

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.

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.



VZCx00
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
- Comfort Cooling
- Floor heating
- Ventilation
- Zone

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
 Media: _____ Heating water (in accordance with VDI2035)
 _____ Water / Glycol mixtures, max. 50%
 _____ Water / Ethanol mixtures, max. 28%
 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
 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



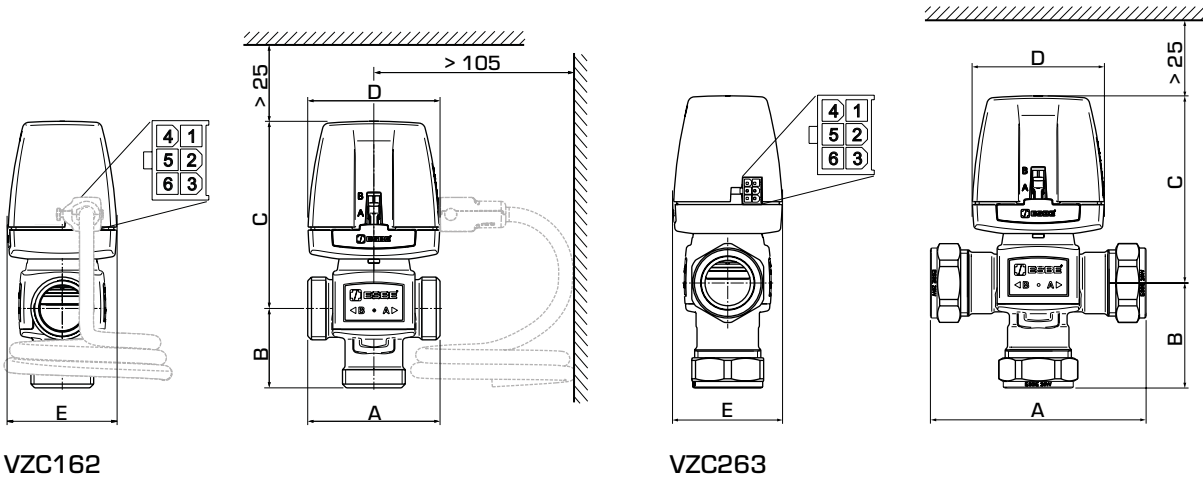
LVD 2014/35/EU
 EMC 2014/30/EU
 RoHS3 2015/863/EU



SI 2016 No. 1101
 SI 2016 No. 1091
 SI 2012 No. 3032

PED 2014/68/EU, article 4.3 / SI 2016 No. 1105 (UK)

DIVERTING VALVE SERIES VZC, VZD



VZC162

VZC263

SERIES VZC162, EXTERNAL THREAD

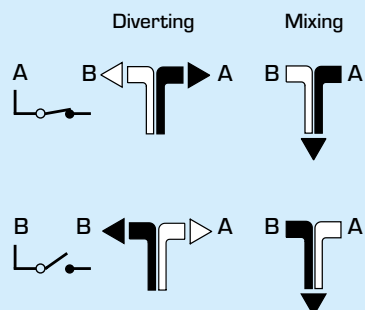
Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43060600	VZC162	15	3,5	G 3/4"	70	42	99	70	58	Detachable cable		0,5
43060700	VZC162	20	6,0	G 1"	70	42	99	70	58	Without cable		0,5
43060800	VZC162	20	6,0	G 1"	70	42	99	70	58	Detachable cable		0,5

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 m³/h at a pressure drop of 1 bar; Kvs-value in mixing mode 10% lower. CPF = compression fitting

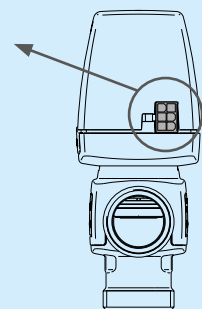
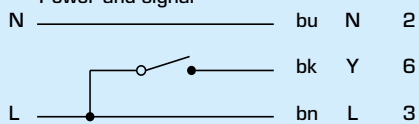
FLOW CONNECTION - VALVE



WIRING - ACTUATOR

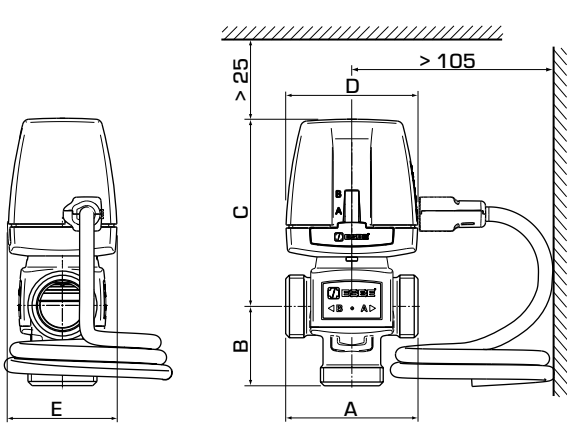
Connector type Molex.

Power and signal

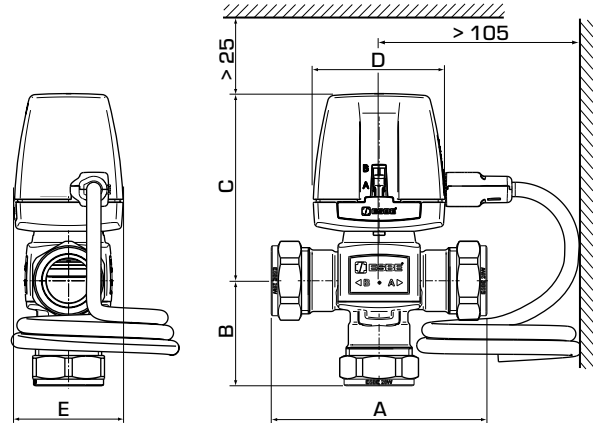


For more variants,
please see next page

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

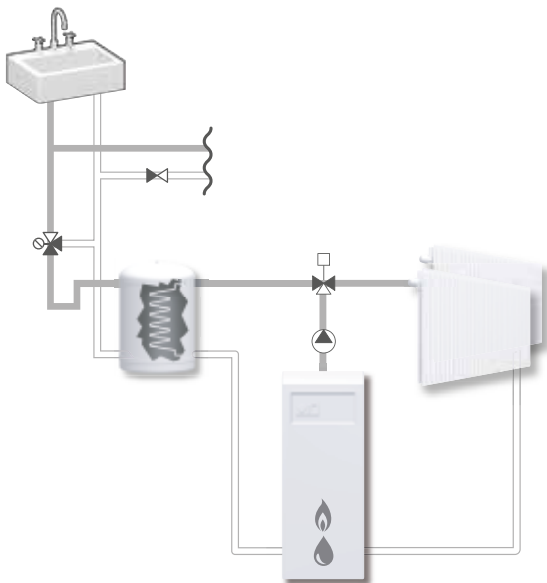
Art. No.	Reference	DN	Kvs*	Connection	A	B	C	D	E	Cable version	Note	Weight [kg]
43080300	VZD162	15	3,5	G 3/4"	70	42	99	70	58	Fixed cable		0,5
43080400	VZD162	20	6,0	G 1"	70	42	99	70	58	Fixed cable		0,5

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

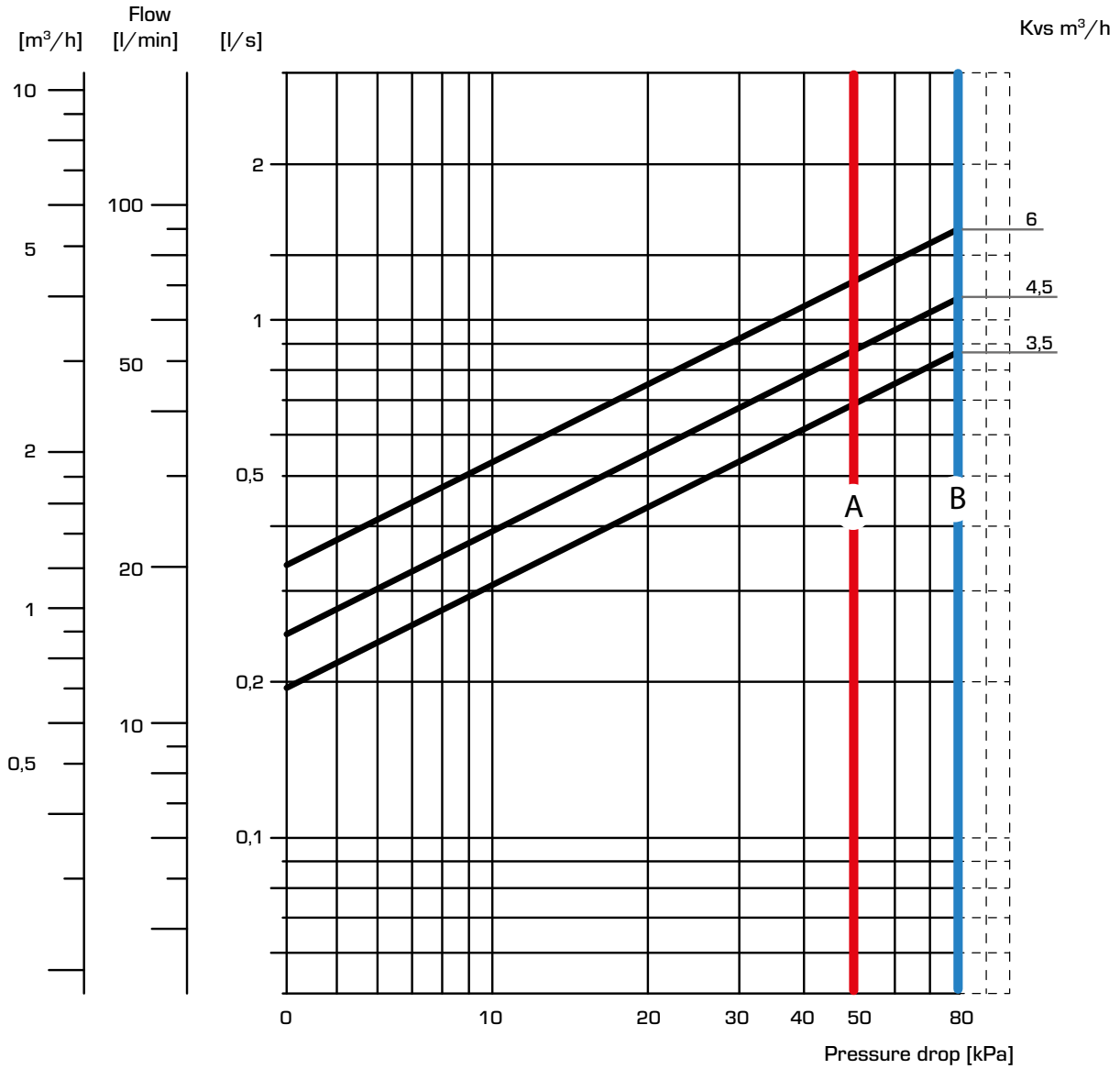
* Kvs-value in diverting mode measured as m³/h at a pressure drop of 1 bar. Kvs-value in mixing mode 10% lower. CPF = compression fitting

INSTALLATION EXAMPLES



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CAPACITY DIAGRAM



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