

## RECESSED DIRECT DISTRIBUTION GROUP

### Description



Preassembled pump group for direct distribution or circulation. Allows the circulation of the thermal fluid, coming from the primary circuit, without performing any thermal regulation. It is used when the same flow temperature of the primary circuit is requested by the user in general heating/cooling systems and radiant panel systems.

The group is composed of a pump, flow LCD thermometers, manual air vent, fittings for secondary distribution manifolds. The group can be installed with the secondary distribution manifolds on the right or the left.

The offset fitting on the flow pipe allows the installation of the group in a perfect vertical position and the coupling to manifolds with different centre distances.

### Range of products

Recessed direct distribution group	30B	XXX	X	X	X	X
Pump threaded connections G 1 1/2		040				
Nickel-plated finish			N			
Direct group without thermal regulation				4		
Pump Grundfos UPM3 AUTO 25-70 130					T	
Pump Wilo Para 25-130/7-50/SC-12					P	
Pump Grundfos UPSO 25-65 130 (Extra EU)					M	
Without pump					X	
Standard version with offset fitting and manual air vent						3

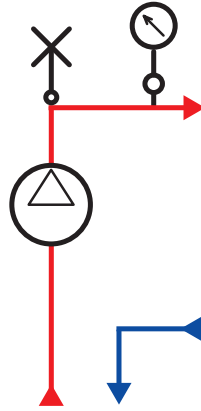
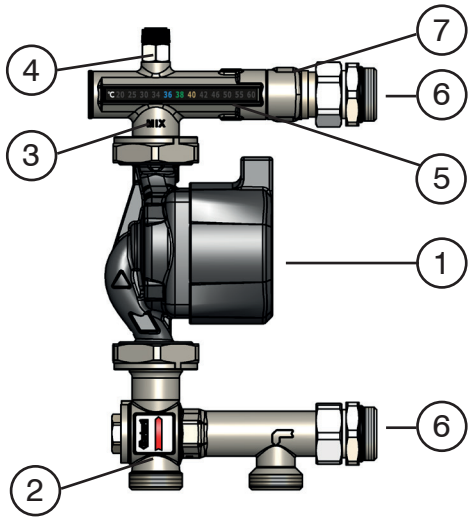
### Features

Working temperature range: **5–90 °C**  
 Max working pressure: **10 bar**  
 Male threaded connections: **ISO 228-1**  
 Primary side connection centre distance: **75 mm**  
 Connection centre distance to secondary manifold (adjustable through the offset fitting): **200–211 mm**  
 Pump: **Grundfos UPM3 AUTO 25-70 130**  
**Wilo Para 25-130/7-50/SC-12**  
**Grundfos UPSO 25-65 130 (Extra EU)**  
 Suitable fluids: **water, glycol solutions (max 30%)**  
 LCD thermometer scale: **20–60 °C**

### Materials

Instrument holder fitting: **brass EN 12165 CW617N**  
 Fitting for the primary side connection: **brass EN 12165 CW617N**  
 Fittings for secondary manifold:  
 • Body: **brass EN 12164 CW614N**  
 • Gasket: **EPDM**  
 Thermometers: **liquid crystals (LCD)**  
 Pump  
 • Body: **cast iron**  
 • Electric supply: **230 V-50/60 Hz**  
 • Protection class:  
 Grundfos UPM3: **IP 44**  
 Wilo Para: **IPx4D**  
 Grundfos UPSO (Extra EU): **IP 44**  
 • Centre distance: **130 mm**  
 • Connections: **G 1 1/2 M (ISO 228-1)**  
 • Gaskets: **EPDM**

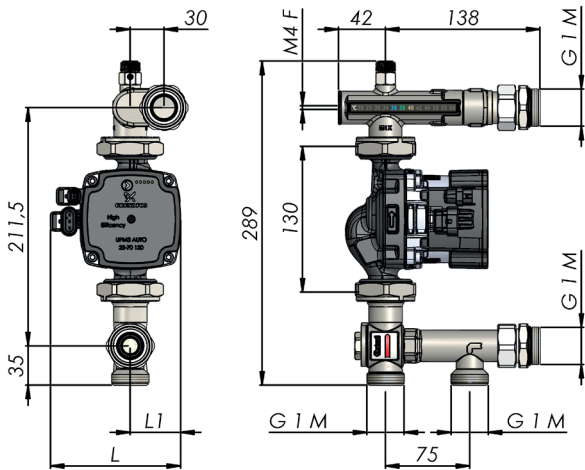
Components



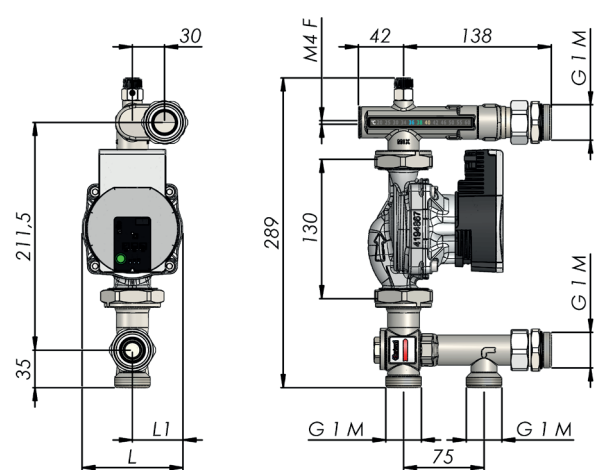
- Pump
- Manual air vent
- LCD thermometer

30B.N		
1	Pump	Grundfos UPM3 AUTO, Wilo Para, Grundfos UPSO (Extra EU)
2	Fitting for primary side connection	
3	Instrument holder fitting	
4	Manual air vent	
5	LCD thermometer	
6	Fittings for secondary manifold	
7	Offset fitting	

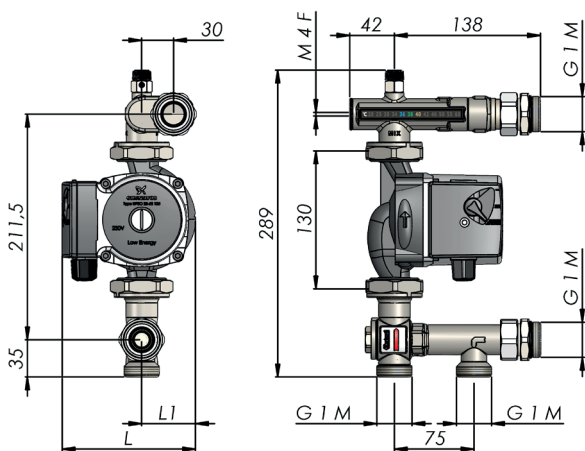
Dimensions



30B040NDT3



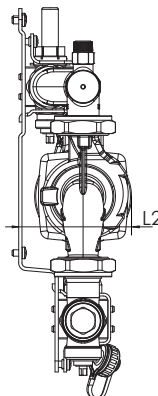
30B040NDP3



30B040NDM3

Code	P [bar]	L [mm]	L1 [mm]	Pump	Weight [kg]	N. P/B	N. P/C
30B 040 NDT 3	10	116	45	Grundfos UPM3 AUTO 25-70 130	3,41	-	1
30B 040 NDP 3	10	94	47	Wilo Para 25-130/7-50/SC-12	3,30	-	1
30B 040 NDM 3	10	126	51	Grundfos UPSO 25-65 130 (Extra EU)	4,01	-	1
30B 040 NDX 3	10	-	-	Without pump	1,55	-	1

N. P/B: number of pieces in box - N. P/C: number of pieces in carton  
Other pump types should be evaluated



Depth of the group coupled to Barberi manifolds				
Code	L2 [mm]	Manifold	Manifold centre distance [mm]	Note
30B 040 NDT 3	131 (105*)	08M-16M	211	* with 90° rotation of the electronic part of the pump
30B 040 NDP 3	106	08M-16M	211	-
30B 040 NDM 3	135	08M-16M	211	-

Diagrams

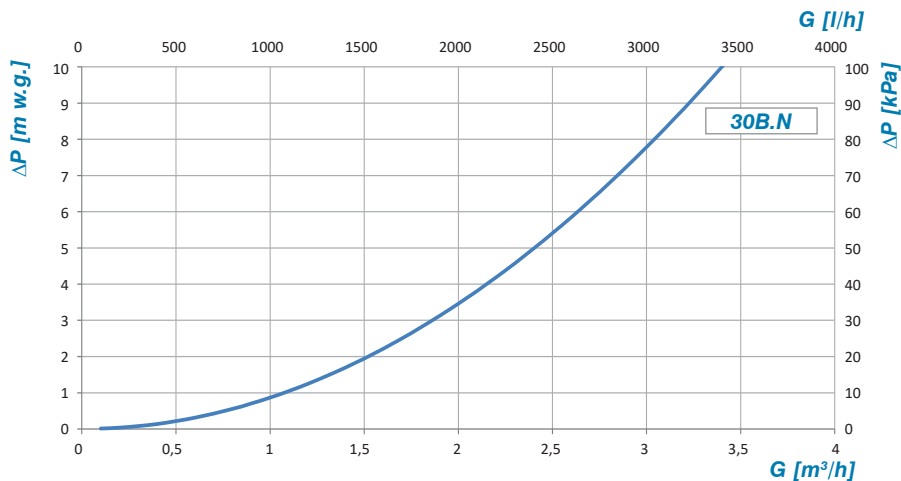
**Group sizing** (operation for specialized/authorized technical personnel).

**Step 1: head losses of the group without pump.** Enter on the x-axis of the first diagram with the design flow rate value. Cross the curve of the group and read the corresponding head losses of the group (without pump) on the y-axis.

**Step 2: available head of the pump.** With the same design flow rate value, enter on the x-axis of the selected pump diagram ("Head of pump"). Cross the curve of the selected working mode (Constant speed, Proportional pressure, Constant pressure) and read the corresponding available head of the pump on the y-axis.

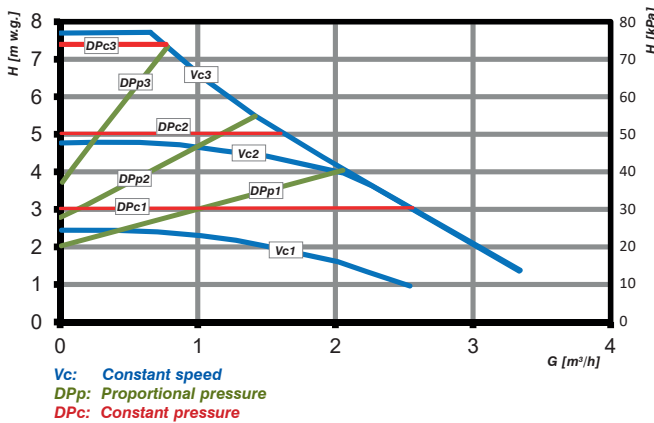
**Step 3: pump validation.** Calculate the difference between the available head of the pump and the head losses of the group without pump. The remaining pump head should be higher than the head losses of the rest of the system: if so, the selected pump is suitable to supply water to the rest of the system, otherwise a different pump working mode or pump size or different group size or a system resizing could be necessary.

**Hydraulic characteristics: head losses of the thermostatic regulating group without pump**

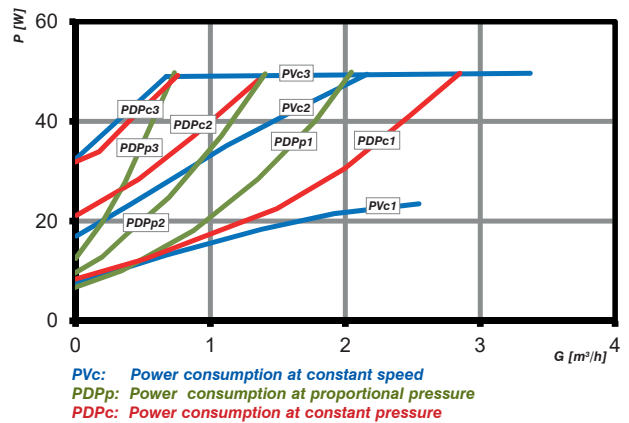


**Head and power consumption of the pumps**

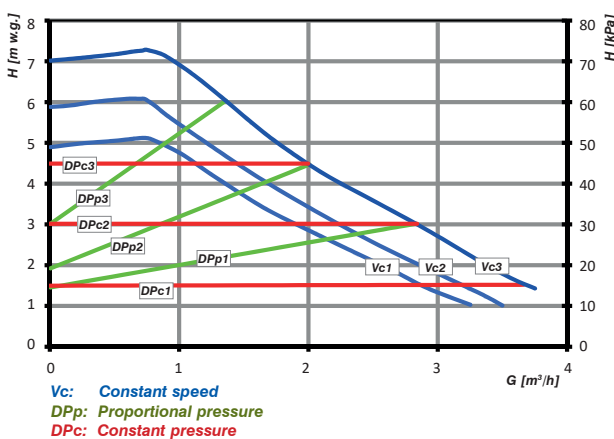
Head of pump Wilo Para 25-130/7-50/SC-12



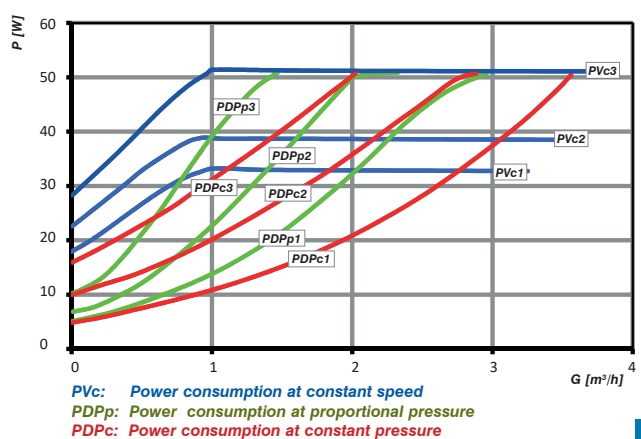
Power of pump Wilo Para 25-130/7-50/SC-12

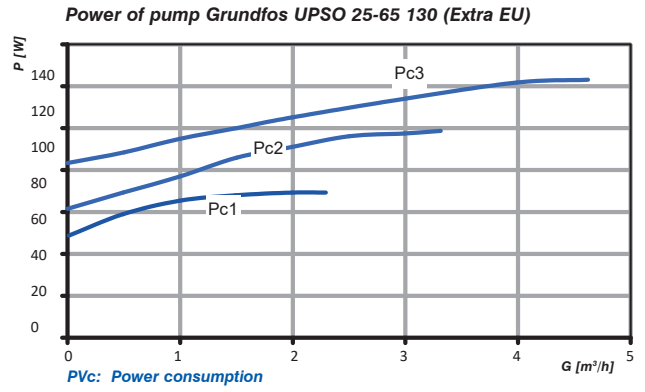
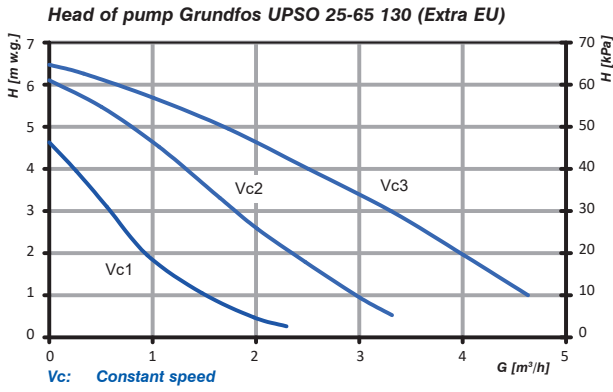


Head of pump Grundfos UPM3 AUTO 25-70 130



Power of pump Grundfos UPM3 AUTO 25-70 130

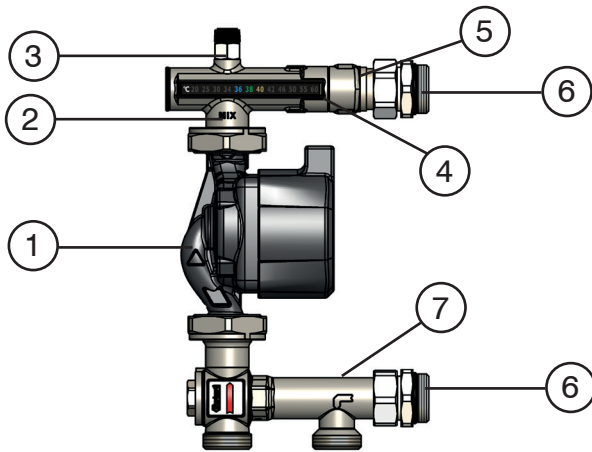




**Features**

The direct distribution group consists of:

- Flow line including fitting for primary side connection (7), pump (1), instrument holder fitting (2), manual air vent (3), liquid cristal thermometer (4), offset fitting (5), fitting for secondary manifold (6);
- Return line including fitting for secondary manifold (6), fitting for primary side connection (7).



**Advantages**

**Reversibility:** thanks to the presence of a thermometer also on the rear side, the group can be easily inverted from right to left by fully reversing it (fig. A).

**Flexibility of installation.** The group can be installed on wall, in box or recessed (fig. B).

**Monobloc structure.** The lower fitting, suitable for the primary side connection, and the instrument holder fitting, equipped with air vent and thermometers, are designed as monobloc structure. The installation is therefore immediate and points of possible leakage are reduced to a minimum.

**Fast fittings.** The provided fittings are equipped with O-Ring and flat gasket to make the installation faster, avoiding the use of other sealing systems like hemp or teflon tapes (fig. C).

**Instrument holder fitting.** Equipped with manual air vent, double LCD thermometer (on front and rear side) to check the temperature of the mixed water supplied to the system (fig. D). The offset fitting on the flow pipe allows the installation of the group in a perfect vertical position and the coupling to manifolds with different centre distances.

**M4 threaded connection:** fitted for the connection of an optional safety thermostat (fig. E).

**Compact installation:** the 75 mm centre distance of the primary side, the adjustable 200-211 mm centre distance to the secondary manifold and the 130 mm pump make the installation very compact.

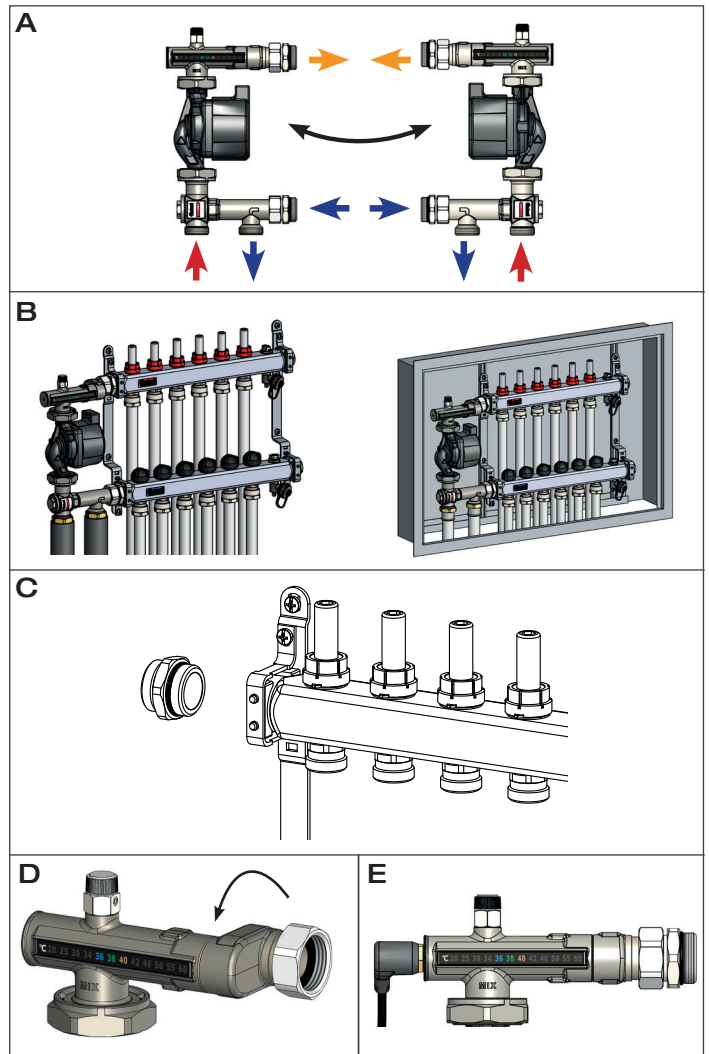
**Pump range:** the groups are available with three different pump models. For the use of other models and/or manufacturers, it is

advisable to contact Barberi for verification.

**Flat gaskets:** the various components of the groups are connected to each other by means of flat seal fittings. This makes the installation faster by avoiding the use of hemp or other sealants.

**Fittings to secondary manifold:** the groups are already complete with fittings to be screwed to the main connections of the secondary manifold.

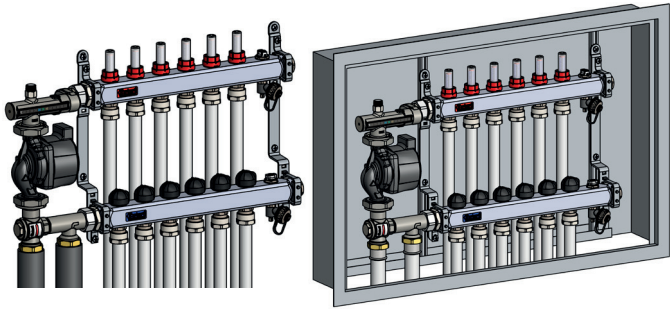
**The nuts are supplied loosened to facilitate the pump rotation on the installation field. Fully screw the nuts before installing the group.**



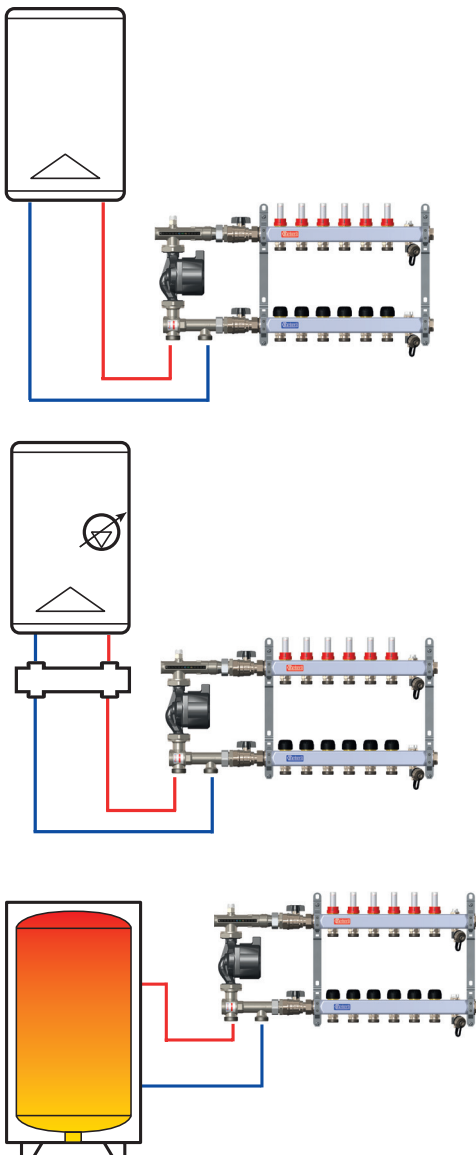
## Installation

The mounting options of the group are:

- Wall installation
- Recessed installation
- Box installation



The group can be directly connected to a generator if the latter is not equipped with a pump. Instead, if the generator is equipped with a pump, an hydraulic separator should be placed between the generator and the group, in order to avoid mutual influences between the pumps. The group can be installed downstream of an inertial water storage, which performs the function of an hydraulic separator.



## Group position

The group can be installed in one of the ways shown in the picture, with the pump rotation axis always horizontal.

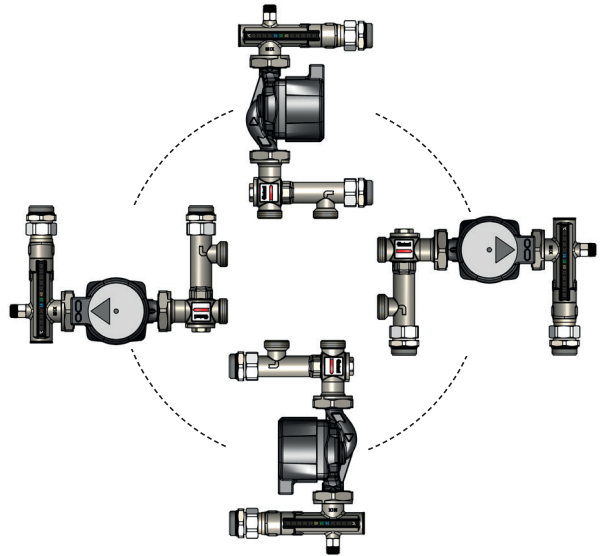
12 o'clock position: suggested.

3 o'clock position: allowed only if the secondary manifold (directly connected to the group) is not equipped with flow meters or it is placed in remote position (only system flow and return pipes are directly connected to the group).

6 o'clock position: allowed but the manual air vent cannot be used anymore since it is placed upside down.

9 o'clock position: see 3 o'clock.

In any case, suitable brackets should be used to fix the group.

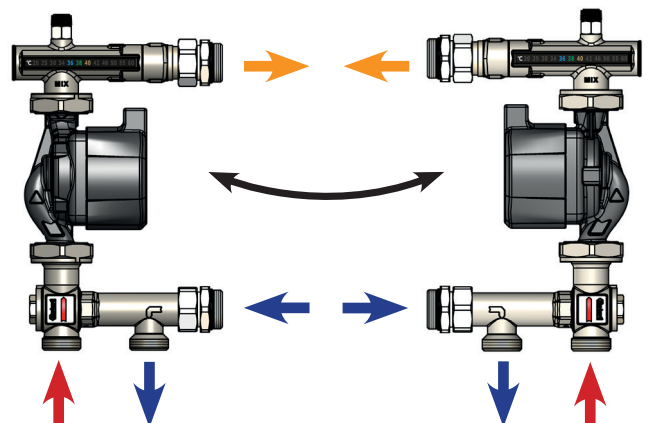


## Group reversibility

The group, as shown in the picture and drawings of this datasheet, allows to directly screw a secondary distribution manifold on its right side.

Thanks to the presence of a LCD thermometer also on the rear part, the group can be fully and quickly overturned to screw a distribution manifold on its left side.

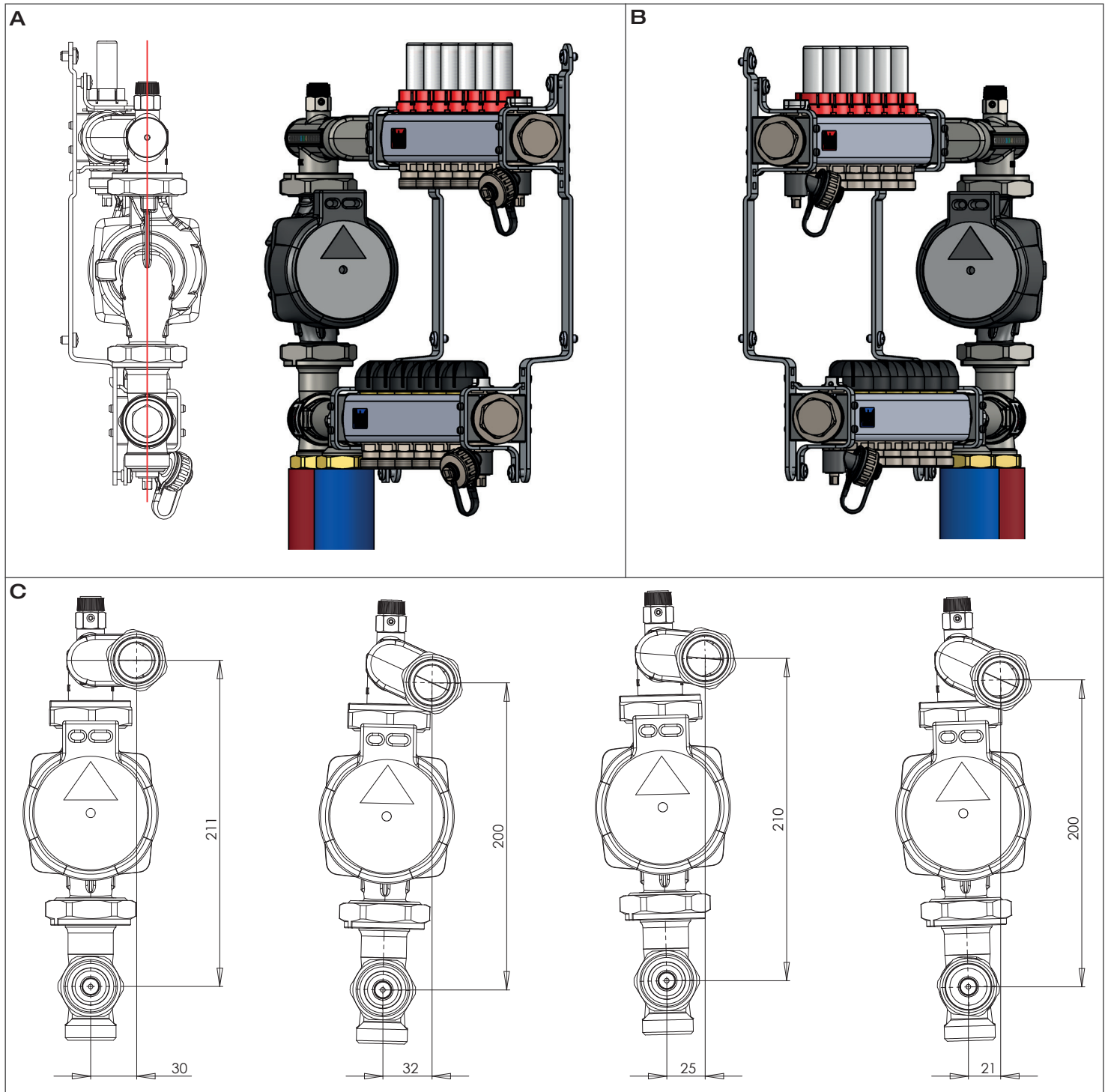
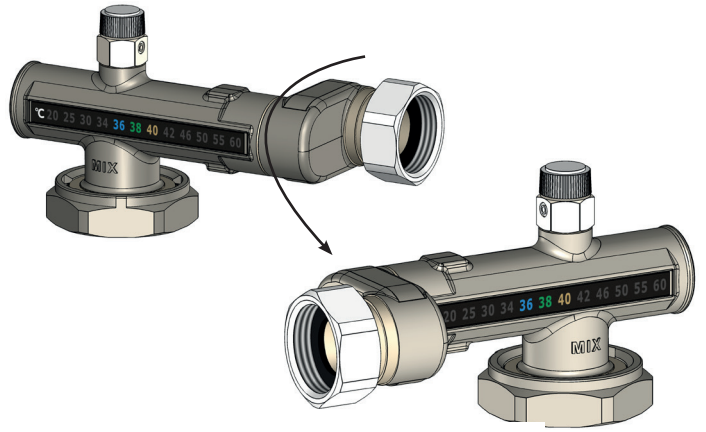
Fully screw the nuts before proceeding with the installation.



**Offset fitting**

The offset fitting, placed on the flow pipe, allows:

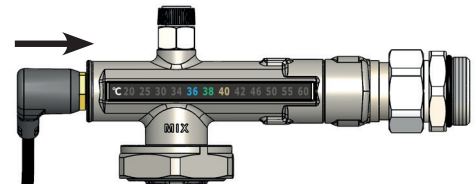
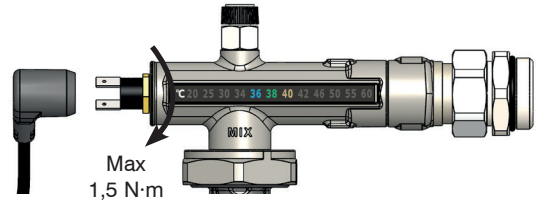
- 1) the installation of the group completely in vertical position. In this way the pipes, coming from the primary circuit, can be easily connected to the group (fig. A);
- 2) the immediate reversibility of the group. When reversing the group from right to left, it's only necessary to rotate the offset fitting by keeping the group still in a complete vertical position (Fig. B);
- 3) the possibility to connect manifolds with centre distances from 200 to 211 mm, the most common on the market (Fig. C).



Accessories

# 99B

Safety thermostat kit for distribution and regulating recessed groups 27B.N-29B.N-30B.N. Normally closed with 55 °C setting, pre-wired box.



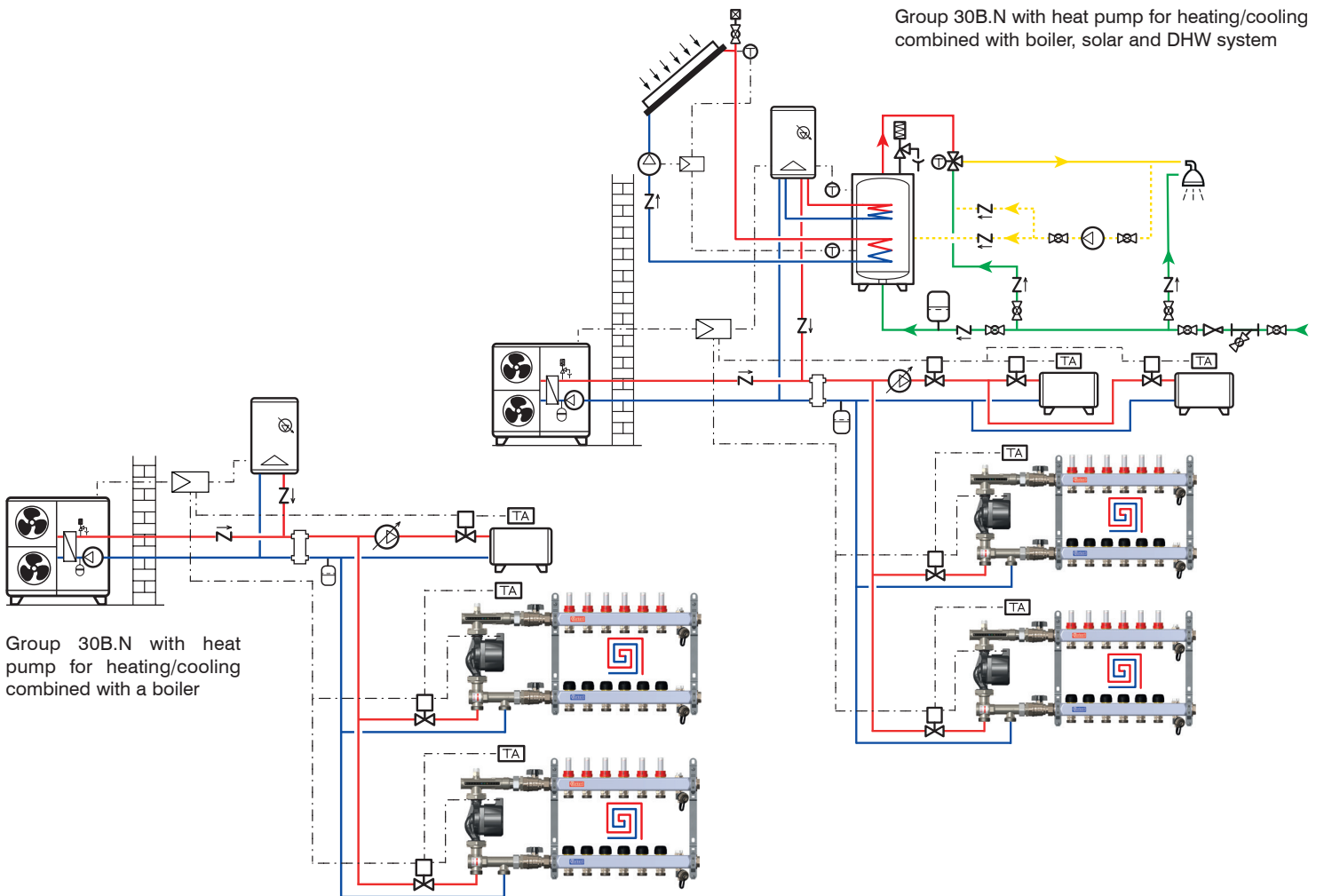
Code



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System diagrams



Group 30B.N with heat pump for heating/cooling combined with boiler, solar and DHW system

Group 30B.N with heat pump for heating/cooling combined with a boiler

Specifications

**Series 30B.N**

Recessed direct distribution group. Threaded connections G 1 M. Primary side connection centre distance 75 mm. Adjustable connection centre distance to secondary manifold 200–211 mm. The group is composed of: monobloc brass fitting for the primary side connection; brass instrument holder and offset fitting; liquid cristal flow thermometers with scale 20–60 °C. High-efficiency pump Grundfos UPM3 Auto 25-70 130 (Wilo Para 25-130/7-50/SC-12, 3 constant speed Grundfos UPSO 15-65 130 (Extra EU)), supply 230 V (50-60 Hz). Working temperature range 5–90 °C; maximum working pressure 10 bar.

