

Centra Linear Valve DF...D

2-Way Flanged Linear Valve PN25/PN40

APPLICATION

These single-seated valves are used for modulating control of hot/chilled water or steam in heating, ventilating and air conditioning systems. Not suitable for use in open-circuit systems with oxygen enrichment.

The valves can be operated by linear actuators series ML64... and ML74...

SPECIAL FEATURES

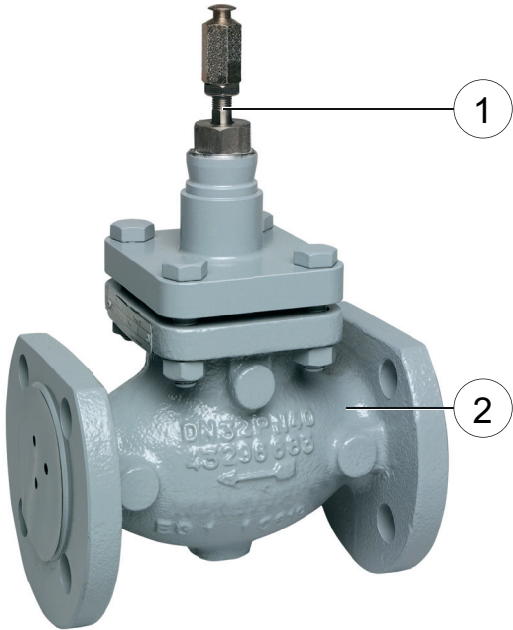
- Cast steel body with flanged end connections
- Low seat leakage rate
- Metal-to-metal seating for long life span
- Self-adjusting packing
- Accurate positioning to ensure state-of-the-art temperature control
- Direct-coupled electric for easy mounting



TECHNICAL DATA

Media	
Medium:	Water or glycol-water mixture, according to VDI 2035
Operating temperatures and operating pressure	
DN15 to DN100	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
Connection/Sizes	
Connection:	Flanged per ISO 7005-2
Specifications	
Action:	Stem down to close
Nominal pressure rating:	PN25/PN40
Flow characteristic:	Equal percentage
Rangeability:	50:1
Leakage rate:	≤0.05 % of kvs up to DN50 ≤0.1 % of kvs DN65 to DN100
Stroke:	20 mm (DN15 to DN65) 38 mm (DN80 to DN100)
Packaging:	Spring-loaded PTFE V-rings

CONSTRUCTION

Overview		Components	Materials
	1	Stem	Stainless steel
	2	Valve body	Cast steel (GS-C25)
	Not depicted components:		
		Seat	Stainless steel, replaceable
		Plug	Stainless steel, skirt-guided

INSTALLATION GUIDELINES

Setup requirements

- 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

TECHNICAL CHARACTERISTICS

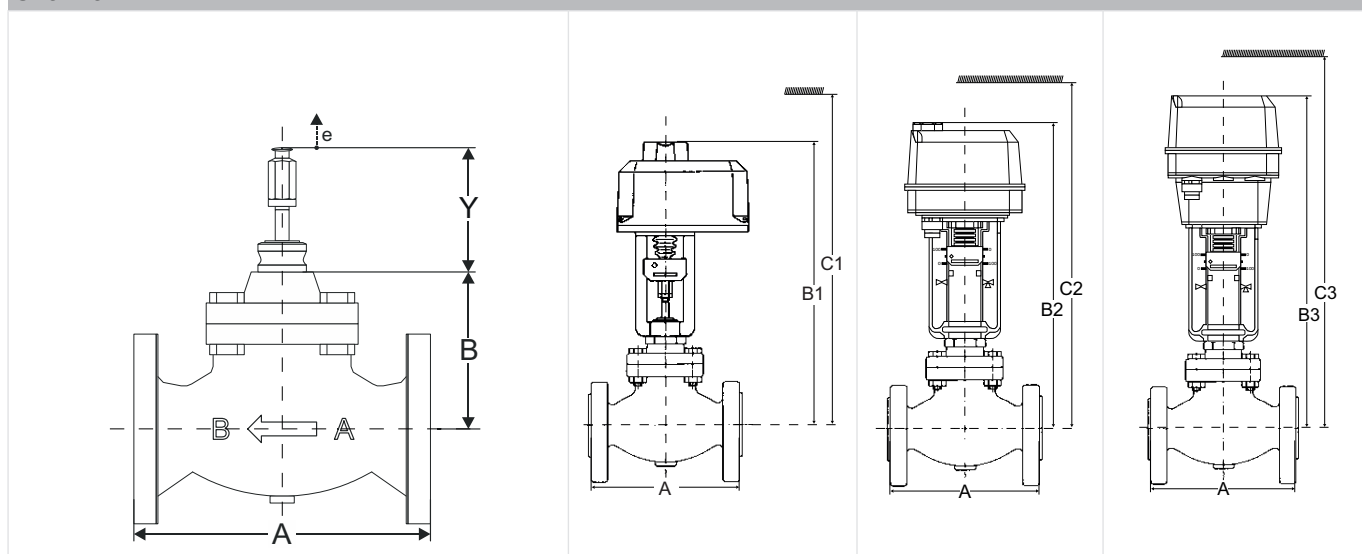
Close off pressure ratings in kPa

Actuator		Valve Size							
Model	Force	DN15 kvs 0.25 - 1.0	DN15 kvs 2.5 - 4.0	DN20 DN25	DN32	DN40	DN50	DN65	DN80 DN100
ML6420A ML6425A/B ML7420A ML7425A/B	600 N	1600 kPa	1000 kPa	1000 kPa	600 kPa*	350 kPa*	200 kPa*	120 kPa*	-
ML6421A ML7421A	1800 N	-	2500 kPa	2500 kPa	2000 kPa	1300 kPa	750 kPa	500 kPa	-
ML6421B ML7421B	1800 N	-	-	-	-	-	-	-	230 kPa

*Preferred solutions are the ML6421/ML7421 variants.

DIMENSIONS

Overview



DN	A	B	Adjustment dimension (Valve in closed position)	Stroke e	ML6421A ML7421A		ML6420 ML7420		ML6425 ML7425	
			Y		B1	C1	B2	C2	B3	C3
15	130	126	89	20	390	490	370	450	410	490
20	150	126			390	490	370	450	410	490
25	160	126			390	490	370	450	410	490
32	180	126			390	490	370	450	410	490
40	200	155			420	515	400	480	440	520
50	230	155			420	515	400	480	440	520
65	290	155			420	515	400	480	440	520
					ML6421B ML7421B					
80	310	181	133	38	510	615	-	-	-	-
100	350	181			510	615	-	-	-	-

Note: All dimensions in mm unless stated otherwise.

ORDERING INFORMATION

The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

Naming key linear valves

D	F	15	D	0.25
Type of valve	Type of thread	DN	PN	k _{VS} -value
D = 2-way valve	F = Flanged	15	D = 25/40	0.25
		20		0.4
		25		0.63
		32		1.0
		40		1.6
		50		2.5
		65		4.0
		80		6.3
		100		10
				16
				25
				40
				63
				100
				160

2-Way Linear Valve - Flanged

DN	k _{VS} -value	Connection	Nominal pressure	Description	OS.-No.
15	0.25	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 0.25	DF15D0.25
15	0.4	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 0.4	DF15D0.4
15	0.63	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 0.63	DF15D0.63
15	1.0	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 1.0	DF15D1.0
15	1.6	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 1.6	DF15D1.6
15	2.5	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 2.5	DF15D2.5
15	4.0	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 4.0	DF15D4.0
20	6.3	flanged	PN40	2-way valve, flanged, DN20, PN25/PN40, k _{VS} 6.3	DF20D6.3
25	10	flanged	PN40	2-way valve, flanged, DN25, PN25/PN40, k _{VS} 10	DF25D10
32	16	flanged	PN40	2-way valve, flanged, DN32, PN25/PN40, k _{VS} 16	DF32D16
40	25	flanged	PN40	2-way valve, flanged, DN40, PN25/PN40, k _{VS} 25	DF40D25
50	40	flanged	PN40	2-way valve, flanged, DN50, PN25/PN40, k _{VS} 40	DF50D40
65	63	flanged	PN40	2-way valve, flanged, DN65, PN25/PN40, k _{VS} 63	DF65D63
80	100	flanged	PN40	2-way valve, flanged, DN80, PN25/PN40, k _{VS} 100	DF80D100
100	160	flanged	PN40	2-way valve, flanged, DN100, PN25/PN40, k _{VS} 160	DF100D160

Accessories

Overview associated actuators

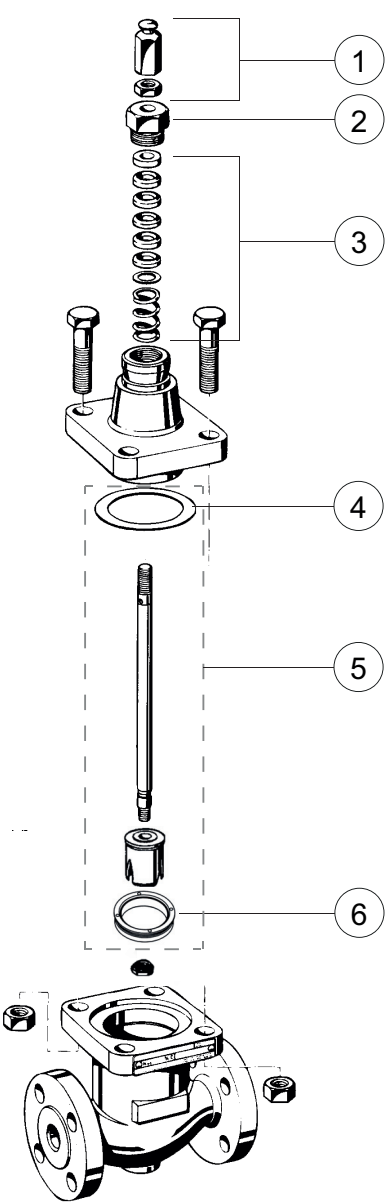
Valve stroke	Control signal	
	3-point (230 V AC or 24 V AC power supply)	0...10 V (24 V AC power supply)
20 mm	ML6420A ML6421A ML6425A/B	ML7420A ML7421A ML7425A/B
38 mm	ML6421B	ML7421B

	Description	Voltage	Runtime	Part No.
	ML6420A Actuator: 3-point / floating			
	20 mm effective stroke, 600N	230 V AC	60 s	ML6420A3015
			30 s	ML6420A3031
		24 V AC	60 s	ML6420A3007
			30 s	ML6420A3023
	ML7420A Actuator: modulating 0/2 ... 10 V			
	20 mm effective stroke, 600N	24 V AC	60 s	ML7420A6009
			30 s	ML7420A6017
	ML6421 Actuator: 3-point / floating			
	20 mm effective stroke, 1800N	230 V AC	114 s	ML6421A3013
		24 V AC		ML6421A3005
	38 mm effective stroke, 1800N	230 V AC	210 s	ML6421B3012
		24 V AC		ML6421B3004
	ML7421 Actuator: modulating 0/2 ... 10 V			
	20 mm effective stroke, 1800N	24 V AC	114 s	ML7421A3004
	38 mm effective stroke, 1800N		210 s	ML7421B3003
	ML6425 Actuator: 3-point / floating (spring return)			
	20 mm effective stroke, 600N, spring return extends	230 V AC	108 s	ML6425A3014
		24 V AC		ML6425A3006
	20 mm effective stroke, 600N, spring return retract	230 V AC		ML6425B3021
		24 V AC		ML6425B3005
	ML7425 Actuator: modulating 0/2 ... 10 V (spring return)			
	20 mm effective stroke, 600N, spring return extends	24 V AC	108 s	ML7425A6008
	20 mm effective stroke, 600N, spring return retract			ML7425B6007

Spare Parts

Naming key spare parts

ASV	-PA	-7	-25
Accessories and spares for valves	Range	Type	k _{VS} -value
ASV = Accessories and spares for valves	PAC = Packing, complete	1	25
	PN = Packing, nut	2	40
	SBA = Stem button assy	3	63
	PA = Plug assembly	4	100
	BG = Body gasket	5	160
	SR = Seat ring	6	
		7	

Overview	Description	Dimension	Part No.
	1 Stem button assy		
		DN40 - DN80	ASV-SBA-2
		DN80 - DN100	ASV-SBA-4
	2 Packing nut		
		DN15 - DN65	ASV-PN-5
		DN80 - DN100	ASV-PN-6
	3 Packing		
		DN15 - DN65	ASV-PAC-5
		DN80 - DN100	ASV-PAC-6
	4 Body gasket		
		DN40 - DN65	ASV-BG-2
		DN80 - DN100	ASV-BG-3
	5 Plug assembly (incl. body gasket, Pos. 4 and seat ring, Pos. 6)		
		DN40, k _{VS} 25	ASV-PA-7-25
		DN50, k _{VS} 40	ASV-PA-7-40
		DN65, k _{VS} 63	ASV-PA-7-63
		DN80, k _{VS} 100	ASV-PA-7-100
		DN100, k _{VS} 160	ASV-PA-7-160
	6 Seat ring		
		DN65, k _{VS} 63	ASV-SR-2
		DN80, k _{VS} 100	ASV-SR-1
		DN100, k _{VS} 160	ASV-SR-1



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