

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.

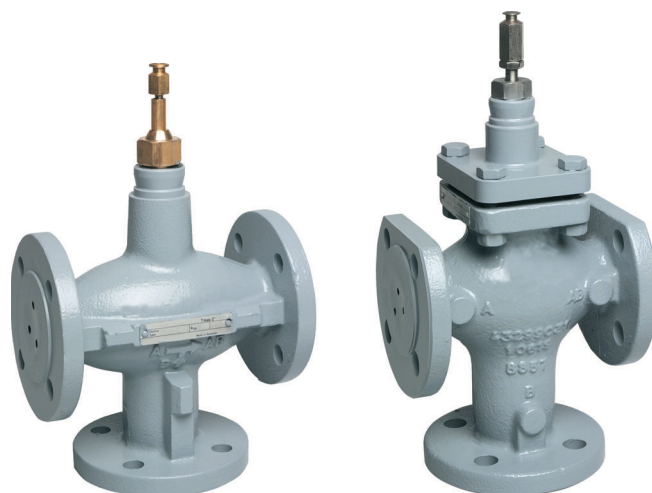
The valves can be operated by linear actuators series ML64... and ML74...

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 port B-AB	Equal percentage Linear
DN100 - DN150:	port A-AB port B-AB	Linear Linear
Rangeability:	50:1	

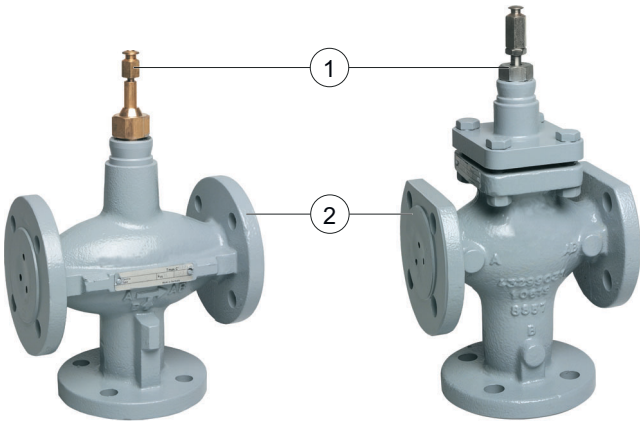


DN15 - DN80

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
	1	Stem	Stainless steel
	2	Valve body	Cast iron (GG25), Flanged per ISO 7005-2
	Not depicted components:		
		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

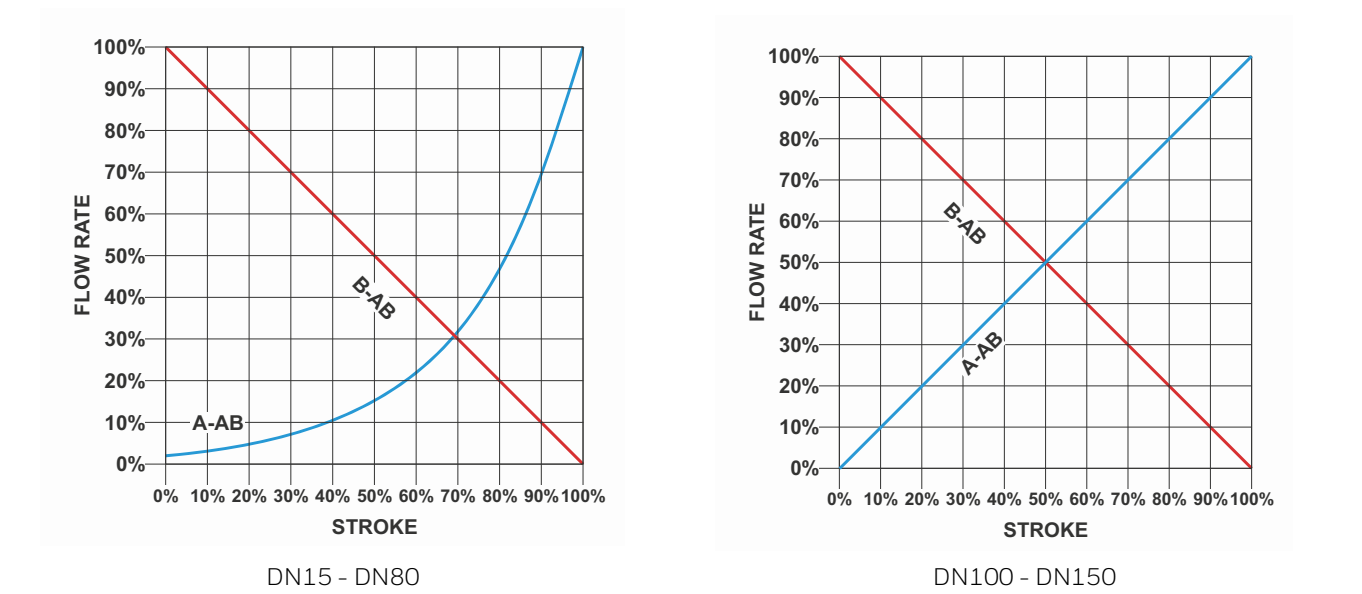
TECHNICAL CHARACTERISTICS

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

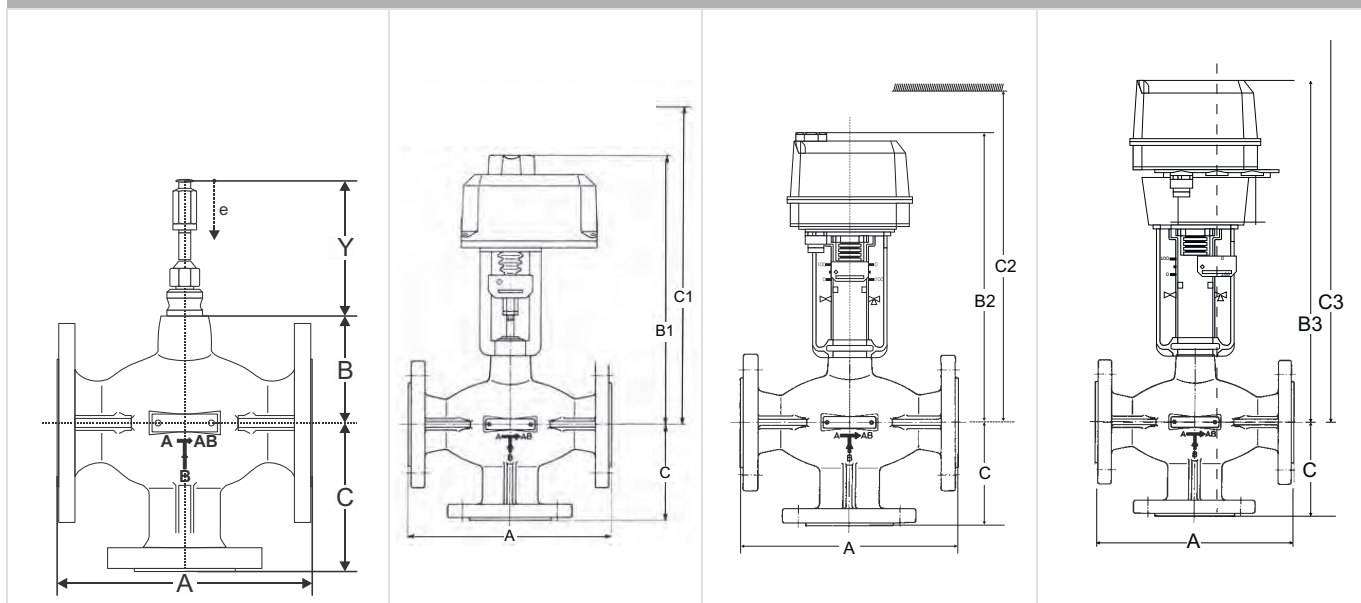
* Preferred solution are the ML6421/ML7421 actuators

Characteristic curves



DIMENSIONS

Overview



DN	A	B	C	Adjustment dimension (A-AB in closed position)	Stroke	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
						ML6421B ML7421B					
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

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

3-Way Linear Valve - Flanged

DN	k_{VS}-value	Connection	Nominal pressure	Description	Item No.
15	2.5	flanged	PN16	3-way valve, flanged, DN15, PN16, k _{VS} 2.5	XF15B2.5
15	4	flanged	PN16	3-way valve, flanged, DN15, PN16, k _{VS} 4	XF15B4.0
20	6.3	flanged	PN16	3-way valve, flanged, DN20, PN16, k _{VS} 6.3	XF20B6.3
25	10	flanged	PN16	3-way valve, flanged, DN25, PN16, k _{VS} 10	XF25B10
32	16	flanged	PN16	3-way valve, flanged, DN32, PN16, k _{VS} 16	XF32B16
40	25	flanged	PN16	3-way valve, flanged, DN40, PN16, k _{VS} 25	XF40B25
50	40	flanged	PN16	3-way valve, flanged, DN50, PN16, k _{VS} 40	XF50B40
65	63	flanged	PN16	3-way valve, flanged, DN65, PN16, k _{VS} 63	XF65B63
80	100	flanged	PN16	3-way valve, flanged, DN80, PN16, k _{VS} 100	XF80B100
100	160	flanged	PN16	3-way valve, flanged, DN100, PN16, k _{VS} 160	XF100B160
100	160	flanged	PN16	3-way valve, flanged, DN100, PN16, k _{VS} 160	XF100B160RA
125	250	flanged	PN16	3-way valve, flanged, DN125, PN16, k _{VS} 250	XF125B250
125	250	flanged	PN16	3-way valve, flanged, DN125, PN16, k _{VS} 250	XF125B250RA
150	360	flanged	PN16	3-way valve, flanged, DN150, PN16, k _{VS} 360	XF150B360
150	360	flanged	PN16	3-way valve, flanged, DN150, PN16, k _{VS} 360	XF150B360RA

Accessories

Overview associated actuators

	Control signal			
Valve stroke	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	

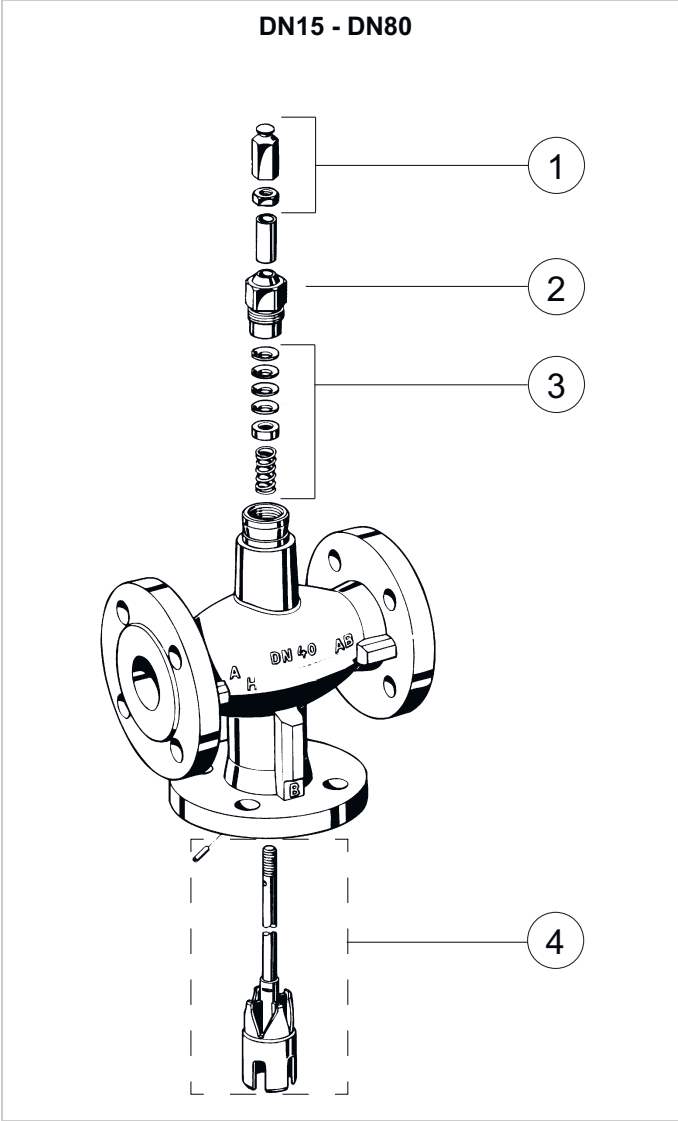
	Description	Voltage	Runtime	Item No.	
	ML6420A	Actuator: 20 mm stroke, 600 N, 3-point, floating			
		230 V AC	60 s	ML6420A3015	
			30 s	ML6420A3031	
		24 V AC	60 s	ML6420A3007	
			30 s	ML6420A3023	
	ML7420A	Actuator: 20 mm stroke, 600 N, 0/2 ... 10 V, modulating			
		24 V AC	60 s	ML7420A6009	
			30 s	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	-3	-25
Accessories and spares for valves	Range	Type	k _{VS} -value
ASV = Accessories and spares for valves	SBA = Stem button assy	1	25
	PN = Packing nut	2	40
	PAC = Packing, complete	3	63
	PA = Plug assembly		100

Overview

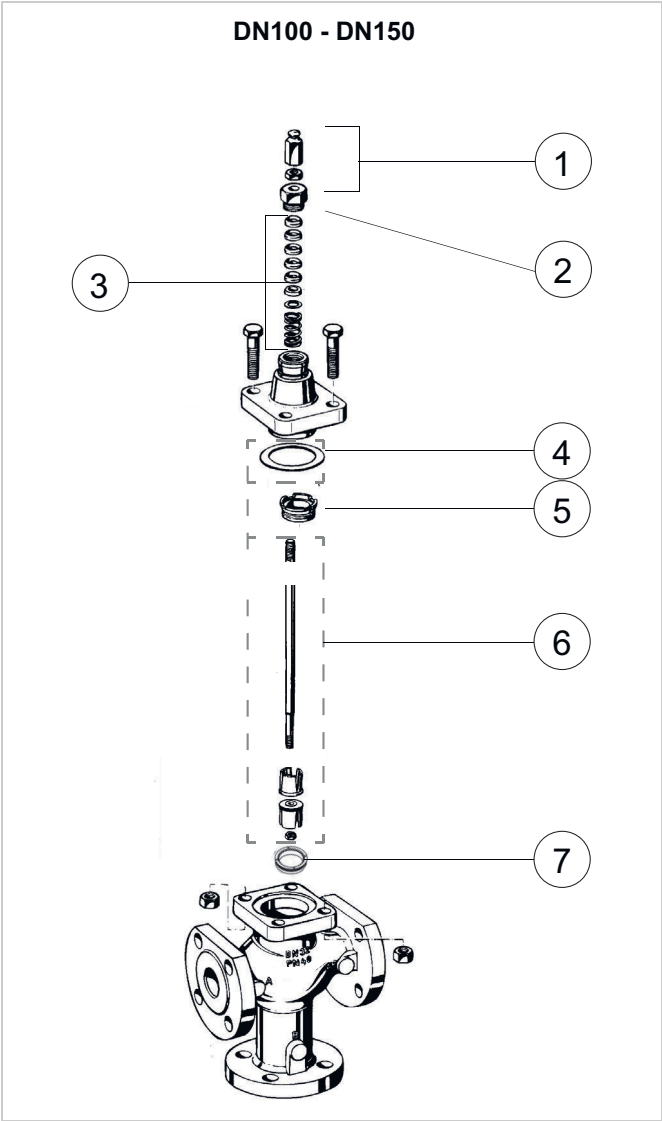


Description	Dimension	Item No.
1 Stem button assy		
	DN15 - DN32	ASV-SBA-1
	DN40 - DN80	ASV-SBA-2
2 Packing nut		
	DN15 - DN32	ASV-PN-1
	DN40 - DN80	ASV-PN-2
3 Packing		
	DN15 - DN32	ASV-PAC-1
	DN40 - DN80	ASV-PAC-2
4 Plug assembly		
	DN40, k _{VS} 25	ASV-PA-3-25
	DN50, k _{VS} 40	ASV-PA-3-40
	DN65, 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 _{VS} -value
ASV = Accessories and spares for valves	SBA = Stem button assy	2	160
	PN = Packing nut	3	250
	PAC = Packing, complete	4	360
	BG = Body gasket	6	
	SR = Seat ring	8	
	PA = Plug assembly	9	

Overview



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



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