



# T3019 Thera-6

## Radiator Thermostats

Compact thermostatic head with closed design and high energy efficiency

### APPLICATION

Thermostatic radiator heads are self-actuating controllers which regulate the flow of hot water through thermostatic radiator valves to continuously control the room temperature to the set-point selected on the head.

The Thera-6 is a head with compact size, sleek design, energy efficiency and durability, which make it an ideal choice for residential heating applications.

### APPROVALS

- EN 215
- Keymark
- TELL A

### SPECIAL FEATURES

- Premium quality, liquid-filled, German-made sensor with high setting force and minimum hysteresis
- Closed handle preventing dust accumulation
- Handle made of non-yellowing ASA plastic for permanent good appearance
- Internal structural ring from high-strength plastic for long durability
- Highest-class Control Accuracy per amended EN215
- TELL „I -class” energy efficiency certified according TELL labeling scheme
- Compact size to fit most installations even with limited space available
- Modern, stylish, easy to clean design
- Easy to operate with ergonomic torque to turn the head to desired setting
- Temperature range limitation by accessory range locks
- Frost protection setting
- A high-stroke variant enabling higher 2K p-band flows and proportional regulation with small p-band
- Standard M30 x 1.5 connection to the valve body according to EN 215
- Variants with connection for Danfoss RA valves
- Variants with connection for Herz M28 valves
- Variants with remote sensor on a 2m capillary
- A theft protection ring available as accessory
- Compatible with all MNG, Braukmann, Honeywell and Honeywell Home thermostatic valves with M30x1,5 connection produced by Resideo and its predecessors since 1974

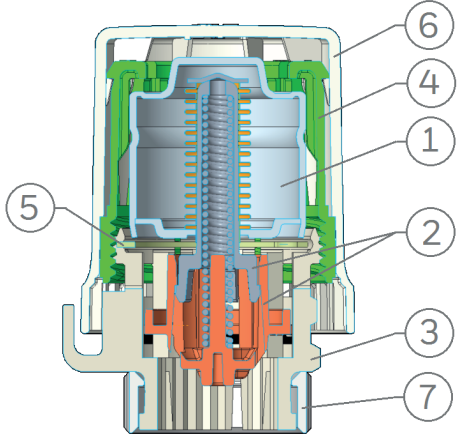


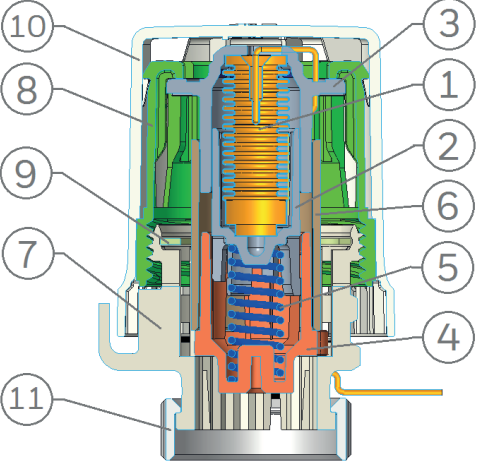
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### TECHNICAL DATA

Connection to valve body	
Standard:	M30 x 1.5 thread
Danfoss:	Snap connection RA valves
Herz:	M28 x 1.5 thread
Temperature set-point range	
0 - * - 1 ... 5	1 ... 28 °C
* - 1 ... 5	6 ... 28 °C
0 - * - 1 ... 4	0 ... 22 °C
2 ... 5	16 ... 27 °C
T3019HF:	7...26 °C
Operating characteristics	
Specific stroke – standard heads:	0.22 mm/K
Specific stroke – T3019HF high-flow head:	0.35 mm/K
Closing force:	90 N
Min. operating ambient temperature:	40 °C (including when thermostat is set to 0)

## CONSTRUCTION

Heads with built-in sensor	Components	Materials
	<b>1</b> Thermal expansion element	Steel, copper bellows, filled with ethyl acetate
	<b>2</b> Over-temperature compensating assembly with spring	PA6GF30 and spring steel
	<b>3</b> Socket	PA6GF30, white RAL 9016
	<b>4</b> Structural cage	PA6GF30
	<b>5</b> Spring ring	Spring steel
	<b>6</b> Handle	ABS, white RAL 9016
	<b>7</b> Coupling nut	Brass, nickel plated

Heads with remote sensor	Components	Materials
	<b>1</b> Thermal expansion element with sensor bulb and capillary	Copper bellows, stainless steel capillary and bulb (bulb nickel plated), filled with ethyl acetate
	<b>2</b> Bellows casing with snaps	PA66 GF33
	<b>3</b> Bellows holder	POM
	<b>4</b> Stem guide	PA66 GF33
	<b>5</b> Over-temperature compensating spring	Spring steel
	<b>6</b> Alignment sleeve	PC
	<b>7</b> Socket	PA6GF30, white RAL 9016
	<b>8</b> Structural cage	PA6GF30
	<b>9</b> Scale ring	Spring steel
	<b>10</b> Handle	ABS, white RAL 9016
	<b>11</b> Coupling nut	Brass, nickel plated
	<b>12</b> Wall mounting bracket for bulb incl. attachment hardware (not shown)	ABS, white RAL 9016

## METHOD OF OPERATION

The thermal expansion element responds to room temperature by expanding or contracting proportionally.

The movement is transmitted onto the stem of the thermostatic valve, on which the head is mounted.

The head thus controls the amount of water which flows into the heat exchanger to just the flow required to maintain the room temperature set on the thermostat.

The temperature setpoint can be selected by rotating the handle, which changes the position of a backstop for the thermal expansion element.

In case of high room temperature and closed head, the expansion of the sensor is absorbed by the overstroke protection spring, protecting the valve and the sensor from an excessive force

## TRANSPORTATION AND STORAGE

Keep parts in their original packaging and unpack them shortly before use.

The following parameters apply during transportation and storage:

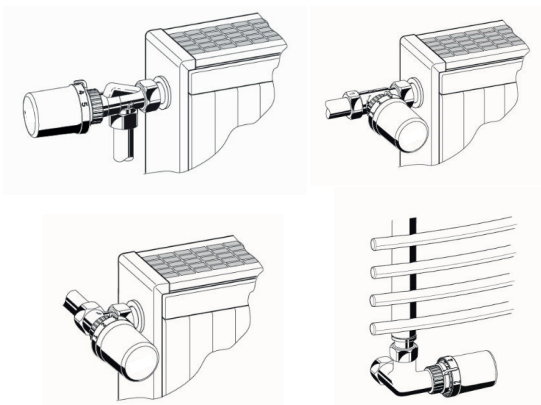
Parameter	Value
Min. ambient temperature:	-20 °C
Max. ambient temperature:	50 °C
Min. ambient relative humidity:	25 %
Max. ambient relative humidity:	85 %

## INSTALLATION GUIDELINES

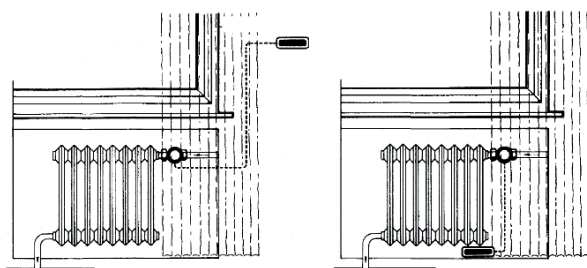
### Setup requirements

- Mount the thermostat to the radiator valve with a torque of about 10 Nm
- For heads with built-in sensor, horizontal orientation is recommended. Heads with built-in sensor should not be covered by curtains, hidden below a window sill or in a tight niche, which would prevent them from sensing the temperature in the room they should control
- The Thera-6 heads with standard connection are compatible with all MNG, Honeywell and Honeywell Home thermostatic valves, as well as with Braukmann V100 thermostatic valves with M30x1,5 connection
- When mounting the DA-type head onto a Danfoss RA valve, pull the coupling nut towards the head, snap the socket of the head onto the groove on the valve, and carefully thread the nut onto the thread of the socket. Then tighten the nut
- Heads with standard connection can be mounted on thermostatic valves with M30x1.5 threaded connection from some other remanufacturers, including Heimeier, Oventrop or Rossweiner. However, because the closing dimension (valve stem height when valve is closed) varies slightly among the manufacturers, the temperature to which the head will regulate may be shifted by a few degrees. The Thera-6 heads have an interface at another depth for the Braukmann V100 valves with  $\varnothing 3\text{mm}$  axis. Therefore, valves of other manufacturers with axis diameter less than  $\varnothing 4\text{mm}$  are not suitable for use with the Thera-6, as the valve axis will sink into the second interface depth of the head.
- When installing heads with remote sensors, handle the capillary with care to prevent damage to its soldered connections, and avoid sharp bends of the capillary which would obstruct free movement of the expansion liquid.

### Installation Example3



### Heads with remote sensor



## TECHNICAL CHARACTERISTICS

### Heads with built-in sensor

EN 215 Parameter	Value
Hysteresis C	0,4 K
Influence of differential pressure D:	0,22 K
Influence of heating medium W:	0,48 K
Response time Z:	30 min
Control Accuracy CA:	0,2 K

### T3019HF Heads with high-stroke built-in sensor

EN 215 Parameter	Value
Hysteresis C	0,6 K
Influence of differential pressure D:	0,40 K
Influence of heating medium W:	0,65 K
Response time Z:	30 min
Control Accuracy CA:	0,6 K

### Heads with remote sensor

EN 215 Parameter	Value
Hysteresis C	0,4 K
Influence of differential pressure D:	0,45 K
Influence of heating medium W:	0,4 K
Response time Z:	8 min
Control Accuracy CA:	0,2 K

## TEMPERATURE SET POINTS

All set points are given with consideration of 2K p-band regulation, i.e. head will close the valve completely at a temperature 2K higher than the set point.

Heads with scale 0 - * - 1 ... 5							
Set point	0	*	1	2	3	4	5
°C	1	6	14	18	21	24	28

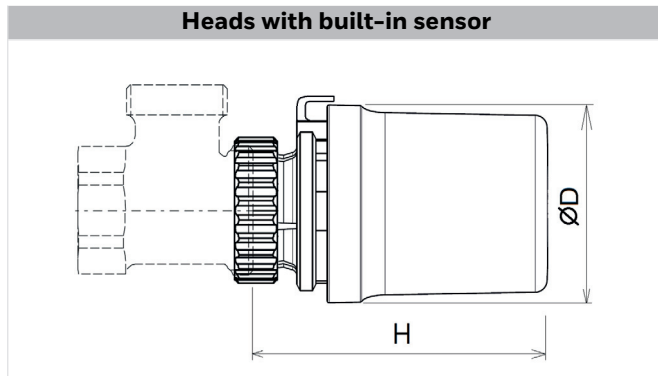
Heads with scale * - 1 ... 5							
Set point		*	1	2	3	4	5
°C		6	14	18	21	24	28

Heads with scale 2 ... 5							
Set point				2	3	4	5
°C				16	20	23	27

Heads with scale 0 - * - 1 ... 4							
Set point	0	*	1	2	3	4	
°C	0	5	12	16	20	22	

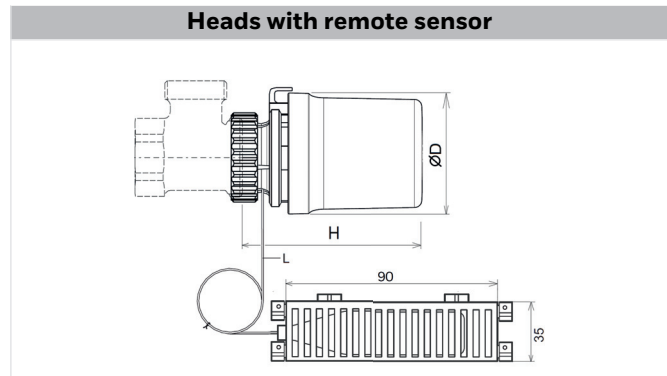
High-stroke head T3019HF							
Set point	*	1	2	3	4	5	
°C	7	14	17	20	23	26	

## DIMENSIONS



Parameter		Values
Dimensions:	ØD	49.5
	H	78 (fully open)

Note: All dimensions in mm unless stated otherwise.



Parameter		Values
Dimensions:	ØD	49.5
	H	78 (fully open)
	L	2.0 m

## ORDERING INFORMATION




The following tables contain all the information you need to make an order of an item of your choice. When ordering, please always state the type, the ordering or the part number.

### Options

Sensor	Specific stroke	Set point range	Connection	Closing dimension *)	EN 215 certified	Ordering Code
Built-in	0.22 mm/K	6-28°C	M30 x 1.5	11.5 mm	•	T3019
Built-in	0.22 mm/K	1-28°C	M30 x 1.5	11.5 mm	•	T3019W0
Built-in	0.22 mm/K	16-27°C	M30 x 1.5	11.5 mm	•	T3019_2-5
Built-in	0.22 mm/K	0-22°C	M30 x 1.5	11.5 mm	•	T3019_0-4
Remote	0.22 mm/K	6-28°C	M30 x 1.5	11.5 mm	•	T301920
Remote	0.22 mm/K	1-28°C	M30 x 1.5	11.5 mm	•	T301920W0
Built-in	0.22 mm/K	6-28°C	Danfoss RA	RA		T3019DA
Built-in	0.22 mm/K	1-28°C	Danfoss RA	RA		T3019DAW0
Built-in	0.22 mm/K	16-27°C	Danfoss RA	RA		T3019DA_2-5
Built-in	0.22 mm/K	6-28°C	Herz M28 x 1.5	9.5 mm		T3019HZ
Built-in	0.22 mm/K	1-28°C	Herz M28 x 1.5	9.5 mm		T3019HZW0
Built-in	0.35 mm/K	7-26°C	M30 x 1.5	11.5 mm	•	T3019HF

\*) Closing dimension is the distance from the bottom of the socket to the end of the valve stem when the valve is closed, i.e. when the room temperature is 2K higher than the set point

**Accessories**

	Colour	Dimension	Part No.
	<b>VA8210</b>	<b>Tool for assembly of radiator thermostats</b>	
			VA8210A001
	<b>TA3000</b>	<b>Range limiter</b>	
		for Thera-6 and Thera-4white (RAL9016), 20 pieces	TA3000C019
	<b>TA6900A</b>	<b>Theft - protection ring</b>	
		white (RAL9016)	TA6900A001

**For more information**

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