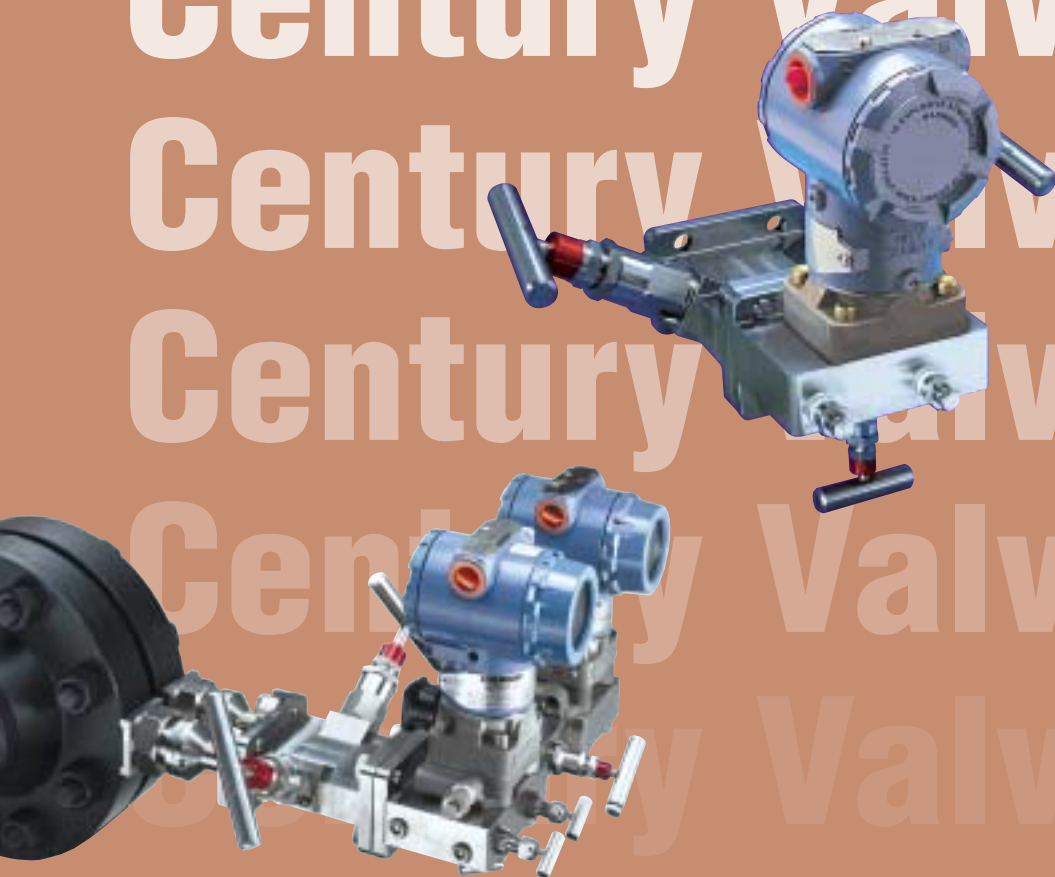


Century Valve  
Century Valve  
Century Valve  
Century Valve  
Century Valve

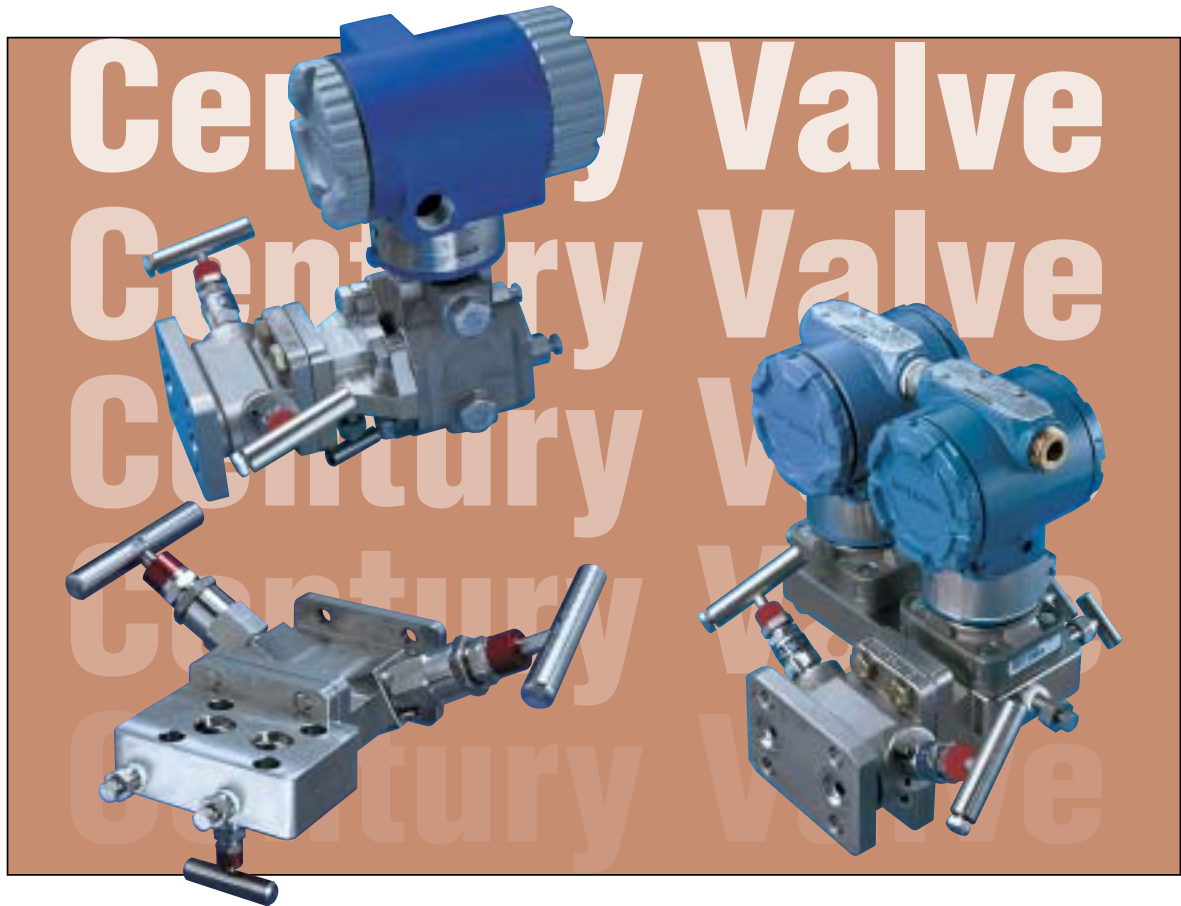


Global  
Instrumentation  
Pressure  
Management  
Solutions

## **Custody Transfer - Gas Measurement (pipeline) Close Coupled Manifold Systems**

- Integral dual instrument adapter plates eliminate field assembly time and potential leak-points.
- Integral double-block and bleed modules eliminate leakpoints.
- Entire system shipped factory assembled and hydrostatically tested - **NO REQUIRED FIELD/INSTRUMENT SHOP ASSEMBLY AND TESTING OF MANIFOLD SYSTEM.**
- 50% weight reduction over conventional gas measurement manifold systems.
- Design eliminates otherwise required spacers/valves for required operational clearance on Sr. Orifice Meters. Minimizes flow on pulsation induced error.
- $\frac{3}{8}$  inch (9.5mm) straight-through bore.

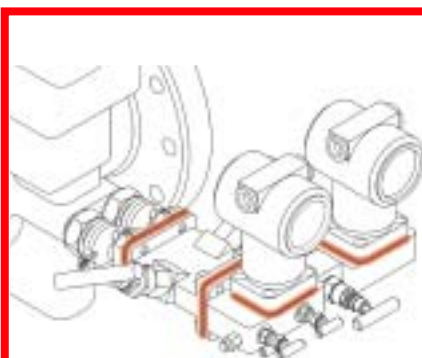




The Century Custody Transfer - Gas measurement (pipeline) large bore manifolds (CM55 series) are the most advanced systems available in the marketplace today. This new Century system was primarily designed for natural gas (custody transfer), liquid or steam measurement applications. The CM55's have been designed for close-coupling differential pressure (DP) measurement instruments to Sr. and Jr. orifice plate changers and/or orifice flange unions (OFU's). NOTE: The CM55 is available in a standard configuration for dual instrument DP and pressure (P) requirements. The CM55 is available in renewable metal seats or in a wide variety of plastic materials such as Delrin®, PEEK and Teflon®. Standard packing materials are either Teflon® or GRAFOIL®.

The CM55 superior design reduces leakpoints (required components) and overall installation weight in relation to the other products currently available in today's marketplace. The CM55 is shipped from the factory assembled and fully hydrostatically tested to 6000 psi [413 barg], eliminating costly field/shop multiple-component assembly and testing procedures.

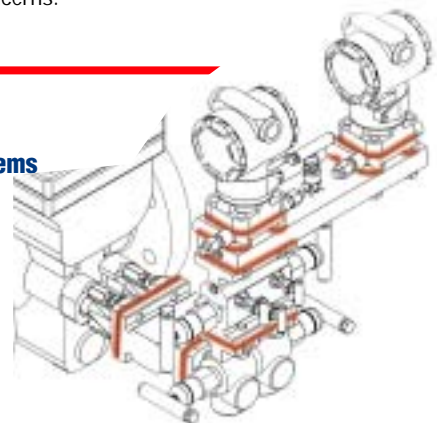
The CM55 also features a unique patented integral gas pattern (2 equalize valves, 1 vent valve, 1 pressure instrument isolation valve) differential pressure (DP) and pressure (P) manifold system further eliminating potential leakage concerns.



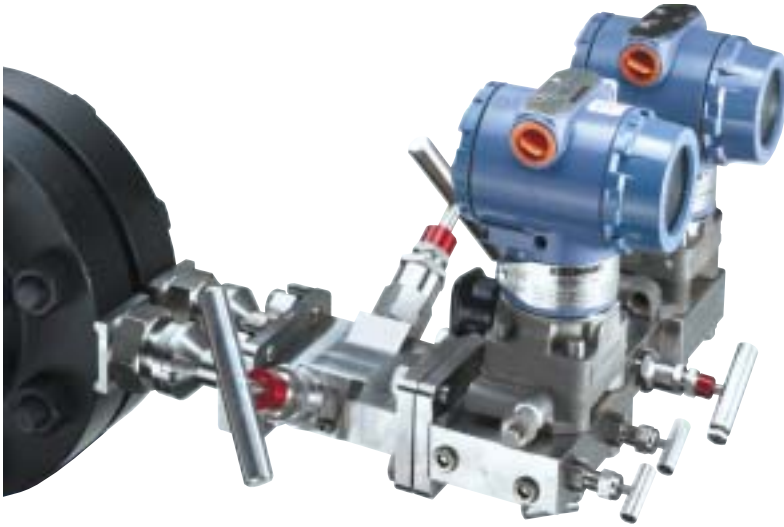
### Large Bore IntelliMount Compared To Conventional Direct Mounting Systems

- Reduction of Leak Points by 50%
- Weight Reduction of 60%
- Installation Space Requirements reduced by 40%
- Easier Installation

— Potential Leak Points  
(See Page 5 for alternate comparison.)



# 2



- Enhanced transmitter performance -close coupled straight through  $\frac{3}{8}$ -inch [9.5mm] bore to transmitter
- Provides required spacing for installation via Sr. Orifice Changers without the otherwise required spacer flanges or manifolds.
- Optional rating to FIRESAFE API 607, BS6755 Part 2
- Maximum two-piece system, regardless of numbers of required instruments.

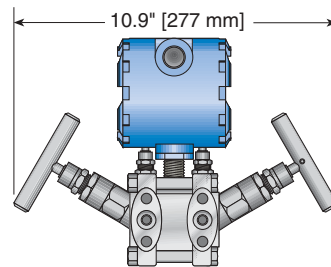
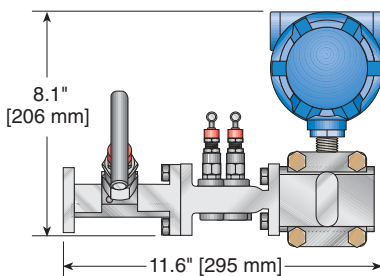
- Coplanar™ flange (Rosemount 305) elimination system available. Two-piece modular system affords permanent protection of Rosemount 305 diaphragms during maintenance procedures.
- i.e., DP and Static adapter plate integral to manifold system eliminating otherwise required flange - eliminates leakpoint, installation time, required components and weight.

- No additional brackets or pipe support required
- Elimination of impulse lines - direct mount system
- Post installation instrument retrofit capability
- Mounts all manufacturers field instruments i.e, 1151, 3051 (ROSEMOUNT PRODUCT LINE), JYC, MOORE, HONEYWELL, FOXBORO.
- Elimination of conventional valve block system
- Elimination of leakpoints/system weakness/instability found in traditional instrument installations.
- Modular design allows for system hydrotest, certification while affording instrument protection/controlled storage until commissioning.

## Notes

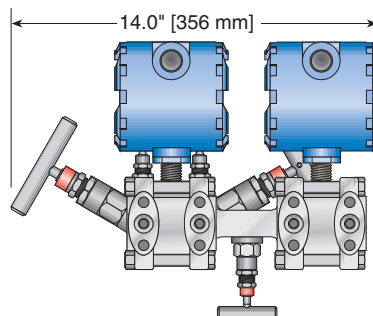
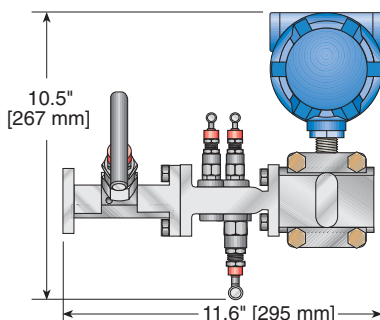
1. GRAFOIL® is a registered trademark of UCAR Carbon.
2. Teflon® is a registered trademark of the E.I. duPont de Nemours Company.

## Dimensions , Common Part Codes And Brief



### CM5 3BH, inches [mm]

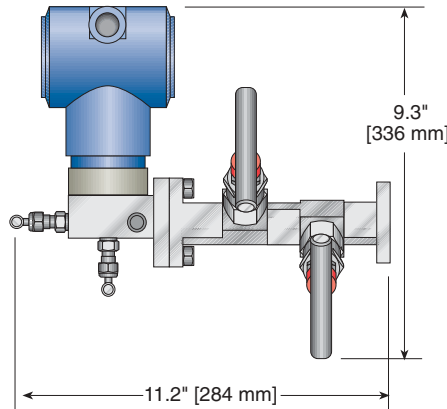
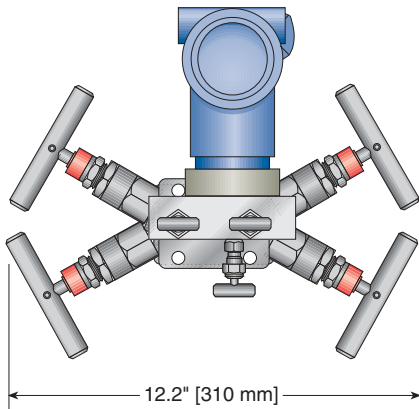
- Biplanar orientation
- Standard manifold configuration
- Single block



### CM55 5G and GP, inches [mm]

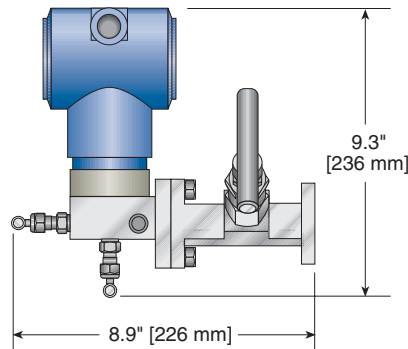
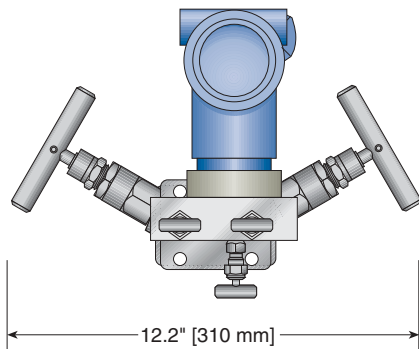
- 5-Valve gas pattern
- Dual instrument
- Gauge pressure isolation valve
- Biplanar horizontal orientation

# Dimensions , Common Part Codes And Brief



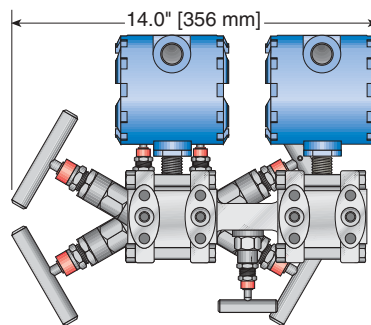
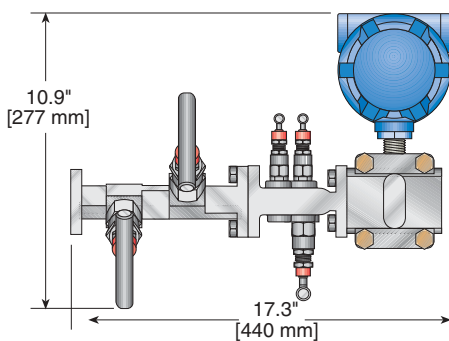
## CM55D/5GC/5GNC, inches [mm]

- 5-Valve gas pattern
- Coplanar instrument (Rosemount 3051/3095)
- Double block and bleed
- Connections: 1.3-inch [33 mm] or 2.125-inch [54 mm]



## CM55/5GC/5GNC, inches [mm]

- 5-Valve gas pattern
- Coplanar instrument (Rosemount 3051/3095)
- Single block and bleed
- Connections: 1.3-inch [33 mm] or 2.125-inch [54 mm]



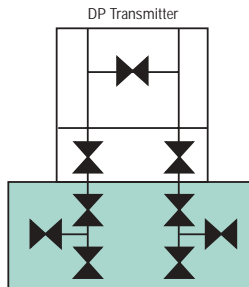
## CM55D/5GB/5PB, inches [mm]

- 5-Valve gas pattern
- Dual instrument
- Gauge pressure isolates valve
- Double block and bleed
- Biplanar instrument configuration

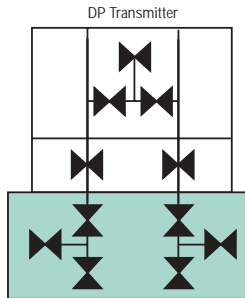
# 4

## Instrument Configurations

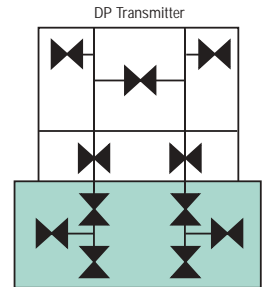
**CM55/3B/3C/3NC**



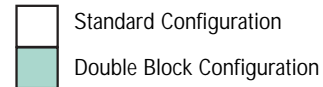
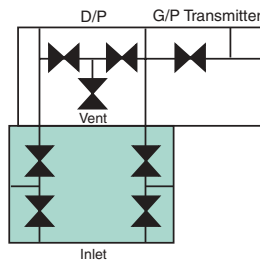
**CM55/5G**



**CM55/5P**



**CM55/5G/GP**



## Materials

### Technical Data

#### Standard Material Traceability

Standard material traceability to EN10204-3.1.B, 50049-3.1.b.

#### Valve Packings and Flange Seals

Teflon® (Standard)

Maximum pressure - 6,000 psig [414 barg]

Maximum temperature - 500°F [260°C]

GRAFOIL® (Optional)

Maximum pressure - 6,000 psig [414 barg]

Maximum temperature - 1000°F [538°C]

### Standard

#### SS Valve

Body — 316 S11

Bonnet — 316 SS

Stem — 316 SS

Non-Wetted Parts — 316 SSL

#### CS Valve

Body — A105 CS

Bonnet — A105 CS

Stem — 303 SS

Non-Wetted Parts — A105 CS

### Special

For severe service, the CM55 Series are available in the following exotic materials:

Monel® Alloy 400

Duplex S31803

Hastelloy® C276

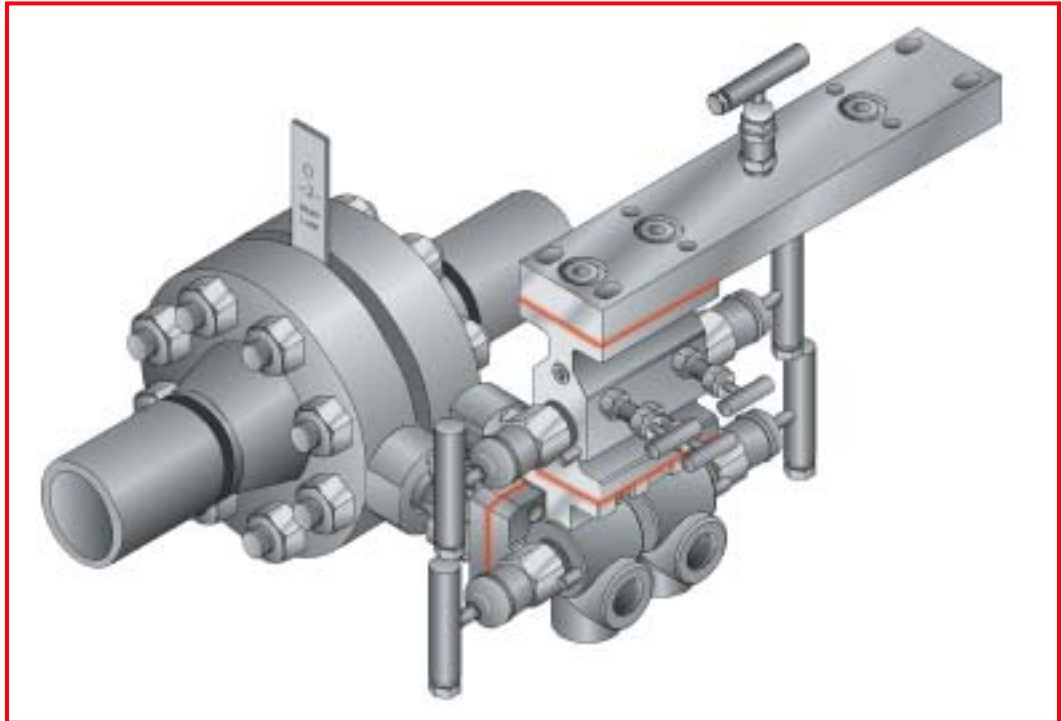
### Bolting

All CM55 assemblies are supplied with high tensile steel bolts as standard. Optional stainless steel bolts (B8M Class 2) are available; please specify when ordering.

# Potential Leak Point Comparison

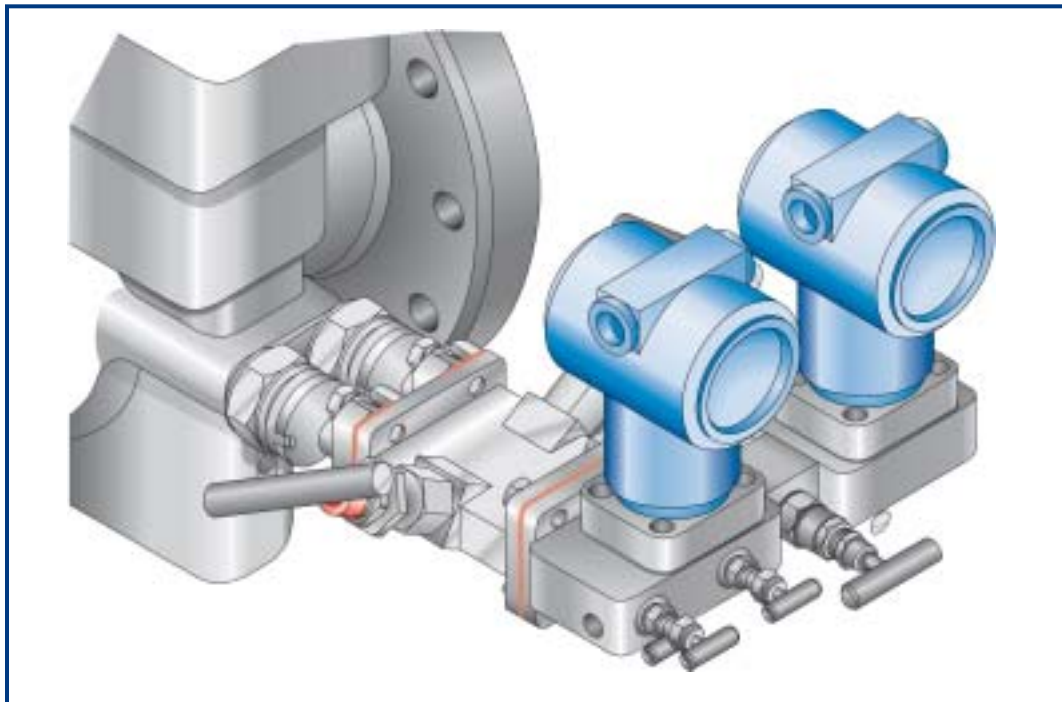
## Old Configuration With Multiple Leak Points

- 4 Modules to assemble and test in-field
- 3 potential leakpoints



## New Configuration With Minimal Leak Points

- Unit factory assembled and tested prior to shipment
- 2 leakpoints (33% reduction)
- Eliminates costly field assembly and testing costs



# 6

## Next Generation Century Stabilized Futbol System

- Quick, easy, one-handed installation
- Large footprint reduces radial-stress load on the NPT threads
- Slotted bolt holes accommodate 2 1/8- to 2 1/4-inch bolt spacings
- Available with dielectric shielding which provides a non-conductive barrier between the instrument and the orifice fitting
- Available in vertical and horizontal mount configurations
- Available in standard length (4-inch) or extended length (5.61-inch) for additional clearance requirements
- Oxygen or chlorine cleaning available
- Available in Stainless or Carbon Steel Construction
- High temperature (GRAFOIL®) flange gaskets available at no additional cost
- Meets the requirements of NACE MR0175-2002 at no additional cost (SS Versions)



### Ordering Information

	CMSF	L	1	H	DI-16	SCO
<b>Body Length</b>	S – Short (standard clearance - overall length 4.0-inch [101.6 mm])		L – Long (additional clearance - overall length 5.61-inch [142.4 mm])			
<b>Construction Material</b>	1 – 316 SS		3 – CS			
<b>Tap Orientation</b>	H – Horizontal - includes flange shoe for additional support		V – Vertical			
<b>Dielectric Shielding Option</b>	DI-16 – Dielectric Shielding - Delrin® Construction		DI-17 – Dielectric Shielding - PEEK Construction			
<b>Options</b>	SCO – Oxygen Cleaning		V – Viton® O-ring Seals (not available with incorporation of dielectric shielding option)		G – GRAFOIL® Gaskets (not available with incorporation of dielectric shielding option)	
	OAS – 316 SS Orifice Plate Adaptor for use with orifice plates over 1/4-inch [64 mm] in width		B303 – 303 SS hardware kit upgrade (standard kit/bolts - CS construction)		B316 – 316 SS hardware kit upgrade (standard kit/bolts - CS construction)	

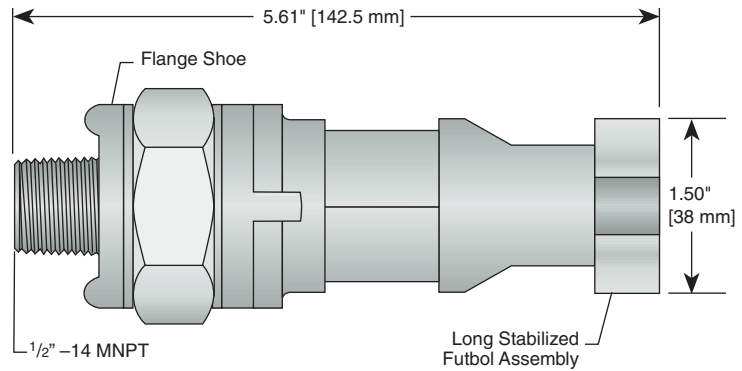
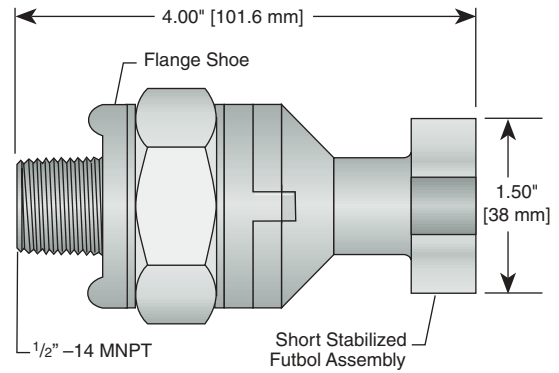
### Notes

1. All standard Century stabilized connectors include Teflon® gaskets.
2. All standard Century stabilized connectors include CS mounting hardware.

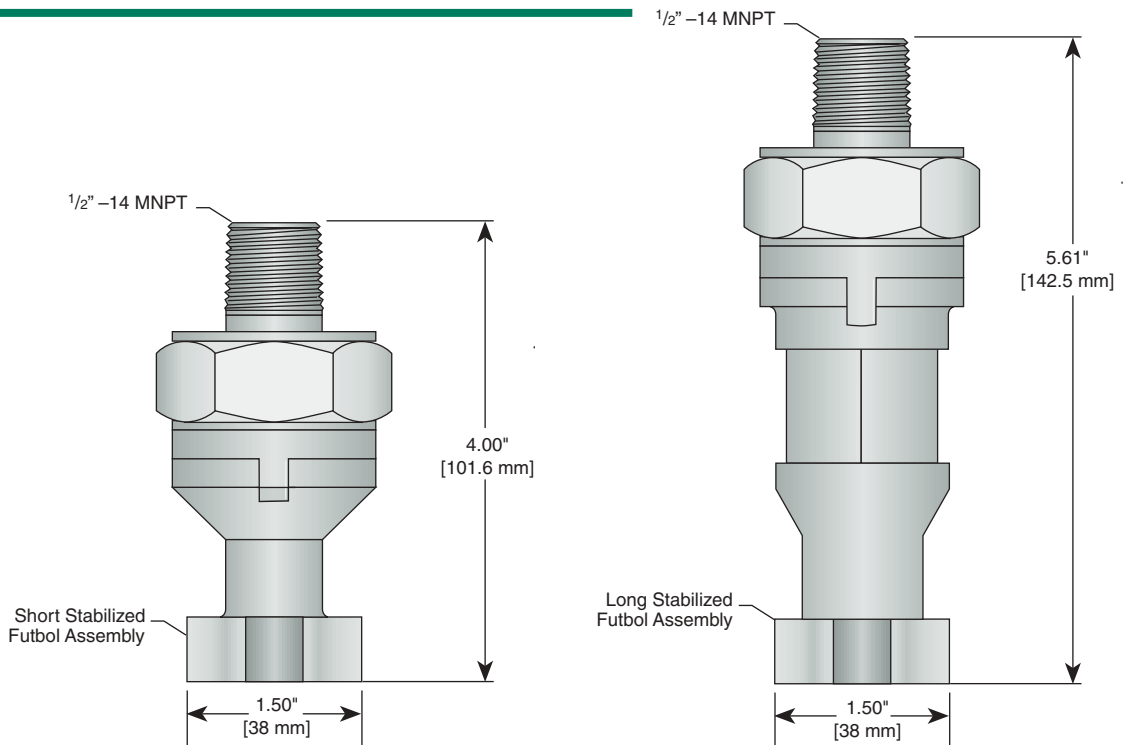
# Stabilized Futbol System Dimensions

## Horizontal

- includes optional flange shoe



## Vertical



7

# Bonnet Specifications

8

## Valve Technical Specifications

The CM55 features high performance valves for reliable bubble-tight performance.

Isolation is achieved with the 'H' series plug valve or the optional "P" non-rotating stem bonnet assembly for FIRESAFE service. Venting and equalizing are achieved with the "N" style bonnet assembly.

## Features and Benefits

- Body to bonnet pressure seals below threads preventing process from corroding bonnet retention threads which are loaded in compression for additional strength.
- Backseat design provides secondary stem seating and prevents stem blowout.
- Adjustable gland follower allows easy access to adjust the packing gland.
- Stem threads are located above the spindle packing and are completely isolated from the process.
- Stem packing with GRAFOIL® or Teflon® for bubble-tight sealing.
- FIRESAFE to API 607 and BS6755 Part 2.

### Notes.

1. Monel® is a registered trademark of International Nickel Company.
2. Hastelloy® is a registered trademark of Haynes International.

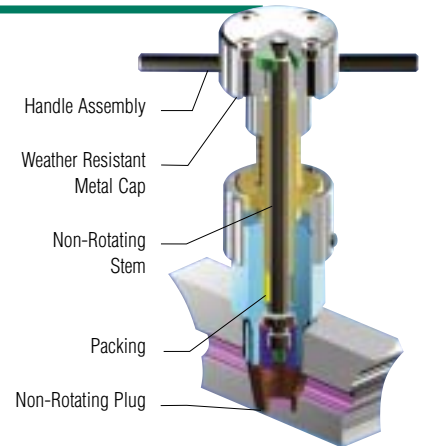
## H Bonnet For Isolation Service

- Rising plug valve
- .375-inch [9.5 mm] bore
- Rotating stem and plug
- Soft or metal seats
- 6000 psig [414 barg]
- Soft seat - Delrin®, Teflon®, PEEK
- Hard seat - 316/316L SS



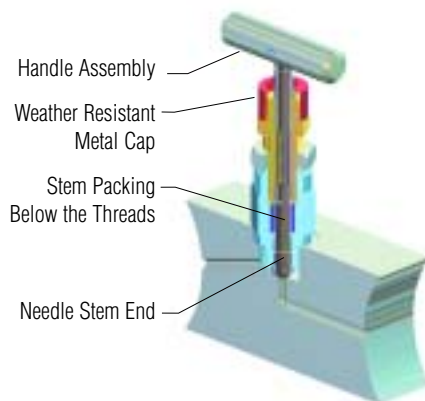
## P Bonnet For FIRESAFE Service

- API 607 FIRESAFE and BS6755 Part 2
- Rising (non-rotating stem) plug valve
- .375-inch [9.5 mm] bore
- Non-rotating stem and plug
- Soft or metal seats
- 6000 psig [414 barg]
- Soft seat - Delrin®, Teflon®, PEEK
- Hard seat - 316/316L SS



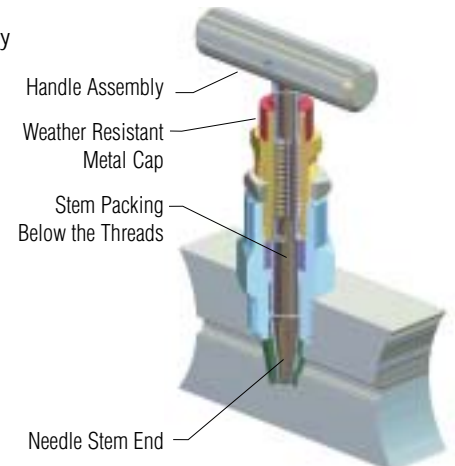
## D Bonnet for Venting and Equalize Service

- Needle/globe bonnet assembly
- 0.2-inch [5.0 mm] bore
- Free swivel ball end stem
- 6000 psig [414 barg]
- -71°F to 1022°F [-57°C to 550°C]



## C Bonnet for Isolation Service (dual instrument only)

- Needle/globe bonnet assembly
- 0.2-inch [5.0 mm] bore
- Needle stem end
- 6000 psig [414 barg]
- -71°F to 1000°F [-57°C to 538°C]



## Ordering Information

	CM55	5G	NC	H	1	HD	16	T	GP	SC
Note: Use CM55D for double block & bleed configuration.										
<b>Manifold Module Configuration (flow patterns)</b>										
3	– 1 @ equalize valve									
5P	– 2 @ vent valves/calibration ports (1/4" FNPT) and 1 @ equalize valve									
5G	– 1 @ vent valve/calibration port (1/4" FNPT) and 2 @ equalize valves									
<b>Manifold Module Configuration (instrument connections)</b>										
NC	– Coplanar style transmitter (Rosemount 3051/3095) with coplanar flange 2.125-inch center-to-center instrument connections									
C	– Coplanar style transmitter (Rosemount 3051/3095) without coplanar flange 1.3-inch center-to-center instrument connections									
B	– Biplanar style transmitter (e.g., 2.125-inch instrument connection [Honeywell]), conventional type									
<b>Tap Orientation</b>										
H	– Horizontal									
V	– Vertical									
<b>Material</b>										
1	– 316/316L SS									
3	– A108 CS									
<b>Bonnet Technology (see page 8 for further details)</b>										
HD	– H - rotating stem plug (block) valves and D non - rotating ball stem end (vent/equalize valves)									
HDC	– (dual instrument configurations), H - rotating stem plug valves (blocks) and D non - rotating ball stem end (vent/equalize/static isolation valves), C - rotating needle stem end (gauge pressure isolation valve)									
PD	– FIRESAFE API 607 "P" - non-rotating stem plug (block) valves and D non - rotating ball stem end (vent/equalize valves)									
PDC	– (dual instrument configurations), FIRESAFE API 607 "P" - non-rotating stem plug (block) valves and D non - rotating ball stem end (vent/equalize valves), C - rotating needle stem end (gauge pressure isolation valve)									
<b>Seat</b>										
1	– 316 SS									
15	– PEEK									
16	– Delrin®									
<b>Stem Packing</b>										
T	– Teflon®									
G	– GRAFOIL®									
<b>Multiple Instrument Connection</b>										
GP	– Additional gauge pressure transmitter, instrument connections to match spacing and orientation of primary unit									
GP2	– Two (2) additional gauge pressure units, instrument connections to match spacing and orientation of primary unit - consult factory									
DP	– Dual differential pressure, instrument connections to match spacing and orientation of primary unit									
<b>Special Connection</b>										
OC	– Oxygen Cleaning									
SSR	– SS Bolting (B7M)									
SSB	– SS Bolting (B8M)									
SC	– Special Construction (please consult factory)									



## CM55 Series

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[www.centuryvalve.com](http://www.centuryvalve.com)

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