

# Centra Linear Valve XF...D

3-Way Linear Valve, Flanged, PN25/PN40

## APPLICATION

These three-port mixing valves are used for modulating control of hot/chilled water or steam in heating, ventilation, and air conditioning systems.

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

## SPECIAL 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 actuators
- Constant total flow throughout full plug travel



## 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
	160...220 °C:	max. 3720 kPa
Maximum temperature differential in alternating hot/cold water use:	60 K	
Connection/Sizes		
Connection:	Flanged per ISO 7005-2 Cast steel (GS-C25)	
Specifications		
Action:	Stem up to close port A-AB	
Nominal pressure rating:	PN25/PN40	
Flow characteristic:	Linear for ports A-AB and B-AB	
Rangeability:	50:1	
Leakage rate:	≤0.1 % of $k_{VS}$ port A-AB	
	≤0.1 % of $k_{VS}$ port B-AB	
Stroke:	20 mm (DN15 to DN 80)	
	38 mm (DN100)	
Packaging:	Spring-loaded PTFE V-rings	

CONSTRUCTION

Overview		Components	Materials
	1	Stem	Stainless steel
	2	Valve body	Cast steel (GS-C25), Flanged per ISO 7005-2
	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

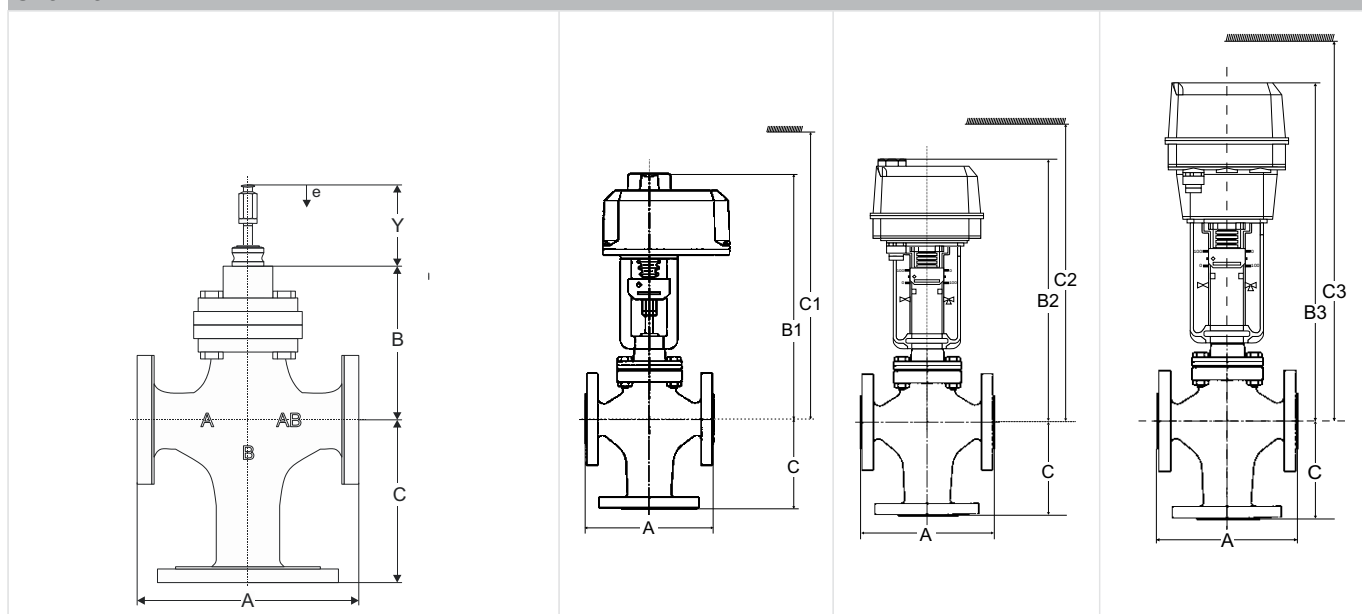
TECHNICAL CHARACTERISTICS

Close off pressure ratings in kPa

Actuator		Valve Size								
Model	Force	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
ML6420A ML6425A/B ML7420A ML7425A/B	600 N	1000 kPa	1000 kPa	1000 kPa	600 kPa	350 kPa	200 kPa	120 kPa	50 kPa	-
ML6421A ML7421A	1800 N	2500 kPa	2500 kPa	2500 kPa	2000 kPa	1300 kPa	750 kPa	500 kPa	230 kPa	-
ML6421B ML7421B		-	-	-	-	-	-	-	-	230 kPa

## DIMENSIONS

### Overview



DN	A	B	C	Adjustment dimension (A-AB in closed position)	Stroke e	ML6421A ML7421A		ML6420 ML7420		ML6425 ML7425	
				Y		B1	C1	B2	C2	B3	C3
15	130	126	120	107	20	390	490	370	450	410	490
20	150	126	120			390	490	370	450	410	490
25	160	126	120			390	490	370	450	410	490
32	180	126	135			390	490	370	450	410	490
40	200	155	140			420	515	400	480	440	520
50	230	155	150			420	515	400	480	440	520
65	290	155	165			420	515	400	480	440	520
80	310	181	220			445	545	425	505	465	545
						ML6421B ML7421B					
100	350	185	220	170.5	38	515	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

<b>X</b>	<b>F</b>	<b>15</b>	<b>D</b>	<b>0.25</b>
Type of valve	Type of thread	DN	PN	k <sub>VS</sub> -value
X = 3-way valve	F = Flanged	15	D = 25/40	2.5
		20		4
		25		6.3
		32		10
		40		16
		50		25
		65		40
		80		63
		100		100
				160

### 3-Way Linear Valve - Flanged

<b>DN</b>	<b>k<sub>VS</sub>-value</b>	<b>Connection</b>	<b>Nominal pressure</b>	<b>Description</b>	<b>OS.-No.</b>
15	2.5	flanged	PN40	3-way valve, flanged, DN15, PN25/PN40, k <sub>VS</sub> 2.5	XF15D2.5
15	4	flanged	PN40	3-way valve, flanged, DN15, PN25/PN40, k <sub>VS</sub> 4	XF15D4.0
20	6.3	flanged	PN40	3-way valve, flanged, DN20, PN25/PN40, k <sub>VS</sub> 6.3	XF20D6.3
25	10	flanged	PN40	3-way valve, flanged, DN25, PN25/PN40, k <sub>VS</sub> 10	XF25D10
32	16	flanged	PN40	3-way valve, flanged, DN32, PN25/PN40, k <sub>VS</sub> 16	XF32D16
40	25	flanged	PN40	3-way valve, flanged, DN40, PN25/PN40, k <sub>VS</sub> 25	XF40D25
50	40	flanged	PN40	3-way valve, flanged, DN50, PN25/PN40, k <sub>VS</sub> 40	XF50D40
65	63	flanged	PN40	3-way valve, flanged, DN65, PN25/PN40, k <sub>VS</sub> 63	XF65D63
80	100	flanged	PN40	3-way valve, flanged, DN80, PN25/PN40, k <sub>VS</sub> 100	XF80D100
100	160	flanged	PN40	3-way valve, flanged, DN100, PN25/PN40, k <sub>VS</sub> 160	XF100D160

## 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

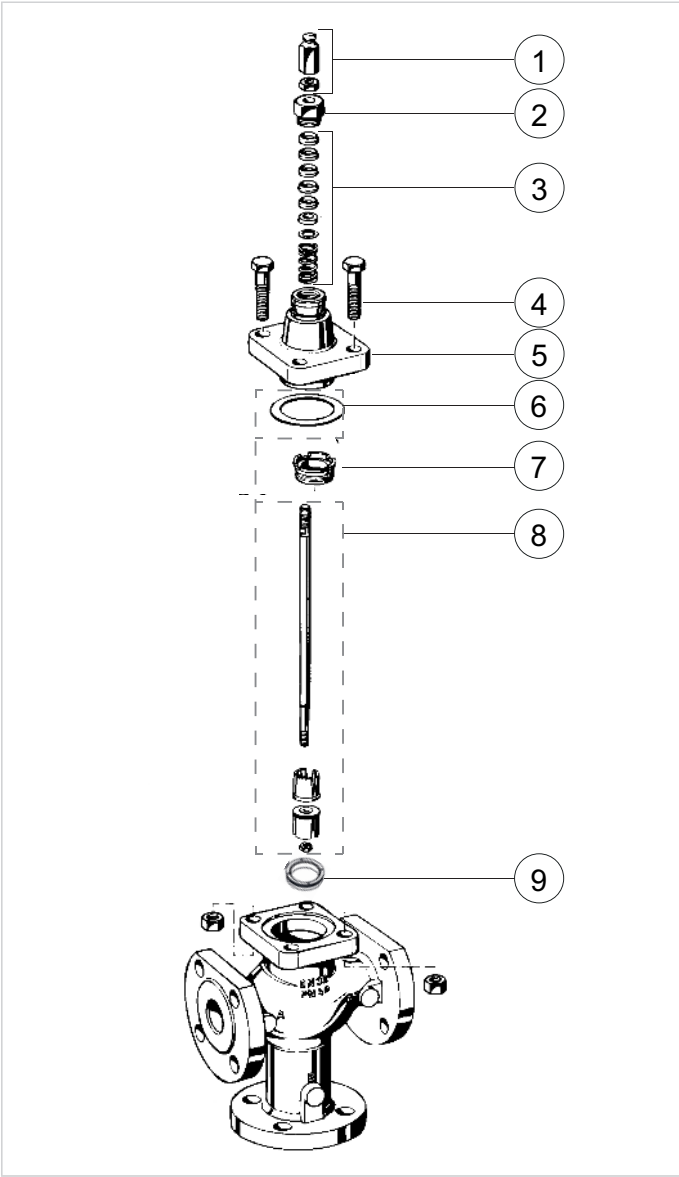
  

	Description	Voltage	Runtime	Part No.
	<b>ML6420A</b> <b>Actuator: 3-point / floating</b>			
	20 mm effective stroke, 600N	230 V AC	60 s	ML6420A3015
			30 s	ML6420A3031
		24 V AC	60 s	ML6420A3007
			30 s	ML6420A3023
	<b>ML7420A</b> <b>Actuator: modulating 0/2 ... 10 V</b>			
	20 mm effective stroke, 600N	24 V AC	60 s	ML7420A6009
			30 s	ML7420A6017
	<b>ML6421</b> <b>Actuator: 3-point / floating</b>			
	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
	<b>ML7421</b> <b>Actuator: modulating 0/2 ... 10 V</b>			
	20 mm effective stroke, 1800N	24 V AC	114 s	ML7421A3004
	38 mm effective stroke, 1800N		210 s	ML7421B3003
	<b>ML6425</b> <b>Actuator: 3-point / floating (spring return)</b>			
	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
	<b>ML7425</b> <b>Actuator: modulating 0/2 ... 10 V (spring return)</b>			
	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	-5	-25
Accessories and spares for valves	Range	Type	k <sub>VS</sub> -value
ASV = Accessories and spares for valves	PAC = Packing, complete	1	25
	PN = Packing, nut	2	40
	SBA = Stem button assy	3	63
	BG = Body gasket	5	100
	SR = Seat ring	6	160
	PA = Plug assembly	7	
		8	

Overview	Description	Dimension	Part No.
	<b>1 Stem button assy</b>		
		DN15 - DN80	ASV-SBA-2
		DN100	ASV-SBA-3
	<b>2 Packing nut</b>		
		DN15 - DN80	ASV-PN-5
		DN100	ASV-PN-6
	<b>3 Packing</b>		
		DN15 - DN80	ASV-PAC-5
		DN100	ASV-PAC-6
	<b>4 Screws</b>		
	<b>5 Bonnet</b>		
	<b>6 Body gasket</b>		
		DN15 - DN32	ASV-BG-1
		DN40 - DN65	ASV-BG-2
		DN80 - DN100	ASV-BG-3
	<b>7 Seat ring top</b>		
		DN65	ASV-SR-2
		DN80 - DN100	ASV-SR-1
	<b>8 Plug assembly (incl. body gasket, Pos. 6)</b>		
		DN25, k <sub>VS</sub> 25	ASV-PA-5-25
		DN40, k <sub>VS</sub> 40	ASV-PA-5-40
		DN65, k <sub>VS</sub> 63	ASV-PA-5-63
		DN80, k <sub>VS</sub> 100	ASV-PA-2-100
		DN100, k <sub>VS</sub> 160	ASV-PA-2-160
	<b>9 Seat ring down</b>		
		DN40	ASV-SR-5
		DN50	ASV-SR-6
		DN65	ASV-SR-7
		DN80 - DN100	ASV-SR-8



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