3



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Digital Display
Aluminum-Bronze, Stainless Steel
Model: DPE with ADI-1



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Batch Controller
Aluminum-Bronze, Stainless Steel
Model: DPE with ZED



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pulse/Analog Output
Aluminum-Bronze, Stainless Steel
Model: DRB



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Analog Output
Aluminum-Bronze, Stainless Steel
Model: DRB with AUF



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pointer Indicator
Aluminum-Bronze, Stainless Steel
Model: DRB-..Z3



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel-Compact Electronics
Aluminum-Bronze, Stainless Steel
Model: DRB-..C3



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel - Digital Display
Aluminum-Bronze, Stainless Steel
Model: DRB with ADI



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel - Batch Controller
Aluminum-Bronze, Stainless Steel
Model: DRB with ZED



Water: 1.5...8 GPM to 15...200 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 3% of Full Scale



Flow

Turbine Wheel - Pulse Output
PVDF, Stainless Steel
Model: SFL



Water: 0.5...20 l/min
 t_{max} 90 °C; p_{max} 250 bar
Connection: G 3/8
Accuracy: $\pm 1\%$ of Full Scale

Turbine - Ratemeter/Totalizer
Stainless Steel
Model: DOT



Water:
0.48...4.8 GPM to 3,080...30,800 GPM
 t_{max} 250 °F; p_{max} 3,600 PSIG
Connection: 1/2"...2" NPT, 1/2"...20" ANSI
Accuracy: $\pm 0.5\%$ of Full Scale

Turbine Flowmeter/Totalizer Battery Powered
Polyamide, Brass, Stainless Steel, PVC, Aluminum, PVDF
Model: EDM



Water: 0.3...3 GPM to 30...300 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...2" NPT
Accuracy: $\pm 1 - 2\%$ of Full Scale

Turbine - Flowmeter/Totalizer Battery Powered
PVC
Model: EDM-8000



Water: 1...10 GPM to 60...600 GPM
 t_{max} 140 °F; p_{max} 150 PSIG
Connection: 1/2"...4" NPT, Flange, Socket
Accuracy: $\pm 3\%$ of Reading

Paddle Wheel - Low Volume Pulse Output
Brass, Stainless Steel
Model: DPM-..F5



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume Pulse or Analog Output
Brass, Stainless Steel
Model: DPM-..F3, DPM-..L3



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume Analog Output
Brass, Stainless Steel
Model: DPM-..L4 with AUF



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume Pointer Indicator
Brass, Stainless Steel
Model: DPM-..Z3



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume Compact Electronics
Brass, Stainless Steel
Model: DPM-..C3



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume Totalizer
Brass, Stainless Steel
Model: DPM with ZED



Water: 0.24...11.1 GPH to 0.8...80 GPH
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: $\pm 1 - 2.5\%$ of Full Scale

Paddle Wheel - Low Volume
Brass, PTFE, PPS
Model: KFF-1 / KFG-1



Water: 15...100 mL/min to 1...10 L/min
Air: 10...50 mL_N/min to 100...500 L_N/min
 t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/8"...1/2" Compression
Accuracy: $\pm 3\%$ of Full Scale

Paddle Wheel - Low Volume
Brass, PPS
Model: KFF-3 / KFG-3



Water: 13...100 mL/min to 1...10 L/min
Air: 10...50 mL_N/min to 100...500 L_N/min
 t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/8"...1/2" Compression
Accuracy: $\pm 3\%$ of Full Scale



Paddle Wheel - Low Volume Pulse Output
Polypropylene
Model: DPL-...F5



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Pulse or Analog Output
Polypropylene
Model: DPL-...F3, ..L3



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Analog Output
Polypropylene
Model: DPL-...L4 with AUF



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Pointer Indicator
Polypropylene
Model: DPL-...Z3



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Compact Electronic
Polypropylene
Model: DPL-...C3



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Totalizer
Polypropylene
Model: DPL with ZED



Water: 0.4...8 GPH to 16...400 GPH
 t_{max} 160 °F; p_{max} 145 PSIG
Connection: 1/2" BSP, Hose Barb
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Low Volume Stainless Steel
Model: DTK



Water: 0.8...9.5 GPH to 16...190 GPH
 t_{max} 280 °F; p_{max} 430 PSIG
Connection: 1/4" NPT
Accuracy: \pm 2% of Full Scale

Paddle Wheel - Pulse Output
Polyamide, Polysulfone, PP, Brass, Stainless Steel
Model: DF-Sensor



Water: 0.02...0.14 GPM to 1.5...36 GPM
 t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Analog Output
Polyamide, Polysulfone, PP, Brass, Stainless Steel
Model: DF-MA



Water: 0.02...0.14 GPM to 1.5...36 GPM
 t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel Switch - Low Volume
Polyamide, Polysulfone, PP, Brass, Stainless Steel
Model: DF-WM



Water: 0.02...0.14 GPM to 1.5...36 GPM
 t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Digital Display
Polyamide, Polysulfone, PP, Brass, Stainless Steel
Model: DF-KL



Water: 0.02...0.14 GPM to 1.5...36 GPM
 t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Totalizer/Batch Controller
Polyamide, Polysulfone, PP, Brass, Stainless Steel
Model: DF-ZL, -DL



Water: 0.02...0.14 GPM to 1.5...36 GPM
 t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: \pm 2.5% of Full Scale





Flow

Paddle Wheel - Pulse Output
Brass
Model: DFT



Water: 0.02...0.14 GPM to 0.5...12 GPM
 t_{max} 180 °F; p_{max} 230 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pulse Output
PTFE
Model: DFT



Water: 0.02...0.14 GPM to 0.5...12 GPM
 t_{max} 180 °F; p_{max} 230 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Digital Display
PTFE, Brass
Model: DFT-..KL



Water: 0.02...0.14 GPM to 0.5...12 GPM
 t_{max} 180 °F; p_{max} 230 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pulse/Analog Output
POM, PVDF, Brass, Stainless Steel
Model: DRH-..F, DRH-..L



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Analog Output
POM, PVDF, Brass, Stainless Steel
Model: DRH with AUF



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pointer Indicator
POM, PVDF, Brass, Stainless Steel
Model: DRH-..Z3



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Compact Electronics
POM, PVDF, Brass, Stainless Steel
Model: DRH-..C3



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Digital Display
POM, PVDF, Brass, Stainless Steel
Model: DRH with ZED or ADI-1



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: \pm 2.5% of Full Scale

Paddle Wheel - Pulse/Analog Output
Polypropylene, Aluminum-Bronze,
Stainless Steel
Model: DRG-..F, ..L



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel - Analog Output
Polypropylene, Aluminum-Bronze,
Stainless Steel
Model: DRG with AUF



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel - Pointer Indicator
Polypropylene, Aluminum-Bronze,
Stainless Steel
Model: DRG-..Z3



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 3% of Full Scale

Paddle Wheel - Compact Electronics
Polypropylene, Aluminum-Bronze,
Stainless Steel
Model: DRG-..C3



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 3% of Full Scale



Paddle Wheel - Digital Display
Polypropylene, Aluminum-Bronze,
Stainless Steel
Model: DRG with ZED or ADI-1



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 3% of Full Scale

Dual-Ring Piston - Pendulum - Low Volume
Stainless Steel
Model: LFM



Water: 0.005...0.25 l/min
 t_{max} 70 °C; p_{max} 100 bar
Connection: G 1/8, Swagelok 6 mm
Accuracy: \pm 2.5 % of Reading

Paddle Wheel - Insertion Type
Stainless Steel
Model: DOR



Water: 5.5...180 GPM to 25,000...800,000 GPM, 1...33 ft/sec
 t_{max} 200 °F; p_{max} 80 PSIG
Connection: 1-1/2" NPT, 2" NPT
Linearity: \pm 1.5% of Full Scale

Positive Displacement - Piston Pulse Output
Brass
Model: DRZ..F



Viscosity Range: 5...100 cSt
Oil: 1.6...110 GPH
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: \pm 1% of Reading

Positive Displacement - Piston Analog Output
Brass
Model: DRZ with AUF



Viscosity Range: 5...100 cSt
Oil: 1.6...110 GPH
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: \pm 1% of Reading

Positive Displacement - Piston Compact Electronics
Brass
Model: DRZ...C3



Viscosity Range: 5...100 cSt
Oil: 1.6...110 GPH
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: \pm 1% of Reading

Positive Displacement - Oval Gear Pulse Output
POM, Aluminum
Model: OVZ-..F, ..L



Viscosity Range: 10...800 cSt
Oil: 0.08...2.1 GPM to 0.5...10.6 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Positive Displacement - Oval Gear Analog Output
POM, Aluminum
Model: OVZ-..L4 with AUF



Viscosity Range: 10...800 cSt
Oil: 0.08...2.1 GPM to 0.5...10.6 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Positive Displacement - Oval Gear Pointer Indicator
POM, Aluminum
Model: OVZ-..Z3



Viscosity Range: 10...800 cSt
Oil: 0.08...2.1 GPM to 0.5...10.6 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Positive Displacement - Oval Gear Compact Electronics
POM, Aluminum
Model: OVZ-..C3



Viscosity Range: 10...800 cSt
Oil: 0.08...2.1 GPM to 0.5...10.6 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Positive Displacement - Oval Gear Batch Controller
POM, Aluminum
Model: OVZ with ZED



Viscosity Range: 10...800 cSt
Oil: 0.08...2.1 GPM to 0.5...10.6 GPM
 t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: \pm 2.5% of Full Scale

Oval Gear - Pulse Output
Aluminum, Stainless Steel, Cast Iron
Model: DON-..F4



Viscosity Range: 0...1000 cP
Oil: 0.13...9.5 GPH to 40...660 GPM
 t_{max} 250 °F; p_{max} 1450 PSI
Connection: 1/8"...4" NPT, ANSI 1"...4"
Accuracy: \pm 0.2-2% of Reading



Flow

| | | | |
|---|--|--|---|
| <p>Oval Gear - LCD Display Aluminum, Stainless Steel, Cast Iron Model: DON-...Z...</p>  <p>Viscosity Range: 0...1000 cP Oil: 0.13...9.5 GPH to 40...660 GPM t_{max} 250 °F; p_{max} 1450 PSI Connection: 1/8"...4" NPT, ANSI 1"...4" Accuracy: \pm 0.2-2% of Reading</p> | <p>Oval Gear - Mechanical Totalizer Aluminum, Stainless Steel, Cast Iron Model: DON-...M...</p>  <p>Viscosity Range: 0...1000 cP Oil: 0.13...9.5 GPH to 40...660 GPM t_{max} 250 °F; p_{max} 1450 PSI Connection: 1/8"...4" NPT, ANSI 1"...4" Accuracy: \pm 0.2-2% of Reading</p> | <p>Oval Gear - Pulse Output PPS Model: DOC</p>  <p>Viscosity Range: 0...1000 cP Oil: 0.13...26.4 GPH to 0.8...21 GPM t_{max} 176 °F; p_{max} 145 PSI Connection: G 1/4...G 1, 1/4"...1" NPT Accuracy: \pm 0.5 % of Reading</p> | <p>Positive Displacement - Screw Type - Pulse Output Aluminum Model: OME</p>  <p>Viscosity Range: 1...5,000 cSt Oil: 0.05...2.6 GPM to 0.53...26.4 GPM t_{max} 210 °F; p_{max} 580 PSIG Connection: 1/2"...1" NPT, 1/2"...1" ANSI Accuracy: \pm 0.3% of Reading</p> |
| <p>Positive Displacement - Screw Type - Pulse Output Cast Iron, Stainless Steel Model: OMG</p>  <p>Viscosity Range: 1...5,000 cSt Oil: 0.026...2.6 GPM to 13...1,300 GPM t_{max} 390 °F; p_{max} 6,000 PSIG Connection: 1/2"...3" NPT, 1/2"...6" ANSI Accuracy: \pm 0.3% of Reading</p> | <p>Gear Wheel - Meter Cast Iron, Stainless Steel Model: DZR</p>  <p>Viscosity Range: 20...5,000 mm²/s Oil: 0.008...2 l/min to 3...700 l/min t_{max} 150 °C; p_{max} 400 bar Connection: G 3/8... 1 Accuracy: \pm 0.3-1% of Reading</p> | <p>Gear Wheel - Meter Aluminum Model: KZA</p>  <p>Viscosity Range: 20...4,000 mm²/s Oil: 0.02...4 l/min to 1...200 l/min t_{max} 80 °C; p_{max} 160 bar Connection: G 1/4... 1 Accuracy: \pm 0.3-3% of Reading</p> | <p>Positive Displacement - Spur Gear Pulse Output Cast Iron, Stainless Steel Model: ZDM</p>  <p>Viscosity Range: 0.3...1,000,000 cSt Oil: 0.0005...0.5 GPM to 0.3...80 GPM t_{max} 300 °F; p_{max} 4,600 PSIG Connection: 3/8"...1-1/2" NPT Accuracy: \pm 0.3% of Reading</p> |
| <p>Calorimetric Indicator/Switch Stainless Steel Model: KAL-D</p>  <p>Water: 0.13...6.5 ft/sec t_{max} 175 °F; p_{max} 580 PSIG Connection: 1/4", 1/2" NPT/BSP, M12</p> | <p>Calorimetric Indicator/Switch Stainless Steel Model: KAL-K</p>  <p>Water: 0.13...6.5 ft/sec t_{max} 250 °F; p_{max} 1,450 PSIG Connection: 1/4"...3/4" NPT, Tri-Clamp®</p> | <p>Calorimetric Transmitter/Switch Stainless Steel Model: KAL-A</p>  <p>Water: 0.13...6.5 ft/sec t_{max} 175 °F; p_{max} 1,450 PSIG Connection: 1/4"...3/4" NPT, Tri-Clamp® Linearity: \pm10% of Full Scale</p> | <p>Calorimetric Indicator/Switch for Air/HVAC Brass Model: KAL-L</p>  <p>Air: 3.5...65 ft/sec t_{max} 250 °F; p_{max} 100 PSIG Connection: 1/2" NPT, Duct Flange Linearity: \pm10% of Full Scale</p> |



Calorimetric Indicator/Switch
Brass, Stainless Steel
Model: KAL, KAL-E



Water: 0.13...6.5 ft/sec
 t_{max} 250 °F; p_{max} 1,450 PSIG
Connection: 1/4"...1-1/2" NPT

Calorimetric Flowmeter/Switch
Stainless Steel
Model: DVK



Air: 1...10 NI/min to 600...12,000 NI/h
 t_{max} 50 °C; p_{max} 15 bar
Connection: G 1/4"...G 2
Accuracy: \pm 5% of Full Scale

Air Velocity Sensor
Polycarbonate
Model: KAH



Air: 0...2,000/3,000/4,000 ft/min
Output Signal: 0 ... 10 V_{DC} or 4 ... 20 mA
Supply Voltage: 24 $V_{AC/DC}$
Connection: Mounting Adapter
Accuracy: \pm (0.2 m/s + 3% of Reading)

Mass Flowmeter/Controller Thermal
Stainless Steel
Model: DMS



Air: 0...10 SCCM to 0...200 SLPM
 t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/4" or 1/2" NPT, 1/8"...1/2" Compression
Accuracy: \pm 1% of Full Scale

Mass Flowmeter - Thermal
Polyamide, Stainless Steel
Model: MAS



Air: 0...10 SCCM to 0...500 SLPM
 t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/4" NPT, 1/2" or 1/2" Swagelok®
Accuracy: \pm 1.5% of Full Scale

Mass Flowmeter/Controller - Thermal
Polyamide, Stainless Steel
Model: MFC



Air: 0...20 SCCM to 0...50 SLPM
 t_{max} 120 °F; p_{max} 145 PSIG
Connection: 1/4" NPT; 1/8" or 1/4" Swagelok®
Accuracy: \pm 1.5% of Full Scale

Mass - Flowmeter - Thermal
Stainless Steel
Model: KMT-1/-2/-3



Air: 0.5...200 Nm/s
 t_{max} 176 °F; p_{max} 230 PSIG
Connection: R 1/2"...2 Ball Valve
Accuracy: \pm 2.5% of Reading, \pm 0.15% of Full Scale

Mass - Flowmeter - Thermal
Stainless Steel
Model: KMT-4

Installation Under Pressure



Air: 0.2...200 Nm/s
 t_{max} 80 °C; p_{max} 16 bar
Connection: R 1/2", Male for Insertion (DN 65... DN 700)
Accuracy: \pm 1.5% of Reading, \pm 0.8% of Full Scale

Mass Flowmeter - Thermal
Stainless Steel
Model: KES-1/3/4



Air: 0...15 ft/sec to 0...300 ft/sec
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/2"...3" NPT, 1/2"...8" ANSI
Accuracy: \pm 1.0% of F/S, \pm 0.5% of Reading

Mass Flowmeter - Coriolis
Stainless Steel
Model: TME / UMC-4



Water: 0...430 lbs/hr to 0...132,000 lbs/hr
 t_{max} 350 °F; p_{max} 580 PSIG
Connection: 1/2"...3" ANSI
Accuracy: \pm 0.15 - 0.5% of Reading

Mass Flowmeter - Coriolis
Stainless Steel, Hastelloy®
Model: TMU / UMC-3



Water: 0...1,320 lbs/hr to 0...2,200 tons/hr
 t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/2"...12" ANSI
Accuracy: \pm 0.1% - 0.5% of Reading

Mass Flowmeter - Coriolis with Heating Jacket
Stainless Steel, Hastelloy®
Model: TMU-..AC



Water: 0...1,320 lbs/hr to 0...2,200 tons/hr
 t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/2"...12" ANSI
Accuracy: \pm 0.1% - 0.5% of Reading



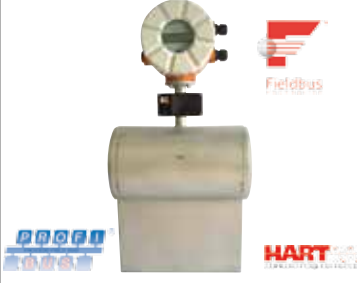
Flow

Mass Flowmeter - Coriolis
Stainless Steel, Hastelloy®, Monel®,
Tantalum, Nickel
Model: TM / UMC-3



Water: 0...18 lbs/hr to 0...140,000 lbs/hr
 t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/4"...1/2" NPT, 1/2"...4" ANSI
Accuracy: \pm 0.1 – 0.5% of Reading

Mass Flowmeter - Coriolis
Stainless Steel, Hastelloy®, Monel®,
Tantalum, Zirconium
Model: TMR / UMC-3



Viscosity Range: 0.3...50,000 cSt
Water: 0...2,600 lbs/hr to 0...54,500 lbs/hr
 t_{max} 500 °F; p_{max} 1,440 PSIG
Connection: 1/2"...4" ANSI
Accuracy: \pm 0.1 – 0.15% of Reading

Orifice Plate - Differential Pressure
Steel, Stainless Steel, Hastelloy-C®,
Titanium, Monel®, Tantalum
Model: KPL



Ranges: for Liquids, Gases, Steam
Connection: DN 50 ... 600, ANSI 2" ... 24"
 t_{max} 500 °C; p_{max} PN 420

Orifice Plate - Differential Pressure
Steel, Stainless Steel, Hastelloy-C®,
Titanium, Monel®, Tantalum
Model: KPL-B/-F



Ranges: for Liquids, Gases, Steam
Connection: DN 50 ... 600, ANSI 2" ... 24"
 t_{max} 500 °C; p_{max} PN 420

Pitot Tube - Differential Pressure
Stainless Steel
Model: ANU



Connection: G 1 ... 2, 1" ... 2" NPT,
DN 25...100, ANSI 1" ... 4"
Probe Length: 50 ... 6000 mm (2" ... 240")
 t_{max} 900 °C; p_{max} PN 250

Nozzle - Differential Pressure
Steel, Stainless Steel
Model: DUS



Nominal Diameter: DN 50 ... 600 (2" ... 24")
 t_{max} 560 °C; p_{max} 420 bar

Venturi Tube - Differential Pressure
Steel, Stainless Steel
Model: DVT



Nominal Diameter:
DN 50 ... 1200 (2" ... 48")
 t_{max} 560 °C; p_{max} 420 bar

Orifice Differential Pressure Transmitter
Brass, Stainless Steel
Model: KEL-V



Water: 0.1...0.5 GPM to 400...2,000 GPM
 t_{max} 250 °F; p_{max} 230 PSIG
Connection:
1/2" ... 1-1/2" NPT, 1/2" ... 8" ANSI Wafer
Accuracy: \pm 5% of Full Scale

Orifice Differential Pressure Flowmeter/Switch
Brass, Stainless Steel
Model: KEL-S, KEL-Q



Water: 0.1...0.5 GPM to 400...2,000 GPM
 t_{max} 250 °F; p_{max} 230 PSIG
Connection:
1/2" ... 1-1/2" NPT, 1/2" ... 8" ANSI Wafer
Accuracy: \pm 5% of Full Scale

Orifice Differential Pressure Flowmeter/Switch/Transmitter
Brass, Stainless Steel
Model: KEL-D



Water: 0.1...0.5 GPM to 400...2,000 GPM
 t_{max} 250 °F; p_{max} 230 PSIG
Connection:
1/2" ... 1-1/2" NPT, 1/2" ... 8" ANSI Wafer
Accuracy: \pm 5% of Full Scale

Orifice - Differential Pressure
Aluminum-Bronze, Stainless Steel
Model: RCD-...Z



Water: 0.2...0.88 GPM to 100...600 GPM
Air: 0.3...3 SCFM to 250...1,650 SCFM
 t_{max} 210 °F; p_{max} 580 PSIG
Connection: 1/2" ... 3" NPT
Accuracy: \pm 3% of Full Scale

Orifice Differential Pressure Flowmeter - Compact Electronics
Aluminum-Bronze, Stainless Steel
Model: RCD-...C3



Water: 0.2...0.88 GPM to 100...600 GPM
Air: 0.3...3 SCFM to 250...1,650 SCFM
 t_{max} 210 °F; p_{max} 580 PSIG
Connection: 1/2" ... 3" NPT
Accuracy: \pm 3% of Full Scale



Orifice Differential Pressure Flowmeter - Digital Display

Aluminum-Bronze, Stainless Steel
Model: RCD-...K



Water: 0.2...0.88 GPM to 100...600 GPM
Air: 0.3...3 SCFM to 250...1,650 SCFM
 t_{max} 210 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: \pm 3% of Full Scale

Orifice Differential Pressure Flowmeter

Bronze, Monel®, Stainless Steel
Model: RCM



Water: 0.3...2 GPM to 400...3,000 GPM
Air: 1.5...10 SCFM to 3,000...20,000 SCFM
 t_{max} 212 °F; p_{max} 180 PSIG
Connection:
1/2"...3" NPT, 1/2"...8" ANSI Wafer
Accuracy: \pm 3% of Full Scale

Electromagnetic - Switch/Pulse/ Analog Output

PPS/Stainless Steel, PVDF/Hastelloy®/
Tantalum
Model: MIK-...S3, ..F3, ..L3



Water: 0.18...7.8 GPH to 9.5...180 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...2" NPT or Glue Socket
Accuracy: \pm 2% of Full Scale

Electromagnetic Compact Electronics

PPS/Stainless Steel, PVDF/Hastelloy®/
Tantalum
Model: MIK-...C3



Water: 0.18...7.8 GPH to 9.5...180 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...2" NPT or Glue Socket
Accuracy: \pm 2% of Full Scale

Electromagnetic - Totalizer or Batch Controller

PPS/Stainless Steel, PVDF/Hastelloy®/
Tantalum
Model: MIK-...E and MIK-...G



Water: 0.18...7.8 GPH to 9.5...180 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...2" NPT or Glue Socket
Accuracy: \pm 2% of Full Scale

Electromagnetic - Insertion

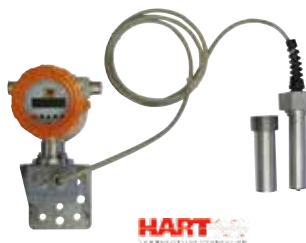
Stainless Steel, PTFE or PFA Clad
Model: PIT



Water: 0...32 ft/sec
 t_{max} 300 °F; p_{max} 580 PSIG
Connection: Weld-on, 2" or 3" ANSI
Accuracy: \pm 1.5% of Reading,
 \pm 0.5% of Full Scale

Electromagnetic - Insertion

Stainless Steel
Model: PITe



Water: 0...10 m/s
 t_{max} 100 °C; p_{max} PN 16
Connection: Weld-on Nozzle ϕ 40 mm,
Sensor with Union Nut M52x2
for Pipelines DN 50...400, ANSI 2"...16"
Accuracy: \pm 1.5% of Full Scale

Electromagnetic In-line Flowmeter

Lining: Hard or Soft Rubber, PTFE
Model: DMH



Water: 0.29...26.4 to 431.6...43,333 GPM
 t_{max} 300 °F; p_{max} 580 PSIG
Connection: 1/2"...24" ANSI
Accuracy: \pm 0.3% of Full Scale

Vortex - Switch/Pulse/Analog Output

PPS/Brass, PPS/Stainless Steel
Model: DVZ-...S3, ..F3, ..L3



Water: 0.13...1.2 GPM to 2.6...26.5 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 2.5% of Full Scale

Vortex - Analog Output

PPS/Brass, PPS/Stainless Steel
Model: DVZ-...L4 with AUF



Water: 0.13...1.2 GPM to 2.6...26.5 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 2.5% of Full Scale

Vortex - Compact Electronics

PPS/Brass, PPS/Stainless Steel
Model: DVZ-...C3



Water: 0.13...1.2 GPM to 2.6...26.5 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 2.5% of Full Scale

Vortex - Totalizer or Batch Controller

PPS/Brass, PPS/Stainless Steel
Model: DVZ-...E and DVZ-...G



Water: 0.13...1.2 GPM to 2.6...26.5 GPM
 t_{max} 175 °F; p_{max} 145 PSIG
Connection: 1/4"...1" NPT
Accuracy: \pm 2.5% of Full Scale



Flow

Vortex - Flowmeter
Stainless Steel
Model: DVH



Water: 0.89...22 GPM to 141...4270 GPM
Air: 1.8...16.4 SCFM to 1800...164911 SCFM
 t_{range} -328...750 °F; p_{max} 1,450 PSIG
Connection: 1/2"...8" ANSI
Option: Integrated Temperature and Pressure Sensor, Wafer Type
Accuracy: $\pm 1\%$ Reading for Gas & Steam, $\pm 0.7\%$ Reading for Liquids

Vortex - Meter
Stainless Steel
Model: DVE



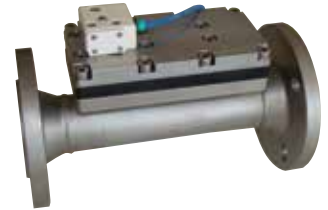
Water: 5.2...157 to 284...8537 m³/h
Air: 889...1463 Nm³/h to 26,915...2,467,081 Nm³/h
 t_{max} 400 °C; p_{max} 100 bar
Connection: 2" NPT, DN 50, ANSI 2"
Mountable in NW80...NW600
Option: Integrated Temp. and Pressure Sensor, Installation/Removal Water
Accuracy: $\pm 1.2\%$ of Reading (Water), $\pm 1.5\%$ of Reading (Gas/Steam)

Oscillation - Flowmeter
Stainless Steel
Model: DOG-4



Air: 0.2...20 Nm³/h to 60...6,000 m³/h
Pressure Drop: Max. 50 mbar
 t_{max} 120 °C (for EX 60 °C); p_{max} PN 40
Connection:
Flange DN 25...200, ANSI 1" ... 8"
Accuracy: $\pm 1.5\%$ of Reading

Oscillation - Flowmeter
Stainless Steel
Model: DOG-5



Water:
0.075...3.75 m³/h to 19.6...980 m³/h
 t_{max} 120 °C; p_{max} PN 40
Connection:
Flange DN 25...200, ANSI 1" ... 8"
Accuracy: $\pm 0.5\%$ of Reading

Ultrasonic - Switch/Pulse/Analog Output
Brass, Stainless Steel
Model: DUK-..S3, -..F3, -..L3



Water: 0.02...5 GPM to 2.6...160 GPM
 t_{max} 190 °F; p_{max} 145 PSIG
Connection: 1/4"...3" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Ultrasonic - Analog Output
Brass, Stainless Steel
Model: DUK-..L4 with AUF



Water: 0.02...5 GPM to 2.6...160 GPM
 t_{max} 190 °F; p_{max} 145 PSIG
Connection: 1/4"...3" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Ultrasonic - Compact Electronics
Brass, Stainless Steel
Model: DUK-..C3



Water: 0.02...5 GPM to 2.6...160 GPM
 t_{max} 190 °F; p_{max} 145 PSIG
Connection: 1/4"...3" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Ultrasonic - Totalizer/Batcher
Brass, Stainless Steel
Model: DUK-..E, ..G



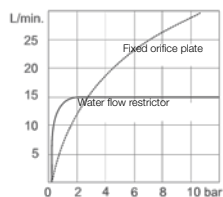
Water: 0.02...5 GPM to 2.6...160 GPM
 t_{max} 190 °F; p_{max} 145 PSIG
Connection: 1/4"...3" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Ultrasonic - Digital Display
Brass, Stainless Steel
Model: DUK-..K



Water: 0.02...5 GPM to 2.6...160 GPM
 t_{max} 190 °F; p_{max} 145 PSIG
Connection: 1/4"...3" NPT
Accuracy: $\pm 1.5\%$ of Full Scale

Flow Regulators
Brass, Stainless Steel
Model: REG



Viscosity Range: 1...30 cSt
Flow Rates: 0.25...7.93 GPM
 t_{max} 570 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT

Flow Regulators - Multiple Element
Stainless Steel
Model: REG-8



Viscosity Range: 1...30 cSt
Flow Rates: 0.25...74 GPM
 t_{max} 570 °F; p_{max} 2,900 PSIG
Connection: 3/4"...2" ANSI Wafer

Flow Regulators - Multiple Element
Stainless Steel
Model: REG-9



Viscosity Range: 1...30 cSt
Flow Rates: 0.25...74 GPM
 t_{max} 570 °F; p_{max} 2,900 PSIG
Connection: 1-1/2"...2-1/2" BSP



Flow

Flow Indicator with Rotor
Brass, Stainless Steel
Model: DAA, DAH



Water: 0.1...3 GPM to 1...58 GPM
 t_{max} 210 °F; p_{max} 230 PSIG
Connection: 1/4"...1-1/2" NPT

Flow Indicator with Rotor
Brass, Stainless Steel
Model: DAF



Water: 0.16...0.16 GPH to 100...2,400 GPH
 t_{max} 180 °F; p_{max} 230 PSIG
Connection: 1/8"...1-1/2" NPT

Flow Indicator with Rotor
Brass, Stainless Steel, POM, PVDF
Model: DIH



Water: 0.05...0.2 GPM to 0.66...13.2 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 3/8" or 1" NPT

Flow Indicator with Rotor
PP, Aluminum-Bronze, Stainless Steel
Model: DIG



Water: 0.15...3 GPM to 3...37 GPM
 t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8"...1" NPT

Flow Indicator with Rotor
Brass
Model: DKF



Water: 0.03...1.8 GPM to 0.08...16 GPM
 t_{max} 250 °F; p_{max} 85 PSIG
Connection: 1/8"...1" NPT

Flow Indicator with Ball
Brass
Model: DKB



Water: 0.03...1.8 GPM to 0.08...16 GPM
 t_{max} 250 °F; p_{max} 85 PSIG
Connection: 1/8"...1" NPT

Flow Indicator with Ball
Bronze
Model: DAB



t_{max} 100 °C; p_{max} 6 bar
Connection: G 3/4...G 3

Flow Indicator - Sight Glass
Stainless Steel, PVC
Model: UFJ



t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1/4"...2" NPT or BSP

Flow Indicator with Flap
Cast Iron
Model: DAZ



Water: 2.1...17 l/min to 2.1...24 l/min
 t_{max} 200 °C; p_{max} 16 bar
Connection: G 1/2...G 1

Flow Indicator with Rotor
Grey Cast Iron, Cast Steel, Stainless Steel
Model: DAR



t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI

Flow Indicator with Flap
Grey Cast Iron, Cast Steel, Stainless Steel
Model: DAK



t_{max} 530 °F; p_{max} 580 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI

Flow Indicator with Drip Tube
Grey Cast Iron, Cast Steel, Stainless Steel
Model: DAT



t_{max} 250 °F; p_{max} 85 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI



Pressure

Bourdon Tube Pressure Gauges
Brass, Stainless Steel
Model: MAN-R, -Q



Measuring Range:
-30"...0" Hg to 0...14,500 PSIG
Housing Ø: 63, 100, 160 mm
Overload Protection: 1.15-1.3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.0% or ±1.6% of Full Scale

All Stainless Steel Bourdon Tube Pressure Gauges
Stainless Steel
Model: MAN-R



Measuring Range:
-30"...0" Hg to 0...14,500 PSIG
Housing Ø: 63, 100, 160 mm
Overload Protection: 1.15-1.3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.0% or ±1.6% of Full Scale

Bourdon Tube Pressure Gauges with Switches
Brass, Stainless Steel
Model: MAN-RF, -RG



Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 100, 160 mm
Overload Protection: 1.15-1.3 Times
Connection: 1/2" NPT
Accuracy: ±1.0% of Full Scale

Capsule Element Pressure Gauges
Brass, Stainless Steel
Model: MAN-K



Measuring Range:
-30"...0" Hg to 0...8.7 PSIG
Housing Ø: 63, 80, 100, 160 mm
Overload Protection: 0.9-1.0 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.6% of Full Scale

Diaphragm Pressure Gauges
Stainless Steel
Model: MAN-P



Measuring Range:
-7.5"...0" Hg to 0...580 PSIG
Housing Ø: 100, 160 mm
Overload Protection: 1.15-1.3 Times
Connection: 1/2" NPT, 3/4"...3" ANSI
Accuracy: ±0.6% of Full Scale

Pressure Gauge with Transducer
Stainless Steel
Model: MAN-ZF



Measuring Range:
-30"...0" Hg to 0...8,700 PSIG
Housing Ø: 100 mm
Overload Protection: 0.9-1.0 Times
Connection: 1/2" NPT
2-wire 4-20 mA Output
Accuracy: ±1.0% of Full Scale

Test Pressure Gauge with Bourdon Tube
Aluminum
Model: MAN-F



Measuring Range:
-8.5"...0" Hg to 0...36,000 PSIG
Housing Ø: 160, 250 mm
Overload Protection: 1.0 Times
Connection: 1/2" NPT
Accuracy: ±0.25% or ±0.6% of Full Scale

LCD Pressure Gauge with Ceramic Sensing Element Battery Powered
Stainless Steel/PA Fiberglass Reinforced
Model: MAN-SD, DSD



Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 80 mm
Overload Protection: 1.3-3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±0.5% of Full Scale

LCD Pressure Gauge with Ceramic Sensing Element Externally Powered
Stainless Steel/PA Fiberglass Reinforced
Model: MAN-LD



Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 80 mm
Overload Protection: 1.3-3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±0.5% of Full Scale

LCD Pressure Gauge with Ceramic or Thin Film Sensing Element - Battery Powered
Stainless Steel
Model: PDC



Measuring Range:
0...30 PSIG to 0...10,000 PSIG
Housing Ø: 80 mm
Overload Protection:
2 Times or 14,500 PSIG Max.
Connection: 1/4" NPT
Accuracy: ±0.5% of Full Scale, ±1 Digit

LED Pressure Gauge with Ceramic Sensing Element
Stainless Steel/PA Fiberglass Reinforced
Model: MAN-SF26, DSF26



Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 100 mm
Overload Protection: 2 Times
Connection: 1/4" NPT, 1/2" NPT
4-20 mA and Relay Contacts
Accuracy: ±0.5% of Full Scale

LED Differential Pressure Gauge with Ceramic Sensing Element
Stainless Steel/PA Fiberglass Reinforced
Model: MAN-BF20



Measuring Range:
-30"...0" Hg to 0...23,000 PSID
Housing Ø: 100 mm
Overload Protection: 2 Times
Connection: 1/2" NPT
4-20 mA and Relay Contacts
Accuracy: ±0.5% of Full Scale



Pressure

LED Differential Pressure Gauge with Ceramic Sensing Element

Stainless Steel/PA Fiberglass Reinforced

Model: MAN-BF26



Measuring Range: -30"...0" Hg to 0...23,000 PSID
Housing Ø: 100 mm
Overload Protection: 2 Times
Connection: 1/4" NPT, 1/2" NPT
4-20 mA and Relay Contacts
Accuracy: ± 0.5% of Full Scale

U-Pipe Pressure Gauge
Glass

Model: PUM



Measuring Range: 0...25 mbar to 0...150 mbar
Scale Division: 2 mm
Hose Connection Ø: 7 mm
Accuracy: ± 0.2 mbar

Differential Pressure Gauge with Diaphragm

Aluminum

Model: MAN-D..2A



Measuring Range: 0...0.4 PSID to 0...360 PSID
Housing Ø: 100, 160 mm
Connection: 1/4" BSP (NPT with Adapter)
Accuracy: ±1.6% of Full Scale

Differential Pressure Gauge with Diaphragm

Stainless Steel

Model: MAN-DF2G, -DG2G



Measuring Range: 0...0.9 PSID to 0...580 PSID
Housing Ø: 100, 160 mm
Connection: 1/2" BSP (NPT with Adapter)
Accuracy: ±1.6% of Full Scale

Diaphragm, Capsule, and Inline Diaphragm Seals for Pressure Gauges and Transmitters

Stainless Steel, Special Materials upon Request

Model: DRM



Measuring Range: -30"...0" Hg to 0...23,000 PSIG
Fill Liquids: Glycerine, Paraffin or Silicone
Connection: NPT, BSP, ANSI, Tri-Clamp® or other Sanitary Connections

Flange Diaphragm Seals

Stainless Steel, Monel®, Tantalum, Hastelloy®, PTFE

Model: DRM



Standard Version up to 350°C/40 bar: DN 25...DN 100, ANSI 1" ... 4"
Special Version up to 400 bar: up to DN 200, ANSI 8"
Flanges According to BS, JIS and GOST Standard
Optional: Extended Diaphragm

All Stainless Steel Bourdon Tube Pressure Gauge with Membrane Diaphragm

Stainless Steel

Model: MAN-RD..DRM-600



Measuring Range: 0...85 PSIG to 0...14,500 PSIG
Housing Ø: 63 mm
Connection: 1/2"...1-1/4" NPT
Accuracy: ±1.6% of Full Scale

Contact Pressure Gauge with Membrane Diaphragm Seal

Stainless Steel

Model: MAN-RF..M..DRM-601



Measuring Range: 0...85 PSIG to 0...14,500 PSIG
Housing Ø: 100 mm
Connection: 1/2"...1-1/4" NPT
Accuracy: ±1.6% of Full Scale

Pressure Gauge with Sanitary Diaphragm Seal and Cooling Element

Stainless Steel

Model: MAN-RF..MZB-711..DRM-602



Measuring Range: 0...15 PSIG to 0...580 PSIG
Housing Ø: 100 mm
Connection: Tri-Clamp®, DIN 11851, Hygienic Connection, IDF, SMS
Accuracy: ±1.6% of Full Scale

All Stainless Steel Pressure Gauge with Membrane Diaphragm

Stainless Steel

Model: MAN-RF..M1..DRM-628



Measuring Range: 0...15 PSIG to 0...580 PSIG
Housing Ø: 100, 160 mm
Connection: 1" ... 4" ANSI
Accuracy: ±1.6% of Full Scale

All Stainless Steel Pressure Gauge with Membrane Diaphragm

Stainless Steel

Model: MAN-RF..M1..DRM-620



Measuring Range: 0...1.45 PSIG to 0...8,700 PSIG
Housing Ø: 100, 160 mm
Connection: 3/4" NPT
Accuracy: ±1.6% of Full Scale

All Stainless Steel Pressure Gauge with In-Line Diaphragm

Stainless Steel

Model: MAN-RF..DRM-502



Measuring Range: 0...15 PSIG to 0...580 PSIG
Housing Ø: 100, 160 mm
Connection: 1/2" ... 2" Tri-Clamp®, ISO Hygienic Connection
Accuracy: ±1.6% of Full Scale



Pressure

Differential Pressure Gauge with Bourdon Tube
Aluminum, Steel
Model: MAN-DG12R



Measuring Range:
0...15 PSID to 0...870 PSID
Housing Ø: 160 mm
Connection: 1/2" NPT
Accuracy: ±1.6% of Full Scale

Pressure Gauge with Tri-Clamp® Diaphragm Seal
Stainless Steel
Model: MAN-RF..DRM-613



Measuring Range:
0...15 PSIG to 0 ...145 PSIG
Housing Ø: 100 mm
Connection: 1"...3" Tri-Clamp®
Accuracy: ±1.6% of Full Scale

Pressure Gauges with Diaphragm PPH
Model: MAN-..D



Measuring Range: 0...1 bar to 0...25 bar
Connection: 3/4" BSP
Accuracy: ±1.6% of Full Scale

LCD Pressure Gauge with Diaphragm Seal for Homogenizing Machines
Stainless Steel
Model: MAN-SD/DSD..DRM-189



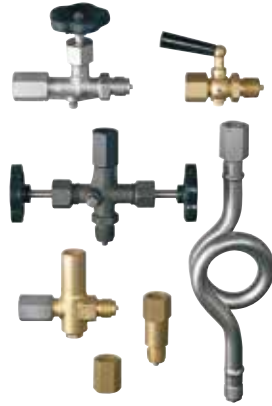
Measuring Range:
0...1,450 PSIG to 0...14,500 PSIG
Housing Ø: 80 mm
Connection: Homogenizer Flange
Accuracy: ±1.6% of Full Scale

LED Pressure Gauge with Diaphragm Seals for Homogenizing Machines
Stainless Steel
Model: MAN-SF..DRM-189



Measuring Range:
0...1,450 PSIG to 0...14,500 PSIG
Housing Ø: 100 mm
Membrane: Flush Mounted
Display: 4-digit, Green LED Display
 t_{max} 210 °F
Connection: Homogenizer Flange
Accuracy: ±1.0% of Full Scale

Pressure Gauge Accessories
Brass, Steel, Stainless Steel
Model: MZN



Block and Bleed Valves, Gauge Swivels, Snubbers, and Steam Siphons

Pressure Gauge with Membrane Diaphragm Seal - Plastic
PVDF
Model: MAN-RD..DRM-632



Measuring Range:
0...20 PSIG to 0...230 PSIG
Housing Ø: 63 mm
Connection: 1/2" NPT
Accuracy: ±1.6% of Full Scale

Pressure Gauge or Sensor with Membrane Diaphragm Seal
PVC or Polypropylene
Model: MAN-SD/DSD..DRM-630 and SEN..DRM-631



Measuring Range:
0...20 PSIG to 0...145 PSIG
Housing Ø: 74 mm
Connection: 1/2" NPT
Accuracy: ±1.0% of Full Scale

Differential Pressure Sensor and Controller for Filters
Model: PMP



Measuring Range: 0...20" H₂O
Power Supply: 24 V_{AC/DC}, 110 V_{AC}, 230 V_{AC}
Display: 4-Digit LED
Connection: 1/4" Tube
Accuracy: ±1.6% of Full Scale

Differential Pressure Transmitter
Stainless Steel, Monel®, Tantalum, Hastelloy®
Model: PAD



Measuring Range:
0...0.01 PSIG to 0...6,000 PSIG
Power Supply: 18-45 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.075% of Full Scale

Differential Pressure Transmitter with Diaphragm Seal
Stainless Steel, Monel®, Tantalum, Hastelloy®, PTFE
Model: PAD-..N



Measuring Range:
0 ... 250 mbar to 0 ... 206.80 bar
 t_{max} : 200 °C
Connection: Flange, Threaded, Clamp-on, and In-line Diaphragm Seal (Nominal Size 15...100)
Accuracy: ± 0.075% of Calibrated Span + Influence of Diaphragm Seal

Pressure Transmitter with Ceramic Sensing Element
Stainless Steel
Model: PDA

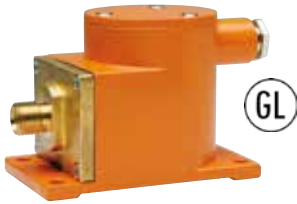


Measuring Range:
-30...0" Hg to 0...5,800 PSIG
Display: 3-Digit LED
Power Supply: 24 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale



Pressure

Pressure Transmitter for High Vibration
Brass
Model: PNK



Measuring Range:
-30...0" Hg to 0...1,450 PSIG
Overload Protection: 1.6 Times
Connection: M16 x 1.5 (NPT with Adapter)
Accuracy: ±1.0% of Full Scale

Hand-Held Pressure Indicator for External Sensors
Model: HND-P105, -210, -215



Measuring Range:
-14.5...40 PSIG to 0...5,800 PSIG
(Dependent on Associated Sensor)
Optional: Data Log, Alarm, Control Functions
Accuracy: ± 0.1% of Full Scale

Hand-Held Differential Pressure Indicator with 2 Integrated Sensors
Model: HND-P121, -123, -126



Measuring Range: -0.0145...0.36 PSID to -1.45...29 PSID
Optional: Data Log, Alarm, Control Functions
Accuracy: ± 0.2% - 0.4% of Full Scale

Hand-Held Differential Pressure Indicator with 1 Integrated Sensor
Model: HND-P129, -239



Measuring Range: 0...15 PSIG
Optional: Data Log, Alarm, Control Functions
Accuracy: ± 0.2% of Full Scale

Pressure Transmitter with Thin Film Sensing Element
Stainless Steel
Model: KPG



Measuring Range:
-30...0" Hg to 0...145,000 PSIG
Overload Protection: 1.5-2 Times
Connection: 1/4" NPT, 1/2" NPT; 9/16 SAE
Accuracy: ± 0.125% - 0.25% of Full Scale

Pressure Transmitter with Thin Film Sensing Element
Stainless Steel
Model: KPK



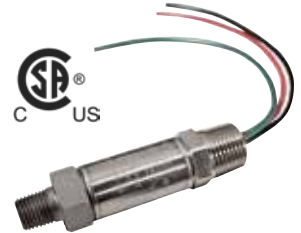
Measuring Range:
-30...0" Hg to 0...15,000 PSIG
Overload Protection: 1.5-2 Times
Connection: 1/4" NPT
Accuracy: ± 0.25% - 0.5% of Full Scale

OEM Pressure Transmitter with Heat-Fused Sensing Element
Stainless Steel
Model: KPA



Measuring Range:
0...50 PSIG to 0...10,000 PSIG
Overload Protection: 2 Times
Connection: 1/4" NPT
Accuracy: ± 0.25% of Full Scale

Explosion Proof Pressure Transmitter CSA/US Approved
Stainless Steel
Model: KP46



Measuring Range:
0...50 PSIG to 0...20,000 PSIG
Overload Protection: 2 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.25% BFSL

Pressure Transmitter with Ceramic Element and Add-On Display AUF
Stainless Steel
Model: SEN-86 & SEN-87 with AUF



Measuring Range:
-30...0" Hg to 0...10,000 PSIG
Display: 4-Digit LED
Overload Protection: 1.5-2 Times
Connection: 1/2" NPT, 1/4" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale

Pressure Sensor with Ceramic Element
Stainless Steel
Model: SEN-96



Measuring Range:
-30...0" Hg to 0...6,000 PSIG
Output: 4-20 mA, 0-5 V_{DC}, 0-10 V_{DC}
Connection: 1/4" NPT, 1/2" NPT, G 1/4, G 1/2
Accuracy: ± 0.5% of Full Scale

Pressure Sensor with Ceramic Element
Stainless Steel
Model: SEN-98/-99



Measuring Range:
-30...0" Hg to 0...8,700 PSIG
0...14.5 to 0...360 PSIA
Overload Protection: 1.3-5 Times
Connection:
1/4" NPT, 1/2" NPT, G 1/4, G 1/2
Accuracy: ± 0.25 - 0.5% of Full Scale

Add-On Loop Powered Display for Transmitters
Model: AUF



For Transmitters with DIN 43650 Plugs
Loop Powered 4-20 mA
Menu Programmable
Optional Transistor Switch



Pressure

**Pressure Transmitter
High Accuracy**
Stainless Steel, Hastelloy-C®, Tantalum
Model: PAS



Measuring Range:
-30"...0" Hg to 0...8,700 PSIG
Power Supply: 12-45 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.075% of Full Scale

**Pressure Transmitter with
Diaphragm Seal**
Stainless Steel, Monel®, Tantalum,
Hastelloy®, PTFE
Model: PAS-..N



Measuring Range:
0 ... 250 mbar to 0 ... 600 bar
t_{max}: 350 °C
Connection:
Thread or Flange (Nominal Size 15...100)
Accuracy: ± 0.075% of Calibrated Span +
Influence of Diaphragm Seal

**Pressure Transmitter with Ceramic
Sensing Element**
Stainless Steel
Model: PDD



Measuring Range:
-30"...0" Hg to 0...5,800 PSIG
Display: 3-Digit LED
Power Supply: 24 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale

**Electronic Pressure
Switch/Transmitter
Thin Film/Ceramic Sensor**
Stainless Steel
Model: PSC



Measuring Range: -30" Hg...30 PSIG
to 0...10,000 PSIG
Display: 4-Digit LED
Power Supply: 12-30 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 1.0% of Full Scale, ± 1 Digit

**Pressure Switch - Heavy Duty
Bellows Type**
Brass
Model: KRT



Switching Range:
-14.5...0 PSIG to 135...435 PSIG
Overpressure: 1.5-5 Times
Repeatability: ± 0.25% of Full Scale

**Pressure Switch - Heavy Duty
Bellows Type**
Brass
Model: KPS/KAS



Switching Range:
0...35 PSIG to 87...870 PSIG
Overpressure: 5-10 Times
Connection: 1/4" NPT
Repeatability: ± 0.25% of Full Scale

**Pressure Switch - Industrial
Diaphragm/Piston Type**
Aluminum
Model: KPH



Switching Range:
-14.5...0 PSIG to 580...6,100 PSIG
Overpressure: 1.4-5 Times
Connection: 1/4" NPT
Repeatability: ± 3% of Full Scale

**Pressure Switch - OEM
Diaphragm Type**
Zinc-Plated Steel
Model: KPH300



Switching Range:
3...30 PSIG to 450...4,600 PSIG
Overpressure: 1.2-9 Times
Connection: 1/4" NPT
Repeatability: ± 4% of Setpoint

**Pressure Switch - OEM
Diaphragm Type**
Brass, Stainless Steel
Model: KPF



Switching Range:
4.3...13 PSIG to 725...1,450 PSIG
Overpressure: 1,450 PSIG
Connection: 1/4" NPT
Repeatability: ± 5% of Full Scale

Pressure Switch with Hall Sensor
Brass/Plastic
Model: PDL-0 / PDL-1



Switching Range:
-0.9...-0.05 bar to 30...600 bar
Switching Function: 2-4 Times
Connection: 1/4" NPT
Repeatability: ± 1% of Full Scale

Pressure Switch - Mechanical
Stainless Steel
Model: SCH-27



Switching Range:
0.01...0.09 PSIG to 120...2,300 PSIG
Switching Function: Micro Switch
Connection: 1/2" NPT Female, 1/4" NPT
Female, 1/2" NPT Male, G 1/2 Male
Repeatability: < 1% of Switching Point

**Differential Pressure Switch -
Mechanical**
Stainless Steel
Model: SCH-28



Switching Range:
1.45...14.5 PSI to 3...145 PSI
Switching Function: Micro Switch
Connection: 1/2" NPT Female, 1/4" NPT
Female, 1/2" NPT Male, G 1/2 Male
Repeatability: < 1% of Switching Point



Custom Magnetic Float Switch
Brass, Stainless Steel, PVC, PPH, PVDF
Model: M



Density: 0.5 kg/dm³
t_{max} 300 °F; p_{max} 1,450 PSIG
Connection: NPT, DIN/ANSI Flange

Magnetic Float Switch
Stainless Steel
Model: NCS



Specific Gravity_{min}: 0.65
t_{max} 300 °F; p_{max} 400 PSIG
Connection: 1/8" NPT, 1/4" NPT

Magnetic Float Switch
Polypropylene
Model: NCP



Specific Gravity_{min}: 0.81
t_{max} 225 °F; p_{max} 100 PSIG
Connection: 1/8" NPT, 1/4" PF

OEM Level Switches
Stainless Steel, Polypropylene, PVDF
Model: OEM



Specific Gravity_{min}: 0.55
t_{max} 250 °F; p_{max} 425 PSIG
Connection: 1/2" NPT, 1/8" PF

Plastic Level Switch
Polypropylene, PVDF
Model: NKP



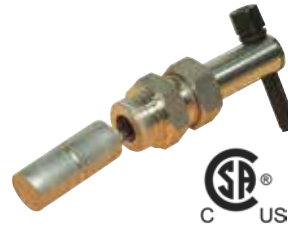
Specific Gravity_{min}: 0.6
t_{max} 212 °F; p_{max} 145 PSIG
Connection: 1/2" NPT, Bulkhead

Float Switch
Stainless Steel
Model: RFS



Specific Gravity_{min}: 0.7
t_{max} 250 °F; p_{max} 72 PSIG
Connection: 1/2" NPT

Float Switch
Brass, Stainless Steel
Model: NV



Specific Gravity_{min}: 0.7
t_{max} 225 °F; p_{max} 230 PSIG
Connection: G 3/4, M27x1.5

Custom Multipoint Level Switch
Brass, PVC, Stainless Steel
Model: NCG, NCM



Specific Gravity_{min}: 0.55
t_{max} 300 °F; p_{max} 400 PSIG
Connection: 1/8"...2" NPT, 3" ANSI Flange, 5/16" or 1/2" Tube

Float Bypass Switch
Aluminum, Stainless Steel
Model: NBA/NBE



Density: 0.65 kg/dm³
t_{max} 90 °C; p_{max} 10 bar
Connection: G 3/8 Female, R 1/2 Male

Float Switch
Polyethylene, Polypropylene
Model: NSP, NSM



Specific Gravity_{min}: 0.6
t_{max} 140 °F; p_{max} 30 PSIG
Connection: Cable

Float Switch
Polypropylene, Hypalon®
Model: NEC, NNE, NAE/B



Specific Gravity_{min}: 0.5
t_{max} 200 °F; p_{max} 80 PSIG
Connection: Cable

Float Switch
PTFE
Model: NST



Specific Gravity_{min}: 0.85
t_{max} 300 °F; p_{max} 15 PSIG
Connection: Cable

Float Switch
Stainless Steel
Model: NSE



Specific Gravity_{min}: 0.8
t_{max} 300 °F; p_{max} 220 PSIG
Connection: 1/2" NPT

Dual Magnet Float Switch
Stainless Steel
Model: NGS



Specific Gravity_{min}: 0.7
t_{max} 480 °F; p_{max} 360 PSIG
Connection: Square Flange, DIN-Flange, 2" BSP, 2" NPT

Conductive Switch
Fitting: SS, Polypropylene, PTFE
Electrode: SS, Hastelloy®, Titanium
Electrode Coating: Polyolefin, PTFE
Model: NEK, NEL, NES



t_{max} 300 °F; p_{max} 440 PSIG
Connection: 1/2" NPT, 1-1/2" NPT

Conductive Suspended Electrodes
Fitting: Polypropylene, PTFE
Electrode: SS, Hastelloy®, Titanium
Electrode Coating: Neoprene, PVC
Model: NEH



t_{max} 300 °F; p_{max} 90 PSIG
Connection: 1/2" NPT, 1-1/2" NPT



Level

Electrode Relays for Conductive Switches

Model: NE-104, -304



2 Limit Contacts or
2 Min/Max Control Switches
Switch Capacity: Max. 250 V_{AC},
5 A, 600 VA

Conductive Switch

Polypropylene, PPS
Model: NEK



Conductivity_{min}: 72 µS/cm
t_{max} 185 °F; p_{max} 290 PSIG
Connection: 3/4" NPT, R 3/4
Open-Collector or Relay

Conductive Switch with Head Mounted Transmitter

Stainless Steel, PEEK
Model: LNK, LNR



Conductivity_{min}: 10 µS/cm
t_{max} 212 / 176 °F; p_{max} 145 PSIG
Connection: G 1/2, G 1
Open-Collector
Electrode Length: 1/8" to 59"

Conductive Switch Compact Probe

Stainless Steel, PEEK
Model: LNK-K



Conductivity_{min}: 10 µS/cm
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2

Capacitive Switch for Liquids

Stainless Steel, PEEK
Model: LNZ



Dielectric Constant_{min}: 20
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2
Open-Collector

Microwave Switch

Stainless Steel, PEEK
Model: LNM



Dielectric Constant_{min}: 20
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2
Open-Collector

Hydrostatic Level Switch

Polypropylene, PVDF
Model: NLP



Tube Length: up to 16 ft
t_{max} 158 °F
Connection: 1" NPT, G 1

Capacitive Switch for Liquids

Stainless Steel, PVDF
Model: NCW



Dielectric Constant_{min}: 1.5
t_{max} 194 °F; p_{max} 145 PSIG
Connection: G 1, G 2
Adapter: G 1-1/4, G 1-1/2, Weld-in Sleeve
Relay

Capacitive Switch Liquids - High Temperature

Stainless Steel
Model: NCW-H



Dielectric Constant_{min}: 1.5
t_{max} 194 °F; p_{max} 145 PSIG
Connection: G 1
Adapter: G 1-1/4, G 1-1/2, Weld-in Sleeve
Relay

Optical Switch for Liquids

Stainless Steel, Polypropylene
Model: OPT



t_{max} 185 °F; p_{max} 145 PSIG
Connection: 1/2" NPT, G 1/2,
M14 Bulkhead
Open-Collector

Optical Switch for Liquids

Stainless Steel, Polysulfone, PFA
Model: TED



t_{max} 230 °F; p_{max} 400 PSIG
Connection: 3/8" NPT, 1/2" NPT

OEM Optical Switch for Liquids

Stainless Steel, Polysulfone
Model: NSD



t_{range} 15...250 °F; p_{max} 150 / 550 (SS) PSIG
Connection: 3/8" NPT

Ultrasonic Switch for Liquids

Stainless Steel
Model: NQ



t_{range} -40...257 °F; p_{max} 290 PSIG
Connection: 1" NPT, R 1

Ultrasonic Switch for Liquids

Stainless Steel
Model: NK-8000



t_{max} 176 / 212 °F; p_{max} 1,000 PSIG
Connection: 3/4" NPT

Vibrating Fork Switch for Liquids

Glass Filled PPS
Model: NWP



t_{range} -40...176 °F; p_{max} 150 PSIG
Connection: 3/4" NPT
Relay Output

















Vibration Switch for Liquids

Stainless Steel
Model: NWS



t_{max} 270 °F; p_{max} 650 PSIG
Viscosity_{max}: 5,000 cSt
Connection: 3/4" NPT, 1" NPT,
2" Tri-Clamp®; R 3/4 and R1; DIN
and ANSI Flanges



| | | | |
|---|--|--|---|
| <p>Static Pressure Level Switch Polyamide, NBR Model: NDT</p>  <p>t_{range}: 15...185 °F; p_{max}: Atmospheric Switchpoint: 4" Above End of Pipe Connection: Hose Clamp for 1-1/4" Pipe</p> | <p>Vibration Switch - Bulk Materials Stainless Steel Model: NSV</p>  <p>Switching Range: 9" ...118" Specific Gravity$_{min}$: 0.06 t_{max} 176 °F; p_{max} Atmospheric Connection: 1-1/2" NPT, G 1-1/2" 1 Relay, SPDT</p> | <p>Vibration Switch - Bulk Materials Stainless Steel Model: NVI</p>  <p>Switching Range: 9.25" and Special Lengths Specific Gravity$_{min}$: 0.05 t_{max} -22...320 °F; p_{max} 360 PSIG Connection: 1-1/2" NPT, G 1-1/2"</p> | <p>Diaphragm Switch - Bulk Materials Neoprene, FKM, Stainless Steel Model: NMF</p>  <p>t_{max} 392 °F; p_{max} 14.5 PSI (Over-pressure Protected) Connection: Flange</p> |
| <p>Pendulum Level Monitor Bulk Materials Aluminum, EPDM Model: PLS</p>  <p>Length$_{max}$: 78.7" t_{max} 176 °F; p_{max} 7 PSIG Connection: Aluminum Flange Contact: SPDT Microswitch 250 V_{AC}/3A</p> | <p>Rotating Vane Switch - Bulk Materials Stainless Steel Model: NIR-9/NIR-E9</p>  <p>Switching Range: 65...4,000 mm t_{max} 200 °C; p_{max} 0.5 bar Connection: 1" NPT, G 1 Male Output: 1 Relay, SPDT</p> | <p>Capacitive Switch Bulk Materials Stainless Steel, Polypropylene Model: NSC</p>  <p>Dielectric Constant$_{min}$: 1.5 Switching Range: 10" ...49 ft t_{range} -4...176 °F; p_{max} 7 PSIG Connection: 1" NPT, 2" NPT, G 1 Adapter: G 1-1/4, G 1-1/2; Round Flange</p> | <p>Guided Wave Radar (TDR) Transmitter Stainless Steel, PTFE Model: NGM</p>  <p>t_{max} 480 °F; p_{max} 580 PSIG Connection: Thread, Flange Rigid Probe, Concentric Probe, Cable Analog Output and Switching Output Accuracy: ± 3 mm of Measured Value</p> |
| <p>Guided Wave Radar (TDR) for Machines/Factory Automation Stainless Steel, PTFE Model: NGR</p>  <p>Measuring Range: 4" ...78" (Liquids) t_{max} 212 °F; p_{max} 145 PSIG Connection: 3/4" NPT, G 3/4 Male Analog Output, Switching Outputs Accuracy: ± 5 mm</p> | <p>Float Transducer - Reed Chain Stainless Steel, PVC-U, PP, PVDF Model: MM</p>  <p>Max. Measuring Length: 19.6 ft Density: 0.4 kg/dm³ t_{max} 265 °F; p_{max} 435 PSI Connection: 3/8" ... 2" NPT, 1-1/2" ... 4" ANSI Accuracy: $\pm 0.5\%$ for L < 6.2 Feet</p> | <p>Liquid Level Transmitter Polyethylene, PVC, PP, PTFE Model: NML-308</p>  <p>Specific Gravity$_{min}$: 0.9 Length$_{max}$: 6" ...48" t_{range} -4...250 °F; p_{max} 25 PSIG Connection: 1-1/4" NPT or 1-1/2" NPT</p> | <p>Liquid Level Transmitter Polyethylene, PVC, PP, PTFE Model: NML-310</p>  <p>Specific Gravity$_{min}$: 0.8 Length$_{max}$: 12" ...108" t_{range} -4...250 °F; p_{max} 40 PSIG Connection: 2" NPT, 2" ... 4" ANSI</p> |
| <p>Magnetostrictive Level Transmitter Stainless Steel Model: NMT</p>  <p>Specific Gravity$_{min}$: 0.7 Measuring Range: 12" ...157" t_{range} -4 ...158 °F; p_{max} 145 PSIG Connection: 2" NPT, G 2 Output: Analog 4-20 mA, 4-wire</p> | <p>Capacitive Level Transmitter Stainless Steel, PVDF Model: NMC</p>  <p>Measuring Range: 10" ...157" Dielectric Constant$_{min}$: 1.5 t_{max} 257 °F; p_{max} 145 PSIG Connection: 1" NPT, 2" NPT, G 1, G 2 Adapter: G 1-1/4, G 1-1/2, Weld-in Sleeve Output: Analog 4-20 mA, 2 Wire</p> | <p>Potentiometric Level Probe Stainless Steel Model: LNP</p>  <p>Conductivity: 1μS/cm Measuring Range: 8" ...80" t_{range} 14...248 °F (30 min. at 300 °F) p_{max} 145 PSIG Connection: 1" NPT, G 1</p> | <p>Capacitive Level Transmitter Stainless Steel, PTFE, CPVC Model: NRF</p>  <p>Rigid Probe and Suspended Cable Designs Length$_{max}$: 200 ft. t_{range} -100...350 °F; p_{max} 500 PSIG Connection: 3/4" NPT, 1-1/2" NPT, 1-1/2" ...3" Tri-Clamp®</p> |



Level

Capacitive Level and Temperature Probe

Stainless Steel, PTFE
Model: NRF-2, -3



Measuring Length_{max} 12 ft
t_{range} -100...350 °F
p_{max} 100 PSIG
Connection: 3/4" NPT, 1-1/2"...3" Tri-Clamp®
Output: 4-20 mA, RTD

Capacitive Level Probe

Stainless Steel, PTFE
Model: NRF-1F



Max. Length: 10 ft
t_{max} 350 °F; p_{max} 14.5...100 PSIG
Connection: 3/4" or 1-1/2" NPT
Output: 4-20 mA
Accuracy: ± 1% of Span

Bypass Level Indicator

Stainless Steel
Model: SZM



Measuring Length_{range} 15"...121"
t_{max} 212 °F; p_{max} 87 PSIG
Connection: DIN Flange, DN 15...32

Bypass Level Indicator

Stainless Steel
Model: MBSK



Measuring Length_{max} 19.7 ft
t_{max} 752 °F;
p_{max} 1,450 PSIG
Connection: 1-1/2"...1-1/4" ANSI Flange, DN 15...32

Mini Bypass with Roller Indicator

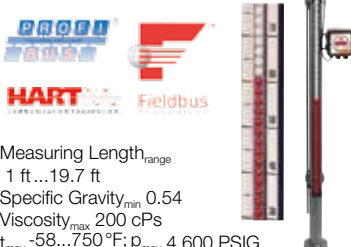
Stainless Steel
Model: NBK-M



Measuring Length_{range} 8"...9.8 ft
Specific Gravity_{min} 0.78
Viscosity_{max} 200 cPs
t_{max} 390 °F; p_{max} 580 PSIG
Connection: 1/2"...1" NPT, G 1/2, 1/2"...1" ANSI Flange, DN15...25

Bypass with Roller Indicator

Stainless Steel
Model: NBK-03,-06,-07,-10,-31,-32,-33



Measuring Length_{range} 1 ft...19.7 ft
Specific Gravity_{min} 0.54
Viscosity_{max} 200 cPs
t_{max} -58...750 °F; p_{max} 4,600 PSIG
Connection: 1/2"...2" NPT, G 1/2...2, 1/2"...2" ANSI Flange, DN15...50

Tank-Top Mounted Level Indicator

Stainless Steel
Model: NBK-04



Measuring Length_{range} 1 ft...13 ft
Specific Gravity_{min} 0.55
Viscosity_{max} 200 cPs
t_{max} 250 °F; p_{max} 230 PSIG
Connection: 2" or 2-1/2" ANSI Flange; DN50...60

Bypass Level Roller Indicator - Plastic

Polypropylene, PVDF
Model: NBK-16,-17



Measuring Length_{range} 8"...3 ft
Specific Gravity_{min} 0.57
Viscosity_{max} 200 cPs
t_{max} 176 °F; p_{max} 58 PSIG
Connection: 3/4"...2" ANSI Flange, DN20...50

Bypass Level Indicator - Cable Design

Polypropylene, Stainless Steel, PVC
Model: NBK-19



Measuring Length_{range} 8"...15.7 ft
Specific Gravity_{min} 1.0
Viscosity_{max} 200 cPs
t_{max} 140 °F; p_{max} Atmospheric

Displacement Level Meter

Stainless Steel, Hastelloy®
Model: BA



Measuring Length_{range} 1...19.7 ft
Specific Gravity_{min} 0.4...2.0
t_{range} -40...570 °F; p_{max} 580 PSIG
Connection: 2" ANSI Flange, DN50 Flange

Ultrasonic Measurement

PP, PVDF
Model: NUS-7



Measuring Range: Liquids up to 20 ft
t_{max} 176 °F; p_{max} 40 PSIG
Connection: G 2, 2" NPT
Analog Output
Accuracy: ± 0.2% of Reading ± 0.05% of Full Scale

Ultrasonic Level Sensor

PP, PVDF
Model: NUS-4



Measuring Range: 7.87"...82' (Liquids)
7.87"...32' (Bulk Media)
t_{max} 190 °F; p_{max} 43.5 PSIG
Connection: 1-1/2", 2" NPT; 3", 5", or 6" ANSI Flange

Ultrasonic Level Transmitter

PVDF, 2-wire or 3-wire
Model: NEO



Measuring Length_{range} 6"...24.5 ft
t_{range} -40...140 °F; p_{max} 30 PSIG
Connection: 2" NPT
Optional Relay

Submersible Pressure Transducer

Stainless Steel
Model: KPW



Measuring Depth_{max} 300 PSIG (690 ft wc)
t_{range} 14...175 °F; p_{max} 2x Depth Range

Deep Well Probe

Stainless Steel
Model: NTB



Measuring Depth_{max} 200 m (wc)
t_{range} 14...140 °F

Differential Pressure Transmitter

Stainless Steel, Hastelloy®
Model: PAD



Measuring Length_{range} 30"...13 ft
Power Supply: 18-45 VDC
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.075% of Measuring Range



Temperature

Temperature Switch for Liquids
Brass, Stainless Steel
Model: TWR



Switching Range: 86...248 °F
t_{max} 250 °F; p_{max} 230 PSIG
Connection: 3/4" NPT

Thermal Reed Temperature Switch
Brass, Stainless Steel
Model: TRS



Switching Range: 14...212 °F
t_{range} -40...250 °F; p_{max} 360 PSIG
Connection: 1/4"...1" NPT

Digital Temperature Switch
Stainless Steel
Model: TDD



Switching Range: -58...250 °F
t_{max} 250 °F; p_{max} 1,150 PSIG
Connection:
1/2" NPT, 3/4" NPT; G 1/2, G 3/4; M25x1.5
2 Limit Switches

Temperature Switch
Brass
Model: DTS



Measuring Range: 15...390 °F
Connection: 1/2" NPT

Gas Filled Rigid Stem
Thermometer
Stainless Steel
Model: TNS



Measuring Range: -40...1,100 °F
p_{max} 350 PSIG
Connection: 1/2"...1" NPT, G 1/2...G 1

Gas Filled Capillary Thermometer
Stainless Steel
Model: TNF



Measuring Range: -40...1,100 °F
p_{max} 350 PSIG
Connection: 1/2"...1" NPT, G 1/2...G 1

Digital Temperature Gauge
Stainless Steel
Model: DTM



Measuring Range: -30...750 °F
p_{max} 350 PSIG
Connection: 1/2"...1" NPT, G 1/2...G 1
Analog Output, Limit Switches

Thermowells for Stem and
Capillary Thermometers
Stainless Steel
Model: TSH



p_{max} 350 PSIG
Connection: 1/2"...1" NPT, Weld Stub

Digital Temperature Sensor
Stainless Steel
Model: TDA



Measuring Range: -58...250 °F
p_{max} 1,150 PSIG
Connection: 1/2" NPT, 3/4" NPT;
G 1/2, G 3/4
Output: 4-20 mA, 3-wire, Limit Switch

RTD Temperature Meters
Brass, Bronze, Stainless Steel
Model: TNK



Measuring Range: -112...302 °F
t_{max} 302 °F; p_{max} 725 PSIG
Connection: 1/2" NPT, G 1/2, M18x1.5

Temperature Sensor for Pipes
Brass, Stainless Steel
Model: TSP



Measuring Range: -40...300 °F
p_{max} 750 PSIG
Connection: 1/4"...1-1/2" NPT,
1-1/2" Tri-Clamp®
Output: 4-20 mA, Pt 100 RTD

RTD Temperature Probes
Stainless Steel
Model: TSR



Measuring Range: -320...1,100 °F
p_{max} 1,450 PSIG
Connection: 1/2" or 3/4" NPT;
1-1/2" Tri-Clamp®
Output: 4-20 mA, Pt 100 RTD

Integrated Temperature
Transmitter
Stainless Steel
Model: TST



Measuring Range:
-58...1,100 °F
p_{max}: 1,500 PSIG
Connection: 1/4" or 1/2" NPT;
1-1/2"...3" Tri-Clamp®
Output: 4-20 mA, 2-wire

Temperature Transmitters
Stainless Steel
Model: TMA with AUF



Measuring Range: -358...1,112 °F
p_{max} 1,450 PSIG
Connection: 1/4" NPT, 1/2" NPT
Output: 4-20 mA, 2-wire

Mini Infrared Thermometers
Model: ST-3000, -6000



Measuring Range: -76...1,400 °F
Laser Sighting: Single Point and Dual Point
Power: 2 AAA Batteries
Accuracy: ± 2% of Reading

Temperature Sensor
Brass, Stainless Steel
Model: TSA



Measuring Range: -40...150 °C
p_{max} 25 bar
Connection: G 1/4...1





Temperature

V-Form - Glass Thermometer
Aluminum or Plastic Casing, Brass
Model: TKG, TGL



Measuring Range: -76...390 °F
Connection: 1/2" NPT, G 1/2
Accuracy: ±1% of Full Scale

Digital Thermometer
Stainless Steel
Model: DTB



Measuring Range: -58...400 °F; -50...200 °C
Display in either °F or °C
Connection: 1/4" ... 1" NPT
Battery Powered, Life up to 5 years

Infrared Fixed Thermometer
Stainless Steel
Model: TIR-FA



Measuring Range:
0...120 °C to 100...500 °C
10 mV/K or Voltage Model J, K
Accuracy:
± 1.5% of Measuring Range or 2.5 °C

Infrared Fixed Thermometer
Stainless Steel
Model: TIR-SN/FS/FG



Measuring Range:
-20...300 °C to 1100...2500 °C
Analog Output
Accuracy: ± 1.5% of Measuring Range/°C
0.8... 1% of Reading +1 °C

Precision Hand-Held Thermometer
Model: HND-T120, -125



Measuring Range: -50...1,150 °C
Sensor: Type K Thermocouple
Power Supply: Battery or External
Accuracy: 0.1% – 1.5% of Reading

Precision Hand-Held Thermometers
Model: HND-T110, -115, -215 and HND-T105, -205



Measuring Range: -220...1,768 °C
Sensor: Type K, N, S, J, T Thermocouples or Pt 100, 4-wire
Power Supply: Battery or External
Accuracy: ± 0.03% of Full Scale

Room Thermometer
Aluminum
Model: TWL-ST



Measuring Range: -20...60 °C
p_{max} Atmospheric
Wall Socket
Pt 100, 4...20 mA
Accuracy: Cl. A or B

Bimetallic Thermometer
Stainless Steel
Model: TBI



Measuring Range: -30...500 °C
p_{max} 360 PSIG
Installed in Thermowell
Connection: G 1/2

Resistance Temperature Probe
Model: LTS



Measuring Range: -50...250 °C
p_{max} 145 PSIG
Sensor: Pt100, 2-wire
Connection: G 1/2, M12 x 1.5

Industrial - Resistance Thermometer
Stainless Steel
Model: MWD



Measuring Range:
-70 ... 250 °C to -200 °C... 600 °C
p_{max} 40 bar
Accuracy: Cl. A or B

Resistance Thermometers
Stainless Steel
Model: TWD



Measuring Range: -80...600 °C
p_{max} 580 PSIG
Sensor: Pt100, 2-, 3-, or 4-wire
Connection: G 1/2...1, 1/2" ... 1" NPT,
DIN25 Flange, Welded
Output: Analog 4-20 mA

Resistance Temperature Measuring Unit
Stainless Steel
Model: TWL, TTL



Measuring Range: -200...1,600 °C
p_{max} 3,625 PSIG
Sensor: Pt100, 2-, 3-, or 4-wire
Connection:
G 1/2...1, 1/2" ... 1" NPT, DIN15-50 Flanges
Output: Analog 4-20 mA

Sheath Resistance Thermometer
Stainless Steel
Model: TWM



Measuring Range: -20...600 °C
Sensor: Pt100, 2-, 3-, or 4-wire
Connection: G 1/2

Weld-In and Screw-In Thermocouples
Steel, Stainless Steel, Ceramic
Model: TTD, TTE



Measuring Range: -200...1,150 °C
Sensor: Thermocouples J or K
Connection: G 1/2, Clamp
Optional Output: 4-20 mA

Contact Resistance Thermometer
Aluminum, Stainless Steel
Model: TWA



Measuring Range: -20...260 °C
Accuracy: Cl. A or B

Sheath Thermocouples
Stainless Steel, Inconel®
Model: TTM



Measuring Range: -50...1,100 °C
Sensor: Thermocouples J or K
Connection: Clamp, Plug



Automatic Flow Regulating Valve
Brass, Stainless Steel
Model: REG



Viscosity: Max. 30 cSt
t_{max} 500 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT, 3/4"...2" ANSI Wafer

Power Supply, Latching and Isolation Relay
Model: RL



Power: 110 VAC, 230 VAC, 24 VDC
Excitation: 24 VDC, 120mA Regulated
Input: Dry Contact or NPN/PNP, 15mA Max
Output: SPDT Relay, 10A@240VAC
8A@24VDC

Compact Local Electronic Display
Model: AUF



Input: 4-20 mA Loop Powered
Indicator: 4-Digit, Red LED
Indicating Range: -1999...1999
Accuracy Class: 0.2 % of Span ±1 Digit

Electronics for Measuring and Monitoring, Counting, or Batch Control
Model: ZED-K, -Z, -D



Input: Frequency
Output: Analog, 2 Limit Contacts, Sensor Supply

Brass Ball Valves
Model: KUG-TB, -VN, -VC



t_{max} 160 °C; p_{max} PN 40
Connection: G 1/4...3
2- and 3-way with Thread

Frequency to Current Converter
Model: SCI



Compact DIN Rail Mounting Option
Explosion-proof Enclosure Available
Magnetic or High-level Pulse Inputs
4-20 mA Loop Powered

Digital - Panel Mount - Indicators
Model: DAG-A/S/M



Input: Current, Voltage, Temperature, Frequency, Resistance
Analog Output, Limit Contacts
Min/Max-Memory

Universal Panel Meter or Counter Electronics/Batch Controller
Model: DAG-T4, DAG-Z2



DAG-T4 Input:
Current, Voltage, Pt 100, Thermocouples
DAG-Z2 Input: Frequency
Both: Limit Contacts, Sensor Supply

Stainless Steel Needle Valve
Model: NVM, NAD



t_{max} 400 °F; p_{max} 3,600 PSIG
Connection: G 1/8...G 1-1/4, 1/8"...1" NPT

Intrinsically Safe Relay/Power Supply
Model: KFD-2, KFA-5



For Dry Contacts or NAMUR-Type Switches
Supply Voltage: 120 V_{AC}, +5/-15%, 45-60 Hz
Power Consumption: 3.5 VA (appx.)
Maximum Relay (SPDT) Output
Switching Frequency: 10 Hz Max.

Rate Meter, Totalizer and Batcher
Model: INT, MRT



Display Values: Rate, Total, Batch
Display Type: 0.56" Red LED
5 Digit Rate, 6 Digit Total, 6 Digit Batch
Power Input: 110 V_{AC}, 220 V_{AC}, 12 V_{DC}
Panel Mount: NEMA 4x Front Panel

Universal Indicator
Model: ADI-1



Input: Current, Voltage, Frequency
Analog Output, 2 Limit Contacts, Sensor Supply

Magnetic Filter
Brass
Model: MFR



t_{max} 392 °F; p_{max} 230 PSIG
Connection: 1/2"...3" BSP

Contact Protection Relay
Model: MSR



Input: Potential-free Contacts
1 or 2 relay Outputs, SPDT

Industrial Dosing, Counter and Flow Indicator
Model: ZOK



Input: Frequency
Analog Output, Limit Contacts, Sensor Supply, Battery Powered

Multi-Channel Data Logger
Model: ZLS



Input: 4-20 mA, Pt 100, Pt 500, Pt 1000
Interface, Sensor Supply





Analytics

Inductive Conductivity Measuring System
PEEK, PVDF, Stainless Steel
Model: LCI



Measuring Range: 0...2,000 mS/cm
 t_{max} 150 °C; p_{max} 10 bar
Integrated Pt 100
Accuracy: \pm 0.5% - 1.0% of Full Scale

Conductive/Inductive Conductivity Measuring Cells
Stainless Steel, PEEK
Model: ACS



Measuring Range: 0.04 μ S/cm ...
2,000 mS/cm
 t_{max} 150 °C; p_{max} 16 bar
Process Connection: G 1, G 3/4,
1/2" NPT, 1" NPT
Accuracy: \pm 0.5% - 1.0% of Reading

Transmitter for pH-Value, ORP, Conductivity
Model: APM-1, ACM-1



Measuring Range: 0...200 mS/cm
Outputs: 1 Binary Output,
2 Analog Outputs,
Switch Output:
2 Relays with Adjustable Setpoints

Hand-Held Measuring Unit Conductivity, pH, Redox, Temperature
Model: HND-C, HND-R



Measuring Range: pH: 0...14
Measuring Range: 0...200 μ S/cm to
0...200 mS/cm
Redox: -1999...2,000 mV
Temperature: -100...250 °C
Accuracy: \pm 0.01 pH; \pm 0.1% of Full Scale

pH-Value Transmitter
Model: APM-Z



Measuring Range: pH -1 up to 14
Display of pH-value and Temperature
with LEDs, Analog Actual-value Output
Scalable, 2 Relays for Control Functions,
(PID) Programmable

pH-Combined Electrodes
Glass, Plastic
Model: APS



Measuring Range: pH 1...12
 t_{max} 80 °C; p_{max} 10 bar
Diaphragm: PTFE-ring or Ceramic

Hand-Held Humidity Precision Measuring Unit
Model: HND-F



Measuring Range: 0...100 % Weight
Moisture
Option: Logger, Alarm
Accuracy: 0.1% - 0.2% of Reading

Humidity/Temperature Transmitter
Model: AFK-E



Measuring Range: 0...100% rH; -40...180 °C
 t_{max} 180 °C; p_{max} 15 bar
Outputs: Analog Outputs and Switches
Accuracy: \pm 1.6% of Reading % rH

Humidity Transmitter with Display
Model: AFA-G with AUF



Measuring Range: 5...95% rH; 0...60 °C
 t_{max} 80 °C
Outputs: 4-20 mA
Accuracy: \pm 2% rH

Hygostat, Humidity Annex Switch
Model: AFS-G1, AFS-G2, AFS-G3



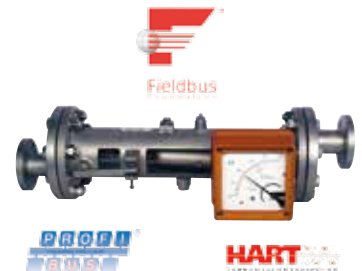
Measuring Range: 30...100% rH
 t_{max} 60 °C
Switch Output: 1 SPDT
Accuracy: 3% rH

Humidity/Temperature Transmitter
Model: AFK-G2



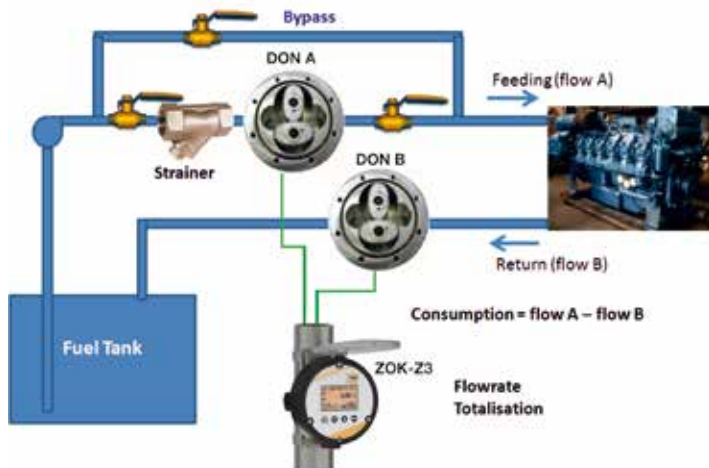
Measuring Range:
0...100 % rH; -60...200 °C
 t_{max} 200 °C; p_{max} 25 bar
Outputs: 2 x 4...20 mA
Accuracy: \pm 2% rH

Density Meter
Stainless Steel
Model: DWF

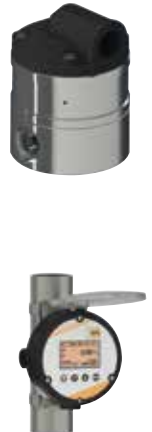


Measuring Range: 700...1,900 g/L
 t_{max} 150 °C
Process Connection
Flange DN 25...50, ANSI 1"...2"
Accuracy: \pm 1.25...6 g/L

Monitoring Fuel Consumption in Large Diesel Engines

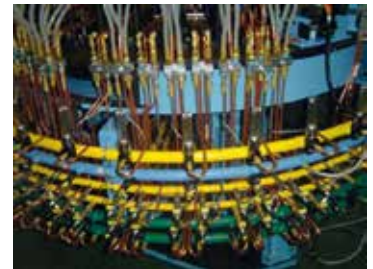


In this off-shore application, a fuel consumption measurement system has been effectively implemented on large diesel engines in small ships. Here, a pair of DON oval wheel flowmeters and one ZOK-Z3 are used per engine. As a potential restriction due to the flowmeter or strainer in the main line may result in higher differential pressure, diminishing fuel to the engine, a pressure relief valve was used in the bypass line. Higher inlet pressure opens the pressure relief valve and ensures a constant supply of fuel to the engine. With this installation, the actual real time fuel consumption is known and the ship speed can be adapted to optimize it. In general, the return on investment can be realized within a short time.



Monitoring Gas Burners to Increase Quality Control

Production lines for lighting manufacturers require frequent maintenance that can include complete dismantling of the line. During this process all failures are fixed, broken or worn parts are replaced, and the burners and valves are refurbished. After each maintenance cycle, the line must be synced again, with each burner reset to the proper temperature for producing the best quality products. This process requires precision, consumes a considerable amount of time, and can lead to rejected goods if optimum settings for production are not realized. With the costs of rejected materials and labor increasing, an improvement to the system was needed.



The KOBOLD Solution: UTS Variable Area Flowmeter



The production lines were reconfigured and equipped with KOBOLD UTS variable area flow meters. One UTS was built into each gas circuit for gas burner control. Retrofitting the machines without major modification was easy, due to the compact design of the UTS. With the newly installed flowmeters, optimum production values are recorded during production and after a maintenance cycle the line is easily restored to those optimum values with the help of the UTS. It now only takes a few seconds to set each burner and downtime is significantly decreased, leading to a quick return on investment in only a few maintenance cycles.





Application Showcase

Waste Water Treatment: Chemical Monitoring

Dependable monitoring in the treatment of waste water is essential to everyone’s well-being. Iron (III) Chloride is a chemical used in waterwater facilities to reduce phosphate concentrations in wastewater. This is essential to protecting our waterways from adverse effects and abnormal algae growth.

However, the level of Iron (III) Chloride in the final output must also be strictly monitored as a high concentration is extremely hazardous to both people and the environment. To ensure everyone’s safety, such a task requires continuous measurement of the chemical injection via a direct connection to the process control system. Errors must be detected during the process, not during the sampling.

The KOBOLD Solution: MIK Magnetic-Inductive Flowmeter

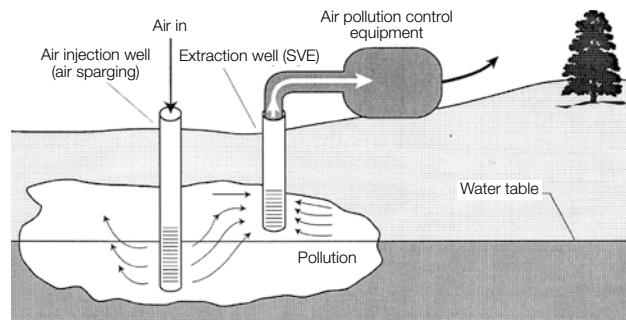


The KOBOLD MIK offered a safe and economical solution for the safe distribution of Iron (III) Chloride. This unit was developed by KOBOLD especially for this application and has consistently proven itself in the field. The materials of the device, a PVDF housing and tantalum electrodes have proven themselves to be completely chemical resistant.

With a directly mounted transmitter, the MIK is compact and durable. It is an ideal fit for cramped control cabinets. It dependably detects small flow rates, from 0.2 Gal/h! With a 4-20 mA signal the MIK continuously communicates the measured values to your process control system, allowing immediate response to the latest process conditions. The MIK increased our customer’s efficiency, generated cost savings, and allowed them to ensure environmental protection from process chemicals.

Groundwater Remediation: Air Sparge Systems

Air sparging is a system of drilling multiple wells into contaminated ground water. Air is forced into the water, ‘bubbling’ contaminants into the vapor pocket above the water. The contaminated air is removed and treated. The sparge runs continuously until the ground water is fully remediated.



The KOBOLD Solution: KSM All-Plastic Flowmeter



Our customer needed inexpensive flowmeters for a 120-well air sparge field where each well required its own meter. The KOBOLD KSM flowmeter met the demands.

The all-plastic construction minimizes corrosion, significantly reduces cost, and ensures a sufficient air flow into the well. Our customer’s engineer recommended the KSM for this application and was impressed with the customer service that we provided by quickly shipping test pieces and the balance directly to the site.



Brewery - Instrumentation

From the Comprehensive KOBOLD Product Range



Flow

- **Model DUK:** Ultrasonic Flow Meter/Switch
- **Model KSM:** Variable Area Flow Meter/Switch
- **Model PSR:** Paddle Flow Switch
- **Model MIK:** Magnetic Inductive Flow Meter
- **Model DAA/DAH:** Flow Indicator



Level

- **Model NIR:** Rotary Vane Level Switch (EX)
- **Model NTB:** Deep-Well Probe
- **Model NMT:** Magnetostrictive Level Gauge
- **Model LNM:** Microwave Level Switch
- **Model LNK:** Conductive Level Switch
- **Model NBK:** Bypass Level Gauge
- **Model LNP:** Potentiometric Level Meter



Pressure

- **Model MAN-R../-ZF:** Bourdon Tube Pressure Gauge
- **Model MAN-RF..DRM:** All Stainless Steel Pressure Gauge with Diaphragm Seal, Capillary and Clamp Connection
- **Model MAN-RF..M21..DRM:** All Stainless Steel Contact Pressure Gauge with Liquid Damping, Diaphragm Seal and Dairy Connection
- **Model PSC/PDD/PDA:** Electronic Pressure Switch



Temperature

- **Model LTS-NK:** Temperature Probe Pt 100 Compact Version
- **Model TNS-TNF:** Safety Thermometer with Contacts
- **Model TDD/TDA:** Electronic Temperature Sensor/Switch



Hand-Held Units/Data Logger

- **Model HND-T:** for Temperature Measurement
- **Model HND-F:** for Humidity Measurement
- **Model HND-P:** for Pressure Measurement
- **Model HND-C:** for Conductivity Measurement
- **Model HND-R:** for pH, Redox, Temp.
- **Model ZLS:** Electronic Multi-Channel Data Logger



Turbidity and Conductivity

- **Model ATL:** Turbidity Sensor
- **Model ATT-K:** Transmitter
- **Model LCI:** Inductive Conductivity Measuring System



Measuring • Monitoring • Analyzing

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