



# resideo

## Centra Linear Valve DF..B..NI / DF..C..

2-Way Linear Valve PN16/PN25  
Flanged, Pressure Balanced, Nodular Iron

### APPLICATION

These single-seated valves are used for modulating control of hot/chilled water or steam in heating, ventilating and air conditioning systems. They are designed especially for use in high differential pressure applications (e.g. district heating)

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

### SPECIAL FEATURES

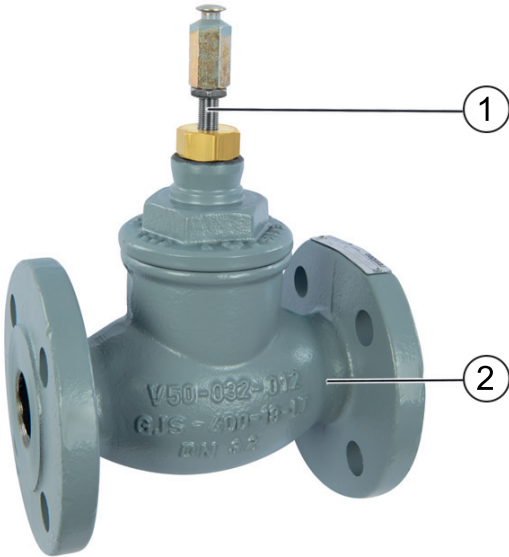
- Pressure-balanced plug
- Nodular iron body with flanged end connections
- Low seat leakage rate
- Metal-to-metal seating for long life span
- Self-adjusting packing
- Accurate positioning to ensure state-of-the-art temperature control
- Direct-coupled electric for easy mounting



### TECHNICAL DATA

<b>Media</b>	
Medium:	Water or glycol-water mixture, according to VDI 2035
<b>Operating temperatures and operating pressure</b>	
DN15 to DN150, PN16	2...180 °C: max. 1600 kPa
DN15 to DN125, PN25	2...120 °C: max. 2500 kPa
	120...160 °C: max. 2250 kPa
	160...200 °C: max. 2000 kPa
Maximum temperature differential in alternating hot/cold water use:	60 K
<b>Connection/Sizes</b>	
Connection:	Flanged per ISO 7005-2 Nodular iron (GGG40.3)
<b>Specifications</b>	
Action:	Stem down to close
Nominal pressure rating:	PN 16/ PN 25
Flow characteristic:	Equal percentage
Rangeability:	50:1
Leakage rate:	≤0.05 % of $k_{vs}$ (DN15 - DN80) ≤0.1 % of $k_{vs}$ (DN100 - DN150)
Stroke:	20 mm (DN15 to DN 80) 38 mm (DN100 to DN150)
Packaging:	Spring-loaded PTFE cone rings

## CONSTRUCTION

Overview	Components	Materials
	<b>1</b> Stem	Stainless steel
	<b>2</b> Valve body	Nodular iron (GGG40.3), Flanged per ISO 7005-2
	<b>Not depicted components:</b>	
	Seat	Stainless steel
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

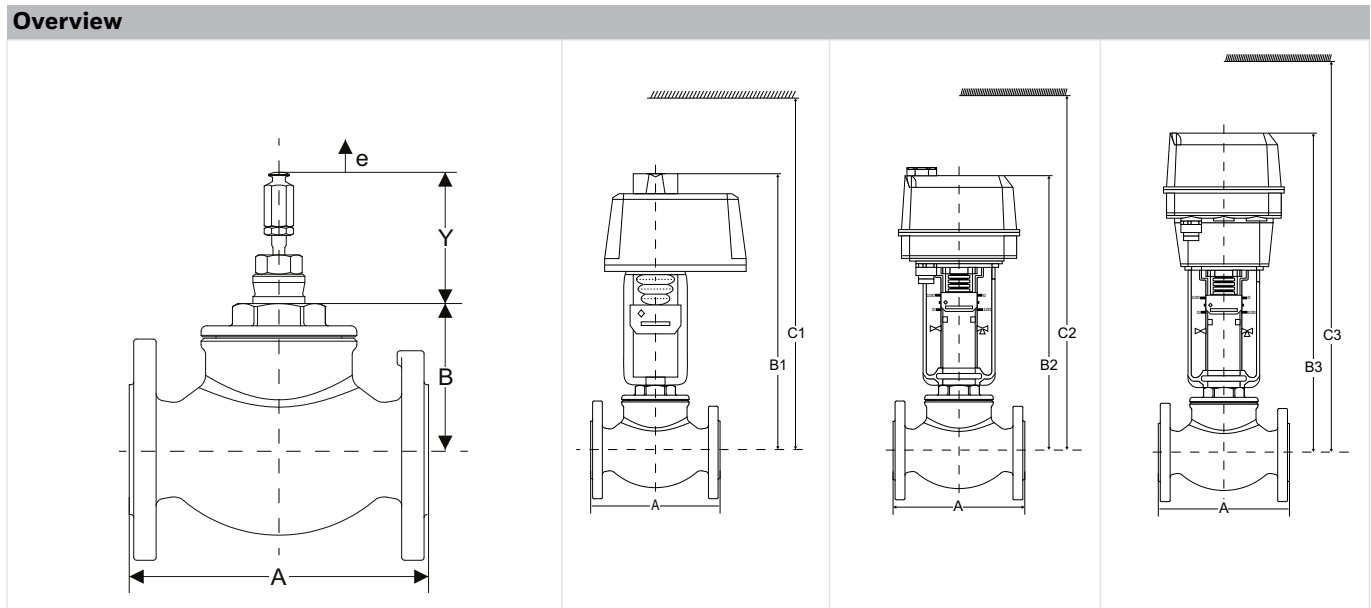
#### DF..B..NI

Actuator		Valve Size										
Model	Force	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150
ML6420A ML6425A/B ML7420A ML7425A/B	600 N	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	-	-	-
ML6421A ML7421A	1800 N	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	1600 kPa	-	-	-
ML6421B ML7421B	1800 N	-	-	-	-	-	-	-	-	1600 kPa	1600 kPa	1600 kPa

#### DF..C..

Actuator		Valve Size										
Model	Force	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	
ML6420A ML6425A/B ML7420A ML7425A/B	600 N	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	-	-	
ML6421A ML7421A	1800 N	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	2500 kPa	-	-	
ML6421B ML7421B	1800 N	-	-	-	-	-	-	-	-	2500 kPa	2500 kPa	

## DIMENSIONS



DN	A	B	Adjustment dimension (Valve in closed position) Y	Stroke e	ML6421A ML7421A		ML6420 ML7420		ML6425 ML7425	
					B1	C1	B2	C2	B3	C3
15	130	95	89	20	360	455	340	420	380	460
20	150				360	455	340	420	380	460
25	160				360	455	340	420	380	460
32	180	99			365	460	345	425	385	465
40	200				365	460	345	425	385	465
50	230	101			365	465	345	425	385	465
65	290	106			370	470	350	430	390	470
80	310	150			415	510	395	475	435	515
					ML6421B ML7421B					
100	350	150	133	38	480	580	-	-	-	-
125	400	156			485	590	-	-	-	-
150	480	157			485	590	-	-	-	-

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>D</b>	<b>F</b>	<b>15</b>	<b>B</b>	<b>0.25</b>	<b>NI</b>
Type of valve	Type of thread	DN	PN	$k_{VS}$ -value	Special
D = 2-way valve	F = Flanged	15 20 25 32 40 50 65 80 100 125 150	B = 16 C = 25	0.4 0.63 1.0 1.6 2.5 4.0 6.3 10 16 25 40 63 100 160 250 360	NI = Nodular iron

**2-Way Linear Valve - Flanged****DF..B..NI**

DN	k <sub>VS</sub> -value	Connection	Nominal pressure	Description	OS.-No.
15	0.4	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 0.4, nodular iron	DF15B0.4NI
15	0.63	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 0.63, nodular iron	DF15B0.63NI
15	1.0	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 1.0, nodular iron	DF15B1.0NI
15	1.6	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 1.6, nodular iron	DF15B1.6NI
15	2.5	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 2.5, nodular iron	DF15B2.5NI
15	4.0	flanged	PN16	2-way valve, flanged, DN15, PN16, k <sub>VS</sub> 4.0, nodular iron	DF15B4.0NI
20	6.3	flanged	PN16	2-way valve, flanged, DN20, PN16, k <sub>VS</sub> 6.3, nodular iron	DF20B6.3NI
25	10	flanged	PN16	2-way valve, flanged, DN25, PN16, k <sub>VS</sub> 10, nodular iron	DF25B10NI
32	16	flanged	PN16	2-way valve, flanged, DN32, PN16, k <sub>VS</sub> 16, nodular iron	DF32B16NI
40	25	flanged	PN16	2-way valve, flanged, DN40, PN16, k <sub>VS</sub> 25, nodular iron	DF40B25NI
50	40	flanged	PN16	2-way valve, flanged, DN50, PN16, k <sub>VS</sub> 40, nodular iron	DF50B40NI
65	63	flanged	PN16	2-way valve, flanged, DN65, PN16, k <sub>VS</sub> 63, nodular iron	DF65B63NI
80	100	flanged	PN16	2-way valve, flanged, DN80, PN16, k <sub>VS</sub> 100, nodular iron	DF80B100NI
100	160	flanged	PN16	2-way valve, flanged, DN100, PN16, k <sub>VS</sub> 160, nodular iron	DF100B160NI
125	250	flanged	PN16	2-way valve, flanged, DN125, PN16, k <sub>VS</sub> 250, nodular iron	DF125B250NI
150	360	flanged	PN16	2-way valve, flanged, DN150, PN16, k <sub>VS</sub> 360, nodular iron	DF150B360NI

**DF..C..**

DN	k <sub>VS</sub> -value	Connection	Nominal pressure	Description	OS.-No.
15	0.4	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 0.4, nodular iron	DF15C0.4
15	0.63	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 0.63, nodular iron	DF15C0.63
15	1.0	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 1.0, nodular iron	DF15C1.0
15	1.6	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 1.6, nodular iron	DF15C1.6
15	2.5	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 2.5, nodular iron	DF15C2.5
15	4.0	flanged	PN25	2-way valve, flanged, DN15, PN25, k <sub>VS</sub> 4.0, nodular iron	DF15C4.0
20	6.3	flanged	PN25	2-way valve, flanged, DN20, PN25, k <sub>VS</sub> 6.3, nodular iron	DF20C6.3
25	10	flanged	PN25	2-way valve, flanged, DN25, PN25, k <sub>VS</sub> 10, nodular iron	DF25C10
32	16	flanged	PN25	2-way valve, flanged, DN32, PN25, k <sub>VS</sub> 16, nodular iron	DF32C16
40	25	flanged	PN25	2-way valve, flanged, DN40, PN25, k <sub>VS</sub> 25, nodular iron	DF40C25
50	40	flanged	PN25	2-way valve, flanged, DN50, PN25, k <sub>VS</sub> 40, nodular iron	DF50C40
65	63	flanged	PN25	2-way valve, flanged, DN65, PN25, k <sub>VS</sub> 63, nodular iron	DF65C63
80	100	flanged	PN25	2-way valve, flanged, DN80, PN25, k <sub>VS</sub> 100, nodular iron	DF80C100
100	160	flanged	PN25	2-way valve, flanged, DN100, PN25, k <sub>VS</sub> 160, nodular iron	DF100C160
125	250	flanged	PN25	2-way valve, flanged, DN125, PN25, k <sub>VS</sub> 250, nodular iron	DF125C250

**Accessories****Overview associated actuators**

Valve stroke	Control signal		Voltage	Runtime	Part No.
	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
		24 V AC	30 s	ML6420A3031
	38 mm effective stroke, 1800N	230 V AC	60 s	ML6420A3007
24 V AC		30 s	ML6420A3023	
	<b>ML7420A</b> <b>Actuator: modulating 0/2 ... 10 V</b>			
	20 mm effective stroke, 600N	24 V AC	60 s 30 s	ML7420A6009 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 38 mm effective stroke, 1800N	24 V AC	114 s 210 s	ML7421A3004 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 20 mm effective stroke, 600N, spring return retract	24 V AC	108 s	ML7425A6008 ML7425B6007

**Spare Parts**

**Naming key spare parts**

ASV	-PA	-4	-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
	PA = Plug assembly	4	100
	OR = O-ring for linear valves	6	160
			250
			360

Overview	Description	Dimension	Part No.
	<b>1 Stem button assy</b>	DN15 - DN150	ASV-SBA-2
	<b>2 Packing nut</b>	DN15 - DN80	ASV-PN-5
		DN100 - DN150	ASV-PN-6
	<b>3 Packing</b>	DN15 - DN80	ASV-PAC-5
		DN100 - DN150	ASV-PAC-6
	<b>4 O-rings</b>		
	10 pcs.	DN40	ASV-OR-1
	10 pcs.	DN50	ASV-OR-2
	5 pcs.	DN65	ASV-OR-3
	5 pcs.	DN80 - DN100	ASV-OR-4
	5 pcs.	DN125 - DN150	ASV-OR-5
	<b>5 Plug assembly</b>		
		DN25, k <sub>VS</sub> 25	ASV-PA-4-25
		DN40, k <sub>VS</sub> 40	ASV-PA-4-40
		DN65, k <sub>VS</sub> 63	ASV-PA-4-63
		DN80, k <sub>VS</sub> 100	ASV-PA-4-100
		DN100, k <sub>VS</sub> 160	ASV-PA-4-160
		DN125, k <sub>VS</sub> 250	ASV-PA-4-250
		DN150, k <sub>VS</sub> 360	ASV-PA-4-360



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