

# Centra Linear Valve VDE...M/VXE...M

## 2-Way and 3-Way Small Linear Valves PN16

Pressure-balanced

### APPLICATION

These small linear valves are used in combination with small electric linear valve actuators for the control of hot and/or chilled water for fan coil units, small reheaters/recoolers in electric/electronic temperature control systems.

Because of the pressure-balanced plug, the close-off pressure is equal to the system pressure.

### SPECIAL FEATURES

- Pressure-balanced
- Standard external threads for flat sealing connections
- Range of fittings available for different connection types
- Adjustment cap for manual operation
- Easy mounting of actuator via standard M30 x 1,5 screw connection




VDE

VXE

### TECHNICAL DATA

Media	
Medium:	Water with max. 50 % glycol according to VDI 2035
Operating temperature	
DN25 - DN40:	2...130 °C
Connection/Sizes	
Valve size:	DN25 - DN40
Actuator:	M30 x 1.5 mm
Specifications	
Model:	2-way valve: VDE 3-way valve: VXE
Action:	Stem up to close port A-AB
Stroke:	6.5 mm
Rangeability:	50:1
Nominal pressure rating:	PN 16
Leakage rate:	≤ 0.05 % of kvs
Flow Characteristics:	Linear for port A-AB, Linear for port B-AB

CONSTRUCTION

Overview	Components	Materials
	1 Valve body	Brass resistant to dezincification
	<b>Not depicted components:</b>	
	Stem Plug	Stainless steel Brass, EPDM seals

METHOD OF OPERATION

All types of valves should be mounted in the return flow. If the  $\Delta p$ -values exceed 60 kPa, attention should be paid to the development of noise.

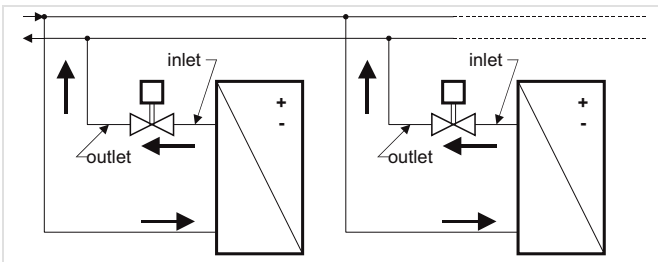
A built-in return spring produces a closing force.

The valves are supplied with an adjustment cap for manual operation and to protect the stem. This allows the stem set up for filling or initial heating/cooling during the building construction phase without the use of a controller or actuator.

The small electric valve actuators provide automatic control during the opening and closing movement of the valve stem.

VDE Valves (2-way valves)

Direction of flow always from port A to port AB  
Port AB: Outlet



INSTALLATION GUIDELINES

Mounting

When installing the valve care must be taken that the flow direction is correct (see chapter Method of Operation). The valve must not be mounted with the stem pointing downward.

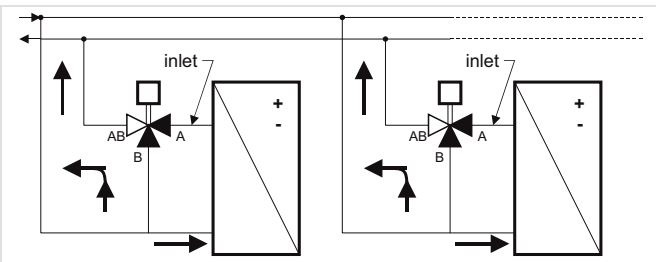
The adjustment cap must be removed from the valve only when the actuator is fitted. The valve should be installed as stress-free as possible with a tightening torque of 25 to 30 Nm.

The valve is supplied complete with mounting instructions.

VXE Valves (3-way valves)

These valves are preferably used as mixing valves, this means:

Port AB: Total flow outlet  
Port A: Controlled flow inlet  
Port B: Bypass inlet



## TECHNICAL CHARACTERISTICS

Close off pressure ratings in kPa

### VDE Valves (2-way valves)

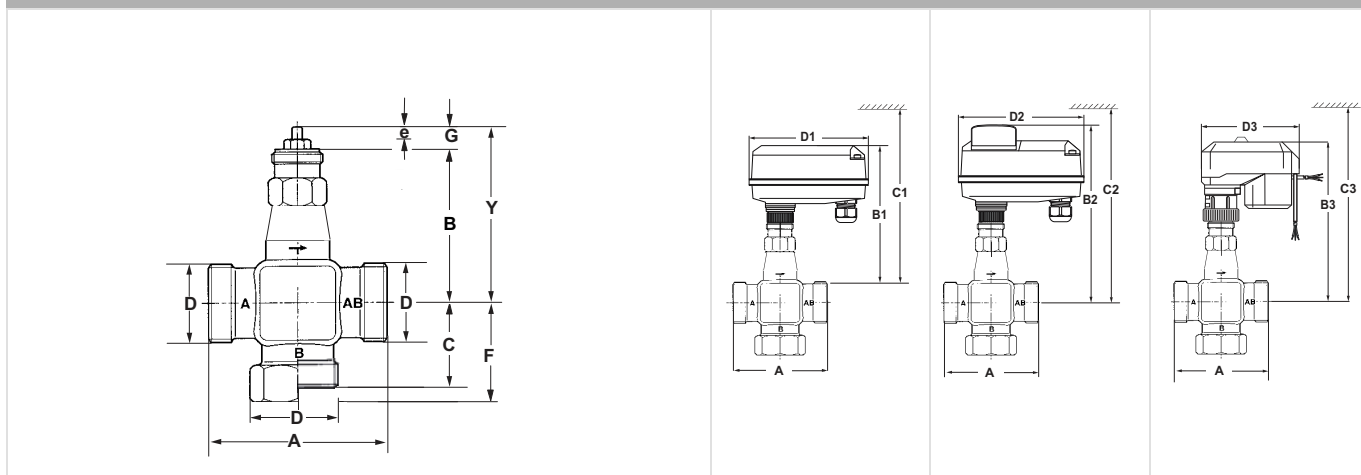
Actuator		Valve Size		
Model	Force	DN25	DN32	DN40
M6410C M6410L M7410C M7410E	300 N	1600 kPa	1200 kPa	1000 kPa
ML6435B ML7430E ML7435E	400 N	1600 kPa	1200 kPa	1000 kPa

### VXE Valves (3-way valves)

Actuator		Valve Size		
Model	Force	DN25	DN32	DN40
M6410C M6410L M7410C M7410E	300 N	600 kPa	300 kPa	-
ML6435B ML7430E ML7435E	400 N	1600 kPa	1200 kPa	1000 kPa

## DIMENSIONS

### Overview



DN	D	A	B	C	F	G	Adjustment dimension (Valve in closed position)	Stroke	ML7435E ML6435B			ML7430E			M6410C M6410L M7410C M7410E		
							Y		B1	C1	D1	B2	C2	D2	B3	C3	D3
25	G 1½"	105	92	53	62		200	6.5	173	253	126	189	269	126	179	259	109
32	G 2"	105	92	53	62	18			173	253	126	189	269	126	179	259	109
40	G 2¼"	130	98	65	77				179	259	126	195	275	126	185	265	109

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

VD	E	25	B	4.0	M
Type of valve	Type of thread	DN	PN	k <sub>VS</sub> -value	Special (optional)
VD = 2-way small linear valve	E = External	25	B = 16	4.0	M = Modulating
VX = 3-way small linear valve		32		6.3	FS = Flat Sealing
		40		10	
				16	
				25	

### VDE 2-way small linear valves, flat sealing

DN	Connection	k <sub>VS</sub> -value	Nominal pressure	Description	OS-No.
25	External thread	4.0	PN16	2-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 4.0, mod	VDE25B4.0M
25		6.3	PN16	2-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 6.3, mod	VDE25B6.3M
25		10	PN16	2-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 10, mod	VDE25B10M
32		16	PN16	2-way small linear valve, external thread, DN32, PN16, k <sub>VS</sub> 16, mod	VDE32B16M
40		25	PN16	2-way small linear valve, external thread, DN40, PN16, k <sub>VS</sub> 25, mod	VDE40B25M

### VXE 3-way small linear valves, flat sealing

DN	Connection	k <sub>VS</sub> -value	Nominal pressure	Description	OS-No.
25	External thread	4.0	PN16	3-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 4.0, mod	VXE25B4.0MFS
25		6.3	PN16	3-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 6.3, mod	VXE25B6.3MFS
25		10	PN16	3-way small linear valve, external thread, DN25, PN16, k <sub>VS</sub> 10, mod	VXE25B10MFS
32		16	PN16	3-way small linear valve, external thread, DN32, PN16, k <sub>VS</sub> 16, mod	VXE32B16MFS
40		25	PN16	3-way small linear valve, external thread, DN40, PN16, k <sub>VS</sub> 25, mod	VXE40B25MFS

## Accessories

## Overview associated actuators

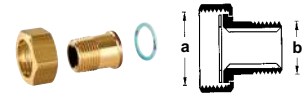
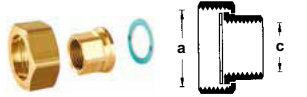
Valve stroke	Control signal	
	3-point (230 V AC or 24 V AC power supply)	0...10 V (24 V AC power supply)
6.5 mm	M6410C M6410L M7410C ML6435B	M7410E ML7430E ML7435E

	Description	Power Supply	Part No.
	<b>M7410C</b> <b>Actuator: 6.5 mm stroke, 300 N, 3-point / floating</b>		
		24 V AC	M7410C1015
	<b>M6410</b> <b>Actuator: 6.5 mm stroke, 300 N, 3-point, floating</b>		
	Manual override	24 V AC	M6410C2031
	Manual override, 2 auxiliary switches		M6410C4037
	Manual override	230 V AC	M6410L2031
	Manual override, 2 auxiliary switches		M6410L4037
	<b>M7410E</b> <b>Actuator: 6.5 mm stroke, 300 N, 0/2 - 10 V, modulating</b>		
		24 V AC	M7410E1028
	Manual override		M7410E2034
	Manual override, 2 auxiliary switches		M7410E4030
	<b>ML6435B</b> <b>Actuator: 6.5 mm stroke, 400 N, 3-point, floating</b>		
	Spring return retract	24 V AC	ML6435B1008
		230 V AC	ML6435B1016
	<b>ML7430E</b> <b>Actuator: 6.5 mm stroke, 400 N, 0/2 - 10 V, modulating</b>		
	Manual override	24 V AC	ML7430E1005
	<b>ML7435E</b> <b>Actuator: 6.5 mm stroke, 400 N, 0/2 - 10 V, modulating</b>		
	Spring return retract	24 V AC	ML7435E1004

Naming key linear valves accessories

ASV	-CS	-25	-O	-F
Accessories for V&A	Range	DN	Fitting type	Sealing type
ASV= Accessories for V&A	CS = Connection set	25 32 40	O = Outer thread I = Inner thread	F = Flat

	<b>ASV-CS-xx-O-F</b>	<b>Flat connection set</b> Consisting of one union nut, one tailpiece with external thread and one gasket		
		a = G1 <sup>1</sup> / <sub>2</sub> " b = R1"	DN25	ASV-CS-25-O-F
		a = G2" b = R1 <sup>1</sup> / <sub>4</sub> "	DN32	ASV-CS-32-O-F
		a = G2 <sup>1</sup> / <sub>4</sub> " b = R1 <sup>1</sup> / <sub>2</sub> "	DN40	ASV-CS-40-O-F
	<b>ASV-CS-xx-I-F</b>	<b>Flat connection set</b> Consisting of one union nut, one tailpiece with internal thread and one gasket		
		a: G1 <sup>1</sup> / <sub>2</sub> " c: Rp1"	DN25	ASV-CS-25-I-F
		a: G2" c: Rp1 <sup>1</sup> / <sub>4</sub> "	DN32	ASV-CS-32-I-F
		a: G2 <sup>1</sup> / <sub>4</sub> " c: Rp1 <sup>1</sup> / <sub>2</sub> "	DN40	ASV-CS-40-I-F

Note: The VDE valves need two connection sets, the VXE valves need three connection sets.



Manufactured for  
and on behalf of  
Pittway 3 Sàrl, Z.A., La Pièce 4  
1180 Rolle, Switzerland

For more information  
**homecomfort.resideo.com/europe**  
Ademco 1 GmbH, Hardhofweg 40,  
74821 MOSBACH, GERMANY  
Phone: +49 6261 810  
Fax: +49 6261 81309

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