

IMPIEGO

- heating / cooling systems
- HVAC
- domestic water systems (full flow ball valves only)
- systems using alternative energies
- automation systems for civil use

MAIN FEATURES

- female threaded connections EN 10226-1 Rp
- connection to ISO 5211 actuator
- in accordance with Ministerial Decree No. 174 06/04/2004 (full flow ball valves only)
- zero leakage - EN 12266-1 grade A

Ball Valves
ISO 5211 connection
BRASS



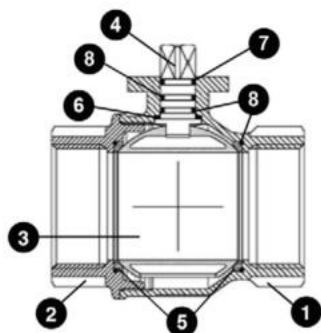
VERSIONS AND FEATURES

Ball valve	DN	Connections	PN	Kvs [m³/h]	Δp max [bar]	Function	Ball drilling	Rotation	Code
2-WAY FULL PORT 	-	Rp 1/4"	40	5,4	40			90°	DC2S2P5
	10	Rp 3/8"	40	6	40			90°	DC2R2P5
	15	Rp 1/2"	40	16,3	40			90°	DC2A2P5
	20	Rp 3/4"	40	29,5	40			90°	DC2B2P5
	25	Rp 1"	40	43	40			90°	DC2C2P5
	32	Rp 1 1/4"	40	89	40			90°	DC2D2P5
2-WAY REDUCED PORT 	15	Rp 1/2"	16	17	3,4			90°	DC2A2R5
	20	Rp 3/4"	16	10,5	3,4			90°	DC2B2R5
	25	Rp 1"	16	18,7	3,4			90°	DC2C2R5
	32	Rp 1 1/4"	16	27,9	3,4			90°	DC2D2R5
	40	Rp 1 1/2"	16	25	3,4			90°	DC2E2R5
	50	Rp 2"	16	42,5	3,4			90°	DC2F2R5
3-WAY VERTICAL FULL PORT 	15	Rp 1/2"	25	6	25	Mixing / Diverting	3 holes	90°	DC3A3E5
	20	Rp 3/4"	16	11,5	16	Mixing / Diverting	3 holes	90°	DC3B3E5
	25	Rp 1"	16	18,3	10	Mixing / Diverting	3 holes	90°	DC3C3E5
	15	Rp 1/2"	25	6	25	Diverting	2 holes	180°	DC3A2E5
	20	Rp 3/4"	16	11,5	16	Diverting	2 holes	180°	DC3B2E5
	25	Rp 1"	16	18,3	10	Diverting	2 holes	180°	DC3C2E5
3-WAY HORIZONTAL FULL PORT 	-	Rp 1/4"	30	2,8 *	30	Diverting	T ball	90°	DC3S6E5
	10	Rp 3/8"	30	3 *	30	Diverting	T ball	90°	DC3R6E5
	15	Rp 1/2"	30	3,9 *	30	Diverting	T ball	90°	DC3A6E5
	20	Rp 3/4"	30	7,9 *	16	Diverting	T ball	90°	DC3B6E5
	-	Rp 1/4"	30	2,8	30	Diverting	L ball	90°	DC3S5E5
	10	Rp 3/8"	30	3	30	Diverting	L ball	90°	DC3R5E5
	15	Rp 1/2"	30	3,9	30	Diverting	L ball	90°	DC3A5E5
	20	Rp 3/4"	30	7,9	16	Diverting	L ball	90°	DC3B5E5
	15	Rp 1/2"	16	6 *	3,4	Mixing / Diverting	T ball	90°	DC3A3R5
	20	Rp 3/4"	16	4,8 *	3,4	Mixing / Diverting	T ball	90°	DC3B3R5
3-WAY HORIZONTAL REDUCED PORT 	25	Rp 1"	16	8,6 *	3,4	Mixing / Diverting	T ball	90°	DC3C3R5
	32	Rp 1 1/4"	16	12,8 *	3,4	Mixing / Diverting	T ball	90°	DC3D3R5
	40	Rp 1 1/2"	16	11,5 *	3,4	Mixing / Diverting	T ball	90°	DC3E3R5
	50	Rp 2"	16	19,5 *	3,4	Mixing / Diverting	T ball	90°	DC3F3R5

* Value referred to the most disadvantaged way (right angle)

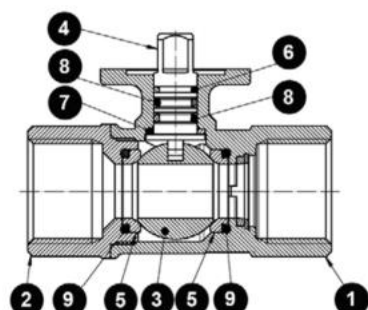
• Type of fluid: Water (glycol max 30%) - Fluid temperature: +5°C...+100°C - Hydraulic connections: Female, Rp, according to EN 10226-1 - Leakage degree: zero leakage - EN 12266-1 grade A

MATERIALS USED



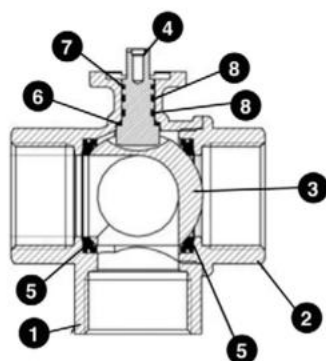
BALL VALVE BRASS ISO 5211 2-WAY FF FULL BORE

1	BODY	BRASS CW617N UNI EN 12165
2	COUPLING	BRASS CW617N UNI EN 12165
3	BALL	BRASS CW617N UNI EN 12165
4	CONTROL ROD	BRASS CW614N UNI EN 12164
5	BALL SEAL	P.T.F.E.
6	ANTI-FRICTION SEAL	P.T.F.E.
7	ANTI-FRICTION SEAL	P.T.F.E.
8	O-RING	FKM



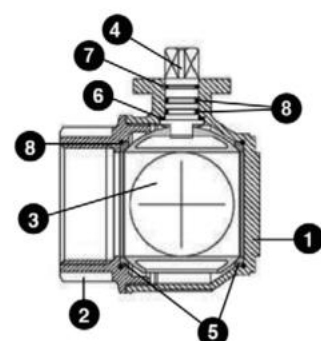
BRASS BALL VALVE ISO 5211 2-WAY FF REDUCED PORT

1	BODY	BRASS CW 617N - UNI EN 12420
2	COUPLING	BRASS CW 617N - UNI EN 12420
3	BALL	BRASS CW 617N - UNI EN 12420 / NICKEL CHROME PLATING
4	ROD	BRASS CW 614N - UNI EN 12164 / NICKEL PLATING
5	BALL SEAL	P.T.F.E. 15% GRAPHITE
6	ANTI-FRICTION SEAL	P.T.F.E.
7	ANTI-FRICTION SEAL	P.T.F.E. 15% GRAPHITE
8	O-RING	EPDM
9	O-RING	EPDM



BRASS BALL VALVE ISO 5211 3-WAY VERTICAL FULL BORE

1	BODY	BRASS CW617N UNI EN 12165
2	COUPLING	BRASS CW617N UNI EN 12165
3	BALL	BRASS CW617N UNI EN 12165
4	CONTROL ROD	BRASS CW614N UNI EN 12164
5	BALL SEAL	P.T.F.E.
6	ANTI-FRICTION SEAL	P.T.F.E.
7	ANTI-FRICTION SEAL	P.T.F.E.
8	O-RING	FKM

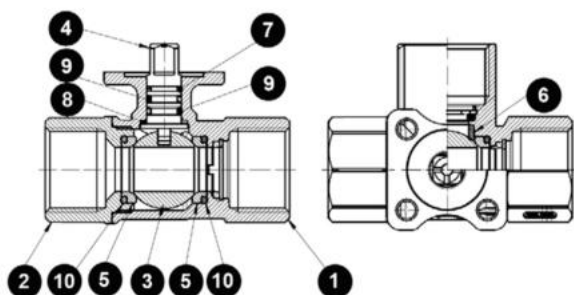


BRASS BALL VALVE ISO 5211 3-WAY HORIZONTAL FULL BORE

1	BODY	BRASS CW617N UNI EN 12165
2	COUPLING	BRASS CW617N UNI EN 12165
3	BALL	BRASS CW617N UNI EN 12165
4	CONTROL ROD	BRASS CW614N UNI EN 12164
5	BALL SEAL	P.T.F.E.
6	ANTI-FRICTION SEAL	P.T.F.E.
7	ANTI-FRICTION SEAL	P.T.F.E.
8	O-RING	FKM

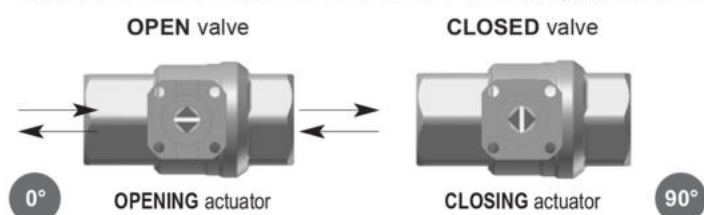
BRASS BALL VALVE ISO 5211 3-WAY HORIZONTAL REDUCED PORT

1	BODY	BRASS CW 617N - UNI EN 12420
2	COUPLING	BRASS CW 617N - UNI EN 12420
3	BALL	BRASS CW 617 PTL - UNI EN 12164 / NICKEL CHROME PLATING
4	ROD	BRASS CW 614N - UNI EN 12164 / NICKEL PLATING
5	BALL SEAL	P.T.F.E. 15% GRAPHITE
6	BALL SEAL	P.T.F.E.
7	ANTI-FRICTION SEAL	P.T.F.E.
8	ANTI-FRICTION SEAL	P.T.F.E. 15% GRAPHITE
9	O-RING	EPDM
10	O-RING	EPDM



CONNECTION TO THE BALL VALVE

The ball valve can be mounted in both flow directions, without distinction.

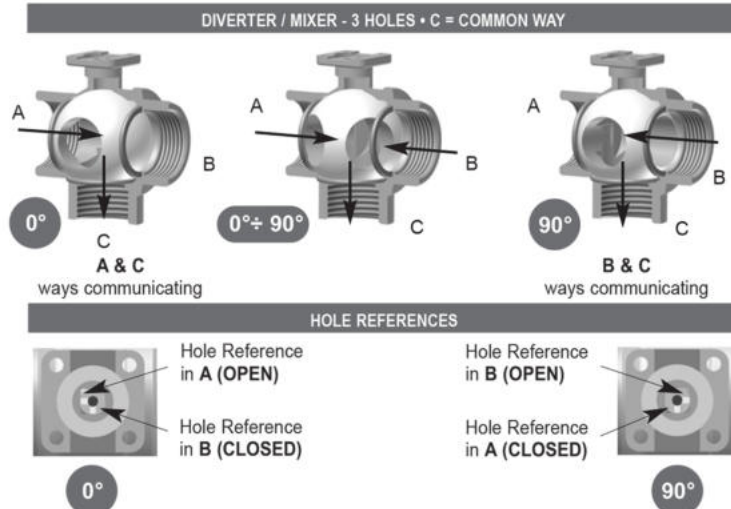


3 WAY DIVERTER / MIXER BALL VALVE

MIXING/DIVERTING BALL VALVE (3-HOLE BALL)

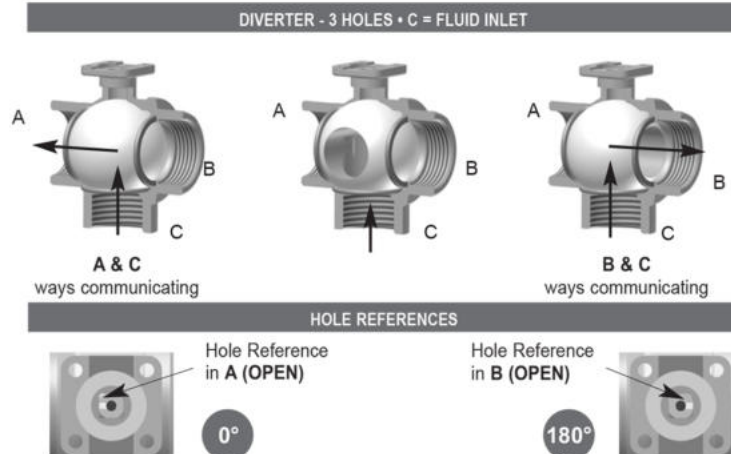
The **MIXING / DIVERTING** ball valve has a 3-hole ball with one hole pointed towards the common way C (always open) and two more holes which are orthogonal to the first one and to each other. When one of these two holes is pointed towards one of the two inlets, for example A, the second inlet B is closed.

When the operation is completed, with a rotation of the ball of 90°, the second hole is oriented on the second way (B), closing the first one (A). A characteristic of the 3-hole ball valve is that it closes one way, while the other one starts opening: for a short while, during the operating phase, all the three ways are communicating. Moreover, the above mentioned condition allows this valve to be used for mixing.



DIVERTER BALL VALVE (2-HOLE BALL)

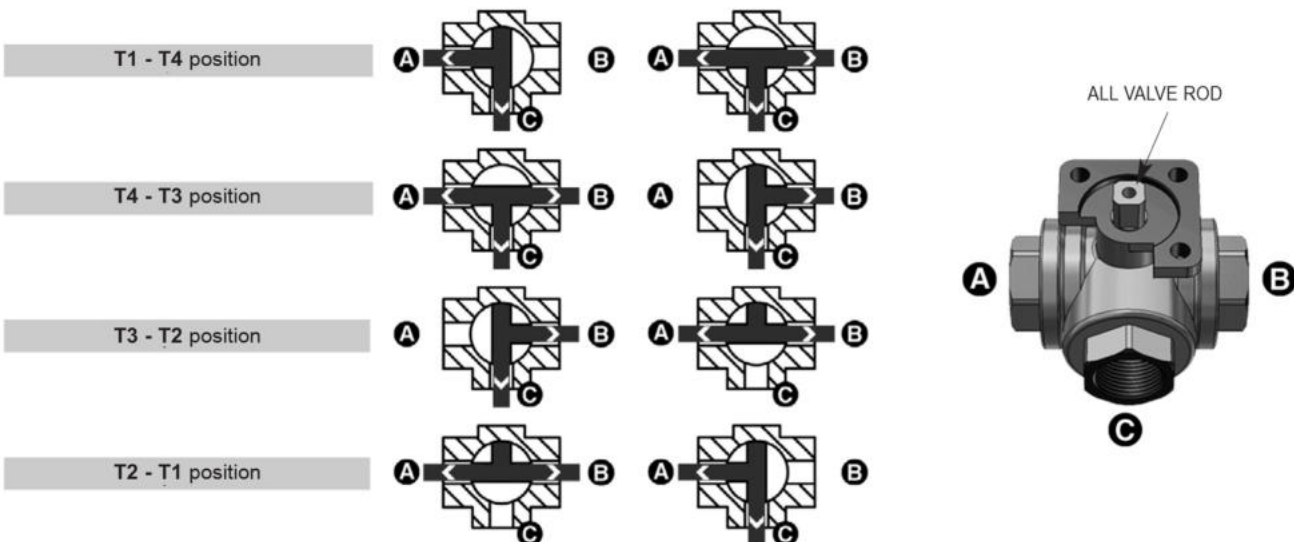
The ball has 2 holes: the first hole is always oriented toward the common way (C), the second hole can be oriented toward either the A or B way, with a rotation of 180°. The **DIVERTING** ball valve closes one of the two inlets before the other one opens, therefore the two ways never communicate. On the control rod there is symbol, which indicates which way is communicating with the common one (C).



HORIZONTAL 3-WAY BALL VALVE

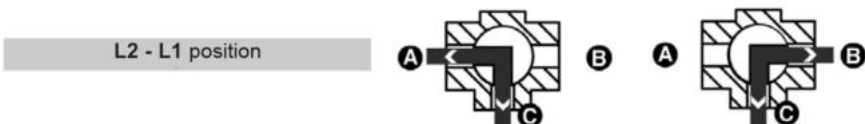
DIVERTER BALL VALVE • "T" BALL

The T-BALL DIVERTER ball valve features a ball that can be used in different ways depending on the initial orientation. As can be seen in the picture, different configurations can be obtained through a 90° rotation. The position of the holes is indicated by a T engraved on the ball valve pin.



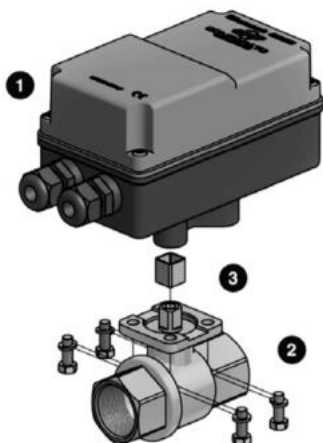
DIVERTER BALL VALVE • "L" BALL

The DIVERTER ball valve with L-SHAPED BALL has a common central way C and two ways which are put into communication with it when they make a 90° rotation. The position of the holes is indicated by an L engraved on the ball valve pin.



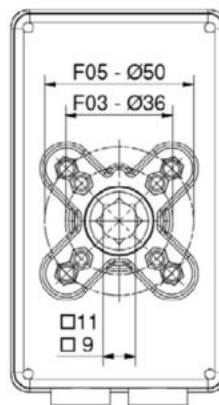
CONNECTION TO THE ACTUATOR

Diamant 2000 ISO 5211 ball valves can be combined with Diamant 2000 actuators with ISO 5211 connection, as shown in the following assembly example.

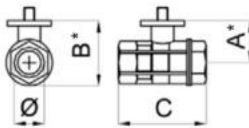
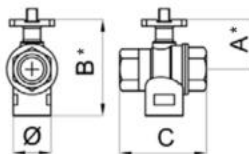
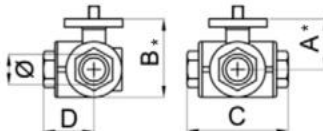
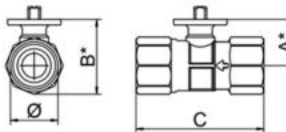
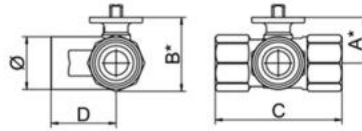


Diamant 2000 attacco ISO 5211

- 1 : Diamant 2000 ISO 5211 connection
- 2 : Ball valve
- 3 : Square adapter (if required)



OVERALL SIZE

MODEL		DN	Ø	A *	B *	C	
2-WAY FULL PORT		8	Rp 1/4"	33	50	67	
		10	Rp 3/8"	33	50	67	
		15	Rp 1/2"	33	50	67	
		20	Rp 3/4"	35	55	76	
		25	Rp 1"	46	71	90	
		32	Rp 1"1/4	49	78	102	
3-WAY VERTICAL FULL PORT		DN	Ø	A *	B *	C	
		15	Rp 1/2"	31	65	64	
		20	Rp 3/4"	42	82	74	
3-WAY HORIZONTAL FULL PORT		DN	Ø	A *	B *	C	D
		8	Rp 1/4"	31	48	67	34
		10	Rp 3/8"	31	48	67	34
		15	Rp 1/2"	33	52	77	39
2-WAY REDUCED PORT		DN	Ø	A *	B *	C	
		15	Rp 1/2"	31	48	72	
		20	Rp 3/4"	31	48	78	
		25	Rp 1"	33	54	91	
		32	Rp 1"1/4	44	70	104	
		40	Rp 1"1/2	44	73	106	
3-WAY HORIZONTAL REDUCED PORT		DN	Ø	A *	B *	C	D
		15	Rp 1/2"	31	48	72	38
		20	Rp 3/4"	31	48	78	40
		25	Rp 1"	33	54	91	47
		32	Rp 1"1/4	44	70	104	55
		40	Rp 1"1/2	44	73	106	55
		50	Rp 2"	48	84	127	66

* overall size to be considered when coupling to the actuator.

EXAMPLE OF SPECIFICATIONS

DIAMANT 2000 BRASS BALL VALVE • brass BRASS CW617N UNI EN 12165, brass ball BRASS CW617N UNI EN12165 nickel chrome plated, EPDM and PTFE seals, full flow, PN30, female thread EN 10226-1, operating temperatures +5°C to +100°C, fluid type: water with glycol max 30%, 'T' ball, Size: DN 20 - 3/4" - Kvs 7.9 - max. differential pressure 16 bar, connection to ISO 5211 actuator.

Brand: **COMPARATO**

Code: **DC3B6E5**