

RETURN TEMPERATURE UNIT

THERMOSTATIC, MIXING FUNCTION

SERIES GST100



GST131



GST141

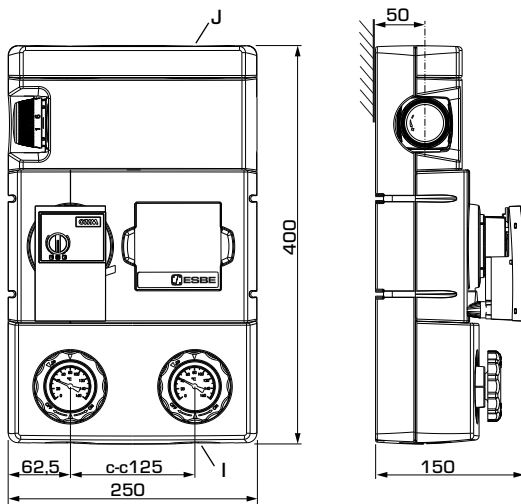
PRODUCT DESCRIPTION

The ESBE series GST100 is a return temperature unit designed for applications, where the return temperature control is required. Equipped with two shut-off valves with thermometers, check valve, high class insulation shell and high efficiency circulation pump. The GST100 is delivered with the 3-way thermostatic mixing valve, which comes with two versions: fixed temperature or adjustable temperature setting.

KEY BENEFITS

- Thermostatic constant temperature control
- Available with fixed or adjustable temperature setting
- High class insulation shell
- High efficiency circulation pump

PRODUCT ASSORTMENT



GST131, GST141

SERIES GST130, FIXED TEMPERATURE SETTING

Art. No.	Reference	DN	Pump	Temperature range	Connections		Weight [kg]	Note
					I	J		
61120100	GST131	25	Wilo 25/6	50/55/60°C	G 1"	G 1½"	5,0	1)

Notes: 1) The Return Temperature Units Series GST130 are delivered with three wax elements: 50/55/60°C. Factory assembly: 55°C.

SERIES GST140, ADJUSTABLE TEMPERATURE SETTING


Art. No.	Reference	DN	Pump	Temperature range	Connections		Weight [kg]	Note
					I	J		
61120200	GST141	25	Wilo 25/6	50-75°C	G 1"	G 1½"	5,4	

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TECHNICAL DATA

 Visit esbe.eu for further detailed information.

The Return temperature unit, in general:

Pressure class: _____ PN 6
 Media temperature: _____ max. +100°C
 _____ min. 0°C
 Ambient temperature: _____ max. +50°C
 _____ min. 0°C
 Working pressure: _____ 0,6 MPa (6 bar)
 Dimensions: _____ DN25
 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, Iron, Steel
 Sealing material of: _____ PTFE, Aramid fibre, EPDM

EEl (Energy Efficiency Index),

Wilo 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 Thermostatic mixing valve:

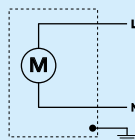
Max. differential pressure drop: _____ 100 kPa (1 bar)
 Rangeability Kv^{max}/Kv^{min} , A-AB: _____ 100
 Leakrate in % of flow*, A-AB: _____ Tight
 Leakrate in % of flow*, B-AB: _____ max. 3% of Kvs
 Opening temperature - Fixed temperature: _____ 50, 55, 60 °C
 - Adjustable temperature: _____ 50-75°C

* Differential pressure 100kPa (1 bar)

The integrated circulation pump:

Power supply: _____ 230 ± 10% V AC, 50/60 Hz
 Power consumption - Wilo 25/6: _____ 3-45 W
 Enclosure rating: _____ IP X4D
 Insulation class: _____ F
 EEl (Energy Efficiency Index) - Wilo 25/6: _____ <0,20

PUMP WIRING*



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

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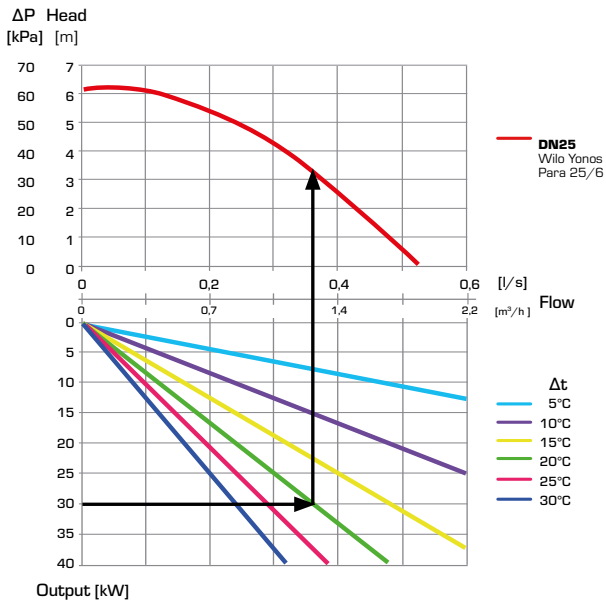
SERIES GST100

DIMENSIONING, PUMP CAPACITY DIAGRAM

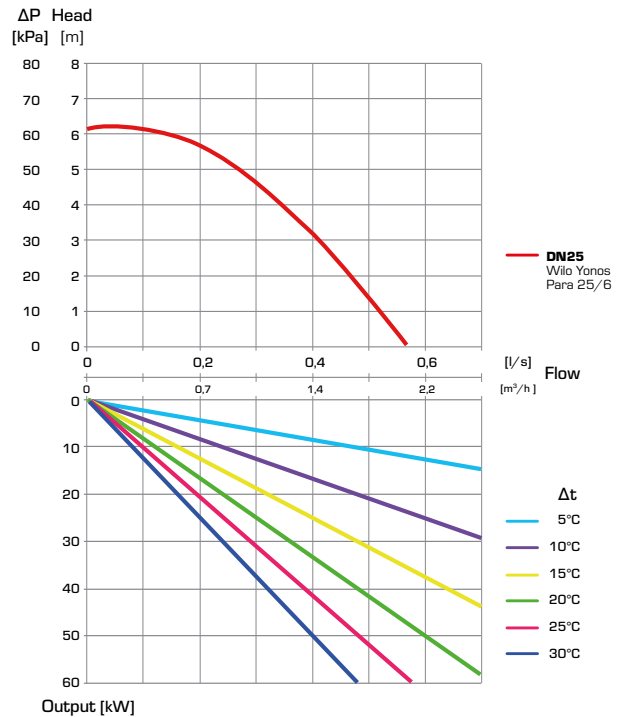
Example: Start with the heat output of the boiler (e.g. 30 kW) and move horizontally to the right in the diagram to the chosen Δt (recommended by boiler supplier), which is the temperature difference between the riser from the boiler and the return to the boiler (e.g. $85^{\circ}\text{C} - 65^{\circ}\text{C} = 20^{\circ}\text{C}$).

Move vertically up to the curves representing load unit performance. Check that the pump curve overcomes the additional pressure drops in system components such as pipes, boiler and storage tank.

SERIES GST130 – available pressure, Wilo pump



SERIES GST140 – available pressure, Wilo pump



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INSTALLATION EXAMPLES

