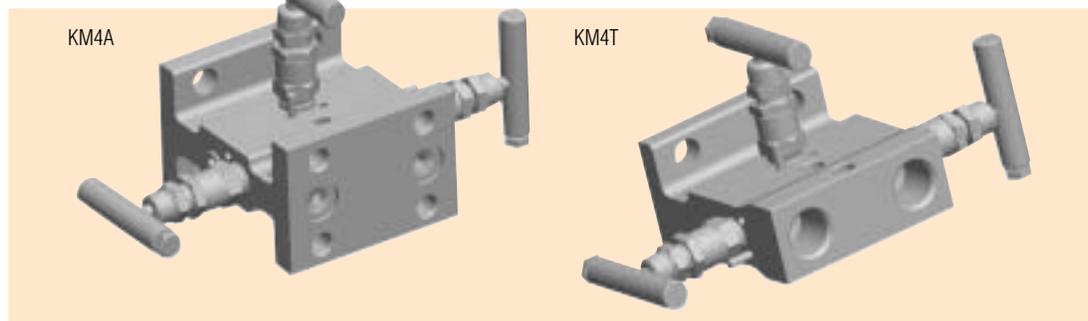


# Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds



## 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.

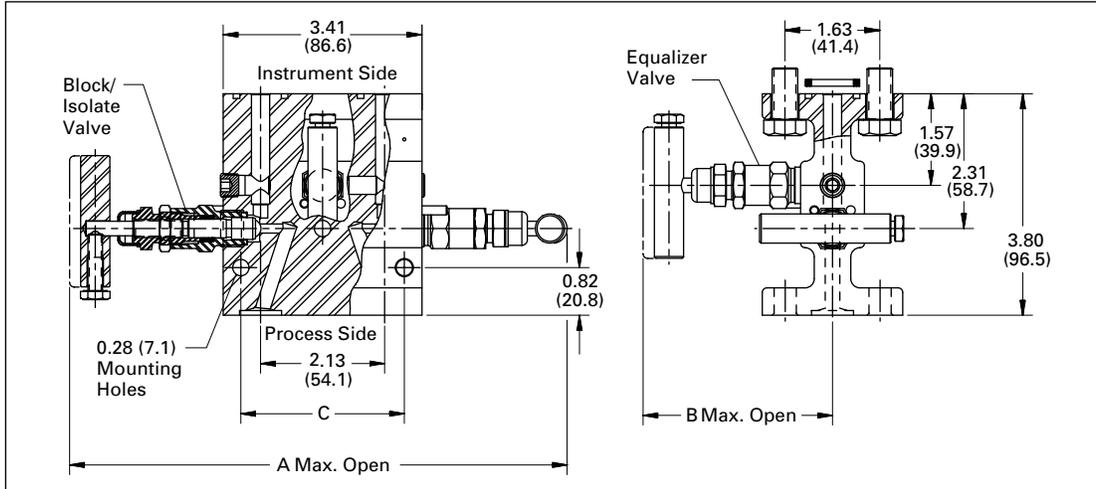


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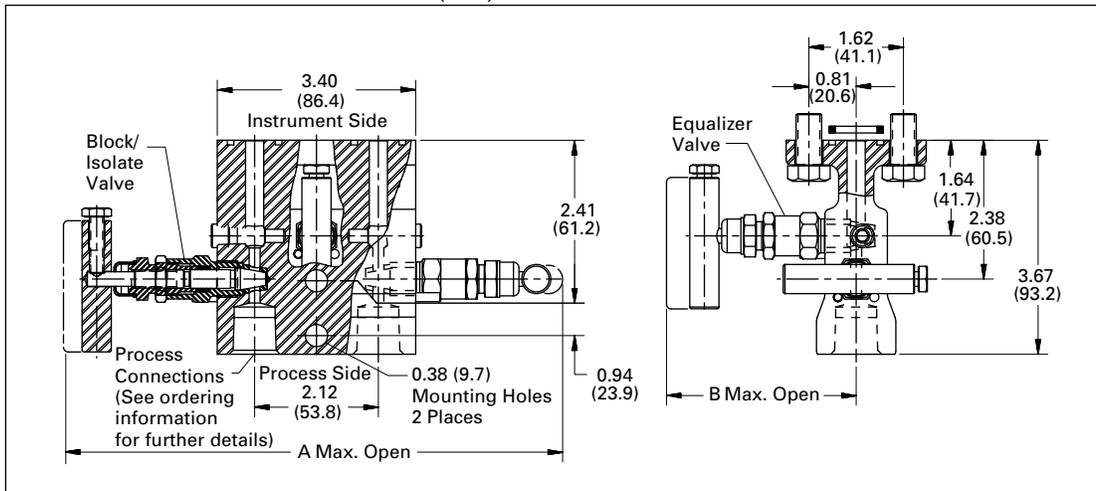
# Kerotest KM4A & KM4T 3-Valve Differential Pressure Manifolds

## Specifications

KM4A Metal Seat Dimensions in Inches (mm)



KM4T Soft Seat Dimensions in Inches (mm)



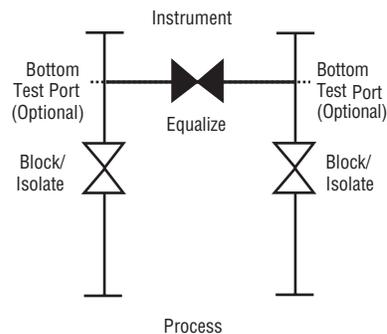
**Dimensions, Inches [mm]**

Valve ①	A	B	C
<b>Soft Seat – Teflon Packed</b>	8.60 (218)	3.20 (81)	1.06 (27)
<b>Metal Seat – Teflon Packed</b>	8.60 (218)	3.20 (81)	2.80 (71)
<b>Metal Seat – GRAFOIL Packed</b>	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.

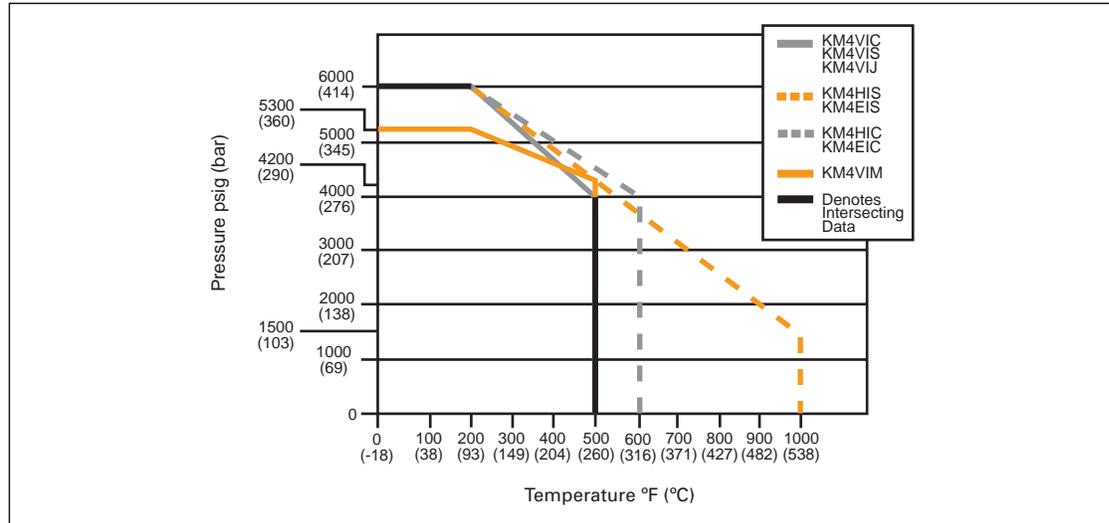
② CS parts are zinc cobalt-plated to prevent corrosion.

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

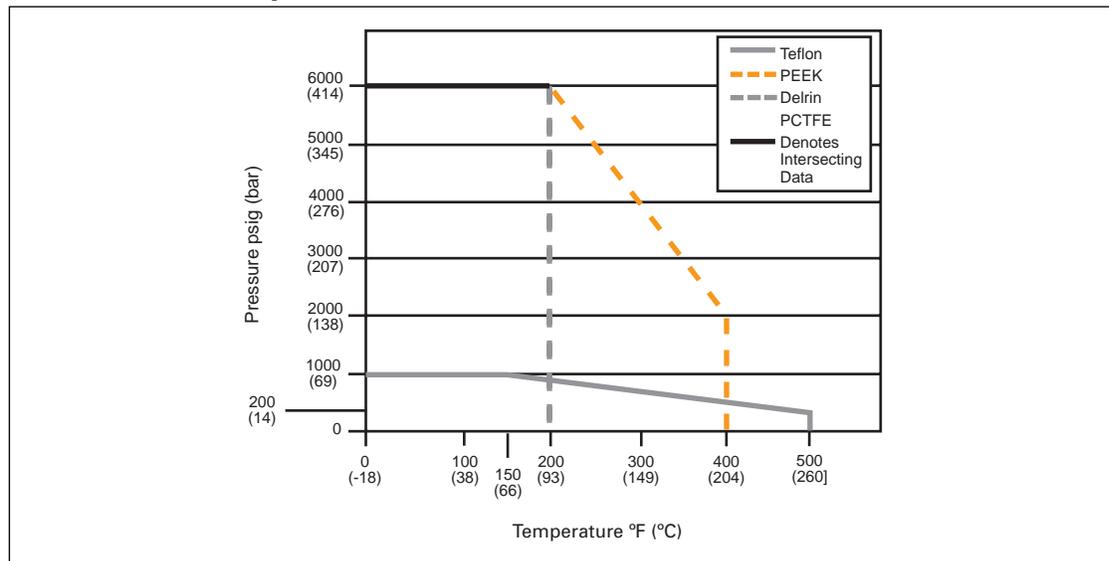
④ SG3 (Sour Gas) meets the requirements of NACE MR0175-2003.

# 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

<b>KM4T</b>	<b>V</b>	<b>D</b>	<b>S</b>	–	<b>4</b>	–	<b>SG</b>
1.	2.	3.	4.		5.		6.
<h3>1. Valve Type</h3> <p><b>KM4A</b> – 3-Valve Manifold, Flange x Flange  <b>KM4T</b> – 3-Valve Manifold, FNPT x Flange</p>	<h3>2. Bonnet Packing</h3> <p><b>V</b> – Teflon  <b>R</b> – O-ring (Viton)</p>	<h3>3. Seat</h3> <p><b>D</b> – Delrin  <b>K</b> – PCTFE  <b>E</b> – PEEK  <b>V</b> – Teflon</p>	<h3>4. Body Material</h3> <p><b>C</b> – CS ①, A576-10L18  <b>W</b> – SS, A479-316L  <b>S</b> – SS, A479-316  <b>J</b> – Hastelloy</p>	<h3>5. Process Connections (KM4T Only)</h3> <p><b>4</b> – 1/2-Inch FNPT  <b>AT</b> ② – Integral Single Ferrule Tube Fittings (4AT 1/2-Inch, 316 SS)  <b>ATD</b> ② – Integral Dual Ferrule Tube Fittings (4ATD 1/2-Inch, 316 SS)</p>	<h3>6. Options</h3> <p><b>AL</b> – Low Temperature Lubricant (-70°F) Not Available for CS Valve  <b>AM</b> – KMC Mount Kits (For Pipestand Mounting of Manifold) (CS)  <b>BC</b> – Accessory Bracket-Mount Conduit with Option KM  <b>BL</b> – Bonnet Lock Device  <b>BP</b> – Accessory Bracket – Mount Purge Meters with Option AM  <b>CL</b> – Cleaned for Chlorine Service  <b>HD</b> – Hydrostatic Testing (100%) (MSS-SP-61)  <b>MS</b> – Monel Stem (Standard on Monel Valves and SG Valves)  <b>OC</b> – Cleaned for Oxygen Service  <b>PHB</b> – Phenolic Black Handle  <b>R3V</b> – Add for Use with Rosemount® Model 3051C (SS 18-8 Bolts)  <b>SB</b> – Steam Block (CS)  <b>AMS</b> – AM, Stainless Steel Bracket</p>	<p><b>SG</b> – Sour Gas Meets the Requirements of NACE MR0175-2002 (SS Valves Only) (Not Available for O-ring Packed Valves)  <b>SG3</b> – Sour Gas Meets the Requirements of NACE MR0175-2003  <b>SSA</b> ③ – SS Flange Bolt (Grade 18-8) – Maximum Pressure Rating 4500 psig (310 bar)  <b>SSC</b> ③ – 316 Flange Bolt (B8M) – Maximum Pressure Rating 4500 psig (310 bar)  <b>TB</b> – Test Ports – Bottom of Manifold (1/4-Inch FNPT) (Option Not Available for KM4A with Option AM)  <b>TR68</b> – 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)  <b>SP</b> – 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><b>1. Valve Type</b></p> <p><b>KM4A</b>–3-Valve Manifold, Flange x Flange  <b>KM4T</b>– 3-Valve Manifold, FNPT x Flange</p>	<p><b>2. Bonnet Packing</b></p> <p>V – Teflon  H – GRAFOIL  E – Low Emissions Graphite (Except M45A)</p>	<p><b>3. Seat</b></p> <p>I – Integral (Body Material)</p>	<p><b>4. Body Material</b></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><b>5. Process Connections (KM4T Only)</b></p> <p>4 – 1/2-Inch FNPT  AT<sup>①</sup> – Integral Single Ferrule Tube Fittings (4AT1/2-Inch, 316 SS)  ATD<sup>①</sup> – Integral Dual Ferrule Tube Fittings (4ATD 1/2-Inch, 316 SS)</p>	<p><b>6. Options</b></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<sup>②</sup> – SS Flange Bolt (Grade 18-8) Maximum Pressure Rating 4500 psig (310 bar)  SSC<sup>②</sup> – 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

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

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.*

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