



RTL and RTL multifunctional box

RTL in-wall box with temperature limiter



The RTL in-wall boxes with temperature limiter are used for maximum limitation of the temperature of the heating surface, for instance for combined heating systems with radiator and floor heating.

■ Variants

- With hidden thermostatic RTL head (blind cover)
- With thermostatic RTL head at sight (cover with hole)

■ Technical features

- Max. operating pressure: 10 bar;
- Max. operating temperature: 120°C;
- Max. differential pressure: 0,1 MPa;
- The return limitation valve is a proportional controller, without any external power supply.
- The thermostatic head has a liquid/solid sensor that reacts depending on the working agent temperature.
- It is mostly used to protect the surface heating system against overheating.
- Temperature range 0 – 50°C.
- As an option, minimum and maximum temperature limitation.
- Pipe connection G3/4-EK
- Depth: 57 mm
- Colour: white (Chrome optionally available)

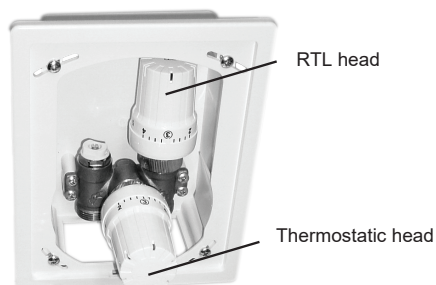
■ Temperature graduations

- 0 = 0°C
- 1 = 10°C
- 2 = 20°C
- 3 = 30°C
- 4 = 40°C
- 5 = 50°C

■ The component package

- In-wall plastic box, adjustable in depth
- Cover and mask, adjustable at angle
- Hooks – 2 pcs.
- Valve type RTL
- Thermostatic head type RTL
- Manual venting valve

RTL in-wall box multifunctional



The RTL in-wall multifunctional boxes are used for individual room temperature control and maximum limitation of the temperature of the heating surface (return temperature), for instance for combined heating systems with radiator and floor heating or for wall heating systems.

■ The component package

- In-wall plastic box, adjustable in depth
- Cover and mask, adjustable at angle
- Hooks – 2 pcs.
- Valve type RTL
- Thermostatic head type RTL
- Thermostatic valve with presetting facility
- Thermostatic head type THN, THZ or THE
- Manual venting valve

■ Temperature graduations

Room temperature	Return temperature
* = 6°C	0 = 0°C
1 = 10°C	1 = 10°C
2 = 16°C	2 = 20°C
2 – 3 = 18°C	3 = 30°C
3 = 20°C	4 = 40°C
3 - 4 = 24°C	5 = 50°C
5 = 28°C	

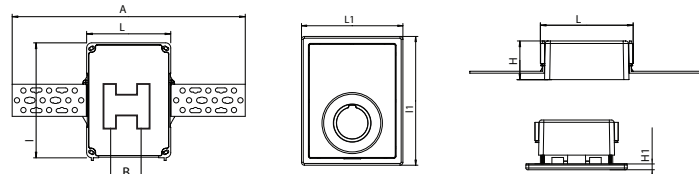


Technical features

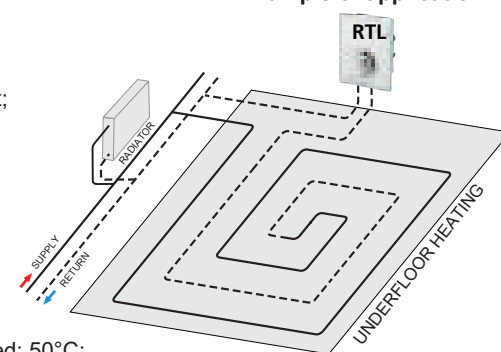
- Max. operating pressure: 10 bar;
- Max. operating temperature: 120°C;
- Max. differential pressure: 0,1 MPa;
- The device that controls the ambient temperature is composed of a thermostatic valve (with prestting facility) and a thermostatic head. The thermostatic head is a liquid sensor type that reacts to the room temperature changes. Room temperature adjustment is achieved by adjusting the heating surface temperature.
- The return limitation valve is a proportional controller, without any external power supply.
- The thermostatic head has a liquid/solid sensor that reacts depending on the working agent temperature.
The Return Temperature Limiter (RTL) stops the flow in the underfloor (or wall) heating pipes when the preset maximum admissible temperature is reached.
- Temperature range
 - 6 – 28°C (room temperature)
 - 20 – 50°C (return temperature).
- As an option, minimum and maximum temperature limitation.
- Pipe connection G3/4 - EK
- Depth: 57 mm
- Colour: white (Chrome optionally available)

Overall sizes (RTL and RTL Multifunctional)

[mm]							
L	I	A	B	H	H1	L1	I1
131	180	363	50	60	10	175	220



Example of application



Installation and use (RTL and RTL Multifunctional)

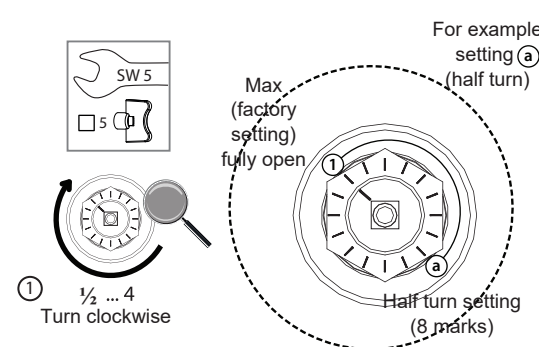
- The flow direction clearly marked on the RTL valve housing will be observed;
- The RTL box will be connected to the return pipe at the end of the floor heating circuit;
- Maximum surface 20m²
- Maximum pipe length 100m with a pipe with a maximum inside dimension of 12mm
- The box will be installed with the opening point of the cover down-wards.
- The thermostat should not be influenced by other heating sources, such as additional radiators and direct sunlight
- The flow is automatically controlled by the valves. The room temperature is set at the thermostatic handwheel. The return temperature is set at the RTL handwheel.
- The instructions of the screed manufacturer have to be observed.
- The maximum permissible screed temperature near the heating pipes must not exceed: 50°C; In case of ceramic tiles, the maximum surface temperature must not exceed 33-35°C. Also, a special attention has to be paid to the expansion joints between the tiles.
- During the installation, the lower edge of the box should be at least 30 cm above the finished floor. The thickness of tiles has to be observed as well.

Presetting (in the case of RTL Multifunctional box) is made on the valve of the thermostatic head.

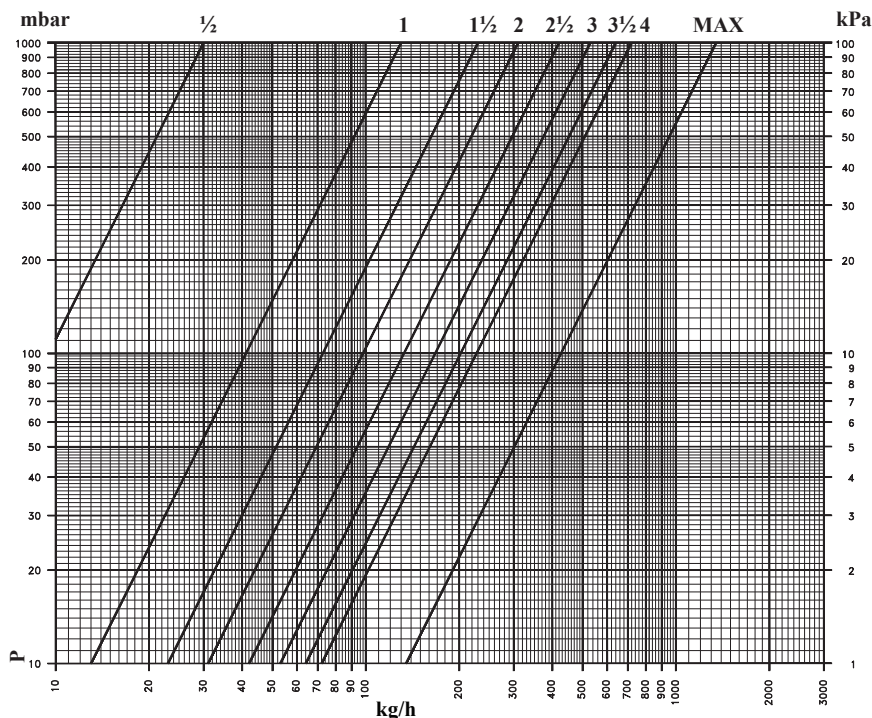
The valve can be preset with a common air-vent key (5 mm) by turning the adjusting screw. When delivered, the valve is adjusted to maximum flow rate (Max)

For presetting, please turn the adjusting screw clockwise (toward closing position) starting from Max. – see ①

Use half turns to set the flow rate following the table and diagram presented below. – see ②



RTL Box Multifunctional	Kv (m³/h)
Max	1.35
1/2 ①	0.72
1	0.64
1 1/2	0.53
2	0.42
2 1/2	0.31
3	0.23
3 1/2	0.13
4	0.03



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