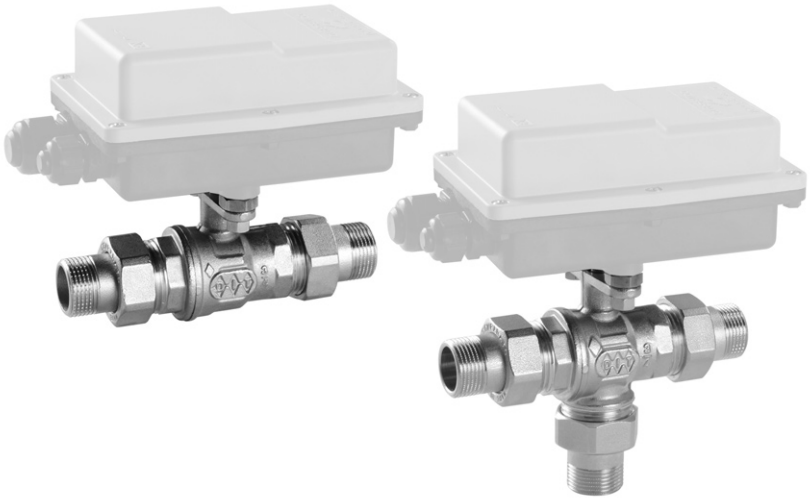
Diamant PRO

BRASS BALL VALVES COMPARATO CONNECTION

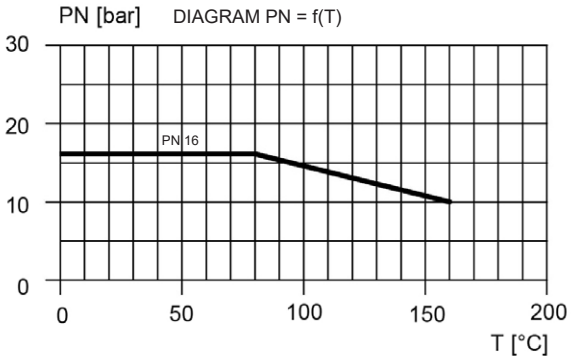
USE

- **systems using alternative energy sources**
- **general automation systems**
- **cooling systems with glycol**
- **heating / cooling systems**
- **open and closed hydraulic systems**
- **general industrial systems with hot and cold fluids**
- **water treatment systems**
- **compressed air systems**
- **compliant with the Decree of the Ministry of Health N° 174 dd 06/04/2004**



TECHNICAL FEATURES

BRASS BALL VALVE **COMPARATO** connection FULL BORE



BRASS

L'espressione generale per il calcolo delle perdite di carico, conoscendo il valore della portata, è la seguente:

$$\Delta p\ [bar] = \left[\frac{Q\ [m^3/h]}{k_{v_s}}\right]^2$$

L'espressione semplificata qui riportata è valida per acqua o fluidi tecnicamente affini.

FLUIDS Water and fluids compatible with EPDM and P.T.F.E. • Other fluids available on request

TEMPERATURE

	Ball valve	Ball valve with spacer
• Minimum	-10°C	-20°C
• Maximum	+110 °C	+110°C

HYDRAULIC VERSIONS AND FEATURES

• Connection with the actuator: COMPARATO connection

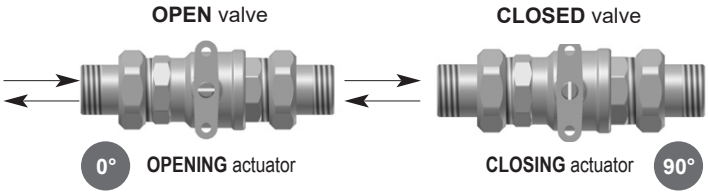
Ball valve	DN	Connections	PN	Kvs [m³/h]	Δp max [bar]	Function	Ball drilling	Rotation	Code
2-WAY MM FULL PORT	15	1/2" M	16	16,3	16			90°	DC2A2A
	20	3/4" M	16	29,5	16			90°	DC2B2A
	25	1" M	16	43	16			90°	DC2C2A
3-WAY MMM VERTICAL FULL PORT	20	3/4" M	16	11,5	16	Mixing / Diverting	3 holes	90°	DC3B3A
	25	1" M	16	18,3	16	Mixing / Diverting	3 holes	90°	DC3C3A
	20	3/4" M	16	11,5	16	Diverting	2 holes	180°	DC3B2A
	25	1" M	16	18,3	16	Diverting	2 holes	180°	DC3C2A

Diamant PRO

BRASS BALL VALVES COMPARATO CONNECTION

2 WAY BALL VALVE

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

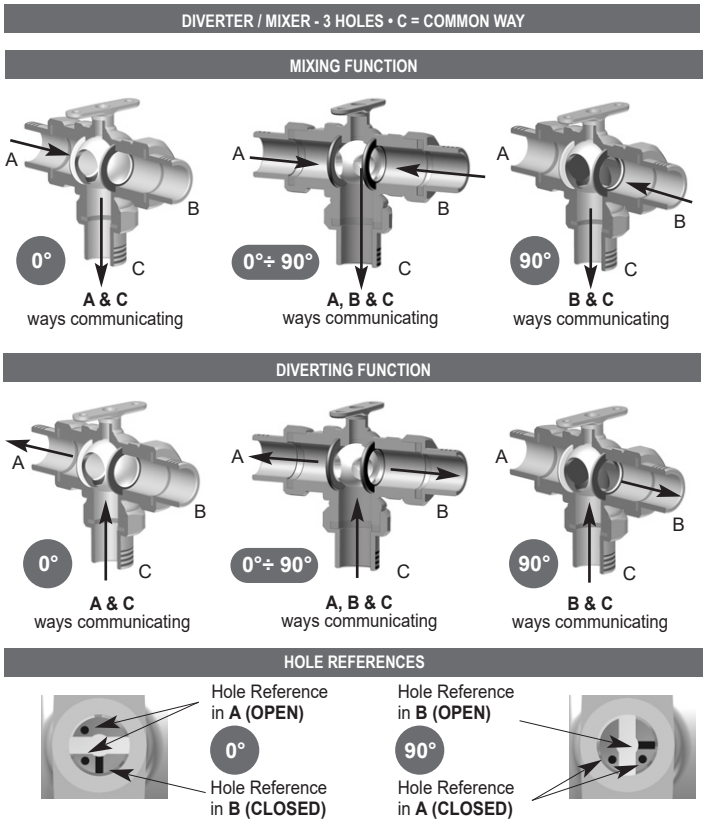


3 WAY DIVERTER / MIXER BALL VALVE

The 3-way version of **Diamant PRO** is available with two different balls. In both cases, one of the holes is positioned on the common way, which is therefore always open.

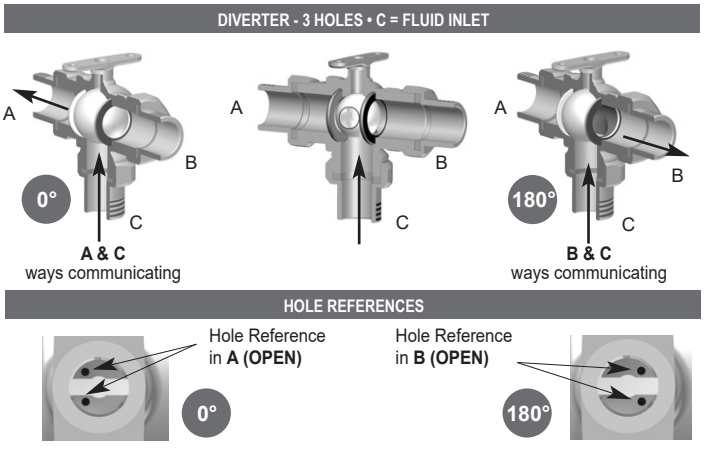
MIXER / DIVERTER BALL VALVE (3-HOLE BALL)

The **MIXER / DIVERTER** ball valve has a 3-hole sphere 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). The 3-hole ball valve has a particular feature: it can close one way and simultaneously start the opening of the other way. 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. On the control rod there are some symbols, which indicate sphere hole references.



DIVERTER BALL VALVE (2-HOLE BALL)

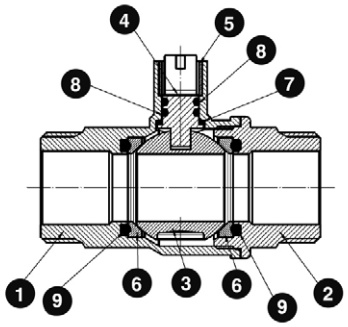
The **DIVERTER** ball valve has a 2-hole sphere: the first hole is always oriented toward the common way (C), the second hole can be oriented toward either the A or B way, with a rotation of 180°. The ball valve closes one of the two inlets before the other one opens, therefore the two ways never communicate.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



Diamant PRO

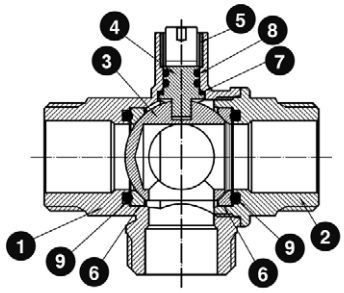
BRASS BALL VALVES COMPARATO CONNECTION

MATERIALS USED



2-WAY COMPARATO CONNECTION BRASS BALL VALVE

1	BODY	BRASS \ CW 617N - UNI EN 12165 NICKEL PLATING
2	COUPLING	BRASS \ CW 617N - UNI EN 12165 NICKEL PLATING
3	BALL	BRASS \ CW 617N - UNI EN 12165 CHROMED NICKEL
4	ROD	BRASS \ CW 614N - UNI EN 12164 NICKEL PLATING
5	SLEEVE	P.T.F.E.
6	BALL SEAL	P.T.F.E.
7	ANTIFRICTION SEAL	P.T.F.E.
8	O-RING	EPDM
9	O-RING	NBR



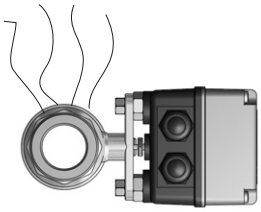
3-WAY COMPARATO CONNECTION BRASS BALL VALVE

1	BODY	BRASS \ CW 617N - UNI EN 12165 NICKEL PLATING
2	COUPLING	BRASS \ CW 617N - UNI EN 12165 NICKEL PLATING
3	BALL	BRASS \ CW 617N - UNI EN 12165 CHROMED NICKEL
4	ROD	BRASS \ CW 614N - UNI EN 12164 NICKEL PLATING
5	SLEEVE	P.T.F.E.
6	BALL SEAL	P.T.F.E.
7	ANTIFRICTION SEAL	P.T.F.E.
8	O-RING	EPDM
9	O-RING	NBR

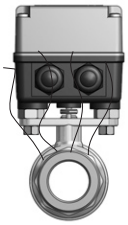
INSTALLATION

The valve shall not be installed with the actuator's connection facing downwards.

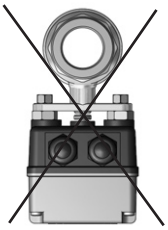
RECOMMENDED POSITION



ALLOWED POSITION



FORBIDDEN POSITION



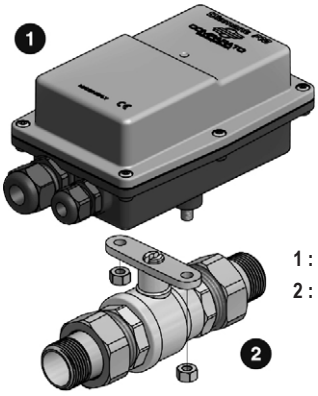
CAUTION! Do not use high-pressure water directly on the actuator (e.g. a pressure washer)

Diamant PRO

BRASS BALL VALVES COMPARATO CONNECTION

CONNECTION TO THE BALL VALVE

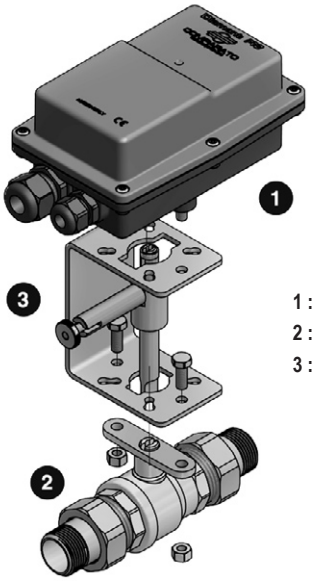
DIRECT CONNECTION



Diamant PRO
COMPARATO connection

1 : Diamant PRO attacco COMPARATO
2 : Corpo valvola

CONNECTION TO THE VALVE BODY VIA SPACER



Diamant PRO
COMPARATO connection

1 : Diamant PRO COMPARATO connection
2 : Ball valve COMPARATO connection
3 : Spacer COMPARATO / COMPARATO connection

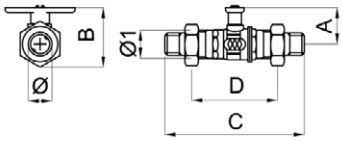
Diamant PRO

BRASS BALL VALVES COMPARATO CONNECTION

OVERALL SIZE

BALL VALVES

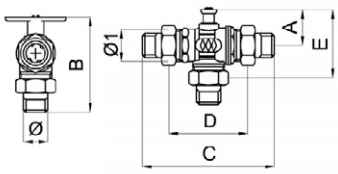
2-way COMPARATO connection



D: dimensions referred to the ball valve without unions.

MODEL	DN	Ø UNIONS	Ø 1 BALL VALVE	A	B	C	D
	15	1/2"	3/4"	34	48	133	78
	20	3/4"	1"	38	58	145	84
	25	1"	1"1/4	42	66	164	94

3-way Diverter Mixer COMPARATO connection



D - **E**: dimensions referred to the ball valve without unions.

DN	Ø UNIONS	Ø 1 BALL VALVE	A	B	C	D	E
20	3/4"	1"	38	105	145	84	74
25	1"	1"1/4	42	117	164	94	82

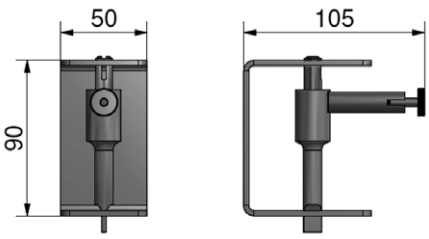
* the overall size of the spacer must always be added to dimension **"A"**

SPACER FOR INSULATION AND/OR MANUAL OPENING

SPACERS COMPARATO / COMPARATO connection

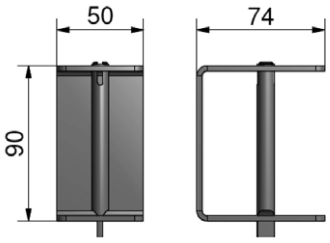
Spacer for insulation with manual opening COMPARATO - COMPARATO connection

Code **ADSTD2**



Spacer for insulation COMPARATO - COMPARATO connection

Code **ADSTD1**



Diamant PRO

BRASS BALL VALVES COMPARATO CONNECTION

comparato.com

EXAMPLE OF SPECIFICATIONS

DIAMANT PRO BALL VALVE • CW617N UNI EN 12165, EPDM and PTFE seals, full bore, PN16, with tangs and caps. Operating temperatures +5°C…+100°C. Fluid type: water with glycol max 30%. Connection to the actuator with Comparato Connection.

Version: 2-WAY MM DN15 - 1/2" - Kvs 16,3

Brand: **COMPARATO**

Code: **DC2A2A**

SPACER • Spacer for insulation, bracket in AISI 304, connecting rod in AISI 303, valve body connection with Comparato fitting. Version: With manual opening - H 90 mm - for coupling with actuators with Comparato connection.

Brand: **COMPARATO**

Code: **ADSTD2**

BIM BUILDING INFORMATION MODELING

UPDATED DATA SHEETS AVAILABLE AT www.comparato.com

In order to provide an up-to-date service, Comparato Nello S.r.l. reserves the right to modify technical data, drawings, graphs and photos of this data sheet at any time, without prior notice.

HYDROTHERMAL SYSTEMS
COMPARATO NELLO s.r.l.
17014 CAIRO MONTENOTTE (SV) ITALIA VIALE DELLA LIBERTÀ • LOCALITÀ FERRANIA • Tel. +39 019 510.371 - FAX +39 019 517.102
www.comparato.com e-mail:info@comparato.com UNI EN ISO 9001:2015 CERTIFIED COMPANY