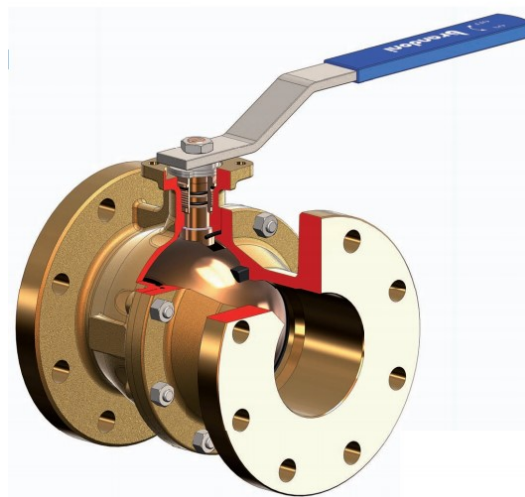




ALLVALVES SERIES 180 - BRONZE BALL VALVE PN16

www.allvalves.co.uk

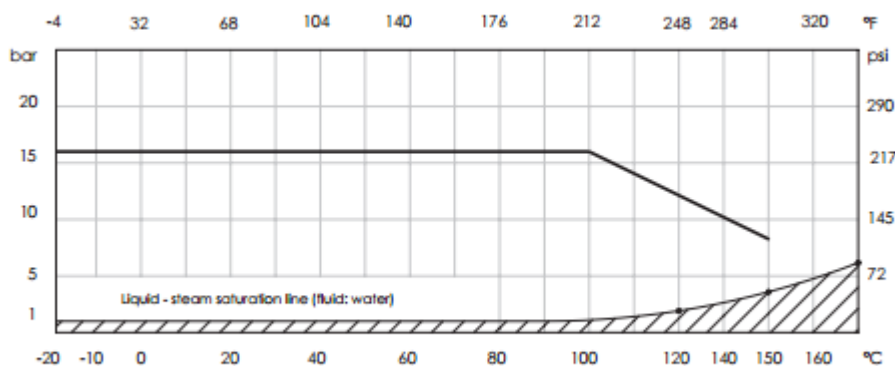
Italian brand range of bronze flanged PN16 full bore ball valves available with ISO pad for actuation and lever for manual operation.



Specifications:

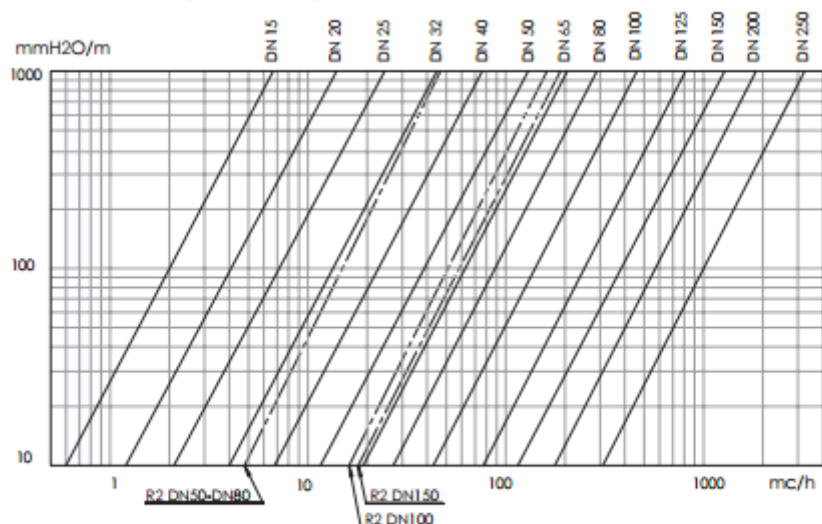
- 1 Body is cast iron wafer and ductile iron lugged
- 2 Suits PN10/16 flanges—ANSI 150
- 3 WRAS APPROVED
- 4 1" to 24"
- 5 -20C to +130C - dependant on liner
- 6 Suitable for marine applications—available with ali bronze disc
- 7 ISO pad
- 8 Available with EPDM, NBR, FKM(Viton) or PTFE seat

Pressure/temperature chart



RANGE NOT SUITABLE FOR STEAM. DO NOT use when temperature and pressure are below the liquid-steam saturation line (hatched area)

Head loss Fluid: water (1m H₂O = 0,098bar)



Kv - DN chart

DN	15	20	25	32	40	50	65	80	100	125	150	200	250
Kv B2.3-B2.7-S2	22,3	47,7	83,5	150,4	255	435	672	947	1508	2633	4261	5957	10510
Kv R2						147	147	511	615				

Tel: 01386 552369

Fax: 01386 554227

sales@allvalves.co.uk

Allvalves Online Ltd, Automation House, Unit 2, Pershore, WR10 2DF UK



Series B2.3/B2.7 valves are split-body-type, shut-off ball valves in bronze or aluminium/bronze and floating ball, manufactured in accordance with the severe product standards and quality management of ISO 9001.

This series is available also:

R2 > with face to face, in accordance with ANSI B 16.5 # 150 reduced bore

S2 > with face to face, in accordance with ANSI B 16.5 # 150 full bore

Suitable for naval and seawater applications, heating and conditioning (HVAC), district heating, distribution and treatment of water, industrial applications, agricultural applications, for compressed air processing, oils and hydrocarbons.

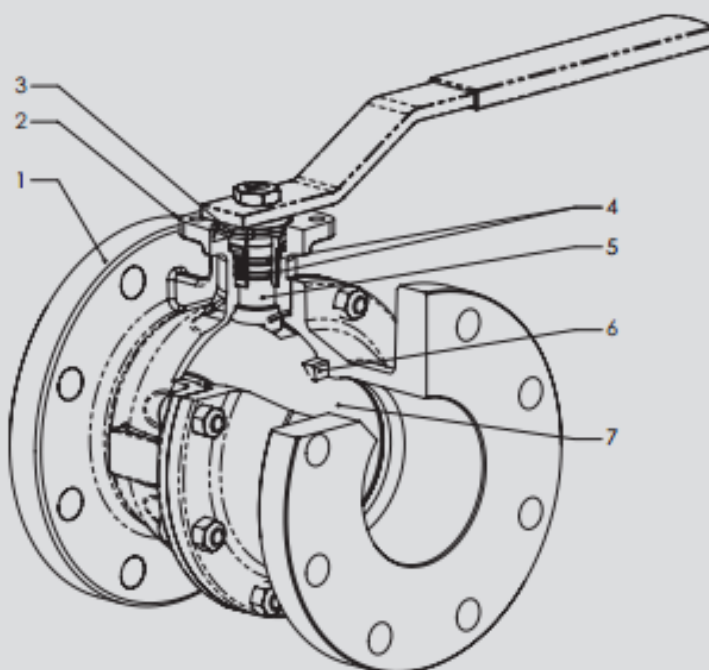
(Please ensure the choice of the corresponding item)

YES: for installation in-line and end of line, for services with frequent acting, the integrated ISO 5211 support allows the installation of a wide range of actuators.

The B2 range of ball valves of full and straight bores, reduce turbulences and minimize head loss.

NO: for steam, for choking and regulation of the flow.

1. Face to face, in accordance with EN558/1 or ANSI B 16.5 class 150 short pattern for all DN (diameters).
2. Integrated flange, in accordance with ISO 5211.
3. Removing and repositioning of the plate at 90° allows locking of the lever in ON-OFF position.
4. The dynamic seal of the stem is guaranteed by a double O-ring, even in severe working conditions.
5. Blow-out proof stem.
6. Seat of ball in reinforced PTFE, as temperature changes, the torque remains constant.
7. Ball with full and straight bore, in chromed brass, stainless steel or aluminium/bronze.



Accessories

- Stem extension for thermal insulation
- Square cap for water main system connection
- Stem extension
- Kit lockable operation lever
- Kit limit switches for ON/OFF position indicator
- KIT ISO 5211 flange

Refer to specifications on page 32

Actuators

- Double acting and single acting pneumatic actuators
On request: limit switches, position indicator
- Electric actuators
- Gear boxes
- Chain driven operated gear boxes

Special items

- Through-drilled ball for legionella thermic preventive treatment
- Drainage plug



In conformity with directive 97/23/CE PED

Construction and testing norms (correspondences):

Flanges: EN 1092, ANSI B16.5 #150

Design: EN 1983, EN13445, ISO 5211

Marking: EN19

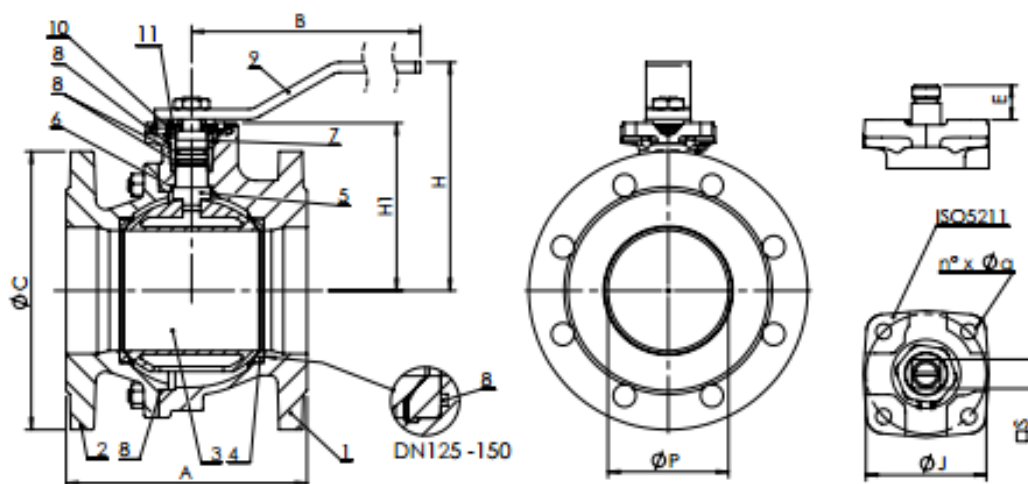
Testing: 100% testing in accordance with EN 12266 cat. A (ISO 5208 cat. A)



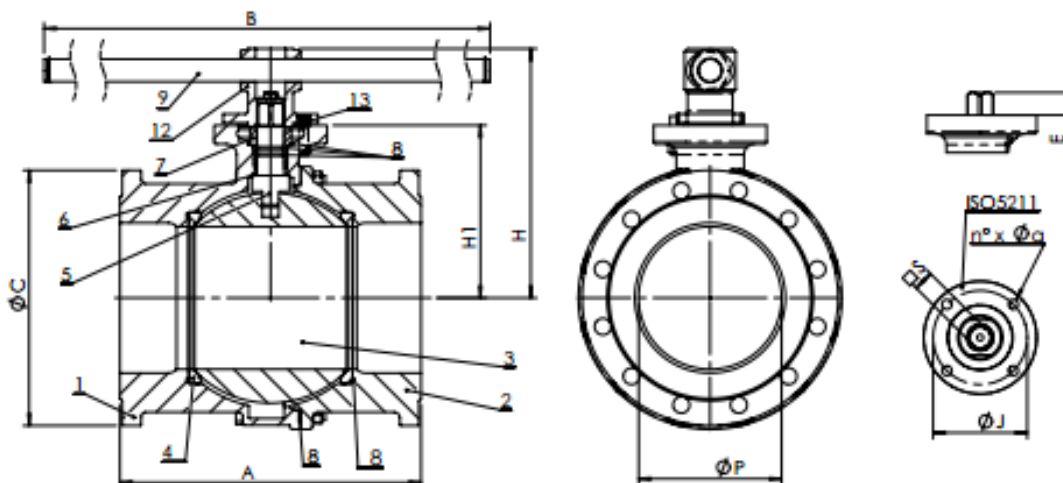
Flanged bronze or aluminium/bronze ball valve

TYPE AVOL: 180 SERIES

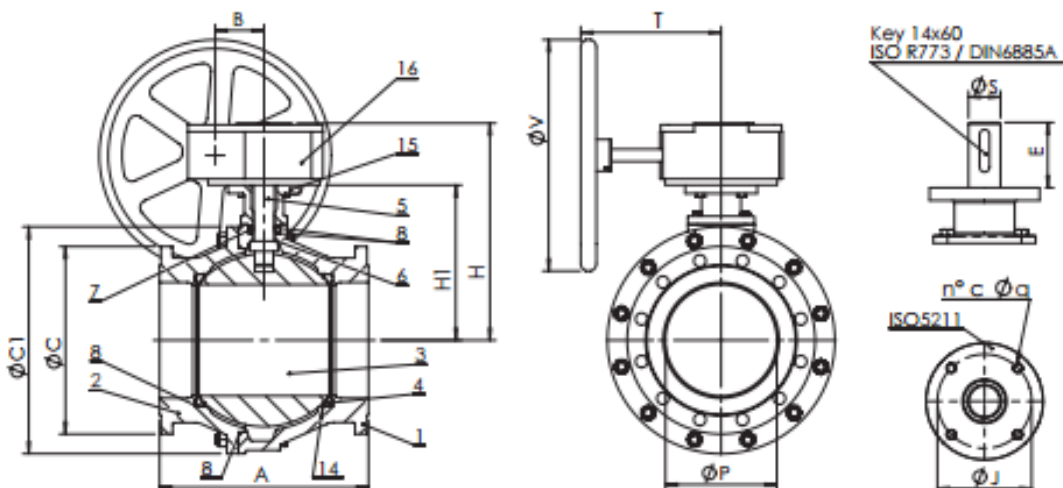
B2.3/7 - DN 15-150



B2.3/7 - DN 200



B2.3/7 - DN 250





Materials relative to series B2.3/S2.3/R2.3 (bronze)

→ B2.3	Component	Material
1	Body	Bronze CuSn5Zn5Pb5 CC491K EN1982 (equivalente C83600 ASTM B62)
2	Flange	Bronze CuSn5Zn5Pb5 CC491K EN1982 (equivalente C83600 ASTM B62)
3	Ball DN15-50	Brass CuZn40Pb2 / AISI316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
	Ball DN65-250	Brass CuZn40Pb2 / AISI316 / Aluminium-bronze CuAl10Ni5Fe5 (C95800 ASTM B148)
4	Ball seat	Reinforced PTFE
5	Stem	Brass CuZn40Pb2 / AISI316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
6	Sliding washer	PTFE
7	Ring	Brass CuZn40Pb2 / AISI316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
8	O-Ring	FKM (Viton®)
9	Lever	Carbon steel, epoxy coated / AISI 316 with plastic coating
10	Stop plate	Galvanized carbon steel / AISI 316
11	Spring washer	Galvanized carbon steel / AISI 316
12	Lever hub	Brass CuZn40Pb2
13	Lever stop	Galvanized carbon steel / AISI 316
14	Anti-blow-out ring	AISI 302
15	Mounting pad for gear box	Aluminium-bronze CuAl10Ni5Fe5
16	Gear box	•
17	Bolts	Galvanized carbon steel / AISI 304 / AISI 316

Materials relative to series B2.7/S2.7/R2.7 (aluminium/bronze)

→ B2.7	Component	Material
1	Body	Aluminium-bronze CuAl10Fe5Ni5 C8333G EN 1982 (equivalente C95800 ASTM B1 48)
2	Flange	Aluminium-bronze CuAl10Fe5Ni5 C8333G EN 1982 (equivalente C95800 ASTM B1 48)
3	Ball DN15-50	AISI 316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
	Ball DN65-250	AISI 316 / Aluminium-bronze CuAl10Ni5Fe5 (C95800 ASTM B1 48)
4	Ball seat	Reinforced PTFE
5	Stem	AISI316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
6	Sliding washer	PTFE
7	Ring	AISI316 / Aluminium-bronze CuAl10Ni5Fe4 (C63000 ASTM 283)
8	O-Ring	FKM (Viton®)
9	Lever	AISI 316 with plastic coating
10	Stop plate	AISI316
11	Spring washer	AISI316
12	Lever hub	Brass CuZn40Pb2
13	Lever stop	AISI304
14	Anti-blow-out ring	AISI302
15	Mounting pad for gear box	Aluminium-bronze CuAl10Ni5Fe5
16	Gear box	•
17	Bolts	AISI 304 / AISI 316



Flanged bronze or aluminium/bronze ball valve

Serie B2.3 / B2.7

Dimensions (mm)

DN		15	20	25	32	40	50	65	80	100	125	150	200	250
P		15	20	25	32	40	50	63	76	95	120	145	190	240
A	EN 558/1 - 14 (ex DIN 3202 F4)	115	120	125	130	140	150	170	180	190	200	210	*	*
A	EN 558/1 - 14 (ex DIN 3202 F5)	*	*	*	*	*	*	*	*	*	*	*	400	450
H		84	84	95	101	125	135	143	165	180	225	243	320	*
H1		50,5	52	59	64	78,5	87	95	118	132,5	165	182,5	230	355
B		160	160	170	170	230	230	230	280	350	450	560	1000	101
C	EN1092/2 PN 16	95	105	115	140	150	165	185	200	220	250	285	340	405
C	ANSI B16.5 #150	88,9	98,6	108	117,3	127	152,4	177,8	190,5	228,6	254	279,4	*	*
ISO 5211		F04	F04	F04	F04	F05	F05	F05	F07	F07	F10	F10	F12	F12
C1		*	*	*	*	*	*	*	*	*	*	*	*	490
V		*	*	*	*	*	*	*	*	*	*	*	*	500
T		*	*	*	*	*	*	*	*	*	*	*	*	284
J		42	42	42	42	50	50	50	70	70	102	102	125	125
n° x Øq		4 x 6	4 x 6	4 x 6	4 x 6	4 x 7	4 x 7	4 x 7	4 x 9	4 x 9	4 x 11	4 x 11	4 x 13	4 x 13
E		11,5	11,5	14,5	14,5	17,5	17,5	17,5	20	20	24,5	24,5	27	92
S		□ 9	□ 9	□ 11	□ 11	□ 14	□ 14	□ 14	□ 17	□ 17	□ 22	□ 22	□ 27	□ 45

Weight (kg)

B2.300		2,8	3,4	4,8	5,6	7,9	10,5	15,1	19,1	24	36,7	44,6	104	120
B2.322		2,8	3,4	4,8	6,5	9,3	11,5	16	20,6	28,4	41,2	52,7	131	140
B2.777		2,4	2,95	4	4,9	6,3	9,4	13,6	17,7	23,3	34,9	45,6	93	105
B2.722		2,4	2,95	4	5,7	8,1	10	14	18,1	25,2	36,9	47,8	120	120

Operating torque (Nm)

Nm		15	15	18	18	18	20	40	70	100	180	250	600	2000
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N.B.: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1.5

Drilling

DN		15	20	25	32	40	50	65	80	100	125	150	200	250
Dimensions of flanges according to PN 16 EN1092/3	Drilling PN 16 EN1092/1	std	std	std	std	std	std	std	std	std	std	std	std	std
	Drilling PN 10 EN1092/1	=	=	=	=	=	=	=	=	=	=	=	opt	opt
	Drilling PN 6 EN1092/1	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt
	Drilling PN 25 EN1092/1	=	=	=	=	=	=	opt	=	no	no	no	no	no
	Drilling ANSI B16.5 #150	*	*	*	*	*	*	*	*	*	*	*	opt	opt
Dimensions of flanges according to ANSI B16.5#150														
	Drilling ANSI B16.5 #150	std	std	std	std	std	std	std	std	std	std	std	*	*

std: standard / opt: option on request / =: same as PN16

Maximum pressure

Fluids *	Mounting	
	BETWEEN FLANGES	END OF LINE
Hazardous gases	NO	NO
Hazardous liquids	16 bar DN15-200 10 bar DN250	10 bar
All remaining fluids	16 bar DN15-200 10 bar DN250	10 bar

*: Hazardous gas, liquids (explosive, inflammable, toxic) in accordance with 97/23/Ce PED and 67/548/EEC

Temperature

Temperature	min °C	Max°C	
		continuous	peak
FKM (Viton®)	-10	150	170

NB: the maximum working pressure decreases while the temperature increases; please refer to "pressure/temperature" chart



Serie S2.3 / S2.7

Dimensions (mm)

DN		15	20	25	32	40	50	65	80	100	150
P		15	20	25	32	40	50	63	76	95	145
A	ANSI B16.10 #150.Short Pattern	108	117	127	140	165	178	190	203	229	267
H		84	84	96	101	125	135	143	165	180	243
H1		50,5	52	59	64	78,5	87	95	118	132,5	182,5
B		160	160	170	170	230	230	230	280	360	560
C	ANSI B16.5 #150	88,9	98,6	108	117,3	127	152,4	177,8	190,5	228,6	279,4
ISO 5211		F04	F04	F04	F04	F05	F05	F05	F07	F07	F10
J		42	42	42	42	50	50	50	70	70	102
n° x Øq		4 x 6	4 x 6	4 x 6	4 x 6	4 x 7	4 x 7	4 x 7	4 x 9	4 x 9	4 x 11
E		11,5	11,5	14,5	14,5	17,5	17,5	17,5	20	20	24,5
S		9	9	11	11	14	14	14	17	17	22

Weight (kg)

S2.300		2,1	2,7	4,1	4,9	7,1	9,8	13,9	18	25,7	47,2
S2.322		2,4	3,1	4,7	5,72	8,1	11,3	16	20,8	29,5	56,8

Operating torque (Nm)

Nm		15	15	18	18	18	20	40	70	100	250
----	--	----	----	----	----	----	----	----	----	-----	-----

N.B.: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1.5

Drilling

DN		15	20	25	32	40	50	65	80	100	150
Dimensions of flanges according to ANSI B16.5 #150	Drilling ANSI B16.5 #150	std	std	std	std	std	std	std	std	std	std

std: standard

Serie R2.3 / R2.7

Dimensions (mm)

DN		50	80	100	150
P		40	50	76	95
A	ANSI B16.10 #150.Short Pattern	178	203	229	267
H		125	135	165	180
H1		78,5	87	118	132,5
B		230	230	280	360
C	ANSI B16.5 #150	152,4	190,5	228,6	279,4
ISO 5211		F05	F05	F07	F07
J		50	50	70	70
n° x Fq		4 x 7	4 x 7	4 x 9	4 x 9
E		17,5	17,5	20	20
S		14	14	17	17

Weight (kg)

R2.377		9,4	15,5	24,8	36,2
R2.777		8,5	14	22,4	31,8

Operating torque (Nm)

Nm		18	20	70	100
----	--	----	----	----	-----

N.B.: In order to choose the right actuator, we recommend multiplying the operating torque figure by a safety coefficient, K=1.5

Drilling

DN		50	80	100	150
Dimensions of flanges according to ANSI B16.5 #150	Drilling ANSI B16.5 #150	std	std	std	std

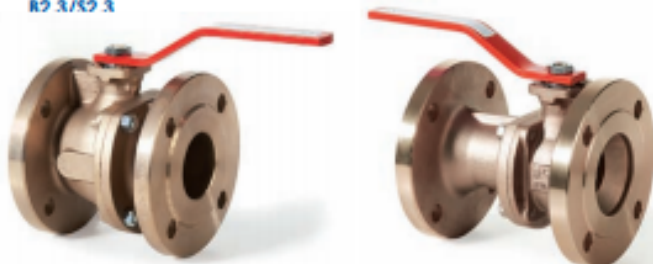
std: standard



Versions

B2.3 Bronze

R2 3/52 3



B2.300

Body: Bronze CuSn5Zn5Pb5 EN1982
Ball: Brass CuZn40Pb2
Stem: Brass CuZn40Pb2
O-ring: FKM
Temp: -10 +150°C

B2.322

Body: Bronze CuSn5Zn5Pb5 EN1982
Ball: AISI 316
Stem: AISI 316
O-ring: FKM
Temp: -10 +150°C

B2.377

Body: Bronze CuSn5Zn5Pb5 EN1982
Ball: Aluminium-bronze CuAl10Fe5Ni5 EN1982
Stem: Aluminium-bronze CuAl10Fe5Ni5 EN1982
O-ring: FKM
Temp: -10 +150°C

Available with item code R2 → Face to face in accordance with ANSI B16.5#150 short pattern reduced bore

R2.377

See: B2.377

Available with item code S2 → Face to face in accordance with ANSI B16.5#150 short pattern full bore

S2.300

See: B2.300

S2.322

See: B2.322

S2.377

See: B2.377

B2.7 Aluminium-bronze



B2.722

Body: Aluminium-bronze
CuAl10Fe5Ni5 EN1982
Ball: AISI 316
Stem: AISI 316
O-ring: FKM
Temp: -10 +150°C

B2.777

Body: Aluminium-bronze
CuAl10Fe5Ni5 EN1982
Ball: Aluminium-bronze CuAl10Fe5Ni5 EN1982
Stem: Aluminium-bronze CuAl10Fe5Ni5 EN1982
O-ring: FKM
Temp: -10 +150°C

Available with item code R2 → Face to face in accordance with ANSI B16.5#150 short pattern reduced bore

R2.777

See: B2.777

Available with item code S2 → Face to face in accordance with ANSI B16.5#150 short pattern full bore

S2.722

See: B2.722

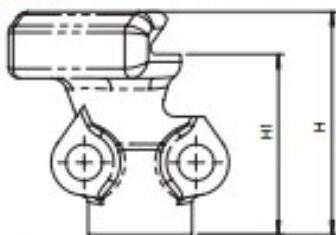
S2.777

See: B2.777

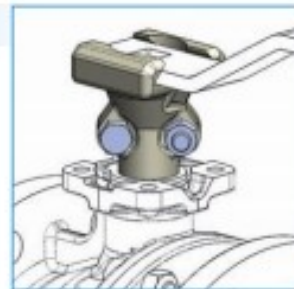


Accessories for series B1 - B2.1 - B2.3/7

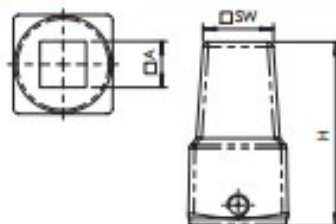
Stem extension for thermal insulation



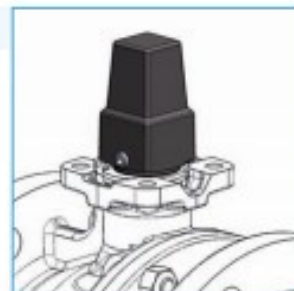
DN	40-50-65	80-100-125-150
H	68	68
H1	55	55



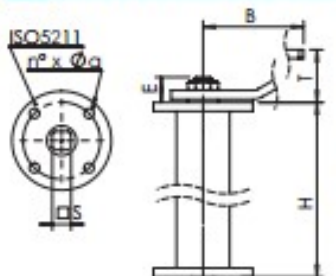
Square cap for water main system connection



DN	40-50-65	80-100	125-150
SW	26	26	26
A	14	17	22
H	69	69	71



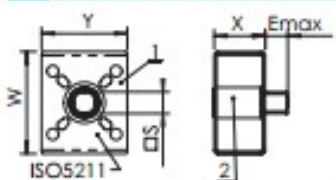
Stem extension for water main system connection



DN	40	50	65	80	100	125	150
H	250-500-800-1000						
T	48	48	48	48	48	59	59
B	230	230	230	280	360	450	560
ISO5211	F05	F05	F05	F07	F07	F10	F10
J	50	50	50	70	70	102	102
n° x Ø q	4 x 7	4 x 7	4 x 7	4 x 9	4 x 9	4 x 11	4 x 11
E	22	22	22	23	23	27	27
S	14	14	14	17	17	22	22



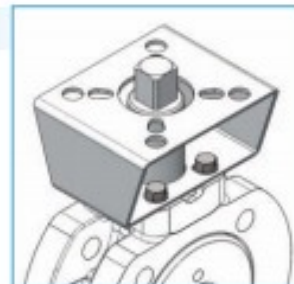
Kit ISO 5211 flange



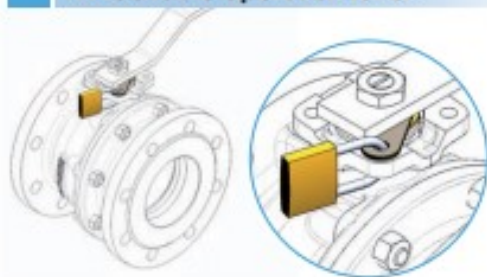
- 1) Bracket
2) Joint

DN	15-20	25-32	40-50-65	80	100	125	150
ISO 5211*	F04-05-07	F04-05-07	F05-07	F10-12	F10-12	F10-12	F10-12-14
S x E	14 x 14	17 x 17	17 x 17	22 x 22	27 x 27	27 x 27	36 x 36
S1 x E1**	11 x 11	11 x 11	-	-	-	-	-
Drilling valve side	F03-04	F03-04	F05-07	F07-10	F07-10	F07-10	F10-12-14
X	40	40	50	60	60	60	80
Y	70	70	70	120	120	120	140
W	80	80	100	120	120	120	160

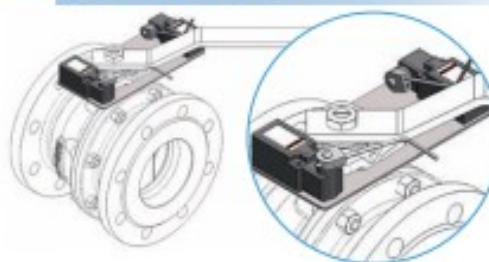
* Drilling actuator side ** for B1 series Other top squares S on request



Kit lockable operation lever



Kit limit switches for ON/OFF position indicator





Instructions and Recommendations for series B1 - B2.1 - B2.3/7

The information provided here is delivered with each product, and contains "Instructions for use and maintenance"; it is also available on our website: www.brandoni.it (download section)

STORING

- Keep in a dry and closed place.
- While stored, the valve must be fully open to avoid damage to the seats.

MAINTENANCE

- It is recommended that the rubber O-rings be replaced at least every 24 months, and the PTFE seats, at least every 48 months. The period of replacement depends on the use of the valve.
- Clean the surface of the valve periodically, in order to prevent the accumulation of dust.

RECOMMENDATIONS

Before carrying out maintenance, or dismantling the valve, be sure that the pipes, valves and liquids have cooled down, that the pressure has decreased and that the lines and pipes have been drained in case of toxic, corrosive, inflammable or caustic liquids. Temperatures above 50°C and below 0°C might cause damage to people.

INSTALLATION

- Handle with care. The valve must be installed in either the ON or OFF position.
 - Place the valve between the flanges of the pipe and install the seal between the pipe and valve flanges. Check the correct position of the seals.
 - The distance between the counter flanges should be equal to the valve's face to face distance. Do not use bolts of the counter flanges to bring the piping close to the valve. The bolts should be cross tightened.
 - Do not weld the flanges to the piping after installing the valve.
 - Water hammers might cause damage and ruptures. Inclinations, torsions and misalignments of the piping may subject the installed valve to excessive stresses. It is recommended that elastic joints be used in order to reduce such effects as much as possible.
 - While heating from room temperature to the high operating temperature, the liquid located between the body and ball (valve open), or located in the bore of the ball (valve closed) tends to expand and may damage the ball and the seats; it is recommended that the valve be opened and closed at intermediate temperatures during the heating process (for example, at 40°C /60°C/...).
- Special valves with drain plugs are available for this application.
- At sub-zero temperatures, the liquid between the body and ball may freeze, causing irreparable damage. If the valve is exposed to such conditions, insulation of the valve is recommended.
 - It is recommended that the valve be operated periodically, to prevent the build-up of materials on the ball and the seats, particularly in the presence of limestone.

SEALING PROCEDURE

