

ANDERSON GREENWOOD PTM/PT7 STATIC PRESSURE MANIFOLDS

Two valve calibration manifolds with a choice of metal and soft seats for static pressures up to 6000 psig (414 barg)



FEATURES

- Cost savings of 20-30% when manifolding instruments by eliminating several parts used in conventional methods of 'piping up'.
- Compact design requires minimum space for operation and installation.
- Shutoff valve, tee, calibration valve and all immediate tubing/fittings available in one simple manifold.
- PTM's unique valve seat can be converted from soft to hard simply by removing two insert washers.
- Stem and bonnet threads are rolled for increased strength, preventing galling and adding years to the useful life of the valve.
- Fewer leak points reduce leakage by having fewer parts to assemble.
- PTFE and graphite adjustable packing is easily adjusted for leak-proof, long service life.
- PTM's O-ring stem seal stem design isolates the stem threads from the process, preventing galling and corrosion.
- Back seat stem prevents blowout.

GENERAL APPLICATION

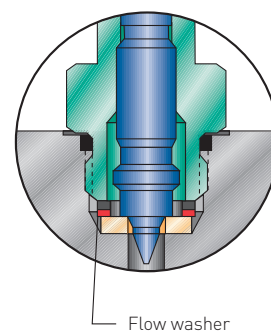
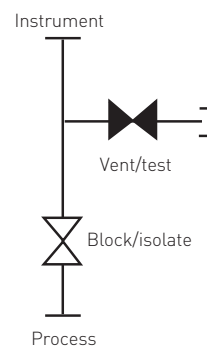
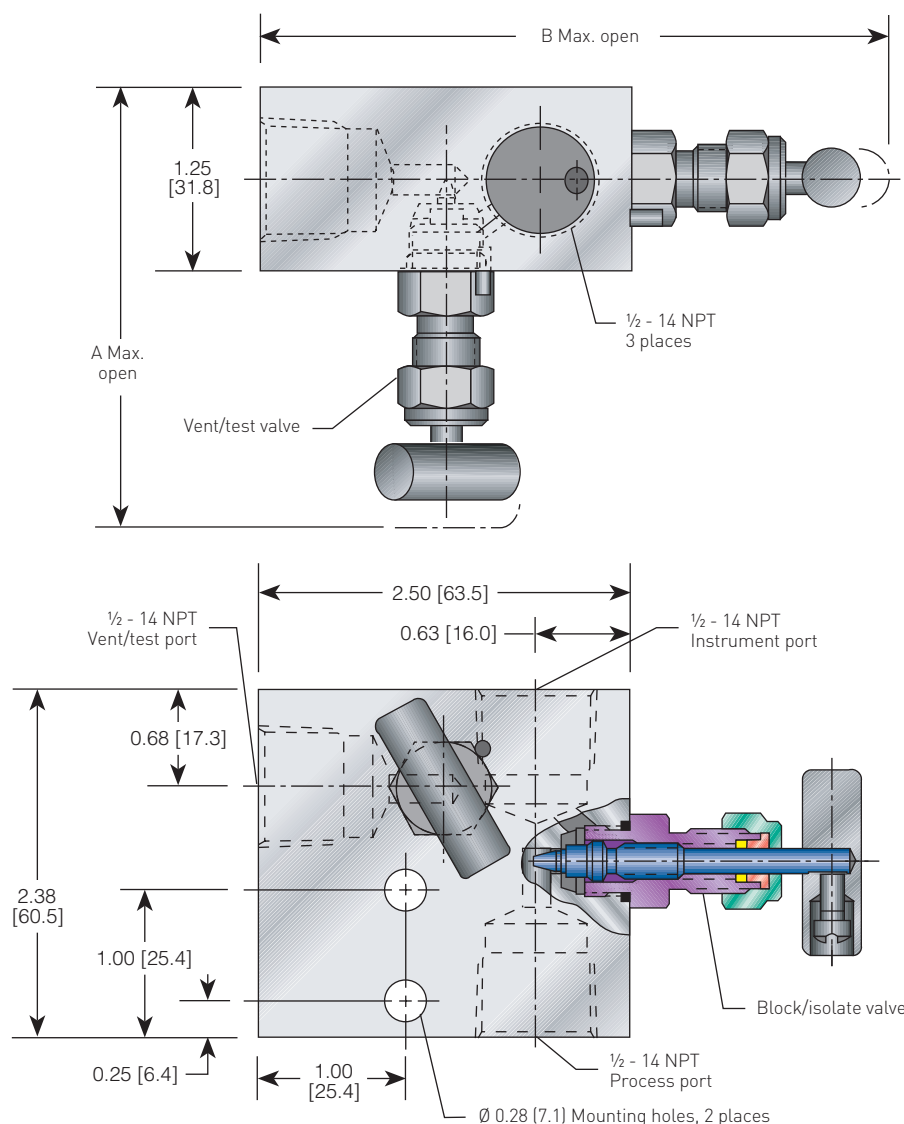
PTM two-valve calibration manifolds are used on static pressure transmitters, switches or gauges. The PT7 manifold is available for elevated temperatures with an integral metal seat and can be used for B31.1 applications. Available for panel or pipe stand mounting.

TECHNICAL DATA

Materials:	CS, SS, Monel, Hastelloy
Seats:	Metal or soft
Connections	
Instrument:	½" (15 mm) NPT
Process:	½" (15 mm) NPT
Pressure (max.):	6000 psig (414 barg)
Temperature range:	-70° to 1000°F (-57° to 538°C)

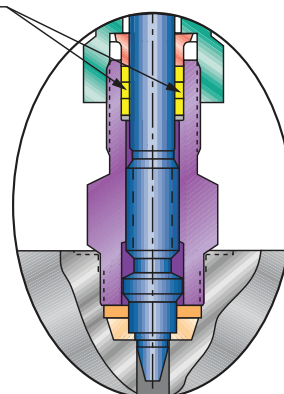
ANDERSON GREENWOOD PTM STATIC PRESSURE MANIFOLDS

PTM DIMENSIONS, INCHES (mm)



Optional soft seat

Grafoil packing



Grafoil packed bonnet

DIMENSIONS, INCHES (mm)

Packing	A	B
O-ring	2.50 [63.5]	3.75 [95.3]
PTFE	3.10 [78.7]	4.35 [110.5]
Grafoil	3.57 [90.7]	4.82 [122.4]

NOTE

1. Approximate valve weight: 2.0 lb [0.9 kg]. 0.136-inch [3.5 mm] diameter orifice. Valve C_v hard seat 0.25 maximum. Valve C_v soft seat 0.24 maximum.

BONNET ASSEMBLIES

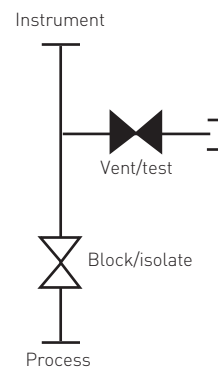
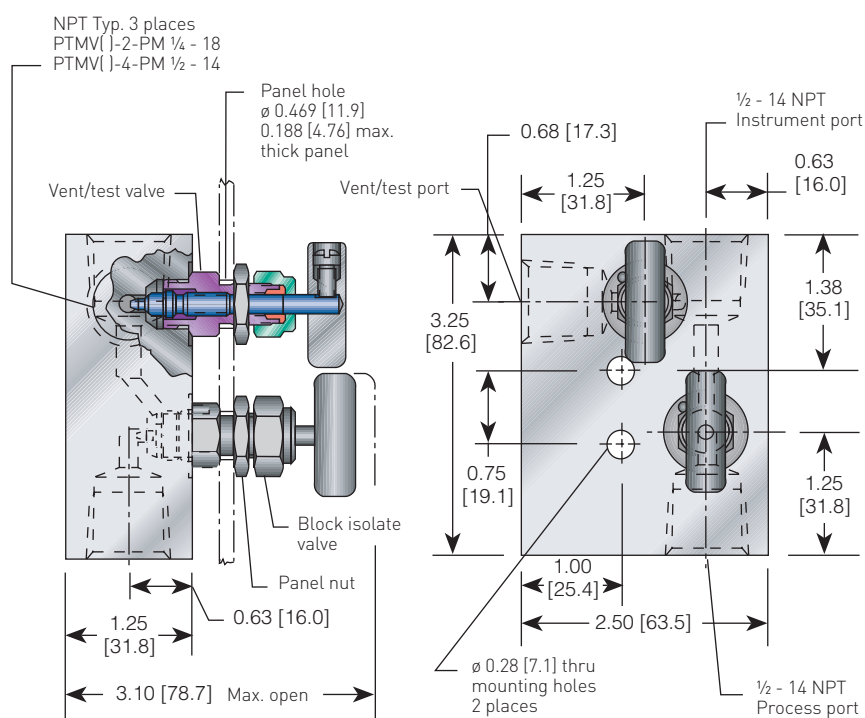
The PTM features mini-valve bonnet technology compact design with a V tipped stem, back seat design and soft or metal seated operation. The stem threads are rolled and lubricated to prevent galling, reducing torque and providing longer service life. All mini valve designed manifolds have a unique valve seat design which may be converted from soft seat to metal simply by removing the seat and flow washer.

The mini-valve bonnets come in three designs:

- An adjustable PTFE stem packed bonnet which is suitable for panel mounting via external bonnet threads.
- O-ring bonnet assemblies which use a PKF or NBR O-ring seal below the stem thread.
- Grafoil packing for applications with temperatures to 1,000°F.

ANDERSON GREENWOOD PTM STATIC PRESSURE MANIFOLDS

PTMV () - () - PM (PANEL MOUNT) DIMENSIONS, INCHES [mm]



STANDARD MATERIALS

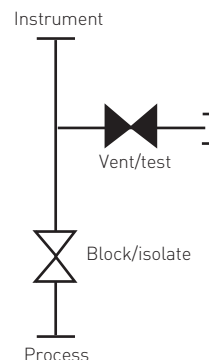
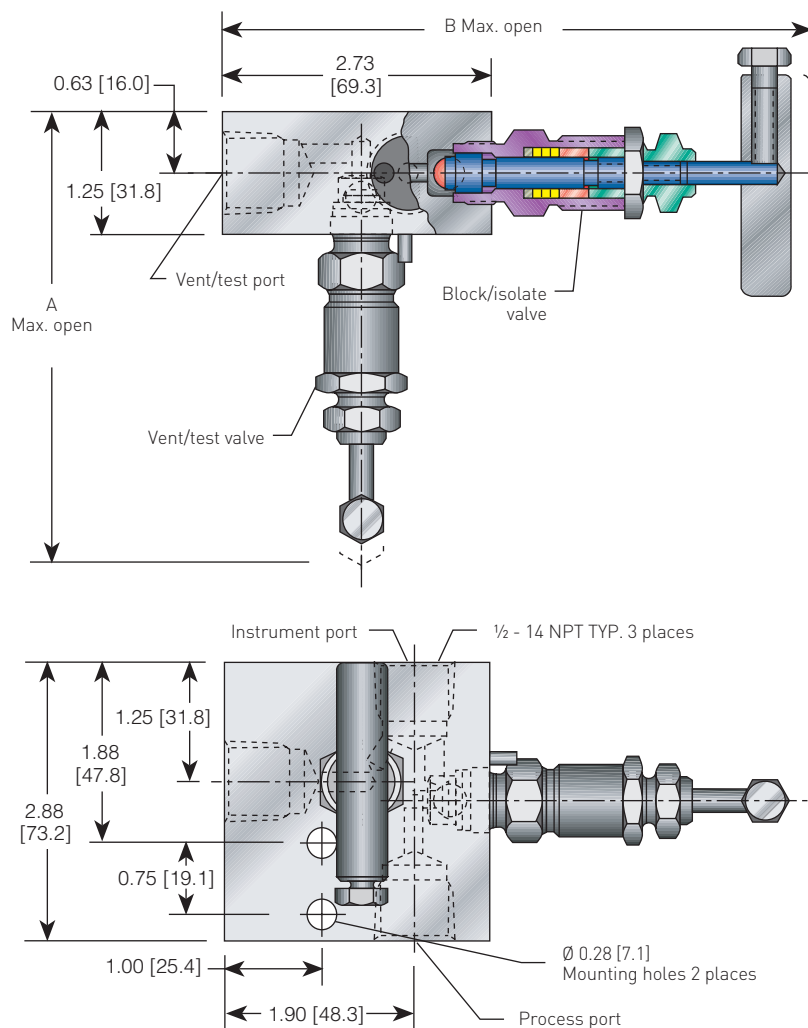
Valve	Body	Bonnet	Stem	Flow washer ⁴
CS ²	A108	A108	A581-303	316
SS	A479-316	A479-316	A276-316	316
SG ³	A476-316	A479-316	Monel® R405	316
Monel®	Monel® 400	Monel® R405	Monel® R405	Monel® 400

NOTES

1. Approximate valve weight: 2.7 lb [1.2 kg].
0.136-inch [3.5 mm] diameter orifice.
Valve C_v hard seat 0.25 maximum.
Valve C_v soft seat 0.24 maximum.
2. CS is zinc chromate plated to prevent corrosion.
3. SG (Sour Gas) - all SS wetted parts are RC22 or less to meet requirements of NACE MR0175-latest revision.
4. Soft seated valves only.

ANDERSON GREENWOOD PT7 STATIC PRESSURE MANIFOLDS

PT7 DIMENSIONS, INCHES (mm)



BONNET ASSEMBLIES

The PT7 is available with metal seated bonnet assemblies which have a rotating stem with free swivel ball-type seat for long service life. All stem threads are rolled and lubricated to prevent galling and reduce operating torque. The stem seal is a patented PTFE packing gland which is adjustable in service. All bonnets are assembled with a bonnet locking pin to prevent accidental removal while in service and a protective dust cap is fitted to contain stem lubricant and prevent the influx of contaminants.

The high-temperature bonnet assemblies use an ENC plated stem and bonnet incorporating adjustable graphite rings and back-up pressure rings to ensure a leak-free stem seal.

STANDARD MATERIALS

Valve ¹	Body	Bonnet	Stem	Ball	Packing
CS ²	A105	A108	A581-303	17-4 PH	PTFE
CS ²	A105	A105	A581-303	17-4 PH	Grafoil®/Low emissions graphite
SS	SS, A479-316	SS, A479-316	A276-316	316	PTFE
SS	SS, A479-316	SS, A479-316	A276-316	316	Grafoil®/Low emissions graphite
SG ³	SS, A479-316	SS, A479-316	Monel® 400	Monel® K500	PTFE
SG ³	SS, A479-316	SS, A479-316	Monel® 400	Monel® K500	Grafoil®/Low emissions graphite

NOTES

- Approximate valve weight: 3.0 lb (1.4 kg).
0.187-inch (4.8 mm) diameter orifice.
Valve C_v 0.52 maximum.
- CS is zinc chromate plated to prevent corrosion.
- SG (Sour Gas) meets the requirements of NACE MR0175/ISO 15156 (for chloride conditions ≤ 50 mg/l (ppm)) and NACE MR0103-2005.

DIMENSIONS, INCHES (mm)

Packing	A	B
PTFE	3.85 (97.8)	5.33 (135.4)
Grafoil®	4.50 (114.3)	5.98 (151.9)

ANDERSON GREENWOOD PTM/PT7 STATIC PRESSURE MANIFOLDS

PRESSURE AND TEMPERATURE RATINGS - PTM

Packing	PCTFE/Delrin® seat		PEEK seat/metal seat			
PTFE	3000 psig at (207 barg at	200°F 93°C)	6000 psig at	200°F	6000 psig at	200°F
			3000 psig at	300°F	4000 psig at	500°F
			(414 barg at	93°C)	(414 barg at	93°C)
			(207 barg at	149°C)	(276 barg at	260°C)
O-ring	3000 psig at (207 barg at	200°F 93°C)	6000 psig at	200°F	6000 psig at	200°F
			(414 barg at	93°C)	(414 barg at	93°C)

PRESSURE AND TEMPERATURE RATINGS - PT7

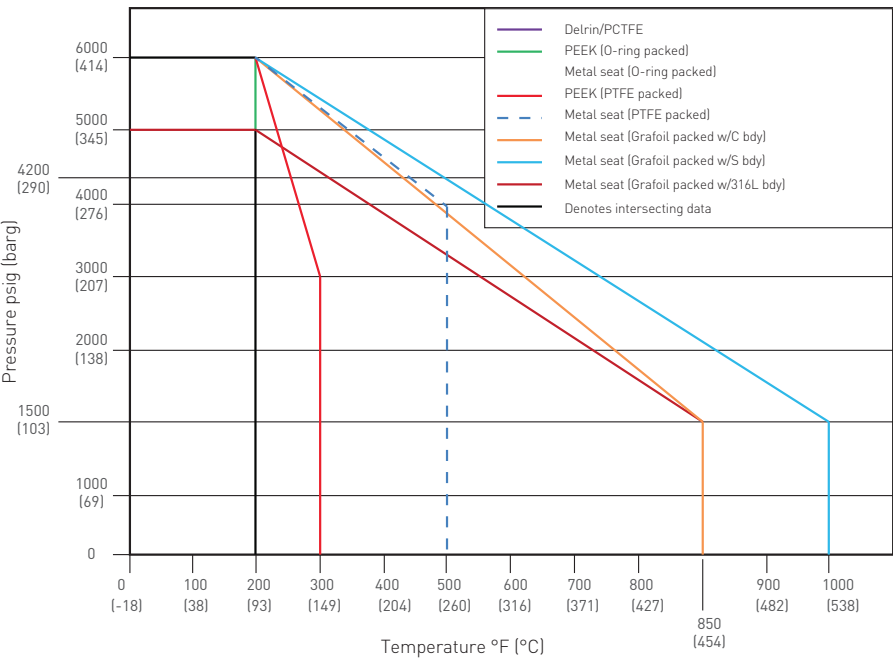
Valve	Packing	Ratings			
CS	PTFE	6000 psig at	200°F	4000 psig at	500°F
		(414 barg at	93°C)	(276 barg at	260°C)
CS	GRAFOIL®/Low emissions graphite	6000 psig at	200°F	1500 psig at	850°F
		(414 barg at	93°C)	(103 barg at	454°C)
SS	PTFE	6000 psig at	200°F	4000 psig at	500°F
		(414 barg at	93°C)	(276 barg at	260°C)
SS	GRAFOIL®/Low emissions graphite	6000 psig at	200°F	1500 psig at	1000°F
		(414 barg at	93°C)	(103 barg at	538°C)
SG	PTFE	6000 psig at	200°F	4000 psig at	500°F
		(414 barg at	93°C)	(276 barg at	260°C)
SG	GRAFOIL®/Low emissions graphite	6000 psig at	200°F	1500 psig at	1000°F
		(414 barg at	93°C)	(103 barg at	538°C)

NOTE

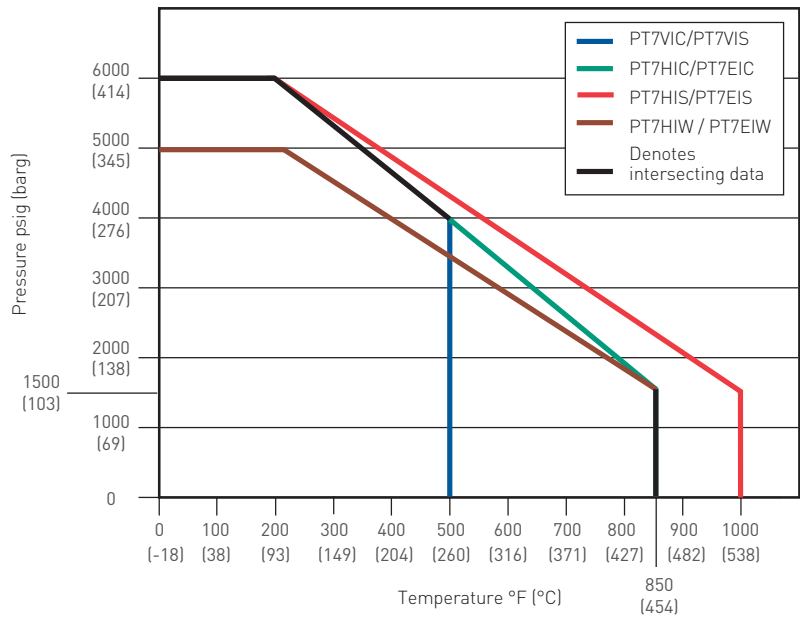
Minimum temperature for 316SS, Grafoil and PTFE packed bonnets is -70°F (-57°C).

ANDERSON GREENWOOD PTM/PT7 STATIC PRESSURE MANIFOLDS

PTM PRESSURE VS. TEMPERATURE



PT7 PRESSURE VS. TEMPERATURE



ANDERSON GREENWOOD PTM STATIC PRESSURE MANIFOLDS

PTM - SELECTION GUIDE

Example:		PTM	V	D	S	- 4	- SG
Bonnet packing							
V	PTFE						
R	O-ring (SS - FKM, CS - NBR) (soft seat only)						
Seat material							
D	Delrin® (standard)						
K	PCTFE						
E	PEEK						
I	Integral (body material)						
Body material							
C	A108						
S	A479-316 SS						
M	Monel® 400						
Connections							
4	½-inch FNPT (inlet) x ½-inch FNPT (outlet) x ½-inch FNPT (vent)						
2	¼-inch FNPT (inlet) x ¼-inch FNPT (outlet) x ¼-inch FNPT (vent)						
Options							
AM	AGCO mount						
AMS	AGCO mount kit (Stainless steel)						
AMV	AGCO mount kit (vertical)						
HD	Hydrostatic testing (100%) (MSS-SP-61)						
OC00	Oxygen clean (OC)						
PMI00	PMI body only						
SG	(Sour Gas) NACE edition 2003 /MR0103						
SG3	(Sour Gas) NACE MR0175/ISO 15156-3 (latest edition)						
PV	Vent plug						

ANDERSON GREENWOOD PT7 STATIC PRESSURE MANIFOLDS

PT7 - SELECTION GUIDE

Example:				PT7	V	I	S	- 4	- SG
Bonnet packing									
V	PTFE								
H	GRAFOIL®								
E	Low emissions graphite								
Seat material									
I	Integral (body material)								
Body material									
C	CS	S	316 SS						
J	Hastelloy	W	316L SS						
M	Monel								
Connections									
3TC4	¾-inch tube stub (inlet) x ¾-inch tube stub (outlet) x ½-inch FNPT (vent)								
4	½-inch FNPT (outlet) x ½-inch FNPT (inlet) x ½-inch FNPT (vent)								
3	¾-inch FNPT (outlet) x ¾-inch FNPT (inlet) x ¾-inch FNPT (vent)								
3TC	¾-inch tube stub (inlet) x ¾-inch tube stub (outlet) x ¾-inch FNPT (vent)								
3TC44	¾-inch tube stub (inlet) x ½-inch FNPT (outlet) x ½-inch FNPT (vent)								
422	½-inch FNPT (inlet) x ¼-inch FNPT (outlet) x ¼-inch FNPT (vent)								
442	½-inch FNPT (inlet) x ½-inch FNPT (outlet) x ¼-inch FNPT (vent)								
4B2	½-inch FSW (inlet) x ¼-inch FNPT (outlet) x ¼-inch FNPT (vent)								
4TC4	½-inch tube stub (inlet) x ½-inch tube stub (outlet) x ½-inch FNPT (vent)								
4TC44	½-inch tube stub (inlet) x ½-inch FNPT (outlet) x ½-inch FNPT (vent)								
Options									
AM	AGCO mount								
AMS	AGCO mount kit (stainless steel)								
AMV	AGCO mount kit (vertical)								
BL	Bonnet lock device								
HD	Hydrostatic testing (100%) (MSS-SP-61)								
LAT	Lockable anti tamper								
OC00	Oxygen clean (OC)								
PMI00	PMI body only								
SG	(Sour Gas) NACE edition 2003 /MR0103								
SG3	(Sour Gas) NACE MR0175/ISO 15156-3 (latest edition)								
VP	Vent plug								

ANDERSON GREENWOOD PT7 STATIC PRESSURE MANIFOLDS

PT7MHP - SELECTION GUIDE POWER INDUSTRY APPLICATIONS¹

EXAMPLE: SELECTED POWER INDUSTRIES APPLICATIONS						NOTES
Example:	PT7MHP	S	- 4	- XP	- SG	
Body material						1. All manifolds come standard with GRAFOIL® packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.
C	A105					
S	A479 - 316 SS					
Connections						2. Manifold ratings:
3TC4	3/8-inch tube stub (inlet) x 3/8-inch tube stub (outlet) x 1/2-inch FNPT (vent)					
4	1/2-inch FNPT (outlet) x 1/2-inch FNPT (inlet) x 1/2-inch FNPT (vent)					
3	3/8-inch FNPT (outlet) x 3/8-inch FNPT (inlet) x 3/8-inch FNPT (vent)					
3TC	3/8-inch tube stub (inlet) x 3/8-inch tube stub (outlet) x 3/8-inch FNPT (vent)					
3TC44	3/8-inch tube stub (inlet) x 1/2-inch FNPT (outlet) x 1/2-inch FNPT (vent)					
422	1/2-inch FNPT (inlet) x 1/4-inch FNPT (outlet) x 1/4-inch FNPT (vent)					
442	1/2-inch FNPT (inlet) x 1/2-inch FNPT (outlet) x 1/4-inch FNPT (vent)					
4B2	1/2-inch FSW (inlet) x 1/4-inch FNPT (outlet) x 1/4-inch FNPT (vent)					
4TC4	1/2-inch tube stub (inlet) x 1/2-inch tube stub (outlet) x 1/2-inch FNPT (vent)					
4TC44	1/2-inch tube stub (inlet) x 1/2-inch FNPT (outlet) x 1/2-inch FNPT (vent)					
Options						
AM	AGCO mount					
AMS	AGCO mount kit (stainless steel)					
AMV	AGCO mount kit (vertical)					
BL	Bonnet lock device					
HD	Hydrostatic testing (100%) (MSS-SP-61)					
LAT	Lockable anti tamper					
OC00	Oxygen clean (OC)					
PMI00	PMI body only					
SG	(Sour Gas) NACE edition 2003 /MR0103					
SG3	(Sour Gas) NACE MR0175/ISO 15156-3 (latest edition)					
VP	Vent plug					
XP	ASME B31.1					

