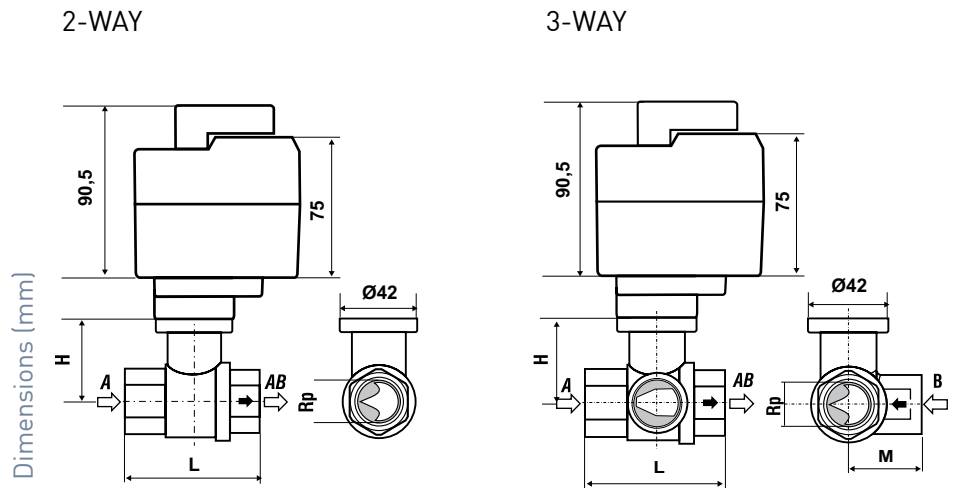


Z20 - Z30

2-way and 3-way motorized ball valves

Ball valves used for water flow rate control, with equal percentage feature, in ventilation, air-conditioning and heating systems. Suitable for hot and cold water.



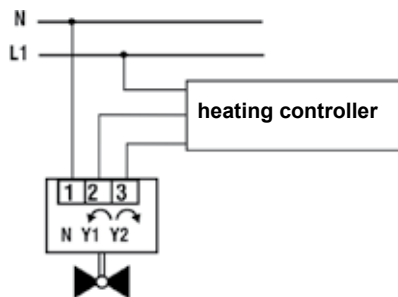
dimensions (mm)				max. thread length (mm)
DN	L	H	Rp	
15	67	45	1/2"	13
20	76	47,5	3/4"	13
25	87	47,5	1"	17
32	113	52	1" 1/4	19
40	113	52	1" 1/2	19
50	127	58	2"	22

dimensions (mm)					max. thread length (mm)
DN	L	H	M	Rp	
15	67	45	34	1/2"	13
20	76	47,5	38,5	3/4"	13
25	87	47,5	43,5	1"	17
32	113	52	56,5	1" 1/4	19
40	113	52	56,5	1" 1/2	19
50	127	58	63,5	2"	22

	KV m ³ /h	DN mm	Connection	Nominal pressure bar	Rotation time sec	Unit weight Kg	Protection degree
2-WAY MOTORIZED BALL VALVES							
Z20L	4	15	G 1/2	16	140	0,9	IP40
Z20M	6,3	20	G 3/4	16	140	1,05	IP40
Z20A	10	25	G 1	16	140	1,2	IP40
Z20B	16	32	G 1 1/4	16	140	1,4	IP40
Z20C	25	40	G 1 1/2	16	140	1,65	IP40
Z20D	40	50	G 2	16	140	2,4	IP40
3-WAY MOTORIZED BALL VALVES							
Z30L	4	15	G 1/2	16	140	0,9	IP40
Z30M	6,3	20	G 3/4	16	140	1,05	IP40
Z30A	10	25	G 1	16	140	1,2	IP40
Z30B	16	32	G 1 1/4	16	140	1,4	IP40
Z30C	25	40	G 1 1/2	16	140	1,65	IP40
Z30D	40	50	G 2	16	140	2,4	IP40

ELECTRICAL FEATURES

Power supply: 230V 50/60Hz.
Power consumption: 3,5VA.
Power supply cable 1m - 3 x 0,5 mm².



STANDARDS AND HOMOLOGATIONS

In conformity with EN 60335-1 standard.

OPERATION

Ball valves are operated by a rotary servocontrol with bidirectional rotation.

Suitable for hot and cold water, antifreeze up to 50% of the volume.

To ensure a stable regulation, valve flow rate must be complementary to the nonlinearity of the heat exchangers of heating systems.

A valve with equal percentage characteristic is ideal to create a linear resultant between the percentage of the irradiated heat from heating elements and the percentage of valve opening (see Figure 1).

Unlike ordinary ball valves (see Figure 2), Fantini Cosmi valves with their adjustment disc inserted into the valve can create an equal percentage control characteristic with considerable advantages in the regulation:

- initial flow peaks absence;
- excellent control stability;
- flow rate coefficient can be compared with the one of linear equal sized valves;
- less need to shorten the pipe gives better overshooting performance and less tendency to vibrate.



Figure 1

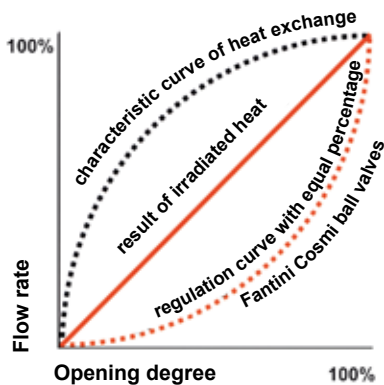
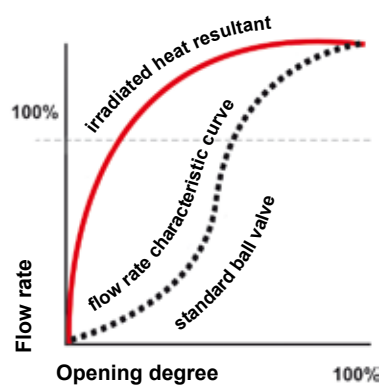


Figure 2



INSTALLATION

Vertical or horizontal mounting position.

FEATURES

Female threaded connections ISO 7/1.

Suitable for hot and cold water, antifreeze up to 50% of the volume.

Valve body in stamped nickel-plated brass.

Stainless steel ball and pin.

PTFE seals.

Pin sealing in EPDM.

TEFZEL regulation disc.

Equal percentage regulation feature, no leakage, sealed closing (ports A-AB).

By-pass B-AB linear feature, flow rate consists 70% of the Kv, leakage of about 1 ÷ 2% of the Kv according to the standards DIN 3230 (ports A-AB) (3 ways).

Servocontrol cover in thermoplastic material.

Manual operation through the handle and manual/automatic control button.

Position indicator with reversible scale.

Protection class: I.

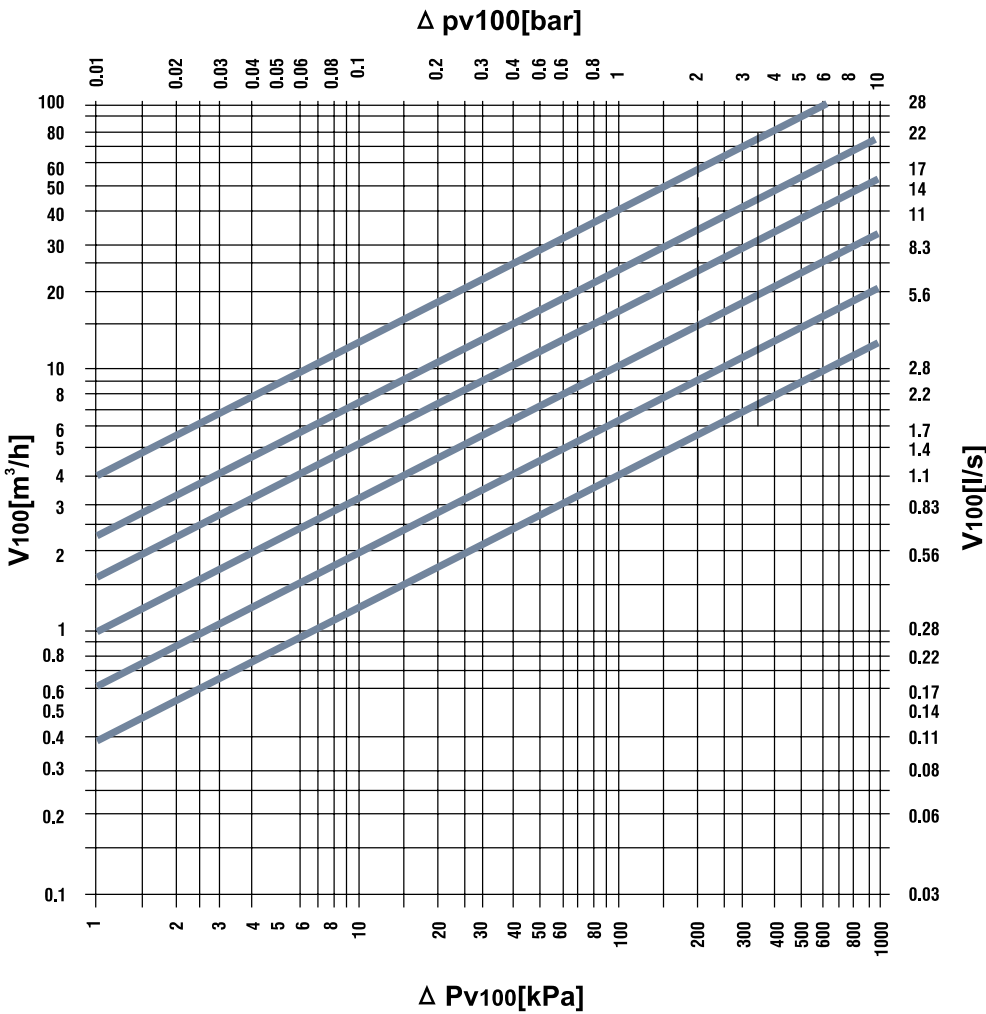
Fluid temperature: 5 ÷ 100°C.

Maximum differential pressure: 3,5 bar.

Rated torque: 10 Nm.

PARAMETERS DETERMINATION

BALL VALVES - LOAD LOSS



LEGEND

— Δp_{max}
 Maximum admissible pressure difference between A-AB ports referred to the completely open state

- - - Δp_{max}
 For silent operation

Δp_{v100}
 Load loss with valve opened
 v_{100} Nominal flow rate
 with Δp_{v100}

FORMULA FOR K_{vs}

$$K_{vs} = \sqrt{\frac{V_{100}}{\Delta P_{v100} / 100}}$$

K_{vs} [m^3/h]

V_{100} [m^3/h]

Δp_{v100} [kPa]

DEFINITION Δp_s
 Pressure value at which the actuator can still close the valve ensuring the necessary loss of load.

CHOICE OF REGULATION BALL VALVES

K_{vs} (m^3/h)	4	6,3	10	16	25	40
DN (mm)	15	20	25	32	40	50
2 VIE	Z20L	Z20M	Z20A	Z20B	Z20C	Z20D
3 VIE	Z30L	Z30M	Z30A	Z30B	Z30C	Z30D