

ESBE CIRCULATION UNITS

Check this!

CRx pump control technic



Simplifies each
installation step

A premium product -
smart and smooth,
usable in a wide
range of applications

New!

FLEXBOX for gas boilers



SIMPLER, SMARTER, SMOOTHER
CIRCULATION UNITS FOR PROFESSIONALS

ESBE circulation units makes the job go SMOOTHER

Installing a circulation unit from ESBE means cost-effective installations with minimal disturbances in the application and for the residents of the property.

- Easily accessible at wholesalers.
- Smart packaged in a box with handles, easy to carry to the installation location.
- The circulation unit has everything needed pre-assembled.
- Quickfit! Circulation units with associated controls and actuators are easily detached and put back through a Quick fit connection.
- Can be mounted at a 0 to 360 degree angle.
- Quality support when contacting Customer/Technical support.
- Uncomplicated and evident installation support when using ESBE installation / instructional videos. Watch this! >>



Units that covers a wide range of demands

The circulation units simple concept is prefabricated units with pipes, shut-off valves with thermometers, check valves and high efficiency circulation pump.

All packed in an insulation shell where adjustments and electronic parts are easily accessible on the outside and installation is straightforward.

We love to do business with professionals

One of our favourite passions are hydronic system solutions, based on the needs of our customers.

The greater the challenges, the higher we rise to meet them! Our end goal speaks for itself: all of ESBE's products must maintain the highest levels of quality and sustainability throughout their working life.

We offer products in many areas of application: Boilers, Hot Water, Heat Pumps, Radiators, Solar Energy, Underfloor Heating, Solid Fuels, Refrigeration, Oil & Gas, HVAC.

At our head office in Reftele, Sweden, you will find our ESBE Technology Center and R&D Department. Here, we use the very latest test equipment and testing methods to ensure that our products meet current quality standards.

We would be delighted to be your OEM partner!

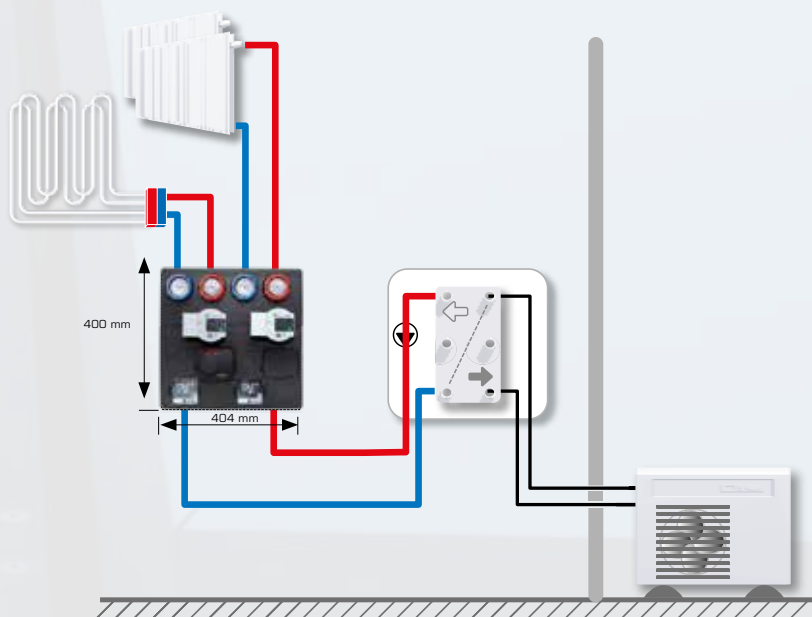
Series DxA100

In this air to water application you find the double circulation unit Series DDA111. A compact unit for two separated heating circuits.

Two circulation units; one mix group in combination with a direct group preassembled with a manifold.

Flexibility

The ability for pooling our expertise with our customer's, enables us to identify and implement the most beneficial and effective solution for you.



Scan for more information



ESBE your OEM-Partner

YOUR CHALLENGE IS OUR PASSION

What makes ESBE circulation units unique?

When developing Circulation Units focus was to deliver a flexible and high end solution with ESBE knowledge. This permeates the entire product, from content and insulation to assembly and packaging design.

- Wide range of possibilities to set up a system.
- ESBEs Valve Technology with progressive characteristic offers an opportunity to adapt to the system's heat and flow needs.
- ESBEs Actuator Technology with QuickFIT connection, a perfect match with the valve.
- The shells are demountable, even when the pipe installation is completed, facilitates upgrades, adjustments and replacements.
- Ready To Go - delivered from factory with actuator or controller.
- The insulation shell fulfills ENEC2014.
- Potentials for upgrades on the installation place.
- Up to 2000l/h energy transfer.



230V 3-point/24V 0-10V actuator

ESBE ARA



Weather compensating controller

ESBE CRC



Combined weather compensating and indoor sensor based controller

ESBE CRD



Click!

Quick FIT – simple mounting of actuator - just one click!

unique!



It is not hocus pocus!

Barely visible but practical, the insulation shell comes with trays dedicated for steering the wires on the back of the circulation unit shell.

The cables disappear behind the circulation unit and can easily be routed from the side of the group. This results in a clean and professional product installation.

Enhanced controllability when using a Progressive Mixing Valve

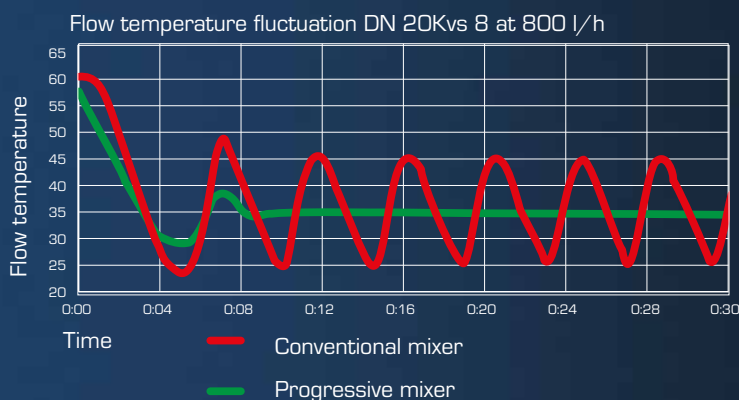
ESBE progressive valve creates improved controllability that gives the possibility to use the circulation unit in a lot of different heating sources. Like heat pumps, gas and oil boilers and solid fuel systems.

The progressive valve technology (by some called equal percent), is characterized by linear outgoing mixing temperature and high controllability. This set fort a stable control flow temperature, see image 1 below.

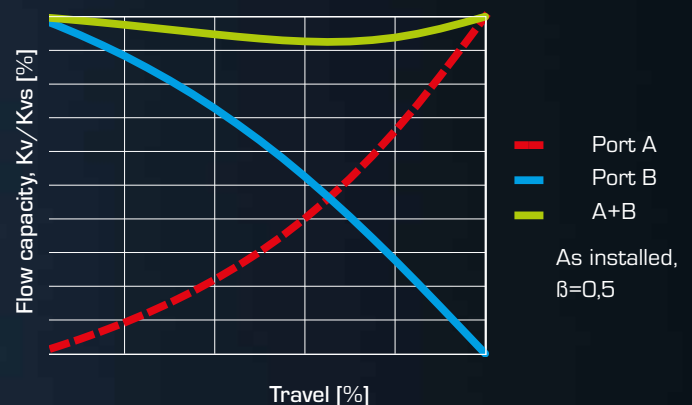
It is all about efficient use of the working angle and optimized flow characteristics.

All these different systems could then be applied in several numbers of different applications such as under floor heating, radiator heating and air handling units.

To explain it simple – it's a universal valve.



The progressive characteristic curve in combination with complementary flow characteristic curve gives a stable mixed flow throughout the entire working angle.



benefits

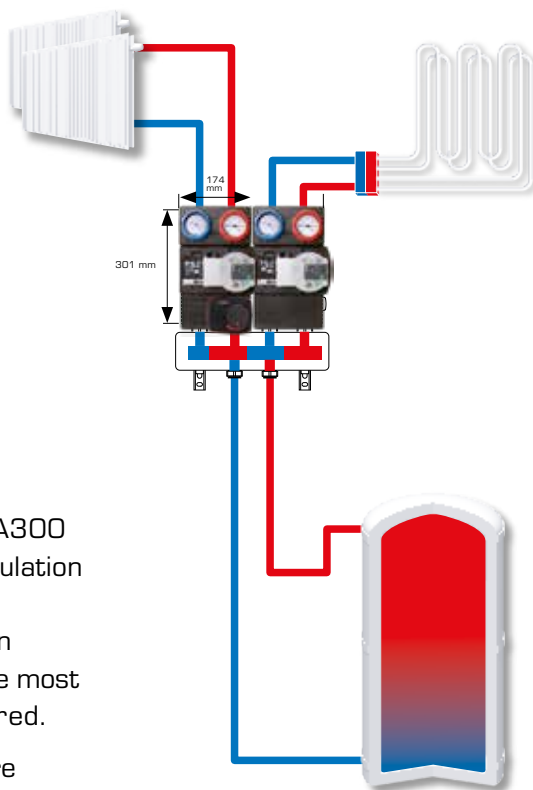
for the heating system:

- long service life of the unit
- Stable return temperatures from heating circuit enables optimal conditions for the heat source to operate as efficient as possible
- The valve's cooperation with the ESBE actuator or controller makes the system even more reliable and stable.



SMALL

The units provide the smallest possible external dimensions, this highly facilitates installation in tight spaces.



Series GRA311, GDA311

The ESBE series GDA300 are direct supply circulation units designed for applications, where an energy transport in the most efficient way is required.

The series GRA300 are intended for heating circuits where an outstanding flow and temperature control are required. The perfect choice for applications where mixing function is needed.

Both units are equipped with two shut-off valves with thermometers, check valve, high class insulation shell and high efficiency circulation pump.

ESBE DN20 Units are one of the most compact units you can find. They smoothly get a place in tight spaces.

Find your tools and support on www.esbe.eu

Instruction manuals, certificates and technical data and lots of additional article numbers to discover! >>

Scan for more information



Circulation Units

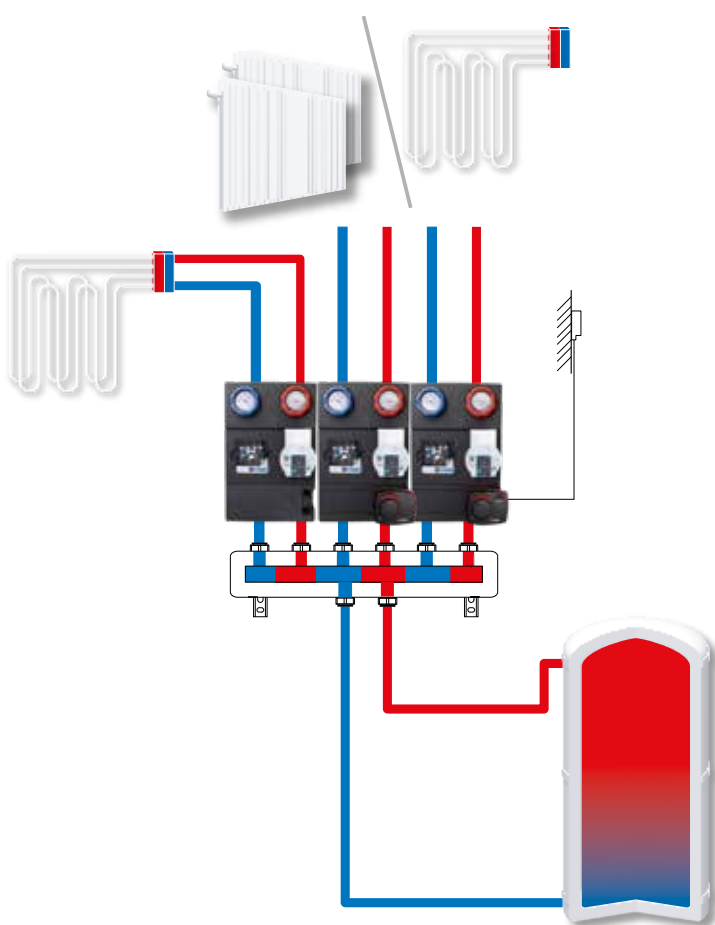


SMART

The same type of unit works for several different heating systems.

The circulation units are designed for applications where the most efficient kind of energy transport is required.

We deliver units suitable for systems where low return temperatures are desirable as circulation units operates with variable flow on the primary side and constant flow on the secondary side.



Series GFA200, GRA200, GRC200,

The primary function of the thermostatic mixing unit GFA200 is flow temperature control, mixing function.

Using GRA200, the heating water prepared in the heating source is mixed down to the desired set temperature, which is then delivered to the heating receiver, i.e., underfloor heating.

GRC200 creates high indoor temperature comfort thanks to ESBE Smart Control and ESBE Self-Adaptive System.

Series GMA4x1

The manifolds are available for 2, 3 and on request for 4 and 5 heating circuits.

Thermal separation for more efficient system performance.

Colour coding for easy and quick product installation.

benefits

ESBE circulation units have simplicity in their disassembly, deconstruction and repairability, which gives upgrade possibilities and compatibility with both old and new opportunities.

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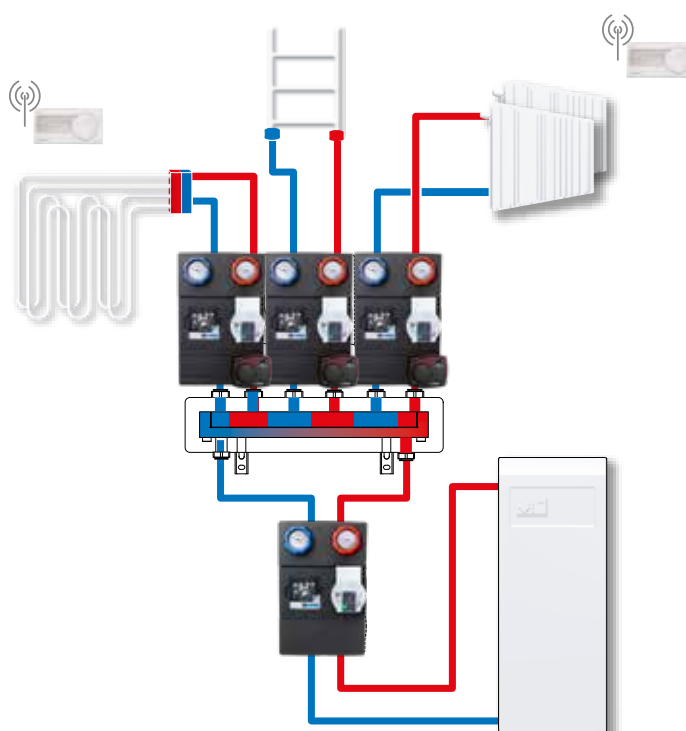


Circulation Units



PUMP CONTROL

With the ESBE smart control and self adapt system, you get a high, energy efficient indoor temperature comfort. Choose between two highly efficient PWM circulation pumps, where both uses the CRx pump control technic.



Series GRC2x0

The ESBE series GRC200 are circulation units, equipped with rotary mixing valve and controller, designed for heating systems steered by weather or weather + indoor temperature and where pump control is required.

In this product the use of the progressive mixing valve reaches its full potential.

Four functions, eight different modes

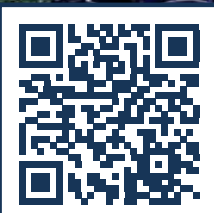
- **Pump Stop:** When the valve is closed, the pump is turned of by the PWM-signal
- **ΔT control (temperature difference):** When the desired flow temperature is reached, the regulator starts regulating the pump speed to achieve the given ΔT
- **Flow limit:** During the regulation of ΔT , the regulator is limited to a set maximum flow value.
- **Flow control:** The flow is controlled to a given value when desired flow temperature is reached.

These four functions can be combined into eight different modes.

Energy savings

When heat is not required in the system, ESBE smart control automatically controls the pump to turn off.

Circulation Units

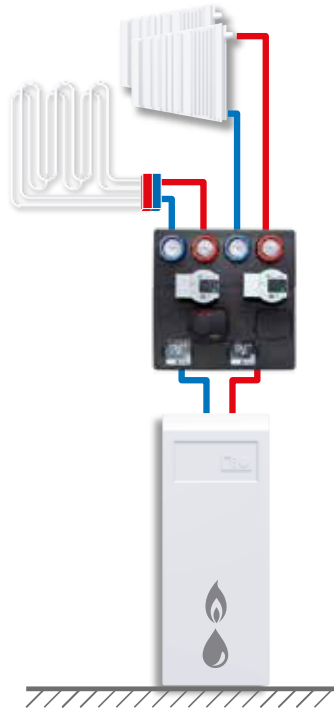


Scan for more information



SIMPLER

The combination of kvs and the use of a progressive characteristic valve provides a versatile product that can be used for almost all applications and heat sources.



Series DxA100

Double circulation unit series
DxA100 is a compact unit for two separated heating circuits.

Two circulation units; either two mix groups, or one mix group in combination with a direct group preassembled with a manifold

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.

Noisy system?

A disturbing noise can occur when two different system requirements are combined in one application. This can be reduced significantly by installing a double circulation unit.

Thanks to the built-in manifold with hydraulic separation, the system is pressure equalized.



Scan for more information



Circulation Units



We call it the FLEXBOX concept.

Because it's an extremely simple and flexible solution, to enable management of zone heating. ESBE Manifold Box - Series GMB600



EASY TO INSTALL, EASY TO OWN

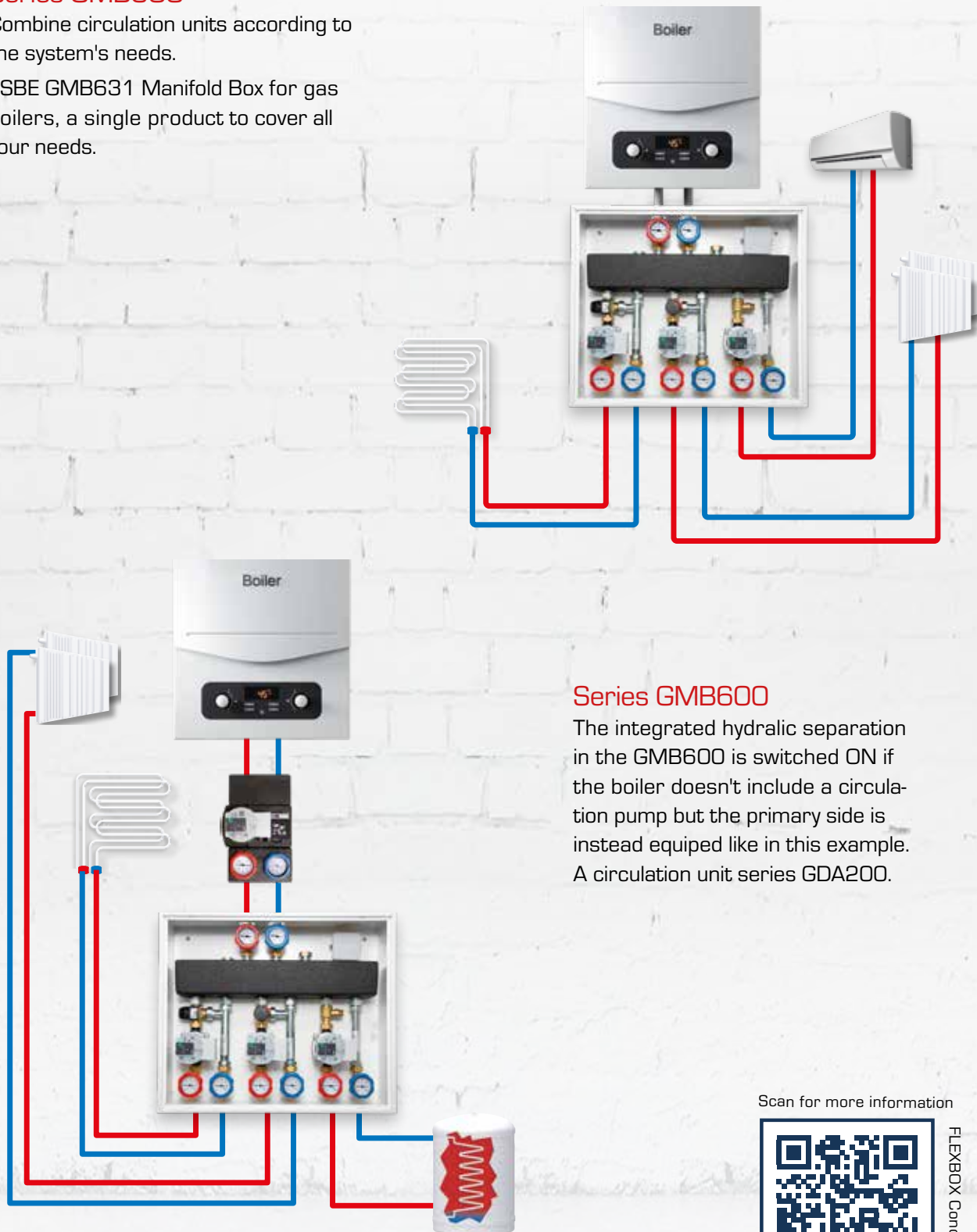
- Pre-prepared input and output holes makes the installation quick and neatly.
- Can be mounted on, or discreetly recessed into the wall
- High aesthetics with white epoxy metal casing, easy to open and close.
- Pre-drilled holes for hanging and mounting.
- 360 degree mounting potential

Since it is FLEXIBLE

Series GMB600

Combine circulation units according to the system's needs.

ESBE GMB631 Manifold Box for gas boilers, a single product to cover all your needs.



Series GMB600

The integrated hydraulic separation in the GMB600 is switched ON if the boiler doesn't include a circulation pump but the primary side is instead equipped like in this example. A circulation unit series GDA200.

Scan for more information



FLEXBOX Concept

POSSIBILITIES!

The ESBE series Gxx300 are compact but powerful circulation units, size DN20 and can be mounted in the Manifold Box GMB600. The wide range of products allows to choose preferred solution. The dimension of the Manifold Box allows both uninsulated as well as insulated Circulation Units to be installed.

ESBE CIRCULATION UNITS with insulation

The GxA300 series, DN20 uses the WILO PARA STG 15/8.

ESBE Series GDA311

- Direct supply
- Three shut-off valves

ESBE Series GRA311

- Mixing function with 3-way motorized mixing valve with progressive characteristic
- ARA actuator

ESBE Series GFA311

- Fixed temperature circulation with VTA thermostatic mixing valve, 20-55°C



ESBE CIRCULATION UNITS without insulation

The GxA390 series, DN20 uses the WILO Para 15/6/SCU.

ESBE Series GDA394

- Direct supply
- Three shut-off valves

ESBE Series GRA394

- Knob for manually adjustment of the valve
- ARA actuator and CRX controller as accessories

ESBE Series GFA394

- Fixed temperature circulation with VTA thermostatic mixing valve, 20-55°C



ESBE MANIFOLD BOX - Series GMB600

ESBE Manifold Box Series GMB600 is a distribution module for the management of two or three heating circuits, complemented with optional Circulation Units Serie Gxx300, DN20. The pre-assembled three circuit distribution manifold has two connection ports (left/right) for the supply line which allows variable installation. The box is complete with an air-vent valve, which allows 360° mounting.

The manifold is designed with a thermal separation between flow and return line and with integrated hydraulic separation, and the bypass function is easily controlled, using the adjustment screw. two connection ports (left/right) for the supply line.



Manual air-venting allows 90°/180°/270°/360° mounting of the unit

POTENTIALS

- Manifold with optional function for hydraulic separation easily set with a screw
- Two incoming ports for supply where one is plugged to avoid unnecessary piping
- Connection of temperature sensor is possible.
- Cover strip, to cover the transition between the box and the wall when its mounted inside the wall and two shut-off valves with colour coded thermometer can be added to the module.
- Space for installation of shut-off valves on the primary side, inside the box.

CIRCULATION UNIT

Direct supply Series GDA

Circulation unit intended for direct supply of heating. PN10.

DN20 : G 3/4"
DN25 : G 1"
DN32 : G 1 1/4"

DN20 : G 1"
DN25 : G 1 1/4"
DN32 : G 1 1/4"



GDA311 GDA394 GDA211 GDA212 GDF111

Art. No.	Ref.	DN	With pump
61003200	GDA311	20	Wilco 15/8
61005200	GDA394		Wilco PARA 15/6
61001100	GDA211	25	Wilco 25/6
61001200		32	Wilco 25/8
61001300	GDA212	25	Grundfos 25-50
61001400		32	Grundfos 25-70

CIRCULATION UNIT

Fixed temperature Series GFA

Circulation unit intended for fixed temperature operation. PN10. Temperature range: 20-55°C

DN20 : G 3/4"
DN25 : G 1"
DN32 : G 1 1/4"

DN20 : G 1"
DN25 : G 1 1/4"
DN32 : G 1 1/4"



GFA311 GFA394 GFA211 GFA212 GFF111

Art. No.	Ref.	DN	With pump
61023200	GFA311	20	Wilco 15/8
61025100	GFA394		Wilco PARA 15/6
61021100	GFA211	25	Wilco 25/6
61021200		32	Wilco 25/8
61021300	GFA212	25	Grundfos 25-50
61021400		32	Grundfos 25-70

ESBE ACCESSORIES

MANIFOLD BOX DN20



ESBE Series GMB600

Manifold for 2 or 3 units, with integrated hydraulic separator function in a box, c-c 90mm.

Connections; To system: G 1" , From Heat source: G 1". PN6.

Art. No.	Ref.	No. of circ. units	With hydraulic separator function
66000700	GMB631	2-3	Yes

CIRCULATION UNIT

Mixing function Series GRA

Circulation unit intended for heating systems where control of heating circuit temperature is required. PN10.

DN20 : G 3/4"
DN25 : G 1"
DN32 : G 1 1/4"

DN20 : G 1"
DN25 : G 1 1/4"
DN32 : G 1 1/4"



GRA311 GRA394 GRA211, GRA231 GRA212, GRA232 GRF111 GRF121

With Actuator ARA661, 230V 3-point ready and mounted on the Circulation unit.

Art. No.	Ref.	DN	With pump
61043600	GRA311	20	Wilco 15/8
61042100	GRA211	25	Wilco 25/6
61042200		32	Wilco 25/8
61042300	GRA212	25	Grundfos 25-50
61042400		32	Grundfos 25-70

With Actuator ARA639, 24V proportional, ready and mounted on the Circulation unit.

Art. No.	Ref.	DN	With pump
61042500	GRA231	25	Wilco 25/6
61042600		32	Wilco 25/8
61042700	GRA232	25	Grundfos 25-50
61042800		32	Grundfos 25-70

With knob for manual operation, can be equipped with actuator or controller. Without Insulation shell.

Art. No.	Ref.	DN	With pump	Euro/pcs
61045800	GRA394	20	Wilco PARA 15/6	650,00

MANIFOLD DN20



GMA321

GMA331

Connections; To system: RN 1" + From Heat source: G 1". PN4.

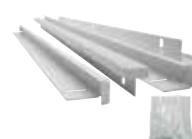
Art. No.	Ref.	No. of circ. units	With hydraulic separator function
66000500	GMA321	2	No
66000600	GMA331	3	

ESBE ACCESSORIES

MANIFOLD BOX DN20



66100600



66100700

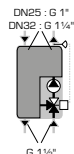
Options GMB600

Art. No.	Ref.	Designation
66100600	GOP810	Shut-off valve incl. Thermometer
66100700	GOP820	Cover strip for Manifold Box

CIRCULATION UNIT

Mixing function Series GRC

With Controller CRD227 ready and mounted on the Circulation unit. PN10.

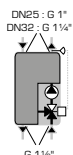


GRC241

GRC242

Art. No.	Ref.	DN	With pump
61044500	GRC241	25	Wilo 25/8
61044600		32	
61044700	GRC242	25	Grundfos 25-70
61044800		32	

With Controller CRC217 ready and mounted on the Circulation unit. PN10.



GRC221

GRC222

Art. No.	Ref.	DN	With pump
61044100	GRC221	25	Wilo 25/8
61044200		32	
61044300	GRC222	25	Grundfos 25-70
61044400		32	

CIRCULATION UNIT

Bivalent mixing function Series GBA

With Actuator ARA661, 230V 3-point ready and mounted on the Circulation unit. PN10.



GBA211

Art. No.	Ref.	DN	With pump
61061100	GBA211	25	Wilo 25/6

MANIFOLD DN25/DN32/FLEXI



GMA421



GMA431



GMA411



GMA521



GMA531

Connections; To system: RN 1 1/2" + From Heat source: G 1 1/2". PN6.

Art. No.	Ref.	No. of circ. units	With hydraulic separator function
66001200	GMA421	2	No
66001300	GMA431	3	
66001100	GMA411	1	Yes
66001600	GMA521	2	
66001700	GMA531	3	



GMA441

GMA451

Note: These products supply on request and might therefore have a longer lead time. In order to know the delivery time please contact our customer services for more information.

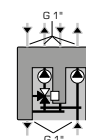
Connections; To system: RN 1 1/2" + From Heat source: G 1 1/2". PN6.

Art. No.	Ref.	No. of circ. units	With hydraulic separator function
66001400	GMA441	4	No
66001500	GMA451	5	

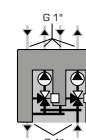
CIRCULATION UNIT

Series DxA

Series DxA100 is a combination of two circulation units and a manifold covered under one insulation shell.



DDA111



DAA111



Mixing + Direct function series DDA

One mixing circuit + one direct circuit. PN6.

Art. No.	Ref.	DN	With pump
61310100	DDA111	20	Wilo PARA 15/8-75/SC

Mixing function series DAA

Two mixing circuits. PN6.

Art. No.	Ref.	DN	With pump
61310200	DAA111	20	Wilo PARA 15/8-75/SC

A FEW WORK STEPS to put a circulation unit from ESBE in place

- Take the "bag" with the circulation unit to the place of installation.
- Prepare and secure the wall for mounting.
- Mount the unit. The adjustable wall bracket simplifies the assembly
- Loosen the insulation shell to access the pipes
- Fit suitable coupling sets, thread tape and do not forget gaskets
- Tighten the pipes and fit the insulation shell
- Connect power to pump and actuator
- Start the pump, check the operation
- Take the opportunity for future users and make notes in the brochure, for example performed settings, system pressure and volume flow, or mark which type of heating receiver the circulation unit is working with.
- Ready to go

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