Multibox

Flush individual room control for floor heating systems

HEIMEIER

Pressurisation & Water Quality › Balancing & Control › Thermostatic Control

ENGINEERING ADVANTAGE

PNEUMATEX TA HEIMEIER

TA HYDRONICS

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Multibox K, RTL and K-RTL

Description

HEIMEIER Multibox K, Multibox RTL and Multibox K-RTL flush box with frame, cover plate and fixing bars, for controlling, for instance, floor heating systems without auxiliary power.

Multibox K

for the individual room temperature control with thermostatic valve of, for instance, floor heating systems.

Multibox RTL

for maximum limitation of the return temperature with return temperature limiter of, for instance, combined floor/radiator heating systems.

Multibox K-RTL

for the individual room temperature control and maximum limitation of the return temperature with thermostatic valve and return temperature limiter of, for instance, combined floor/radiator heating systems.

All models optionally with cover and visible graduation cap in white RAL 9016 or chrome-plated.

The flush box has an overall depth of 60 mm.

Flexible mounting thanks to variable spacing between flush box and cover of up to 30 mm.

The cover can compensate for slanted mounting of the flush box of up to 6° on each side.

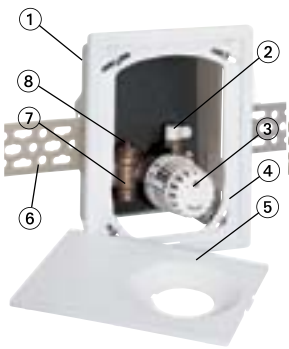
Thermostatic head K with liquid-filled thermostat. High actuating power, minimum hysterisis, optimum shutting time. Stable control properties even with small design control differences (<1 K). Meets EnEV and/or DIN V 4701-10. Cue number 1-5. Anti-freeze protection. Temperature range 6° C - 28° C. Return Temperature Limiter (RTL) with expanding substance-filled thermostat. Cue number 1-5. Temperature range 10° C - 50° C.

Body made of gunmetal. Thermostatic inserts with stainless steel spindle and double O-ring seal. Outer O-ring can be replaced without system drainage. All models are equipped with a venting valve.

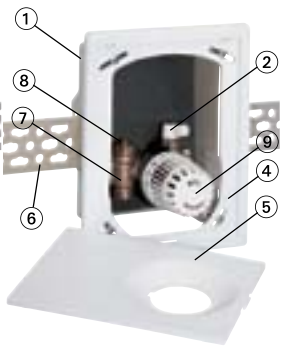
Pipe-side G 3/4 adaptor with cone suitable for compression fittings for plastic, copper, precision steel and multi-layer pipe. For HEIMEIER valves, only use the corresponding, designated HEIMEIER compression fittings (designation e.g. 15 THE). Pipe guide channel for easy pipe/valve attachment – see Accessories.

Construction

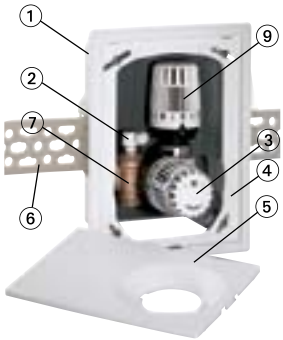
Multibox K



Multibox RTL



Multibox K-RTL



1. Flush box
2. Venting valve
3. Thermostatic head K
4. Frame
5. Cover plate
6. Fixing bar
7. Valve chamber of corrosion resistant gunmetal
8. Shutoff/regulating spindle
9. Return temperature limiter (RTL)

- **For out-of-true installation offsetting up to 6° on each side**
- **Cover with concealed screw connection**
- **Small installation depth**
- **Designs with cover and visible graduation cap in white or chrome-plated**
- **Adjustable fitting for all wall structures, 30 mm depth compensation**
- **Pipe guide channel as accessory**
- **Valve chamber of corrosionresistant gunmetal**
- **Universal connection possibilities**

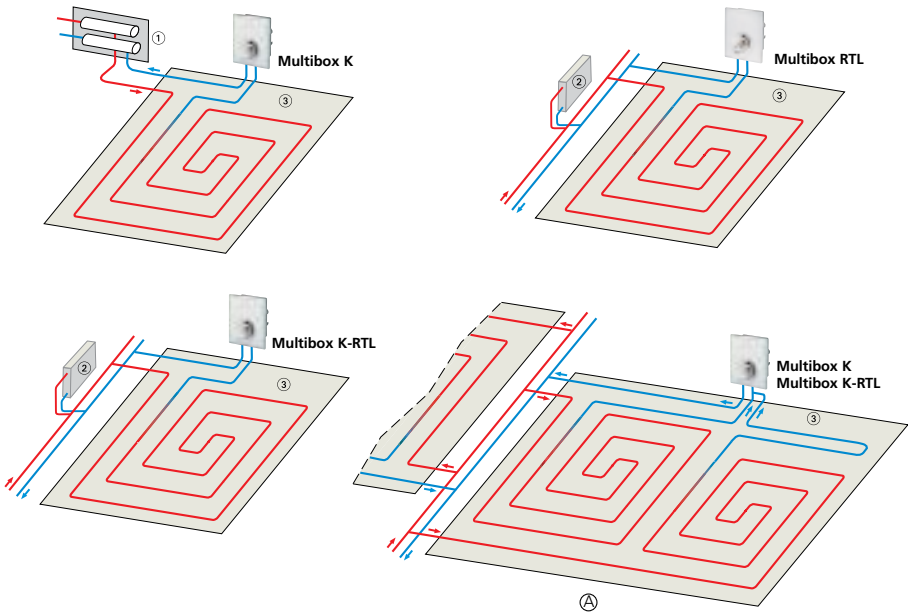
Applications

Multibox K
Multibox K is used for the individual room temperature control of, for instance, floor heating systems in association with low temperature heating systems.
Multibox K is also used in wall heating systems.
Use the shutoff/regulating spindle for hydraulic balancing.

Multibox RTL
Multibox RTL is used for maximum limitation of the return temperature with, for instance, combined floor/radiator heating systems for temperature control of floor areas. Only the return temperature is controlled.
Use the shutoff/regulating spindle for hydraulic balancing.

Multibox K-RTL
Multibox K-RTL is used for the individual room temperature control and maximum limitation of the return temperature with, for instance, combined floor/ radiator heating systems.
Multibox K-RTL is also used in wall heating systems.

Sample application



1. Manifold
2. Radiator
3. Floor heating area

A. Floor heating without central manifold with e.g. two equally long heating circuits per room and Multibox (see Planning Information).

Temperature setting

Thermostatic head K

Cue number	❄	**1**	☽	**2**	**3**	**4**	**5**
Room temperature [°C]	6	12	14	16	20	24	28

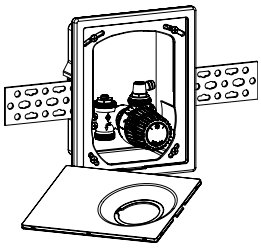
Return temperature limiter (RTL)

Cue number	**0**	**1**	**2**	**3**	**4**	**5**	
Room temperature [°C]	0	10	20	30	40	50	(Opening temperature)

Function

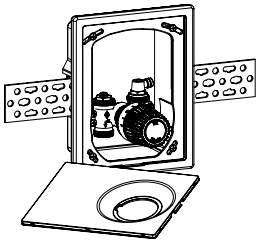
Multibox K
From the control aspect, the thermostatic valve integrated in Multibox K is a constant proportional controller (P- controller) without any auxiliary power. It does not need any electrical connection or other outside power source.
The change of the room air temperature (controlled variable) is proportional to the change of the valve lift (correcting variable). A rise in the room air temperature e.g. from the sun's rays, results in an expansion of the liquid in the temperature sensor and it acts on the bellows. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling room air temperature.
Multibox RTL
From the control aspect, the return temperature limiter integrated in Multibox RTL is a constant proportional controller (P-controller) without any auxiliary power. It does not need any electrical connection or other outside power source.
The temperature change of the fluid flowing through (controlled variable) is proportional to the change of the valve lift (correcting variable) and is transferred to the sensor by means of thermal conduction. Any rise in the return temperature due to, for instance, to lowered heating output of the floor heating system as a result of outside thermal effects causes the substance in the temperature sensor to expand and act on the diaphragm plunger. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling fluid temperature.
The valve opens when the set limiting figure is exceeded.
Multibox K-RTL
From the control aspect, the thermostatic valve integrated in Multibox K-RTL is a constant proportional controller (P-controller) without any auxiliary power. It does not need any electrical connection or other outside power source.
The change of the room air temperature (controlled variable) is proportional to the change of the valve lift (correcting variable). A rise in the room air temperature e.g. from the sun's rays, results in an expansion of the liquid in the temperature sensor of the thermostatic head and it acts on the bellows. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling room air temperature.
Multibox K-RTL is additionally provided with a return temperature limiter (RTL) which stops the set return temperature from being exceeded. The valve opens when the set limiting figure is exceeded.

Article numbers



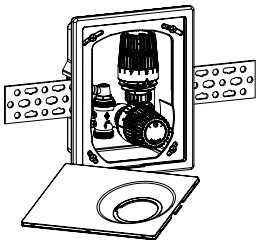
Multibox K
with thermostatic valve

Colour	Article No
Cover and thermostatic head K white RAL 9016	9302-00.800
Cover and thermostatic head K chrome-plated	9302-00.801



Multibox RTL
with return temperature limiter (RTL)

Colour	Article No
Cover and thermostatic head K white RAL 9016	9304-00.800
Cover and thermostatic head K chrome-plated	9304-00.801



Multibox K-RTL
with thermostatic valve and return temperature limiter (RTL)

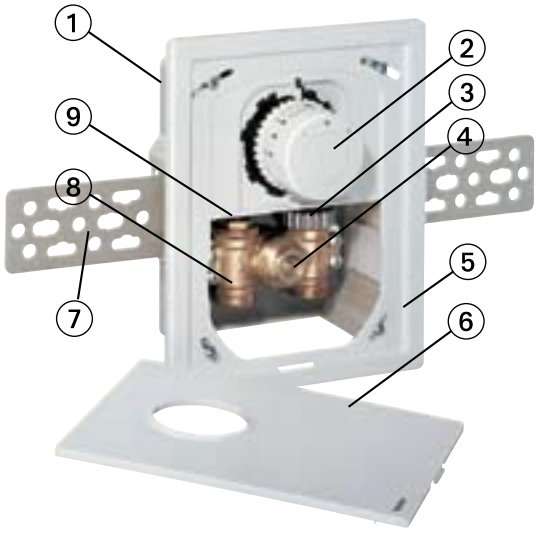
Colour	Article No
Cover and thermostatic head K white RAL 9016	9301-00.800
Cover and thermostatic head K chrome-plated	9301-00.801

Multibox F

Description

HEIMEIER Multibox F flush box with frame including thermostatic head, cover plate and fixing bars for the individual room temperature control with thermostatic valve of, for instance, floor heating systems, without auxiliary power.
Through a capillary tube, the temperature sensor liquid of the thermostatic head acts on the bellows in the valve adaptor. There is therefore never any change in the appearance of the cover with thermostatic head – irrespective of the installation depth.
All models with cover and visible graduation cap in white RAL 9016.
The flush box has an overall depth of 60 mm.
Adjustable mounting thanks to variable spacing between flush box and cover of up to 30 mm. The cover can compensate for slanted mounting of the flush box up to 6° on each side.
Thermostatic head with liquid-filled thermostat. High actuating power, low level of hysterisis, optimum shutting time. Stable control properties even with small design control differences (<1 K). Meets EnEV and/or DIN V 4701-10. Cue number 1-5. Anti-freeze protection. Zero position (valve opens at approx. 0° C). Temperature range 6° C - 27° C.
Body made of gunmetal. Thermostatic insert with stainless steel spindle and double O-ring seal. Outer O-ring can be replaced without system draining.
Multibox F is provided with a venting valve.
Pipe-side G 3/4 adaptor with cone – suitable for compression fittings for plastic, copper, precision steel and multi-layer pipe. For HEIMEIER valves, only use the corresponding, designated HEIMEIER compression fittings (designation e.g. 15 THE).
Pipe guide channel for easy pipe/valve attachment, see Accessories.

Aufbau



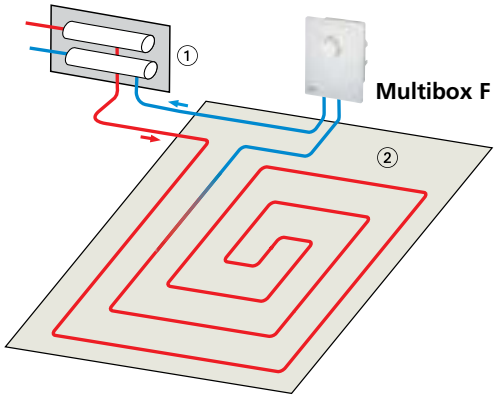
1. Flush box
2. Thermostatic head with capillary tube
3. Adaptor
4. Venting valve
5. Frame
6. Cover plate
7. Fixing bar
8. Valve chamber of corrosion resistant gunmetal
9. Shutoff/reg. spindle

- **No change in appearance irrespective of installation depth**
- **Elegant and easy-to-clean graduation cap**
- **For out-of-true installation offsetting up to 6° on each side**
- **Cover with concealed screw connection**
- **Small installation depth**
- **Adjustable mounting for all wall structures, 30 mm depth compensation**
- **Pipe guide channel as accessory**
- **Valve chamber of corrosion-resistant gunmetal**
- **Universal connection possibilities**

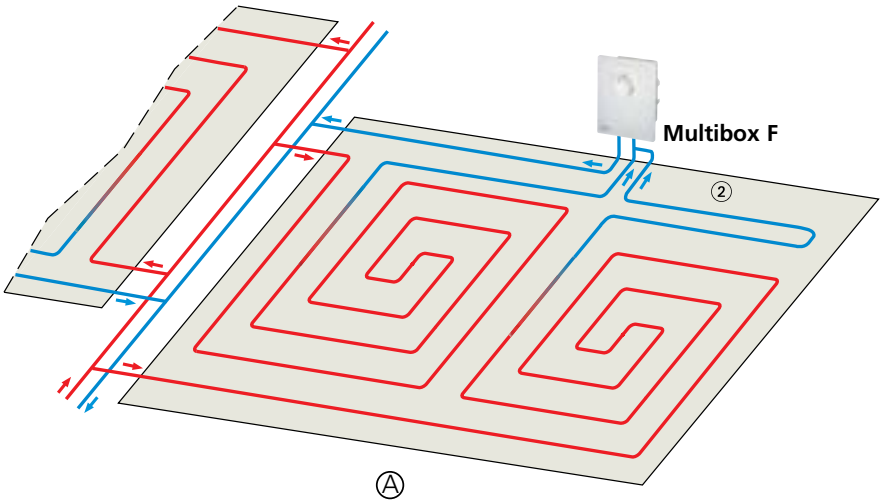
Application

Multibox F
Multibox F is used for the individual room temperature control of, for instance, floor heating systems in association with low temperature heating systems.
Multibox F is also used in wall heating systems.
Use the shutoff/regulating spindle for hydraulic balancing.

Sample application



1. Manifold
2. Heating area



A. Floor heating without central manifold with e.g. two equally long heating circuits per room and Multibox (see Planning Information).

Temperature setting

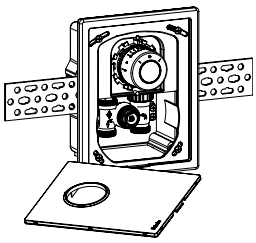
Thermostatic head F

Cue number	❄	1	☽	2	3	4	5
Room temperature [C°]	6	12	14	16	20	24	27

Function

Multibox F
From the control aspect, the thermostatic valve integrated in Multibox F is a constant proportional controller (P-controller) without any auxiliary power. It does not need any electrical connection or other outside power source.
Change of the room air temperature (controlled variable) is proportional to the change of the valve lift (correcting variable). A rise in the room air temperature e.g. from the sun's rays, results in an expansion of the liquid in the temperature sensor and it acts through the capillary tube on the bellows in the valve adaptor. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling room air temperature.

Article numbers



Multibox F
with thermostatic valve

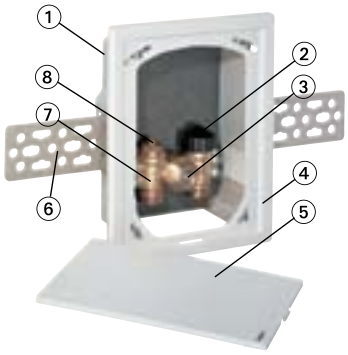
Colour	Article No
Cover and thermostatic head white RAL 9016	9306-00.800

Multibox C/E and C/RTL

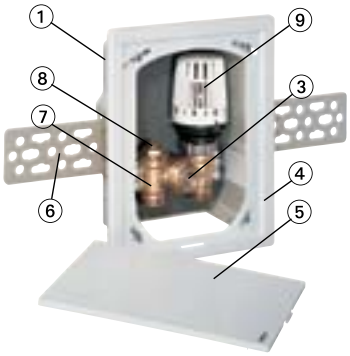
Description
HEIMEIER Multibox C/E and Multibox C/RTL flush box with frame, closed cover plate and fixing bars for controlling, for instance, floor heating systems.
Multibox C/E
for individual room temperature control of, for instance, floor heating systems with thermal or motor actuators and/or with remote dial thermostatic head F.
Multibox C/RTL
for maximum limitation of the return temperature with return temperature limiter of, for instance, combined floor/radiator heating systems.
All models with closed cover in white RAL 9016. The flush box has an overall depth of 60 mm.
Adjustable mounting from variable spacing between flush box and cover of up to 30 mm.
The cover can compensate for slanted mounting of the flush box up to 6° on each side.
Return temperature limiter (RTL) with expanding substance-filled thermostat. Cue number 1-5.
Temperature range 10° C - 50° C. Body made of gunmetal. Thermostatic inserts with stainless steel spindle and double O-ring seal. Outer O-ring can be replaced without system drainage.
All models are equipped with a venting/flushing valve.
Pipe-side G 3/4 adaptor with cone suitable for compression fittings for plastic, copper, precision steel and multilayer pipe.
For HEIMEIER valves, only use the corresponding, designated HEIMEIER compression fittings (designation e.g. 15 THE).
Pipe guide channel for easy pipe/valve attachment, see Accessories.

Construction

Multibox C/E



Multibox C/RTL



1. Flush box
2. Thermostatic insert for attachment of actuators or remote dials
3. Venting valve
4. Frame
5. Cover plate
6. Fixing bar
7. Valve chamber of corrosion resistant gunmetal
8. Shutoff/regulating spindle
9. Return temperature limiter (RTL)

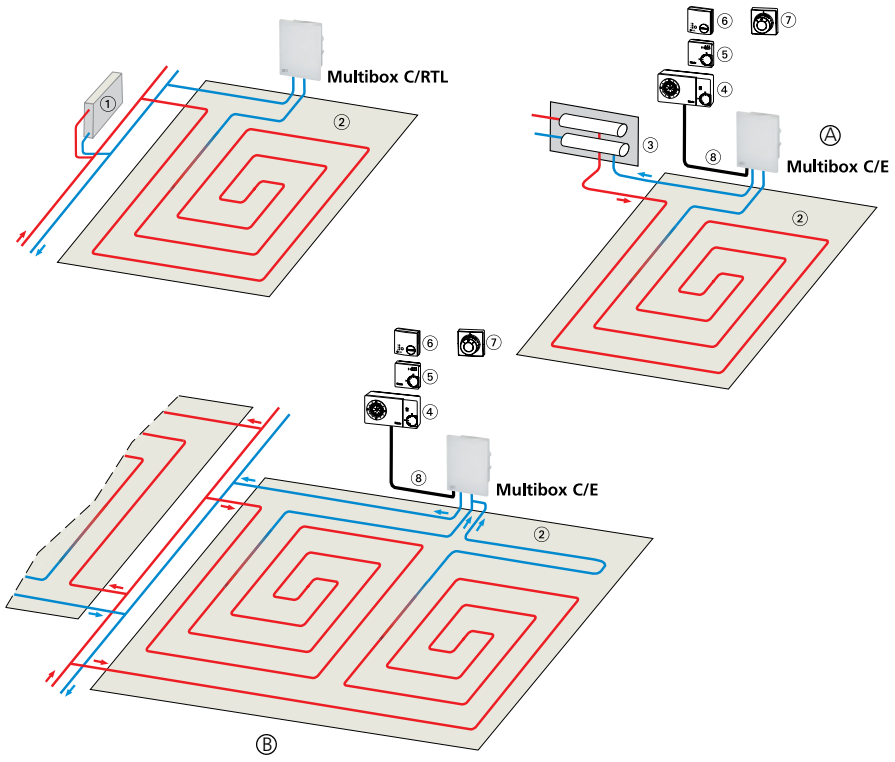
- **Closed cover plate**
- **Multibox C/E suitable for actuators or remote dials**
- **For out-of-true installation offsetting up to 6° on each side**
- **Cover with concealed screw connection**
- **Small installation depth**
- **Adjustable fitting for all wall structures, 30 mm depth compensation**
- **Valve chamber of corrosionresistant gunmetal**
- **Universal connection possibilities**

Application

Multibox C/E
Multibox C/E is used for the individual room temperature control of, for instance, floor heating systems in association with low temperature heating systems.
The individual room temperature is controlled by room thermostats in association with thermal or motor actuators and/or without auxiliary power with the thermostatic head F remote dial.
Multibox C/E is also used in wall heating systems.
Use the shutoff/regulating spindle for hydraulic balancing.

Multibox C/RTL
Multibox C/RTL is used for maximum limitation of the return temperature with, for instance, combined floor/radiator heating systems for the temperature control of floor areas. Only the return temperature is controlled.
Use the shutoff/regulating spindle for hydraulic balancing.

Sample application



1. Radiator
2. Floor heating area
3. Manifold
4. Thermostat P
5. Room thermostat
6. Thermostat E
7. Thermostatic head F, Remote dial
8. Empty pipe for cable and/or cap. tube

A. With thermal actuator EMO T, EMOtec, motor actuator EMO 1/3/EIB/LON or thermostatic head F (see Equipment Overview)
B. With e.g. two equally long heating circuits per room and Multibox (see Planning information).

Temperature setting

Return temperature limiter (RTL)

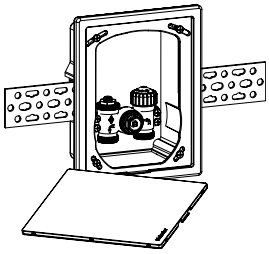
Cue number	**0**	**1**	**2**	**3**	**4**	**5**	
Return temperature [C°]	0	10	20	30	40	50	(Opening temperature)

Function

Multibox C/E
From the control aspect, the thermostatic valve integrated in Multibox C/E – in association with the F thermostatic valve – is a constant proportional controller (P-controller) without auxiliary power. It does not need any electrical connection or other outside power source. Change of the room air temperature (controlled variable) is proportional to the change of the valve lift (correcting variable). A rise in the room air temperature e.g. from the sun's rays, results in an expansion of the temperature sensor liquid and it acts through the capillary tube on the corrugated tube in the valve adaptor. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling room air temperature. Together with thermal or motor actuators, room thermostats control individual room temperature.

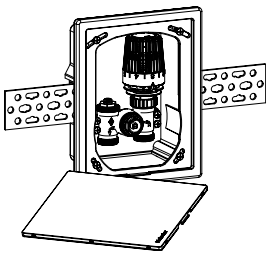
Multibox C/RTL
From the control aspect, the return temperature limiter integrated in Multibox C/RTL is a constant proportional controller (P controller) without any auxiliary power. It does not need any electrical connection or other outside power source. Temperature change of the fluid flowing through (controlled variable) is proportional to the change of the valve lift (correcting variable) and is transferred to the sensor by means of thermal conduction. Any rise in the return temperature due to, for instance, to a lowered heating output of the floor heating system as a result of outside thermal effects causes the substance in the temperature sensor to expand and act on the diaphragm plunger. By means of the valve spindle, this cuts back on the supply of water in the floor heating circuit. The procedure is reversed given a falling fluid temperature.
The valve opens when the set limiting figure is exceeded.

Article numbers



Multibox C/E
with thermostatic insert for actuator or remote dial

Colour	Article No
Cover white RAL 9016	9308-00.800



Multibox C/RTL
with return temperature limiter (RTL)

Colour	Article No
Cover white RAL 9016	9303-00.800

Pipe Guide Channel

PU pipe guide channel for easy mounting of all HEIMEIER Multibox models and for convenient pipe-valve attachment. Mounting, for instance, in wall gaps or in front wall plumbing.
Dimensions: 180 mm x 575 mm x 70 mm (B x H x D). Also see Accessories.

Examples of mounting

1.

2.

3.

Information

Planning
- **For all Multibox models, ensure that the system supply temperature is suitable for setting up the floor heating system.**
- **All Multibox models are to be connected to the return pipe at the end of the floor heating circuit. Heed direction of flow (see Examples of use).**
- Depending on piping pressure loss, all Multibox models are suitable for heating areas up to approx. 20 m^2.
- The length of 12 mm internal diameter pipe in any heating circuit should not exeed 100 m.
- With heating areas >20 m^2 and/or pipe lengths >100 m, a T-piece, for instance, should be used to connect two equally long heating circuits to the Multibox. (see Examples of use).
- To ensure low-noise system operation, differential pressure over the valve should not exceed 0.2 bar.
- The floor heating pipe is to be laid spirally in the flooring screed (see Examples of use).
- The set value of the RTL should not be below ambient temperature - otherwise it will not open.

Thermal fluid
To stop any damage and scale in hot water heating systems, the composition of the thermal fluid is to conform to VDI Directive 2035. For industrial and longdistance energy systems, see applicable codes VdTÜV and 1466/AGFW FW 510.
Mineral oil in the thermal fluid and/or all kinds of lubricants containing mineral oil lead to considerable swelling and, in most cases, to the failure of EPDM seals.
When using nitrite-free antifreeze and anti-corrosive based on ethylene glycol, technical advice – especially on additive concentration – is to be taken from the anti-freeze/anti-corrosive manufacturer's documentation.

Functional heating
Carry out functional heating of heating screed conforming to standards in keeping with EN 1264-4.
Earliest start for functional heating:
- Cement screed: 21 days after laying
- Anhydrite screed 7 days after laying

Begin 20 °C - 25 °C flow temperature and maintain for 3 days. Then set maximum design temperature and maintain for 4 days. Flow temperature can be regulated by controlling the heat generator. Turn the protective cap anticlockwise to open valve or turn RTL head to Position 5.
Refer to the screed manufacturer's information!
Do not exceed maximum floor temperature at the heating pipes:
- Cement and anhydrite screed: 55 °C
- Poured asphalt screed: 45 °C
- according to screed manufacturer's technical advice!

Accessories

Compression fitting
for copper or precision steel pipe. Brass nickel-plated. With a pipe wall thickness of 0.8-1 mm insert supporting sleeves. Heed pipe manufacturer's technical advice.

Ø Pipe	Article No
12	3831-12.351
15	3831-15.351
16	3831-16.351
18	3831-18.351

Support sleeve
for copper or precision steel pipe with a 1 mm wall thickness.
Brass nickel-plated.

L	Ø Pipe	Article No
25,0	12	1300-12.170
26,0	15	1300-15.170
26,3	16	1300-16.170
26,8	18	1300-18.170

Compression fitting
for copper or precision steel pipe. Brass nickel-plated. Soft sealed.

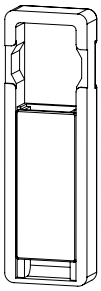
Ø Pipe	Article No
15	1313-15.351
18	1313-18.351

Compression fitting
for plastic pipe. Brass nickel-plate.

Ø Pipe	Article No
14x2	1311-14.351
16x2	1311-16.351
17x2	1311-17.351
18x2	1311-18.351
20x2	1311-20.351

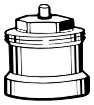
Compression fitting
for multi-layer pipes. Nickel-plated brass.

Ø Pipe	Article No
16x2	1331-16.351



Pipe guide channel
made of PU, for easy mounting of all HEIMEIER Multibox models and convenient pipe-valve attachment.
180 mm x 575 mm x 70 mm
(B x H x D).

	Article No
	9300-00.553



Spindle extension for K thermostatic head with Multibox K and Multibox K-RTL
when maximum installation depth exceeded.

L	Article No
Brass nickel-plated	
20	2201-20.700
30	2201-30.700
Plastic, black	
15	2001-15.700
30	2002-30.700

Spindle extension for RTL thermostatic head with Multibox RTL
when maximum installation depth exceeded. Brass nickel-plated.

L	Article No
20	9153-20.700

Replacement insert for Multibox RTL

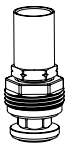
	Article No
	9304-00.300

Replacement insert with regulating spindle for Multibox K, RTL, C/E, C/RTL, F

	Article No
	9302-00.300

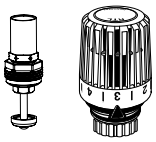
Special insert for Multibox K and Multibox K-RTL
for reversed direction of flow with switched supply and return flow.

	Article No
	9302-03.300



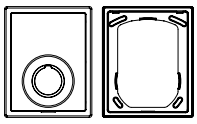
Special insert for Multibox RTL
for reversed direction of flow with switched supply and return flow.

	Article No
	9304-03.300



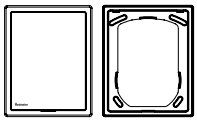
RTL insert and RTL thermostatic head
specially for converting Multibox K into Multibox K-RTL.

	Article No
RTL insert	9303-00.300
RTL thermostatic head	6500-00.500



Frame and cover plate
Replacement for Multibox K, Multibox RTL and Multibox K-RTL.

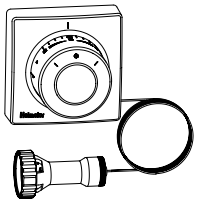
Colour	Article No
White RAL 9016	9300-00.800
Chrome	9300-00.801



Frame and cover plate
Replacement for Multibox C/RTL and Multibox C/E.

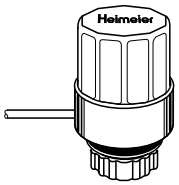
Colour	Article No
White RAL 9016	9300-03.800

Equipment overview



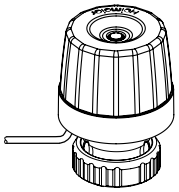
Thermostatic head F
for connection to Multibox C/E
Remote dial.
Cue number 1–5.
Liquid-filled thermostat.
High degree of control precision.

Capillary tube [m]	Article No
2	2802-00.500
5	2805-00.500
8	2808-00.500
10	2810-00.500
15	2815-00.500



Thermal actuator EMO T
Suitable for Multibox C/E
Thermal two-point actuator for heating, ventilation and air conditioning systems. With incorporated overvoltage protection with 230 V model.

Model		Article No
230 V	no-current closed (NC)	1831-00.500
24 V	no-current closed (NC)	1841-00.500
230 V	no-current opened (NO)	1835-00.500
24 V	no-current opened (NO)	1845-00.500



Thermal actuator EMOtec
Suitable for Multibox C/E
Thermal two-point actuator for floor heating systems. With position indicator given no-current closed (NC) model.

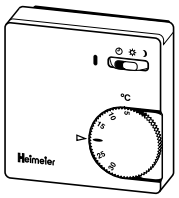
Model		Article No
230 V	no-current closed (NC)	1807-00.500
24 V	no-current closed (NC)	1827-00.500
230 V	no-current opened (NO)	1809-00.500
24 V	no-current opened (NO)	1829-00.500

Thermostat P
electronic two-point room thermostat for time-dependent control of room temperature, with analogue 7-day switch clock, Pulse-Width Modulation output signal (PWM) and voltage-free change-over contact.

Model	Article No
230 V	1932-00.500
24 V	1942-00.500

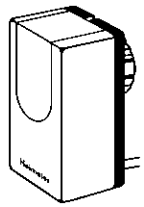
Protective casing
lockable, surface-mounted casing for thermostat P, transparent.

Article No
1930-02.433



Room thermostat
with thermal return, controls room temperature together with thermal actuators.

Model		Article No
230 V	without temperature drop	1936-00.500
230 V	with temperature drop	1938-00.500
24 V	without temperature drop	1946-00.500
24 V	with temperature drop	1948-00.500



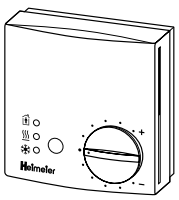
Motor actuators
Suitable for Multibox C/E

NOTE! Only in conjunction with spindle extension, see below.

EMO 1 Proportional actuator, 0-10 V DC	1860-00.500
EMO 3 Three point actuator	1880-00.500
EMO EIB for attaching directly to the European Installation Bus	
Standard	1865-00.500
with 2 binary inputs	1864-00.500
EMOLON - for use in LONWORKS®-Networks	
LP variant (FT variant on request)	1867-00.500

Spindle extension
Plastic, black

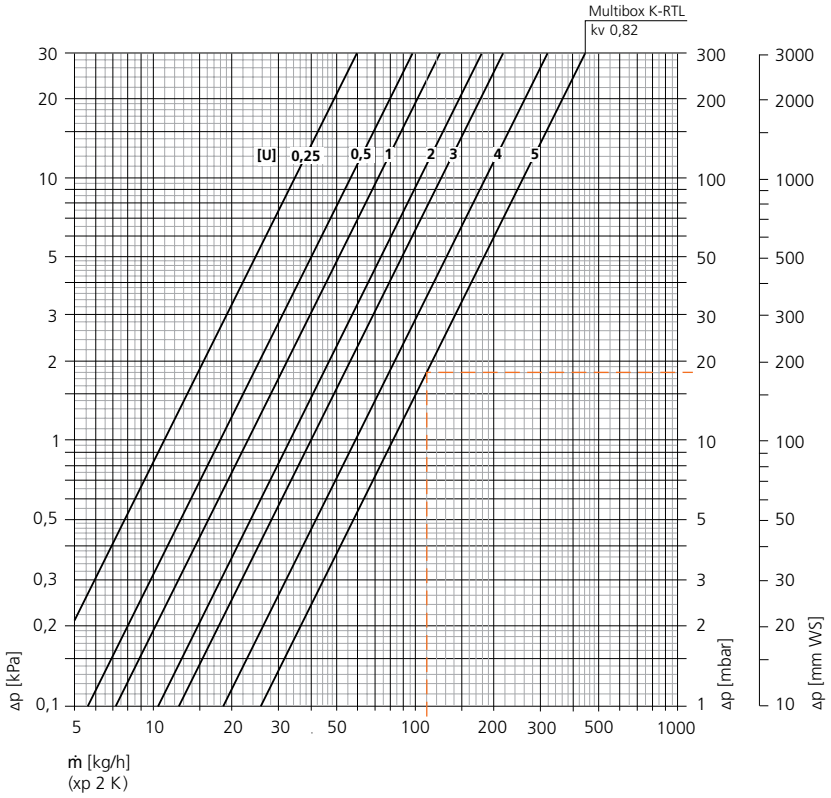
L	Article No
30	2002-30.700



Elektronische Raumtemperaturregler
Thermostat E 1 and Thermostat E 3 are incorporated in conjunction with the EMO 1 or EMO 3 electrical-motor actuators. For operating voltage supply (24 V AC) use safety transformers meeting EN 60742, e.g. HEIMEIER transformer (Art. No. 1600-00.000).

Model	Article No
Thermostat E 1	
Continuous controller	1960-01.500
Thermostat E 3	
Three-point controller	1980-01.500

Technical data – Multibox K, K-RTL, F and C/E**)



Controller with valve body	Control diff. Th. head xp [K]	Kv-figure [m³/h] Multibox K, F, C/E**) Preset rotations [U] Regulating spindle							Kv-figure [m³/h] Multibox K-RTL	Kvs-figure [m³/h]	Safe operating temp. TB [°C]	Safe operating gauge pressure PB [bar]
		0,25	0,5	1,0	2,0	3,0	4,0	5,0				
DN 15	1	0,10	0,17	0,21	0,28	0,32	0,39	0,43	0,43*)	1,35	90	10
	2	0,11	0,18	0,23	0,33	0,40	0,59	0,82	0,82*)			

*) when RTL fully opened
**) together with thermostatic head F

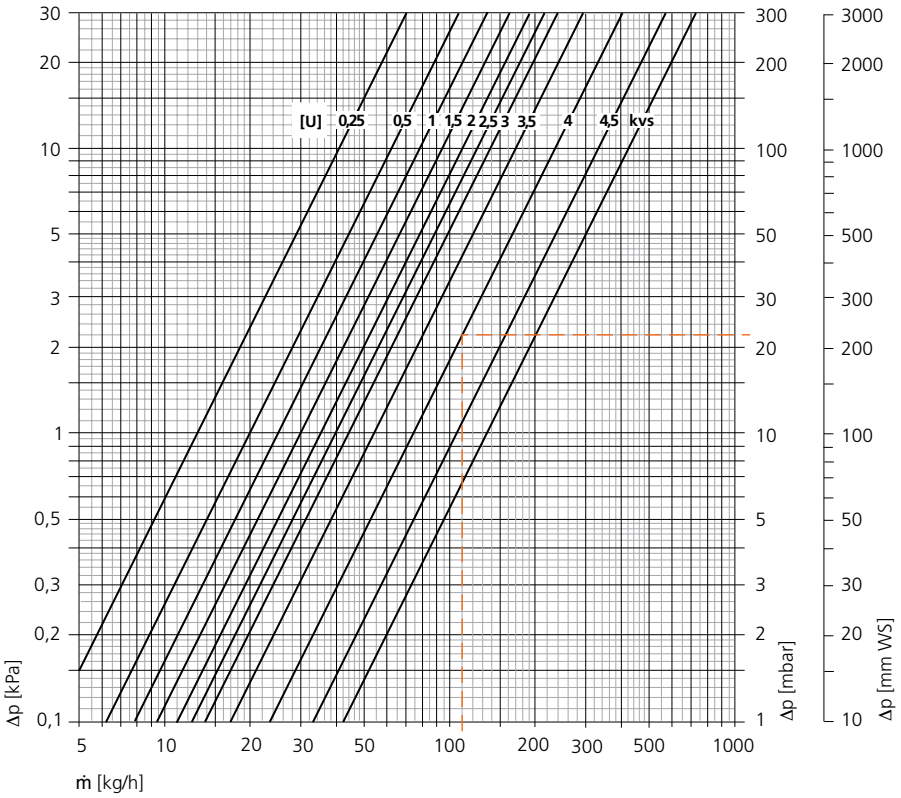
Sample calculation

To be found:
Pressure loss Multibox K, F, C/E, K-RTL at 2 K control difference xp
Given:
Thermal flux $\dot{Q} = 1025$ W
Temperature spread $\Delta t = 8$ K (44/36° C)
Solution:
Mass flow $\dot{m} = \dot{Q} / (c \cdot \Delta t) = 1025 / (1{,}163 \cdot 8) = 110$ kg/h
Pressure loss
as diagram $\Delta pv = 18$ mbar

$$c_V = \frac{k_V}{0{,}86}$$

$$k_V = c_V \cdot 0{,}86$$

Technical data – Multibox RTL and C/RTL



Controller with valve body	Kv-figure [m3/h] Multibox RTL, C/RTL Preset rotations [U] Regulating spindle										Kvs-figure [m³/h]	Safe operating temp. TB [°C]	Safe operating gauge pressure PB [bar]
	0,25	0,5	1,0	1,5	2,0	2,5	3,0	3,5	4,0	4,5	5,0		
DN 15	0,13	0,20	0,25	0,30	0,35	0,39	0,44	0,54	0,74	1,06	1,35	90	10

Sample calculation

To be found:
Preset figure Multibox RTL, C/RTL
Given:

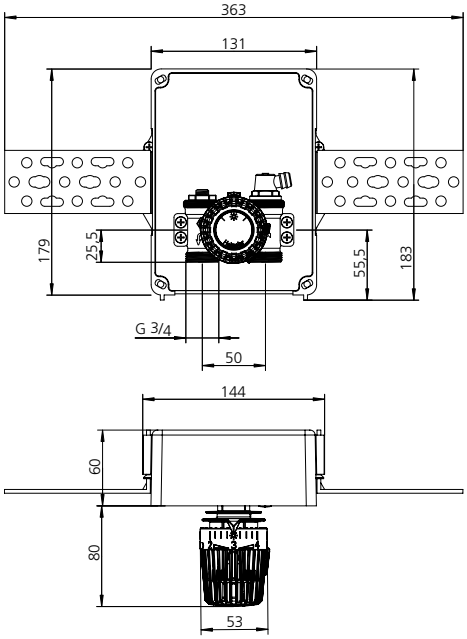
Thermal flux	$\dot{Q}$ = 1025 W
Temperature spread	Δt = 8 K (44/36° C)
Pressure loss Multibox RTL	Δp_V = 22 mbar

Solution:

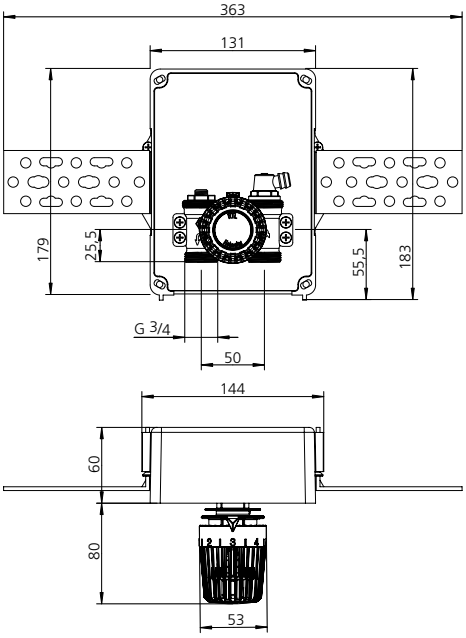
Mass flow	$\dot{m} = \dot{Q} / (c \cdot \Delta t) = 1025 / (1{,}163 \cdot 8) = 110$ kg/h
Preset figure from diagram:	4

Dimensions – Multibox K, RTL, K-RTL

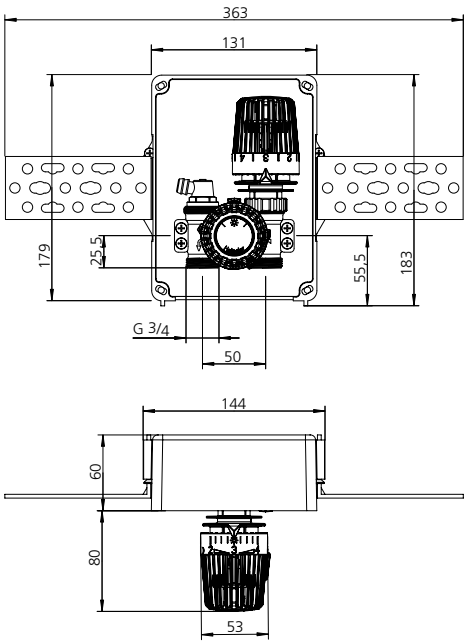
Multibox K

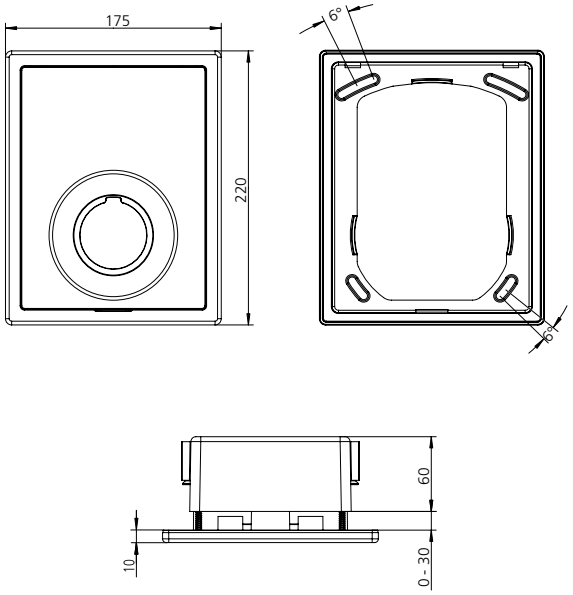


Multibox RTL



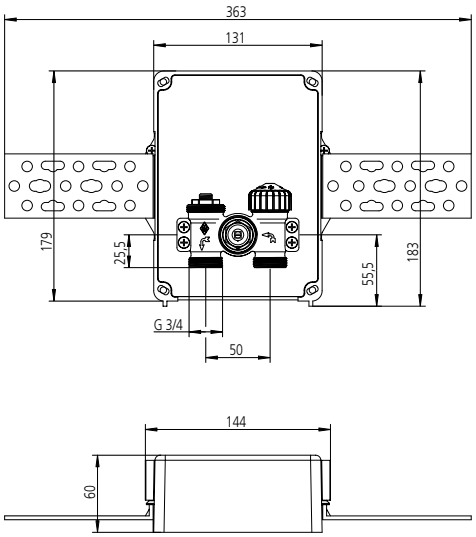
Multibox K-RTL

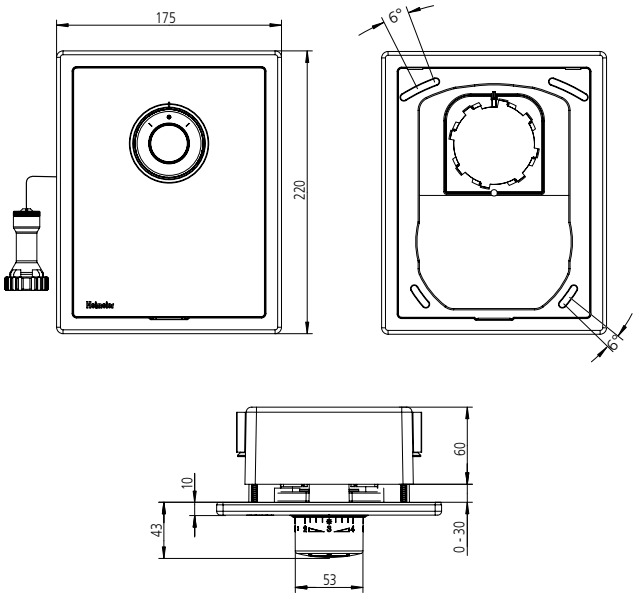




Dimensions – Multibox F

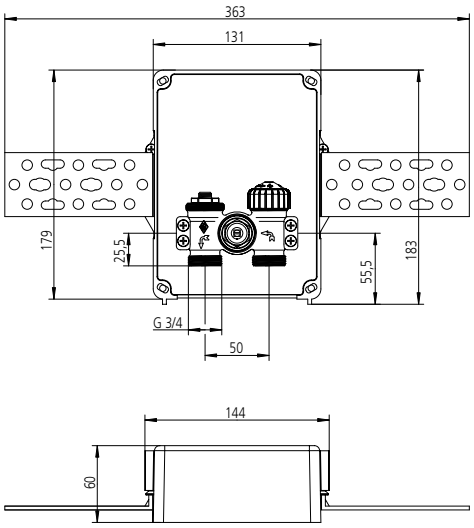
Multibox F



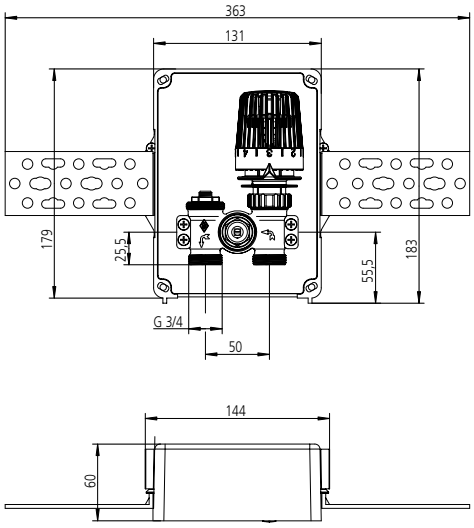


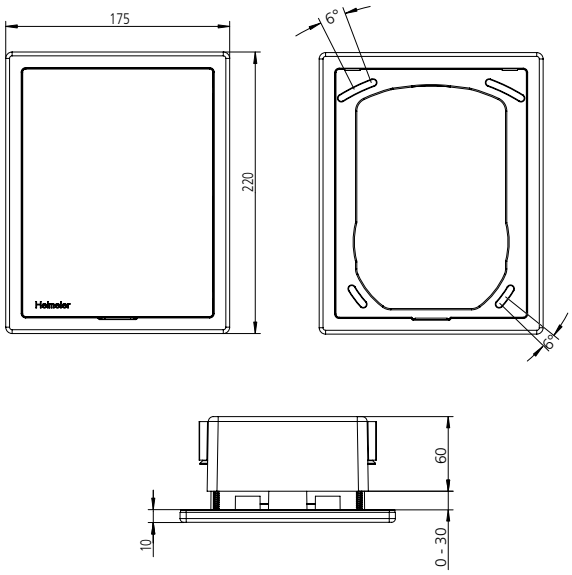
Dimensions – Multibox C/E und C/RTL

Multibox C/E



Multibox C/RTL





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