

Modelli		DN	Portata Kvs m <sup>3</sup> /h	Corsa [mm]
2 vie	3 vie			
VSB3	VMB3	3/4"	6,3	16,5
VSB4	VMB4	1"	10	
VSB5	VMB5	1"1/4	16	
VSB6	VMB6	1"1/2	22	
VSB8	VMB8	2"	30	
VSB8A	VMB8A		40	

100 kPa = 1 bar = 10 m H<sub>2</sub>O

### APPLICATION AND USE

Two-way VSB and three-way VMB valves can be used either for control or fluid detection in air-conditioning, thermoventilation and heating plants, both environmental and industrial, and in machines for product thermal process.

Three-way valves should be used only as mixing valves; angle way should never be used for control purposes.

### MANUFACTURING CHARACTERISTICS

The valve body is made of G25 cast iron (only DN1/2" valves have brass body and fitting).

The plug is in brass with Contoured-type profile on direct way and V-port on angle way.

The stem is in CrNi steel with threaded M8 end and female threaded connections. The stem packing is constituted by a EPDM O-ring with graphited teflon scraper rings.

**NOTE: The valves are also available in the stainless steel plug version (profile and Kvs are the same of the brass plug). For further sales information, please contact our Sales Support.**

### TECHNICAL CHARACTERISTICS

Body rating 1600 kPa max (16 bar)

Control characteristics  
 VSB-VMB direct way equal-percentage  
 VMB angle way linear

Leakage\*  
 VSB-VMB direct way 0...0,03% of Kvs  
 VMB angle way 0...2% of Kvs

Connections female threaded  
 Stroke 16,5 mm (max 18,5)

Allowed fluids  
 - water  
 max. temperature 150 °C  
 min. temperature -10 °C  
 (in case of ice on stem and gasket, use the stem-heater, see actuators data sheets; is not applicable to V.B 1/2" valves)  
 glycol added max 50%

- saturated steam  
 max. temperature 150 °C  
 max. pressure 2,5 bar (absolute value)

Weight See overall dimensions

\* Leakage is measured according to the EN1349 standard.

NOTE: If V.B valves are assembled with MVB+spacer (MVBHT) the max. operating temperature is 140 °C, while without spacer is 120 °C. For other actuators the max. operating temperature is 150 °C.



### INSTALLATION

Before valves are mounted, make sure that pipes are clean, free from welding slags, that are perfectly lined up with valve body and not subjected to vibrations.

The valve can be mounted in any position except upside-down (for MVH actuators see Fig. 3).

While assembling, respect the flow directions indicated by the letters located on the valve body (see Fig. 1 and 2) and the application schemes.

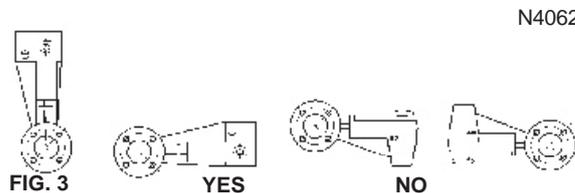
### OPERATION

When stem is up, the direct way is closed, with stem down direct way is open.

### ACTUATORS

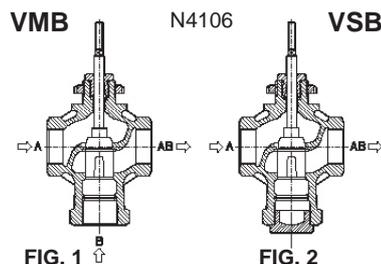
VSB and VMB are actuated by CONTROLLI MVB, MVF, MVH, MVH56FA/C, MVE electrical actuators.

### MOUNTING POSITIONS



### ACCESSORIES

- AG52 Mounting kit for MVF actuator
- AG62 Mounting kit for MVH actuator
- AG63 Mounting kit for MVF..S actuator
- GVB3 Thermal insulation for DN 3/4" valves (V.B3)
- GVB4 Thermal insulation for DN 1" valves (V.B4)
- GVB5 Thermal insulation for DN 1 1/4" valves (V.B5)
- GVB6 Thermal insulation for DN 1 1/2" valves (V.B6)
- GVB8 Thermal insulation for DN 2" valves (V.B8)
- GVB8A Thermal insulation for DN 2" valves (V.B8A)



		MVH		MVHA/C*		MVB		MVF54		MVF58		MVF515		MVF59A/C		MVEX06		MVEX10	
U-Bolt Connection	DN	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB	A-AB	B-AB
VSB VMB	3/4"	1600	1600	1600	1560	1080	260	1210	760	1600	1600	1600	1600	1600	1600	1600	1310	1600	1600
	1"	1600	1600	1380	1030	680	170	760	500	1560	1190	1600	1600	1600	1360	1190	870	1600	1560
	1 1/4"	1600	1370	840	650	410	110	460	320	950	750	1600	1500	1070	860	720	540	1210	980
	1 1/2"	1170	990	590	470	290	80	320	230	670	540	1270	1090	750	620	500	390	860	710
	2"	870	750	440	350	210	60	240	170	490	410	950	820	560	470	370	290	640	540

DP max = max differential pressure value ensured by the actuator for regular operation

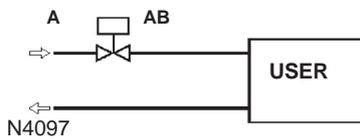
**NOTE** In order to avoid wear between plug and seat, we recommend not to overcome the 2 bar differential pressure

Note: in case of lack of voltage, with MVH56FA direct way is closed, with MVH56FC angle way is closed.

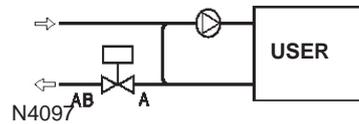
APPLICATION SCHEMES

VSB VALVES

a) Variable flow control when used

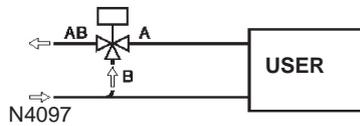


b) Constant flow when used in injection circuits

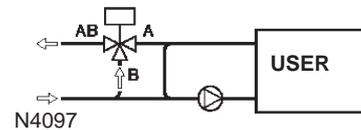


VMB VALVES

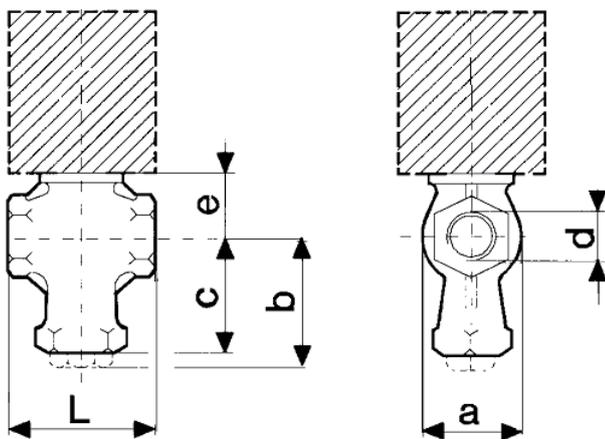
c) Variable flow mixing when used



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



OVERALL DIMENSIONS (mm.)



N4105

Dimensioni valvola [mm]							
DN	d	VSB-VMB			VSB	VMB	Peso [Kg]
		L	a	e			
3/4"	G 3/4	85	54	34,5	79	67,5	1,1
1"	G 1	95	62	39,5	83	72,5	1,5
1"1/4"	G 1 1/4	108	70	43,5	90	78,5	2
1"1/2"	G 1 1/2	120	81	51	98	85,5	2,7
2" (V.B8A)	G 2	194	97	54,5	111	97	5
2" (V.B8)	G 2	142	97	54,5	111	97	4

The performances stated in this sheet can be modified without any prior notice due to design improvements