PN25 two-way Balanced Valves

2FSA.B

Model	DN	PN	Kvs	Application
2FSA25BR4	25	25	4	Group 1 fluids
2FSA25BR7	25		6,3	
2FSA25B	25		10	
2FSA32B	32		16	
2FSA40B	40		25	
2FSA50B	50		40	
2FSA65B	65		63	
2FSA80B	80		100	Group 2 fluids

Kvs is the flow rate expressed in m^3/h of water at a temperature between 5°C and 40°C passing through a valve, open at the nominal stroke, having a 100kPa (1bar) differential pressure.

APPLICATION AND USE

2FSA.B balanced valve bodies are designed to use in air-conditioning, thermoventilation and heating systems and in industrial process systems; they cannot be used as safety valves. They can be employed to control fluids belonging to groups 1 and 2 (see table above) according to the article 13 of 2014/68/UE directive (PED).
In particular Group 1 includes just diathermic oil; Group 2 includes water, overheated water, steam.
For fluids different from the ones listed above, please contact our Sales Support.
The peculiar characteristic of such valves is they can operate under high close off pressure and wherever low leakage is required. This makes them particularly suitable in applications with high pressure and high DeltaT, such as overheated water (i.e. remote control, boiler supply) and steam.

MANUFACTURING CHARACTERISTICS

Valve body:	spheroidal cast iron
Seat, Plug, Stem:	stainless steel
Balancing gasket:	teflon ring with steel spring
Stem packing:	teflon

TECHNICAL CHARACTERISTICS

Construction:	PN25;
connections:	PN25 flanges;
control characteristic:	equal percentage;
leakage (% of Kvs):	0,02;
allowed fluids:	
- water:	min. temperature: -10°C(1); glycol added max 50%;
- overheated water:	max temp. 230°C(2);
- diathermic oil:	max temp. 230°C(2);
- steam:	max pressure 8 bar; max temperature 230°C;
storage temp.:	-20T60°C;
weight:	see dimensions.

(1) see 248 accessory.
(2) temperature/pressure ratio according to the following standards: UNI 1092-2 and UNI 12516-4.

Reference standards
Control valves for hot water heating plants: UNI 9753;
control characteristics: IEC 534-2-4;
leakage: measured according to the EN1349 standard.

INSTALLATION

Hydraulic connections
Respect the fluid directions: inlet is labelled by A and outlet by AB.

Valve mounting
Before mounting the valve, make sure pipes are clean, free from welding slags. The pipes must be perfectly aligned with the valve body and not subjected to vibrations. For installations on plants with high temperature fluids (steam, overheated water, diathermic oil) use expansion joints to avoid the dilatation of pipes to stress the valve body.
In any case, avoid installing the valve in plants which are considered aggressive and/or corrosive for valve materials.
Please contact our Sales Support in order to define which potentially aggressive or polluting substances can be used.
We disclaim all responsibility in case of valve failure due to external fortuitous events (fire, earthquakes etc.).
Leave sufficient room over the actuator, at least 20cm., to allow the actuator disassembling from the valve body for eventual maintenance.
If a MVH is present, mount the valves with the actuator in vertical position with fluid temperature up to 120°C. For higher temperatures, the valves must be mounted horizontally, otherwise the use of the MVHT accessory is required. In all cases, keep in mind that the MVH actuator main shaft must always be horizontal.

NOTE: Following the hydraulic installation it is necessary to check the tight of the stem packing placed on the bonnet, both in cases of low and high temperatures. The valves require periodic maintenance.

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OPERATION

With stem up the valve is in closed position, with stem down the valve is open.

ACTUATORS TECHNICAL CHARACTERISTICS, WIRING DIAGRAM AND INSTALLATION

See MVH - MVHAC and MVE actuators data sheets and mounting instructions.

MOTORIZED VALVES OPTIONS

A150-2 Flanges with ANSI 150 bolt holes

ACCESSORIES

248 Stem heater for applications with possible ice formation on stem and packing.

MVHT Valve body actuator spacer to reduce the direct exposure of the actuator when installed on a valve with high temperature fluids.
Dimensions: Ø 120mm; h = actuator height + 102mm.

MAX DIFFERENTIAL PRESSURE [kPa]

		MVH	MVHA/C*	MVE.06	MVE.10	MVE.15	MVE.22
U-Bolt Connection	**DN**	**A-AB**	**A-AB**	**A-AB**	**A-AB**	**A-AB**	**A-AB**
2FSA..B	25R	2500	2500	2500	2500	2500	2500
	25I	2500	2500	2500	2500	2500	2500
	25	2500	2500	2500	2500	2500	2500
	32	2500	2500	2500	2500	2500	2500
	40	2500	2500	2490	2500	2500	2500
	50	2500	2500	1830	2500	2500	2500
	65	2500	1760	1220	2500	2500	2500
	80	2500	1280	830	2500	2500	2500

100kPa = 1bar = 10m_{H_2O}

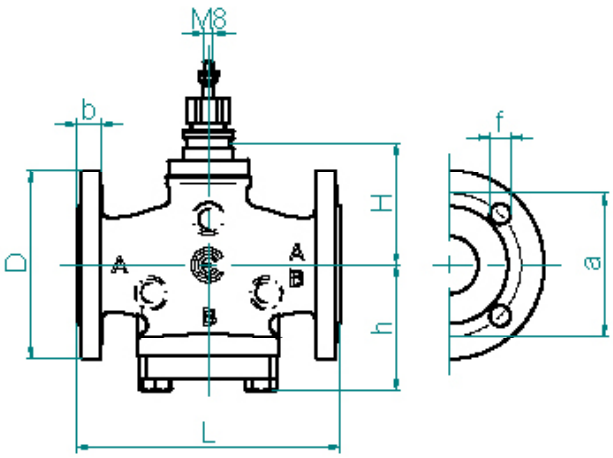
* MVH.A in emergency valve closed, MVH.C in emergency valve open.

MAX REGULATION DIFFERENTIAL PRESSURE [kPa]

The max regulation differential pressure, it means the pressure which can be used during the stroke, is conditioned by wear between seat and plug and by the performance guaranteed by the actuator for the evaluated valve. So we recommend not to overcome the differential pressure whose value corresponds to the minimum between 800kPa (maximum admitted value not to cause wear) and the one shown in the previous table (max close-off differential pressure).

Note: The max operating pressures at different temperatures for various PN classes must correspond to the following standards: UNI 1092-02 and UNI 12516-1.

DIMENSIONS [mm]



Model	DN	L	H	h	D	b	a	f	Holes n.	Weight [kg]
2FSA.B PN25	25	160	92	85	115	18	85	14	4	6
	32	180	97	105	140	20	100	18	4	10
	40	200	98	110	150	20	110	18	4	11
	50	230	107	116	165	22	125	18	4	16
	65	270	117	132	185	24	145	18	8	20
	80	310	181	149	200	26	160	18	8	39

The performances stated in this sheet can be modified without any prior notice