

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.

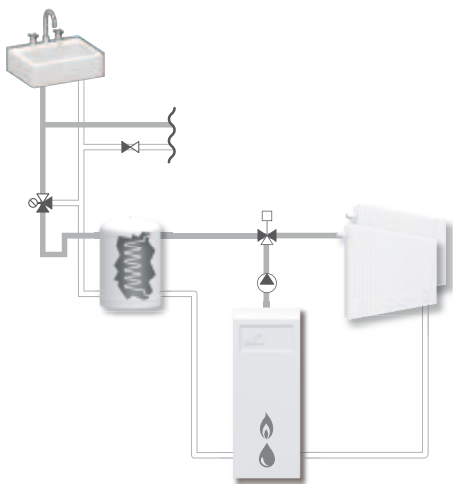
### VERSIONS

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



VZC100

Internal thread, IP20 without/detachable cable

External thread, IP20 without/detachable cable

Compression fitting, IP20 without/detachable cable



VZD100

Internal thread, IP40 fixed cable

External thread, IP40 fixed cable

Compression fitting, IP40 fixed cable

### DIVERTING VALVE VZC, VZD DESIGNED FOR

- Heating
- Comfort Cooling
- Potable water
- Floor heating
- Solar heating
- Ventilation
- Zone
- District Hot Water
- District Heating
- District Cooling

### OPTION

Cable ALZ801, fixed version IP40,

3-wire \_\_\_\_\_ Art. No. 4605 01 00\*

6-wire for use with auxiliary switch \_\_\_\_\_ Art. No. 4605 02 00\*

Cable ALZ801, detachable version IP20,

3-wire \_\_\_\_\_ Art. No. 4605 03 00\*

6-wire for use with auxiliary switch \_\_\_\_\_ Art. No. 4605 04 00\*

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

### TECHNICAL DATA

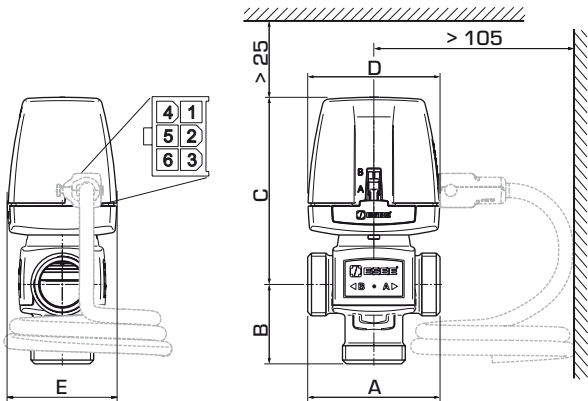
Pressure class: \_\_\_\_\_ PN 6  
 Media temperature: \_\_\_\_\_ max. (continuously) +95°C  
 \_\_\_\_\_ max. (temporarily) +110°C  
 \_\_\_\_\_ min. +5°C  
 Max. differential pressure drop: \_\_\_\_\_ Diverting, 80 kPa (0.8 bar)  
 \_\_\_\_\_ Mixing, 50 kPa (0.5 bar)  
 Leakrate in % of flow: \_\_\_\_\_ 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 2006/95/EC  
 EMC 2004/108/EC  
 RoHS 2011/65/EC  
 PED 97/23/EC, article 3.3

# DIVERTING VALVE SERIES VZC, VZD



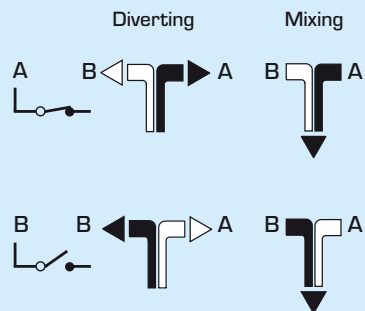
VZC161

## SERIES VZC161, INTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
4306 02 00	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.

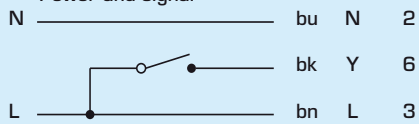
### FLOW CONNECTION - VALVE



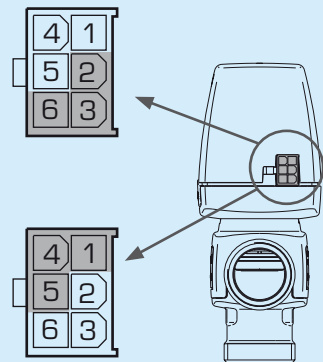
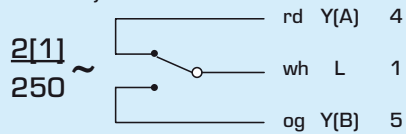
### WIRING - ACTUATOR

Connector type Molex.

Power and signal

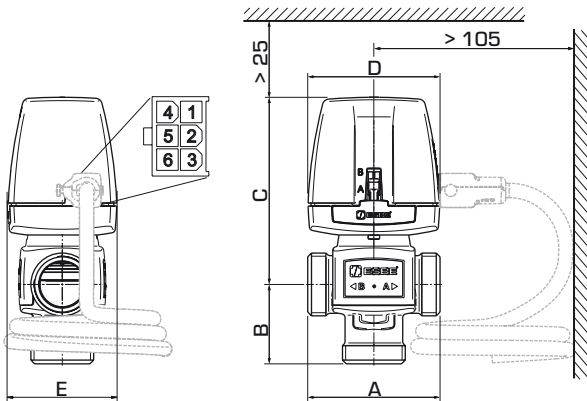


Auxiliary switch

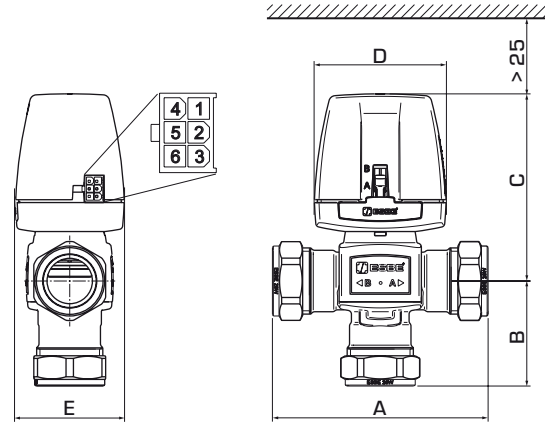


Diverting valve with Auxiliary switch, series: VZC152

# DIVERTING VALVE SERIES VZC, VZD



VZC152, VZC162



VZC263

## SERIES VZC152/VZC162, EXTERNAL THREAD

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
4306 06 00	VZC162	15	3.5	G 3/4"	70	42	99	70	58	Detachable cable		0.5
4306 07 00	VZC162	20	6.0	G 1"	70	42	99	70	58	Without cable		0.5
4306 08 00	VZC162	20	6.0	G 1"	70	42	99	70	58	Detachable cable		0.5
4306 12 00	VZC152										1)	0.5

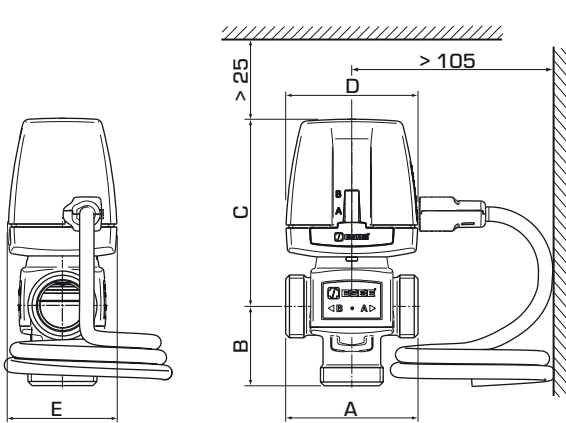
## SERIES VZC263, COMPRESSION FITTING

Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
4306 14 00	VZC263	20	4.5	CPF 22 mm	111	49	99	70	58	Detachable cable		0.6
4306 16 00	VZC263	25	6.0	CPF 28 mm	114	56	99	70	58	Detachable cable		0.7

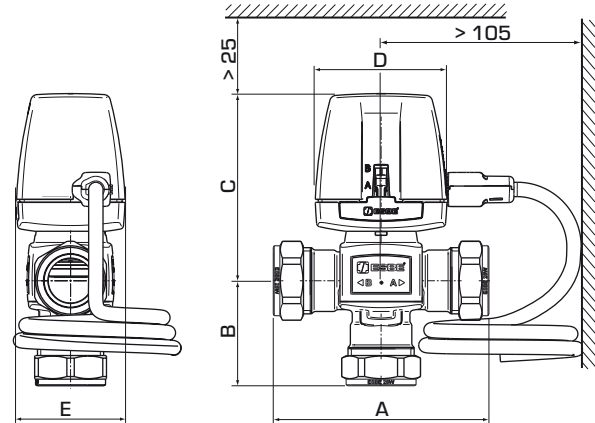
\* Kvs-value in diverting mode measured as m<sup>3</sup>/h at a pressure drop of 1 bar. Kvs-value in mixing mode 10% lower. CPF = compression fitting  
Note 1) With auxiliary switch

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]
4308 01 00	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]
4308 03 00	VZD162	15	3.5	G 3/4"	70	42	99	70	58	Fixed cable		0.5
4308 04 00	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]
4308 07 00	VZD263	20	4.5	CPF 22 mm	111	49	99	70	58	Fixed cable		0.6
4308 08 00	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