

V5011E and V5013E

EXTERNAL THREADED END-CONNECTION LINEAR VALVE PN16

PRODUCT DATA



FEATURES

- Brass body with external threaded end connections
- Low seat leakage rate
- Self-adjusting packing
- Accurate positioning to ensure state-of-the-art temperature control
- Direct-coupled electric and pneumatic actuators for easy mounting

SPECIFICATIONS

Action:	
V5011E	Stem down to close port A-AB
V5013E	Stem up to close port A-AB
Nominal pressure rating:	PN16
Flow characteristic:	
V5011E	equal percentage, 2-way
V5013E	equal percentage: port A-AB linear: port B-AB
Rangeability:	50:1
Leakage rate:	≤0.05% of k_{vs}
Stroke:	20 mm
Valve body:	
Pipe connections:	External threading as per ISO228
Material:	Brass
Dimensions:	See Fig. 2 on page 4
Trim:	
Seat:	
V5011E	stainless steel
V5013E	DN15: stainless steel DN20...50: body integrated
Plug:	Brass
Stem:	Stainless steel
Packing:	Spring-loaded carbon fiber reinforced PTFE V-rings
Medium temperature and pressure:	
Water and steam	2 to 120 °C max. 1600 kPa 120 to 170 °C max. 1490 kPa
Max. temperature differential in alternating hot/cold water use:	60 K

APPLICATION

These two-port and three-port mixing valves are used for modulating control of hot or chilled water in heating, ventilation, and air conditioning systems and can be operated by electric linear actuators as ML6420/6425, ML7420/7425, ML6421/7421 or by pneumatic actuators MP953.

SIZES AND FLOW CAPACITIES

Table 1. Size and flow capacity (in m³/h)

order number	valve size	kvs m³/h
V5011E1165	DN15	0.6
V5011E1171	DN15	1.0
V5011E1189	DN15	1.6
V5011E1197	DN15	2.5
V5011E1205	DN15	4.0
V5011E1213	DN20	6.3
V5011E1221	DN25	10
V5011E1229	DN32	16
V5011E1237	DN40	25
V5011E1245	DN50	40
V5013E1063	DN15	2.5
V5013E1071	DN15	4
V5013E1089	DN20	6.3
V5013E1097	DN25	10
V5013E1105	DN32	16
V5013E1113	DN40	25
V5013E1121	DN50	40

INSTALLATION

Water should meet VDI2035 requirements.

Do not install valve with stem below the horizontal.

Fluid flow must correspond with the arrow direction on the valve body.

The installation of a strainer is strongly recommended.

The valve should be installed as stress-free as possible.

SPARE PARTS

Repair Packing Kit:

valve size	date code	order no.
DN15...50	≥ 0301	R43176754002

CLOSE-OFF PRESSURE RATINGS

Electric Actuators

Table 2. Close-off pressure ratings (in kPa) of electric actuators

actuator		valve size					
type	force	DN15	DN20	DN25	DN32	DN40	DN50
ML6420 / ML6425 ML7420 / ML7425	600 N	1600	1600	1000	700	460	260
ML6421 / ML7421	1800 N	-	-	1600	1600	1500	850

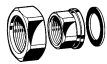
Pneumatic Actuators MP953

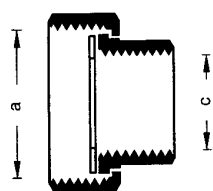
Table 3. Close-off pressure ratings (in kPa) of pneumatic actuators MP953

actuator				valve size					
type	spring range	air pressure	closed seat	DN15	DN20	DN25	DN32	DN40	DN50
MP953C5001	14...48 kPa	0 kPa 115 kPa	upper lower	150 1600	-- --	-- --	-- --	-- --	-- --
MP953C5027 MP953A5005	27...76 kPa			800 1150	310 530	180 350	90 200	30 100	-- --
MP953C5019	55...83 kPa			1600 860	950 380	620 240	370 130	220 60	-- --
MP953C5068	14...48 kPa			1550 1600	650 1600	420 1600	240 1600	130 1130	50 630
MP953C5084 MP953A5039	27...76 kPa			1600 1600	1550 1600	1030 1500	630 950	400 600	200 320
MP953C5076	55...83 kPa			1600 1600	1600 1600	1600 1190	1470 750	970 460	520 250
MP953D5025	27...76 kPa		lower upper	1600 1600	840 1480	570 990	340 600	200 370	90 190
MP953D5009 MP953B5003	55...83 kPa			1600 1600	1050 1490	720 1490	440 920	260 600	130 320

ACCESSORIES

Valves V5011E require the use of two internal thread connection sets. V5013E require the use of three connection sets.

connection	pipe size	DN	order number	connection set		description
internal thread	R 1/2"	15	AC-15TF			consisting of 1 union nut, 1 tailpiece, and 1 gasket
	R 3/4"	20	AC-20TF			
	R 1"	25	AC-25TF			
	R 1-1/4"	32	AC-32TF			
	R 1-1/2"	40	AC-40TF			
	R 2"	50	AC-50TF			

dimensions of connection sets			order number
	a	c	
	G 1-1/8"	G 1/2"	AC-15TF
	G 1-1/4"	G 3/4"	AC-20TF
	G 1-1/2"	G 1"	AC-25TF
	G 2"	G 1-1/4"	AC-32TF
	G 2-1/4"	G 1-1/2"	AC-40TF
	G 2-3/4"	G 2"	AC-50TF

DIMENSIONS

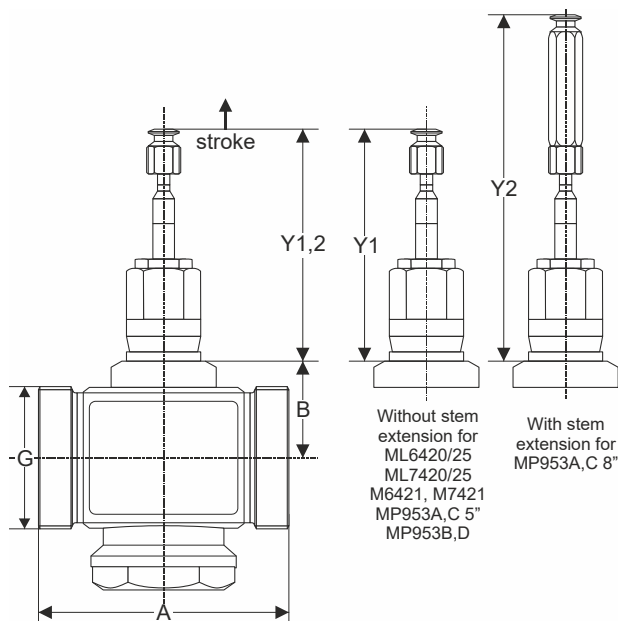


Fig. 1. Dimensions, V5011E (2-port)

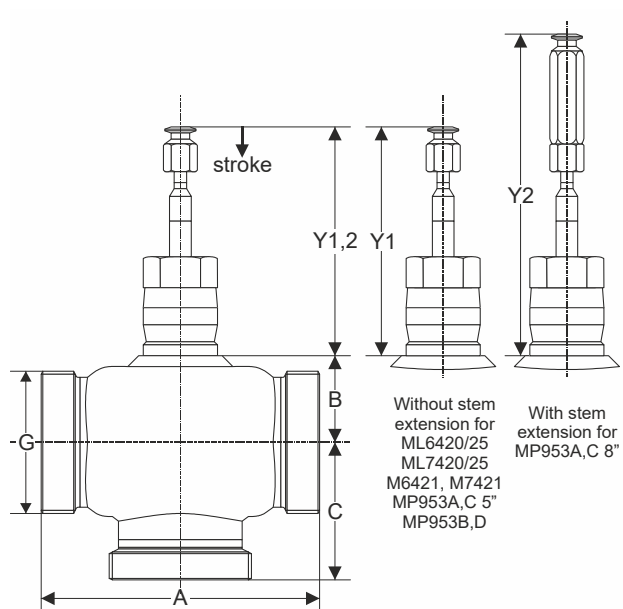


Fig. 2. Dimensions, V5013E (3-port, mixing)

Table 4. Dimensions, V5011E (in mm)

valve size	G	A	B	Y1	Y2
				stem down	
DN15	G1-1/8"	80	40	89	133
DN20	G1-1/4"	90	40		
DN25	G1-1/2"	110	40		
DN32	G2"	120	40		
DN40	G2-1/4"	130	40		
DN50	G2-3/4"	150	40		

Table 5. Dimensions, V5013E (in mm)

valve size	G	A	B	C	Y1	Y2
					stem up	
DN15	G1-1/8"	80	40	55	107	151
DN20	G1-1/4"	90	40	55		
DN25	G1-1/2"	110	40	55		
DN32	G2"	120	40	55		
DN40	G2-1/4"	130	40	60		
DN50	G2-3/4"	150	40	65		

For actuator dimensions, please refer to:

ML6420A3072 EN0B-0411GE51
 ML6420A / ML6425A,B.....EN0B-0351GE51
 ML7420A / ML7425A,B.....EN0B-0261GE51
 ML6421A,B.....EN0B-0414GE51
 ML7421A,B.....EN0B-0416GE51
 MP953A,B,C,D EN0B-0552GE51

Honeywell

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