

DIVERTING VALVES

# DIVERTING VALVE SERIES VZC, VZD

The ESBE VZC and VZD series 3-way diverting valve for heat pumps, under floor heating or HVAC applications. Three types of connections are available, internal thread, external thread or compression fittings.

### OPERATION

ESBE series VZC and VZD is a range of compact diverting valves in brass for use in heat pumps, under floor heating or HVAC applications. The main feature is the ability to rapidly change the flow direction between two circuits meaning a energy-efficient operation.

ESBE diverting valve series VZC and VZD has a built-in function for automatic valve motion after 7 days and nights of non-operation.

### FUNCTION

Change-over from A- to B-circuit is performed by a signal from a control unit. The position indicator shows the flow path.

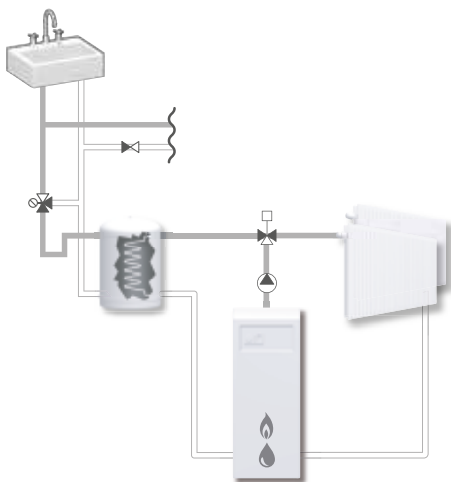
### VERSIONS

ESBE VZC is available without cable or with detachable cable and has an enclosure rating of IP20. Series VZC without cable is supplied with a socket type Molex for connection to a cable of own choice, with a maximum length of 100 m. ESBE VZD is delivered with fixed cable and has an enclosure rating of IP40. As an option the ESBE VZC and VZD series is available with auxiliary switch.

### SERVICE AND MAINTENANCE

Vital parts like valve inserts and the entire actuator is easily replaceable. The entire actuator can be replaced without dismantling the valve. When changing the valve insert the system must be depressurized.

### INSTALLATION



VZCx00

Internal thread, IP20 without/detachable cable

External thread, IP20 without/detachable cable

Compression fitting, IP20 without/detachable cable



VZDx00

Internal thread, IP40 fixed cable

External thread, IP40 fixed cable

Compression fitting, IP40 fixed cable

### DIVERTING VALVE VZC, VZD DESIGNED FOR

- Heating
- Ventilation
- Comfort Cooling
- Zone
- Floor heating

### OPTION

Cable ALZ801, detachable version IP20,

3-wire \_\_\_\_\_ Art. No. 46050300\*

6-wire for use with auxiliary switch \_\_\_\_\_ Art. No. 46050400\*

\* Compatible with article numbers 4306XXXX and 4308XXXX (not 4300XXXX)

### TECHNICAL DATA

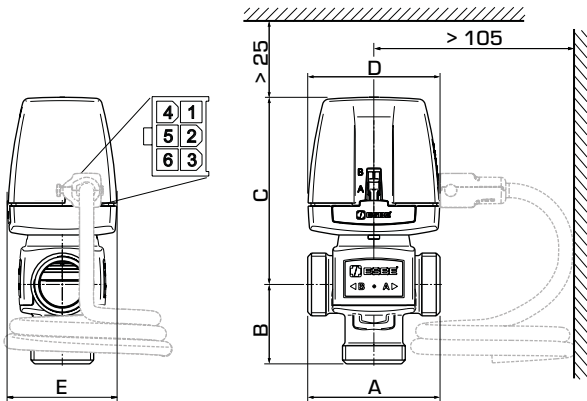
Pressure class: \_\_\_\_\_ PN 6  
 Media temperature: \_\_\_\_\_ max. (continuously) +95°C  
 \_\_\_\_\_ max. (temporarily) +110°C  
 \_\_\_\_\_ min. +5°C  
 Max. differential pressure drop: \_\_\_\_ Diverting, 80 kPa (0,8 bar)  
 \_\_\_\_\_ Mixing, 50 kPa (0,5 bar)  
 Leakrate in % of flow: \_\_\_\_\_ 0  
 Connections: \_\_\_\_\_ Female thread (Rp), EN 10226-1  
 \_\_\_\_\_ Male thread (G), ISO 228/1  
 \_\_\_\_\_ Compression fitting (CPF), EN 1254-2  
 Ambient temperature: \_\_\_\_\_ max. +60°C  
 \_\_\_\_\_ min. 0°C  
 Power supply: \_\_\_\_\_ 230 ± 10% V AC, 50 Hz  
 Max. Power consumption \_\_\_\_\_ 15 VA  
 Power consumption idle: \_\_\_\_\_ 0,9 VA  
 Control signal: \_\_\_\_\_ 2-point SPST (Single Pole Single Throw)  
 Enclosure rating: \_\_\_\_\_ series VZC, IP20  
 \_\_\_\_\_ series VZD, IP40  
 Protection class: \_\_\_\_\_ II  
 Running time: \_\_\_\_\_ 3 s  
 Rating auxiliary switch: \_\_\_\_\_ 2(1)A 250 V AC  
 Cable length: \_\_\_\_\_ 1,6 m

### Material

Valve body: \_\_\_\_\_ Dezincification resistant brass DZR  
 Plug and cover plate: \_\_\_\_\_ PPS  
 Spindle: \_\_\_\_\_ Stainless steel, SS 2346  
 O-rings: \_\_\_\_\_ EPDM

CE LVD 2014/35/EU  
 EMC 2014/30/EU  
 RoHS 2011/65/EU  
 PED 2014/68/EU, article 4.3

# DIVERTING VALVE SERIES VZC, VZD



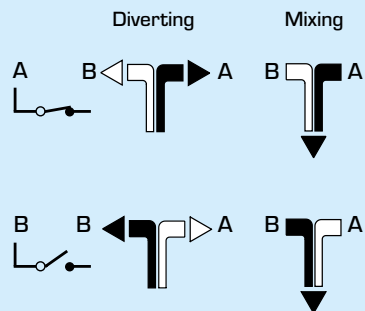
VZC161

## SERIES VZC161, INTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43060200	VZC161	20	6,0	Rp 3/4"	70	42	99	70	58	Detachable cable		0,5

\* Kvs-value in diverting mode measured as m<sup>3</sup>/h at a pressure drop of 1 bar; Kvs-value in mixing mode 10% lower.

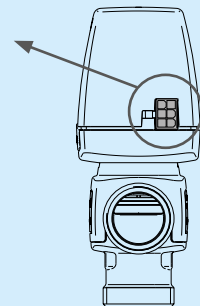
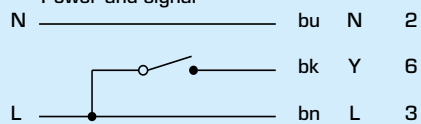
### FLOW CONNECTION - VALVE



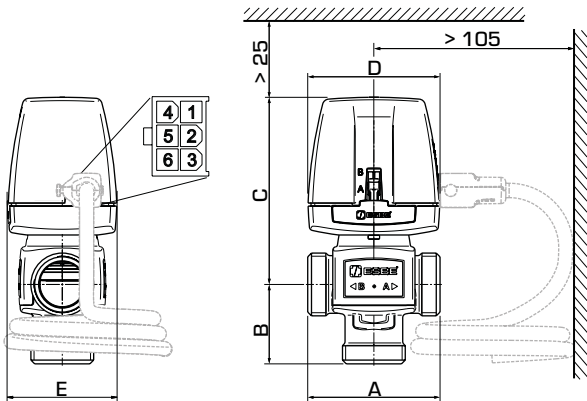
### WIRING - ACTUATOR

Connector type Molex.

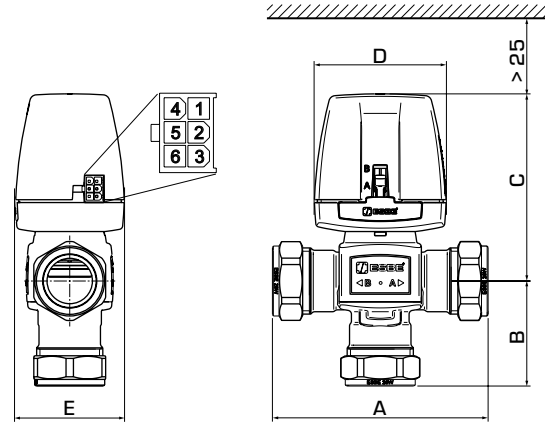
Power and signal



# DIVERTING VALVE SERIES VZC, VZD



VZC162



VZC263

## SERIES VZC162, EXTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43060600	VZC162	15	3,5	G 3/4"	70	42	99	70	58	Detachable cable		0,5
43060700	VZC162	20	6,0	G 1"	70	42	99	70	58	Without cable		0,5
43060800	VZC162	20	6,0	G 1"	70	42	99	70	58	Detachable cable		0,5

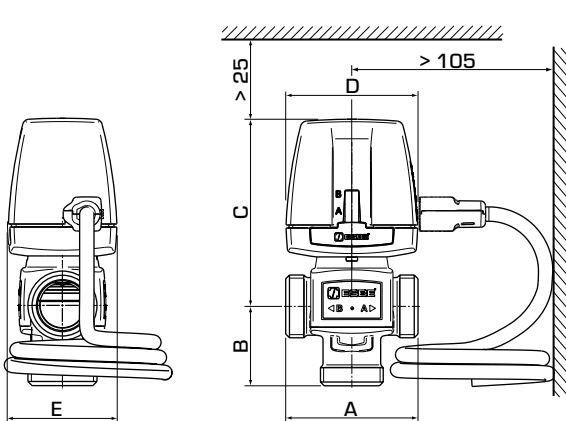
## SERIES VZC263, COMPRESSION FITTING

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43061400	VZC263	20	4,5	CPF 22 mm	111	49	99	70	58	Detachable cable		0,6
43061600	VZC263	25	6,0	CPF 28 mm	114	56	99	70	58	Detachable cable		0,7

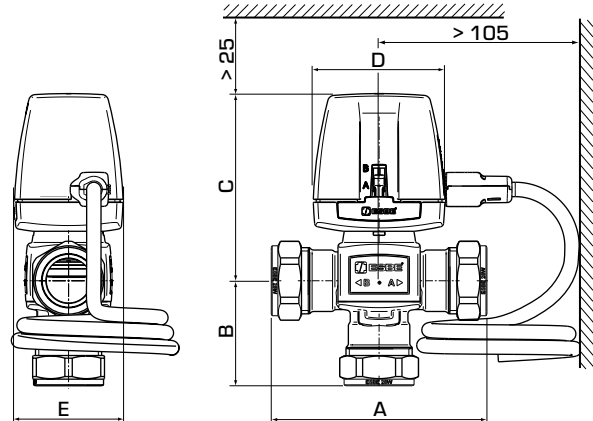
\* Kvs-value in diverting mode measured as m<sup>3</sup>/h at a pressure drop of 1 bar. Kvs-value in mixing mode 10% lower. CPF = compression fitting

For more variants,  
please see next page

# DIVERTING VALVE SERIES VZC, VZD



VZD161, VZD162



VZD263

### SERIES VZD161, INTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43080100	VZD161	20	6,0	Rp 3/4"	70	42	99	70	58	Fixed cable		0,5

### SERIES VZD162, EXTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43080300	VZD162	15	3,5	G 3/4"	70	42	99	70	58	Fixed cable		0,5
43080400	VZD162	20	6,0	G 1"	70	42	99	70	58	Fixed cable		0,5

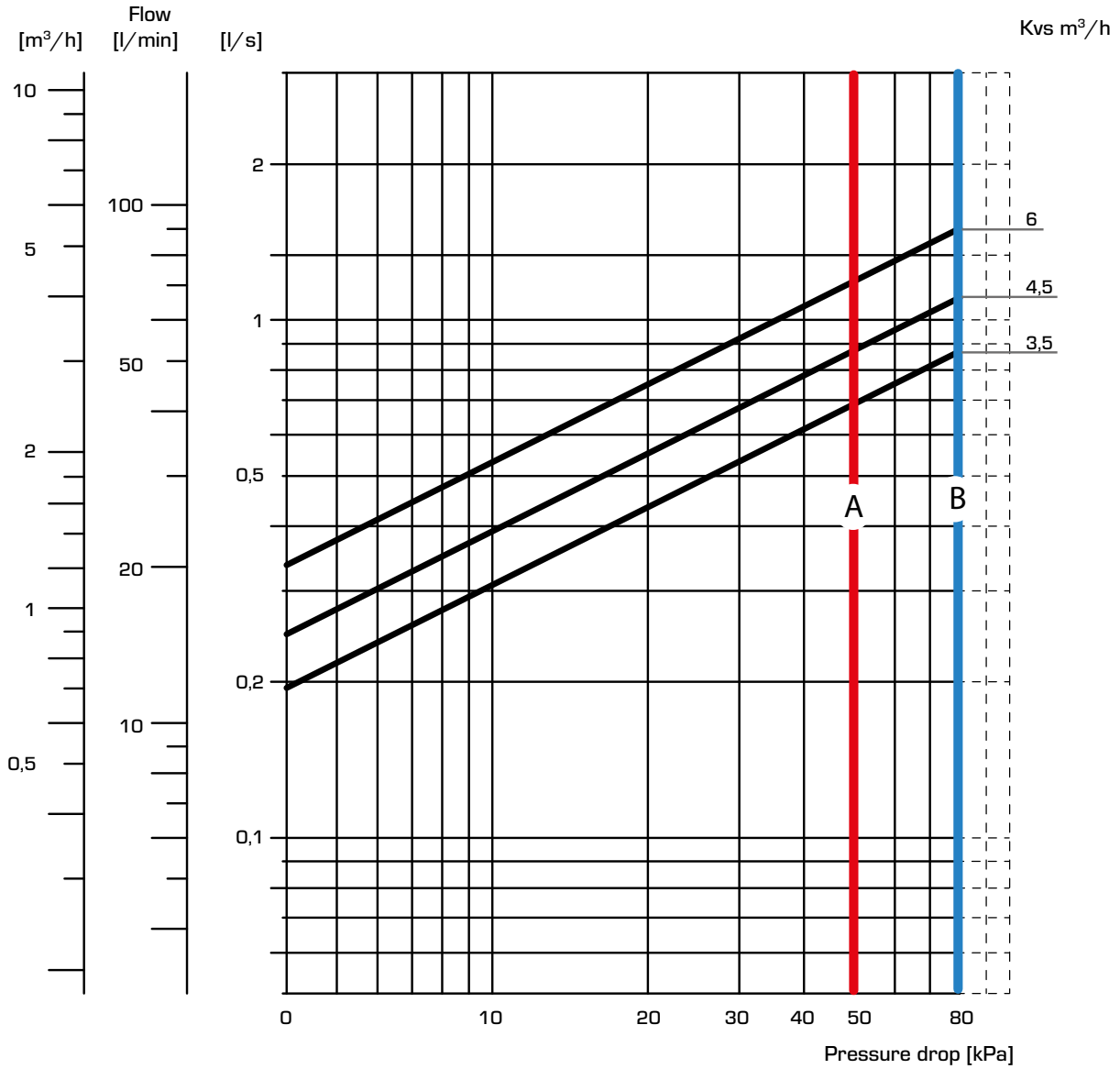
### SERIES VZD263, COMPRESSION FITTING

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43080700	VZD263	20	4,5	CPF 22 mm	111	49	99	70	58	Fixed cable		0,6
43080800	VZD263	25	6,0	CPF 28 mm	114	56	99	70	58	Fixed cable		0,7

\* Kvs-value in diverting mode measured as m<sup>3</sup>/h at a pressure drop of 1 bar. Kvs-value in mixing mode 10% lower. CPF = compression fitting

# DIVERTING VALVE SERIES VZC, VZD

## CAPACITY DIAGRAM



- A - max ΔP Mixing
  - B - max ΔP Diverting
- 100 kPa = 1 bar = 10 mWC