

RBR
Ball Valves

10&11 Series

**WAFER &
JACKETED
WAFER TYPE
BALL VALVES**



RBR

Specialist in Quality and Reliability since mid sixty's.

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.

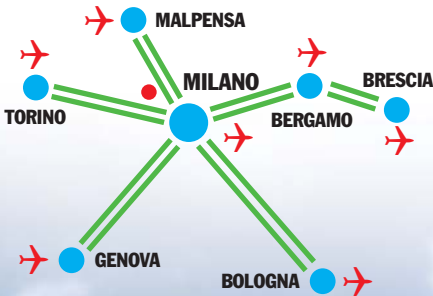
The **RBR** Ball Valves are successfully installed in many Chemical, Petrochemical, Oil,

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.

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



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'S NEWS

IL VARO

Here is "Cavour", the first Italian aircraft carrier!

Ecco la «Cavour», prima portaerei italiana

RIVA TRIGOSO (Genova) — Davanti al presidente Ciampi, che ne ha scelto il nome, è stata varata ieri a Riva Trigoso la «Cavour», la prima portaerei italiana e la più grande nave che la nostra marina abbia mai avuto. Ciampi ha esaltato Cavour come «il padre dello Stato unitario, liberale e moderno» (foto Ansa/Zenaro) ■ A pagina 8 Breda



RBR



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RBR

Ball Valves

RBR

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

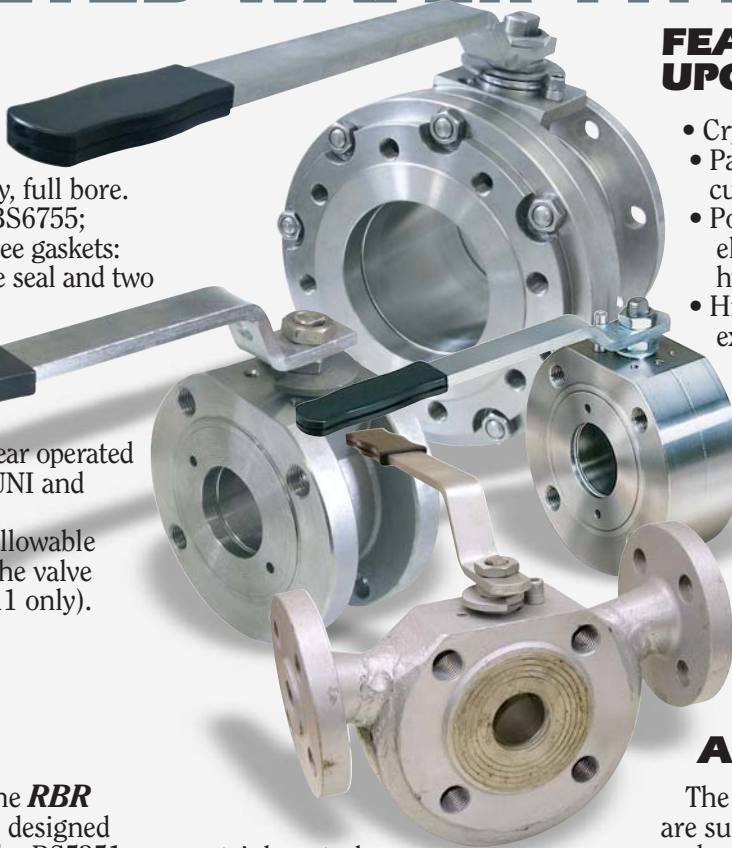
Please don't hesitate to contact our sales department for more information.



10 SERIES WAFER & 11 SERIES JACKETED WAFER TYPE

STANDARD FEATURES

- Wafer/sandwich one piece Floating Ball Valves, side entry, full bore.
- Fire safe certified BS6755;
- Stem sealing by three gaskets: one V-pack graphite seal and two o-rings;
- Antistatic device
- Lever/gear operated
- Suitable to ANSI, UNI and DIN standards
- Jacket maximum allowable pressure equal to the valve nominal rating (S11 only).



FEATURES UPON REQUEST

- Cryogenic extension bonnet;
- Painting according to customer specification;
- Power assisted control by electric, pneumatic or hydraulic actuators;
- High temperature extension bonnets;
- Locking device;
- Jacket material according to customer specification (S11 only);
- Jacket connections threaded, socket ends or flanged as per customer requirements.

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PRODUCT RANGE

The full range of the **RBR** Wafer Ball Valves are designed in accordance with the BS5351 standards and verified following the PED standards.

The valves are constructed with forged or casting materials in the various grades of carbon steel,

stainless steel and alloy steel in compliance of the most severe conditions of service.

A wide range of options and sealing materials are also available upon request.

AUTOMATION

The **RBR** Wafer Ball Valves are suitable for automated lines and can be assembled with a wide range of actuators, including automation accessories such as boxes, solenoid valves, limit switches, pressure regulators, etc.



SIZE	ANSI			PN			
	150	300	600	16	40	64	100
1/2"	•	•	•	•	•	•	•
3/4"	•	•	•	•	•	•	•
1"	•	•	•	•	•	•	•
1 1/4"	•	•	•	•	•	•	•
1 1/2"	•	•	•	•	•	•	•
2"	•	•	•	•	•	•	•
2 1/2"	•	•	•	•	•	•	•
3"	•	•	•	•	•	•	•
4"	•	•	•	•	•	•	•
5"	•	•	•	•	•	•	•
6"	•	•	•	•	•	•	•
8"	•	•	•	•	•	•	•
10"	•	•	•	•	•	•	•



10 & 11 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 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 • B 148 • B 446
- 304/CF8 • 316/CF8M
- 316L/CF3M • 317

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.



SEAT

- PTFE (up to 6" max.);
- PTFE Glass or Graphite Filled;
 - PCTFE (Kel-F);
 - Nylon;
 - Peek;

SEAL

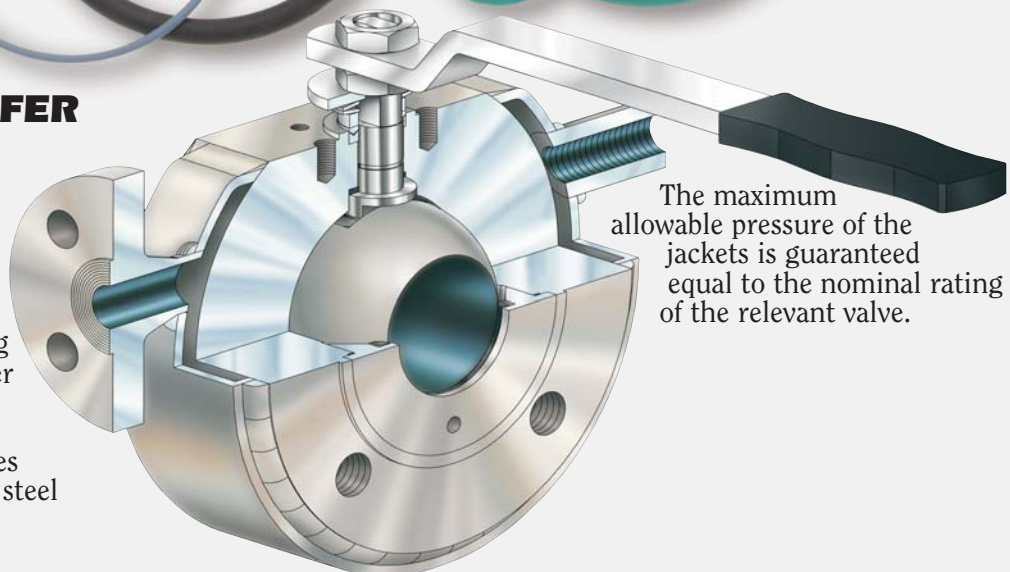
- Nitrile;
- Viton A, B, GF, AED, GLT;

JACKETED WAFER BALL VALVES

The **RBR** Jacketed Ball Valves can be supplied with different jacket connections:

- Threaded GAS or NPT
- Socket ends for welding
- Flanges as per customer request.

All the jacket can be provided in various grades of carbon steel, stainless steel or alloys.



The maximum allowable pressure of the jackets is guaranteed equal to the nominal rating of the relevant valve.



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 the top of the housing.



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10 & 11 SERIES

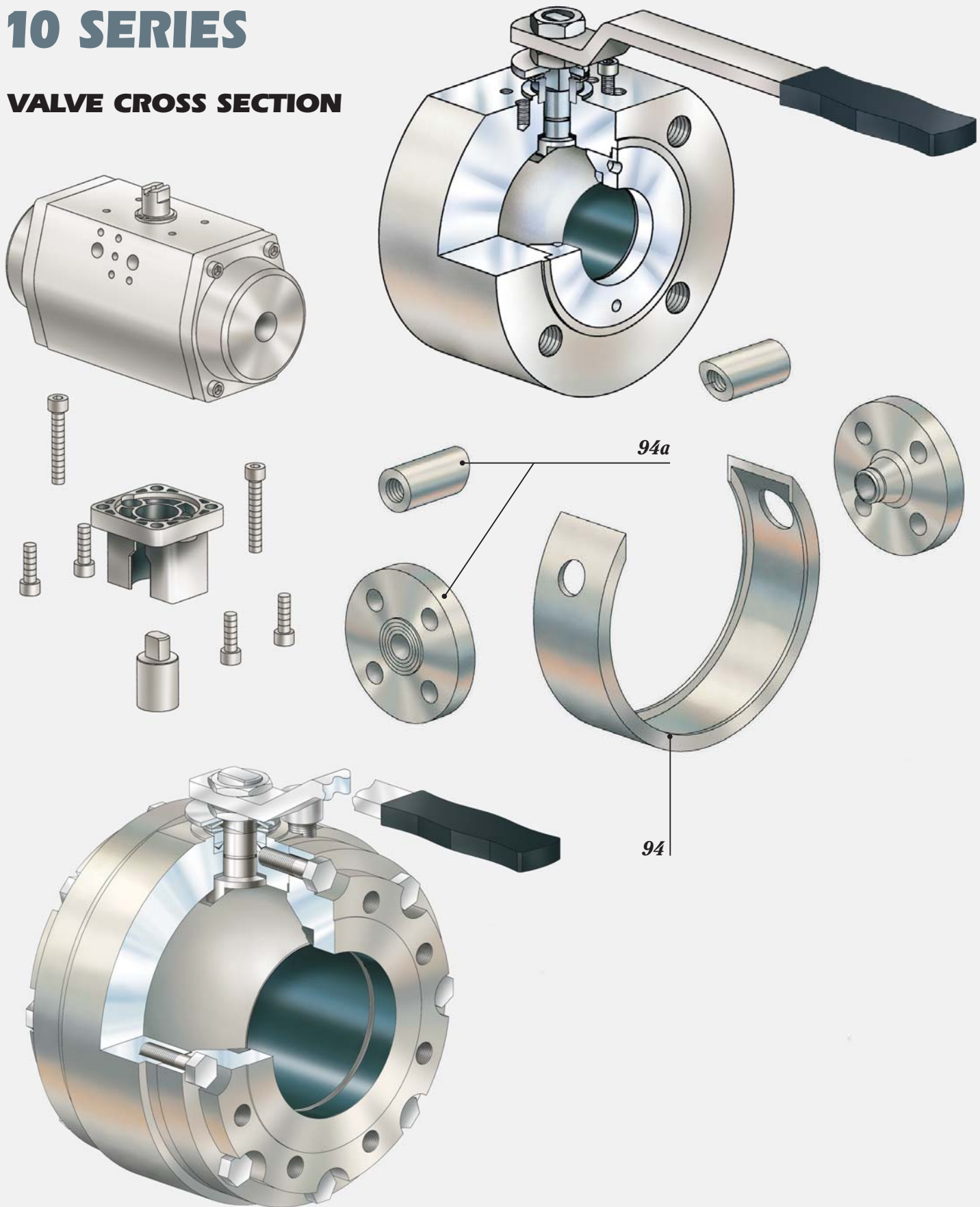
PART LIST

Description

- 1** Body
- 2** Closure
- 4** Seat
- 5** Ball
- 6** Stem
- 23g** Stop Screw
- 12a** Gland Bushing
- 14** V-Pack
- 31** Antistatic Device
- 34** Wrench
- 35d** Lower Stem Seal
- 44b** Body Gasket
- 55** Stop
- 56** Disk Spring
- 56a** Gland Nut
- 94** Jacket
- 94a** Connection

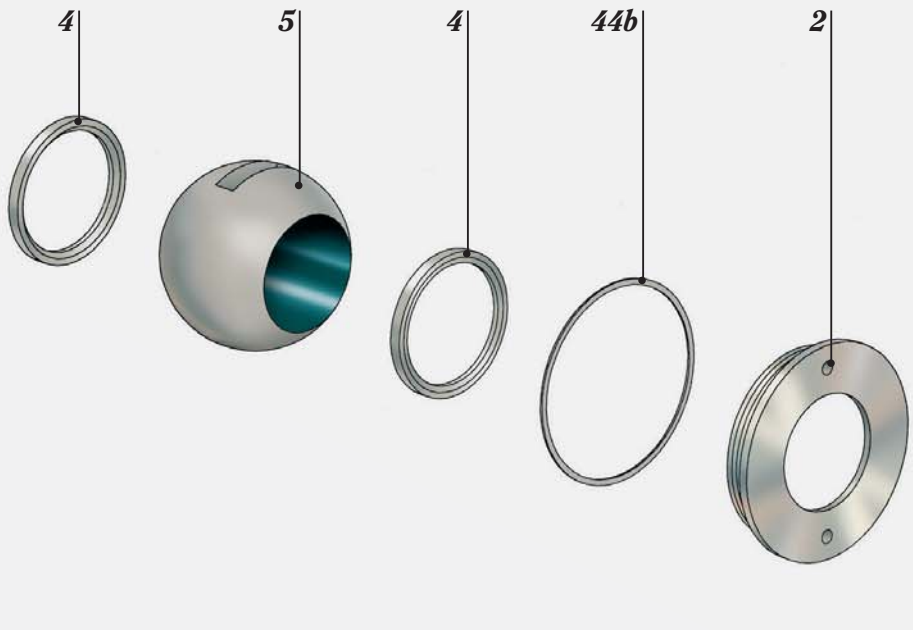
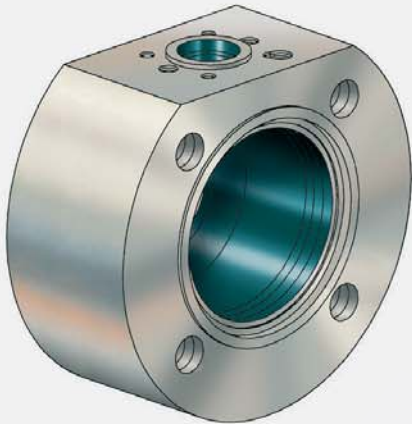
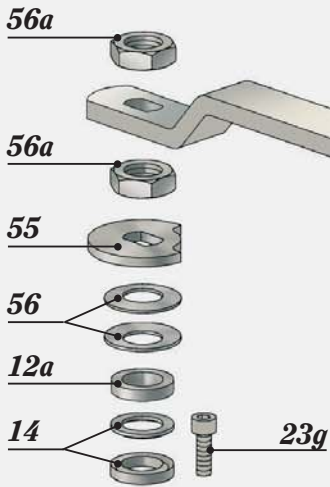
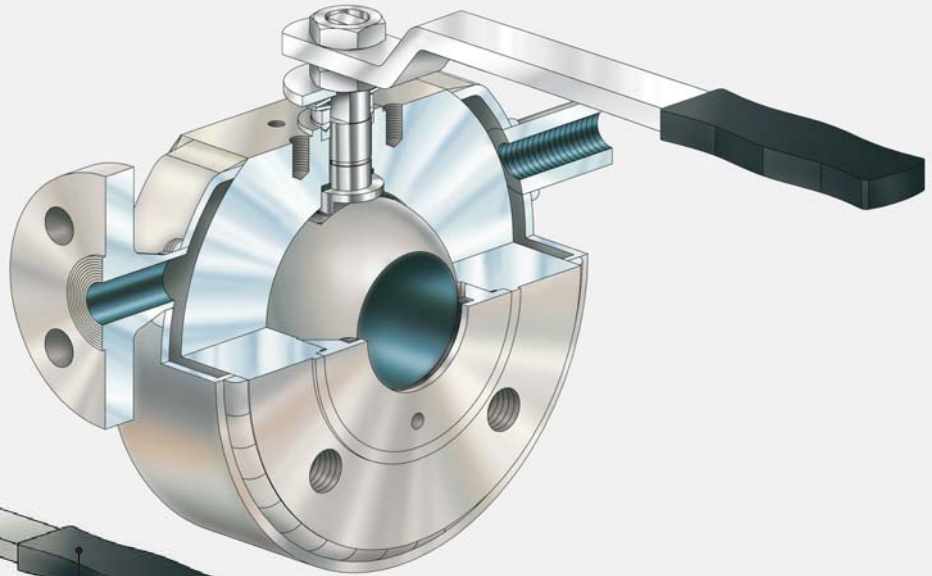
10 SERIES

VALVE CROSS SECTION



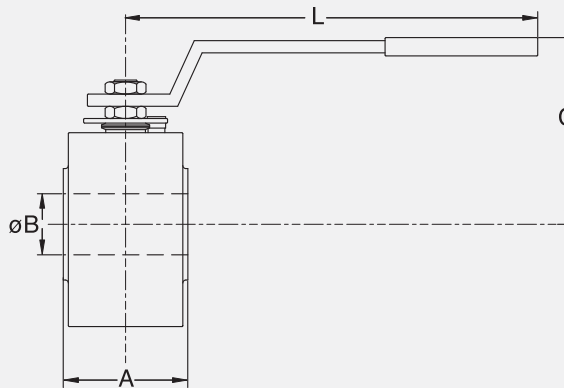
11 SERIES

VALVE ASSEMBLY



10 SERIES

DIMENSIONS & WEIGHTS



Class 150 / PN 16-40

Size DN		End to End A RF		ØB		C		L		Weight (Kg)
Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	
1/2	15	1,38	35	0,59	15	3,5	85	5,9	150	2
3/4	20	1,50	38	0,79	20	3,54	90	5,9	150	2
1	25	1,69	43	0,98	25	3,94	100	8,26	210	3
1.1/4	32	2,01	51	1,26	32	3,94	100	8,26	210	4
1.1/2	40	2,52	64	1,57	40	4,72	120	10,6	270	7
2	50	3,15	80	1,97	50	5,12	130	10,6	270	10
2.1/2	65	4,09	104	2,60	66	5,7	145	14,95	380	16
3	80	4,65	118	2,99	76	6,1	155	14,95	380	18
4	100	5,91	150	3,94	100	7,5	190	16,55	470	32
5	125	7,17	182	4,92	125	8	200	16,55	470	56
6	150	9,13	232	5,91	150	9,64	245	22,83	580	105
8	200	11,50	292	7,87	200	-	-	-	GEAR	120

Class 300 / PN 40

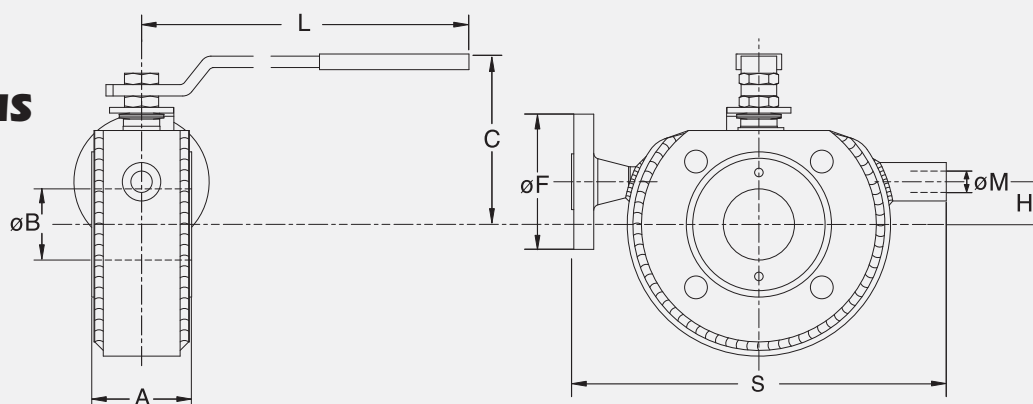
Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	
1/2	15	1,38	35	0,59	15	3,5	85	5,9	150	2
3/4	20	1,50	38	0,79	20	3,54	90	5,9	150	2
1	25	1,69	43	0,98	25	3,94	100	8,26	210	3
1.1/4	32	2,01	51	1,26	32	3,94	100	8,26	210	4
1.1/2	40	2,52	64	1,57	40	4,72	120	10,6	270	7
2	50	3,15	80	1,97	50	5,12	130	10,6	270	10
2.1/2	65	4,09	104	2,60	66	5,7	145	14,95	380	16
3	80	4,65	118	2,99	76	6,1	155	14,95	380	18
4	100	5,91	150	3,94	100	7,5	190	16,55	470	32
5	125	7,17	182	4,92	125	8	200	16,55	470	56
6	150	9,13	232	5,91	150	9,64	245	22,83	580	105
8	200	11,50	292	7,87	200	-	-	-	GEAR	120

Class 600 / PN 64-100

Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	
1/2	15	1,77	45	0,59	15	3,5	85	5,9	150	3,0
3/4	20	1,81	46	0,79	20	3,54	90	5,9	150	4,5
1	25	2,01	51	0,98	25	3,94	100	8,26	210	6,0
1.1/4	32	2,24	57	1,26	32	3,94	100	8,26	210	8,0
1.1/2	40	2,64	67	1,57	40	4,72	120	10,6	270	11,0
2	50	3,35	85	1,97	50	5,12	130	10,6	270	16,0
2.1/2	65	4,09	104	2,60	66	5,7	145	14,95	380	24,0
3	80	4,65	118	2,99	76	6,1	155	14,95	380	29,5
4	100	6,50	165	3,94	100	7,5	190	16,55	470	54,0

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DIMENSIONS & WEIGHTS



Class 150 / PN 16-40

Size DN	End to End A RF		ØB		C		L		S		ØF	ØM	H		Weight (Kg)	
Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	DN	GAS or NPT	Inch.	mm	
1/2	15	1,38	35	0,59	15	3,5	85	5,9	150	7,09	180	15	1/2"	0,79	20	4
3/4	20	1,50	38	0,79	20	3,54	90	5,9	150	7,09	180	15	1/2"	0,79	20	4,6
1	25	1,69	43	0,98	25	3,94	100	8,26	210	7,87	200	15	1/2"	0,98	25	6
1.1/4	32	2,01	51	1,26	32	3,94	100	8,26	210	8,27	210	15	1/2"	0,98	25	7,5
1.1/2	40	2,52	64	1,57	40	4,72	120	10,6	270	9,25	235	15	1/2"	1,18	30	10
2	50	3,15	80	1,97	50	5,12	130	10,6	270	9,84	250	15	1/2"	1,18	30	12,5
2.1/2	65	4,09	104	2,60	66	5,7	145	14,95	380	10,83	275	15	1/2"	1,38	35	20
3	80	4,65	118	2,99	76	6,1	155	14,95	380	11,81	300	20	3/4"	1,57	40	27
4	100	5,91	150	3,94	100	7,5	190	16,55	470	13,39	340	20	3/4"	2,36	60	38

Class 300 / PN 40

Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	Inch.	mm	DN	GAS or NPT	Inch.	mm	
1/2	15	1,38	35	0,59	15	3,5	85	5,9	150	7,09	180	15	1/2"	0,79	20	4
3/4	20	1,50	38	0,79	20	3,54	90	5,9	150	7,09	180	15	1/2"	0,79	20	4,6
1	25	1,69	43	0,98	25	3,94	100	8,26	210	7,87	200	15	1/2"	0,98	25	6
1.1/4	32	2,01	51	1,26	32	3,94	100	8,26	210	8,27	210	15	1/2"	0,98	25	7,5
1.1/2	40	2,52	64	1,57	40	4,72	120	10,6	270	9,25	235	15	1/2"	1,18	30	10
2	50	3,15	80	1,97	50	5,12	130	10,6	270	9,84	250	15	1/2"	1,18	30	12,5
2.1/2	65	4,09	104	2,60	66	5,7	145	14,95	380	10,83	275	15	1/2"	1,38	35	20
3	80	4,65	118	2,99	76	6,1	155	14,95	380	11,81	300	20	3/4"	1,57	40	27
4	100	5,91	150	3,94	100	7,5	190	16,55	470	13,39	340	20	3/4"	2,36	60	38

10 & 11 SERIES AUTOMATION

BOXES

A full range of boxes is available for the most different purposes:

- Body and cover in die-cast aluminium heat cured polyester powder epoxy coated
- Body and cover in plastic materials
- Dome in polycarbon and tridimensional indicator in plastic material



- Interchangeable microswitches
- Standard IP65, IP66 and IP67
- Available in anti-explosion proof version too.

STANDARD ACTUATORS

RBR Wafer Floating Ball Valves can be power assisted with a standardized range of actuators with the following characteristics:

- Operating pressure 4 to 10 bar

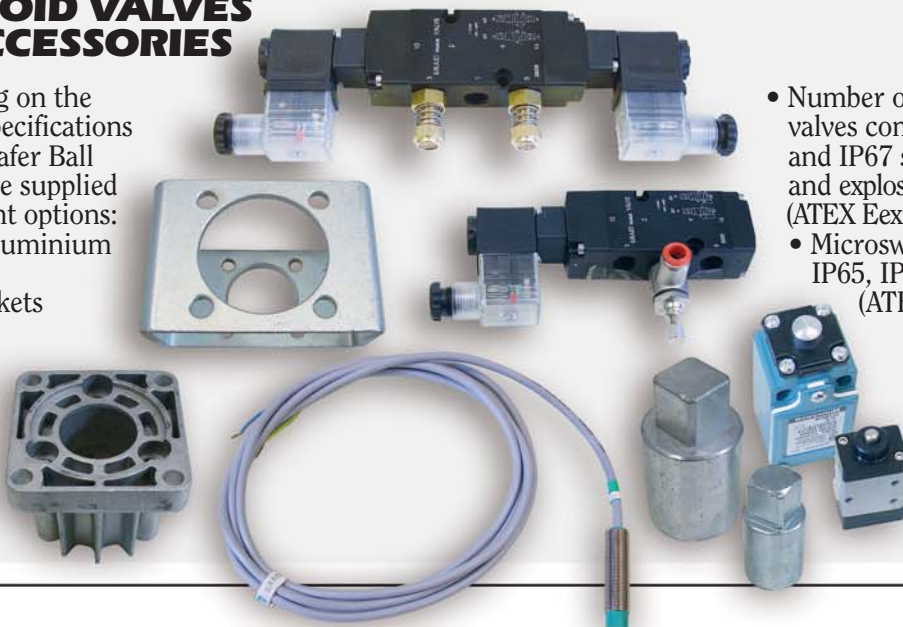


- Operating temperature -20°C to +90°C
- Maximum operating cycles 500.000
- Under request: Operating temperature -40°C to 160°C.

SOLENOID VALVES and ACCESSORIES

Depending on the customer specifications the *RBR* Wafer Ball Valves can be supplied with different options:

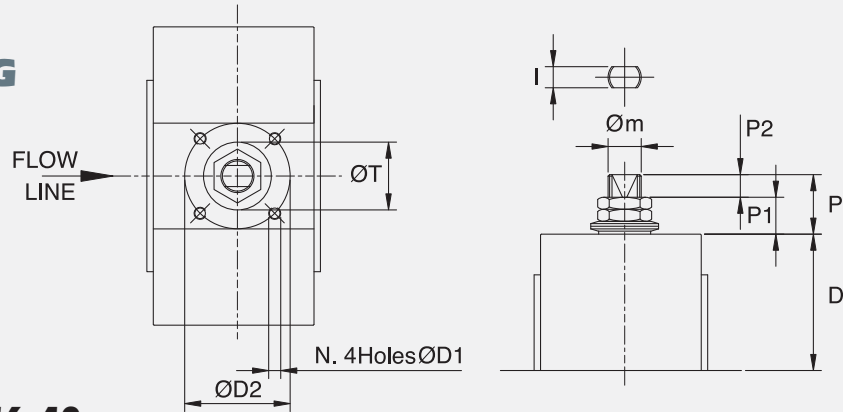
- Die cast aluminium bracket
- Steel brackets



- Number one or two solenoids valves complying IP65, IP66 and IP67 standards, proximity and explosion-proof (ATEX Exia Ex-d)
- Microswitches complying IP65, IP66 and IP67 standards (ATEX Exia Ex-d).

10 & 11 SERIES

TOP MOUNTING DIMENSIONS

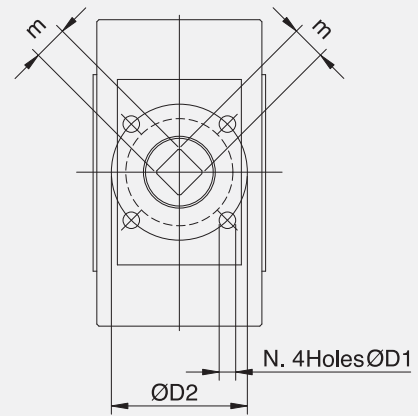
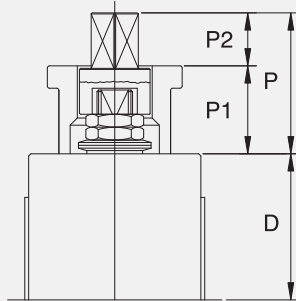


Class 150 - 300 / PN 16-40

Size DN	D	P	P1	P2	$\varnothing M$	I	$\varnothing T$	$\varnothing D1$	$\varnothing D2$	ISO	
Inch. mm	mm	mm	mm	mm	mm	mm	mm		mm		
1/2	15	34	18	12	6	10	6	20	M.5	36	F.03
3/4	20	38	18	12	6	10	6	20	M.5	36	F.03
1	25	45	24	14	10	12	7	25	M.5	42	F.04
1.1/4	32	49	24	14	10	12	7	25	M.5	42	F.04
1.1/2	40	60	35	22	13	16	10	32	M.6	50	F.05
2	50	68	35	22	13	16	10	32	M.6	50	F.05
2.1/2	65	84,5	44	24	20	22	14	45	M.8	70	F.07
3	80	90,5	40	24	16	22	14	45	M.8	70	F.07
4	100	108	45	27	18	30	18	54	M.8	70	F.07
5	125	123	45	27	18	30	18	54	M.8	70	F.07
6	150	163	63	28	35	39	22	70	M.12	125	F.12
8	200	202,5	66	34	32	50	30	100	M.12	125	F.12

10 & 11 SERIES

DIE ALUMINIUM CAST BRACKET: TOP MOUNTING DIMENSIONS

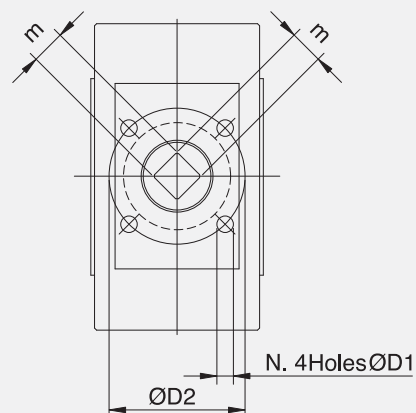
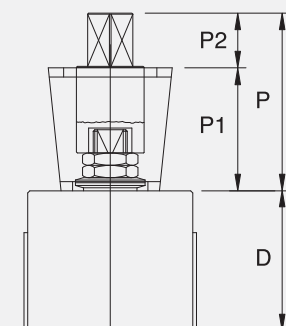


Class 150 - 300 / PN 16-40

Size DN	D	ISO Bracket	ØD1	ØD2	P	P1	P2	m				
Inch.	mm	mm	mm	mm	mm	mm	mm	mm				
1/2	15	34	F.05	6,5	50	51	40	11	9			
						53	40	13	11			
						53	40	13	14			
3/4	20	38	F.05	6,5	50	51	40	11	9			
						53	40	13	11			
						53	40	13	14			
1	25	45	F.05	6,5	50	54	40	14	11			
						54	40	14	14			
						51	40	11	9			
1.1/4	32	49	F.05	6,5	50	54	40	14	11			
						54	40	14	14			
						51	40	11	9			
1.1/2	40	60	F.05	6,5	50	67	55	12	11			
						F.07	8,5	70	71	55	16	14
						F.10	10,5	102	74	55	19	17
2	50	68	F.07	8,5	70	74	55	19	17			
						F.10	10,5	102	74	55	19	22
						F.07	8,5	70	90	70	20	17
2.1/2	65	84,5	F.10	10,5	102	95	70	25	22			
						F.07	8,5	70	90	70	20	17
						F.10	10,5	102	95	70	25	22
3	80	90,5	F.07	8,5	70	90	70	20	17			
						F.10	10,5	102	95	70	25	22
						F.10	10,5	102	115	95	20	17
4	100	108	F.10	10,5	102	116	95	21	22			
						F.12	12,5	125	121	95	26	27
						F.14	16,5	140	130	95	35	36
						F.10	10,5	102	115	95	20	17
5	125	123	F.10	10,5	102	116	95	21	22			
						F.12	12,5	125	121	95	26	27
						F.14	16,5	140	130	95	35	36
						F.10	10,5	102	115	95	20	17
6	150	163	F.12	12,5	125	118	95	23	27			
						F.14	16,5	140	132	95	37	36
						F.12	12,5	125	118	95	23	27

10 & 11 SERIES

STEEL BRACKET: TOP MOUNTING DIMENSIONS




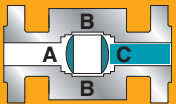

Class 150 - 300 / PN 16-40

Size DN	D	ISO Bracket	ØD1	ØD2	P	P1	P2	m				
Inch.	mm	mm	mm	mm	mm	mm	mm	mm				
1/2	15	34	F.05	7	50	71	60	11	9			
						73	60	13	11			
						74	60	14	14			
3/4	20	38	F.05	7	50	71	60	11	9			
						73	60	13	11			
						74	60	14	14			
1	25	45	F.05	7	50	71	60	11	9			
						74	60	14	11			
						73	60	13	14			
1.1/4	32	49	F.05	7	50	71	60	11	9			
						74	60	14	11			
						73	60	13	14			
1.1/2	40	60	F.05	7	50	74	60	14	11			
						73	60	13	14			
						F.05	7	50	74	60	14	11
1.1/2	40	60	F.07	9	70	76	60	16	14			
						F.10	11	102	79	60	19	17
									99	80	19	22
2	50	68	F.07	9	70	74	60	14	11			
						F.10	11	102	76	60	16	14
									79	60	19	17
2.1/2	65	84,5	F.07	9	70	99	80	19	22			
						F.10	11	102	74	60	14	11
									76	60	16	14
3	80	90,5	F.07	9	70	79	60	19	17			
						F.10	11	102	99	80	19	22
									74	60	14	11
4	100	108	F.10	11	102	104	80	24	22			
									74	60	14	11
									76	60	16	14
5	125	123	F.10	11	102	101	80	21	17			
						F.12	13	125	102	80	22	22
						F.14	17,5	140	107	80	27	27
6	150	163	F.12	13	125	102	80	22	22			
						F.14	17,5	140	107	80	27	27
									127	90	37	36
8	150	202,5	F.14	17,5	140	102	80	22	22			
									107	80	27	27
									127	90	37	36

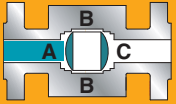

10 & 11 SERIES

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

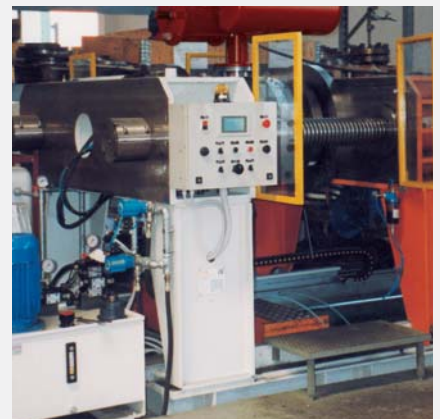
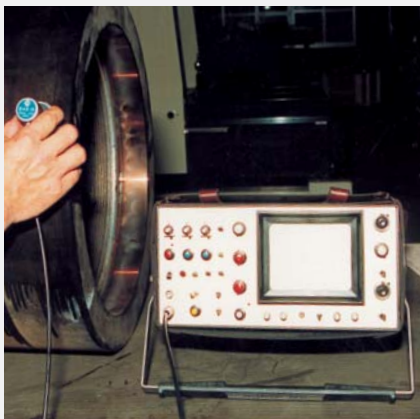
All **RBR** Wafer Ball Valves are fire safe designed.

The fire safe design allows to prevent any leakages through the seals when the temperature reaches levels higher than the melting

point of the seals.

Each **RBR** Wafer Ball Valve seal is provided with a secondary graphite seal which is designed to endure the high temperatures for a determinate time.

The **RBR** Wafer Ball Valves fire safe design has been approved during the appropriate tests in accordance with the BS 6755 standard.



10 & 11 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



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

All production processes,

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



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.

SERVICE

A dedicated team of skilled technicians is 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.



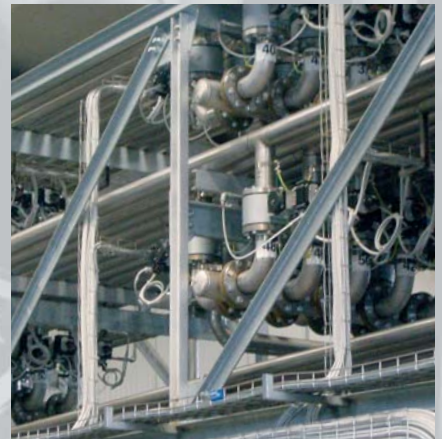
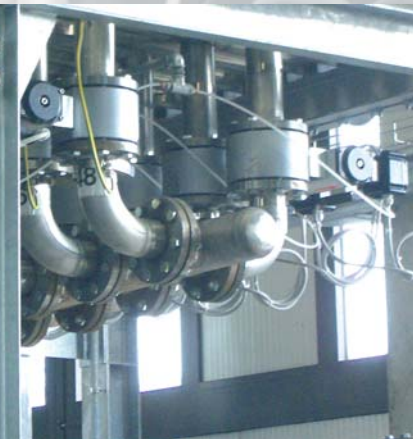
On site supervision and assistance are available as well as specific training courses according to Customer's requirements.

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



RBR

10 & 11 SERIES APPLICATIONS



**Your Favourite
Partner in Technology,
Quality and Service.**



RBR'S PRODUCTION



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

AdverTime-MI

RBR Your Favourite Partner
in Technology,
Quality and Service.



PRODUCT RANGE



40T Series

Bolted Body Trunnion Mounted Ball Valves.



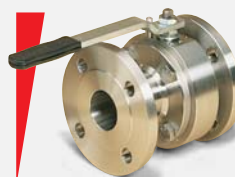
40TW Series

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.



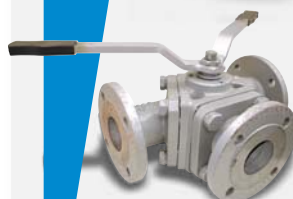
70HP Series

One-Piece Ball Valves High Pressure.



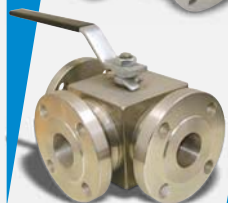
30Y Series

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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