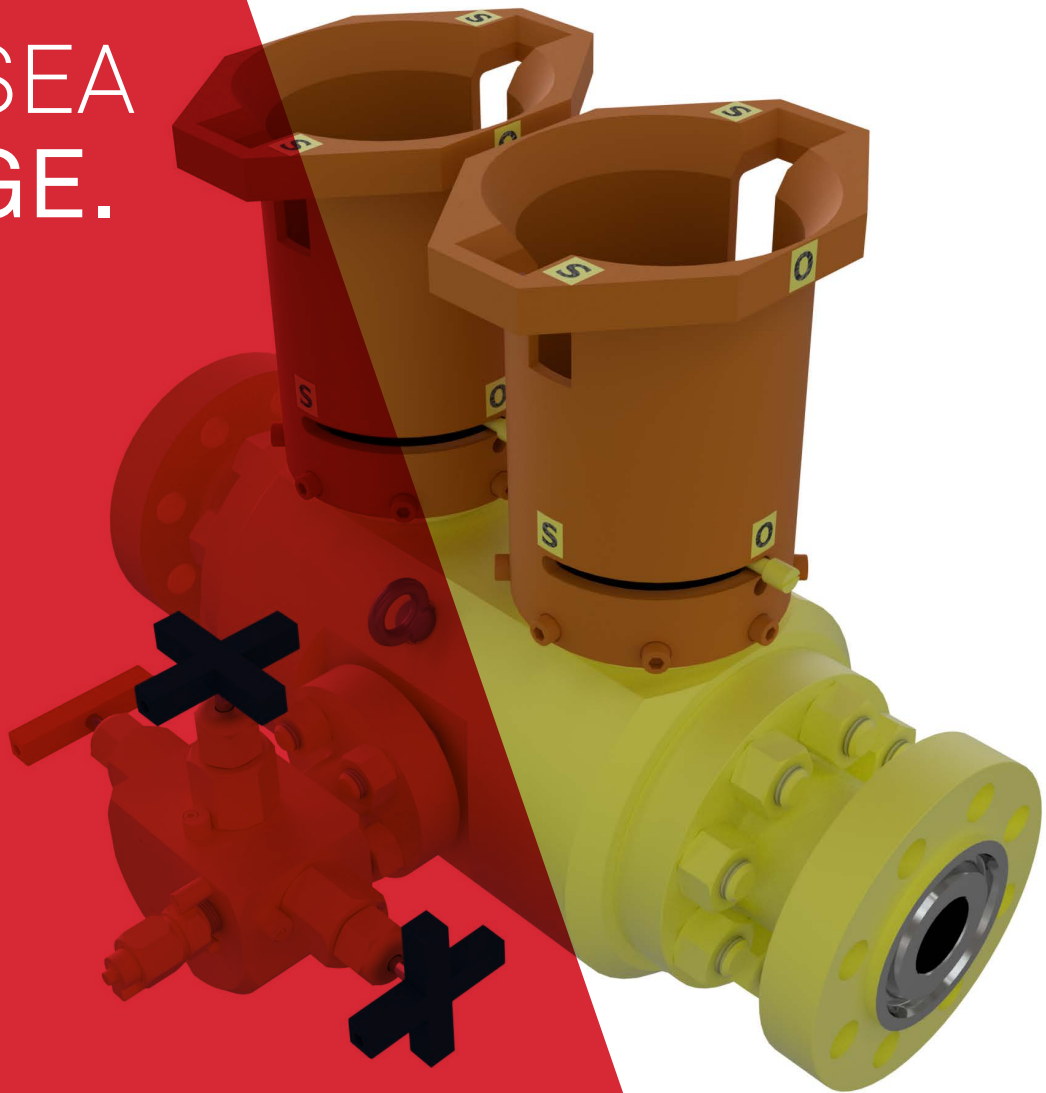


SUBSEA
RANGE.



ALCO VALVES DELIVER TRUSTED
SOLUTIONS FOR CRITICAL
APPLICATIONS.





ALCO VALVES GROUP LTD

The Alco Valves Group has been delivering quality, precision and excellence for its customers since 1977. In that time the business has evolved into the choice supplier of technically advanced valve products and solutions for critical applications across the globe.

The Alco Valves Group's extensive range of valves and accessories are precision made to fit the bespoke applications using advanced machinery and manufacturing processes. Quality assurance is of the utmost importance to Alco and the group holds a number of internationally recognised quality standards certifications and management systems.

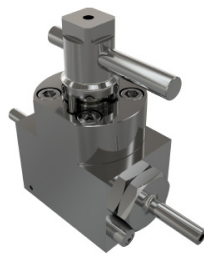
The Alco Valves Group now operates in over thirty countries worldwide with office locations in the UK and Malaysia. In 2016 the group developed its flagship headquarters in Yorkshire, UK, establishing it as a state of the art production and technology centre. This is where innovation comes to life and products are designed, tested and manufactured using the latest industry-led technology.

This dedication to operational excellence runs throughout the business, from customer service right through to the safety and reliability of products. The Alco Valves Group is committed to continual improvement and infrastructure investment as it aspires to be the most technologically advanced valve provider in the world.

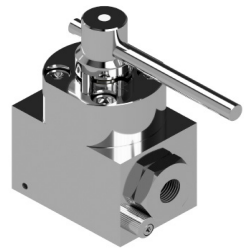
SUBSEA PRODUCTS



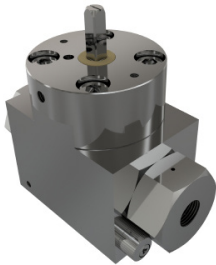
SSB1 Subsea Instrument Ball Valve



SSC1 Centurion API Ball Valve



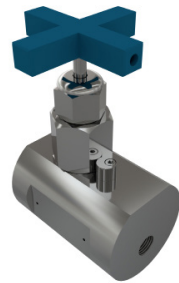
SSC2 Centurion ASMI Ball Valve



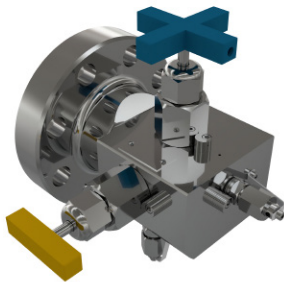
SSC3 Centurion Long Life Ball Valve



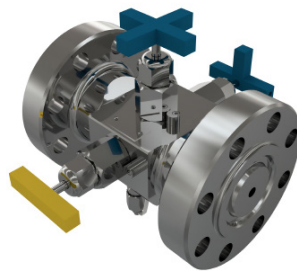
SSC4 Centurion 3 Way Ball Valve



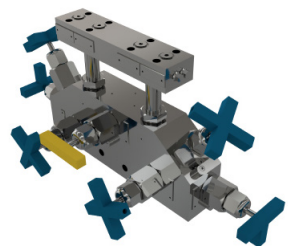
SSN1 Substar PR2 Needle Valve



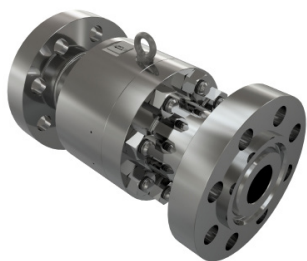
SSN2 Substar PR2 Needle Valve



SSN3 Substar PR2 Needle Valve



SSN4 Substar PR2 Needle Valve



SSCVP Check Valve



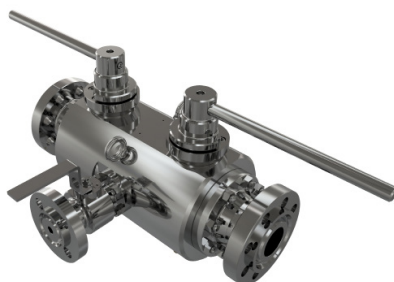
SSTS Temporary Service Ball Valve



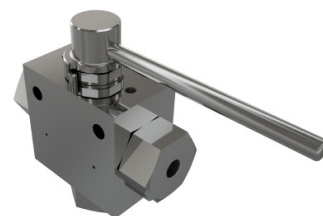
SSTMS1 Trunnion Mounted Ball Valve



SSTMS2 Trunnion Mounted
Ball Needle Ball Valve



SSTMS3 Trunnion Mounted
Ball Ball Ball Valve



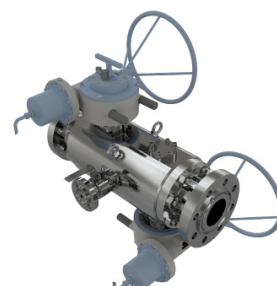
SSTMS4 Trunnion Mounted
3 Way Ball Valve



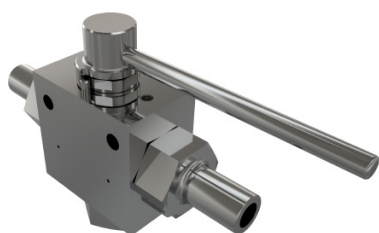
SSTMM1 Trunnion Mounted
Ball Valve



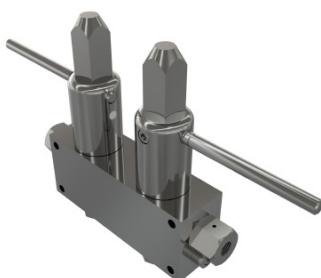
SSTMM2 Trunnion Mounted
Ball Needle Valve



SSTMM3 Trunnion Mounted
Ball Ball Ball Valve



SSTMM4 Trunnion Mounted
3 Way Ball Valve

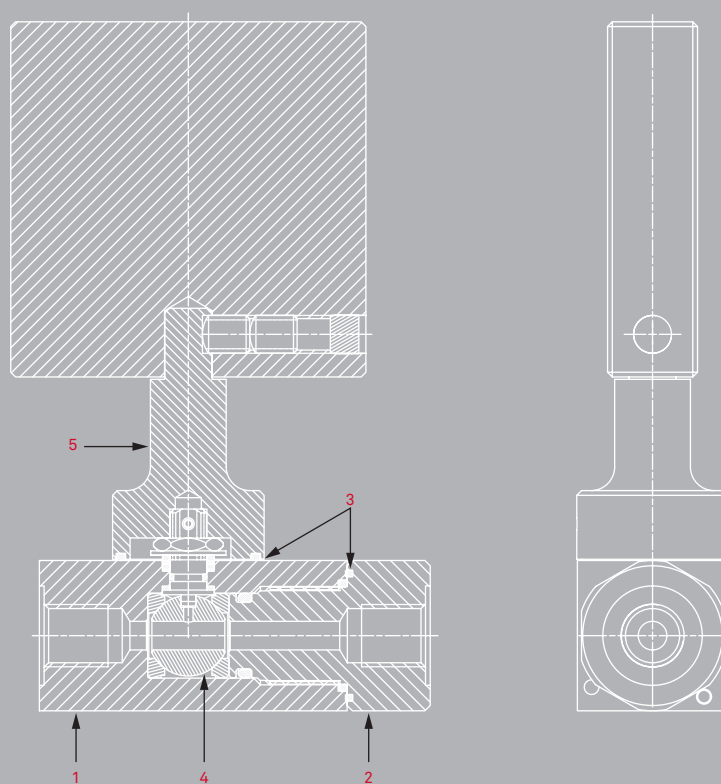


SSMS Small Bore Trunnion
Ball Valve

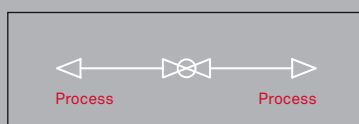
SSB1 - Subsea Instrument Ball Valve Range

Technical Spec

Alco Valves manufacture a range of high integrity bar stock instrument ball valves for light to medium subsea service applications. The SSB1 is a floating pattern ball valve design that can be configured with threaded end connections in various materials. It provides a superb shut-off solution with a smooth 90 Degree operation for pressures up to 10,000 psi and a maximum working depth of 300 metres (1000 ft). Product qualifications to API and internationally recognised standards are available on request.



Flow Diagram



- Valve Body
- End Connector
- Ingress Seals
- Ball
- ROV Paddle (Optional)

Valve Construction



Pressure Rating

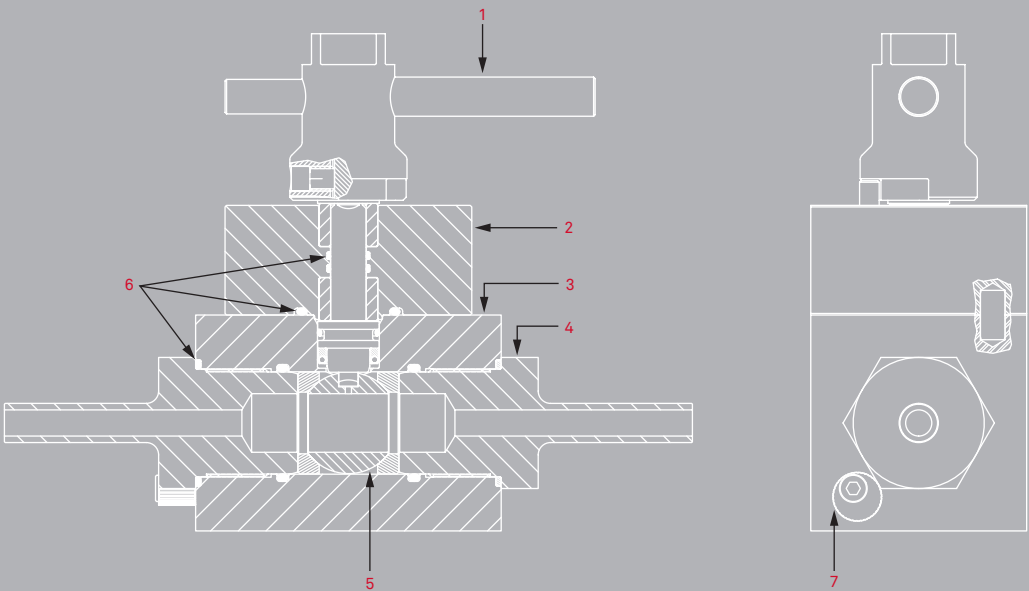
Up to API 6A 10,000 psi

- Threaded pipe connections
- Handle, ROV and diver operated
- Bare stem / Actuation options available
- Single block isolation
- Full and reduced bore options from 6mm - 13mm
- Suitable for underwater service depth to 300m (1000 ft)

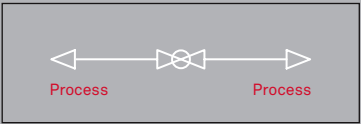
SSC1 - Centurion API Ball Valve Range

Technical Spec

The Centurion is a floating pattern ball valve originally designed for a high pressure compressed natural gas application, where the design was substantiated by performing over 1,000,000 cycles. The Centurion design has also been PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009. Extensive testing and operational experience demonstrates the Centurion valve provides superior sealing solutions where safety and reliability for extended life are required at pressures up to 10,000 psi and a maximum working depth of 3000 metres (10,000 ft)



Flow Diagram



- Handle (Optional)
- Valve Bonnet
- Valve Body
- End Connector
- Ball
- Ingress Seals
- Locking Cam

Valve Construction

**Pressure Rating**

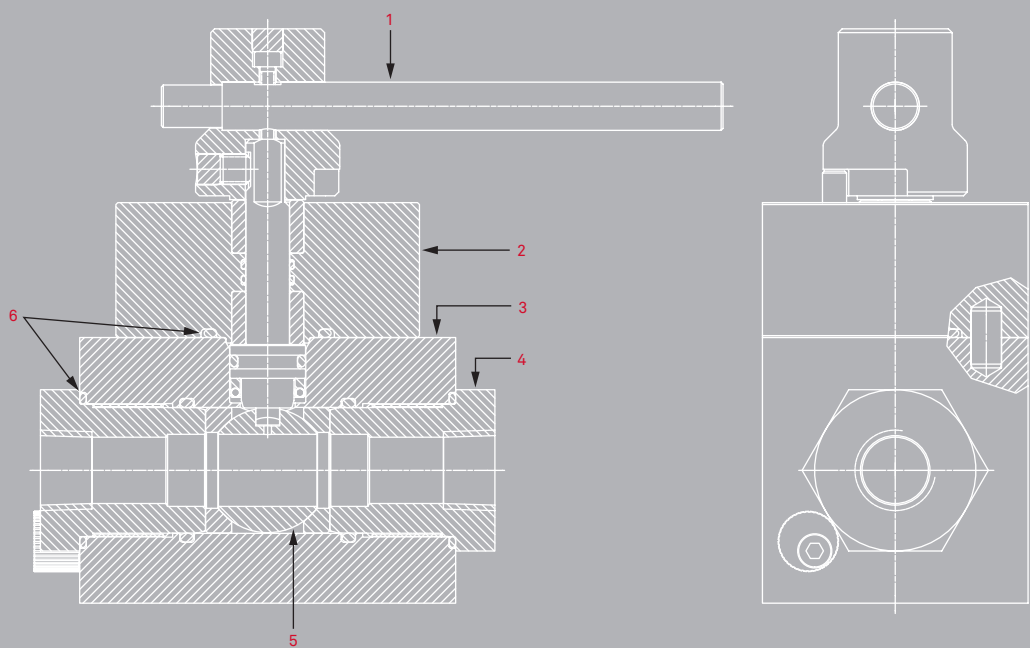
Up to API 6A 10,000 psi

- Choice of operators: Bare stem (for user actuation), lever or low torque ROV paddle
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service up to 3000m (10,000ft)
- Body, stem and ingress seals
- Available in 10mm and 13mm bore sizes (19mm on request)
- Single block, double block or double block and bleed available
- Triple stem sealing design
- PR2 performance verification testing to API 6A
- Lip seal primary seals
- O-ring secondary and tertiary seals (as applicable)
- NPT, BSPP and BSPT thread options
- Schedule pipe or customer defined stub tubes
- SAE connections available on request

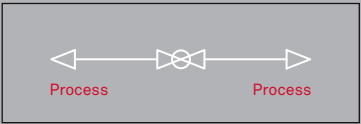
SSC2 - Centurion ASME Ball Valve Range

Technical Spec

This subsea valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Alco high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft. The SSC2 range offers single block, double block and double block and bleed options designed to ASME specifications with threaded, welded or flanged connections. The in-house design team can accommodate most requirements.



Flow Diagram



- Handle
- Valve Bonnet
- Valve Body
- End Connector
- Ball
- Ingress Seals

Valve Construction

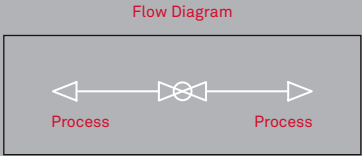
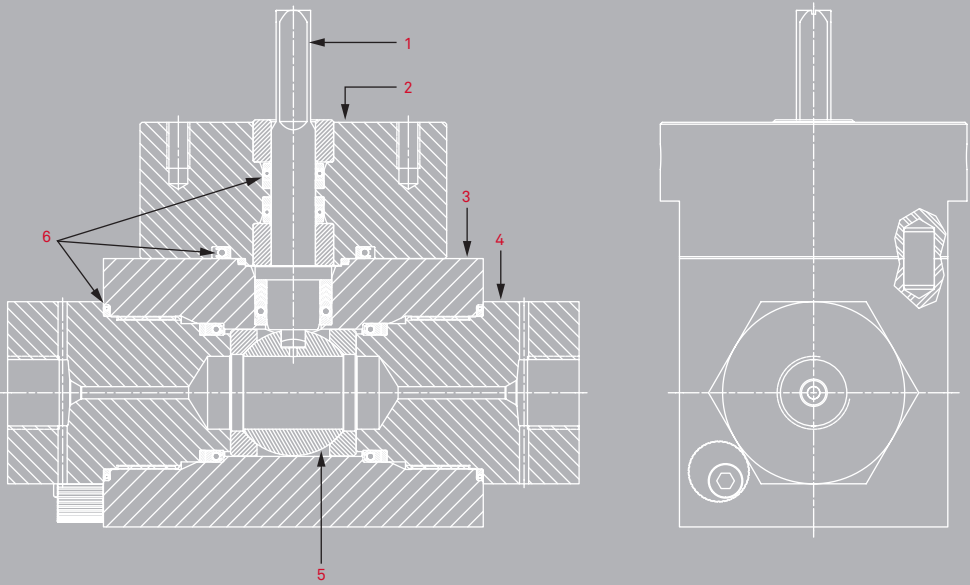
**Pressure Rating**

Up to API 10,000 psi

- Choice of operators: Bare stem (for user actuation), lever or low torque ROV paddle
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service up to 3000m (10,000ft)
- Body, stem and ingress seals
- Available in 10mm and 13mm bore sizes (19mm on request)
- Single block, double block or double block and bleed available
- Triple stem sealing design
- PR2 performance verification testing to API 6A
- Lip seal primary seals
- O-ring secondary and tertiary seals (as applicable)
- NPT, BSPP and BSPT thread options
- Schedule pipe or customer defined stub tubes
- SAE connections available on request

SSC3 - Centurion Long Life Ball Valve Range

Alco Valves utilised the technical design of the Centurion ball valve to provide a three way version suitable for diverting high pressure lines as well as providing shut off in a single valve body. The three way centurion is offered as a bottom entry design as standard and was developed for high flow applications of pressures up to 10,000 psi as a maximum working depth of 3000 metres (10,000 ft) and has up to a 50 year life span.



- Bare Stem Design
- Valve Bonnet
- Valve Body
- End Connector
- Floating Ball
- Ingress Lip Seals

**Pressure Rating**

Up to API 10,000 psi

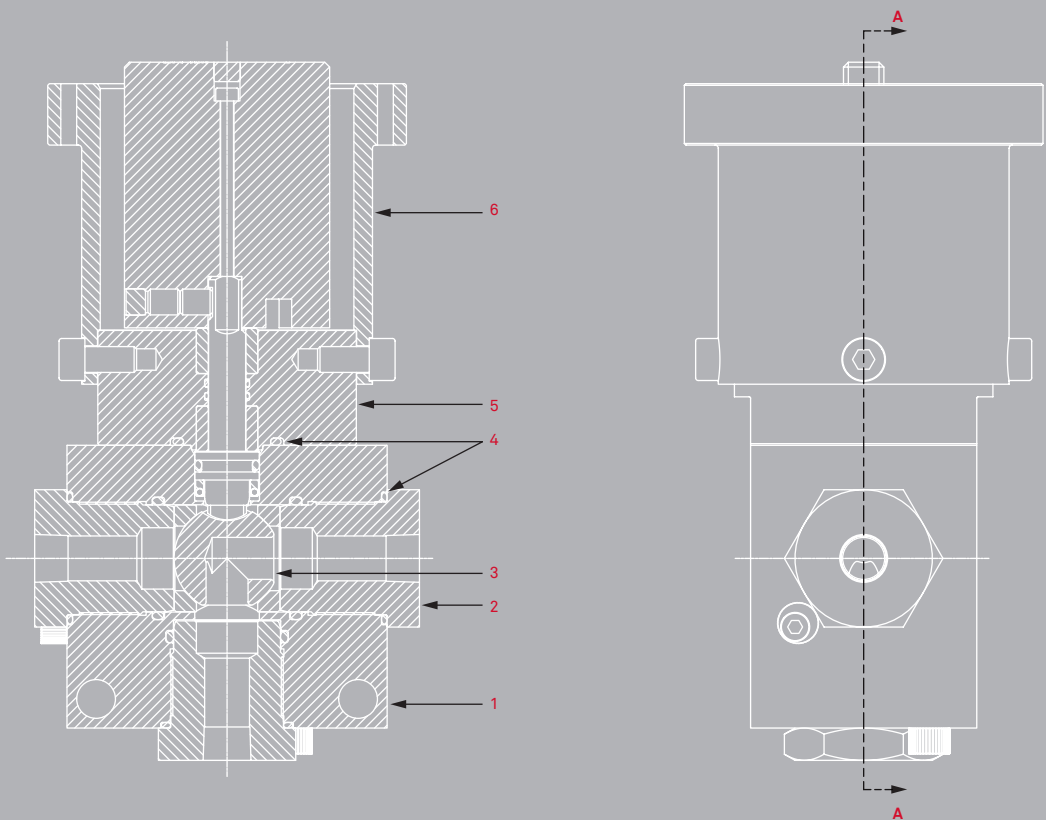
- Choice of operators: Bare stem, lever or low torque ROV paddle
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- Available in 10mm and 13mm bore sizes (19mm on request)
- Triple stem sealing design
- PR2 performance verification testing to API 6A
- Mixing or diverting flow
- Optional ROV guide receptacle
- Schedule pipe or customer defined stub tubes
- SAE connections available upon request

SSC4 - Centurion 3 Way Ball Valve Range

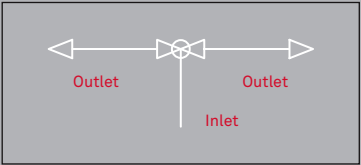
Technical Spec

This Sub-Tek valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Alco high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft.

The SSC4 range offers single block, multiport options designed to API specifications with threaded or welded connections. The in-house design team can accommodate most requirements.



Flow Diagram



- Valve Body
- End Connector
- L-Port Ball
- Ingress Seals
- Valve Bonnet
- ROV Receptacle with Paddle

Valve Construction

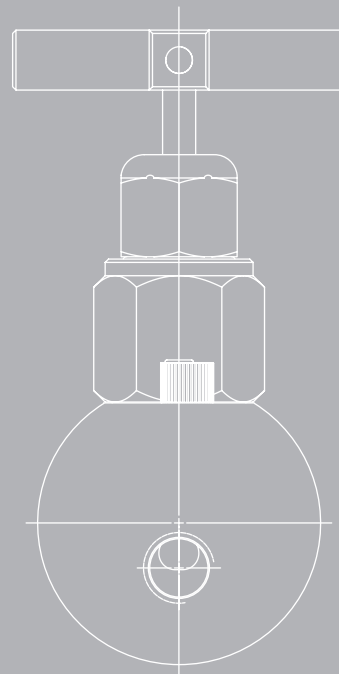
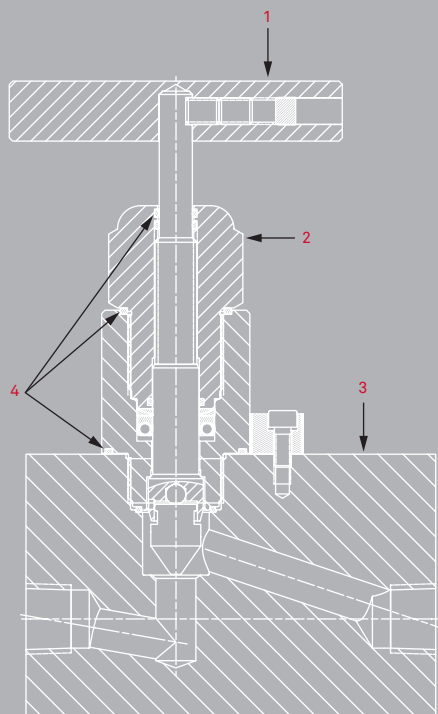
**Pressure Rating**

Up to API 10,000 psi

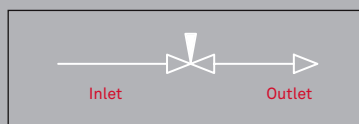
- Choice of operators: Bare stem (actuated), lever or ROV paddle
- Connection options include: Threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- Body, stem and ingress seals
- Available in 10mm and 13mm bore sizes (19mm on request)
- 3 way multiport solution
- Triple stem sealing design
- PR2 performance verification testing to API 6A
- Lip seal primary seals
- O-ring secondary and tertiary seals (as applicable)
- NPT, BSPP and BSPT thread options
- Schedule pipe or customer defined stub tubes

SSN1 - Substar PR2 Needle Valve

The Substar needle valve utilises a metal to metal, anti-rotating tip for superior shut off that can be configured with various end connections in various materials. The range has been successfully PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009 and in addition has been endurance tested to TOTAL GS-EP-SPS-005 completing over 1200 cycles. The SSN1 is offered as a single block isolation valve.



Flow Diagram



- Coded Handle
- Substar Needle Assembly
- Valve Body
- Ingress Seals



Pressure Rating

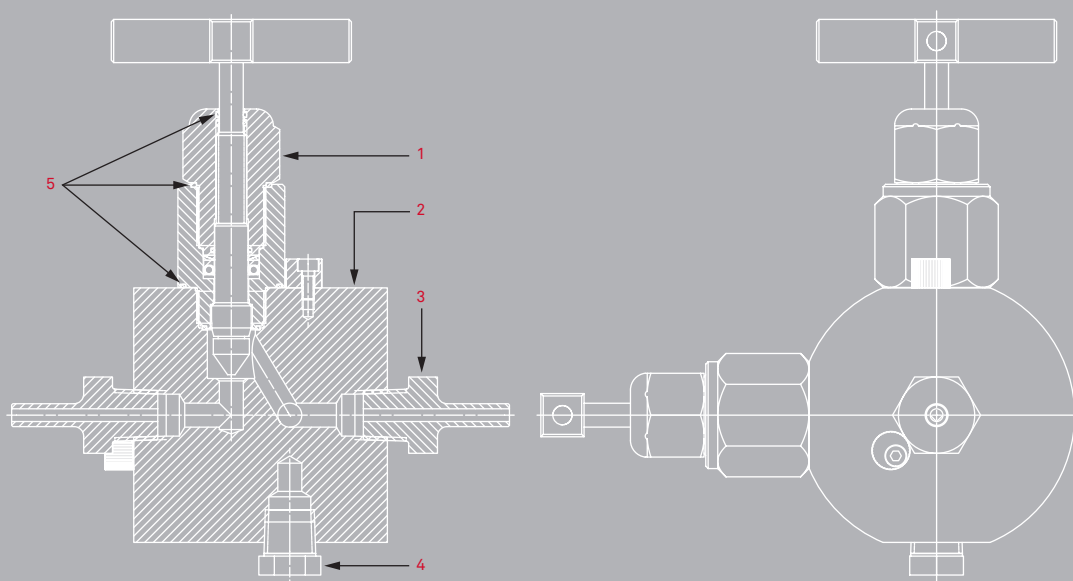
Up to API 10,000 psi

- Connection options include: Flanged, threaded and welded
- Single block isolation
- 10mm or 12mm bore size options
- Diver operated only
- Suitable for underwater service up to 3000m (10,000ft)
- PR2 performance verification testing to API 6A
- Schedule pipe or customer defined stub tubes

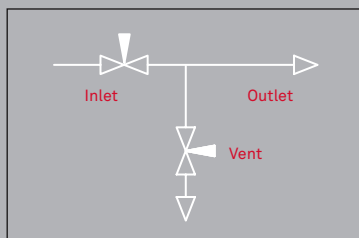
SSN2 - Substar PR2 Needle Valve

Technical Spec

The Substar needle valve utilises a metal to metal, anti-rotating tip for superior shut off that can be configured with various end connections in various materials. The range has been successfully PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009 and in addition has been endurance tested to TOTAL GS-EP-SPS-005, completing over 1200 cycles. The SSN2 is a single block and bleed configuration for instrumentation.



Flow Diagram



- Substar Needle Assembly
- Valve Body
- Screwed End Connector
- Blank Plug
- Ingress Seals

Valve Construction

**Pressure Rating**

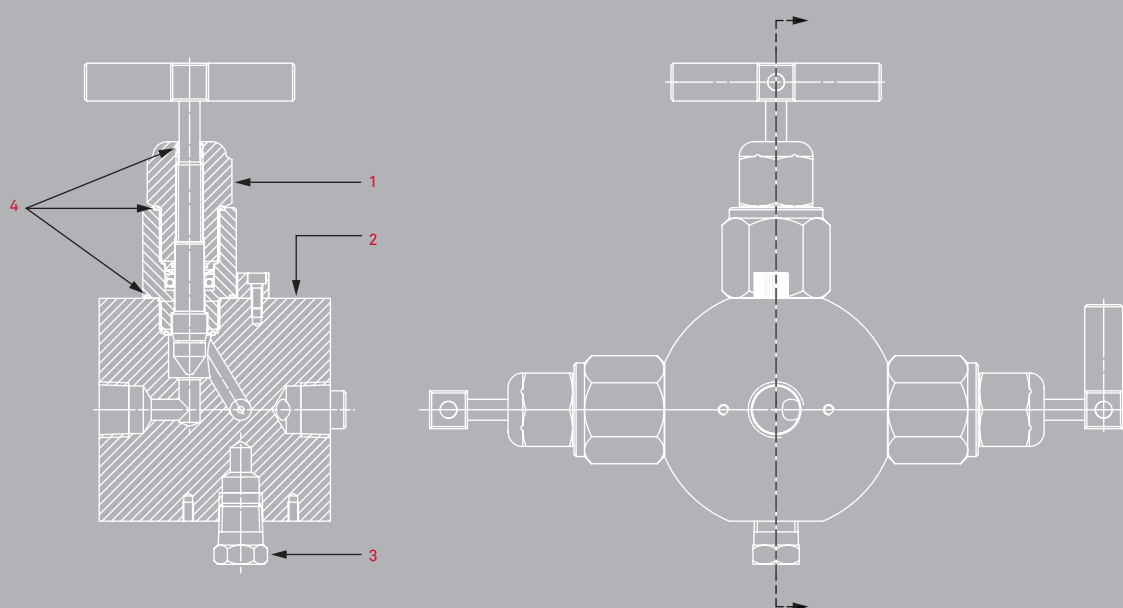
Up to API 10,000 psi

- Connection options include: Flanged, threaded and welded
- Single block and bleed
- 10mm or 12mm bore size options
- Diver operated only
- PR2 performance verification testing to API 6A
- Suitable for underwater service depth of 3000m (10,000ft)
- Coded handle colours and shapes for ease of operation
- Schedule pipe or customer defined stub tubes

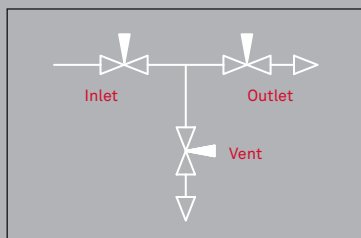
SSN3 - Substar Double Block and Bleed Needle Valve

Technical Spec

The Substar needle valve utilises a metal to metal, anti-rotating tip for superior shut off that can be configured with various end connections in various materials. The range has been successfully PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009 and in addition has been endurance tested to TOTAL GS-EP-SPS-005, completing over 1200 cycles. The SSN3 has a double block and bleed configuration for instrumentation.



Flow Diagram



- Substar Needle Assembly
- Valve Body
- 1/2" N.P.T Blank Plug
- Ingress Seals

Valve Construction

**Pressure Rating**

Up to API 10,000 psi

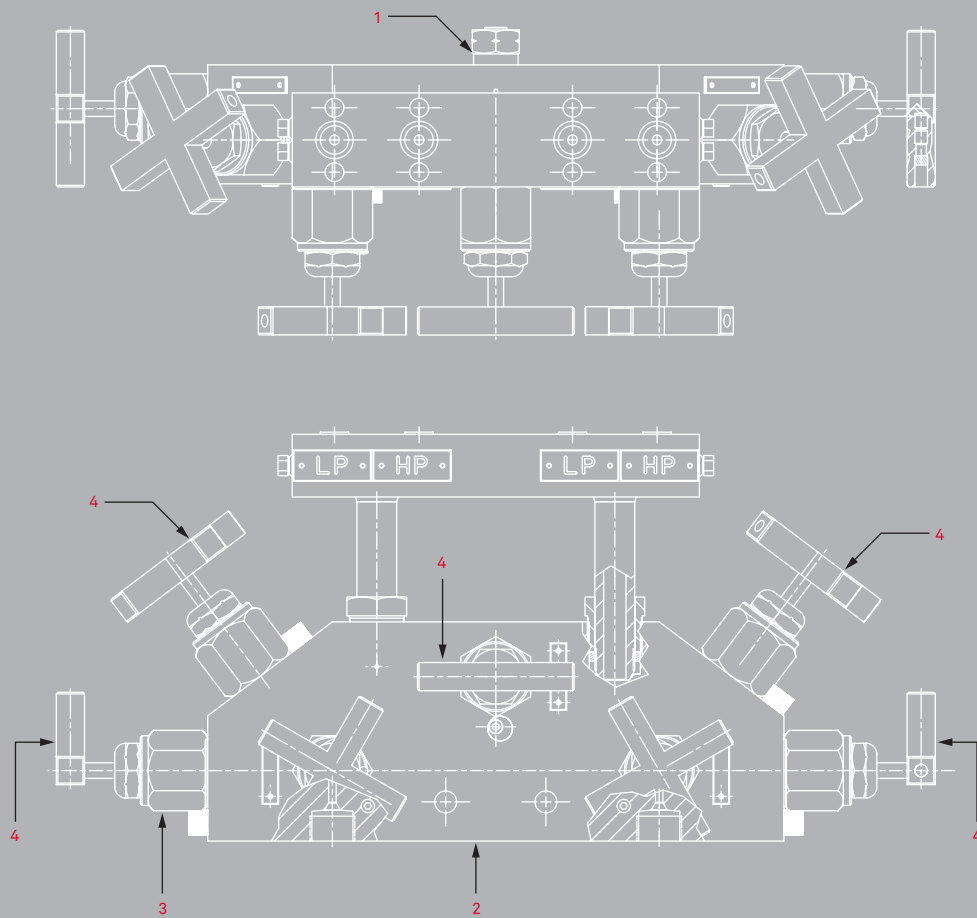
- Connection options include: Flanged, threaded and welded
- Double block and bleed configuration
- Needle vent valve
- 10mm or 12mm bore size
- Diver operated only
- PR2 performance verification testing to API 6A
- Suitable for underwater service depth of 3000m (10,000 ft)
- Coded handle design to prevent incorrect operation

SSN4 - Substar Manifold

Direct Mount

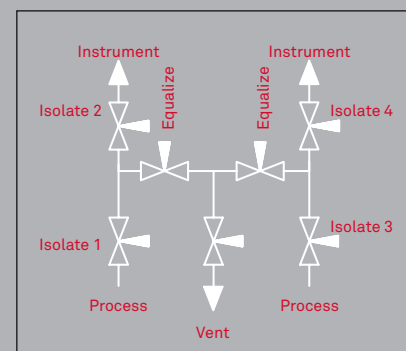
Technical Spec

The Substar manifold is suitable for direct mounting for use with differential pressure transmitters. The Substar needle valve utilises a metal to metal, anti-rotating tip for superior shut off that can be configured with various end connections in various materials. The range has been successfully PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009 and in addition has been endurance tested to TOTAL GS-EP-SPS-005, completing over 1200 cycles.



- Blank Plug
- Valve Body
- Substar Needle Assembly
- Coded Handle(s)

Flow diagram



Valve Construction

**Pressure Rating**

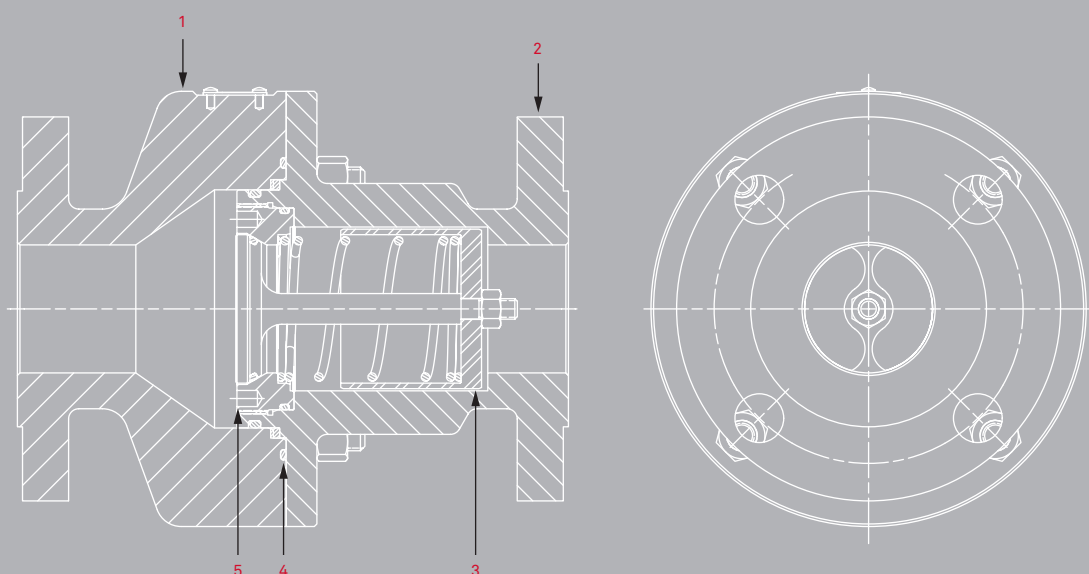
Up to API 10,000 psi

- Connection options include: Threaded and welded
- Double block and bleed configuration
- 10mm bore
- Diver operated only
- PR2 performance verification testing to API 6A
- Suitable for underwater service depth of 3000m (10,000 ft)
- Coded handle colours and shapes for ease of operation

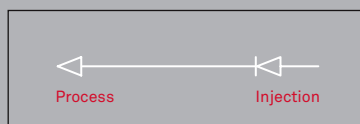
SSCVP - Check Valve Range

Technical Spec

The SSCVP is a piston check valve designed with sealing suitable for gas or liquid service. PR2 qualified to API specification 6A, 20th Edition / ISO 104232: 2009, the SSCVP can be offered to API or ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- CV Flanged Body
- CV Housing Flange
- Check Valve
- Ingress Seal
- CV Screwed Insert

Valve Construction



Flow Direction

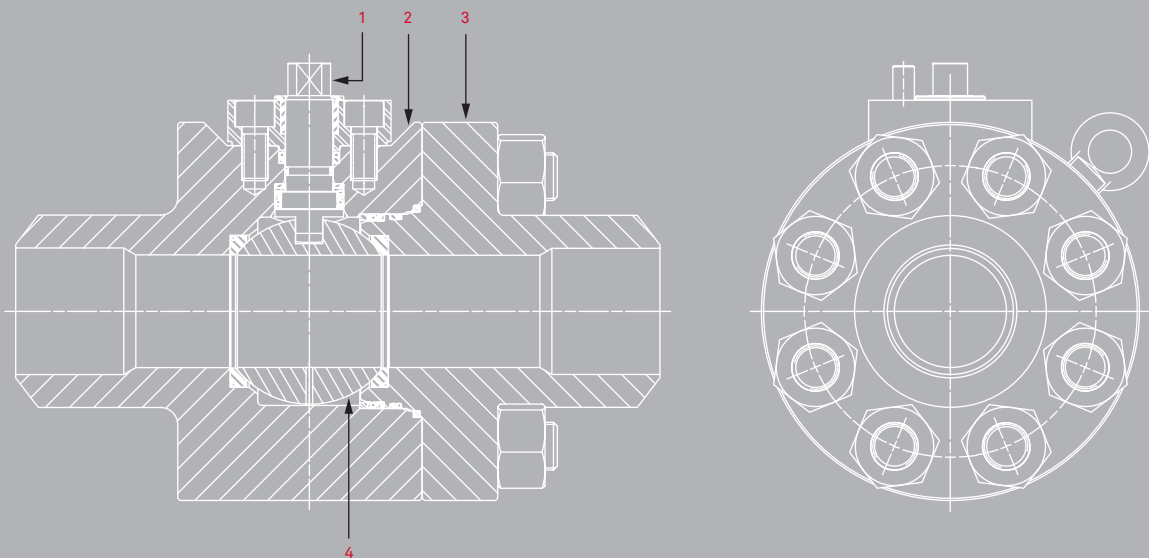
Up to API 10,000 psi

- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm (1/2") to 50mm (2") bore size options
- Check valve design can be incorporated into other valve configurations

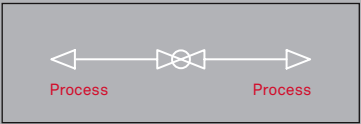
SSTS - Subsea Temporary Service Ball Valve Range

Technical Spec

The SSTS is a floating ball valve designed for light to medium duty subsea service. The range can be configured with soft or metal seats for demanding service conditions and can be offered to API or ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- Bare Stem
- Valve Body
- Bolt On Flange C/W Weld Prep
- Floating Ball

Valve Construction



Pressure Rating

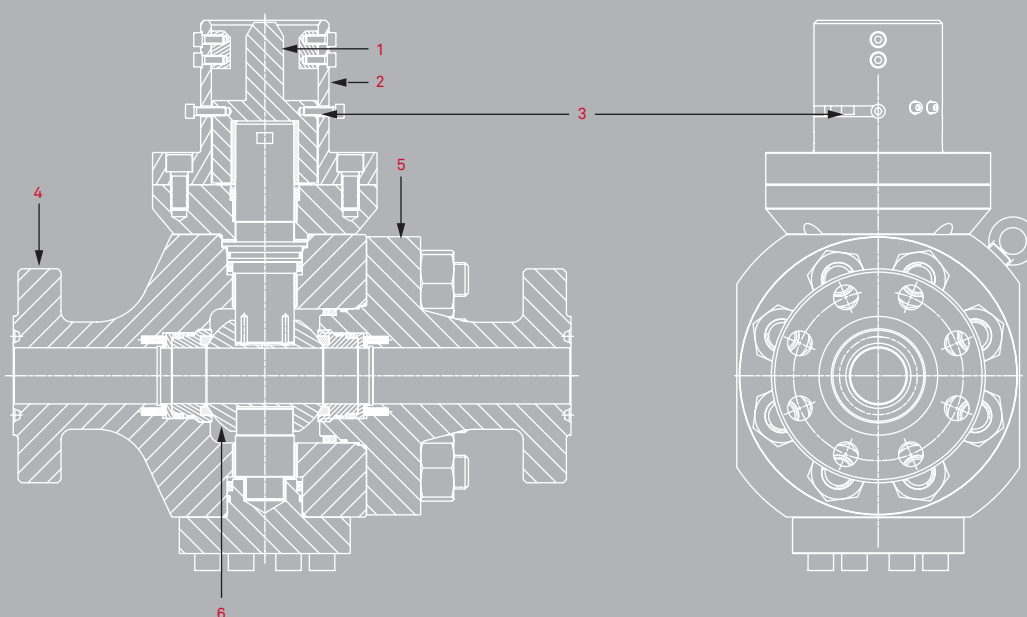
Up to API 10,000 psi

- Single isolate configuration
- Connection options include: Flanged, threaded or welded
- ROV, bare stem or diver operated options available
- Suitable for underwater service depth of 3000m (10,000 ft)
- 13mm to 150mm bore size options

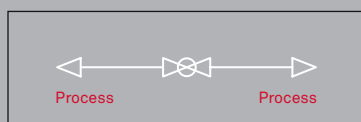
SSTMS1 - Single Isolate Trunnion Mounted Range

Technical Spec

The SSTMS1 is a single isolate trunnion ball valve designed for light to heavy duty subsea service. PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009, the SSTM range can be offered with soft or metal seats for demanding service conditions. The design can be offered to API and ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- 1 ROV Operation Drive
- 2 ROV Receptacle
- 3 Position Indicating SHC Screws
- 4 Flanged Body
- 5 Bolt On Flange
- 6 Trunnion Ball

Valve Construction



Pressure Rating

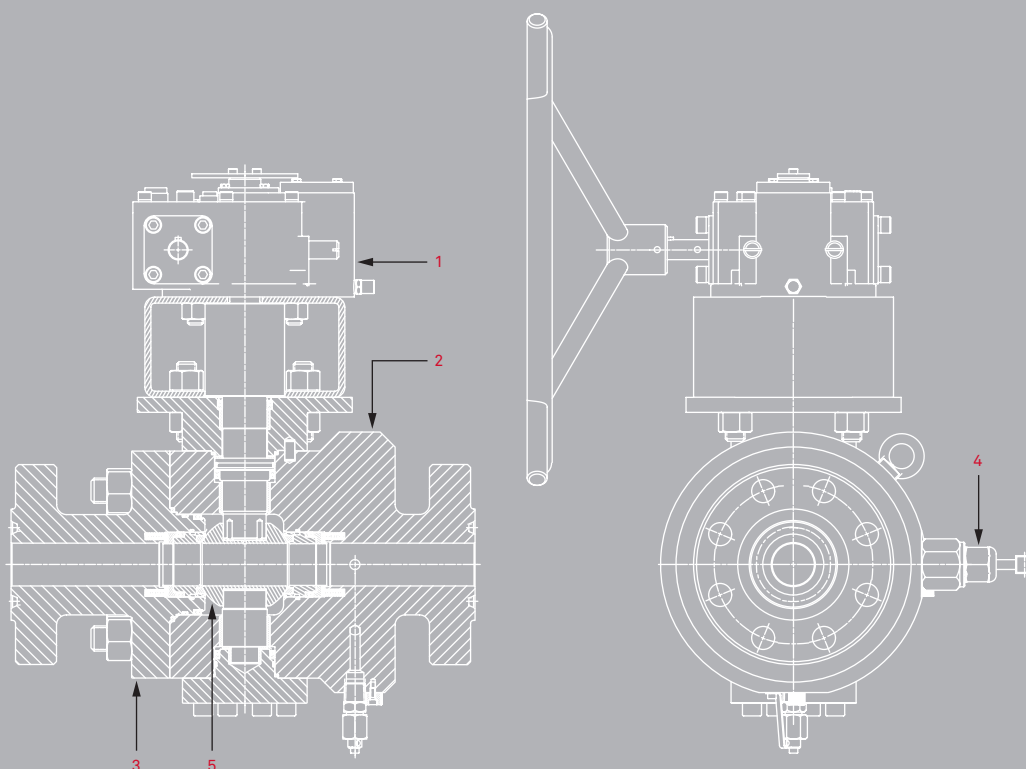
Up to API 10,000 psi

- Single isolate configuration
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Soft seat design
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A available

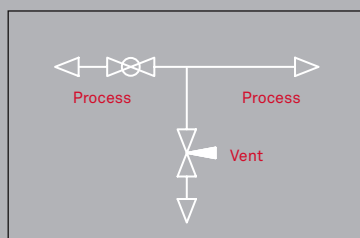
SSTMS2 - Single Block and Bleed Trunnion Mounted Range

Technical Spec

The SSTMS2 is a single block and bleed trunnion ball valve designed for light to heavy duty subsea service. PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009, the SSTMS range can be offered with soft or metal seats for demanding service conditions. The design can be offered to API or ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- Diver Operated Gearbox
- Flanged Body
- Bolt On Flange
- Substar Needle Assembly
- Trunnion Ball

Valve Construction

**Pressure Rating**

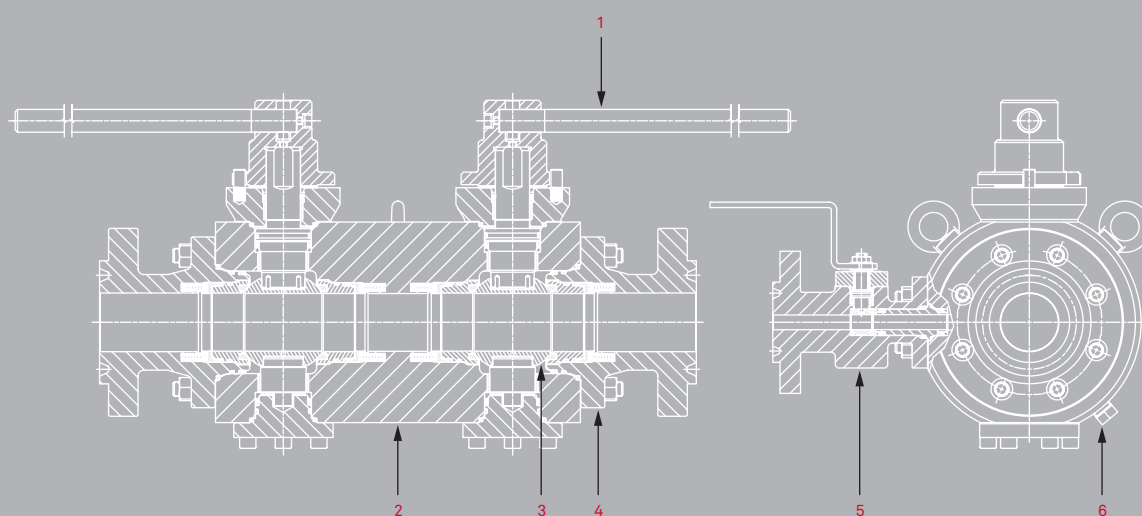
Up to API 10,000 psi

- Single block and bleed configuration
- Ball or Substar needle valve vent options
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Soft or metal seat options
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A

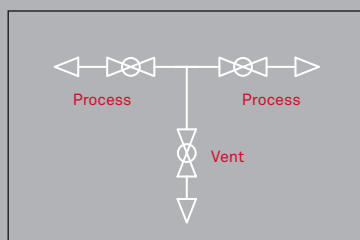
SSTMS3 - Double Block and Bleed Trunnion Mounted Range

Technical Spec

The SSTMS3 is a double block and bleed trunnion ball valve designed for light to heavy duty subsea service. PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009. the SSTMS range can be offered with soft or metal seats for demanding service conditions. The design can be offered to API or ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- Lever Handle
- Valve Body
- Trunnion Ball
- Bolt On Flange
- Bolt On Venting Ball Valve
- Vent Plug

Valve Construction

**Pressure Rating**

Up to API 10,000 psi

- Double block and bleed configuration
- Ball or Substar needle valve vent options
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm to 250mm bore size options
- Soft or metal seat options
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A available

SSTMS4 - Trunnion Mounted 3 Way Ball Valve Range

This subsea valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Alco high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft. The SSTMS4 range offers a single block 3 way design to API specifications with threaded connections. The in-house design team can accommodate most requirements.

Technical Spec

Flow Diagram

Outlet Outlet

Inlet

Valve Construction

- Lever Handle
- Ingress Seal
- Valve Body
- End Connector
- L Port Trunnion Ball
- Bottom End Connector

**Pressure Rating**

Up to API 10,000 psi

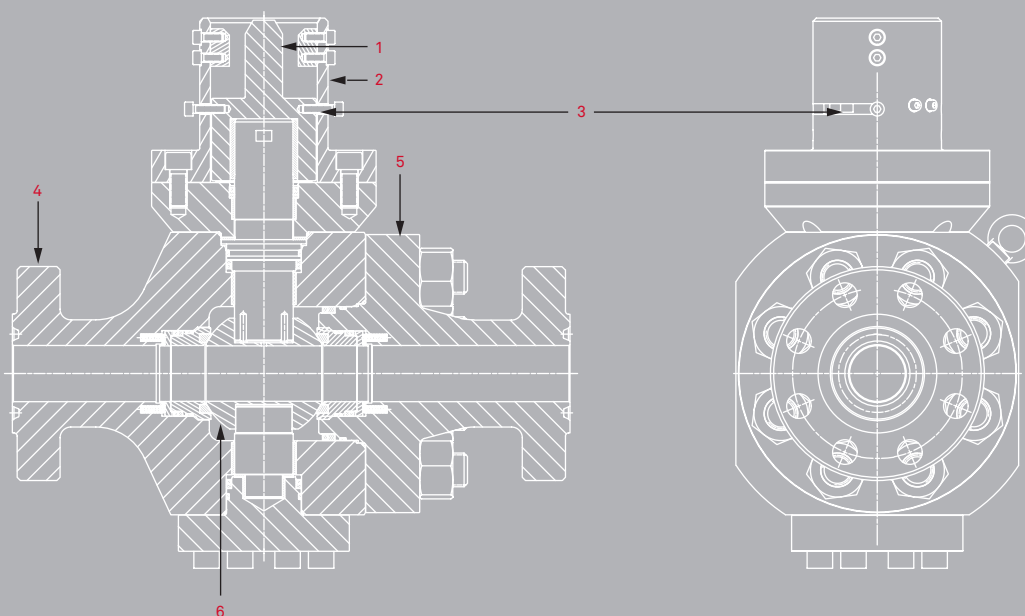
- Single block diverting valve
- ROV, gearbox or diver operated
- Soft seat design
- Trunnion design
- Bolted body design
- 13mm up to 25mm bore sizes available
- Connection options include: Flanged, threaded and welded
- Flanges to ASME B16.5 or API 6A
- Suitable for underwater service depth of 3000m (10,000ft)
- Body, Stem and Ingress seals
- PR2 performance verification testing to API 6A available

SSTMM1 - Trunnion Mounted Ball Valve Range

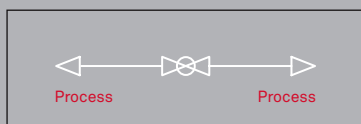
Technical Spec

This subsea valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Alco high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft.

The SSTMM1 range offers single block and double block options designed to ASME or API specifications with threaded, welded or flanged connections. The in-house design team can accommodate most requirements.



Flow Diagram



- 1 ROV Operation Drive
- 2 ROV Receptacle
- 3 Position Indicating SHC Screws
- 4 Flanged Body
- 5 Bolt On Flange
- 6 Trunnion Ball

Valve Construction

**Pressure Rating**

Up to API 10,000 psi

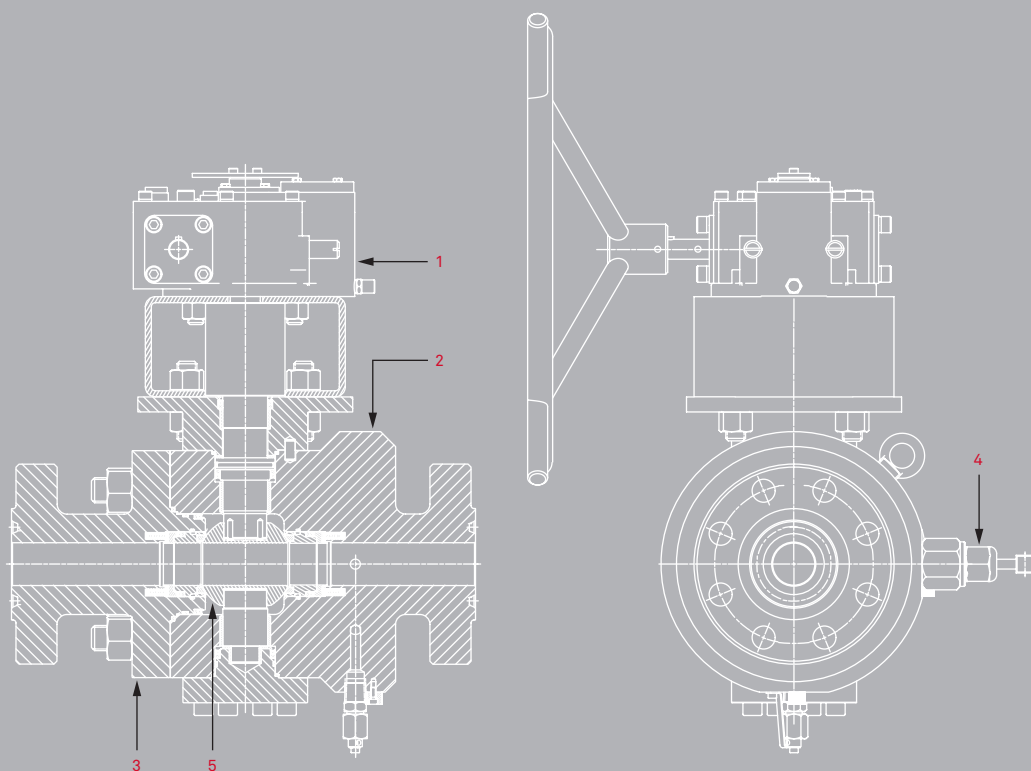
- Single isolate configuration
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Metal seat design
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A available

SSTMM2 - Trunnion Mounted Ball Needle Valve Range

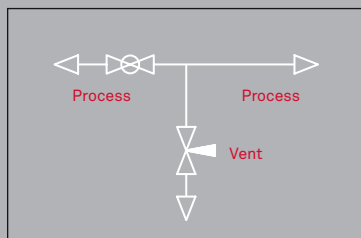
Technical Spec

This subsea valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Also high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft.

The SSTMM2 range offers single block and bleed & double block and bleed options designed to API specifications with threaded, welded or flanged connections. The in-house design team can accommodate most requirements.



Flow Diagram



- 1 Diver Operated Gearbox
- 2 Flanged Body
- 3 Bolt On Flange
- 4 Substar Needle Assembly
- 5 Trunnion Ball

Valve Construction



Pressure Rating
Up to API 10,000 psi



Flow Direction
Bi-directional

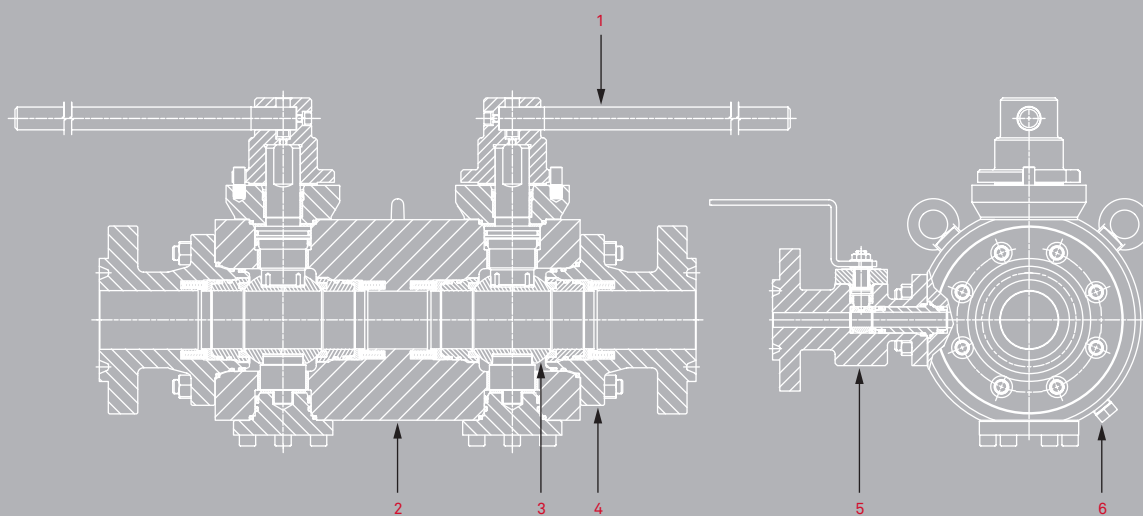
- Single isolate configuration
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Metal seat design
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A available

SSTMM3 - Trunnion Mounted Ball Valve Range

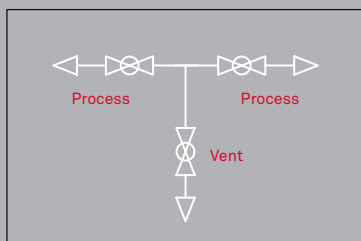
Technical Spec

This subsea valve range is designed for superb sealing keeping flow media in and the outside liquid out. Usual Alco high performance in guaranteed combined with excellent external sealing providing a working depth of up to 10,000ft.

The SSTMM3 range offers single block and bleed and double block and bleed options designed to API specifications with threaded, welded or flanged connections. The in-house design team can accommodate most requirements.



Flow Diagram



- 1 Lever Handle
- 2 Valve Body
- 3 Trunnion Ball
- 4 Bolt On Flange
- 5 Bolt On Venting Ball Valve
- 6 Vent Plug

Valve Construction



Pressure Rating
Up to API 10,000 psi

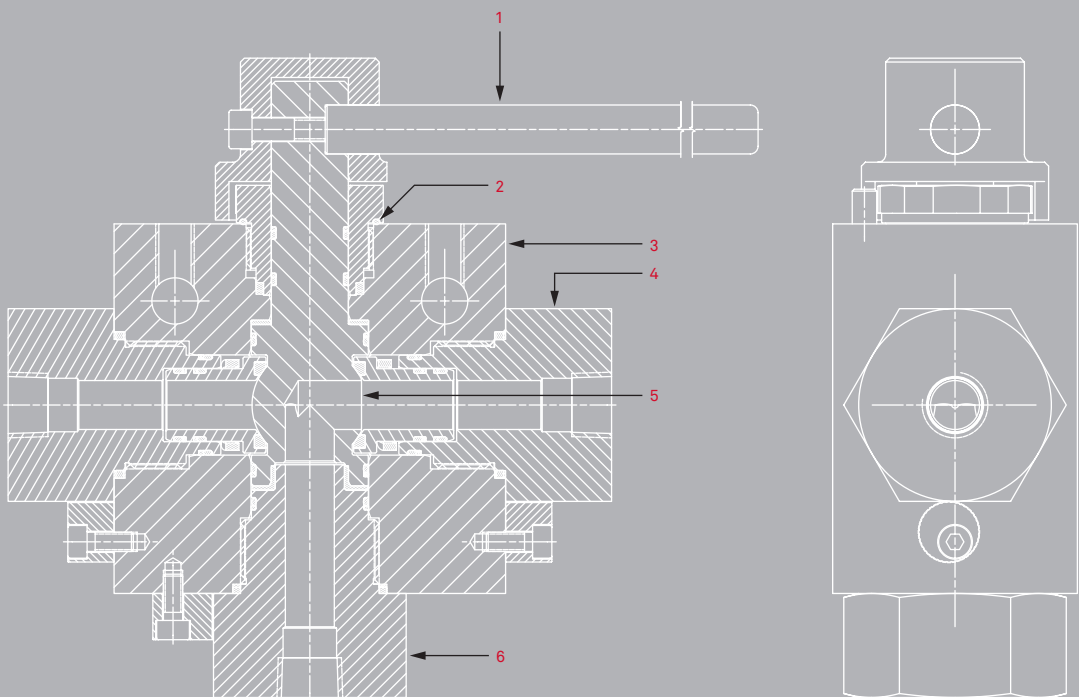


Flow Direction
Bi-directional

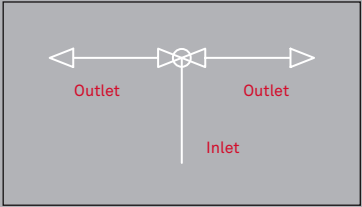
- Single isolate configuration
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Metal seat design
- Trunnion design
- ROV, gearbox or diver operated
- PR2 performance verification testing to API 6A available

SSTMM4 - Trunnion Mounted 3 Way Ball Valve Range

Alco Valves utilised the technical design of the SSMS ball valve to provide a three way version suitable for diverting high pressure lines as well as providing shut off in a single valve bod. The SSTM three way trunnion ball valve is offered as a bottom entry design as standard and was developed for high flow applications of pressures up to 10,000 psi as a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- Lever Handle
- Ingress Seal
- Valve Body
- End Connector
- L Port Trunnion Ball
- Bottom End Connector



Pressure Rating

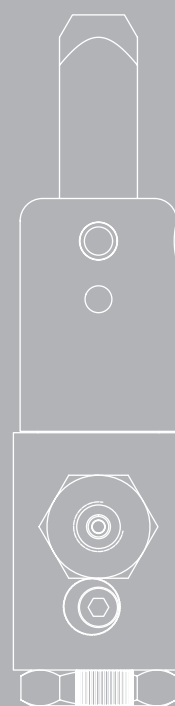
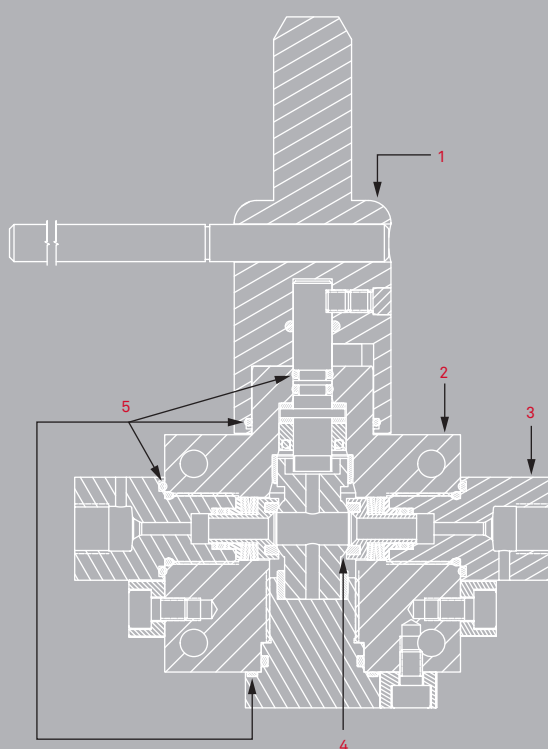
Up to API 10,000 psi

- Choice of operators: Bare stem, lever or low torque ROV paddle
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 13mm up to 250mm bore sizes available
- Triple stem sealing as standard
- PR2 performance verification testing to API 6A available
- Mixing or diverting flow
- Schedule pipe or customer defined stub tubes
- SAE connections available on request

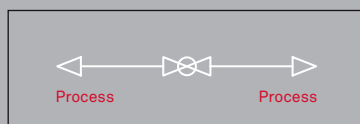
SSMS – Small Bore Trunnion Ball Valve Range

Technical Spec

The SSMS is a compact trunnion ball valve designed for light to heavy duty subsea service. PR2 qualified to API specification 6A, 20th Edition / ISO 10423:2009, the SSMS range can be offered with soft or metal seats for demanding service conditions. The design can be offered to API or ASME standards in a range of materials for service pressures up to 10,000 psi and a maximum working depth of 3000m (10,000 ft).



Flow Diagram



- Handle Boss
- Valve Body
- End Connector
- Trunnion Ball
- Ingress Seals

Valve Construction

**Pressure Rating**

Up to API 10,000 psi

- Choice of operators: Bare stem, lever or low torque ROV paddle
- Connection options include: Flanged, threaded and welded
- Suitable for underwater service depth of 3000m (10,000ft)
- 5mm bore
- Compact design
- Soft or metal seat design options
- Triple stem sealing as standard
- PR2 performance verification testing to API 6A
- Single block or double block configurations available
- Compact trunnion design



ALCO VALVES DELIVER TRUSTED

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