

Dynamic Valves

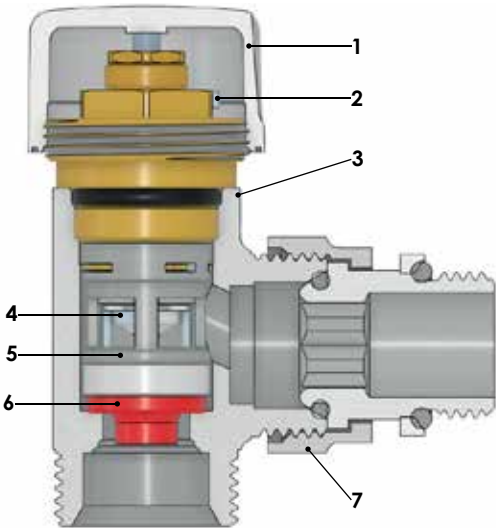


Dynamic Valves

Pressure Independent Thermostatic radiator valves

Traditionally, radiator flow rates are set manually when balancing a heating system. MHS Dynamic valves allow the installer to set the correct peak design flow rate directly on the radiator valve with a special regulation key.

The volume flow is kept constant even if the differential pressure in the system fluctuates. If, for example, the flow rate were to increase due to other thermostatic valves closing, the cartridge membrane will reduce the opening surface so that the flow rate is automatically limited to a preset value. Likewise, if the flow rate were to decrease below the preset value, the cartridge membrane will increase the opening surface and the flow rate will return to the preset value.



Advantages of MHS Dynamic Valves

- Easy to use, pre-settable flow rates allowing faster commissioning
- Automatic, hydronic balancing during all load conditions
- Control of return temperatures
- Aesthetically pleasing

1	Protection cap
2	Indicator ring
3	Valve body
4	EPDM stopper
5	Setting sleeves
6	EPDM controlled-deformation balancing membrane
7	Brass tail piece with EPDM self-seal

Calculating radiator flow rates

$$\text{Radiator flow rate} = \frac{\text{Required heat output (watts)}}{\Delta t \text{ across radiator} \times 1.16} = \text{flow rate (l/h)}$$

Example

Required output: 600 watts
Operating temperatures: 55-35-20

$$\text{Radiator flow rate} = \frac{600}{20 \times 1.16} = 25.86 \text{ l/h}$$

Therefore, use pre-setting position 3.

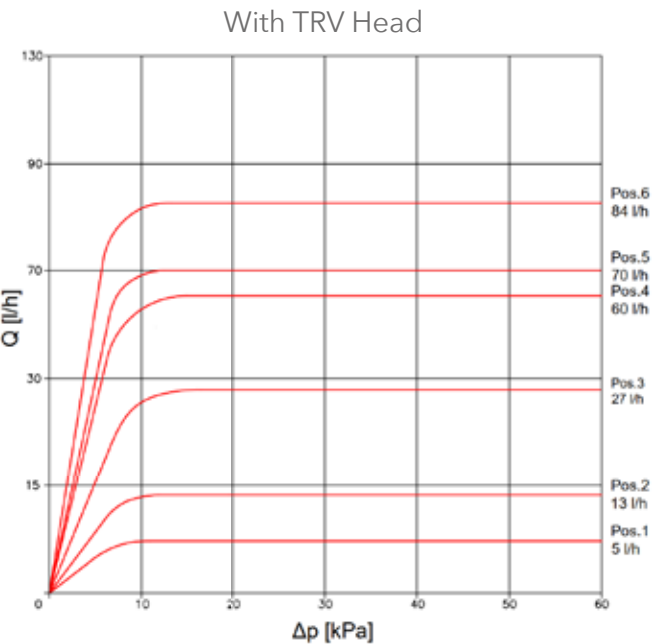
Adjusting pre-setting



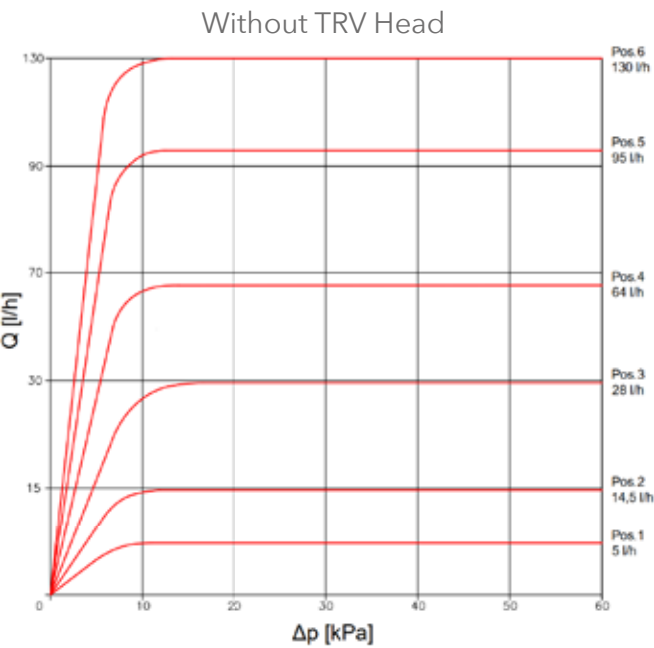
Dynamic - Pressure Drop

The diagrams show the pressure drop values of the valve in the different pre-settings. The corresponding Kv values are reported for each of them.

Pre-setting (N)	Kv (m³/h)
1	0.02
2	0.04
3	0.10
4	0.19
5	0.21
6	0.25



Pre-setting (N)	Kv (m³/h)
1	0.02
2	0.05
3	0.09
4	0.20
5	0.30
6	0.41





Dynamic Valves

Dynamic Valves

Dynamic Angled
Nickel Plated

Dynamic Angled TRV 15mm

Dynamic Angled TRV 1/2" BSP

Dynamic Straight
Nickel Plated

Dynamic Straight TRV 15mm

Dynamic Straight TRV 1/2" BSP

Dynamic Reverse Angled
Nickel Plated

Dynamic Reverse Angled TRV 15mm

Dynamic Reverse Angled TRV 1/2" BSP

TRV Heads

Anti-tamper plastic TRV head A421

Lockable plastic TRV head (White) A49500A

Lockable plastic TRV head (Chrome) A49500B

To be ordered separately to valve body & lockshield

Non-thermostatic hand wheel

Plastic hand wheel (White) A57915A

Plastic hand wheel (Chrome) A57915B

To be ordered separately to valve body & lockshield

Dynamic Angled
Chrome

Dynamic Angled Chrome TRV 15mm

Also available with 1/2" BSP connections

Dynamic Straight
Chrome

Dynamic Straight Chrome TRV 15mm

Also available with 1/2" BSP connections

Dynamic Reverse Angled
Chrome

Dynamic Reverse Angled Chrome TRV 15mm

Also available with 1/2" BSP connections

TRV Heads

Lockable plastic TRV head A49500

Brass TRV head A409

To be ordered separately to valve body & lockshield

Non-thermostatic hand wheel

Plastic hand wheel A574

To be ordered separately to valve body & lockshield

Finishes

Satin (B)

Chrome (P)

Antique Copper (AAC)

Antique Brass (AAB)

Black (BL)

White (W)

All products on this page are available in these finishes.