

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...

In combination with actuators ML6425A/ML7425A the DF...D-SV safety linear valves are approved according DIN EN 14597 and marked with CE0035 e.g. for district heating application.

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
- Special versions are approved according to DIN EN 14597 in combination with dedicated actuators



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 k_{VS} up to DN50 ≤0.1 % of k_{VS} 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

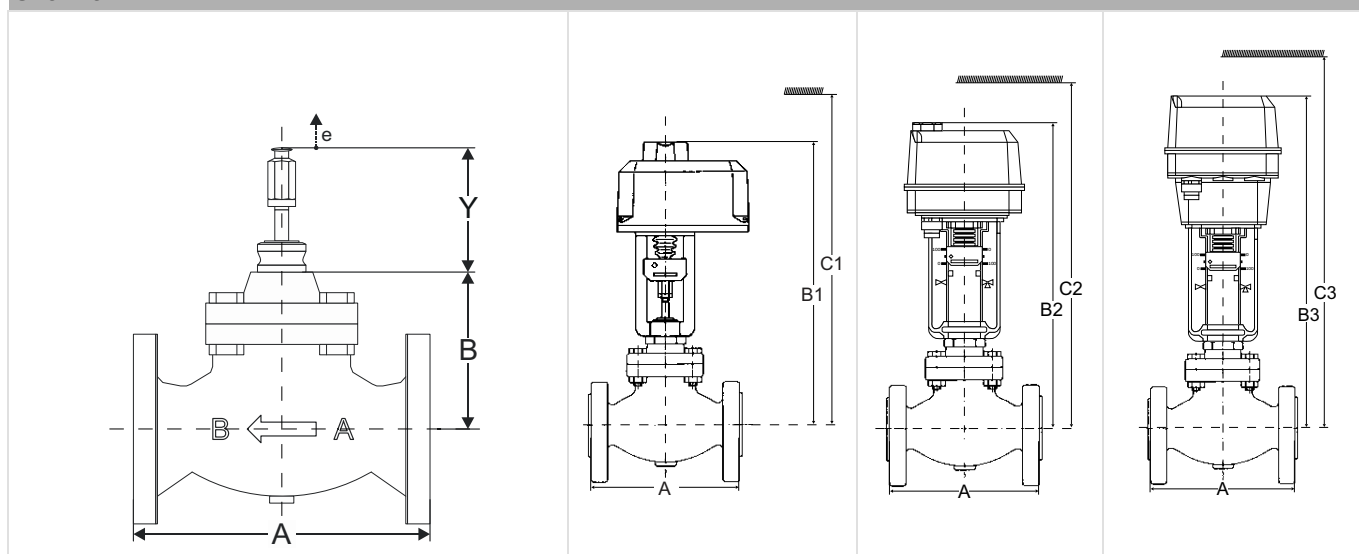
Close off pressure ratings in kPa

Actuator		Valve Size							
Model	Force	DN15 k _{VS} 0.25 - 1.0	DN15 k _{VS} 1.6 - 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*	-	-
ML6421A ML7421A	1800 N	-	2500 kPa	2500 kPa	2000 kPa	1300 kPa	750 kPa	500 kPa	-
ML6421B ML7421B	1800 N	-	-	-	-	-	-	-	230 kPa

*With the exception of the DF...D-SV variants, the ML6421/ML7421 are the preferred solutions

DIMENSIONS

Overview



DN	A	B	Adjustment dimension (Valve in closed position)	Stroke	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	-SV
Type of valve	Type of thread	DN	PN	k _{VS} -value	Special (optional)
D = 2-way valve	F = Flanged	15	D = 25/40	0.25	SV = Safety valve
		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

2-way linear valves - flanged safety valves according DIN EN 14597

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, SV	DF15D0.25-SV
15	0.4	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 0.4, SV	DF15D0.4-SV
15	0.63	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 0.63, SV	DF15D0.63-SV
15	1.0	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 1.0, SV	DF15D1.0-SV
15	1.6	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 1.6, SV	DF15D1.6-SV
15	2.5	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 2.5, SV	DF15D2.5-SV
15	4.0	flanged	PN40	2-way valve, flanged, DN15, PN25/PN40, k _{VS} 4.0, SV	DF15D4.0-SV
20	6.3	flanged	PN40	2-way valve, flanged, DN20, PN25/PN40, k _{VS} 6.3, SV	DF20D6.3-SV
25	10	flanged	PN40	2-way valve, flanged, DN25, PN25/PN40, k _{VS} 10, SV	DF25D10-SV
32	16	flanged	PN40	2-way valve, flanged, DN32, PN25/PN40, k _{VS} 16, SV	DF32D16-SV
40	25	flanged	PN40	2-way valve, flanged, DN40, PN25/PN40, k _{VS} 25, SV	DF40D25-SV
50	40	flanged	PN40	2-way valve, flanged, DN50, PN25/PN40, k _{VS} 40, SV	DF50D40-SV

Note: Only in combination with the linear actuators ML6425A3014, ML6425A3006 and ML7425A6008.

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: 20 mm stroke, 600 N, 3-point, floating			
			230 V AC	60 s	ML6420A3015
			30 s	ML6420A3031	
			24 V AC	60 s	ML6420A3007
			30 s	ML6420A3023	
	ML7420A	Actuator: 20 mm stroke, 600 N, 0/2 ... 10 V, modulating			
			24 V AC	60 s	ML7420A6009
			30 s	ML7420A6017	
	ML6421	Actuator: 1800 N, 3-point, floating			
		20 mm stroke	230 V AC	114 s	ML6421A3013
			24 V AC		ML6421A3005
		38 mm stroke	230 V AC	210 s	ML6421B3012
			24 V AC		ML6421B3004
	ML7421	Actuator: 1800 N, 0/2 ... 10 V, modulating			
		20 mm stroke	24 V AC	114 s	ML7421A3004
		38 mm stroke		210 s	ML7421B3003
	ML6425	Actuator: 20 mm stroke, 600 N, 3-point, floating			
		Spring return extends	230 V AC	108 s	ML6425A3014
			24 V AC		ML6425A3006
		Spring return retract	230 V AC		ML6425B3021
			24 V AC		ML6425B3005
	ML7425	Actuator: 20 mm stroke, 600 N, 0/2 ... 10 V, modulating			
		Spring return extends	24 V AC	108 s	ML7425A6008
		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		
		DN15 - DN65	ASV-SBA-2
		DN80 - DN100	ASV-SBA-3
	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		
		DN15 - DN32	ASV-BG-1
		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-3



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