IMI HEIMEIER

Multilux V Eclipse

Thermostatic valves with radiator connection systems

with two-point connection for radiators with integrated valves and bathroom radiators, with automatic flow limitation

IMI Hydronic Engineering

Breakthrough Engineering

Multilux V Eclipse

Multilux V Eclipse 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. For radiators with integrated valves Multilux V Eclipse is also used as connection fitting without thermostatic head. 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 exceed 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. 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

- **Can be used as thermostatic valve or connection fitting for radiators with integrated valves**
- **Integrated flow limiter**
  eliminates over flows
- **Cover for angle and straight forms, white or chrome**
- **Thermostatic insert and shut-off insert are interchangeable**
  the valve is suitable for installation both left and right side of the radiator
- **Easy draining off and filling**
- **All versions suitable for R1/2 and G3/4 connection**

Technical description

Applications area:
2-pipe heating systems

Function:
Control
Flow limitation
Shut-off
Drain-off
Filling

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.
Delivery setting: Commissioning setting

Differential pressure (ΔpV):
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)
The complete thermostatic insert can be replaced using the fitting tool without draining the system.
Spindle: Niro-steel spindle with double O-ring sealing.
Cover: ABS

Surface treatment:
Valve body and fittings are nickel-plated.

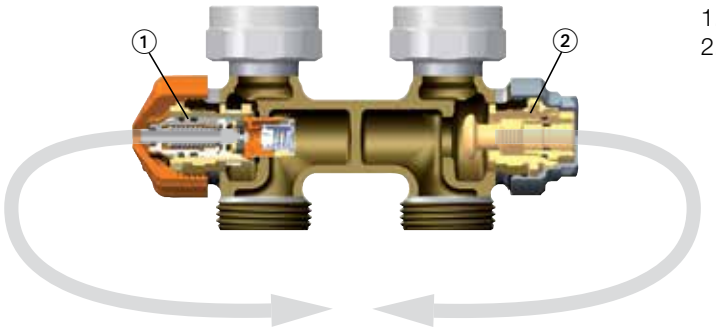
Marking:
THE and II+ Designation.
Protection cap orange.

Radiator connection:
Adapters for R1/2 or G3/4, for radiator connections. Tolerance compensation ±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:
HEIMEIER M30x1.5

Contruction



1. Thermostatic insert with automatic flow limiter
2. Shut-off cone and drain 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

Multilux V Eclipse 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. **For radiators with integrated valves Multilux V Eclipse is also used as connection fitting without thermostatic head.**

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 exceed 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.

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.

Multilux V Eclipse allows the individual opportunity of shut-off, drain-off and filling. Decorating or service work can therefore be carried out without interruption.

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

Note the flow direction!

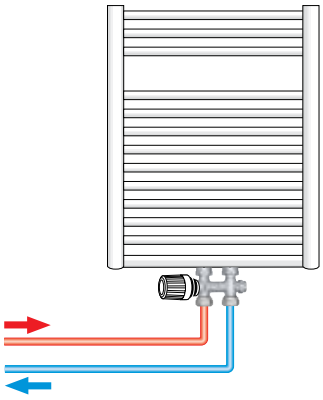
See also the installation and operating instruction.

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

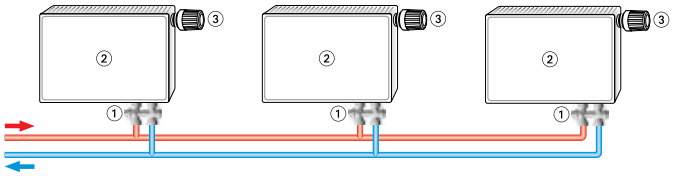
- The differential pressure above Eclipse should not exceed 60 kPa = 600 mbar = 0,6 bar (<30 dB(A)).
- Flow must be correctly adjusted.
- The system must be completely deaerated.

Sample application

Bath radiator



Radiator with integrated valves



1. Multilux V Eclipse
2. Radiator
3. Thermostatic head

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.

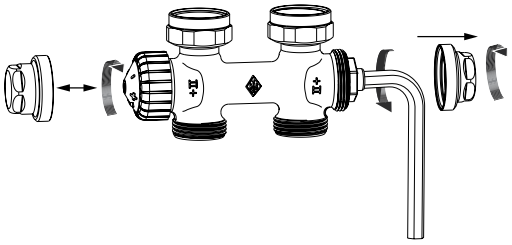
– The thermostatic valve bodies can be used with all HEIMEIER thermostatic heads and HEIMEIER or TA thermal or motorized actuators. The optimal tuning of the components guarantees maximum safety. When using actuators from other manufacturers, make sure that the pressure power is appropriate for thermostatic valve bodies with soft sealing valve discs.

Operation

Shut-off

The Multilux V Eclipse return pipe shut-off is operated with an allan key size 5 AF. The return pipe shut-off is closed by turning clockwise (Fig.).

The supply pipe to the thermostatic valve body is shut off by turning the protection cap clockwise.

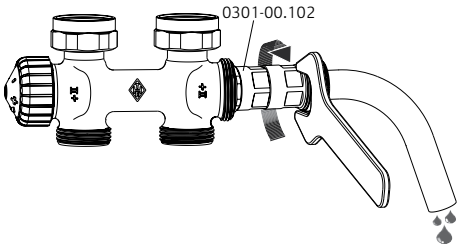


Draining off

Close return pipe shut-off and thermostatic valve insert (see shut-off). Slightly loosen the pressure piece by turning anticlockwise with an allan key size 10 AF.

Screw draining off and filling device on to Multilux V Eclipse and slightly tighten the lower hexagon with an open jawed spanner size 22 AF. Screw hose threaded joint (1/2") on to draining off and filling device.

Loosen the upper hexagon on the hose connection side with an open jawed spanner size 22 AF and unscrew to the limit by turning anticlockwise (Fig.).

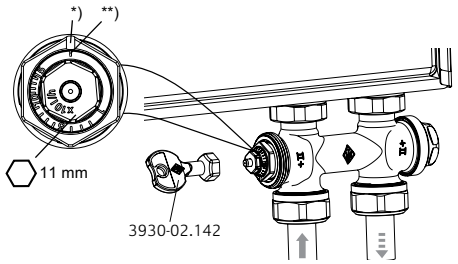


Flow setting

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.

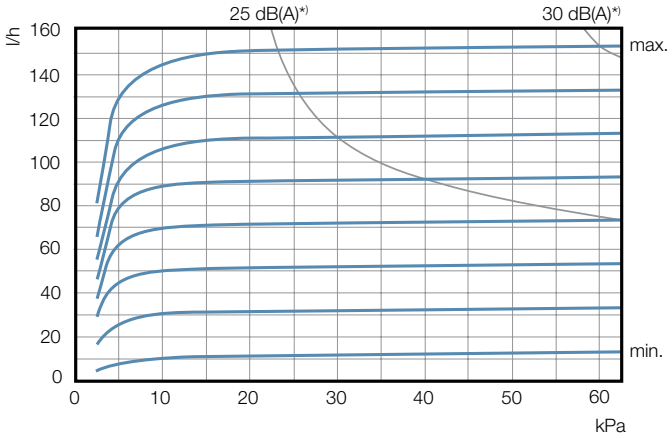


*) Index
**) Commissioning setting

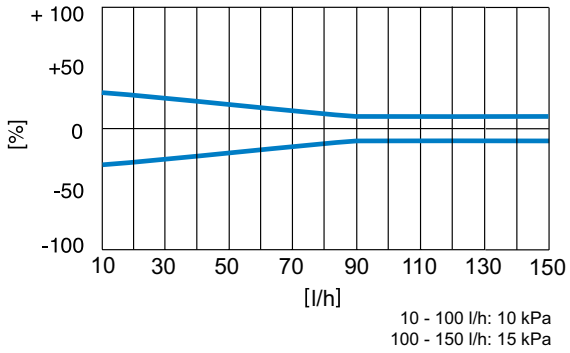
Setting	1	I	I	I	5	I	I	I	I	10	I	I	I	I	15
l/h	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150

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

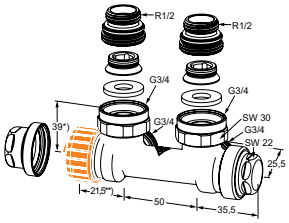
Q [W]	200	250	300	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200	3400	3600	3800	4000	4800	5300	6500	6800
Δt [K]																													
10	2	2	3	3	4	5	6	7	8	9	10	12	14	15															
15	1	1	2	2	3	3	4	5	5	6	7	8	9	10	12	13	14	15											
20	1	1	1	2	2	3	3	3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

Δp min. 10 - 100 l/h = 10 kPa
Δp min. 100 - 150 l/h = 15 kPa

Q = Radiator performance
Δt = System differential temperature
Δp = Differential pressure

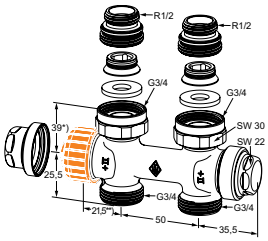
Sample:
Q = 1000 W, Δt = 15 K
Setting value: **6** (≈ 60 l/h)

Articles



Angle
Female thread
Nickel plated gunmetal

Connection radiator	Flow range [l/h]	EAN	Article No
Rp1/2 / G3/4	10-150	4024052938612	3866-02.000

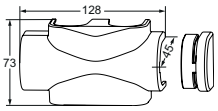


Straight
Female thread
Nickel plated gunmetal

Connection radiator	Flow range [l/h]	EAN	Article No
Rp1/2 / G3/4	10-150	4024052938513	3865-02.000

*) Bearing surface seal top edge.
**) Value at the bearing surface thermostatic head or actuator.

Accessories

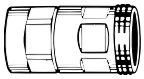


Cover
made of plastic.
For angle and straight forms.

Colour	EAN	Article No
white RAL 9016	4024052459254	3850-50.553
chrome plated	4024052553617	3850-12.553

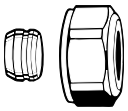
Setting key
for Eclipse. Color orange.

	EAN	Article No
	4024052937714	3930-02.142



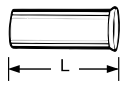
Draining off and filling device
for 1/2”-hose connection.

	EAN	Article No
	4024052114511	0301-00.102



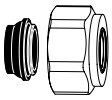
Compression fitting
for copper or precision steel pipe according to DIN EN 1057/10305-1/2.
Connection male thread G 3/4 according to DIN EN 16313 (Eurocone).
Metal-to-metal joint. Brass nickel-plated.
With a pipe wall thickness of 0.8-1 mm insert supporting sleeves. Heed pipe manufacturer’s technical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

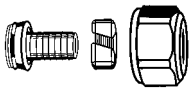


Compression fitting
for copper or precision steel pipe according to DIN EN 1057/10305-1/2.
Connection male thread G 3/4 according to DIN EN 16313 (Eurocone).
Soft sealed, max. 95°C.
Nickel-plated brass.

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

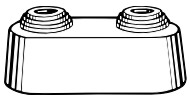
Compression fitting
for Alu/PEX multi-layer pipe according to DIN 16836. Connection male thread G 3/4 according to DIN EN 16313 (Eurocone).
Nickel-plated brass.

Ø Pipe	EAN	Article No
16x2	4024052137312	1331-16.351



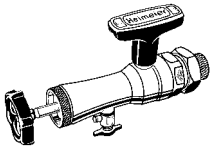
Compression fitting
for plastic pipe according to DIN 4726, ISO 10508.
PE-X: DIN 16892/16893, EN ISO 15875; PB: DIN 16968/16969.
Connection male thread G 3/4 according to DIN EN 16313 (Eurocone).
Nickel-plated brass.

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



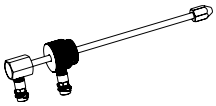
Double rosette
Dividable in the middle, made of plastic, white, for various pipe diameters.
Centre distance 50 mm.
Overall height max. 31 mm.

	EAN	Article No
	4024052120710	0520-00.093



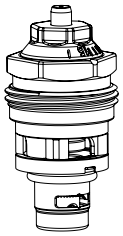
Fitting tool
complete with case, box spanner and replacement seals, for replacing thermostatic inserts without draining off the heating system (for DN 10 to DN 20).

	Article No
Fitting tool	9721-00.000



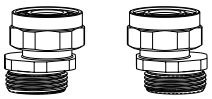
Measuring spindle for fitting tool
for differential pressure measurement at thermostatic valve bodies with TA-Scope balancing instrument.

	EAN	Article No
	4024052942114	9790-01.890



Replacement thermostatic insert
with automatic flow limiter for Eclipse.

	EAN	Article No
	4024052940912	3930-02.300



S-connection set
consisting of 2 adapter pieces G3/4 x G3/4.
Brass nickel-plated.

	Model	EAN	Article No
Set 1	Axial distance min. 40/50 to max. 60/50	4024052840816	1354-02.362
Set 2	Axial distance min. 35/50 to max. 65/50	4024052840915	1354-22.362

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