

THERMOSTATIC MIXING VALVE

BASIC SERIES VTA320, VTA520

The ESBE thermostatic mixing valves series VTA320/VTA520 offer high flow capacity and good functionality for universal applications, such as domestic hot water with or without HWC (hot water circulation) and smaller underfloor heating circuits.

OPERATION

Series VTA320/VTA520 are the number one choice for domestic hot water systems requiring an in-line scald safe* function and where further temperature control devices have been installed at the water taps. These series of valves are also suitable for domestic hot water installations equipped with HWC (hot water circulation).

Series VTA320/VTA520 are suitable for under floor heating applications, as long as special attention is paid to temperature range and flow requirements.

FUNCTION

Asymmetrical flow pattern. Scald safe*.

VERSIONS

The product range includes a wide choice of valves delivered with adapter fitting kits, each including three adapter fittings and two check valves, which facilitate easy installation and maintenance.

Supplied with a top cover, unless otherwise stated.

*) Scald safe means that in the case of a cold water failure, the hot water supply shuts off automatically.

MEDIA

These valves can handle the following types of media:

- Fresh water / Potable water
- Closed systems
- Water with antifreeze additive (glycol ≤ 50% mixture)



VTA320
Internal thread



External thread



Compression fitting



VTA520
External thread



With adapters,
external thread



With adapters,
compression fitting

VALVES ARE DESIGNED FOR

Series	Temperature range					Application
	20 - 43°C	30 - 70°C	35 - 60°C	45 - 65°C	50 - 75°C	
VTA320	○	●	●			Potable water, in line
VTA520	○			●	●	
VTA320						Potable water, point of use
VTA520						
VTA320		○	○			Solar heating
VTA520				○	○	
VTA320						Cooling
VTA520						
VTA320	○	○	○			Floor heating
VTA520	○			○		

● recommended ○ secondary alternative

TECHNICAL DATA

Pressure class: _____ PN 10
 Working pressure: _____ 1.0 MPa (10 bar)
 Differential pressure: _____ Mixing, max. 0.3 MPa (3 bar)
 Pressure drop diagram: _____ see catalogue page 127
 Media temperature: VTA320, VTA520 _____ max. 95°C
 VTA520 _____ temporarily max. 100°C
 Temperature stability: VTA320 _____ ±2°C*
 VTA520 _____ ±4°C**
 Connection: _____ Internal thread (Rp), EN 10226-1
 _____ External thread (G), ISO 228/1
 _____ External thread (R), EN 10226-1
 _____ Compression fitting (CPF), EN 1254-2

* Valid at unchanged hot/cold water pressure, minimum flow rate 4 l/min. Minimum temperature difference between hot water inlet and mixed water outlet 10°C.

** Valid at unchanged hot/cold water pressure, minimum flow rate 9 l/min. Minimum temperature difference between hot water inlet and mixed water outlet 10°C.

Material

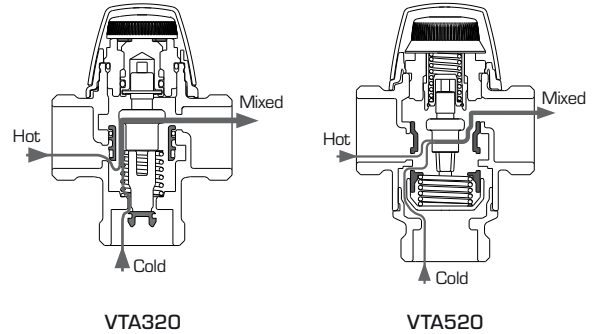
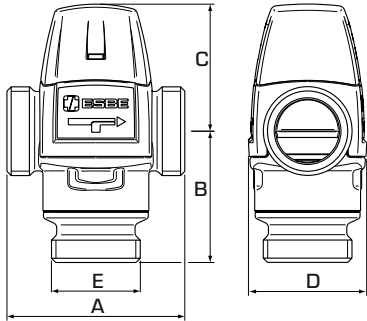
Valve housing and other metal parts with fluid contact:
 _____ Dezincification resistant brass, DZR

PED 97/23/EC, article 3.3

Pressure Equipment in conformity with PED 97/23/EC, article 3.3 (sound engineering practice). According to the directive the equipment shall not carry any CE-mark.

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➤ SERIES VTA321, INTERNAL THREAD

Art. No.	Reference	Temp. range	Kvs *	Connection E	A	Dimension			Note	Weight [kg]
						B	C	D		
3110 03 00	VTA321	20 - 43°C	1.5	Rp 1/2"	70	42	52	46		0.45
3110 07 00			1.6	Rp 3/4"						0.48
3110 04 00	VTA321	35 - 60°C	1.5	Rp 1/2"	70	42	52	46		0.45
3110 08 00			1.6	Rp 3/4"						0.48

➤ SERIES VTA322/VTA522, EXTERNAL THREAD

Art. No.	Reference	Temp. range	Kvs *	Connection E	A	Dimension			Note	Weight [kg]
						B	C	D		
3110 28 00	VTA322	20 - 43°C	1.2	G 1/2"	70	42	52	46		0.41
3110 05 00			1.5	G 3/4"						0.45
3110 09 00			1.6	G 1"						0.48
3162 01 00	VTA522		3.2	G 1"	84	62	60	56		0.86
3162 04 00			3.5	G 1 1/4"						0.95
3110 32 00	VTA322	30 - 70°C	1.6	G 1"	70	42	52	46		0.53
3110 29 00	VTA322	35 - 60°C	1.2	G 1/2"	70	42	52	46		0.41
3110 06 00			1.5	G 3/4"						0.45
3110 10 00			1.6	G 1"						0.48
3110 47 00	VTA322	45 - 65°C	1.6	G 1"	70	42	52	46		0.55
3162 02 00	VTA522		3.2	G 1"	84	62	60	56	0.86	
3162 05 00			3.5	G 1 1/4"					0.95	
3162 03 00	VTA522	50 - 75°C	3.2	G 1"	84	62	60	56	0.86	
3162 06 00			3.5	G 1 1/4"					0.95	

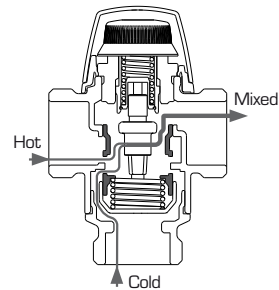
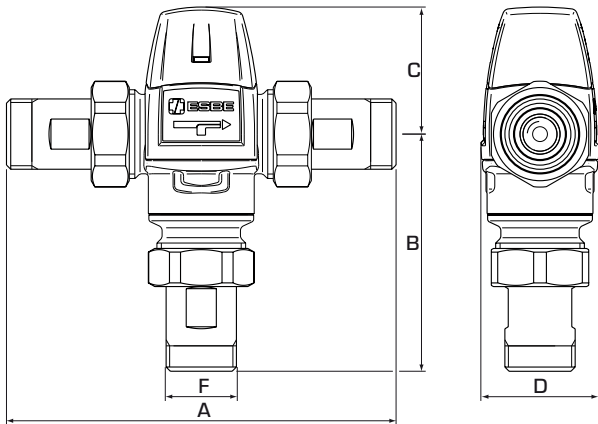
➤ SERIES VTA323, COMPRESSION FITTINGS

Art. No.	Reference	Temp. range	Kvs *	Connection E	A	Dimension			Note	Weight [kg]
						B	C	D		
3110 26 00	VTA323	20 - 43°C	1.2	CPF 15 mm	86	50	52	46	1)	0.49
3110 01 00			1.5	CPF 22 mm						0.57
3110 27 00	VTA323	35 - 60°C	1.2	CPF 15 mm	86	50	52	46	1)	0.49
3110 39 00			1.5	CPF 18 mm						0.66
3110 02 00			1.5	CPF 22 mm						0.57

* Kvs-value in m³/h at a pressure drop of 1 bar. CPF = compression fitting
 Note 1) A non-return valve for the cold water is included.

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VTA520

➔ SERIES VTA522/VTA523, WITH ADAPTERS

Art. No.	Reference	Temp. range	Kvs *	Connection F	A	Dimension B	C	D	Note	Weight [kg]
3162 07 00	VTA522	20 - 43°C	3.0	R 3/4"	154	97	60	56	2)	1.22
3162 13 00	VTA523			CPF 22mm	180	110				
3162 10 00	VTA522		3.4	R 1"	164	102				
3162 16 00	VTA523			CPF 28mm	204	122				
3162 08 00	VTA522	45 - 65°C	3.0	R 3/4"	154	97	60	56	2)	1.22
3162 14 00	VTA523			CPF 22mm	180	110				
3162 11 00	VTA522		3.4	R 1"	164	102				
3162 17 00	VTA523			CPF 28mm	204	122				
3162 09 00	VTA522	50 - 75°C	3.0	R 3/4"	154	97	60	56	2)	1.22
3162 15 00	VTA523			CPF 22mm	180	110				
3162 12 00	VTA522		3.4	R 1"	164	102				
3162 18 00	VTA523			CPF 28mm	204	122				

* Kvs-value in m³/h at a pressure drop of 1 bar. CPF = compression fitting
 Note 2) Two check valves for both hot and cold water are included

INSTALLATION EXAMPLES

See the catalogue section "How to choose the correct installation/ position" for further information and connection examples.

