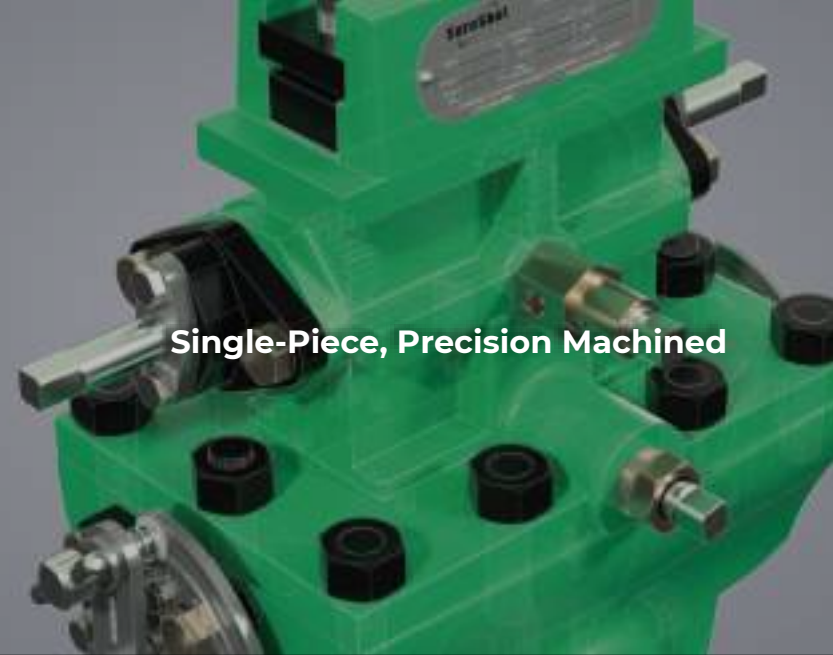


Meets or exceeds all industry (AGA3/API14.3)



Single-Piece, Precision Machined



Protected positive orifice plate seal extends service life



2" thru 16" ANIS Classes 150-600

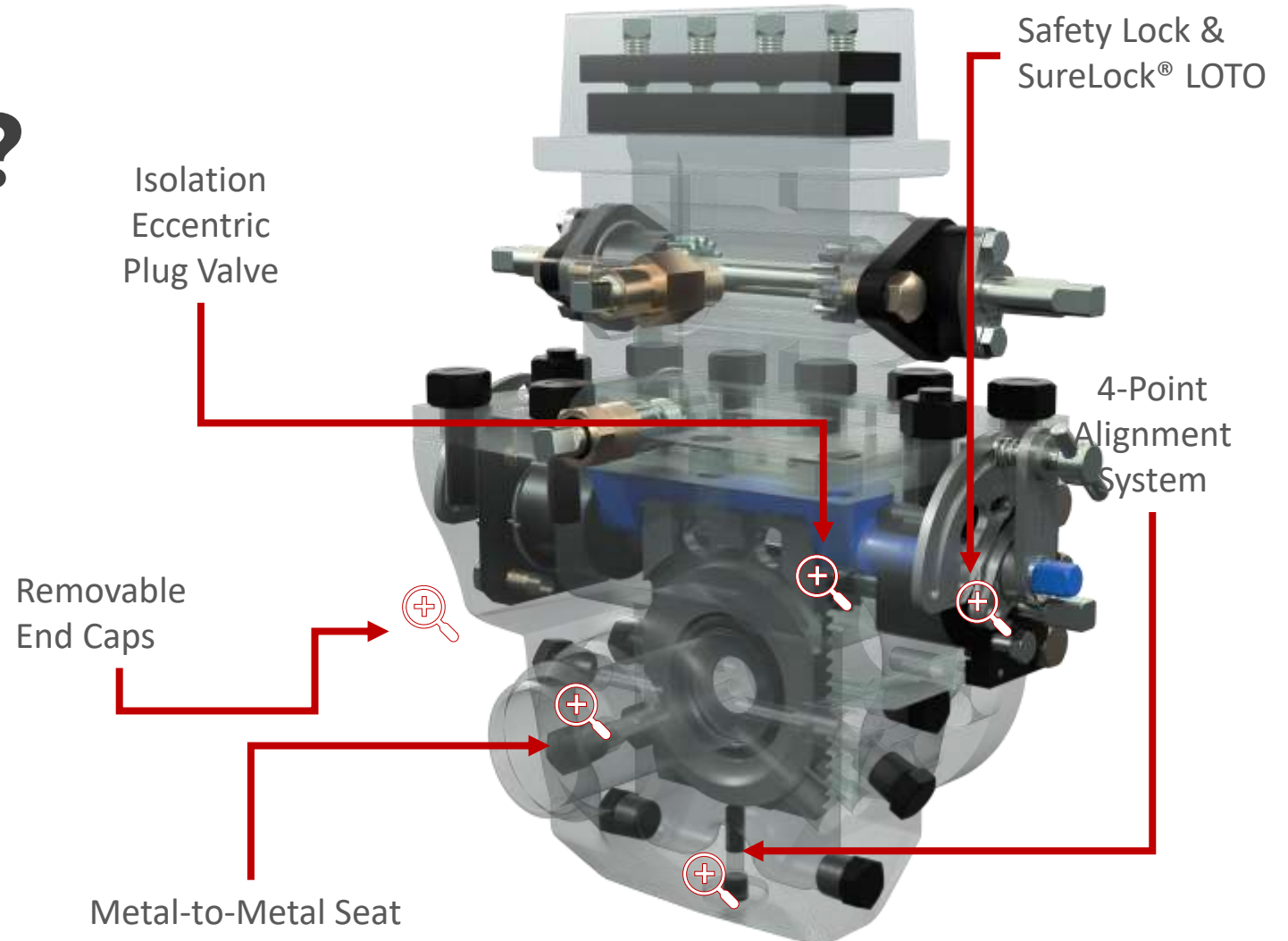
What makes TMCO Unique?

Market Driven Features

Designed with direct input from the measurement specialists who design, fabricate, and operate orifice metering systems and skids

TMCO has strengthened the advantages of metering by implementing features that -

- Improve the performance of your meter
- Simplify your operations, reduce maintenance costs
- Keep your people safe in the field



Orifice Fittings

TMCO

Inspired Innovation

Single Chamber

- One piece body allows for quick, inexpensive orifice plate changes without the time-consuming operational steps associated with Orifice Flange Union
- Metal-to-Meter seat against the downstream face significantly reduces seal ring compression and downstream shift of orifice plate



Dual Chamber

- Eccentric Isolating Plug Valve
- Removable End Caps
- Sure Lock™ Safety Device and Lockout/Tagout
- Orifice Plate Carrier
- Metal-to-Metal Seat
- 4-Point Alignment System



PRODUCTS

Support: Sales | Service | Field

Ensuring Seamless Integration Across Applications

SUPPORT YOU CAN COUNT ON

- Products designed, engineered, manufactured and supported in India.
- Engineering, manufacturing, sales and service teams respond 24/7/365
- 99% on-time delivery
- Short, if any, lead times
- Parts in stock
- Reps and techs are trained and equipped to perform field repairs

SUPPORT CALL PROTOCOL

- All calls answered immediately by us from Pune, India.
- Product-related issues addressed within the hour by trained service technician and experts.



Orifice Fittings

Better Fittings by Design



Simplify Operations

- Robust technology
- Calibration not required
- Familiar to field personnel
- Greaseless operation - quick plate changes



Lower the Cost of Ownership

- Eliminates troublesome grease injections
- Lasts for years with minimal maintenance
- Service without removing upper body
- Accuracy can increase revenue
- Fewer Parts = Reduced Service Costs



Keep Your People Safe in the Field

- Safety Lock Device
- Lockout/Tagout



*SureShot®
Dual Chamber Orifice Fitting*



*SureShot®
Single Chamber Orifice
Fitting*

Simplify Operations



Simplify Operations

- Robust technology
- Calibration not required
- Familiar to field personnel
- Greaseless operation - quick plate changes



COMPETITOR FITTINGS HAVE OPERATIONAL LIMITS:

- When checking or changing the plate with the competition's fitting "reduce the differential pressure across the meter to a maximum of (200 inches of H₂O)"¹
- TMCO fittings may be operated up to the maximum operating differential pressure allowed by AGA for that size fitting, generally 1000 inches of water column

FLOW CALIBRATION NOT REQUIRED

- Unlike ultrasonic, Coriolis or turbine meters, orifice meters do not need expensive and disruptive calibration / proving

Lower the Cost of Ownership



Lower the Cost of Ownership

- Eliminates frequent grease injections
- Lasts for years with minimal maintenance
- Service without removing upper body
- Accuracy can increase revenue
- Fewer Parts = Reduced Service Costs
- Competitively priced
- Provided at no additional charge
 - Product documentation
 - Seal Ring (Initial Order)
 - Telemetering taps
 - NACE trim standard

COMPETING FITTINGS REQUIRE GREASE TO ISOLATE UPPER & LOWER CHAMBERS

- Must select and stock proper type of grease – Standard, H₂S, CO₂ or High Temp ¹
- Must insert grease slowly, no more than 4 to 6 turns per minute ¹, once when removing the plate and again after removing the plate
- “Injection of the grease at a faster rate will lead to the separation of the valve strip from the valve seat, resulting in release of pressurized fluid which may cause death or serious injury” ¹
- Manufacturer “recommends have one box of lubricant sticks (24 sticks per box) on-hand when performing maintenance and plate inspection/change procedures.” ¹
- Grease may become clogged in the grease delivery system, requiring the line to be shut down and the top of the fitting removed to clean out the grease path.

TMCO ECCENTRIC VALVE SIMPLIFIES OPERATIONS & OPTIMIZES PERFORMANCE

- Greaseless O-ring seal
- Designed to last for years without replacement
- Removable end caps allow replacement of O-ring without removing top of fitting

Lower Cost of Ownership

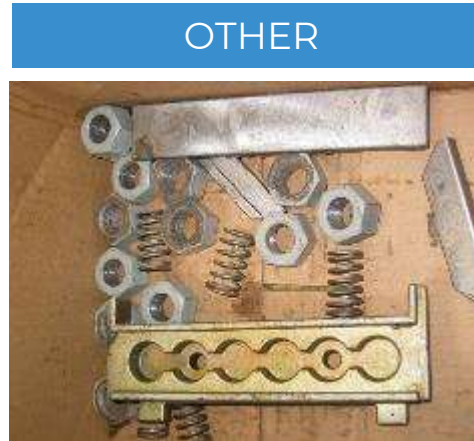
Fewer Parts & Easier Maintenance Reduce Service Costs & Keep Technicians Safe

Superior technology – a single part - isolates the top from bottom chambers

When competitor's fitting installed on its side, it is very difficult to keep springs and slide valve in place and properly aligned when removing and replacing the upper chamber. TMCO isolation valve is easily maintained without removing the top, through the removable end caps. Fewer parts means fewer potential points of failure and faster maintenance

Greaseless operation - simplifies maintenance

NACE trim, telemetering taps, initial seal ring, and full documentation are standard; competition may charge extra



Isolating Eccentric Plug Valve

A Patented Differentiator



GREASELESS DESIGN

Clean, positive isolation between upper and lower chambers

TEFLON SEAL & STAINLESS STEEL RETAINER

Optimal sealing and minimum drag across seat minimizes maintenance

TWO-HANDED OPEN/CLOSE SOP

Prevents accidental opening while upper chamber is under pressure

REMOVABLE END CAPS

Inspect or replace plug valve assembly without removing upper chamber

NO GREASE, NO SPRINGS, NO SLIDE VALVE PARTS

Simplifies operations and lowers maintenance costs

Orifice Plate Carrier Features

Improved Accuracy Delivers Increased Revenues

PRECISION MACHINED CARRIER

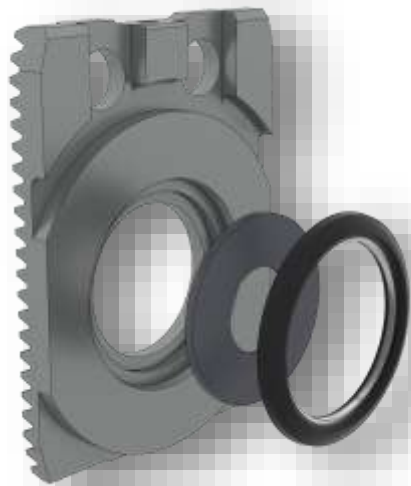
Design allows for secured plate positioning, eliminating downstream movement of the orifice plate during high differential pressure

FOUR POINT ALIGNMENT

Accurate and repeatable positioning and concentricity are achieved by factory-set internal screws located at the bottom and sides of the fitting's internal body and a ball plunger located in the top of the plate carrier

METAL-TO-METAL SEAT

Metal-to-metal seat against the downstream face significantly reduces seal ring compression and resulting downstream shift of orifice plate. Downstream movement causes the meter to under-measure, which can reduce revenue



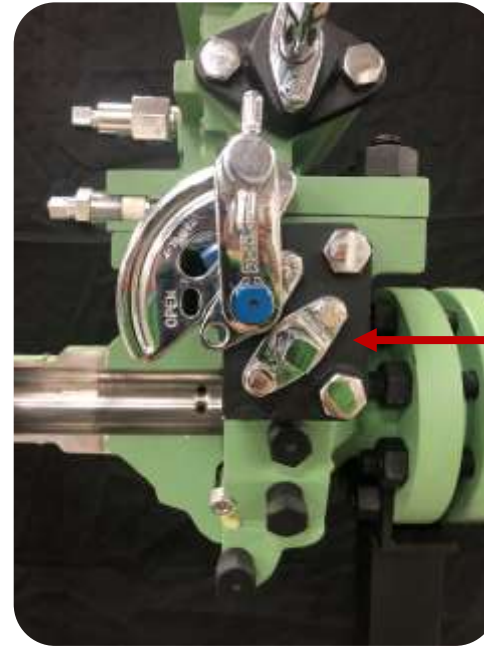
Keep Your People Safe in the Field

Safety is our Mission



Keep Your People Safe in the Field

- Safety Device
- LOTO



SAFETY LOCK

- Safety lock prevents accidentally opening the eccentric valve while the upper chamber is open
- Prevents improper location of the orifice plate carrier in the fitting when the eccentric valve is closed

LOCK OUT / TAG OUT

- Optional Lockout/Tagout feature prevents tampering with the fitting or operation of the fitting when other activities are underway on site
- For additional safety, Eccentric Plug will not close if the plate carrier is improperly positioned, forcing operator attention and proper placement of the carrier

Dual Chamber Orifice Fitting

Customer Inspired Innovation

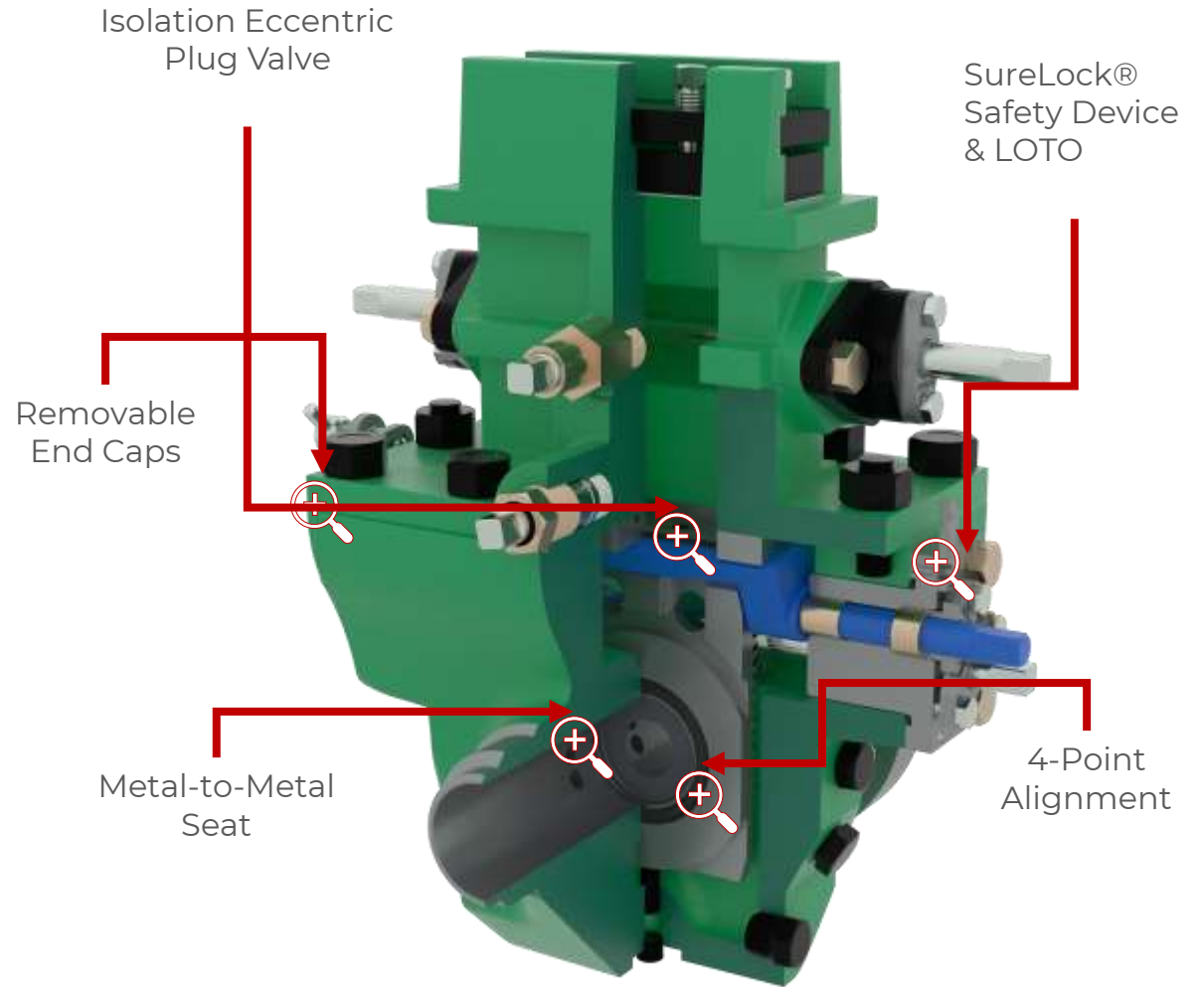
Designed with direct input from the measurement specialists who design, fabricate, and operate orifice metering systems and skids

Key features ensure safe, cost-effective, and operationally excellent solutions to the most demanding gas measurement challenges

ACCURACY & PERFORMANCE

- Fully conforms to AGA 3/API 14.3 requirements
- Requires no added uncertainty and provides accurate performance over the orifice plate beta ratio range from 0.1 to 0.75 within 0.5% flow accuracy to theoretical value

Learn More: Detailed Specifications



Dual Chamber Orifice Fitting

Meeting & Exceeding Industry Standards

SPECIFICATIONS

| | MODEL | | |
|-------------------------|--|--------------|----------------|
| | Dual Chamber | Dual Chamber | Single Chamber |
| Sizes (Inches) | 2, 3, 4, 6, 8, 10, 12, 16 | 3 | 2, 3, 4, 6 |
| ANSI Class | 150, 300, 600 | 900 | 150, 300, 600 |
| PSI CWP | 285, 740, 1480 | 2160 | 285, 740, 1480 |
| Temperature Ranges | - 20°F to 275°F (-29°C to 120°C) | | |
| End Connections | Weld x Flange, Flange x Flange, Raised Face, Ring Type Joint (RTJ) | | |
| Telemetry Taps | Standard | | |
| Regulatory Requirements | AGA 3/API 14.3, ISO 5167 | | |
| | ASME B31.3, ASME B16.5, MSS SP-55 | | |
| | NACE MR-01-75-2000 | | |
| Flange Ratings | ANSI Class 150 to ANSI Class 600 inclusive | | |
| Pipe Spec | Schedule 40 & Schedule 80 | | |
| Body materials | A-216 WCB/WCC | | |
| Quality Checks | Hydrostatic: 1-1/2 times rated CWP | | |
| | Positive Plate Seal | | |
| | Pressure tap Integrity | | |
| | Seal Protrusion | | |
| | Eccentricity | | |

Consult factory for larger sizes and other operating conditions.

ACCURACY

Orifice fittings fully conform to the latest AGA 3/API 14.3 stringent requirements. They require no added uncertainty and provide accurate performance over the orifice plate beta ratio range from 0.1 to 0.75 within 0.5% flow accuracy to theoretical value.

Single Chamber Orifice Fitting

Rugged, Reliable and Field Proven

- One-piece body for quick, inexpensive orifice plate changes without the time-consuming operational steps associated with Orifice Flange Union
- Metal-to-metal seat against the downstream face significantly reduces seal ring compression and downstream shift of orifice plate
- Protected positive orifice plate seal design extends service life
- Telemetry taps standard
- **Quick Specs:**
 - 2" thru 6" ANSI Classes 150-600
 - Body Type: Flange x Weld
 - Raised Face & RTJ Facings
 - Body Material: A-216 WCB



ACCURACY & PERFORMANCE

- Fully conforms to AGA 3/API 14.3 requirements
- Requires no added uncertainty and provides accurate performance over the orifice plate beta ratio range from 0.1 to 0.75 within 0.5% flow accuracy to theoretical value

Learn More: Detailed Specifications

Single Chamber Orifice Fitting

Meeting & Exceeding Industry Standards

| SPECIFICATIONS | | | |
|-------------------------|--|--------------|----------------|
| | MODEL | | |
| | Dual Chamber | Dual Chamber | Single Chamber |
| Sizes (Inches) | 2, 3, 4, 6, 8, 10, 12, 16 | 3 | 2, 3, 4, 6 |
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| PSI CWP | 285, 740, 1480 | 2160 | 285, 740, 1480 |
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| End Connections | Weld x Flange, Flange x Flange, Raised Face, Ring Type Joint (RTJ) | | |
| Telemetry Taps | Standard | | |
| Regulatory Requirements | AGA 3/API 14.3, ISO 5167 | | |
| | ASME B31.3, ASME B16.5, MSS SP-55 | | |
| | NACE MR-01-75-2000 | | |
| Flange Ratings | ANSI Class 150 to ANSI Class 600 inclusive | | |
| Pipe Spec | Schedule 40 & Schedule 80 | | |
| Body materials | A-216 WCB/WCC | | |
| Quality Checks | Hydrostatic: 1-1/2 times rated CWP | | |
| | Positive Plate Seal | | |
| | Pressure tap Integrity | | |
| | Seal Protrusion | | |
| | Eccentricity | | |



Single Chamber Orifice Fitting

Meeting & Exceeding Industry Standards

ACCURACY

SureShot Orifice fittings fully conform to the latest AGA 3/API 14.3 stringent requirements. They require no added uncertainty and provide accurate performance over the orifice plate beta ratio range from 0.1 to 0.75 within 0.5% flow accuracy to theoretical value.

14.3 ORIFICE FITTING COMPLIANCE

- Bore Diameter
- Tap Hole Diameter
- Tap Hole Location
- Concentricity
- Seat Gap Width
- Fitting Pressure Test

Working Upstream

Rugged, Reliable, and Cost-Effective

Installing the SureShot Single Chamber Orifice Fitting is a choice thousands of companies make every day. The SureShot is ideal for the broadest range of plays including conventional, unconventional and mixed medium.

- Production & Test Separators
- Well Site Flow Control Skids
- Well Test Calibration Skids



Working Midstream

Accurate Measurement Data from Production to Storage

With the SureShot, requirements at each measurement point are covered: The Single Chamber delivers simple, easy and proven allocation data and the Dual Chamber conforms to the latest AGA 3/API 14.3 stringent requirements for custody transfer

- Upstream Transportation
- Compressor Stations
- Export Terminals



Working Downstream & Industrial

Delivering Operational Flexibility

The breadth of requirements for downstream and industrial markets demands a measurement technology that can deliver solutions across a wide range of applications.

- Gas Processing Plants
- Marketing Terminals
- Industrial In-Plant Processes



Skid Mounted Dual Chamber Tubes



Built by our excellent fabrication partners



Quick Facts

Why our products makes it easier, faster, and safer?

CREDENTIALS

- Fittings are AGA 14.3 / API Compliant
- Facilities are ISO-9001 Certified
- All products and parts designed, manufactured and serviced in USA
- Install base of 150,000 meters operating in applications from production to processing...and beyond

COST OF OWNERSHIP

- Competitively priced
- Provided at no additional charge
 - Product documentation
 - Seal Ring (Initial Order)
 - Telemetry taps
 - NACE trim standard
- Fewer parts to buy, service and replace
- Reduced maintenance demands drive down cost over life of fitting

PERFORMANCE

- 99% on-time delivery
- Short lead times
- Reps and techs are trained and equipped to repair fittings in the field
- Support Call Protocol
 - Calls answered immediately by TMCO employees in the USA
 - Product-related issues addressed within the hour by trained technician
 - Technicians dispatched within 24 hours in USA, if required

DESIGN – DUAL CHAMBER

- Eccentric Plug Valve (Patented) and Removable End Caps
- Orifice Plate
 - Metal-to-Metal Seat
 - 4 Point Alignment
 - Precision Machined
- Safety
 - Locking Arm Safety Device
 - Optional Lock Out / Tag Out



THANK YOU

Eximp Measurement Private Limited Our Contact

Contact us today to find your perfect solution.



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Operations

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