



GLOBE VALVES, SCREWED, STROKE 16.5 mm

2S...3S

APPLICATION AND FEATURES

2-way and 3-way 2S/3S valves are used for flow control in air-conditioning, refrigeration and heating systems.

3-way valves should be used as mixing valves; when the valve is used as diverting valve, the maximum differential pressure is reduced by 50% of the value indicated on schedule.

Angle way should never be used for control purposes.

WORKING

Stem up: direct way A-AB closed
(opened via B-AB only for 3-way valves)

Stem down: direct way A-AB opened
(closed via B-AB only for 3-way valves)

ACTUATORS

The 2S/3S valves can be motorized by the DA21x /AQx, SE6... series actuators.

TYPE		DN	KV _s m ³ /h	MAX. DIFF. PRESS. bar
2 WAY	3 WAY			
2S15	3S15	1/2"	2.5	2.2 (11.0)
2S18	3S18	3/4"	4.0	2.2 (11.0)
2S20	3S20	3/4"	6.3	2.2 (11.0)
2S25	3S25	1"	10.0	2.2 (7.0)
2S32	3S32	1 1/4"	16.0	2.2 (4.4)
2S40	3S40	1 1/2"	25.0	2.2 (2.7)
2S50	3S50	2"	30.0	2.2 (2.2)
2S55	3S55	2"	40.0	2.2 (2.2)

dP_{max} The values in brackets are the max differential pressure when valve is fully closed.
The values outside brackets indicate the max pressure drop suggested (valve fully open).

TECHNICAL FEATURES

Nominal pressure: PN16 (ISO7268/EN1333)
Connections: threaded female GAS
Valve body: cast iron G25
Plug: brass OT58
Stem: stainless steel AISI304
Stem-packing: brass OT58
Spring: stainless steel AISI304
Stem gasket: teflon PTFE
Stroke: 16.5 mm

Control flow characteristics: direct way A→AB equal percentage
angle way B→AB linear

Leakage: direct way A→AB perfect sealing
angle way B→AB 0,02% KV_s

Rangeability: 50:1

Fluid temperature: -10...+140°C
(for temperature below 0°C use ESV12 heater)

Fluids: water
water with glycole max. 50%
saturated steam max 2,5 Ata

Dimensions/Weight: see schedule

ACCESSORY

ESV12 Stem heater 24Vac 18W
 RP1/2"...RP2" fittings for valve assembling

SPARE PART

DPI/2"/S...DP2"/S Stem-packing with gaskets



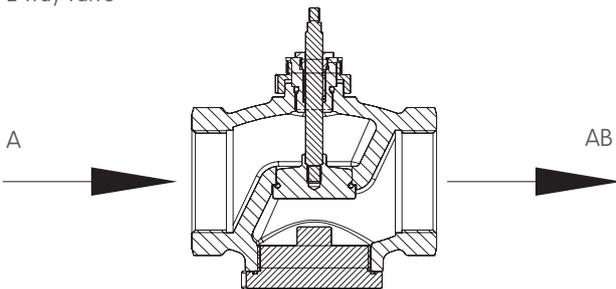
INSTALLATION

HYDRAULIC CONNECTIONS

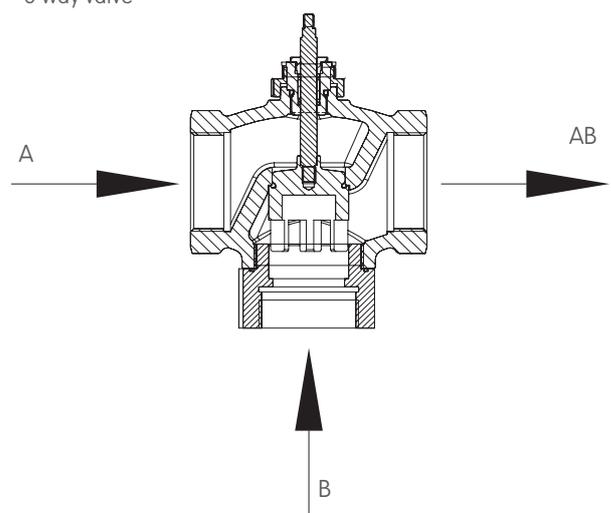
Mount according to flow direction as indicated on the valve body.

AB is always the outlet port; inlets are A (two port) or A and B (three port).

2 way valve



3 way valve



VALVE MOUNTING

Before mounting the valve be sure that the pipes are clean and free of soldering scraps. It is essential that the pipes are lined up squarely with the valve at each connection and free of vibrations. Install the valve so that the actuator will be mounted in a vertical or horizontal position but not upside down. Leave sufficient clearance to facilitate the dismantling of the actuator from the valve body for maintenance purposes. The valve must not be installed in an explo-

sive atmosphere or at an ambient temperature higher than 50 °C or lower than 0 °C. It must not be subjected to steam jets, water jets, or dripping liquid. Hydraulic diag. for application of 3-way mixing valves. Note the valve must only be used as a mixing valve, and is not suitable for diverting (with one inlet and two outlet ports). Where this function is required, the valve should be installed in the return line, as Fig. 3.

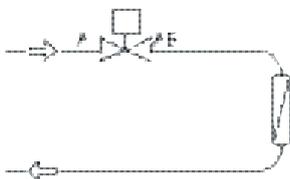


fig.1
2-way

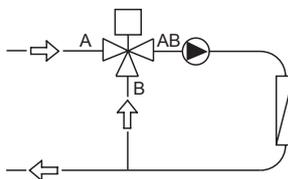


fig.2
3-way mixing used in mixing application toward user

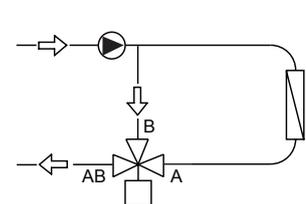
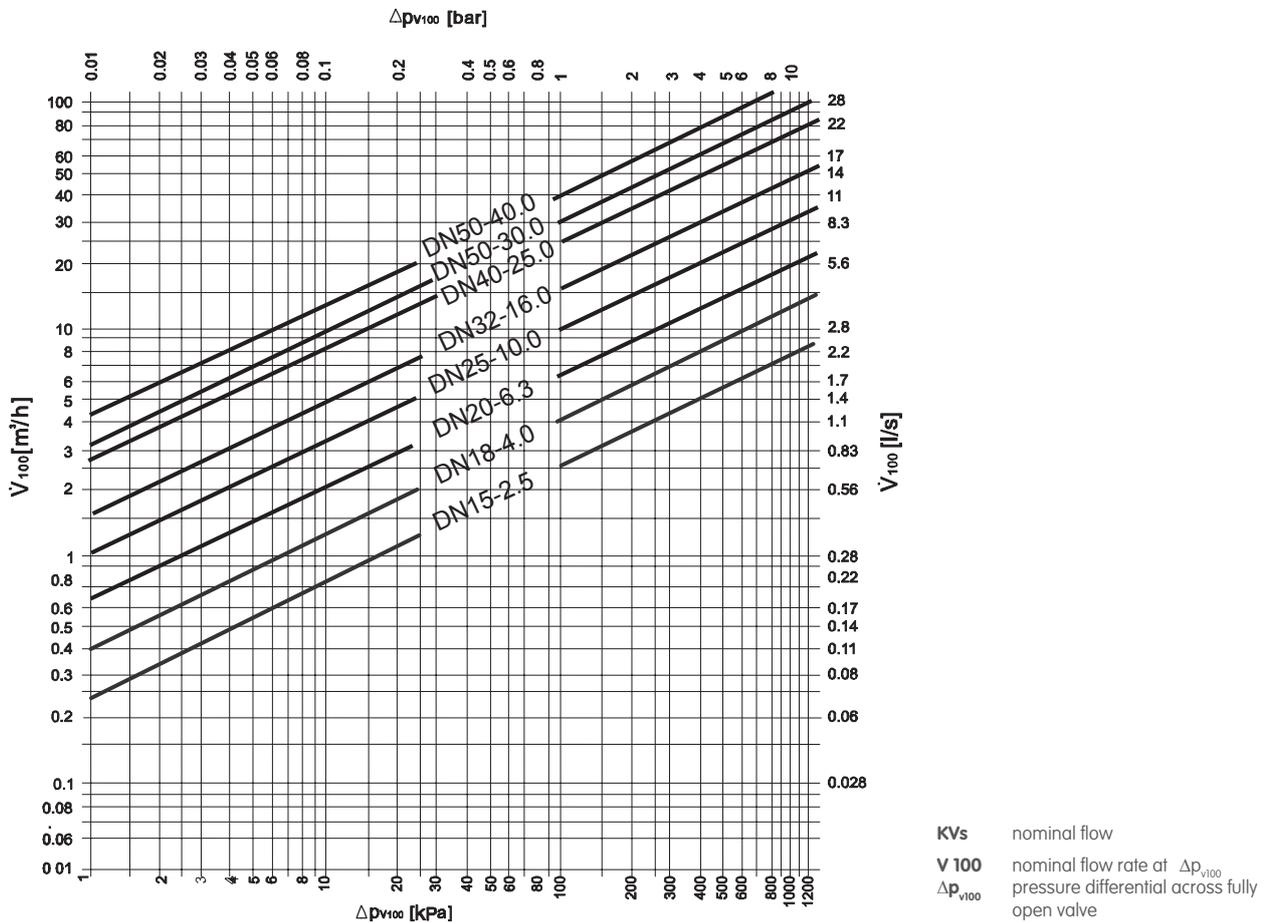
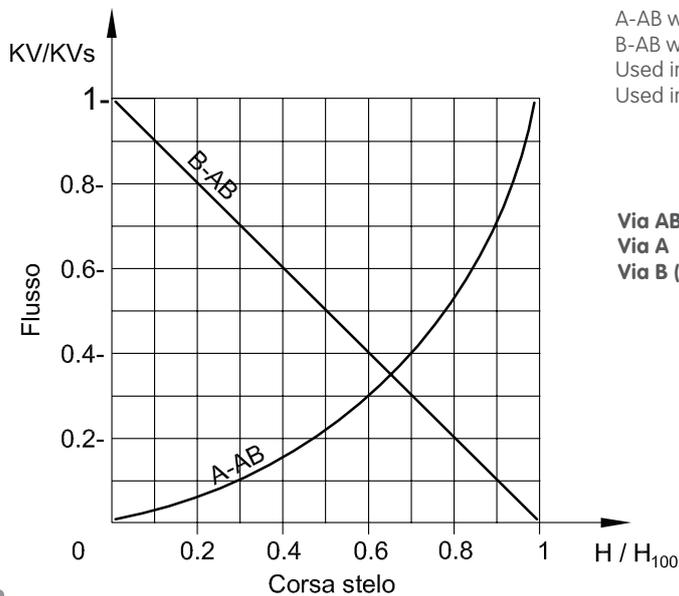


fig.3
3-way mixing used in diverting application toward user

PRESSURE DROP DIAGRAM



CONTROL FLOW CHARACTERISTICS



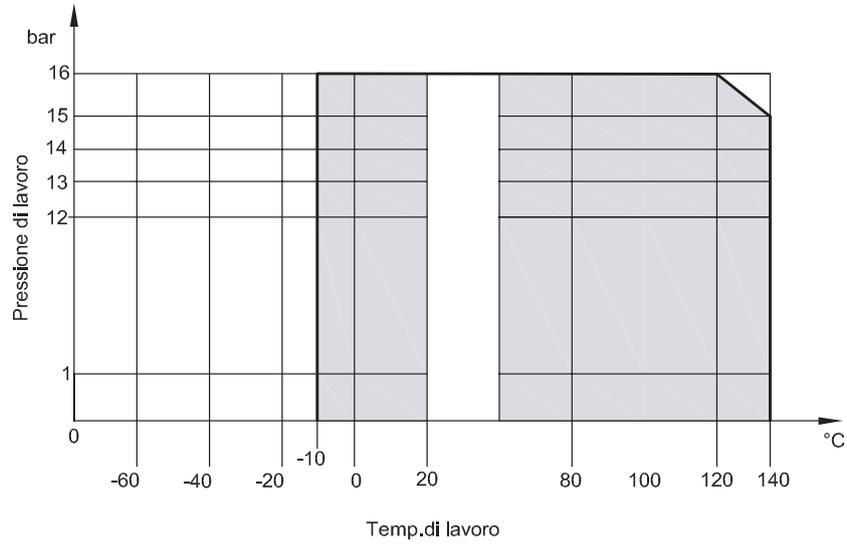
A-AB way equal percentage
 B-AB way linear
 Used in mixing appl. flow from A to B output AB
 Used in diverting appl. flow from AB to output from A to B

Via AB
Via A
Via B (bypass)

fixed-range
 variable range
 variable range



PRESSURE / TEMPERATURE DIAGRAM



DIMENSIONS (mm)

DN	A	B	C	C1	D	G	H min.	Weight (g)	
			3S	2S				2S	3S
15	66	73.5	40.5	32.5	33.0	G 1/2"	300	650	800
18	90	79.0	64.0	42.0	45.0	G 3/4"	305	1100	1250
20	90	79.0	64.0	42.0	45.0	G 3/4"	305	1100	1250
25	96	86.5	70.0	40.5	48.0	G 1"	310	1450	1650
32	109	89.5	76.5	47.5	54.5	G 1 1/4"	315	1950	2200
40	122	94.0	80.0	55.0	61.0	G 1 1/2"	320	2750	2950
50	142	101.5	88.5	62.5	71.0	G 2"	325	3950	4250

