



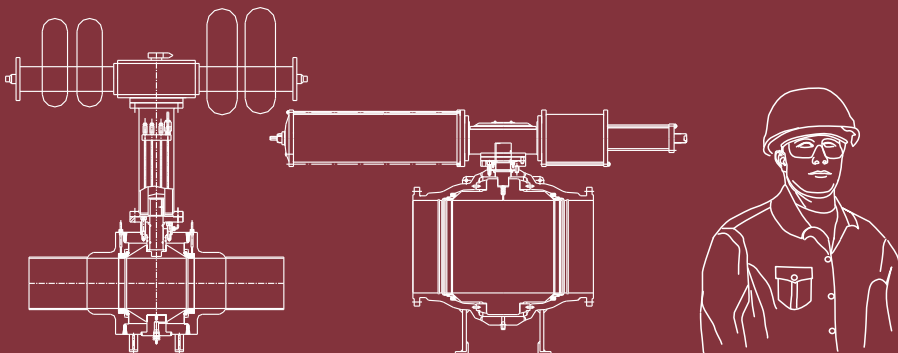
RUV

API6D FULLY WELDED BODY BALL VALVE



GDR-3 Fully Welded Body Ball Valve

CAB-17-01



ROCKY UNION

Fully Welded Body Ball Valve

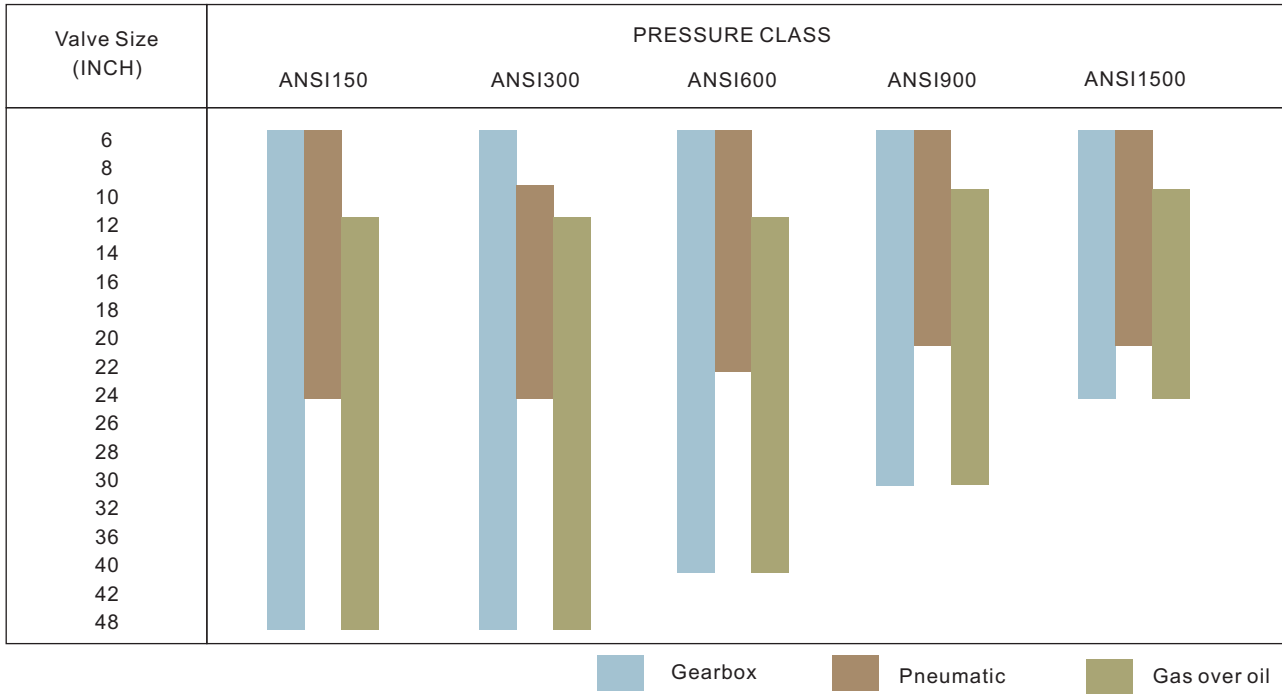
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Rocky Union is committed to enhancing our customers' working site safety, system stability, and convenient operations through our valve product offerings. Our diverse and innovative valves will have more safety design, longer working life and more reliable operation.

Located in the city with a more than forty years' history to make industrial valve, RUV has carried on the mature valve manufacturing tradition of Zigong city. By our advanced seat design and special workmanship, we are making high quality ball valve and through conduit gate valve, range from complete size and pressure for petroleum, chemical, and energy industrial use. To be a professional API6D valve company, we are making for reliability.

RANGE OF PRODUCT



APPLICATIONS

A wide variety of body designs, materials, and trim make RUV Fully Welded Body Ball Valves exceptionally versatile and suitable for a multitude of liquid and gas fluid applications.



Petroleum Refining

- Hydrogen
- Cracking
- Steam
- Crude Oil
- Gasoline
- Visbreakers
- Naptha
- Sulfur

Oil and Gas Production

- Oil/Steam Separation
- Gas/Oil Gathering Systems
- Flowlines
- Wellheads

Petrochemicals

- Ethylene
- Propylene
- Steam
- Reboilers
- Gases



Marine

- Oil Tankers
- Tanker Loading Terminals
- Offshore Platforms
- Sub-Sea Manifolds
- Terminal Transfer Lines
- Barge Unloading Lines
- Shipboard Services

Chemicals

- Chlorine
- Phosgene
- Aromatics
- Polymers
- Acids
- Air Separation
- Cauctics



Pulp and Paper

- Bleaching Lines
- Black Liquor
- Green Liquor
- White Water
- Steam
- Chemical Recovery

Power Generation

- Steam
- Condensate
- Boiler Feed Pumps
- Cooling Towers
- Service Water Recirculators
- River Water Intake

Steel/Primary Metals

- Quench Lines
- De-Scaling
- Continuous Casters
- Steam
- Condensate
- Strippers
- Electro-Galvanizing

RUV FULLY WELDED BODY BALL VALVE FEATURE

General Design Features

Design Features

- Fully welded body
- Spring energized seats
- Metal or soft seated
- Double Block and Bleed
- Full or reduced bore
- Flanged or welded ends
- Anti blow out trunnion stem design
- Corrosion resistant low friction bearing
- Sealant injection fittings for emergency stem or seal sealing
- ISO5211 Mounting pad for actuator or gear operator
- Removable stem seals under full line pressure in fully opened or closed position
- Anti static device for grounding of the ball, stem and body
- Self lubricated bearings
- In accordance with API 6D, API 6FA, BS 6755 and NACE 01-75 (latest edition)
- Trunnion supported design reduces operating torque
- 8" & larger valves are equipped with lifting lugs
- Two sets of O-rings plus firesafe stem packing prevents leakage



Functions & Features



1. Double block & bleed



2. Safe release



3. Reliable seal



4. Fire safe



5. Cleaning pipe



6. Emergency seal



7. Special seat



8. Bonnet combined seal



9. Draining



10. Extended stem



11. Various operations



12. Various end connections



13. Diversity of body materials



14. Diversity of seat materials



15. Various kinds of control systems



16. Reliable operation



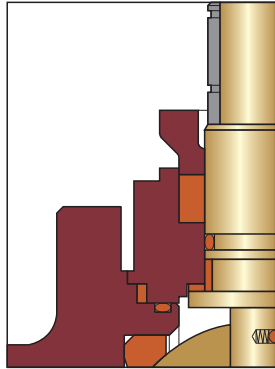
17. Bearing pipe stress safety

RUV FULLY WELDED BODY BALL VALVE FEATURE

Design Features

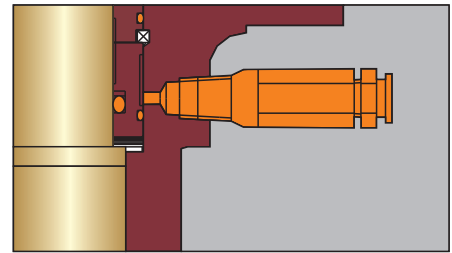
Anti-Blowout Stem Design

Stem seal integrity is achieved by the use of three o-rings (or two o-rings and a graphite gasket). Upper o-ring (or graphite gasket) can be replaced with the valve in line and under pressure.



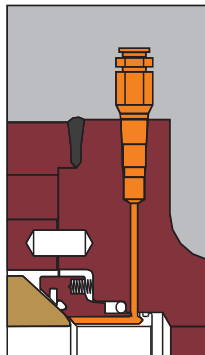
Emergency Sealant Injection System

The Sealant Injection System located on the Bonnet can be utilized in case of emergencies, o-ring damage, or if stem leakage occurs.



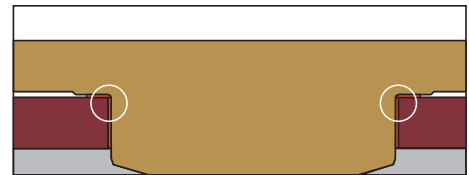
Emergency Seat Seal

Special sealants may be injected thru fittings that are located on the adapter flanges to restore sealing integrity if damaged. A second internal check valve provides backup to the fitting.



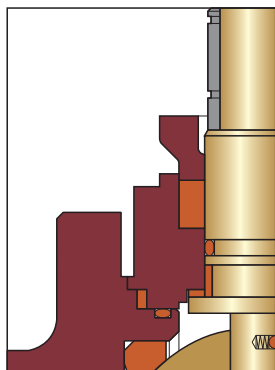
Heavy Duty Bearings

Trunnion are supported by heavy duty Teflon coated Steel Bearings. Thrust load on the ball is supported by large trunnions mounted within captured trunnion blocks, resulting in low operating torque and seat wear.



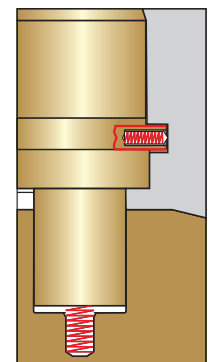
Double Sealed Envelope Connections

Double o-rings or a combination of an o-ring and fire safe gasket on body/ adapter connections to ensure positive sealing. This makes the P3 suitable for above or below ground service.



Antistatic Device

A spring between the trunnion and the ball or between the stem and the gland plate permits electrical continuity between all valve components.



TECHNICAL SEATING FEATURES

Technical Seating Features

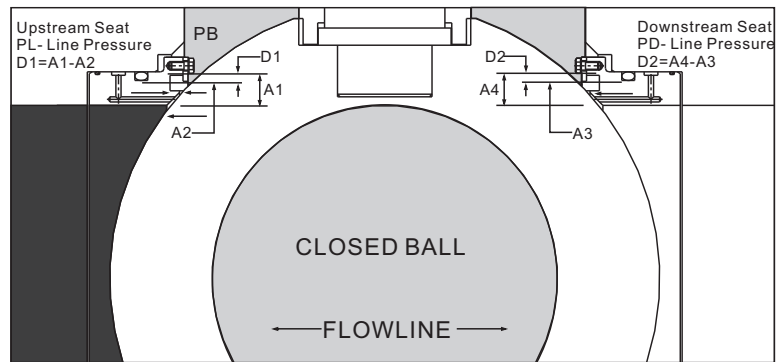
Double Piston Seat Design

Upstream Seat:

Line Pressure acting on the seat area (A1) does not equalize against the line pressure acting on the seat area (A2). The difference in the area (D1) times the line pressure creates "piston effect" force which pushes the seat against the ball surface resulting in a tight effective seal.

Downstream Seat:

When the body cavity pressure is greater than the downstream pressure, the body cavity pressure acts on the seal area (A4). The net pressure difference, acting over area (D2), pushes the downstream seat tightly against the ball creating a positive seal.



PB=Body Cavity Pressure

THE ULTIMATE BENEFIT OF USING THE "DOUBLE PISTON SEAT" DESIGN:

In case of upstream seat leakage, the downstream seat maintains a pressure assisted tight shut off by sealing against the ball surface.

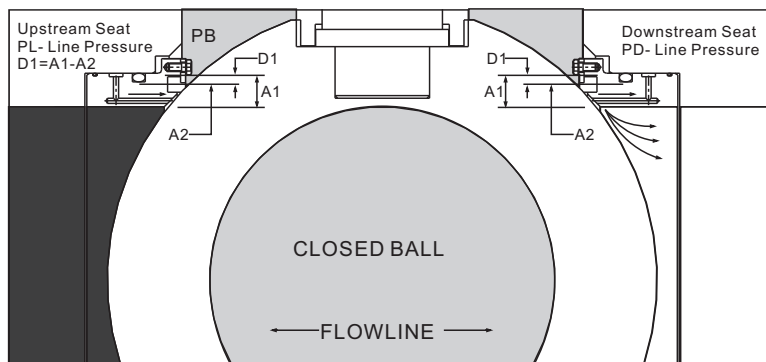
Self Relieving Seat Design

Upstream Seat:

The difference in the area (D1) times the line pressure creates a "piston effect" which forces the seat against the ball surface. Also the springs behind the seat adds the force to the seat which keeps the seat in contact with the ball surface by providing the tight seal.

Downstream Seat:

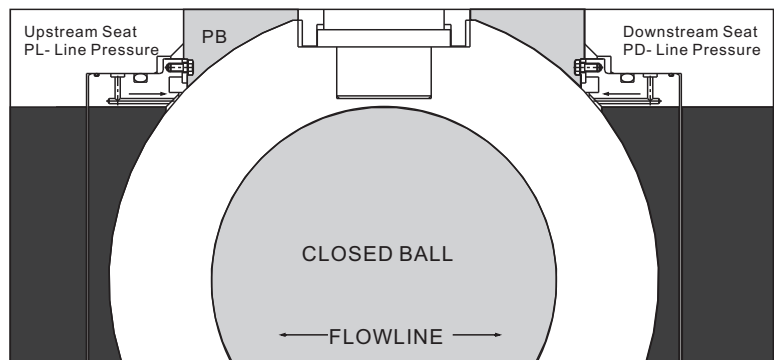
When the body cavity pressure exceeds the spring pressure, automatic pressure relief will occur by relieving the body cavity pressure past the downstream seat. This eliminates the need for the body relief valve.



PB=Body Cavity Pressure

Double Block and Bleed

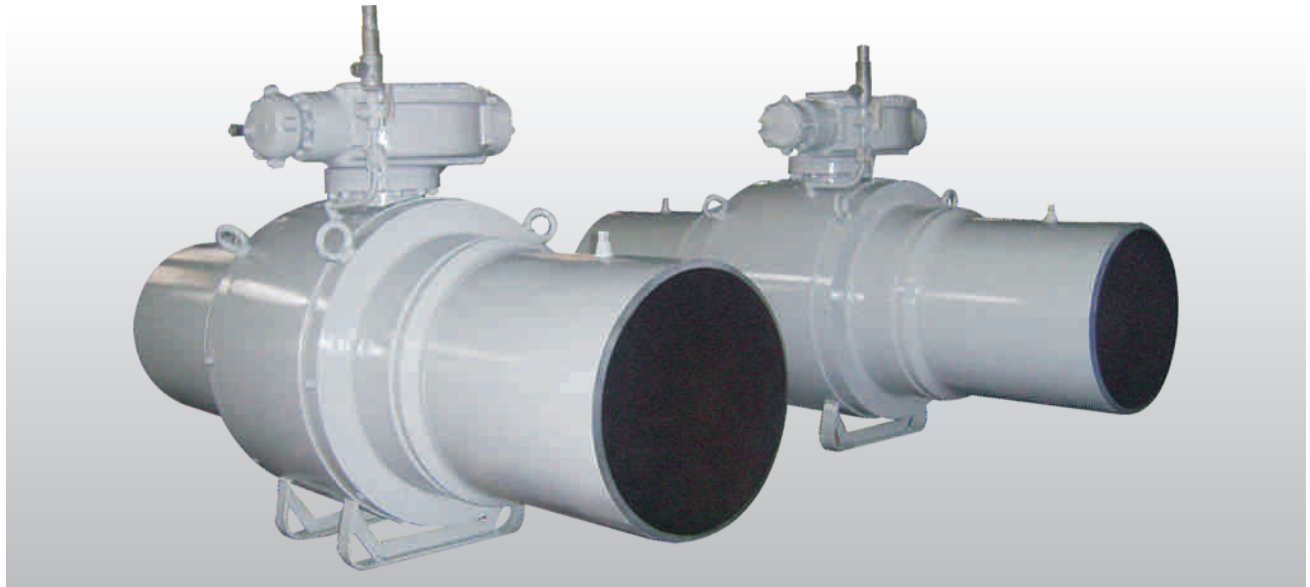
The double block and bleed condition is available in all seat design configurations. When the ball is in the closed position the body cavity pressure may be drained down to 'zero' by opening the bleed valve and draining the fluid by removing the drain plug. Each seat works independently assuring tight shut off seal against ball on the upstream and downstream side.



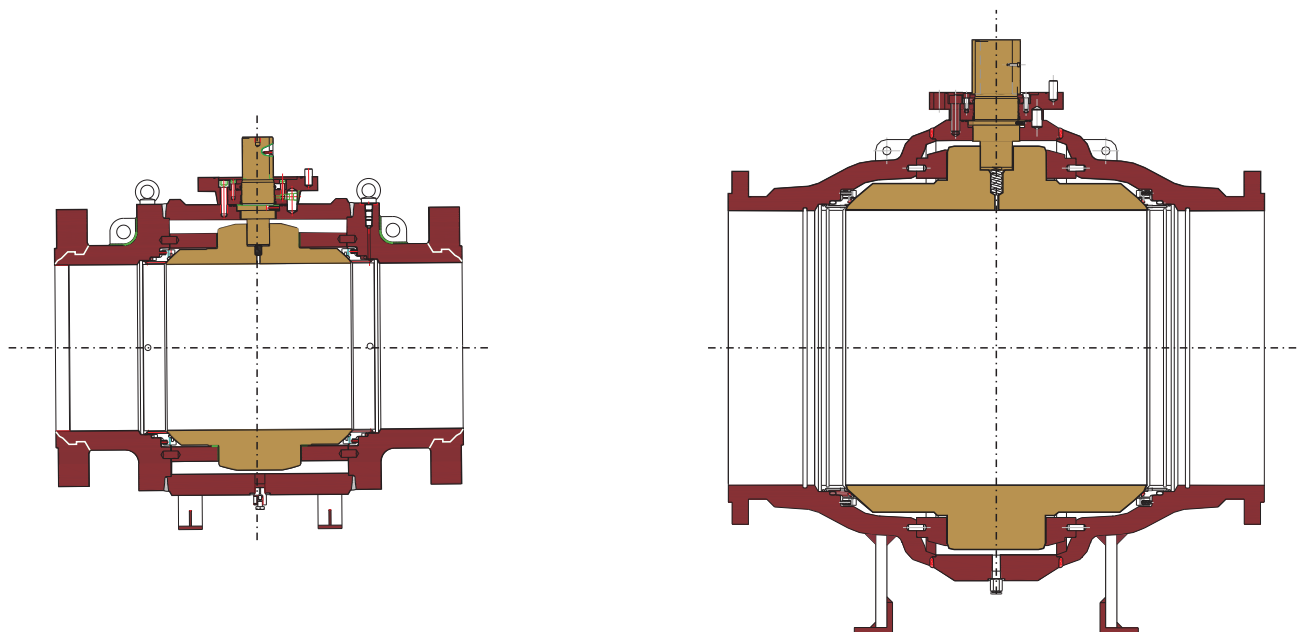
PB=Body Cavity Pressure is Zero
Cavity Pressure is Drained or Vented to Atmosphere

RUV FULLY WELDED BODY BALL VALVE ASSEMBLY DRAWING

- Nominal Size (DN): 6 inches (150mm) up to 48 inches (1200mm)
- Pressure Class (PN): ANSI 150 up to ANSI 1500
- Bore: full & reduced (Venturi type)
- Ends: butt weld, flanged, ring joint, butt weld by flanged
- Various configurations



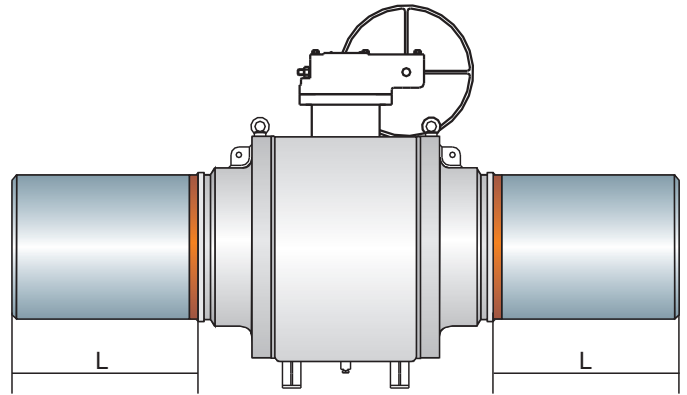
Fully Welded Body Ball Valve



◆ Assembly drawing

TRANSITION PUPS

The Ball Valves can be furnished with transition pups of different length to facilitate the installation of valve and piping on site in accordance with existing standards.. Also the transition pups are required for welding between the valve and the pipeline. The transition piece length L is to be specified by the customer, including wall thickness and pipe specification.



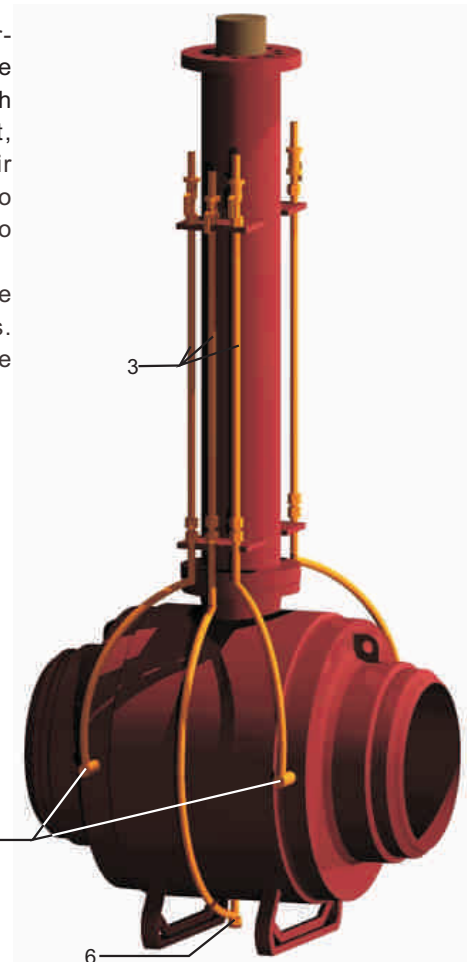
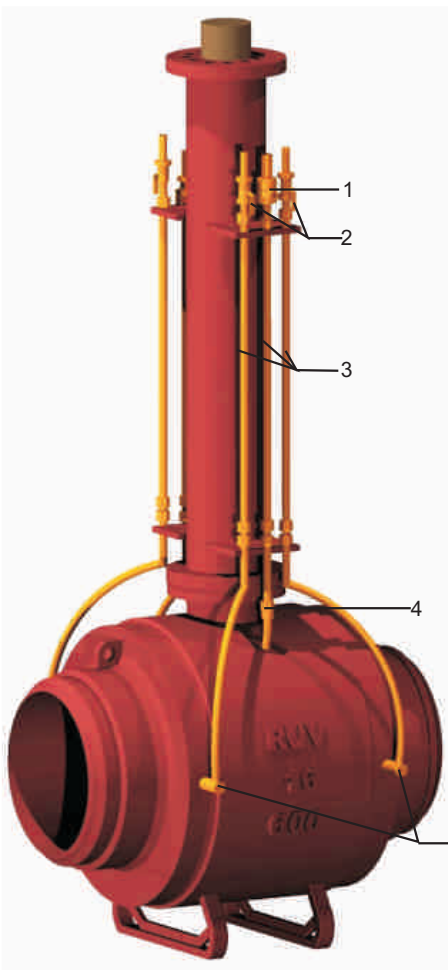
EXTENSION DETAIL FOR AUXILIARY PIPES

For valves buried, installed underground or in areas that are inaccessible may be equipped with stem and auxiliary (drain, vent, sealant) piping extensions. Their operation and the accessibility to their auxiliary connections, need to be brought at ground level. This requires an extension of the stem and all the piping connections. The extension always needs to be specified by customer.

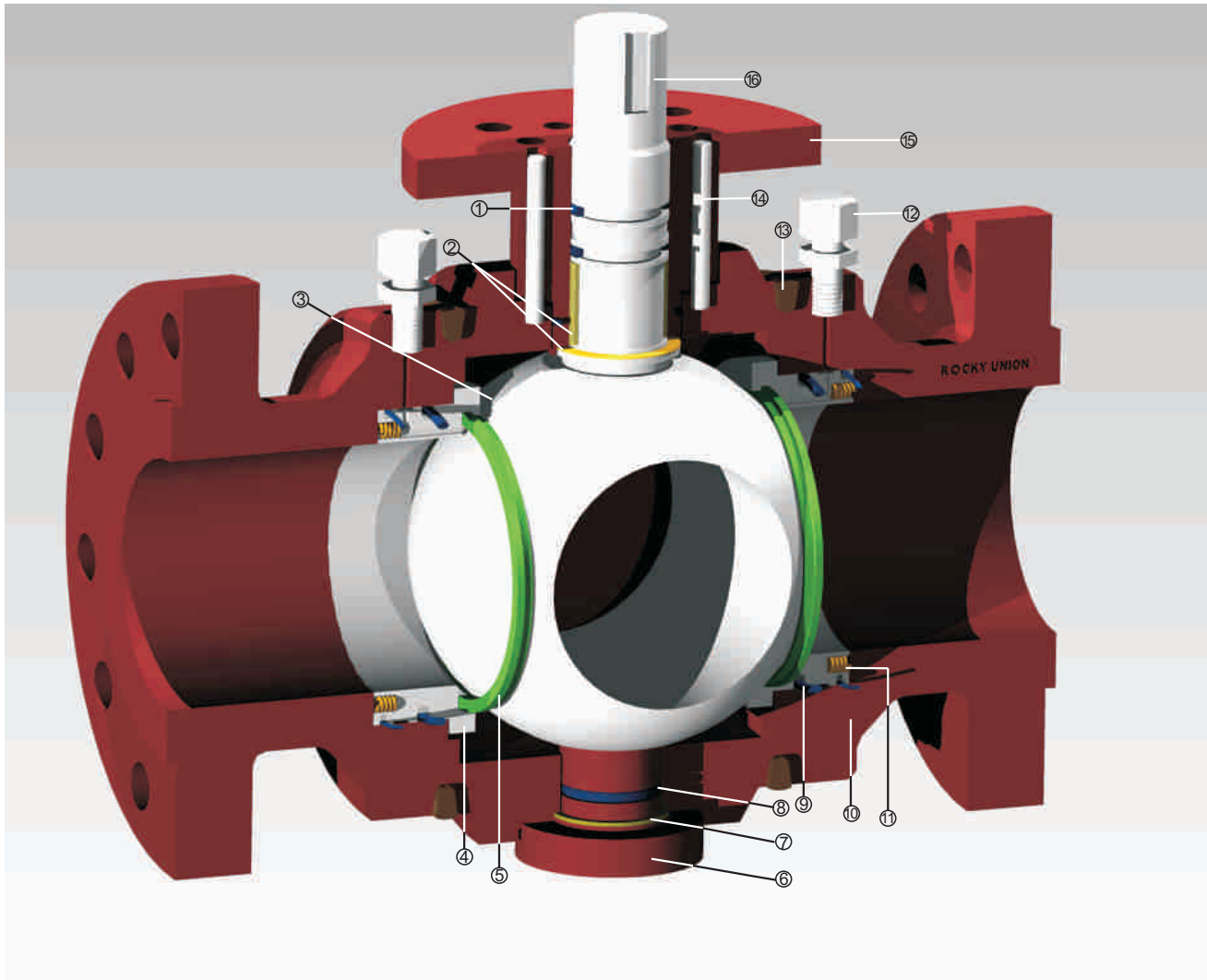
- 1- Safety relief valve
- 2- Needle valve
- 3- Extension tube
- 4- Body Vent
- 5- Seat sealant injection
- 6- Body Drain

NOTE

- 1) Seat sealant injection only on request
- 2) Relief valve only on request or if there is a liquid medium



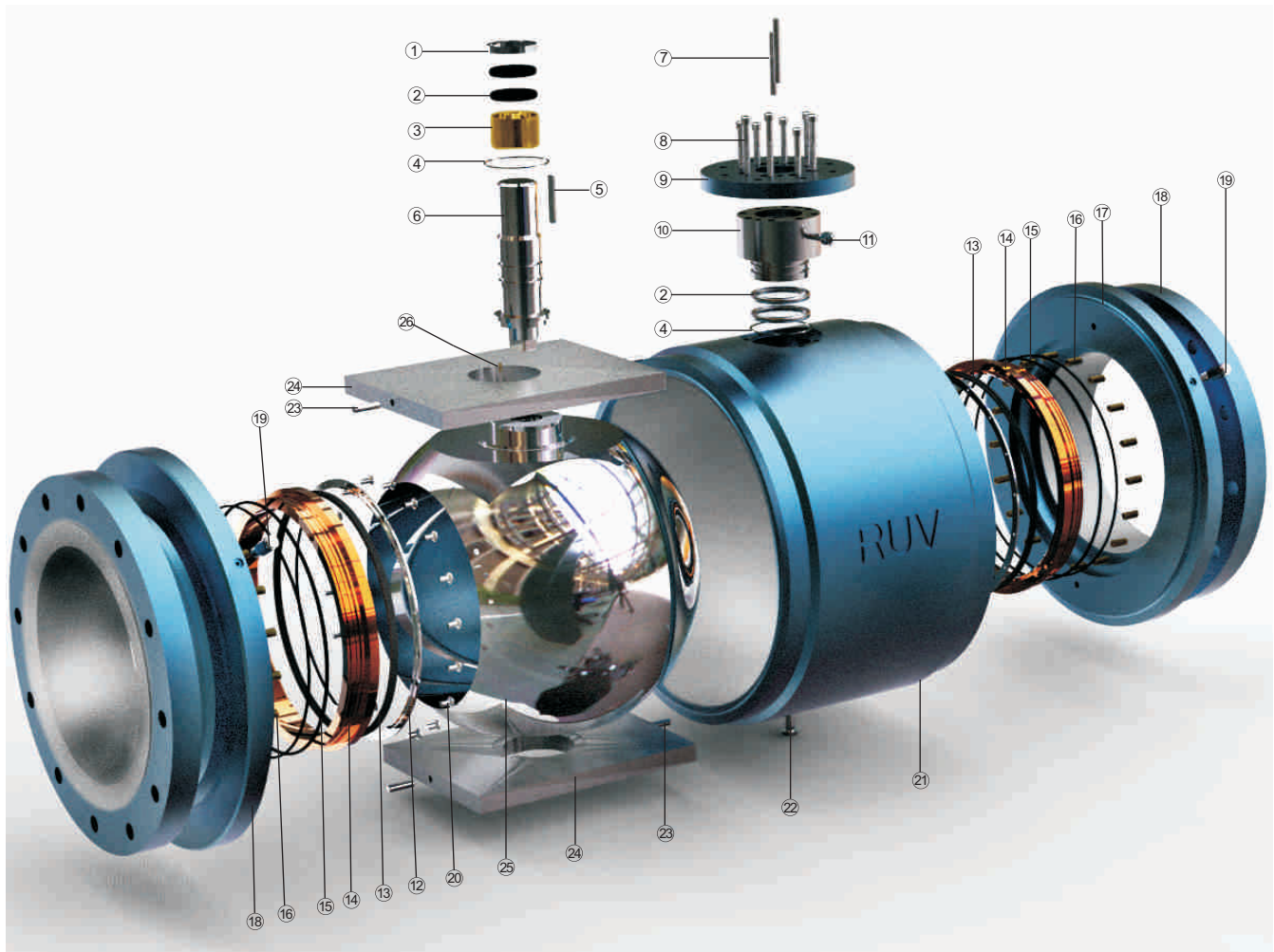
DYNAMIC DRAWING



Item	Part Name	Item	Part Name
1	Stem O-ring	9	Seat ring O-ring
2	Stem bearing	10	Body
3	Ball	11	Seat ring spring
4	Seat ring	12	Seat sealant injection
5	Seat insert	13	Weld seam
6	Trunnion	14	Pin
7	Trunnion bearing	15	Mounting Pad
8	Trunnion O-ring	16	Stem

DYNAMIC DRAWING

Item	Part Name	Item	Part Name	Item	Part Name
1	Stem gasket	10	Gland	19	Seat grease injection
2	Stem O-ring	11	Stem grease injection	20	Screw
3	Stem bearing	12	Backup ring	21	Body
4	Thrust bearing	13	Seat insert	22	Drain plug
5	Pin	14	Seat ring	23	Block pin
6	Stem	15	Seat O-ring	24	Trunnion block
7	Alignment bearing	16	Spring	25	Ball
8	Cap screw	17	Seam line	26	Antistatic spring
9	Adapter plate	18	Cap		



MATERIALS FOR MAIN PARTS

ITEM NO.	PART NAME	NON SOUR		SOUR		CORROSION RESISTANT	
		TEMPERATURE RANGE		TEMPERATURE RANGE		TEMPERATURE RANGE	
		T=-46°Cup to+120°C	T=-29°Cup to+220°C	T=-46°Cup to+120°C	T=-29°Cup to+220°C	T=-200°Cup to+200°C	
1	BODY	ASTM A350 LF2	ASTM A105	ASTM A350 LF2	ASTM A105	ASTM A182 F316 OR 316L	
2	END ADAPTER	ASTM A350 LF2 ORA694 (2)	ASTM A105 ORA694 (2)	ASTM A350 LF2 ORA694 (2)	ASTM A105 ORA694 (2)	ASTM A182 F316 OR 316L	
3	BALL	ASTM A350 LF2 ENP (3)	ASTM A105 ENP (3)	ASTM A350 LF2 ENP (3)	ASTM A105 ENP (3)	ASTM A182 F316(4)	
4	SEAT RING	ASTM A350 LF2 ENP (3)	ASTM A105 ENP (3)	ASTM A350 LF2 ENP (3)	ASTM A105 ENP (3)	ASTM A182 F316 OR A564 TYPE 630 (17-PH) (4)	
5	SEAT INSERT(6)	Therban or VitonGF (6) (7)	PTFE OR Nylon OR Kel-F	PTFE OR Nylon OR Kel-F		PTFE OR Nylon OR Kel-F	
6	SEAL(6)	STD	Therban or VitonGF	Nitrile or Viton	Therban or VitonGF		PTFE + Inconel x 750 (8)
		FIRE SAFE	VitonGF	Viton	VitonGF		
7	SPRING (STD & FIRE SAFE)	ASTM A316 TYPE 302		Inconel x 750		ASTM A316 TYPE 302	
8	STEM	AISI4140 ENP(3) OR AISI4340 ENP(3)		ASTMA564 Type 630(17-4PH)		ASTM A316 TYPE 302	
9	ADAPTER FLANGE	ASTM A350 LF2	ASTM A105	ASTM A350 LF2	ASTM A105	ASTM A182 F304	
10	BOLT	ASTM A320 L7	ASTM B193 B7	ASTM A320 L7M	ASTM B192 B7M	ASTM A320 B8	
11	NUT	ASTM A194 7	ASTM A194 2H	ASTM A320 7M	ASTM B192 2HM	ASTM A194 8	

* For other trim materials, RUV can make them at customer's request.

NOTES:

- (1) Service covered by NACE MR-01-75 Code requirements (limited hardness).
- (2) It is used for valves to be butt welded to high-strength pipelines.
- (3) ENP = Electroless Nickel and/or Chrome Plating.
- (4) Hard plating is needed when erosive phenomena are present.
- (5) Selection of gasket material is according to the following temperature ranges:
 Therban (HNBR) for T=-45°C up to +175°C; Viton GF for T=-40°C up to +220°C;
 Nitrile (NBR) for T=-29°C up to +130°C; Viton- (FPM) for T=-20°C up to +220°C;
 PTFE for T=-200°C up to +240°C; Nylon 12G for T=-50°C up to +120°C; Kel-F
 for T=-250°C up to +150°C.
- (6) Nylon 12G is used for valves pressure \geq ANSI600
- (7) Seat insert made of PTFE reinforced with glass or graphite fiber is supplied on request.
- (8) Spiral wound gasket (ANSI 316 + Graphite) is used for body seals.
- (9) RUV reserves the right to change the materials complying with specifications without any notice.



APPLICABLE STANDARD

BRITISH STANDARDS

- BS 1503 -Specification for Steel Forging for Pressure Purpose
- BS 5404 -Flanges and Bolting for Pipes Valves and Fittings
- BS 1560 -Steel Pipe Flanges and Flanged Fittings
- BS 5351 -Steel Ball Valves for the Petroleum, petrochemicals and Allied Industries
- BS 2080 -Face to Face, Center to Center, End to End and Center to End Dimension of Flanged Butt-welding End Steel Valves for Petroleum, Petrochemical and Allied Industries
- BS 6755Part2 -Testing of Valves: Specification for Fire Type- Testing Requirements
- BS 3239 -Carbon Steel Pipe Flanges for the Petroleum Industry

ANSI/ASME AMERICAN STANDARDS

- B 1.20.1 -Pipe Treads, General Purpose
- B 16.5 -Pipe Flanges and Flanged Fittings
- B 16.10 -Face to Face and End to End Dimensions of Valves
- B 16.25 -Butt-welding End
- B 16.34 -Valves Flanged, Threaded and Welding End
- ASME-Boiler and Pressure Vessel Code Section V, VIII & IX
- B 31.3 -Chemical plant and Petroleum Refinery Piping
- B 31.4 -Liquid Petroleum Transportation Piping System
- B 31.8 -Gas Transmission and Distribution Piping System
- B 46.1 -Surface texture (Surface Roughness, Waviness, and Lay)

API AMERICAN PETROLEUM INSTITUTE

- Spec. 6D -Specification for Pipeline Valves
- Spec. 598 -Valve Inspection and Test
- Spec. 5L -Specification for Line Pipe
- Spec. 6FA -Specification for Fire Test for Valves
- Std. 607 -Fire Test for Soft Seated Ball Valves
- Std. 5B -Threading Gauging and Thread Inspection of Casting and Line Pipe Thread

DIN DEUTSCHE INSTITUTE FÜR NORMUNG

MSS SP

- SP-6 -Standard Finish for Contract Face of Pipe Flanges and Connecting End Flanges of Valves and Fittings
- SP-25 -Standard Marketing System for Valves, Fittings, Flanges and Unions
- SP-44 -Steel Pipe Line Flanges
- SP-45 -By pass and Drain Connection Standard
- SP-61 -Hydrostatic Testing of Steel Valves
- SP-72 -Ball Valves with Flanged or Butt welding Ends for General Service
- SP-82 -Valve Pressure Testing Methods

NACE

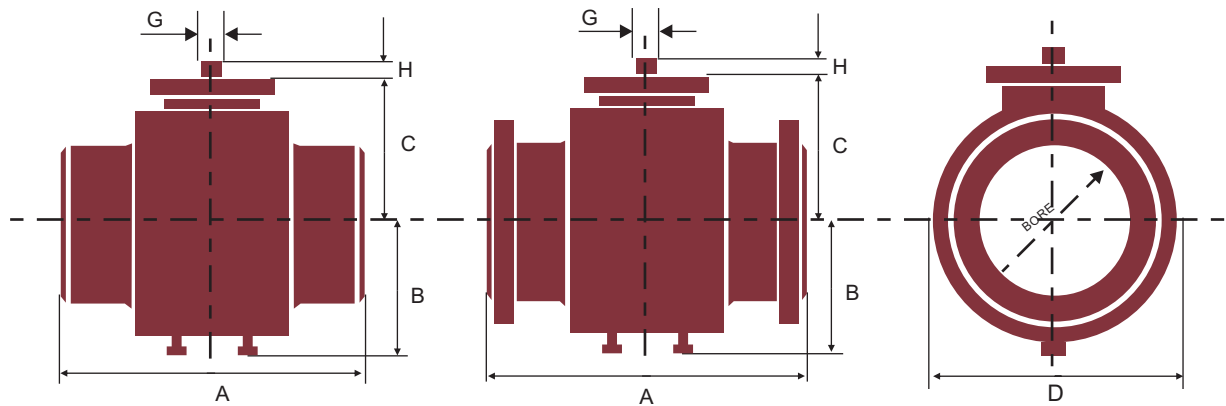
- MR-01-75 -Sulfide Stress Cracking Resistant Material for Oil Field Equipment
- MT-01-77 -Laboratory Corrosion Testing of metals for the Process Industry

P-T Rating

The following table indicates rated values of temperature and pressure for main materials of valves. These valves are determined according to American standard ASME/ANSI B 16.34.

Temp.		Maximum Working Pressure																			
		150Lb				300Lb				400Lb				600Lb				900Lb			
°C	°F	A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316		A105,LF2		ASTM A182 F316	
Up to	Up to	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi
38	100	19.7	285	19	275	51	740	49.6	720	68.3	990	66.2	960	102	1480	99.3	1440	153.1	2220	148.9	2160
93	200	17.9	260	16.5	240	46.5	675	42.7	620	62.1	900	56.9	825	93.1	1350	85.5	1240	139.6	2025	128.2	1860
149	300	15.9	230	14.8	215	45.2	655	38.6	560	60.3	875	51.4	745	90.7	1315	77.2	1120	135.8	1970	115.8	1680
204	400	13.8	200	13.4	195	43.8	635	35.5	515	58.3	845	47.2	685	87.6	1270	71.0	1030	131	1900	106.2	1540
264	500	11.7	170	11.7	170	41.4	600	33.1	480	55.2	800	43.8	635	82.7	1200	65.8	955	123.8	1795	98.9	1435

DIMENSIONS



ANSI 150

(Unit) : mm

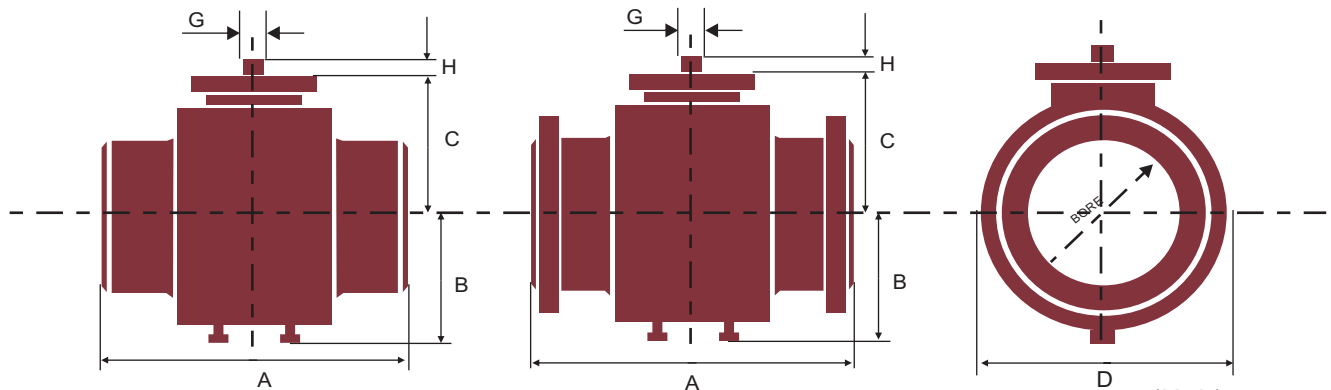
Nom. Dia.	Bore	Face to Face Dimension		Body			Stem		WT.(kg)	
		A(WE)	A(RF)	B	C	D	G	H	WE	RF
6	150	457	394	270	225	345	55	70	185	220
8	201	521	457	325	265	425	55	70	250	290
10	252	559	533	362	299	485	55	70	400	430
12	303	635	610	405	340	560	55	70	550	620
14	334	762	686	440	371	620	75	85	820	900
16	385	838	762	430	410	695	75	85	1100	1220
18	436	914	864	490	457	792	90	115	1400	1550
20	487	991	914	535	500	870	90	115	1750	1950
22	538	1092	991	585	540	950	90	115	2200	2350
24	589	1143	1067	635	585	1040	120	140	2800	3050
26	633	1245	1143	685	627	1115	120	140	2900	3250
28	684	1346	1245	730	667	1190	120	140	3400	3700
30	735	1397	1295	780	716	1280	120	140	4800	5300
32	779	1524	1372	820	750	1345	120	140	5500	6000

ANSI 300

(Unit) : mm

Nom. Dia.	Bore	Face to Face Dimension		Body			Stem		WT.(kg)	
		A(WE)	A(RF)	B	C	D	G	H	WE	RF
6	150	457	403	270	225	345	55	70	185	230
8	201	521	502	325	265	425	55	70	250	300
10	252	559	568	362	299	485	55	70	400	460
12	303	635	648	405	340	560	55	70	550	670
14	334	762	762	440	371	620	75	85	820	1000
16	385	838	838	430	410	695	75	85	1100	1320
18	436	914	914	490	457	792	90	115	1400	1650
20	487	991	991	535	500	870	90	115	1750	2000
22	538	1092	1092	585	540	950	90	115	2200	2550
24	589	1143	1143	635	585	1040	120	140	2800	3100
26	633	1245	1245	685	627	1115	120	140	2900	3300
28	684	1346	1346	730	667	1190	120	140	3400	3750
30	735	1397	1397	780	716	1280	120	140	4800	5500
32	779	1524	1524	820	750	1345	120	140	5500	6500

DIMENSIONS



ANSI 600

(Unit) : mm

Nom. Dia.	Bore	Face to Face Dimension			Body			Stem		WT.(kg)	
		A(WE)	A(RF)	A(RJ)	B	C	D	G	H	WE	RF
6	150	559	559	562	270	225	345	55	70	250	330
8	201	660	660	664	325	265	425	55	70	340	450
10	252	787	787	791	362	299	485	55	70	570	710
12	303	838	838	841	405	340	560	55	70	850	1000
14	334	889	889	892	440	371	620	75	85	1100	1370
16	385	991	991	994	430	410	695	75	85	1350	1650
18	436	1092	1092	1095	490	457	792	90	115	2100	2400
20	487	1194	1194	1200	535	500	870	90	115	2600	3000
22	538	1295	1295	1305	585	540	950	90	115	3150	3550
24	589	1397	1397	1407	635	585	1040	120	140	3700	4300
26	633	1448	1448	1461	685	627	1115	120	140	3900	4500
28	684	1549	1549	1562	730	667	1190	120	140	4200	4900
30	735	1651	1651	1664	780	716	1280	120	140	6000	6900
32	779	1778	1778	1794	820	750	1345	120	140	6800	8000

ANSI 900

(Unit) : mm

Nom. Dia.	Bore	Face to Face Dimension			Body			Stem		WT.(kg)	
		A(WE)	A(RF)	A(RJ)	B	C	D	G	H	WE	RF
6	150	610	610	613	270	225	345	55	70	330	430
8	201	737	737	740	325	265	425	55	70	400	520
10	252	838	838	841	380	320	525	75	85	640	820
12	303	965	965	968	425	355	595	75	85	900	1050
14	322	1029	1029	1038	450	378	635	75	85	1020	1400
16	373	1130	1130	1140	455	426	735	90	115	1350	2050
18	423	1219	1219	1232	500	495	805	120	115	2600	3400
20	471	1321	1321	1334	560	520	910	120	140	3700	4200
22	522	1422	-	-	615	562	995	120	140	4000	4600
24	570	1549	1549	1568	635	585	1040	150	140	4400	5400
26	617	1729	1651	1673	715	655	1165	150	187	5800	7000
28	665	1700	1780	1802	770	694	1240	150	187	7600	8600
30	712	1880	1890	1902	815	737	1330	150	187	10000	11000
32	760	1884	2014	2036	855	781	1410	150	187	10600	12500

1) Reduced bore ball valves have the same face-to-face and end-to-end dimensions as full bore ball valves of the same pipe size.

2) Valve size is as same as nominal pipe size.

3) Dimension (C) of a welding x flanged end valves is one half the sum of dimensions (C) of a welding end and a flanged end valve of the same size and pressure rating.

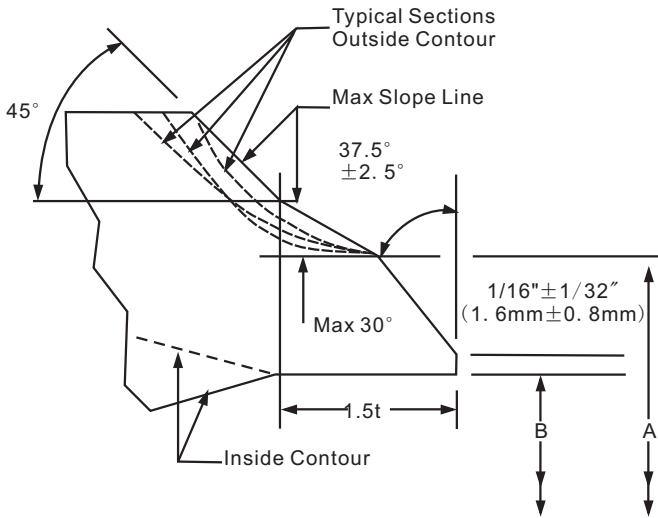
4) Dimension and tolerances for flanges conform to ANSI B 16.5 or MSS SP-44.

5) Welding ends conform to ANSI B 31.8 and ANSI 16.25. It is up to the purchaser to specify welding end.

BUTT WELDING DIMENSIONS----ANSI 16.25

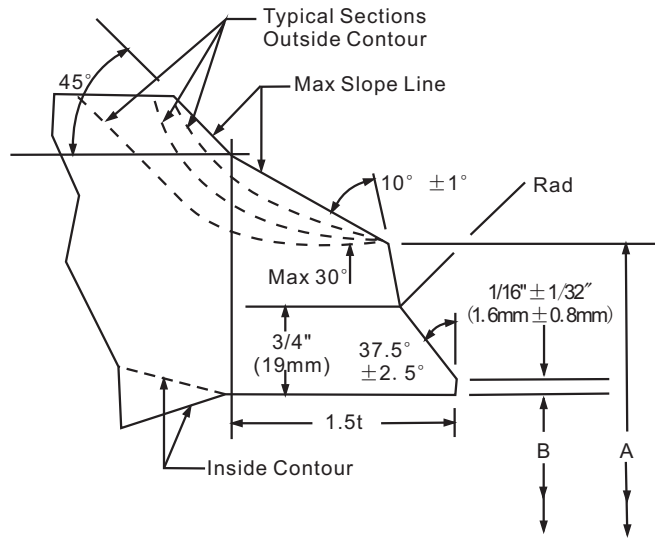
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

Welding end details for cast components for use without backing ring or with split backing ring.



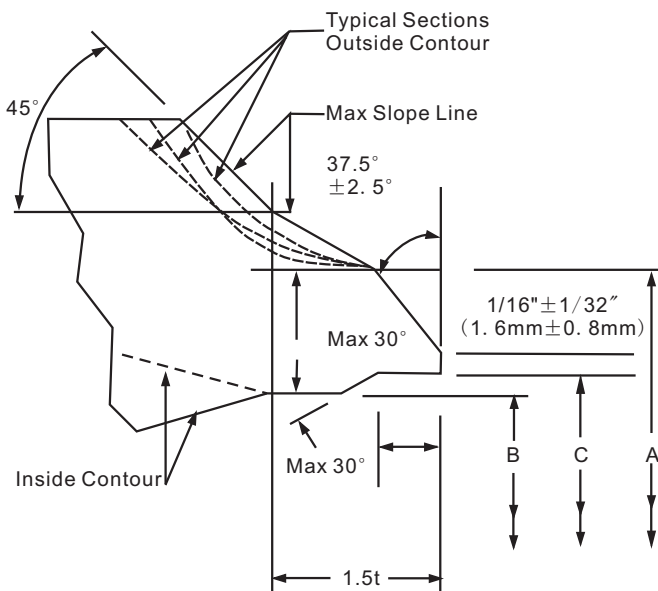
Compound Bevel Butt-welding End for Pipe Wall Thickness Greater than 7/8" (22.23mm).

Welding end details for cast components for use without backing ring or with split backing ring.



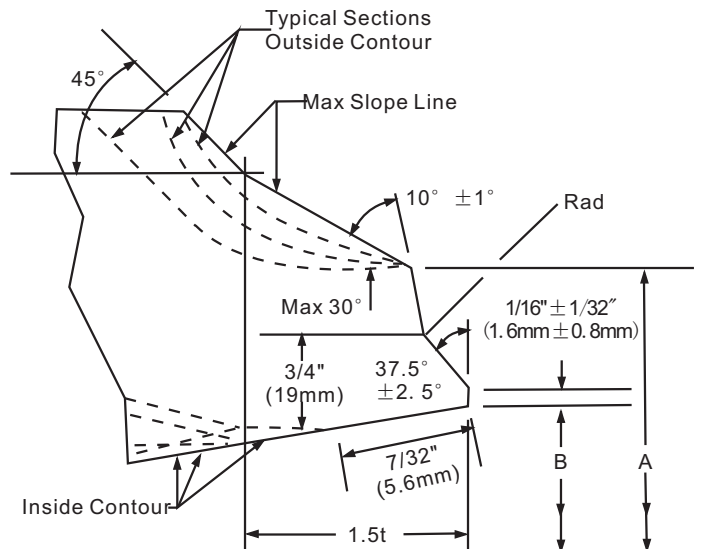
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

Welding end details for cast components for use with continuous rectangular or tapered backing ring



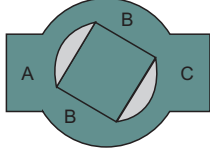
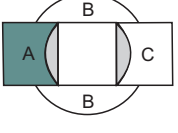
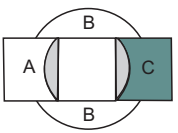
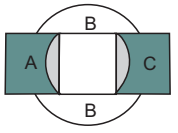
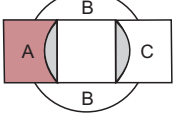
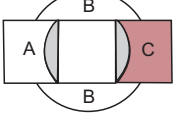
Compound Bevel Butt-welding End for Pipe Wall Thickness Greater than 7/8" (22.23mm).

Welding end details for cast components for use with continuous rectangular or tapered backing ring



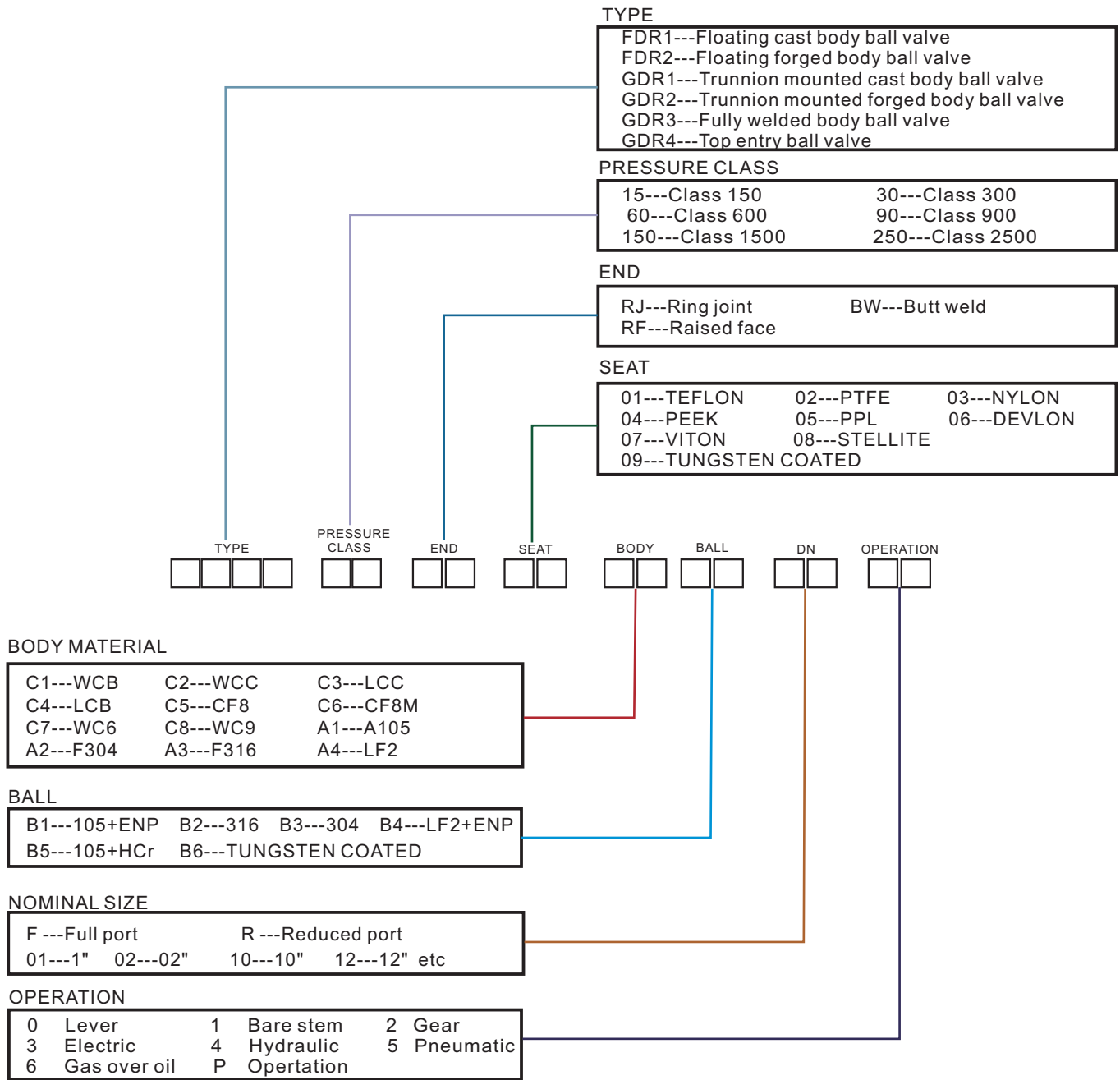
TEST PROCEDURE

ROCKY UNION FULLY WELDED BODY BALL VALVE TEST PROCEDURE

HYDROSTATIC SEAL TEST API6D 10.3 and 10.4						
Sequence		Area Pressure		Duration(min)		Description
SHELL TEST		A	1.5x PN	6 " -10 "	5	1. Valve in partial open. 2. Set the pressure to 150% PN. 3. Reduce the pressure to 50% PN. 4. Reset the pressure to 150% PN. 5. Hold the pressure for the duration of testing.
		B	1.5xPN	12 " -18 "	15	
		C	1.5xPN	20 " -60 "	30	
SEAT TEST		A	1.1xPN	5	5	Seat hydro seal test at A end towards body B
		B	Atmospheric			
		C	Atmospheric			
		A	Atmospheric	5	5	Seat hydro seal test at C end towards body B
		B	Atmospheric			
		C	1.1xPN			
		A	1.1xPN	5	5	Seat hydro seal test for both A and C DBB
		B	Atmospheric			
		C	1.1xPN			
AIR SEAL TEST API6D 10.4						
SEAT TEST		A	Atmospheric	5	5	Seat air seal test at A end towards body B
		B	Atmospheric			
		C	80PSIG(5.5bar)			
		A	80PSIG(5.5bar)	5	5	Seat air seal test at C end towards body B
		B	80PSIG(5.5bar)			
		C	Atmospheric			

PN=Nominal Pressure Green=Liquid Red=Air

HOW TO SPECIFY RUV BALL VALVES



EXAMPLES

F D R 1 1 5 R F 0 4 A 1 B 1 F 02 P 0

Floating ball valve, Class 150, Raised face, with seat of PEEK and body materials constructed using A105, Ball constructed with 105+ENP, full port, nominal size 2 inch, operated by lever.

G D R 3 6 0 B W 0 2 C 1 B 3 F 08 P 2

Fully welded body ball valve, Class 600, Butt Weld, with seat of PTFE and body materials constructed using WCB, Ball constructed with materials of 304, Full port, nominal size 8 inch, operated by gearbox.

WE MAKE FOR RELIABILITY

ROCKY UNION VALVE CO.,LTD

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Special Statement

ROCKY UNION is always committed to provide high quality products and efficient service to our customers, At the same time, we have always strictly abided by the provisions of the state; abided by the relevant international rules. And we also abide by the business and professional ethics, making effort to providing employees safety, healthy, environmental work environment.