

ROTATING RIGHT

PIPER VALVES & SYSTEMS

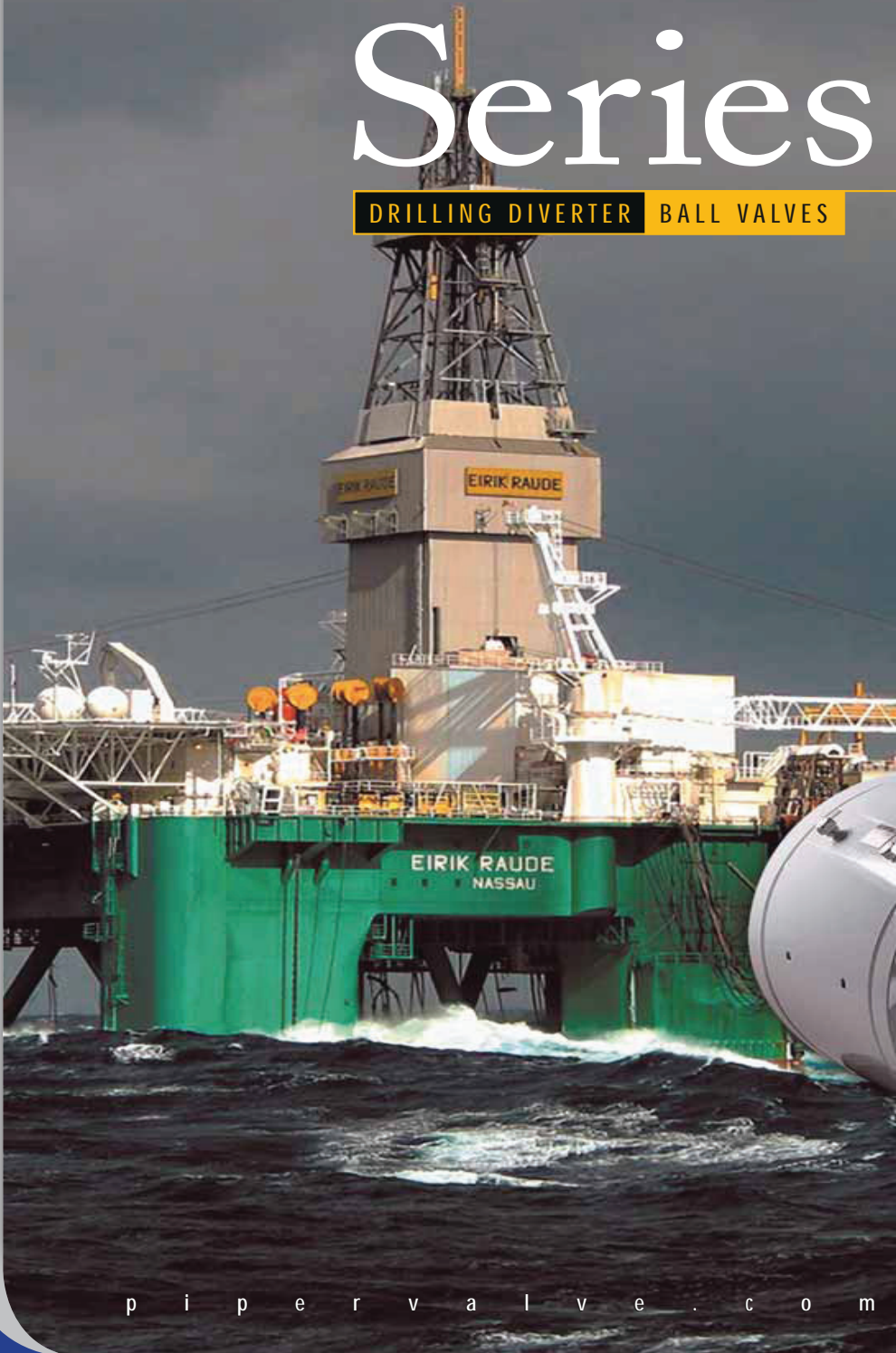
OPTIMUM FLOW TECHNOLOGY BY P I P E R

Series

DRILLING DIVERTER BALL VALVES

DC

COMPACT BALL VALVES
DESIGNED FOR DRILLING
DIVERTER APPLICATIONS



p i p e r v a l v e . c o m

Piper
VALVE SYSTEMS

Series DC Drilling Diverter Valves

DRILLING DIVERTER SOLUTIONS



SERIES DC FEATURES

- **Field Repairable:** Floating ball design allows for true field repair that can be accomplished in hours, not days.
- **Interchangeable Parts:** Internal parts are completely interchangeable between ANSI 300, 600 & 900 series valves of the same bore size.
- **Compact Size:** Compact valve design is almost half the size and weight of a standard API 6D trunnion mounted ball valve.
- **Fewer Parts:** The number of internal parts on a "DC" ball valve is less than half of the parts in conventional trunnion ball valves, resulting in less expensive repair kits.
- Available in 10" thru 18" sizes.
- ANSI Class 300, 600, 900 and 1500.
- Wide range of materials available to suit various application requirements.
- Offered in 2" thru 8" sizes for fill-up, trip tank and booster line applications
- Actuator packages available with a variety of position indicator options.
- Materials available for H₂S service.

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High Performance In A Compact Size

VALVES DESIGNED FOR DRILLING FLUID SERVICE

Piper's Series DC Drilling Diverter valves are designed to provide superior performance and extended life in corrosive and abrasive drilling fluid service not found in trunnion mounted pipeline ball valves. Piper's compact design allows for easier handling and installation in the tight areas found in rig substructures. Series DC valves are available in sizes from 10" thru 18" in ANSI Class 300, 600, 900 and 1500.

External stroke adjusters allow easy timing to the full open position, without disassembly of the actuator.

Unique seat assembly design provides excellent low pressure sealing capability.

All valve bodies and retainers are internally Xylan coated as a standard to provide corrosion resistance for ease of disassembly.

Valve bores are sized to match Schedule 80, 100 or 120 inside diameters to eliminate any transitions that could be an erosion point during flow.

Large seat contact area provides positive sealing even in high particulate conditions. Seat carriers are salt bath nitrite QPQ finished as a standard.

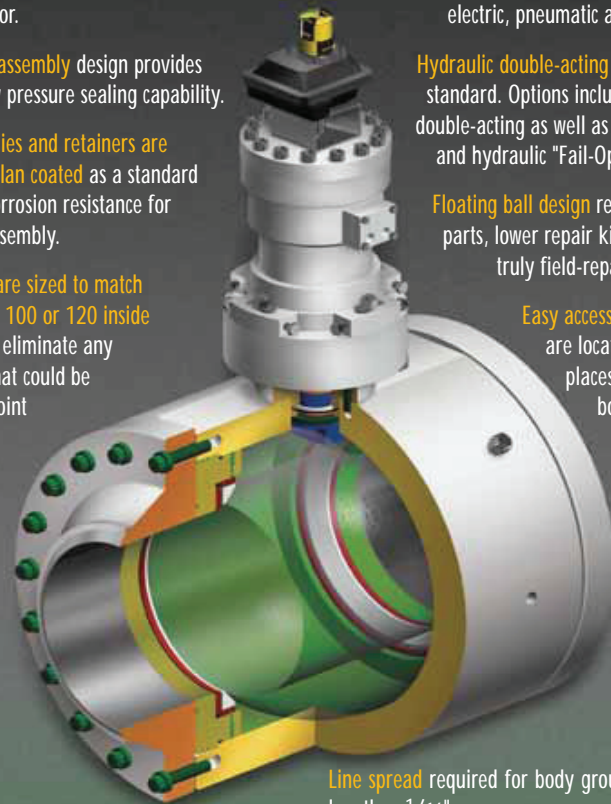
End flanges are available with a Stainless Steel wear plate to provide a replaceable sealing surface.

Visual position indication is standard. Optional position indication includes electric, pneumatic and hydraulic.

Hydraulic double-acting actuators are standard. Options include pneumatic double-acting as well as spring-return and hydraulic "Fail-Open" features.

Floating ball design results in fewer parts, lower repair kit costs, and a truly field-repairable valve.

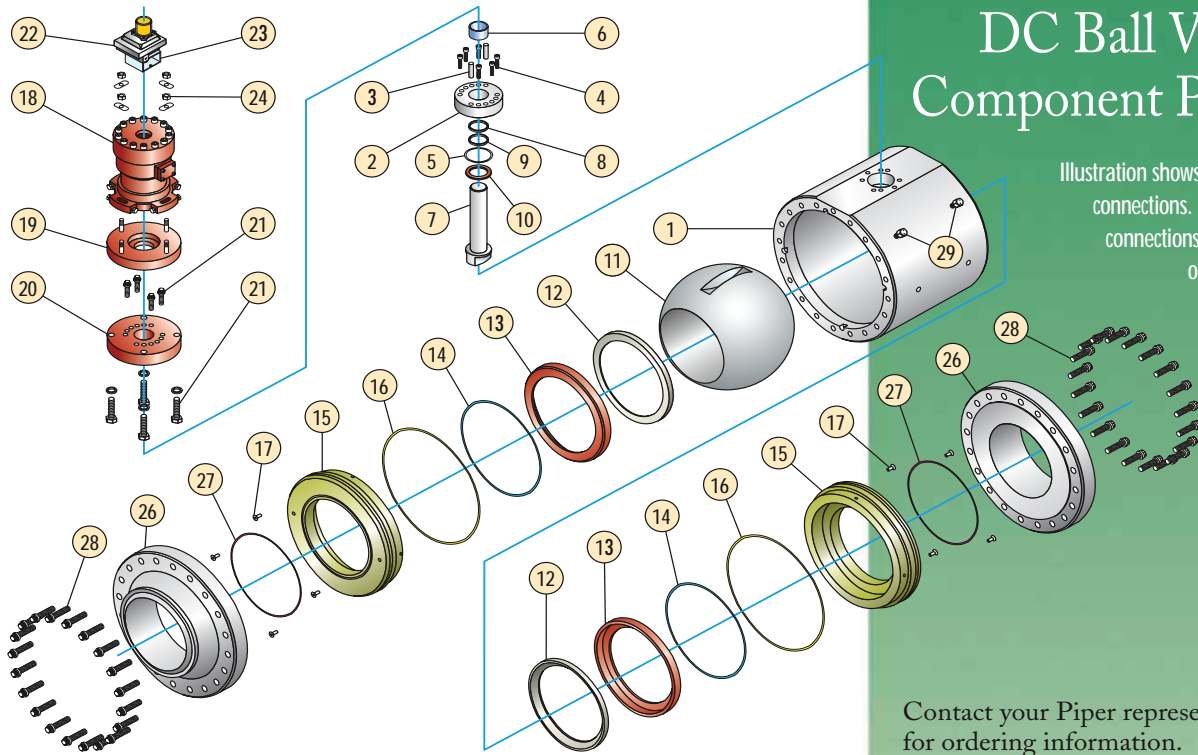
Easy access lifting points are located at several places on the valve body as well as on the end flanges.



Line spread required for body group removal is less than 1/16".

Seat insert is not captured, and can be replaced without replacing the entire seat assembly.

Capscrews or hex bolts are Xylan coated ASTM A320-L7 for possible low temperature service.



Contact your Piper representative for ordering information.

Index	Qty	Description	Standard Materials	Optional Materials ¹
1	1	Body	ASTM A350-LF2 Xylan Coated	316 SS, Duplex SS
2	1	Bonnet	ASTM A350-LF2 Xylan Coated	316 SS, Duplex SS
3	2	Shear Pin	Alloy Steel	
4	6	Bonnet Cap Screw	ASTM A320-L7 Xylan Coated	Stainless Steel
5	1	Bonnet Seal	Low Temp Nitrile	Peroxide-Cured Nitrile, Viton®
6	1	Stem Bearing	SS Teflon®	
7	1	Stem	17-4PH SS	Duplex SS, Inconel
8	1	Stem Back-up Ring	Polymyte/Peroxide-Cured Nitrile	Polymyte/Viton®, Viton®/Viton®
9	1	Stem Seal	Glass Filled Teflon®	
10	1	Thrust Bearing	Nitronic 60	
11	1	Ball	1 mil. ENP Carbon Steel	3 mil. ENP Carbon Steel, 316 SS Chrome
12	2	Seat	Celcon	Devlon®
13	2	Seat Carrier	Carbon Steel (Salt Bath Nitride / QPO)	316 SS, Alloy Steel
14	2	L-Seal	Low Temp Nitrile	Peroxide-Cured Nitrile, Viton®
15	2	Retainer	ASTM A350-LF2 Xylan Coated	316 SS
16	2	Retainer Seal	Low Temp Nitrile	Peroxide-Cured Nitrile, Viton®
17	8	Retainer Screw	18-8 SS	
18	1	Actuator	Actuator	Actuator
19	1	Mounting Plate - Actuator	Carbon Steel	
20	1	Adapter Plate - Actuator / Bonnet	Carbon Steel	
21	Varies	Actuator Mounting Bolts	ASTM A320-L7 Xylan Coated	
22	1	Position Indicator	Visual	Electric, Pneumatic, Hydraulic
23	1	Position Indicator Mounting Bracket	Carbon Steel	
24	4	Position Indicator Mounting Bolts	18-8	Grade 8
N/S	1	Position Indicator Adapter Coupling	Carbon Steel	316 SS
26	2	End Connection Flange	ASTM A350-LF2	316 SS
27	1	End Connection Seal	Low Temp Nitrile	Peroxide-Cured Nitrile, Viton®
28	Varies	End Connection Bolts	ASTM A320-L7 Xylan Coated	
29	2	Body Grease Fitting	316 SS	Alloy Steel

¹ Consult factory for other material.

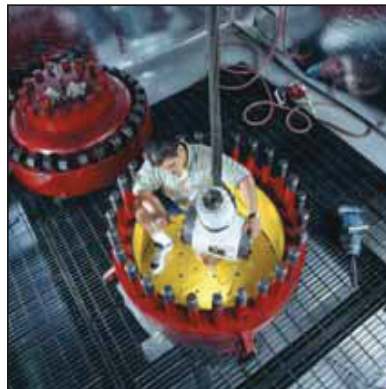
Drilling Valve Applications & Product Range

H₂S SERVICE

Standard components conform to NACE MR0175 2002 Edition and earlier. Per NACE MR0175/ISO 15156-3: 2003, our standard components are suitable for sour service at a maximum 0.5 psi partial pressure H₂S. Materials are available for compliance at higher partial pressure upon request.

CERTIFICATION AND OUR QUALITY COMMITMENT

At Piper Valve Systems, we continually update our certification programs to comply with our industry's leading qualifying authorities - including API 6D, API 6A, API RP64, Minerals Management Service, United Kingdom D.O.E., Norwegian Petroleum Directorate and others.



Diverter Valves/Flow Line Valves

Sizes	Nominal 8" thru 18"
Pressure Classes	ANSI 300 (720 psi C.W.P.) ANSI 600 (1,480 psi C.W.P.) ANSI 900 (2,220 psi C.W.P.)

Fill-Up Valves/Trip Tank Valves

Sizes	Nominal 2" thru 12"
Pressure Classes	ANSI 300 (720 psi C.W.P.) ANSI 600 (1,480 psi C.W.P.) ANSI 900 (2,220 psi C.W.P.) ANSI 1500 (3,705 psi C.W.P.) API 5,000 ANSI 2500 (6,170 psi C.W.P.) API 10,000

Motion Compensation & Riser Tensioning System Control Valves

Sizes	Nominal 1" thru 10"
Pressure Classes	ANSI 1500 (3,705 psi C.W.P.) API 5,000 ANSI 2500 (6,170 psi C.W.P.) API 10,000

Riser Booster Line Valves

Sizes	Nominal 2" thru 8"
Pressure Classes	API 5,000 API 10,000
Actuation	Hydraulic Double Acting Hydraulic Spring Return API 17D & ISO ROV Interfaces Avail.

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