

# TRV-2, TRV-2S



**Thermostatic radiator valves**  
With presetting

Engineering  
*GREAT* Solutions

# TRV-2, TRV-2S

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

## Key features

- > **Stepless presetting**  
Accurate balancing.
- > **Double O-rings**  
Trouble free operation.
- > **Max  $\Delta p$  30 kPa**  
Better comfort.



## 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  
Min. working temperature: -10°C

### Materials:

Valve body: Straight and angle of AMETAL®. Reversed angle of brass.  
O-rings: EPDM rubber  
Valve disc: EPDM rubber  
Return spring: Stainless steel  
Valve insert: Brass, PPS (polyphenylsulphide)  
Spindle: Stainless steel

AMETAL® is the dezincification resistant alloy of IMI Hydronic Engineering.

### Surface treatment:

Valve body and fittings are nickel-plated

### Marking:

TA, country code, flow direction arrow, size and KEYMARK symbol.  
TRV-2: White protection cap.  
TRV-2S: Red protection cap. The locking nut at the valve insert is marked in red.

### Standards:

KEYMARK certified and tested according to EN 215.



026

### Connection to thermostatic head:

M30x1.5

## Operating instruction

The valve is supplied with a protective wheel. The protective wheel can easily be replaced by a handwheel, thermostatic head or an actuator.

If the protective wheel is used to isolate when dismantling the radiator, the outlet must be plugged or capped.

**Attention!** TRV-2/TRV-2S requires clean system water to work properly without disturbance because of clogging.



## 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).

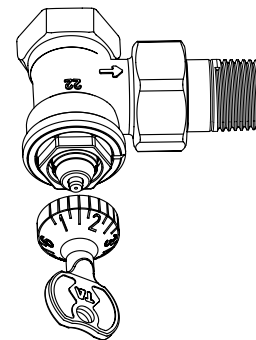
The maximum recommended pressure drop in order to avoid noise: 30 kPa = 0,3 bar.

## Setting

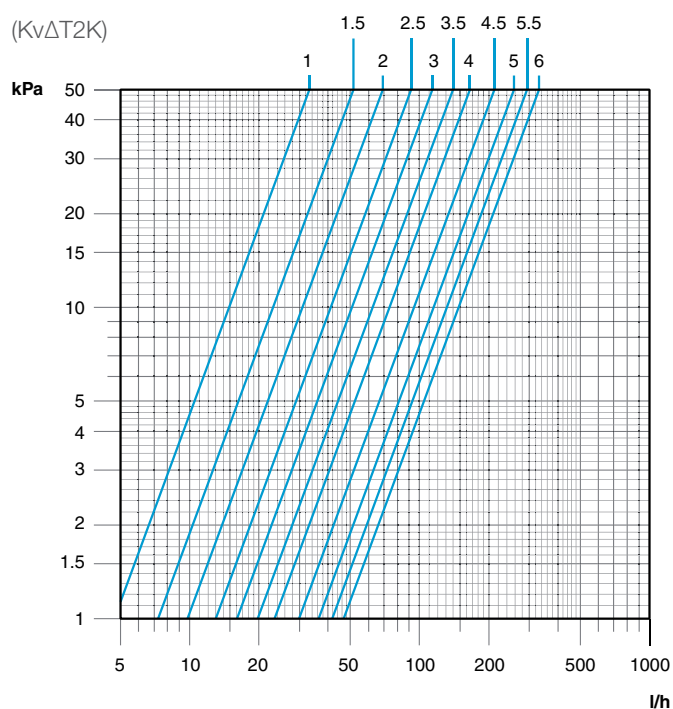
The valve has stepless pre-setting which can be adjusted by the pre-setting tool.

The valve is delivered with the pre-setting of 6, i.e. fully open valve.

1. Remove the protective wheel.
2. Set the required value using the pre-setting tool (Article No 50 198-004).
3. Refit the protective wheel (alternatively the thermostat head or the handwheel).

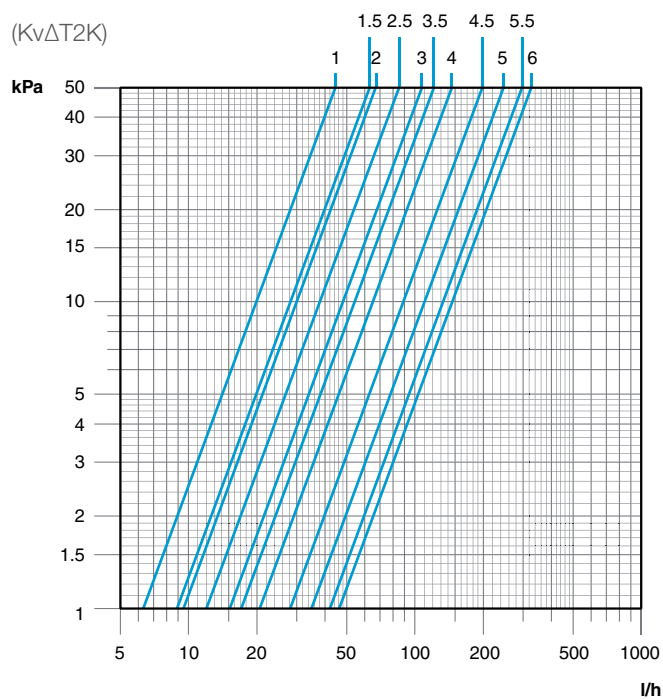


## Diagram TRV-2 Straight and angle



| Pre-setting value              | 1     | 1.5   | 2     | 2.5   | 3     | 3.5   | 4     | 4.5   | 5     | 5.5   | 6        |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <b>KvΔT2K*</b>                 | 0,047 | 0,073 | 0,098 | 0,130 | 0,161 | 0,198 | 0,234 | 0,299 | 0,364 | 0,416 | 0,468    |
| <b>Fully open valve disc**</b> | 0,054 | 0,079 | 0,104 | 0,139 | 0,174 | 0,211 | 0,247 | 0,353 | 0,459 | 0,630 | 0,800*** |

## Diagram TRV-2 Reversed angle



| Pre-setting value              | 1     | 1.5   | 2     | 2.5   | 3     | 3.5   | 4     | 4.5   | 5     | 5.5   | 6        |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <b>KvΔT2K*</b>                 | 0,063 | 0,089 | 0,095 | 0,120 | 0,152 | 0,171 | 0,206 | 0,281 | 0,348 | 0,421 | 0,462    |
| <b>Fully open valve disc**</b> | 0,063 | 0,089 | 0,095 | 0,123 | 0,158 | 0,180 | 0,221 | 0,323 | 0,430 | 0,626 | 0,727*** |

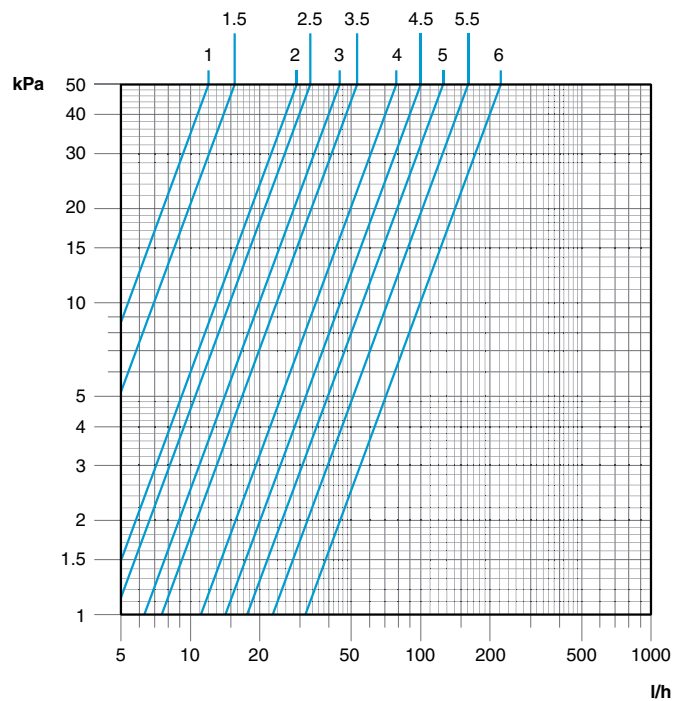
\*) The values are valid when used together with thermostatic head TRV 300.

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

\*\*\*) Fully open valve.

## Diagram TRV-2S Low flow

(KvΔT2K)



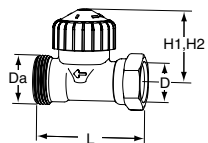
| Pre-setting value              | 1     | 1.5   | 2     | 2.5   | 3     | 3.5   | 4     | 4.5   | 5     | 5.5   | 6        |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| <b>KvΔT2K*</b>                 | 0,017 | 0,022 | 0,041 | 0,047 | 0,063 | 0,075 | 0,111 | 0,142 | 0,177 | 0,228 | 0,316    |
| <b>Fully open valve disc**</b> | 0,017 | 0,022 | 0,041 | 0,047 | 0,063 | 0,078 | 0,114 | 0,150 | 0,187 | 0,240 | 0,350*** |

\*) The values are valid when used together with thermostic head TRV 300.

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

\*\*\*) Fully open valve.

## Excluding radiator union

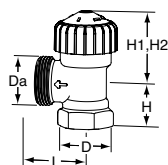


### Straight

| DN | D    | Da      | L  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 50 | 36 | 107 | 0,047-0,468 | 7318793757500 | 50 861-610 |
| 15 | G1/2 | M26x1,5 | 58 | 38 | 109 | 0,047-0,468 | 7318793757609 | 50 861-615 |
| 20 | G3/4 | M34x1,5 | 68 | 38 | 109 | 0,047-0,468 | 7318793757708 | 50 861-620 |

### TRV-2S, low flow

| DN | D    | Da      | L  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 50 | 36 | 107 | 0,017-0,316 | 7318793788009 | 50 861-010 |
| 15 | G1/2 | M26x1,5 | 58 | 38 | 109 | 0,017-0,316 | 7318793788108 | 50 861-015 |
| 20 | G3/4 | M34x1,5 | 68 | 38 | 109 | 0,017-0,316 | 7318793788207 | 50 861-020 |

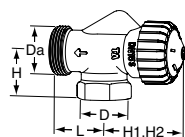


### Angle

| DN | D    | Da      | L  | H  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 23 | 20 | 36 | 107 | 0,047-0,468 | 7318793758309 | 50 863-610 |
| 15 | G1/2 | M26x1,5 | 26 | 24 | 38 | 109 | 0,047-0,468 | 7318793758408 | 50 863-615 |
| 20 | G3/4 | M34x1,5 | 31 | 28 | 36 | 107 | 0,047-0,468 | 7318793758507 | 50 863-620 |

### TRV-2S, low flow

| DN | D    | Da      | L  | H  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 23 | 20 | 36 | 107 | 0,017-0,316 | 7318793946805 | 50 863-010 |
| 15 | G1/2 | M26x1,5 | 26 | 24 | 38 | 109 | 0,017-0,316 | 7318793946904 | 50 863-015 |
| 20 | G3/4 | M34x1,5 | 31 | 28 | 36 | 107 | 0,017-0,316 | 7318793947000 | 50 863-020 |

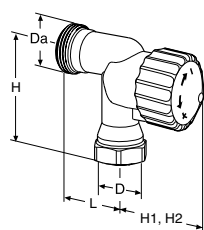


### Reversed angle

| DN | D    | Da      | L  | H  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 23 | 21 | 47 | 119 | 0,063-0,462 | 7318793759009 | 50 864-610 |
| 15 | G1/2 | M26x1,5 | 26 | 25 | 47 | 119 | 0,063-0,462 | 7318793759108 | 50 864-615 |

### TRV-2S, low flow

| DN | D    | Da      | L  | H  | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|----|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 23 | 21 | 47 | 119 | 0,017-0,316 | 7318793787606 | 50 864-010 |
| 15 | G1/2 | M26x1,5 | 26 | 25 | 47 | 119 | 0,017-0,316 | 7318793787705 | 50 864-015 |



### Angle

For replacement of radiator valve in manifold assemblies.

### TRV-2S, low flow

| DN | D    | Da      | L  | H    | H1 | H2* | KvΔT2K      | EAN           | Article No |
|----|------|---------|----|------|----|-----|-------------|---------------|------------|
| 10 | G3/8 | M22x1,5 | 27 | 46,5 | 37 | 108 | 0,017-0,316 | 7318793947703 | 50 864-210 |

\*) Valve with fitted thermostat.

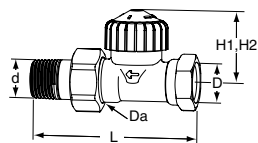
Kv = m³/h at Δp = 1 bar.

KvΔT2K = The values are valid when used together with thermostatic head TRV 300.

**All valves can be connected to smooth pipes by means of the KOMBI compression coupling**

- See catalogue leaflet KOMBI.

## Including radiator union

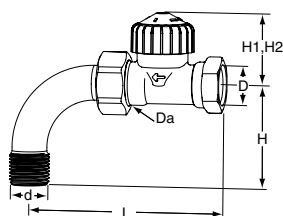


### Straight

| DN | d    | D    | Da      | L   | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|-----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 75  | 36 | 107 | 0,047-0,468     | 7318793757807 | 50 861-110 |
| 15 | R1/2 | G1/2 | M26x1,5 | 88  | 38 | 109 | 0,047-0,468     | 7318793757906 | 50 861-115 |
| 20 | R3/4 | G3/4 | M34x1,5 | 102 | 38 | 109 | 0,047-0,468     | 7318793758002 | 50 861-120 |

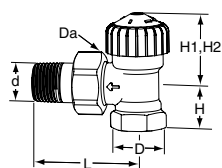
### TRV-2S, low flow

| DN | d    | D    | Da      | L  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 75 | 36 | 107 | 0,017-0,316     | 7318793788306 | 50 861-510 |
| 15 | R1/2 | G1/2 | M26x1,5 | 88 | 38 | 109 | 0,017-0,316     | 7318793788405 | 50 861-515 |



### Straight

| DN | d    | D    | Da      | L   | H  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|-----|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 93  | 46 | 36 | 107 | 0,047-0,468     | 7318793758101 | 50 862-110 |
| 15 | R1/2 | G1/2 | M26x1,5 | 106 | 52 | 38 | 109 | 0,047-0,468     | 7318793758200 | 50 862-115 |

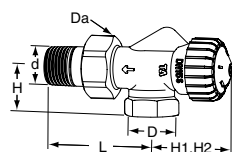


### Angle

| DN | d    | D    | Da      | L  | H  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|----|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 48 | 20 | 36 | 107 | 0,047-0,468     | 7318793758606 | 50 863-110 |
| 15 | R1/2 | G1/2 | M26x1,5 | 56 | 24 | 38 | 109 | 0,047-0,468     | 7318793758705 | 50 863-115 |
| 20 | R3/4 | G3/4 | M34x1,5 | 65 | 28 | 36 | 107 | 0,047-0,468     | 7318793758804 | 50 863-120 |

### TRV-2S, low flow

| DN | d    | D    | Da      | L  | H  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|----|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 48 | 20 | 36 | 107 | 0,017-0,316     | 7318793947109 | 50 863-510 |
| 15 | R1/2 | G1/2 | M26x1,5 | 56 | 24 | 38 | 109 | 0,017-0,316     | 7318793947208 | 50 863-515 |
| 20 | R3/4 | G3/4 | M34x1,5 | 65 | 28 | 36 | 107 | 0,017-0,316     | 7318793947307 | 50 863-520 |



### Reversed angle

| DN | d    | D    | Da      | L  | H  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|----|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 48 | 21 | 47 | 119 | 0,063-0,462     | 7318793758903 | 50 864-110 |
| 15 | R1/2 | G1/2 | M26x1,5 | 56 | 25 | 47 | 119 | 0,063-0,462     | 7318793759603 | 50 864-115 |

### TRV-2S, low flow

| DN | d    | D    | Da      | L  | H  | H1 | H2* | Kv $\Delta$ T2K | EAN           | Article No |
|----|------|------|---------|----|----|----|-----|-----------------|---------------|------------|
| 10 | R3/8 | G3/8 | M22x1,5 | 48 | 21 | 47 | 119 | 0,017-0,316     | 7318793787804 | 50 864-510 |
| 15 | R1/2 | G1/2 | M26x1,5 | 56 | 25 | 47 | 119 | 0,017-0,316     | 7318793787903 | 50 864-515 |

\*) Valve with fitted thermostat.

Kv = m<sup>3</sup>/h at  $\Delta p$  = 1 bar.

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

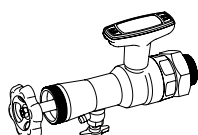
**All valves can be connected to smooth pipes by means of the KOMBI compression coupling**  
- See catalogue leaflet KOMBI.

## Accessories



### Pre-setting tool

| EAN           | Article No |
|---------------|------------|
| 7318793748102 | 50 198-004 |



### Servicing tool TRV-2, TRV-2S

When changing of valve insert during operation

| EAN           | Article No  |
|---------------|-------------|
| 4024052298914 | 9721-00.000 |

## Spare parts

The valve insert can be exchanged during operation - please contact IMI Hydronic Engineering for more information.