

V5049A,B

FLANGED LINEAR VALVE PN16, PN25/40

SPECIFICATION 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 M6421, M7421, 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
- Directly coupled electric and pneumatic actuators for easy mounting
- Approved according to DIN 32730

SPECIFICATIONS

Action	Stem down to close
Nominal pressure rating	PN16 or PN25/40
Flow characteristic	Equal percentage
Rangeability	50:1
Leakage rate	≤ 0.05 % of k_{vs} up to DN 50 ≤ 0.1 % of k_{vs} for DN 65 to DN 80
Stroke	20 mm up to DN65 38 mm for DN80 to 150
Valve body	
End connections	Flanged per ISO 7005-2
Material	Cast iron (GG25) for PN16 Cast steel (GS-C25) for 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 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
V5049A1201	PN16	DN100	160.00
V5049A1219		DN125	250.00
V5049A1227		DN150	360.00
V5049B1035*		DN100	160.00
V5049B1043*		DN125	250.00
V5049B1050*		DN150	360.00
V5049A2027	PN25/40	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
V5049B1084*		DN80	100.00
V5049B1092*		DN100	160.00

* 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. R 43 176 755 - 004
(DN 15 to 65)
R 43 176 755 - 005
(DN 80 to 150)

ACTUATORS

Electric actuators

Force	600 N	600 N Spring Return	1800 N	
Model	ML6420A ML7420A	ML6425A,B ML7425A,B	M6421A M7421A	M6421B M7421B
Stroke	20 mm			38 mm
Size	PN16:			DN100-150
	PN25: DN15-65			DN80-100

Pneumatic actuators

Valve Size	Pneumatic Actuator		Acting		Positi- oner
	Model	Size	Direct	Reverse	
DN 15-65	MP953A MP953B	5", 8" 7"	x	x	yes
	MP953C MP953D	5", 8" 7"	x	x	no
DN 80-150	MP953A MP953C	13"	x		yes no

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	DN125/150 (PN16 only)
ML6420A, ML6425A,B ML7420A, ML7425A,B	600 N	1600	1000	1000	600	350	200	120	-	-
M6421A,B, M7421A,B	1800 N	-	2500	2500	2000	1300	750	500	230	90

Pneumatic actuators

Actuator Model MP953	Actuator Spring Range	Air Pressure in Actuator	Valve Size												
			DN15 k _{VS} 0.25 -1.60 PN16	DN15 k _{VS} 0.25 -1.60 PN40	DN15 k _{VS} 2.5 -4.0	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
C 5"	14-48kPa (2-7PSI)	115kPa	1600	4000	730	730	730	420	250	120	70	-	-	-	-
A,C 5"	27-76kPa (4-11PSI)		1600	3200	410	410	410	230	120	50	20	-	-	-	-
C 5"	55-83kPa (8-12PSI)		1600	2000	220	220	220	110	50	-	-	-	-	-	-
D 7"	27-76kPa (4-11PSI)	0kPa	1600	4000	570	570	570	330	190	90	40	-	-	-	-
B,D 7"	55-90kPa (8-13PSI)		1600	4000	1350	1350	1350	800	490	260	160	-	-	-	-
C 8"	14-48kPa (2-7PSI)	115kPa	1600	4000	1600 ¹⁾ 2700 ²⁾	1600 ¹⁾ 2700 ²⁾	1600 2700	1600	1000	570	360	-	-	-	-
A,C 8"	27-76kPa (4-11PSI)		1600	4000	1500	1500	1500	890	540	300	180	-	-	-	-
C 8"	55-83kPa (8-12PSI)		1600	4000	1200	1200	1200	700	420	220	130	-	-	-	-
C 13"	14-48kPa (2-7PSI)		-	-	-	-	-	-	-	-	-	620	620	250	250
A,C 13"	27-76kPa (4-11PSI)		-	-	-	-	-	-	-	-	-	320	320	120	120
A,C 13"	27-76kPa (4-11PSI)	0kPa	-	-	-	-	-	-	-	-	-	230 ³⁾	230 ³⁾	90 ³⁾	90 ³⁾

¹⁾ = PN16

²⁾ = PN25

³⁾ = V5049B models, all others = V5049A models

DIMENSIONS (mm)

Valve

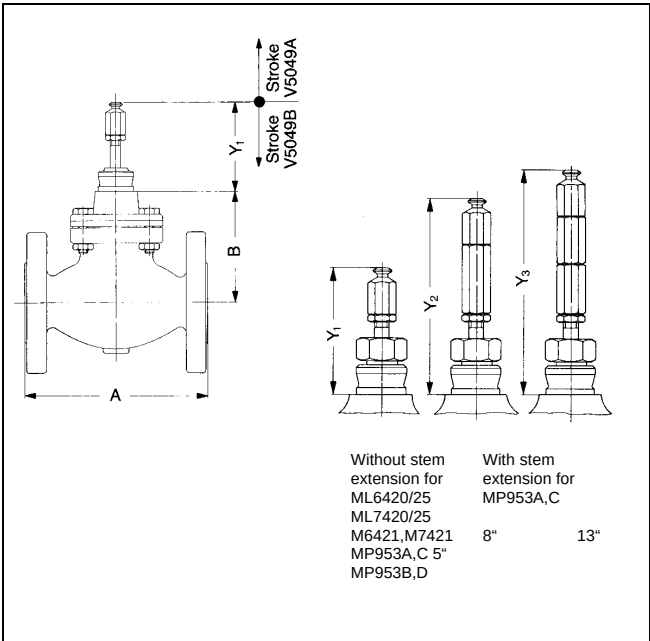


Fig. 1 V5049A,B

Valve Size	A	B	Adjustment Dimension		
			Y1	Y2	Y3
15	130	126	89	133	-
29	150	126			
25	160	126			
32	180	126			
40	200	155			
50	230	155			
65	290	155	133	-	190
80	310	181			
100	350	181			
125	400	219			
150	480	219	V5049A	-	V5049A
			170		227
			V5049B		V5049B
Valve in closed position					

Electric actuators

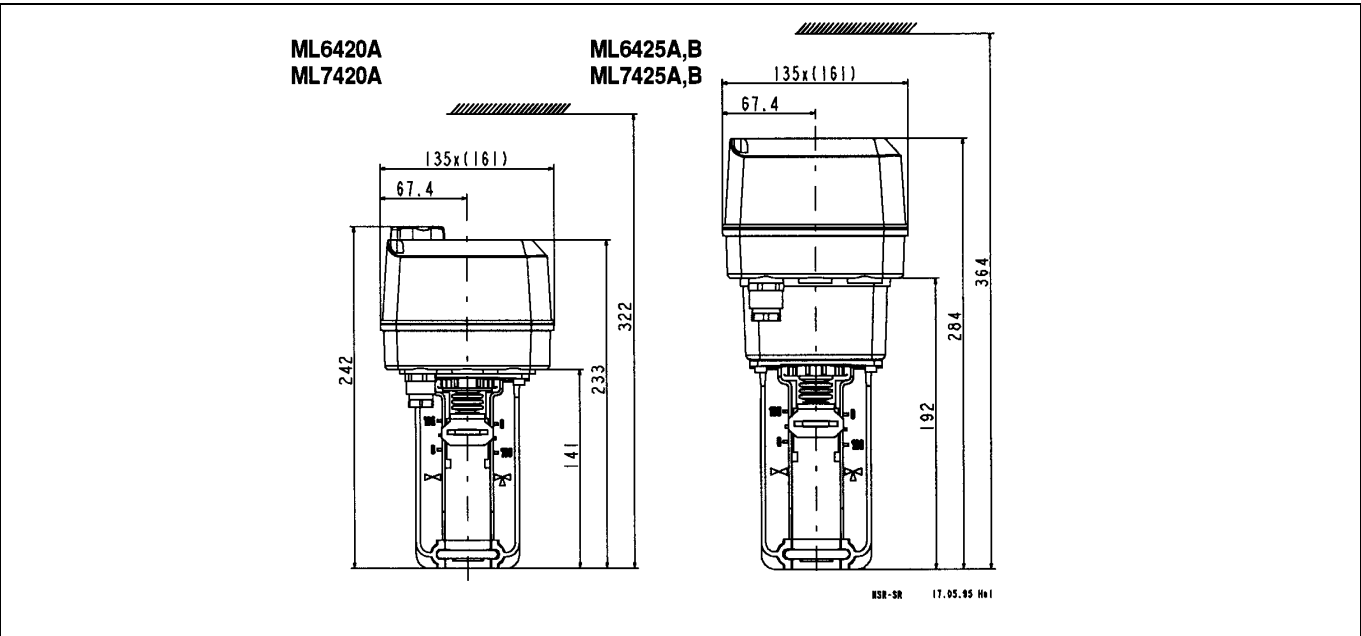


Fig. 2 ML6420A/25A,B ML7420A/25A,B

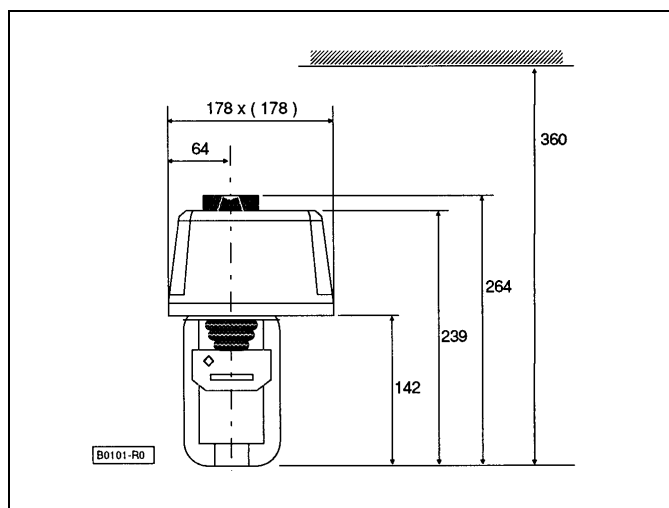


Fig. 3 M6421A, M7421A

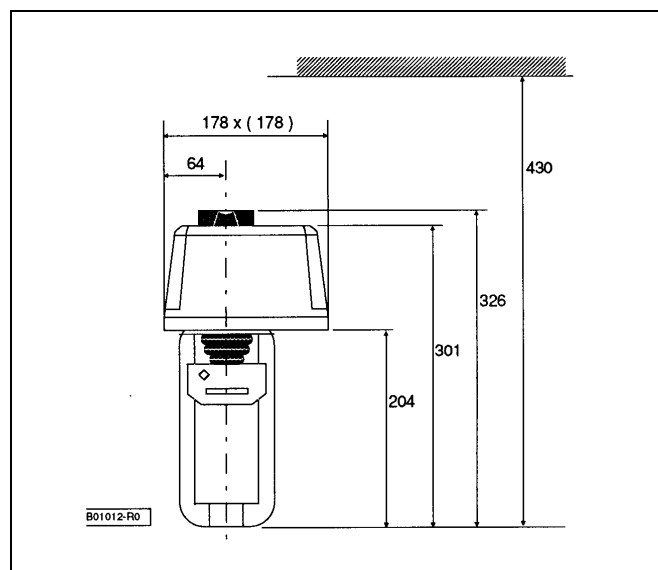


Fig. 4 M6421B, M7421B

Pneumatic actuators

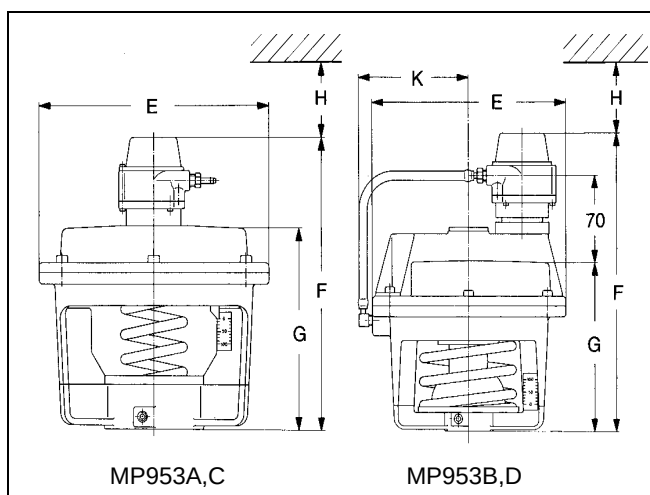


Fig. 5 MP953A,B,C,D

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		

NOTE: V5049 valves up to DN50 in combination with the following actuators are approved according to DIN 32730:

Actuator O.S. No.	DIN Registration No.
ML6425A3006 ML6425A3014 ML7425A3005	1F13995
MP953B5003 MP953D5009	1F12392

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