

# 2-PORT BALANCED PRESSURE FLANGED PN 16 (– 10 ... 150 °C) SEAT VALVES



## VBG 2... Eng.

- Body in UNI ISO 185-250 cast iron
- Spindle in AISI 303 steel, plug in bronze
- Flanged connections PN 16
- Equipercantage control
- Leakage rate: 0.03 % Kvs

### 1. APPLICATION

The VBG2... valves are used for closing the superheated hot water flow or refrigerated water flow in heating, air-conditioning, district heating or steam sites.

They are operated by MVL / MVF linear actuators.

Permitted fluids :

- Superheated hot water max. 150 °C
- Chilled water min. –10 °C (max. 50% glycol)
- Steam (max. 2 bar, absolute)

### 2. OPERATION

The closing element of the valve is an appropriately-machined plug which, operated by the linear movement of the actuator, blocks the water flow. The plug run is of 45 mm.

Control: equipercantage.

### 3. MODELS

Code	DN body mm	Kvs <sup>(1)</sup> m <sup>3</sup> /h	Run mm	Suitable actuators			
				MVL 06. 1.33 s/mm		MVF 004 1.33 s/mm	
				bar <sup>(2)</sup>	sec <sup>(3)</sup>	bar <sup>(2)</sup>	sec <sup>(3)</sup>
<b>VBG 280</b>	80	100	45	2	60	2	60
<b>VBG 2100</b>	100	130	45	2	60	2	60
<b>VBG 2125</b>	125	200	45	2	60	2	60
<b>VBG 2150</b>	150	300	45	2	60	2	60

(1) : Kvs – Flow coefficient : flow in m<sup>3</sup>/h with open valve and pressure drop of 100 kPa. 100 kPa = 10 mWG = 1 bar

(2) : bar – Maximum pressure differential Δp max. permitted by actuator.

(3) : sec – Time necessary for actuator to make a complete run of the valve.

WARNING : 100 kPa = 10 mWG = 1 bar

### 4. TECHNICAL DATA

Valve body	cast iron UNI ISO 185-250	Run	45 mm
Spindle	AISI 303 steel	Control features	equipercantage
Plug	bronze	Control ratio	50:1
Spindle seals	O-Ring	Leakage rate	0.03% Kvs
Nominal pressure	16 bar (1600 kPa)	Connections	flanged PN 16 (ISO 7005/2)
Fluid temperature	–10...150 °C		

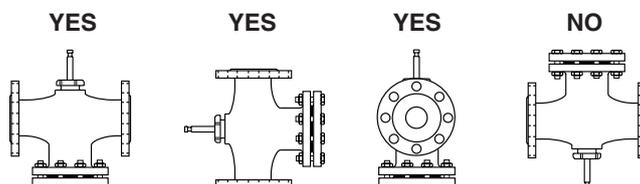
### 5. MOUNTING

Before mounting the valve ensure that in the pipework there is no extraneous matter such as residues from welding or threading. The pipework must not be subject to vibrations and must be perfectly aligned with the valve connections to avoid dangerous strains which could damage the valve.

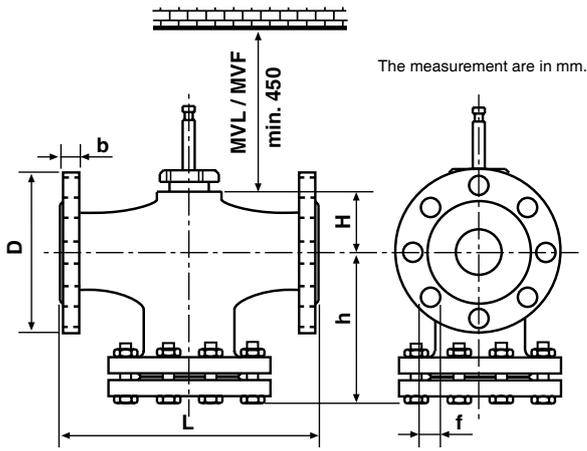
During installation pay attention to the direction of flow, indicated by an arrow on the body of the valve.

The valve can be installed in any position but with the spindle pointed downwards.

When installing make sure you leave enough space for the mounting of the actuator on the spindle side.

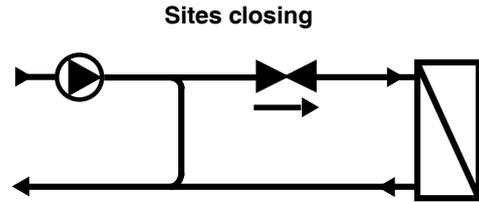


**6. OVERALL DIMENSIONS**



Model	L	H	h	D	b	f
<b>VBG 280</b>	310	181	158	200	22	8X18
<b>VBG 2100</b>	350	193	178	220	22	8X18
<b>VBG 2125</b>	400	115	203	250	24	8X18
<b>VBG 2150</b>	480	133	243	285	24	8X22

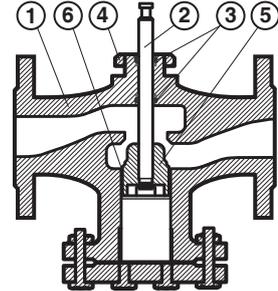
**7. FUNCTIONAL DIAGRAM**



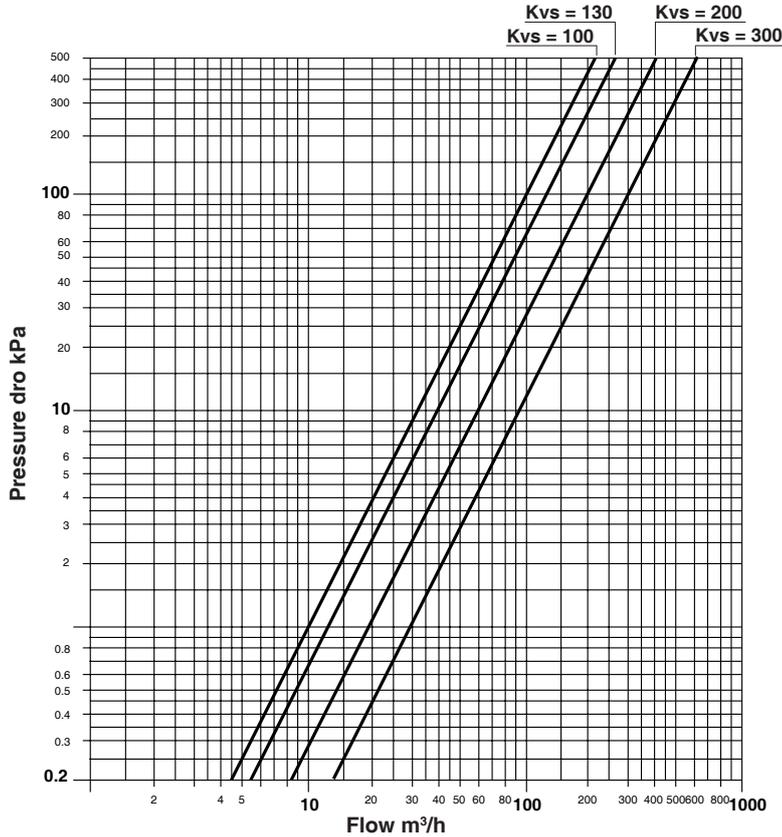
**8. CONSTRUCTION**

The valve body is made of UNI ISO 185-250 cast iron, the spindle is in AISI 303 steel and the plug is in bronze. The spindle and balancing room are rendered watertight by O-Rings in teflon. The O-Rings of the spindle are held between cleaning rings. The whole thing is enclosed in a sealing block which is easily replaceable.

- 1 – Valve body
- 2 – Spindle
- 3 – O-ring seal
- 4 – Actuator ring nut
- 5 – Plug
- 6 – Seat



**9. PRESSURE DROP**



Kvs = Flow coefficient : Flow in m³/h with open valve and pressure drop of 100 kPa  
 100 kPa = 10 mWG = 1 bar

**Amendment to data sheet**

Date	Revision No.	Page	Section	Details of amendment
13.09.00 06.09.07 MC	- <b>01</b>	- All	General General	Original data sheet New page layout and change type actuator which can be used (from MVA to MVF)



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