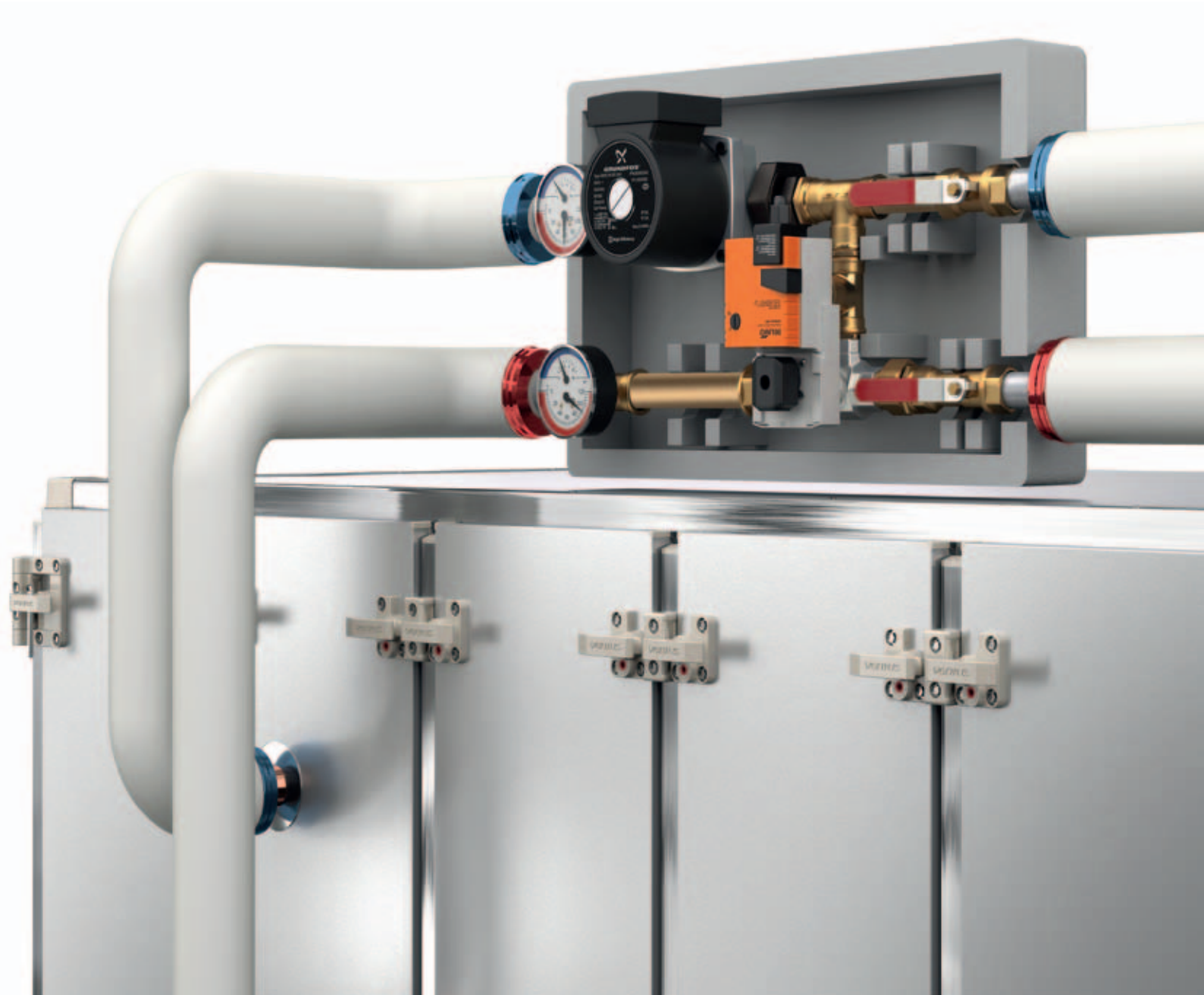
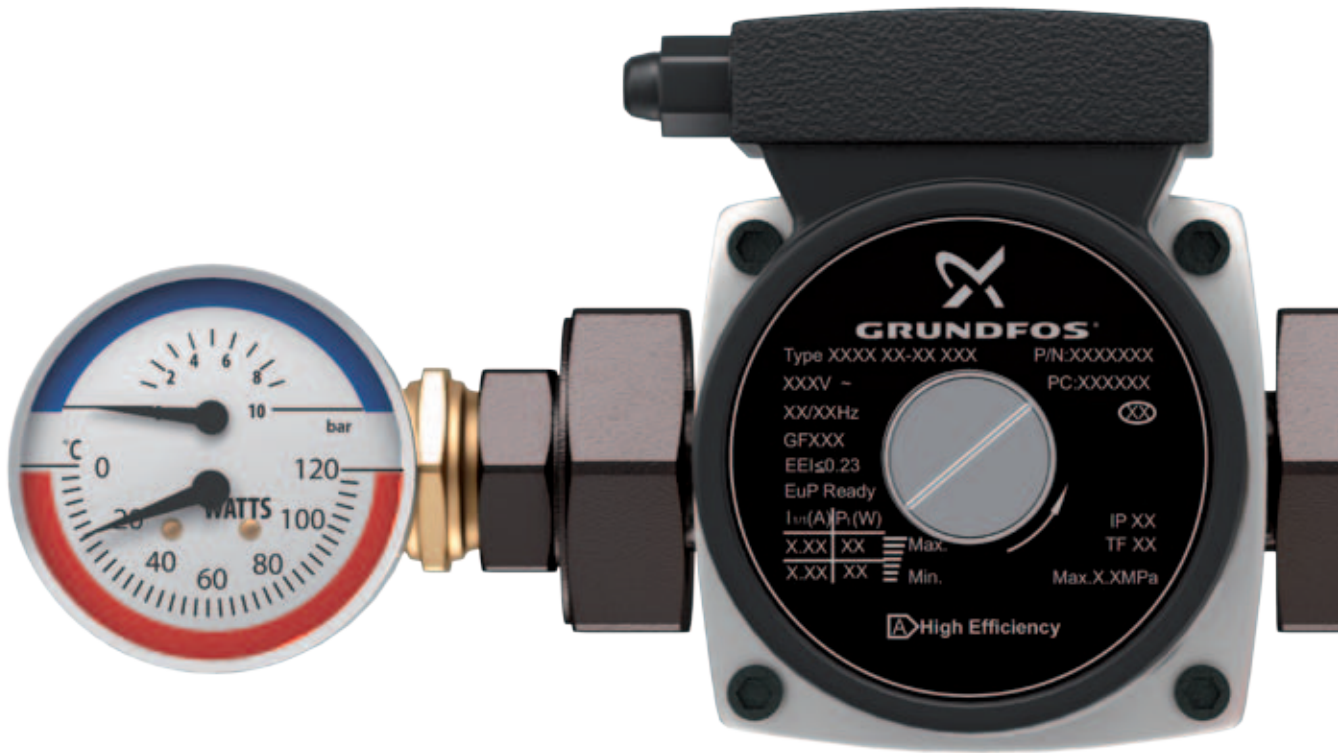




PUMP GROUPS  
2016

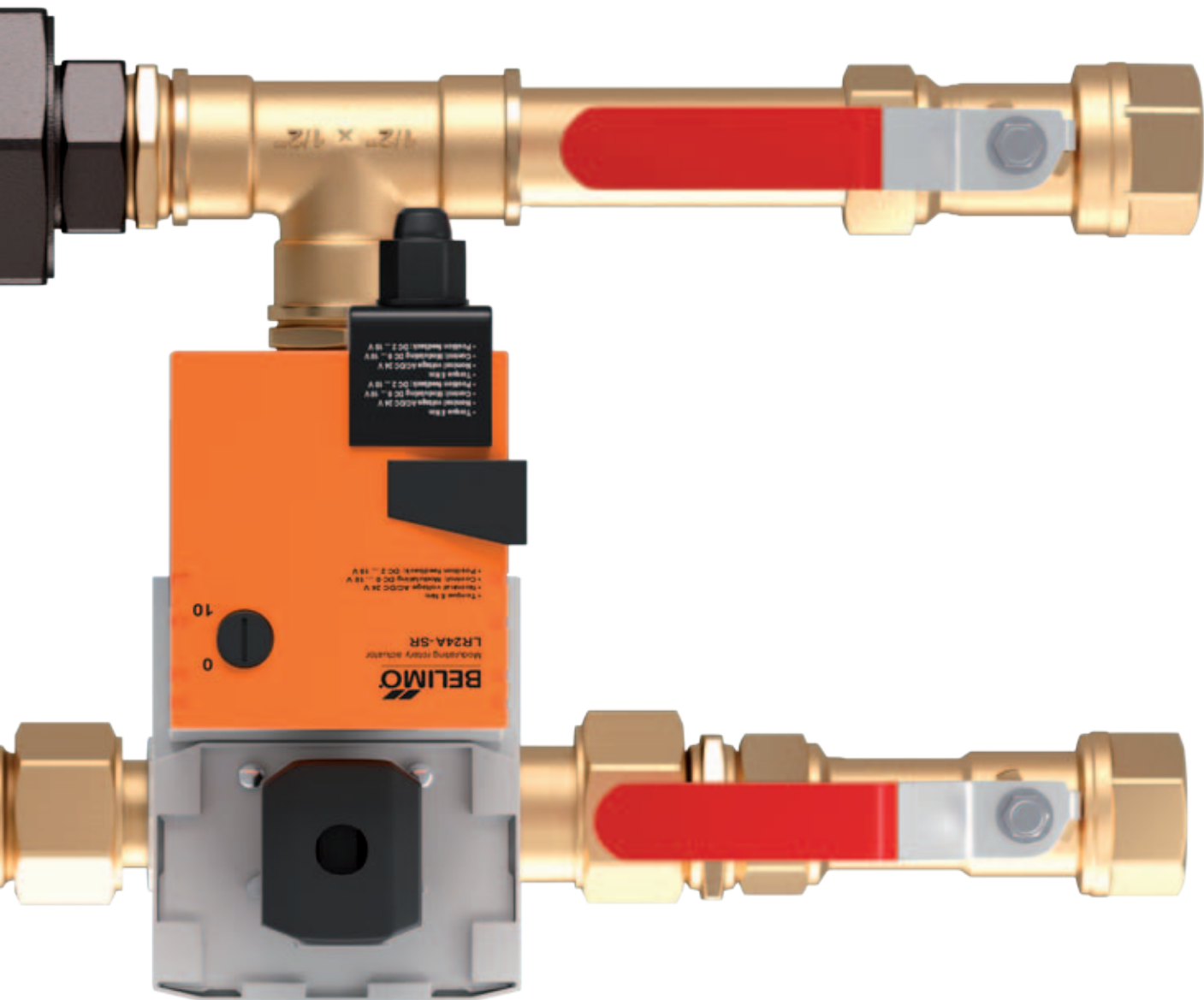




**EASY  
INSTALLATION**



**EPP  
CASING**



**IMMEDIATE  
AVAILABILITY**



**ATTRACTIVE  
PRICE**

# VTS pump groups

**Pump groups** - are ready to apply hydraulic control systems of water heater capacity, dedicated to cooperate with water heating coils used in VTS units. They complement the sales offer of VTS air handling units, ensuring optimal parameter adjustment of the complete system.

The key pump group components are: circulation water pump, three-way valve with actuator controlled by analog signal, mesh filter and two thermomanometers.

The entire system is enclosed in EPP casing, enabling outdoor installation and securing against mechanical damage. The casing provides also effective thermal insulation for the internal components.



## ADVANTAGES:

- » easy and intuitive selection of pump group
- » optimally matched technical parameters of particular components
- » eliminated of mistakes while connecting the water heater supplying system
- » easy and user-friendly connection to the heater and heat supply installation
- » guaranteed optimal support of VTS control system and of proper electric matching of pump protection system
- » possibility of using a most effective heater anti-freeze protection system, based on return medium temperature monitoring, active also when air handling unit is off
- » possibility of medium temperature and pressure current monitoring on supply and return side

# Key components



## PUMP

- » Voltage – 230 V/1 ph./50 Hz
- » Ambient temperature – 0 to 40°C
- » Water temp.
  - 110°C (WPG-25-070)
  - 95°C (WPG-25-095,WPG-25-105)
- » Max. operating pressure – 10 bar
- » Overload protection – integrated
- » Casing protection rating
  - IP 44 (WPG-25-070)
  - IP X2D (WPG-25-095,WPG-25-105)
- » Propylene / ethylene glycol
  - up to 35%



## VALVE/ACTUATOR ASSEMBLY

- » Power Supply – 24 VAC, 0–10 V DC signal
- » Ambient temp. – -30 to +50°C
- » Max. temp. of the medium – 120°C
- » Humidity 5 to 95% rH (non-condensing)
- » Casing protection degree – IP54



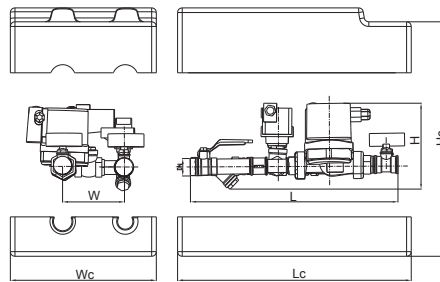
## THERMOMANOMETER

- » Measured parameters
  - temperature and pressure
- » Temp. measuring range – 0 to 120°C
- » Pressure measuring range
  - 0 to 10 bar (0 to 1 MPa)
- » Casing diameter – 80 mm

# Technical specifications

## DIMENSIONS

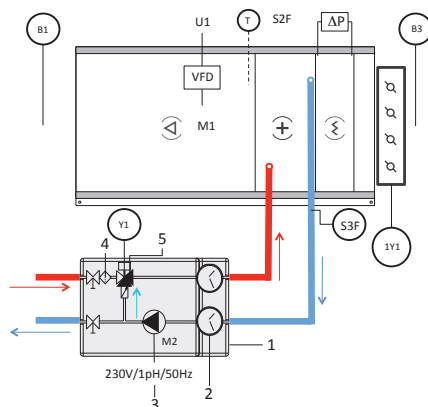
Pump group type	Casing type	Pump group casing dimensions			Connection diameter [inch]	Pump group dimensions		
		Lc [mm]	Wc [mm]	Hc [mm]		L [mm]	W [mm]	H [mm]
WPG - 25-070 - 2.5	S	540	305	230	3/4"	436	137	165
WPG - 25-070 - 4.0					1"	448	137	176
WPG - 25-070 - 6.3					1"	448	137	176
WPG - 25-095 - 4.0					1"	448	137	182
WPG - 25-095 - 6.3					1"	448	137	182
WPG - 25-070 - 10	L	690	355	270	1 1/4"	436	191	195
WPG - 25-095 - 10					1 1/4"	521	191	200
WPG - 25-095 - 16					1 1/4"	521	191	220
WPG - 25-105 - 16					1 1/4"	566	191	220



## PUMP GROUP PARAMETERS P GROUP PARAMETERS

Type	Weight	Rated power	Rated current	Valve flow coefficient
	[kg]	[W]	[A]	[kvs]
WPG - 25-070 - 2.5	5.4	52	0.52	2.5
WPG - 25-070 - 4.0	6.3	52	0.52	4
WPG - 25-070 - 6.3	6.4	52	0.52	6.3
WPG - 25-070 - 10	9.0	52	0.52	10
WPG - 25-095 - 4.0	6.7	140	1.1	4
WPG - 25-095 - 6.3	6.8	140	1.1	6.3
WPG - 25-095 - 10	11.0	140	1.1	10
WPG - 25-095 - 16	11.8	140	1.1	16
WPG - 25-105 - 16	13.7	180	1.4	16

## OPERATING DIAGRAM



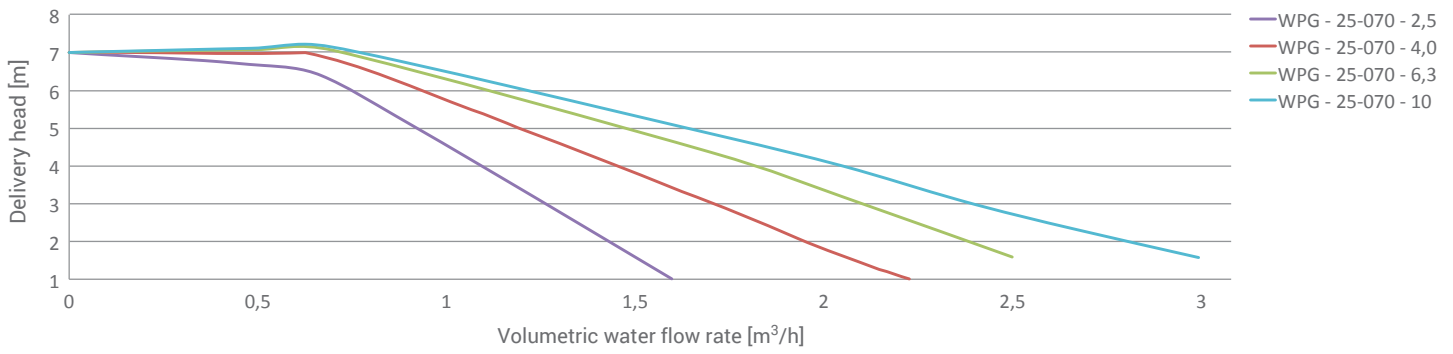
- B1 - supply air sensor
- VFD - frequency converter
- U1 - converter supply voltage
- T S2F - air-side anti-freeze protection sensor
- B3 - outside air temperature sensor
- 1Y1 - damper actuator
- ΔP - pressure switch
- S3F - return water temperature sensor
- Y1 - three-way valve actuator
- M1 - fan motor
- M2 - pump motor
- 1 - pump group casing
- 2 - thermomanometer
- 3 - circulator pump
- 4 - mesh filter
- 5 - three-way valve/actuator assembly

## COMBINED WITH VTS CONTROL SYSTEM, THE PUMP CENTRE ENSURES:

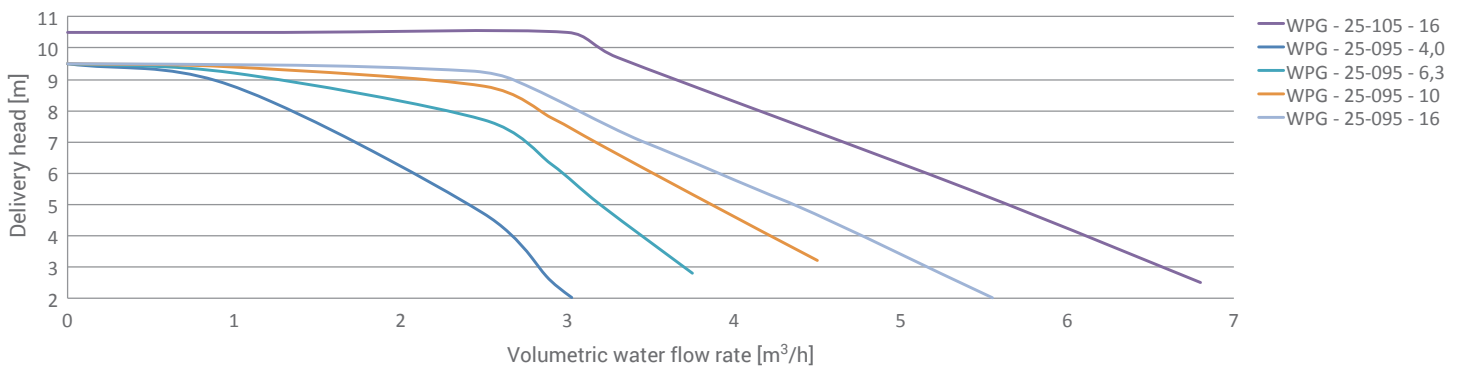
- » smooth regulation of supply air temperature by changing heating coil supply medium temperature, at constant medium flow-rate (quality regulation)
- » double, most effective heater anti-freeze protection based on off-coil air temperature and return medium temperature constant monitoring.

# Pump group characteristics

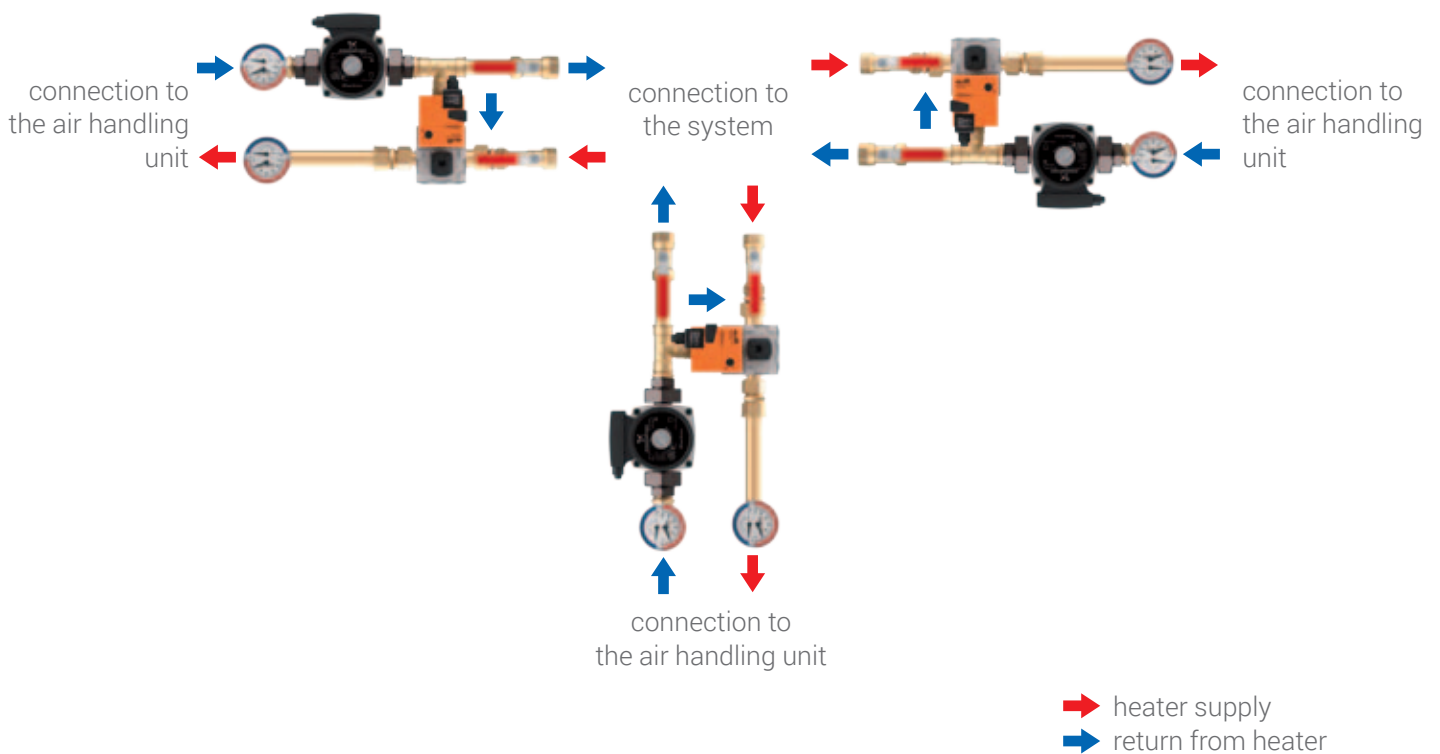
WPG - 25-070



WPG - 25-095, WPG - 25-105



# Installation





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