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.

Versions of Series VTA320 are available in Lead free material suitable for domestic hot water applications.

VTA320
Internal thread | External thread | Compression fitting

VTA520
External thread | With adapters, external thread | With adapters, compression fitting

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.

Versions of valves series VTA320 are also available in Lead free material meaning that lead makes up less than 0,1% of the total weight of the valve.

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)

VALVES ARE DESIGNED FOR

	Temperature range					
Series	20 – 43°C	30 – 70°C	35 – 60°C	45 – 65°C	50 – 75°C	Application
VTA320	●	●	●			Potable water, in line
VTA520	●			●	●	
VTA320						Potable water, point of use
VTA520						
VTA320						Solar heating
VTA520						
VTA320						Cooling
VTA520						
VTA320	○					Floor heating
VTA520	○					
VTA320		○	○			Radiator 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)
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 or
Lead free brass (versions marked LF)

PED 2014/68/EU, article 4.3

Pressure Equipment in conformity with PED 2014/68/EU, article 4.3 (sound engineering practice). According to the directive the equipment shall not carry any CE-mark.

4MS/UBA
4MS/KTW-BWGL

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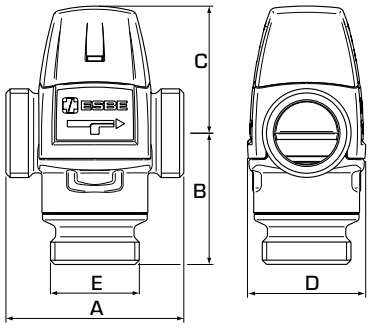
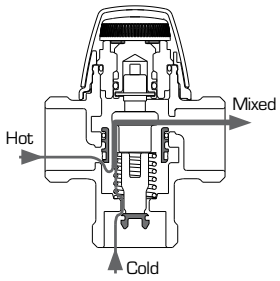
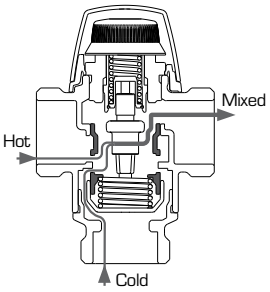




VTA320



VTA520

SERIES VTA321, INTERNAL THREAD

Art. No.	Reference	Temp. range	Kvs*	Connection E	Dimension A	B	C	D	Note	Weight [kg]
31100300	VTA321	20 - 43°C	1,5	Rp ½"	70	42	52	46		0,45
31100700			1,6	Rp ¾"						0,48
31100400	VTA321	35 - 60°C	1,5	Rp ½"	70	42	52	46		0,45
31100800			1,6	Rp ¾"						0,48
32100800	VTA321LF		1,6	Rp ¾"					**	0,48

SERIES VTA322/VTA522, EXTERNAL THREAD

Art. No.	Reference	Temp. range	Kvs*	Connection E	Dimension A	B	C	D	Note	Weight [kg]
31102800	VTA322	20 - 43°C	1,2	G ½"	70	42	52	46		0,41
31100500			1,5	G ¾"						0,45
31100900			1,6	G 1"						0,48
31620100	VTA522		3,2	G 1"	84	62	60	56		0,86
31620400			3,5	G 1¼"						0,95
31103200	VTA322	30 - 70°C	1,6	G 1"	70	42	52	46		0,53
31102900	VTA322	35 - 60°C	1,2	G ½"	70	42	52	46		0,41
31100600			1,5	G ¾"						0,45
32100600	VTA322LF		1,5	G ¾"					**	0,45
31101000	VTA322		1,6	G 1"						0,48
32101000	VTA322LF		1,6	G 1"					**	0,48
31104700	VTA322	45 - 65°C	1,6	G 1"	70	42	52	46		0,55
31620200	VTA522		3,2	G 1"	84	62	60	56		0,86
31620500			3,5	G 1¼"						0,95
31620300	VTA522	50 - 75°C	3,2	G 1"	84	62	60	56		0,86
31620600			3,5	G 1¼"						0,95

SERIES VTA323, COMPRESSION FITTINGS

Art. No.	Reference	Temp. range	Kvs*	Connection E	Dimension A	B	C	D	Note	Weight [kg]
31102600	VTA323	20 - 43°C	1,2	CPF 15 mm	86	50	52	46	1)	0,49
31100100			1,5	CPF 22 mm						0,57
31102700	VTA323	35 - 60°C	1,2	CPF 15 mm	86	50	52	46	1)	0,49
31103900			1,5	CPF 18 mm						0,66
31100200			1,5	CPF 22 mm					1)	0,57

* Kvs-value in m^3/h at a pressure drop of 1 bar. ** Lead-free. Lead makes up less than 0,1% by weight of components in brass. CPF = compression fitting.
Note 1) A non-return valve for the cold water is included.

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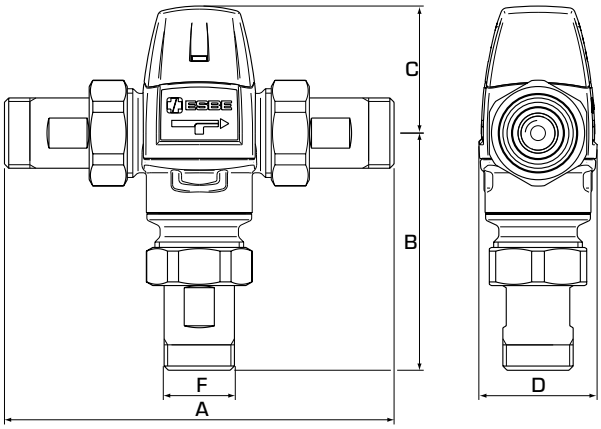
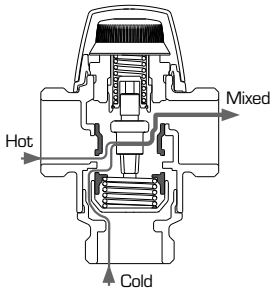




VTA520

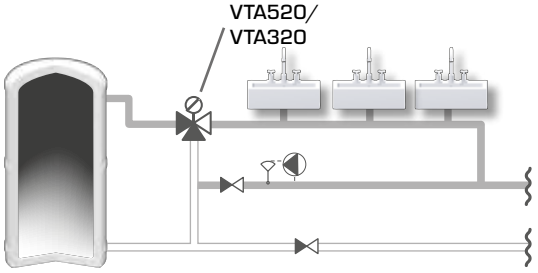
SERIES VTA522/VTA523, WITH ADAPTERS

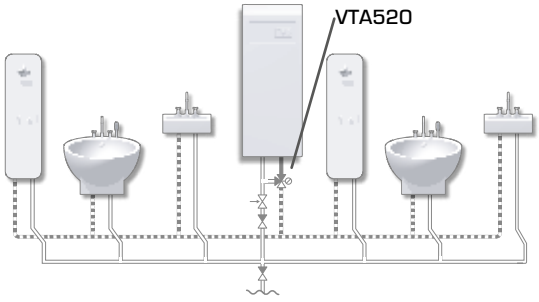
Art. No.	Reference	Temp. range	Kvs*	Connection F	Dimension A	B	C	D	Note	Weight [kg]
31620700	VTA522	20 - 43°C	3,0	R ¾"	154	97	60	56	2)	1,22
31621000	VTA522		3,4	R 1"	164	102				1,59
31621600	VTA523			CPF 28mm	204	122				1,90
31620800	VTA522	45 - 65°C	3,0	R ¾"	154	97	60	56	2)	1,22
31621100	VTA522		3,4	R 1"	164	102				1,59
31621700	VTA523			CPF 28mm	204	122				1,90
31620900	VTA522	50 - 75°C	3,0	R ¾"	154	97	60	56	2)	1,22
31621200	VTA522		3,4	R 1"	164	102				1,59

* Kvs-value in m^3/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

Since lead in drinking water affects our health, ESBE recommends that you choose valves made of lead-free material in such applications as domestic hot water.





The shown applications are only examples of product use!
Before using the product in any application, the regional and national regulations need to be checked.

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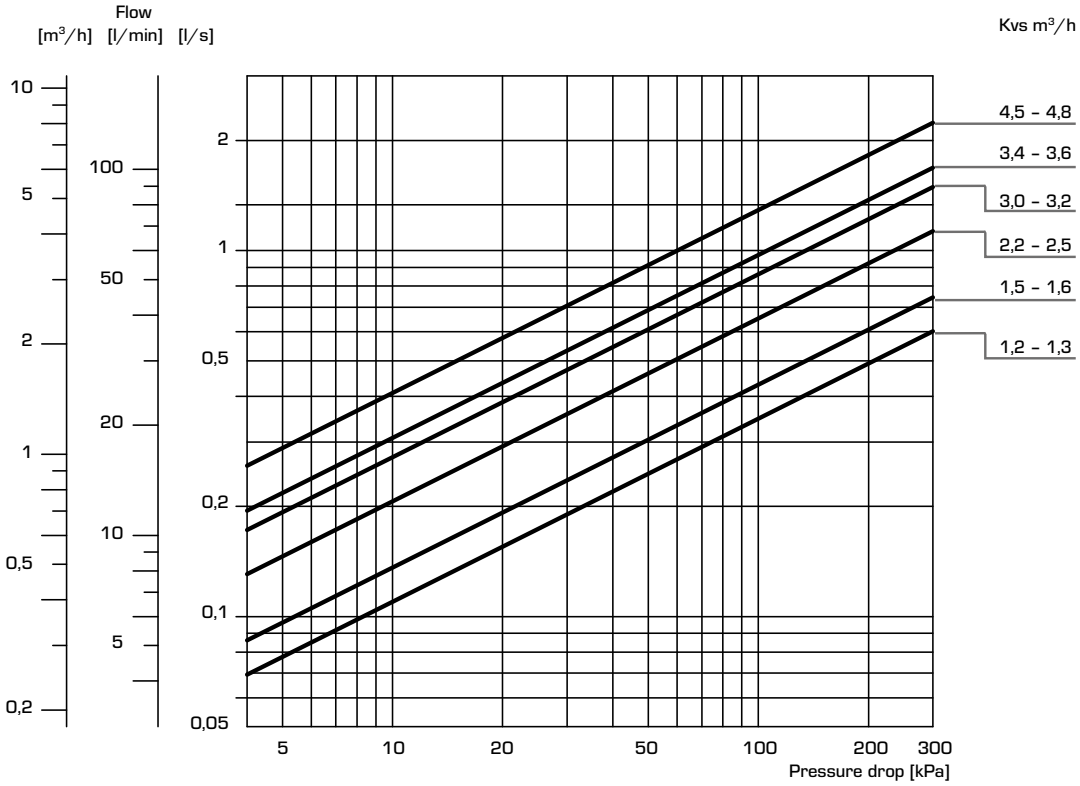
CAPACITY DIAGRAM



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