



## Centra Linear Valve XF...B

3-way Flanged Linear Valve PN16

### APPLICATION

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

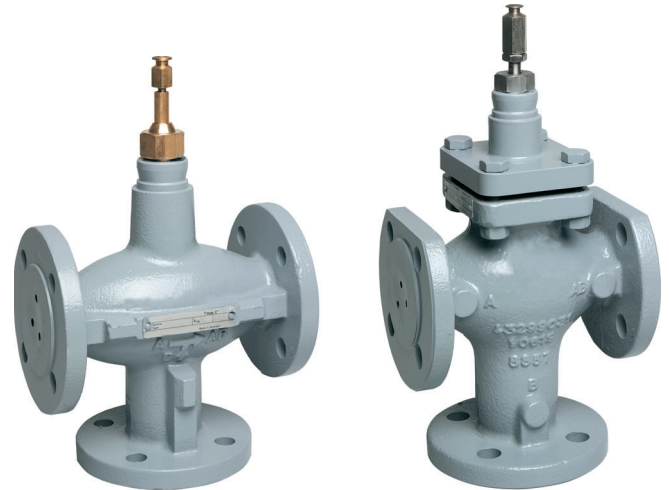
The valves can be operated by linear actuators series ML64... and ML74...

### 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 valve stroke

### TECHNICAL DATA

Media		
Medium:	Water or glycol-water mixture, according to VDI 2035	
Operating temperatures and operating pressure		
DN15 - DN80:	2...120 °C:	max. 1600 kPa
	120...150 °C:	max. 1440 kPa
	150...170 °C:	max. 1370 kPa
DN100 - DN150:	2...120 °C:	max. 1600 kPa
	120...150 °C:	max. 1440 kPa
	150...200 °C:	max. 1280 kPa
	200...220 °C:	max. 1200 kPa
Maximum temperature differential in alternating hot/cold water use:	60 K	
Connection/Sizes		
Connection:	Flanged per ISO 7005-2	
Specifications		
Action:	Stem up to close port A-AB	
Nominal pressure rating:	PN16	
Flow characteristic:		
DN15 - DN80:	port A-AB	Equal percentage Linear
	port B-AB	
DN100 - DN150:	port A-AB	Linear Linear
	port B-AB	
Rangeability:	50:1	

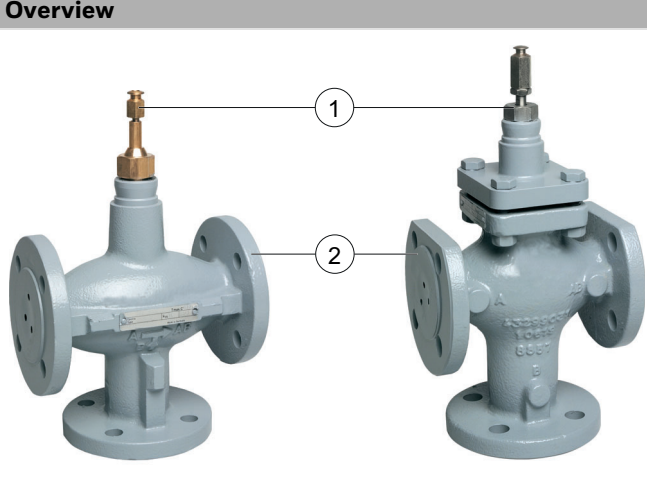


DN15 - DN80

DN100 - DN150

Specifications	
Leakage rate:	
DN15 - DN80:	≤0.5 % of $k_{VS}$ port A-AB ≤1 % of $k_{VS}$ port B-AB
DN100 - DN150:	≤0.1 % of $k_{VS}$ port A-AB ≤0.1 % of $k_{VS}$ port B-AB
Stroke:	
DN15 - DN80:	20 mm
DN100 - DN150:	38 mm
Packaging:	Spring-loaded PTFE V-rings and cone rings

## CONSTRUCTION

Overview	Components	Materials
	<b>1</b> Stem	Stainless steel
	<b>2</b> Valve body	Cast iron (GG25), Flanged per ISO 7005-2
	<b>Not depicted components:</b>	
	Seat	Stainless steel, replaceable Body integrated
	Plug	Stainless steel, skirt-guided

## INSTALLATION GUIDELINES

### Setup 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

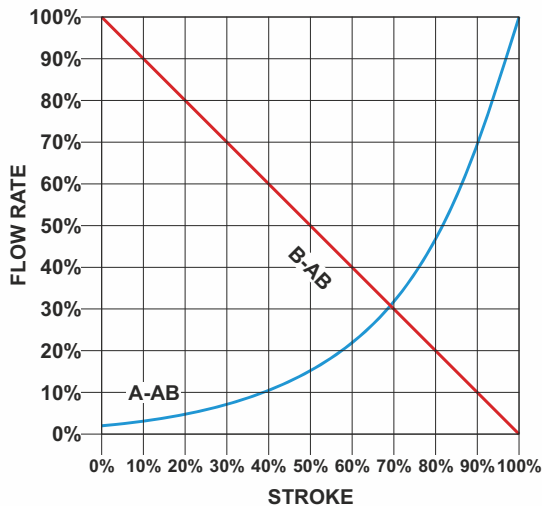
## TECHNICAL CHARACTERISTICS

### Close off pressure ratings in kPa

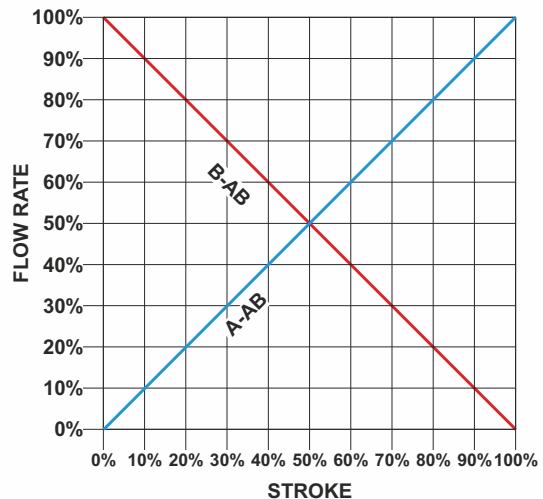
Actuator		Valve Size										
Model	Force	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
ML6420A ML6425A/B ML7420A ML7425A/B	600 N	1000 kPa	1000 kPa	1000 kPa	790 kPa	480 kPa	260 kPa*	160 kPa*	100 kPa*	-	-	-
ML6421A ML7421A	1800 N	-	-	-	1000 kPa	1000 kPa	1000 kPa	650 kPa	400 kPa	-	-	-
ML6421B ML7421B	1800 N	-	-	-	-	-	-	-	-	230 kPa	90 kPa	90 kPa

\* Preferred solution are the ML6421/ML7421 actuators

### Characteristic curves



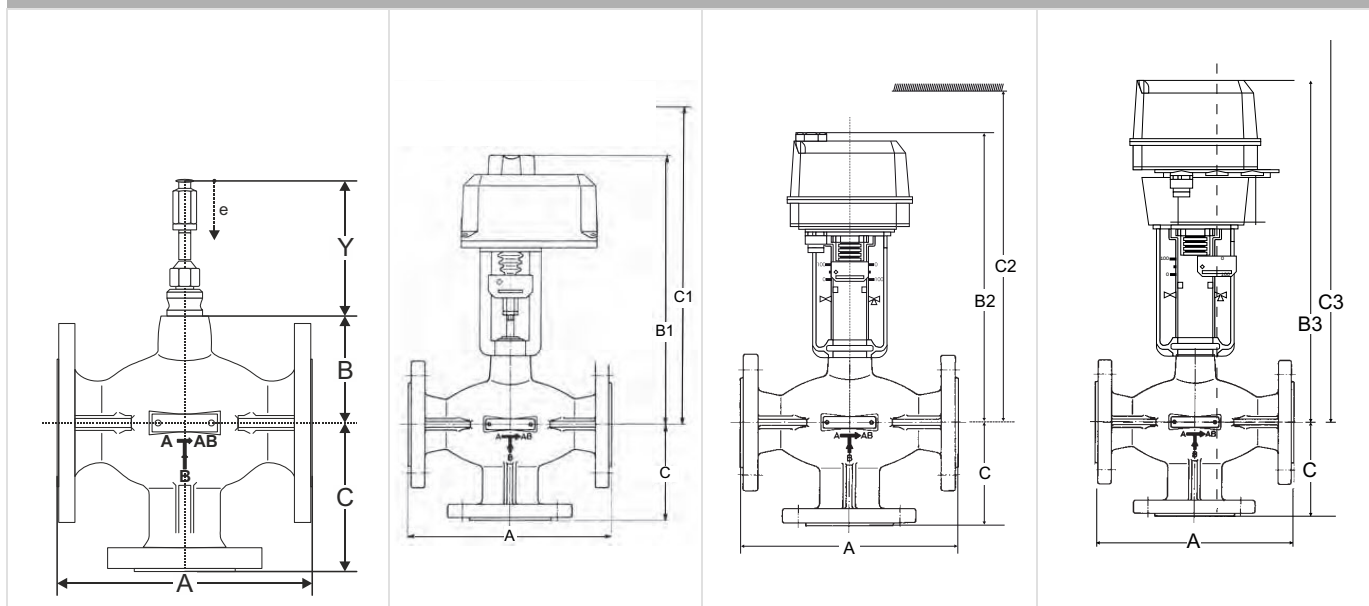
DN15 - DN80



DN100 - DN150

# DIMENSIONS

## Overview



DN	A	B	C	Adjustment dimension (A-AB in closed position)		ML6421A ML7421A		ML6420 ML7420		ML6425 ML7425	
				Y	e	B1	C1	B2	C2	B3	C3
15	130	63	90	107	20	330	425	305	385	350	430
20	150	63	95			330	425	305	385	350	430
25	160	80	100			345	440	325	405	365	445
32	180	80	105			345	440	325	405	365	445
40	200	80	115			345	440	325	405	365	445
50	230	94	125			360	455	340	420	380	460
65	290	105	145			370	465	350	430	390	470
80	310	112	155			380	475	355	435	400	480
						<b>ML6421B ML7421B</b>					
100	350	184	220	170.5	38	510	615	-	-	-	-
125	400	219	245			545	650	-	-	-	-
150	480	219	270			545	650	-	-	-	-

Note: All dimensions in mm unless stated otherwise.

## ORDERING INFORMATION

### Naming key linear valves

<b>X</b>	<b>F</b>	<b>100</b>	<b>B</b>	<b>160</b>	<b>RA</b>
Type of valve	Type of thread	DN	PN	K <sub>VS</sub> -value	Special
X = 3-way valve	F = Flanged	15 20 25 32 40 50 65 80 100 125 150	B = 16	2.5 4.0 6.3 10 16 25 40 63 100 160 250 360	RA = Diverting

### 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>Item No.</b>
15	2.5	flanged	PN16	3-way valve, flanged, DN15, PN16, k <sub>VS</sub> 2.5	XF15B2.5
15	4	flanged	PN16	3-way valve, flanged, DN15, PN16, k <sub>VS</sub> 4	XF15B4.0
20	6.3	flanged	PN16	3-way valve, flanged, DN20, PN16, k <sub>VS</sub> 6.3	XF20B6.3
25	10	flanged	PN16	3-way valve, flanged, DN25, PN16, k <sub>VS</sub> 10	XF25B10
32	16	flanged	PN16	3-way valve, flanged, DN32, PN16, k <sub>VS</sub> 16	XF32B16
40	25	flanged	PN16	3-way valve, flanged, DN40, PN16, k <sub>VS</sub> 25	XF40B25
50	40	flanged	PN16	3-way valve, flanged, DN50, PN16, k <sub>VS</sub> 40	XF50B40
65	63	flanged	PN16	3-way valve, flanged, DN65, PN16, k <sub>VS</sub> 63	XF65B63
80	100	flanged	PN16	3-way valve, flanged, DN80, PN16, k <sub>VS</sub> 100	XF80B100
100	160	flanged	PN16	3-way valve, flanged, DN100, PN16, k <sub>VS</sub> 160	XF100B160
100	160	flanged	PN16	3-way valve, flanged, DN100, PN16, k <sub>VS</sub> 160	XF100B160RA
125	250	flanged	PN16	3-way valve, flanged, DN125, PN16, k <sub>VS</sub> 250	XF125B250
125	250	flanged	PN16	3-way valve, flanged, DN125, PN16, k <sub>VS</sub> 250	XF125B250RA
150	360	flanged	PN16	3-way valve, flanged, DN150, PN16, k <sub>VS</sub> 360	XF150B360
150	360	flanged	PN16	3-way valve, flanged, DN150, PN16, k <sub>VS</sub> 360	XF150B360RA

## 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

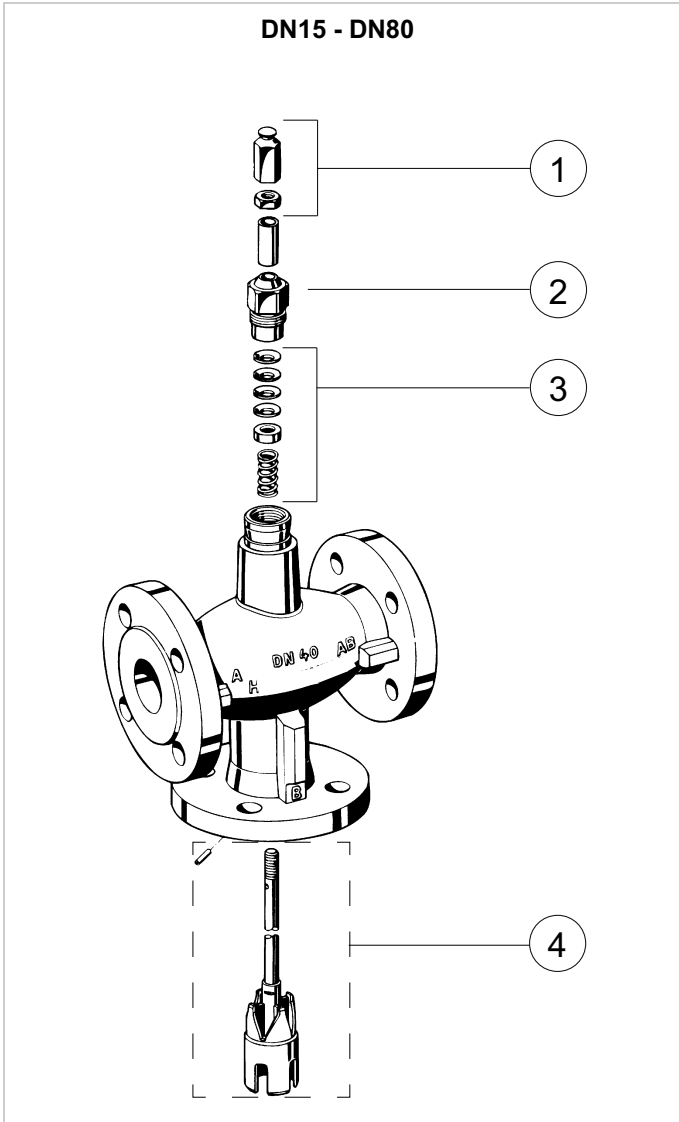
	Description	Voltage	Runtime	Item No.
	<b>ML6420A</b>	<b>Actuator: 20 mm stroke, 600 N, 3-point, floating</b>		
		230 V AC	60 s	ML6420A3015
			30 s	ML6420A3031
		24 V AC	60 s	ML6420A3007
			30 s	ML6420A3023
	<b>ML7420A</b>	<b>Actuator: 20 mm stroke, 600 N, 0/2 ... 10 V, modulating</b>		
		24 V AC	60 s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

**Spare Parts**

**Naming key spare parts**

ASV	-PA	-3	-25
Accessories and spares for valves	Range	Type	$k_{VS}$ -value
ASV = Accessories and spares for valves	SBA = Stem button assy PN = Packing nut PAC = Packing, complete PA = Plug assembly	1 2 3	25 40 63 100

**Overview**

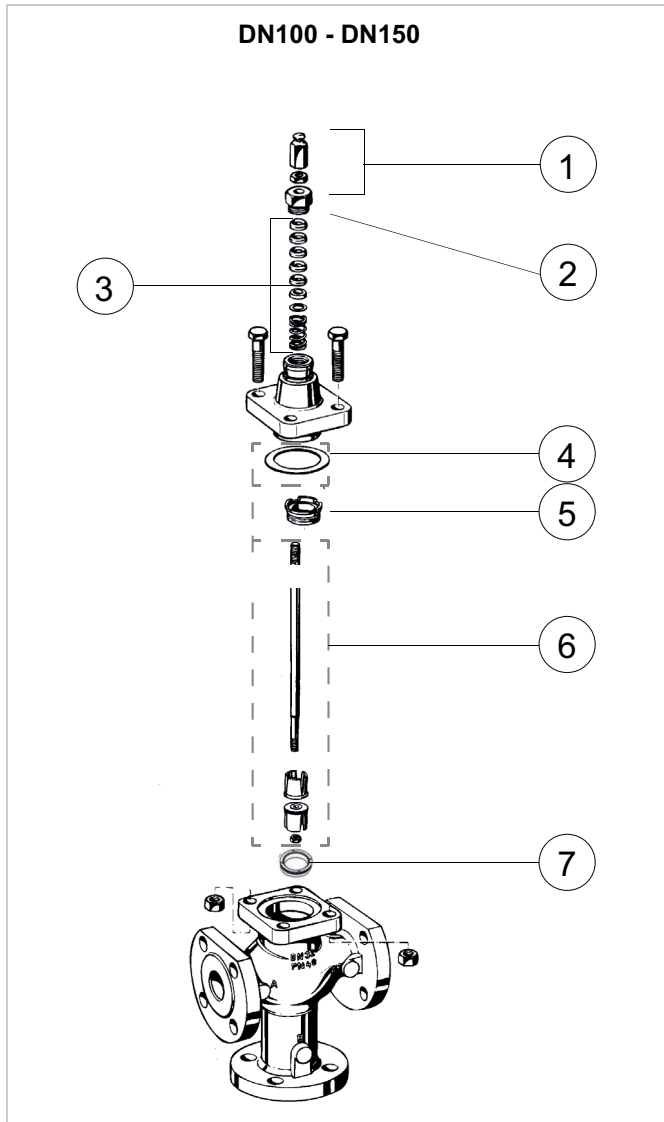


Description	Dimension	Item No.
<b>1 Stem button assy</b>		
	DN15 - DN32	ASV-SBA-1
	DN40 - DN80	ASV-SBA-2
<b>2 Packing nut</b>		
	DN15 - DN32	ASV-PN-1
	DN40 - DN80	ASV-PN-2
<b>3 Packing</b>		
	DN15 - DN32	ASV-PAC-1
	DN40 - DN80	ASV-PAC-2
<b>4 Plug assembly</b>		
	DN40, $k_{VS}$ 25	ASV-PA-3-25
	DN50, $k_{VS}$ 40	ASV-PA-3-40
	DN65, $k_{VS}$ 63	ASV-PA-3-63
	DN80, $k_{VS}$ 100	ASV-PA-3-100

**Naming key spare parts**

ASV	-PA	-2	-160
Accessories and spares for valves	Range	Type	k <sub>VS</sub> -value
ASV = Accessories and spares for valves	SBA = Stem button assy PN = Packing nut PAC = Packing, complete BG = Body gasket SR = Seat ring PA = Plug assembly	2 3 4 6 8 9	160 250 360

**Overview**



Description	Dimension	Item No.
<b>1 Stem button assy</b>		
	DN100 - DN150	ASV-SBA-3
<b>2 Packing nut</b>		
	DN100 - DN150	ASV-PN-6
<b>3 Packing</b>		
	DN100 - DN150	ASV-PAC-6
<b>4 Body gasket</b>		
	DN100	ASV-BG-3
	DN125 - DN150	ASV-BG-4
<b>5 Seat ring</b>		
	DN100	ASV-SR-3
	DN125 - DN150	ASV-SR-4
<b>6 Plug assembly (incl. body gasket)</b>		
	DN100, k <sub>VS</sub> 160	ASV-PA-2-160
	DN125, k <sub>VS</sub> 250	ASV-PA-2-250
	DN150, k <sub>VS</sub> 360	ASV-PA-2-360
<b>7 Seat ring</b>		
	DN100	ASV-SR-8
	DN125 - DN150	ASV-SR-9



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