

Calypso TRV-3

(for the Nordic countries)



Thermostatic radiator valves
With presetting



Engineering
GREAT Solutions

Calypso TRV-3

(for the Nordic countries)

Thermostatic radiator valve primary for radiators in heating systems and secondary for small cooling terminals.



Technical description

Applications:

Heating and cooling systems

Function:

Control
Stepless presetting
Shut-off

Dimensions:

DN 10-20

Pressure class:

PN 10

Max. differential pressure:

Maximum differential pressure to ensure that the valve does not open against a closed thermostat: 100 kPa.

Temperature:

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

Materials:

Valve body: Brass
O-rings: EPDM rubber
Valve disc: EPDM rubber
Return spring: Stainless steel
Valve insert: Brass, PPS (polyphenylsulphide)
Spindle: Niro-steel spindle with double O-ring sealing.

Surface treatment:

Valve body and fittings are nickel-plated

Marking:

TA, country code, flow direction arrow, size and KEYMARK symbol.
Red protection cap.
Upper part of valve insert: Red

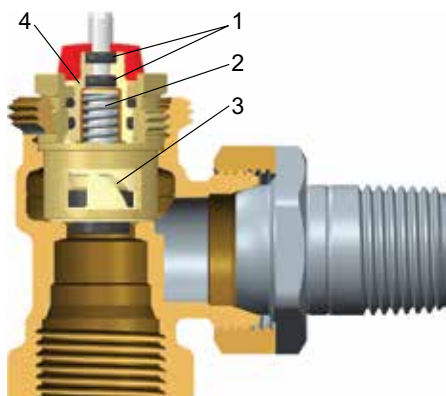
Standards:

KEYMARK certified and tested according to EN 215.



Connection to thermostatic head:
M30x1.5

Construction



1. Long-life double O-ring sealing.
2. Strong return spring in combination with high locating force ensures that the valve does not slacken off over time.
3. Precise regulating part for accurate stepless presetting.
4. Valve insert replaceable using the fitting tool without draining the system.

Replaceable insert

The complete thermostatic insert can be replaced using the fitting tool (with black handwheel) without draining the system.

Noise

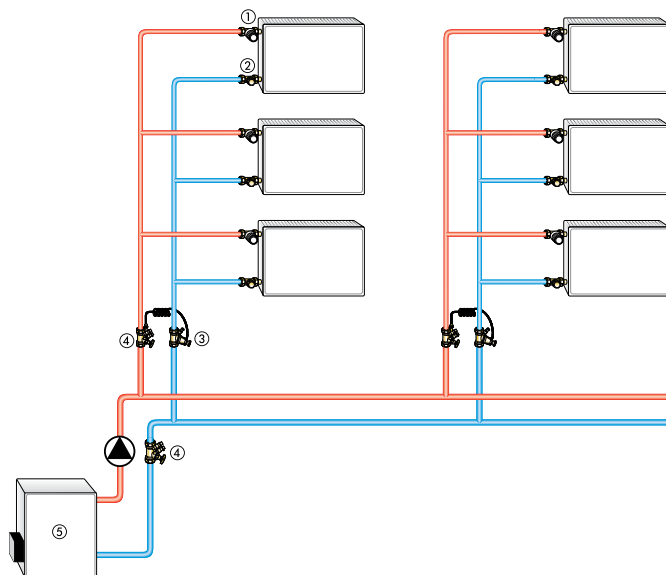
The following conditions must be fulfilled in order to avoid noise in the heating system:

- Flows correctly balanced
- The water in the system must have been de-aerated
- Circulation pumps which do not give too high differential pressure (alternative use a differential pressure controller, e.g. STAP).

The maximum recommended pressure drop in order to avoid noise: 30 kPa = 0,3 bar.

Installation

Sample application



1. Calypso TRV-3 thermostatic valve body
2. Regutec lockshield
3. STAP differential pressure controller
4. STAD balancing valve
5. Boiler

Notes

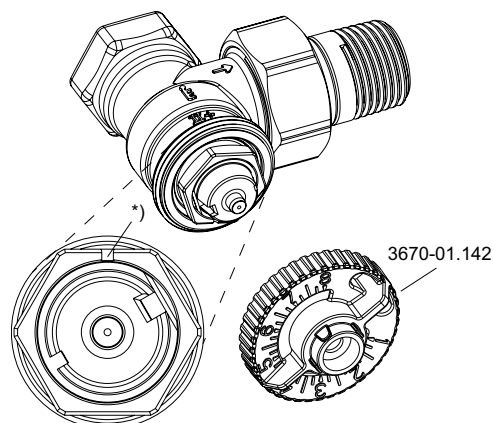
- To avoid damage and the formation of scale deposit in the hot water heating system, the composition of the heat transfer medium should be in accordance with the VDI guideline 2035.
For industrial and long-distance energy systems, see the applicable codes VdTÜV and 1466/AGFW FW 510.
A heat transfer 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.

Setting

The valve has stepless presetting which can be adjusted by the presetting tool (Article No. 3670-01.142).

The valve is delivered fully open valve (presetting 8).

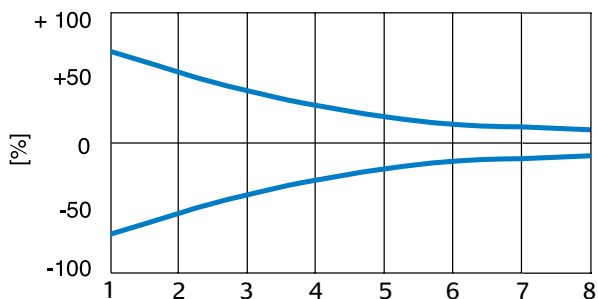
1. Remove the protective cap.
2. Set the required value using the presetting tool.
3. Refit the protective cap alternatively fit the thermostat head.



*) Index

Calypso TRV-3	With thermostatic head	With thermostatic head	Tolerance	Flow deviation
Setting	Kv	l/h	%	l/h
1,0	0,01	3	70	2,1
1,5	0,024	8		
2,0	0,038	12	55	6,6
2,5	0,056	18		
3,0	0,073	23	40	9,2
3,5	0,083	26		
4,0	0,092	29	30	8,7
4,5	0,117	37		
5,0	0,142	45	20	9,0
5,5	0,201	63		
6,0	0,259	82	15	12,3
6,5	0,324	102		
7,0	0,389	123	12	14,8
7,5	0,455	144		
8,0	0,520	164	10	16,4

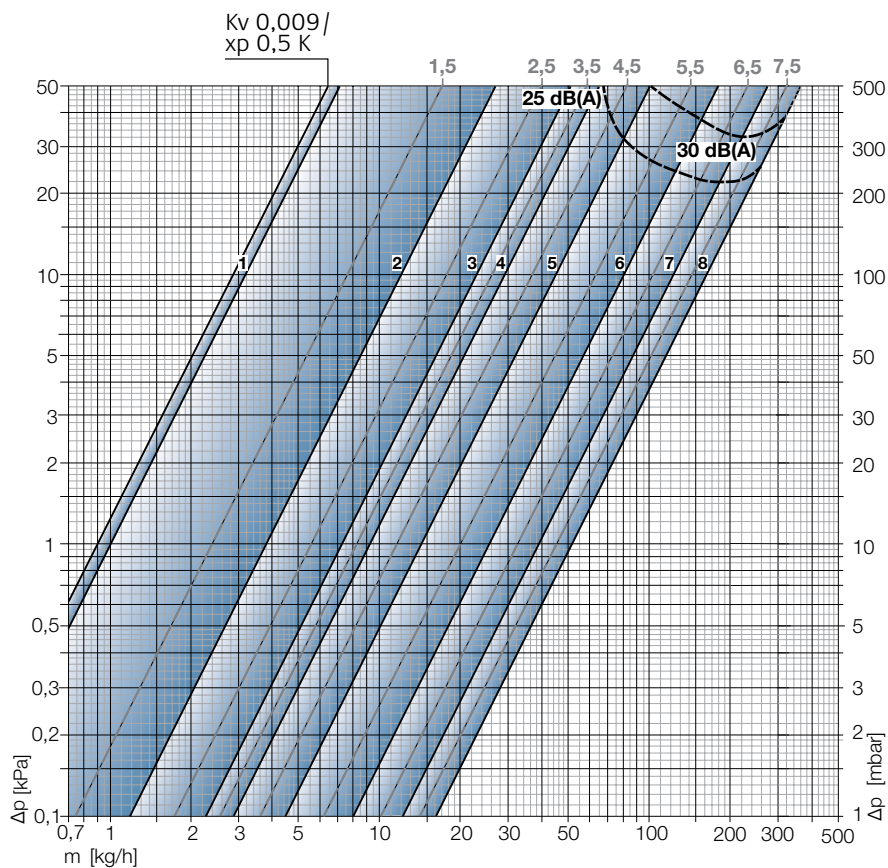
Flow deviation



Diagram

Valve body with thermostatic head

P-band [xp] 2.0 K



Kv values – DN 10, 15, 20

	Presetting														Permitted differential pressure, during which the valve is kept closed Δp [bar]		
	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8	Th.-head	EMO T/TM EMOtec EMO 3 TA-Slider 160
P-band [xp] 2.0K	0,010	0,024	0,038	0,056	0,073	0,083	0,092	0,117	0,142	0,201	0,259	0,324	0,389	0,455	0,520	1,0	3,5
Fully open valve disc**	0,010	0,024	0,038	0,056	0,073	0,083	0,092	0,117	0,142	0,224	0,261	0,345	0,398	0,486	0,544***		

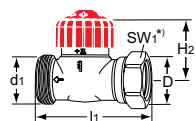
*) The values are valid when used together with thermostatic head TRV 300 or TRV Nordic.

**) The values are valid for on/off regulation with, for example, thermo actuator EMO T.

***) Fully open valve.

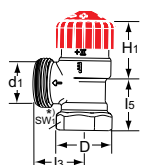
Kv/Kvs = m³/h at a pressure drop of 1 bar.

Excluding radiator union



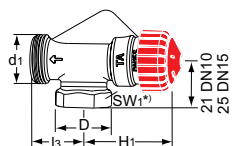
Straight

DN	D	d1	l1	H2	Kv Δ T2K	EAN	Article No
10	G3/8	M22x1,5	50	22,5	0,010-0,520	4024052948710	50 820-010
15	G1/2	M26x1,5	58	23,5	0,010-0,520	4024052948611	50 820-015
20	G3/4	M34x1,5	68	23,5	0,010-0,520	4024052948512	50 820-020



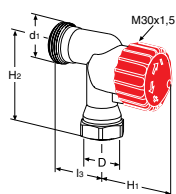
Angle

DN	D	d1	l3	l5	H1	Kv Δ T2K	EAN	Article No
10	G3/8	M22x1,5	23	21	27	0,010-0,520	4024052948413	50 822-010
15	G1/2	M26,1,5	26	25	24,5	0,010-0,520	4024052948314	50 822-015
20	G3/4	M34x1,5	31	28	23,5	0,010-0,520	4024052948215	50 822-020



Reversed angle

DN	D	d1	l3	H1	Kv Δ T2K	EAN	Article No
10	G3/8	M22x1,5	23	37,0	0,010-0,520	4024052948116	50 824-010
15	G1/2	M26x1,5	26	38,5	0,010-0,520	4024052948017	50 824-015



Angle

For replacement of radiator valve in manifold assemblies.

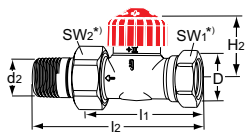
DN	D	d1	l3	H1	H2	Kv Δ T2K	EAN	Article No
10	G3/8	M22x1,5	27	37	46,5	0,010-0,520	4024052947911	50 824-110
With KOMBI connection for connection pipe \varnothing12 mm								
10	\varnothing 12	M22x1,5	27	37	46,5	0,010-0,520	4024052946914	50 824-012

$K_v = m^3/h$ at $\Delta p = 1$ bar.

$K_v\Delta T2K$ = The values are valid when used together with thermostatic head TRV 300 or TRV Nordic.

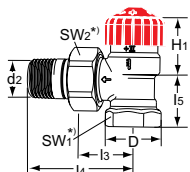
All valves can be connected to smooth pipes by means of the KOMBI compression coupling. DN 15 can also be connected to Alu/PEX pipes by means of the KOMBI-MT compression coupling. See catalogue leaflets KOMBI and KOMBI-MT.

Including radiator union



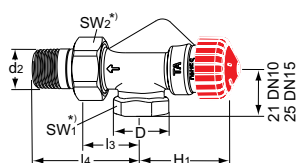
Straight

DN	D	d2	I1	I2	H2	KvΔT2K	EAN	Article No
10	G3/8	R3/8	50	75	22,5	0,010-0,520	4024052947812	50 820-310
15	G1/2	R1/2	58	88	23,5	0,010-0,520	4024052947713	50 820-315
20	G3/4	R3/4	68	102	23,5	0,010-0,520	4024052947614	50 820-320



Angle

DN	D	d2	I3	I4	I5	H1	KvΔT2K	EAN	Article No
10	G3/8	R3/8	23	48	21	27	0,010-0,520	4024052947515	50 822-310
15	G1/2	R1/2	26	56	25	24,5	0,010-0,520	4024052947416	50 822-315
20	G3/4	R3/4	31	65	28	23,5	0,010-0,520	4024052947317	50 822-320



Reversed angle

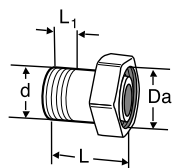
DN	D	d2	I3	I4	H1	KvΔT2K	EAN	Article No
10	G3/8	R3/8	23	48	37,0	0,010-0,520	4024052947218	50 824-310
15	G1/2	R1/2	26	56	38,5	0,010-0,520	4024052947119	50 824-315

$K_v = m^3/h$ at $\Delta p = 1$ bar.

$K_v\Delta T2K$ = The values are valid when used together with thermostatic head TRV 300 or TRV Nordic.

All valves can be connected to smooth pipes by means of the KOMBI compression coupling. DN 15 can also be connected to Alu/PEX pipes by means of the KOMBI-MT compression coupling. See catalogue leaflets KOMBI and KOMBI-MT.

Radiator connections

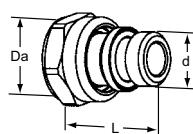


Straight sleeve with nut

(Taper connection)

For heating and tap water installations

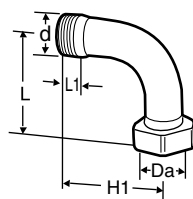
DN	d	Da	L	L1	EAN	Article No
10	R3/8	M22x1,5	25	8	7318792687402	50 701-510
15	R1/2	M26x1,5	30	10	7318792687501	50 701-515
15	R1/2	M22x1,5	25	10	7318792687600	50 701-516
20	R3/4	M34x1,5	34	11	7318792687709	50 701-520



Straight sleeve with O-ring and nut

(Taper connection)

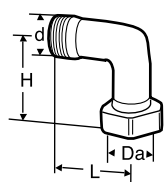
DN	d	Da	L	EAN	Article No
10	G3/8	M22x1,5	33	7318793825704	50 707-610
15	G1/2	M26x1,5	32	7318793830401	50 707-615
15	G1/2	M22x1,5	33	7318793825803	50 707-616



Elbow with nut

(Taper connection)

DN	d	Da	L	L1	H	EAN	Article No
10	R3/8	M22x1,5	48	8	44	7318792689208	50 702-110
15	R1/2	M26x1,5	56	10	46	7318792689307	50 702-115
20	R3/4	M34x1,5	65	11	51	7318792689406	50 702-120



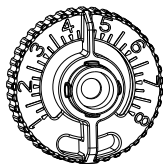
Elbow

For manifold assemblies

(Taper connection)

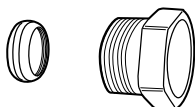
DN	d	Da	L	H	EAN	Article No
10	M22x1,5	M22x1,5	27	26,5	7318792689802	50 702-510

Accessories



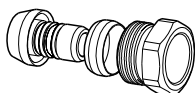
Pre-setting tool
For Calypso TRV-3.
Colour: Grey

EAN	Article No
4024052035823	3670-01.142



KOMBI compression coupling
Max.: 100°C
(For more information see catalogue leaflet KOMBI.)

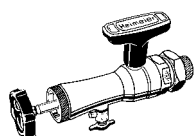
Male pipe threads on thrust screw	For pipes, diameter	EAN	Article No
G3/8	8	7318792874505	53 235-103
G3/8	10	7318792874604	53 235-104
G3/8	12	7318792874703	53 235-107
G1/2	10	7318792874901	53 235-109
G1/2	12	7318792875007	53 235-111
G1/2	14	7318792875106	53 235-112
G1/2	15	7318792875205	53 235-113
G1/2	16	7318792875304	53 235-114
G3/4	15	7318792875403	53 235-117
G3/4	18	7318792875601	53 235-121
G3/4	22	7318792875700	53 235-123



KOMBI-MT compression coupling
Max.: 95°C
(See catalogue leaflet KOMBI-MT)

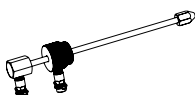
Male pipes threads on thrust screw	Dim MT pipe (Alu/PEX)	EAN	Article No
G1/2 *	14x2	7318792873706	53 231-112
G1/2 **	16x2	7318792873805	53 231-114
G1/2 **	16x2.2	7318792873904	53 231-614

*) Cone with slot **) Cone without slot



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).

	EAN	Article No
Fitting tool	4024052298914	9721-00.000
Replacement seals	4024052299010	9721-00.514



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

Spare parts



Valve insert
Calypso TRV-3

EAN	Article No
	3670-00.300

