ESBE SYSTEM UNITS

CIRCULATION UNIT
FIXED TEMPERATURE, SERIES GFA300

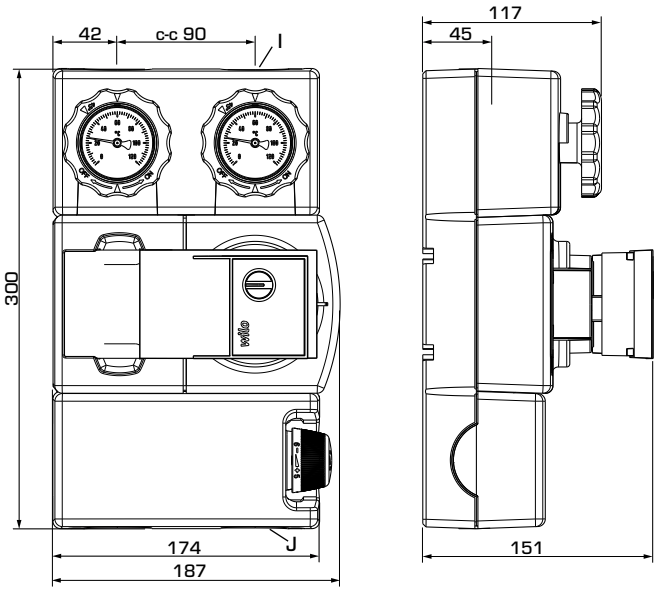
GFA311

PRODUCT DESCRIPTION
The ESBE series GFA300 is a circulation mixing unit designed for heating circuits, where the constant temperature control is required. Equipped with two shut-off valves with thermometers, check valve, high class insulation shell and high efficiency circulation pump. The GFA300 is delivered with the 3-way thermostatic mixing valve for constant temperature control of the heating circuit. The thermostatic mixing valve has adjustable temperature setting.

SERVICE AND MAINTENANCE
The circulation unit does not require any specific maintenance under normal conditions.

KEY BENEFITS
- Thermostatic constant temperature control
- Adjustable temperature setting
- High class insulation shell
- High efficiency circulation pump
- Compact design

PRODUCT ASSORTMENT



GFA311

SERIES GFA300

Art. No.	Reference	DN	Pump	Temperature range	Connections		Weight [kg]	Note
					I	J		
61023100	GFA311	20	Wilo 15/7,5	20–55 °C	G ¾"	G 1"	4,0	

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TECHNICAL DATA Visit esbe.eu for further detailed information.

The Circulation unit, in general:

Pressure class: PN 6
Media temperature: max. +110°C
min. 0°C
Ambient temperaure: max. +50°C
min. 0°C
Working pressure: 0,6 MPa (6 bar)
Connections, Internal thread (G), ISO 228/1
External thread (G), ISO 228/1
Insulation: EPP λ 0,036 W/mK
Media: Heating water (in accordance with VDI2035)
Water / Glycol mixtures, max. 50%.
(above 20% admixture, the pump data must be checked)
Water / Ethanol mixtures, max. 28%

Material, in contact with water:

Components of: Brass, Cast iron, Steel
Sealing material of: PTFE, Aramid fibre, EPDM

EEI (Energy Efficiency Index),

Wilo circulation pump: <0,21

Conformities and certificates:

LVD 2014/35/EU
EMC 2014/30/EU
RoHS 2011/65/EU
PED 2014/68/EU, article 4.3
ErP 2009/125/EU
ErP 2015
EnEV 2014

The integrated thermostatic mixing valve:

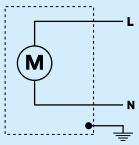
Max. differential pressure drop: 100kPa (1bar)
Temperature range: 20–55°C
Temperature stability: ±3°C*

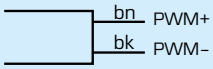
* Valid at unchanged hot/cold water pressure, minimum flow rate 9 l/min. Minimum temperature difference between hot water inlet and mixed water outlet 10°C.

The integrated circulation pump:

Type: Wilo RSTG 15/7,5
Power supply: 230 ± 10% V AC, 50/60 Hz
Cable length: 3m
Power consumption: 4–75 W
Enclosure rating: IP X4D
Insulation class: F
EEI (Energy Efficiency Index): <0,21

PUMP WIRING*





Pumpspeed could be controlled by PWM signal

* The circulation pump should be preceded by a multi-pole contact breaker in the fixed installation.

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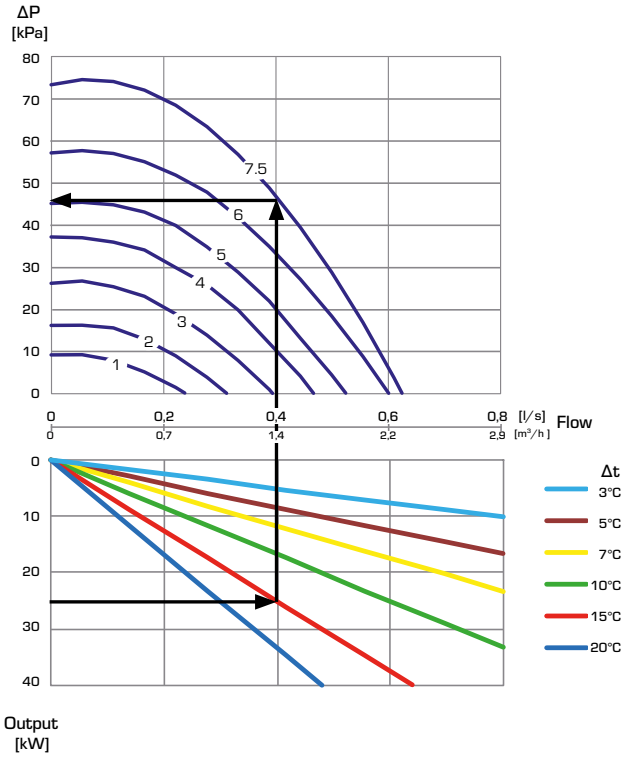
DIMENSIONING, PUMP CAPACITY DIAGRAM

Example: Start with the heating demand of heating circuit (e.g. 25 kW) and move horizontally to the right in the diagram to the Δt = 15°C (temperature difference between flow and return of the heating circuit). Next go up and find working point and read the available pressure of the pump on the left – Δp = 47 kPa.

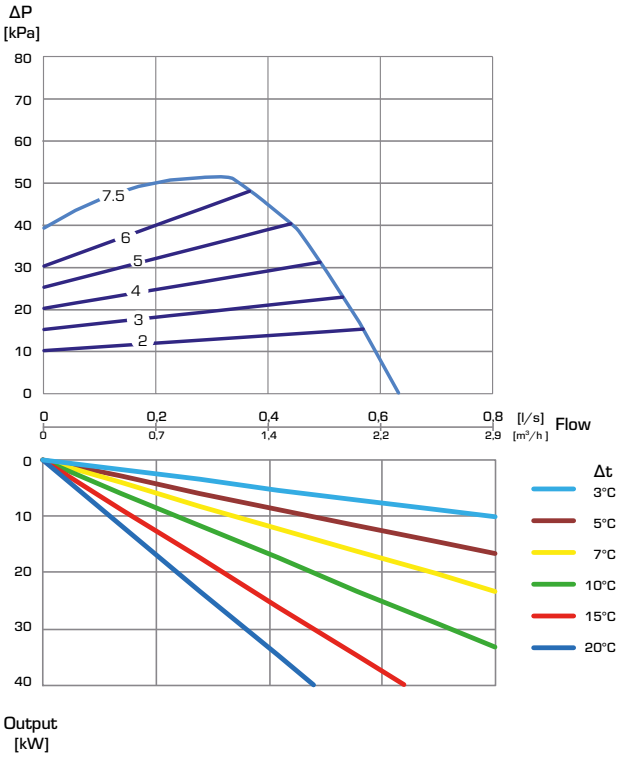
SERIES GFA300 – available pressure

Constant speed



SERIES GFA300 – available pressure

Variable pressure



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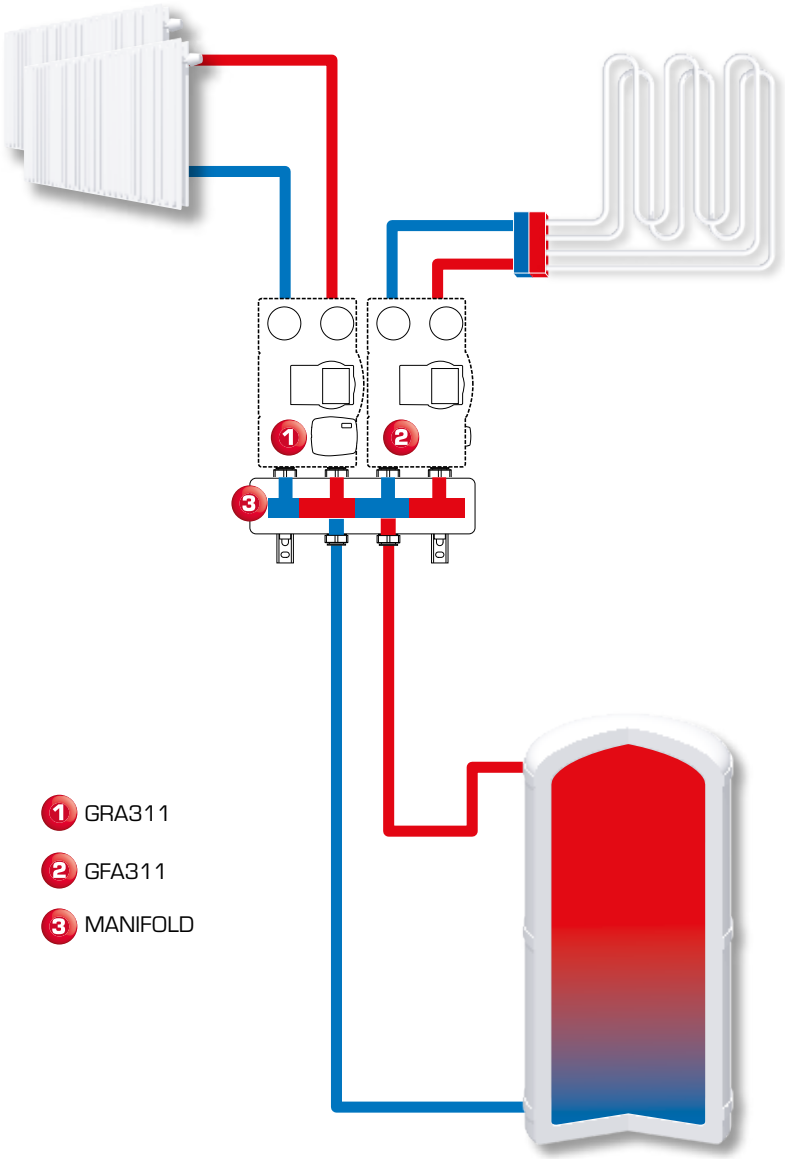
INSTALLATION EXAMPLE



1. GRA311
2. GFA311
3. MANIFOLD