Climate
Control

IMI Heimeier

E-Z Valve

Thermostatic valves with radiator connection systems

For one- and two-pipe heating systems

Breakthrough
engineering for
a better world

E-Z Valve

E-Z Valve with immersion pipe is connected to radiators with a lower one-point connection, e.g. bathroom radiators, column radiators, etc.. Centre-to-centre distance of pipe connections 50 mm.

Key features

Body made of nickel-plated corrosion-free gunmetal

Return shut-off

Two-pipe design with presetting

For all IMI Heimeier thermostatic heads and actuators

Technical description

Applications area:
Two- and one-pipe heating systems

Function:
Control
Presetting
Shut-off

Dimensions:
DN 15

Pressure class:
PN 10

Temperature:
Max. working temperature: 120°C, with protection cap or actuator 100°C.
Min. working temperature: -10°C.

Materials:
Valve body: Corrosion resistant Gunmetal.
O-rings: EPDM rubber
Valve disc: EPDM rubber
Return spring: Stainless steel
Valve insert: Brass
The complete thermostatic insert can be replaced using the fitting tool without draining the system.
Spindle: Niro-steel spindle with double O-ring sealing. The outer O-ring can be replaced under pressure.
Immersion pipe: Brass

Other:
See “Accessories”.

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

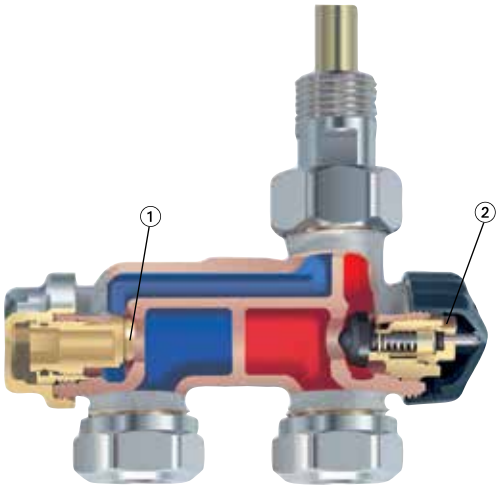
Marking:
Two-pipe:
THE, flow direction arrow.
Black protection cap.
One-pipe:
THE, flow direction arrow, 35/65.
Blue protection cap.

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

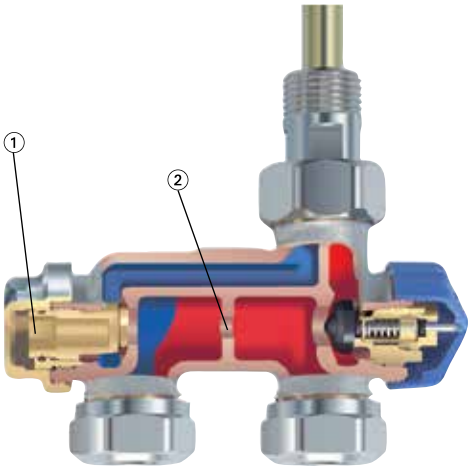
Construction

Two-pipe system
Black protection cap



1. Shut-off / regulator cone
2. Thermostatic head part

One-pipe system
Blue protection cap

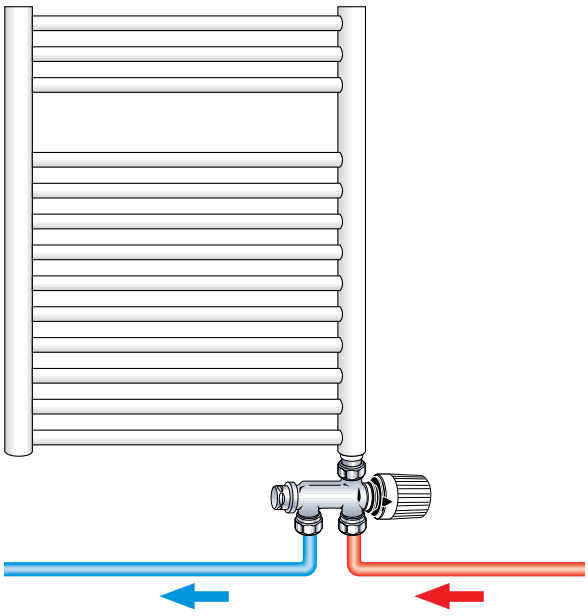


1. Return shut-off
2. Bypass aperture

Application

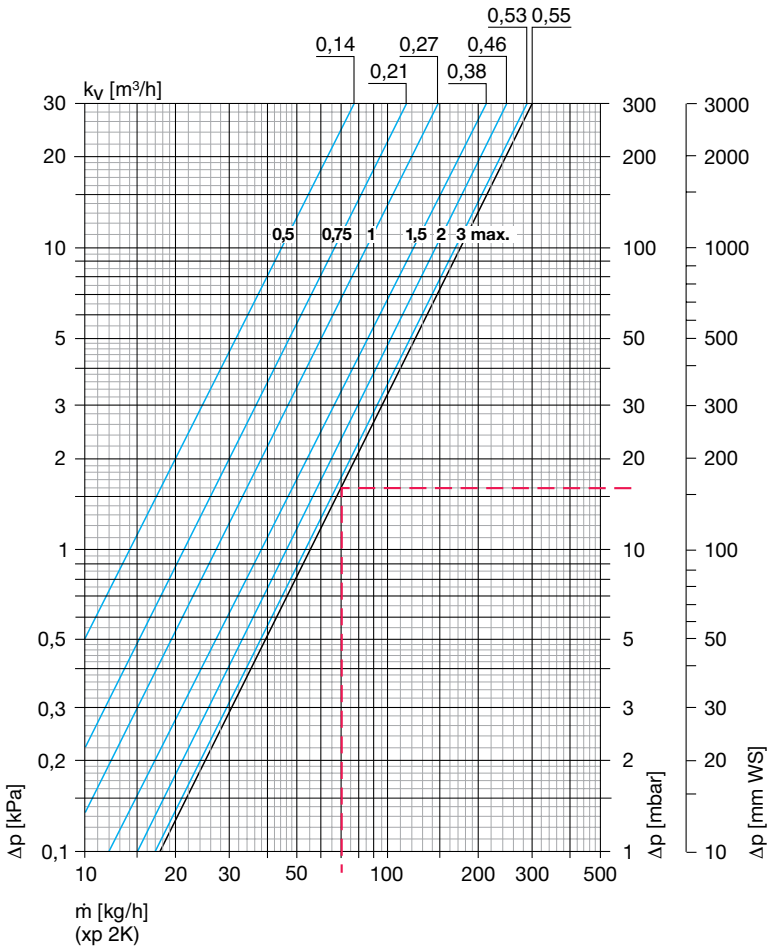
E-Z Valve with immersion pipe is connected to radiators with a lower one-point connection, e.g. bathroom radiators, column radiators, etc. (Follow the directions of the radiator manufacturer).
The two-pipe design is suited to pump heating installations with normal temperature spread. The shut-off regulating cone enables hydraulic balancing in order to provide all radiators with the required amount of hot water.
The one-pipe design is used for conventional one-pipe heating systems in which all radiators are connected to a single heating circuit. The circuit flow rate is designed to distribute 35% to radiators and 65% to bypass.
When the valve is shut-off, the bypass maintains the circuit flow rate such that the circulation in the pipes is not interrupted. In this way it is possible, for example, to integrate towel radiators into a floor radiator circuit.
Both the flow and return on E-Z Valves can be shut-off. Painting and maintenance work can therefore be executed without interrupting the operation of other radiators.

Sample application



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 actuators or motorized. 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.

Technical data – Two-pipe



Thermostatic head with E-Z Valve two-pipe

	Kv value (presetting max.) *) P-band xp [K]					Kvs	Permitted differential pressure at which the valve still closes Δp [bar]		
	1,0	1,5	2,0	2,5	3,0		Th.-head	EMO T/NC EMOtec/NC TA-TRI	EMO T/NO EMOtec/NO TA-Slider 160
DN 15 (1/2") angle, straight	0,31	0,44	0,55	0,62	0,67	0,83	1,00	2,70	3,50

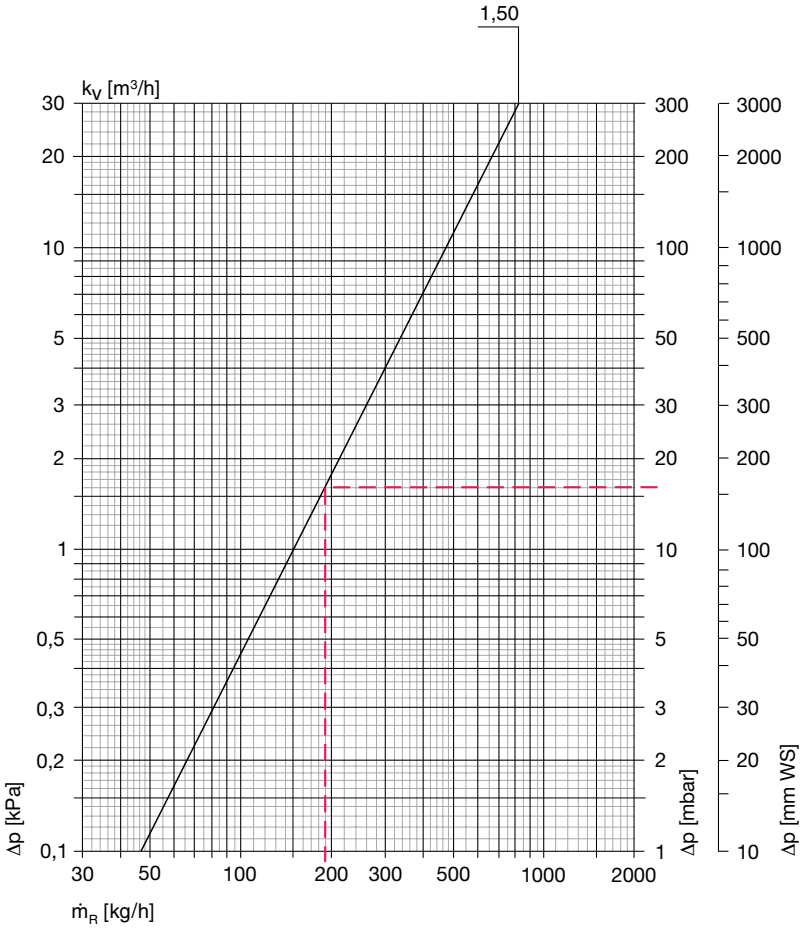
*) factory setting

Sample calculation
Goal:
Determine pressure loss for two-pipe E-Z Valve Preset max.

Given:
Heat flow Q = 1225 W
Temperature spread Δt = 15 K (65/50°C)

Solution:
Mass flow rate m = Q / (c · Δt) = 1225 / (1,163 · 15) = 70 kg/h
Pressure loss from diagram Δp_v = 16 mbar

Technical data – One-pipe



Equivalent pipe lengths [m]

Kv	12 x 1	14 x 1	15 x 1	16 x 1	18 x 1
1,50	2,2	6,1	9,1	13,7	26,8

Copper pipe
t = 80 °C (176 °F)
v = 0,5 m/s

Thermostatic head with E-Z Valve one-pipe

	Radiator portion [%]	Kv value	Kv value (Thermostatic valve closed)
DN 15 (1/2") angle, straight	35	1,50	1,10

Sample calculation
Goal:
Determine pressure loss for E-Z Valve, one-pipe Radiator mass flow rate

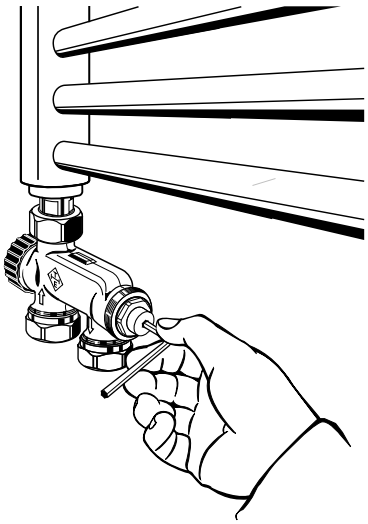
Given:
Heat flow in closed circuit Q = 4420 W
Temp. flux in circuit Δt = 20 K (70/50°C)
Radiator portion m_{HK} = 35%

Solution:
Mass flow in circuit $m_R = Q / (c \cdot \Delta t) = 4420 / (1{,}163 \cdot 20) = 190$ kg/h
E-Z Valve pressure loss Δp_v = 16 mbar
Radiator mass flow $m_{HK} = m_R \cdot 0{,}35 = 190 \cdot 0{,}35 = 66{,}5$ kg/h

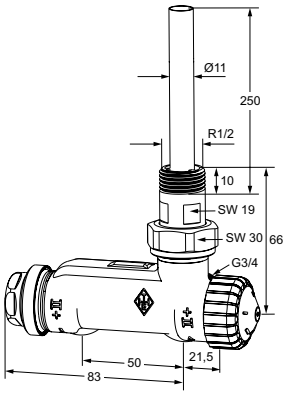
Operation

Shut-off
The E-Z Valve return shut-off is actuated using a hexagon key, size 8. Turn it clockwise to close. If the E-Z Valve is set for a hydraulic balancing, the corresponding number of rotations for shut-off must be determined specifically. This helps to guarantee that, after connecting a radiator, the original setting can be reestablished.
Flow is blocked by turning the protection cap on the thermostatic valve insert clokkwise. If the radiator is dismantled, it is necessary for reasons of safety to shut off the E-Z Valve with an additional plug cap G3/4.

Presetting (two-pipe system)
The E-Z Valve is infinitely variable using a hexagon key, size 8. The valve is first closed and then set using the required number of rotations. The specific number of rotations for the presetting can be taken from the diagram under Technical data. The lock shield is set completely open at the factory.

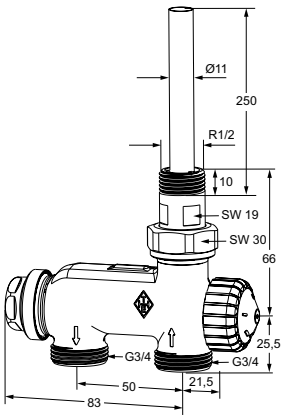


Articles



Angle
Nickel plated gunmetal

DN	kv value (max. presetting)*) P-band xp [K]			Kvs	kv value Radiator portion 35%	EAN	Article No
	1	2	3				
Two-pipe system							
15 (1/2”)	0,31	0,55	0,67	0,83		4024052375301	3879-02.000
One-pipe system (Housing ID no. 35/65)							
15 (1/2”)					1,50	4024052375103	3877-02.000

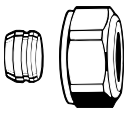


Straight
Nickel plated gunmetal

DN	kv value (max. presetting)*) P-band xp [K]			Kvs	kv value Radiator portion 35%	EAN	Article No
	1	2	3				
Two-pipe system							
15 (1/2”)	0,31	0,55	0,67	0,83		4024052375202	3878-02.000
One-pipe system (Housing ID no. 35/65)							
15 (1/2”)					1,50	4024052375004	3876-02.000

*) factory setting

Accessories

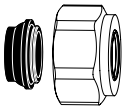


Compression fitting
for copper or precision steel pipe according to DIN EN 1057/10305-1/2.
Connection external thread G3/4 according to DIN EN 16313 (Eurocone).
Metal-to-metal joint.
Brass nickel-plated.
With a pipe wall thickness of 0.8-1 mm insert supporting sleeves. Heed pipe manufacturer's technical advice.

Ø Pipe	EAN	Article No
12	4024052214211	3831-12.351
14	4024052214310	3831-14.351
15	4024052214617	3831-15.351
16	4024052214914	3831-16.351
18	4024052215218	3831-18.351

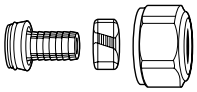
Supporting sleeves
for copper or precision steel pipe with a wall thickness of 1 mm.

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 and stainless steel pipe.
Connection external thread G3/4 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

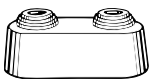


Compression fitting
for plastic pipe according to DIN 4726, ISO 10508.
PE-X: DIN 16892/16893, EN ISO 15875; PB: DIN 16968/16969.
Connection external thread G3/4 according to DIN EN 16313 (Eurocone).
Nickel plated brass.

Ø Pipe	EAN	Article No
12x1,1	4024052136018	1315-12.351
14x2	4024052134618	1311-14.351
16x1,5	4024052136117	1315-16.351
16x2	4024052134816	1311-16.351
17x2	4024052134915	1311-17.351
18x2	4024052135110	1311-18.351
20x2	4024052135318	1311-20.351

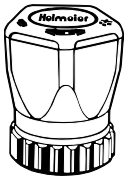
Compression fitting
for Alu/PEX multi-layer pipe according to DIN 16836.
Connection external thread G3/4 according to DIN EN 16313 (Eurocone).
Nickel-plated brass.

Ø Pipe	EAN	Article No
16x2	4024052137312	1331-16.351
18x2	4024052137411	1331-18.351



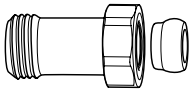
Double rosette
Dividable in the middle, made of plastic, white, for various pipe diameters.
Centre distance 50 mm.
Overall height max. 31 mm.

	EAN	Article No
	4024052120710	0520-00.093



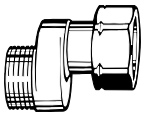
Hand regulating cap
for all IMI Heimeier thermostatic valve bodies.

	EAN	Article No
white RAL 9016	4024052156610	2001-00.325



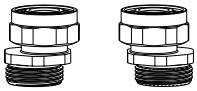
Length adjustment fitting
For connecting to plastic, copper, precision steel or multi-layer pipes.
For valves with external thread connection G3/4.
Brass nickel-plated.

	L	EAN	Article No
G3/4 x G3/4	25	4024052298310	9713-02.354
G3/4 x G3/4	50	4024052298419	9714-02.354



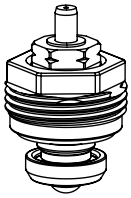
S-connection
For compensating different pipe distances, e. g. when replacing old one-pipe valves.
Note flow direction!
Brass, nickel-plated.

	Axial distance [mm]	Total length [mm]	EAN	Article No
G3/4 x G3/4	11,5	43	4024052139217	1351-02.362



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



Thermostatic insert
Replacement part.

	EAN	Article No
	4024052132614	1302-02.300

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