

2-PORT FLANGED SEAT VALVES PN 25 (1...120 °C) , PN 20 (120...200 °C)

VS 2.. Eng.



- GGG 40.3 cast iron body; stainless steel spindle, seat and plug
- PN 25 flanged connections (ISO 7005/2)

1. APPLICATION

VS valves are designed to control the flow of hot or superheated water (max. 200°C) or steam (max. 6 bar) in heating or air-conditioning plants.

Operated by linear actuators of the type CLE... or CLF... or CEF D16 (with spring-return closure).

2. OPERATION

The control element of the valve is a shaped plug which, operated by the linear movement of the spindle, controls the flow between the A port (input) and the AB port (output).

3. MODELS

Code	DN body	Kvs ⁽¹⁾ m ³ /h	Run mm	Suitable actuators										
				CLE 16.. 500 N 11 s/mm		CLE 10.. 300 N 7 s/mm		CLF 16.. 1,000 N 11 s/mm		CLF 04.. 600 N 3 s/mm		CEF D16.. ⁽⁵⁾ 450 N 11 s/mm		
				bar ⁽²⁾	s ⁽³⁾	bar ⁽²⁾	s ⁽³⁾	bar ⁽²⁾	s ⁽³⁾	bar ⁽²⁾	s ⁽³⁾	bar ⁽²⁾	bar ⁽⁴⁾	s ⁽³⁾
VS 211	15	0.63	15	25	165	9	105	25	165	25	45	22	6	165
VS 213	15	1.6	15	25	165	9	105	25	165	25	45	22	6	165
VS 215	15	4.0	15	17	165	9	105	25	165	20	45	16	6	165
VS 220	20	6.3	15	11	165	4	105	25	165	13	45	10	6	165
VS 225	25	10	15	6	165	2	105	16	165	8	45	5	5	165
VS 232	32	16	15	3	165	1	105	9	165	5	45	2.5	2.5	165
VS 240	40	25	15	2	165	–	–	6	165	3	45	2	2	165
VS 250	50	40	15	1	165	–	–	3	165	2	45	0.5	0.5	165

4. ACCESSORIES

Code	Description
ADS S12	Spacing collar for actuator (12 cm) for fluid with temperature above 130°C.

100 kPa = 10 mWG = 1 bar

(1) : Kvs – Flow coefficient: Flow in m³/h with valve open and pressure drop of 100 kPa

(2) : bar – Maximum differential pressure Δp max. with hot or superheated water permitted by actuator.

(3) : s – Time in seconds necessary for actuator to make a complete valve run.

(4) : bar – Maximum differential pressure Δp max. with steam permitted by actuator.

(5) : actuator with spring-return closure

5. TECHNICAL DATA

Valve body	GGG 40.3 cast iron	Nominal pressure	25 bar at 120 °C ; 20 bar at 200 °C
Spindle	stainless steel	Fluid temperature	1...200 °C
Seat	stainless steel	Maximum vapour pressure	6 bar
Plug	stainless steel	Run	15 mm
Spindle seals	PTFE	Control characteristic	equal percentage
Connections	flanged PN 25 (ISO 7005/2)	Control ratio	50:1
		Let by	0.05 % Kvs

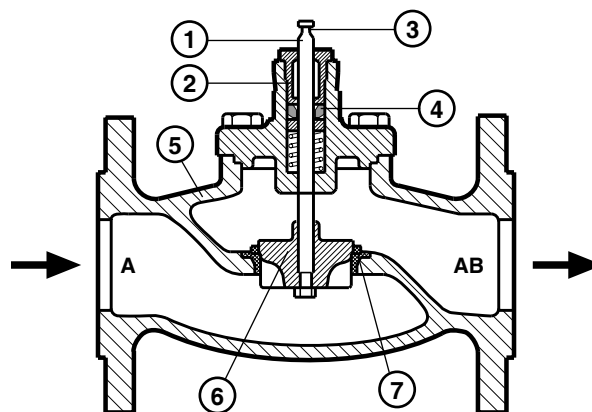
6. CONSTRUCTION

The valve body is made of GGG 40.3 cast iron; the spindle, seat and plug of stainless steel.

The spindle is hydraulically sealed by self-cleaning Teflon gaskets enclosed in an easily-replaceable sealing block.

At the head of the spindle is a groove for insertion in the coupling block of the actuator.

- 1 – Spindle
- 2 – Sealing block
- 3 – Groove for attachment to actuator
- 4 – Teflon seals
- 5 – Valve body
- 6 – Plug
- 7 – Seat
- A – Input port
- AB – Output port



7. MOUNTING

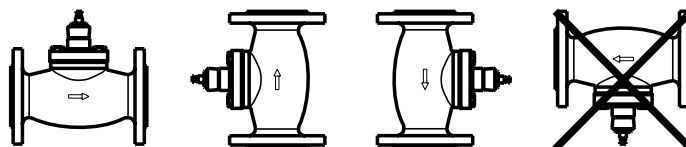
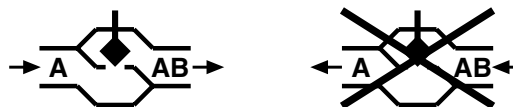
Before mounting the valve ensure that there is no extraneous material in the pipework such as residues from welding or threading.

The pipework must not be subject to vibrations and must be perfectly aligned with the valve connections in order to avoid dangerous stresses.

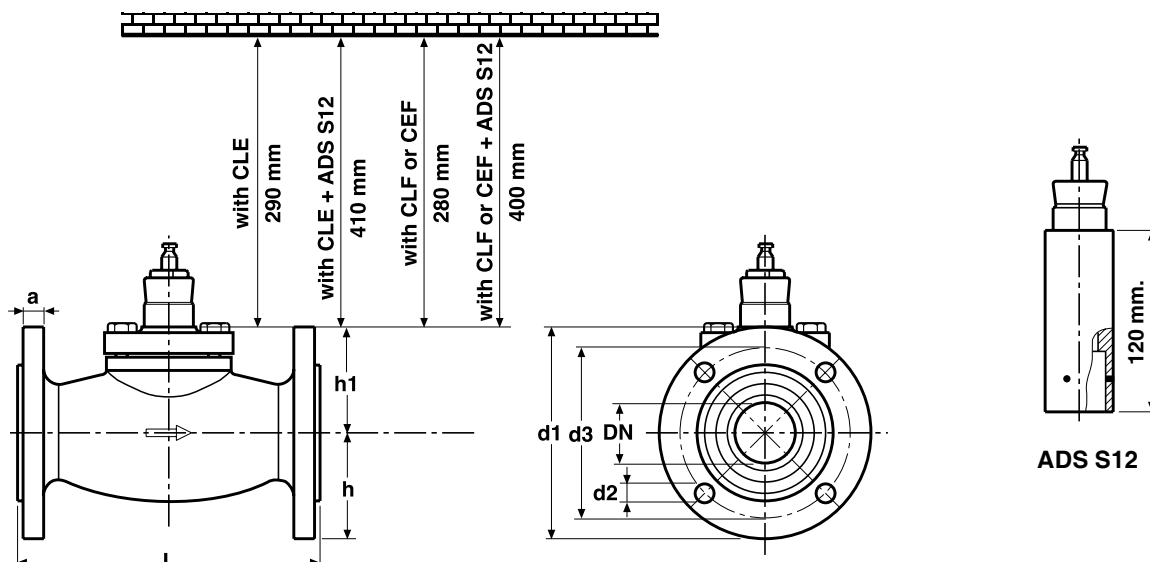
To avoid vibration problems it is preferable always to mount the valve so that water flows out of the AB port (9. EXAMPLES OF PLANTS).

The valve can be installed in any position except that with the spindle pointing downwards.

Leave sufficient space on the spindle side for mounting the actuator (8. OVERALL DIMENSIONS).



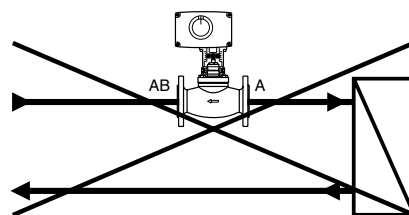
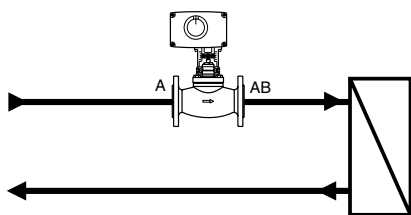
8. OVERALL DIMENSIONS



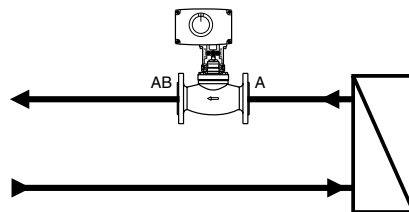
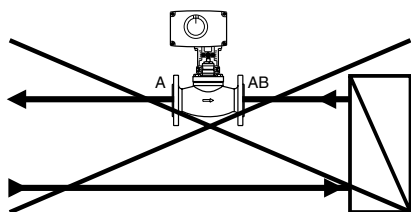
Model	DN mm	L mm	d1 mm	d2 mm	d3 mm	a mm	h mm	h1 mm	weight kg
VS 211...215	15	130	95	4 X 14	65	16	47.5	58	3.9
VS 220	20	150	105	4 X 14	75	18	52.5	58	4.6
VS 225	25	160	115	4 X 14	85	18	57.5	58	5.0
VS 232	32	180	140	4 X 18	100	18	70	80	8.6
VS 240	40	200	150	4 X 18	110	18	75	80	9.5
VS 250	50	230	165	4 X 18	125	20	82.5	80	10.9

9. EXAMPLES OF PLANTS

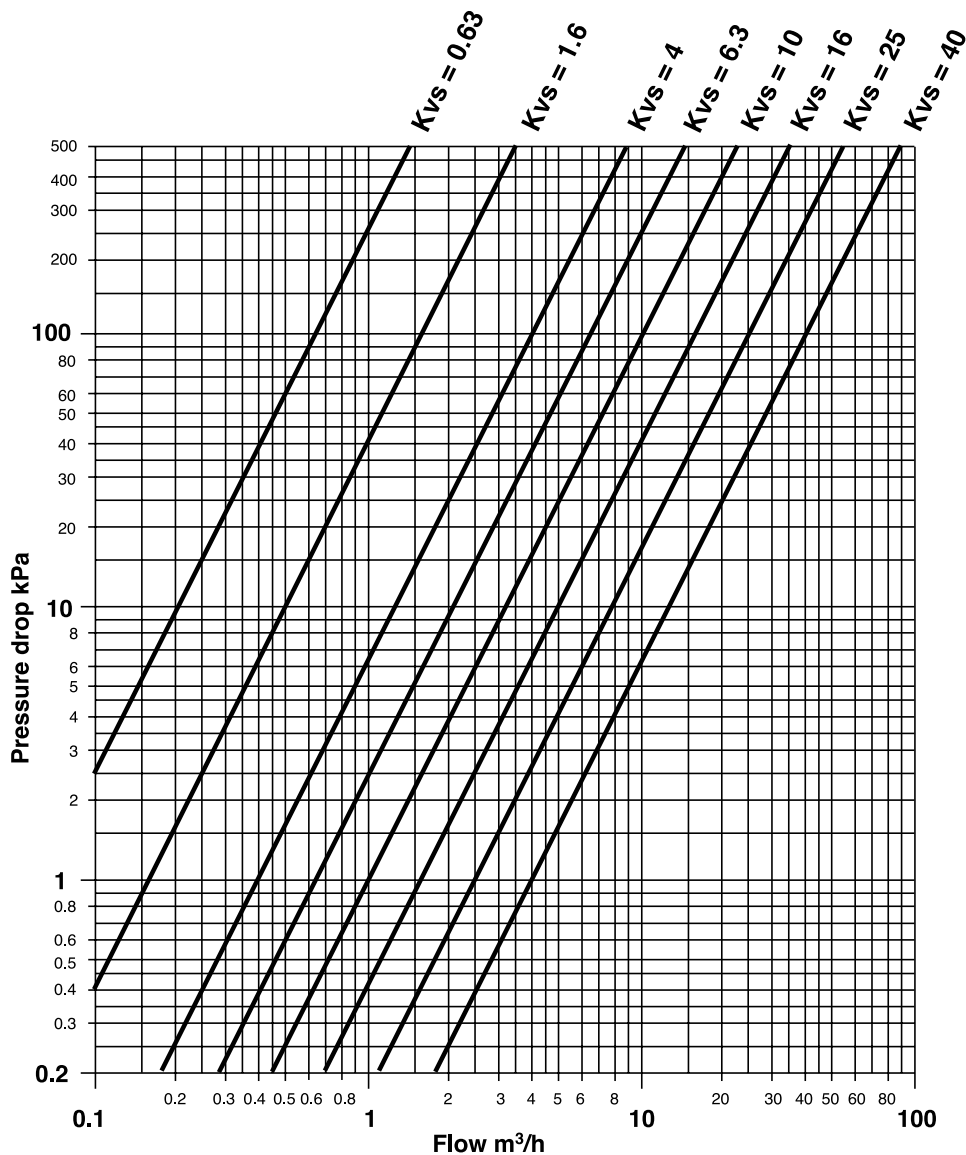
Mounting on flow



Mounting on return



10. PRESSURE DROP



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

Amendments to data sheet

from version	to version	Page	Section	Details of amendments
24.01.03 LB	18.01.06 LB	1	1. APPLICATION 2. OPERATION	Update actuator's name from CEF U16.. to CEF D16.. Update actuator's name from CEF U16.. to CEF D16.



Head Office & Sales
 Via San G.B. De La Salle, 4/a Tel. +39 022722121
 20132 - Milano Fax +39 022593645
 Reg. Off. Central & Southern
 Via S. Longanesi, 14 Tel. +39 065573330
 00146 - Roma Fax +39 065566517
 Orders and Shipping
 Via Gen. Treboldi, 190/192 Tel. +39 0364773200
 25048 - Edolo (BS) Tel. +39 0364773202
 Fax +39 0364770016
 E-mail: info@coster.info Web: www.coster.info



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