INSTRUMENT VALVES

FOR THE PROCESS AND GAS INDUSTRIES

ISO 9001:2008 Certified Quality System

- Needle Valves
- Gauge Valves
- Bleeder Valves
- Multi-Port Valves
- Root Valves
- Miniature Valves
- Monoflange Valves

Patented Pressure-Core® Stem Seal with 5 Year Warranty

Exceeds EPA Method 21 Testing for VOC Emissions

Carbide Ball Seats

Soft "Roddable" Seat Styles

Carbon Steel and 316 SS Standard Materials

Standard 316 SS meets NACE MR0175/ISO 15156-36

Specialty Alloys Available

PGI International

Excellence Through Innovation

CATALOG VALVE 11.2012

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Warranty, Sales Policy, Special Orders and Manufacturing Standards & Compliances

PRODUCT WARRANTY

PGI International warrants its products to be free from defects in material and/or workmanship for a period of one year from date of shipment. This guarantee is valid only if such products have been used in normal applications consistent with our recommendations. Our liability is limited to repair or replacement and no responsibility is assumed for consequential damage or expense. Any controversy arising out of the sale of PGI International products shall be determined in accordance with laws of the State of Texas.

PGI International reserves the right to change materials, specifications or designs without notice. PGI International will not be obligated to install or furnish such changes on products previously or subsequently sold.

TEFLON® PRESSURE-CORE® STEM SEAL WARRANTY

After years of field experience and millions of valves in service, PGI International takes great pride in extending a five year limited warranty on our patented Teflon® Pressure-Core® Stem Seal System. The warranty period starts at date of purchase and extends for five full years. If within this period the Pressure-Core® Stem Seal develops a leak, PGI will provide a new bonnet and stem assembly at no cost.

PGI International will assume no consequential damages or liabilities connected with this warranty. The warranty is void if the valves have not been used in accordance with the stamped pressure / temperature ratings or if the bonnet assembly has been disassembled. The Teflon® Pressure-Core® Stem Seal is factory assembled and cannot be disassembled or inspected without damaging the seal.

SALES POLICY

Our products are sold through authorized manufacturer representatives or direct from our factory sales office. All orders are subject to acceptance by PGI International, headquarters located in Houston, Texas (U.S.A.). Prices are subject to change without notice and any errors in published prices are subject to correction. No materials may be returned for credit without written authorization from our Houston office. In issuing credit for returned material, we reserve the right to direct deduct a reconditioning and handling charge. Special items, not conforming to our standard line, will not be accepted for credit.

SPECIAL ORDERS

PGI International has been a custom manufacturer of valve components since 1941. PGI invites inquiries for special variations on our line of valves and will work with you to solve your specific application problems.

OXYGEN & CHLORINE SERVICE

To insure the quality, safety and cleanliness levels of our products, PGI International has a verifiable, environmentally controlled system of precision cleaning for Oxygen and Chlorine Service.

- Parts are cleaned with an approved liquid cleaner in an ultrasonic vibrator.
- Inspection of parts is done with an Ultraviolet light to detect contaminants such as hydrocarbons and minute particles that are not visible to the naked eye.
- Each part is tagged and heat-sealed in a double bag to prevent contamination in transit.
- Upon completion of cleaning process, Carbon Steel Valves discolor to a silver-greenish sheen. This does not affect manifold performance in any way.

MANUFACTURING STANDARDS & COMPLIANCES

PGI products are manufactured, conform and are certified by the following agencies and associations as required:

- ISO 9001:2008 Certified Quality System
- Canadian Registration Number (CRN)
- CE – Pressure Equipment Directive Conformity
- National Association of Corrosion Engineers (NACE MR0175/ISO 15156-3) and MR0103
- ASME/ANSI B1.20.1 General Pipe Threads
- ASME/ANSI B16.34 Valves Flanged, Threaded
- ASME/ANSI B16.11 Fittings/Socket Weld, etc.
- ASME/ANSI B31.3 Process Piping (except M Fluid Service)
- MSS SP-25 Standard Valve Markings
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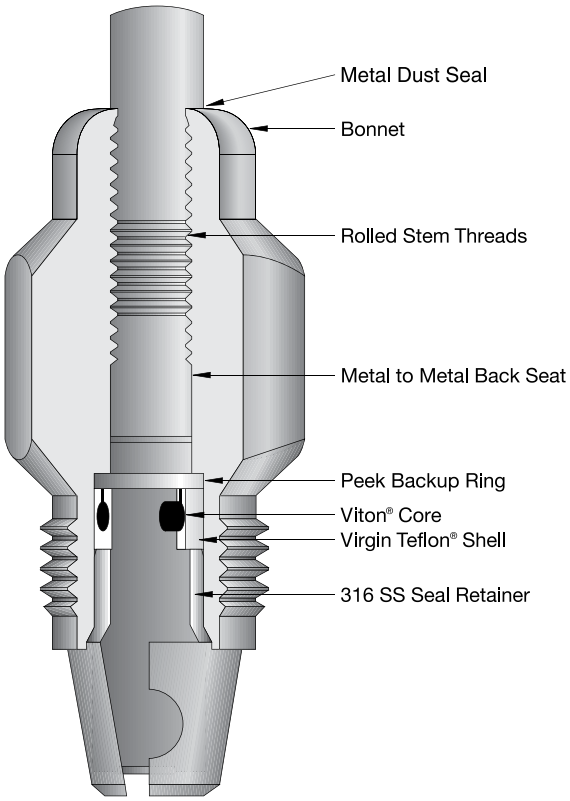
- MSS SP-99 Instrument Valves

Teflon® Pressure-Core® Stem Seal Bonnet and Packing Design

CODE "T" AND "J"

ORIFICE			
.136"	.187"	.250"	.375"

PATENTED 5 YEAR WARRANTY



Pressure-Core® Stem Seal

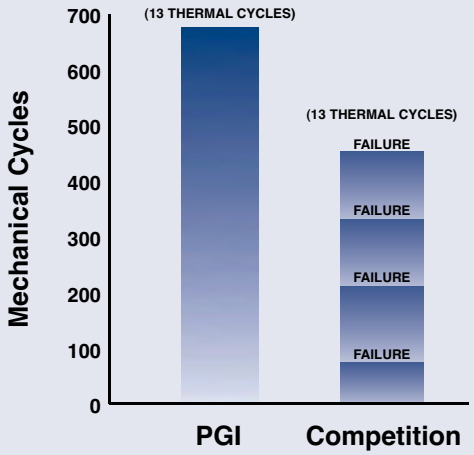
Compared to competitive valve designs, PGI's Pressure-Core® Seal offers leak-free performance with no maintenance requirements. To support this claim, the Pressure-Core® Seal was tested against the competitor's design. The tests simulated harsh plant operating environments and were performed by an independent laboratory in accordance with EPA Method 21.

How We Do It!

The Pressure-Core® Seal consists of an outer Teflon® shell with an elliptical shaped Viton® O-Ring core. The encapsulated core is "live-loaded" and provides constant outward pressure against the Teflon® shell, which flexes under pressure like an O-Ring. The Teflon® 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. PGI stands behind this claim with a five year warranty, far exceeding the industry standard.

FUGITIVE EMISSIONS TEST RESULTS



See for yourself how our Pressure-Core® Seal not only out performs the leading manufacturer's design, but sets a new industry standard.

TEST PROCEDURE
Valves mechanically cycled 50 times (full open to full close) at 1,000 PSI methane, then heated to 400°F and air cooled to ambient. Procedure repeated until failure.

FAILURE CRITERIA
100 PPM leak*

*Competitor's Emission Seal Warranty

TEST RESULTS
PGI: The Pressure-Core® Seal successfully completed **694** mechanical cycles and **15** thermal cycles. Maximum leakage throughout testing was **40** PPM.

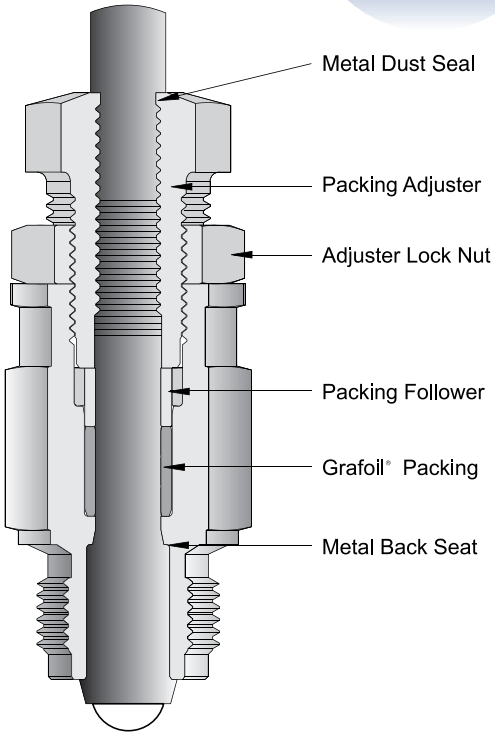
Competition: The leading manufacturer's "low emissions" graphite design failed on the **89th** mechanical cycle and on average every **125** cycles throughout the testing. Repeated maintenance was required between each failure to readjust the valve packing.

Low-Torque™ Grafoil® Bonnet and Packing Design

ORIFICE

.187" .375"

TORQUE REDUCED 50%



Grafoil® Stem Seal Torque Reduced 50%

PGI International answered customer requests for a lower stem handle turning torque by introducing our new Low-Torque™ Grafoil® bonnet and packing design. It is the nature of Grafoil® packing that it is easily abraded away by the rotation of the valve stem. This abrading requires periodic packing compression adjustment to stop stem seal leaks. We developed a proprietary assembly technique to lower stem torque by 50% which increases ease of operations, and therefore reduces stem abrasion and stem damage from over-torquing. The Low-Torque™ Grafoil® packed stem seal reduces packing adjustments and the associated maintenance costs, while extending the service life of the Grafoil® packing.

Instrument Hand Valves ~ Soft Seat

ORIFICE
.187" .250"

V | | - | 5 | 0 | 7 | C | D | T | - | | | | | |

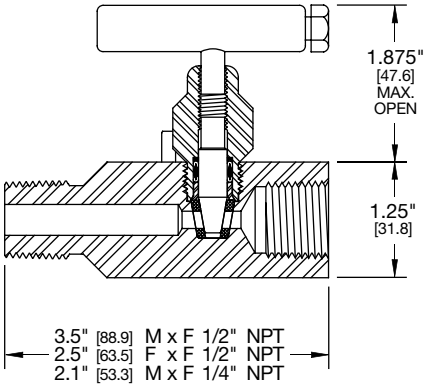
- ORIFICE: BLANK = .187", 2 = .250"
- BODY CODE
- BODY MAT'L CODE
- SEAT CODE
- STEM PACKING CODE
- MISC. OPTIONS

ORDERING INFORMATION

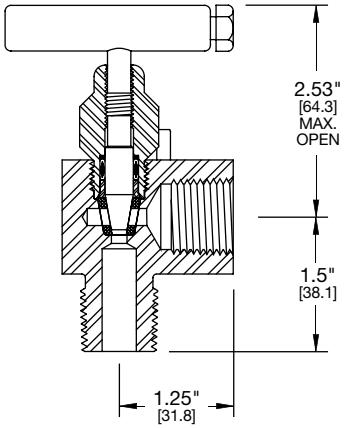
PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				Delrin® Cone Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V-501CDT	1/4" MNPT	1/4" FNPT	Carbon Steel	
V-501SDT			316 SS	
V-503CDT	1/4" FNPT	1/4" FNPT	Carbon Steel	
V-503SDT			316 SS	
V-507CDT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V-507SDT			316 SS	
V-509CDT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V-509SDT			316 SS	
V-511CDT	1/2" MNPT	1/2" FNPT Angle	Carbon Steel	
V-511SDT			316 SS	
V-529CDT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-529SDT			316 SS	
V-531CDT	1/2" MNPT	1/4" FNPT	Carbon Steel	
V-531SDT			316 SS	
.250" Orifice				
V2-507CDT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V2-507SDT			316 SS	
V2-509CDT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V2-509SDT			316 SS	
V2-529CDT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V2-529SDT			316 SS	
V2-531CDT	1/2" MNPT	1/4" FNPT	Carbon Steel	
V2-531SDT			316 SS	

OPTION CODE	DESCRIPTION
Seat Material Options	Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat
P	PEEK® Seat
T	Teflon® Seat
Z	Tefzel® Seat (Available in .250" Orifice Only)
Stem Packing Material Options	
T	Teflon® Pressure-Core® Stem Seal
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)
Miscellaneous Options *See Complete List on Page 24*	
M1	Panel Mount
W	Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)

V-507



V-511



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A581-303 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight	BODY STYLE Angle
.187"	.83	.79
.250"	1.40	
Approximate Valve Weight: 1.30 lbs [0.59 kg] each		

Instrument Hand Valves ~ Soft Seat

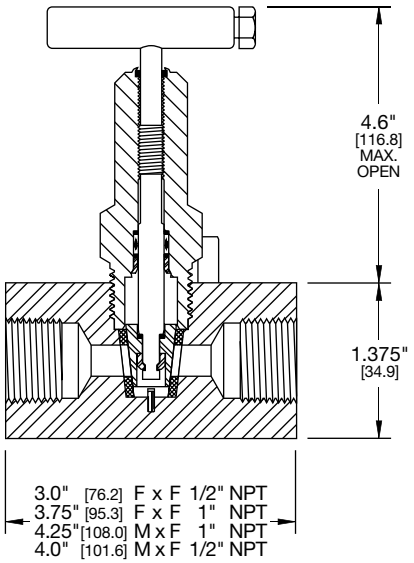
ORIFICE

.375"

V	3	-	5	0	9	C	D	T	-					

- ORIFICE: 3 = .375"
- BODY CODE: 509
- BODY MAT'L CODE: C
- SEAT CODE: D
- STEM PACKING CODE: T
- MISC. OPTIONS

V3-509



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.375" Orifice				Delrin® Cone Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V3-507CDT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V3-507SDT	1/2" MNPT	1/2" FNPT	316 SS	
V3-509CDT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V3-509SDT	1/2" FNPT	1/2" FNPT	316 SS	
V3-537CDT	1" MNPT	1/2" FNPT	Carbon Steel	
V3-537SDT	1" MNPT	1/2" FNPT	316 SS	
V3-541CDT	3/4" FNPT	3/4" FNPT	Carbon Steel	
V3-541SDT	3/4" FNPT	3/4" FNPT	316 SS	
V3-543CDT	1" FNPT	1" FNPT	Carbon Steel	
V3-543SDT	1" FNPT	1" FNPT	316 SS	
V3-545CDT	1" MNPT	1" FNPT	Carbon Steel	
V3-545SDT	1" MNPT	1" FNPT	316 SS	
V3-547CDT	3/4" MNPT	3/4" FNPT	Carbon Steel	
V3-547SDT	3/4" MNPT	3/4" FNPT	316 SS	

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Chart D on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat	
L	Rylon™ Seat	
P	PEEK® Seat	
T	Teflon® Seat	
6	316 SS Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed (Available with 316SS Seat Only)	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
W	Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.375"	3.00
Approximate Valve Weight: 3.00 lbs [1.36 kg] each	

Instrument Hand Valves ~ Hard Seat

ORIFICE
.187"

V	-	5	2	8	C	C	T	-						

BODY CODE — SEAT CODE — BODY MAT'L CODE — STEM PACKING CODE — MISC. OPTIONS

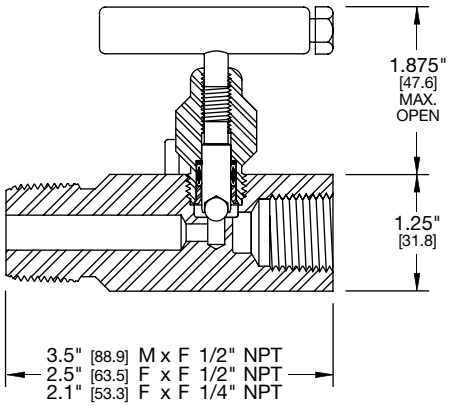
ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT	SEAL
.187" Orifice					
V-500CCT	1/4" MNPT x 1/4" FNPT		Carbon Steel	Carbide Ball	Teflon® Pressure-Core® Stem Seal
V-500SCT			316 SS		
V-502CCT	1/4" FNPT x 1/4" FNPT		Carbon Steel		
V-502SCT			316 SS		
V-502MNT			Monel®	Monel® Ball	
V-506CCT	1/2" MNPT x 1/2" FNPT		Carbon Steel	Carbide Ball	
V-506SCT			316 SS		
V-506MNT			Monel®	Monel® Ball	
V-506HHT			Hast-C	Hast-C	
V-508CCT	1/2" FNPT x 1/2" FNPT		Carbon Steel	Carbide Ball	Max Pressure 10,000 PSI @ 200°F
V-508SCT			316 SS		
V-508MNT			Monel®	Monel® Ball	
V-510CCT	1/2" MNPT x 1/2" FNPT Angle		Carbon Steel	Carbide Ball	
V-510SCT			316 SS		
V-528CCT	3/4" MNPT x 1/2" FNPT		Carbon Steel		
V-528SCT			316 SS		
V-530CCT	1/2" MNPT x 1/4" FNPT		Carbon Steel		
V-530SCT			316 SS		

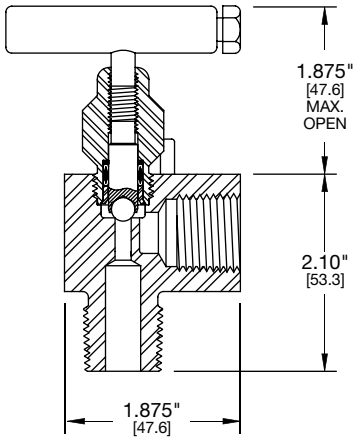
OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		
N	Monel® Ball Seat	Refer to Chart C on Page 22 and Pressure and Process Temperature Charts on Page 23.
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AB†	1/2" Parker A-LOK Welded in Compression Fitting	
AC†	1/2" Swagelok Welded in Compression Fitting	
AM7	Male Pipe Socket Weld - Male Inlet Only	
AP§	Female Pipe Socket Weld - Female Inlet and Female Outlet	
AP7§	Female Pipe Socket Weld - Female Inlet Only	
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

† Inlet and Outlet: Available on V-508 Valves Only
§ Available on V-502 and V-508 Valves Only

V-528



V-510



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight	BODY STYLE Angle
.187"	.53	.79
Approximate Valve Weight: 1.30 lbs [0.59 kg] each		

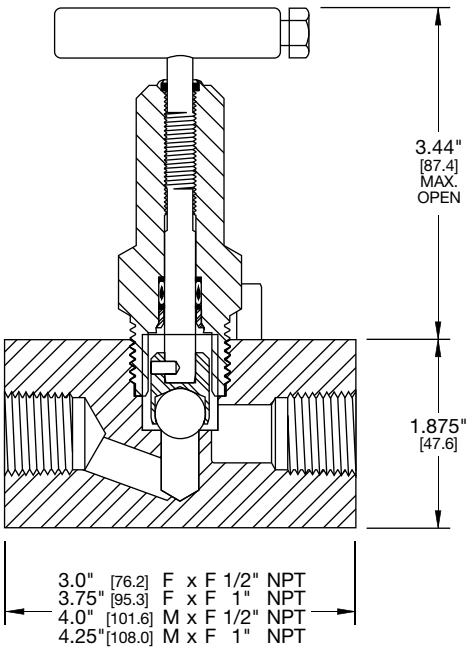
Instrument Hand Valves ~ Hard Seat

ORIFICE
.375"

V	3	-	5	0	8	C	C	T	-					

- ORIFICE: 3 = .375"
- BODY CODE
- BODY MAT'L CODE
- SEAT CODE
- STEM PACKING CODE
- MISC. OPTIONS

V3-508



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.375"	2.40
Approximate Valve Weight: 3.00 lbs [1.36 kg] each	

ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.375" Orifice				Carbide Ball Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V3-506CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V3-506SCT	1/2" MNPT	1/2" FNPT	316 SS	
V3-508CCT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V3-508SCT	1/2" FNPT	1/2" FNPT	316 SS	
V3-536CCT	1" MNPT	1/2" FNPT	Carbon Steel	
V3-536SCT	1" MNPT	1/2" FNPT	316 SS	
V3-540CCT	3/4" FNPT	3/4" FNPT	Carbon Steel	
V3-540SCT	3/4" FNPT	3/4" FNPT	316 SS	
V3-542CCT	1" FNPT	1" FNPT	Carbon Steel	
V3-542SCT	1" FNPT	1" FNPT	316 SS	
V3-544CCT	1" MNPT	1" FNPT	Carbon Steel	
V3-544SCT	1" MNPT	1" FNPT	316 SS	

OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AB†	1/2" Parker A-LOK Welded in Compression Fitting	
AC†	1/2" Swagelok Welded in Compression Fitting	
AM7	Male Pipe Socket Weld - Male Inlet Only	
AP	Female Pipe Socket Weld - Female Inlet and Female Outlet	
AP7	Female Pipe Socket Weld - Female Inlet Only	
AP8	Female Pipe Socket Weld - Female Outlet Only	
S1	Monel Stem Material	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

† Inlet and Outlet: Available on V3-508 Valves Only

VP Mini and Cylinder Valves

ORIFICE
.136"

V	P	-	5	5	2	S	D	T	-					

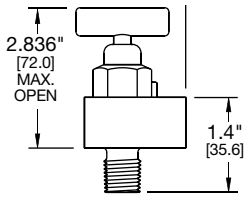
- .136" ORIFICE MINI PRESSURE-CORE®
- BODY CODE
- SEAT CODE
- BODY MAT'L CODE
- STEM PACKING CODE
- MISC. OPTIONS

ORDERING INFORMATION

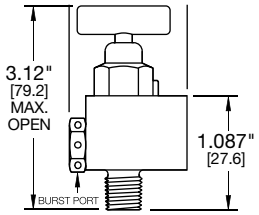
PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
Valve Only				
VP-552SDT	1/4" MNPT	1/4" FNPT Angle	316 SS	Delrin® Washer Seat
VP-554SDT	1/4" MNPT	1/4" MNPT Straight	316 SS	Delrin® Washer Seat
VP-556SDT	1/4" MNPT	1/4" FNPT Straight	316 SS	Delrin® Washer Seat
Cylinder Valves with Burst Disc Port (Less Burst Disc)				
VP-590SDT	1/4" MNPT	1/4" MNPT Straight	316 SS	Delrin® Washer Seat
VP-591SDT	1/4" MNPT	1/4" FNPT Straight	316 SS	Delrin® Washer Seat
VP-592SDT	1/4" MNPT	1/4" FNPT Angle	316 SS	Delrin® Washer Seat
Cylinder Valves with 1800 PSI Inconel Burst Disc				
VP-590SDT-18	1/4" MNPT	1/4" MNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal
VP-591SDT-18	1/4" MNPT	1/4" FNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal
VP-592SDT-18	1/4" MNPT	1/4" FNPT Angle	316 SS	Teflon® Pressure-Core® Stem Seal
Cylinder Valves (Right Hand Product End) with 1/4" Gauge Port 18 = 1800 PSI Inconel Burst Disc				
VP-306SDT	1/4" MNPT	1/4" FNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal
VP-306SDT-18 with Burst Disc	1/4" MNPT	1/4" FNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal
Cylinder Valves (Left Hand Product End) with 1/4" Gauge Port 18 = 1800 PSI Inconel Burst Disc				
VP-307SDT	1/4" MNPT	1/4" FNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal
VP-307SDT-18 with Burst Disc	1/4" MNPT	1/4" FNPT Straight	316 SS	Teflon® Pressure-Core® Stem Seal

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Chart A on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat	
P	PEEK® Seat	
T	Teflon® Seat	
Miscellaneous Options *See Complete List on Page 24*		
HA	Extruded Aluminum Round Handle ("T" / Bar Handle is Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

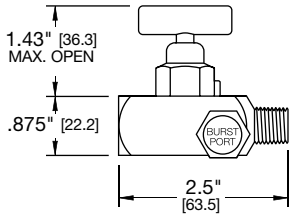
VP-552



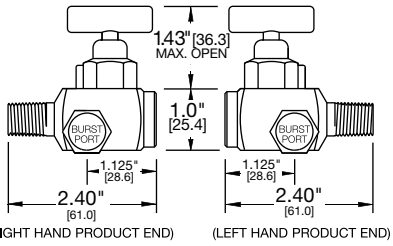
VP-592



VP-591



VP-306 **VP-307**



GAUGE PORT ON BACK SIDE

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	316 SS
Body and Bonnet	ASTM A479-316 SS
Stem	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS
Rupture Disc Plug	ASTM A479-316 SS
Handle Assembly	ASTM A581 18-8 300 SS

- 316 SS Valves Meet NACE MR-01-75 Requirements (Latest Revision)
- 100% Pressure Tested
- Delrin® soft seats are rated 6,000 PSI @ 200° F or 3,000 PSI@400°F and are compatible with H_2S / CO_2

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight	BODY STYLE Angle
.136"	.22	.27
Approximate Valve Weight: .60 lbs [0.27 kg] each		

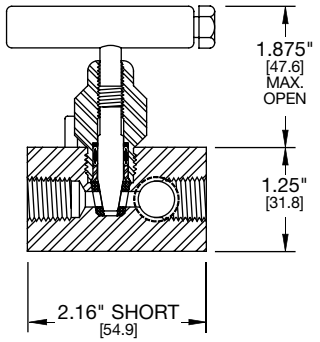
Multi-Port Gauge Valves ~ Soft Seat

ORIFICE
.187" .250"

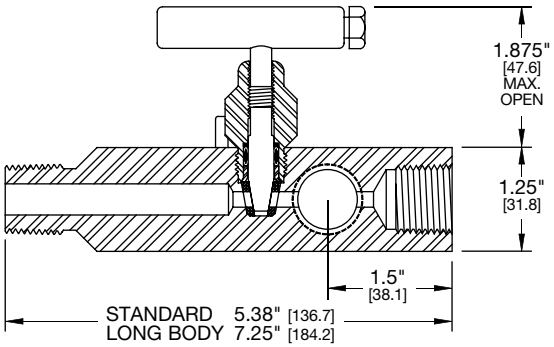
V		-	5	2	1	C	D	T	-					

- ORIFICE: BLANK = .187", 2 = .250"
- BODY CODE
- SEAT CODE
- BODY MAT'L CODE
- STEM PACKING CODE
- MISC. OPTIONS

V-521



V-517



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				Delrin® Cone Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V-521CDT	1/4" FNPT x (3) 1/4" FNPT Short		Carbon Steel	
V-521SDT			316 SS	
V-517CDT	1/2" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V-517SDT			316 SS	
V-519CDT	3/4" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V-519SDT			316 SS	
V-573CDT	1/2" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel	
V-573SDT			316 SS	
V-574CDT	3/4" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel	
V-574SDT			316 SS	
.250" Orifice				
V2-517CDT	1/2" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V2-517SDT			316 SS	
V2-519CDT	3/4" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V2-519SDT			316 SS	

OPTION CODE	DESCRIPTION
Seat Material Options	
K	Kel-F® Seat
P	PEEK® Seat
T	Teflon® Seat
Z	Tefzel® Seat (Available in .250" Orifice Only)
Stem Packing Materials Options	
T	Teflon® Pressure-Core® Stem Seal
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)
Miscellaneous Options *See Complete List on Page 24*	
AM7	Male Pipe Socket Weld - Male Inlet Only
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)
Y	OS&Y Bonnet Carbon Steel Or 316SS

Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.83
.250"	1.40

Approximate Valve Weight: 1.00 lb [0.45 kg] each (Short)
2.30 lbs [1.04 kg] each (Standard)
3.00 lbs [1.36 kg] each (Longbody)

Multi-Port Gauge Valves ~ Soft Seat

ORIFICE
.375"

V	3	-	5	1	7	C	D	T	-					

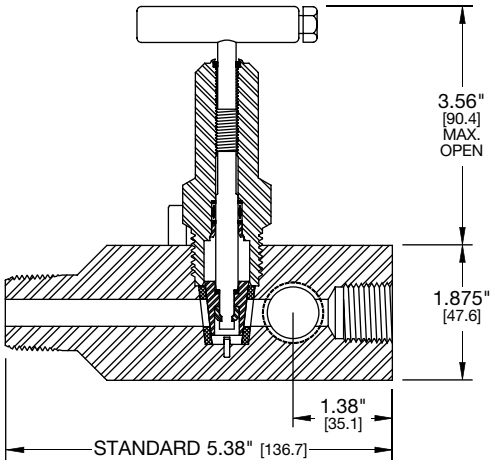
- ORIFICE: 3 = .375"
- BODY CODE
- BODY MAT'L CODE
- SEAT CODE
- STEM PACKING CODE
- MISC. OPTIONS

ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.375" Orifice				Delrin® Cone Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V3-517CDT	1/2" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V3-517SDT			316 SS	
V3-519CDT	3/4" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V3-519SDT			316 SS	
V3-577CDT	1" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	
V3-577SDT			316 SS	

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Charts D and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat	
L	Rylon™ Seat	
P	PEEK® Seat	
T	Teflon® Seat	
6	316 SS Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed (Available with 316 SS Cone Only)	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	
Y	OS&Y Bonnet Carbon Steel Or 316SS	

V3-517



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.375"	3.00
Approximate Valve Weight: 2.30 lbs [1.04 kg] each	

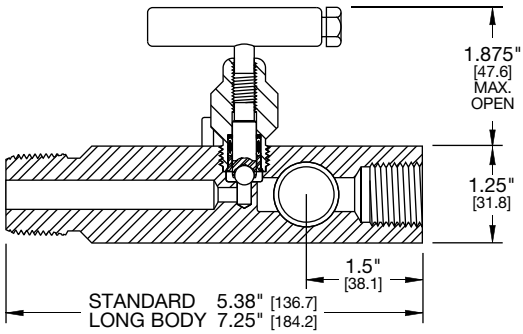
Multi-Port Gauge Valves ~ Hard Seat

ORIFICE
.187"

V	-	5	1	8	C	C	T	-						

BODY CODE — BODY MAT'L CODE — SEAT CODE — STEM PACKING CODE — MISC. OPTIONS

V-518



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT	PACKING
.187" Orifice					Teflon® Pressure-Core® Stem Seal Max Pressure 10,000 PSI @ 200°F
V-516CCT	1/2" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	Carbide Ball	
V-516SCT			316 SS		
V-516MNT			Monel®	Monel® Ball	
V-518CCT	3/4" MNPT x (3) 1/2" FNPT Standard		Carbon Steel	Carbide Ball	
V-518SCT			316 SS		
V-518MNT			Monel®	Monel® Ball	
V-520CCT	1/2" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel	Carbide Ball	
V-520SCT			316 SS		
V-532CCT	3/4" MNPT x (3) 1/2" FNPT Longbody		Carbon Steel		
V-532SCT			316 SS		

OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
N	Monel® Ball Seat	
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
S1	Monel Stem Material	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	
Y	OS&Y Bonnet Carbon Steel Or 316SS	

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 2.30 lbs [1.04 kg] each (Standard) 3.00 lbs [1.36 kg] each (Longbody)	

Multi-Port Gauge Valves ~ Hard Seat

ORIFICE
.375"

V	3	-	5	1	6	C	C	T	-					

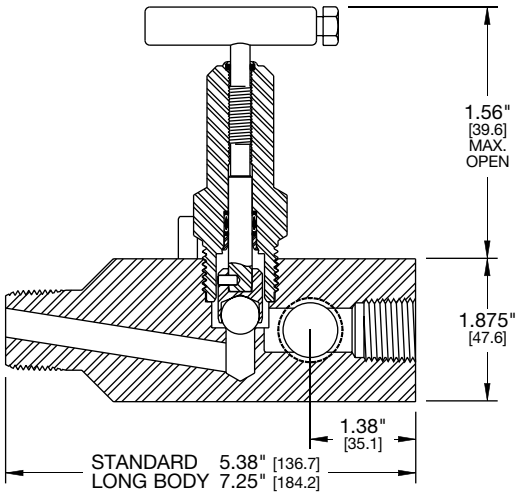
- ORIFICE: 3 = .375"
- BODY CODE
- BODY MAT'L CODE
- SEAT CODE
- STEM PACKING CODE
- MISC. OPTIONS

ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.375" Orifice				Carbide Ball Seat Teflon® Pressure-Core® Stem Seal Refer to page 22 Press./Temp. Chart C.
V3-516CCT	1/2" MNPT x	(3) 1/2" FNPT Standard	Carbon Steel	
V3-516SCT			316 SS	
V3-518CCT	3/4" MNPT x	(3) 1/2" FNPT Standard	Carbon Steel	
V3-518SCT			316 SS	
V3-516PCG	1/2" MNPT x	(3) 1/2" FNPT Standard	Carbon Steel	Carbide Ball Seat Grafoil® Packed Refer to page 22 Press./Temp. Chart E.
V3-516SCG			316 SS	
V3-518PCG	3/4" MNPT x	(3) 1/2" FNPT Standard	Carbon Steel	
V3-518SCG			316 SS	
V3-520PCG	1/2" MNPT x	(3) 1/2" FNPT Longbody	Carbon Steel	
V3-520SCG			316 SS	
V3-532PCG	3/4" MNPT x	(3) 1/2" FNPT Longbody	Carbon Steel	
V3-532SCG			316 SS	

OPTION CODE	DESCRIPTION
Body Material Options	
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*
Seat Material Options	Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
R	Ceramic Ball Seat
6	316 SS Ball Seat
Stem Packing Material Options	
T	Teflon® Pressure-Core® Stem Seal
G	Low-Torque™ Grafoil® Packed
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)
Miscellaneous Options *See Complete List on Page 24*	
AM7	Male Pipe Socket Weld - Male Inlet Only
W	Safety Bonnet Lock Plate (Lock Pin Standard)
W1	316 SS Tag
WK	Paper Tag
XL	Clean for Critical Service (Oxygen or Chlorine)
Y	OS&Y Bonnet Carbon Steel Or 316SS

V3-516



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.375"	2.40
Approximate Valve Weight: 2.30 lbs [1.04 kg] each (Standard)	
3.00 lbs [1.36 kg] each (Longbody)	

Root Valves ~ Hard Seat

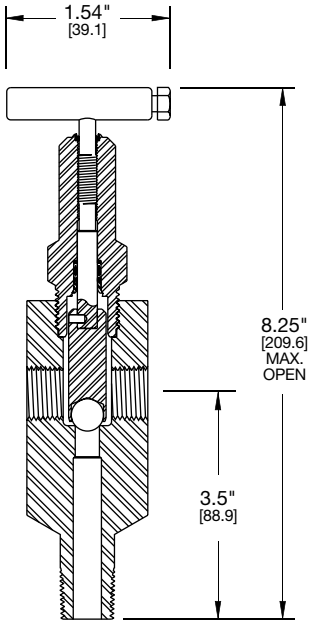
ORIFICE

.187" .375"

V	3	-	5	8	0	C	C	T	-					

- ORIFICE — BLANK = .187", 3 = .375"
- BODY CODE
- SEAT CODE
- BODY MAT'L CODE
- STEM PACKING CODE
- MISC. OPTIONS

V3-580



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				Carbide Ball Seat; Teflon® Pressure-Core® Stem Seal; Max Pressure 6,000 PSI @ 200°F
V-579CCT	1/2" MNPT	(1) 1/2" FNPT	Carbon Steel	
V-579SCT	1/2" MNPT	(1) 1/2" FNPT	316 SS	
V-580CCT	1/2" MNPT	(2) 1/2" FNPT	Carbon Steel	
V-580SCT	1/2" MNPT	(2) 1/2" FNPT	316 SS	
V-582CCT	3/4" MNPT	(2) 1/2" FNPT	Carbon Steel	
V-582SCT	3/4" MNPT	(2) 1/2" FNPT	316 SS	
V-584CCT	1" MNPT	(2) 1/2" FNPT	Carbon Steel	
V-584SCT	1" MNPT	(2) 1/2" FNPT	316 SS	
.375" Orifice				
V3-579CCT	1/2" MNPT	(1) 1/2" FNPT	Carbon Steel	
V3-579SCT	1/2" MNPT	(1) 1/2" FNPT	316 SS	
V3-580CCT	1/2" MNPT	(2) 1/2" FNPT	Carbon Steel	
V3-580SCT	1/2" MNPT	(2) 1/2" FNPT	316 SS	
V3-582CCT	3/4" MNPT	(2) 1/2" FNPT	Carbon Steel	
V3-582SCT	3/4" MNPT	(2) 1/2" FNPT	316 SS	
V3-584CCT	1" MNPT	(2) 1/2" FNPT	Carbon Steel	
V3-584SCT	1" MNPT	(2) 1/2" FNPT	316 SS	

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body	ASTM A105 CF	ASTM A479-316 SS
Bonnet	ASTM A105	ASTM A351-CF8M
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Yoke	ASTM A351-CF8M	ASTM A351-CF8M
Packing Follower	ASTM A479-316 SS	ASTM A479-316 SS
Bolt	ASTM A449-TYPE 1-CS	ASTM A193-B8M
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
.375"	3.00
Approximate Valve Weight: 3.70 lbs [1.68 kg] each (.187" Orifice) 4.50 lbs [2.04 kg] each (.375" Orifice)	

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Option		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
TH	Hydrostatic Testing	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	
Y	OS&Y Bonnet Carbon Steel Or 316SS	

Block & Bleed Valves ~ Soft Seat

ORIFICE
.250"

V	2	-	9	0	4	C	D	T	-					

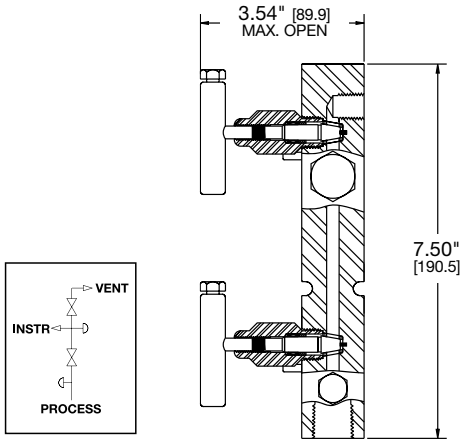
- ORIFICE 2 = .250
- BODY CODE
- SEAT CODE
- BODY MAT'L CODE
- STEM PACKING CODE
- MISC. OPTIONS

ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.250" Orifice				Delrin® Cone Seat
V2-904CDT	1/2" FNPT	x 1/2" FNPT	Carbon Steel	Teflon® Pressure-Core® Stem Seal
V2-904SDT			316 SS	Max Pressure 6,000 PSI @ 200°F

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat	
P	PEEK® Seat	
T	Teflon® Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

V2-904



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.250"	1.40
Approximate Valve Weight: 2.50 lbs [1.13 kg] each	

Block & Bleed Valves ~ Hard Seat

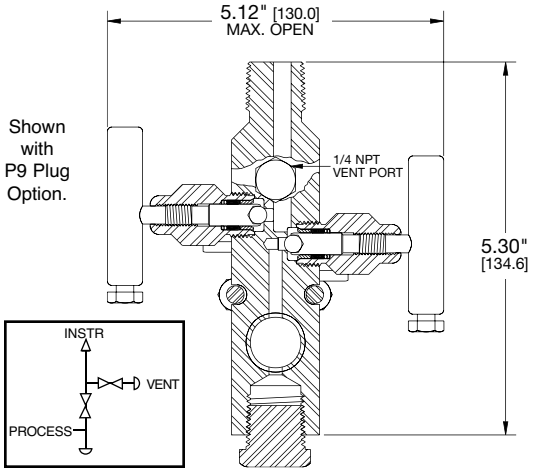
ORIFICE

.187"

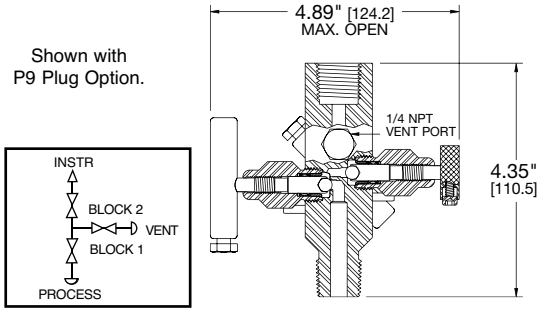
V - 6 2 0 C C T - | | | | | | |

BODY CODE | SEAT CODE | BODY MAT'L CODE | STEM PACKING CODE | MISC. OPTIONS

V-620



V-690



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				
V-570CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	Carbide Ball Seat
V-570SCT			316 SS	
V-626CCT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V-626SCT			316 SS	
V-572CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-572SCT			316 SS	
V-612CCT	1/2" MNPT	1/2" MNPT	Carbon Steel	Teflon® Pressure-Core® Stem Seal
V-612SCT			316 SS	
V-614CCT	1/2" FNPT	1/2" MNPT	Carbon Steel	
V-614SCT			316 SS	
V-616SCT	3/4" MNPT	1/2" MNPT	316 SS	
V-620CCT*	(2)1/2" FNPT	x (1)1/2" MNPT	Carbon Steel	Max Pressure 10,000 PSI @ 200°F
V-620SCT*			316 SS	
V-700SCT	1/2" MNPT Stabilized Design	x 1/2" MNPT	316 SS	
Double Block and Bleed				
V-690CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V-690SCT			316 SS	
V-692CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-692SCT			316 SS	
V-905CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-905SCT	Longbody		316 SS	

* V-620 Bracket Mounted Block and Bleed Valve Includes mounting U-Bolt as standard. V-620 Bracket options shown at bottom of page.

OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
R	Ceramic Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
P9	Hex Head Pipe Plug in Vent/Test Port	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

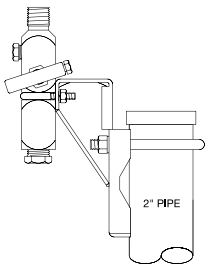
MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 2.50 lbs [1.13 kg] each	



OPTION CODE	DESCRIPTION
V-620 Bracket Options	
VCH	AK-002-10-HD Versa-Mount Heavy Duty Manifold Bracket - Carbon Steel
VSH	AK-002-C0-HD Versa-Mount Heavy Duty Manifold Bracket - 316 SS
VC	AK-002-10 Versa-Mount Manifold Bracket - Carbon Steel
VS	AK-002-C0 Versa-Mount Manifold Bracket - 316 SS

Three-Valve Double Block & Bleed Monoflange

ORIFICE
.187"

Note: "R" denotes RTJ (Ring Joint Flange) Facings.

BODY STYLE		SIZE FLANGE IN.		PRESSURE RATING LB.	BODY CODE	SEAT CODE	STEM SEAL CODE OS&Y FIRST ISOLATE		STEM SEAL CODE SECOND ISOLATE & VENT		OPTION CODES						
MF3Y	-		-					-		-							
MFR3Y	-		-					-		-							

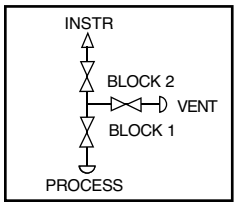
BODY CODE	
[Std.] 316 SS	S

HARD SEAT CODE	
C	Carbide Ball [Std.]
R	Ceramic Ball
6	316 SS Ball

HARD SEAT CODE	
G	Grafoil® Packed [Std.]
P	Teflon® Packed

HARD SEAT CODE	
[Std.] Teflon® Pressure-Core®	T
Grafoil® Packed	G
Teflon® Packed	P
Viton® O-Ring	V
Low-Temp Pressure-Core®	J

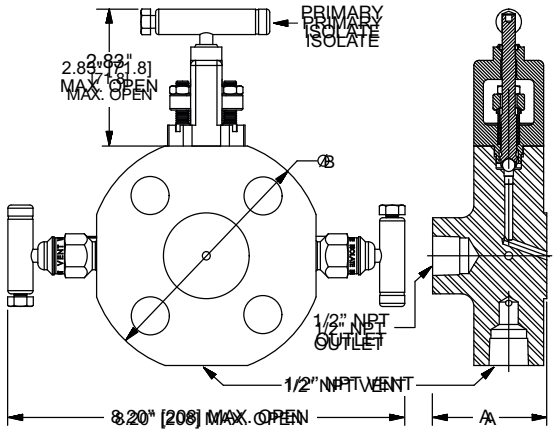
BODY STYLE		SIZE FLANGE IN.		PRESSURE RATING LB.	BODY CODE	SEAT CODE	STEM SEAL CODE FIRST ISOLATE		STEM SEAL CODE SECOND ISOLATE & VENT		OPTION CODES						
MF3	-		-					-		-							
MFR3	-		-					-		-							



BODY CODE	
[Std.] 316 SS	S

HARD SEAT CODE	
C	Carbide Ball [Std.]
R	Ceramic Ball
6	316 SS Ball

HARD SEAT CODE	
[Std.] Teflon® Pressure-Core®	T
Grafoil® Packed	G
Teflon® Packed	P
Viton® O-Ring	V
Low-Temp Pressure-Core®	J



Pressure & Temp. Per ASME B16.34

OPTION DESCRIPTION	OPTION CODE
1/2" Male Pipe Socket Weld (Instrument)	AM8
Anti-Tamper Bonnet (All Positions)	GA
Anti-Tamper Bonnet (Isolate Only)	GC
Anti-Tamper Bonnet (Vent Valve Only)	GE
Bonnet Lock-Out (All Positions - Lock Not Provided - Not for OS&Y)	GJ
Bonnet Lock-Out (Isolate Only - Lock Not Provided - Not for OS&Y)	GK
Bonnet Lock-Out (Vent Valve Only - Lock Not Provided)	GM
Hex Head Pipe Plug in Vent/Test Port	P9
Safety Bonnet Lock Plate	W
Paper Tag	WK
316 SS Tag	W1
Clean for Critical Service (Oxygen or Chlorine)	XL

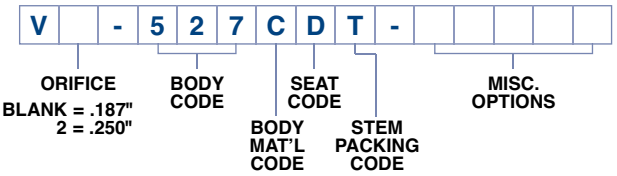
SIZE IN.	RATING LB.	DIMENSIONS, INCHES [mm] A – RF		A – RTJ		B		WEIGHT LB.	[KG]
1/2	150	2.25	[57]	—	—	3.5	[89]	3.5	1.6
1/2	300	2.25	[57]	2.41	[61]	3.8	[96]	4.1	1.9
1/2	600	2.44	[62]	2.41	[61]	3.8	[96]	4.0	1.8
1/2	900/1500	2.44	[62]	2.41	[61]	4.8	[121]	7.1	3.2
1/2	2500	2.44	[62]	2.44	[62]	5.3	[134]	9.6	4.4
3/4	150	2.25	[57]	—	—	3.9	[99]	4.2	1.9
3/4	300	2.25	[57]	2.44	[62]	4.6	[118]	6.6	3.0
3/4	600	2.44	[62]	2.44	[62]	4.6	[118]	6.6	3.0
3/4	900/1500	2.44	[62]	2.44	[62]	5.1	[130]	8.2	3.7
3/4	2500	2.44	[62]	2.44	[62]	5.5	[140]	9.5	2.0
1	150	2.25	[57]	2.44	[62]	4.3	[108]	5.1	2.3
1	300	2.25	[57]	2.44	[62]	4.9	[124]	7.5	3.4

SIZE IN.	RATING LB.	DIMENSIONS, INCHES [mm] A – RF		A – RTJ		B		WEIGHT LB.	[KG]
1	600	2.44	[62]	2.44	[62]	4.9	[124]	7.5	3.4
1	900/1500	2.44	[62]	2.44	[62]	5.9	[150]	11.8	5.4
1	2500	2.44	[62]	2.44	[62]	6.3	[159]	13.5	6.1
1-1/2	150	2.25	[57]	2.44	[62]	5.0	[127]	8.0	3.6
1-1/2	300	2.25	[57]	2.44	[62]	6.1	[156]	12.8	5.8
1-1/2	600	2.44	[62]	2.44	[62]	6.1	[156]	12.8	5.8
1-1/2	900/1500	2.44	[62]	2.44	[62]	7.0	[178]	17.0	7.7
1-1/2	2500	2.81	[71]	2.87	[73]	8.0	[203]	24.9	11.3
2	150	2.25	[57]	2.44	[62]	6.0	[153]	12.4	5.6
2	300	2.25	[57]	2.50	[64]	6.5	[165]	19.6	6.6
2	600	2.44	[62]	2.50	[64]	6.5	[165]	14.6	6.6
2	900/1500	2.56	[65]	2.62	[67]	8.5	[216]	28.2	12.8
2	2500	3.06	[78]	—	—	9.393	[235]	43.0	20.0

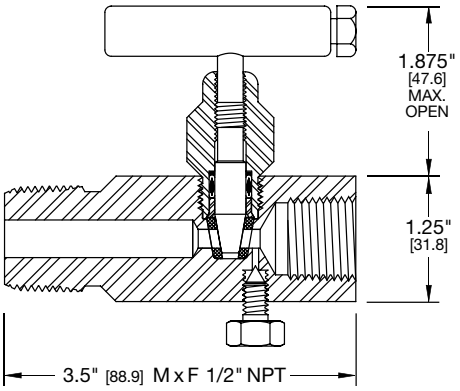
Bleeder Screw Gauge Valves ~ Soft Seat

ORIFICE

.187" .250"



V-527



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				Delrin® Cone Seat Teflon® Pressure-Core® Stem Seal Max Pressure 6,000 PSI @ 200°F
V-523CDT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V-523SDT	1/2" MNPT	1/2" FNPT	316 SS	
V-525CDT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V-525SDT	1/2" FNPT	1/2" FNPT	316 SS	
V-527CDT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-527SDT	3/4" MNPT	1/2" FNPT	316 SS	
.250" Orifice				
V2-523CDT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V2-523SDT	1/2" MNPT	1/2" FNPT	316 SS	
V2-527CDT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V2-527SDT	3/4" MNPT	1/2" FNPT	316 SS	

OPTION CODE	DESCRIPTION	
Seat Material Options		Refer to Chart B on Page 22 and Pressure and Process Temperature Charts on Page 23.
K	Kel-F® Seat	
P	PEEK® Seat	
T	Teflon® Seat	
Z	Tefzel® Seat (Available in .250" Orifice Only)	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Bleed Screw	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.83
.250"	1.40
Approximate Valve Weight: 1.30 lbs [0.59 kg] each	

Bleeder Screw Gauge Valves ~ Hard Seat

ORIFICE
.187"

V	-	5	2	6	C	C	T	-						

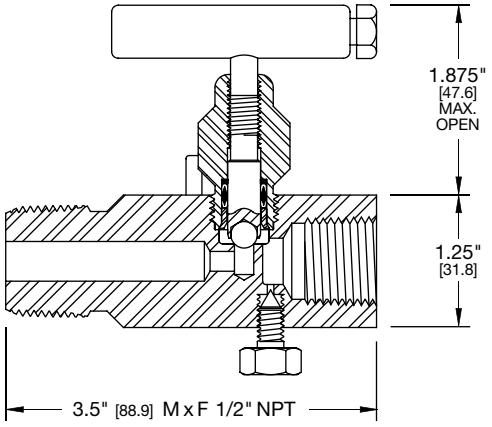
BODY CODE — SEAT CODE — BODY MAT'L CODE — STEM PACKING CODE — MISC. OPTIONS

ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT & PACKING
.187" Orifice				Carbide Ball Seat Teflon® Pressure-Core® Stem Seal Max Pressure 10,000 PSI @ 200°F
V-522CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V-522SCT			316 SS	
V-524CCT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V-524SCT			316 SS	
V-526CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-526SCT			316 SS	
V-606CCT	1/2" MNPT	1/2" MNPT	Carbon Steel	
V-606SCT			316 SS	
V-608CCT	3/4" MNPT	1/2" MNPT	Carbon Steel	
V-608SCT			316 SS	

OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
AP7	Female Pipe Socket Weld - Female Inlet Only	
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

V-526



MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Bleed Screw	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

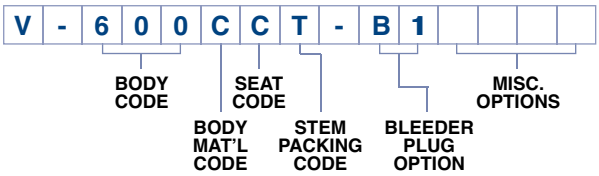
- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

MAX Cv RATINGS

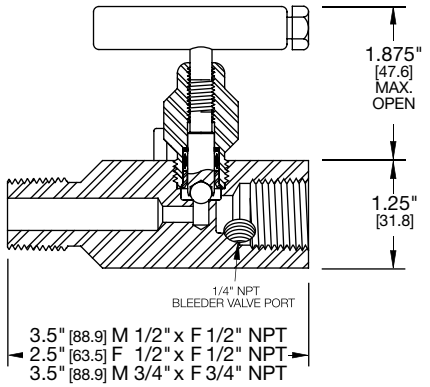
ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 1.30 lbs [0.59 kg] each	

Bleeder Valves ~ Hard Seat

ORIFICE
.187"



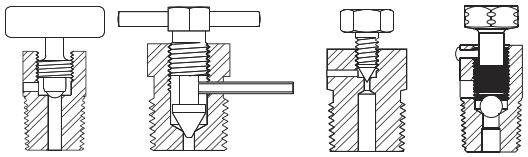
V-600 Main Valve



ORDERING INFORMATION

PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	MAIN VALVE SEAT & PACKING
.187" Orifice				Carbide Ball Seat Teflon® Pressure-Core® Stem Seal Max Pressure 10,000 PSI @ 200°F
V-600CCT	1/2" MNPT	1/2" FNPT	Carbon Steel	
V-600SCT	1/2" MNPT	1/2" FNPT	316 SS	
V-602CCT	1/2" FNPT	1/2" FNPT	Carbon Steel	
V-602SCT	1/2" FNPT	1/2" FNPT	316 SS	
V-604CCT	3/4" MNPT	1/2" FNPT	Carbon Steel	
V-604SCT	3/4" MNPT	1/2" FNPT	316 SS	

B1 **B2** **B4** **B6**



Bleeder Plug Options
Installed in 1/4" NPT Main Valve Bleeder Port

OPTION CODE	DESCRIPTION	
Seat Material Options		
R	Ceramic Ball Seat	Refer to Chart C on Page 22 and Pressure and Process Temperature Charts on Page 23.
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Bleeder Plug Options Installed in 1/4" NPT Bleed Port Bleeder Valve Body is same material as Main Valve.		
B1	Carbide Ball Bleeder Plug Model A7-521	Max Pressure 10,000 PSI @ 200°F
B2	Bleed-T Plug Model A7-528	
B4	Mini-Hex Bleeder Plug Model A7-525	
B6	SS Ball Bleed Plug Model BV10N4	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
M1	Panel Mount	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

MAIN VALVE MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body and Bonnet	ASTM A108 CS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are Alkaline Zinc plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested
- Carbon Steel Weld End Connection Bodies are AISI 1018

VALVE MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53

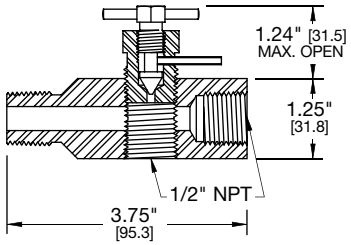
Approximate Weight of Main Valve: 1.60 lbs [0.73 kg] each
Approximate Weight of Bleeder Plugs: See page 19.

ORDERING INFORMATION

Bleed "T" Valves

PART NO.	CONNECTIONS	BODY & STEM	SEAT	BLEED "T" PLUG
V-597-10	1/2" MNPT x (2) 1/2" FNPT	A108-1215 CS / A479-316 SS	Integral Metal	A108-1215 CS
V-597-C0		A479-316 SS		A479-316 SS
B8-597-10	Body Only 1/2" MNPT x (3) 1/2" FNPT	A108-1215 CS / A479-316 SS		None
B8-597-C0		A479-316 SS		
V-598-10	3/4" MNPT x (2) 1/2" FNPT	A108-1215 CS / A479-316 SS		A108-1215 CS
V-598-C0		A479-316 SS		A479-316 SS
B8-598-10	Body Only 3/4" MNPT x (3) 1/2" FNPT	A108-1215 CS / A479-316 SS		None
B8-598-C0		A479-316 SS		

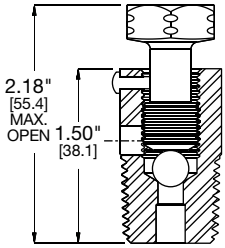
MAX Cv Rating: .125 Approximate Weight: 1.00 lbs [0.45 kg] each
Carbon Steel: 10,000 PSI @ 200°F or 1,500 PSI @ 800°F
316 SS: 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



Body Vent Plugs B6

PART NO.	CONNECTIONS	BODY & STEM	SEAT
BV10N2-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	410 SS Ball
BV10N2-C0		ASTM A479-316 SS / ASTM A479-316 SS	Carbide Ball
BV10N4-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	410 SS Ball
BV10N4C0		ASTM A479-316 SS / ASTM A479-316 SS	Carbide Ball

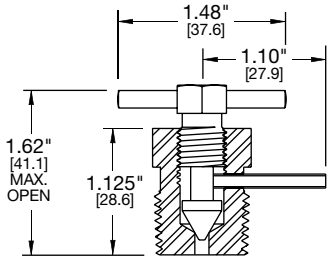
Approximate Weight: .50 lbs [0.23 kg] each
Carbon Steel: 10,000 PSI @ 200°F or 1,500 PSI @ 500°F
316 SS: 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



Bleed "T" Plugs B2

PART NO.	CONNECTIONS	BODY & STEM	SEAT
A7-528-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	Integral Metal
A7-528-C0		ASTM A479-316 SS / ASTM A479-316 SS	
A7-529-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-529-C0		ASTM A479-316 SS / ASTM A479-316 SS	

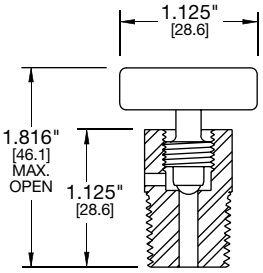
MAX Cv Rating: .125 Approximate Weight: .50 lbs [0.23 kg] each
Carbon Steel: 10,000 PSI @ 200°F or 1,500 PSI @ 500°F
316 SS: 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



Carbide Ball Bleed Plugs B1

PART NO.	CONNECTIONS	BODY & STEM	SEAT
A7-521-10	1/4" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	Carbide Ball
A7-521-C0		ASTM A479-316 SS / ASTM A479-316 SS	
A7-520-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-520-C0		ASTM A479-316 SS / ASTM A479-316 SS	

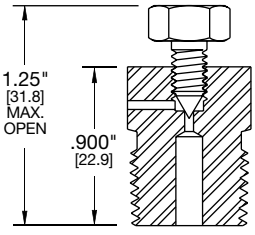
Approximate Weight: .50 lbs [0.23 kg] each
Carbon Steel: 10,000 PSI @ 200°F or 1,500 PSI @ 500°F
316 SS: 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



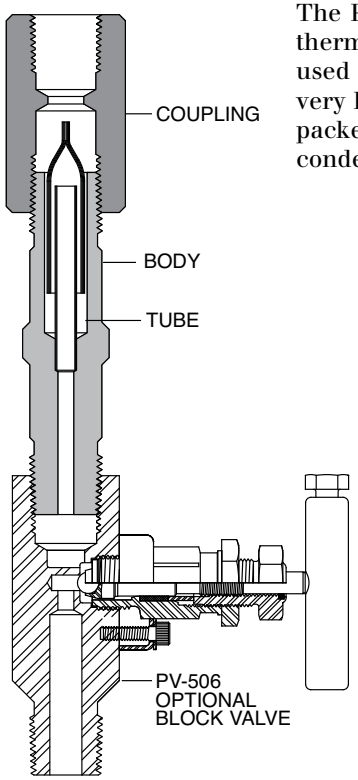
Mini-Hex Bleed Plugs B4

PART NO.	CONNECTIONS	BODY & BLEED SCREW	SEAT
A7-525-10	1/4" MNPT	ASTM A108-1215 CS / 17-4 PH	Integral Metal
A7-525-C0		ASTM A479-316 SS / 17-4 PH	
A7-526-10	1/2" MNPT	ASTM A108-1215 CS / ASTM A479-316 SS	
A7-526-C0		ASTM A479-316 SS / ASTM A479-316 SS	

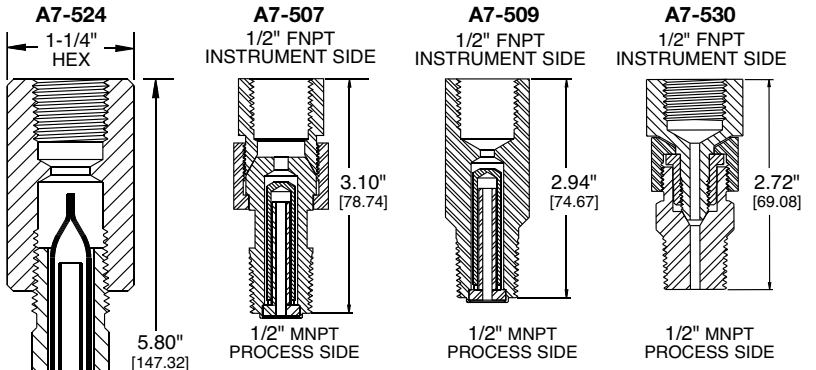
Approximate Weight: .30 lbs [0.14 kg] each
Carbon Steel: 10,000 PSI @ 200°F or 1,500 PSI @ 500°F
316 SS: 10,000 PSI @ 200°F or 1,500 PSI @ 1,000°F



Gauge Siphons and Swivels



The PGI Gauge Siphon replaces the old style "Pigtail" siphon. The siphon provides a thermal barrier, protecting your instruments from harmful vapors. The siphon can be used as either a freeze or steam protector when used with the proper fill fluids. When very high heat is present, the siphon, used in conjunction with the PGI V-506 Grafoil® packed Hand Valve, reduces temperatures seen at the instrument by lengthening the condensate leg.



ESTIMATED GAUGE TEMPERATURES

By knowing the material of construction, saturated steam conditions, and ambient temperature, the chart below can estimate the gauge temperature for the A7-522/524-C0 & C0S. For example, if using an A7-524-C0 in an application of 500 psig, 470°F saturated steam, and 90°F ambient temperature, Chart 1 (Carbon Steel) can be utilized by following the 90°F ambient temperature curve to 500 psig. An estimated gauge temperature of 180°F is shown. The same method will be applied for an A7-524-C0S on Chart 2 (Stainless Steel.) The estimated gauge temperature will be 144°F.

CHART 1

Carbon Steel

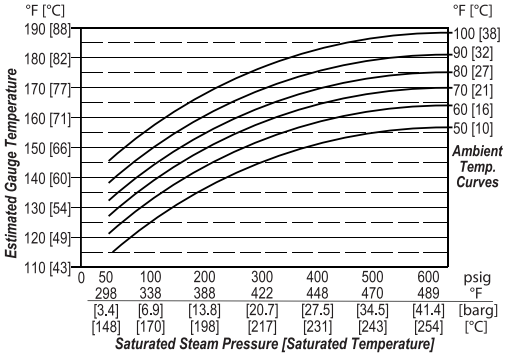
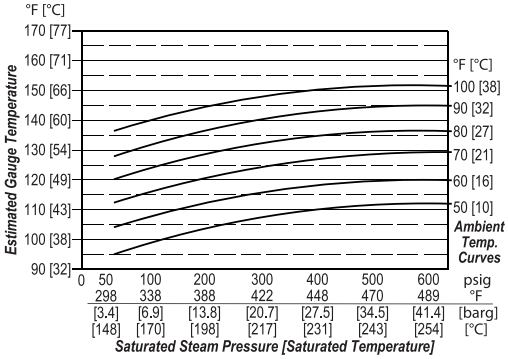


CHART 2

Stainless Steel



PART NUMBER SELECTION

Gauge Siphons: Process x Instrument	
A7-524-C0	1/2" MNPT x 1/2" FNPT; CS Coupling; 316 SS Material
A7-524-C0S	1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-522-C0	3/4" MNPT x 1/2" FNPT; CS Coupling; 316 SS Material
A7-522-C0S	3/4" MNPT x 1/2" FNPT; 316 SS Material
A7-507-C0	With Excess Flow Check & Swivel; 1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-508-C0	3/4" MNPT x 3/4" FNPT; 316 SS Material
A7-509-C0	With Excess Flow Check; 1/2" MNPT x 1/2" FNPT; 316 SS Material
A7-530-C0	Gauge Swivel Only; 1/2" MNPT x 1/2" FNPT; 316 SS Material

PRESSURE VS. TEMPERATURE

Part No.	Pressure @ Temperature
A7-524-C0	6,000 PSI @ 200°F Max 1,500 PSI @ 500°F Max
A7-524-C0S	6,000 PSI @ 200°F Max 1,500 PSI @ 1,000°F Max
A7-530-C0	10,000 PSI @ 200°F Max 1,500 PSI @ 1,000°F Max
A7-507-C0	1,500 PSI @ 1,000°F Max
A7-508-C0	10,000 PSI @ 200°F Max 1,500 PSI @ 500°F Max
A7-509-C0	1,500 PSI @ 1,000°F Max

WEIGHTS

Approx. Weights:
1.51 lbs. [0.68 kg] ea.
(A7-508 and A7-522/524-C0/C0S)
0.58 lbs. [0.26 kg] ea. (A7-530-C0)
0.60 lbs. [0.27 kg] ea. (A7-507-C0)
1.00 lbs. [0.45 kg] ea. (A7-509-C0)

Weldolet Double Block Gauge Valves ~ Hard Seat

ORIFICE
.187"

A	K	-	2	0	2	Y	C	T	-					

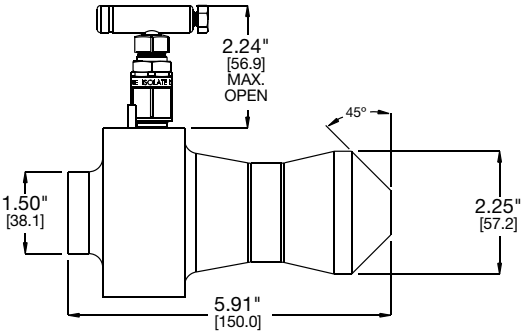
BODY CODE: 202
SEAT CODE: Y
BODY MAT'L CODE: C
STEM PACKING CODE: T
MISC. OPTIONS

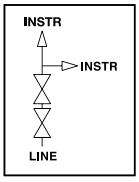
ORDERING INFORMATION

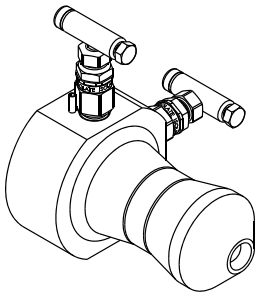
PART NO.	CONNECTIONS INLET	CONNECTIONS OUTLET	BODY & BONNET	SEAT	PACKING
.187" Orifice					Teflon® Pressure-Core® Stem Seal Max Pressure 10,000 PSI @ 200°F
AK-202YCT	1/2" FNPT Standard		Carbon Steel	Carbide Ball	
AK-202SCT			316 SS		

OPTION CODE	DESCRIPTION	
Body Material Options		
P	ASTM A105 CF Carbon Steel *For Use with Grafoil® Packed Bonnets*	
Seat Material Options		Refer to Charts C and E on Page 22 and Pressure and Process Temperature Charts on Page 23.
N	Monel® Ball Seat	
R	Ceramic Ball Seat	
6	316 SS Ball Seat	
Stem Packing Material Options		
T	Teflon® Pressure-Core® Stem Seal	
G	Low-Torque™ Grafoil® Packed	
J	Teflon® Pressure-Core® Stem Seal (Low Temperature -50°F)	
Miscellaneous Options *See Complete List on Page 24*		
AM7	Male Pipe Socket Weld - Male Inlet Only	
S1	Monel Stem Material	
W	Safety Bonnet Lock Plate (Lock Pin Standard)	
W1	316 SS Tag	
WK	Paper Tag	
XL	Clean for Critical Service (Oxygen or Chlorine)	

AK-202YCT







MATERIALS OF CONSTRUCTION

PART DESCRIPTION	CARBON STEEL	316 SS
Body	ASTM A350-LF2 CS	ASTM A479-316 SS
Bonnet	ASTM A479-316 SS	ASTM A479-316 SS
Stem	ASTM A479-316 SS	ASTM A479-316 SS
Seal Retainer	ASTM A479-316 SS	ASTM A479-316 SS
Handle Assembly	ASTM A108 CS	ASTM A581 18-8 300 SS

- PGI Carbon Steel Products are plated for corrosion prevention.
- PGI 316 SS Products meet the requirements of NACE MR0175/ISO 15156-36.
- 100% Pressure Tested

MAX Cv RATINGS

ORIFICE SIZE	BODY STYLE Straight
.187"	.53
Approximate Valve Weight: 8.00 lbs [3.62 kg]	

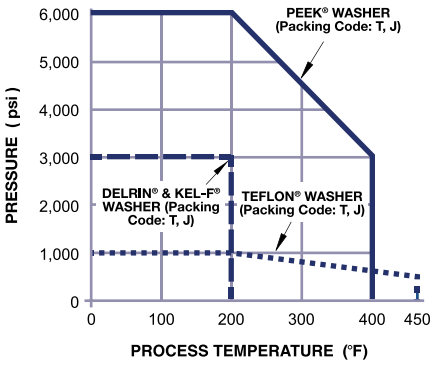
Pressure and Temperature Charts

ORIFICE

.136" .187" .250" .375"

CHART A

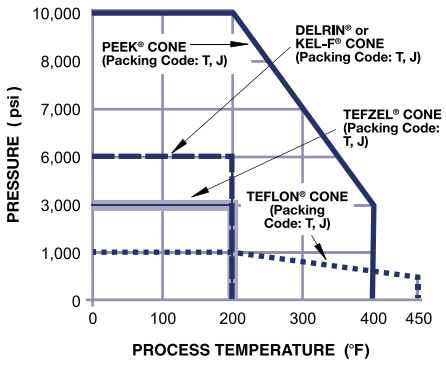
SOFT SEATS - .136" ORIFICE
TEFLON® PRESSURE-CORE® SEAL



A

CHART B

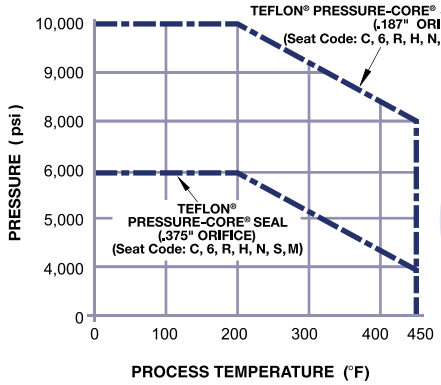
SOFT SEATS - .250" ORIFICE
TEFLON® PRESSURE-CORE® SEAL
All Materials



B

CHART C

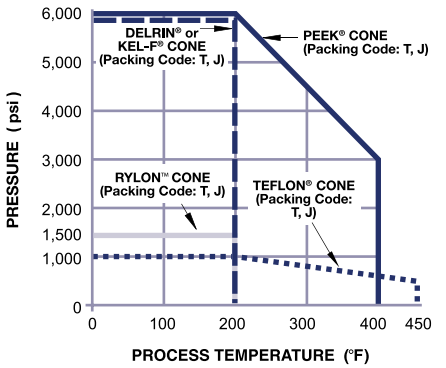
HARD SEATS - .187" and .375" ORIFICE
TEFLON® PRESSURE-CORE® SEAL
All Materials



C

CHART D

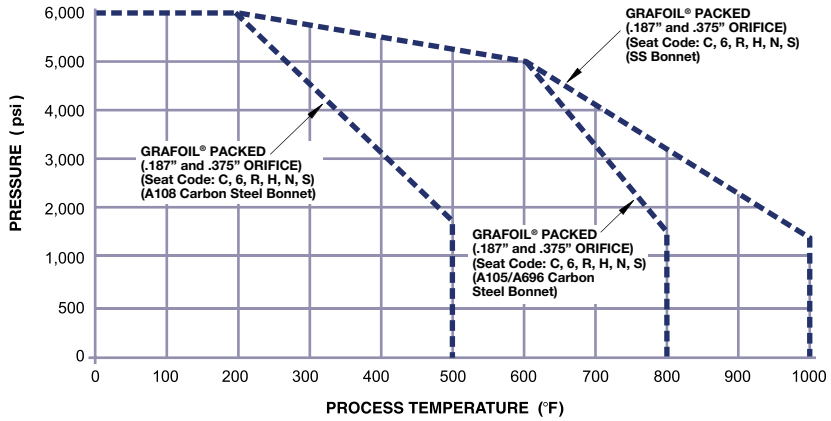
SOFT SEATS - .375" ORIFICE
All Materials



D

CHART E

LOW-TORQUE™ GRAFOIL® PACKED
HARD SEATS - .187" and .375" ORIFICE



E

Pressure and Process Temperature Ratings

To determine the Pressure & Temperature rating of your product, choose your body, seat and then seal, and use the lowest maximum Pressure & Temperature rating of the 3 selected criteria.

To determine the low temperature rating, use the highest minimum rating.

STANDARD BODY MATERIAL CODES

CODE	DESCRIPTION	PRESSURE & PROCESS TEMPERATURES
S	ASTM A479-316 Stainless Steel	See Pressure & Temperature of Stem Seal and Seat Material Minimum Temperature: -100°F (-73°C)
H	Hastelloy C-276	
C	ASTM A108 Carbon Steel	See Pressure & Temperature of Stem Seal and Seat Material Minimum Temperature: -20°F (-29°C)
P	ASTM A105/A696 Carbon Steel	

STANDARD STEM SEAL MATERIAL CODES

CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES
T	Mini Teflon® Packed	.136"	6,000 PSI Max. @ 200° to -80°F Min. 4,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -62°C Min. 276 bar Max. @ 204°C Max.
	Teflon® Pressure-Core® Chart C Hard Seat Only	.187" .250"	10,000 PSI Max. @ 200° to -40°F Min. 8,000 PSI Max. @ 450°F Max. 689 bar Max. @ 93° to -40°C Min. 552 bar Max. @ 232°C Max.
		.375"	6,000 PSI Max. @ 200° to -40°F Min. 4,000 PSI Max. @ 450°F Max. 414 bar Max. @ 93°C to -40°C Min. 276 bar Max. @ 232°C Max.
J	Teflon® Pressure-Core® Low Temperature Chart C Hard Seat Only	.187" .250"	10,000 PSI Max. @ 200° to -50°F Min. 8,000 PSI Max. @ 450°F Max. 689 bar Max. @ 93° to -46°C Min. 552 bar Max. @ 232°C Max.
		.375"	6,000 PSI Max. @ 200° to -50°F Min. 4,000 PSI Max. @ 450°F Max. 414 bar Max. @ 93° to -46°C Min. 276 bar Max. @ 232°C Max.
P	Teflon® Packed Style	.187"	10,000 PSI Max. @ 200° to -80°F Min. 4,000 PSI Max. @ 500°F Max. 689 bar Max. @ 93° to -62°C Min. 276 bar Max. @ 260°C Max.
G	Low-Torque™ Grafoil® Packed Style Chart E Hard Seat Only	.187" .375"	**A105/A696 Carbon Steel Bonnet** 6,000 PSI Max. @ 200° to -20°F Min. 1,500 PSI Max. @ 800°F Max. 414 bar Max. @ 93° to -29°C Min. 103 bar Max. @ 427°C Max.
			A108 Carbon Steel Bonnet 6,000 PSI Max. @ 200° to -20°F Min. 1,500 PSI Max. @ 500°F Max. 414 bar Max. @ 93° to -29°C Min. 103 bar Max. @ 260°C Max.
			SS Bonnet 6,000 PSI Max. @ 200° to -100°F Min. 1,500 PSI Max. @ 1,000°F Max. 414 bar Max. @ 93° to -73°C Min. 103 bar Max. @ 538°C Max.

STANDARD SOFT SEAT MATERIAL CODES

CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES
L	Rylon™ Cone Chart D	.375"	1,500 PSI Max. @ 200°F Max. to -40°F Min. 103 bar Max. @ 93°C Max. to -40°C Min.
D & K	Delrin® and Kel-F® Cone Charts B & D	.187" .250" .375"	6,000 PSI Max. @ 200°F Max. to -40°F Min. 414 bar Max. @ 93°C Max. to -40°C Min.
	Delrin® and Kel-F® Washer Chart A	.136"	3,000 PSI Max. @ 200°F Max. to -40°F Min. 207 bar Max. @ 93°C Max. to -40°C Min.
P	PEEK® Cone Chart B	.187" .250"	10,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 689 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.
	PEEK® Cone Chart D	.375"	6,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.
	PEEK® Washer Chart A	.136"	6,000 PSI Max. @ 200° to -40°F Min. 3,000 PSI Max. @ 400°F Max. 414 bar Max. @ 93° to -40°C Min. 207 bar Max. @ 204°C Max.
T	Teflon® Washer Chart A	.136"	1,000 PSI Max. @ 200° to -80°F Min. 500 psi Max. @ 450°F Max. 69 bar Max. @ 93° to -62°C Min. 34 bar Max. @ 232°C Max.
	Teflon® Cone Charts B & D	.187" .250" .375"	1,000 PSI Max. @ 200° to -80°F Min. 500 psi Max. @ 450°F Max. 69 bar Max. @ 93° to -62°C Min. 34 bar Max. @ 232°C Max.
Z	Tefzel® Cone Chart B	.250"	3,000 PSI Max. @ 200°F Max. to -40°F Min. 207 bar Max. @ 93°C Max. to -40°C Min.

STANDARD HARD SEAT MATERIAL CODES

CODE	DESCRIPTION	ORIFICE SIZES	PRESSURE & PROCESS TEMPERATURES
C	Carbide Ball	.136" .187" .375" Charts C & E	See Pressure & Temperature of Body and Stem Seal Material
R	Ceramic Ball		
6	316 SS Ball		
N	Monel Ball		
H	Hastelloy-C Ball		
S	Stellite Ball		
M	Integral Metal to Metal Seat	.187"	

NOTES

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Hastelloy® is a registered trademark of Haynes International.
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Kel-F® is a registered trademark of the 3M Company.
Rosemount® is a registered trademark of Rosemount®, Inc.
Parker® is a registered trademark of Parker Hannifin Corporation.
Swagelok® is a registered trademark of The Swagelok® Companies.

Miscellaneous Options *Add Options in Alpha-Numeric Order.*

OPTIONS			
OPTION CODE	DESCRIPTION	OPTION CODE	DESCRIPTION
AB	1/2" Integral Tube Fitting - Parker A-Lok Welded in Compression Fitting	GE	Anti-Tamper Bonnet (Vent Valve Only)
AC	1/2" Integral Tube Fitting - Swagelok Welded in Compression Fitting	GJ	Bonnet Lock Out (All Positions - Lock Not Provided)
AM7	1/2" Male Pipe Socket Weld - Inlet Only (Process Ports)	GK	Bonnet Lock Out (Isolation Valve Only - Lock Not Provided)
AP	1/2" Female Pipe Socket Weld Inlet & Outlet	GL	Bonnet Lock Out (Equalizer or Secondary Block Valve Only – Lock Not Provided)
AP7	1/2" Female Pipe Socket Weld Inlet Only (Process Ports)	GM	Bonnet Lock Out (Vent Valve Only - Lock Not Provided)
AP8	1/2" Female Pipe Socket Weld Outlet Only	HA	Extruded Aluminum Round Handle ("T" / Bar Handle Std.)
AS	6" Tube Stub Inlet & Outlet	H5	CS Mini Round Handles
AS7	6" Tube Stub Inlet Only	H6	SS Mini Round Handles
AU	Integral Parker A-Lok Inlet & Outlet	H7	CS Mini "T" / Bar Handle
AU7	1/2" Integral Tube Fitting - Parker A-Lok Dual Ferrules Inlet Only (Process Ports)	H8	SS Mini "T" / Bar Handle
AY	Integral Parker CPI Inlet & Outlet	M1	Panel Mount Nut
AY7	Integral Parker CPI Inlet Only	S1	Monel Stem Material
B1	Bleed Valve Installed Ball Seat A7-521 (1/4") or A7-520 (1/2")	TH	Hydrostatic Testing
B2	Bleed Valve Installed Bleed Tee Style A7-528 (1/4") or A7-529 (1/2")	VC	CS Versa Mount Bracket
B3XX	Mini Bleed Valve Installed V-585 Style XX = Seat and Seal Code On V-585	VCH	CS Heavy Duty Versa Mount Bracket
B4	Bleed Valve Installed Mini Hex Style A7-525 (1/4") or A7-526 (1/2")	VS	316 SS Versa Mount Bracket
B5	Bleeder Valve 1/4" NPT Installed in Vent Port (BV10N2)	VSH	316 SS Heavy Duty Versa Mount Bracket
B6	Bleeder Valve 1/4" NPT Installed in Vent Port (BV10N4)	W	Safety Bonnet Lock Plate
GA	Anti-Tamper Bonnet (All Positions)	W1	316 SS Tag (20 Characters)
GC	Anti-Tamper Bonnet (Isolation Valve Only)	WK	Paper Tag
GD	Anti-Tamper Bonnet (Equalizer Valve Only)	XL	Clean for Critical Service (Oxygen or Chlorine)
		XS	Special Stamping
		XV	Manifold Mounted to Customers Transmitter and Pressure Tested
		Y	OS & Y Bonnet

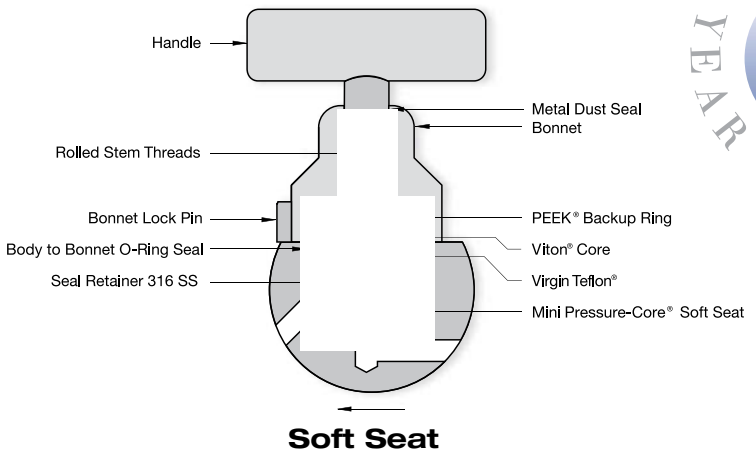
Teflon® Mini Pressure-Core® Stem Seal Bonnet and Packing Design

ORIFICE

.136"

VP Series Mini / Cylinder Valves

PATENTED 5 YEAR WARRANTY



Soft Seat

Mini Teflon® Pressure-Core® vs. Conventional "Packed" Teflon®

Conventional mini packed bonnet designs are prone to stem leaks due to Teflon® seal extrusion. The packing is located above the stem threads, thus allowing the possibility of critical stem thread contamination by the process. Additionally, the soft seat area is so small that technicians can easily force the stem through the seat washer as they try to get a "firm feel" on the shut-off. Over the long run, stem and seat leaks will cause calibration and recording difficulties, as well as loss of sample product.

Mini Pressure-Core® Advantages:

- **Highly Reliable** Patented Pressure-Core® Stem Seal with **5 Year Warranty**
- Seal **Below** the Stem Threads
- Soft Seat Washer with **FOUR TIMES** the Sealing Area of a Standard Mini Seat that Provides a Seat that Can't Be Damaged with Excessive Shutoff Force
- **Same Cv Rating** (.22 Max) as the Conventional Mini Bonnet

Teflon® Pressure-Core® Stem Seal Bonnet and Packing Design

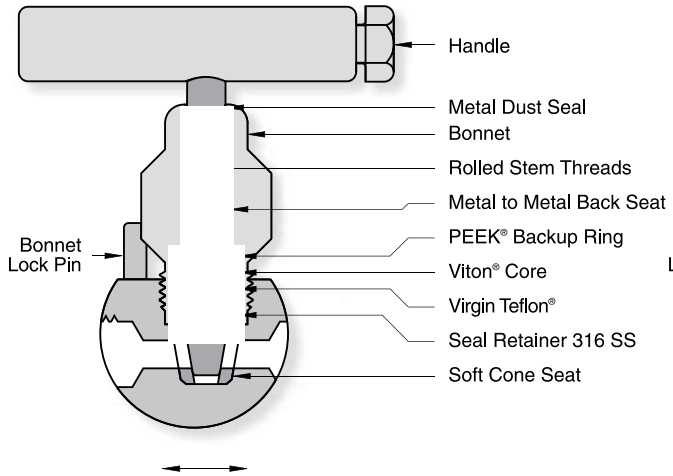
ORIFICE

.187" .250" .375"

PATENTED

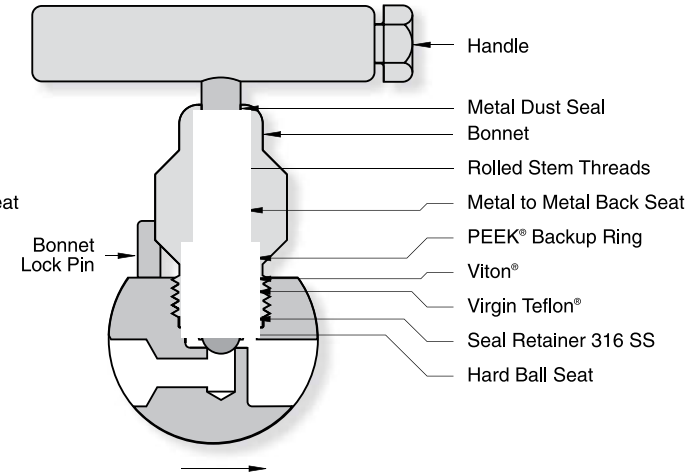
5 YEAR WARRANTY

.187" .250" Orifice



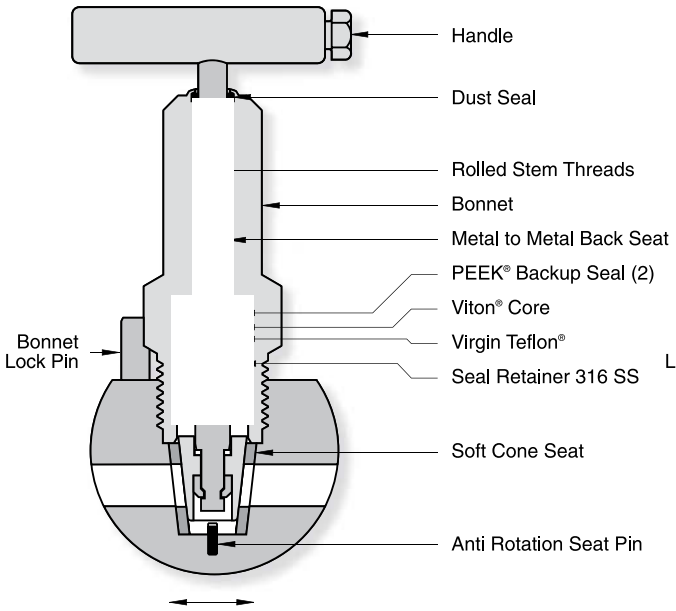
Soft Seat

.187" Orifice Only



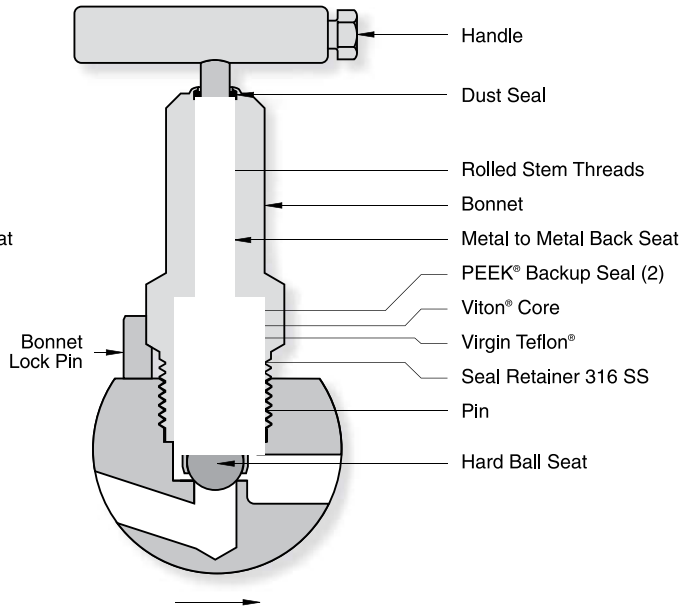
Hard Seat

.375" Orifice



Soft Seat

.375" Orifice



Hard Seat

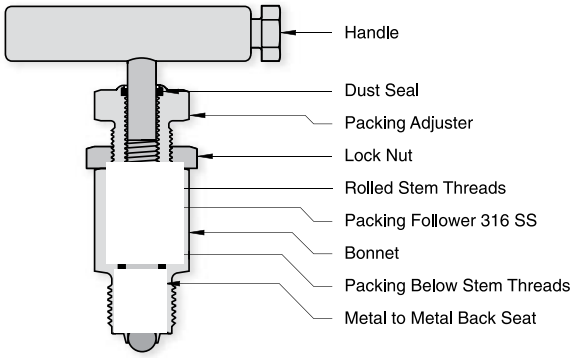
Low-Torc

ORIFICE

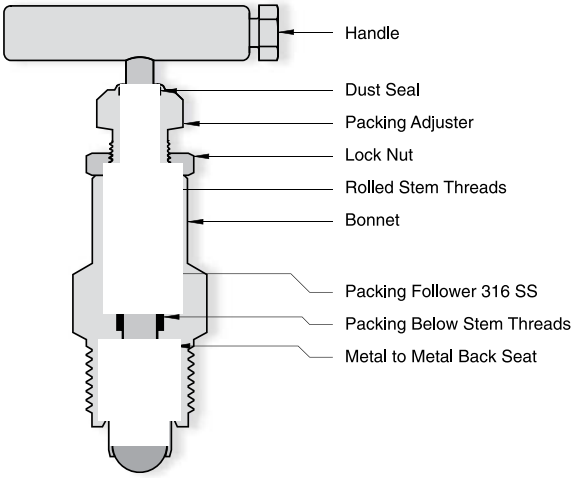
.187" .375"

Packed Valves
Low-Torque™ Grafoil® Code "G"

.187" Orifice



.375" Orifice

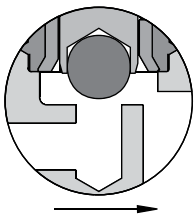


Seat Designs ~ Features and Benefits

ORIFICE

.136" .187" .250" .375"

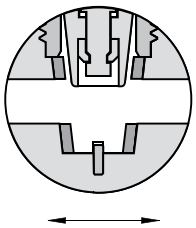
HARD BALL SEAT ~ .187" .375" Orifice



FEATURES
- PGI Standard Carbide *Ball* Seat

BENEFITS
- Non-rotating ball eliminates seat galling and ball creasing
- Leak free, bubble tight seating
- Available in a variety of materials

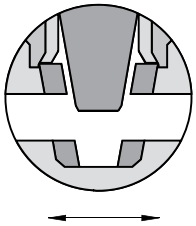
316 SS CONE SEAT ~ .375" Orifice



FEATURES
- PGI 316 SS *Cone* Seat

BENEFITS
- Non-rotating stem tip
- Roddable straight-through design
- Easily replaced
- Bi-directional flow

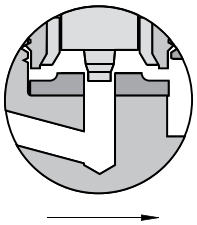
SOFT SEAT ~ .187" .250" .375" Orifice



FEATURES
- PGI Soft *Cone* Seat

BENEFITS
- Roddable straight-through design
- Leak free, bubble tight seating
- Easily replaced
- Available in a variety of materials
- Bi-directional flow

SOFT "WASHER" SEAT ~ .136" Orifice [Mini Pressure-Core®] [VP Series Mini / Cylinder Valves]



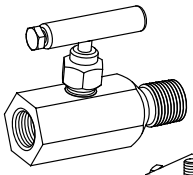
FEATURES
- PGI Standard Delrin® Seat

BENEFITS
- Compatible with H_2S/CO_2
- Throttling and shut-off design
- Available in a variety of materials

Additional PGI Product Offerings

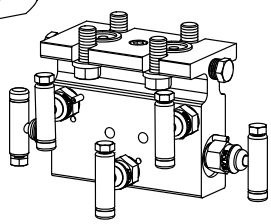
PGI Instrument Manifolds

A complete line of Block & Bleed, Meter, Two, Three and Five Valve styles available in Carbon Steel and 316 SS to NACE MR-01-75/ISO 15156-3. Specialty alloys available. Offered with the patented Teflon® Pressure-Core® Stem Seal with an unmatched 5 year warranty.



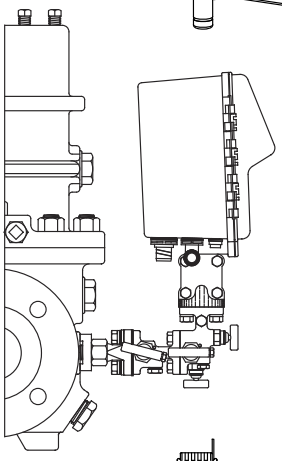
Lone Star™ Instrument Valves & Manifolds

PGI also offers a complete line of instrument valve and manifold products with the traditional 1 year warranty. This value line of products is available in adjustable packed bonnet designs and Viton O-Ring seal bonnets for customers requiring a quality product at a value price. The Lone Star line offers a complete array of seat material options. A wide variety of ball seat materials, metal to metal seats and soft seats are available in a variety of materials to fit your application. Lone Star is also available in NACE MR0175/ISO 15156-3 for your critical services.



PGI Power & Steam Instrument Valves & Manifolds

A complete line of Hand, Gauge, Root, Multi-Port, and Blowdown Valves. Two, Three and Five Valve manifolds for power and steam plant applications. All of the PGI power products are rated for ANSI B31.1.

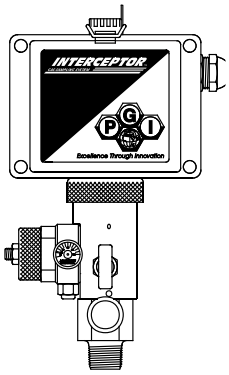


Direct-Mount® Systems

PGI, as the industry leader of close coupled manifolding, offers systems to meet today's strict measurement requirements that reduce or eliminate gauge line errors (GLE). Offered with our patented Teflon® Pressure-Core® Stem Seal with an unmatched 5 year warranty.

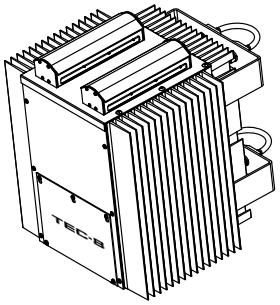
Engineered Products Division

PGI International offers a complete line of Gas and Liquid Composite Samplers. The Interceptor and Nova samplers are FM and CSA Approved, Intrinsically safe for Class I, Division 1, Group C and D hazardous locations, when used with an Approved PGI furnished power supply. Our NOVA system samples refined liquids, dense phase CO_2 and wet, dry or dirty gas. Engineered Products division also offers sample cylinders, sample probes and cylinder valves. Our Hot-Shot™ Heated Enclosure System is designed to be used with natural gas samplers and will heat the sampling system to temperatures above the hydrocarbon dew point of the gas, assisting in the compliance of the new API Standard 14.1.



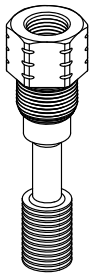
ZEUS® Power Systems

We offer efficient and reliable alternatives to solar panel systems used to power electronic instruments on gas pipelines. PGI's ThermoElectric Chargers (TEC) and Differential Pressure Chargers (DB1) both produce 12- or 24- volts of power to keep batteries fully charged. TEC is fueled by natural gas or propane, while the DB1 is powered using the differential pressure developed across a pressure regulator. Both TEC and DB1 continually monitor the battery's temperature and charge level, and charge the battery accordingly. TEC and DB1 can be used on transmitters, flow computers, AFR (Air Fuel Ratio) and communication systems on gas pipelines. The compact units excel in cold, snowy or rainy conditions, and are low-emission environmentally friendly.



ThermoSync® Temperature Measurement Systems

PGI International's ThermoSync thermowell and RTD probe provide the most accurate pipeline gas temperature measurement system available. The unique patented design optimizes thermo-coupling at the RTD tip while minimizing pipe wall induced errors. Reducing pipe temperature effects on flow calculations provides greater accuracy and minimizes unaccountable errors. The ThermoSync Temperature system measures the true flowing gas temperature by including a finned thermowell with a RTD that has PVC insulation, thus reducing the transfer of outside temperature effects to the RTD.



INSTRUMENTATION PRODUCTS

- Instrument Valves & Manifolds
- Power and Steam Plant Valves & Manifolds
- Purge Adapters for the Process Industry

ENGINEERED PRODUCTS

- Gas & Liquid Sampling Systems
- Natural Gas Sampling System Heated Enclosures
- Sample Cylinders and Accessories

MEASUREMENT ACCURACY PRODUCTS

- ThermoSync® Thermowells & Temperature Probes
- Direct-Mount® Systems
- Square Root Error (SRE) & Gauge Line Error (GLE) Indicators

ZEUS® POWER SYSTEMS

- TEC™ ThermoElectric Battery Chargers
- DB1™ Differential Pressure Battery Chargers

ADDITIONAL PGI INTERNATIONAL PRODUCTS & SERVICES

- Valve Fittings & Wellhead Components
- Propane and Anhydrous Ammonia Valves
- Contract Machining

QUALITY SYSTEM CERTIFICATION ISO 9001:2008 DNV

PGI International

Excellence Through Innovation

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sales@pgiint.com • www.pgiint.com