

Performance Under Pressure

Most any valve can perform adequately under normal conditions. We build valves that will consistently excel over time, under virtually any condition or installation.

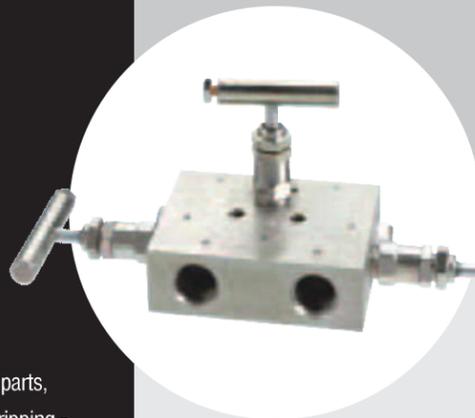
Bubble tight shut-off, lightweight, super strong construction, compact designs that require less parts, chrome plated stems that prevent galling and stripping - these valves are built to perform under pressure. That's why in some of the most rigid tests, Kerotest valves consistently meet or exceed industry standards.

If a valve is going to work as hard as you do, then the people who build it had better be good. Our engineers, designers and machinists are all part of a company committed to "performance under pressure." It means that they work to exceed the specs and add to the design, so that what you get is better than anything you expect.

For over 100 years, we have designed, manufactured and delivered. Every day, we're going to work as hard as you do.

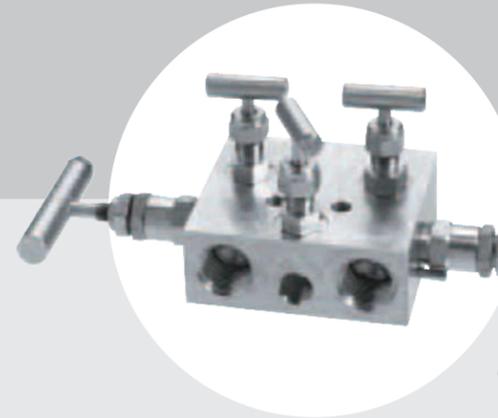
Kerotest Manifold Valves.
Performance Under Pressure.

VALVES THAT WORK AS HARD AS YOU DO.



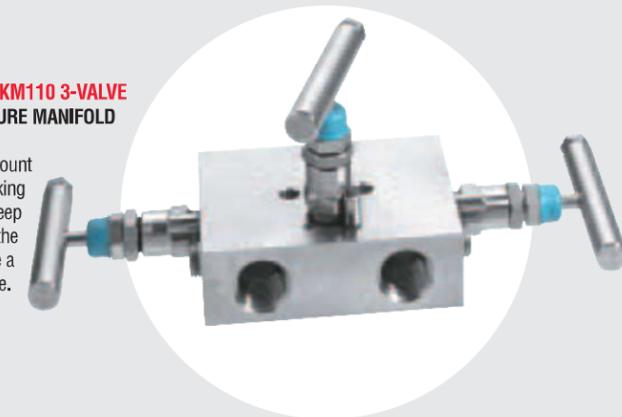
KM1 3-VALVE
DIFFERENTIAL PRESSURE MANIFOLD

Designed for remote mount applications. This one manifold does the work of three valves, saving you money and time. Plus, its bonnet cap protection increases valve life and maintains the integrity of the stem threads.



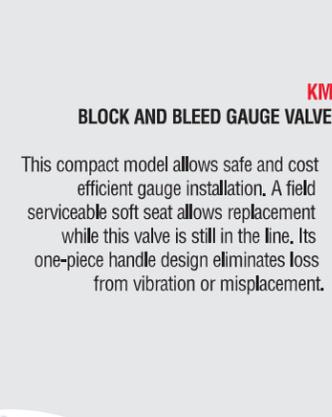
KM6A 5-VALVE
NATURAL GAS MANIFOLD

Designed for recording orifice meters, this lightweight manifold eliminates the need for additional support when installed in meter tubing. It also features standard quarter-inch FNPT ports for connecting upstream or downstream static pressure.



KM110 3-VALVE
DIFFERENTIAL PRESSURE MANIFOLD

This high pressure, remote mount manifold features adjustable packing below the stem threads to keep process fluids away and isolate the stem threads. This helps assure a leakproof, long service life.

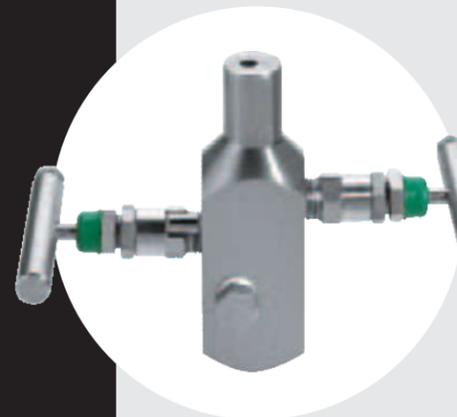


KM9
BLOCK AND BLEED GAUGE VALVE

This compact model allows safe and cost efficient gauge installation. A field serviceable soft seat allows replacement while this valve is still in the line. Its one-piece handle design eliminates loss from vibration or misplacement.

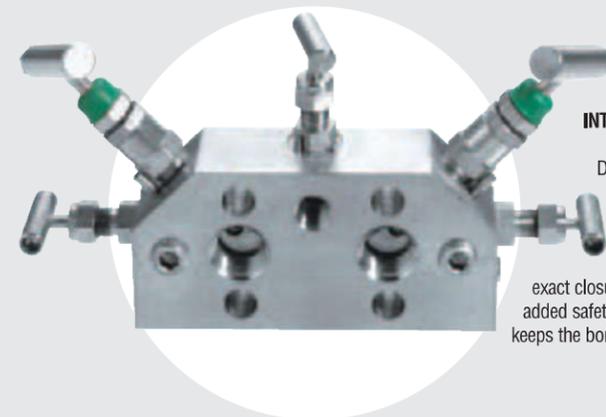


KMC2
Integral Manifold



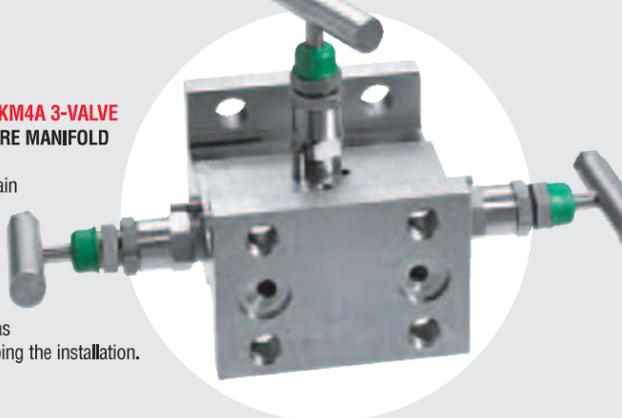
KM251 2-VALVE
STATIC PRESSURE MANIFOLD

Designed to isolate, calibrate and vent, this compact model is available with standard, high pressure or high temperature bonnets. In addition, the chrome plated stem prevents freezing and galling problems. Also, features threaded vent ports for easy connections.



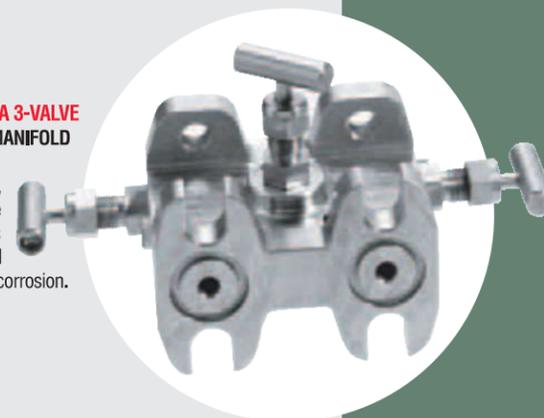
KMC5G
INTEGRAL MANIFOLD

Designed to connect to the transmitter of specific manufacturer's models, this manifold's hardened, non-rotating ball assures exact closure every time. And for added safety a bonnet locking pin keeps the bonnet and body together.



KM4A 3-VALVE
DIFFERENTIAL PRESSURE MANIFOLD

This model features two main block valves and an equalizing valve. Along with all the standard features, this model also offers direct-to-pipestand mounting. That means complete loop installation without the transmitter, as well as instrument removal without disturbing the installation.



KMM4A 3-VALVE
DIFFERENTIAL PRESSURE MINI-MANIFOLD

The "mini" is a low-cost, small-sized, full-featured manifold. Features include backseat stem design that prevents blowout problems and o-ring stem seal that protects stem threads from corrosion.

A Model for Every Need

Though not pictured, the complete Kerotest Manifold product line includes the following models. Ask your Sales Representative for information on the model or models to meet your specific needs.

- KM1 3-Valve Differential Pressure Manifold
- KM1H 3-Valve Differential Pressure Manifold
- KMM1 3-Valve Differential Pressure Mini-Manifold
- KM110 3-Valve Differential Pressure Manifold
- KM4A 3-Valve Differential Pressure Manifold
- KM4T 3-Valve Differential Pressure Manifold
- KMM4A 3-Valve Differential Pressure Mini-Manifold
- KM45A 3-Valve Differential Pressure Manifold
- KM6A 5-Valve Natural Gas Manifold
- KM6T 5-Valve Natural Gas Manifold
- KM6TA 5-Valve Natural Gas Manifold
- KMC2 Integral Manifold
- KMC3 Integral Manifold
- KMT3 Integral Manifold
- KMC5G Integral Manifold
- KMC5P Integral Manifold
- KM4AP 2-Valve Static Pressure Manifold
- KM4TP 2-Valve Static Pressure Manifold
- KPTM 2-Valve Static Pressure Manifold
- KPT7 2-Valve Static Pressure Manifold
- KMP1 2-Valve Static Pressure Manifold
- KMP2 2-Valve Static Pressure Manifold
- KM25 Block and Bleed Gauge Valve
- KM251 Block and Bleed Gauge Valve
- KM9 Block and Bleed Gauge Valve
- KM4TL 2-Valve Liquid Level Manifold



Built to Perform

The Kerotest Manifold product line incorporates proven design and the latest engineering advancements to truly deliver "performance under pressure." Every model comes to you with a full complement of the following features and benefits:

- Isolated Stem Threads. Adjustable packing below stem threads keeps process fluid away. Assures leakproof, long service life.
- Bubble-tight Shutoff.
- Space-saving Design.
- One Valve Does the Work of Many. Saves money and labor.
- Bonnet Cap Protection. Increases valve life and maintains integrity of stem threads.
- Rolled Stem Threads for Increased Strength and Life.
- No More Stem Blowouts. Backseat stem design prevents blowout problems.
- Less Parts Mean Less Leak Points.
- Quarter-inch Test Ports.
- Field Serviceable Soft Seat. Allows replacement with valve still in the line.
- Compact, Remote Mount Design. Saves space and installation costs.
- Chrome plated stem prevents freezing and galling.
- Perfect closure every time with free-swiveling ball end stem.
- Vent ports are threaded for safe, easy piping connections.
- Purge-less cleaning of impulse lines.
- Metal-to-Metal Seal Between Bonnet and Body. Maintains thread integrity, prevents bonnet breakage and assures reliable seal.
- Direct-to-Pipestand Mounting. Allows complete loop installation without the transmitter, and instrument removal without disturbing installation.
- Lightweight Construction. Installs in meter tubing without additional support.
- Quarter-inch FNPT Ports Standard. Connect static pressure to the upstream or downstream ports.
- Two-way Seat Design. Soft seat via simple insert or metal seat when no insert is used.
- One Piece Handle. No way to lose the handle from vibration or misplacement.
- Adjustable Bonnet Packing. Increases valve life and maintains integrity of stem threads.
- Ball End Stem. Hardened, non-rotating ball assures exact closure every time.
- Locking Pin Assures Safety. Bonnet lock pin keeps bonnet and body together.
- O-Ring Stem Seal Protects Stem Threads. Reduces chances of corrosion to stem threads.

MANIFOLDS

FLOW, STATIC PRESSURE, LIQUID LEVEL



DIFFERENTIAL PRESSURE

NATURAL GAS

INTEGRAL

STATIC PRESSURE

Replaceable Soft Seat
Bubble-Tight Shutoff
Rolled Stem Threads



SINCE 1909

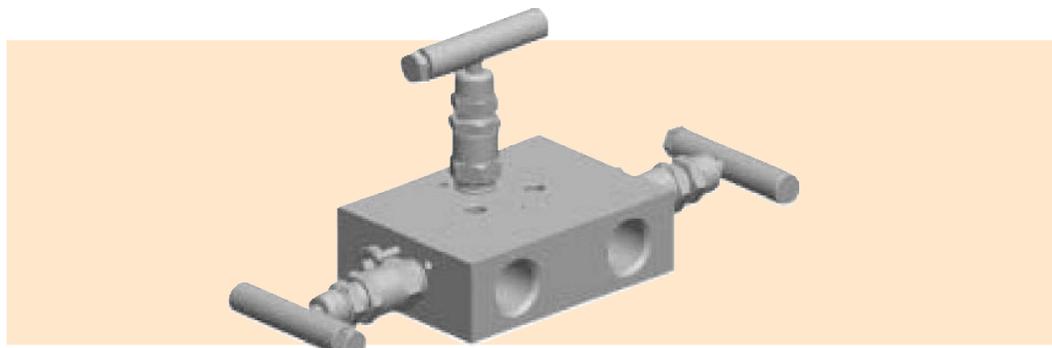
An Employee-Owned Total Quality Management Company



SINCE 1909

An Employee-Owned Total Quality Management Company

Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds



Product Brief

The KM1 is a 3-valve manifold designed for applications where direct mounting to an instrument is impractical or undesirable. This style manifold is mounted to the lines from the instrument and signal rather than directly to the instrument; a KMC Mount is also available. These manifolds are often used in conjunction with small differential pressure indicators, recording orifice meters, etc., that have connections other than the standard 2-1/8-inch (54 mm) distance between taps. A 3/16-inch (4.8 mm) orifice is provided. The standard manifold has integral metal seats, and soft seats (roddable) are available in various materials.

Features/Benefits

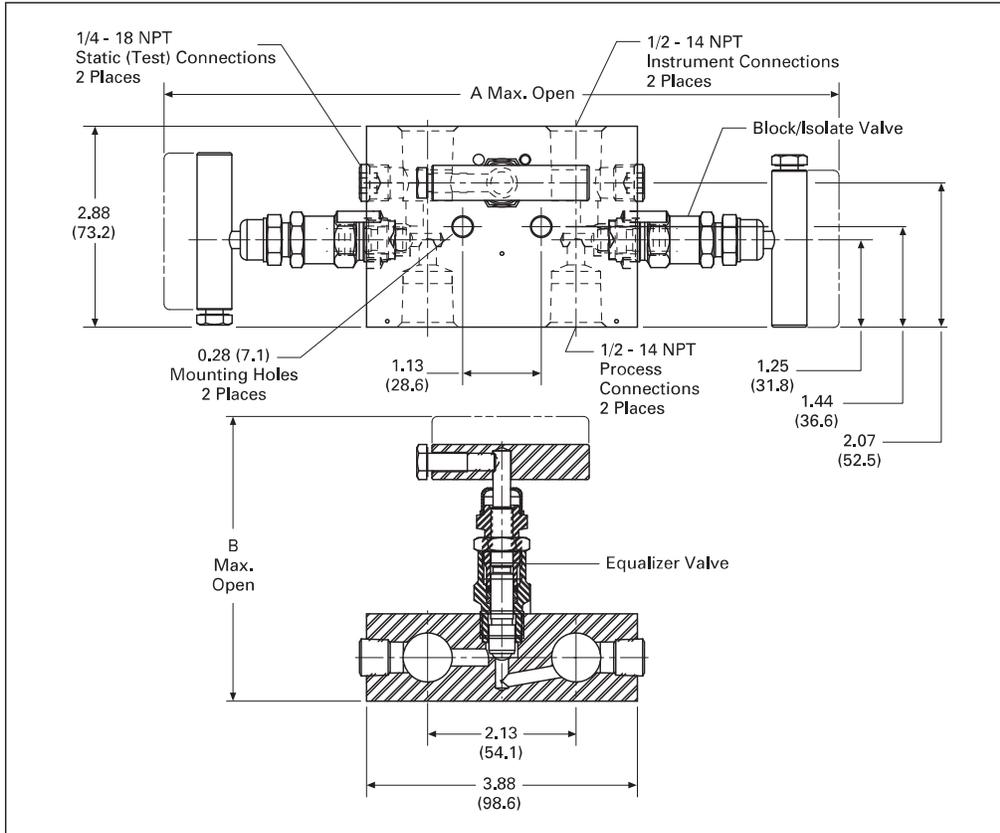
- **Isolated stem threads.** Adjustable packing below stem threads keeps process fluid away. Ensures leakproof, long service life.
- **Bubble-tight shutoff.**
- **Replaceable seat design.** Standard 3/16-inch diameter orifice.
- **Space-saving design.**
- **One valve does the work of three.** Saves money and labor.
- **Bonnet cap protection.** Increases valve life by protecting stem threads from atmospheric corrosion.
- **Rolled stem threads** for increased strength and life.
- **No more stem blowouts.** Backseat stem design prevents blowout problems.
- **Less parts** mean less leak points and less fugitive emissions.
- **1/4-inch test ports.**



Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

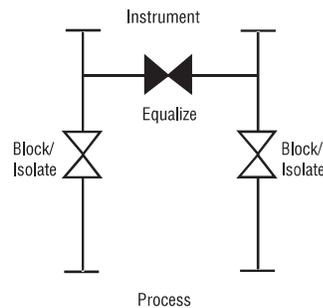
KM1 Specifications

Metal Seat Dimensions in Inches (mm)



Dimensions in Inches (mm)

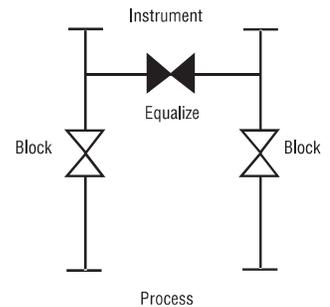
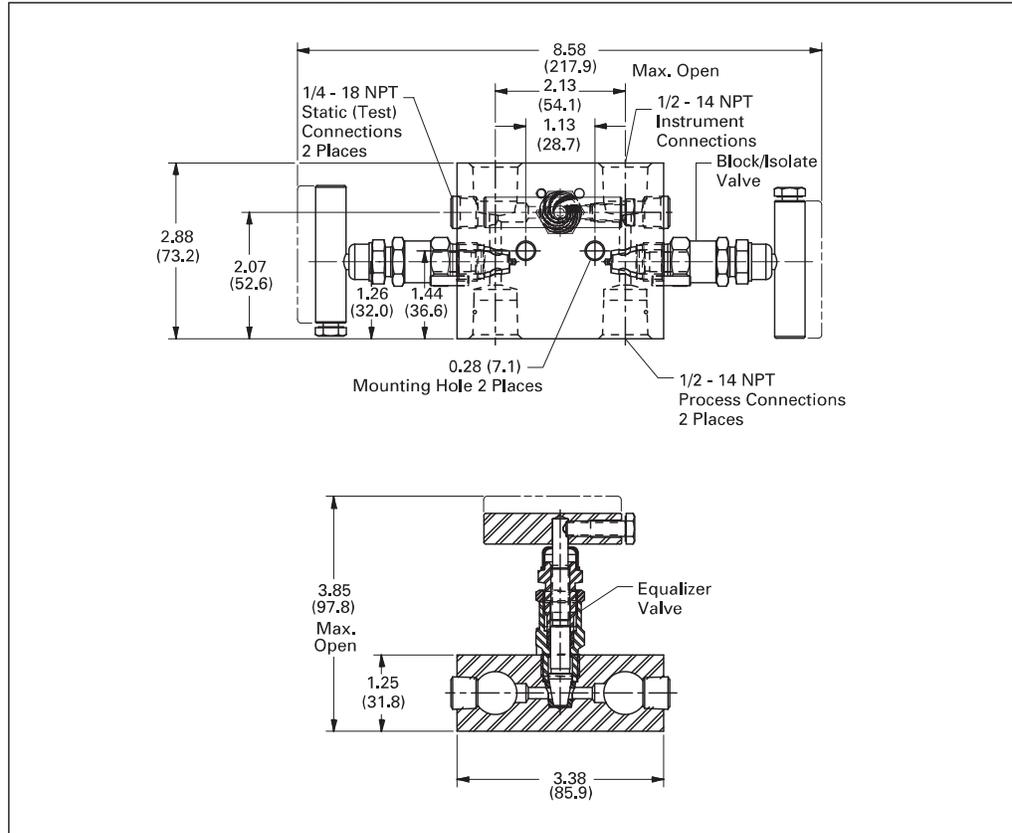
Packing	A	B
GRAFOIL®/Low Emissions Graphite	10.38 (263.7)	4.50 (114.3)
Teflon®	9.08 (230.6)	3.85 (97.8)



Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

KM1 Specifications

Soft Seat Dimensions in Inches (mm)



Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

KM1 Standard Materials

Metal Seat

Valve ①	Packing	Body and Bonnet	Stem and Ball
CS ②	Teflon, O-ring	A108 Body A108 Bonnet	A581-303 Stem 17-4PH Ball
CS ①	GRAFOIL/Low Emissions Graphite	A105 Body A105 Bonnet	A581-303 Stem 17-4PH Ball
SS	Teflon, O-ring	A479-316 Body A479-316 Bonnet	A276-316 Stem 316 SS Ball
SS	GRAFOIL/Low Emissions Graphite	A479-316 Body A479-316 Bonnet	A276-316 Stem 316 SS Ball
Monel®	Teflon	Monel 400 Body Monel R405 Bonnet	Monel 400 Stem Monel K500 Ball
Monel	GRAFOIL/Low Emissions Graphite	Monel 400 Body Monel R405 Bonnet	Monel 400 Stem Monel K500 Ball
SG ③, SG3 ④	Teflon	A479-316 Body A479-316 Bonnet	Monel 400 Stem Monel K500 Ball
SG ③, SG3 ④	GRAFOIL/Low Emissions Graphite	A479-316 Body A479-316 Bonnet	Monel 400 Stem Monel K500 Ball

Soft Seat

Valve ①	Packing	Body and Bonnet	Stem	Seat
CS ②	Teflon or Viton® O-ring w/ Teflon backup	A108 CS	A581-303	Delrin® ⑤
SS	Teflon or Viton O-ring w/ Teflon backup	A479-316	A276-316	Delrin ⑤
SG ③	Teflon	A479-316	Monel 400	Delrin ⑤
SG3 ④	Teflon	Hastelloy® C276	Hastelloy C276	Delrin ⑤

① Approximate valve weight: 4.0 lb (1.8 kg).
0.187-inch (4.8 mm) diameter orifice.
Metal Seat: Cv = .52, full open.
Soft Seat: Cv = .83, full open.

② CS parts are zinc cobalt-plated to prevent corrosion.

③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.

④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

⑤ PCTFE (Polychlorotrifluoroethylene is equivalent of Kel-F®), PEEK and Teflon are also available.

Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

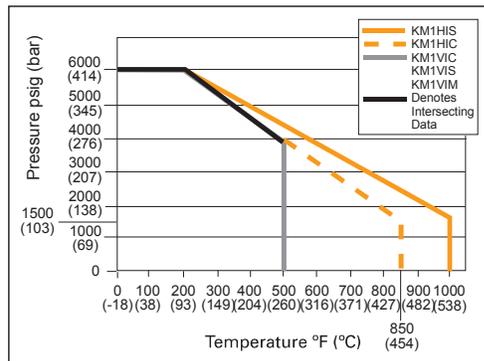
KM1 Pressure and Temperature Ratings

Metal Seat			
Valve	Packing	Ratings	
CS	Teflon, O-ring	6000 psig at 200°F (414 bar at 93°C)	4000 psig at 500°F (276 bar at 260°C)
CS	GRAFOIL/Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C)	1500 psig at 850°F (103 bar at 454°C)
SS, SG	Teflon, O-ring	6000 psig at 200°F (414 bar at 93°C)	4000 psig at 500°F (276 bar at 260°C)
SS, SG	GRAFOIL/Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C)	1500 psig at 1000°F (103 bar at 538°C)
Monel	Teflon	6000 psig at 200°F (414 bar at 93°C)	4000 psig at 500°F (276 bar at 260°C)
Monel	GRAFOIL/Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C)	1500 psig at 800°F (103 bar at 427°C)

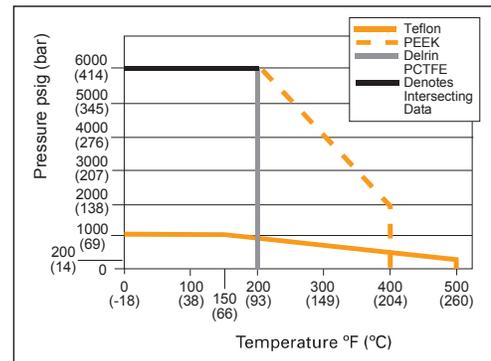
Soft Seat			
Seat	Ratings		
Delrin and PCTFE	6000 psig at 200°F (414 bar at 93°C)		
PEEK	6000 psig at 200°F (414 bar at 93°C)	2000 psig at 400°F (138 bar at 204°C)	
Teflon	1000 psig at 150°F (69 bar at 66°C)	200 psig at 500°F (14 bar at 260°C)	

Pressure vs. Temperature

Metal Seat



Soft Seat



Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

Ordering Information – KM1 Metal Seat and Soft Seat

KM1		<u>H</u> 1.	<u>I</u> 2.	<u>S</u> 3.	–	<u>4</u> 4.	–	<u>SG</u> 5.	
1. Packing		<p>V – Teflon H – GRAFOIL E – Low Emissions Graphite R – O-ring (Viton) (Soft Seat Only)</p>			<p>S – SS, A479-316 M – Monel (Metal Seat Only) W – 316L SS J – Hastelloy</p>			<p>BP – Accessory Bracket – Mount Purge Meters with Option AM BL – Bonnet Lock Device CL – Cleaned for Chlorine Service OC – Cleaned for Oxygen Service HD – Hydrostatic Testing (100 Percent) (MSS-SP-61) MS – Monel Stem PHB – Phenolic Black Handle SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 ST – Stellite Ball Ended Stem SP – Special Requirements – Please Specify</p>	
2. Seat		<p>I – Integral (Body Material) D – Delrin V – Teflon E – PEEK K – PCTFE ①</p>			4. Connection			<p>4 – 1/2-Inch FNPT</p>	
3. Body Material ①		<p>C – CS, A108 (Teflon Packed) CS, A105 (GRAFOIL and Low Emissions Graphite Packed)</p>			5. Options			<p>AL – Low Temperature Lubricant (Low Temperature Service -70°F) Not Available for CS Valves AM – KMC Mount Kit for Pipestand Mounting BC – Accessory Bracket – Mount Conduit with Option AM</p>	

① Call Kerotest for optional materials.

Ordering Information – KM1 (Power Industry)

KM1HP		<u>S</u> 1.	–	<u>4</u> 2.	–	<u>XP</u>	–	<u>SP</u> 3.		
1. Body Material		<p>C – CS, A105 S – SS, A479-316 W – 316L SS J – Hastelloy</p>			<p>3TC4 – 3/8-Inch Tube Stub x 1/2-Inch FNPT x 1/2-Inch FNPT ① 3TB4 – 3/8-Inch Tube S.W. x 1/2-Inch FNPT x 1/2-Inch FNPT 4TC4 – 1/2-Inch Tube Stub x 1/2-Inch FNPT x 1/2-Inch FNPT ② 4TB4 – 1/2-Inch Tube S.W. x 1/2-Inch FNPT x 1/2-Inch FNPT 4B – 1/2-Inch FSW x 1/2-Inch FSW</p>			3. Options		
2. Connection		<p>4 – 1/2-Inch FNPT x 1/2-Inch FNPT x 1/2-Inch FNPT</p>			<p>AM – KMC Mount Kit for Pipestand Mounting SP – Special Requirements – Please Specify</p>					

① Tube stubs are 6-inch long x 0.065-inch wall.

② Tube stubs are 6-inch long x 0.095-inch wall.

Manifold ratings:

SST6000 psig @ 100°F (414 bar @ 38°C) 2915 psig @ 1000°F (201 bar @ 538°C)

STL6170 psig @ 100°F (425 bar @ 38°C) 3430 psig @ 800°F (236 bar @ 427°C)

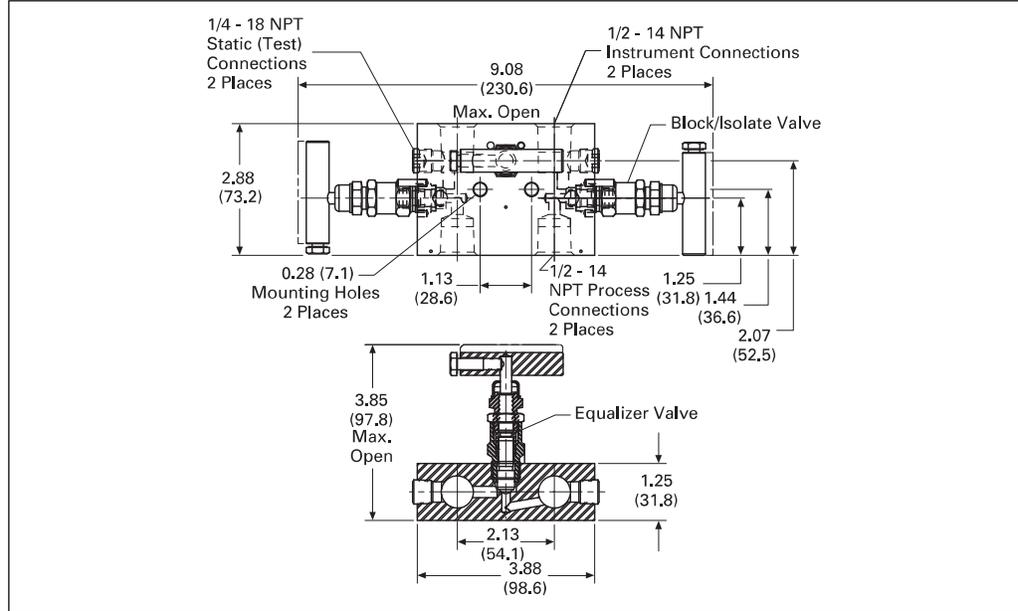
KM1 ASME B31.1 and B31.3 Specifications meet MSS-SP-105.

Note: All manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.

Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

KM110 Specifications

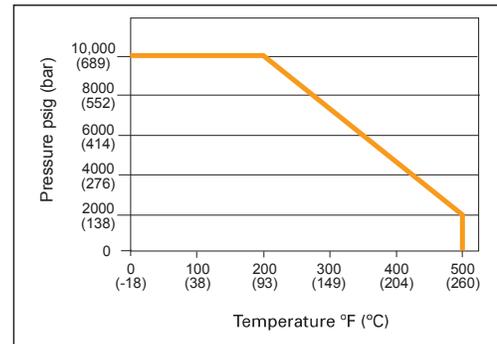
Dimensions in Inches (mm)



Standard Materials

Valve ①	Body and Bonnet	Stem and Ball	Packing
SS	A479-316 Body A479-316 Bonnet	A276-316 Stem 316 SS Ball	Teflon
SG ②	A479-316 Body A479-316 Bonnet	Monel 400 Stem Monel K500 Ball	Teflon
SG3 ③	Hastelloy C276 A479-316 Bonnet	Hastelloy C276 A479-316 Bonnet	Teflon

Pressure vs. Temperature



Pressure and Temperature Ratings

Valve ①	Packing	Ratings
SS	Teflon	10,000 psig at 200°F (689 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG ②	Teflon	10,000 psig at 200°F (689 bar at 93°C)
SG3 ③	Teflon	4000 psig at 500°F (276 bar at 260°C)

- ① Approximate valve weight: 4.0 lb (1.8 kg).
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.
- ② SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Kerotest KM1 & KM110 3-Valve Differential Pressure Manifolds

Ordering Information

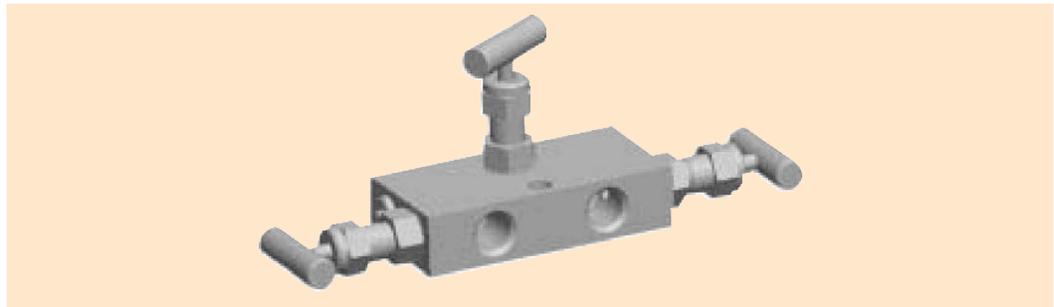
KM110		<u>V</u> 1.	<u>I</u> 2.	<u>S</u> 3.	-	<u>4</u> 4.	-	<u>SG</u> 5.
1. Packing	4. Connection	<p>MS – Monel Stem PHB – Phenolic Black Handle SG – Sour Gas Meets the Requirements of NACE MR0175-2002 SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 ST – Stellite Ball Ended Stem SP – Special Options – Please Specify</p>						
V – Teflon	4 – 1/2-Inch FNPT							
2. Seat	5. Options							
I – Integral (Body Material)	<p>AL – Low Temperature Lubricant (Low Temperature Service) AM – KMC Mount Kit for Pipestand Mounting BC – Accessory Bracket – Mount Conduit with Option AM BP – Accessory Bracket – Mount Purge Meters with Option AM BL – Bonnet Lock Device CL – Cleaned for Chlorine Service OC – Cleaned for Oxygen Service HD – Hydrostatic Testing (100 Percent) (MSS-SP-61)</p>							
3. Body Material [Ⓢ]								
S – SS, A479-316								

[Ⓢ] Call Kerotest for optional materials.

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KMM1 3-Valve Differential Pressure Mini-Manifold



Product Brief

The KMM1 is a miniature 3-valve manifold designed for remote installation in confined spaces. It is ideal for cabinet mounting and also for portable devices due to its low profile and efficient flow characteristics. This style manifold is often used to set differential pressure switches and other instruments during process or plant start-up. Both hard and soft seat versions are available. The KMM1 manifold is installed in the lines between the process and the instrument, and also used with miniature differential pressure-measuring devices.

Features/Benefits

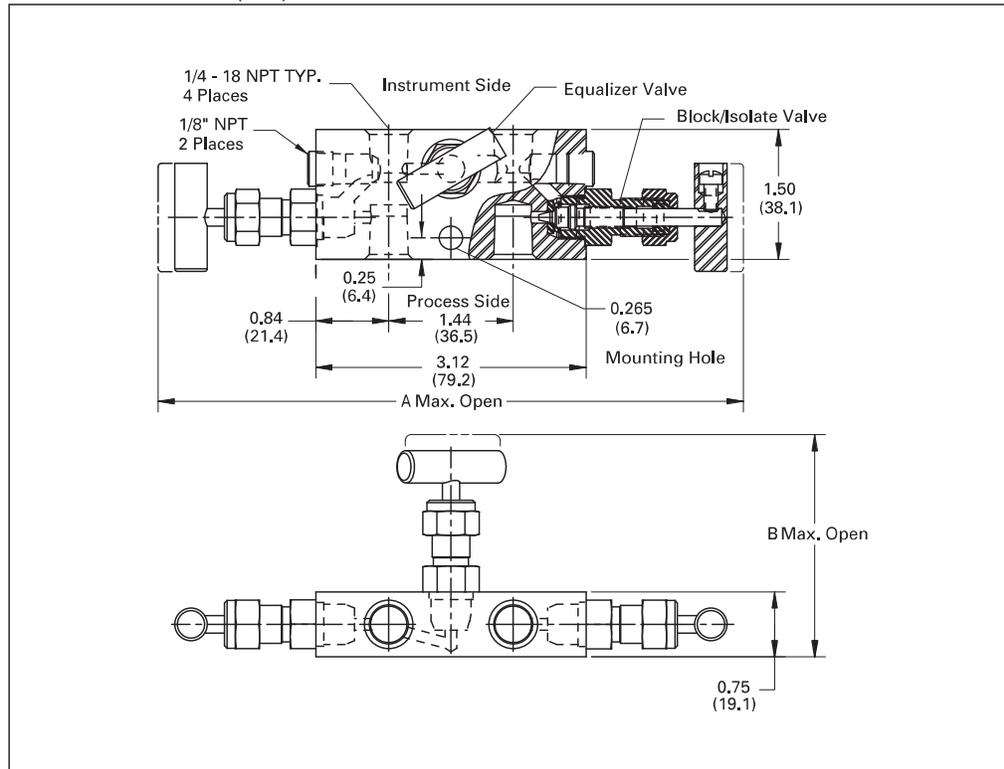
- **Bubble-tight shutoff.**
- **Replaceable seat design.**
- **Space-saving, compact design.**
- **One valve does the work of three.**
Saves money and labor.
- **O-ring stem seal option** isolates the stem threads from the process, preventing galling and corrosion due to exposure to the process.
- **Rolled stem threads** for increased strength and life.
- **No more stem blowouts.** Backseat stem design prevents blowout problems.
- **Less parts** mean less leak points and less fugitive emissions.
- **1/8-inch test ports.**



Kerotest KMM1 3-Valve Differential Pressure Mini-Manifold

Specifications

Dimensions in Inches (mm)

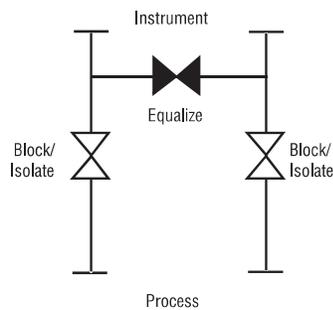


Dimensions in Inches (mm)

Packing	A	B
O-ring	5.62 (142.7)	2.00 (50.8)
Teflon®	6.82 (173.2)	2.60 (66.0)

Notes:

Approximate valve weight: 1.0 lb (0.4 kg)
 0.136-inch (3.5 mm) diameter orifice.
 Hard Seat: Cv = .25, full open.
 Soft Seat: Cv = .24, full open.



Kerotest KMM1 3-Valve Differential Pressure Mini-Manifold

Standard Materials

Valve	Body	Bonnet	Stem	Flow Washer ①
CS ②	A108	A108	A581-303	316
Brass	B16	B16	A581-303	316
SS	A276-316	A479-316	A276-316	316
SG ③	A276-316	A479-316	Monel® R405	316

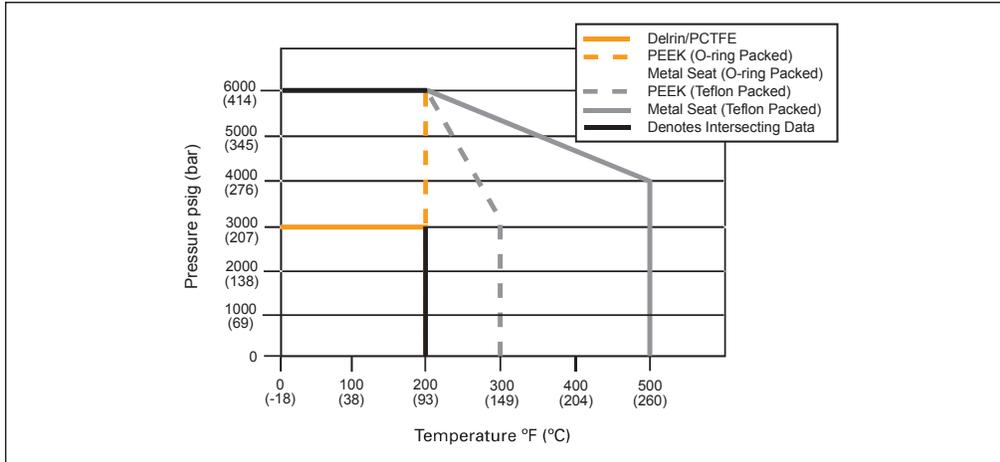
Pressure and Temperature Ratings

Valve	Packing	Soft Seat Delrin®/PCTFE ④	Soft Seat PEEK	Metal Seat
CS ②	BUNA-N O-ring	3000 psig at 200°F (207 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)
CS ②	Teflon	3000 psig at 200°F (207 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)
			3000 psig at 300°F (207 bar at 149°C)	4000 psig at 500°F (276 bar at 260°C)
Brass	BUNA-N O-ring	3000 psig at 200°F (207 bar at 93°C)	3000 psig at 200°F (207 bar at 93°C)	3000 psig at 200°F (207 bar at 93°C)
Brass	Teflon	3000 psig at 200°F (207 bar at 93°C)	3000 psig at 300°F (207 bar at 149°C)	3000 psig at 400°F (207 bar at 204°C)
SS	Viton® O-ring	3000 psig at 200°F (207 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)
SS	Teflon	3000 psig at 200°F (207 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)
			3000 psig at 300°F (207 bar at 149°C)	4000 psig at 500°F (276 bar at 260°C)
SG ③	Teflon	3000 psig at 200°F (207 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)	6000 psig at 200°F (414 bar at 93°C)
SG3 ⑤			3000 psig at 300°F (207 bar at 149°C)	4000 psig at 500°F (276 bar at 260°C)

- ① Soft seated valves only.
- ② CS is zinc cobalt-plated to prevent corrosion.
- ③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ④ PCTFE (Polychlorotrifluoroethylene) is the equivalent of Kel-F®.
- ⑤ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Kerotest KMM1 3-Valve Differential Pressure Mini-Manifold

Pressure vs. Temperature



Ordering Information

KMM1 **V** **D** **S** - **2** - **SG**

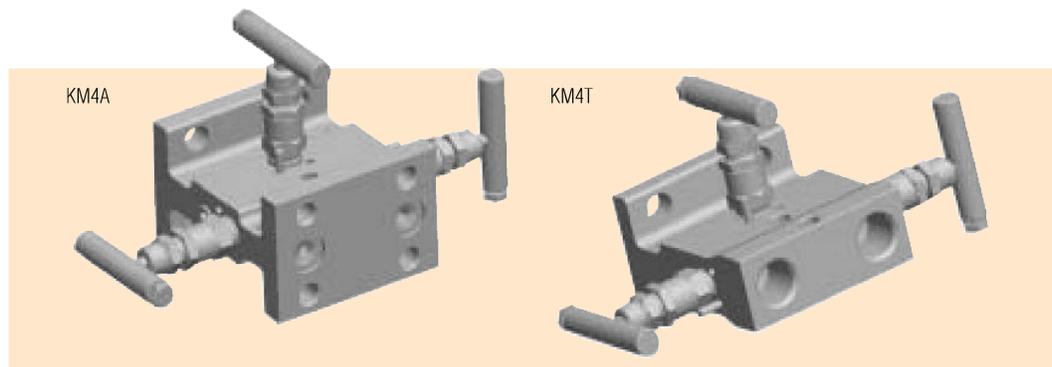
1. 2. 3. 4. 5.

<p>1. Packing</p> <p>V – Teflon R – O-ring</p>	<p>3. Body Material</p> <p>C – CS, A108 B – Brass B16 S – SS, A276-316 J – Hastelloy®</p>	<p>5. Options</p> <p>SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves)</p> <p>SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003</p>
<p>2. Seat</p> <p>D – Delrin K – PCTFE E – PEEK I – Integral (Body Material)</p>	<p>4. Connection</p> <p>2 – 1/4-Inch FNPT</p>	

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds



Product Brief

The KM4 style 3-valve manifold is designed for either direct (4A) or remote (4T) mounting to differential pressure transmitters with 2-1/8 inch (54 mm) centers. It contains two (2) main block valves plus an equalizing valve.

Features/Benefits

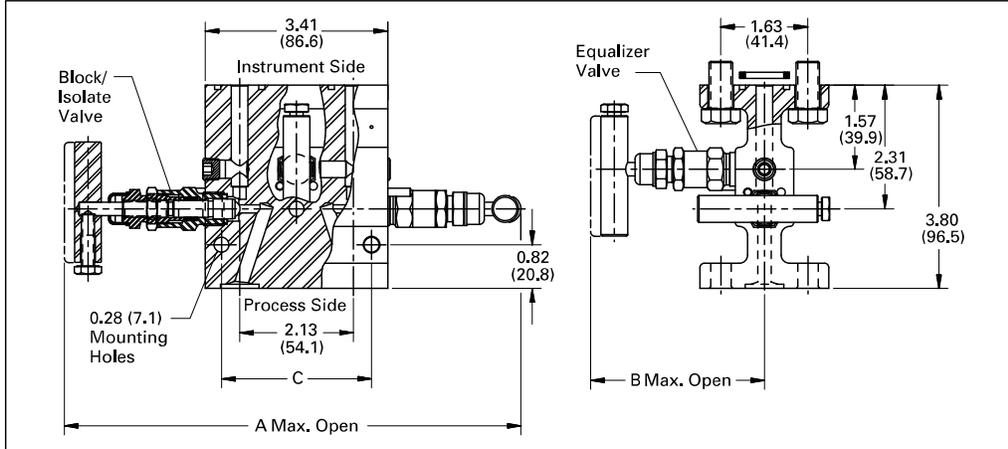
- **Bubble-tight shutoff.** Every valve 100% tested.
- **Space-saving design.** One valve replaces three. Less parts equals less leaks, equals less fugitive emissions.
- **Roddable** design of soft seat valves often eliminates purge-style cleaning, simplifying maintenance.
- **Blowout-proof stem.** Stem design prevents accidental back-out, eliminates blowout problems.
- **Rolled stem and bonnet threads** increase strength, wear resistance and life.
- **Highly polished** stems yield easier operation and increased packing life.
- **Metal-to-metal bonnet-to-body seal** maintains pressure integrity, eliminates bonnet thread process corrosion, and ensures a reliable seal.
- **Stem threads isolated** from the process fluid. Packing adjustment below the threads prevents thread corrosion.
- **Multiple packing options** available including Teflon® and GRAFOIL® packing.
- **Bonnet cap** protects stem threads from atmospheric corrosion, increases valve life.
- **Direct pipestand mounting** to 2-inch pipe. Requires KMC Mounting Kit. Permits complete piping installation without the transmitter and simplified instrument removal.
- **Soft seat** is field-replaceable with valve in line. Metal seats also available.



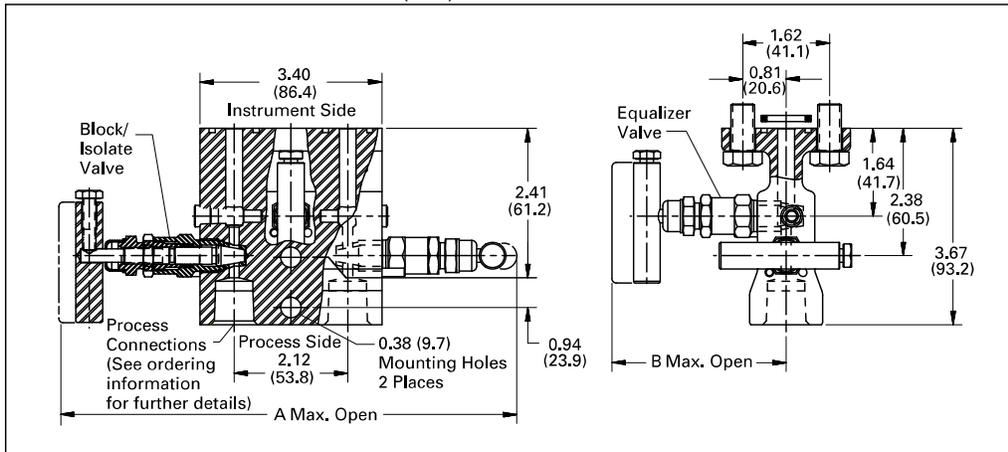
Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Specifications

KM4A Metal Seat Dimensions in Inches (mm)



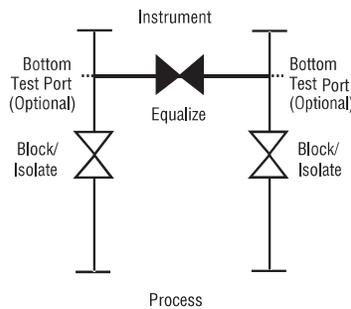
KM4T Soft Seat Dimensions in Inches (mm)



Dimensions, Inches [mm]

Valve ①	A	B	C
Soft Seat – Teflon Packed	8.60 (218)	3.20 (81)	1.06 (27)
Metal Seat – Teflon Packed	8.60 (218)	3.20 (81)	2.80 (71)
Metal Seat – GRAFOIL Packed	9.90 (251)	3.85 (98)	2.80 (71)

- ① Approximate valve weight: KM4A = 4.7 lb (2.1 kg)
KM4T = 4.5 lb (2.0 kg)
- Metal Seat: 0.156-inch (4.0 mm) diameter orifice.
CV = .36, full open.
- Soft Seat: 0.187-inch (4.8 mm) diameter orifice.
CV = .83, full open.



Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Standard Materials

Metal Seat

Valve	Body ^①	Bonnet	Stem	Ball
CS ^②	A576-10L18	A108 CS	A581-303	17-4 PH
CS ^②	A576-10L18	A105 CS	A581-303	17-4 PH
SS	A479-316	A479-316	A276-316	316 SS
SG ^③	A479-316	A479-316	Monel 400	Monel K500
Monel [®]	Monel 400	Monel R405	Monel 400	Monel K500
Hastelloy [®]	Hastelloy C276	Hastelloy C276	Hastelloy C276	Stellite
SG3 ^④	Hastelloy C276	Hastelloy C276	Hastelloy C276	Stellite

Soft Seat

Valve	Body	Bonnet	Stem	Seat
CS ^②	A576-10L18	A108 CS	A581-303	Delrin [®]
SS	A479-316	A479-316	A276-316	Delrin
SG ^③	A479-316	A479-316	Monel 400	Delrin
SG3 ^④	Hastelloy C276	Hastelloy C276	Hastelloy C276	Delrin

^① Instrument mounting kit furnished with the KM4 includes four (4) A193-B7 bolts and two (2) Teflon or GRAFOIL flange gaskets to match bonnet packing.

^② CS parts are zinc cobalt-plated to prevent corrosion.

^③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.

^④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Pressure and Temperature Ratings

Metal Seat

Valve	Packing	Ratings ①	
CS ②	Teflon	6000 psig at 200°F 4000 psig at 500°F	(414 bar at 93°C) (276 bar at 260°C)
CS ②	GRAFOIL Graphite	6000 psig at 200°F 4000 psig at 600°F	(414 bar at 93°C) (276 bar at 316°C)
SS	Teflon	6000 psig at 200°F 4000 psig at 500°F	(414 bar at 93°C) (276 bar at 260°C)
SS	Graphite GRAFOIL	6000 psig at 200°F 1500 psig at 1000°F	(414 bar at 93°C) (103 bar at 538°C)
SG ③ or SG3 ④	Teflon	6000 psig at 200°F 4000 psig at 500°F	(414 bar at 93°C) (276 bar at 260°C)
SG ③ or SG3 ④	GRAFOIL	6000 psig at 200°F 1500 psig at 1000°F	(414 bar at 93°C) (103 bar at 538°C)
Monel	Teflon	5300 psig at 200°F 4200 psig at 500°F	(360 bar at 93°C) (290 bar at 260°C)
Hastelloy	Teflon	6000 psig at 200°F 4000 psig at 500°F	(414 bar at 93°C) (276 bar at 260°C)

Soft Seat

Valve	Packing	Ratings ①	
CS ②	Teflon	6000 psig at 200°F	(414 bar at 93°C)
SS	Viton® O-ring with Teflon Backup ring	6000 psig at 200°F	(414 bar at 93°C)
SG ③ or SG3 ④	Teflon	6000 psig at 200°F	(414 bar at 93°C)

① 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Consult factory for full rating with 316 SS bolts.

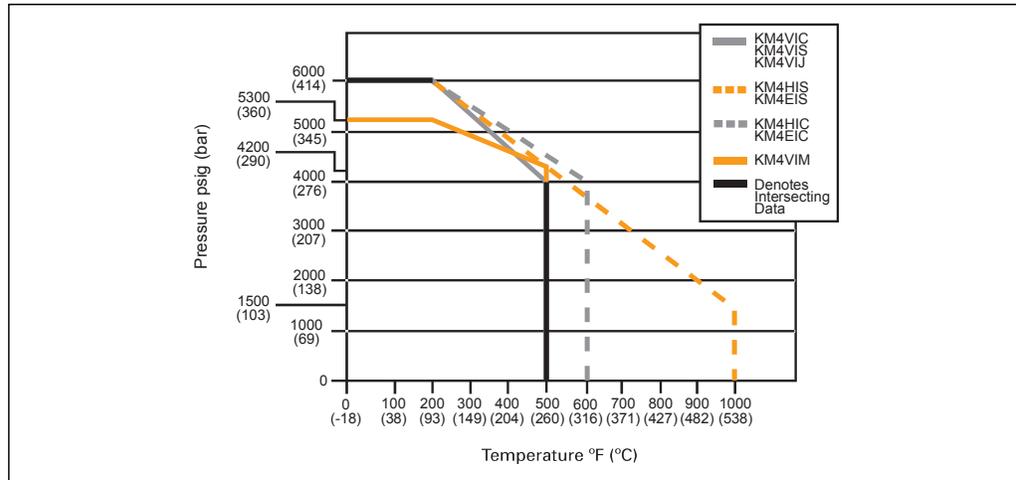
② CS parts are zinc cobalt-plated to prevent corrosion.

③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.

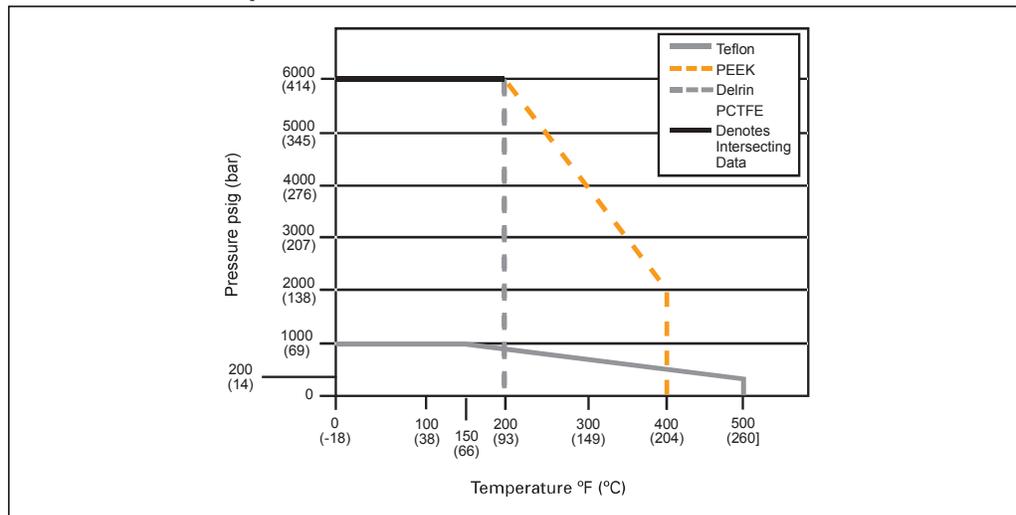
④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Pressure vs. Temperature – Metal Seat



Pressure vs. Temperature – Soft Seat



Note: 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Consult factory for full rating with 316 SS bolts.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Ordering Information – Soft Seat

KM4T	<u>V</u>	<u>D</u>	<u>S</u>	-	<u>4</u>	-	<u>SG</u>	
1.	2.	3.	4.		5.		6.	
<p>1. Valve Type</p> <p>KM4A – 3-Valve Manifold, Flange x Flange KM4T – 3-Valve Manifold, FNPT x Flange</p>	<p>2. Bonnet Packing</p> <p>V – Teflon R – O-ring (Viton)</p>	<p>3. Seat</p> <p>D – Delrin K – PCTFE E – PEEK V – Teflon</p>	<p>4. Body Material</p> <p>C – CS ^①, A576-10L18 W – SS, A479-316L S – SS, A479-316 J – Hastelloy</p>		<p>5. Process Connections (KM4T Only)</p> <p>4 – 1/2-Inch FNPT AT ^② – Integral Single Ferrule Tube Fittings (4AT 1/2-Inch, 316 SS) ATD ^② – Integral Dual Ferrule Tube Fittings (4ATD 1/2-Inch, 316 SS)</p>		<p>6. Options</p> <p>AL – Low Temperature Lubricant (-70°F) Not Available for CS Valve AM – KMC Mount Kits (For Pipestand Mounting of Manifold) (CS) BC – Accessory Bracket-Mount Conduit with Option KM BL – Bonnet Lock Device BP – Accessory Bracket – Mount Purge Meters with Option AM CL – Cleaned for Chlorine Service HD – Hydrostatic Testing (100%) (MSS-SP-61) MS – Monel Stem (Standard on Monel Valves and SG Valves) OC – Cleaned for Oxygen Service PHB – Phenolic Black Handle R3V – Add for Use with Rosemount® Model 3051C (SS 18-8 Bolts) SB – Steam Block (CS) AMS – AM, Stainless Steel Bracket</p>	<p>SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 SSA ^③ – SS Flange Bolt (Grade 18-8) – Maximum Pressure Rating 4500 psig (310 bar) SSC ^③ – 316 Flange Bolt (B8M) – Maximum Pressure Rating 4500 psig (310 bar) TB – Test Ports – Bottom of Manifold (1/4-Inch FNPT) (Option Not Available for KM4A with Option AM) TR68 – Add for Use with Rosemount Models 1151DP 6, 7, 8 and 1151HP 6, 7, 8 and any DP Transmitter with Bolt Spacing Between 2.13-Inch (54 mm) and 2.28-Inch (58 mm) SP – Special Requirements – Please Specify</p>

① CS parts are zinc cobalt-plated to prevent corrosion.

② Integral tube fitting design.

③ 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Consult factory for full rating with 316 SS bolts.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Ordering Information – Metal Seat

KM4T	<u>V</u>	<u>I</u>	<u>S</u>	-	<u>4</u>	-	<u>SG</u>
1.	2.	3.	4.	5.	6.		
<p>1. Valve Type</p> <p>KM4A– 3-Valve Manifold, Flange x Flange KM4T– 3-Valve Manifold, FNPT x Flange</p>	<p>2. Bonnet Packing</p> <p>V – Teflon H – GRAFOIL E – Low Emissions Graphite (Except M45A)</p>	<p>3. Seat</p> <p>I – Integral (Body Material)</p>	<p>4. Body Material</p> <p>C – CS, A576-10L18 S – SS, A479-316 M – Monel 400 (KM4A and KM4T Only) J – Hastelloy W – SS, A479-316L</p>	<p>5. Process Connections (KM4T Only)</p> <p>4 – 1/2-Inch FNPT AT ^① – Integral Single Ferrule Tube Fittings (4AT1/2-Inch, 316 SS) ATD ^① – Integral Dual Ferrule Tube Fittings (4ATD 1/2-Inch, 316 SS)</p>	<p>6. Options</p> <p>AL – Low Temperature Lubricant (-70°F) Not Available for CS Valves AM – KMC Mount Kits (CS) (For Pipestand Mounting of Manifold) BC – Accessory Bracket – Mount Conduit with Option AM BL – Bonnet Lock Device BP – Accessory Bracket – Mount Purge Meters with Option AM CL – Cleaned for Chlorine Service HD – Hydrostatic Testing (100%) (MSS-SP-61) LP – Street Elbows and Top Purge Ports MS – Monel Stem (Standard on Monel Valves and SG Valves) OC – Cleaned for Oxygen Service PB – Bottom Purge Ports (1/4-Inch FNPT) (Not Available with Option SB) (KM4T Metal Seat Only) (Option Not Available for KM4A with Option AM) PHB – Phenolic Black Handle PT – Top Purge Ports (1/4-Inch FNPT) (Metal Seat Only) (If Elbows are Required, Specify Option LP, not Option PT) AMS – AM, Stainless Steel Bracket</p>	<p>R3V – Add for Use with Rosemount Model 3051C (SS 18-8 Bolts) SB – Steam Block (CS) SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 SSA ^② – SS Flange Bolt (Grade 18-8) Maximum Pressure Rating 4500 psig (310 bar) SSC ^② – 316 Flange Bolt (B8M) – Maximum Pressure Rating 4500 psig (310 bar) ST – Stellite Ball Ended Stem TB – Test Ports – Bottom of Manifold (1/4-Inch FNPT) (Option Not Available for KM4A with Option AM) TR68 – Add for Use with Rosemount Models 1151DP 6, 7, 8 and 1151HP 6, 7, 8 and any DP Transmitter with Bolt Spacing Between 2.13-Inch (54 mm) and 2.28-Inch (58 mm) (Metal Seat Only) SP – Special Requirements – Please Specify</p>	

^① Integral tube fitting design.

^② 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Consult factory for full rating with 316 SS bolts.

Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

Ordering Information – Power Industry Applications ①

KM4THP 1.	S 2.	4 3.	XP 4.	AM 4.
<p>1. Valve Type</p> <p>KM4AHP – 3-Valve Manifold, Flange x Flange KM4THP – 3-Valve Manifold, FNPT x Flange</p> <p>2. Body Material</p> <p>S – SS, A479-316 ②</p>	<p>3. Connections (Process x Instrument x Vent)</p> <p>4 – 1/2-Inch FNPT x Flange x 1/4-Inch FNPT 4AT – 1/2-Inch KMC Tube x Flange x 1/4-Inch FNPT 4B – 1/2-Inch Pipe S.W. x Flange x 1/4-Inch FNPT 4TB – 1/2-Inch Tube S.W. x Flange x 1/4-Inch FNPT</p>	<p>4. Options</p> <p>AM – KMC Mount Kits (CS) (For Pipestand Mounting of Manifold) TB – Bottom Test Ports on KM4THP Only SP – Special Requirements – Please Specify</p>		

① All Manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subject to hydrostatic testing.

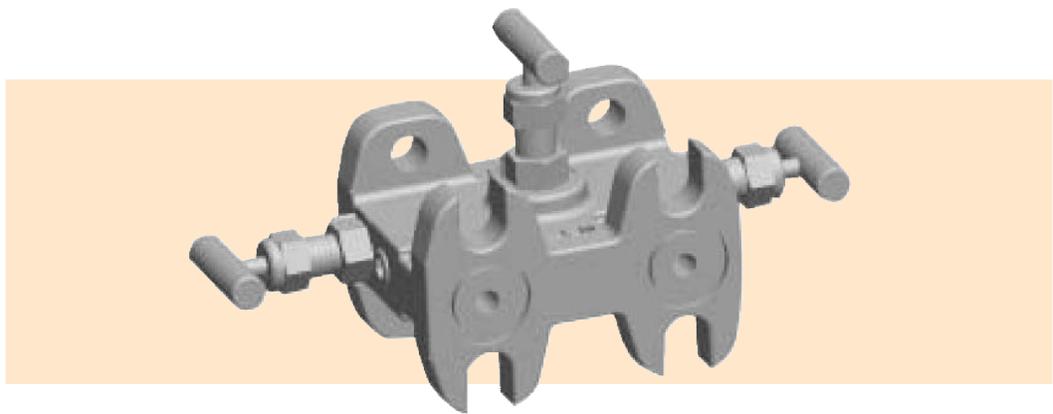
② Manifold ratings: SST 6170 psig at 100°F (425 bar at 38°C) / 3430 psig at 800°F (236 bar at 427°C).

Note: Integral tube fitting design. Test bottom ports standard.

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KMM4A 3-Valve Differential Pressure Mini-Manifold



Product Brief

The KMM4A style 3-valve mini-manifold is designed as a compact, low-cost alternative to full size 3-valve manifolds. It is suitable for close, direct or remote mounting. It contains two (2) main block valves plus an equalizing valve.

Features/Benefits

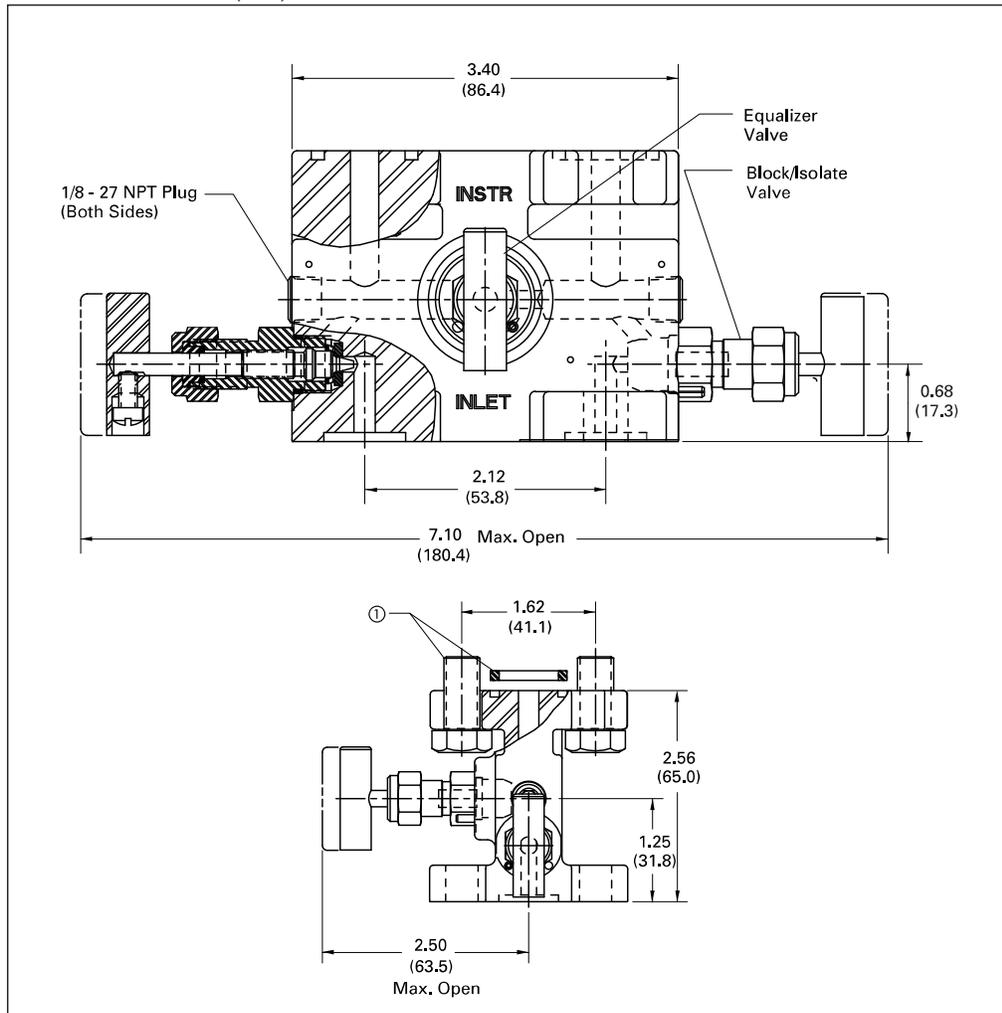
- **Bubble-tight shutoff.** Every valve 100% tested.
- **Compact, space-saving design.** One valve replaces three. Less parts equals less **leaks**, equals less **fugitive emissions**.
- **Blowout-proof stem.** Stem design prevents accidental back-out, eliminates blowout problems.
- **Rolled stem and bonnet threads** increase strength, wear resistance and life.
- **Highly polished stems** yield easier operation and increased packing life.
- **Metal-to-metal bonnet-to-body seal** maintains pressure integrity, and eliminates bonnet thread process corrosion.
- **Direct pipestand mounting** to 2-inch pipe. Requires KMC Mounting Kit. Permits complete piping installation without the transmitter and simplified instrument removal.
- **Soft seat** is field-replaceable with valve in line. Metal seats also available.
- **Stem threads isolated** from the process fluid by O-ring stem seal. Prevents stem thread corrosion.



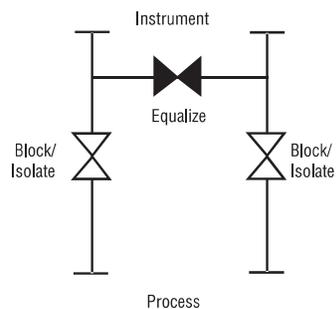
Kerotest KMM4A 3-Valve Differential Pressure Mini-Manifold

Specifications

Dimensions in Inches (mm)



① Mounting kit furnished with the KMM4A consists of four (4) bolts and two (2) Teflon® gaskets.



Kerotest KMM4A 3-Valve Differential Pressure Mini-Manifold

Standard Materials

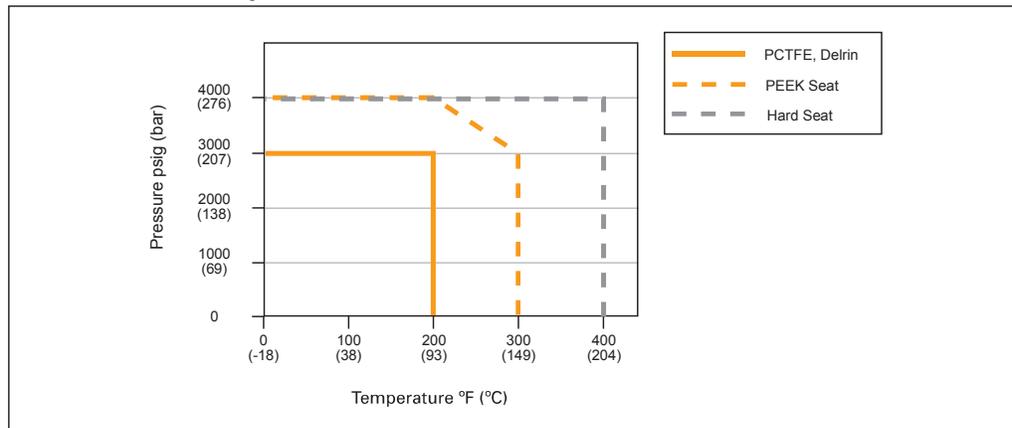
Valve	Seat	Body	Bonnet	Stem	Stem Seal ①	Seat	Flow Washer
SS	Hard Seat	A351-CF8M SS	A479-316 SS	A276-316 SS	Teflon or O-ring	SS	N/A
SG ②	Hard Seat	A351-CF8M SS	A479-316 SS	Monel® R405	Teflon or O-ring	SS	N/A
SS	Soft Seat	A351-CF8M SS	A479-316 SS	A276-316 SS	Teflon or O-ring with Teflon Backup Ring	Delrin® ③	316
SS ②	Soft Seat	A351-CF8M SS	A479-316 SS	A276-316 SS	Teflon or O-ring with Teflon Backup Ring	Delrin ③	316

① Bonnet assembly with O-ring Stem Seal is 0.60 inches (15.2 mm) shorter than Bonnet with Teflon Stem Seal.

② SG (Sour Gas) all SS wetted parts are RC22 or less to meet requirements of NACE MR0175-latest revision.

③ PCTFE (Polychlorotrifluoroethylene is equivalent to Kel-F) and PEEK are also available.

Pressure vs. Temperature



Pressure and Temperature Ratings

Valve	Ratings	
Metal Seat	4000 psig at 400°F	(276 bar at 204°C)
Delrin and PCTFE Seat	3000 psig at 200°F	(207 bar at 93°C)
PEEK Seat	4000 psig at 200°F	(276 bar at 93°C)
	3000 psig at 300°F	(207 bar at 149°C)

Kerotest KMM4A 3-Valve Differential Pressure Mini-Manifold

Ordering Information

KMM4A		<u>V</u>	<u>D</u>	<u>S</u>	–	<u>B2</u>	–	<u>AM</u>
		1.	2.	3.		4.		5.
1. Stem Seal		1. Stem Seal		4. Installation Kits				5. Options
V – Teflon				B1 – Rosemount® 2024 (Four 18-8 SS Bolts/Washers, Teflon Seals) 7/16 – 20 x 1.25-Inch Bolts				AMS – KMC Mount Kit for Pipestand Mounting with Stainless Steel Bracket
R – Viton® O-ring				B2 – Rosemount 2024 (Four 18-8 SS Bolts/Washers, Teflon Seals) 7/16 – 20 x 1.50-Inch Bolts				BP – Accessory Bracket – Mount Purge Meters with Option AM
2. Seat				B3 – Foxboro 843 d/p (Standard) (Four A193-B7 Bolts/Washers)				CL – Cleaned for Chlorine Service
I – Integral				B4 – Rosemount 3051C (Four 18-8 SS Bolts/Washers)				OC – Cleaned for Oxygen Service
D – Delrin (Standard)								HD – Hydrostatic Testing (100%) (MSS-SP-61)
K – PCTFE								MS – Monel Stem
E – PEEK								PHB – Phenolic Black Handle
3. Body Material								PHG – Phenolic Green Handle
S – SS, A351-CF8M								PHR – Phenolic Red Handle
								SG – Sour Gas Meets the Requirement of NACE MR0175-Latest Revision (Not Available for O-ring Packed Valves)
								SSA – SS Flange Bolt (Grade 18-8)
								SSC – 316 Flange Bolt (B8M)
								SP – Special Requirements – Please Specify

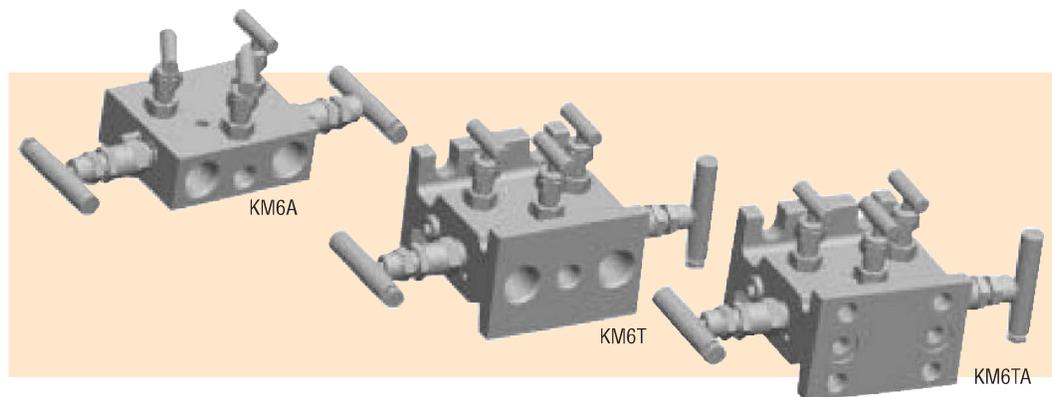
Installation Kits

Kit	Part Number	Kit Contents	Typical Transmitter Reference
B1	60001039	4 Bolts 7/16 – 20 x 1.25-Inch, 18-8 SST, 4 Washers, 18-8 SST, 2 Gaskets Teflon	Rosemount 2024
B2	60001040	4 Bolts 7/16 – 20 x 1.5-Inch, 18-8 SST, 4 Washers, 18-8 SST, 2 Gaskets Teflon	Rosemount 2024
B3 (Standard)	60001041	4 Bolts 7/16 – 20 x 1.00-Inch, 18-8 SST, 4 Washers, 18-8 SST, 2 Gaskets Teflon	Foxboro 843 d/p
B4 (R3V)	60001042	4 Bolts 7/16 – 20 x 2.25-Inch, 18-8 SST, 4 Washers, 18-8 SST, 2 Gaskets Teflon	Rosemount 3051C

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds



Product Brief

The KM6A 5-Valve Manifold is designed specifically for natural gas applications, especially for use with recording orifice meters. These manifolds are generally mounted in the tubing from the orifice flange. Because of its light weight, it is normally supported by the meter tubing without additional support. The KM6T and KM6TA options, however, allow for flange by tube installation or flange-by-flange installation of these manifolds if desired.

Features/Benefits

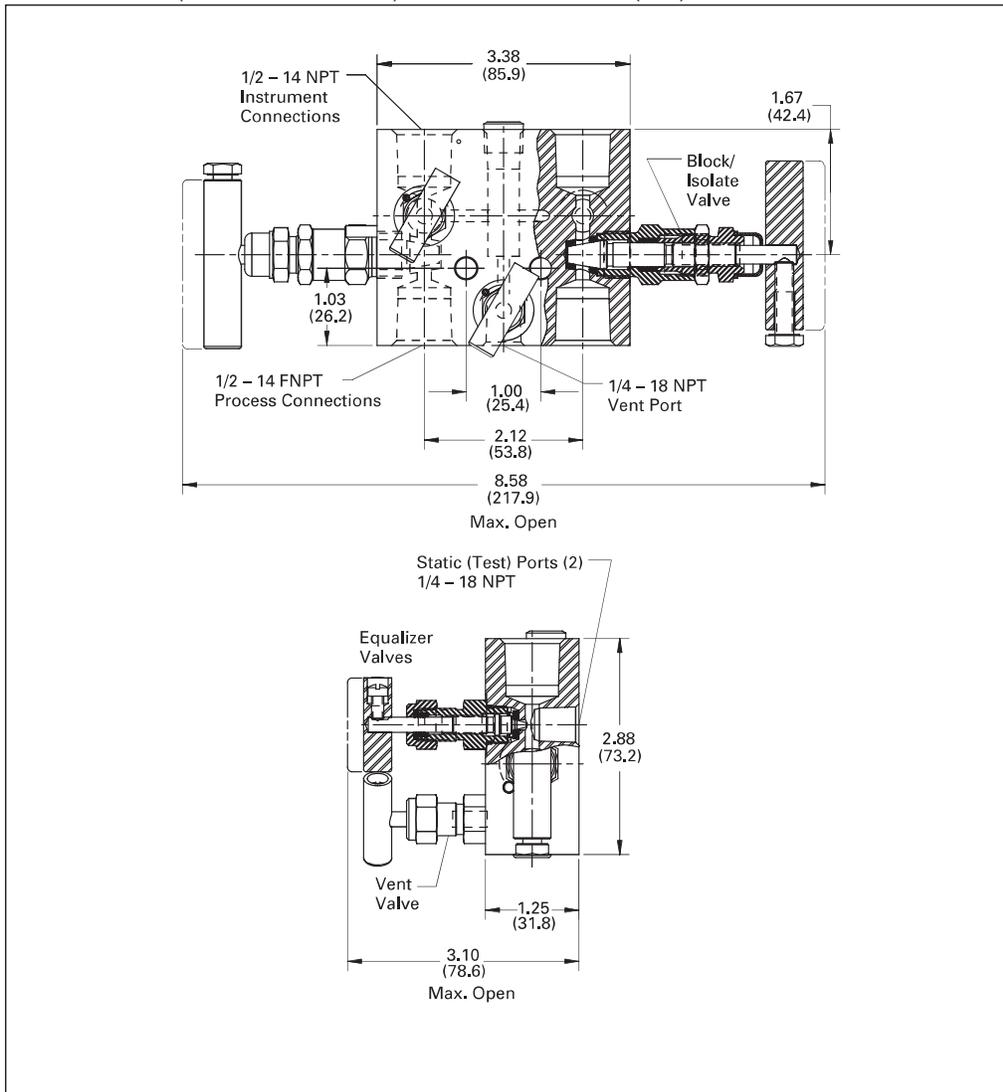
- **Lightweight construction.** Installs in meter tubing without additional support.
- **Field-serviceable soft seat.** Allows replacement with valve still in the line.
- **1/4-inch FNPT ports standard.** Connect static pressure to the upstream or downstream ports.
- **Isolated stem threads.** Adjustable packing below stem threads keeps process fluid away. Ensures leakproof, long service life.
- **Bubble-tight shutoff.**
- **Space-saving design.**
- **One valve does the work of five.** Saves money and labor.
- **Bonnet cap protection.** Increases valve life and maintains integrity of stem threads.
- **Rolled stem and bonnet threads** for increased strength and life.
- **No more stem blowouts.** No-backout stem design prevents blowout problems and removal while in use.
- **Less parts** mean less leak points and less fugitive emissions.



Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

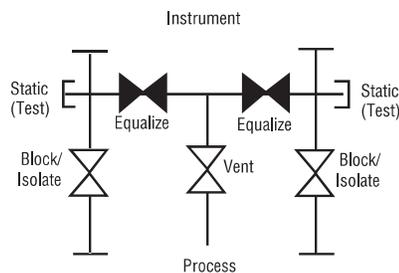
Specifications

KM6A Soft Seat (Metal Seat Available) Dimensions in Inches (mm)



Notes:

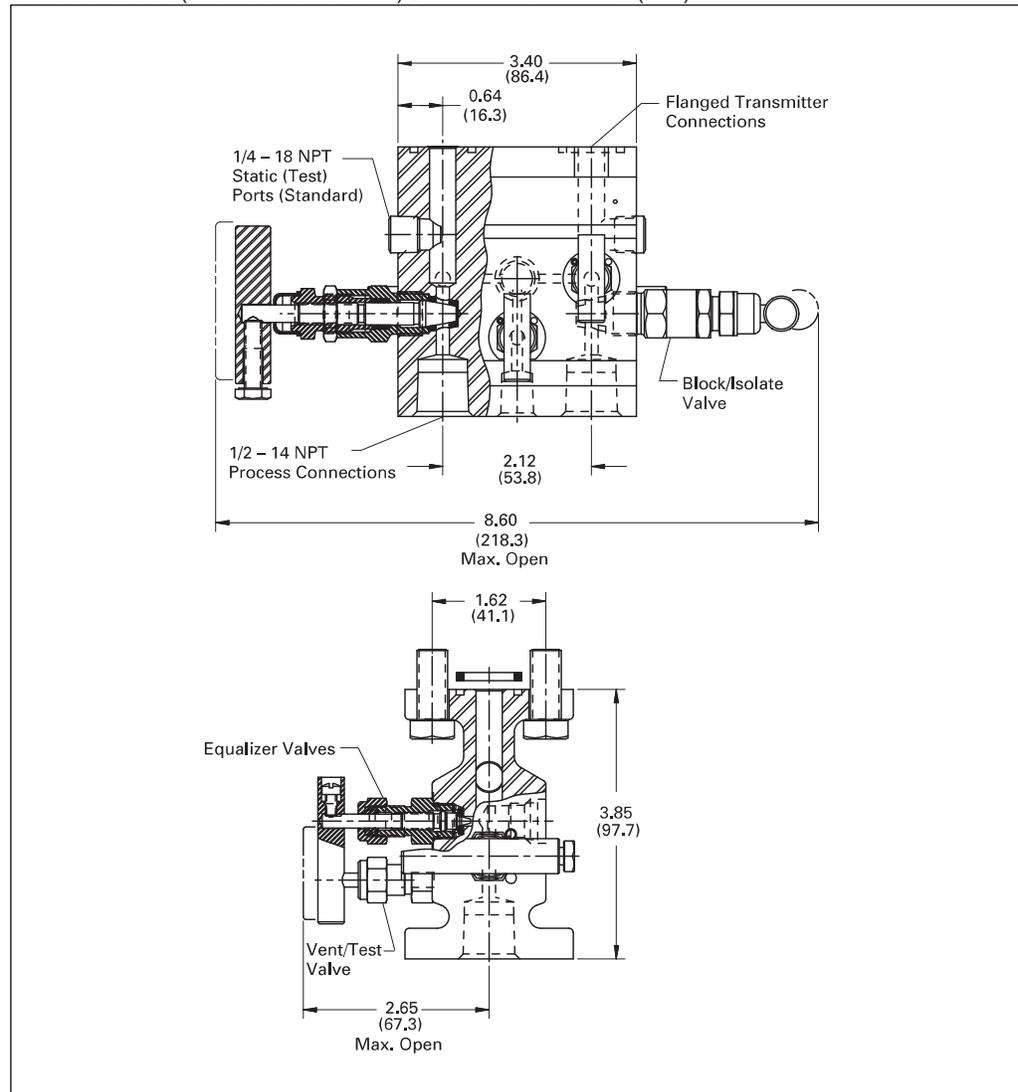
- Approximate valve weight: 4.0 lb (1.8 kg)
- Metal Seat: 0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.
- Soft Seat: 0.187-inch (4.8 mm) diameter orifice.
Cv = .83, full open.



Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

Specifications

KM6T Soft Seat (Metal Seat Available) Dimensions in Inches (mm)



Notes:

Approximate valve weight: 6.0 lb (2.7 kg)

Metal Seat: 0.156-inch (4.0 mm) diameter orifice.

Cv = .36, full open.

Soft Seat: 0.187-inch (4.8 mm) diameter orifice.

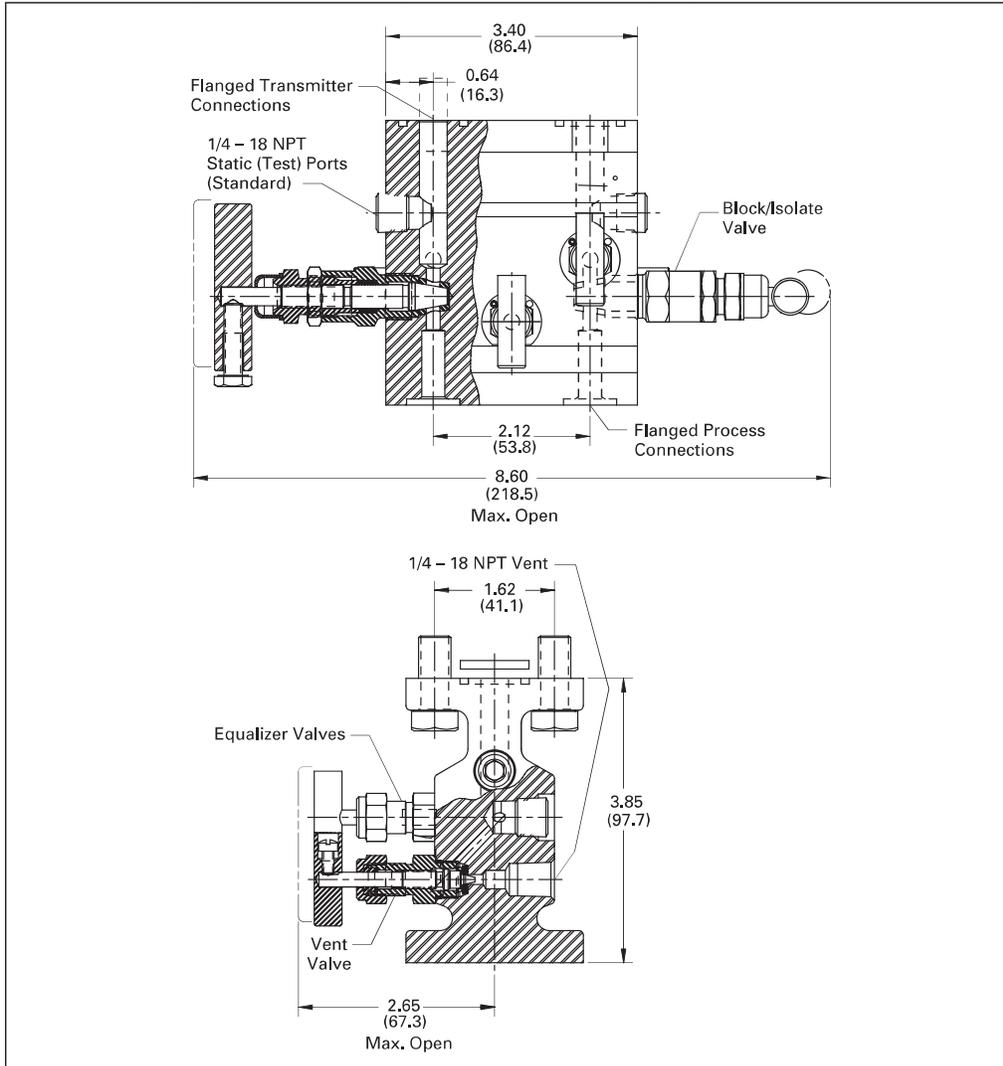
Cv = .83, full open.

KM6T Installation Kit consists of 4 bolts,
7/16-inch - 20 x 1-inch A193-B7, 4 washers,
and 2 Teflon gaskets.

Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

Specifications

KM6TA Soft Seat (Metal Seat Available) Dimensions in Inches (mm)

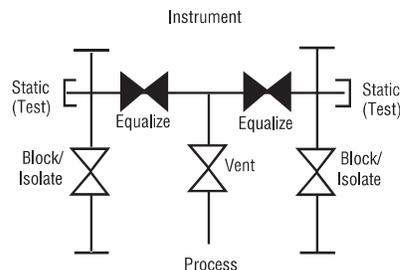


Notes:

- Approximate valve weight: 6.0 lb (2.7 kg)
- Metal Seat: 0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.
- Soft Seat: 0.187-inch (4.8 mm) diameter orifice.
Cv = .83, full open.

KM6TA Installation Kit consists of 4 bolts, 7/16-inch - 20 x 1-inch A193-B7, 4 washers, and 2 Teflon® gaskets.

The KM6TA high pressure extrusion has flanged (integral) instrument and process connections.



Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

Standard Materials

Valve	Seat	Body	Bonnet	Stem	Ball	Flow Washer
CS ①	Soft	A105 ④	A108	A581-303	N/A	316
CS ①	Integral	A105 ④	A108	A581-303	17-4PH	N/A
SS	Soft	A479-316	A479-316	A276-316	N/A	316
SS	Integral	A479-316	A479-316	A276-316	316	N/A
SG ②	Soft	A479-316	A479-316	Monel® 400	N/A	316
SG ②	Integral	A479-316	A479-316	Monel 400	Monel K500	N/A
SG3 ③	Hastelloy® C-276	Hastelloy C-276	Hastelloy C-276	Hastelloy C-276	Stellite	Hastelloy

Pressure and Temperature Ratings

Valve	Packing	Seat Material	Standard Bolting	SS Bolting
CS ①, SS, SG ②, SG3 ③, Monel	Teflon O-ring	Delrin® PCTFE ⑤	3000 psig at 200°F (207 bar at 93°C)	3000 psig at 200°F (207 bar at 93°C)
CS ①, SS, SG ②, SG3 ③	Teflon O-ring	PEEK	6000 psig at 200°F (414 bar at 93°C) 3000 psig at 300°F (207 bar at 149°C)	4500 psig at 100°F (310 bar at 38°C) 3000 psig at 300°F (207 bar at 149°C)
Monel	Teflon O-ring	PEEK	5300 psig at 200°F ⑦ (365 bar at 93°C) 3000 psig at 300°F (207 bar at 149°C)	4500 psig at 100°F (310 bar at 38°C) 3000 psig at 300°F (207 bar at 149°C)
CS ①, SS, SG ②, SG3 ③, Monel	Teflon	Teflon ⑥	1000 psig at 150°F (69 bar at 66°C) 200 psig at 500°F (14 bar at 260°C)	1000 psig at 150°F (69 bar at 66°C) 200 psig at 500°F (14 bar at 260°C)
CS ①, SS, SG ②, SG3 ③	Teflon GRAFOIL® Low Emissions Graphite	Body Material	4000 psig at 500°F (276 bar at 260°C)	3000 psig at 500°F (207 bar at 260°C)
Monel	Teflon GRAFOIL Low Emissions Graphite	Body Material	5300 psig at 200°F ⑦ (365 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)	4500 psig at 100°F (310 bar at 38°C) 3000 psig at 500°F (207 bar at 260°C)

① CS parts are zinc cobalt-plated to prevent corrosion.

② SG (Sour Gas) meets the requirements of NACE MR0175-2002.

③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

④ KM6A body material is A108.

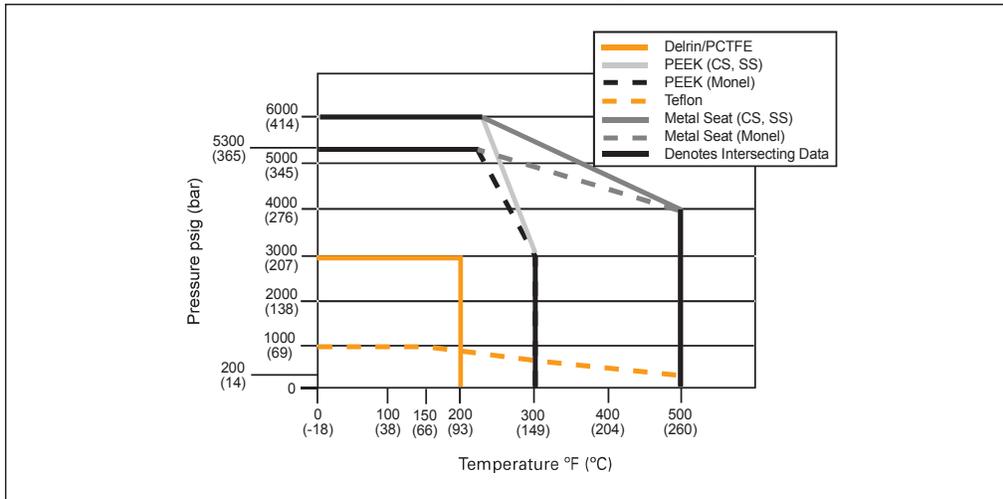
⑤ PCTFE (Polychlorotrifluoroethylene) is the equivalent of Kel-F®.

⑥ Block valves only.

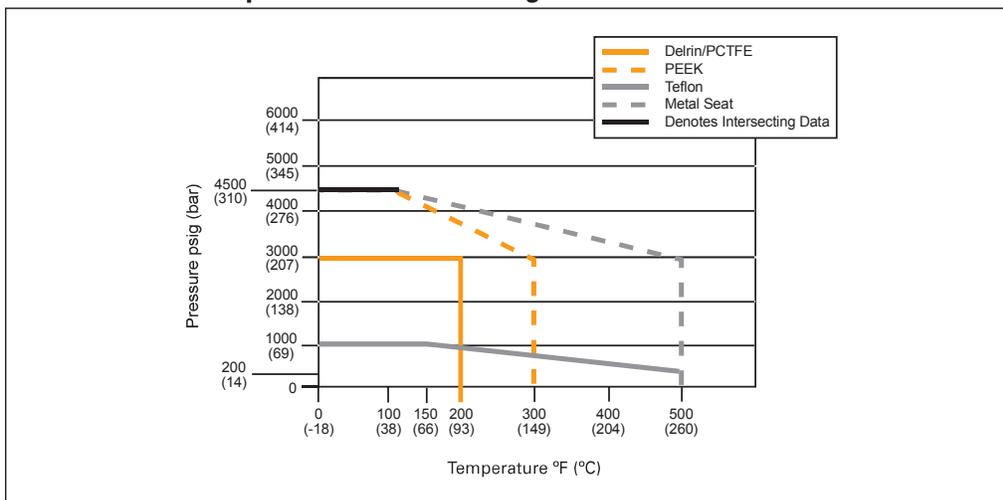
⑦ KM6A Monel ratings are: 6000 psig at 200°F (414 bar at 93°C), 4000 psig at 500°F (276 bar at 260°C).

Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

Pressure vs. Temperature – Standard Bolting



Pressure vs. Temperature – SS Bolting



Kerotest KM6A, KM6T & KM6TA 5-Valve Natural Gas Manifolds

Ordering Information

KM6A	<u>V</u>	<u>D</u>	<u>S</u>	-	<u>4</u>	-	<u>SG</u>
1.	2.	3.	4.		5.		6.

1. Valve Type

3/16-Inch (4.8 mm) Orifice
KM6A – Pipe x Pipe
KM6T – Pipe x Flange
KM6TA – Flange x Flange

2. Packing

V – Teflon
R – O-ring
H – GRAFOIL
E – Low Emissions Graphite

3. Seat

Soft
V – Teflon (Block Valves Only)
D – Delrin
E – PEEK
K – PCTFE
Hard
I – Integral (Body Material)

4. Body Material

C – CS, A105 ①
S – SS, A479-316
M – Monel

5. Process Connections

4 ② – 1/2-Inch FNPT
AT ③ – Integral Single Ferrule Tube Fittings (4AT 1/2-Inch, 316 SS Ferrule and Nut)
ATD ③ – Integral Double Ferrule Tube Fittings (4ATD 1/2-Inch, 316 SS Ferrule and Nut)

6. Options

AM – KMC Mount Kit (For 2-Inch Pipestand Mounting of Manifold)
BC – Accessory Bracket for Mounting Conduit with KMC Mount
BP – Accessory Bracket for Mounting Purge Meters with KMC Mount
CL – Cleaned for Chlorine Service
HD – Hydrostatic Testing – Includes Test Report (MSS-SP-61)

OC – Cleaned for Oxygen Service
R3V – Add When Mounting to Rosemount® Model #3051C, 2024, -3095. Specify on All Components. Use SS Columns for Rating (KM6T, KM6TA Only)
SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (B7 Mounting Bolts Standard, SS Mounting Bolts Optional) (SS Valves Only) (Not Available for O-ring Packed Valves)
SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003
TB – Static/Test Ports (Bottom of Manifold) 1/4-Inch – 18 NPT, 2 Places, KM6T, KM6TA Only
EL – Installed Street Elbows in Static Test Ports (KM6T, KM6TA Only) Elbows Provided with 1/4-Inch NPT Plugs
EL1 – Elbow Facing Bottom of Manifold
EL2 – Elbow Facing Outlet of Manifold
EL3 – Elbow Facing Top of Manifold
SP – Special Requirements – Please Specify

① KM6A is A108.

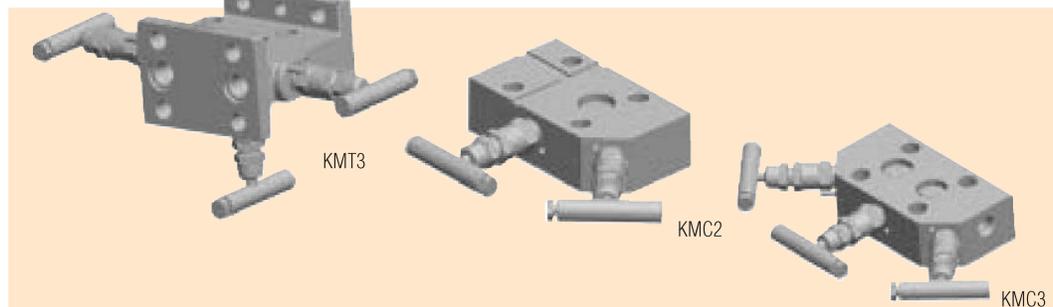
② Available to KM6A and KM6T only.

③ Available to KM6T only.

Note: For Close Couple Futbols (NPT and Tube-Ended) and Adapter Kits, consult Kerotest.

All product names referenced herein are trademarks of their respective companies.

Kerotest KMC2, KMC3 & KMT3 Integral Manifolds



Product Brief

The KMC2, KMC3 and KMT3 Manifolds are designed as integral manifolds, intended for use with a specific transmitter brand. These particular manifolds complement the KMC5G manifold series. All are designed for Rosemount® Transmitter Models 3051, 2024 and 3095. They offer 2- and 3-valve options with the Rosemount Transmitter. They are lightweight and small, making an integrated package when mounted directly to and installed with the transmitter. The KMC5G manifold is also designed to be compatible with Rosemount Coplanar™ pressure transmitters including Models 3051C and 3051P.

Features/Benefits

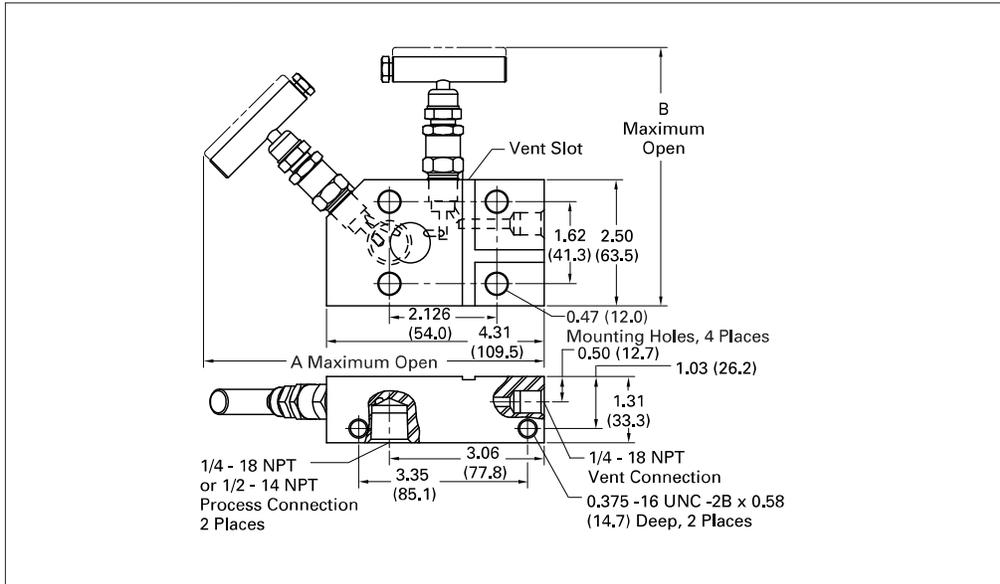
- **Ball end stem.** Hardened, non-rotating ball ensures exact leak-tight closure every time.
- **Field-serviceable soft seat.** Allows replacement with valve still in the line.
- **Isolated stem threads.** Packing below stem threads keeps solids away. Prevents process contamination.
- **Bubble-tight shutoff.**
- **Chrome-plated stainless steel stem** prevents freezing and galling.
- **Metal-to-metal seal between bonnet and body.** Maintains thread integrity, prevents bonnet breakage and ensures reliable seal.
- **Locking pin ensures safety.** Bonnet lock pin keeps bonnet and body together.
- **Adjustable bonnet packing.** Increases valve life and maintains integrity of stem threads.
- **Rolled stem and bonnet threads** for increased strength and life.
- **No more stem blowouts.** No-blackout stem design prevents blowout problems and removal while in use.
- **Less parts** mean less leak points and less fugitive emissions.



Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Specifications – KMC2 2-Valve Manifold for Static Pressure

Dimensions in Inches (mm)

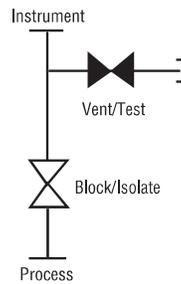


Dimensions in Inches (mm)

Valve ①	A	B
Teflon® Packed	6.85 (174.0)	5.10 (129.5)
GRAFOIL®/Low Emissions Graphite Packed	7.49 (190.2)	5.75 (146.1)

① Approximate valve weight: 4.1 lb (1.9 kg)
0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.

Body face is slotted to ensure atmospheric vent when a differential transmitter is used.



Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Specifications – KMC2 2-Valve Manifold for Static Pressure

Standard Materials

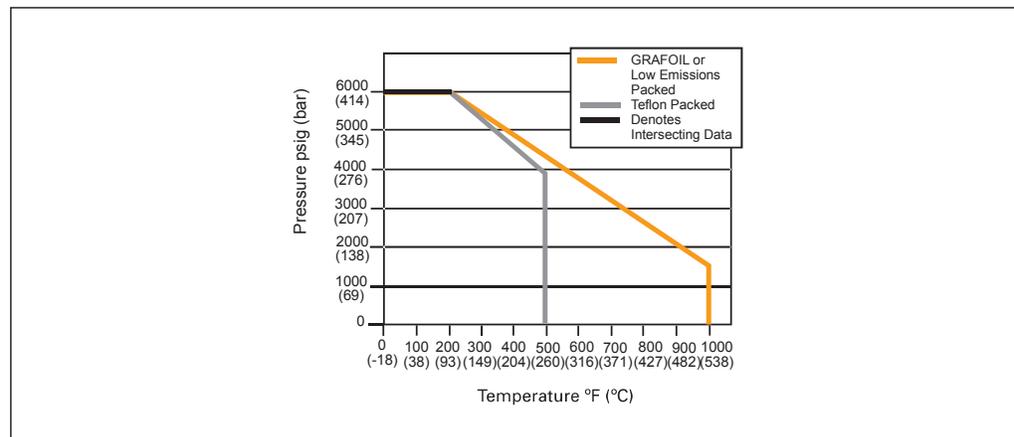
Valve	Body and Bonnet	Stem and Ball
SS	A479-316 316	A276-316 316
SG ①	A479-316 316	Monel® 400 Monel K500
SG ①	Hastelloy® C-276	Hastelloy C-276 Stellite

Pressure and Temperature Ratings

Valve	Packing	Ratings
SS	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SS	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG ①	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG ①	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG3 ②	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG3 ②	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)

- ① SG (Sour Gas) meets the requirements of NACE MR0175-2002.
 ② SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

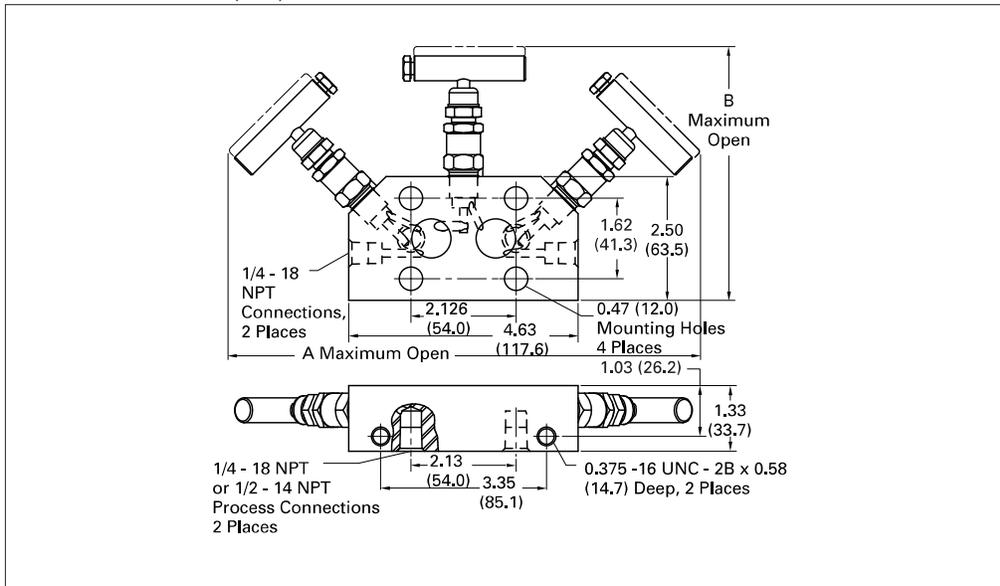
Pressure vs. Temperature



Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Specifications – KMC3 3-Valve Manifold with Optional Externally Valved Test Ports

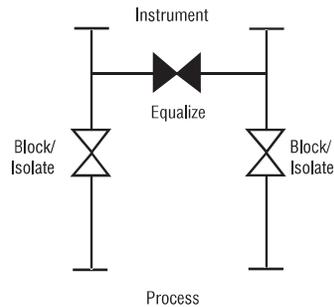
Dimensions in Inches (mm)



Dimensions in Inches (mm)

Valve ①	A	B
Teflon Packed	9.60 (243.8)	5.10 (129.5)
GRAFOIL/Low Emissions Graphite Packed	10.98 (278.9)	5.75 (146.1)

① Approximate valve weight: 5.0 lb (2.3 kg) for KMC3VI () -2-H5
4.4 lb (2.0 kg) for KMC3VI () -2
0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.



Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Specifications – KMC3 3-Valve Manifold with Optional Externally Valved Test Ports

Standard Materials

Valve ①	Body and Bonnet	Stem and Ball
SS	A479-316 316	A276-316 316
SG ②	A479-316 316	Monel 400 Monel K500
SG3 ③	Hastelloy C-276	Hastelloy C-276 Stellite

Pressure and Temperature Ratings

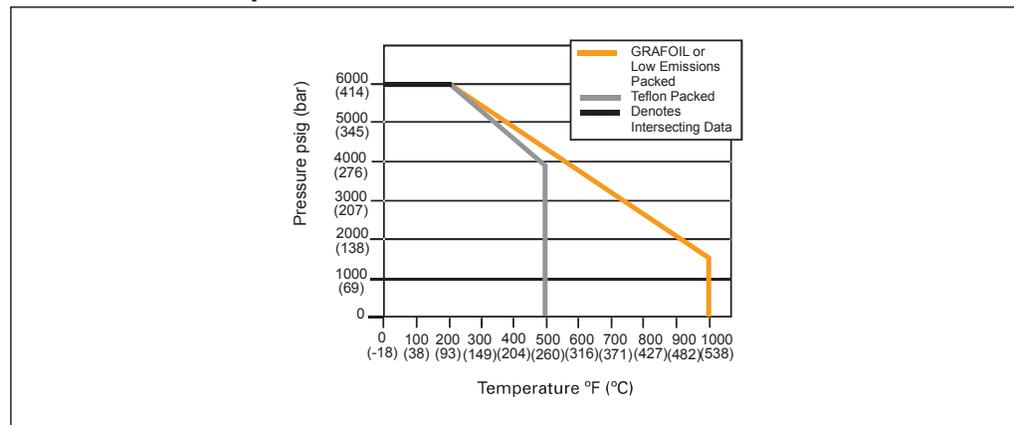
Valve	Packing	Ratings
SS	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SS	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG ②	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG ②	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG3 ③	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG3 ③	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)

① Optional test port valves are available. Convertible soft-to-metal seat.

② SG (Sour Gas) meets the requirements of NACE MR0175-2002.

③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

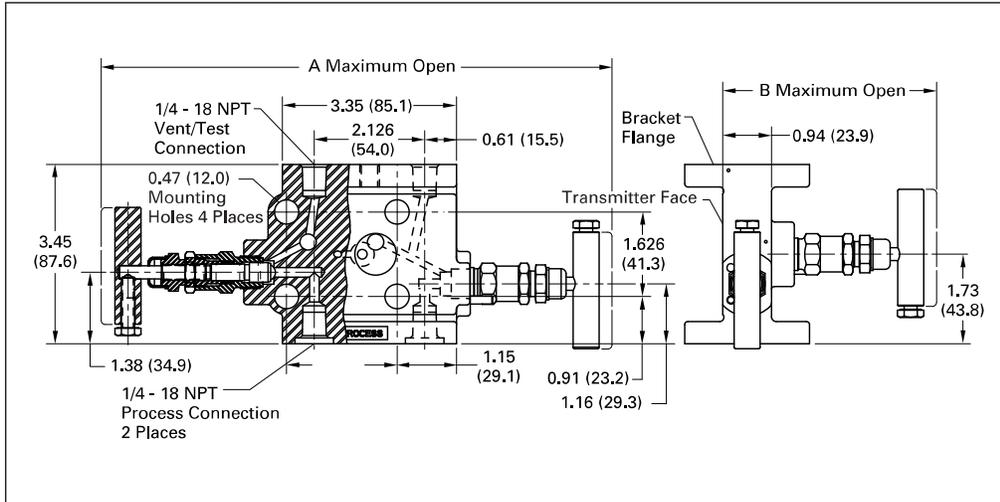
Pressure vs. Temperature



Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

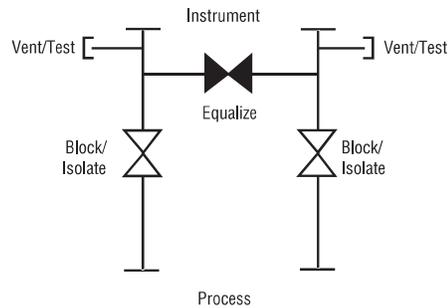
Specifications – KMT3 3-Valve Manifold with Test Ports

Dimensions in Inches (mm)



Dimensions in Inches (mm)

Valve ①	A	B
Teflon Packed	9.72 (246.9)	4.04 (102.6)
GRAFOIL/Low Emissions	11.02	4.69
Graphite Packed	(279.9)	(119.1)



Standard Materials ②

Valve	Body and Bonnet	Stem and Ball
SS	A351-CF8M SS 316	A276-316 316
SG ③	A351-CF8M SS 316	Monel 400 Monel K500
SG3 ④	Hastelloy C-276	Hastelloy C-276 Stellite

① Approximate valve weight: 4.9 lb (2.22 kg)
0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.

② Monel and Hastelloy are also available.

③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.

④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

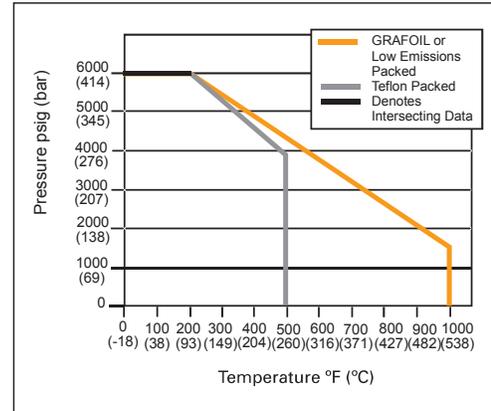
Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Specifications – KMT3 3-Valve Manifold with Test Ports

Pressure and Temperature Ratings

Valve	Packing	Ratings
SS	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SS	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG ^①	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG ^①	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)
SG3 ^②	Teflon	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)
SG3 ^②	GRAFOIL/ Low Emissions Graphite	6000 psig at 200°F (414 bar at 93°C) 1500 psig at 1000°F (103 bar at 538°C)

Pressure vs. Temperature



- ① SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ② SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Ordering Information – KMC and KMT (Rosemount Coplanar Only)

KMC	<u>3</u>	<u>V</u>	<u>I</u>	<u>S</u>	-	<u>4</u>	-	<u>AL</u>
1.	2.	3.	4.	5.		6.		7.

1. Style

KMC – Coplanar
KMT – Double Flange

2. Type

2 – Two Valve (Static Pressure)
3 – Three Valve (ΔP)

3. Packing

V – Teflon
H – GRAFOIL
E – Low Emissions Graphite

4. Seat

I – Integral (Body Material)

5. Body Material

S – 316 SS
J – Hastelloy

6. End Connection

2 – 1/4-Inch FNPT
4 – 1/2-Inch FNPT

7. Options

AL – Low Temperature Lubricant (Low Temperature Service -70°F) Not Available for CS Valves
AM – KMC Mount Kit for 2-Inch Pipestand Mounting
BL – Bonnet Lock Device
CB – Ceramic Ball Ended Stem

CL – Cleaned for Chlorine Service
OC – Cleaned for Oxygen Service
HD – Hydrostatic Testing
SG – Sour Gas Meets the Requirements of NACE MR0175-2002
SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003
ST – Stellite Ball Ended Stem
SB – Steam Block (KMC Only)
KH5 – KH5VS-22 Vent Valve (2) (KMC3 Only)
K1H5 – KH5VS-22 Vent Valve (1) (KMC2, KMC3 Only)
SP – Special Requirements – Please Specify

Kerotest KMC2, KMC3 & KMT3 Integral Manifolds

Ordering Information – KMC and KMT ASME B31.1

KMC	3HP	S	4	XP	SP
1.	2.	3.	4.	5.	5.
1. Style		3. Material		5. Options	
KMC – Coplanar KMT – Double Flange		S – 316 SS		AM – KMC Mount Kit for 2-Inch Pipestand Mounting SP – Special Requirements – Please Specify	
2. Type		4. End Connection			
2HP – Two Valve (Static Pressure) 3HP – Three Valve (ΔP) 5PHP – Five Valve (Power) (ΔP)		2 – 1/4-Inch FNPT (Use if Futbol Mounting to Inlet) 4 – 1/2-Inch FNPT			

Note: All manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.

Manifold ratings:

6000 psig @ 100°F (414 bar @ 38°C)

2915 psig @ 1000°F (201 bar @ 538°C)

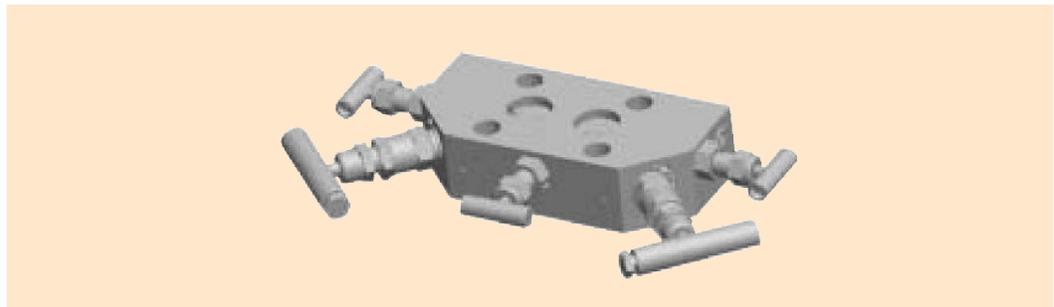
Bolts and gaskets are not included. Contact factory if bolts or gaskets are required.

KMC and KMT ASME B31.1 and B31.3 specifications meet MSS-SP-105.

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KMC5G 5-Valve Integral Manifold



Product Brief

The KMC5G is an integral manifold, intended for use with a specific transmitter brand. This model manifold is designed for Rosemount® Transmitter Models 3051, 2024 and 3095. They are light-weight and small, making an integrated package when mounted directly to and installed with the transmitter. The KMC5G manifold is also designed to be compatible with Rosemount Coplanar™ pressure transmitters including Models 3051C and 3051P.

Features/Benefits

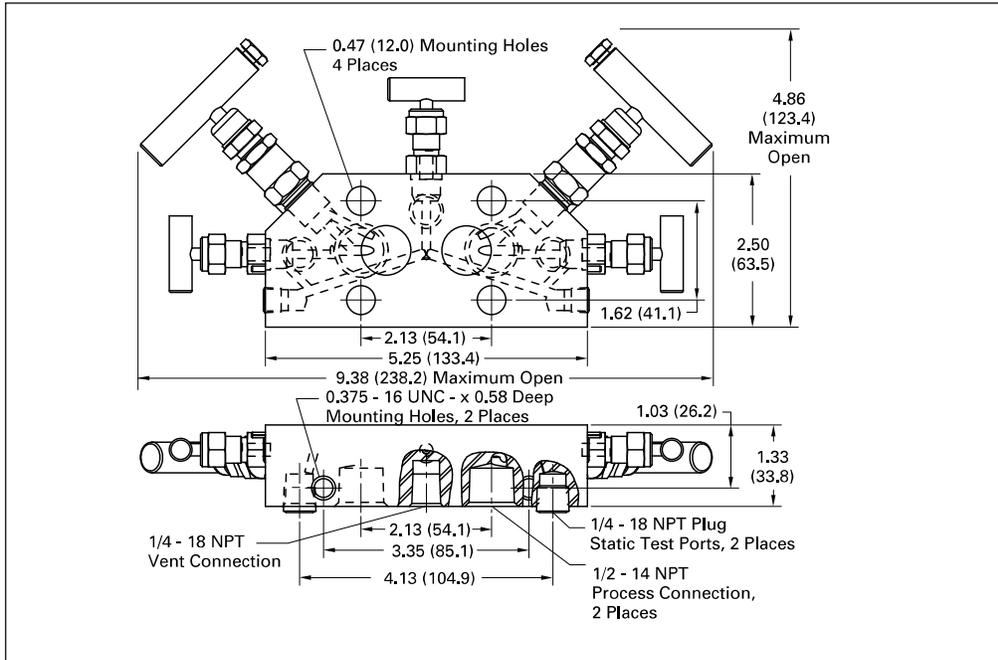
- **Ball end stem.** Hardened, non-rotating ball ensures exact leak-tight closure every time.
- **Field-serviceable soft seat.** Allows replacement with valve still in the line.
- **Isolated stem threads.** Packing below stem threads keeps solids away. Prevents process contamination.
- **Bubble-tight shutoff.**
- **Chrome-plated stainless steel stem** prevents freezing and galling.
- **Metal-to-metal seal between bonnet and body.** Maintains thread integrity, prevents bonnet breakage and ensures reliable seal.
- **Locking pin ensures safety.** Bonnet lock pin keeps bonnet and body together.
- **Adjustable bonnet packing.** Increases valve life and maintains integrity of stem threads.
- **Rolled stem and bonnet threads** for increased strength and life.
- **No more stem blowouts.** No-blackout stem design prevents blowout problems and removal while in use.
- **Less parts** mean less leak points and less fugitive emissions.



Kerotest KMC5G 5-Valve Integral Manifold

Specifications

Dimensions in Inches (mm)



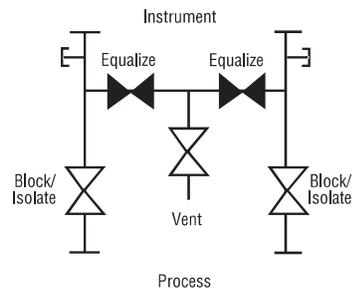
Standard Materials

Valve ①	Body and Bonnet	Stem and Ball	Packing
SS	A479-316 316	A276-316 316	Teflon®
SG ②	A479-316 316/Monel®	Monel 400 Monel K500	Teflon
SG3 ③	Hastelloy® C-276	Hastelloy C-276 Stellite	Teflon

Pressure and Temperature Ratings

Valve	Ratings	
SS, SG ②, SG3 ③	6000 psig at 200°F 4000 psig at 500°F	(414 bar at 93°C) (276 bar at 260°C)

- ① Approximate valve weight: 4.8 lb (2.2 kg)
0.136-inch (3.5 mm) diameter orifice.
Cv = .24, full open.
- ② SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.



Kerotest KMC5G 5-Valve Integral Manifold

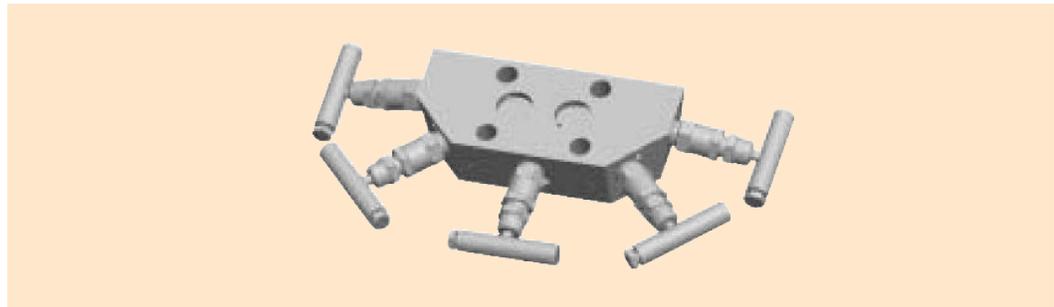
Ordering Information – KMC (Rosemount Coplanar Only)

KMC	<u>5G</u> 1.	<u>V</u> 2.	<u>I</u> 3.	<u>S</u> –	<u>4</u> –	<u>PS</u> 6.
Style				4. Body Material		6. Options
KMC – Coplanar				S – 316 SS J – Hastelloy		AL – Low Temperature Lubricant (Low Temperature Service -70°F) Not Available for CS Valves
1. Type				5. End Connection		AM – KMC Mount Kit for 2-Inch Pipestand Mounting
5G – Five Valve (Gas) (ΔP) 5P – Five Valve (Power) (ΔP)				4 – 1/2-Inch FNPT		BL – Bonnet Lock Device
2. Packing						CB – Ceramic Ball Ended Stem
V – Teflon						CL – Cleaned for Chlorine Service
3. Seat						OC – Cleaned for Oxygen Service
I – Integral (Body Material)						HD – Hydrostatic Testing
						SG – Sour Gas Meets the Requirements of NACE MR0175-2002
						SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003
						ST – Stellite Ball Ended Stem
						SB – Steam Block
						PS – Static Test Ports (Required for KMC5G)
						SP – Special Requirements – Please Specify

Note: Bolts and gaskets are not included; contact factory if bolts or gaskets are required.

All product names referenced herein are trademarks of their respective companies.

Kerotest KMC5P Integral Manifold



Product Brief

The KMC5P is a five-valve manifold designed for use with specific Rosemount transmitters, Models 3051C, 3051P, 2024 and 3095 Multivariable transmitters. This manifold is primarily intended for power plant applications. See the KMC5G catalog for products for gas applications and the KMC2 catalog for other general application products. The manifold consists of two block valves, an equalizing valve and two integral test/vent valves.

Features/Benefits

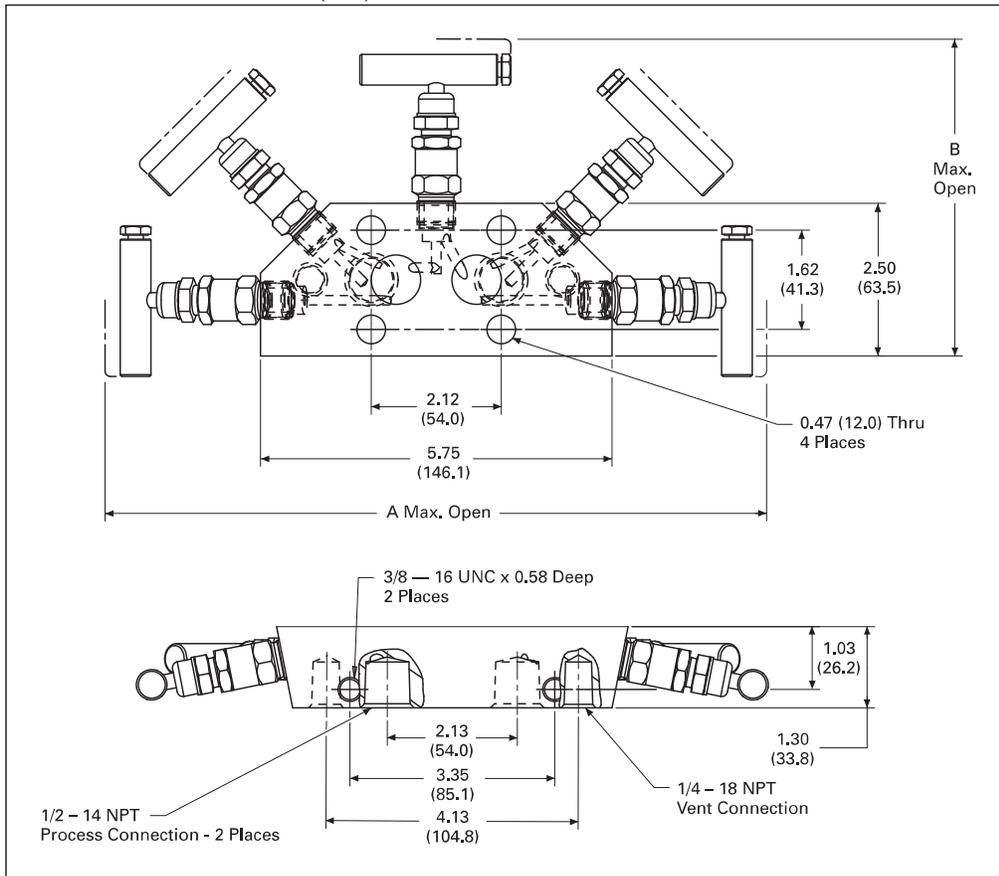
- **Bubble-tight shutoff.** Every valve is 100% tested.
- **Space-saving design.** One compact valve replaces five. Much fewer connections means less leak paths means **less fugitive emissions**.
- **Cost-saving design.** Less parts means lower cost in the order of 20-30% compared to conventional two-valve installation.
- **Stem threads isolated** from the process fluid, eliminating process fluid contamination, lubricant washout and thread corrosion.
- **Mirror finish stems** enable smooth stem operation and extended packing life.
- **Adjustable packing** adjusts easily, increasing valve life and reducing downtime for packing replacement.
- **Multiple packing options** available including Teflon® and GRAFOIL®.
- **Ball-tipped stem design** prevents seat galling during valve closure.
- **Dust covers and bonnet locking pins** provided for each valve for added safety and reduced contamination of the bonnet assembly.



Kerotest KMC5P Integral Manifold

Specifications

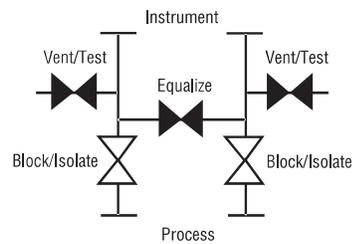
KMC5P Dimensions in Inches (mm)



Dimensions in Inches (mm)

Valve ①	A	B
Teflon Packed	10.95 (278.1)	5.10 (129.5)
GRAFOIL/Low Emissions Graphite Packed	12.40 (315.0)	5.75 (146.1)

① Approximate valve weight: 5.3 lb (2.4 kg).
0.156-inch (4.0 mm) diameter orifice size.
Cv = .36, full open.



Kerotest KMC5P Integral Manifold

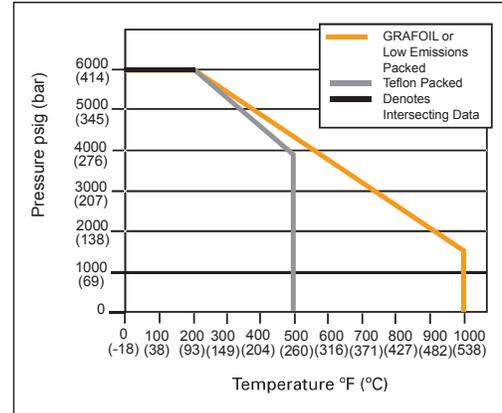
Standard Materials

Valve	Body and Bonnet	Stem and Ball	Packing
SS	A479-316 316	A276-316 316	Teflon
SG ①	A479-316 316/Monel®	Monel 400 Monel K-500	Teflon
SG ②	Hastelloy® C-276	Hastelloy C-276 Stellite	Teflon

Pressure and Temperature Ratings

Valve	Ratings
SS, SG ①, SG3 ②	6000 psig at 200°F (414 bar at 93°C) 4000 psig at 500°F (276 bar at 260°C)

Pressure vs. Temperature



- ① SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ② SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Ordering Information – KMC (Rosemount® Coplanar™ Only)

KMC5P

H
1.

I
2.

S
3.

-

4
4.

-

BL
5.

Style

KMC5P – Coplanar 5-Valve (Power) (ΔP)

1. Packing

V – Teflon
H – GRAFOIL
E – Low Emissions Graphite

2. Seat

I – Integral (Body Material)

3. Body Material

S – 316 SS
J – Hastelloy

4. End Connection

4 – 1/2-Inch FNPT

5. Options

AL – Low Temperature Lubricant (Low Temperature Service -70°F) Not Available for CS Valves
AM – KMC Mount Kit for 2-Inch Pipestand Mounting
BL – Bonnet Lock Device

CB – Ceramic Ball Stem Tip
CL – Cleaned for Chlorine Service
OC – Cleaned for Oxygen Service
HD – Hydrostatic Testing
SG – Sour Gas Meets the Requirements of NACE MR0175-2002
SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003
ST – Stellite Ball Stem Tip
SP – Special Requirements - Please Contact Factory

Note: Bolts and gaskets are not included. Contact factory if bolts and gaskets are required.

Kerotest KMC5P Integral Manifold

Ordering Information

KMC5PHP <u>S</u> - <u>4</u> - <u>XP</u> - <u>SP</u>			
	1.	2.	3.
Style	2. End Connection	3. Options	
KMC5PHP – Coplanar 5-Valve (Power) (ΔP)	4 – 1/2-Inch FNPT	AM – KMC Mount Kit for 2-Inch Pipestand Mounting	
1. Body Material		SP – Special Requirements – Please Contact Factory	
S – 316 SS			

Note: All manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subjected to hydrostatic testing.

Manifold ratings:

6000 psig @ 100°F (414 bar @ 38°C)

2915 psig @ 1000°F (201 bar @ 538°C)

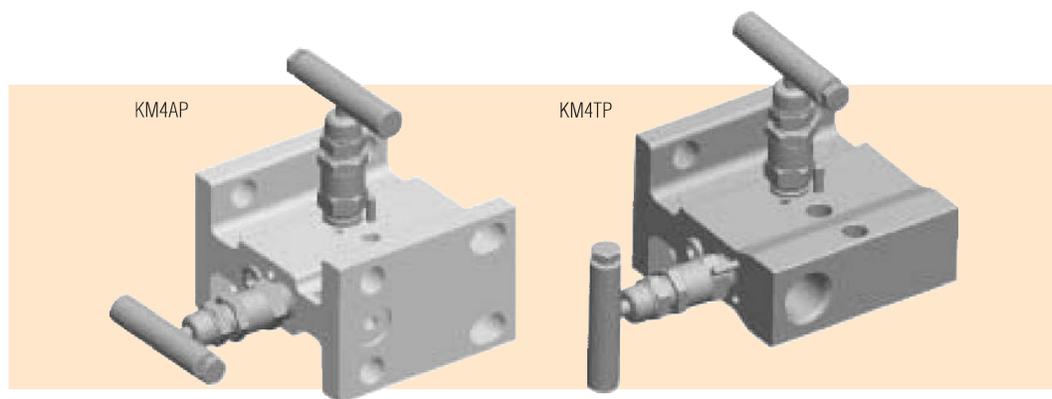
Bolts and gaskets are not included. Contact factory if bolts or gaskets are required.

KMC ASME B31.1 and B31.3 meet MSS-SP-105.

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KM4AP & KM4TP Static Pressure Manifolds



Product Brief

The KM4AP and KM4TP are two-valve, block and bleed style manifolds. These manifolds are intended for static pressure applications and are generally used with Differential Pressure (DP) style pressure transmitters. The block valve isolates the instrument (normally a transmitter) from the process and is normally open in service. When the block valve is closed to isolate the instrument, the bleed valve may be opened to safely vent pressure from the instrument. The KM4AP design permits the process signal line from the transmitter's funnel flange to be connected directly to the manifold. The KM4TP design has a standard 1/2-inch FNPT inlet connection.

Features/Benefits

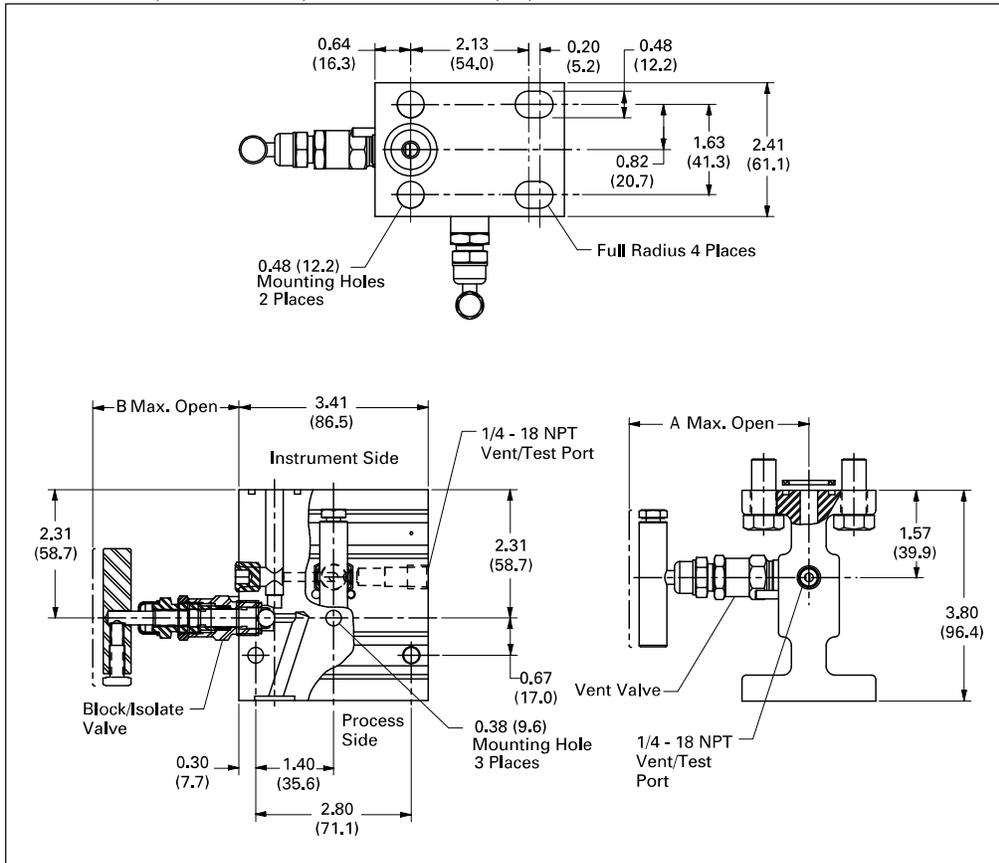
- **Bubble-tight shutoff.** Every valve is 100% tested.
- **Space-saving design.** One valve replaces two. Less connections means less leak paths means **less fugitive emissions**.
- **Cost-saving design.** Less parts means lower cost in the order of 20-30% compared to conventional two-valve installation.
- **Stem threads** isolated from the process fluid, eliminating process fluid contamination.
- **Direct pipestand mounting.** Requires KMC Mounting Kit. Permits complete piping installation without the transmitter to minimize potential instrument damage during construction.
- **Multiple packing options** available including Teflon® and GRAFOIL®.
- **Ball-tipped stem design** prevents seat galling during valve closure.



Kerotest KM4AP & KM4TP Static Pressure Manifolds

Specifications

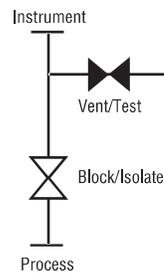
KM4AP Metal Seat (Soft Seat Available) – Dimensions in Inches (mm)



Dimensions in Inches (mm)

Packing	A	B
Teflon	3.14 (79.8)	2.60 (66.0)
GRAFOIL/ Low Emissions Graphite	3.79 (96.3)	3.25 (82.6)

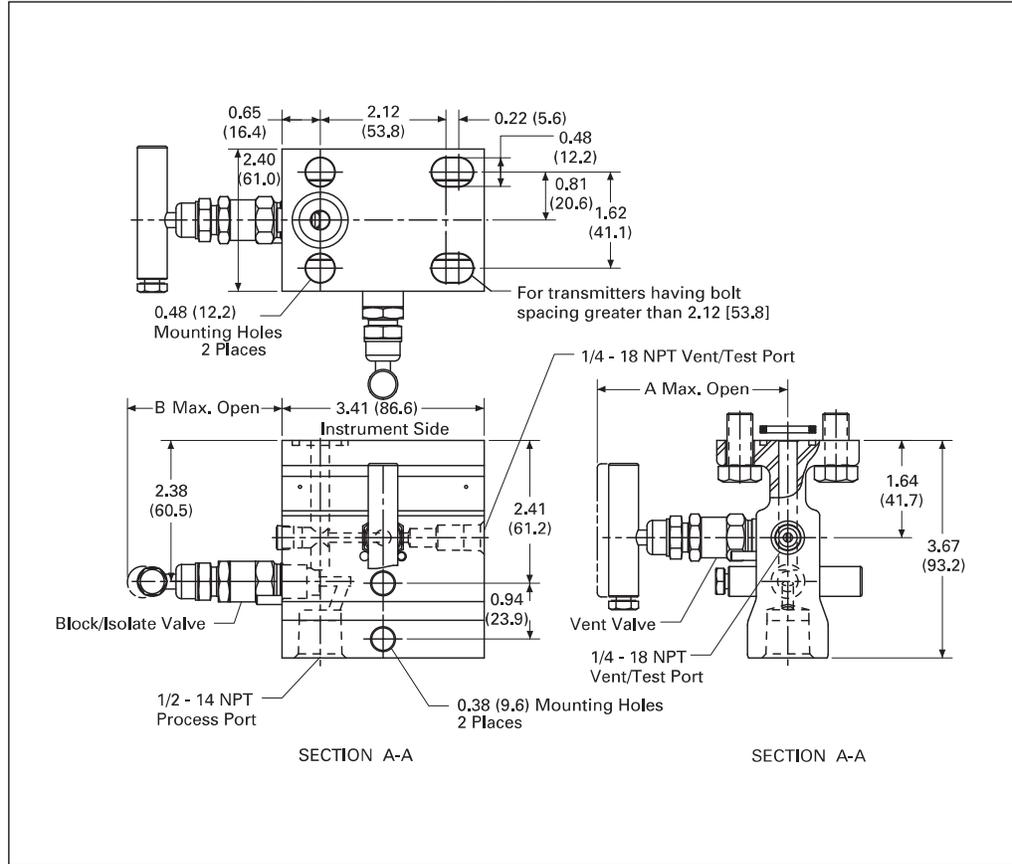
Note: Approximate valve weight: 4.3 lb (2.0 kg).
 Metal Seat: 0.156-inch (4 mm) diameter orifice.
 Cv = .36, full open.
 Soft Seat: 0.187-Inch (4.8 mm) diameter orifice.
 Cv = .83, full open.



Kerotest KM4AP & KM4TP Static Pressure Manifolds

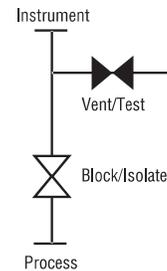
Specifications

KM4TP Metal Seat (Soft Seat Available) – Dimensions in Inches (mm)



Dimensions in Inches (mm)		
Packing	A	B
Teflon	3.14 (79.8)	2.60 (66.0)
GRAFOIL/ Low Emissions Graphite	3.79 (96.3)	3.25 (82.6)

Note: Approximate valve weight: 4.2 lb (1.9 kg).
 Metal Seat: 0.156-inch (4 mm) diameter orifice.
 Cv = .36, full open.
 Soft Seat: 0.187-inch (4.8 mm) diameter orifice.
 Cv = .83, full open.



Kerotest KM4AP & KM4TP Static Pressure Manifolds

Standard Materials

Valve	Body	Bonnet	Stem	Ball	Bolts	Packing
CS ①	A576-10L18	A108	A581-303	17-4 PH	A193-B7	Teflon
CS ②	A576-10L18	A105	A581-303	17-4 PH	A193-B7	GRAFOIL
316 SS	A479-316	A479-316	A276-316	316 SS	A193-B7	Teflon
316 SS	A479-316	A479-316	A276-316	316 SS	A193-B7	GRAFOIL
SG ②	A479-316	A479-316	Monel 400	Monel K500	A193-B7	Teflon
Monel®	Monel 400	Monel R405	Monel 400	Monel K500	A193-B7	Teflon
SG3 ③	Hastelloy® C276	Hastelloy C276	Hastelloy C276	Stellite	A193-B7	Teflon

Pressure and Temperature Ratings ④

Packing	Valve	Seat	Pressure and Temperature Ratings
Teflon	CS, SS	Delrin®	6000 psig @ 200°F (414 bar @ 93°C)
Teflon	CS, SS	PEEK	6000 psig @ 200°F (414 bar @ 93°C) 2000 psig @ 400°F (138 bar @ 204°C)
Teflon	CS, SS	Teflon	1000 psig @ 150°F (69 bar @ 66°C) 200 psig @ 500°F (14 bar @ 260°C)
Teflon	CS, SS	Integral	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 500°F (276 bar @ 260°C)
Teflon	Monel	Integral	5300 psig @ 200°F (365 bar @ 93°C) 4200 psig @ 500°F (290 bar @ 260°C)
GRAFOIL/Low Emissions Graphite	CS	Integral	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 600°F (276 bar @ 316°C)
GRAFOIL/Low Emissions Graphite	SS	Integral	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 1000°F (103 bar @ 538°C)

① CS is zinc cobalt-plated to prevent corrosion.

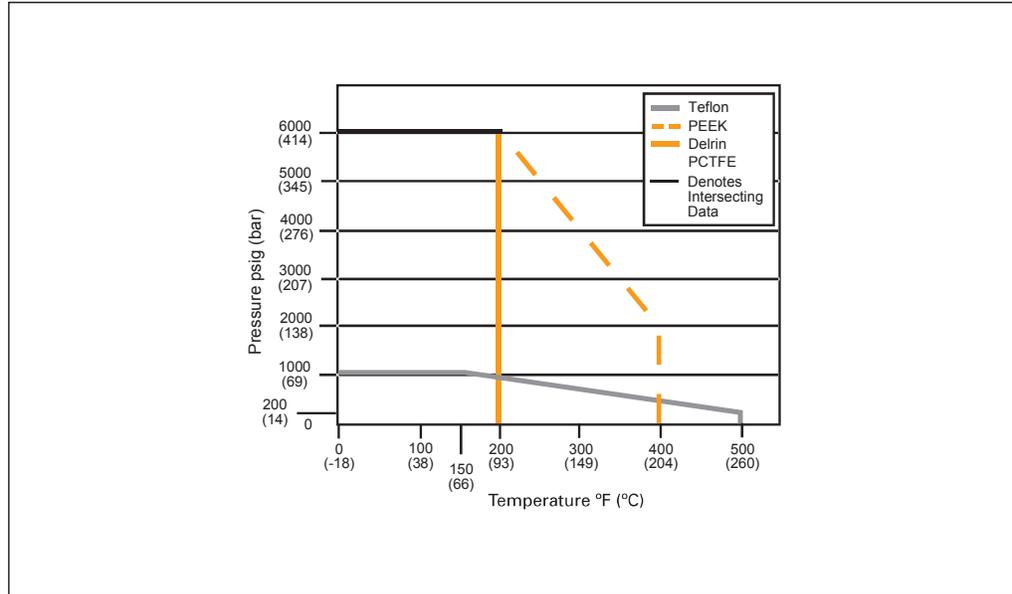
② SG (Sour Gas) meets the requirements of NACE MR0175-2002.

③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

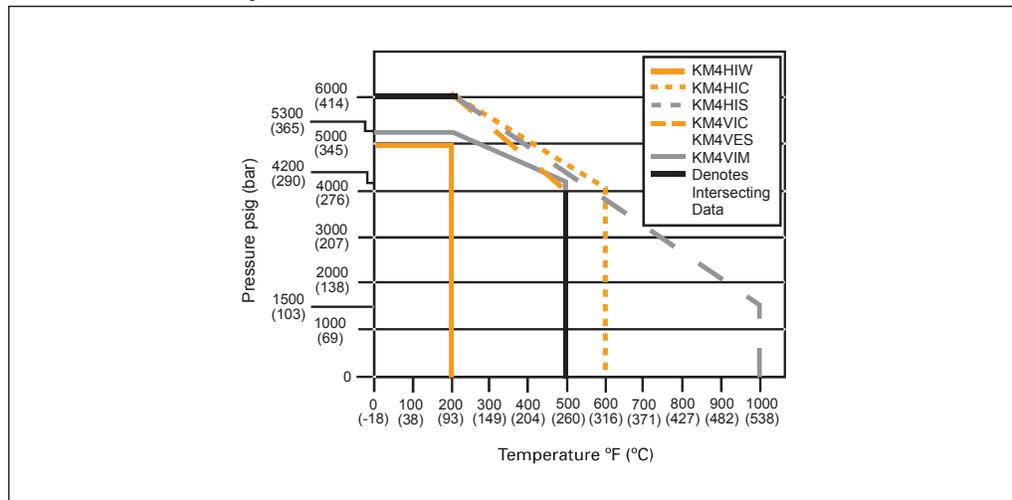
④ 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar).

Kerotest KM4AP & KM4TP Static Pressure Manifolds

Pressure vs. Temperature – Soft Seat



Pressure vs. Temperature – Metal Seat



Note: PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F®.
316 SS bolts lower pressure ratings to maximum of 4500 psig (310 bar).

Kerotest KM4AP & KM4TP Static Pressure Manifolds

Ordering Information

KM4TP	<u>V</u>	<u>D</u>	<u>C</u>	-	<u>4</u>	-	<u>AM</u>
1.	2.	3.	4.		5.		6.
<p>1. Valve Type</p> <p>KM4AP – Flange x Flange KM4TP – FNPT x Flange</p>	<p>2. Bonnet Packing</p> <p>V – Teflon (Soft and Integral Seats) H – GRAFOIL (Integral Seat Only) E – Low Emissions Graphite (Integral Seat Only)</p>	<p>3. Seat Material</p> <p>D – Delrin (Standard) V – Teflon E – PEEK K – PCTFE (Polychlorotrifluoroethylene) is the exact equivalent of Kel-F I – Integral (Body Material)</p>	<p>4. Body Material</p> <p>C – CS W – 316L SS S – 316 SS J – Hastelloy M – Monel</p>		<p>5. Process Connections</p> <p>4 – 1/2-Inch FNPT (KM4TP Only)</p>		<p>6. Options</p> <p>AM – KMC Mount Kit for 2-Inch Pipestand Mounting of Manifold BC – Accessory Bracket for Mounting Conduit with KMC Mount BP – Accessory Bracket for Mounting Purge Meters with KMC Mount</p>
							<p>CL – Cleaned for Chlorine Service HD – Hydrostatic Testing (100%) LP – Street Elbows and Top Purge Ports OC – Cleaned for Oxygen Service PB – Bottom Purge Port (Metal Seat Only) PT – Top Purge Port (Metal Seat Only) (If Elbow is Required, Specify LP, not PT) R3V – Add for Use with Rosemount® Model 3051C (SS 18-8 Bolts) SB – Steam Block (CS) SSA^① – SS Flange Bolt (Grade 18-8) – Maximum Pressure Rating 4500 psig (310 bar) SSC – 316 Flange Bolt (B8M) – Maximum Pressure Rating 4500 psig (310 bar) SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) SG3 – Sour Gas meets the requirements of NACE MR0175-2003 SP – Special Requirements – Please Specify</p>

^① 316 SS bolts lower pressure ratings to maximum of 4500 psig (310 bar).

Kerotest KM4AP & KM4TP Static Pressure Manifolds

Ordering Information

KM4TPHP		
<u>S</u> 1.	- <u>4</u> - 2.	- <u>XP</u> - 3.
<p>1. Body Material</p> <p>C – CS, A105 S – 316 SS W – 316L SS J – Hastelloy</p>	<p>2. Process Connections</p> <p>4 – 1/2-Inch FNPT 4AT – Integral 1/2-Inch Single Ferrule Tube Fittings 316 SS Ferrule and Nut 4ATD – Integral 1/2-Inch Dual Ferrule Tube Fittings 316 SS Ferrule and Nut 4TB – 1/2-Inch Tube S.W. x Flange x 1/4-Inch FNPT</p>	<p>3. Options</p> <p>AM – KMC Mount Kit for 2-Inch Pipestand Mounting of Manifold R3V – Add for use with Rosemount Model 3051C (SS 18-8 Bolts) SB – Steam Block (CS) SSA^① – SS Flange Bolt (Grade 18-8) – Maximum Pressure Rating 4500 psig (310 bar) SSC^① – 316 Flange Bolt (B8M) – Maximum Pressure Rating 4500 psig (310 bar) SP – Special Requirements – Please Specify</p>

Note: All manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subjected to hydrostatic testing. KM4TP ASME B31.1 and B31.3 specifications meet MSS-SP-105.

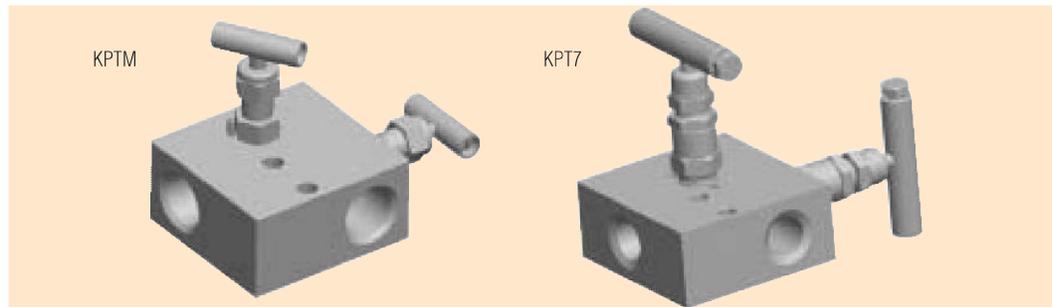
Manifold ratings:

SST	6000 psig @ 100°F	(414 bar @ 38°C)
	2915 psig @ 1000°F	(201 bar @ 538°C)
STL	6170 psig @ 100°F	(425 bar @ 38°C)
	3430 psig @ 800°F	(236 bar @ 427°C)

^① 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar).

All product names referenced herein are trademarks of their respective companies.

Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds



Product Brief

The KPT two-valve manifolds are used primarily to calibrate static pressure transmitters, switches or gauges. All necessary hardware including a shutoff valve, calibration valve, tee and other tubing are all contained in one product. The KPT series of manifolds are available with either replaceable soft seats or an integral metal seat. The KPTM manifold includes a special valve seat that can be converted from a hard or metal seat to a soft seat by simply removing two washers. The KPT7 manifold is intended for high temperature applications. It has an integral metal seat.

Features/Benefits

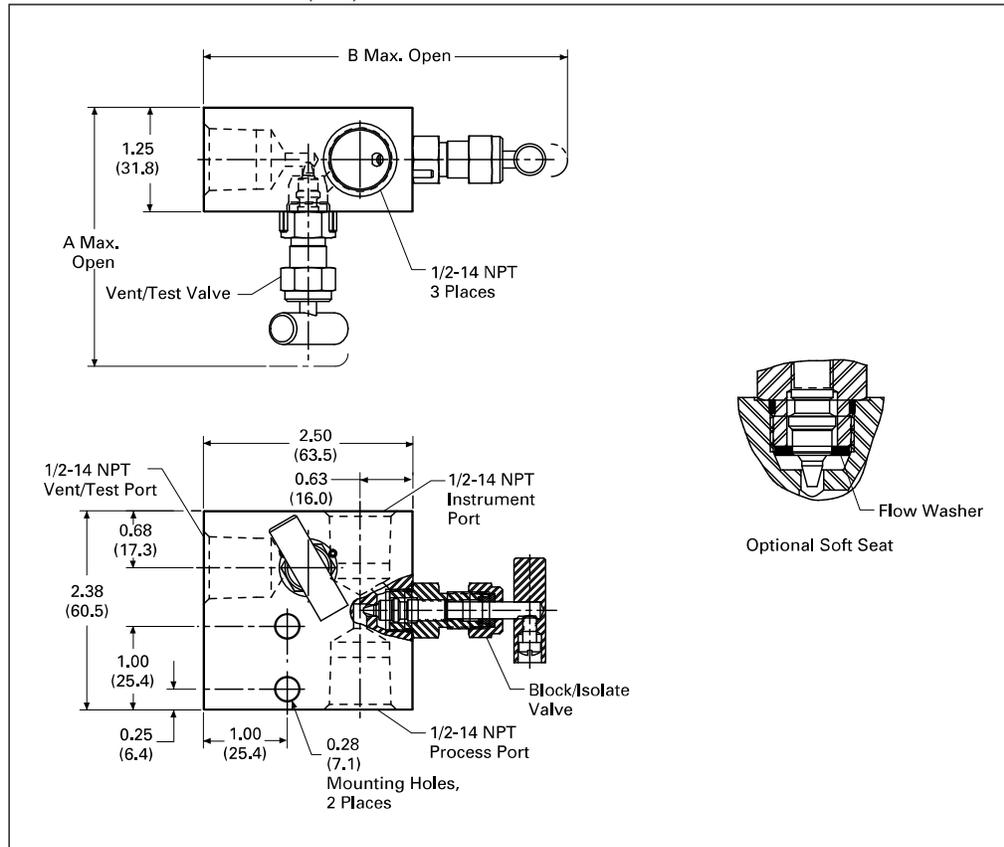
- **Bubble-tight shutoff.** Every valve is 100% tested.
- **Space-saving design.** One compact valve replaces two. Fewer connections means less leak paths means **less fugitive emissions.**
- **Cost-saving design.** Less parts means lower cost in the order of 20-30% compared to conventional two-valve installation.
- **Stem threads isolated** from the process fluid, eliminating process fluid contamination, lubricant washout and thread corrosion.
- **Mirror finish stems** enable smooth stem operation and extended packing life.
- **Rolled threads** on the stem and in the bonnet increase strength, reduce galling and extend the service life of the valve.
- **Adjustable packing** adjusts easily, increasing valve life and reducing downtime for packing replacement.
- **Multiple packing options** available including Teflon® and GRAFOIL®.



Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Specifications

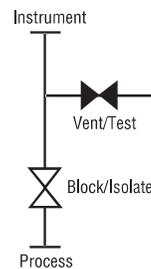
KPTM Dimensions in Inches (mm)



Dimensions in Inches (mm)

Packing	A	B
O-ring	2.50 (63.5)	3.75 (95.3)
Teflon	3.10 (78.7)	4.35 (110.5)

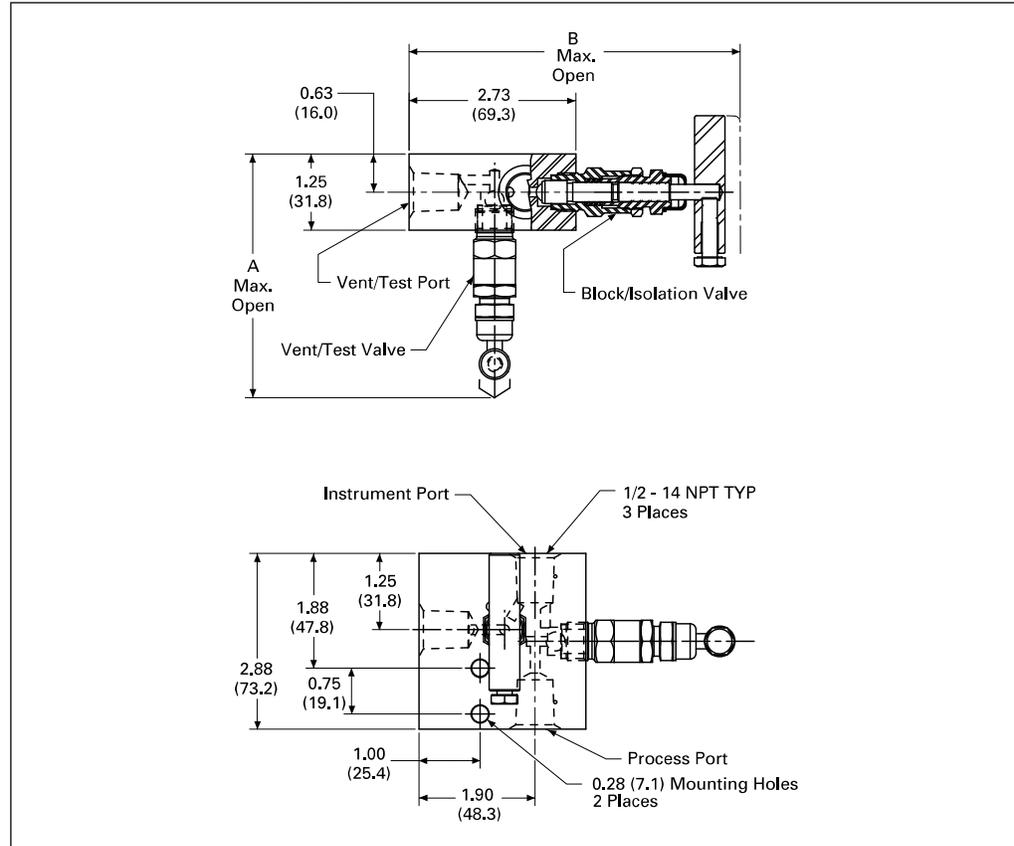
Note: Approximate valve weight: 2.0 lb (0.9 kg).
 Metal Seat: 0.136-inch (3.5 mm) diameter orifice.
 Cv = .25, full open.
 Soft Seat: 0.136-inch (3.5 mm) diameter orifice.
 Cv = .24, full open.



Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

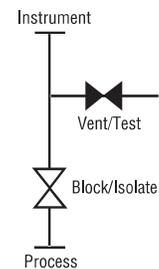
Specifications

KPT7 Dimensions in Inches (mm)



Dimensions in Inches (mm)

Packing	A	B
Teflon	3.85 (97.8)	5.33 (135.4)
GRAFOIL	4.50 (114.3)	5.98 (151.9)



Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Standard Materials

Valve ①	Body	Bonnet	Stem	Ball	Packing
CS ②	A105	A108	A581-303	17-4 PH	Teflon
CS ②	A105	A105	A581-303	17-4 PH	GRAFOIL/Low Emissions Graphite
SS	SS, A479-316	SS, A479-316	A276-316	316	Teflon
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	Teflon
SG ③	SS, A479-316	SS, A479-316	Monel 400	Monel K500	GRAFOIL/Low Emissions Graphite
SG3 ④	Hastelloy® C276	Hastelloy C276	Hastelloy C276	Stellite	Teflon

- ① Approximate valve weight: 3.0 lb (1.4 kg)
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.
- ② CS is zinc cobalt-plated to prevent corrosion.
- ③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Pressure and Temperature Ratings – KPTM

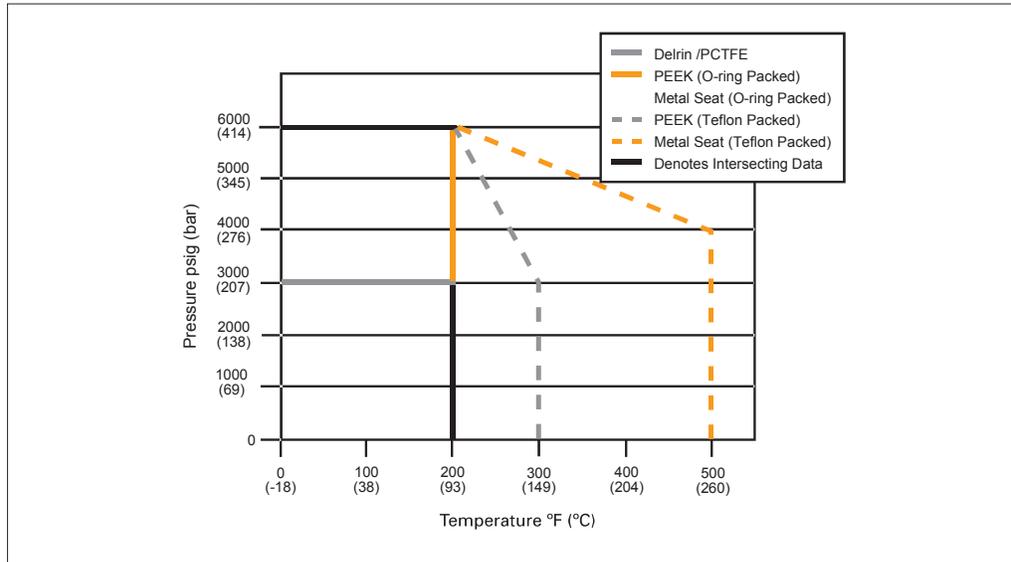
Packing	PCTFE/Delrin® Seat	PEEK Seat	Metal Seat
Teflon	3000 psig @ 200°F (207 bar @ 93°C)	6000 psig @ 200°F (414 bar @ 93°C) 3000 psig @ 300°F (207 bar @ 149°C)	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 500°F (276 bar @ 260°C)
O-ring	3000 psig @ 200°F (207 bar @ 93°C)	6000 psig @ 200°F (414 bar @ 93°C)	6000 psig @ 200°F (414 bar @ 93°C)

Pressure and Temperature Ratings – KPT7

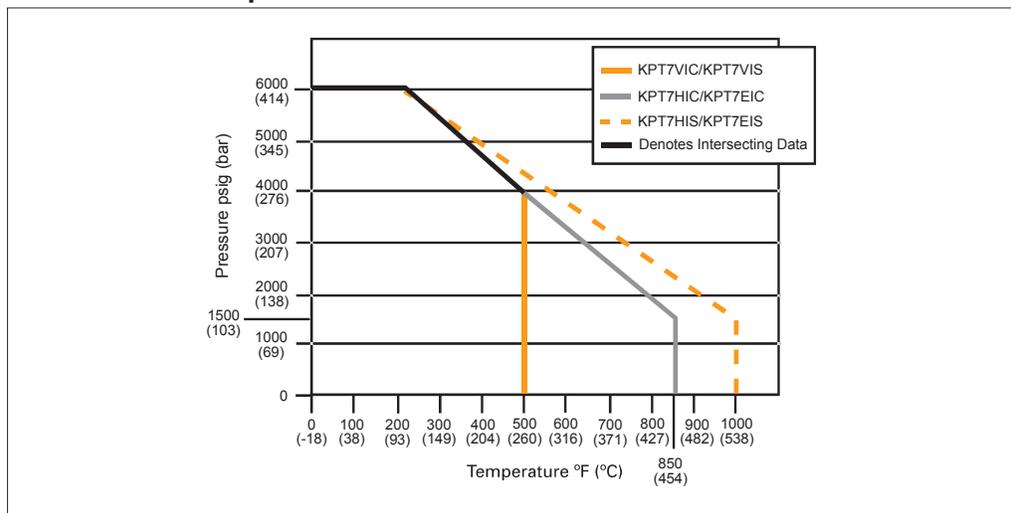
Valve	Packing	Ratings
CS	Teflon	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 500°F (276 bar @ 260°C)
CS	GRAFOIL/Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 850°F (103 bar @ 454°C)
SS	Teflon	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 500°F (276 bar @ 260°C)
SS	GRAFOIL/Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 1000°F (103 bar @ 538°C)
SG SG3	Teflon	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 500°F (276 bar @ 260°C)
SG SG3	GRAFOIL/Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 1000°F (103 bar @ 538°C)

Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Pressure vs. Temperature – KPTM



Pressure vs. Temperature – KPT7



Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Ordering Information

KPTM						
<u>V</u>	<u>D</u>	<u>S</u>	-	<u>4</u>	-	<u>SG</u>
1.	2.	3.		4.		5.
<p>1. Bonnet Packing</p> <p>V – Teflon R – O-ring (SS - Viton, CS - BUNA-N) (Soft Seat Only)</p>	<p>2. Seat Material</p> <p>D – Delrin (Standard) K – PCTFE E – PEEK I – Integral (Body Material)</p>	<p>3. Body Material</p> <p>C – A108 S – A479-316 SS M – Monel 400 W – 316L SS J – Hastelloy</p>	<p>4. Connections</p> <p>4 – 1/2-Inch FNPT</p>	<p>5. Options</p> <p>AL – Low Temperature Lubricant (Low Temperature Service) Not Available for CS Valves AM – KMC Mount Kit for 2-Inch Pipe Mounting of Manifold CL – Cleaned for Chlorine Service OC – Cleaned for Oxygen Service HD – Hydrostatic Testing (100%) (MSS-SP-61) MS – Monel Stem PHB– Phenolic Black Handle PHG– Phenolic Green Handle PHR– Phenolic Red Handle PM – Panel Mount</p>	<p>PV – Plug Vent SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves) SG3– Sour Gas Meets the Requirements of NACE MR0175-2003 SP – Special Requirements – Please Specify</p>	

Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Ordering Information

KPT7						
<u>V</u>	<u>I</u>	<u>S</u>	-	<u>4</u>	-	<u>SG</u>
1.	2.	3.		4.		5.
1. Bonnet Packing		4. Connections		5. Options		
V – Teflon H – GRAFOIL E – Low Emissions Graphite		4 – 1/2-Inch FNPT		PO – Plug Option SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 SP – Special Requirements – Please Specify		
2. Seat Material		5. Options				
I – Integral (Body Material)		AL – Low Temperature Lubricant (Low Temperature Service) Now Available for CS Valves AM – KMC Mount Kit for 2-Inch Pipe Mounting of Manifold CL – Cleaned for Chlorine Service OC – Cleaned for Oxygen Service HD – Hydrostatic Testing (100%) (MSS-SP-61) MS – Monel Stem				
3. Body Material						
C – A105 S – A479-316 SS W – 316L SS J – Hastelloy						

Kerotest KPTM & KPT7 2-Valve Static Pressure Manifolds

Ordering Information – ASME B31.1

KPT7MHP <u>S</u> – <u>4</u> – <u>XP</u> – <u>SP</u> 1. 2. 3.		
<p>1. Body Material</p> <p>C – A105 S – A479-316 SS J – Hastelloy</p>	<p>3TC44 – 3/8-Inch Tube Stub (6 x 0.065 Inches) x 1/2-Inch FNPT x 1/2-Inch FNPT</p> <p>4 – 1/2-Inch FNPT x 1/2-Inch FNPT x 1/2-Inch FNPT</p> <p>422 – 1/2-Inch FNPT x 1/4-Inch FNPT x 1/4-Inch FNPT</p> <p>442 – 1/2-Inch FNPT x 1/2-Inch FNPT x 1/4-Inch FNPT</p> <p>4B2 – 1/2-Inch PSW x 1/4-Inch FNPT x 1/4-Inch FNPT</p> <p>4TC4 – 1/2-Inch Tube Stub (6 x 0.095 Inches) x 1/2-Inch Tube Stub x 1/2-Inch FNPT</p> <p>4TC44 – 1/2-Inch Tube Stub (6 x 0.095 Inches) x 1/2-Inch FNPT x 1/2-Inch FNPT</p>	<p>3. Options</p> <p>AM – KMC Mount Kit for 2-Inch Pipe Mounting of Manifold</p> <p>PO – Plug Outlet</p> <p>SP – Special Requirements – Please Specify</p>
<p>2. Connections (Process x Instrument x Vent)</p> <p>3 – 3/8-Inch FNPT x 3/8-Inch FNPT x 3/8-Inch FNPT</p> <p>3TC – 3/8-Inch Tube Stub (6 x 0.065 Inches) – All Connections</p> <p>3TC4 – 3/8-Inch Tube Stub (6 x 0.065 Inches) x 3/8-Inch Tube Stub x 1/2-Inch FNPT</p>		

Note: All Manifolds come standard with GRAFOIL packing, integral seats, bonnet locks, and are subjected to hydrostatic testing. KPT7M ASME B31.1 and B31.3 Specifications meet MSS-SP-105.

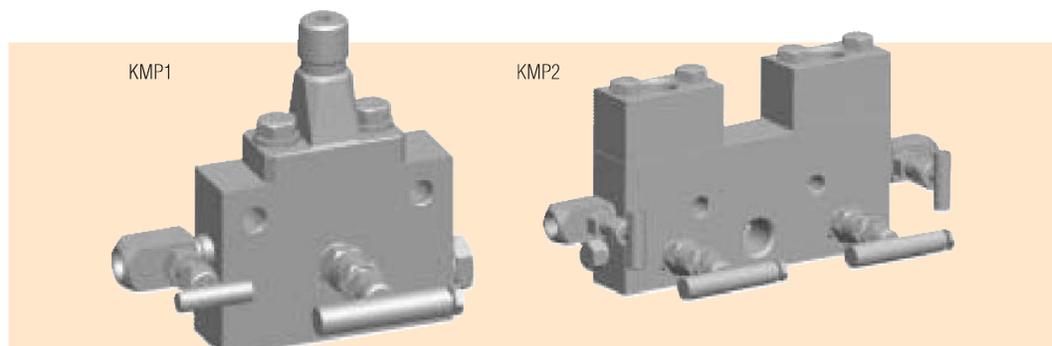
Manifold ratings:

SST 6000 psig @ 100°F (414 bar @ 38°C)	2915 psig @ 1000°F (201 bar @ 538°C)
STL 6170 psig @ 100°F (425 bar @ 38°C)	3430 psig @ 800°F (236 bar @ 427°C)
Monel 5000 psig @ 100°F (345 bar @ 38°C)	2911 psig @ 900°F (201 bar @ 482°C)

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KMP1 & KMP2 Static Pressure Manifolds



Product Brief

The KMP1 is a two-valve manifold used primarily for single instrument applications such as test, calibration, block and bleed and instrument zeroing. The KMP1 functions both as the manifold valve and also as the mount for the instrument, all in the same unit. The KMP2 manifold provides the same functions as the KMP1 except two different instruments may be installed simultaneously and both supplied from a single pressure source. It has dual block and bleed valves serving the exact same functions as the KMP1 manifold, except for two instruments rather than one. The KMP2 manifold also serves as the mount for two instruments. The pressure instruments are connected to either manifolds via 1/2-inch FNPT or 1/2-inch MNPT union connectors.

Features/Benefits

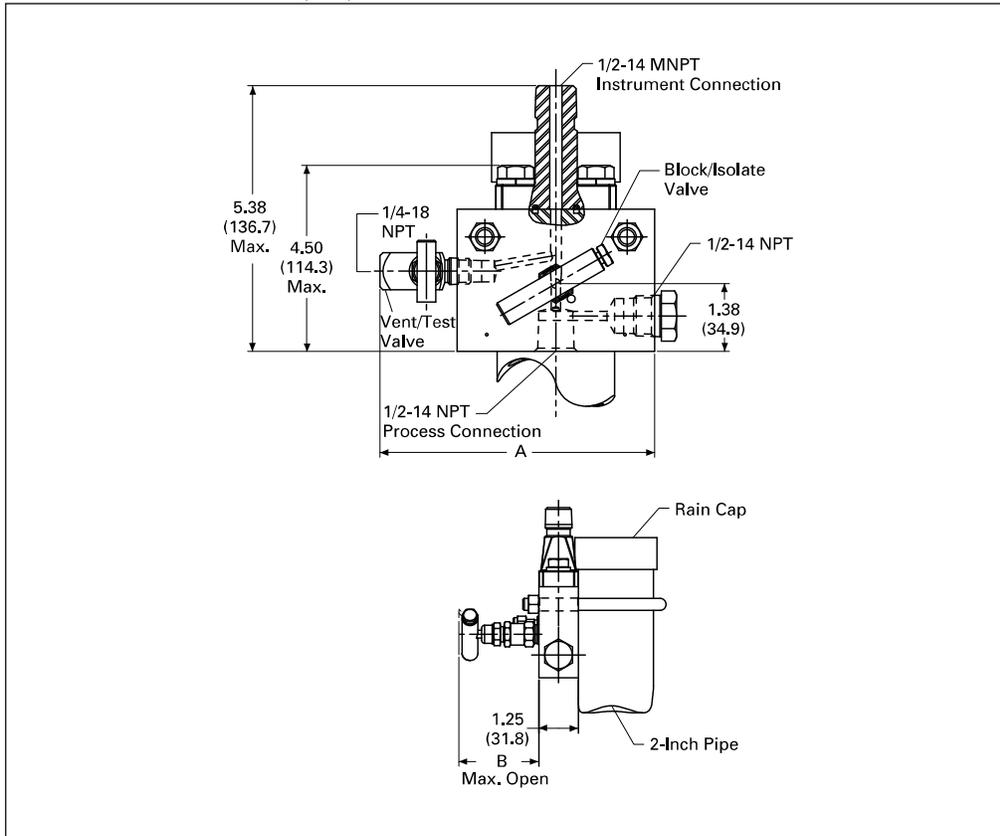
- **Bubble-tight shutoff.** Every valve is 100% tested.
- **Space-saving design.** One compact valve replaces two or four valves. Fewer connections means less leak paths means less fugitive emissions.
- **Cost-saving design.** Less parts means lower cost in the order of 25-30% compared to conventional two-valve installation.
- **Stem threads** isolated from the process fluid, eliminating process fluid contamination, lubricant washout and thread corrosion.
- **Stem end “ball” design** ensures the stem will not rotate against the body seat, eliminating seat galling, improving seat tightness and extending the life of the valve.
- **Mirror finish stems** enable smooth stem operation and extended packing life.
- **The KMC mounting** arrangement provides for secure mounting of the instrument to the manifold.
- **Rolled threads** on the stem and in the bonnet increase strength, reduce galling and extend the service life of the valve.
- **Adjustable packing** adjusts easily, increasing valve life and reducing downtime for packing replacement.
- **Multiple packing options** available including Teflon® and GRAFOIL®.



Kerotest KMP1 & KMP2 Static Pressure Manifolds

Specifications

KMP1 Dimensions in Inches (mm)

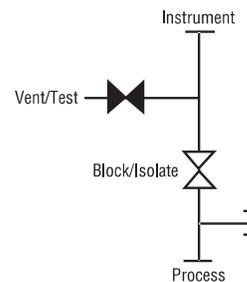


Dimensions in Inches (mm)

Packing	A	B
Teflon	5.62 (142.7)	3.85 (97.8)
GRAFOIL/Low Emissions Graphite	8.20 (208.3)	4.50 (114.3)

Note: Approximate valve weight: 6.0 lb (2.72 kg).
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.

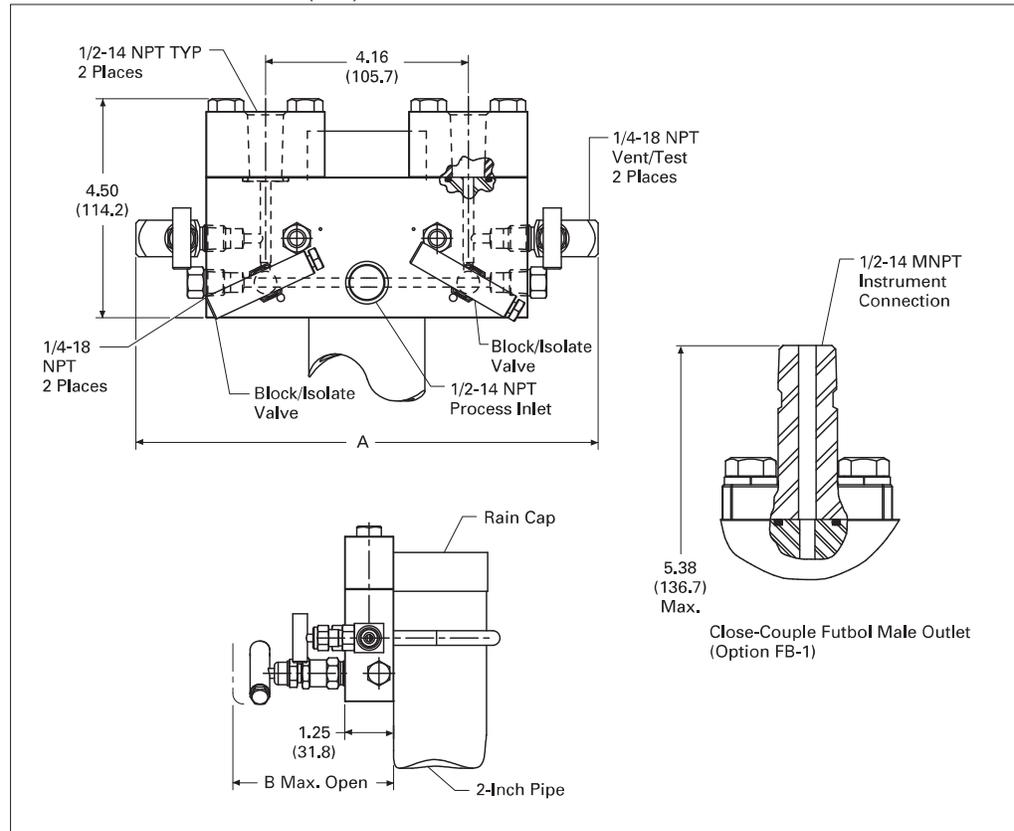
Pressure seal between union connectors and manifold body is Viton® O-ring for Teflon packed valves, GRAFOIL for GRAFOIL packed valves.



Kerotest KMP1 & KMP2 Static Pressure Manifolds

Specifications

KMP2 Dimensions in Inches (mm)

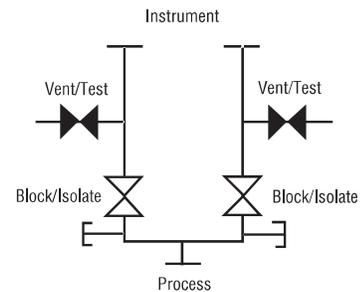


Dimensions in Inches (mm)

Packing	A	B
Teflon	9.81 (249.2)	3.85 (97.8)
GRAFOIL/Low Emissions Graphite	13.98 (355.1)	4.50 (114.3)

Note: Approximate valve weight: 10.0 lb (4.54 kg).
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.

Pressure seal between union connectors and manifold body is Viton O-ring for Teflon packed valves, GRAFOIL for GRAFOIL packed valves.



Kerotest KMP1 & KMP2 Static Pressure Manifolds

Standard Materials – KMP1

Valve	Body	Bonnet	Stem/Ball (Block Valve)	Stem (Bleed Valve)	Vent/Test Valve	Bolts
CS ①	A105	A108	A581-303 Stem 17-4 Ball	A581-303	A105 ④	A193-B7
SS	A479-316	A479-316	A276-316 Stem 316 SS Ball	A276-316	A479-316	A193-B7
SG ②	A479-316	A479-316	Monel 400 Stem Monel K500 Ball	Monel R405	A479-316	A193-B7
Monel®	Monel 400	Monel R405	Monel 400 Stem Monel K500 Ball	Monel R405	Monel	A193-B7
SG3 ③	Hastelloy® C276	Hastelloy C276	Hastelloy C276 Stellite	Hastelloy	Hastelloy	A193-B7

Standard Materials – KMP2

Valve	Body	Bonnet	Stem/Ball (Block Valve)	Stem (Bleed Valve)	Vent/Test Valve	Bolts
CS ①	A108	A108	A581-303 Stem 17-4 Ball	A581-303	A105 ④	A193-B7
SS	A479-316	A479-316	A276-316 Stem 316 SS Ball	A276-316	A479-316	A193-B7
SG ②	A479-316	A479-316	Monel 400 Stem Monel K500 Ball	Monel 405	A479-316	A193-B7
SG3 ③	Hastelloy C276	Hastelloy C276	Hastelloy C276 Stellite	Hastelloy	Hastelloy	A193-B7

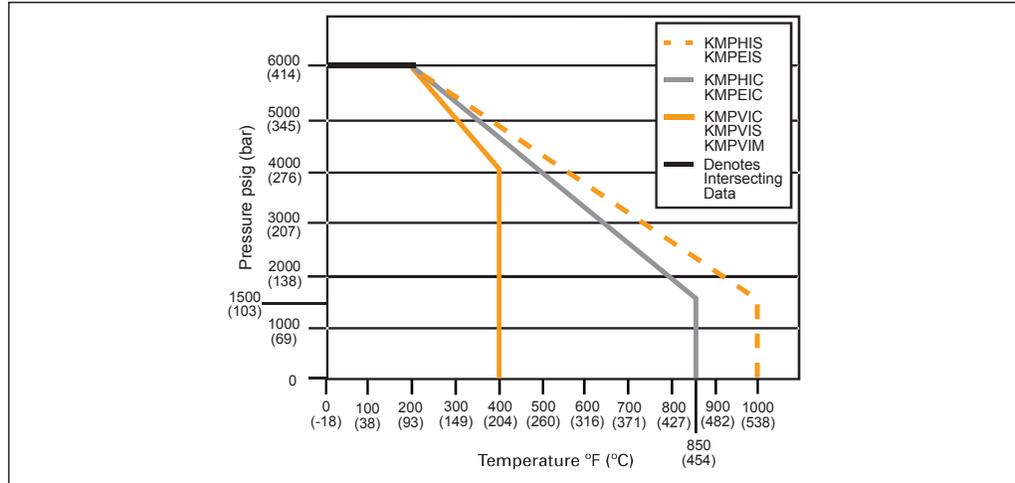
Pressure and Temperature Ratings

Valve	Packing	Ratings
CS ①, SS and SG ②	Teflon	6000 psig @ 200°F (414 bar @ 93°C) 4000 psig @ 400°F (276 bar @ 204°C)
CS ①	GRAFOIL/Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 850°F (103 bar @ 454°C)
SS SG ②	GRAFOIL/Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C) 1500 psig @ 1000°F (103 bar @ 538°C)

- ① CS parts are zinc cobalt-plated to prevent corrosion.
- ② SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ③ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.
- ④ Teflon packed bleed valve body is 10L18 steel.

Kerotest KMP1 & KMP2 Static Pressure Manifolds

Pressure vs. Temperature



Ordering Information

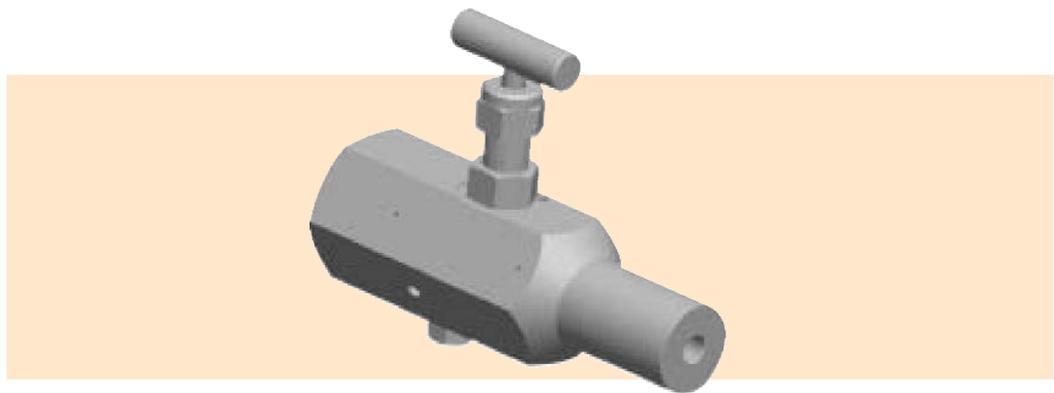
KMP1	V	I	C	-	44	-	SB
1.	2.	3.	4.		5.		6.

<p>1. Style</p> <p>KMP1 – Pressure Manifold (One Instrument) KMP2 – Pressure Manifold (Two Instruments)</p>	<p>4. Body Material</p> <p>C – CS S – 316 SS M – Monel W – 316L SS J – Hastelloy</p>	<p>6. Options ⓘ</p> <p>BC – Conduit Connection Bracket BL – Bonnet Lock Device (Block Valves) FB1 – KMP2 with 1 Each MNPT and FNPT Connectors SB – Steam Block SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003</p>
<p>2. Packing</p> <p>V – Teflon H – GRAFOIL E – Low Emissions Graphite</p>	<p>5. Connection</p> <p>4 – 1/2-Inch FNPT Process x 1/2-Inch FNPT Instrument 44 – 1/2-Inch FNPT Process x 1/2-Inch MNPT Instrument (KMP1 Only) 4-FB1 – KMP2 with 1 Each 1/2-Inch MNPT Process x 1/2-Inch FNPT Instrument</p>	
<p>3. Seat</p> <p>I – Integral (Body Material)</p>		

ⓘ Includes U-bolt and nuts for 2-inch pipe mounting.

All product names referenced herein are trademarks of their respective companies.

Kerotest KM9 Block & Bleed Gauge Valve



Product Brief

The KM9 Block & Bleed Valve is ideal for gauge installation. It is rugged, safe, compact and economical. The KM9 valve is offered in metal and soft seat versions, both using the same bonnet assembly for economy and convenience. A bleed plug is standard with each valve, permitting the safe venting of line pressure without breaking any in-line threaded connections.

Features/Benefits

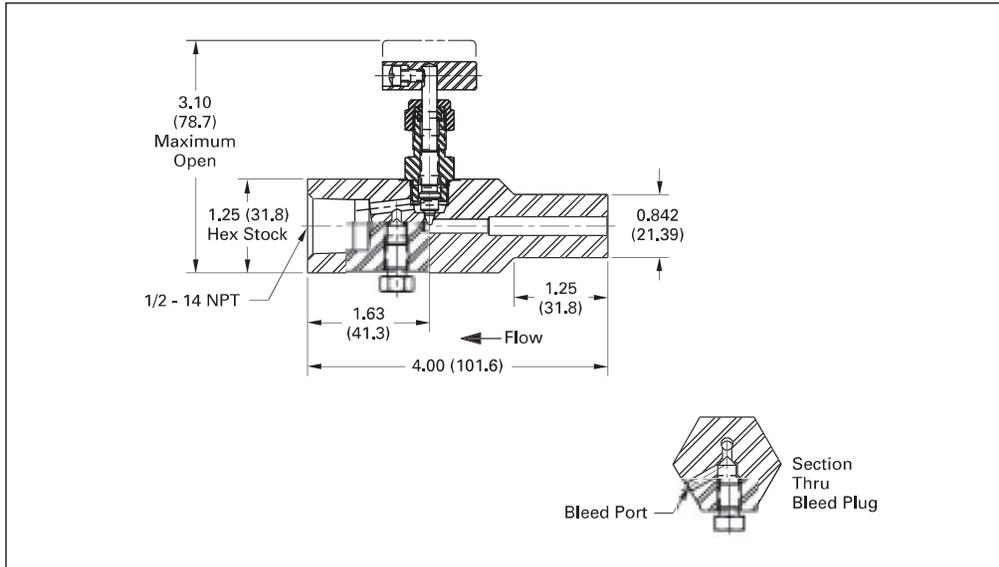
- **Field-serviceable soft seat.** Allows replacement with valve still in the line.
- **Isolated stem threads** (O-ring bonnet). Packing below stem threads keeps solids away. Prevents process contamination.
- **Bubble-tight shutoff.**
- **Chrome-plated stainless steel stem** prevents freezing and galling.
- **Two-way seat design.** Soft seat via simple insert or metal seat when no insert is used.
- **One piece handle.** No way to lose the handle from vibration or misplacement.
- **Adjustable bonnet packing.** Increases valve life and maintains integrity of stem threads.
- **Rolled stem and bonnet threads** for increased strength and life.
- **No more stem blowouts.** No-backout stem design prevents blowout problems and removal while in use.
- **Less parts** mean less leak points and less fugitive emissions.



Kerotest KM9 Block & Bleed Gauge Valve

Specifications

KM9VIS – 44C Dimensions with Teflon® Bonnet ①, Inches (mm)



- ① Bonnets interchangeable between all body configurations.
4.00-inch (101.6 mm) for -44°C, -46°C.
KM9(-)4 body length 2.88-inch (73.2 mm).

Note: For Hastelloy® and SG3, call factory for dimensions and weights.

Kerotest KM9 Block & Bleed Gauge Valve

Standard Materials

Metal Seat

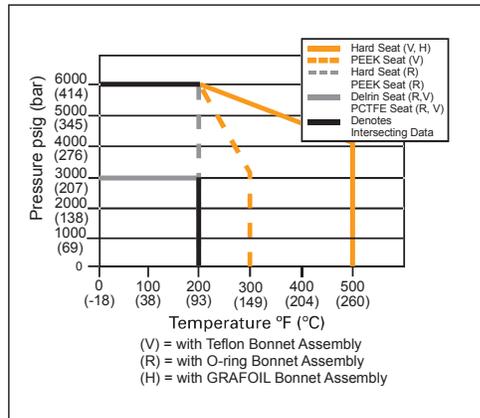
Valve ①	Body	Bonnet	Stem	Packing	Bleed Plug	Seat
CS ②	A108 CS	A108 CS	A581-303 SS	Teflon or BUNA-N O-ring	A108 CS	Integral
SS	A479-316 SS	A479-316 SS	A276-316 SS	Teflon, BUNA-N O-ring or GRAFOIL®	A276-316 SS	Integral
SG ③	A479-316 SS	A479-316 SS	Monel 400	Teflon	A279-316 SS	Integral
Monel®	Monel R405	Monel R405	Monel R405	Teflon	Monel R405	Integral
SG3 ④	Hastelloy C-276	Hastelloy C-276	Hastelloy C-276	Teflon	Hastelloy C-276	Integral

Soft Seat

Valve ①	Body	Bonnet	Stem	Packing	Flow Washer	Bleed Plug	Seat ⑤
CS ②	A108 CS	A108 CS	A581-303 SS	Teflon or BUNA-N O-ring	316 SS	A108 CS	Delrin®
SS	A479-316 SS	A479-316 SS	A276-316 SS	Teflon or Viton® O-ring	316 SS	A276-316 SS	PCTFE ⑥
SG ③	A479-316 SS	A479-316 SS	Monel 400	Teflon	316 SS	A276-316 SS	PCTFE ⑥
SG3 ④	Hastelloy C-276	Hastelloy C-276	Hastelloy C-276	Teflon	Hastelloy C-276	Hastelloy C-276	PCTFE ⑥

- ① Approximate valve weight: 1.2 lb (.54 kg).
Orifice size 0.136-inch (3.5 mm) diameter.
Metal Seat: Cv = .25, full open.
Soft Seat: Cv = .24, full open.
- ② CS is zinc cobalt-plated to prevent corrosion (except male plain end is black oxide coated).
- ③ SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.
- ⑤ PEEK available.
- ⑥ PCTFE (Polychlorotrifluoroethylene) is the equivalent of Kel-F®.

Pressure vs. Temperature



Pressure and Temperature Ratings

Teflon or GRAFOIL Bonnet

Hard Seat	6000 psig at 200°F (414 bar at 93°C)
	4000 psig at 500°F (276 bar at 260°C)
Delrin and PCTFE	3000 psig at 200°F (207 bar at 93°C)
PEEK Seat	6000 psig at 200°F (414 bar at 93°C)
	3000 psig at 300°F (207 bar at 149°C)

O-ring Bonnet

Hard Seat	6000 psig at 200°F (414 bar at 93°C)
Delrin and PCTFE	3000 psig at 200°F (207 bar at 93°C)
PEEK Seat	6000 psig at 200°F (414 bar at 93°C)

Kerotest KM9 Block & Bleed Gauge Valve

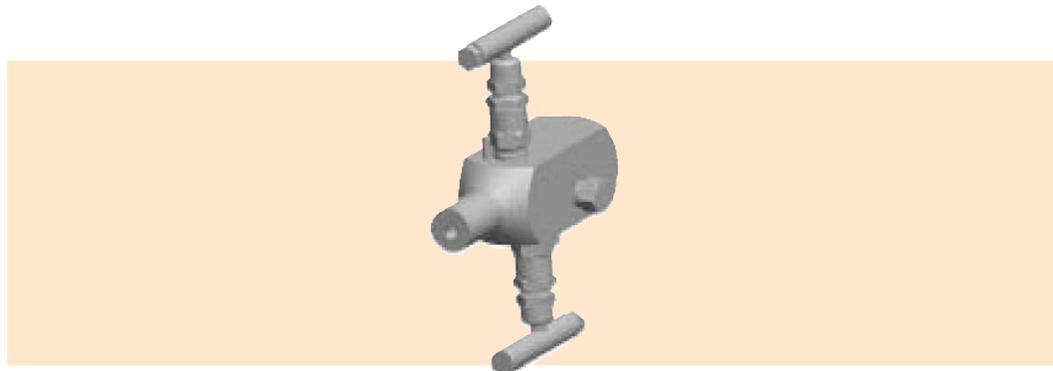
Ordering Information

KM9						
<u>V</u>	<u>I</u>	<u>S</u>	–	<u>44C</u>	–	<u>SG</u>
1.	2.	3.		4.		5.
<p>1. Packing</p> <p>V – Teflon Bonnet (Standard for 316 SS) R – O-ring Bonnet H – GRAFOIL (500°F [260°C] Maximum)</p>	<p>2. Seat</p> <p>I – Integral D – Delrin (Standard) E – PEEK K – PCTFE</p>	<p>3. Body Material</p> <p>C – CS S – SS M – Monel J – Hastelloy I – Inconel</p>	<p>4. Connections (Inlet/Outlet)</p> <p>44 – 1/2-Inch MNPT x 1/2-Inch FNPT 46 – 3/4-Inch MNPT x 1/2-Inch FNPT 4M – 1/2-Inch MNPT x 1/2-Inch MNPT 4 – 1/2-Inch FNPT x 1/2-Inch FNPT C – Male Plain End (CS is Black Oxide Coated) 44A – 9/16-Inch M Autoclave x 9/16-Inch F Autoclave</p>	<p>5. Options</p> <p>AL – Low Temperature Lubricant; Not Available for CS Valves CLC – Chlorine Cleaning HD – Hydrostatic Testing (100%) (MSS-SP-61) MS – Monel Stem OC – Oxygen Cleaning PHB – Phenolic Black Handle PHG – Phenolic Green Handle PHR – Phenolic Red Handle PM – Panel Mount (Teflon Packed Only) SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Only) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 SP – Special Requirements – Please Specify</p>		

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.

Kerotest KM25 & KM251 Block & Bleed Gauge Valves



Product Brief

The KM25 and KM251 are 2-valve, single outlet valves used primarily for gauge isolation. They can also be used for calibrating and venting operations, all in a very compact unit. They are highly reliable valves that permit the safe installation and servicing of gauges, switches, etc., without concern for external leakage.

Features/Benefits

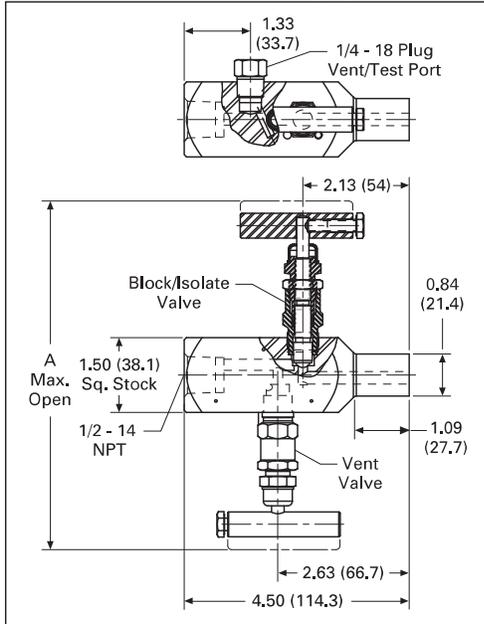
- **Field-serviceable soft seat.** Allows replacement with valve still in the line.
- **Compact, panel mount design.** Saves space and installation costs.
- **Isolated stem threads.** Adjustable packing below stem threads keeps solids away. Prevents process contamination.
- **Bubble-tight shutoff.**
- **Chrome-plated stem** prevents freezing and galling.
- **Perfect closure** every time with free-swiveling ball end stem.
- **Vent ports** are threaded for safe, easy piping connections.
- **Rolled stem and bonnet threads** for increased strength and life. Highly polished stem.
- **No more stem blowouts.** No-backout stem design prevents blowout problems and removal while in use.
- **Less parts** mean less leak points and less fugitive emissions.



Kerotest KM25 & KM251 Block & Bleed Gauge Valves

Specifications

KM25 and KM251 Dimensions in Inches (mm)



Dimensions in Inches (mm)

Packing	A
Teflon®	7.87 (200.0)
GRAFOIL®	8.98 (228.1)

Note: Approximate valve weight: 2.2 lb (1.0 kg).
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.

The KM25 and KM251 are supplied as standard with two 0.26-inch (6.7 mm) diameter mounting holes.

Valve Bonnet Identification

Dust Cap Coding	The valve bonnet dust caps are color-coded to identify the gland packing/stem.
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White	Standard bonnet assembly Teflon packing.
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Blue	High pressure bonnet assembly Teflon packing.
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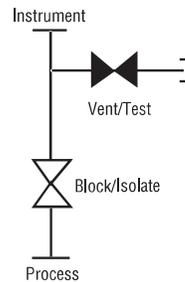
Green	Sour Gas service Teflon packing.
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Note: CS, SS and Monel® valves are suitable for most process applications, however for severe service, KM25/KM251 valves are also available in exotic materials. For other material requirements, contact Kerotest.

Standard Connections

Process and Instrument	Threaded 1/2-inch NPT to ANSI/ASME B1-20-1.
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Vent	Threaded 1/4-inch NPT to ANSI/ASME B1-20-1.
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Kerotest KM25 & KM251 Block & Bleed Gauge Valves

Standard Materials

Valve ①	Body	Bonnet	Stem	Ball Seat
CS ②	A108	A108	303 SS	17-4PH
SS	316 SS	316 SS	316 SS	316 SS
Monel	Monel 400	Monel 400	Monel 400	Monel K500
SG ③	316 SS	316 SS	Monel 400	Monel K500
SG3 ④	Hastelloy C276	Hastelloy C276	Hastelloy C276	Stellite

① Approximate valve weight: 3.3 lb (1.5 kg).
0.187-inch (4.8 mm) diameter orifice.
Cv = .52, full open.

② For CS valves with GRAFOIL packing, body and bonnet material is A105. For CS valves, non-wetted parts are all CS.

③ For SS, SG (Sour Gas meets the requirements of NACE MR0175-2002) and Monel valves, non-wetted parts are all austenitic SS.

④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Note: Threaded connection: vent supplied with blanking plug as standard.

Pressure and Temperature Ratings

KM25

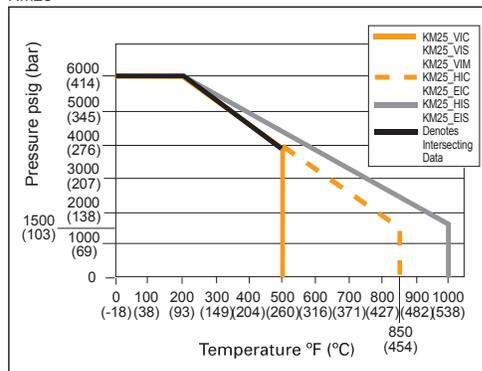
Valve	Teflon Bonnet (Standard)	
CS, SS and Monel	6000 psig at 200°F (414 bar at 93°C)	4000 psig at 500°F (276 bar at 260°C)
Valve	High Temperature Applications	
CS	6000 psig at 200°F (414 bar at 93°C)	1500 psig at 850°F (103 bar at 454°C)
SS	6000 psig at 200°F (414 bar at 93°C)	1500 psig at 1000°F (103 bar at 538°C)

KM251

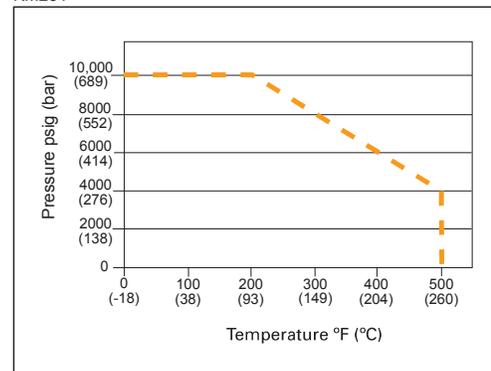
Valve	High Pressure Applications	
SS	10,000 psig at 200°F (689 bar at 93°C)	4000 psig at 500°F (276 bar at 260°C)

Pressure vs. Temperature

KM25



KM251



Kerotest KM25 & KM251 Block & Bleed Gauge Valves

Ordering Information

<h1 style="margin: 0;">KM25</h1> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 5px;"> <div style="text-align: center;"><u>V</u> 1.</div> <div style="text-align: center;"><u>I</u> 2.</div> <div style="text-align: center;"><u>S</u> 3.</div> <div style="text-align: center;">-</div> <div style="text-align: center;"><u>4</u> 4.</div> <div style="text-align: center;">-</div> <div style="text-align: center;"><u>SG</u> 5.</div> </div>				
<p>Valve Type</p> <p>KM25 – Threaded x Threaded (Front Vent)</p>	<p>3. Body Material</p> <p>C – CS M–Monel S – SS J–Hastelloy</p>	<p>5. Options</p> <p>BL – Bonnet Lock Device KMB51 – KMC Mount Pipestand OC – Cleaned for Oxygen Service SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 ST – Stellite Ball Ended Stem SP – Special Requirements – Please Specify</p>		
<p>1. Packing</p> <p>V – Teflon H – GRAFOIL E – Low Emissions Graphite</p>	<p>4. Process Connections</p> <p>Inlet x Outlet 2 –1/4-Inch FNPT x 1/4-Inch FNPT 4^① –1/2-Inch FNPT x 1/2-Inch FNPT 4M –1/2-Inch MNPT x 1/2-Inch MNPT 44 –1/2-Inch MNPT x 1/2-Inch FNPT 44F –1/2-Inch FNPT x 1/2-Inch MNPT 46 –3/4-Inch MNPT x 1/2-Inch FNPT C –Male Plain End in Lieu of MNPT</p>			
<p>2. Seat</p> <p>I – Integral</p>				

<h1 style="margin: 0;">KM251</h1> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 5px;"> <div style="text-align: center;"><u>V</u> 1.</div> <div style="text-align: center;"><u>I</u> 2.</div> <div style="text-align: center;"><u>S</u> 3.</div> <div style="text-align: center;">-</div> <div style="text-align: center;"><u>4</u> 4.</div> <div style="text-align: center;">-</div> <div style="text-align: center;"><u>SG</u> 5.</div> </div>				
<p>Valve Type</p> <p>KM251 – Threaded x Threaded (Front Vent)</p>	<p>3. Body Material</p> <p>C – CS M–Monel S – SS J–Hastelloy</p>	<p>5. Options</p> <p>BL – Bonnet Lock Device KMB51 – KMC Mount Pipestand OC – Cleaned for Oxygen Service SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 ST – Stellite Ball Ended Stem SP – Special Requirements – Please Specify</p>		
<p>1. Packing</p> <p>V – Teflon</p>	<p>4. Process Connections</p> <p>Inlet x Outlet 2 –1/4-Inch FNPT x 1/4-Inch FNPT 4^① –1/2-Inch FNPT x 1/2-Inch FNPT 4M –1/2-Inch MNPT x 1/2-Inch MNPT 44 –1/2-Inch MNPT x 1/2-Inch FNPT 44F –1/2-Inch FNPT x 1/2-Inch MNPT 46 –3/4-Inch MNPT x 1/2-Inch FNPT C –Male Plain End in Lieu of MNPT</p>			
<p>2. Seat</p> <p>I – Integral</p>				

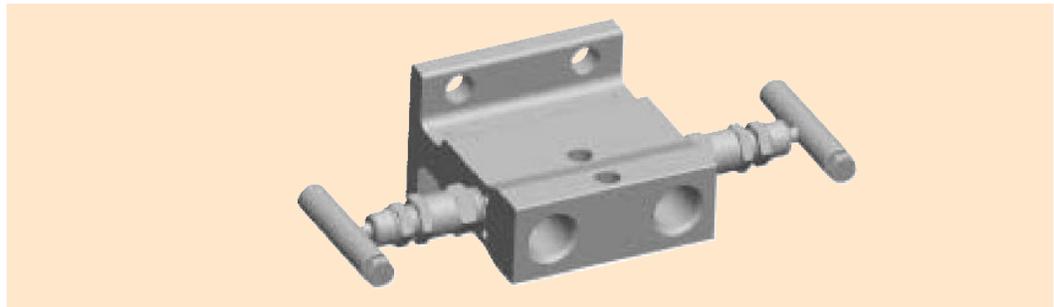
① Body length = 4.5-inch (114 mm)

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.



Kerotest KM4TL 2-Valve Liquid Level Manifold



Product Brief

The KM4TL is a two-valve manifold designed for use with Differential Pressure style pressure transmitters. The manifold is primarily intended for liquid level service. The manifold consists of two block valves. It does not contain an equalizer valve. It is offered in a single connection style of flange by NPT.

Features/Benefits

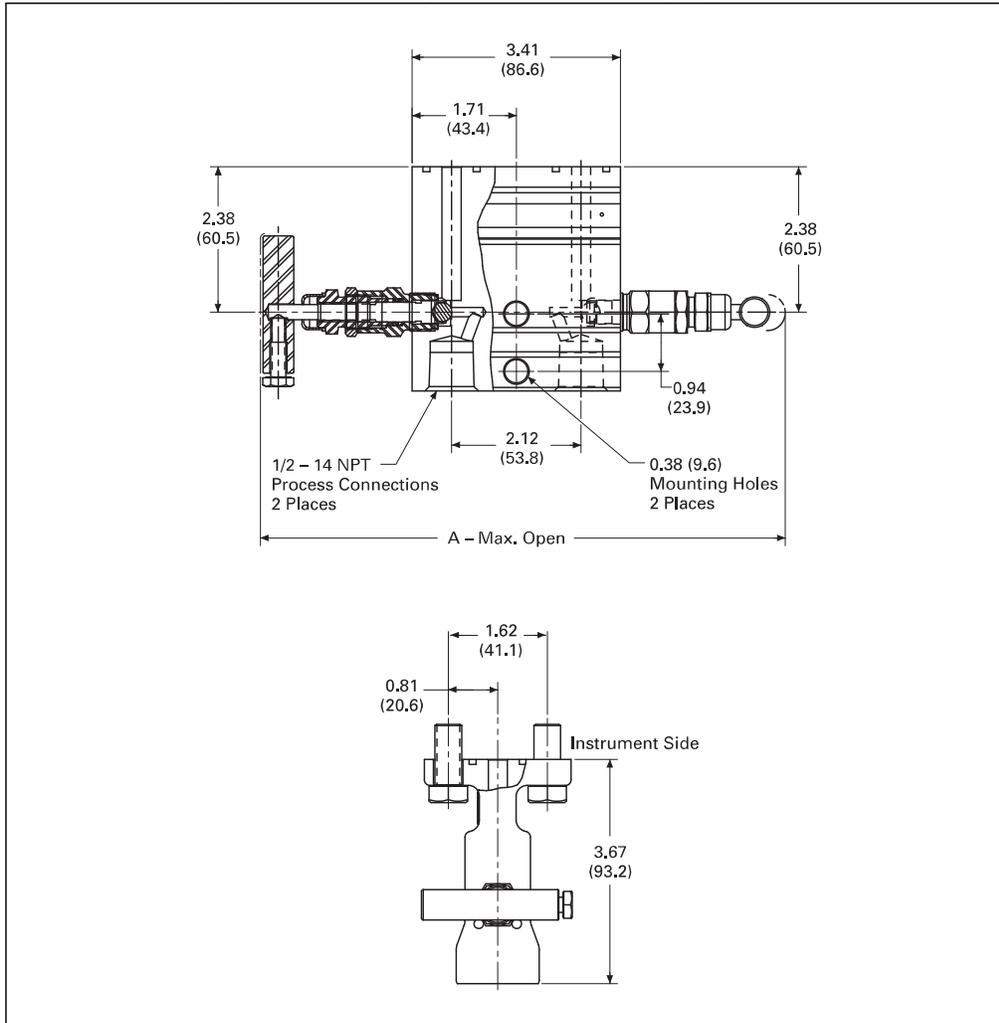
- **Bubble-tight shutoff.** Every valve is 100% tested.
- **Space-saving design.** One compact valve replaces two. Less connections means less leak paths means **less fugitive emissions.**
- **Cost-saving design.** Less parts means lower cost in the order of 20-30% compared to conventional two-valve installation.
- **Stem threads isolated** from the process fluid, eliminating process fluid contamination.
- **Direct pipestand mounting.** Requires KMC mounting kit. Permits complete piping installation without the transmitter to minimize potential instrument damage during construction.
- **Easy instrument removal** as a result of direct bolting of the instrument to the manifold.
- **Service, repair and calibration** are enhanced because the signal and purge lines are undisturbed during instrument installation and removal.
- **Multiple packing options** available including Teflon® and GRAFOIL®.
- **Ball-tipped stem design** prevents seat galling during valve closure.



Kerotest KM4TL 2-Valve Liquid Level Manifold

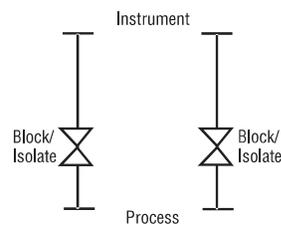
Specifications

KM4TL – Metal Seat (Soft Seat Available) Dimensions in Inches (mm)



Dimensions in Inches (mm)

Packing	A
Teflon	8.60 (218.4)
GRAFOIL	9.90 (251.5)



Kerotest KM4TL 2-Valve Liquid Level Manifold

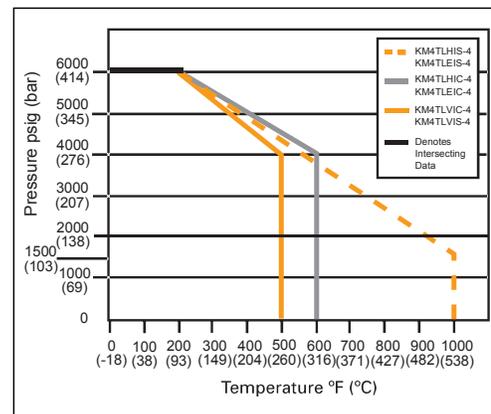
Standard Materials

Valve ①	Packing	Body	Bonnet	Stem	Ball	Bolts ②
CS ③	Teflon	A576 10L18	A108	A581-303	17-4 PH	A193-B7
CS ③	GRAFOIL/ Low Emissions Graphite	A576 10L18	A105	A581-303	17-4 PH	A193-B7
SS	Teflon	A479-316	A479-316	A276-316	316	A193-B7
SS	GRAFOIL/ Low Emissions Graphite	A479-316	A479-316	A276-316	316	A193-B7
SG ④	Teflon	A479-316	Monel® 400	Monel K500	A193-B7	Teflon
SG ④	GRAFOIL/ Low Emissions Graphite	A479-316	A479-316	Monel 400	Monel K500	A193-B7
SG3 ⑤	Teflon	Hastelloy® C276	Hastelloy C276	Hastelloy C276	Stellite	A193-B7

Pressure and Temperature Ratings

Valve	Packing	Ratings ②
CS ③	Teflon	6000 psig @ 200°F (414 bar @ 93°C)
		4000 psig @ 500°F (276 bar @ 260°C)
CS ③	GRAFOIL/ Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C)
		4000 psig @ 600°F (276 bar @ 316°C)
SS	Teflon	6000 psig @ 200°F (414 bar @ 93°C)
		4000 psig @ 500°F (276 bar @ 260°C)
SS	GRAFOIL/ Low Emissions Graphite	6000 psig @ 200°F (414 bar @ 93°C)
		1500 psig @ 1000°F (103 bar @ 538°C)
SG ④	Teflon	6000 psig @ 200°F (414 bar @ 93°C)
SG3 ⑤		4000 psig @ 500°F (276 bar @ 260°C)
SG ④	GRAFOIL/	6000 psig @ 200°F (414 bar @ 93°C)
SG3 ⑤	Low Emissions Graphite	1500 psig @ 1000°F (103 bar @ 538°C)

Pressure vs. Temperature



- ① Approximate valve weight: 5.0 lb (2.3 kg).
Metal Seat: 0.156-inch (4.0 mm) diameter orifice.
Cv = .36, full open.
Soft Seat: 0.187-inch (4.8 mm) diameter orifice.
Cv = .83, full open.
- ② 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Contact factory for full rating with 316 SS bolts.
- ③ CS is zinc cobalt-plated to prevent corrosion.
- ④ SG (Sour Gas) meets the requirements of NACE MR0175-2002.
- ⑤ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

Kerotest KM4TL 2-Valve Liquid Level Manifold

Ordering Information

<p style="text-align: center; font-size: 24pt; font-weight: bold;">KM4TL</p> <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 30px;"> V 1. </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 30px;"> I 2. </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 30px;"> S 3. </div> <div style="font-size: 24pt; font-weight: bold;">-</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 30px;"> 4 4. </div> <div style="font-size: 24pt; font-weight: bold;">-</div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 30px;"> HD 5. </div> </div>	<p>1. Packing</p> <p>V – Teflon H – GRAFOIL</p>	<p>4. Process Connection</p> <p>4 – 1/2-Inch FNPT</p>	<p>MS – Monel Stem PHB – Phenolic Black Handle PT – Top Purge Ports (1/4-Inch FNPT) SSA ① – SS Flange Bolt (Grade 18-8) SSC ① – 316 Flange Bolt (B8M) SG – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) SG3 – Sour Gas Meets the Requirements of NACE MR0175-2003 ST – Stellite Ball Stem Tip SP – Special Options – Please Specify</p>
<p>2. Seat</p> <p>I – Integral (Body Material)</p>	<p>3. Body Material</p> <p>C – CS, A576-10L18 S – SS, A479-316 W – 316L SS J – Hastelloy</p>	<p>5. Options</p> <p>AL – Low Temperature Lubricant (Low Temperature Service) Not Available for CS Valves AM – KMC Mount Kit for 2-Inch Pipestand Mounting Manifold BL – Bonnet Lock Device CL – Cleaned for Chlorine Service OC – Cleaned for Oxygen Service HD – Hydrostatic Testing (100%) (MSS-SP-61)</p>	

① 316 SS bolts lower pressure ratings to a maximum of 4500 psig (310 bar). Contact factory for full rating with 316 SS bolts.

All product names referenced herein are trademarks of their respective companies.

Kerotest Manufacturing Corp.