

V5050A,B

FLANGED LINEAR VALVE PN16 AND PN25/40

PRODUCT DATA



GENERAL

These three-port mixing valves are used for modulating control of hot/chilled water or steam in heating, ventilation, and air conditioning systems and can be operated by electric linear actuators ML6420/ML6425, ML7420/ML7425, and ML6421/ML7421 or by pneumatic actuator MP953.

FEATURES

- Cast iron body with flanged end connections
- Low seat leakage rate
- Metal-to-metal seating for long life span
- Self-adjusting packing
- Accurate positioning to ensure state-of-the-art temperature control
- Easy mounting of direct-coupled electric and pneumatic actuators
- Constant total flow throughout entire plug travel

SPECIFICATIONS

Action	Stem up to close port A-AB
Nominal pressure rating	PN16, PN25/40
Flow characteristic	linear for ports A-AB and B-AB
Rangeability	50:1
Leakage rate	≤0.1 % of kvs port A-AB ≤0.1 % of kvs port B-AB
Stroke	20 mm DN15...80 38 mm DN100...150
Valve body	
End connections	Flanged per ISO 7005-2
Material	Cast iron (GG25) PN16 Cast steel (GS-C25) PN25/40
Dimensions	See Fig. 1.
Trim	
Seat	Stainless steel, replaceable
Plug	Stainless steel, skirt-guided
Stem	Stainless steel
Packing	Spring-loaded PTFE V-rings
Medium temperature and max. pressure	
PN16	2 ... 120 °C; max. 1600 kPa 120 ... 150 °C; max. 1440 kPa 150 ... 200 °C; max. 1280 kPa 200 ... 220 °C; max. 1200 kPa
PN25/40	2 ... 120 °C; max. 4000 kPa 120 ... 150 °C; max. 3920 kPa 150 ... 200 °C; max. 3800 kPa 200 ... 220 °C; max. 3720 kPa
Maximum temperature differential in alternating hot/cold water use	60 K

SIZES AND FLOW CAPACITIES

order number	valve size	kvs	
V5050A1124	PN25/40	DN15 2.5	
V5050A1132		DN15 4.0	
V5050A1140		DN20 6.3	
V5050A1157		DN25 10.0	
V5050A1165		DN32 16.0	
V5050A1173		DN40 25.0	
V5050A1181		DN50 40.0	
V5050A1199		DN65 63.0	
V5050A1207		DN80 100.0	
V5050A1215		DN100 160.0	
V5050B1155*		DN100 160.0	
V5050A1090		PN16	DN100 160.0
V5050A1108			DN125 250.0
V5050A1116			DN150 360.0
V5050B1064*	DN100 160.0		
V5050B1072*	DN125 250.0		
V5050B1080*	DN150 360.0		

* Reverse acting valve, only available on special request.

INSTALLATION

- Water should meet VDI 2035 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.

REPAIR PACKING KIT

Part No.: R43176755004 (DN15...80)
R43176755005 (DN100...150)

ACTUATORS

Electric Actuators

	600 N	600 N spring return	1800 N	
valve size	DN15-80		DN 15-80	DN 100-150
model	ML6420A ML7420A	ML6425A,B ML7425A,B	ML6421A ML7421A	ML6421B ML7421B

Pneumatic Actuators

valve size	actuator		action		positioner
	model	size	direct	reverse	
DN 15-80	MP953A	5", 8"	x		yes
	MP953B	7"		x	
	MP953C	5", 8"	x		no
	MP953D	7"		x	
DN 100-150	MP953A	13"	x		yes
	MP953C	13"	x		no

CLOSE OFF PRESSURE RATINGS in kPa**Electric Actuators**

actuator		valve size										
model	force	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
ML6420A, ML6425A,B ML7420A, ML7425A,B	600 N	1000	1000	1000	600	350	200	120	50	-	-	-
ML6421A, ML7421A	1800 N	2500	2500	2500	2000	1300	750	500	230	-	-	-
ML6421B, ML7421B		-	-	-	-	-	-	-	-	230	90	90

Pneumatic Actuators

actuator			closed valve seat	valve size											
model	actuator spring range	air pressure in actuator		DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	
MP953 A,C; (5")	27-76 kPa (4-11 PSI)	0 kPa 115 kPa	upper lower	160 410	160 410	160 410	70 230	-	-	-	-	-	-	-	
MP953 C; (5")	55-83 kPa (8-12 PSI)			550 220	550 220	550 220	310 110	180 50	-	-	-	-	-	-	-
MP953C; (8")	14-48 kPa (2-7 PSI)			370 1600	370 1600	370 1600	200 1600	110 100	40 570	-	-	-	-	-	-
MP953A,C; (8")	27-76 kPa (4-11 PSI)			980 1500	980 1500	980 1500	570 890	340 540	180 290	100 180	40 80	-	-	-	-
MP953C; (8")	55-83 kPa (8-12 PSI)			1600 1100	1600 1100	1600 1100	1300 700	820 420	450 220	280 130	140 60	-	-	-	-
MP953C; (13")	14-48 kPa (2-7 PSI)			-	-	-	-	-	-	-	-	-	90 620	30 250	30 250
MP953A,C; (13")	27-76 kPa (4-11 PSI)			-	-	-	-	-	-	-	-	-	230 320	90 120	90 120
MP953D; (7")	27-76 kPa (4-11 PSI)			880 530	880 530	880 530	510 300	300 170	160 80	90 40	-	-	-	-	-
MP953B,D; (7")	55-90 kPa (8-13 PSI)			680 1300	680 1300	680 1300	390 800	230 440	110 260	60 160	20 70	-	-	-	-

DIMENSIONS

Valve

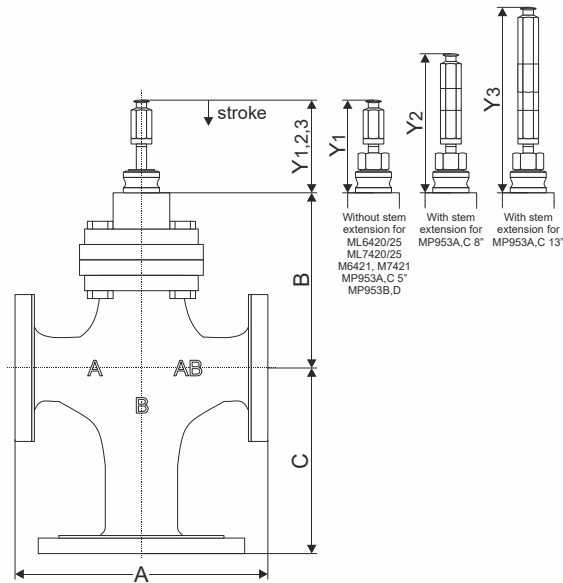


Fig. 1. V5050A,B (dimensions in mm, stem up)

valve size	A	B	C	Y ₁ *	Y ₂ *	Y ₃ *
DN15	130	126	120	107	151	-
DN20	150					
DN25	160					
DN32	180	155	135			
DN40	200		140			
DN50	230		150			
DN65	290	181	165			
DN80	310		220			
DN100	350		245			
DN125	400	219	270	170.5	-	227
DN150	480					

* = Adjustment dimension. Port A-AB closed.

Electric Actuators

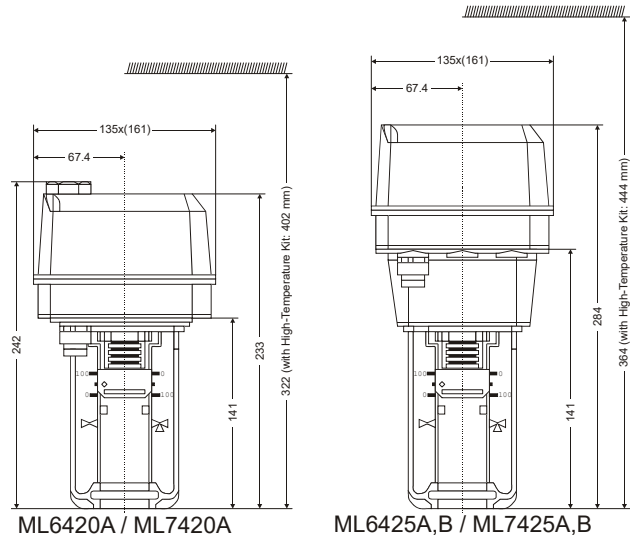


Fig. 2. ML6420A / ML7420A, ML6425A,B / ML7425A,B

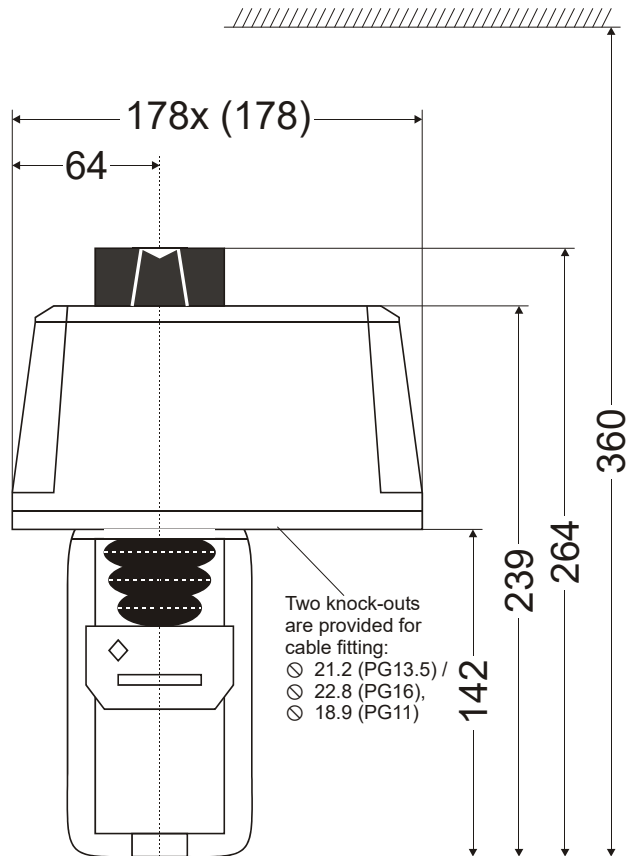


Fig. 3. ML6421A/ML7421A (dimensions in mm)

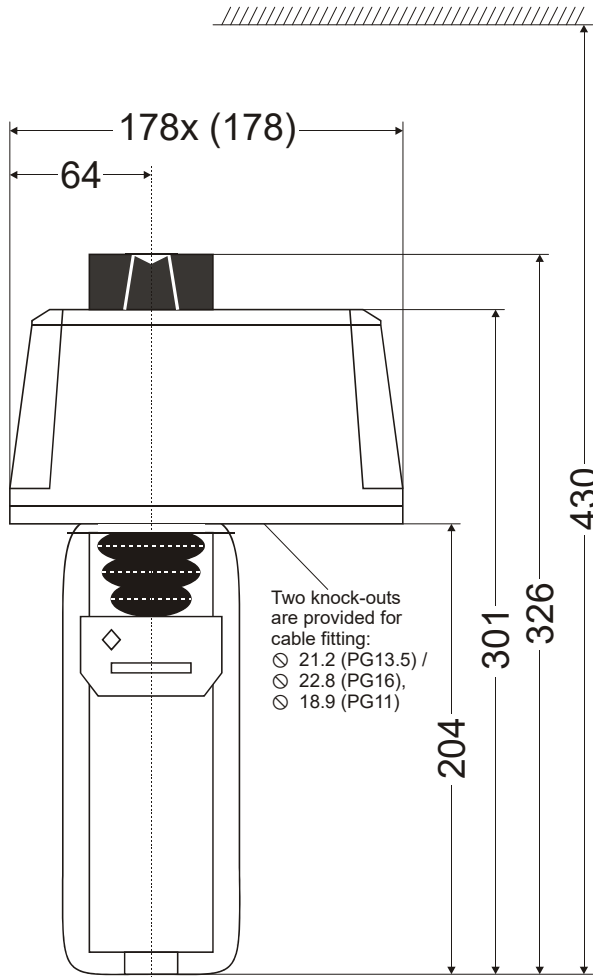


Fig. 4. ML6421B/ML7421B (dimensions in mm)

Pneumatic Actuators

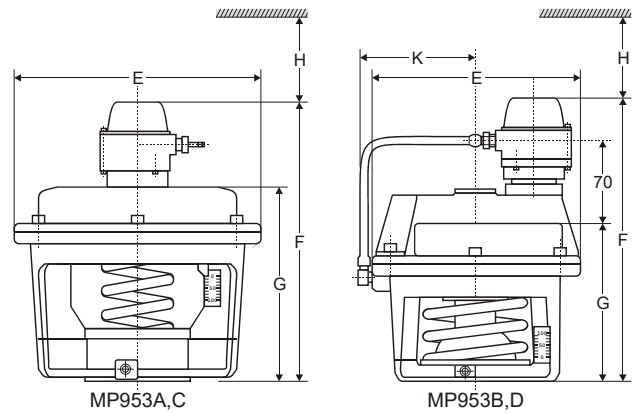


Fig. 5. MP953A,C/MP953B,D (dimensions in mm)

model	ØE	F	G	H	K
MP953A, 5"	130	192	-	120	-
MP953C, 5"		-	120		-
MP953A, 8"	210	237	-	140	-
MP953C, 8"		-	165		-
MP953A, 13"	343	327	-	200	-
MP953A, 13"		-	255		-
MP953B	180	242	-	120	107
MP953D		-	137		-



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