T6101/T6102 series

Underfloor Heating Controllers
Control of Underfloor Heating Loops

APPLICATION

The underfloor heating sets are used to control underfloor heating loops with or without additional radiator.

The RTL-Set limits the return temperature of an underfloor heating loop in combined underfloor/radiator heating systems. The thermostat is set between 20 and 50 °C (68 and 122 °F) depending on the desired return temperature. It is available with visible or concealed thermostat. The RTL-Set with the concealed thermostat is set only once whereas the setting of the visible thermostat can easily be changed anytime.

The Room Control-Set controls the flow of the medium through the underfloor heating loop depending on the ambient room temperature.

As the return temperature is controlled, the system designer has to make sure that the supply temperature is suitable for the floor design of the underfloor heating system. A too high supply temperature may result in damage to the floor and to the floor construction.

FEATURES

- Easy readability of set temperature from every angle
- Equipped with easy to use range stoppers
- Valve inserts follow AT-Concept

SPECIFICATIONS

Medium:	Heating water, quality to VDI 2035
pH-value:	8 - 9.5
Set point range:	RTL-Set
	approx. 20 - 50 °C (68 - 122 °F)
	Room Control-Set
	approx. 6 - 28 °C (43 - 82 °F)
Max. operating pressure:	10 bar (145 psi)
Max. differential pressure:	1 bar (14.5 psi)
k_{vs}(cv)-values:	RTL-Set
	with visible thermostat - 1.0
	with concealed thermostat - 1.7
	Room Control-Set - 1.0
Spec. stroke:	0.22 mm/K

DESIGN

The sets constist of:

- Underwall case with lid
- Protective render lid for use during building phase
- Thera-RTL or Thera-3 thermostat
- Thermostatic valve PN10, DN15, double or horizontal angle body, with external threads to ISO 228 (Eurocone). Connections for copper, plastic or composite tube - see 'Accessories'
- Air vent

MATERIALS

- Handwheel and socket made of plastic, white to RAL9016
- Lid made of sheet steel, white to RAL9016
- Underwall box and render lid made of dark grey plastic
- Valve housing made of nickel-plated hot-forged brass
- Valve insert made of brass with EPDM O-rings and seat sealing
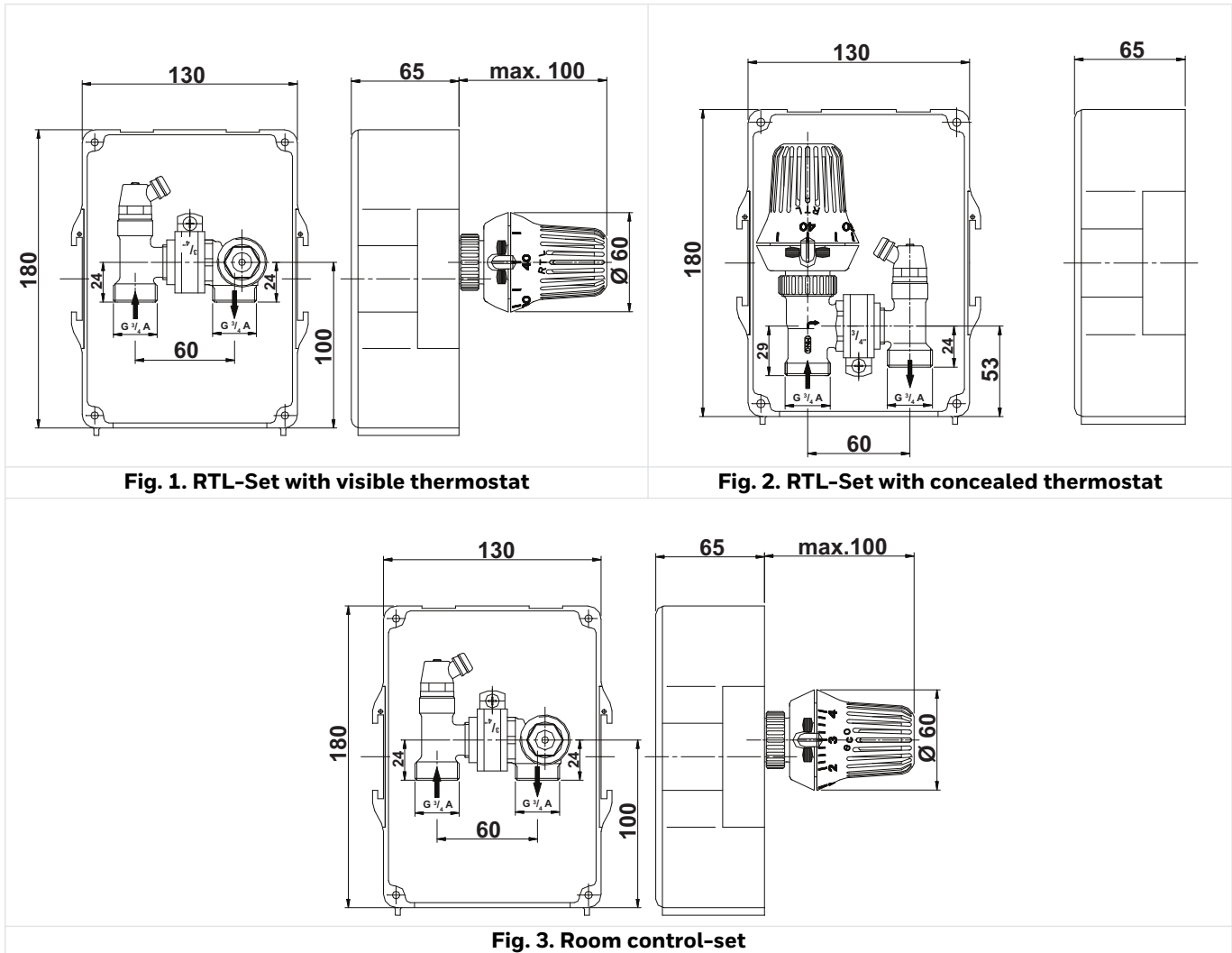- Air vent made of brass

FUNCTION

Return temperature limiter are installed in the return of a radiator or underfloor heating loop. When the return flow temperature rises the valve closes and the flow through the heating loop is throttled. When the return flow temperature decreases the valve opens and the flow increases.

The function of the Room Control-Set is identical except for the control mode. The thermostat senses the ambient room temperature and controls the flow of the medium through the heating loop accordingly.

PLEASE NOTE:

• To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035

• Additives have to be suitable for EPDM sealings

• System has to be flushed thoroughly before initial operation with all valves fully open

• Any complaints or costs resulting from non-compliance with above rules will not be accepted by Honeywell Home

• Please contact us if you should have any special requirements or needs

DIMENSIONS AND ORDERING INFORMATION

Fig. 1. RTL–Set with visible thermostat

Fig. 2. RTL–Set with concealed thermostat

Fig. 3. Room control–set

Note: All dimensions in mm unless stated otherwise.

Tab. 1 Available versions and OS-Nos (OS=Ordering Specification)

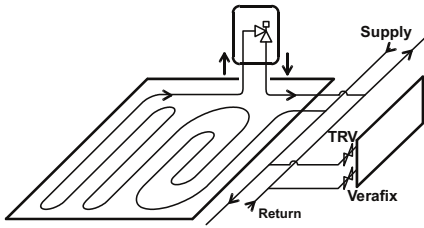| Type	k_{vs} $(_{cv})$-value	OS-No.
RTL-Set with visible thermostat	1.0	T6102RUB15
RTL-Set with concealed thermostat	1.7	T6102AUB15
Room Control-Set	1.0	T6101RUB15

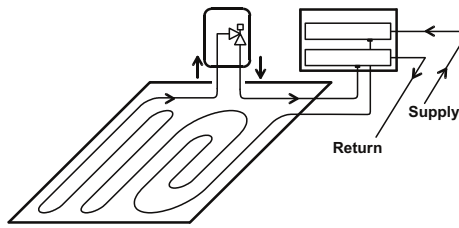## INSTALLATION EXAMPLE

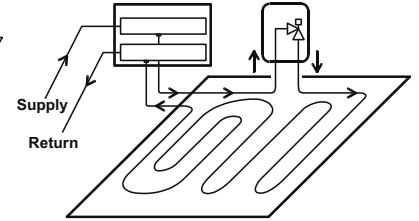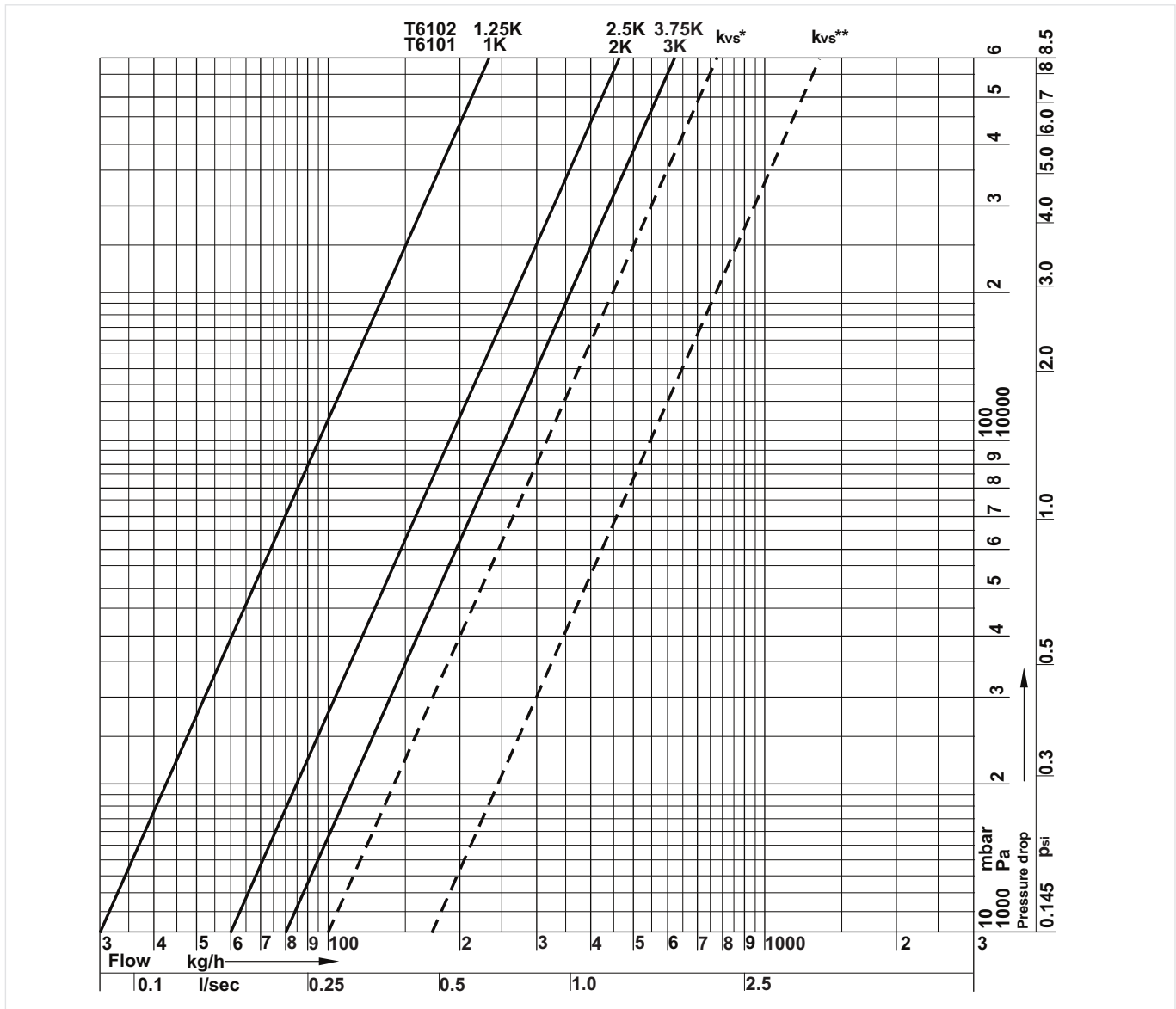**Fig. 4. RTL–Set**   **Fig. 5. Room Control–Set (return)**   **Fig. 6. Room Control–Set (supply)**

ACCESSORIES

	Description		Dimension	Part No.
	VA7200	**Compression fitting for copper and soft steel pipe**		
		Consisting of compression nut, compression ring and support insert; for ports with $^3/_4$" external thread; 2 pcs per pack		
		$^3/_4$" (DN20)	10 mm	VA7200A010
			12 mm	VA7200A012
			14 mm	VA7200A014
			15 mm	VA7200A015
			16 mm	VA7200A016
			18 mm	VA7200A018
	OT112M	**Compression fitting for PE-X pipe**		
		Consisting of compression nut, ring and support insert; for ports with $^3/_4$" external thread; 2 pcs per pack		
		all sizes	14 x 2 mm	OT112M-3/4D
			16 x 2 mm	OT112M-3/4F
			16 x 2.2 mm	OT112M-3/4F2
			17 x 2 mm	OT112M-3/4G
			18 x 2 mm	OT112M-3/4H
	OT113M	**Design compression fitting for multiskin pipe**		
		Consisting of compression nut, ring and support insert; for ports with $^3/_4$" external thread; 2 pcs per pack		
		all sizes	14 x 2 mm	OT113M-3/4D
			16 x 2 mm	OT113M-3/4F
			18 x 2 mm	OT113M-3/4H

FLOW DIAGRAM

Tab. 2 Flow values

P-Band T6102	P-Band T6101	k_{vs} ($_{cv}$)-value
1.25 K	1.0 K	0.3
2.5 K	2.0 K	0.6
3.75 K	3.0 K	0.8
open = k_{vs}		1.0*
		1.7**

Note:　* kvs-value of RTL-Set with visible thermostat
　　　　**kvs-value of RTL-Set with concealed thermostat (T6102 only)

For more information

homecomfort.resideo.com/europe

Honeywell Home