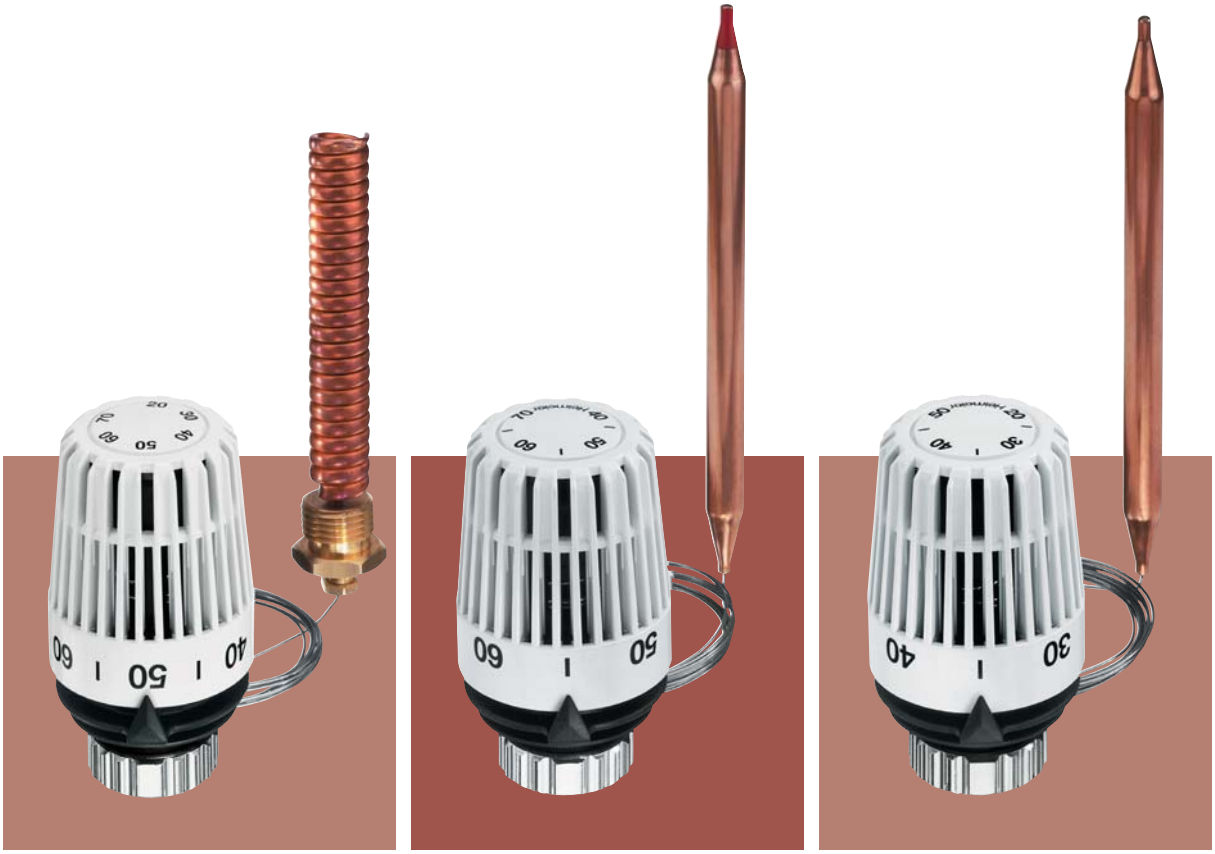
Thermostatic head K

with contact or immersion sensor



To be precise.

Heimeier

Thermostatic head K

with contact or immersion sensor

Description

HEIMEIER thermostatic head K with liquid-filled contact or immersion sensor (overall length 157 mm) or with spiral immersion sensor (R $^1/_2$ x 118 mm).

Capillary tube length – 2 m

Graduation cap white RAL 9016.

Suitable for installation on all HEIMEIER thermostatic valve bodies, three-way reversing valves and three-way mixing valves.

The thermostatic heads 6402/6602 can be used in conjunction with a heat conducting base as a contact sensor or with an immersion sleeve as an immersion sensor.

Thermostatic head 6672 as an immersion sensor without immersion sleeve Sealed to the capillary tube via clamping joints.

The setting range is 20° C to 50° C, 40° C to 70° C or 20° C to 70° C.

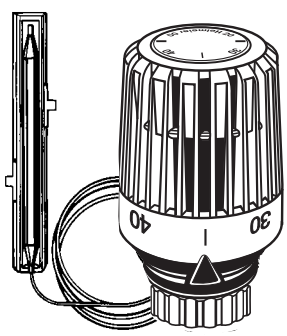
Maximum sensor temperature 60° C with thermostatic head 6402, 80° C with thermostatic head 6602 and 90° C with thermostatic head 6672.

Hidden stop clips can be used to conceal the upper and lower temperature restriction or to lock a setting.

Assembly

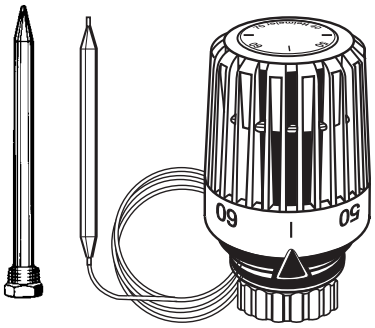
Thermostatic head K 6402

with heat conducting base
as a contact sensor



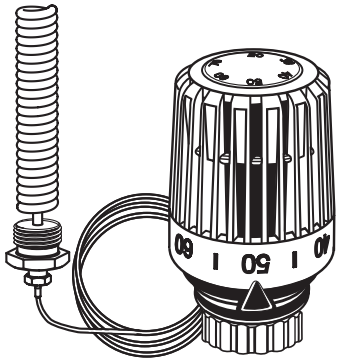
Thermostatic head K 6602

with immersion sleeve (accessory)
as an immersion sensor



Thermostatic head K 6672

with spiral immersion sensor



Function

Controls the set temperature without auxiliary power within a proportional band which is required by controlling technology.

If the temperature on the sensor increases, the thermostatic valve bodies are closed.

With HEIMEIER three-way reversing valves the straight pipe is closed and the angled outflow pipe is opened.

With HEIMEIER three-way mixing valves the angled pipe is closed and the straight outflow pipe is opened.

Setting

Art. no.	6402-00.500				6602-00.500				6672-00.500					
Figure	20	30	40	50	40	50	60	70	20	30	40	50	60	70
Setting value [°C]	20	30	40	50	40	50	60	70	20	30	40	50	60	70

Thermostatic head K

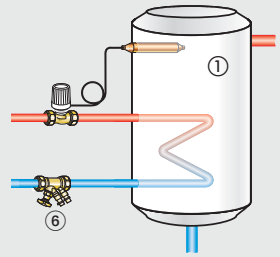
with contact or immersion sensor

Application

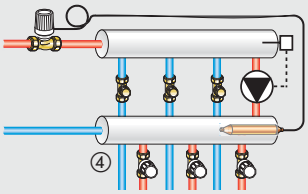
- Control of water temperature in hot water storages
- Continuous supply pipe control for combined floor/radiator heating systems
- Maximum restriction of the supply or return temperature
- Minimal restriction or boost of the return temperature
- Constant control of the supply temperature on the secondary side of the heat exchanger
- Control of the blow-out temperature from air heaters

A special feature of the thermostatic head K with spiral immersion sensor is its rapid reaction time (approx. 3 to 5 seconds) – a real benefit in rapid controlled systems, e.g. systems with plate heat exchangers.

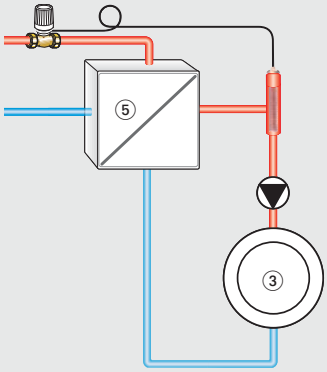
Sample applications



Flow rate control for constant water temperatures in hot water storages

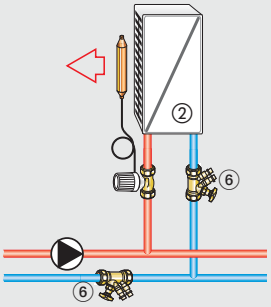


Mixing control for floor heating systems for integration into the heating circuit with a higher supply temperature

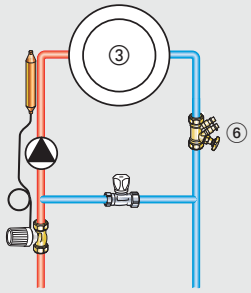


Flow rate control for constant supply temperature on the secondary side of heat exchangers via spiral immersion sensor

① Hot water storage
② Air heater
③ Heating circuit
④ Manifold station
⑤ Heat exchanger
⑥ TA STAD balancing valve

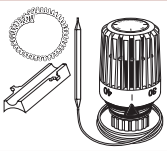
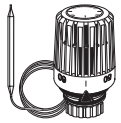
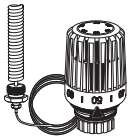


Flow rate control for constant blow-out temperatures for air heaters



Mixing control for constant supply temperatures of heat consumers

Article numbers

Illustration	Model	Setting range	Capillary tube length	Art. no.
	**Thermostatic head K** with heat conducting base and spiral spring	20 °C – 50 °C	2 m	**6402-00.500**
	**Thermostatic head K** without accessories	40 °C – 70 °C	2 m	**6602-00.500**
	Tauchhülse Brass R $^1/_2$ x 186 mm total length			**6602-00.363**
	**Thermostatic head K** with spiral immersion sensor R $^1/_2$ x 118 mm total length	20 °C – 70 °C	2 m	**6672-00.500**

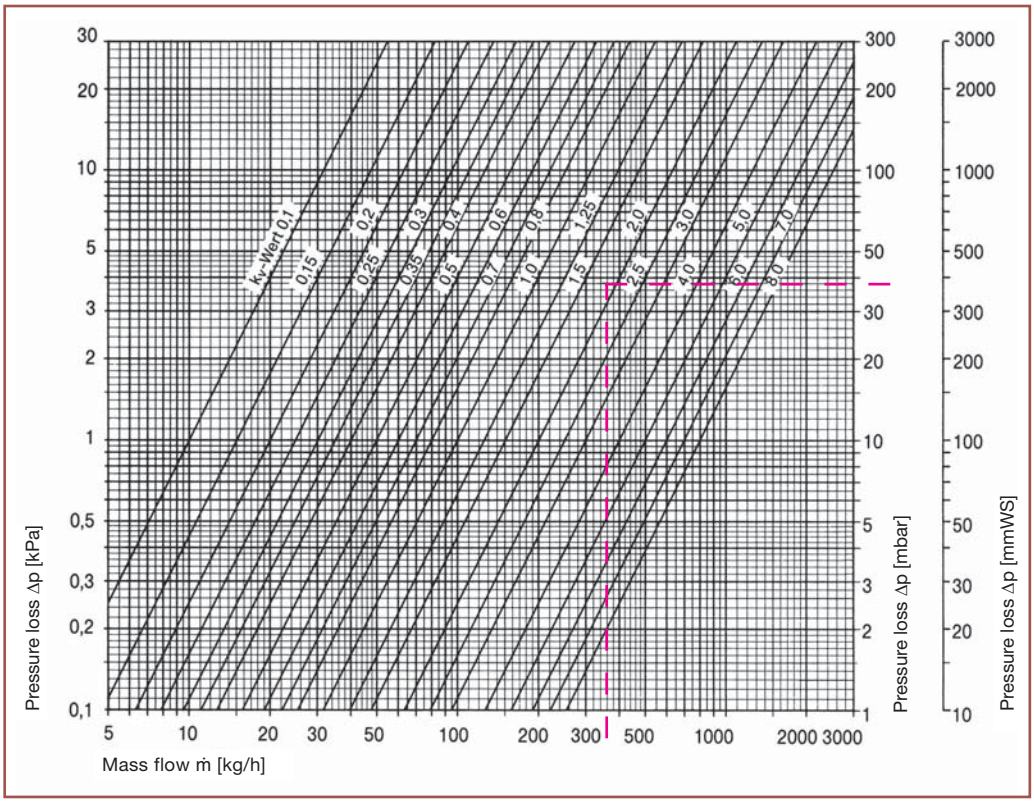
Lengths correspond to the data given in the brochure entitled "Thermostatic heads".

Thermostatic head K

with contact or immersion sensor

Technical data

Diagram



Thermostatic head with valve body Standard or with three-way reversing or mixing valve		k_v value [m³/h] P-band [K] 1) 2,0	4,0	6,0	8,0	k_{vs} value [m³/h]	Permitted operating temperature TB [°C]	Permitted operating pressure PB [bar]	Permitted differential pressure Δp [bar]
DN 10	ET (angle) DT (straight)	0,39	0,68	0,92	1,08	1,25			
DN 15	ET (angle) DT (straight)	0,39	0,68	0,92	1,13	1,35	120	10	1,00
DN 20	ET (angle) DT (straight)	0,62	1,31	1,81	2,18	2,50			
DN 25	ET (angle) DT (straight)	1,49	2,65	3,32	3,72	4,20			
DN 32	ET (angle) DT (straight)	2,39	3,86	4,52	5,00	5,80	120	10	0,25
DN 15	Reversing valve	0,60	1,20	1,71	2,10	2,47	120	10	1,20
DN 20	Reversing valve	0,70	1,50	2,39	3,10	3,48	120	10	0,75
DN 25	Reversing valve	1,08	2,28	3,48	4,62	5,12	120	10	0,50
DN 15	Mixing valve 3)	1,40 2)				2,50	120	10	1,20
DN 20	Mixing valve 3)	1,90 2)				3,50	120	10	0,75
DN 25	Mixing valve 3)	2,60 2)				4,60	120	10	0,50
DN 32	Mixing valve 3)	3,50 2)				6,40	120	10	0,25

1) In thermostatic head K with spiral immersion sensor the given p-bands can be adjusted by a factor of 1.7.
2) K_v value with valve cone in the middle position. Mixing ratio ≈ 50%.
3) Three-way mixing valve "without presetting". You will find models "with presetting" in the brochure entitled "Three-way mixing valve".

You will find further information in the brochures "Thermostatic valve bodies", "Three-way reversing valve" and "Three-way mixing valve".

Other HEIMEIER thermostatic valve bodies can also be used. The p-bands given in the brochure "Thermostatic valve bodies" can be adjusted by a factor of 1.3 in thermostatic heads 6402/6602 and by a factor of 2.2 in the thermostatic head 6672.

For three-way reversing valves kv values correspond to the flow in the straight direction I-II for the given control differences. The kvs value corresponds to the flow in the I-II direction with valve fully opened or in the I-III direction with the valve closed.

For three-way mixing valves the kv values correspond to the flow in angular direction B-AB or in straight direction A-AB when the valve cone is in the middle respectively. The mixing ratio is in this case ≈ 50%. The kvs value corresponds to the flow in angular direction B-AB with the valve fully opened or with the flow in straight direction A-AB with the valve closed.

Sample calculation

Target:
NW thermostatic valve body

Given:
Mass flow: $\dot{m} = 360$ kg/h
Valve body pressure loss: $\Delta p_v = 38$ mbar
P-band: $x_p = 6$ K

Solution:
Required k_v value from the diagram: between 1.5 und 2.0 m³/h
Valve bodies from the table: DN 20, k_v at 6 K = 1,81 m³/h

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