

# 2-PORT BALANCED PRESSURE FLANGED PN 25 (5 ... 150 °C) SEAT VALVES



## VB 2.. Eng.

- Body in GGG 40.3 cast iron
- Spindle and plung in stainless steel
- Flanged connections PN 25 ISO 7005/2
- Equipcentage control ; control ratio 50: 1
- Leakage rate: 0.05% Kvs



### 1. APPLICATION

The VB2.. valves in cast iron are used for closing the hot or superheated water flow in heating and district heating sites.

They are operated by CLQ / CEQ 07.. or CLR / CER 15.. / 03.. linear actuators..

Permitted fluid:

- Superheated hot water max. 150 °C

### 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 varies between 5...10 mm according to the diameter (see table).

Control. equipcentage.

### 3. MODELS

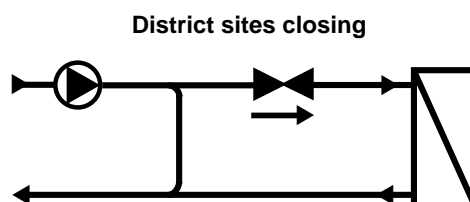
Code	DN body mm	Kvs <sup>(1)</sup> m <sup>3</sup> /h	Run mm	Suitable actuators					
				CLQ / CEQ 07.. 14 s./mm		CLR / CER 15.. 15 s./mm		CLR / CER 03.. 3 s./mm	
				bar <sup>(2)</sup>	sec <sup>(3)</sup>	bar <sup>(2)</sup>	sec <sup>(3)</sup>	bar <sup>(2)</sup>	sec <sup>(3)</sup>
<b>VB 209</b>	15	0.25	5	16	70	16	75	16	15
<b>VB 210</b>	15	0.4	5	16	70	16	75	16	15
<b>VB 211</b>	15	0.63	5	16	70	16	75	16	15
<b>VB 212</b>	15	1.0	5	16	70	16	75	16	15
<b>VB 213</b>	15	1.6	5	16	70	16	75	16	15
<b>VB 214</b>	15	2.5	5	16	70	16	75	16	15
<b>VB 215</b>	15	4.0	5	16	70	16	75	16	15
<b>VB 220</b>	20	6.3	5	16	70	16	75	16	15
<b>VB 225</b>	25	10.0	7	-	-	16	105	16	21
<b>VB 232</b>	32	16.0	10	-	-	16	150	16	30
<b>VB 240</b>	40	25.0	10	-	-	16	150	16	30
<b>VB 250</b>	50	40.0	10	-	-	16	150	16	30

(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.

### 4. FUNCTIONAL DIAGRAM



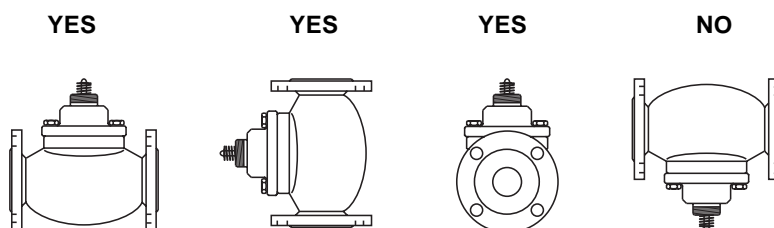
## 5. TECHNICAL DATA

Valve body	GGG 40.3 cast iron	Run	5 ... 10 mm
Spindle and plug	stainless steel	Control features	equipercentage
Spindle seals	O-Ring	Control ratio	50:1
Nominal pressure	25 bar (2500 kPa)	Leakage rate	0.05% Kvs
Fluid temperature	5 ... 150 °C	Connections	flanged PN 25 (ISO 7005/2)

## 6. MOUNTING

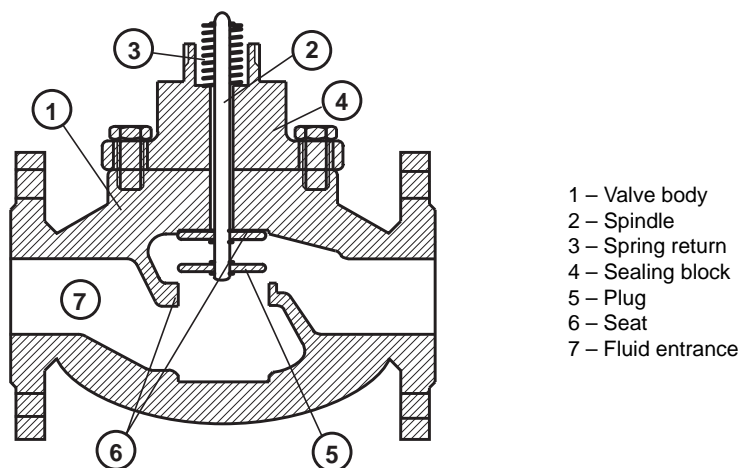
Before mounting the valve ensure that in the pipework there is no extraneous matter such as residues from welding or threading. The pipework must not be subject to vibrations and must be perfectly aligned with the valve connections to avoid dangerous strains which could damage the valve. During installation pay special attention to the direction of the flow, embossed on the valve body, in relation to the hydraulic circuit controlled.

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.

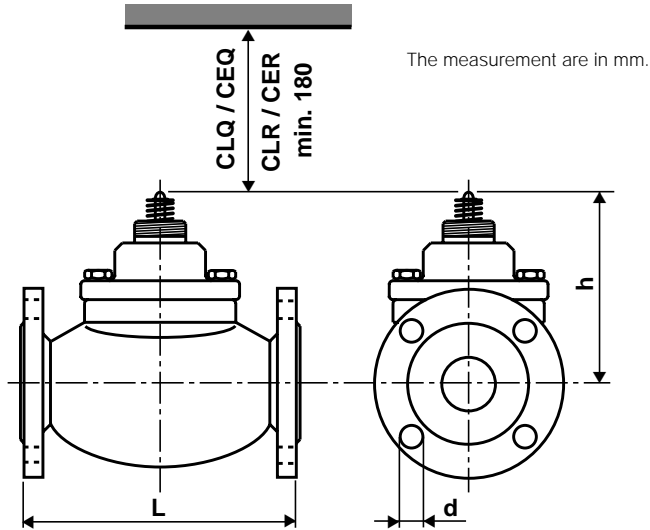


## 7. CONSTRUCTION

The valve body is made of GGG 40.3 cast iron whereas the spindle and the plug are in stainless steel. The spindle is rendered watertight by two O-Rings held between cleaning rings in teflon. The whole thing is enclosed in a sealing block which is easily replaceable. The spring return is mounted externally on the spindle, above the sealing block. At the top of the valve there is the thread that allows the mounting and fixing of the actuator (CLQ / CEQ - CLR / CER). The valves come with threaded male unions with seals.

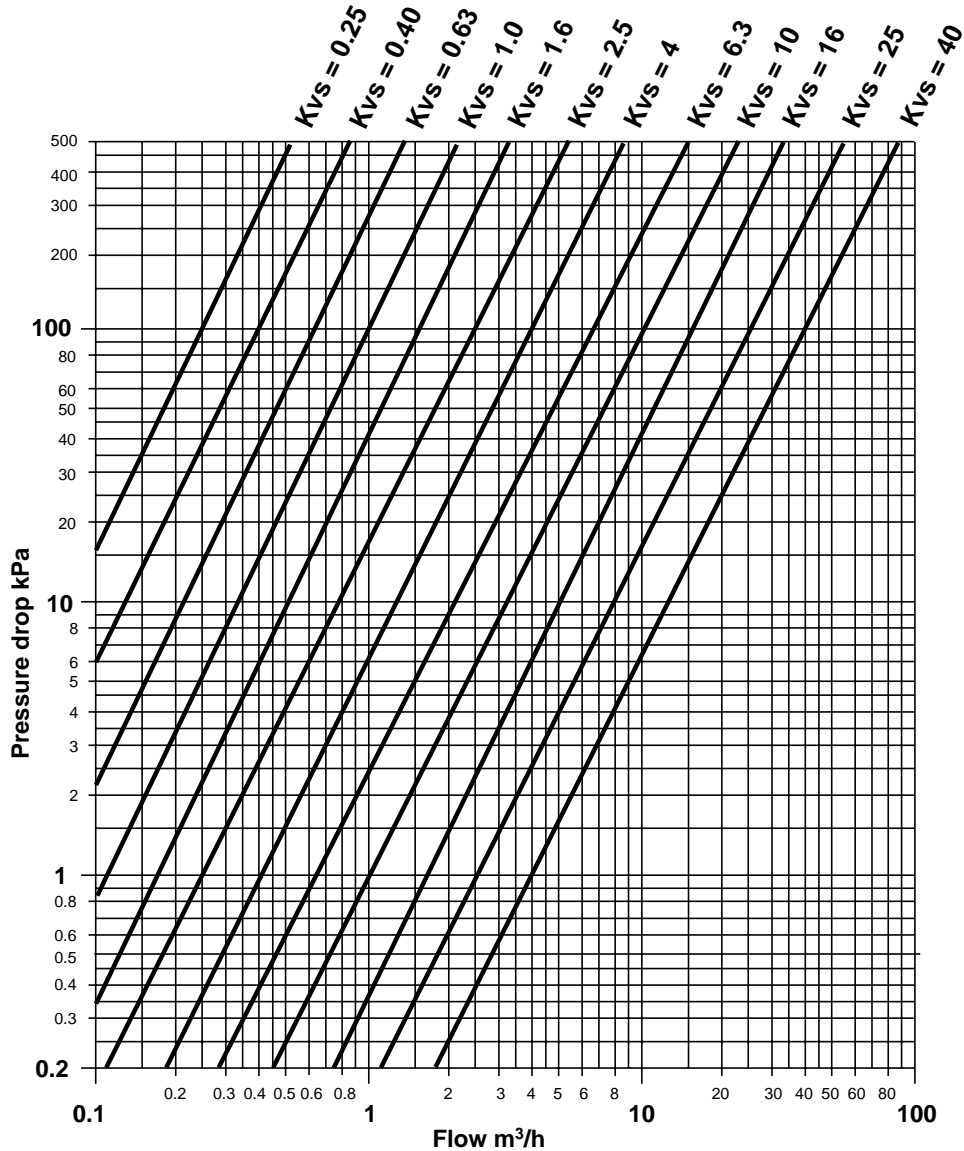


**8. OVERALL DIMENSIONS**



Model	L	h	d
<b>VB 209</b>	134	99	4 X 14
<b>VB 210</b>	134	99	4 X 14
<b>VB 211</b>	134	99	4 X 14
<b>VB 212</b>	134	99	4 X 14
<b>VB 213</b>	134	99	4 X 14
<b>VB 214</b>	134	99	4 X 14
<b>VB 215</b>	134	99	4 X 14
<b>VB 220</b>	154	99	4 X 14
<b>VB 225</b>	164	99	4 X 14
<b>VB 232</b>	184	123	4 X 18
<b>VB 240</b>	204	123	4 X 18
<b>VB 250</b>	234	123	4 X 18

**9. PRESSURE DROP**



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



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