

# CIRCULATION UNIT

## DIRECT SUPPLY, SERIES GDA100



GDA111

GDA112

### PRODUCT DESCRIPTION

The ESBE series GDA100 is a direct supply circulation unit designed for applications, where the energy transport in the most efficient way is required. Equipped with two shut-off valves with thermometers, check valve, high class insulation shell and high efficiency circulation pump. You can be sure that ESBE delivers the best circulation unit for both your economy as well as for the environment. It is simply the most efficient direct supply unit available. When designing the circulation unit product line the focus at ESBE has been to simplify installation. This goes through the whole product from pre assembly, mounting brackets and insulation to packaging design.

### SERVICE AND MAINTENANCE

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

### PRODUCT ASSORTMENT

### KEY BENEFITS

- High efficiency circulation pump
- High class insulation shell of hydronic parts
- Pre tested and ready to use
- One size fits all – auto adapt function on board

### RELATED ACCESSORIES

See separate data sheet for further detailed information.

#### ESBE Manifold

Manifold for 1, 2, or 3 circulation units. With integrated separator function.

Art. No.

66001100 \_\_\_\_\_ GMA411- for 1 unit

66001600 \_\_\_\_\_ GMA521 - for 2 units

66001700 \_\_\_\_\_ GMA531 - for 3 units

Manifold for 2, 3, 4 or 5 circulation units. Without integrated separator function.

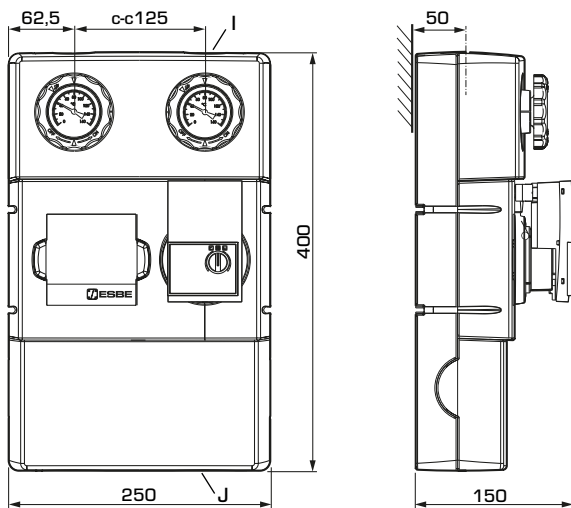
Art. No.

66001200 \_\_\_\_\_ GMA421- for 2 units

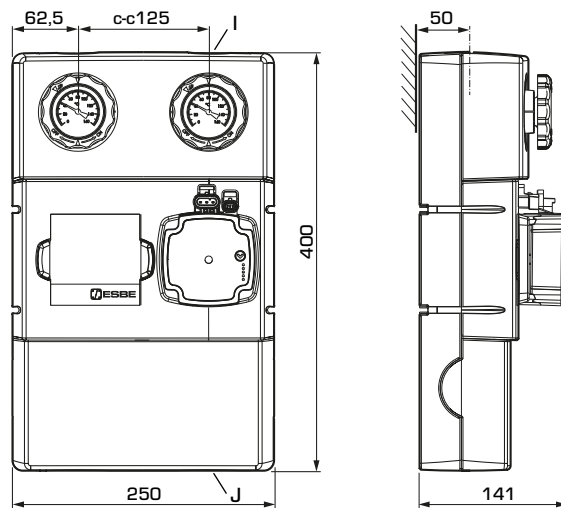
66001300 \_\_\_\_\_ GMA431 - for 3 units

66001400 \_\_\_\_\_ GMA441 - for 4 units

66001500 \_\_\_\_\_ GMA451 - for 5 units



GDA111



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### SERIES GDA100

Art. No.	Reference	DN	Pump	Connections		Weight [kg]	Note
				I	J		
61000100	GDA111	25	Wilo 25/6	G 1"	G 1½"	4,8	
61000200		32	Wilo 25/7,5	G 1¼"	G 1½"	5,4	
61000300	GDA112	25	Grundfos 25-50	G 1"	G 1½"	4,9	
61000400		32	Grundfos 25-70	G 1¼"	G 1½"	5,5	

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### TECHNICAL DATA

 Visit [esbe.eu](http://esbe.eu) for further detailed information.

#### The Circulation unit, in general:

Pressure class: \_\_\_\_\_ PN 6  
 Media temperature: \_\_\_\_\_ max. +110°C  
 \_\_\_\_\_ min. 0°C  
 Ambient temperature: \_\_\_\_\_ 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  $\lambda$  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  
 Grundfos circulation pump: \_\_\_\_\_ <0,20

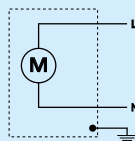
#### Conformities and certificates:

 LVD 2014/35/EU  ErP 2009/125/EU  
 EMC 2014/30/EU  ErP 2015  
 RoHS 2011/65/EU  EnEV2014  
 PED 2014/68/EU, article 4.3

#### The integrated circulation pump:

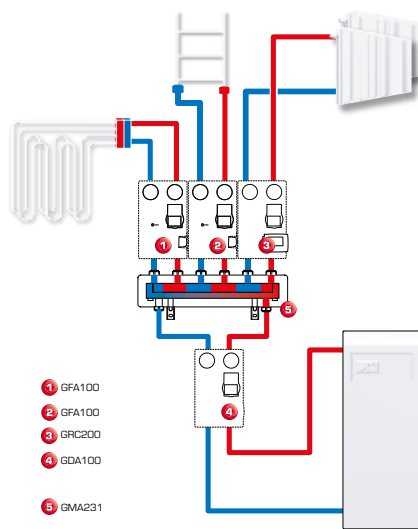
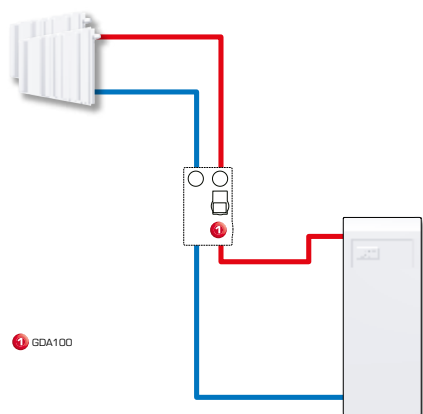
Power supply: 230 ± 10% V AC, 50/60 Hz  
 Power consumption - Wilo 25/6: \_\_\_\_\_ 3-45 W  
 - Wilo 25/7,5: \_\_\_\_\_ 3-76 W  
 - Grundfos 25-50: \_\_\_\_\_ 2-34 W  
 - Grundfos 25-70: \_\_\_\_\_ 2-53 W  
 Enclosure rating: \_\_\_\_\_ IP X4D  
 Insulation class: \_\_\_\_\_ F  
 EEI (Energy Efficiency Index) - Wilo 25/6: \_\_\_\_\_ <0,20  
 - Wilo 25/7,5: \_\_\_\_\_ <0,21  
 - Grundfos: \_\_\_\_\_ <0,20

#### PUMP WIRING\*



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

### INSTALLATION EXAMPLES



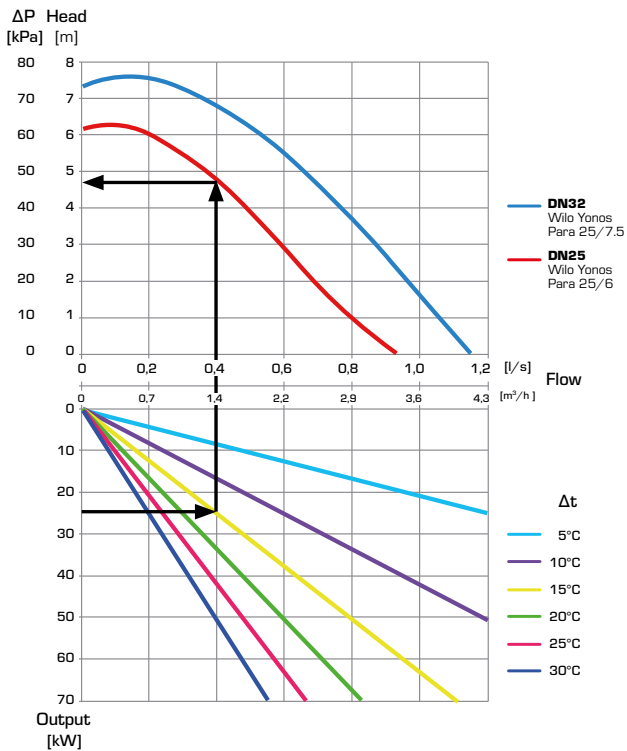
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### DIMENSIONING, PUMP CAPACITY DIAGRAM

**Example:** Start with the heating demand of heating circuit (e.g. 25 kW) and move horizontally to the right in the diagram to the  $\Delta t = 15^\circ\text{C}$  (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 -  $\Delta p = 48 \text{ kPa}$ .

**SERIES GDA100** – available pressure, Wilo pumps



**SERIES GDA100** – available pressure, Grundfos pumps

