

Thermostatic head K



Thermostatic heads
with built-in sensor and remote
sensor

*Engineering
GREAT Solutions*

Thermostatic head K

The thermostatic heads K are used to control the temperature of individual rooms using, for example, heaters, convectors, and radiators. The thermostatic head K range not only provides high-precision control it also is designed for exceptional ease of use. The models with remote sensor enables the installation of the thermostatic head covered by curtains, radiator facings, or other obstructions, or mounted vertically or in tight niches.



Key features

- > **Liquid-filled thermostat with high pressure power and precision control**
- > **With 2 clips for marking, limiting or blocking**
- > **Symbols for basic setting and nighttime set back**
- > **Brief data including the most important settings**
- > **Rotation direction indicator**
- > **Markings designed for the visually impaired**

Technical description

Application:

Heating systems

Functions:

Room temperature control.

Frost protection.

Markings indicate upper and lower temperature range; two energy saving clips can be used to limit settings.

Temperature range is limited on both ends and can be blocked using covered stop clips.

Control behavior:

Proportional controller without auxiliary energy. Liquid-filled thermostat. High pressure power, lowest hysteresis, optimal closing time.

Stable control behavior even in the case of small calculated p-band variation (<1K).

Nominal temperature range:

See each product

Temperature:

Max. sensor temperature: 50°C (122°F)

Specific extension:

0,22 mm/K,

Valve stroke limiter

Water temperature influence:

With built-in sensor: 0.3 K

With remote sensor: 0.3 K

Differential pressure influence:

With built-in sensor: 0.2 K

With remote sensor: 0.3 K

Closing time:

With integral sensor 19 min

With remote sensor:

Horizontally fitted sensor 12 min

Vertically fitted sensor 15 min

Hysteresis:

With built-in sensor: 0.15 K

With remote sensor: 0.2 K

Material:

ABS, PA6.6GF30, brass, steel,
Liquid-filled thermostat.

Colour:

White RAL 9016

Marking:

Heimeier and KEYMARK symbol.

Setting numbers.

Symbols for basic setting and nighttime reduction.

Brief data including the most important settings.

Setting indicators on the face of the head and markings designed for the visually impaired.

Rotation direction indicator.

Standard:

KEYMARK certified and tested according to EN 215. See also leaflet "Thermostatic Heads - General".



Connection:

Designed to be mounted on all IMI Heimeier thermostatic valve bodies and radiators with integrated valves which have an M30x1.5 thermostatic insert.

Thermostatic Efficiency Label TELL:

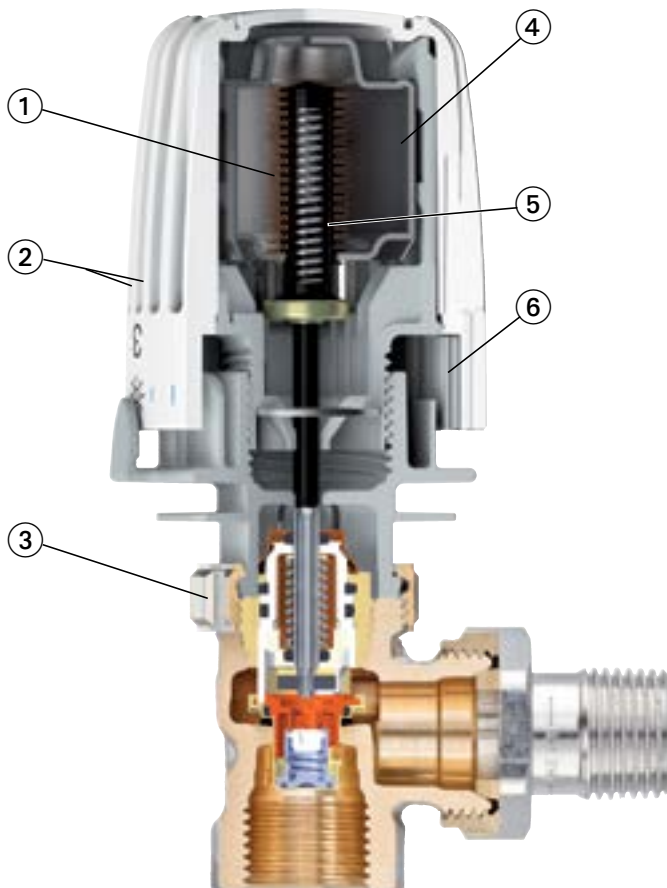


Information: www.tell-online.eu

A Label of Efficient Valves
European Valve Manufacturers Association

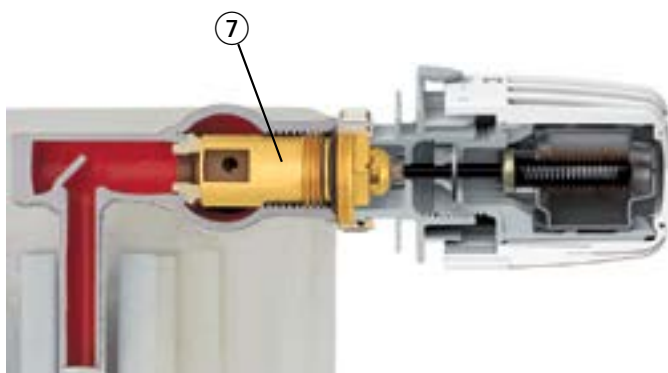
Construction

e. g. Thermolux K with thermostatic valve body
Eclipse with automatic flow limitation



1. Corrugated pipe
2. Markings designed for the visually impaired
3. IMI Heimeier connection technology (locking ring M30 x 1.5)
4. Liquid-filled thermostat with high pressure power and precision control
5. Safety spring
6. Hidden stops for variable limiting and blocking

e. g. Thermolux K with thermostatic insert for
radiators with integrated valve



7. Thermostatic insert for radiators with integrated valve

Function

In terms of controls, thermostatic heads are seen as continuous proportional controllers (P controllers) that require no auxiliary energy. They do not need an electrical connection or other source of energy. Changes in room air temperature are proportional to changes in the valve stroke.

If the temperature of the air in the room increases due to sunshine, for example, the liquid in the temperature sensor expands and affects the corrugated pipe. This chokes the water supply to the radiator via the valve spindle. If the temperature in the room decreases, the opposite process occurs. The change in valve stroke caused by a change in temperature can be quantified as 0.22 mm per K room temperature change.

Application

IMI Heimeier thermostatic heads are used to control the temperature of individual rooms using, for example, heaters, convectors, and radiators.

They are designed to be mounted on all IMI Heimeier thermostatic valve bodies and on radiators with integrated valves which have an M 30 x 1.5 connecting thread on the thermostatic insert. Adapters and models with direct connections enable mounting onto thermostatic valve bodies from other manufacturers.

The thermostatic heads use the energy of internal and external

heat sources including solar heat, the heat radiated from people and electrical devices, and other sources, in order to keep the room air temperature constant. This helps to avoid wasting energy.

Thermostatic heads with built-in sensors may not be covered by curtains, radiator facings, or other obstructions, or mounted vertically or in tight niches. Otherwise it will not be possible to precisely control the temperature.

In other cases, it may be necessary to install a remote sensor or remote dial (see leaflet "Thermostatic head F).

Notes on installation



Correct

Circulation of air around the thermostatic head is not hindered.



Correct

The remote sensor enables an unhindered reading of the air temperature in the room.



Underfloor convector
(Thermostatic head F)



Incorrect

The thermostatic head with built-in sensor may not be mounted vertically.



Incorrect

The thermostatic head with built-in sensor may not be covered by curtains.



Built-in cabinet
(Thermostatic head F)

Operation

Recommended room temperatures

The following temperature settings are recommended for the corresponding rooms based on heating with cost savings in mind:

Setting/Position	Room temperature approx.	Recommended for e.g.
5	28 °C	Swimming pool* *
4	24 °C	Bathroom
3	20 °C	Work room or children's bedroom Living or dining rooms (basic setting)
2	16 °C	Kitchen, corridor Hobby room, bedroom
1	12 °C	All rooms at night (nighttime reduction) Stairway, vestibule
MIN	6 °C**	Basement/cellar rooms (frost protection setting)



*) If higher temperatures are required for the swimming pool area, special thermostatic heads are available (15 °C (59 °F) to 35 °C (95 °F) setting range).

***) For thermostatic heads with an auxiliary zero position, the lowest setting is 0 °C (32 °F).

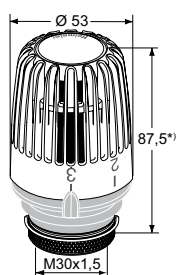
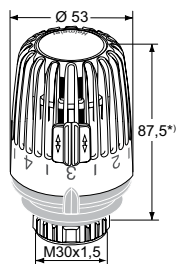
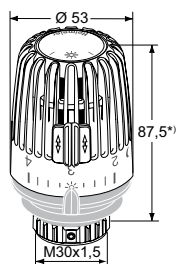
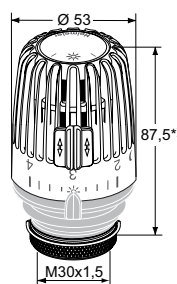
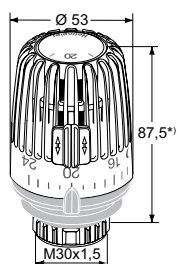
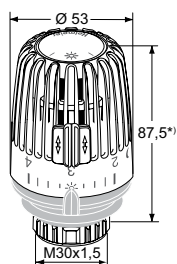
Setting the temperature

The desired room temperature can be selected by turning the thermostatic head (right = cooler, left = warmer). The arrow must be pointing to the appropriate setting position (number, bar, symbol).

All IMI Heimeier thermostatic heads are adjusted in a climatic chamber, free of external influences such as heat build-up, sunshine, etc. The number 3 corresponds to a temperature of approximately 20 °C (68 °F). The difference between each number is approximately 4 °C (7 °F), from bar to bar approx. 1 °C (2 °F).

We recommend setting at the number 3 which corresponds to the basic setting of about 20 °C (68 °F) room temperature. Settings above 4 should be avoided if a lower setting satisfies the comfort level, as a 1 °C (2 °F) higher room temperature corresponds to an increase in energy use of around 6 %.

Articles – Thermostatic head K with built-in sensor



Standard

Model	Setting range	EAN	Article No
Setting numbers 1 to 5 With two economy clips	6 °C – 28 °C	4024052248711	6000-00.500
Setting numbers 1 to 5			
Cap with graduation chrome	6 °C – 28 °C	4024052463923	6000-00.501
Cap with graduation RAL 7016, anthracite grey	6 °C – 28 °C	4024052464029	6000-00.503
Cap with graduation RAL 7035, light grey	6 °C – 28 °C	4024052464128	6000-00.504
Cap with graduation RAL 7037, dust grey	6 °C – 28 °C	4024052464227	6000-00.505
Cap with graduation RAL 9005, jet black	6 °C – 28 °C	4024052524020	6000-00.507
Setting scale with temperature values With two economy clips	6 °C – 28 °C	4024052561612	6000-00.600
With zero position (valve opens at approx. 0 °C or 32 °F)			
Setting numbers 1 to 5. With two economy clips	0 °C – 28 °C	4024052277117	7000-00.500

Public buildings model

Theft protection using security ring. Increased strength in accordance with former German army certification TL 4520-0014 Stress group 1 (for highest stress).
With two economy clips.

Model	Setting range	EAN	Article No
Standard	6 °C – 28 °C	4024052264711	6020-00.500
With zero position (valve opens at approx. 0 °C or 32 °F)	0 °C – 28 °C	4024052278213	7020-00.500

With theft protection using 2 screws

Setting numbers 1 to 5. With two economy clips.

Setting range	EAN	Article No
6 °C – 28 °C	4024052266517	6040-00.500

For public indoor swimming pools, medical spas

Setting numbers 1 to 5. With two economy clips.

Setting range	EAN	Article No
15 °C – 35 °C	4024052273515	6200-00.500

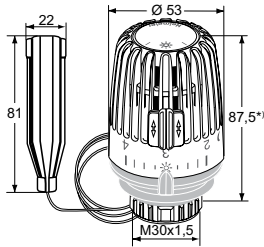
Public buildings model. Theft protection using security ring. Staggered/limited setting range.

Setting number based on setting range 1-3/1-4/1-5. Turn all the way left for highest setting. Increased strength in accordance with former German army certification TL 4520-0014.

Setting range	Article No
lowest setting 6°C (43 °F), upper setting in 1°C (2 °F) increments between 15°C (59 °F) to 25°C (77 °F).	6120-...500 *)

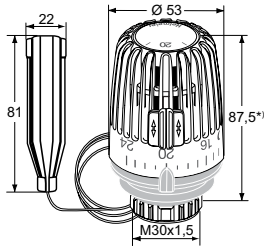
*) When ordering indicate upper value, e.g. enter at .. 20 for 20°C (68°F).

Articles – Thermostatic head K with remote sensor

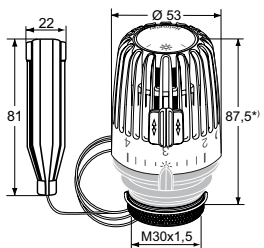


Standard

Model	Setting range	Capillary tube length [m]	EAN	Article No
Standard				
Setting numbers 1 to 5 With two economy clips.	6 °C – 27 °C	1,25	4024052259816	6001-00.500
		2,00	4024052260515	6002-00.500
		5,00	4024052262212	6005-00.500
		8,00	4024052263011	6008-00.500
		10,00	4024052263417	6010-00.500
Cap with graduation RAL 7024, graphit grey		2,00	4024052539055	6002-00.503
Cap with graduation RAL 9005, jet black		2,00	4024052556717	6002-00.507



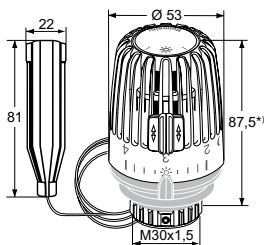
Standard	Setting scale with temperature values	Setting range	Capillary tube length [m]	EAN	Article No
	With two economy clips.	6 °C – 28 °C	1,25	4024052561711	6001-00.600
			2,00	4024052561810	6002-00.600
With zero position (valve opens at approx. 0 °C or 32 °F)					
Setting numbers 1 to 5.	0 °C – 28 °C	2,00	4024052277810	7002-00.500	
With two economy clips.					



Public buildings model

Theft protection using security ring. Setting numbers 1 to 5. With two economy clips.

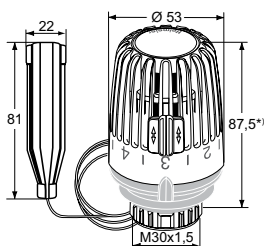
Setting range	Capillary tube length [m]	EAN	Article No
6 °C – 27 °C	2,00	4024052265114	6022-00.500



With theft protection using 2 screws

Setting numbers 1 to 5. With two economy clips.

Setting range	Capillary tube length [m]	EAN	Article No
6 °C – 27 °C	2,00	4024052267217	6042-00.500



For public indoor swimming pools, medical spas

Setting numbers 1 to 5. With two economy clips.

Setting range	Capillary tube length [m]	EAN	Article No
15 °C – 35 °C	2,00	4024052273911	6202-00.500

*) setting at 3

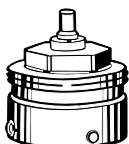
Accessories



Accessories

for thermostatic heads K, DX, D, WK.

EAN	Article No
4024052264810	6020-01.347



Connecting to products from other manufacturers

Adapters for mounting all IMI Heimeier thermostatic heads on thermostatic valve bodies from manufacturers listed here. Standard M 30 x 1.5 threaded connection. Refer also "Thermostatic head with direct connection to thermostatic valve bodies from other manufacturers."

*) can not be used on radiators with integrated valves

Manufacturer	EAN	Article No
Danfoss RA*)	4024052297016	9702-24.700 ¹⁾
Danfoss RAV	4024052300112	9800-24.700
Danfoss RAVL	4024052295913	9700-24.700
Vaillant (Ø ≈ 30 mm)	4024052296019	9700-27.700
TA (M28x1,5)	4024052336418	9701-28.700
Herz (M28x1,5)	4024052296316	9700-30.700
Markaryd (M28x1,5)	4024052296514	9700-41.700
Comap (M28x1,5)	4024052296712	9700-55.700
Giacomini	4024052429714	9700-33.700
Oventrop (M30x1,0)	4024052428519	9700-10.700
Ista	4024052511419	9700-36.700



Connection to radiators with integrated valves

Adapters for mounting IMI Heimeier thermostatic heads with an M 30 x 1.5 connection on thermostatic inserts for clamping connections. Standard M 30 x 1.5 threaded connection.

Exception: The thermostatic head WK is designed only for mounting on thermostatic inserts with an M 30 x 1.5 threaded connection.

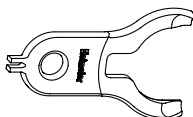
		EAN	Article No
Series 2	(20 x 1)	4024052297214	9703-24.700
Series 3	(23,5 x 1,5), since 10/98	4024052313518	9704-24.700



Spindle extension

for thermostatic valve bodies.

L	EAN	Article No
Brass nickel-plated		
20	4024052528813	2201-20.700
30	4024052528912	2201-30.700
Plastic, black		
15	4024052553310	2001-15.700
30	4024052165018	2002-30.700



Removal device

for graduation cap of thermostatic head K and VK and for dismounting stop clips.

EAN	Article No
4024052457410	6000-00.138



Hexagon key

for thermostatic head B and theft protection with 2 screws on thermostatic head K.

[mm]	EAN	Article No
2	4024052266616	6040-02.256

The groove on the face of the thermostatic heads K, VK, WK and F serves to take up "color clips" or specially printed "partner clips". **E-mail: Partnerclip.Montage@imi-hydronic.com**

E-Pro time adaptor for time-dependent room temperature control without time-consuming programming, see leaflet "E-Pro".