

Thermostat valve bodies

VarioQ



- Fixed, calibrated measuring unit for accurate adjustment of the radiator
- Fully adjustable
- Valve insert can be replaced without system having to be drained
- Lightning-fast hydraulic balancing with series HMG measuring instruments



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Application

For measuring and adjusting the volume flow directly at the valve, e.g. with the measuring instruments HMG 01/10/100 for hydraulic balancing. Suitable for small, medium and large water volumes. For installation in dual-pipe heating systems. Design as per standard, therefore, installation in existing systems without changes to the connection pipes.

Description

Patented, low-noise thermostat valve body with fixed, calibrated measuring unit for measuring and adjusting the volume flow directly at the valve. Mounting cap with valve shut-off function. Threaded connection M 30 x 1.5 mm for thermostat control heads and actuators. Fully adjustable with ES-SV adjustment key. Valve spindle with double O ring seal. The valve insert can be replaced with the MG mounting unit at operating pressure without the system having to be drained.

VarioQ is a triple-stage hydraulic balancing system which allows for optimisation of the heating pipe system by means of calculation, measurement and adjustment. The free VarioQCalc software automatically determines the optimum water volume per radiator and selects the required VarioQ valves. This information is transferred to the HMG 10/HMG 100 measuring instrument via USB data cable. The measuring instrument measures the flow rate in litres per hour and the water volume can be easily set at the valve without conversion. Even minimum flow rates can be set with this system.

Technical specifications

System connection

See ordering table

Thermostat head/actuator connection

Threaded connection M 30 x 1.5 mm

Nominal pressure

Max. 10 bar

Nominal diameter

DN 10, DN 15, DN 20

Operating temperature range

Medium: $T_{max} = 120\text{ °C}$

Housing

VarioQ S-L: Brass, nickel-plated

Option

- Version PN 16

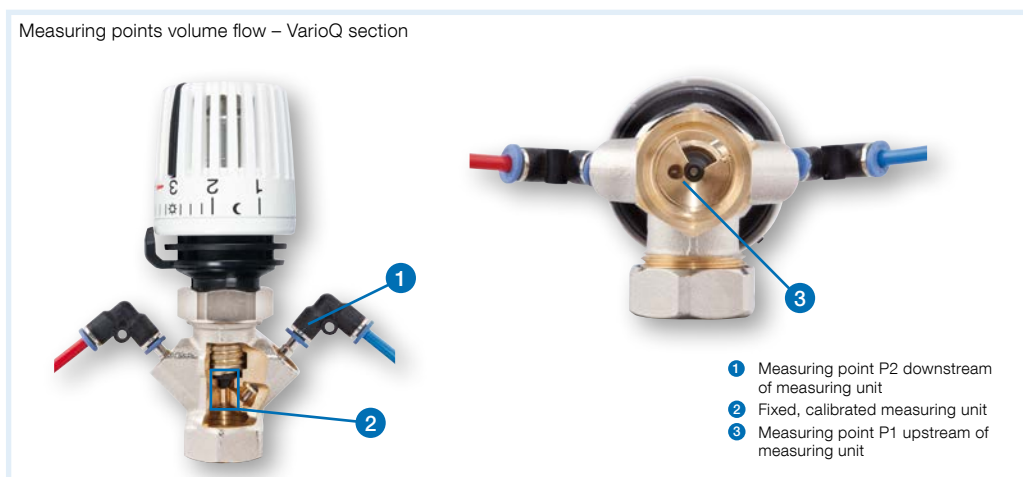
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In the case of axial version or angled-angled version (left/right), use valve body Vario (axial) or Vario angled-angled (left/right) with lockshield valve with measuring function 454 Q.

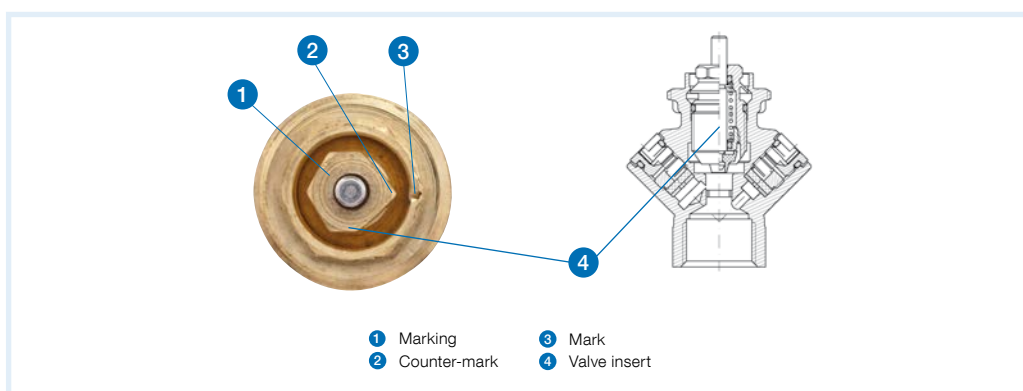
See page 235 for prices.

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Measuring points volume flow – VarioQ section



Valve pre-adjustment VarioQ thermostat valves are fully adjustable by means of the ES-SV adjustment key, starting with the open position (8 = open), see adjustment key for numbers 1–8. Mark and counter-mark are aligned. Each $\frac{1}{8}$ of a turn corresponds to one flow characteristic, shown in a diagram (see operating instructions).



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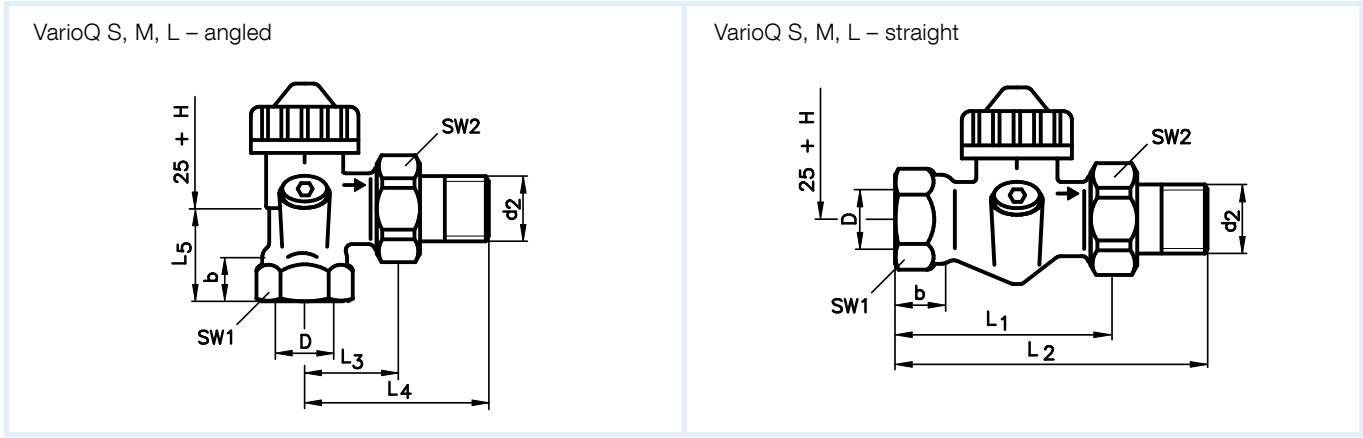
Type overview

Valve type	Marking at valve insert	Colour of mounting cap	Flow rate range in l/h*	
			Min.	Max.
VarioQ S	1 ring/red	Red	6	80
VarioQ M	2 rings	Black	20	260
VarioQ L	3 rings/green	Green	20	400

*The measurable flow rate is much higher than the adjustable range of the valves. The flow rate ranges for the VarioQ valves are shown in the ordering table.

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Types and dimensions as per EN 215, series D



Dimensions (mm) VarioQ S, M, L

DN	D	d1	d2	Spanner size SW1	Spanner size SW2	H	b min	L1 ±2	L2 ±2	L3 ±1	L4 ±1.5	L5 ±1.5	L6	L7	L8
10	Rp ³ / ₈	-	R ³ / ₈	22	27	= Height control head	10.1	59	85	26	52	22	74	26	40
15	Rp ¹ / ₂	G ³ / ₄	R ¹ / ₂	27	30		13.2	66	95	29	58	26	82	29	42
20	Rp ³ / ₄	-	R ³ / ₄	32	37		14.5	74	106	34	66	29	96	34	53

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DG: V, PG: 2	Version	Nominal diameter	Connection	Flow coefficient* (m³/h)	Flow coefficient NS** (m³/h)			Part no.	Price €
VarioQ S for small water volumes									
	Angled	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.019 - 0.24	0.25	1	35	181 110.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	30	181 120.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	25	181 130.101	
	Straight	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.019 - 0.24	0.25	1	35	181 160.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	30	181 170.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	25	181 180.101	
VarioQ M for medium water volumes									
	Angled	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.044 - 0.46	0.68	1	35	181 210.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	30	181 220.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	25	181 230.101	
	Straight	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.044 - 0.46	0.68	1	35	181 260.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	30	181 270.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	25	181 280.101	
VarioQ L for large water volumes									
	Angled	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.125–0.51	0.94	1	-	181 310.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	-	181 320.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	-	181 330.101	
	Straight	DN 10	Rp $\frac{3}{8}$ x R $\frac{3}{8}$	0.125–0.51	0.94	1	-	181 360.101	
		DN 15	Rp $\frac{1}{2}$ x R $\frac{1}{2}$			1	-	181 370.101	
		DN 20	Rp $\frac{3}{4}$ x R $\frac{3}{4}$			1	-	181 380.101	






* The flow coefficient corresponds to the water flow in m³/h through the valve at a given valve stroke (proportional offset, e.g. 1 K or 2 K) and a differential pressure of 1 bar.

** The flow coefficient NS is the flow coefficient of the valve at nominal stroke (100 % open).

***Extra charge added to standard version in €. Replace the specified digit in the standard part number with this number when ordering.

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Accessories for thermostat valve bodies VarioQ

DG: V	Description	PG			Part no.	Price €
	Adjustment key ES-SV, for valve bodies Vario and VarioQ	1	1	40	140 110.850	
	Valve insert S for DN 10–DN 20	2	1	-	140 110.221	
	Valve insert M for DN 10–DN 20	2	1	-	140 210.221	
	Valve insert L for DN 10–DN 20	2	1	-	140 310.221	
	Mounting unit MGV for replacing the valve inserts Vario, VarioQ and Vario-DP	2	1	2	140 110.860	