

SIDE ENTRY BALL VALVES

valves and actuators



PETROLVALVES

introduction

PETROLVALVES is a leading manufacturer of valves for the oil and gas industry. Formed in 1956, **PETROLVALVES** has grown to a company with sales, services and manufacturing facilities throughout the world, with direct presence in the United States, Norway, United Kingdom, Italy, Singapore and Australia.

ball valves

The continuous investment in development of new technology has resulted in the growth and ongoing success of our company. **PETROLVALVES'** line of production includes some of the most sophisticated valve products in the world, with a strong focus on the development of custom or niche products designed according to customer's specific requirements. **PETROLVALVES** has been manufacturing end entry ball valves since the early 1960's, supplying artification includes to the largest and any president.

supplying critical valves to the largest oil and gas projects.

PETROLVALVES' experience in the end entry valve designs grew quickly, meeting our clients' increasingly challenging applications, with more complex products, such as large diameter (48", 56") and/or high service classes: API 5000, API 10000, API 15000, ASME 2500 uprated, ASME 4500. For example:

34" API 5500 10" API 15000



SIDE ENTRY BAL						
228/238/241/243		• • • • • •		• • • • •	valv	BALL
					valv	05
Sic	de entry ball DESIGN FEATURES					
	DESIGN FEATURES					
	Standard service: use in natural	aas ING cruc				
	refined products transmission lir					
	other general industrial and oil8					
	For example:	(gao application				
	 transmission pipelines 		· · · · · · ·			
	▶ pumping, compression and re	iniaction units				
	 pumping, compression and re 		· · · · · · · · ·	• • • • •		
	 offshore platforms 	DESIG	SN SEAT TY	PE MO	DEL SEAL	ING TYPE
	► onshore terminals		► Soft seat	red 22	28 Elasto	meric Seal
	• Onshore terminals	_ Split bod				noplastic Seal
	▶ pig traps	Z	 Metal set 	ated 22	28 Elasto	meric Seal
	► measuring stations	<u>z</u>				oplastic Seal
			 Soft seat 			meric Seal
	 surge-relief skids 	NOINNAU 3 PIECES		24	43 Therm	noplastic Seal
· · · · · · · · · · · ·	► surge-relief skids	3 PIECES	 Soft seat Metal sea 	ated 2	43 Therm 41 Elasto	noplastic Seal meric Seal
	· · · · · · · · · · · · · · ·	3 PIECES		ated 2	43 Therm 41 Elasto	noplastic Seal
· ·	► surge-relief skids			ated 2	43 Therm 41 Elasto	noplastic Seal meric Seal
	► surge-relief skids			ated 2	43 Therm 41 Elasto	noplastic Seal meric Seal
· ·	► surge-relief skids			ated 2	43 Therm 41 Elasto	noplastic Seal meric Seal
····································	 surge-relief skids blowdown SPECIAL SERVICE 	3 PIECES	► Metal ser	ated 2 24	43 Therm 41 Elasto 43 Therm	noplastic Seal meric Seal
· ·	 surge-relief skids blowdown SPECIAL SERVICE HIPPS 		Metal see	ated 2 24 24 PRODUCT	43 Therm 41 Elasto 43 Therm ION (*)	noplastic Seal meric Seal noplastic Seal
····································	 surge-relief skids blowdown SPECIAL SERVICE 	API 6D class	Metal set RANGE OF 150 to 600	24 ated 2 24 PRODUCT 900	43 Therm 41 Elasto 43 Therm 43 Therm 10N (*) 1500	poplastic Seal meric Seal poplastic Seal
. .	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD 	API 6D class SIZE	 Metal set RANGE OF 150 to 600 2" to 60" 	24 ated 2 24 PRODUCT 900 2" to 48"	43 Therm 41 Elasto 43 Therm 10N (*) 1500 2" to 48"	2500 2″ to 30″
. .	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD SSIV 	API 6D class SIZE API 6A class	► Metal set RANGE OF 150 to 600 2" to 60" API 3000 A	24 ated 2 24 PRODUCT 900 2" to 48" API 5000**	43 Therm 41 Elasto 43 Therm 43 Therm 43 Ibon (*) 1500 2" to 48" API 10000	2500 2″ to 30″ API 15000
. .	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD 	API 6D class SIZE API 6A class SIZE	► Metal set RANGE OF 150 to 600 2" to 60" API 3000 up to 34"	24 ated 2 24 PRODUCT 900 2" to 48" API 5000** up to 34"	43 Therm 41 Elasto 43 Therm 10N (*) 1500 2" to 48"	2500 2″ to 30″
. .	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD SSIV HIGH/LOW TEMPERATURE 	API 6D class SIZE API 6A class SIZE (*) for non listed	Metal see RANGE OF 150 to 600 2" to 60" API 3000 up to 34" dimensions contact	24 ated 2 24 PRODUCT 900 2" to 48" API 5000** up to 34"	43 Therm 41 Elasto 43 Therm 43 Therm 43 Ibon (*) 1500 2" to 48" API 10000	2500 2″ to 30″ API 15000
	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD SSIV HIGH/LOW TEMPERATURE CRYOGENIC 	API 6D class SIZE API 6A class SIZE	Metal see RANGE OF 150 to 600 2" to 60" API 3000 up to 34" dimensions contact	24 ated 2 24 PRODUCT 900 2" to 48" API 5000** up to 34"	43 Therm 41 Elasto 43 Therm 43 Therm 43 Ibon (*) 1500 2" to 48" API 10000	2500 2″ to 30″ API 15000
· ·	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD SSIV HIGH/LOW TEMPERATURE 	API 6D class SIZE API 6A class SIZE (*) for non listed	Metal see RANGE OF 150 to 600 2" to 60" API 3000 up to 34" dimensions contact	24 ated 2 24 PRODUCT 900 2" to 48" API 5000** up to 34"	43 Therm 41 Elasto 43 Therm 43 Therm 43 Ibon (*) 1500 2" to 48" API 10000	2500 2″ to 30″ API 15000
	 surge-relief skids blowdown SPECIAL SERVICE HIPPS ESD SSIV HIGH/LOW TEMPERATURE CRYOGENIC DIRTY / ABRASIVE SERVICE 	API 6D class SIZE API 6A class SIZE (*) for non listed	Metal see RANGE OF 150 to 600 2" to 60" API 3000 up to 34" dimensions contact	24 ated 2 24 PRODUCT 900 2" to 48" API 5000** up to 34"	43 Therm 41 Elasto 43 Therm 43 Therm 43 Ibon (*) 1500 2" to 48" API 10000	2500 2″ to 30″ API 15000
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PETROLVALVES	ball valves	
side entry ball DESIGN FEATURES		
MAIN DESIGN FEATURES	SPECIAL FEATURES	ACCESSORIES
 API 6D or API 6A ASME BI6.34 Fire Safe Full/Reduced Bore Bidirectional/Unidirectional Self Relieving Anti blow out stem Anti static device 	 NACE Requirement Special bore Full/partial cladding Seat Double Piston effect Double Block and Bleed Double Isolation & Bleed Equalizing hole Extended stem Extended bonnet Ad hoc design for horizontal stem installation and or vertical pipeline installation (*) Ad hoc engineering to suit customer projects requirements Internal painting (FBE, Epoxy lined) (*) inclusive of any special tooling may be needed to maintain the valve in situ 	 Vent & Drain: Plugged Flanged With valve Stem Injection: Class 1500 standard for DN 6" and above Class 2500 standard for DN 4" and above Seat Injection: Class 150/300/600 upon request for DN 6" and above Class 900/1500/2500 upon request for DN 4" and above
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PETROLVALVES engineering department is sp	pecialized in fulfilling all customer's	s requirements and project specification.

SIDE ENTRY BALL VALVE 228/238/241/243			BALL
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seat-to-ball SEALING DES	IGN		
SOFT SEAT		· · · · · · · · · · · · ·	
energized. Our de sealing, leak rate A	c insert fitted, the seat is pressure sign provides tight shutoff seat-to-ball A (no visible leakage), in any condition. or the insert material are available to suit	TYPICAL SEAT INSERT MATERIAL > PTFE > RPTFE > PCTFE	
the service condition		▶ PEEK▶ Devlon	
		► Nylon	
		· · · · · · · · · · · · · · ·	03
METAL SEAT			
technologies to pro	h the assistance of the most updated ovide the optimal selection of flexibility th ball and seat rings.	· · · · · · · · · · · · · · ·	
Numerical simulati project solution.	ions are carried out to optimize any	· · · · · · · · · · · · · ·	· · · · · · · · · · · · · ·
Stress Stemsky Faxe - 5 Mare KAZ Meris 1000 KAZ Meris 1000 KAZ		· · · · · · · · · · · ·	δίτα 1 των 2 Νίματο 2010 101
40.8 40.2 30.72 27.72 15.72 4.72 15.72			440 (Fr61) 400 (Fr62) 400 (Fr62) 400 (Fr62) 400 (Fr64) 400 (F
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PETROLVALVES	ball valves	· ·
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seat functionality SELF RELIEVING SE	Λ	
in the valve cavity.	are designed to relieve pressure he following condition: ≤ line pressure	BODY CAVITY PRESSURE = 0
	rantee Double Block & Bleed	LINE PRESSURE = P
		· ·
pressure source in eithe	are designed to seal against	BODY CAVITY PRESSURE = P
 Line pressure < body Bidirectional seat desig Bleed performances in 	cavity pressure n guarantees Double Block & accordance with API 6D .	LINE PRESSURE = 0
	· ·	· ·
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SIDE ENTRY BALL VALVE

split body 228 DESIGN

SEAT ELASTOMER SEALING

O-ring type, with PTFE back up for higher classes. Seat to ball sealing: both soft and metal available. Self relieving or bidirectional solution can be provided.

valves

STEM SEALING

Elastomer (o-ring) type, with PTFE back up on higher classes. Two different configurations are available.



Metal seal option available upon request

BODY SEALING

Elastomer (o-ring) type, with PTFE backup provided for higher pressure classes, and graphite for fire safe requirement.



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PETROLVALVES	ball valves
	· · · · · · · · · · · · · · · · · · ·
split body 238 DESIGN	
BODY SEALING Spiral wound type, or ring	g joint type on higher pressure classes.
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· · · · · · · · · · · · · · · · · · ·	
06 STEM SEALING	
Thermoplastic multiple V with or without lantern rin	rings seal type (PTFE chevron pack), ng.
. .	
Metal seal option available upon request	
Thermoplastic multiple V	rings sould up (PTFE charge pack)
	rings seal type (PTFE chevron pack). soft and metal are available.
	soft and metal are available.
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SIDE ENTRY BALL VALVE

3 Pieces 241 DESIGN

SEAT ELASTOMER SEALING

O-ring type, with PTFE back up on higher pressure classes. Seat to ball sealing: both soft and metal are available. Self relieving or bidirectional solution can be provided.

STEM SEALING

Elastomer (o-ring) type, with PTFE back up on higher classes. Two different configuration available.



Metal seal option available upon request

BODY SEALING

Elastomer (o-ring) type, with PTFE back up on higher pressure classes and graphite for fire safe requirement.



valves



PETROLVALVES	ball valves
3 Pieces 243 DESIGN	
BODY SEALING Spiral wound type, or rin	ng joint type on higher pressure classes.
STEM SEALING	
Thermoplastic multiple V with or without lantern ri	/ rings seal type (PTFE chevron pack), na.
Metal seal option	
Metal seal option available upon request	
SEAT SEALING	/ rings seal type (PTFE chevron pack).
	onal solution can be provided.

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	a15		
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DETE			
		oall valves have been designed ons of materials which are selecte	d
	tter suit service condition		u
· · · · · · · · · · · · · · ·			
	AVAILABLE BODY	AVAILABLE OBTURATOR MATERIAL SELECTION	AVAILABLE SEAT MATERIAL SELECTION
M	ATERIAL SELECTION	SOFT SEAT EXECUTION	SOFT SEAT EXECUTION
► · · · · · · · · · · · · · · · · · · ·	S, LTCS (*)	► CS, LTCS (*)	► CS, LTCS
► Lo	ow Alloy Steel (*)	► Low Alloy Steel (*)	► Low Alloy Steel
	tainless Steel	Austenitic / Ferritic /	Austenitic / Ferritic /
$\mathbb{P} = \mathbb{P} = $	i Alloy	Martensitic Stainless Steel Duplex, Superduplex, Ni Alloy 	Martensitic Stainless Steel Duplex, Superduplex, Ni Alloy
(*) (CRA weld overlay option	(*) CRA weld overlay option	Secondary seal material
	ailable	available	 PTFE, RPTFE, PCTFE, PEEK, DEVLON, NYLON
		Option	Option
		 Electroless Nickel plating 	 Electroless Nickel plating
		AVAILABLE OBTURATOR	AVAILABLE SEAT
M	AVAILABLE BODY ATERIAL SELECTION	MATERIAL SELECTION METAL SEAT EXECUTION	MATERIAL SELECTION METAL SEAT EXECUTION
	S, LTCS (*) ow Alloy Steel (*)	 CS, LTCS (*) Low Alloy Steel (*) 	▶ Low Alloy Steel
	tainless Steel	 Austenitic / Ferritic / 	 Austenitic / Ferritic /
	i Alloy	Martensitic Stainless Steel	Martensitic Stainless Steel
		 Duplex, Superduplex, Ni Alloy 	 Duplex, Superduplex, Ni Alloy
(*)	PA wold overlay ention	(*) CPA wold everlage entire	
	CRA weld overlay option ailable	(*) CRA weld overlay option available	
			11 IF .
		HardFacing ► Tungsten / Chromium carbide	HardFacing ► Tungsten / Chromium carbide
		coating	coating
· · · · · · · · · · <u>L</u>			



MANUFACTURING PLANT

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