

V5049A

FLANGED LINEAR VALVE PN25/40

PRODUCT DATA



GENERAL

These single seated valves are used for modulating control of hot or chilled water or steam in heating, ventilating, and air conditioning systems and can be operated by electric linear actuators as ML6420/25 or ML7420/25 and ML6421/ML7421, or by pneumatic actuators MP953.

FEATURES

- Cast iron or cast steel 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
- Direct-coupled electric and pneumatic actuators for easy mounting
- Approved according to DIN EN 14597

SPECIFICATIONS

Action	Stem down to close
Nominal pressure rating	PN25/40
Flow characteristic	Equal percentage
Rangeability	50:1
Leakage rate	≤0.05% of k_{VS} up to DN50 ≤0.1% of k_{VS} for DN65 to DN100
Stroke	20 mm up to DN65 38 mm for DN80 to DN100
Valve body	
End connections	Flanged per ISO 7005-2
Material	Cast steel (GS-C25)
Dimensions	See Fig. 1 on page 3
Trim	
Seat	Stainless steel, replaceable
Plug	Stainless steel, skirt-guided
Stem	Stainless steel
Packing	Spring-loaded PTFE V-rings
Medium temperature and pressure	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	k _{vs}
V5049A2027	DN15	0.25
V5049A2035	DN15	0.40
V5049A2043	DN15	0.63
V5049A1425	DN15	1.00
V5049A1433	DN15	1.60
V5049A1441	DN15	2.50
V5049A1458	DN15	4.00
V5049A1508	DN20	6.30
V5049A1565	DN25	10.00
V5049A1573	DN32	16.00
V5049A1581	DN40	25.00
V5049A1599	DN50	40.00
V5049A1607	DN65	63.00
V5049A1615	DN80	100.00
V5049A1623	DN100	160.00

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.

CLOSE-OFF PRESSURE RATINGS (in kPa)

Electric Actuators

actuator		valve size							
model	force	DN15 k _{vs} 0.25 -1.0	DN15 k _{vs} 2.5 -4.0	DN20/25	DN32	DN40	DN50	DN65	DN80/100
ML6420A, ML6425A,B ML7420A, ML7425A,B	600 N	1600	1000	1000	600	350	200	120	-
ML6421A,B, ML7421A,B	1800 N	-	2500	2500	2000	1300	750	500	230

REPAIR PACKING KIT

Part no. R43176755004 (DN 15 to 65)
R43176755005 (DN 80 to 100)

ACTUATORS

Electric Actuators

force	600 N	600 N spring return	1800 N	
model	ML6420A ML7420A	ML6425A,B ML7425A,B	ML6421A ML7421A	ML6421B ML7421B
stroke	20 mm			38 mm
size	DN15-80			DN100-150

Pneumatic Actuators

valve size	pneumatic actuator		action		positioner
	model	size	direct	reverse	
DN 15-65	MP953A MP953B	5", 8" 7"	x	x	yes
	MP953C MP953D	5", 8" 7"	x	x	no
DN 80-100	MP953A MP953C	13"	x	-	yes no

Pneumatic Actuators

actuator MP953	actuator spring range	air pressure in actuator	valve size									
			DN15 kvs 0.25 -1.60	DN15 kvs 2.5 -4.0	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
C 5"	14...48 kPa (2...7 PSI)	115 kPa	4000	730	730	730	420	250	120	70	-	-
A,C 5"	27...76 kPa (4...11 PSI)		3200	410	410	410	230	120	50	20	-	-
C 5"	55...83 kPa (8...12 PSI)		2000	220	220	220	110	50	-	-	-	-
D 7"	27...76 kPa (4...11 PSI)	0 kPa	4000	570	570	570	330	190	90	40	-	-
B,D 7"	55...90 kPa (8...13 PSI)		4000	1350	1350	1350	800	490	260	160	-	-
C 8"	14...48 kPa (2...7 PSI)	115 kPa	4000	2700	2700	2700	1600	1000	570	360	-	-
A,C 8"	27...76 kPa (4...11 PSI)		4000	1500	1500	1500	890	540	300	180	-	-
C 8"	55...83 kPa (8...12 PSI)		4000	1200	1200	1200	700	420	220	130	-	-
C 13"	14...48 kPa (2...7 PSI)		-	-	-	-	-	-	-	-	620	620
A,C 13"	27...76 kPa (4...11 PSI)		-	-	-	-	-	-	-	-	320	320

DIMENSIONS

Valve

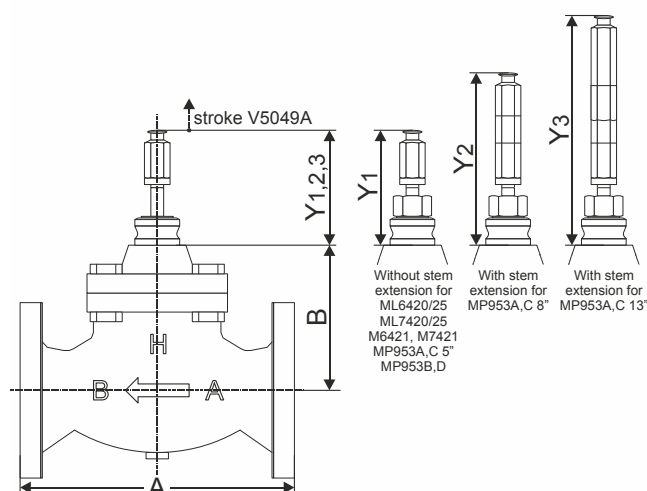


Fig. 1. V5049A,B (dimensions in mm)

valve size	A	B	adjustment dimension (valve in closed position)		
			Y1	Y2	Y3
15	130	126	89	133	-
20	150				
25	160				
32	180				
40	200	155	133	-	-
50	230				
65	290				
80	310	181	133	-	190
100	350				

Electric Actuators

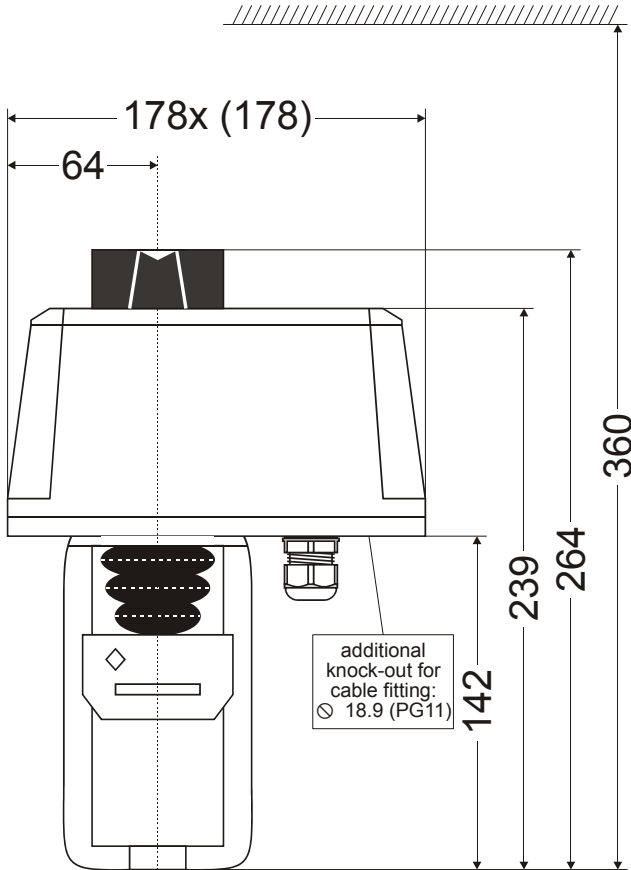


Fig. 2. ML6421A, ML7421A (dimensions in mm)

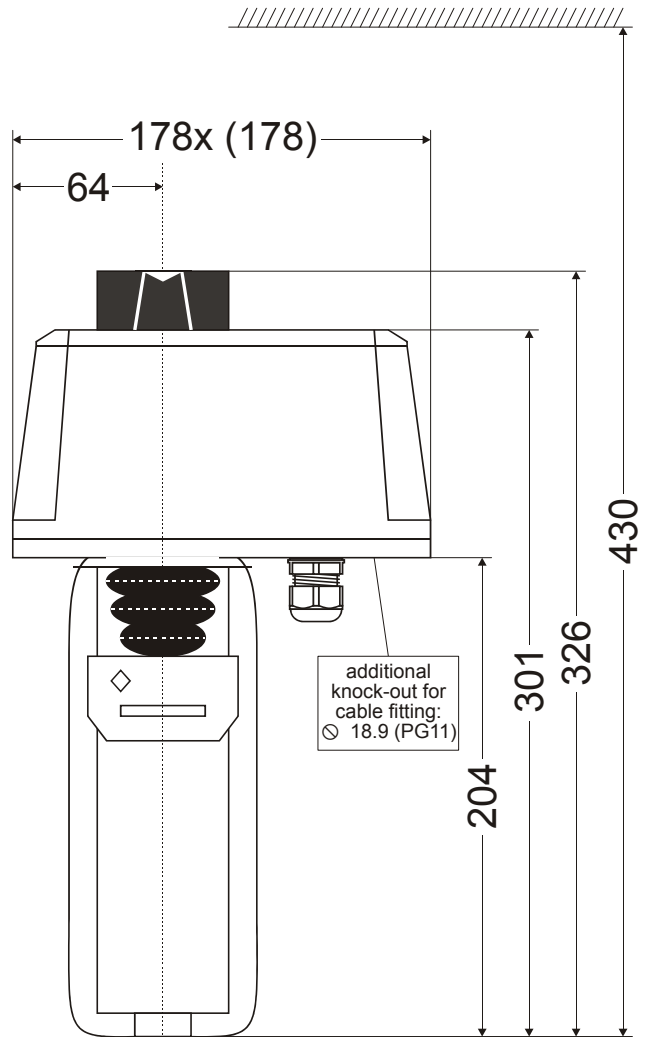


Fig. 3. ML6421B, ML7421B (dimensions in mm)

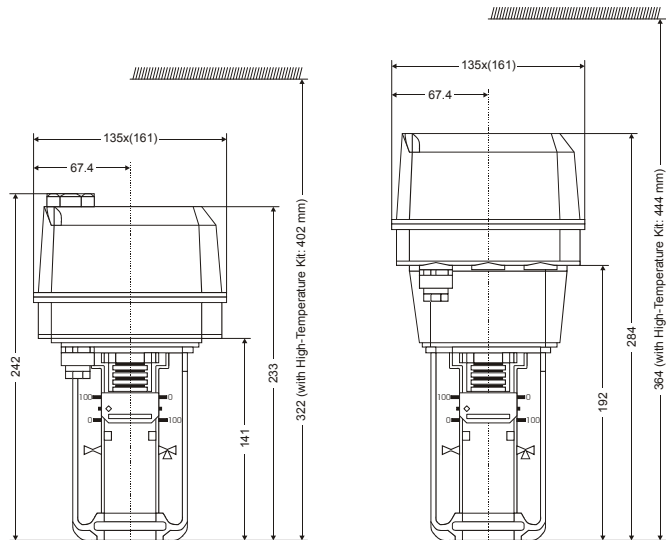
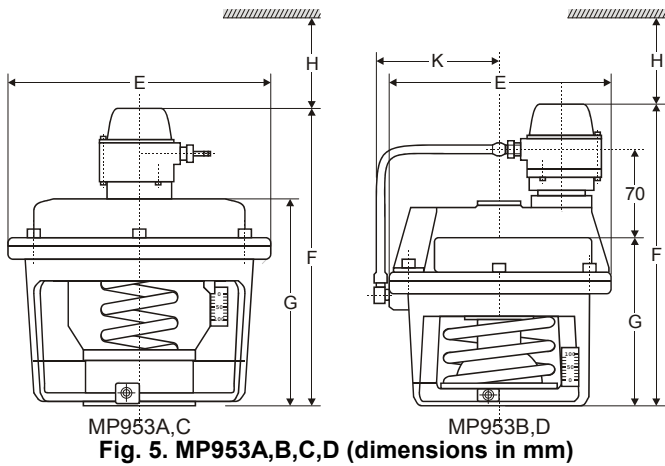


Fig. 4. ML6420A / ML7420A (left) and ML6425A,B / ML7425A,B (right)

Pneumatic Actuators



NOTE: V5049 valves up to DN50 in combination with the following actuators are approved according to DIN EN 14597:

actuator O.S. No.	DIN registration no.
ML6425A3006 ML6425A3014 ML7425A6008	1F139/08
MP953B5003 MP953D5009	1F12392

model	E	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	
MP953C 13"		-	255		
MP953B	180	242	-	120	107
MP953D		-	137		

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