

09/17



schneider

Tailored to Your Business

FOCUS



**5-8
SEPT
2017**

Offshore Europe ABERDEEN, UK

SPE Offshore Europe
CONFERENCE & EXHIBITION

DirectMount System

Meets the

NATURAL GAS MEASUREMENT – BEST PRACTICES

Field research and testing conducted by South-west Research in San Antonio, Texas and the Pipeline Gas Compressor Research Council (PCRC) confirmed that pulsation created by compressors, flow control valves, regulators and some piping configurations may create undesirable levels of Square Root Error (SRE) and/or resulting Gauge Line Error (GLE). Pulsation at the orifice meter is a major source of lost and unaccounted for natural gas. These errors create large economic gains or losses for the buyer and seller along a natural gas pipeline system.

CONCLUSIONS DETERMINED

that Transmitters or Electronic Flow Measurement (EFM) devices should be:

- Close coupled to the orifice taps (within 18 inches - "Rule of Thumb")
- Use equal length, large orifice (0.375 inch I.D. or greater), constant diameter gauge lines
- Use Multi-Turn Valves to protect electronics from pressure spikes

MINIMIZE OR ELIMINATE GAUGE LINE ERROR (GLE)

Schneider DirectMount Systems (SDMS) are designed for a safe, efficient method of close coupling EFM's and transmitters to the orifice fitting, eliminating or reducing the effects of Gauge Line Error.

SDMS ARE EASY TO INSTALL

and available in both Vertical and Horizontal to Vertical Installations.

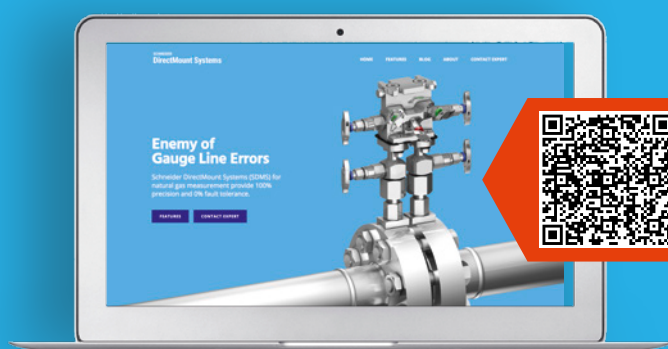
- SDMS reduces installation cost – No need to manufacture and install tube runs, fittings, and expensive pipe stands
- Reduces potential leak points associated with NPT connections
- Provides a safe compact leak free measurement installation
- Internal porting promotes self draining of condensates and liquids to reduce freezing issues

DESIGN STANDARDS MEET THE RECOMMENDATIONS OF:

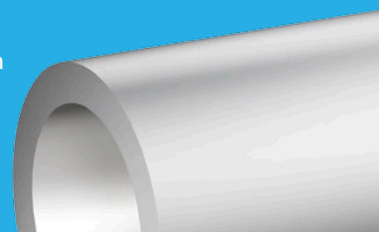
- American Petroleum Institute (API)
- Gas Processors Association (GPA)
- American Gas Association (AGA)

LONG TERM CONFIDENCE AND COMMITMENT

You can rest assured in your decision to purchase AS-Schneider, we are a modern, international family-owned company since 1875. You can rely on our 140 years of manufacturing experience. The AS-Schneider Group with its headquarters in Germany is one of the world's leading manufacturers of Instrumentation Valves and Manifolds.



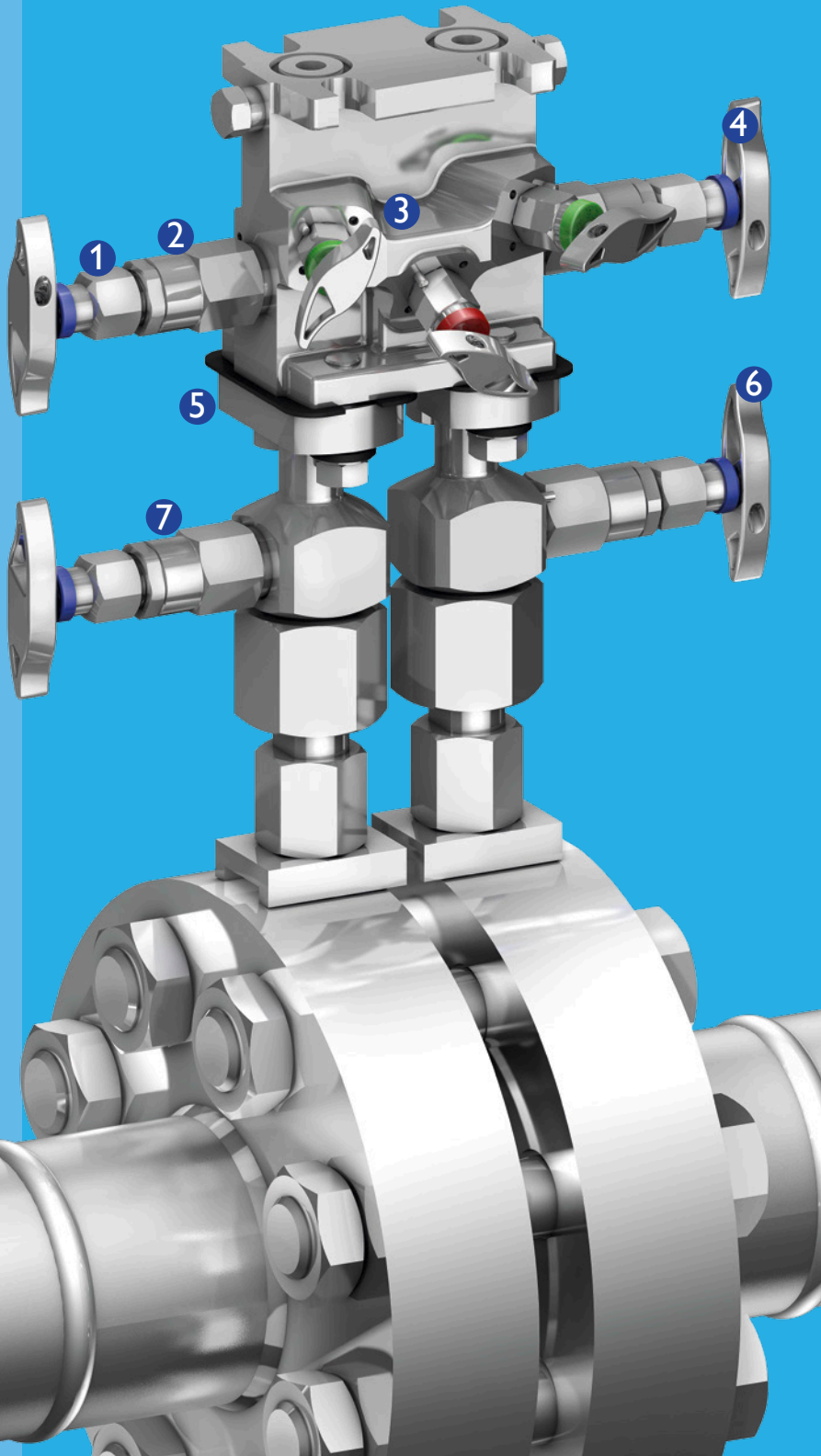
<https://directmountsystems.com>



challenge

FEATURES AND BENEFITS

- ☐ 1. NEW STEM DESIGN
Reduced operating torque.
Minimized gap between stem and stem nut for additional operating thread protection.
- ☐ 2. COST SAVINGS
Extended seal and packing life.
- ☐ 3. REDUCES FREEZING ISSUES
Flow paths machined to self drain condensates and liquid accumulation.
- ☐ 4. PROTECTION AND CONVENIENCE
6 1/2 turns to full open & close isolation valves. Protects electronics from pressure spikes.
- ☐ 5. CATHODIC PROTECTION
Dielectric isolators protect expensive electronics.
- ☐ 6. COMFORTABLE EASY TURN
Ergonomic handle design.
- ☐ 7. SAFETY
Ships assembled & pressure tested. No seat and bonnet field assembly required.
- ☐ FINALLY
Bug plug standard in 5 valve manifold vent port (not shown).



DOUBLE SAFETY. HALF SPACE.

AS-Schneider is one of the World's Leading Manufacturers of Instrumentation and Pipeline Valves.

Today we are supplying a range of Process to Instrument Valves (VariAS-Blocks) DN 10 (Bore Size 10 mm), DN 15 (Bore Size 14 mm) and DN 20 (Bore Size 20 mm) as well as Double Block & Bleed Pipeline Ball Valves (Taurus Series), starting with DN 25 (1") up to DN 150 (6") type.

The Double Block & Bleed Pipeline Ball Valves of the Taurus Series consist of a Double Block and Bleed Design made of two Isolation Valves and a Vent Valve and are available in nominal sizes from two to six inches. Depending on the type, they can withstand pressures up to 6,092 psi (420 bar). The Taurus Series is specially designed according to the standard API 6D / ISO 14313 and is therefore particularly suitable as a positive isolation for oil and gas pipelines.

Reliable fire protection and the highest tightness class with regard to volatile emissions are essential for these applications.

TÜV SÜD has certified the Taurus Series with both – with the Fire Safe and the ISO 15848-1 type testing.

SAFE AND TIGHT – ALSO IN TICKLISH SITUATIONS

The Fire Safe Test ensures that the Valves offer a safe and reliable shut-off in case of fire. For this, the Ball Valve is exposed to fire for half an hour in the presence of the TÜV SÜD where the flame temperature must be maintained between 1,382°F (750°C) and 1,832°F (1,000°C). The duration of half

an hour is roughly the time that the plant fire brigade needs to start fighting the fire. Immediately after switching off the fire, the valve is force-cooled with water which simulates extinguishing with water. During the entire duration of the approval, a leakage value, which is defined in the standard, must not be exceeded.

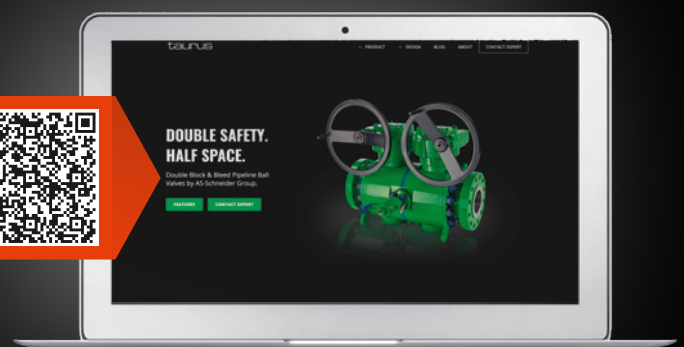
ISO FE Approval certifies the Ball Valves so that they meet the strict requirements of the ISO 15848: They meet the highest tightness class 'A' and are built to last. The Ball Valves are designed for pressure of up to 6,092 psi (420 bar) and temperatures from -20°F to 392°F (-29°C to 200°C).

WHAT MAKES THE TAURUS DESIGN SO SAFE?

To reliably prevent leakage to atmosphere, AS-Schneider uses only AED O-Rings and Graphite gaskets for stem and body seals.

The packing of the OS&Y Bleed Valve is disc spring loaded. On the one hand, the disc springs provide a low maintenance and secure sealing, and on the other, the different linear expansions due to temperature differences are balanced, which allows a positive seal on the valve seat.

<https://taurusdbbvalves.com>



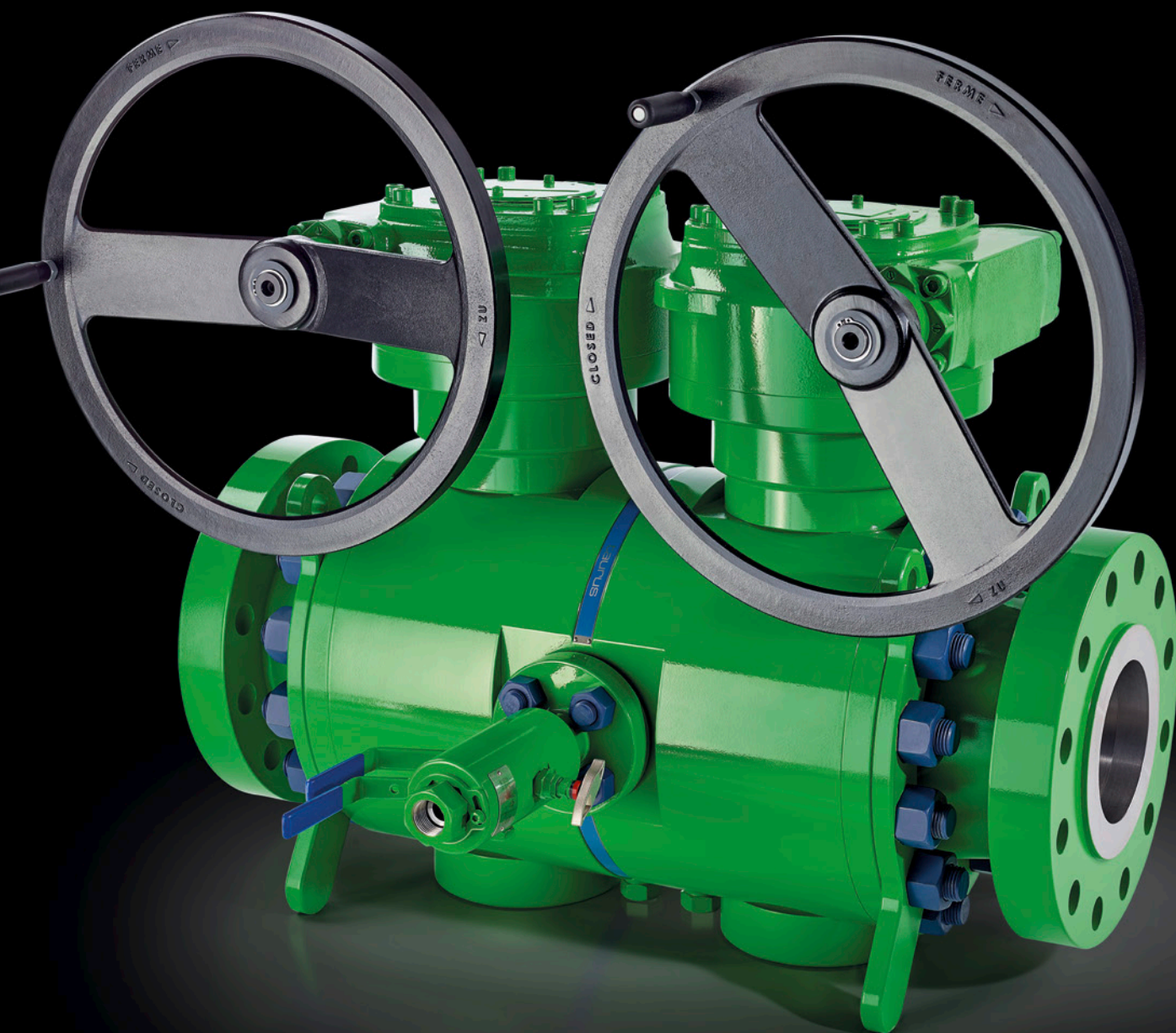
Taurus Series Double Block & Bleed Pipeline Ball Valves

Features:

- 2 Piece or 3 Piece Design
- 1" up to 6"
- Full Bore or Reduced Bore
- Floating Ball Design and Trunnion Ball Design
- Class 150 up to 2,500
- Bi-Directional and Anti-Static Design
- Anti-Blowout Stem

Developed and Designed in accordance with common Industry Standards:

- API 6D / ISO 14313
- ASME B16.34
- Fire Safe Tested and Certified acc. to API 607 and ISO 10497
- Tested and Certified for Fugitive Emissions acc. to ISO 15848-1
- NACE MR0175 and ISO 15156
- Pressure Equipment Directive (PED)





SAFETY &

MORE RELIABILITY - EVEN IF THE GOING GETS TOUGH

Works well under normal conditions? Those who opt for products made by AS-Schneider, get much more. For example, more reliability: Because even in the event of a fire, our products are absolutely reliable - Fire-Safe.

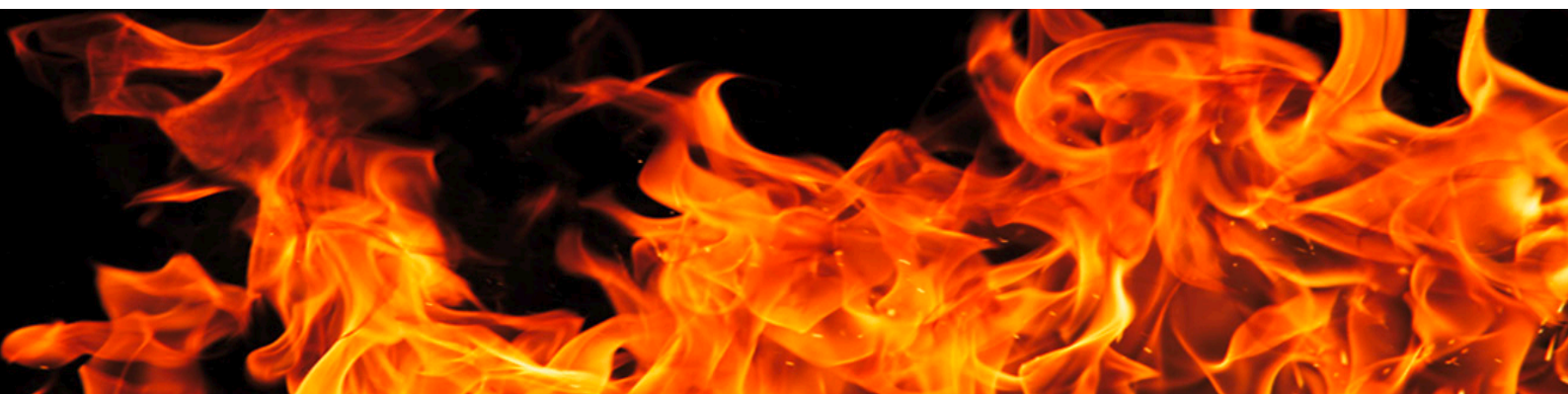
Our development engineers don't only focus on technology, performance and service. We want our customers to be able to rely on our products at any time and also in all (including emergency) situations - for example, in the event of a fire. We think that reliable fire protection is indispensable for industrial valves and therefore is a part of the standard for many AS-Schneider product lines. Ultimately they are mutually responsible for safety in highly sensitive applications such as oil and gas conveying systems or in the chemical and petrochemical industry. Our customers should be able to rely on the fact that AS-Schneider products guarantee an absolutely trustworthy and safe shut-off even in the event of fire. The fact that we meet this goal has been certified: with Fire Safe certifications. Our products have easily mastered the corresponding testing. As a result, we offer maximum safety - for our customers, for the plant and for the environment.

AS-Schneider provides Fire-Safe approval for Ball Valves, Double Block & Bleed Valves of the Taurus, VariAS-Block and Monoflange Series and for the E Series Valves and Manifolds, among others. The tested products work reliably even under extreme test conditions. The testing and certification was conducted by TÜV SÜD according to the strict requirements of ISO 10497 "Testing of Valves - Requirements for the Fire Test for Fire Safety" and API 607 "Fire Test for Quarter Turn Valves and Valves Equipped with Non-metallic Seats".

Extreme testing conditions

For example, valves are exposed to flame temperatures of up to 1,000 degrees Celsius for half an hour. Immediately after switching off the simulated fire, the valves are forcibly cooled down with water - within ten minutes - to below 100 degrees Celsius, in order to simulate the extinguishing process. The leakage of the valve seat and the leakage to atmosphere are measured over the entire test period. They must not exceed a defined limit. Finally, the valve is tested for its operability. The fittings from AS-Schneider passed the tests with flying colours: Not only that during the tests, the leakage was well below the limit values but often no leakage at all was detected. The valves also showed no limitation in their operability. They could be opened and closed easily. This high safety standard is no accident. In order to reliably prevent leakages to the outside, AS-Schneider only uses RGD-resistant O-rings and pure graphite seals for stem and body seals, e.g. in the case of the Taurus series.

In the OS & Y Bleed Valves, the packing is pressed using spring washers. On the one hand, the spring washers ensure a low-maintenance, secure seal and, on the other hand, different thermal expansions of components are compensated which leads to a secure sealing at the valve seat. With AS-Schneider products, you are therefore opting for fittings that you can rely on. Not only when things are good, but also when they get tough.



ENVIRONMENT

EXCEEDING REQUIREMENTS

Tight means tight. With our ISO FE series, the complete valve is subjected to a sophisticated leak test - including the Body Seals. As a result, AS-Schneider offers far more than the TA-Luft (VDI 2440) (Technical Instruction on Air Quality Control) requires.

Rising energy consumption, dwindling natural resources and increasingly stringent legal requirements - we know that the demands on the industry are becoming more and more demanding. For this reason, we have developed the ISO FE series as a particularly environmentally friendly offer for our customers. This series is used for Needle Valves, Manifolds and also for Ball Valves, which are subject to the strictest requirements of leakage.

The products of the ISO FE series meet the highest sealing category "A" of the ISO 15848-I. Our Valves significantly exceed the requirements for TA-Luft. When using helium, for example, the annual emission of a typical valve with the "A" sealing class is 10,000 times less than with a standard fitting. While the TA-Luft only treats the sealing system of the stem and a manufacturing guarantee is sufficient for this, the complete valve is subjected to a design test, including the body seals in our ISO FE series.

While the TA-Luft test only generally certifies a "high-quality sealing system" without allowing the individual valves to be compared, the ISO design test classifies the complete valve in detail into a pressure, temperature, endurance and tightness class. The duration of the testing also differs considerably. It takes one to two days for the TA-Luft testing. ISO 15848-testing continues for around two weeks.

These valves have no problem complying with regulatory requirements.



The ISO FE series offers a plus in advantages over conventional standard valves - not only in this respect, but also in environmental aspects: In order to meet the tough test conditions, AS-Schneider has installed only robust and high-quality components for the ISO FE series. And this is advantageous for plant safety. We are therefore delighted to be able to offer our customers the same value in several areas: an increase in environmental protection, an increase in reliability, an increase in longevity, an increase in ease of operation. And last but not least: innovative design.



Thanks for visiting us at the SPE Offshore Europe 2017 in Scotland.

For further information or if you have any questions please do not hesitate to contact our team of experts:



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