



FLANGED GLOBE VALVES BODIES

2F...3F

APPLICATION AND USE

2F/3F 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.

ACTUATORS

2F/2F valve bodies are motorized by DA-51, DA-71, DA-72 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		DN	KV _s m ³ /h	STROKE mm	MAX DIFF. PRESS. (*) bar		
2-WAY	3-WAY				DA-51	DA-71	DA-72
2F-65	3F-65	65	63	21	2 (2)		
2F-80	3F-80	80	100	41		2 (6)	2 (10)
2F-100	3F-100	100	145	41		2 (4)	2 (6)
2F-125	3F-125	125	220	41		2 (3)	2 (4)
2F-150	3F-150	150	320	41		2 (2)	2 (3)
2F-200	3F-200	200	550	42		2 (1)	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: flanged
Valve body: cast-iron G25
Plug: brass OT58
 type Contoured on direct way
 type V-port on angle way
Plug packing: Viton O-ring
Stem: stainless steel CrNi
Stem packing nut: brass OT58
Stem packing: NOK O-ring and nitrile rubber

Control flow characteristic: 2F-3F: equal-percentage on direct way
 3F: linear on angle way
Leakage: 2F-3F: direct way 0...0,05% of KV_s
 3F: angle way 0...1% of KV_s
Rangeability: 50:1
Fluid temperature: -10...+130°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 in the vertical or horizontal position, never at upside down. Leave sufficient clearance to facilitate the dismantling of actuator

from the valve body for maintenance purpose. The valve must not be installed in an explosive atmosphere or in places in which temperature and humidity are outside ranges indicated on the technical futures part. Valve must not be subjected to steam or water jets or dripping liquid. 3-way valve must be used as mixing valve (2 inlets 1 output). If the valve is used in diverting way (1 inlet 2 outputs), the max differential pressure indicated in the data sheet must be reduced by 50%.

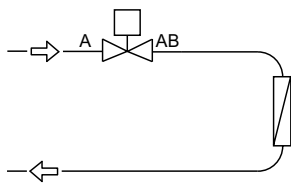


fig.1
2-way

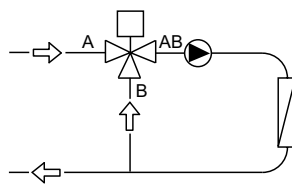


fig.2
3-way mixing used in mixing application toward user

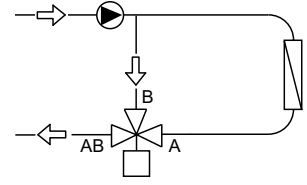
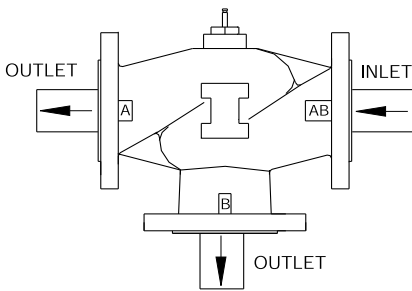
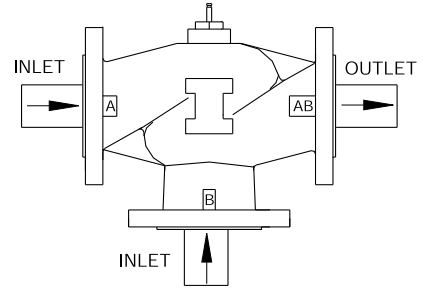


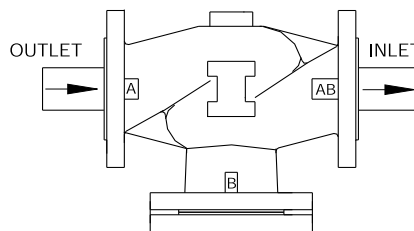
fig.3
3-way mixing used in diverting application toward user



3-way diverting valve

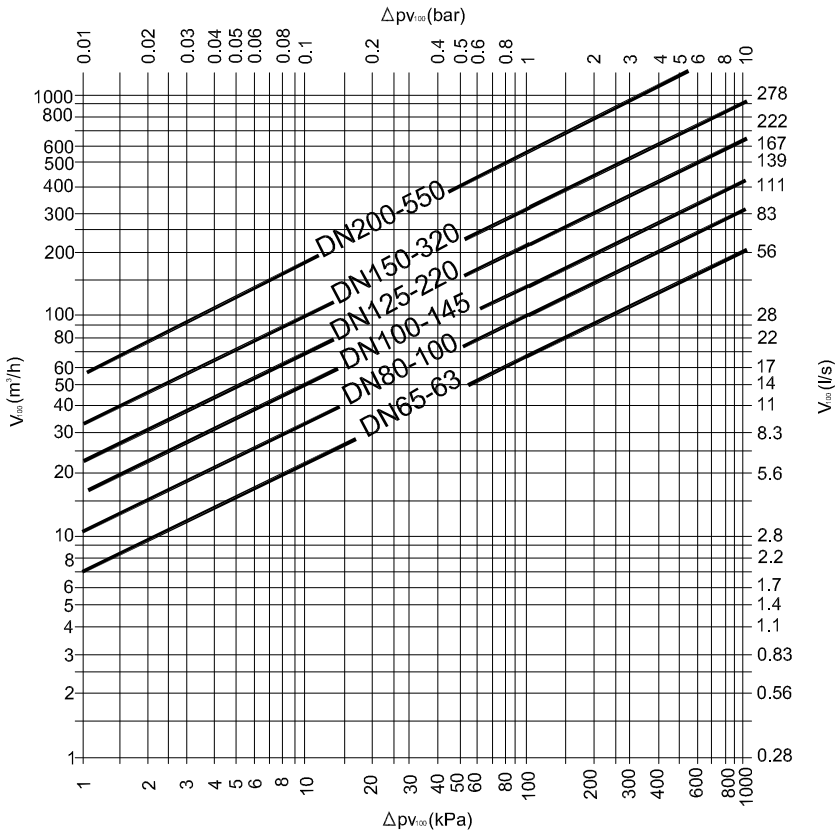


3-way mixing valve



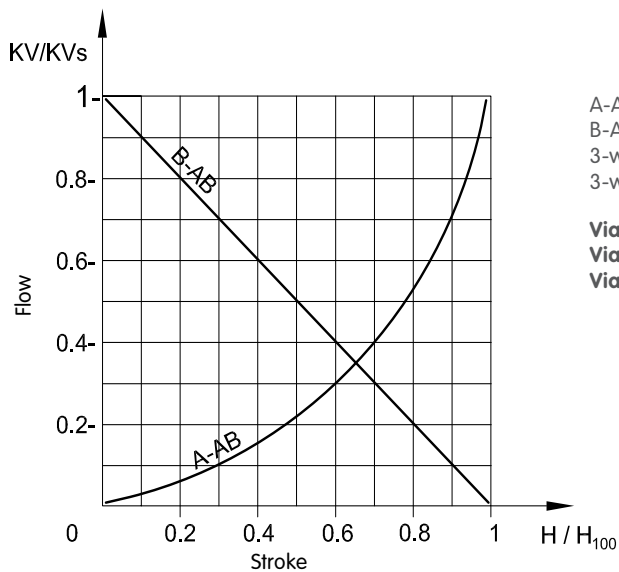
2-way

PRESSURE DROP DIAGRAM



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

CONTROL FLOW CHARACTERISTICS

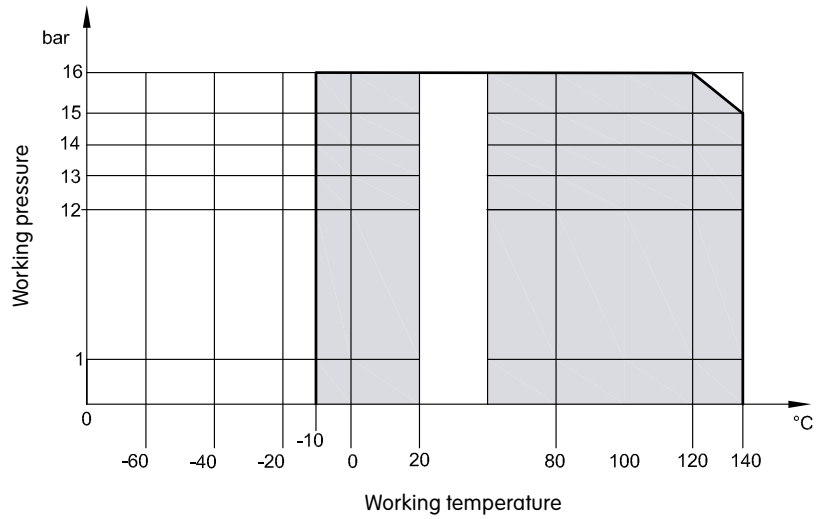


A-AB equal-percentage way
 B-AB bypass linear way
 3-way used as mixing inlet in A and B, outlet AB
 3-way used as diverting inlet in AB, outlet from A and B

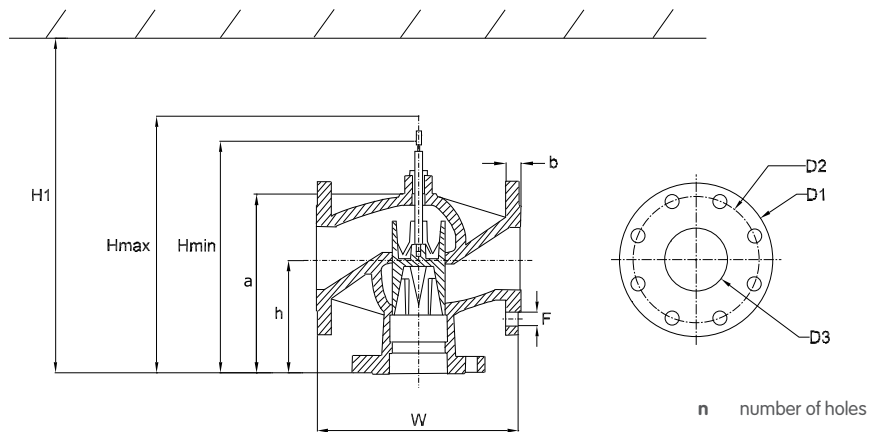
Via AB constant flow
Via A variable flow
Via B (bypass) variable flow



PRESSURE / TEMPERATURE DIAGRAM



OVERALL DIMENSIONS (mm)



DN	65 mm		80 mm		100 mm		125 mm		150 mm		200 mm	
	2	3	2	3	2	3	2	3	2	3	2	3
Hmax	315	295	379	356	422	400	515	492	574	552	578	
Hmin	295	275	338	315	380	358	474	451	533	511	540	
W	290		310		350		400		480		600	
h	159	145	166	152	191	175	266	250	318	300	337	300
D1	180		195		218		245		280		340	
D2	135		160		180		210		240		295	
D3	67		82		100		125		152		210	
a	235	215	260	240	302	280	337	315	402	380	494	470
b	20		20		22		22		22		24	
H1	660	640	805	785	850	825	880	860	950	925	1040	1015
n	4		8		8		8		8		12	
F	18		18		18		18		22		22	
Weight (kg)	23.1	21.9	31	29.2	41	36	58	52	82	73	141	123