THREADED GLOBE VALVE BODIES - STROKE 16,5 mm

VFS

APPLICATION

VFS valve bodies are used in HVAC systems to control and regulate fluids. Valves are female threaded for connections. 3-way valves are used as mixing. They can also be used as diverting by reducing the max differential pressure value by 50%. Do not use the bypass (angle way) as control port. VFS valve bodies are motorized by SE6 series electric actuators.

WORKING

Stem up: direct way A-AB closed (B-AB way open for 3-way valve)
Stem down: direct way A-AB open (B-AB way closed for 3-way valve)

TYPE		CONNECTION	KVs m^3/h	MAX DIFF. PRESS. (*) bar
2-WAY	3-WAY			
VFS215	VFS315	G 1/2	2.5	2.2 (11.0)
VFS218	VFS318	G 3/4	4.0	2.2 (11.0)
VFS220	VFS320	G 3/4	6.3	2.2 (11.0)
VFS225	VFS325	G 1	10.0	2.2 (7.0)
VFS232	VFS332	G 1 1/4	16.0	2.2 (4.4)
VFS240	VFS340	G 1 1/2	25.0	2.2 (2.7)
VFS250	VFS350	G 2	40.0	2.2 (2.2)
VFS252	VFS352	G 2	30.0	2.2 (2.2)

(*) the values in the brackets are the max diff. pressure when valve is fully closed and actuator is still able to open or close the valve with security.
the values outside the brackets are the suggested max pressure drop (valve fully open)

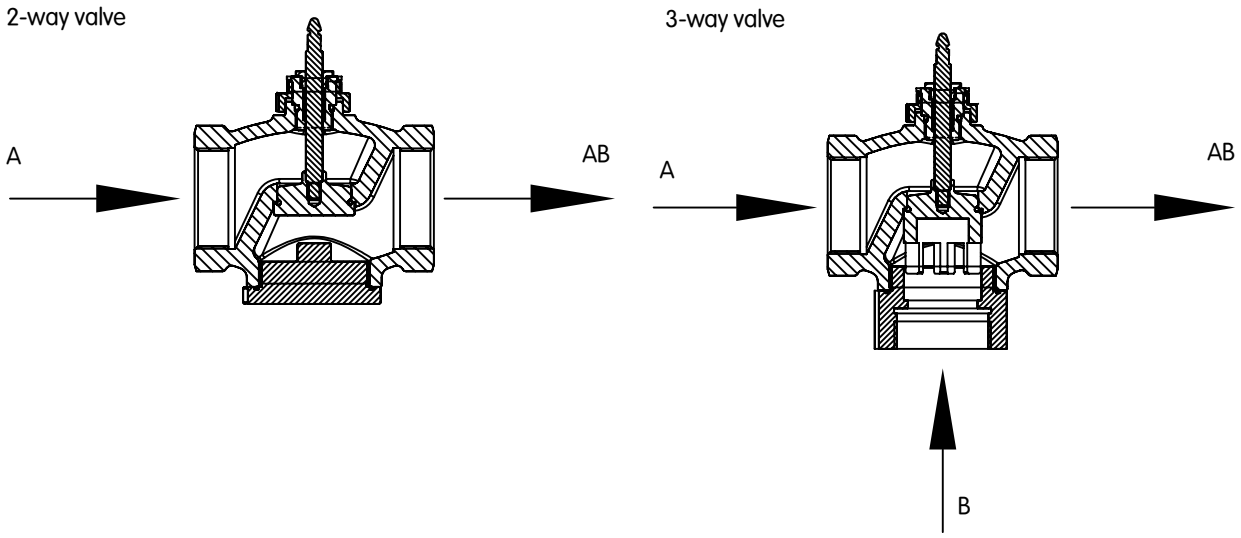
TECHNICAL FEATURES

Nominal pressure: PN16 (ISO7268/EN1333)
Connections: female threaded GAS
Valve body: cast-iron G25
Plug: brass OT58
Stem: stainless steel AISI304
Stem packing nut: brass OT58
Spring: stainless steel AISI304
Stem packing: FKM O-ring
Control stroke: 16.5 mm

Control flow characteristic: equal-percentage on way A→AB
linear on way B→AB
Leakage: direct way A→AB perfect sealing
angle way B→AB max 0,2% KVs
Rangeability: 50:1
Fluid temperature: -10...+140°C
Fluid type: water
water with max 50% glycol
saturated steam max 2,5 ata
Dimensions: see relevant table
Weight: see relevant table

INSTALLATION

PIPING CONNECTIONS
Make the piping connections according to flow directions indicated on valve body as the following drawings.
AB is always the output. Input is A for 2-way valve, A and B for 3-way valve.



VALVE MOUNTING
Before mounting the valve body be sure that the pipes are clean and free of soldering scraps. Pipes must be lined up squarely with the valve at each connection and free of vibrations. Install the valve/actuator vertically or horizontally but never upside down. Leave enough clearance to facilitate the dismounting of actuator from the valve body for maintenance purpose.
The valve must not be installed in explosive atmosphere or in ambient with temperature and humidity outside the ranges indicated on technical features part. Valve must not be subjected to water or steam jets or dripping liquid. 3-way valve must be used in mixing way fig.2 (2 inlets 1 output). If the valve is used in diverting way (fig.3, 1 inlet 2 outputs), the max differential pressure allowed is reduced by 50%.

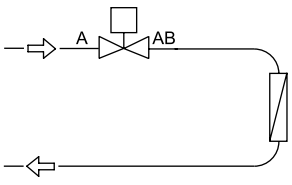


fig.1
2-way

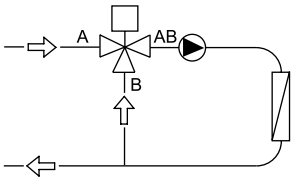


fig.2
3-way mixing used in mixing application
toward user

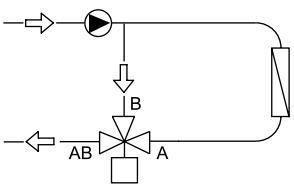
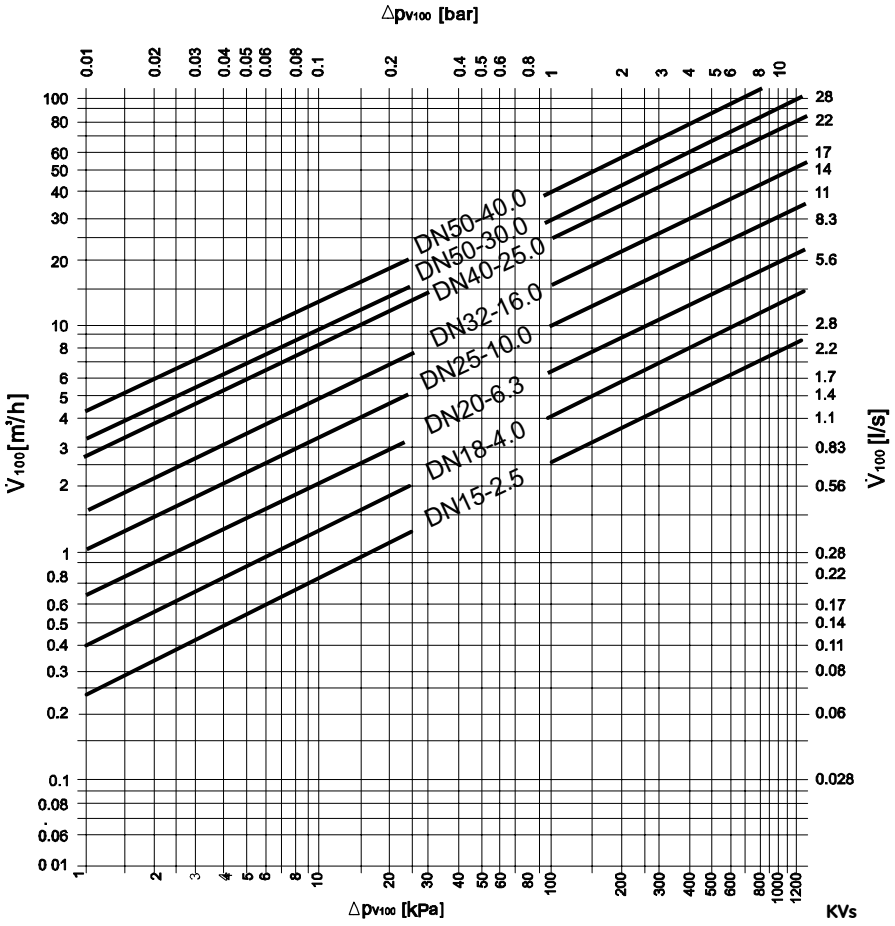


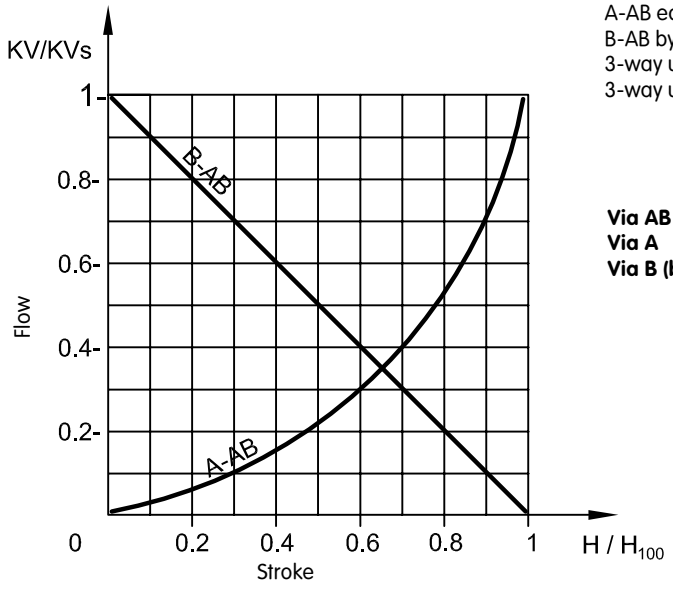
fig.3
3-way mixing used in diverting application
toward user

CONTROL DROP DIAGRAM



KVs	nominal flow rate
V 100	nominal flow rate at Δp_{v100}
Δ p_{v100}	differential pressure drop across the valve fully open

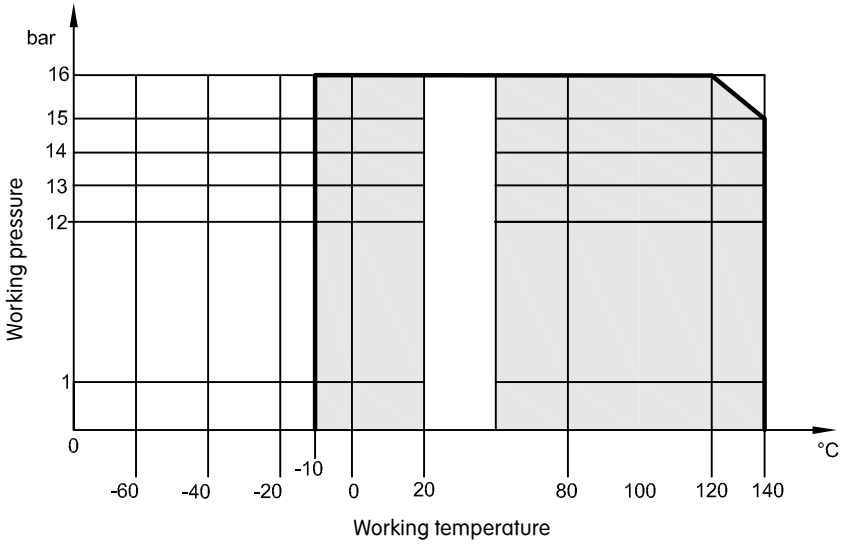
CONTROL FLOW CHARACTERISTICS



A-AB equal-percentage way
B-AB bypass linear way
3-way used as mixing inlet in A and B, outlet AB
3-way used as diverting inlet in AB, outlet from A and B

Via AB	constant flow
Via A	variable flow
Via B (bypass)	variable flow

PRESSURE / TEMPERATURE DIAGRAM



OVERALL DIMENSIONS (mm)

G	A	B	C	C1	D	H min.	Weight (g)	
			VFS3	VFS2			VFS2	VFS3
G 1/2	66	87.0	45.5	32.5	33.0	300	650	800
G 3/4	90	85.5	53.5	42.0	45.0	305	1100	1250
G 1	96	93.0	56.5	42.5	48.0	310	1450	1650
G 1 1/4	109	96.0	60.4	47.5	54.5	315	1950	2200
G 1 1/2	122	100.5	64.5	55.0	61.0	320	2750	2950
G 2	196	113.5	95.0	71.0	98.0	335	3950	4250