

# Compact mixing group

Art. M061 - M061...172

**ICMA**<sup>®</sup>

ST.M061.10.22.EN

## / Description

ICMA mixing group M061 is designed for underfloor heating systems, in combination with distribution manifolds.

It maintains the fluid delivery temperature stable to the set value. The delivery temperature adjustment is done simply by means of a graduated cap.

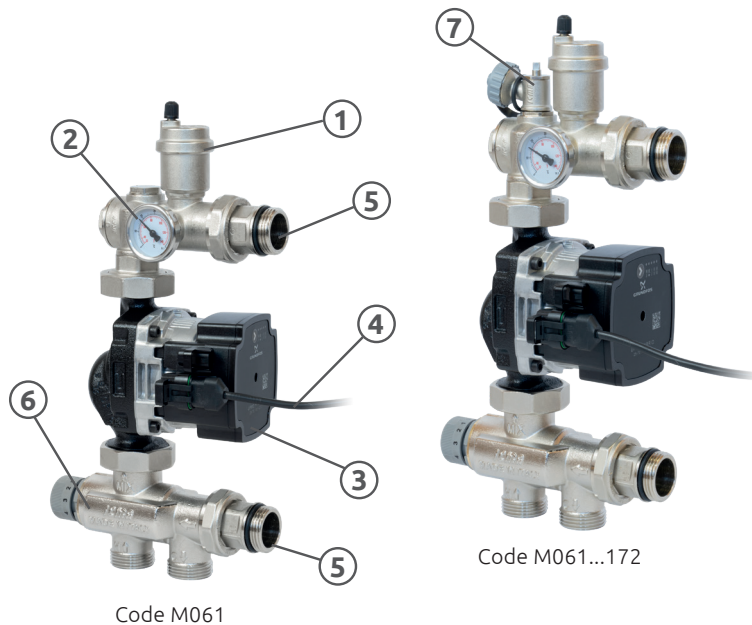
## / Group advantages

- Right / left reversibility (with respect to the manifold).
- No sensors.
- Compactness.
- Mixing accuracy.

## / Components List

Fixed point mixing group components:

1. Automatic air vent
2. Thermometer 0/60°C
3. Circulator
4. Power cable
5. Union nuts G1" with O-Ring sealing for manifolds
6. Fixed-point thermostatic valve 20-50°C
7. 3/4" water filling and drain tap (**available only for articles with code "172", see the tables in the next page.**)



## / Technical features

### TECHNICAL DATA:

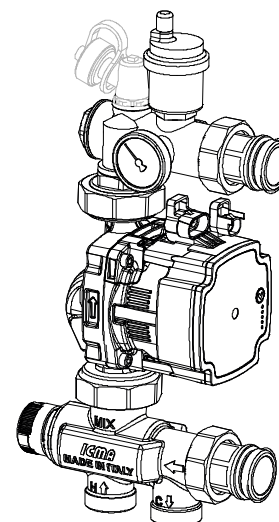
Fluids used:	Water and glycol based solutions
Maximum percentage of glycol:	30%
Temperature range of boiler inlet:	5÷110°C
Mixing temperature range:	20÷50°C
Thermometers scale:	0÷60°C
Maximum operating pressure:	10 bar
Maximum differential pressure:	1 bar
Power supply:	230 V – 50 Hz
Circulators:	See specification on page 3

### MATERIALS:

Valve bodies and fittings:	Brass CW617N - UNI EN 12165
Mixing valve body:	Brass CB753S - UNI EN 1982:2017
Unions and nuts:	Brass CW617N - UNI EN 12165
Thermometer:	Steel/Aluminium
O-rings and gaskets:	EPDM Perox

### CONNECTIONS:

Boiler connection threads:	G1" M
Collectors connection threads:	G1" M

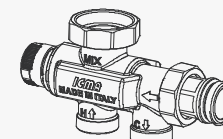


### MIXING VALVE:

Fluids used:	Water and glycol based solutions
Maximum percentage of glycol:	30%
Maximum operating pressure:	10 bar
Operating temperature:	20-50°C

Code 93793AE062050

Operating temperature: 20°-50°C



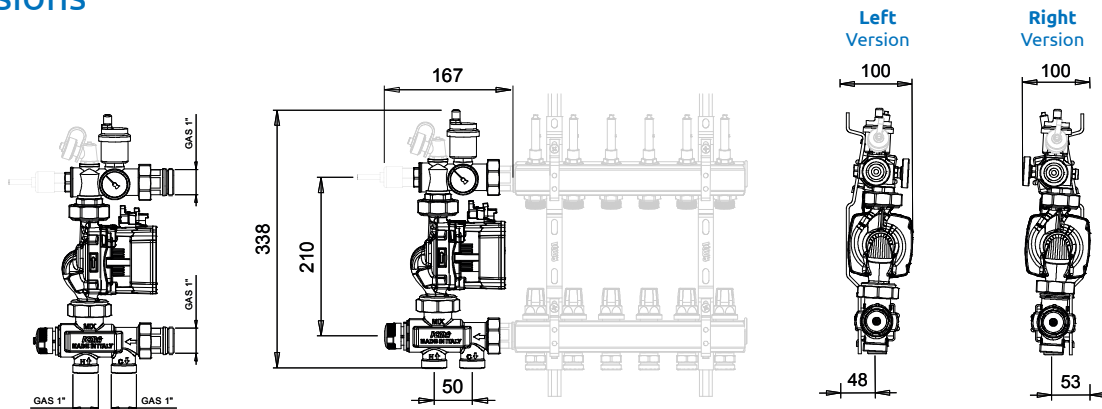
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## Dimensions



Groups <b>without</b> 3/4" water filling and drain tap		
Thread dimensions	Code	Circulator
G1" M	87M0615006	NO PUMP
G1" M	87M0615006P328	GRUNDFOS UPM3 HYBRID 25/65 130
G1" M	87M0615006P330	WILO PARA 25/7 130
G1" M	87M0615006P321	GRUNDFOS UPS 25/65 130

Groups <b>with</b> 3/4" water filling and drain tap		
Thread dimensions	Code	Circulator
G1" M	87M06150172	NO PUMP
G1" M	87M06150172P328	GRUNDFOS UPM3 HYBRID 25/65 130
G1" M	87M06150172P330	WILO PARA 25/7 130
G1" M	87M06150172P321	GRUNDFOS UPS 25/65 130

## Functioning

The picture below shows a group with left side delivery set at 35 °C. The "RT" room thermostat controls the recirculation pump passing through the "ST" safety thermostat P310 (optional), activating the system when the room temperature goes below the set value. The connections to the unit pass through an hydraulic separator "HS", which sends the heat transfer fluid to the heating zones. The thermostatic mixer works continuously to maintain the temperature previously set by cap adjustment.

The thermostatic mixer works in two different positions during its operation:

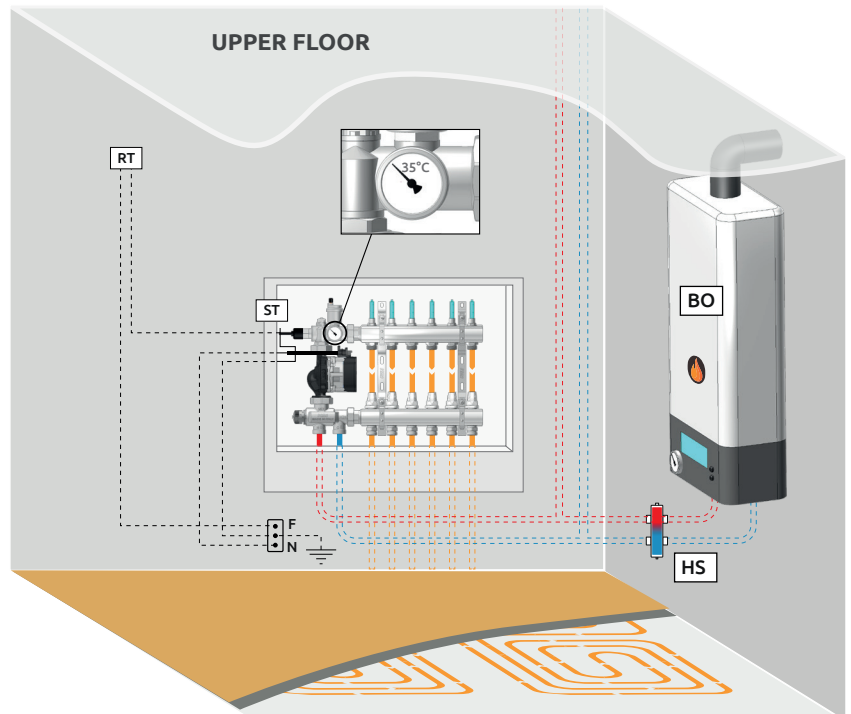
### 1. ADJUSTMENT POSITION:

In case of thermostatic mixer set on 4\*, and  $T_{mix} < 35^\circ$ , the 3 way valve lets the heatcarrying fluid coming from the boiler in and mixes it with the underfloor heating system return fluid.

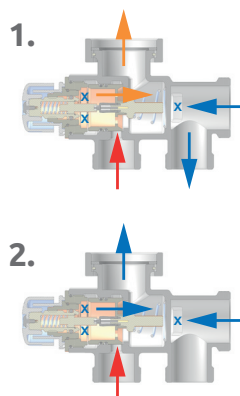
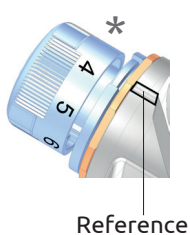
### 2. CLOSURE POSITION:

In case of thermostatic mixer set on 4\*, and  $T_{mix} > 35^\circ$ , the 3 way valve excludes the heat-carrying fluid coming from the boiler completely, to let the underfloor heating return fluid recirculate.

If the secondary delivery temperature exceeds 50 ° C, the TS safety probe opens the contact and switches off the circulator. This prevents radiant system damage due to prolonged exposure to overheating.



RA: Room Thermostat  
BO: Boiler  
HS: Hydraulic Separator  
ST: Safety thermostat P310



Position	1	2	3	4*	5	6	7
°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C

### / Group customization

#### Circulation pumps (Saleable in Extra-EU countries only)

##### Art. P321 - Synchronous circulation pump with 3 speeds:



##### CARATTERISTICHE TECNICHE:

Brand:	Grundfos
Model:	UPSO 25 – 65 130 mm
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50Hz
Operating temperature:	+2°C ÷ 110°C.
Max operating pressure:	10 bar
Minimum pressure on the intake side:	85°C = 0,049 bar 90°C = 0,27 bar 110°C = 1,08 bar
Max. percentage of glycol:	50%
Protection level:	IP44

#### Circulation pumps (Saleable in UE countries)



##### Art. P328 - Circulator with PP (proportional pressure), CP (constant pressure) CC (constant curves), PWM (profile A o C), AA (auto adapt):

##### TECHNICAL SPECIFICATIONS:

Brand:	Grundfos
Model:	UPM3 hybrid 25/70 130
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	+2°C ÷ 110°C
Max. ambient temperature:	70°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	75°C = 0,05 bar 95°C = 0,5 bar 110°C = 1,08 bar
Max. percentage of glycol:	50%
Protection level:	IP44
Energy Class (EEI):	≤0.20



##### Art. P327 - Circulator with ΔP constant and ΔP variable:

##### TECHNICAL SPECIFICATIONS:

Brand:	Wilo
Model:	PARA RS 25/8 130
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. 50°C = 2 ÷ 105°C Ambient. temp. 55°C = 2 ÷ 90°C Ambient. temp. 60°C = 2 ÷ 77°C Ambient. temp. 65°C = 2 ÷ 66°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	0,5 bar
Max. percentage of glycol:	50%
Protection level:	IPx4D
Energy class (EEI):	≤0.21



##### Art. P330 - Circulator with fixed ΔP , variable ΔP and 3 constant speed:

##### TECHNICAL SPECIFICATIONS:

Brand:	Wilo
Model:	PARA RS 25/7 130
Centre to centre distance:	130 mm
Connections:	G 1"1/2 M
Electrical power supply:	230V – 50/60Hz
Operating temperature:	Ambient. temp. 50°C = 2 ÷ 105°C Ambient. temp. 55°C = 2 ÷ 90°C Ambient. temp. 60°C = 2 ÷ 77°C Ambient. temp. 65°C = 2 ÷ 60°C
Max operating pressure:	10 bar
Minimum pressure on the intake side:	0,5 bar
Max. percentage of glycol:	50%
Protection level:	IPx4D
Energy Class (EEI):	≤0.21

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### Accessories



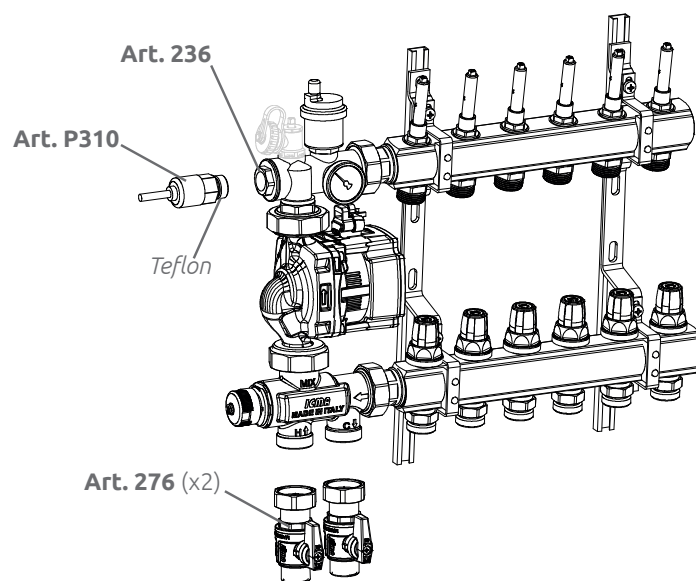
**Art. P310 - Code 88P3100199**  
Safety thermostat. It stops the pump when reaching 50°C.  
Requires the end cap art. 236 \*.



**\*Art. 236 - Code 87236LE05**  
Hollow end cap. Female 1"-1/2".

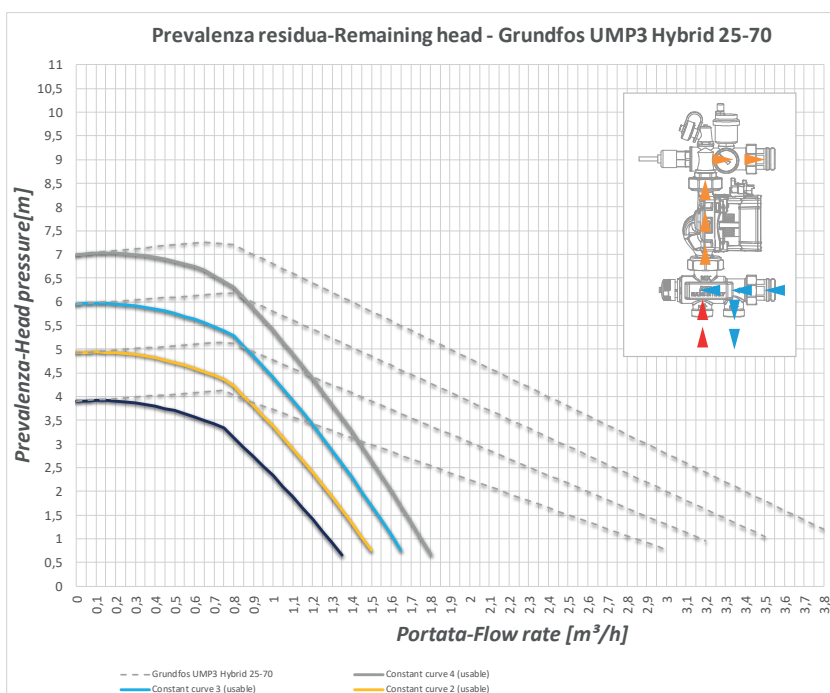


**Art. 276 - Code 87276AF11**  
Ball valve with revolving nut and flat seat. Male 3/4" / Female 1".



### Hydraulic Specifications

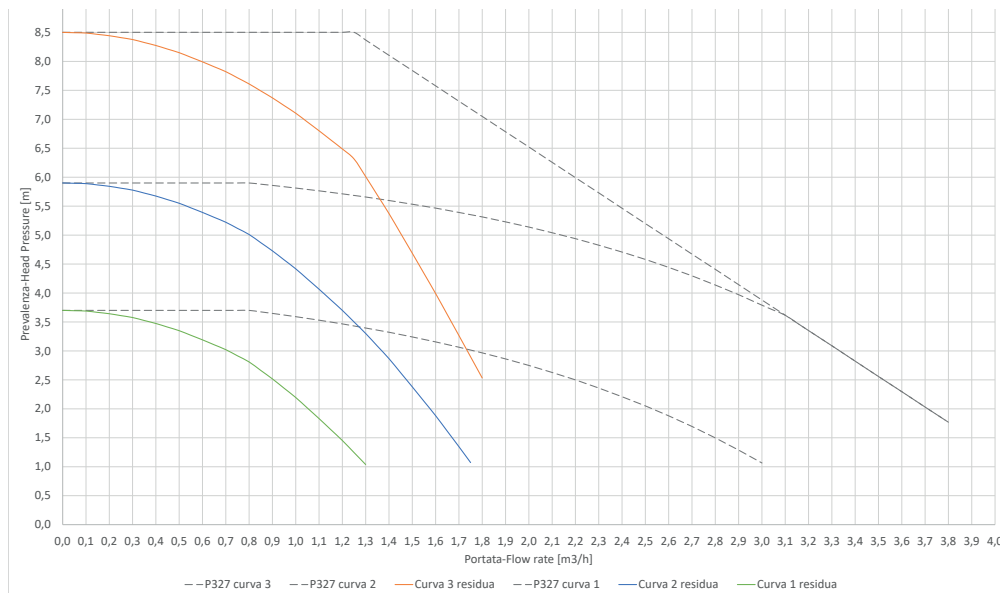
Art. P328



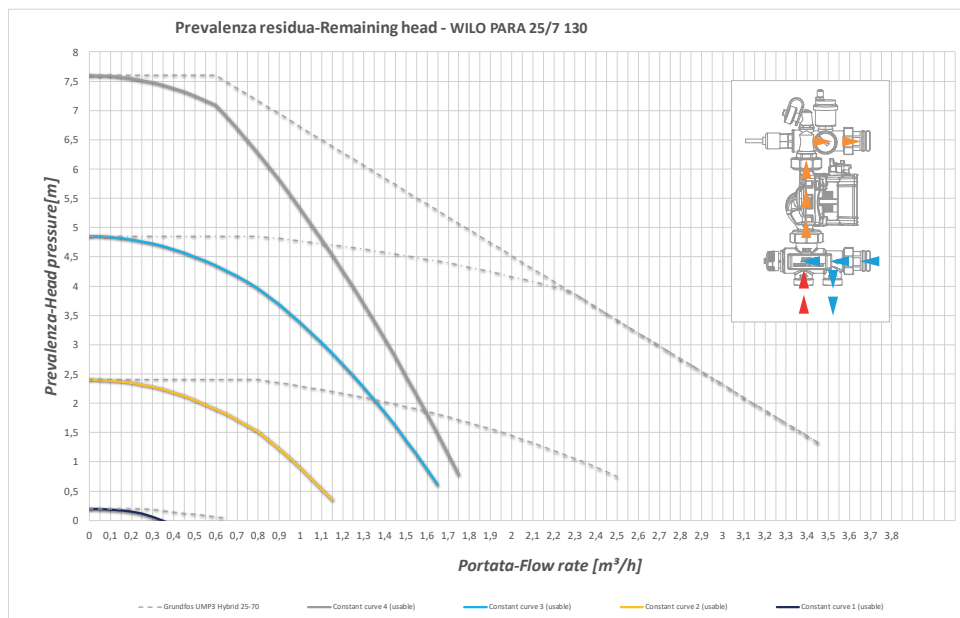
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### Art. P327



### Art. P330

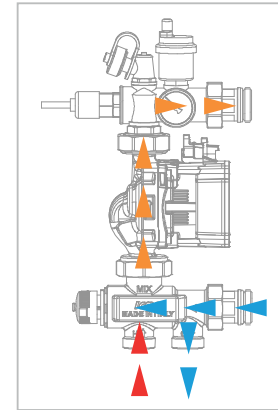
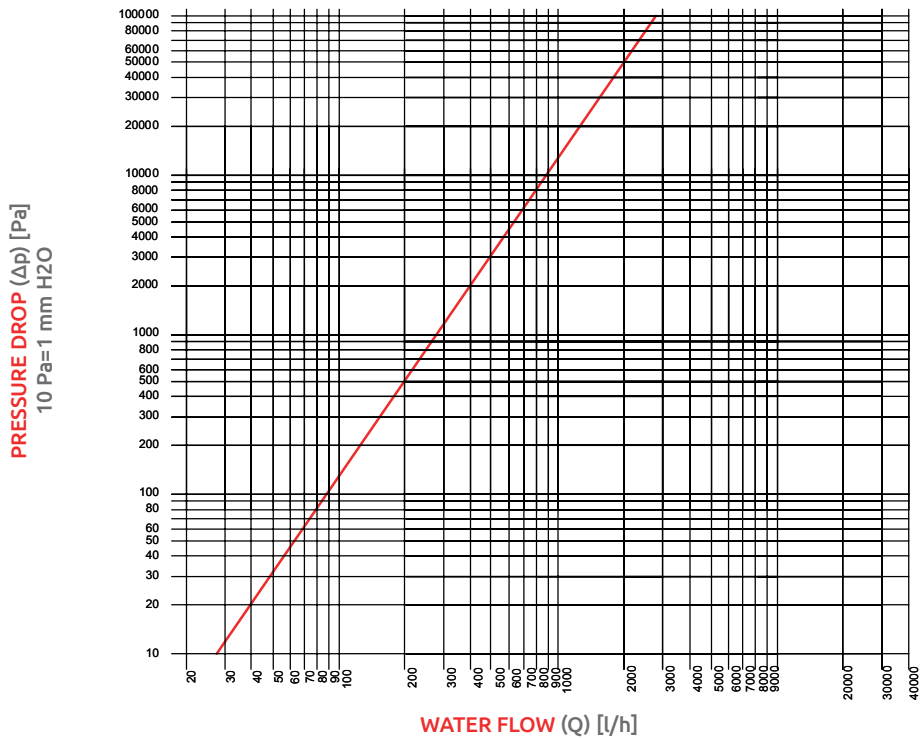


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## / Hydraulical Specifications

Compact mixing group Art. M061  
PRESSURE DROP DIAGRAM



Kv m3/h	2.7
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## / Positioning

### Group orientation

