Innovative Systems and Solutions

Total Product Capability For The Process, Power And Gas Industries

ENGINEERING YOUR SUCCESS.

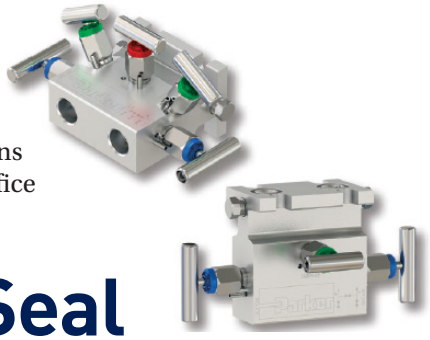
Global Instrumentation Manifolds

Reduced Complexity, Increased Performance

Parker's Global Manifold range combines the manifold experience of three companies totalling over 100 years of manifold experience. The 'G Series' of manifolds offers unrivaled technology, innovation and availability.

The Global Manifold range is designed to reduce complexity and increase performance. With five global locations dedicated to manifold manufacturing, a Parker partnership is the key to YOUR success.

- PGI Pressure-Core® Stem Seal exceeds EPA method 21, with 5-year warranty
- Chevron packed PTFE for low torque operation
- Available in 2, 3, and 5 valve configurations
- Turn-Saver™ features 3 1/2 turns to open and close all .375" orifice soft seat valves
- Available in .187", .250" and .375" orifice sizes
- 6,000 PSI and 10,000 PSI working pressures available
- Low-Torque™ Grafoil® stem seal also available



Pressure-Core® Stem Seal

Parker's PTFE Pressure-Core® Stem Seal offers advanced sealing technology in standard instrument valves and manifolds, saving you both time and money. Compared to competitive valve designs, Parker's Pressure-Core® Seal offers leak-free performance with no maintenance requirements. To verify the capabilties of the Pressure-Core®, an independent laboratory tested them in accordance with EPA Method 21 protocol.

The Pressure-Core® Seal consists of an outer PTFE shell with an elliptical shaped Viton® O-Ring core. The encapsulated core is "live-loaded" and provides constant outward pressure against the PTFE shell, which flexes under pressure like an O-Ring. The PTFE shell offers the desired chemical resistance without periodic gland tightening as in conventional designs. The test results indicate that the Pressure-Core® Seal is a reliable, affordable, virtually leak-free valve requiring no costly, time-consuming maintenance. Parker stands behind this claim with a five year warranty, far exceeding the industry standard.

Instrument and Multi-Port Valves

Parker's Instrument and Multi-Port Valves are designed for bubble tight shut-off and maximum reliability. This makes them both an excellent choice for most service conditions. They are versatile and can be used for multiple positioning of gauges, instruments and pressure switches.

Orifice Sizes	.136" .187" .250" .375"
Connections	1/4" thru 1" FNPT & MNPT
Materials	Carbon Steel 316 SS Corrosion Resistant Alloys
Pressure	Up to 10,000 PSI (690 Bar)
Temperature	Up to 1,000° F (538° C)
Packing	PTFE Pressure-Core® Low-Torque™ Grafoil® Chevron
Seats	Carbide® Ball Soft "Roddable" Seat

Parker's Valves and Manifolds feature the patented PTFE Pressure-Core® Stem Seal. • All valves and manifolds are available with a bonnet handle lock-out that prevents unauthorized cycling in either the open or closed position, or an anti-tamper bonnet that allows the bonnet stem to be placed in any position before removing the handle. • OS&Y bonnets available. • Standard 316 SS models conform to NACE MR0175/ISO 15156-36.

2-Valve Manifolds

Parker's wide variety of 2-Valve Manifolds permit the user to select and hook-up to virtually any pressure transmitter, gauge or switch. The controlled vent provides the option of venting to atmosphere or piping to a collector, depending on the media.

Orifice Sizes	.136" .187" .250" .375"
Connections	1/4" FNPT
	1/2" FNPT & MNPT
	1/2" FNPT x Flange
	Flange x Flange
Materials	Carbon Steel
	316 SS
	Corrosion Resistant Alloys
Pressure	Up to 10,000 PSI (690 Bar)
Temperature	Up to 1,000° F (538° C)
Packing	PTFE Pressure-Core®
	Low-Torque™ Grafoil®
	Chevron
Seats	Carbide® Ball
	Soft "Roddable" Seat

3-Valve Manifolds

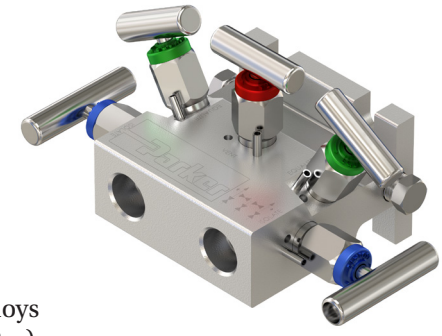
Parker's selection of 3-Valve Manifolds permit the user to select and hook-up any transmitter. A variety of 3-Valve Manifold styles are available with controlled vents for use where venting to atmosphere is not permitted and piping to collectors or vessels is required.

Orifice Sizes	.136" .187" .250" .375"
Connections	1/4" FNPT
	1/2" FNPT
	1/2" FNPT x Flange
	Flange x Flange
Materials	Carbon Steel
	316 SS
	Corrosion Resistant Alloys
Pressure	Up to 10,000 PSI (690 Bar)
Temperature	Up to 1,000° F (538° C)
Packing	PTFE Pressure-Core®
	Low-Torque™ Grafoil®
	Chevron
Seats	Carbide® Ball
	Soft "Roddable" Seat

5-Valve Manifolds

Parker's 5-Valve Manifolds permit the user to select and hook-up any chart recorder, transmitter or EFM for gas applications. Features WIDE Pattern™ technology, a unique configuration for "no finger pinching" operation of all five valves. Parker's Versa-Mount bracket allows the easy mounting of most 2, 3 and 5-Valve Manifolds to a 2" pipe stand or wall-mounted application.

Orifice Sizes	.187" .375"
Connections	1/2" FNPT
	1/2" FNPT x Flange
	Flange x Flange
Materials	Carbon Steel
	316 SS
	Corrosion Resistant Alloys
Pressure	Up to 10,000 PSI (690 Bar)
Temperature	Up to 1,000° F (538° C)
Packing	PTFE Pressure-Core®
	Low-Torque™ Grafoil®
	Chevron
Seats	Carbide® Ball
	Soft "Roddable" Seat



Features

Turn-Saver™

Only 3.5 turns to fully open or close the bonnet of the valve or manifold assembly (compared to competitor's 11 turns). Saves time with less repetitive motion.

** Only available for .375" orifice sizes*

PGI PHOENIX PRECISION™

Parker Hannifin acquired PGI in 2012 and Phoenix Precision Ltd in 2014. The enclosed offering combines the best product features of the acquisition and is the best available, safest technology to better serve customers.

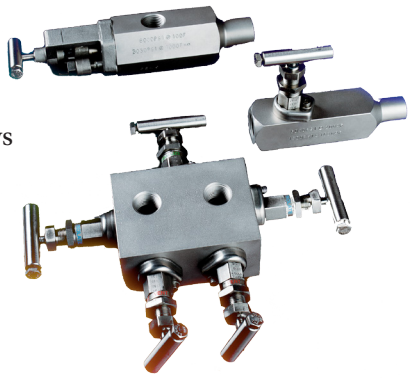
Parker's Manifolds feature the patented PTFE Pressure-Core® Stem Seal. • All manifolds are available with a bonnet handle lock-out that prevents unauthorized cycling in either the open or closed position, or an anti-tamper bonnet that allows the bonnet stem to be placed in any position before removing the handle. • OS &Y bonnets available. • Standard 316 SS models conform to NACE MR0175/ISO 15156-36.

Power and Root Valves

All Parker Power Valves conform to ANSI B31.1 Power Piping Code. Valve temperature and pressure ratings are ASME Class 2500, and materials conform to those listed in the ASTM specifications. Hydrostatic testing is performed in accordance with MSS-SP-61 and includes a shell test at 1.5 times the rated design pressure and seat(s) leakage test at 1.1 times the maximum pressure rating.

- Socket weld connections are available, packing is below stem threads and bonnet lock plates are standard on all valves and manifolds.
- OS&Y bonnets available.

Orifice Sizes	.187" .375"
Connections	1/2" FNPT
	1/2" MNPT
	1/2" FNPT x Flange
	Flange x Flange
Materials	Carbon Steel
	316 SS
	Corrosion Resistant Alloys
Pressure	Up to 6,170 PSI (425 Bar)
Temperature	Up to 1,000° F (538° C)
Packing	Low-Torque™ Grafoil®
Seats	Carbide® Ball

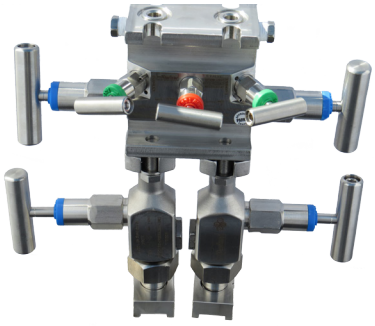


Direct-Mount® Systems

Parker is the recognized industry leader in the close coupling of manifold systems. Pioneered by Parker in 1988, Direct-Mount® Systems can minimize or eliminate Gauge Line Error (GLE), resulting in more accurate measurement. Dielectric isolators are available for stabilized connectors and manifolds.

Parker also offers the Direct-Mount® Duo™ Stabilized Connector with Integral Block Valves. The compact dual function design with factory installed bonnets are pressure tested to eliminate field induced leaks. The installation time is cut in half compared to competitive designs, and this design also features the Pressure-Core® Stem Seal and Turn-Saver™ technologies.

Orifice Sizes	.187" .375"
Connections	1/2" MNPT x Flange
	Flange x Flange
Materials	Carbon Steel
	316 SS
	Corrosion Resistant Alloys
Pressure	Up to 6,000 PSI (414 Bar)
Temperature	Up to 450° F (232° C)
Packing	PTFE Pressure-Core®
Seats	Carbide® Ball
	Soft "Roddable" Seat



Parker's Valves and Direct-Mount® Systems are offered with our Low-Torque™ Grafoil® packed stem seals. To answer customer requests for a lower stem handle turning torque, Parker developed a proprietary assembly technique to lower stem torque by 50% which increases ease of operation, and therefore reduces stem abrasion and stem damage from over-torqueing. The Low-Torque™ Grafoil® packed stem seal reduces packing adjustments and the associated maintenance costs, while extending the service life of the Grafoil® packing.

DB1™ Differential Pressure Battery Chargers

Converting Pipeline Energy to Battery Power

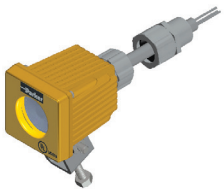
Parker's DB1 Differential Pressure Battery Charger is a versatile alternative to solar panel systems used to power electronic instruments on gas pipelines. It uses the differential pressure developed across a pressure reducing device or system to operate a small turbine generator which produces charging power.

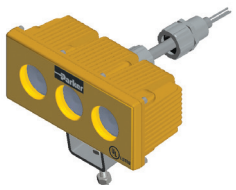
- Free uninterruptible power 24/7
- Powered by natural gas up to 1440 PSIG system pressure
- 10, 20, 50 or 100 Watt Units available
- RS-485 Serial/Ethernet MODBUS protocol communication
- Severe service option - wetted parts suitable up to 8% H2S and 8% CO2
- Emission and Maintenance free
- Microprocessor controlled temperature compensated battery charging
- CSA certified Class I, Div. 1, Group D

LED Area Lights

Parker's compact, lightweight LED lights are DC powered and produce the equivalent of 3.5 standard high-beam automobile headlights. The energy efficient lights are UL Certified for Class I, Division 2 for Groups A, B, C and D hazardous locations.

- Available in the three lighting options: single, three or six LED units
- Produces upto 4200 lumens in a 100° broad beamed high-intensity light
- Operating voltage range 10.5 to 32 VDC
- Powder coated aluminum body designed to withstand rugged outdoor service
- Pole mountable on existing structures





Sampling Systems

Gas and Light-Liquid

Both the highly reliable Interceptor™ and Nova™ Samplers are Intrinsically Safe for Class I, Division 1, Groups C & D hazardous locations. In addition, both models are offered with a wide variety of options. All materials conform to NACE MR0175/ISO 15156-36.

Interceptor™ Gas Sampling System
Provides true representative average sampling with both time-based and flow-based capability

- Several models available covering an inlet pressure range -10" Hg to 2200 PSI
- Programmable user-interface
- Compatible with all flow computers
- CSA Certified for Class I, Division 1, Groups C & D hazardous locations

Nova™ Gas or Liquid Sampling System
Provides true representative average sampling for gas or light liquid hydrocarbons

- Liquid skids with 1.5 to 7 gallon reservoir available
- Numerous power options including solar
- Maximum 3.0 cc bite size
- Compatible with all flow computers

Constant Pressure Cylinders

- Volume capacities of 300cc, 500cc or 1000cc
- Gas and liquid configurations available
- DOT approved
- Dual piston seals
- Patented jet-flow mixers
- Magnetic fill indicator

Spun End Cylinders

- Seamless 316SS construction
- 1800 PSI DOT-3E rating
- Numerous valve configurations available
- Hydrostatic test certificates and heat code traceability

Probes

- Single flow, dual flow, hot tap
- Numerous inlet and outlet configurations available
- All 316 SS construction

Heated Enclosures

Parker's Hot Shot heated enclosure system is engineered and designed to ensure natural gas samples and composite sampling system components are consistently maintained at a temperature above the hydrocarbon dew point of the flowing gas stream. This helps to ensure that your composite gas sample is a true representation of the gas being sampled.

- Complies with API 14.1 recommendations for accurate sampling
- Using proven catalytic heater technology, the sample probe, pump and cylinder are kept at a temperature of 100° - 140° F
- CSA certified Class I, Div. 1 Intrinsically Safe components
- Propane and electric powered heaters available
- Many mounting configurations available to fit all applications
- Field tested in thousands of installations
- Gas BTU range of 900-1250 BTU/Cu. Ft. natural gas (other ranges optional)

Wellhead Fitting and Valve Components

Parker's Wellhead Fittings and Valve Components allow for the proper lubrication of essential equipment, the relieving of pressure from inside closed mechanical systems and provides sealing methods to the wellhead and valve ports.

- Vented cap body grease fittings with and without giant button heads
- The standard design directs the flow of lubricant through the center of the spring to reduce "pack-off"
- Free flow fitting style utilizes a unique spring retainer that allows the free flow of lubricant around the spring and not through it
- Other fittings include
  - Autoclave style packing injection fittings
  - Pressure relief tooling
  - Internal check fittings
  - Internal relief fittings
  - Internal blow-down fittings

Thermowells

Texas Thermowell

Parker specializes in the design and manufacture of all types of thermowells. Custom designs as well as modifications to our standard design are readily available.

- Available in virtually any configuration or material to fit various applications
- Thermowell styles offered include threaded, flanged (ring joint and flat face), van stone, socket weld, sanitary, and weld-in
- Each thermowell is stamped to provide full material traceability
- Custom options include PTFE coating, stellite overlay, solid stellite tips, full penetration welding on flanged thermowells, electro-polishing, oxygen cleaning, tantalum and titanium sheaths
- One-day turn-around offered on most configurations
- Wake frequency calculations performed upon request

ThermoSync®

The ThermoSync® thermowell provides the most accurate pipeline gas temperature measurement available. The patented finned design reduces the ambient temperature effects on flow calculations, thus providing greater accuracy and minimizing unaccounted for errors.

- Patented design features a finned section that increases the surface area over 7.5 times that of a conventional thermowell.
- Increased surface area allows the thermowell to rapidly synchronize to the flowing gas temperature
- Significantly increases the convection heat transfer between the gas and the sensor
- Solid 316L SS construction
- Available 100 ohm PT 4-wire and dual RTD
- Explosion proof conduit box available

Instrumentation Products Division

United States

1005 A Cleaner Way
Huntsville, AL 35805
phone 256 885 3800
fax 256 881 5072

16101 Vallen Drive
Houston, TX 77041
phone 713 466 0056
fax 800 568 9228

8325 Hessinger Drive
Erie, PN 16509
phone 814 860 5700
fax 814 860 5811

Canada

2620 21st Street N.E.
Calgary, Canada T2E 7L3
phone 403 291 3154
fax 403 291 3292

Europe

Riverside Road
Pottington Business Park
Barnstaple, Devon EX31 1NP
phone 44 1271 313131
fax 44 1271 373636

PGI-ISS 4-17 04-27-2017

Parker Hannifin Corporation
Instrumentation Products Division
PGI Business Unit
16101 Vallen Drive
phone 713 466 0056
fax 800 568 9228
www.parker.com/ipd

QUALITY SYSTEM CERTIFICATION ISO 9001:2008 DNV

Pricing & Quotes: pgi_quotes@parker.com
Technical Support: pgi_technical@parker.com
Customer Service: pgi_sales@parker.com