

Climate  
Control

IMI Heimeier

# Multilux 4-Eclipse-Set with Halo



## Design-Edition

with two-point connection, angle and straight type,  
for R 1/2 and G 3/4 connection, with automatic  
flow limitation

# Multilux 4-Eclipse-Set with Halo

The Multilux 4-Eclipse-Set is connected in 2-pipe systems to radiators with a lower 2-point connection such as bathroom radiators, design radiators, universal radiators or radiators with integrated valves. The valve has a unique integrated flow limiter that eliminates over flows. The required flow rate can be adjusted with one twist directly at the valve. The adjusted flow will not be exceeded even if there are load changes in the system, due to other valves closing or during morning start up. The valve controls the flow rate independently from differential pressure. Therefore, complicated calculations to determine settings are not necessary. Centre-to-centre distance of connections 50 mm. The Multilux 4-Eclipse-Set is suitable for installation as angle or straight form. Thermostatic insert and shut-off insert are interchangeable. Therefore the valve is suitable for installation both left and right side of the radiator.



## Key features

**Integrated flow limiter**  
eliminates over flows

**Suitable for installation as angle or straight form**

for pipe connection to the wall or vertical to the floor

**Thermostatic insert and shut-off insert are interchangeable**

the valve is suitable for installation both left and right side of the radiator

**Sets with white or chrome cover**  
easy to install

## Technical description

**Applications area:**  
2-pipe heating systems

**Function:**  
Control  
Flow limitation  
Shut-off

**Dimensions:**  
DN 15

**Pressure class:**  
PN 10

**Temperature:**  
Max. working temperature: 120 °C, with cover 90 °C.  
Min. working temperature: -10 °C

**Flow range:**  
The flow can be stepless pre-set within the range: 10-150 l/h.  
Factory setting: Commissioning.

**Differential pressure ( $\Delta p_V$ ):**  
Max. differential pressure:  
60 kPa (<30 dB(A))  
Min. differential pressure:  
10 – 100 l/h = 10 kPa  
100 – 150 l/h = 15 kPa

**Materials:**  
Valve body: Corrosion resistant Gunmetal.  
O-rings: EPDM rubber  
Valve disc: EPDM rubber  
Return spring: Stainless steel  
Valve insert: Brass, PPS (polyphenylsulphide) and SPS (syndiotactic polystyrene)  
Spindle: Niro-steel spindle with double O-ring sealing.  
Cover: ABS

**Surface treatment:**  
Valve body gunmetal, fittings are nickel-plated.

**Marking:**  
THE and II+ Designation.  
Protection cap orange.

**Radiator connection:**  
Adapters for R1/2 and G3/4, for radiator connections. Tolerance compensation  $\pm 1,0$  mm with special union nuts and flexible flat seal system for installation free of tension.

**Pipe connection:**  
G3/4 male thread for compression fittings for plastic, copper, precision steel or multi-layer pipe.

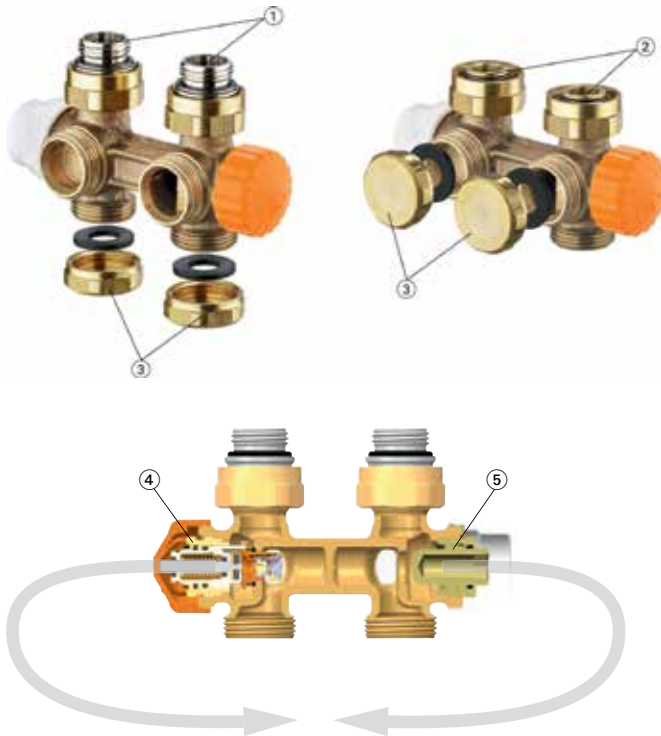
**Connection to thermostatic head and actuator:**  
IMI Heimeier M30x1.5

**Thermostatic head Halo:**  
Thermostatic head Halo with closed graduation cap and liquidfilled thermostat. High actuating force, minimum hysteresis, optimum closing time. Stable control response even with minor calculated p-band variations (<1 K). Conforming to German EnEV and/or DIN V 4701-10. Setting numbers 8-28. Frost protection. Temperature range 6 °C to 28 °C.

## Construction

### Multilux 4-Eclipse

Installation as angle type / Installation as straight type



1. R1/2 Radiator connection
2. G3/4 Radiator connection
3. G3/4 end caps
4. Thermostatic insert with automatic flow limiter
5. Return shut-off

## Function

### Eclipse flow limiter

A regulating part is set to the calculated control rate by turning the digit cap with the setting key or an 11 mm end wrench. If the flow rate increases at the valve the rising pressure moves the sleeve, thus constantly limiting the flow to the set value.

The set flow rate is therefore never exceeded. If the flow rate drops below the set value a spring presses the sleeve back to its original position.

## Application

The Multilux 4-Eclipse-Set is connected in 2-pipe systems to radiators with a lower 2-point connection such as bathroom radiators, design radiators, universal radiators or radiators with integrated valves etc..

The Multilux 4-Eclipse-Set is suitable for installation as angle or straight form.

The required design flow for each radiator is set directly on the Multilux 4-Eclipse valve. This automatic flow limitation is done with a twist and the adjusted flow will then not be exceeded. Even if there is an oversupply of pressure, due to load changes in the system, for example other valves closing or during morning start up, Eclipse will guarantee the requested flow.

The valve controls the flow rate independently from differential pressure. Therefore, complicated calculations to determine settings are not necessary. The pressure loss of pipings in old systems does not have to be determined in renovation projects. Only the heating capacity and the resulting max. flow rate have to be determined (see setting chart). The min. differential pressure has to be at the most unfavourable valve. If necessary, it can be measured in order to optimize pump settings.

Thermostatic insert and shut-off insert are interchangeable. Therefore the valve is suitable for installation both left and right side of the radiator.

The Multilux 4-Eclipse-Set is suitable for universal applications thanks to its connection options for Rp 1/2 and G3/4 radiator connections.

### Note the flow direction!

**See also the installation and operating instruction.**

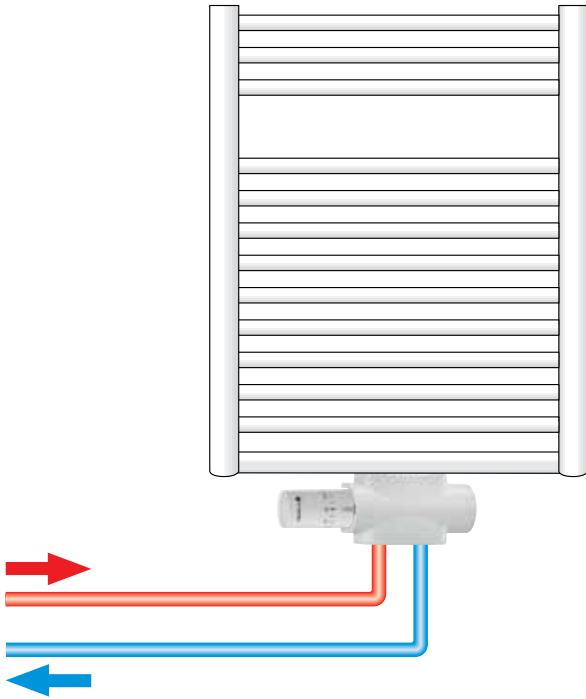
### Noise behaviour

To ensure low-noise performance, the following conditions must be met:

- The differential pressure above Eclipse should not exceed 60 kPa = 600 mbar = 0,6 bar (<30 dB(A)).
- Flow must be correctly adjusted.
- The system must be completely deaerated.

### Sample application

Multilux 4-Eclipse with bathroom radiator



### Multilux 4-Eclipse-Set, white RAL 9016



### Multilux 4-Eclipse-Set, chrome



### Notes

- To avoid damage and the formation of scale deposit in the hot-water heating system, the composition of the heat transfer medium should be in accordance with the VDI guideline 2035. For industrial and long-distance energy systems, see the applicable codes VdTÜV and 1466/AGFW FW 510. A heat transfer medium containing mineral oils, or any type of lubricant containing mineral oil can have extremely negative effects 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 concerning concentration and specific additives.
- Flush the system before changing thermostatic valves in heavy polluted existing systems.
- The thermostatic valve bodies can be used with all IMI Heimeier thermostatic heads and IMI Heimeier or IMI TA thermal or motorized actuators. The optimal tuning of the components guarantees maximum safety. When using actuators from other manufacturers, make sure that the pressure power is appropriate for thermostatic valve bodies with soft sealing valve discs.

## Operation

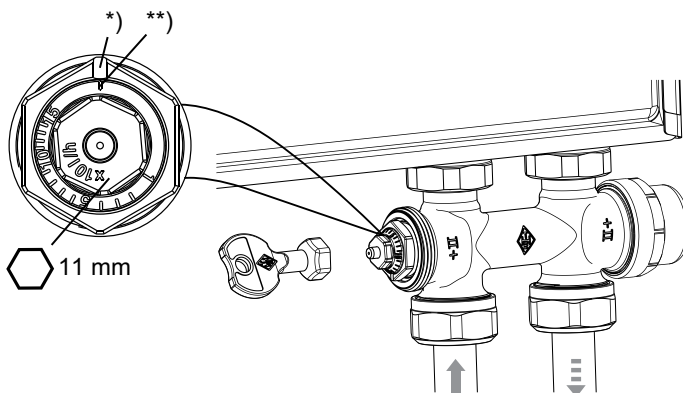
### Flow setting

Stepless setting between 1 to 15 (10 to 150 l/h).

The setting is changed using a special setting key (article No. 3930-02.142) or an 11 mm end wrench, to ensure tamper proof setting.

- Place the setting key on the valve insert.
- Turn the setting tool so that desired setting value is pointing at the index\* of the valve body (see fig.).
- Remove the key or 11 mm end wrench. The valve is now set.

### Front-end and lateral visibility



\*) Index

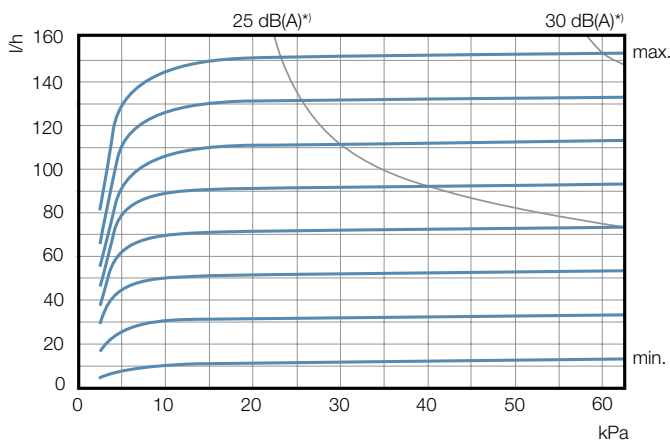
\*\*) Commissioning setting

Setting	1	I	I	I	5	I	I	I	I	10	I	I	I	I	15
l/h	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

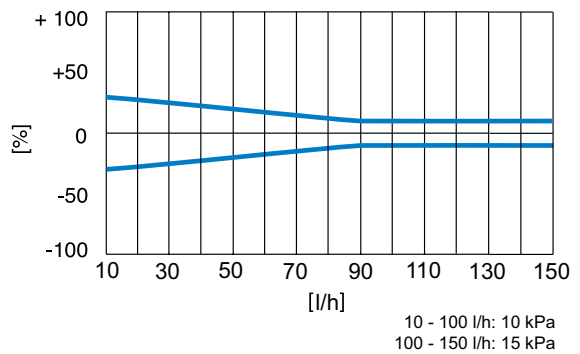
P-band [xp] max. 2 K.

P-band [xp] max. 1 K up to 90 l/h.

## Diagram



### Lowest flow tolerances



\*) P-band [xp] max. 2 K.

## Setting table

### Setting values with different radiator performances and system differential temperatures

Q [W]	200	250	300	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4800	5300	6500	6800			
$\Delta t$ [K]																																
10	2	2	3	3	4	5	6	7	8	9	10	12	14	15																		
15	1	1	2	2	3	3	4	5	5	6	7	8	9	10	12	13	14	15														
20	1	1	1	2	2	3	3	3	4	4	5	6	7	8	9	10	10	11	12	13	14	15										
30	1	1	1	1	1	2	2	2	3	3	3	4	5	5	6	6	7	8	8	9	9	10	10	11	12	14	15					
40		1	1	1	1	1	2	2	2	2	3	3	3	4	4	5	5	6	6	7	7	7	8	8	9	10	11	14	15			

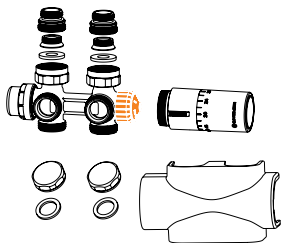
$\Delta p$  min. 10 - 100 l/h = 10 kPa  
 $\Delta p$  min. 100 - 150 l/h = 15 kPa

Q = Radiator performance  
 $\Delta t$  = System differential temperature  
 $\Delta p$  = Differential pressure

#### Sample:

Q = 1000 W,  $\Delta t$  = 15 K  
 Setting value: **6** ( $\approx$  60 l/h)

## Articles



### Multilux 4-Eclipse-Set with Halo

Multilux 4-Eclipse-Set with Halo consists of:

- Multilux 4 Eclipse thermostatic valve body
- R 1/2 radiator connections
- G 3/4 radiator connections
- End caps for G 3/4 pipe connection
- Cover
- Thermostatic head Halo

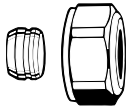
	EAN	Article No
White RAL 9016	4024052994311	9690-58.800
Chrome-plated	4024052994410	9690-59.800

## Accessories



**Setting key**  
for Eclipse. Color orange.

EAN	Article No
4024052937714	3930-02.142



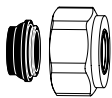
**Compression fitting**  
for copper or precision steel pipe according to DIN EN 1057/10305-1/2. Connection external thread G 3/4 according to DIN EN 16313 (Eurocone). Metal-to-metal joint. Brass nickel-plated. With a pipe wall thickness of 0.8-1 mm insert supporting sleeves. Heed pipe manufacturer's technical advice.

Ø Pipe	EAN	Article No
12	4024052214211	3831-12.351
15	4024052214617	3831-15.351
16	4024052214914	3831-16.351
18	4024052215218	3831-18.351



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

Ø Pipe	L	EAN	Article No
12	25,0	4024052127016	1300-12.170
15	26,0	4024052127917	1300-15.170
16	26,3	4024052128419	1300-16.170
18	26,8	4024052128815	1300-18.170



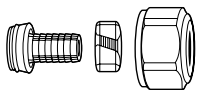
**Compression fitting**  
for copper or precision steel pipe according to DIN EN 1057/10305-1/2. Connection external thread G 3/4 according to DIN EN 16313 (Eurocone). Soft sealed, max. 95°C. Nickel-plated brass.

Ø Pipe	EAN	Article No
15	4024052515851	1313-15.351
18	4024052516056	1313-18.351



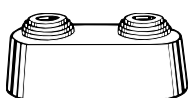
**Compression fitting**  
for Alu/PEX multi-layer pipe according to DIN 16836. Connection external thread G 3/4 according to DIN EN 16313 (Eurocone). Nickel-plated brass.

Ø Pipe	EAN	Article No
16x2	4024052137312	1331-16.351



**Compression fitting**  
for plastic pipe according to DIN 4726, ISO 10508. PE-X: DIN 16892/16893, EN ISO 15875; PB: DIN 16968/16969. Connection external thread G 3/4 according to DIN EN 16313 (Eurocone). Nickel plated brass.

Ø Pipe	EAN	Article No
14x2	4024052134618	1311-14.351
16x2	4024052134816	1311-16.351
17x2	4024052134915	1311-17.351
18x2	4024052135110	1311-18.351
20x2	4024052135318	1311-20.351



**Double rosette**  
Dividable in the middle, made of plastic, white, for various pipe diameters. Centre distance 50 mm. Overall height max. 31 mm.

EAN	Article No
4024052120710	0520-00.093

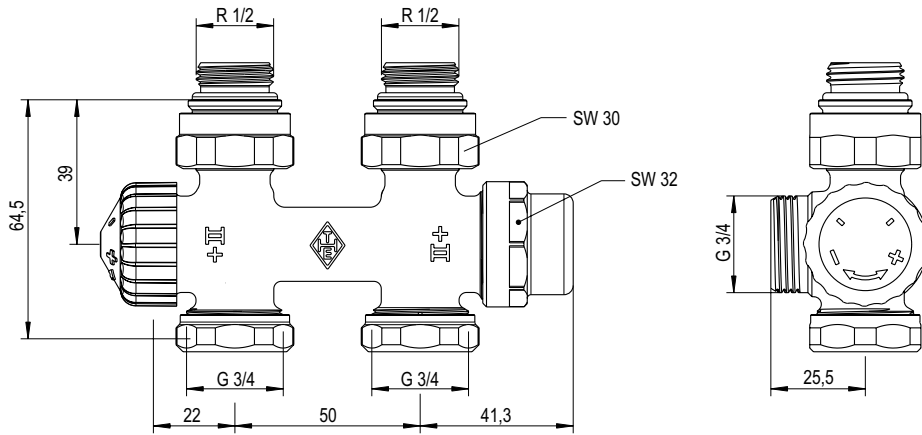


**Replacement thermostatic insert**  
with automatic flow limiter for Eclipse.

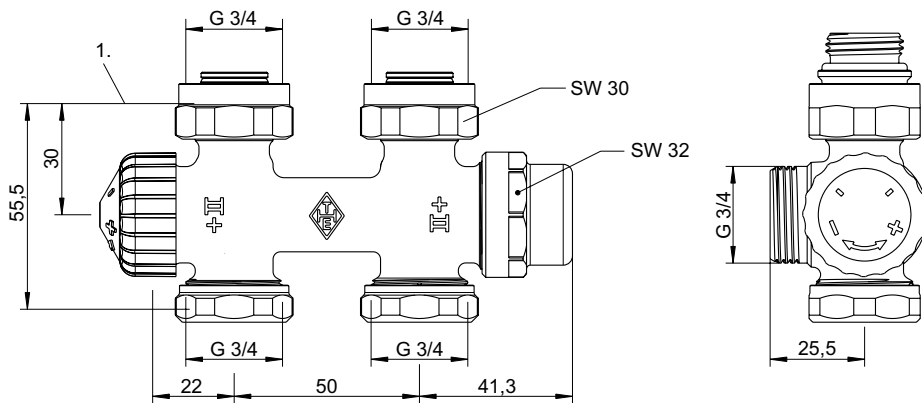
EAN	Article No
4024052940912	3930-02.300

## Dimensions

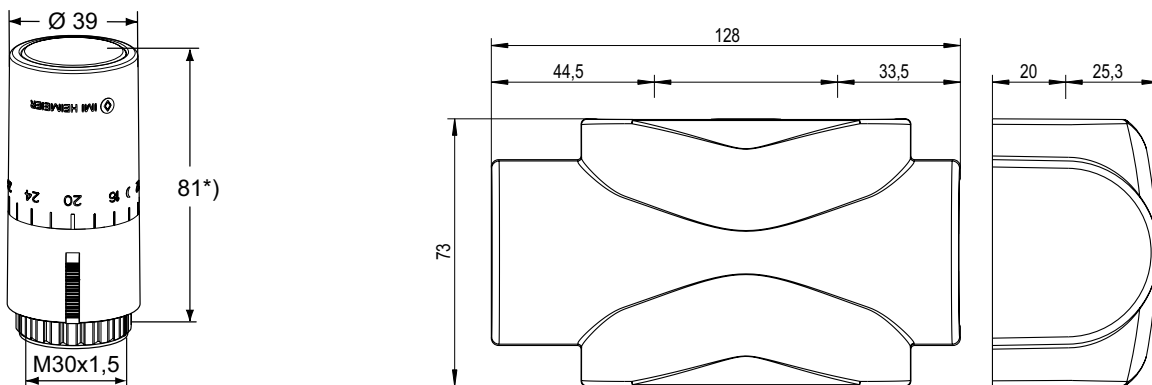
### R1/2 radiator connection



### G3/4 radiator connection



1. Contact surface, upper edge seal



\*) setting at 20

1 mm = 0,0394 inch



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