

RBR
Ball Valves

40T Series

TRUNNION
MOUNTED
BALL VALVES



Specialist in Quality and Reliability since mid sixties.

RBR was founded in 1964 and it has always been acknowledged worldwide as one of the leading manufactures of high quality and reliability Ball Valves for industrial application.

The **RBR** Ball Valves are successfully installed in many Chemical, Petrochemical, Oil,

Gas, Onshore and Offshore applications.

The keys of the long lasting success of **RBR** are:

- Constant **development** of **RBR** products and performance;
- Continous improvement of **RBR process capability**;
- Focus on the **skills** of **RBR** people.

RBR goals is to meet the expectations of the customers **delivering on time** the best product at a competitive price with an excellent **before and after sales service**.



2

Where we are

RBR headquarter is located 10 km from Central Milan in the area of the new exhibition centre of Milan (Italy), close to Malpensa International Airport, near to all the main motorway and 150-200 km from the 3 most important Italian seaports.



RBR Ball Valves are successfully installed on the first Italian Navy air carrier.



RBR



3

RBR
Ball Valves

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Our Team includes our valuable representatives and local distributors in various countries worldwide.

Please don't hesitate to contact our sales department for more information.

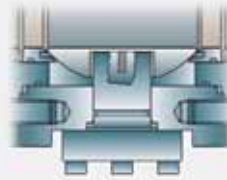
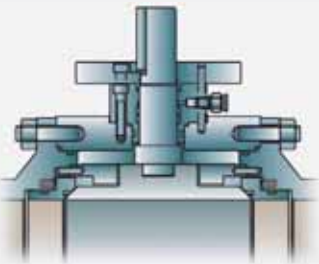


TRUNNION SIDE ENTRY SPLIT BOLTED OR WELDED BODY AND TOP ENTRY BALL VALVES

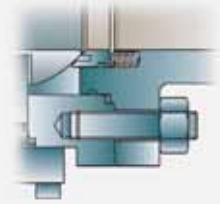
STANDARD FEATURES

Trunnion Mounted Ball Valves, 2/3 pcs split bolted body, side entry, full and reduced bore:

- Double Block and bleed;
- Fire safe certified (ISO10497, API 607 and API 6FA);
- Stem sealing by three gaskets: one graphite seal and two o-rings;
- Antistatic device;
- Anti-blow-out stem design;
- Supporting feet on 6" and larger;
- Lifting lugs on 6" and larger;



- Self Relieving Seats;
- Vent/Drain Plug;
- Lever/Gear Operated;
- Self lubricating PTFE impregnated steel bearing support of stem and trunnion for reduced torque and extended life;
- Sealing of the body with a combination of o-rings, graphite, gaskets to allow both the above ground and buried installation;
- Flanges ANSI, UNI and DIN standards available;



4

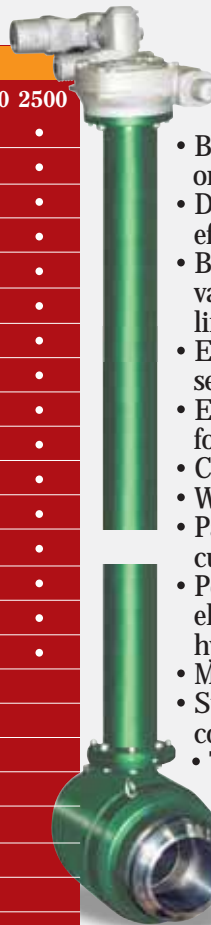
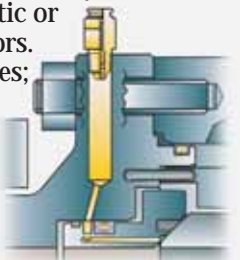
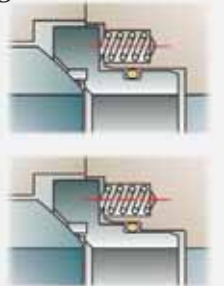
PRODUCT RANGE

The full range of the RBR trunnion ball valves are designed in accordance with the (API 6D/ ISO 14313 Standard and verified following the PED and ATEX standard. Even meet the demands of SIL3 (Safety integrity level). The valves are constructed with forged materials in the various grades of carbon steel, stainless steels and alloys steel in compliance of the most severe conditions of service. A wide range of options, sealing materials and welding overlays are also available upon request. On request RBR ball valves can be supplied accordingly with NACE MR-01-75 Standards.

SIZE	CLASS					
	150	300	600	900	1500	2500
3/4"
1"
1 1/2"
2"
3"
4"
6"
8"
10"
12"
14"
16"
18"
20"
22"
24"
26"
28"
30"
32"
34"
36"
38"
40"
42"
48"

FEATURES UPON REQUEST

- BW compact flange or HUB ends;
- Double piston effect;
- Body relief of valve for liquid line service;
- Emergency sealant injector;
- Extension stem for buried use;
- Cryogenic extension bonnet;
- Welded body configuration;
- Painting according to customer specification;
- Power assisted control by electric, pneumatic or hydraulic actuators.
- Metal seated valves;
- Subsea service configuration;
- Transition pieces (pups)
 - Locking device.
 - Internal Valve Coating (Epoxy Lining)



SEALING MATERIALS ON REQUEST

When the standard soft sealing is no longer suitable due to the peculiar combination of pressure, temperature and chemical characteristic of the fluid, different sealing designs and materials are available.

Lip seals: for cryogenic, high temperatures and corrosive applications.

Metal to metal seats (high velocity application of tungsten carbide powder): in case of a flowing media with hard solid particles or elevated temperatures.

WELD OVERLAY

For an additional protection and a longer life in corrosive conditions a wide choice of seat pocket and a seal area overlays are available. Depending on the service conditions, the anticorrosive



SEAT INSERTS

- PTFE (up to 6" max.);
- PCTFE (Kel-F); • Nylon; • Peek;
- Viton (all grades available) STD or AED service.
- NBR, HNBR
- Perfluoro Elastomers (Kalrez, Chemraz)
- TFEP (AFLAS)

SEAL O-RING

- NBR, HNBR;
- Viton (all grades available) STD or AED service.
- Perfluoro Elastomers (Kalrez, Chemraz)
- TFEP (AFLAS)

LIP SEAL

- PTFE + ELGILOY;
- PEEK + ELGILOY;
- KELF + ELGILOY.

Peek: suitable for high temperatures (up to 250°C/480° F).

Graphite: suitable for very high temperatures (up to 590°C/750° F).



overlays may be in nickel alloys or in stainless steel. The perfect melting of the overlaid surfaces may be checked and assured by the liquid penetrant examination available on request.

Engineering Data: Standard Operating Design:

Manual operated Ball Valves are normally supplied with wrench or gear box.

The wrench position parallel to the flow line means the valve is open.

The gear box is always provided with open/close indicator fit up on top of the housing.



Side Entry Ball Valves
40 T Series.



Top Entry Ball Valves
40 TE Series.

40T SERIES

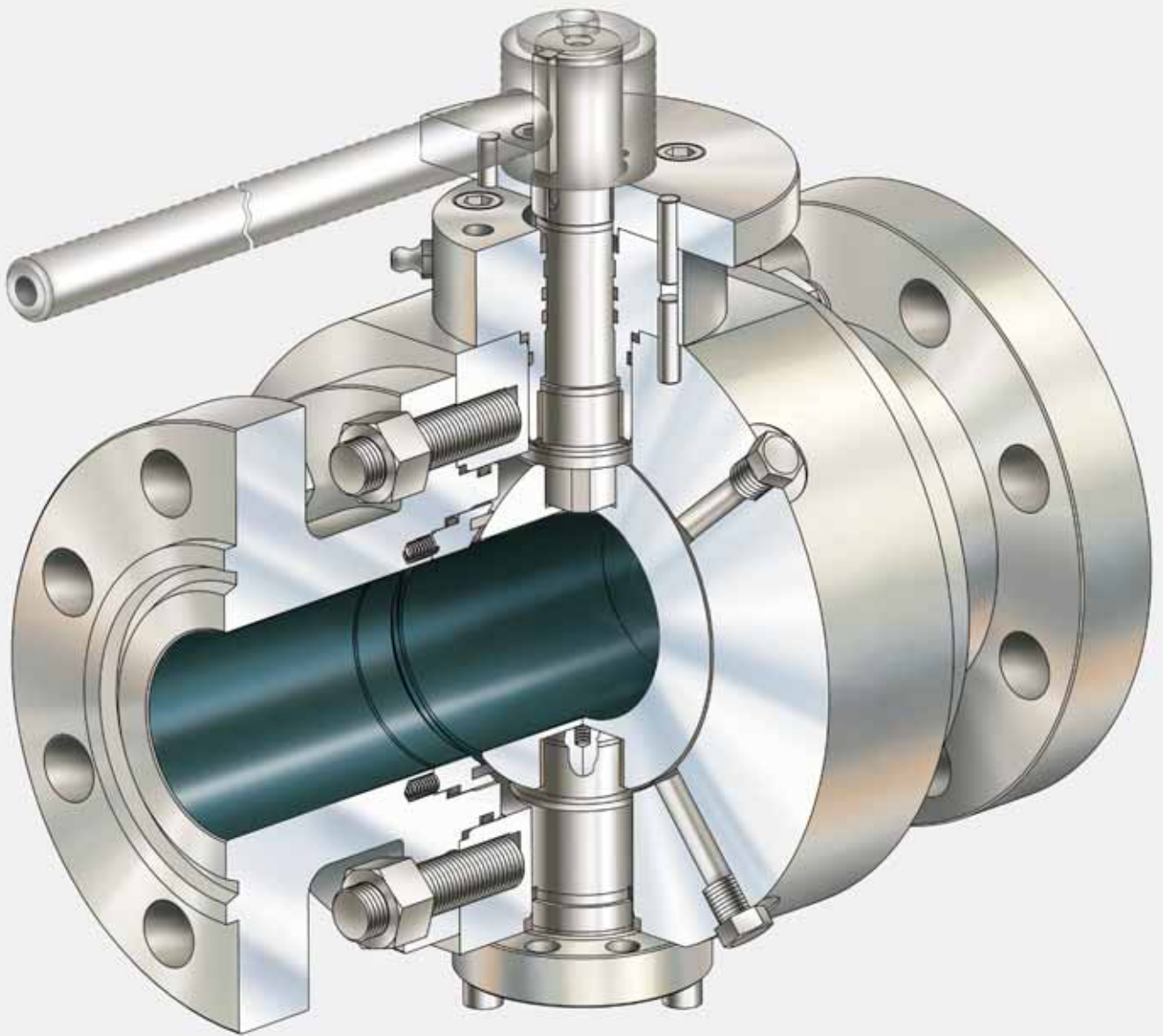
PART LIST

Description

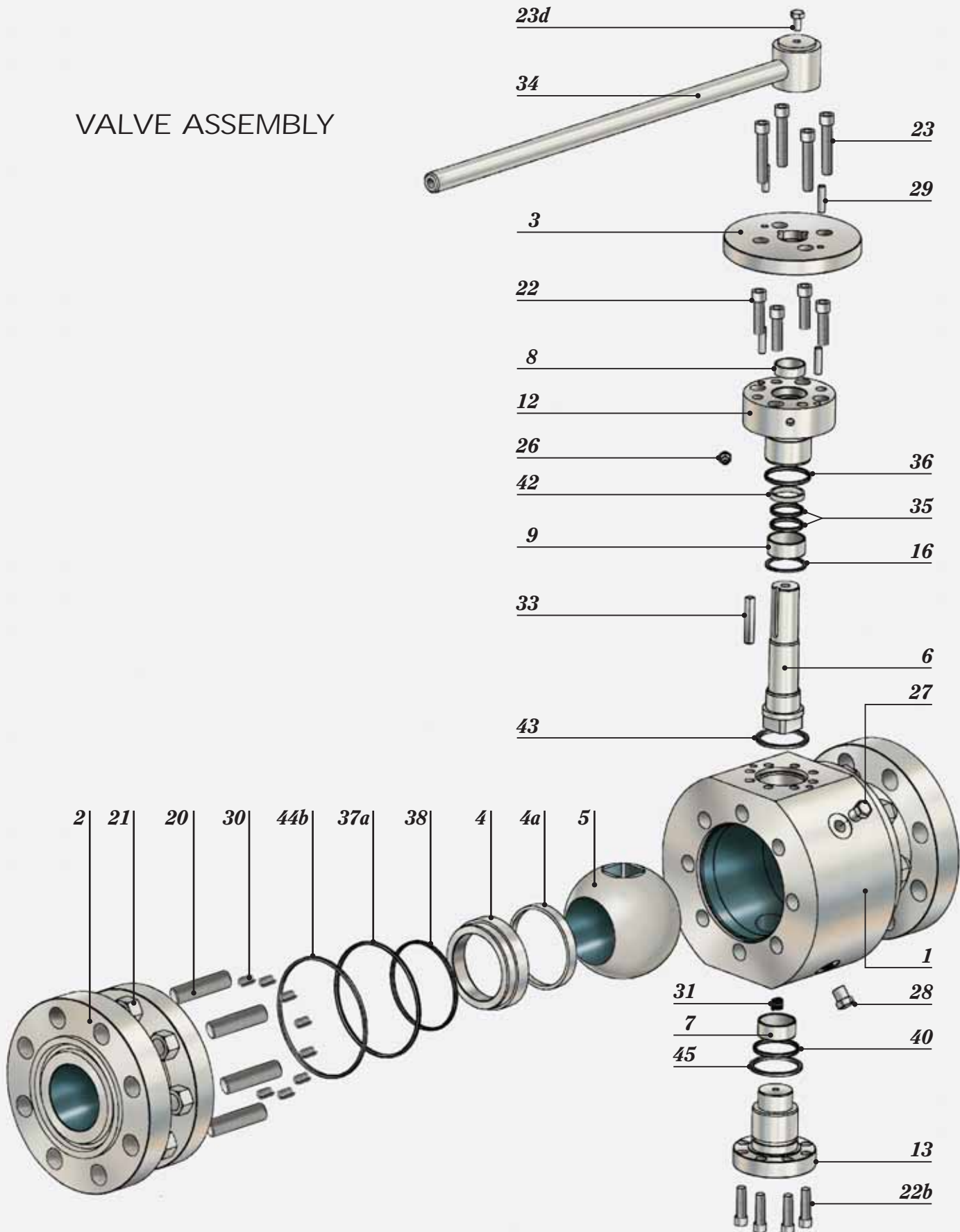
- 1** Body
- 2** Closures
- 2a** Bonnet
- 3** Motor Flange
- 4** Seats
- 4a** Seat Insert
- 5** Ball
- 6** Stem
- 7** Ball Bearing
- 8** Motor Flange Bearing
- 9** Stem Bearing
- 10** Threaded Ring
- 11** Spring Retainer Ring
- 12** Gland Plate
- 13** Trunnion
- 15** Ball Retainer
- 16** Upper Thrust Washer
- 18** Ball Washer
- 20** Body Stud
- 21** Body Nut
- 22** Gland Plate Cap Screw
- 22b** Trunnion Cap Screw
- 23** Motor Flange Cap Screw
- 23d** Wrench Cap Screw
- 23e** Stem Key Cap Screw
- 25** Seat Grease Fitting
- 26** Stem Grease Fitting
- 27** Vent Valve
- 28** Drain Plug
- 29** Pin
- 30** Seat Spring
- 31** Antistatic Device
- 32a** Ball Retainer Pin
- 33** Stem Key
- 34** Wrench
- 35** Stem O-Ring
- 36** Gland Plate O-Ring
- 37** Bonnet O-Ring
- 37a** Body O-Ring
- 38** Seat O-Ring
- 40** Trunnion O-Ring
- 42** Stem Gasket
- 43** Gland Plate Gasket
- 44** Bonnet Gasket
- 44b** Body Gasket
- 45** Trunnion Gasket

40T SERIES (up to 4")

VALVE CROSS SECTION



VALVE ASSEMBLY

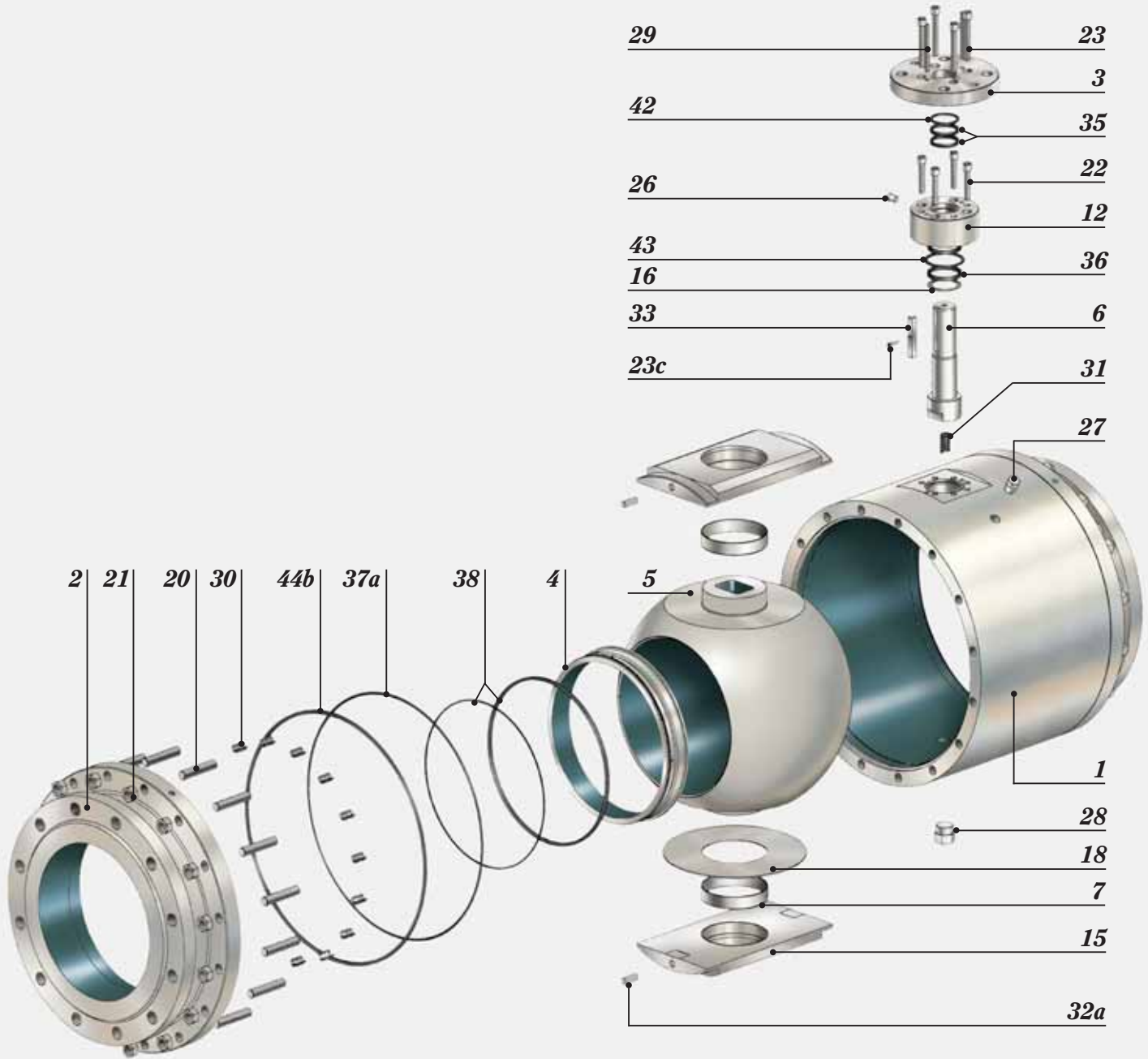


40T SERIES (from 6" and above)

VALVE CROSS SECTION

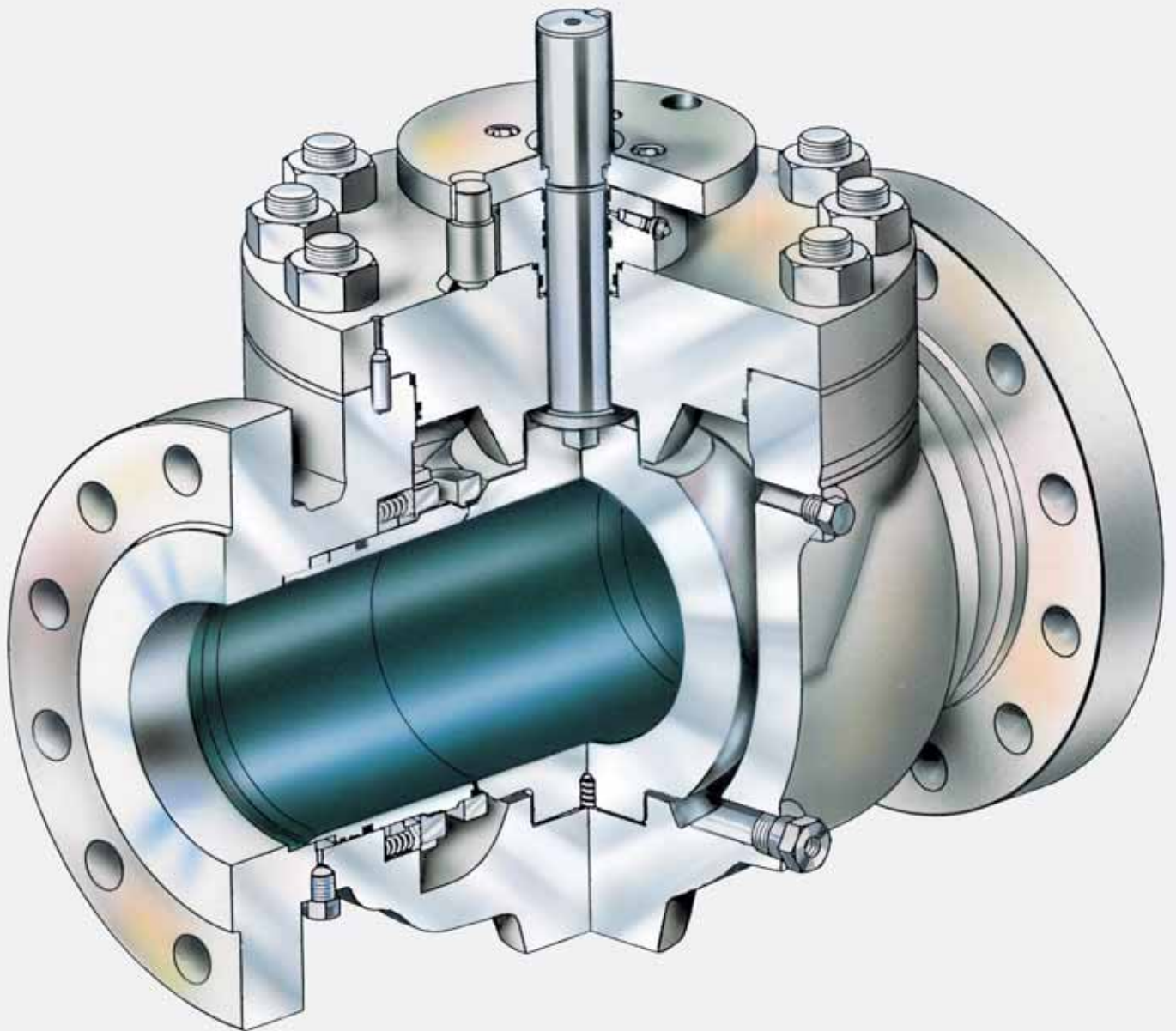


VALVE ASSEMBLY

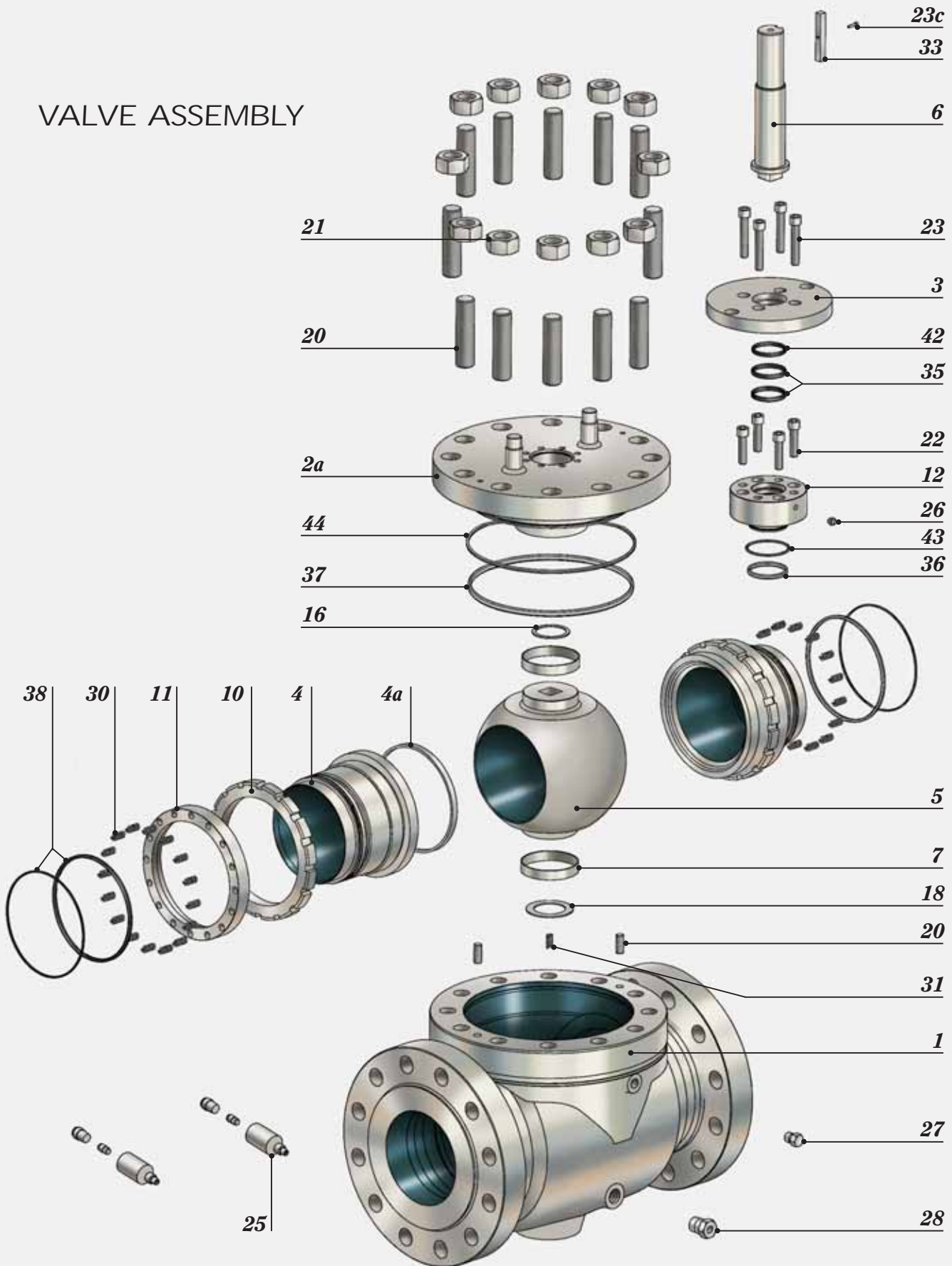


40TE SERIES

VALVE CROSS SECTION

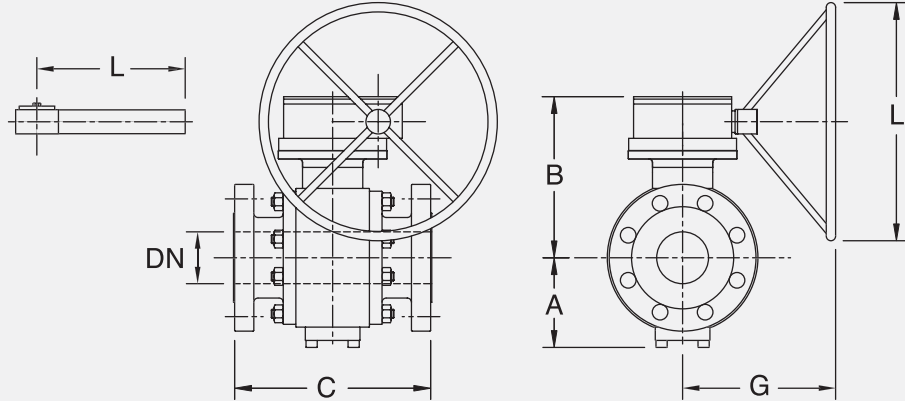


VALVE ASSEMBLY



40T SERIES

DIMENSION & WEIGHT



Class 150 - PN 20

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1.5	38	165	178	191	95	168	9	15	300	-
2	50	178	191	216	105	177	15	20	300	-
3	80	203	216	283	130	203	40	45	400	-
4	100	229	241	305	150	225	60	70	400	-
6	150	394	406	457	190	339	170	180	500	310
8	200	457	470	521	230	377	290	307	500	310
10	250	533	546	559	265	416	370	400	500	310
12	300	610	622	635	300	467	580	615	800	410
14	350	686	699	762	340	505	840	890	800	410
16	400	762	775	838	380	574	995	1055	700	520
18	450	864	876	914	410	583	1190	1250	700	520
20	500	914	927	991	475	672	2320	2400	700	520

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
24	600	1067	1080	1143	555	765	3075	3195	700	565
26	650	1143	1245	1270	570	740	3650	3800	800	750
28	700	1245	1346	1372	600	790	4420	4600	800	750
30	750	1295	1397	1422	630	820	5000	5200	800	750
32	800	1372	1524	1553	655	885	6800	7000	800	750
34	850	1473	1626	1654	720	930	7800	8000	800	750
36	900	1524	1727	1756	750	970	8850	9100	800	750
38	950	1625	1625	-	850	1030	10750	11000	800	750
40	1000	1753	1753	-	890	1100	12600	12900	800	850
42	1050	1855	1855	-	940	1190	14300	14600	800	850
48	1200	2134	2134	-	1100	1450	21400	21800	800	850

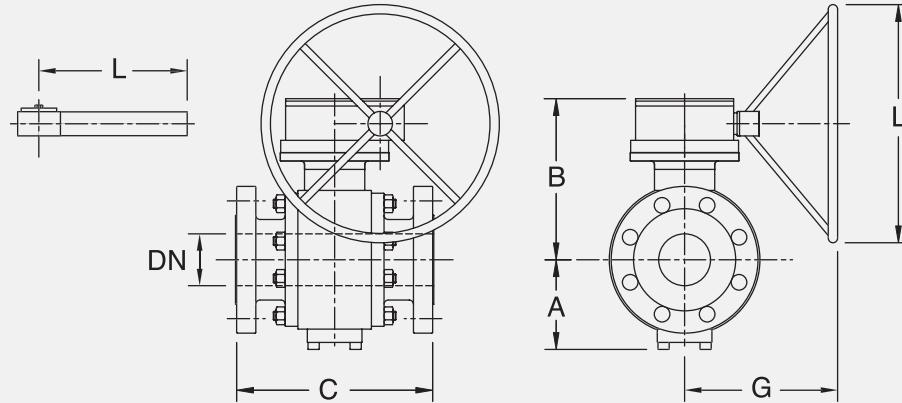
Class 300 - PN 50

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1.5	38	191	203	191	95	168	15	20	300	-
2	50	216	232	216	105	177	19	25	300	-
3	80	283	298	283	130	203	46	56	400	-
4	100	305	321	305	150	225	63	82	400	-
6	150	403	419	457	190	339	170	190	500	310
8	200	502	518	521	245	395	290	350	500	310
10	250	568	584	559	265	436	420	480	500	330
12	300	648	664	635	310	480	670	740	700	500
14	350	762	778	762	350	520	990	1100	700	480
16	400	838	854	838	380	574	1295	1430	700	520
18	450	914	930	914	490	598	1540	1660	700	520
20	500	991	1010	991	475	682	2340	2530	700	540

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
24	600	1143	1165	1143	560	755	3385	3675	700	540
26	650	1245	1245	1270	580	770	4500	4700	800	750
28	700	1346	1346	1372	610	820	5800	6000	800	750
30	750	1397	1397	1422	645	850	6450	6700	800	750
32	800	1524	1524	1553	675	915	7700	8000	800	750
34	850	1626	1626	1654	735	965	8990	9250	800	750
36	900	1727	1727	1756	770	1000	10000	10400	800	850
38	950	1830	1830	-	870	1100	12700	13000	800	850
40	1000	1956	1956	-	915	1140	14800	15200	800	850
42	1050	2083	2083	-	970	1230	16600	17000	800	850
48	1200	2200	2200	-	1130	1500	24500	25000	800	850

40T SERIES

DIMENSION & WEIGHT



Class 600 - PN 100

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1,5	38	241	241	241	95	168	19	25	300	-
2	50	292	295	292	105	177	27	35	300	-
3	80	356	359	356	130	203	45	60	400	-
4	100	432	435	432	150	225	70	100	700	-
6	150	559	562	559	190	339	200	250	500	345
8	200	660	664	660	230	389	445	525	500	325
10	250	787	791	787	270	411	671	786	500	325
12	300	838	841	838	310	499	945	1070	700	355
14	350	889	892	889	350	548	980	1145	700	550
16	400	991	994	991	380	574	1465	1690	700	520
18	450	1092	1095	1092	495	640	2065	2215	700	520
20	500	1194	1200	1194	475	682	2600	2796	700	580

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
24	600	1397	1407	1397	620	785	4620	4903	800	750
26	650	1448	1448	1461	640	800	5400	5600	800	850
28	700	1549	1549	1562	675	850	6380	6610	800	850
30	750	1651	1651	1664	710	880	7800	8090	800	850
32	800	1778	1778	1794	740	950	8750	9000	800	850
34	850	1930	1930	1946	810	1000	9700	10050	800	850
36	900	2083	2083	2099	850	1040	11600	11980	800	850
38	950	2120	2120	-	950	1100	13520	13900	800	850
40	1000	2185	2185	-	990	1170	16300	16700	800	850
42	1050	2200	2200	-	1045	1270	23100	23500	800	850
48	1200	2250	2250	-	1250	1520	32100	33000	800	970

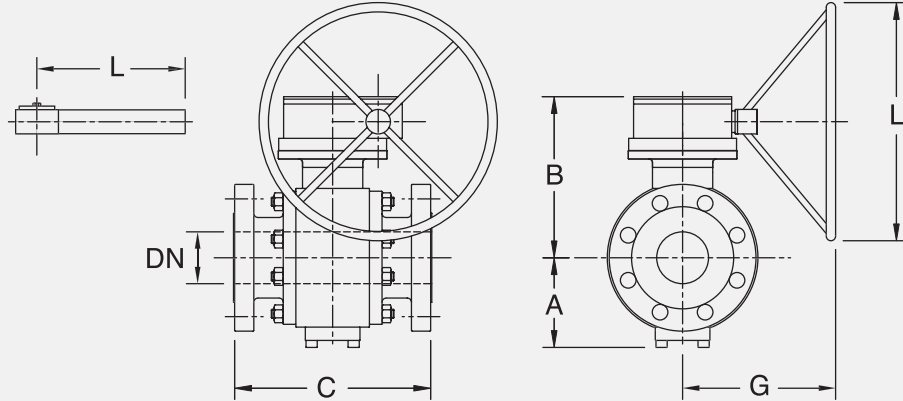
Class 900 - PN 150

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1,5	38	305	305	305	100	170	25	38	300	-
2	50	368	371	368	125	199	35	58	300	-
3	80	381	15	6,1	10,6	88	110	300	230	
4	100	457	460	457	185	344	136	176	500	330
6	150	610	613	610	200	364	375	450	500	325
8	200	737	740	737	260	419	545	665	700	355
10	250	838	841	838	300	486	885	1045	700	420
12	300	965	968	965	330	519	1380	1580	700	520
14	350	1029	1038	1029	430	546	1450	1615	700	520
16	400	1130	1140	1130	485	602	2100	2270	700	520
18	450	1219	1232	1219	515	660	2935	3082	700	520
20	500	1321	1334	1321	570	711	4100	4368	700	580
24	600	1549	1568	1549	670	800	6800	7110	800	850

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
24	600	1549	1568	1549	670	800	6800	7110	800	850
26	650	1651	1651	1675	700	840	6700	7005	800	850
28	700	1753	1753	1775	730	890	7700	8040	800	850
30	750	1880	1880	1902	770	920	9480	9810	800	850
32	800	2032	2032	2054	800	990	11780	12100	800	850
34	850	2159	2159	2188	860	1070	13200	14180	800	850
36	900	2210	2210	2250	910	1100	15680	16000	800	850
38	950	2285	2285	-	1000	1160	17490	17800	800	850
40	1000	2320	2320	-	1050	1235	18750	19100	800	850
42	1050	2385	2385	-	1110	1340	20500	21000	800	970
48	1200	2450	2450	-	1320	1570	36500	37000	800	970

40T SERIES

DIMENSION & WEIGHT



Class 1500 - PN 250

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1.5	38	305	305	305	100	170	25	38	300	-
2	50	368	371	368	125	199	35	58	300	-
3	80	470	473	470	155	299	70	108	500	310
4	100	546	549	546	185	344	140	195	500	330
6	150	705	711	705	200	369	420	496	500	325
8	200	832	841	832	260	460	795	912	700	540
10	250	991	1000	991	300	486	1430	1595	700	420
12	300	1130	1146	1130	465	650	1930	2370	700	520
14	350	1257	1276	1257	492	670	2610	3110	700	550

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
16	400	1384	1407	1384	561	684	3875	4380	700	550
18	450	1537	1559	1537	620	747	6010	6560	800	850
20	500	1664	1664	-	680	800	8700	9100	800	850
22	550	1854	1854	-	720	890	11400	12000	800	850
24	600	1980	1980	-	770	990	16000	16600	800	850
26	650	2005	2005	-	830	1045	18700	19500	800	850
28	700	2080	2080	-	880	1120	21200	22500	800	850
30	750	2120	2120	-	930	1200	25000	26500	800	970

Class 2500 - PN 420

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
1.5	32	384	387	384	120	197	20	36	500	-
2	50	451	454	451	162	251	65	95	500	-
3	80	578	584	578	200	365	146	221	500	330
4	100	673	683	673	215	414	315	390	500	330
6	150	914	927	914	285	431	600	842	700	540
8	200	1022	1038	1022	380	523	1180	1450	700	540
10	250	1270	1292	1270	444	620	1856	2305	700	580
12	300	1422	1445	1422	507	695	2948	3453	700	580

Nominal Size		End to End C			A	B	Weights		L	G
NPS	DN	RF	RTJ	BW			BW	RF-RTJ		
Inch	mm	mm	mm	mm	mm	mm				
12	300	1422	1445	1422	507	695	2948	3453	700	580
14	350	1651	1651	-	550	760	4980	5500	800	750
16	400	1880	1880	-	600	850	6100	6800	800	850
18	450	1950	1950	-	725	910	7650	8300	800	850
20	500	2035	2035	-	780	1020	11000	12500	800	850
22	550	2100	2100	-	830	1130	19000	21000	800	970
24	600	2210	2210	-	900	1240	25000	27500	800	970

40T SERIES

MATERIALS FOR THE CONSTRUCTION

The valves are manufactured in accordance with our customers' requirements taking in consideration the operating conditions (i.e. fluid condition and environmental parameters like pressure and temperature).

A wide range of forged or cast ferrous and non ferrous materials is available: carbon steel, low alloy steel, stainless steel, duplex stainless steel and nickel alloys, such as:

- A105/WCB
- A350 LF2/LCB
- A350 LF3/LCC
- AISI 4140
- AISI 1040
- A694 F60
- A694 F65
- A182 F6A - UNS S41000
- A182 F6NM - UNS S41500
- A182 F304 - UNS S30400/CF8
- A182 F316 - UNS S31600/CF8M
- A182 F316LNM - UNS S31653
- A564 630 - UNS S17400
- A182 F44 - UNS S31254
- A182 F51 - UNS S31803
- A182 - UNS S32550
- A182 F53 - UNS S32750
- A182 F55 - UNS S32760
- B446 - UNS S06625
- UNS N08825
- UNS N08925



CLADDING

Depending on the customer specifications or the environmental and fluid conditions,


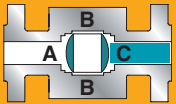
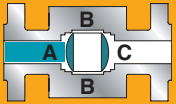
RBR Ball Valves can be provided with the most appropriate cladding materials in order to improve the surface resistance to high abrasion service conditions.



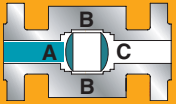
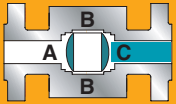
40T SERIES

STANDARD TESTS

HYDROSTATIC TEST

PART	SEQUENCE	AREA	PRESSURE	DURATION (min.)	DESCRIPTION
Shell		A B C	1.5xPress. Rating 1.5xPress. Rating 1.5xPress. Rating	From 2 to 30 min. depending on valve size	Shell hydrostatic test with valve half-open as follows: obtain hydrostatic test pressure and hold it for duration of testing.
Seat		A B C	Atmospheric Atmospheric 1.1xPress. Rating	From 2 to 5 min. depending on valve size	Seat seal test at "C" end towards body "B".
Seat		A B C	1.1xPress. Rating Atmospheric Atmospheric	From 2 to 5 min. depending on valve size	Seat seal test at "A" end towards body "B".

AIR TEST (supplementary tests on request)

PART	SEQUENCE	AREA	PRESSURE	DURATION (min.)	DESCRIPTION
Seat		A B C	5,5 bar Atmospheric Atmospheric	From 2 to 5 min. depending on valve size	Seat seal test at "A" end towards body "B".
Seat		A B C	Atmospheric Atmospheric 5,5 bar	From 2 to 5 min. depending on valve size	Seat seal test at "C" end towards body "B".

FIRE SAFE DESIGN

All **RBR** Ball Valves are fire safe designed. The fire safe design allow to prevent any leakages through the seals when the temperature reaches levels higher than the melting point of the seals.

Each **RBR** Ball Valves seals is provided with a secondary graphite seal wich is designed to endure the high temperatures for a determinate time.

The **RBR** Ball Valves fire safe design has been approved during the appropriate tests in accordance with the API 6FA and BS 6755 standards.



40T SERIES

OPTIONAL TESTS

In case of special requirements of the customer various optional tests can be performed:

- Magnetic particle inspection;
- Liquid penetrant test;
- Ultrasonic test;
- X-ray analysis;
- Pmi.



SPECIAL TESTS

- Fugitive emission test;
- High pressure Nitrogen/Helium test;
- Low temperature test;
- Hyperbaric test;
- High Temperature Test.



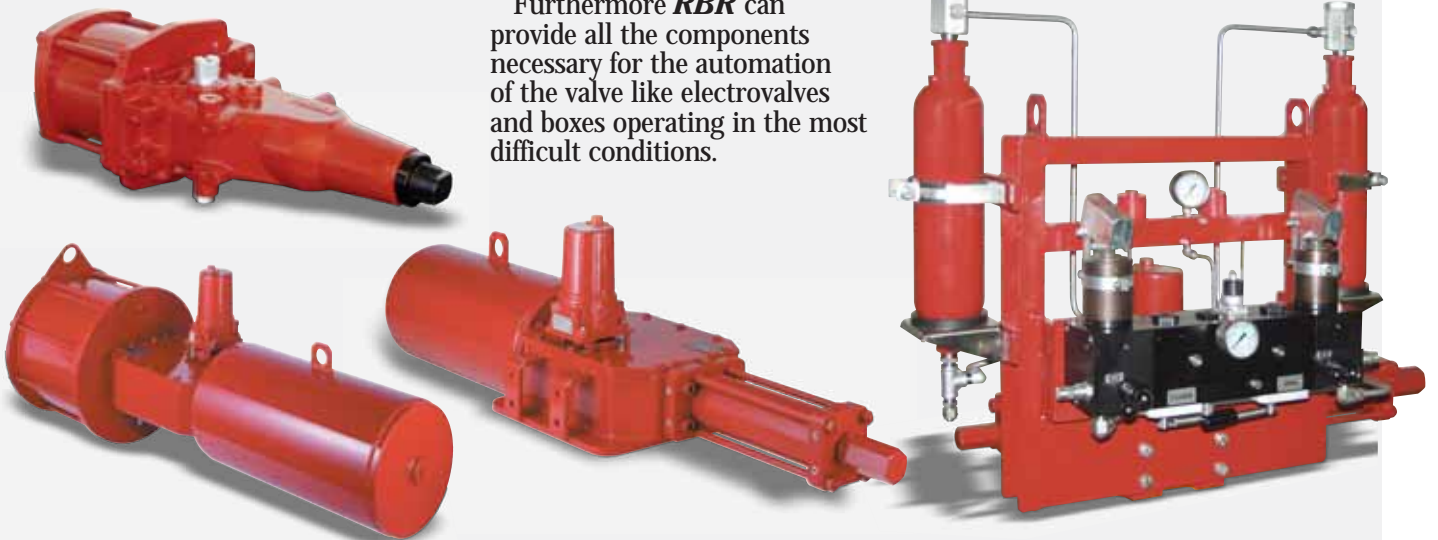
ACTUATORS

On customer request all **RBR** Ball Valves can be provided with any kind of pneumatic, electric or hydraulic actuator.

RBR is able to determine the size of the actuator, to assemble and to check the valve/actuator system.

Furthermore **RBR** can provide all the components necessary for the automation of the valve like electrovalves and boxes operating in the most difficult conditions.

SIL3 certified and flame proof components are available upon request.



40T SERIES

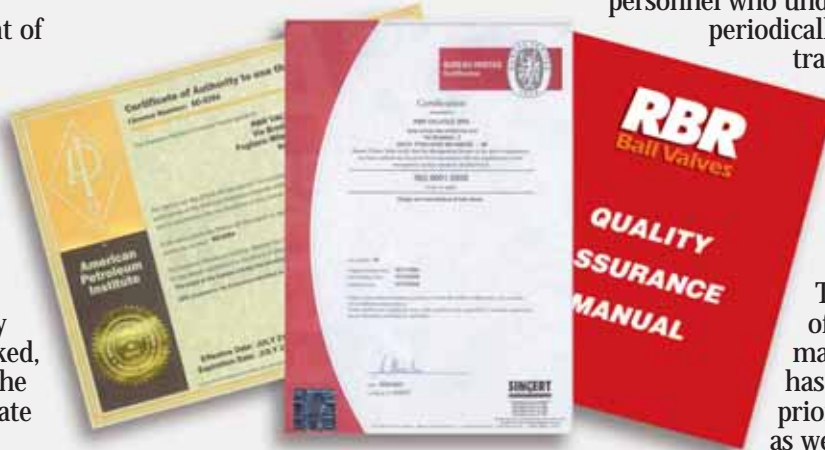
QUALITY ASSURANCE DEVELOPMENT

Under the constant supervision of the management and thanks to the large investments in human resources and equipment, **RBR** has grown to the point of being today regarded as a world class high quality valve manufacturer with the ISO 9001 accreditation certified by a primary International Independent Inspection Agency and API 6D monogramming authorisation.

The quality and reliability of **RBR** Ball Valves are checked, verified and guaranteed by the implementation of appropriate engineering and design, procurement, production processes, to the final acceptance test, as well as by endurance type-testing.

Working in an International multistandards environment **RBR** assure the capability to

both standard and special, are identified, implemented, verified and managed by highly qualified personnel who under go periodically scheduled training courses.



comply with the most demanding Customer's requests and specifications.

All production processes,

The quality of the valves manufactured has always been a priority for **RBR**, as well as the after sales service:

CUSTOMER SATISFACTION is the mission of **RBR**, with no compromises.

19

SERVICE

A dedicated team of skilled technicians are available on 24 hours base, to quickly and professionally respond to all our Customer's needs in case of emergency situations.

On request we can provide personnel for specific planned standard or preventive maintenance.



On site supervision and assistance are available as well as specific training courses according to Customer's requirements.

Most commonly used spare parts are available from stock and full parts interchangeability is guaranteed.





10"x8" 1500 Fully Inconel Clad



16" 1500 Fully Duplex Metal Seated



12" 150 Fully Welded Body



12" 2500 Hub Ends



12" 900 Metal to Metal



Actuated valve + Fire Safe protection



24" 150 Fully Welded Body



Underground Application



8" 600 -120°C + 20°C



SUBSEA BALL VALVE



HYPERBARIC TEST



24" 900 TOP ENTRY



Since
1964

RBR Your Favourite Partner
in Technology,
Quality and Service.



PRODUCT RANGE



40T Series

Bolted Body Trunnion Mounted Ball Valves.



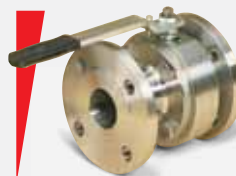
40TW Series

Welded Body Trunnion Mounted Ball Valves.



40TE Series

Top Entry Trunnion Mounted Ball Valves.



40 Series

Floating Split / One Piece Body Ball Valves.



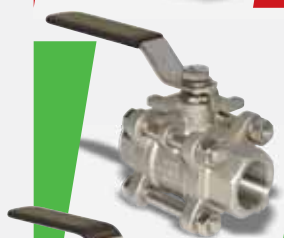
10 Series

Wafer Type Ball Valves.



11 Series

Jacketed Wafer Type Ball Valves.



24 Series

Three-Pieces Ball Valves.



70 Series

One-Piece Ball Valves.



33 Series

Threaded Three-Way Ball Valves.



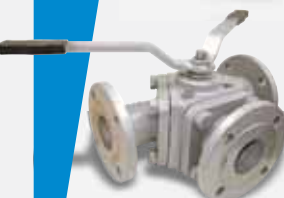
70HP Series

One-Piece Ball Valves High Pressure.



30Y Series

Flanged Three-Way Ball Valves 120°.



30T Series

Flanged Three-Way Ball Valves 90°.



34 Series

Flanged Three-Way Ball Valves 90°.



103 Series

Three-Way Wafer Type Two Seats Ball Valves 90°.



103 Series

Three-Way Wafer Type Three Seats Ball Valves 90°.



ACTUATORS & ACCESSORIES

Parts for Automatic Operations.

RBR
Ball Valves

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