

RTL

Return temperature limiter



To be precise.



Description



The HEIMEIER return temperature limiter RTL is an automatic thermostatic controller. The temperature of the flowing medium is transferred to the sensor via conductivity. This keeps the specified value constant within a proportional band necessary for control. The valve only opens when the set limiting value has not been reached.

Sensor element with concealed upper and lower temperature range limiting or blocking of the settings using stop clips. Thermostat filled with an expansible medium.

Overstroke safety.

White cover with printed scale.

Valve body made of nickel-plated gunmetal (angle/straight). With stainless spindle and double O-ring seal.

Outer O-ring can be replaced without draining the system.

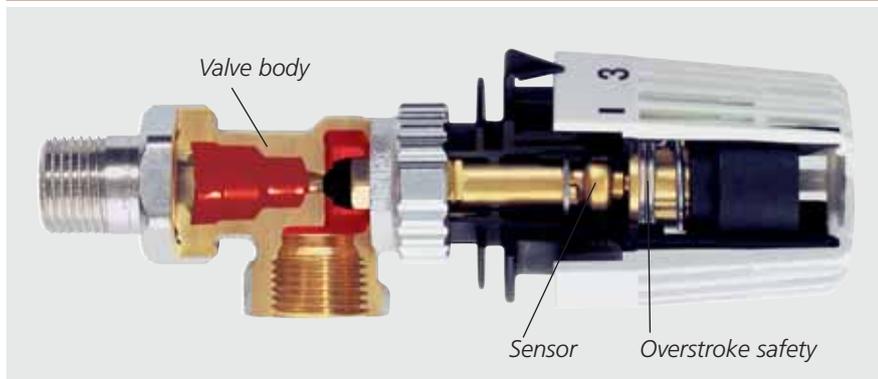
Potential connections using the model with inside threading for threaded pipe or with compression fittings for copper, precision steel, or multi-layer pipe. For the model with outside thread, potential connection with additional compression fittings for plastic pipe.

For the RTL return temperature limiter use only the accompanying, labeled HEIMEIER compression fittings (e.g. 15 THE).

Attention: The RTL return temperature limiter is constructed from a special valve body and sensor element. Thermostatic valve bodies cannot be used.

Construction

RTL – return temperature limiter



- Body made of corrosion-resistant gunmetal
- Stainless spindle with double O-ring seal
- Outer O-ring can be replaced while under pressure
- Concealed limiting or blocking using stop clips

Settings

Number on dial	1	2	3	4	5
Return temperature t_R [°C]	10	20	30	40	50
Return temperature t_R [°F]	50	68	86	104	122

Application

Among other things, the HEIMEIER return temperature limiter RTL is used to limit the return temperatures of radiators or combined floor/radiator systems to equalize the temperature of smaller floor surfaces (up to ca. 15 m²). The return temperature is constantly controlled.

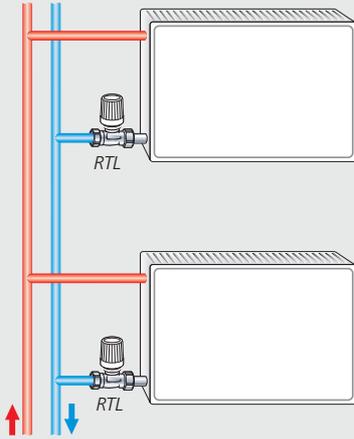
With floor heating systems, it is important to note that the flow temperature controlled by the system is appropriate for the particular system installed.

Please make sure the setting value is not below the ambient temperature of the return temperature limiter, as this would

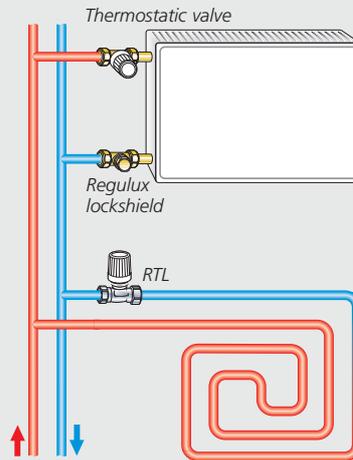
then no longer open (carefully choose location of installation). This may also be the case if the return temperature limiter is influenced by transferred heat, e.g. by mounting a floor heating circuit distributor directly on the return collector.

Sample applications

Return temperature limiting on radiators



Floor heating



Note

The composition of the heat transfer medium should be one which avoids damage or the accumulation of stones in hot water heating systems, in accordance with VDI guide line 2035. For industrial and long-distance energy systems, see applicable codes VdTÜV and 1466/AGFW 5/15.

Heat transfer media containing mineral oils or lubricants containing mineral oil can have seriously negative effects on the source apparatus and usually lead to the disintegration of EPDM seals.

When using nitrite-free frost and corrosion resistance solutions with an ethylene glycol base, pay close attention to the details outlined in the manufacturers' documentation, particularly details concerning concentration and specific additives.

Article numbers

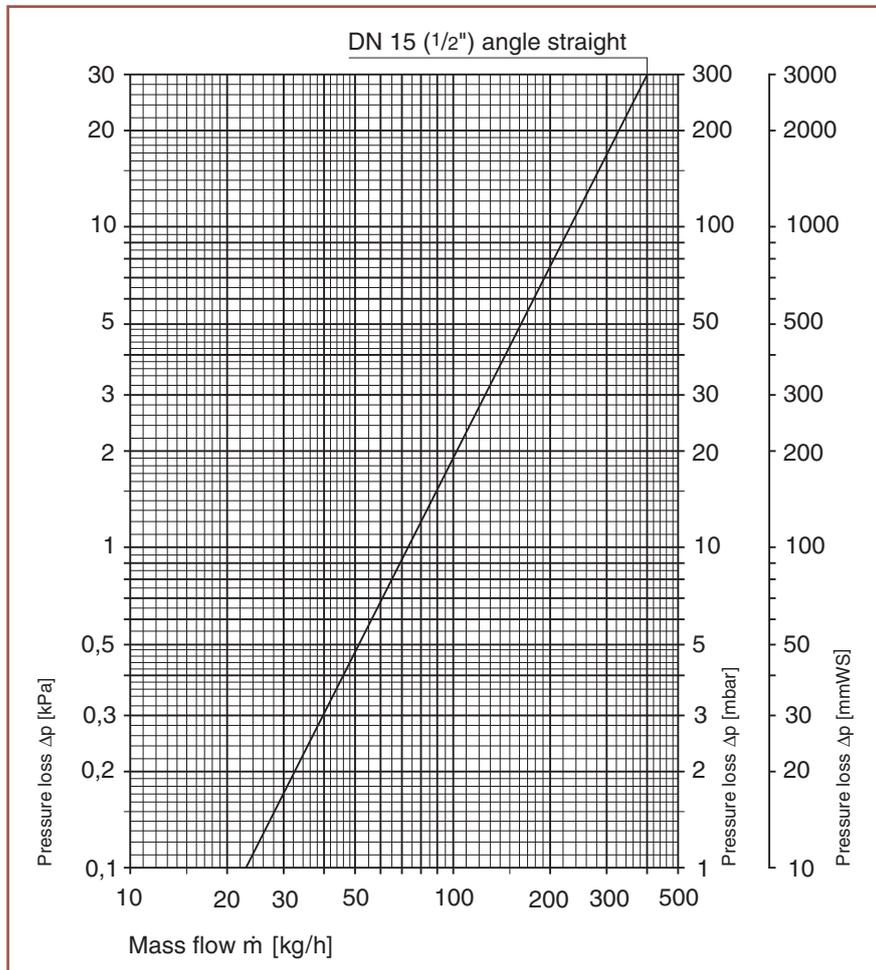
Model	Connection	Art. no.	Model	Connection	Art. no.
<p>Angle</p>	R 1/2	9173-02.800	<p>Straight</p>	R 1/2	9174-02.800
<p>Angle</p>	G 3/4	9153-02.800	<p>Straight</p>	G 3/4	9154-02.800

Dimensions

NW	D	b	d ₁	d ₂	l ₁ ±2	l ₂ ±2	l ₃ ±1	l ₄ ±1.5	l ₅ ±1.5	l ₆ min.	α	Spanner size		H
												S ₁	S ₂	
15	R _p 1/2	13.2	G 3/4	R 1/2	66	95	31	59	28	7	70°±10°	27	30	107
15	G 3/4	-	G 3/4	R 1/2	62	91	31	58	29	7	70°±10°	-	30	107

Technical data

Diagram



Regulator with valve body	k_v value [m ³ /h]	Permissible operating temperature TB [°C]	Permissible operating pressure PB [bar]	Permissible pressure differential at which the return temperature limiter still closes Δp [bar]
DN 15 (1/2") angle, straight	0.73	120	10	4

Accessories

RTL thermostatic head

As spare part for return temperature limiter RTL.
white RAL 9016 Art. no. **6500-00.500**
chrome Art. no. **6500-00.501**

Insert for RTL

Since 1996.
With 25 mm brass sleeve. Art. no. **2004-02.300**

Special insert for RTL

Since 1996, with 25 mm brass sleeve,
for reversed flow direction. Art. no. **2004-24.300**

Spindle extension for RTL

Brass nickel-plated.
Length: 20 mm. Art. no. **9153-20.700**

Accessories

Compression fitting

for copper or precision steel pipe,
metal-to-metal joint.
For a pipe wall thickness of 0.8–1 mm, use
support sleeves. Follow the specifications of
the pipe manufacturer.

Connection female thread Rp 1/2		Connection male thread G 3/4	
Art. no.	Ø pipe	Art. no.	Ø pipe
2202-10.351	10	3831-10.351	10
2202-12.351	12	3831-12.351	12
2201-14.351	14	3831-14.351	14
2201-15.351	15	3831-15.351	15
2201-16.351	16	3831-16.351	16
		3831-18.351	18

Support sleeve

for copper or precision steel pipe
with a wall thickness of 1 mm.

Art. no.	Ø pipe	Length
1300-10.170	10	18.5
1300-12.170	12	25.0
1300-14.170	14	25.0
1300-15.170	15	26.0
1300-16.170	16	26.3
1300-18.170	18	26.8

Compression fitting

for copper or precision steel pipe.
Soft sealed.

Male thread connection G 3/4

Art. no.	Ø pipe
1313-12.351	12
1313-14.351	14
1313-15.351	15
1313-16.351	16
1313-18.351	18

Compression fitting

for plastic pipe

Connection outside thread G 3/4

Art. no.	Ø pipe
1311-12.351	12 x 2
1311-14.351	14 x 2
1311-16.351	16 x 2
1311-17.351	17 x 2
1311-18.351	18 x 2
1312-18.351	18 x 2.5
1311-20.351	20 x 2
1311-21.351	21 x 2.5

Compression fitting

for multi-layer pipe, nickel-plated

Connection female thread Rp 1/2		Connection male thread G 3/4	
Art. no.	Ø pipe	Art. no.	Ø pipe
1335-14.351	14 x 2	1331-14.351	14 x 2
1335-16.351	16 x 2	1331-16.351	16 x 2
		1331-18.351	18 x 2



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