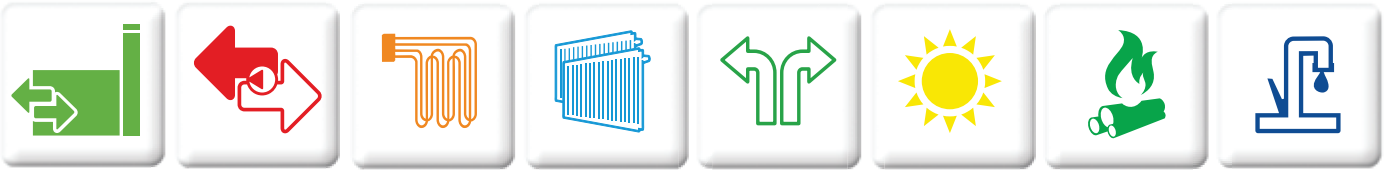
ESBE®

Guide

GB Version 5.0

SWEDISH HYDRONIC SOLUTIONS SINCE 1906



EXPLORE YOUR POSSIBILITIES AND MAKE THE RIGHT CHOICE

The guide to the right product.

ESBE valves, actuators and controllers, regulates the heating in millions of households today. Our wide assortment give you extensive possibilities and combinations to suit the most simple applications to the most complicated ones. Whatever need you have we offer a solution. One ESBE product makes a system more efficient, but if you use our whole range a new world of efficiency is what you get. With 100 years of experience in this business, we can confidently say that we know what we are doing. We simply offer valves, actuators and controllers that deliver safety, comfort and energy savings to your customers.

Saving energy is crucial to sustain the environment. Each kWh saved in heating our households helps preserve our environment. Therefore, the priority in the ESBE Guide aims to meet your comfort and energy saving needs. We help you to optimize the system by offering different solutions of comfort and energy saving solutions without sacrificing on safety.

Everyone's a winner! Your customer can easily understand the big pay-offs and how they get a home where highest comfort is the norm. The environment wins too and starts to benefit from day one. And you win because you get products that are easy to sell, even easier to install and virtually maintenance free. It doesn't get any better than that!

CONTENTS

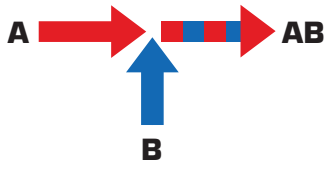
THE ESBE GUIDE

MIXING FUNCTION

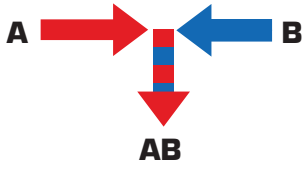
Adjust the temperature of your fluid according to your needs

Principal

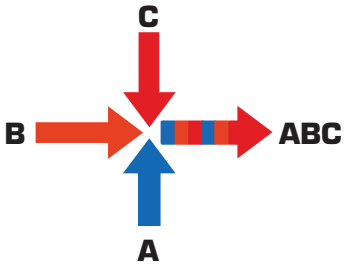
Reference models: VTA320/520, VTA370/570, VTA330, VTS520, VRG130/330, 3F



Reference models: VTA350/550, VTA360, VTS550, VRG230



Reference models: VRB140



Possible mixing systems

1 – Simple

Thermostatic mixing valve VTA/VTS

DESCRIPTION :
- Thermostatic Cartridge
- Manual control (Mechanical)

2 – Through external controller

Rotary Valve
VRG

+

ARA600 Actuator
(3-point or proportional)

DESCRIPTION :
- Motorized valve
- Control via existing controller/system

3 – Using integrated control unit

Rotary Valve
VRG

+

- Constant temperature controller CRA200, CRA120
- Weather compensation controller CRC200, CRC120
- Combined weather compensating and indoor based controller CRD200
- Indoor based controller CRB200

DESCRIPTION :
- Motorized valve
- Power supply with a plug contact
- Control of the flow temperature at a constant level or based on external probe and /or internal

4 – For heating and cooling applications

Rotary Valve
VRG

+

Constant flow temperature controller CRK210 made especially for applications with heating and cooling possibility in the same circuit.

DESCRIPTION :
- Motorized valve
- Power supply with a plug contact
- Control of the flow temperature for heating /cooling

5 – For sanitary applications

Rotary Valve
VRG

+

Constant flow temperature controller CRS210 made especially for PWx (Potable water applications)

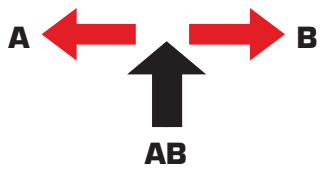
DESCRIPTION :
- Motorized valve
- Power supply with a plug contact
- Control of the flow temperature using an immersion sensor
- Possibility to activate an anti-legionella cycle

DIVERTING FUNCTION

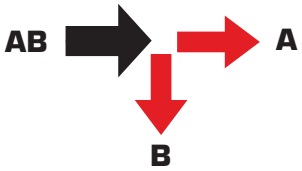
Distribute your fluid selectively.

Principal

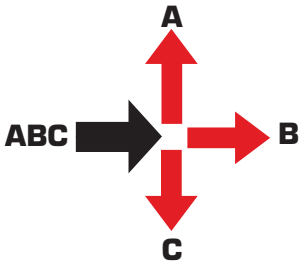
Reference models: VZC/VZD, MBA130, ZRS230, VRG230



Reference models: VTD300/500, VRG130/330



Reference models: VRB140



Possible diverting systems

1 – Simple

Thermostatic diverting valve VTD300/VTD500

DESCRIPTION :
- Switching based on the water temperature in the pipes
- Thermostat manual control (mechanical)
- Deviation fixed temperature (VTD 300) or adjustable (VTD 500)

KVS (M^3/H) :
- < 3,6

2 – Compact

Diverting valve VZC/VZD, MBA130, ZRS230

DESCRIPTION :
- Change ports: 3 sec. (VZC/VZD), 40 sec. (MBA130), 5-15 sec. (ZRS230)
- Compact
- Electric control via external control unit

KVS (M^3/H) :
- <6,0 (VZC/VZD), <11,3 (MBA130), <8,4 (ZRS230)

3 – High flow rate

Rotary Valve
VRG

\+

Actuator
ARA600 (2 point)

DESCRIPTION :
- Setting control
- Electric control via external control unit

KVS (M^3/H) :
- < 65

4 – Superb regulation for best bivalent performance

Rotary Valve
VRB140

\+

Actuator
ARA600 (proportional)

DESCRIPTION :
- Setting control
- Electric control via external control unit

KVS (M^3/H) :
- < 35

PRECISION AT YOUR SERVICE

Clear and precise answers to the most detailed questions.

Choose precision

An essential condition in order to optimize your heating system with an ESBE product is, of course, to use a suitable product and to use it correctly. ESBE offers an extensive assortment of products enabling you to meet all the specifics and complexities of your installation. In the next pages you are presented to tables and graphs that guide you to the right product choice.

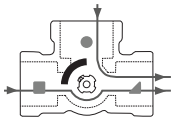
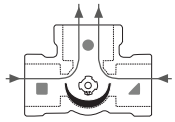
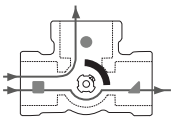
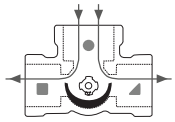
But always remember

The guide is for inspiration and suggestions on installations, and cannot replace the knowledge of the skilled professional, you. All decisions regarding product selection and product installation must be carried out by qualified personnel in accordance with applicable laws and standards and with suitable consideration of other equipment and the system in general.

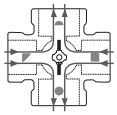
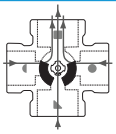
SELECTION GUIDE
ROTARY VALVE

Support: the 3 key stages to choose the valve

STEP 1 Finding the valves series of one's choice

3 WAY	Output port	on the side	in the middle
	Mixing	 VRG130	 VRG230
	Diverting	 VRG130	 VRG230

OR

4 WAY	Classic	Bivalent
	 VRG140	 VRB140

STEP 2 Choose the KVS : m^3/h

	Radiator ΔT=15		Underfloor heating ΔT=7	
HEATING POWER (kW)	3 WAY	4 WAY	3 WAY	4 WAY
5	1	2,5	2,5	2,5
10	1,6	2,5	4	4
15	2,5	2,5	6,3	6,3
20	4	4	10 or 13/8	10
25	4	4	10	10
30	6,3	6,3	10	10
35	6,3	6,3	16 or 13/8	16
40	6,3	6,3	16	16
45	10 or 13/8	10	16 or 17/10	16
50	10	10	16	16
55	10	10	25	25
60	10	10	25	25
65	10	10	25	25
70	10	10	25	25
75	16 or 13/8	16	25 or 50/30	35 or 40
80	16	16	40 or 50/30	35 or 40
85	16	16	40	35 or 40
90	16	16	40	35 or 40
95	16 or 17/10	16	40	35 or 40
100	16 or 17/10	16	40	35 or 40

Example: For an installation comprising a 30KW heat source, either a Kvs=6.3 valve for a system with radiators, or a Kvs=10 valve for underfloor heating.

STEP 3 Choose the DN connection

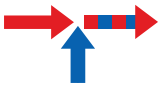
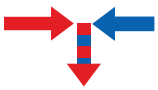
DN	FEMALE	MALE	COMPRESSION FITTING
15	Rp ½"	G ¾"	
20	Rp ¾"	G 1"	CPF 22 mm
25	Rp 1"	G 1¼"	CPF 28 mm
32	Rp 1¼"	G 1½"	
40	Rp 1½"	G 2"	
50	Rp 2"	G 2¼"	

Example: If I want a valve of interior DN equal to 20, I can take a Rp ¾" female connection or male G 1" or 22mm compression fittings.

SELECTION GUIDE
THERMOSTATIC MIXING VALVE

Find the right valve for you

The table below and the following page is a toolbox for finding the best valve for your system and application.

Flow direction	Temp. range	APPLICATION: Potable water, in line	Potable water, point of use	Solar heating	Cooling	Under floor heating	Radiator heating
	10 - 30°C				VTA570		
	20 - 43°C	VTA320 VTA520				VTA320 VTA520	
	20 - 55°C					VTA370 VTA570	VTA370 VTA570
	30 - 70°C	VTA310 VTA320					VTA370 VTA570 VTA320
	32 - 49°C	VTA330	VTA330			VTA330	
	35 - 50°C	VTA530				VTA530	
	35 - 60°C	VTA310 VTA320 VTA330	VTA330				VTA320 VTA330
	45 - 65°C	VTA520 VTA530 VTS520 UPTT520		VTS520			VTA520 VTA530 VTS520 UPTT520
	50 - 75°C	VTA520 VTS520 UPTT520		VTS520			VTA520 VTS520 UPTT520
	20 - 43°C	VTA550				VTA550	
	32 - 49°C	VTA360	VTA360			VTA360	
	35 - 50°C	VTA560				VTA560	
	35 - 60°C	VTA350 VTA360	VTA360				VTA360
	45 - 65°C	VTA550 VTA560 VTS550		VTS550			VTA550 VTA560 VTS550
	50 - 75°C	VTA550 VTS550		VTS550			VTA550 VTS550

Recommended alternative

Secondary alternative

SELECTION GUIDE
THERMOSTATIC MIXING VALVE

DIMENSIONING OF DOMESTIC WATER APPLICATIONS

The thermostatic mixing valves for domestic hot water applications can be dimensioned according to the number of households in the house or the number of showers in, for example sports centers.

The ESBE thermostatic mixing valves are available with Kvs-values from 1,2 up to 6,1 and is to be dimensioned as below.

RECOMMENDED KVS-VALUES

Kvs	Typical households [1]	Showers [2]	Shower heads [3]	Under floor heating [4]	Radiator heating [5]
	Quantity*	Quantity*	Quantity*	m^2	kW
1,2 - 1,3	1	2	2	< 80	< 12
1,5 - 1,6	≤ 3	3	2	40 – 105	6 – 16
2,2 - 2,5	≤ 6	5	3	60 – 165	10 – 26
3,0 - 3,2	≤ 15	6	4	75 – 210	12 – 33
3,4 - 3,6	≤ 20	7	5	85 – 230	13 – 36
4,5 - 4,8 [6]	–	–	–	110 – 315	18 – 49
6,1	≤ 40	12	8	< 150	< 25 kW

* Number of households in the house or the number of showers in, for example sports centers.

1) A typical household consist of bath, shower, kitchen sink and washbasin with a design flow evaluated from probability curve in reference with EN 806-3:2006, and with a supply pressure >300kPa (3 bar). ESBE recommends max. allowed pressure drop (instant use) over valve <200 kPa (2 bar)

2) Showers in for example sport centers (simultaneous usage) meaning supply of scald safe hot water to shower mixer with supply pressure >300kPa (3 bar)

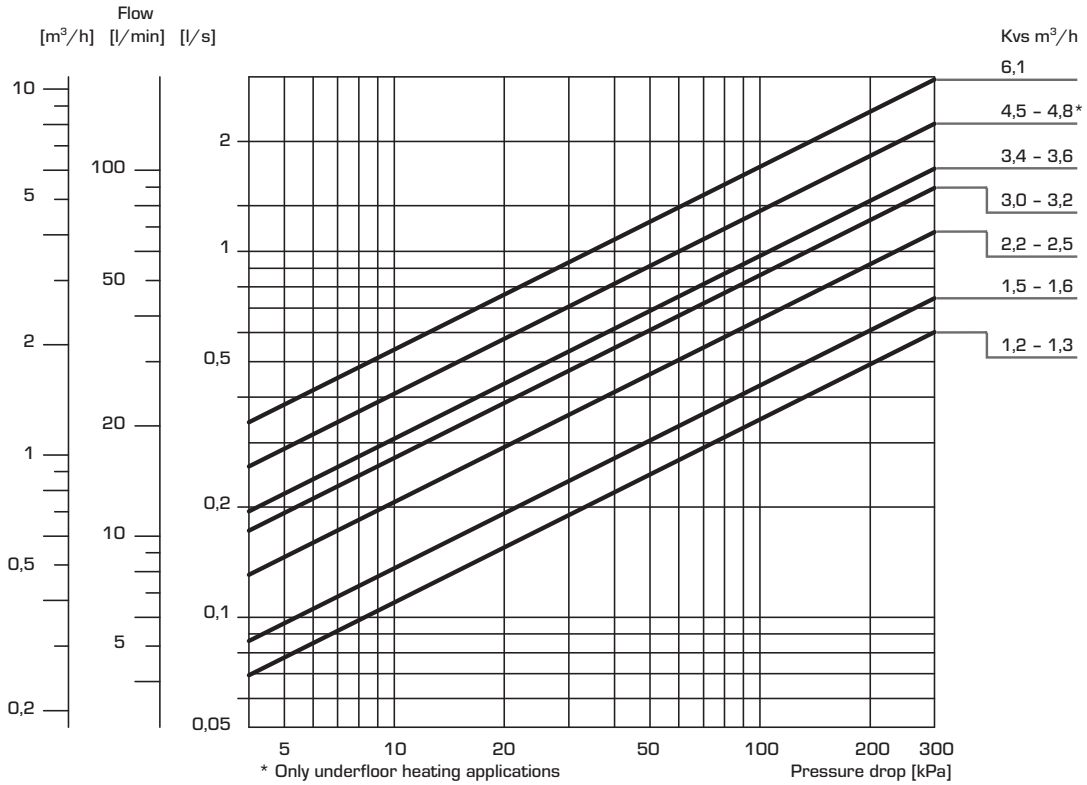
3) Showers in for example sport centers (simultaneous usage) meaning supply of scald safe mixed water to shower head with supply pressure >300kPa (3 bar)

4) Under floor heating calculated for: q = 55W/m^2, Δt = 7K and Δp = 3-20kPa

5) Power calculated for: Δt = 20K and Δp = 3-20kPa

6) Kvs-values available only for heating valves

CAPACITY DIAGRAM



SELECTION GUIDE
ROTARY ACTUATOR

Support: the 5 key stages to choose the actuator

STEP 1 Find the actuator series according to the DN of my valve

Valve DN	Series to choose
DN ≤ 50	ARA SERIES
DN > 50	90 SERIES

STEP 2 Identify the actuator function

Motorized valve function	Series to choose
Diverting valve	2-point
Mixing valve	3 Point (or proportional signal 0-10V)

STEP 3 Choose the power supply voltage

Voltage
24 V AC
230 V AC

STEP 4 Find the run time in correlation with the desired application

Installation	Corresponding run time
Domestic hot water	15 to 30 seconds
Radiator	60 to 120 seconds
Underfloor heating	120 to 240 seconds

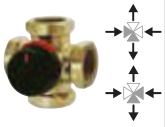
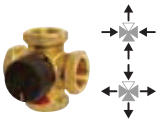
STEP 5 Choose the option of an auxiliary contact

Do i need to control externalt equipment by the valve position? (e.g. to switch the pump or heating device on or off)	Auxiliary contact option
Yes	Auxiliary contact option useful
No	Auxiliary contact option not useful

SELECTION GUIDE
VALVE + ACTUATOR/CONTROLLER

Guide for use to ESBE actuators and controllers

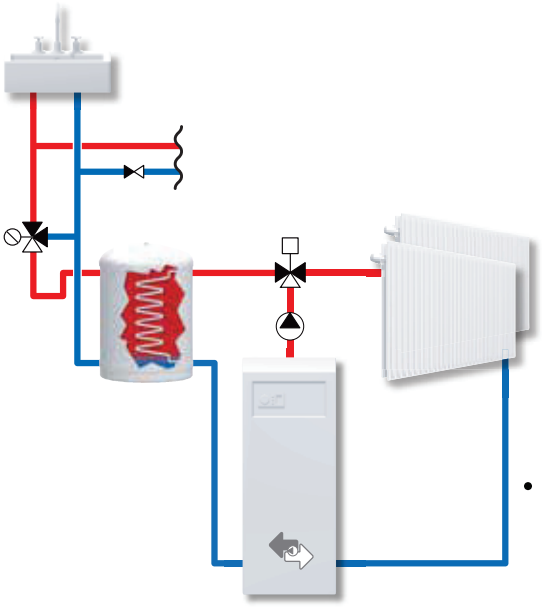
● Recommended ● Secondary alternative

	Actuators						Controllers			
	 ARA6xx			 90			 90C	 CRA21x, CRK21x	 CRB21x, CRB22x	 CRS21x
	3-P	2-P	Prop.	3-P	2-P	Prop.		 CRC21x	 CRD22x	
 VRG130	●	●	●	● *	● *	● *	●	●	●	● [1]
 VRG330										
 VRH130										
 VRG140	●	●	●	● *	● *	● *	●	●	●	● [1]
 VRG230	●	●	●	● *	● *	● *				
 VRB140	●		●	● *		● *	●	●	●	● [1]

Notes: *Additional adaptor kit necessary, se data sheet or web
1) Due to drinking water legislation the decision of valve shall be made depending on application and national laws and directives.

HEAT PUMPS

HEAT PUMP WITH HEATING CIRCUIT AND DOMESTIC HOT WATER TANK



Diverting valve VZC/VCD

Up to 130 m²	VZC162	G ¾" Kvs: 3,5	**Art. 43060600**
Up to 220 m²	VZC162	G 1" Kvs: 6	**Art. 43060800**
Up to 19 kW	VZC162	G ¾" Kvs: 3,5	**Art. 43060600**

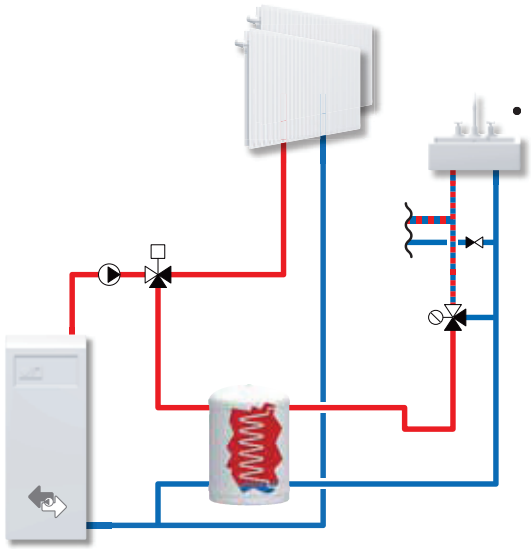
* Calculated on ΔP_{valve}: ≤ 10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: ≤ 10kPa and ΔT=15K

Thermostatic mixing valves

			Kvs	
Up to 2-3 showers*	VTA322	35-60°C, G ¾"	1,5	**Art. 31100600**
Up to 2-3 showers*	VTA322	35-60°C, G 1"	1,6	**Art. 31101000**
Up to 5-6 showers*	VTA522	45-65°C, G 1"	3,2	**Art. 31620200**
Up to 5-6 showers*	VTA522	45-65°C, G 1¼"	3,5	**Art. 31620500**
Up to 40 apartments**	UPTT522	45-65°C, G 1¼"	6,1	**Art. 31420200**
Up to 40 apartments**	UPTT522	50-75°C, G 1¼"	6,1	**Art. 31420300**

* Specifications depending on the cold water supply and if it is separate, and for applications with supply pressure P> 3 bar (for details see the datasheets)
** According to BBR, Boverkets byggregler (Sweden)

HEAT PUMP WITH HIGH FLOW REQUIREMENTS



Rotary valve, 3-way

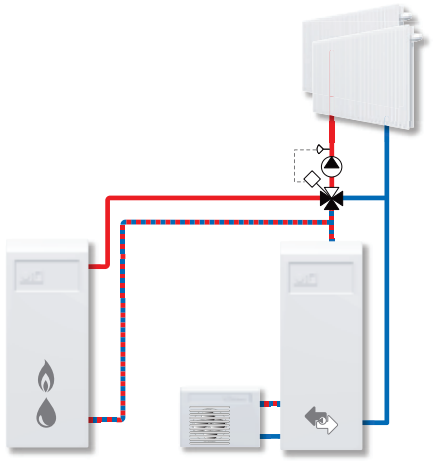
Actuator ARA600, 2-point

Radiator*				
12 to 21 kW	VRG331	Rp ¾" Kvs: 4	**Art. 11660200**	2 point, 230V AC, 30 sec., 6 Nm **Art. 12101300**
19 to 35 kW	VRG331	Rp ¾" Kvs: 6,3	**Art. 11660300**	
30 to 55 kW	VRG331	Rp 1" Kvs: 10	**Art. 11660400**	

* Calculated with ΔP_{valve}: 3-10kPa and ΔT=15K

HEAT PUMPS

HEAT PUMP APPLICATIONS WITH ROTARY VALVE AND CONTROLLER



	Bivalent rotary valve, 4-way			Controller CRD221
Radiator*				Combined weather-compensating and indoor-based regulation CRD221 230V AC, 6 Nm **Art. 12684200**[1]
12 to 21 kW	VRB141	Rp ¾" Kvs: 4	**Art. 11660200**	
19 to 35 kW	VRB141	Rp ¾" Kvs: 6,3	**Art. 11660300**	
30 to 55 kW	VRB141	Rp 1" Kvs: 10	**Art. 11660400**	

* Calculated with ΔP_{valve}: 3-10kPa and ΔT=15K

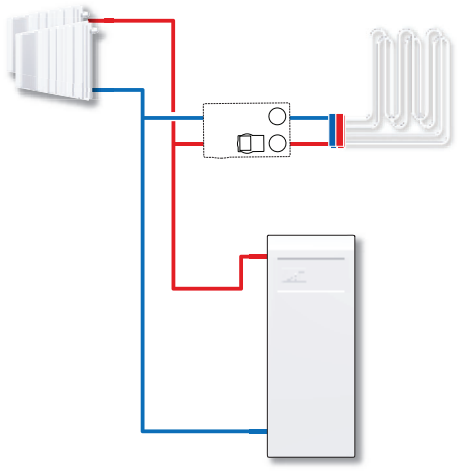
ALTERNATIVE REGULATION

Indoor-based regulation, CRB200				
CRB211	230V AC	6 Nm	wired	**Art. 12663100**[1]
CRB221	230V AC	6 Nm	wireless	**Art. 12665200**[1]

Weather-compensating regulation, CRC200				
CRC211	230V AC	6 Nm		**Art. 12821100**[1]

1) All controllers can be upgraded with auxiliary switch kit ARA801 for gas boiler "on". Art. 16200700,

HEAT PUMP AND EXTRA HEATING CIRCUIT



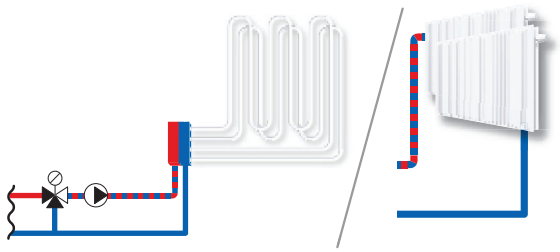
Floor heating*	Circulation unit with actuator, GRA211				
60 to 240 m²	GRA211	DN25	Wilo PARA 25/6	3 point	**Art. 61042100**
90 to 350 m²	GRA211	DN32	Wilo PARA 25/8	3 point	**Art. 61042200**
Radiator**					
6 to 41 kW	GRA211	DN25	Wilo PARA 25/6	3 point	**Art. 61042100**
13 to 57 kW	GRA211	DN32	Wilo PARA 25/8	3 point	**Art. 61042200**

* Calculated on influence of the pump in the system ΔP: 2,7 m, 50 W/m² and ΔT=5K
** Calculated on influence of the pump in the system ΔP: 1,7 m and ΔT=15K

FLOOR/RADIATOR

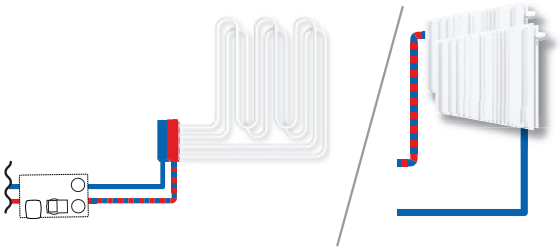
Simple and efficient applications for underfloor heating/radiators

CONSTANT TEMPERATURE SUPPLY USING THERMOSTATIC VALVE



Floor heating*	 Thermostatic mixing valve		Kvs	
30 to 65 m²	VTA322	20–43°C, G ¾"	1,5	**Art. 31100500**
70 to 150 m²	VTA372	20–55°C, G 1"	3,4	**Art. 31200100**
100 to 210 m²	VTA572	20–55°C, G 1¼"	4,8	**Art. 31702200**
Radiator**				
9 to 20 kW	VTA522	45–65°C, G 1"	3,2	**Art. 31620200**
14 to 30 kW	VTA572	20–55°C, G 1¼"	4,8	**Art. 31702200**

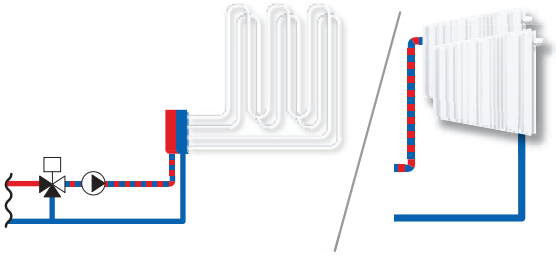
* Calculated with ΔP_{valve} : 3-15kPa, 50 W/m² och ΔT=5K
** Calculated with ΔP_{valve} : 3-15kPa och ΔT=15K



Floor heating*	 Circulation unit, fixed temperature GFA211		
60 to 200 m²	GFA211	DN25 Wilo 20–55°C	**Art. 61021100**
60 to 270 m²	GFA211	DN32 Wilo 20–55°C	**Art. 61021200**

* Calculated on influence of the pump in the system ΔP: 2,7 m, 50 W/m² and ΔT=5K

TEMPERATURE SETTING OPERATED BY EXTERNAL CONTROL UNIT



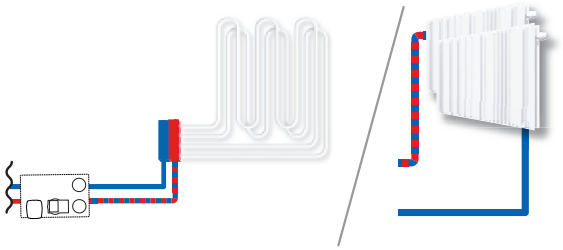
Floor heating*	 Mixing valve, 3-way			 Actuator ARA661
80 to 140 m²	VRG131	Rp ¾" Kvs: 4	**Art. 11600800**	3 point, 230V AC, 120 sec., 6 Nm **Art. 12101300**
125 to 230 m²	VRG131	Rp 1" Kvs: 6,3	**Art. 11601000**	
200 to 350 m²	VRG131	Rp 1" Kvs: 10	**Art. 11601100**	
Radiator**				
12 to 21 kW	VRG131	Rp ¾" Kvs: 4	**Art. 11600800**	
19 to 35 kW	VRG131	Rp ¾" Kvs: 6,3	**Art. 11600900**	
30 to 55 kW	VRG131	Rp 1" Kvs: 10	**Art. 11601100**	

* Calculated on ΔP_{valve} : 3-10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve} : 3-10kPa and ΔT=15K

FLOOR/RADIATOR

Application: simple and efficient underfloor heating/radiators

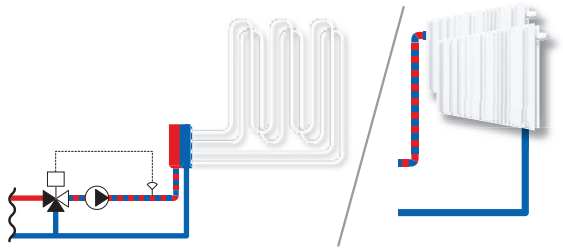
TEMPERATURE SETTING OPERATED BY EXTERNAL CONTROL UNIT



Floor heating*			Circulation unit with actuator, GRA211		
60 to 240 m²	GRA211	DN25	Wilo PARA 25/6	3 point	**Art. 61042100**
90 to 350 m²	GRA211	DN32	Wilo PARA 25/8	3 point	**Art. 61042200**
Radiator**					
6 to 41 kW	GRA211	DN25	Wilo PARA 25/6	3 point	**Art. 61042100**
13 to 57 kW	GRA211	DN32	Wilo PARA 25/8	3 point	**Art. 61042200**

* Calculated on influence of the pump in the system ΔP: 2,7 m, 50 W/m² and ΔT=5K
** Calculated on influence of the pump in the system ΔP: 1,7 m and ΔT=15K

TEMPERATURE SETTING OPERATED BY INTEGRATED CONTROLLER



Floor heating*				Mixing valve, 3-way + Controller, constant temp.
80 to 140 m²	VRG131	Rp ¾" Kvs: 4	**Art. 11600800**	CRA211 230V AC, 6 Nm, 5–95°C **Art. 12721100**
125 to 230 m²	VRG131	Rp 1" Kvs: 6,3	**Art. 11601000**	
200 to 350 m²	VRG131	Rp 1" Kvs: 10	**Art. 11601100**	
Radiator**				
12 to 21 kW	VRG131	Rp ¾" Kvs: 4	**Art. 11600800**	
19 to 35 kW	VRG131	Rp ¾" Kvs: 6,3	**Art. 11600900**	
30 to 55 kW	VRG131	Rp 1" Kvs: 10	**Art. 11601100**	

* Calculated on ΔP_{valve}: 3-10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: 3-10kPa and ΔT=15K

CONTROLLERS ALTERNATIVE

Indoor temperature controller, CRB200

CRB211	230V AC	6 Nm	wired	**Art. 12663100**
CRB221	230V AC	6 Nm	wireless	**Art. 12665200**

Weather compensation controller, CRC200

CRC211	230V AC	6 Nm		**Art. 12821100**

Combined weather compensating and indoor sensor based controller, CRD200

CRD221	230V AC	6 Nm		**Art. 12684200**

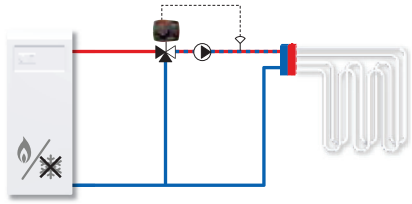
Floor heating*			Circulation unit with controller, GRC221	
60 to 240 m²	GRC221	DN25	Wilo PARA 25/6	**Art. 61044100**
90 to 350 m²	GRC221	DN32	Wilo PARA 25/8	**Art. 61044200**
Radiator**				
6 to 41 kW	GRC221	DN25	Wilo PARA 25/6	**Art. 61044100**
13 to 57 kW	GRC221	DN32	Wilo PARA 25/8	**Art. 61044200**

* Calculated on influence of the pump in the system ΔP: 2,7 m, 50 W/m² and ΔT=5K
**Calculated on influence of the pump in the system ΔP: 1,7 m and ΔT=15K

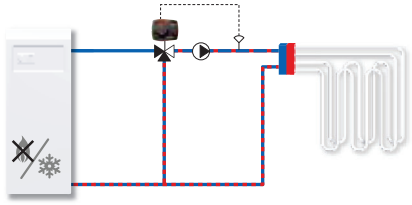
HEATING, FLOOR/RADIATOR

REGULATION OF CONSTANT TEMPERATURE, HEATING AND COOLING IN THE SAME CIRCUIT

Heating mode



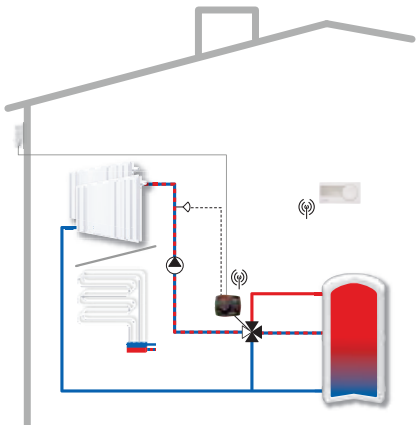
Cooling mode



Floor heating*	 Rotary valve, 3-way			 Regulation, constant temp.
80 to 140 m²	VRG131	Rp ¾" Kvs: 4	**Art. 11600800**	CRK211 230V AC, 6 Nm, 5–95°C **Art. 12729100**
125 to 230 m²	VRG131	Rp 1" Kvs: 6,3	**Art. 11601000**	
200 to 350 m²	VRG131	Rp 1" Kvs: 10	**Art. 11601100**	

* Calculated with ΔP_{valve} : 3-10kPa, 50 W/m² and ΔT=5K

ADJUSTMENT AND EASY INSTALLATION FOR EFFICIENT TANK USE



Floor heating*	 Bivalent rotary valve, 4-way			 Controller CRD221
80 to 140 m²	VRB141	Rp ¾" Kvs: 4	**Art. 11660200**	Combined weather-compensating and indoor-based regulation CRD221 230V AC, 6 Nm **Art. 12684200**
125 to 230 m²	VRB141	Rp 1" Kvs: 6,3	**Art. 11660300**	
200 to 350 m²	VRB141	Rp 1" Kvs: 10	**Art. 11660400**	
Radiator**				
12 to 21 kW	VRB141	Rp ¾" Kvs: 4	**Art. 11660200**	
19 to 35 kW	VRB141	Rp ¾" Kvs: 6,3	**Art. 11660300**	
30 to 55 kW	VRB141	Rp 1" Kvs: 10	**Art. 11660400**	

* Calculated with ΔP_{valve}: 3-10kPa, 70 W/m² and ΔT=7K

** Calculated with ΔP_{valve}: 3-10kPa and ΔT=15K

ALTERNATIVE REGULATION

 Indoor-based regulation, CRB200

CRB211	230V AC	6 Nm	wired	**Art. 12663100**
CRB221	230V AC	6 Nm	wireless	**Art. 12665200**

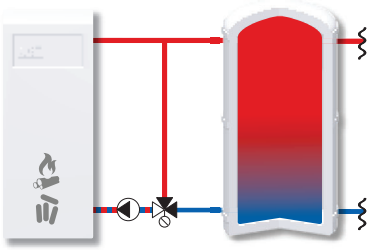
 Weather-compensating regulation, CRC200

CRC211	230V AC	6 Nm		**Art. 12821100**

BIOMASS

Controlled return temperature, combustion cycle and optimized loading of accumulation tank.
Choose your product based on the power of your heat source.

BOILER PROTECTION AND EXCELLENT LOADING WITH A PUMP OF YOUR OWN CHOICE



Load valve, VTC300

				45°	55°	60°
Up to 18 kW*	VTC311	Rp ¾"	Art.	51000100	51000200	51000300
Up to 18 kW*	VTC312	G1"	Art.	51001500	51001600	51001700

Load valve, VTC400

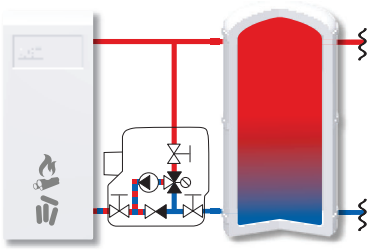
				50°	55°
18–30 kW*	VTC412	G1"	Art.	51060100	51060200
14–25 kW*	VTC422	G1"	Art.	55–70°C 51060600	

Load valve, VTC500

				50°	55°	60°
26 to 50 kW*	VTC511	Rp 1"	Art.	51020100	51020200	51020300
26 to 50 kW*	VTC512	G 1¼"	Art.	51021500	51021600	51021700
42 to 80 kW*	VTC511	Rp 1¼"	Art.	51020600	51020700	51020800
42 to 80 kW*	VTC512	G 1½"	Art.	51022000	51022100	51022200

*Calculated on ΔT=15K, 3kPa ≤ ΔP ≤10kPa for the valve

BOILER PROTECTION AND EXCELLENT LOADING WITH INTEGRATED PUMP



Load unit, LTC300

				55°	60°	65°
Up to 60 kW*	LTC341	G 1"	Art.	55005300	55005400	55005500
Up to 90 kW*	LTC361	G 1"	Art.	55006000	55006100	55006200
Up to 110 kW*	LTC381	G 1½"	Art.	55006800	55006900	55005200

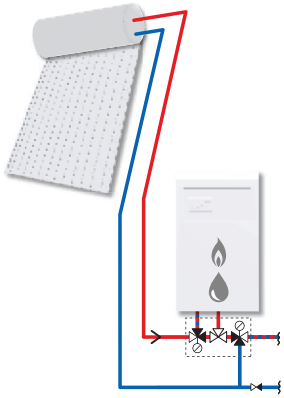
*Calculated on ΔT=20K and influence of the pump in the system ΔP≥10kPa

SOLAR

Effective solar energy

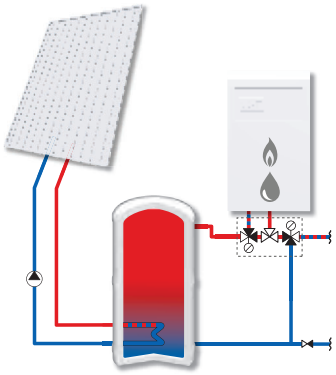
Choose your product based on the power of your heat source

ALWAYS TAKE ADVANTAGE OF SOLAR ENERGY AVAILABLE WITH A MECHANICAL ADJUSTMENT SIMPLE, SAFE AND EFFECTIVE



Solar kit, VMC300

	TEMPERATURE RANGE		CHANGEOVER POINT 45°C
Up to 2-3 showers*	35-60°C	G 1"	**Art. 31521000**



Solar kit, VMD300

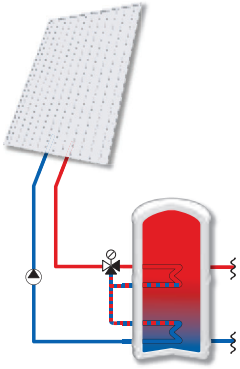
	TEMPERATURE RANGE		CHANGEOVER POINT 42 - 52°C
Up to 2-3 showers*	35-60°C	R ¾"	**Art. 31525000**

* Specifications depending on the cold water supply and if it is separate, and for applications with supply pressure P> 3 bar (for details see the datasheets)

Perfectly distributed solar power.

Choose your product based on the power of your heat source.

A STANDARD STRATIFICATION



Diverting valve, VTD300

			45°	50°	60°
Up to 19 l/min*	G1" kvs: 3,6	**Art.**	**31600100**	**31600200**	**31600300**

Diverting valve, VTD500

			42 - 52°C
Up to 15 l/min*	G1" kvs: 2,8	**Art.**	**31580100**

* Calculated on un ΔP <10 kPa for the valve

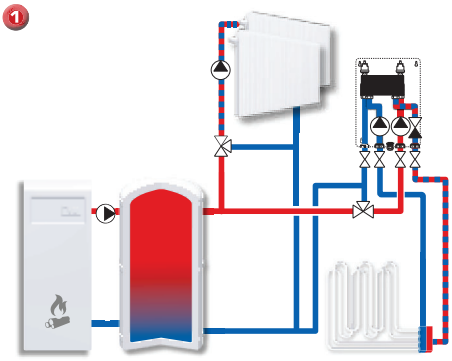
SYSTEM SEPARATION

ESBE SKx100 series – Hydraulic system separation

The Separation units are used in systems with one or two heat sources, where hydraulic system separation (separation of fluids in different sub systems) is needed.

Depending on version, the units are equipped with plate heat exchanger, pump, diverting valve and check valve. The Separation Units can be equipped with a controller CSK211 (available as accessory) for easy control and automatization of the heat supply.

1



1 SKP100

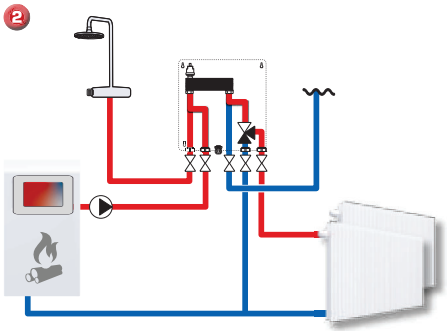
SKP100 is used as a heating system separation for underfloor heating and has been equipped with an additional pump* to receive water from the tank.

Separation unit, SKC100

	WEIGHT	PLATE HEAT EXCHANGER	
SKP111	8,2 kg	30 kW	**Art. 62000100**
SKP112	8,2 kg	40 kW	**Art. 62000200**

*Additional pump sold separetely.

2



2 SKS100

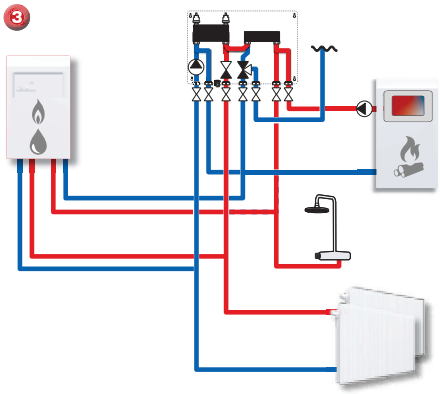
The SKS100 provides hot water from the solid fuel boiler. The boiler has its own pump. Can be fitted with a pump*.

Separation unit, SKS100

	WEIGHT	PHW	PLATE HEAT EXCHANGER	
SKS101	8,0 kg	12 l/min	20 kW	**Art. 62001100**

*Additional pump sold separetely.

3



3 SKC100

SKC100 provides the heat and potable hot water from two heating devices (gas boiler and water fireplace) through hydraulic system separation. The water fireplace has its own circulation pump. Can be fitted with additional pump*.

Separation unit, SKC100

	WEIGHT	PHW	PLATE HEAT EXCHANGER	
SKC111	14,7 kg	12 l/min	30 kw[1] + 20 kW[2]	**Art. 62002100**

*Additional pump sold separetely. 1) Heating 2) Potable hot water

Accessories

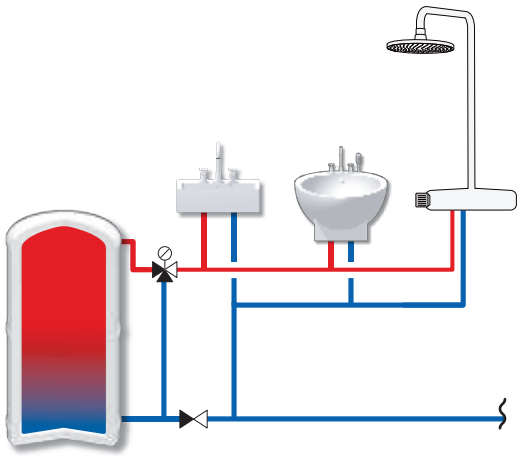
A	CSK211	Separation unit controller	**Art. 62100200**
B	PSK211	Pump Wilo PARA 15/8-75/SC 130	**Art. 62100400**

DOMESTIC HOT WATER

Water at constant temperature and protection from scalding

Choose the product according to the size and level of comfort desired

TAP WATER SYSTEM WITH STANDARD PROTECTION FROM SCALDING



Advantages

- Temperature set output in 7-8 seconds
- Possible integration into a circulation system
- Protection from scalding

		Thermostatic mixing valve Basic VTA	Kvs	
Up to 2–3 showers*	VTA322	35–60°C, G ¾"	1,5	**Art. 31100600**
Up to 2–3 showers*	VTA322	35–60°C, G 1"	1,6	**Art. 31101000**
Up to 5–6 showers*	VTA522	45–65°C, G 1"	3,2	**Art. 31620200**
Up to 5–6 showers*	VTA522	45–65°C, G 1¼"	3,5	**Art. 31620500**

* Specifications depending on the cold water supply and if it is separate, and for applications with supply pressure P> 3 bar (for details see the datasheets)

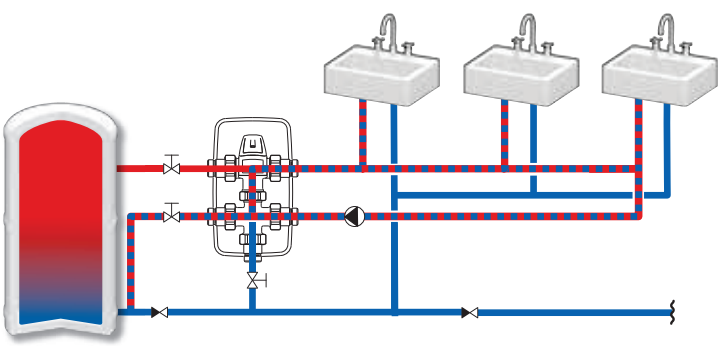
SELECT WITH RIGHT FLOW SIZING

For tap water applications, the mixing valve can be sized according to the number of flats or tap points. A typical household in apartment buildings consists of a shower, sink, WC and sink with dimensioned flow calculated from probability curve with a maximum pressure >300kPa (3bar).

	Typical household
Kvs	Quantity
1,2 - 1,3	1
1,5 - 1,6	2
2,2 - 2,5	8
3,0 - 3,2	20
3,4 - 3,6	22

Water at constant temperature with protection from scalding and simple integration into a hot water circulation circuit

TAP WATER SYSTEM COMBINED WITH PROTECTION FROM SCALDING AND A CIRCUIT OF CIRCULATION



Advantages

- Constant temperature hot water
- Pre-assembled set
- Protection from scalding
- Including insulating shell
- Equipped with 3 non-return valves
- Reduced installation costs
- Installation Security

		Circulation set, VTR300/VTR500		
VTR322	35–60°	R ¾"	Kvs 1,6	**Art. 31400100**
VTR522	45–65°	R ¾"–R 1"	Kvs 3,5	**Art. 31400400**

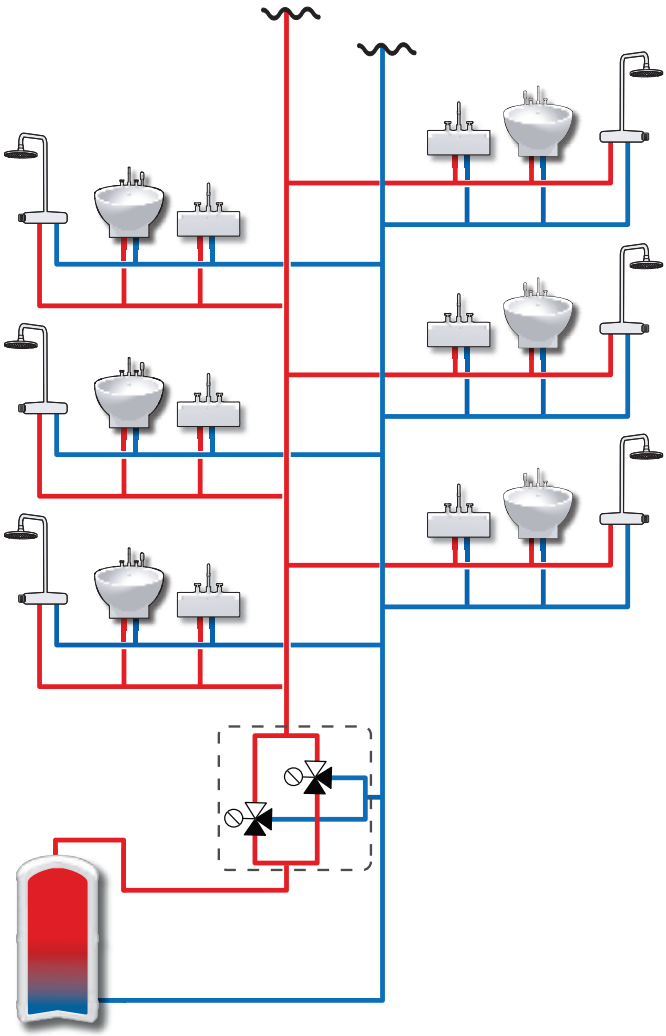
DOMESTIC HOT WATER

ESBE UPTT520 – Thermostatic mixing valve unit

Thermostatic valves with high Kvs value kan be both big and expensive. Therefore, we are now presenting a solution where we have, instead of one big valve, put together two of the best thermostatic valves we have – VTA520 x 2 = UPTT500. With two parallel-connected thermostatic valves we get a high performance at both high and low flows, compared to a big valve. UPTT500 is a cost-effective and efficient solution to increase the capacity of your system.

Advantages

- Anti scald function
- High accuracy at both high and low flows
- High Kvs: 6,1
- Two temperature ranges: 45–65° eller 50–75°



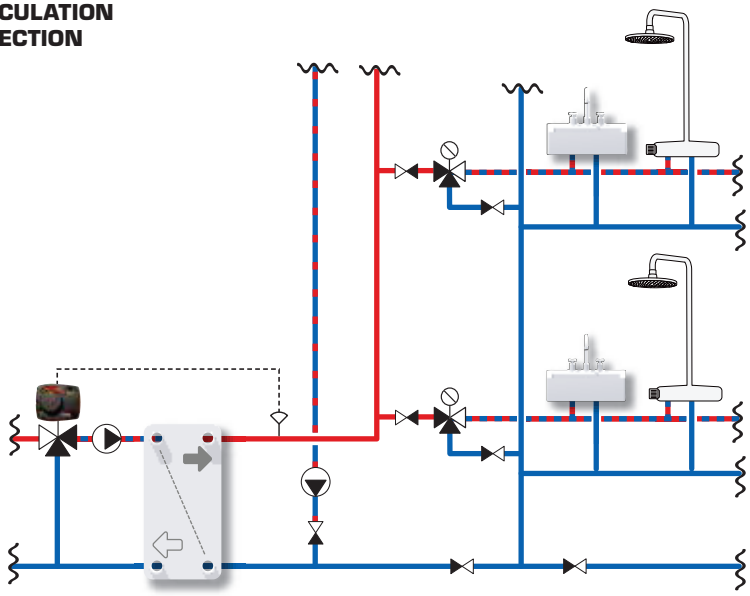
 Thermostatic mixing valve unit, UPTT522				
UPTT522	45–65°	G 1¼"	Kvs 6,1	**Art. 31420200**
	50–75°			**Art. 31420300**

DOMESTIC HOT WATER

Water at constant temperature with the possibility of the thermal disinfection cycle management for the protection against Legionella

Choose the product according to the size and level of comfort desired

TAP WATER SYSTEM WITH CIRCULATION CIRCUIT FOR THERMAL DISINFECTION



	Mixing valve, 3-way [1]			Controller CRS211
12 to 25 l/min*	VRG132	G ¾" Kvs: 4	Art. 11602000	Constant flow temperature controller made especially for PWx (Potable water applications) CRS211 230V AC, 6 Nm, 5-95°C **Art. 12727100***
20 to 40 l/min*	VRG132	G 1" Kvs: 6,3	Art. 11602300	
30 to 60 l/min*	VRG132	G 1¼" Kvs: 10	Art. 11602500	
48 to 100 l/min*	VRG132	G 1½" Kvs: 16	Art. 11602600	
75 to 150 l/min*	VRG132	G 2" Kvs: 25	Art. 11603500	
120 to 250 l/min*	VRG132	G 2¼" Kvs: 40	Art. 11603700	

* Maximum specifications for applications with power P> 3 bar and ΔP≤2 bar for the valve (for details see the datasheets)

1) Calculated on ΔP_{valve} : 3-15kPa

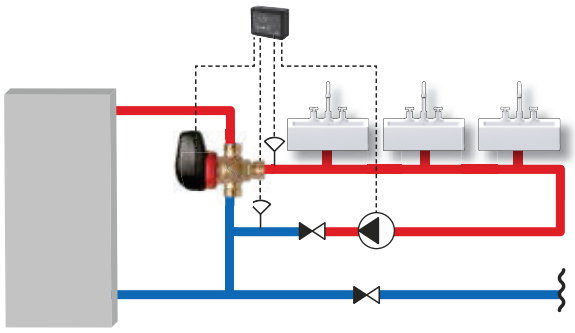
Thermostatic mixing valve VTA			
		Kvs	
VTA322	35-60°C, G ¾"	1,5	**Art. 31100600**
VTA322	35-60°C, G 1"	1,6	**Art. 31101000**
VTA522	45-65°C, G 1"	3,2	**Art. 31620200**
VTA522	45-65°C, G 1¼"	3,5	**Art. 31620500**

* Maximum specifications for applications with power P> 3 bar and ΔP≤2 bar for the valve (for details see the datasheets)

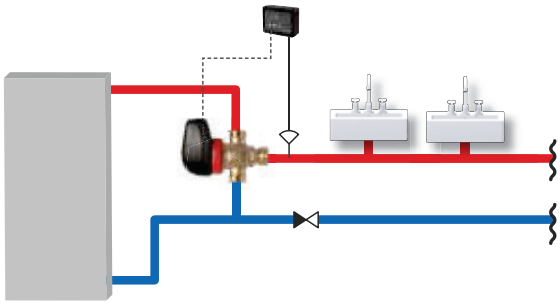
DOMESTIC HOT WATER

Electronic mixing valve in a safe, adaptable and compact design

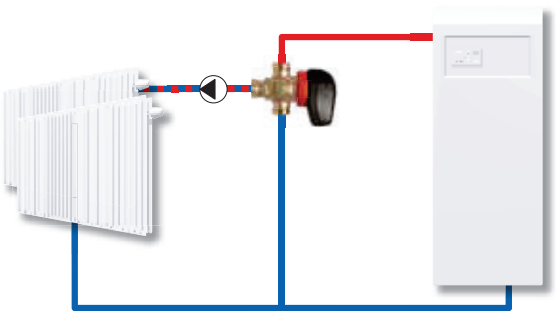
The SLD136 is a high-speed electronic mixing valve, made with material suitable for drinking water. With its high speed control and a modern control interface it is an ideal product where flexibility, compactness and customization is wanted and needed. Thanks to the high-speed motor driven system, a change-over time of 1 second can be achieved. The SLD can function both as a mixing valve and a change over valve in i.e., HIUs, underfloor heating or hot water circulation applications.



Sensor and controller is not within scope of delivery.



Sensor and controller is not within scope of delivery.



Motorized control valve, SLD136

SLD136	24 V AC/DC	DN10	Kvs 1,6*	G ½"	**Art. 31100600**
		DN15	Kvs 2,5*	G ¾"	**Art. 43500200**
		DN20	Kvs 3,4*	G 1"	**Art. 43500300**

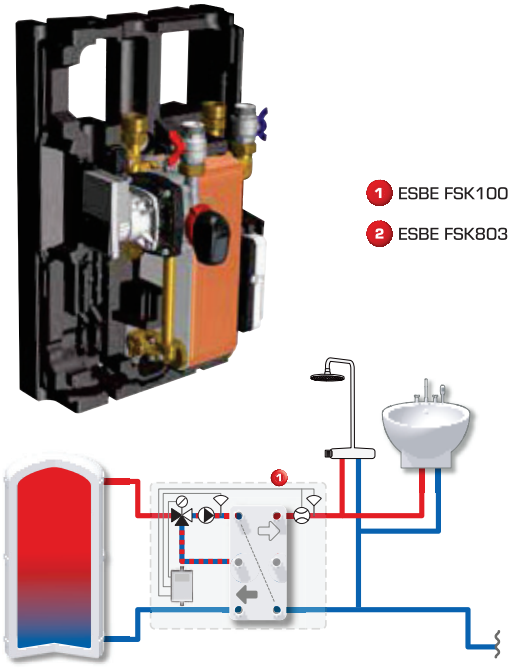
* Kvs-value in m^3/h in A- & B-position at a pressure drop of 1 bar.

DOMESTIC HOT WATER

Group for instant DHW production

Hygienic production of hot water, high comfort and protection from limestone.

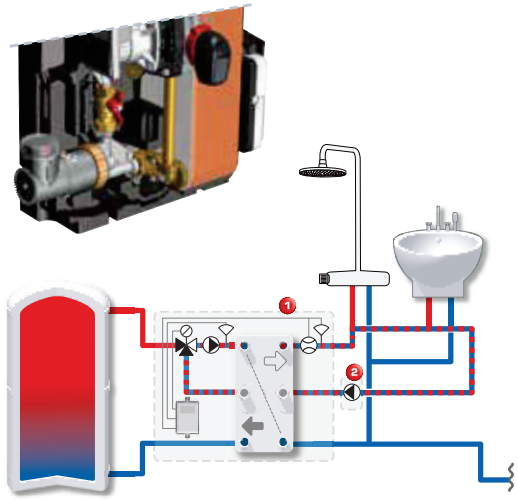
An intergrated innovative high speed mixing valve, allows adjustment of the inlet temperature to the heat exchanger ensuring an efficient use of energy and protecting the plate heat exchanger from limestone formation. This obtains a stable hot water temperature with high reliability and efficiency. The simplicity of use is assured by a pre-wired and pre-programmed control unit and the hygienic production of hot water, high comfort and protection from limestone are secured. Double pass plate heat exchanger allows long thermal length resulting in high thermal efficiency and low return temperature.



Fresh Hydro unit

FSK101	G 1"	**Art. 31100600**

- Tap performance: 40 l/min – at 70°C primary
- Tap performance: 40 l/min – at 45°C outlet secondary



Accessories

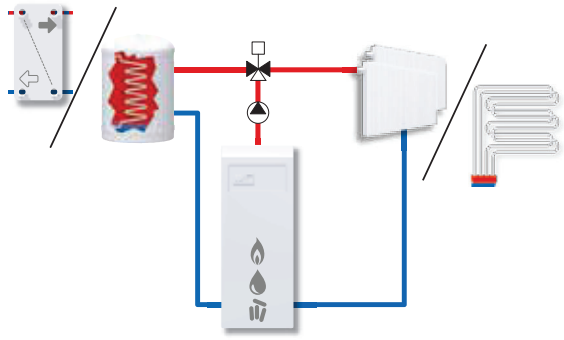
Circulation unit with pump and electronic return thermostat

FSK803	G½"	**Art. 64020100**

DIVERTING SYSTEM HEATING / DOMESTIC HOT WATER

Zone and diverting valves for applications; heatpump/oil/gas/pellet/wood
Choose the product according to the power of the radiator or the surface with underfloor heating

LOW FLOW DIVERTING

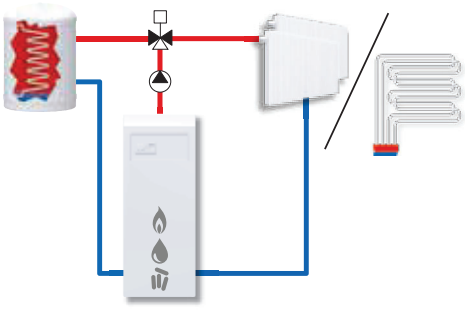


Advantages
- Switching time 3 seconds
- Suitable for heat pumps
- Automatic start-blocking (every 7 days)
- Low leakage
- Fluid temperature 95 ° C

Floor heating*	 Diverting valve VZC		
Up to 130 m²	VZC162	G ¾" Kvs: 3,5	**Art. 43060600**
Up to 220 m²	VZC162	G 1" Kvs: 6	**Art. 43060800**
Radiator**			
Up to 19 kW	VZC162	G ¾" Kvs: 3,5	**Art. 43060600**
Up to 33 kW	VZC162	G 1" Kvs: 6	**Art. 11660300**

* Calculated on ΔP_{valve}: ≤ 10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: ≤ 10kPa and ΔT=15K

LOW / MEDIUM FLOW DIVERTING WITH SPRING RETURN



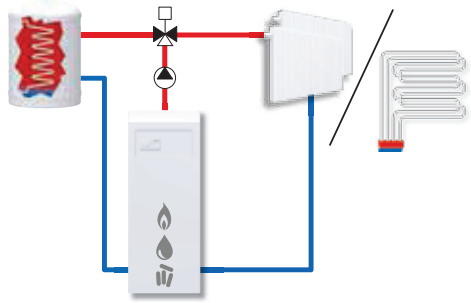
Floor heating*	 Diverting valve ZRS230		
Up to 115 m²	ZRS234	G ½" kvs: 3,2	**Art. 43123100**
Up to 170 m²	ZRS234	G ¾" kvs: 4,6	**Art. 43123200**
Up to 200 m²	ZRS234	G 1" kvs: 5,7	**Art. 43123300**
Up to 360 m²	ZRS234	G 1¼" kvs: 10	**Art. 43123400**
Radiator**			
Up to 17 kW	ZRS234	G ½" kvs: 3,2	**Art. 43123100**
Up to 25 kW	ZRS234	G ¾" kvs: 4,6	**Art. 43123200**
Up to 31 kW	ZRS234	G 1" kvs: 5,7	**Art. 43123300**
Up to 54 kW	ZRS234	G 1¼" kvs: 10	**Art. 43123400**

* Calculated on ΔP_{valve}: ≤ 10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: ≤ 10kPa and ΔT=15K

DIVERTING SYSTEM HEATING / DOMESTIC HOT WATER

Zone and diverting valves for applications; heatpump/oil/gas/pellet/wood
Choose the product according to the power of the radiator or the surface with underfloor heating

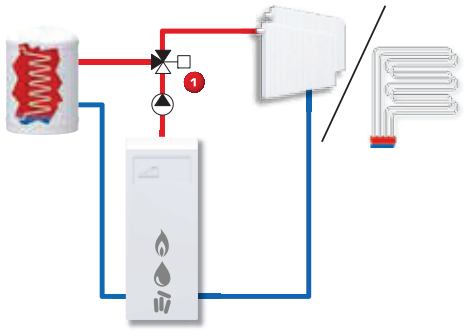
MEDIUM FLOW DIVERTING



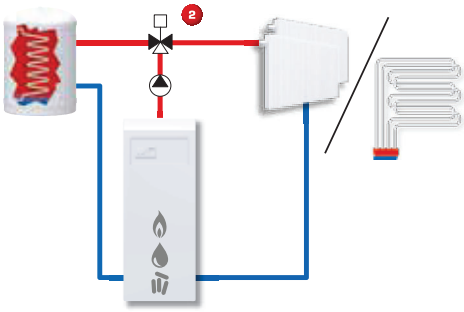
Floor heating*	 Diverting valve, MBA130		
Up to 340 m²	MBA132	G ¾" Kvs: 9,6	**Art. 43102700**
Up to 410 m²	MBA132	G 1" Kvs: 11,3	**Art. 43102800**
Radiator**			
Up to 53 kW	MBA132	G ¾" Kvs: 9,6	**Art. 43102700**
Up to 61 kW	MBA132	G 1" Kvs: 11,3	**Art. 43102800**

* Calculated on ΔP_{valve}: ≤ 10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: ≤ 10kPa and ΔT=15K

HIGH FLOW DIVERTING



MEDIUM FLOW DIVERTING



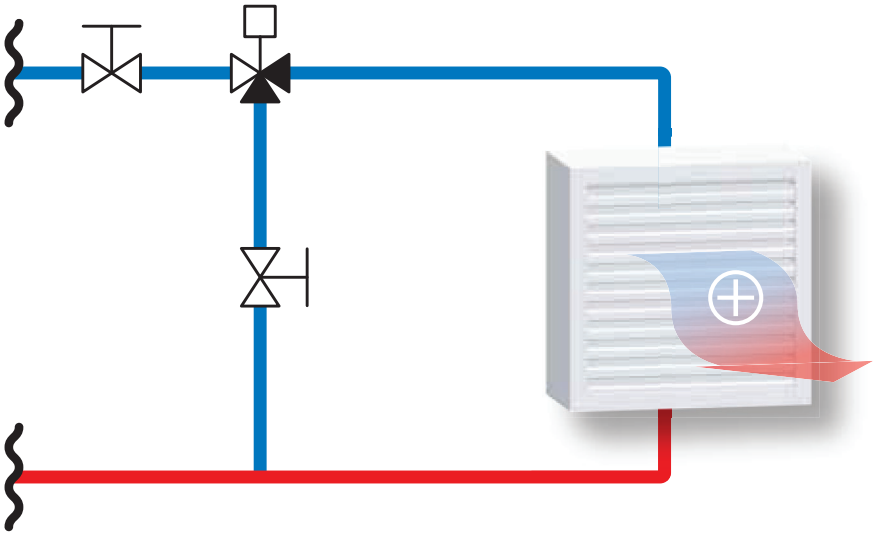
Floor heating*	 Mixing valve, 3-way				
Up to 360 m²	VRG131	**Art. 11601100** Rp 1" Kvs: 10	VRG231	**Art. 11620200** Rp 1" Kvs: 10	Actuator ARA645 2 point, 230V AC, 30 s, 6 Nm **Art. 12120800**
Up to 570 m²	VRG131	**Art. 11601200** Rp 1¼" Kvs: 16	VRG231	**Art. 11620300** Rp 1¼" Kvs: 16	
Up to 920 m²	VRG131	**Art. 11603400** Rp 1½" Kvs: 25	VRG231	**Art. 11621400** Rp 1½" Kvs: 25	
Up to 1420 m²	VRG131	**Art. 11603600** Rp 2" Kvs: 40	VRG231	**Art. 11621600** Rp 2" Kvs: 40	
Radiator**					
Up to 55 kW	VRG131	**Art. 11601100** Rp 1" Kvs: 10	VRG231	**Art. 11620200** Rp 1" Kvs: 10	
Up to 85 kW	VRG131	**Art. 11601200** Rp 1¼" Kvs: 16	VRG231	**Art. 11620300** Rp 1¼" Kvs: 16	
Up to 140 kW	VRG131	**Art. 11603400** Rp 1½" Kvs: 25	VRG231	**Art. 11621400** Rp 1½" Kvs: 25	
Up to 220 kW	VRG131	**Art. 11603600** Rp 2" Kvs: 40	VRG231	**Art. 11621600** Rp 2" Kvs: 40	

* Calculated on ΔP_{valve}: ≤ 10kPa, 50 W/m² and ΔT=5K
** Calculated on ΔP_{valve}: ≤ 10kPa and ΔT=15K

DISTRICT HEATING & SUBSTATIONS

Perfect match between valve and actutator

The ESBE valve 3F is a superb regulation for best mixing or diverting performance. Long lasting and high durability. Combine with series 90, with 3 point signal, or a controller from the CRx120 series. In these applications any position of the actuator operating range can be used to get the desired mix level.



COMBINE VALVE WITH AN ACTUATOR OR A CONTROLLER SUITABLE FOR YOUR SYSTEM

Rotary valve 3F, 3-way

Art.no.	DN	Kvs
11100100	20	12
11100200	25	18
11100300	32	28
11100400	40	44
11100600	50	60
11100800	65	90
11101000	80	150
11101200	100	225
11101400	125	280
11101600	150	400

OR

Actuator Series 90

Art.no.	Ref.	Voltage	Running time (s)	Torque (Nm)
12550500	93P	24 V AC/DC	60/90/120	15
12051900	95 3-P	230 V AC	60	15
12052000	95 2-P	230 V AC	120	15
12052200	95M 3-P	230 V AC	60	15
12052300	96 3-P	230 V AC	240	15

CRC12x

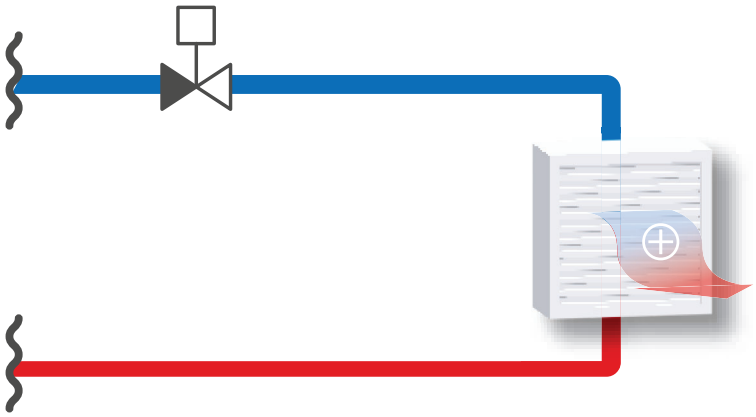
Controller, CRx120

Art.no.	Ref.	Voltage	Temp. Range	Torque (Nm)
12742200	CRA122	24 V AC/DC	5°C – 95°C	15
12742100	CRA121	230 V AC	5°C – 95°C	15
12742500	CRA125	230 V AC [2)]	5°C – 95°C	15
12842100	CRC121 [1)]	230 V AC	5°C – 95°C	15
12842500	CRC125 [1)]	230 V AC [2)]	5°C – 95°C	15

1) Weather compensating controller. 2) Transformer with UK plug.

DISTRICT HEATING & SUBSTATIONS

For mixing and regulation of cooling and heating systems.



Control valve
2-way, PN16

VLE122/VLE325

Art.	DN	Kvs	Reference
21250100	15	0,25	VLE122
21250200		0,4	
21250300		0,63	
21250400		1	
21250500		1,6	
21250600		2,5	
21250700		4	
21250800	20	6,3	
21250900	25	10	
21251000	32	16	
21251100	40	25	
21251200	50	38	
21400300	20	1,6	VLE325
21400400		2,5	
21400700	25	1,6	VLE325
21400800		2,5	
21400900		4	

VLE325 can replace old STL-Valve with same measurements

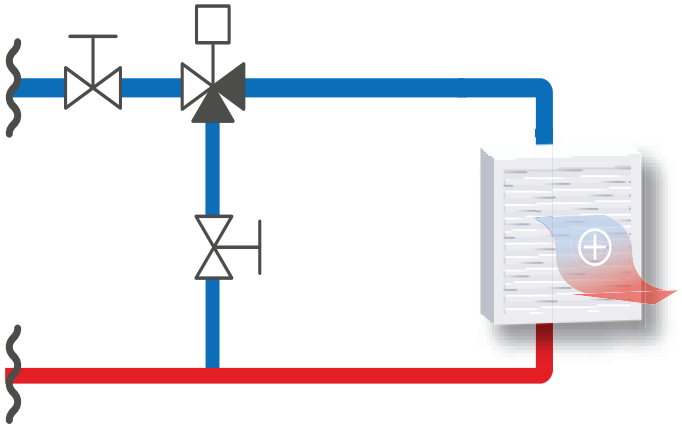
Control valve
2-way, PN16

VLA325

Art.	DN	Kvs	Reference
21200100	15	1,6	VLA325
21200200		2,5	
21200300		4	
21200400	20	6,3	
21200500	25	10	
21200600	32	16	
21200700	40	25	
21200800	50	38	

DISTRICT HEATING & SUBSTATIONS

For mixing and regulation of cooling and heating systems.



Control valve
3-way, PN16

VLA335/VLB335

Art.no.	DN	Kvs	Reference
21200900	15	1,6	VLA335
21201000		2,5	
21201100		4	
21201200	20	6,3	
21201300	25	10	
21201400	32	16	
21201500	40	25	
21201600	50	38	
21221100	65	63	VLB335
21221200	80	100	
21221300	100	130	
21221400	125	200	
21221500	150	300	

ALFxx1

Modulating/proportional or
3-point floating control signal

Art.no.	Reference	Supply voltage [V]	Force [N]	Stroke [mm]
22200100	ALF131	230V AC, 50Hz	600	30
22200200	ALF261		1000	60
22200300	ALF361		1500	
22200400	ALF461		2200	

ALB100

With proportional or 3-point
(increase/decrease) control signal

Art.no..	Reference	Supply voltage [V]	Force [N]	Power consumption [VA]
22050100	ALB144	24V AC/DC, 50/60Hz	800	30

TEMPERATURE REGULATION FOR HEATING AND COOLING WITH VLE AND ALF/ALB

The ESBE control valve is able to handle both extremely hot water and cooling water with antifreeze additive. This valve comes in 2-way and 3-way versions. The easiest, most appropriate way to fit it is with our actuators ALF or ALB.

Series ALF/ALB and VLE

COMFORT COOLING

TEMPERATURE REGULATION OF HEATING AND COOLING WITH VRG AND ARA

ESBE supplies a broad range of rotary valves for regulation of heating and cooling installations. These valve series come with different dimensions and connection types. Unique in terms of stability and precision in combination with the ESBE ARA actuator.

ARA and
VRG series

HEAT INSTALLATION

COOLING INSTALLATION

REMOTE WORKING IN A SMALL SPACE

Use a spacer between the valve and the actuator to facilitate condensation insulation for your cooling installation.

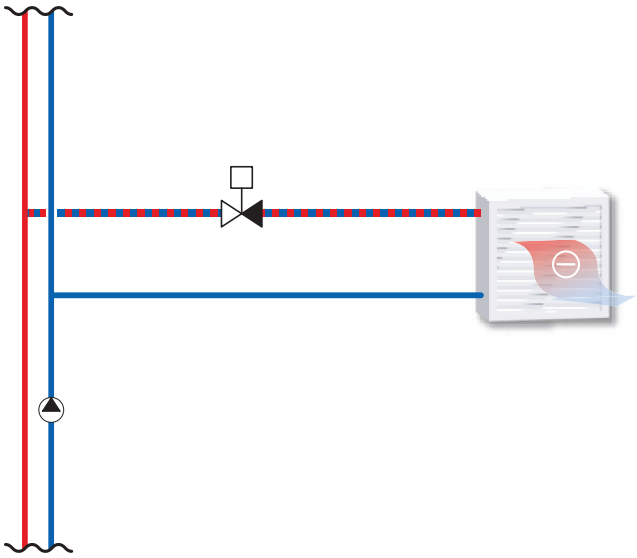
Art. nr. 67000700

Tip!

COMFORT COOLING

COOLING SYSTEM WITH 2-WAY REGULATION AND VARIABLE FLOW

Series VLE122 Series ALF/ALB

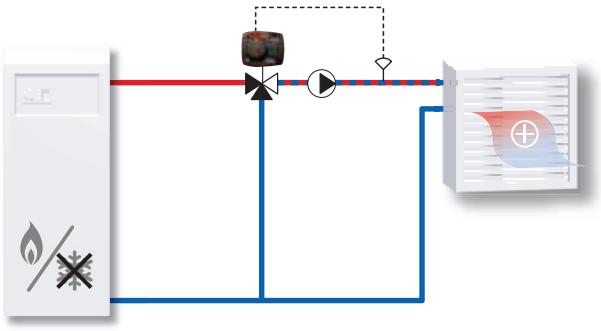


CONTROLS AND SETS TWO DIFFERENT MODES

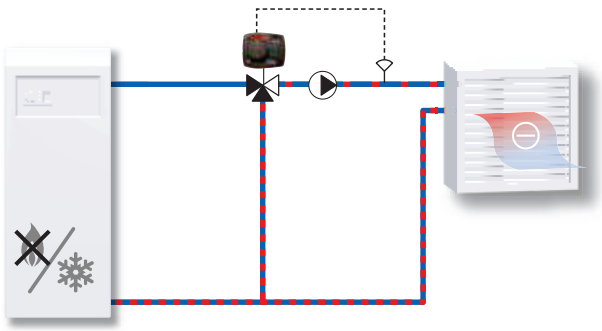
The ESBE CRA150 series is a built-in actuator and regulator that can control two different operating modes. Heating mode and cooling mode, according to a selected preset temperature. Can be combined with any ESBE rotary valves.

Art. no. 12725100

Tip!



Heating mode



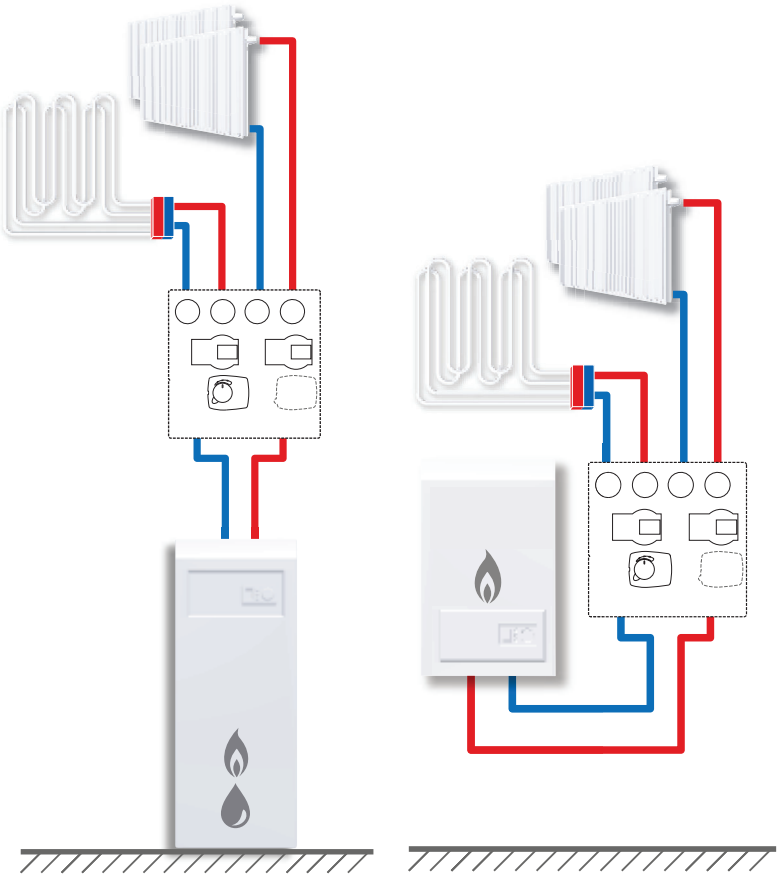
Cooling mode

CIRCULATION UNITS
INSTALLATION TIPS

There are lots of applications for ESBE circulation units

Ventilation and heating systems in apartment blocks, on factory sites and in single-family homes, and systems with lower heat requirements are just a few examples of contents in which they work perfectly. Our series of circulation units is designed for applications requiring the most efficient kind of energy transport, and they are particularly applicable for systems where low return temperatures are preferable as the circulation units operate with variable flow on the primary side and constantly on the secondary side.

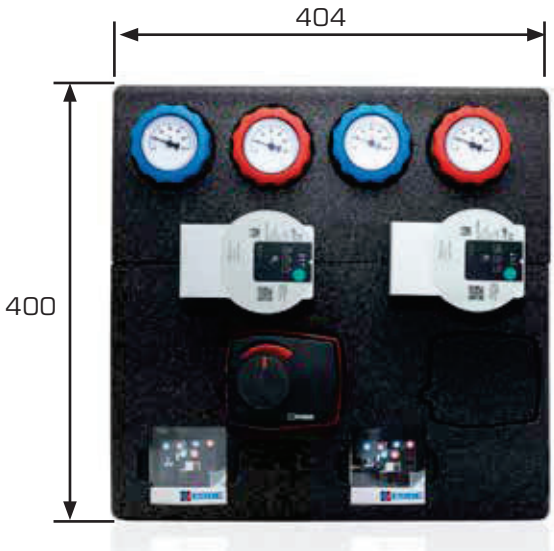
Our circulation units are combined to form a single group of compact components in which all spacers and dimensions are optimised. As assembly is complete, you just need enough space in which to link the pipe connections together.



ESBE DDA111
Art. 61310100

ESBE DAA111
Art. 61310200

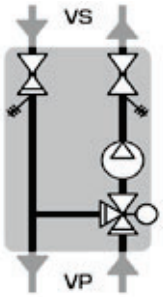
NEW



CIRCULATION UNITS
INSTALLATION TIPS

What is a circulation unit?

A circulation unit is a prefabricated unit that consists of control valve, actuator, controller, circulation pump and shut-off valve, all together in one product. The circulation unit creates energy effiency and is designed for applications where right temperature and flow are needed for an optimated operation of your heating-/cooling system. ESBE circulation units are suitable for several kinds of applications in bigger and smaller properties with several climate zones with different ventilation- heating- and cooling needs.

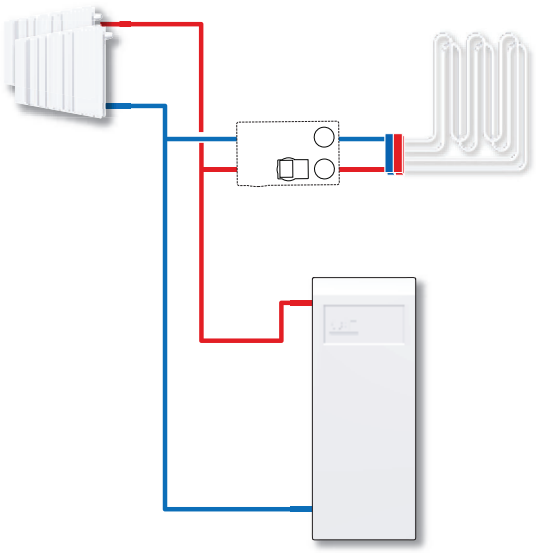


- Cost efficient installations, quick and easy.
- Circulation units creates energy savings.
- Space saving models, as small as a A4-sheet, 21x30 cm
- Adjustable wall bracket, but could also be mounted direct on the pipes in a 90-180 degree angle.
- ESBE technical support will help with dimensions.
- Data Sheets, BIM and MagiCloud are avaliable on ESBE website

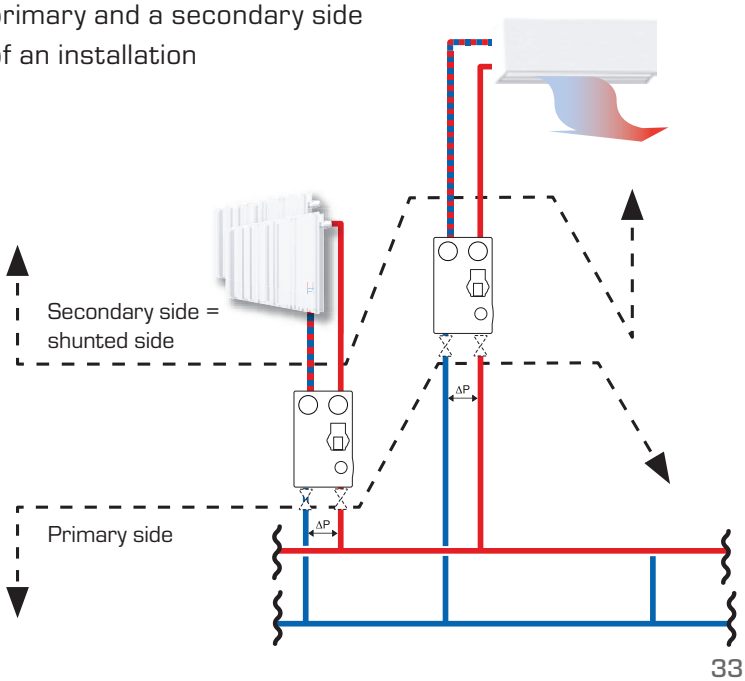
Not as hard as you think!

INSTALLATION EXAMPLES

Example with a heat pump and an additional circuit, both radiator and under floor heating.



Example to illustrate what is a primary and a secondary side of an installation



CIRCULATION UNITS
INSTALLATION TIPS

FLEXI, THE FLEXIBLE MODEL THAT CREATES OPPOTUNITIES

Select an appropriate controller or actuator:

ESBE CRD

ESBE CRA

ESBE CRC

ESBE ARA

Use your prefered 180 mm pump:

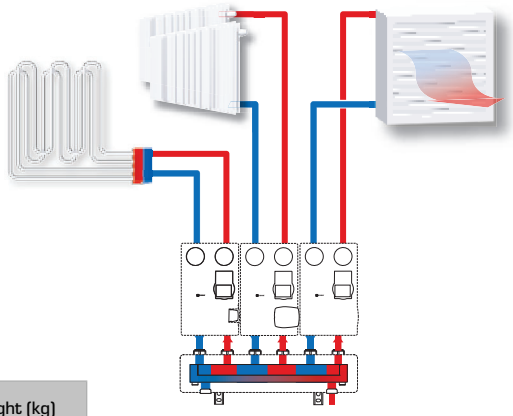
Art.No.	Ref.	DN	Weight (kg)	Note
61240100	GRF111	25	3,4	Mixing function with VRG432

Manifolds

Available in multiple models, see the full assortment on our webpage.

GMA421, GMA431

Art.No	Ref.	No. of circulation units	With hydraulic separator	Weight (kg)
66001200	GMA421	2	No	4,3
66001300	GMA431	3		5,3



Installation example with a GMA431 manifold.

CIRCULATION UNITS
INSTALLATION TIPS

DN20 – MAXIMUM FUNCTION **IN A MINIMUM OF SPACE**

Applications include everything from homes needing less heating to larger ventilation and heating systems in apartment blocks. The compact devices allow for even more options and make it easy for you to find a group to suit your precise needs.

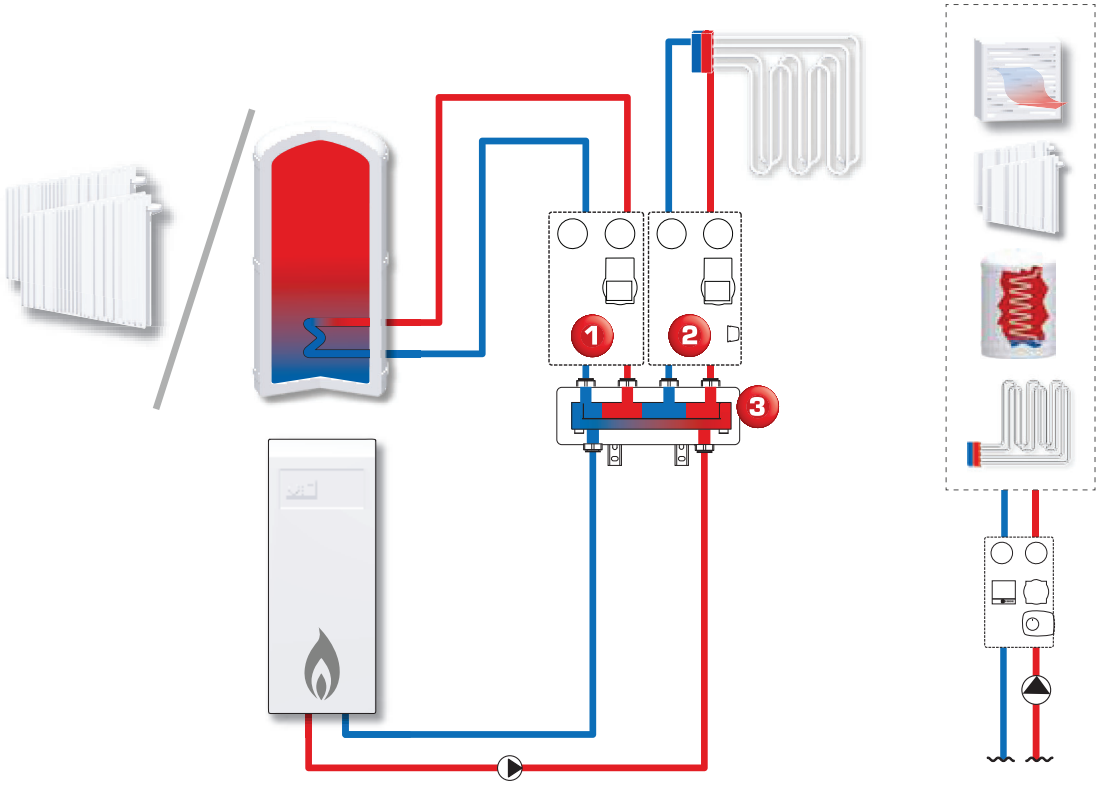
Just like the larger version the DN20 is a concept offering high technical quality in combination with simple, smart solutions.

The DN20's external dimensions are just 301 x 190 mm
Supplied with Wilo pumps.

ESBE GRA311
Art. 61043600

CIRCULATION UNIT WITH MANIFOLD

Circulation units for a mixed circuit with fixed temperature regulation for the underfloor heating and a direct circuit tank/radiator

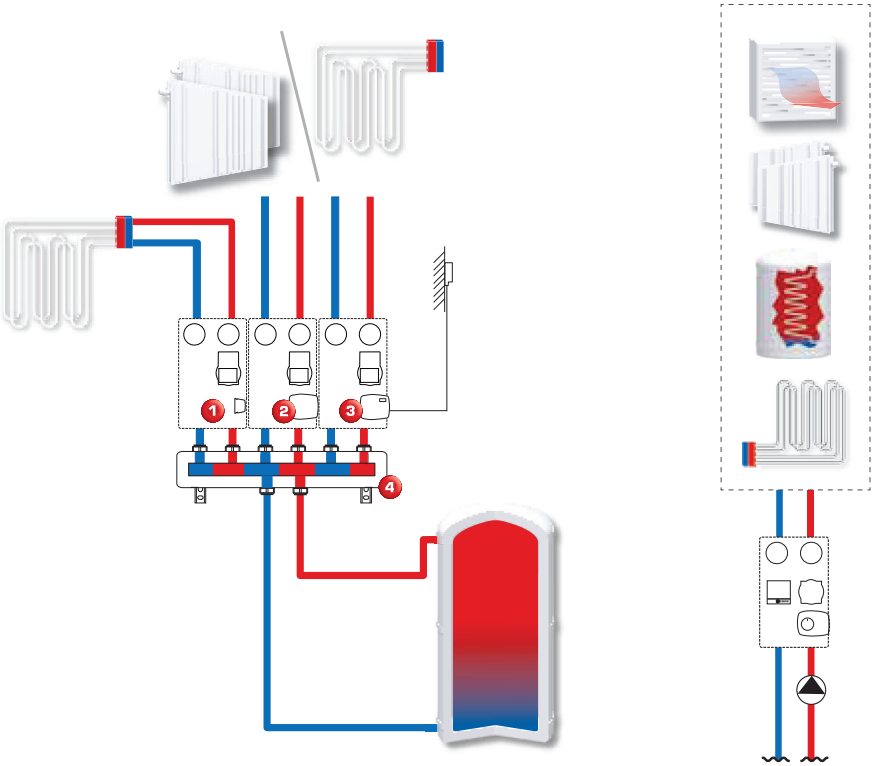


	1 Circulation unit, direct GDA211	2 Circulation unit, fixed temperature GFA211	3 Manifold with integrated separator GMA521
Floor heating*			For 2 circulation units, 3 m³/h **Art. 66001600** **PN6**
From 60 to 200 m²		• GFA211 DN25 Wilo PARA 25/6 20–55°C **Art. 61021100**	
From 100 to 270 m²		• GFA211 DN32 Wilo PARA 25/8 20–55°C **Art. 61021200**	
Radiator**			
Up to 45 kW	• GDA211 DN25 Wilo PARA 25/6 **Art. 61001100**		
Up to 62 kW	• GDA211 DN32 Wilo PARA 25/8 **Art. 61001200**		

* Calculated on influence of the pump in the system ΔP= 2,7 m, 50 W/m² and ΔT=5K
**Calculated on influence of the pump in the system ΔP= 1,7 m, and ΔT=15K

CIRCULATION UNIT WITH MANIFOLD

Circulation units for a fixed temperature regulation for one floor and to an other floor/radiator a mixed circuit with integrated or external climate control unit

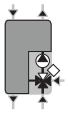
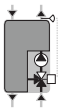


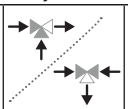
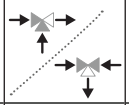
	 1 Circulation unit, fixed temperature GFA211	 2 Circulation unit, with actuator GRA211	 3 Circulation unit, with controller GRC221	 4 Manifold GMA431
Floor heating*				For 3 circulation units, 3 m³/h **Art. 66001300** **PN6**
From 60 to 200 m²	DN25 Wilo PARA 25/6 20–55°C **Art. 61021100**			
From 100 to 270 m²	DN32 Wilo PARA 25/8 20–55°C **Art. 61021200**			
Up to 240 m²		DN25 Wilo PARA 25/6 **Art. 61042100**	DN25 Wilo PARA 25/6 **Art. 61044100**	
Up to 350 m²		DN32 Wilo PARA 25/8 **Art. 61042200**	DN32 Wilo PARA 25/8 **Art. 61044200**	
Radiator**				
Up to 41 kW		DN25 Wilo PARA 25/6 **Art. 61042100**	DN25 Wilo PARA 25/6 **Art. 61044100**	
Up to 58 kW		DN32 Wilo PARA 25/8 **Art. 61042200**	DN32 Wilo PARA 25/8 **Art. 61044200**	

* Calculated on influence of the pump in the system ΔP= 2,7 m, 50 W/m² and ΔT=5K

**Calculated on influence of the pump in the system ΔP= 1,7 m and ΔT=15K

PRODUCT SUMMARY

Circulation units	Description	Symbol	Sample page
 GDA200, GDA300	• Circulation unit series GDA intended for direct supply of heating • Complete with two shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo or Grundfos). • DN: 20–32		36
 GFA200, GFA300	• Circulation unit series GFA intended for fixed temperature operation. • Complete with a thermostatic mixing valve, two shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo or Grundfos). • DN: 20–32 • Temperature setting: 20–55 °C		14, 36, 37
 GRA200, GRA300	• Circulation unit series GRA intended for control the flow temperature in heating systems with external control unit. • Complete with a 3- or 4-way mixing valve, actuator, two shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo or Grundfos). • DN: 20–32		15, 35, 37
 GRC200	• Circulation unit series GRC200 equipped with integrated climate control unit for the control of the flow temperature in heating systems. • Complete with a 3-way mixing valve, controller, two shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo or Grundfos). • DN25 or DN32		15, 37
 GRB300	• Circulation unit series GRB300 intended for efficient energy transport in heating circuits where flow and temperature control are required. • Complete with a rotary mixing valve with a bypass canal in six variants with different Kvs values from 0.4 to 4.0, thermometers, shell of high insulation class and a highly efficient circulation pump (Wilo) • The 2-way function enables a variable primary flow and a constant secondary flow. • DN20		–
 DDA100	• Double circulation unit series DDA intended for direct supply of heat and for regulating the flow temperature in heating systems with external control unit. • Complete with 3-way mixing valve, actuator, shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo). • DN20		32
 DAA100	• Double circulation unit series DAA intended for control the flow temperature in heating systems with external control unit. • Complete with 3-way mixing valves, actuators, shut-off valves with thermometers, check valve, wall bracket, shell of high insulation class and high efficiency circulation pump (Wilo). • DN20		32
 GMA400	• Manifolds series GMA400 for 1 circulation unit as a hydraulic separation GMA411 and manifolds for 2, 3, 4 or 5 circulation units DN25 and DN32 with the distance between connection 125mm		34, 37
 GMA500	• Manifolds with integrated hydraulic separation series GMA500 for 2 or 3 circulation nits DN25 and DN32 with the distance between connections 125mm		36

Rotary valves	Description	Symbol	Sample page
 VRG130, VRG230	• The series VRG130 / VRG230 is a range of compact 3-way rotary mixing valves. • Available from DN15 to DN50. • Also available in high-flow version DN20–50. (Series VRG330) • Also available in flanged cast iron DN20–150 (Series 3F)		12, 14, 15, 16, 22, 26
 VRG140	• The series VRG140 is a range of compact 4-way rotary mixing valves. • Recommended for applications where it is necessary to avoid the cold return flow to the heat source. • Available from DN15 to DN50. • Also available in flanged cast iron DN32–150 (Serie 4F)		–
 VRB140	• The series VRB140 is a range of compact 4-way rotary bivalent mixing valves. • "Dual-Energy"; Allows mixing of two energy sources in ideal proportion guaranteeing big savings. • Recommended for backup applications for boilers. • Available from DN15 to DN50.		13, 16
 3F	• Series 3F are three way valves with flange connection made out of cast iron. • Can be used in both heating and cooling installations. • Suitable for mixing or diverting operation up to 6 bar. • Available in DN 20–150.		27
 4F	• Series 4F are four way valves with flange connection made out of cast iron. • Can be used in both heating and cooling installations. • Suitable for mixing or diverting operation up to 6 bar. • Available in DN 40–100.		–

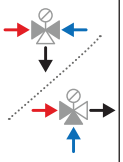
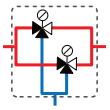
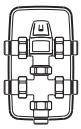
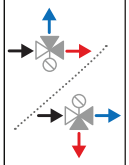
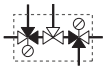
PRODUCT SUMMARY

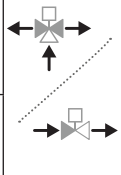
Rotary controllers	Description	Symbol	Sample page
 CRA210, CRA120, CRK210	• The CRA series is an integrated actuator and controller, for the control of a constant flow temperature. • Available for heating only (CRA210/CRA120), for heating and cooling (CRK210). • Fully pre-wired and delivered with a flow pipe sensor and connection kit to VRG valves. • Adjust 5–95°C, 230V or 24V (CRA210/CRA120) • An alternative target temperature T2 may be activated by an external signal.		15, 16, 27, 31
 CRC210, CRC120	• The CRC series is an integrated actuator and controller. The regulation is based on outdoor sensor feedback and an adjustable characteristic heating curve. • Available in version for heating (CRC210/CRC120). • Fully pre-wired and delivered with a flow pipe sensor, an outdoor sensor and connection kit to VRG valves. • 230V or 24V (CRC210/CRC120) • A temperature filter can be activated to delay an outdoor temperature change to avoid an imbalance between estimated and actual heating demand.		13, 15, 16, 27
 CRD	• The CRD series is an integrated actuator and controller that include an advanced adaptation that will build the ideal characteristic heating curve for the specific building so that the user only need to decide one thing, the required indoor temperature. • Available in versions for heating. • 230V • Fully pre-wired, with flow sensor, external sensor with 20 m cable, wireless room sensor and connection to VRG valves kit. • Possible programming from the room thermostat with timer function for T/T2		13, 15, 16
 CRS	• The CRS series is an integrated actuator and controller for primarily use in centralised potable water applications thanks to the response time and position of the sensor. • Fully pre-wired, with flow sensor immersion and connection kit to VRG valves. • Adjust 5–95°C • 230V • An alternative target temperature T2, for example during legionella flushing, can be activated by an external signal.		22
 CRB	• The CRB series is an integrated actuator and controller for perfect indoor temperature control. The room unit allows to set a weekly program and alternative room temperature (e.g. lower temperature during night). • Power supply 230V AC. • Room temperature settings +5 to +30°C • Wired and wireless versions are available.		13, 15, 16

Rotary actuators	Description	Symbol	Sample page
 ARA600 2 point	• Recommended for diverting applications. • The actuators are controlled by a 2-point signal (on / off), or by a 3-point signal. • Running time: 15 to 60 s • Power supply voltage: 230V AC or 24V AC • Also available in version 15 Nm (Series 90) or up to 30 Nm (ARC series) for valve series 3F / 4F		12, 26
 ARA600 3 point	• Recommended for mixing applications • Actuators are controlled by 3-point signal • Running time from 30 to 1200s • Power supply 230V AC or 24V AC • Torque 6Nm * Available actuators: series 90 with torque 15Nm and series ARC with torque 30Nm for valves 3F and 4F		14
 ARA600 Proportional	• Recommended for mixing applications • Actuators are controlled by propotional (0-10V, 2-10V, 0-20mA, 4-20mA) 3-point and 2-point signal • Running time from 15 to 120s • Power supply 24V AC/DC • Torque 6Nm * Available actuators: series 90 with torque 15Nm and series ARC with torque 30Nm for valves 3F and 4F		-
 SERIES 90 2-Point 3-Point Proportional	• 3-point and Proportional is suitable for mixing operations. 2-point is suitable for diverting operations. • The actuator is controlled either 3- or 2-point signal, alternatively by proportional signal (0-10V, 2-10V, 0-20mA, 4-20mA) • Running time: 3-point: 15–240 s, 2-point: 15–60 s, Proportional: 60–390 s • Voltage: 3-point: 24 or 230 VAC, 2-point: 230 VAC, Proportional: 24 VAC • Torque: 3- and 2-point: 5–15 Nm Proportional: 15 Nm		27

Fresh hydro units	Description	Symbol	Sample page
 FSK100	• The series FSK100 is a unit designed for instantaneous production of sanitary hot water • Up to 40 l/min domestic hot water • All time fresh, vital and hygienic drinking water in the demanded volume • High tap rates due to high dimensioned plate heat exchangers • Legionella flushing function • Fast reaction times without over and under shooting • Lowest calcification risk due to reduction of the temperature on the heat plate exchanger inlet side		24

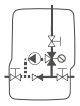
PRODUCT SUMMARY

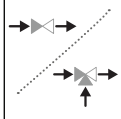
Thermostatic units	Description	Symbol	Sample page
 VTA300, VTA500	• The installation of a thermostatic mixing valve to the water heater allows you to limit the temperature of the outlet to the taps. In this way the water can be heated to high temperatures reducing the risk of legionella while safeguarding the user from the risk of scalding. There are also other possible applications, such as solar heating and underfloor heating. • Kvs <4,8 • DN15–25 • Setting ranges from from 10°C to 75°C • Accessories such as connection kits and check valves		12, 14, 20, 22
 UPTT500	• The UPTT500 series is a thermostatic mixing valve unit consisting of two parallel connected VTA500 • Designed specifically for systems requiring higher flow rates but without compromising precise control performance at lower flows. • Available in two different temperature ranges: 45-65°C and 50-75°C • Kvs <6,1		12, 21
 VTR300, VTR500	• The series VTR300 /VTR500 is a circulation set that provides instantly hot water, scald protection and comfort in a compact and efficient way • The circulation set offers an easy installation of HWC (hot water circulation) • Includes all the necessary thermostatic mixing valve, check valves, fittings, and the insulation shells. • Setting ranges from 35°C to 75°C • Kvs 1,6 (VTR300, mono-detached applications) or 3,5 (VTR500, multi-family applications)		20
 VTD300, VTD500	• The series VTD300/VTD500 is composed of a range of thermostatic diverting valves. • Available in fixed or adjustable temperature version temperature (42°C–52°C) • Setting ranges from 45°C to 60°C • Kvs <3,6		18
 VMC300, VMD300	• The series VMC300/VMC500 and VMD300 consist of thermostatic mixing valves and diverter valves 3-way and operate in a simple and efficient raising of the domestic hot water temperature produced by a solar thermal installation kits through an instant boiler according to need. • Available with or without fittings and insulating shells • Setting ranges: 35–60°C (mixer), 45°C o 42–52°C (diverter) • Kvs <2,5		18
 VTF320	• The series VTF300 is a thermostatic flow limitation valve • Setting range: 55 °C • Kvs 1,8		–

Diverting valves and Zone valves	Description	Symbol	Sample page
 VZC/VZD	• Series VZC, VZD is a range of compact diverting valves in brass for use in heat pumps, underfloor heating or HVAC applications. The main feature is the ability to rapidly change the flow direction between two circuits meaning an energy-efficient operation. • The actuator is controlled by 2-point signal, 230 VAC. • Kvs < 6 ; DN15–25		12, 25
 ZRS230	• Series ZRS is a range of diverting motorized zone valve with spring return actuator for use in heating and cooling system. • The actuator is controlled by 2-point signal with spring return function, 230 VAC. • Kvs <8,4, DN15–32 • Also available in a 2-way version.		25
 MBA130	• Series MBA is a range of motorized ball valves with actuator for use in heating and cooling system. The valve is air bubble tight according to EN12266-1. • The actuator is controlled by 2-point signal, 230 VAC. • Kvs <11,3, DN20–25 • Also available in a 2-way version.		29

Solid fuel products	Description	Symbol	Sample page
 VTC300	• The series VTC300 is a compact and accurate load valve used for solid fuel boilers. The load valve makes sure that the boiler gets up to a high combustion temperature so as to ensure the lowest possible emissions. • Kvs <3.2 ; DN15–20 • Opening temperature: from 45°C to 60°C		17

PRODUCT SUMMARY

Solid fuel products	Description	Symbol	Sample page
 VTC400	• The series VTC400 is a compact and accurate load valve used for solid fuel boilers. The load valve makes sure that the boiler gets up to a high combustion temperature so as to ensure the lowest possible emissions. • Available with fixed or adjustable temperature setting • Opening temperature: from 50°C to 70°C • Kvs <5.5		17
 VTC500	• The series VTC500 is a compact and accurate load valve used for solid fuel boilers. The load valve makes sure that the boiler gets up to a high combustion temperature so as to ensure the lowest possible emissions. • Kvs < 14 • DN25–32 • Opening temperature: from 50°C to 70°C		17
 LTC300	• The series LTC300 is a load unit with integrated high efficiency pump. The load unit makes sure that the boiler gets up to a high combustion temperature so as to ensure the lowest possible emissions. Above all, the load unit make sure that the return temperature to the boiler is kept high and guaranteed over the entire combustion cycle which enables a higher level of boiler efficiency, reduced tarring and increased life span of the boiler. • DN25–40 • Opening temperature: from 55°C to 70°C		17
 SFK120	• Compact size • Shutoff ball valve with thermometers • Pump working principle: Constant curve, variable pressure, PWM • ESBE thermic load valve VTC400 • Adjustable temperature: 50 - 70°C • Kvs value for thermostatic fix temp. units 4,5		–
 SFK130	• Compact size • Shutoff ball valve with thermometers • Pump working principle: Constant curve, variable pressure, PWM • ESBE VRG300 series valve technology • 60%/100% kvs valve feature (kvs 8/13) • ESBE ARA651 actuator • 3-point actuator control signal 230VAC with 60s running time		–
 SFK140	• Compact size • Shutoff ball valve with thermometers • Pump working principle: Constant curve, variable pressure, PWM • ESBE VRG300 series valve technology • 60%/100% kvs valve feature (kvs 8/13) • ESBE CRA111 constant temperature controller		–

Control valves and Actuators	Description	Symbol	Sample page
 SLD	• Series SLD130 is a high speed electric 3-way mixing valve made from brass approved for use in potable water. • For use in HIU:s, underfloor heating or hot water circulation applications. • Power supply: 24 V AC/DC • DN: 10–15 • Kvs < 3,4		23
 VLA, VLB, VLC, VLE, VLF	• The series VLx are 2-way and 3-way control valves suitable for mixing, diverting (delta P< 50kpa) and flow regulation. • For use in heating and cooling system. • Threaded or flanged bodies, in nodular iron or bronze. • DN: 15–150 • PN6/16/25 • Kvs < 300		28, 29, 31
 ALF	• Series ALFxx1 is a range of linear actuators available with 3-point floating control mode (extend/retract) and modulating / proportional control mode (voltage/current). • Force: from 600N to 2200N • Stroke 5..30 mm or 5..60 mm		29, 31
 ALB	• ESBE series ALB is either controlled by a 3-point (increase/decrease) signal or by a proportional (0..10V, 2..10V) signal. Proportional control signal gives a fast actuator. • Force: 800N • Stroke 10–52 mm • Power supply 24V AC		29, 31

REPLACEMENT GUIDE

Rotary mixing valves

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REFERENCE**
1100 02 00	3MG 15-0,6 Rp ½"	1160 02 00	VRG131 15-0,63 Rp ½"
1100 03 00	3MG 15-1,0 Rp ½"	1160 03 00	VRG131 15-1 Rp ½"
1100 04 00	3MG 15-1,2 Rp ½"	1160 04 00	VRG131 15-1,6 Rp ½"
1100 05 00	3MG 15-1,6 Rp ½"	1160 04 00	VRG131 15-1,6 Rp ½"
1100 01 00	3MG 15-2,5 Rp ½"	1160 05 00	VRG131 15-2,5 Rp ½"
1100 07 00	3MG 20-4 Rp ¾"	1160 08 00	VRG131 20-4 Rp ¾"
1100 11 00	3MG 20-6,3 Rp ¾"	1160 09 00	VRG131 20-6,3 Rp ¾"
1100 16 00	3MG 25-8 Rp 1"	1160 10 00	VRG131 25-6,3 Rp 1"
1100 24 00	3MG 25-12 Rp 1"	1160 11 00	VRG131 25-10 Rp 1"
1100 27 00	3MG 32-18 Rp 1¼"	1160 12 00	VRG131 32-16 Rp 1¼"
1100 21 00	3MG 22-6,3 CPF22	1160 30 00	VRG133 20-6,3 CPF22
1100 23 00	3MG 25-8 CPF28	1160 31 00	VRG133 25-10 CPF28
1100 13 00	3MGA 20-6,3 G 1"	1160 23 00	VRG132 20-6,3 G 1"
1100 26 00	3MGA 25-12 G 1¼"	1160 25 00	VRG132 25-10 G 1¼"
1100 29 00	3MGA 32-18 G 1½"	1160 26 00	VRG132 32-16 G 1½"
1100 15 00	3MGR 20-6,3 G 1"	1160 41 00	VRG138 20-6,3 RN 1"

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REFERENCE**
1100 34 00	4MG 15-2,5 Rp ½"	1164 01 00	VRG141 15-2,5 Rp ½"
1100 36 00	4MG 20-4 Rp ¾"	1164 02 00	VRG141 20-4 Rp ¾"
1100 39 00	4MG 20-6,3 Rp ¾"	1164 03 00	VRG141 20-6,3 Rp ¾"
1100 42 00	4MG 25-8 Rp 1"	1164 04 00	VRG141 25-10 Rp 1"
1100 49 00	4MG 32-18 Rp 1¼"	1164 05 00	VRG141 32-16 Rp 1¼"
1100 41 00	4MGA 20-6,3 G 1"	1164 10 00	VRG142 20-6,3 G 1"
1105 01 00	3G 20-8 Rp ¾"	1160 09 00	VRG131 20-6,3 Rp ¾"
1105 02 00	3G 25-12 Rp 1"	1160 11 00	VRG131 25-10 Rp 1"
1105 03 00	3G 32-18 Rp 1¼"	1160 12 00	VRG131 32-16 Rp 1¼"
1105 04 00	3G 40-28 Rp 1½"	1160 34 00	VRG131 40-25 Rp 1½"
1105 06 00	3G 50-44 Rp 2"	1160 36 00	VRG131 50-40 Rp 2"
1105 08 00	4G 20-8 Rp ¾"	1164 03 00	VRG141 20-6,3 Rp ¾"
1105 10 00	4G 25-12 Rp 1"	1164 04 00	VRG141 25-10 Rp 1"
1105 13 00	4G 32-18 Rp 1¼"	1164 05 00	VRG141 32-16 Rp 1¼"
1105 14 00	4G 40-28 Rp 1½"	1164 15 00	VRG141 40-25 Rp 1½"
1105 16 00	4G 50-44 Rp 2"	1164 17 00	VRG141 50-40 Rp 2"
1145 01 00	BIV 20-4 G ¾"	1166 18 00	VRB243 20-4 CPF22
1145 03 00	BIV 22-4,0 CPF22	1166 18 00	VRB243 20-4 CPF22
1145 02 00	BIV 25-12 Rp 1"	1166 04 00	VRB14125-10 Rp 1"

Rotary actuators

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
1200 10 00	65 230V 60S 5Nm 3P	1210 12 00	ARA651
1200 14 00	66 230V 120S 5Nm 3P	1210 13 00	ARA661
1200 20 00	67 230V 240S 5Nm 3P	1210 14 00	ARA671
1200 30 00	69 230V 480S 5Nm 3P	1210 15 00	ARA691
1200 21 00	67-20 230V 1200S 5Nm 3P	1210 15 00	ARA691
1200 11 00	65M 230V 60S 5Nm 3P	1210 17 00	ARA652
1200 15 00	66M 230V 120S 5Nm 3P	1210 18 00	ARA662
1200 23 00	67M 230V 240S 5Nm 3P	1210 19 00	ARA672
1200 01 00	62 24V 120S 5Nm 3P	1210 03 00	ARA663
1200 08 00	63 24V 240S 5Nm 3P	1210 04 00	ARA673
1200 05 00	62M 24V 120S 5Nm 3P	1210 08 00	ARA664
1200 09 00	63M 24V 240S 5Nm 3P	1210 09 00	ARA674
1250 01 00	62P 24V AC/DC 60-120S 5Nm PROP	1252 01 00	ARA639
		1252 02 00	ARA659
1200 27 00	68 230V 60S 5Nm 2P	1212 09 00	ARA655
1200 29 00	68M 230V 60S 5Nm 2P	1212 12 00	ARA656

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
81	81 24V 12S 3Nm 3P	1205 02 00	91
82	82 24V 55S 5Nm 3P	1205 06 00	92
82S	82S 24V 55S 10Nm 3P	1205 06 00	92
83	83 24V 240S 5Nm 3P	1205 13 00	93
83S	83S 24V 240S 10Nm 3P	1205 13 00	93
82P	82P 24V AC/DC 55S 10Nm	1255 05 00	93P
83P	83P 24V AC/DC 240S 15Nm	1255 05 00	93P
84	84 220V 12S 3Nm 3P	1205 17 00	94
85	85 220V 55S 5Nm 3P	1205 19 00	95
85S	85S 220V 55S 10Nm 3P	1205 19 00	95
86	86 220V 240S 5Nm 3P	1205 23 00	96
86S	86S 220V 240S 10Nm 3P	1205 23 00	96
87	87 220V 12S 3Nm 2P	1205 25 00	97
88	88 220V 55S 5Nm 2P	1205 26 00	98
88S	88S 220V 55S 10Nm 2P	1205 26 00	98

Thermostatic mixing valves

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REFERENCE**
3130 12 00	VTA222 38-65°C G 1"	3162 02 00	VTA522
3130 16 00	VTA222 20-40°C G 1"	3162 01 00	VTA522
3130 01 00	VTA223 38-65°C CPF28	3162 17 00	VTA523
3130 07 00	VTA223 20-40°C CPF28	3162 16 00	VTA523
3130 08 00	VTA223 10-30°C CPF28	–	–
3130 13 00	VTA272 20-40°C G 1"	3170 21 00	VTA572
470	20-AS 38-65°C CPF22	3110 02 00	VTA323
470L	20-AS 20-40°C CPF22	3110 01 00	VTA323
476	28-AS 38-65°C CPF28	3162 17 00	VTA523
476L	28-AS 20-40°C CPF28	3162 16 00	VTA523
472	15R-AS 38-65°C Rp 1"	3110 04 00	VTA321
472L	15R-AS 20-40°C Rp 1"	3110 03 00	VTA321
474	20R-AS 38-65°C Rp ¾"	3110 08 00	VTA321
474L	20R-AS 20-40°C Rp ¾"	3110 07 00	VTA321

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REFERENCE**
471	20RA-AS 38-65°C G ¾"	3110 06 00	VTA322
471L	20RA-AS 20-40°C G ¾"	3110 05 00	VTA322
475	25RA-AS 38-65°C G 1"	3110 10 00	VTA322
475L	25RA-AS 20-40°C G 1"	3110 09 00	VTA322
401	15 38-65°C CPF15	3105 01 00	VTA313
401L	15 20-40°C CPF15	3110 26 00	VTA323
404	20 38-65°C CPF22	3105 04 00	VTA313
404L	20 20-40°C CPF22	3110 01 00	VTA323
416	28 38-65°C CPF28	3162 17 00	VTA523
406	15R 38-65°C Rp ½"	3110 04 00	VTA321
407	20R 38-65°C Rp ¾"	3110 08 00	VTA321
410	15RA 38-65°C G ½"	3105 02 00	VTA312
410L	15RA 20-40°C G ½"	3110 28 00	VTA322
408	20RA 38-65°C G ¾"	3110 06 00	VTA322
409	25RA 38-65°C G 1"	3110 10 00	VTA322
414	20K 35-60°C CPF22	3135 05 00	VTA323

REPLACEMENT GUIDE

Controllers

TERMOVENTILER		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
121301	Thermomatic CBJ	1266 31 00	CRB211
121301	Thermomatic CBJ	1266 52 00	CRB221
121401	Thermomatic ERA 10	1266 31 00	CRB211
121401	Thermomatic ERA 10	1266 52 00	CRB221
121431	Thermomatic ERA 10PE+	12663100 + 17055600	CRB211 + CRA913
121501	Thermomatic EC Home	1266 31 00	CRB211
121501	Thermomatic EC Home	1266 52 00	CRB221
123001	Thermomatic K	1272 11 00	CRA211
121421	Thermomatic ERA K	1272 11 00	CRA211
121422	Thermomatic ERA K	1272 11 00	CRA211

DANFOSS		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
087B1700	ECL Comfort 100	1282 11 00	CRC211

AUTOMIX		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
1110000	Automix 10 / LK961	1282 11 00	CR2111
1120000	Automix 20 / LK962	1266 52 00	CRB221
1130000	Automix 30 E / LK963 E	1282 11 00	CRC211
1130003	Automix 30 Q / LK963 Q	1282 11 00	CRC211
1130008	Automix 30 D / LK963 D	1282 11 00	CRC211
1170008	Automix CTR / LK965	1266 52 00	CRB221

ESBE		ESBE	
ART.NO.	**REFERENCE**	**ART.NO.**	**REF.**
1260 01 00	95-1C	1260 15 00	90C-1A-90
1270 01 00	92K2	1274 22 00	CRA122
1270 02 00	94K2	1272 11 00	CRA211
1270 05 00	99K2	1274 21 00	CRA121

Load valves and load units

LK, ACASO/TERMOVAR/BAXI	
ART.NO.	**ART.NO. ESBE**
Termovar 25	5102 01 00
Termovar 25	5102 03 00
Termovar 25	5102 04 00
Termovar 32	5102 06 00
Termovar 32	5102 08 00
Termovar 32	5102 09 00
Termovar unit 32	5500 64 00
Termovar unit 32	5500 69 00

TERMOVENTILER/LADDOMAT	
ART.NO.	**ART.NO.ESBE**
Laddomat 21, 72°C	5500 65 00
	5500 69 00
Laddomat 21, 78°C	5500 66 00
	5500 52 00
Laddomat 21, 83°C	5500 67 00
Laddomat 21, 88°C	5500 67 00

ESBE	ESBE
ART.NO.	**ART.NO.**
TV, 1140 06 00	5102 01 00
TV, 1140 07 00	5102 02 00
TV, 1140 04 00	5102 03 00
TV, 1140 01 00	5102 04 00
TV, 1140 11 00	5102 06 00
TV, 1140 12 00	5102 07 00
TV, 1140 08 00	5102 08 00
TV, 1140 02 00	5102 09 00
TV, 1140 15 00	5102 06 00
TV, 1140 16 00	5102 07 00
TV, 1140 13 00	5102 08 00
TV, 1140 03 00	5102 09 00

Diverting valves

SIEMENS – LANDIS & STAEFA	
ART.NO.	**ART.NO. ESBE**
MXE22,20/180	4308 01 00
HONEYWELL	
ART.NO.	**ART.NO. ESBE**
V4044C1189U	4308 01 00
V4044F1000/U	4308 01 00

Draught regulators

ESBE	ESBE
ART.NO.	**ART.NO.**
C20/ATA100, 31800200	5600 11 00

Linear valves

TAC Type STL-SR		
ART.NO.	**DN**	**Kvs**
721-1426-000	25	2,5
721-1428-000	25	4,0

ESBE series VLE325		
ART.NO.	**DN**	**Kvs**
21400700	25	1,6
21400800	25	2,5
21400900	25	4,0

The purpose of the replacement guide is to assist you in finding the best replacement for an existing product. It is up to the user of this guide to make the final judgement of which product to choose and check that the application specific requirements are fulfilled.

MADE IN SWEDEN
WITH THE WORLD IN MIND

Five sales companies and partners in over 30 countries gives ESBE a large market presence throughout Europe. The base is still in Reftele in the county of Småland, the tiny village in southern Sweden where it all began. The Swedish plant with head office, R&D department and factory is state-of-the-art and products are distributed all over Europe.

To meet the demands on high delivery reliability – and because our product portfolio is constantly growing in size as well as brand awareness – our products are delivered to central and southern Europe via ESBE's distribution centre in Munich.

Find country specific contacts info >> esbe.eu

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The application examples inside this brochure are overall sketches. Always also take local laws and regulations into consideration.

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