

# ANSI 125, Two/Three-Way Valves

Specifications subject to change without notice. | 1st Issue rev. c, 11/2018, DBL429e | USA 200204 | Page 1 of 2



## VSB.T-VMB.T

MODELS		SIZE	Kvs (Cvs)		STROKE [mm]
2-way	3-way		A-AB	B-AB	
VSB3T	VMB3T	3/4"	6.3 (7.28)	5.5 (6.36)	5.5 (0.22")
VSB4T	VMB4T	1"	10 (11.56)	9 (10.4)	
VSB5T	VMB5T	1 1/4"	14 (16.18)	11 (12.72)	
VSB6T	VMB6T	1 1/2"	18 (20.8)	12 (13.87)	
VSB8T	VMB8T	2"	25 (28.9)	17 (19.65)	



### APPLICATION AND USE

VSBT two-way and VMBT three-way valves can be used for fluid control in industrial and residential air-conditioning, thermoventilation and heating plants and in machinery for product thermal process. Three-way valves must be used only as mixers, angle way must never be employed for control purposes.

### MANUFACTURING CHARACTERISTICS

G25 cast iron valve body.  
Brass plug with Contoured-type profile on direct way and V-port profile on angle way.  
CrNi steel stem. Female threaded connections.  
Double EPDM O-ring stem packing.

### CARATTERISTICHE TECNICHE

<b>Construction:</b>	ANSI 125
<b>Control characteristic:</b>	linear
<b>Rangeability (Kvs/Kvm):</b>	> 50
<b>Leakage*:</b>	
- VSB.T:	< 0.03% of Kvs or Cvs
- VMB.T:	direct way < 0,03% of Kvs or Cvs angle way < 2% of Kvs or Cvs
<b>Connections:</b>	female thread
<b>Stroke:</b>	5.5 mm (0.22")
<b>Allowed fluids:</b>	
- Water:	max temperature 95°C (203°F) min. temperature 5°C (41°F)
- glycol-added:	max 50%
<b>Weight:</b>	see dimensions

\*Leakage is measured according to the EN1349 standard.

### OPERATION

By pushing the stem inwards, the actuator opens A-AB way and, in three-way valves, it contemporary closes the angle way B-AB

### INSTALLATION

Before mounting, ensure pipes are clean, free from weld slag, perfectly aligned with the valve body and not subjected to vibrations. As far as valve mounting positions are concerned, follow the instructions given in the actuator data sheets. While mounting, respect the fluid directions indicated by the letters on the valve body (see fig. 1 and 2).

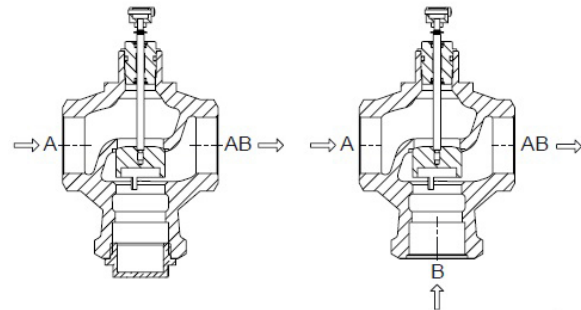


FIG. 1

FIG. 2

### ACTUATORS

VSBT and VMBT valves can be motorized by MVT actuators.

### MAX DIFFERENTIAL CLOSE-OFF PRESSURE [KPA (PSI)]

SIZE (DN)	DIRECT WAY	ANGLE WAY
3/4" (20)	900 (130.5)	700 (101.5)
1" (25)	550 (79.75)	450 (65.25)
1 1/4" (32)	350 (50.75)	300 (43.5)
1 1/2" (40)	250 (36.25)	200 (29)
2" (50)	190 (27.55)	160 (23.2)

100 kPa = 1 bar = 14.5 PSI

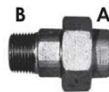
## MAX REGULATION DIFFERENTIAL PRESSURE [kPa]

The max regulation differential pressure, it means the pressure which can be used during the stroke, is conditioned by wear between seat and plug and by the performance guaranteed by the actuator for the evaluated valve. So we recommend not to overcome the differential pressure whose value corresponds to the minimum between 200kPa (maximum admitted value not to cause wear) and the one shown in the previous table (max close-off differential pressure).

Note: The max operating pressures at different temperatures for various PN classes must correspond to the following standards: UNI 1092-02 and UNI 12516-1.

## ACCESSORIES

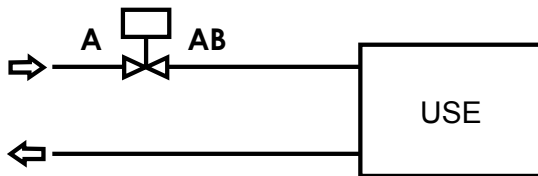
CAST IRON FITTINGS 3 PIECES			
THREAD		FITTING CODE	SEAL CODE
A	B		
G3/4" F	G3/4" M	89948-02	89949-02
G1" F	G1" M	89948-03	89949-03
G1"1/4 F	G1"1/4 M	89948-04	89949-04
G1"1/2 F	G1"1/2 M	89948-05	89949-05
G2" F	G2" M	89948-06	89949-06



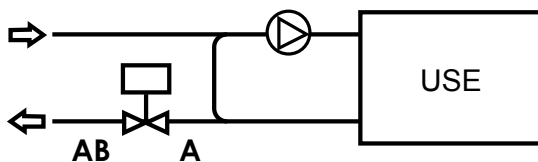
## APPLICATION SCHEMES

### VSB.T VALVES

a) Variable flow control when used

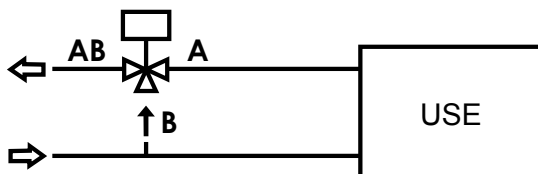


b) Constant flow control to the user in injection circuits

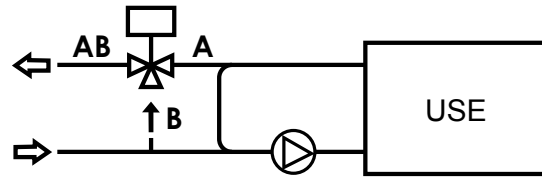


### VMB.T VALVES

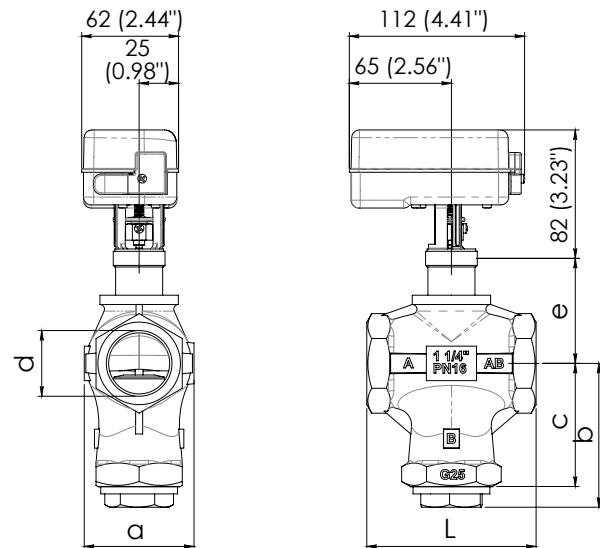
c) Variable flow mixing when used



d) Constant flow mixing when used in injection or tapping circuits



## DIMENSIONS [mm (inch)]



SIZE	Ø d	VSB.T				VMB.T				Weight [kg (lb)]
		L	a	e	b	L	a	e	c	
3/4"	G 3/4"	85 (3.35)	54 (2.12)	58 (2.28)	79 (3.11)	85 (3.35)	54 (2.13)	58 (2.28)	67.5 (2.66)	1.1 (2.42)
1"	G 1"	95 (3.74)	62 (2.44)	63 (2.48)	83 (3.27)	95 (3.74)	62 (2.44)	63 (2.48)	72.5 (2.85)	1.5 (3.3)
1 1/4"	G 1 1/4"	108 (4.25)	70 (2.76)	67 (2.64)	90 (3.54)	108 (4.25)	70 (2.76)	67 (2.64)	78.5 (3.09)	2 (4.4)
1 1/2"	G 1 1/2"	120 (4.72)	81 (3.19)	75 (2.95)	98 (3.86)	120 (4.72)	81 (3.19)	75 (2.95)	85.5 (3.37)	2.7 (5.94)
2"	G 2"	142 (5.59)	97 (3.82)	78 (3.07)	111 (4.37)	142 (5.59)	97 (3.82)	78 (3.07)	97 (3.82)	4 (8.8)