

Thermostatic regulating unit for underfloor radiant panels



Function

The thermostatic regulating unit is designed for **maintaining the temperature set for the flow fluid constant** in a low temperature circuit for underfloor radiant panels.

This unit has been specially designed for use with both the external and wall embedded versions of the separator/distribution manifolds.

It comes supplied with a three-way thermostatic mixing valve with built-in temperature sensor, a three-speed pump, a safety thermostat, a differential by-pass valve, flow and return temperature gauges and secondary circuit shut-off valves.

Supplied complete with preformed insulation shell.

Product range

Part # 31093 External thermostatic regulating unit for radiant panels for Sepcoll. Flow upwards, flow on right hand side _____ Size 1"
 Part # 31094 External thermostatic regulating unit for radiant panels for Sepcoll. Flow upwards, flow on left hand side _____ Size 1"

Technical specification

Three-way thermostatic valve

Materials: - Body: brass EN 1982 CB753S
 - Internal cartridge: brass EN 12164 CW614N, chemically nickel plated
 - Springs: stainless steel
 - Seals: EPDM

By-pass

Materials: - Body: brass EN 1982 CB753S
 - Springs: stainless steel
 - Obturator: EPDM
 - Seals: EPDM

Shut-off valves

Materials: - Body: brass EN 12165 CW617N
 - Seals: EPDM

Performance

Medium: water, glycol solutions
 Max. percentage of glycol: 30%
 Setting temperature range: 25 – 55°C
 Accuracy: ± 2°C
 Primary inlet max. temperature: 85°C
 By-pass setting range: 10-60 kPa (1- 6 m w.g.)
 Connections: - primary circuit: 1" F with union
 - secondary circuit: 1" F
 - connection centre distance: 90 mm

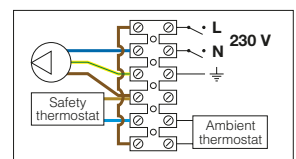
Safety thermostat

Set temperature: 55°C
 Protection class: IP 55
 Contacts rating: 10 A/ 240 V

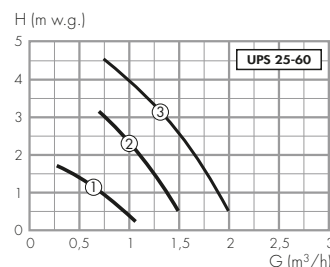
Pump

Three-speed pump: UPS 25/60
 Material: - Body: GG 15/20 cast iron
 Electric supply: 230 V - 50 Hz
 Max. relative humidity: 95%
 Max. ambient temperature: 80°C
 Protection class: IP 44
 Pump centre distance: 130 mm
 Pump connections: 1 1/2" with union

Wiring diagrams



Head available at the regulating unit connections



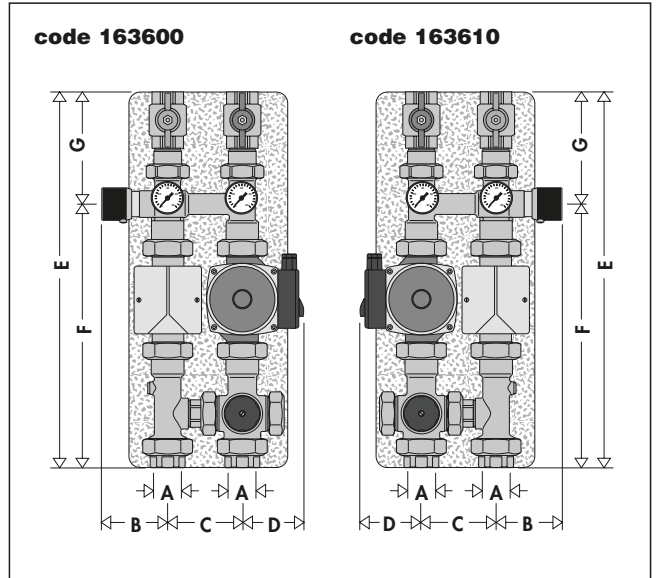
Power consumption

Speed	I (A)	P (W)	n (r.p.m.)
3	0,40	90	1800
2	0,30	65	1100
1	0,20	45	700

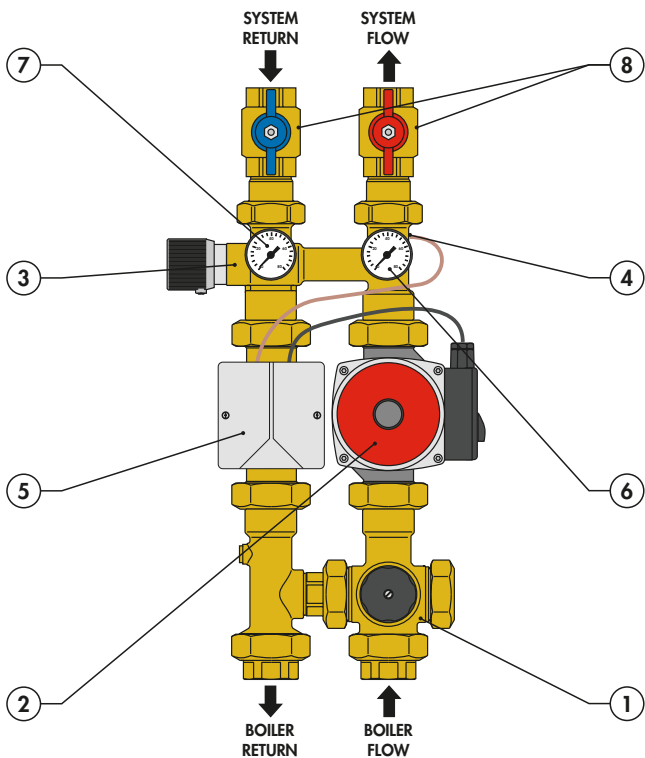
Insulation technical specification

Material:	closed cell expanded PEX
Thickness:	20 mm
Density:	- inner part 30 Kg/m ³
	- outer part 50 Kg/m ³
Thermal conductivity (DIN 52612):	- at 0°C 0,038 W/(m·K)
	- at 40°C 0,045 W/(m·K)
Coefficient of resistance to the diffusion of vapour (DIN 52615):	> 1.300
Temperature range:	0 – 100°C
Fire resistance (DIN 4102):	B2 class

Dimensions



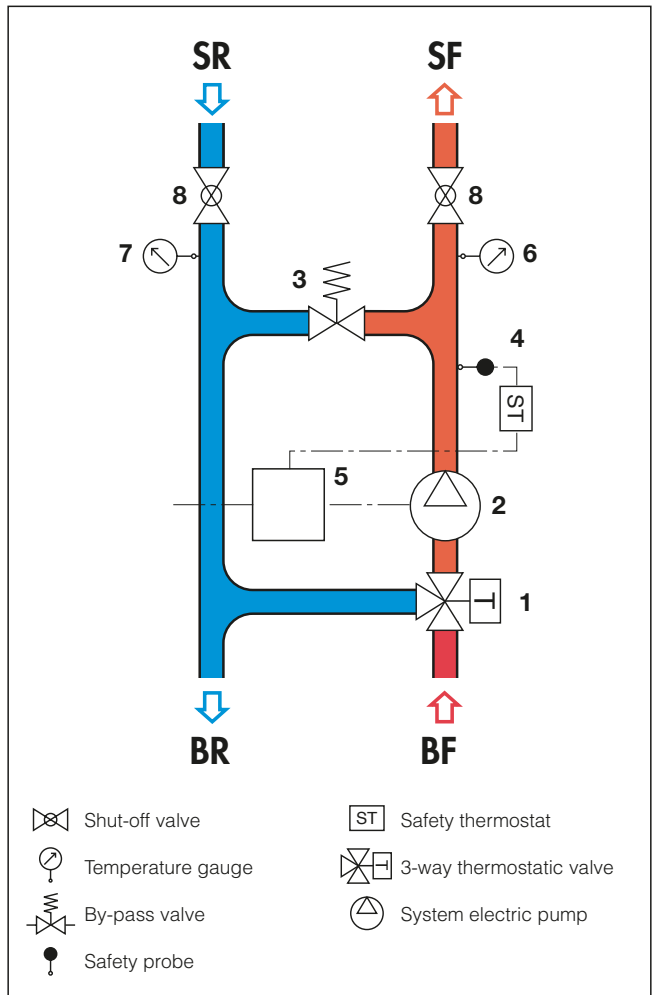
Code	A	B	C	D	E	F	G
163600	1"	95	90	77	460	320	140
163610	1"	95	90	77	460	320	140



Characteristic components

- 1 Three-way thermostatic valve with built-in temperature sensor
- 2 Three-speed UPS 25-60 pump
- 3 Differential by-pass valve
- 4 Safety thermostat
- 5 Wiring box
- 6 Flow temperature gauge
- 7 Return temperature gauge
- 8 Secondary circuit shut-off valves

Hydraulic diagram



- | | |
|-------------------|--------------------------|
| Shut-off valve | Safety thermostat |
| Temperature gauge | 3-way thermostatic valve |
| By-pass valve | System electric pump |
| Safety probe | |

