

- The RVO radiator valve is intended for use with pump-circulated hot water systems. It is made of AMETAL[®], brass and heat-resistant plastic. The handwheel is made of acetal plastic. Determination and adjustment of the flow resistance is done directly from the K_V-scale (see nomogram).
- The handwheel is protected by a plastic cap during delivery and assembly.
- The valve body is die cast in AMETAL[®], other parts being made of brass. The control spindle with specially shaped cone seals against the seat in the valve body and when regulated gives a flow directly proportional to the amount it is turned.
Spindle sealing is done by means of O-ring which can be replaced without having to drain off the system — a shoulder on the valve spindle sealing against the upper section when the spindle is fully screwed up.
- The valve can be locked in a particular preset position to prevent any unauthorised alteration of the valve setting.
- Valves with lockshield are preset in accordance with the K_V-scale. The calibrating card is always supplied packed together in the sealed valve carton on delivery.
- All types of RVO valves can be connected to smooth tubes by means of the KOMBI compression coupling. For further information, see the KOMBI sheets under section 4.

Type	TA.No
Straight, with union and handwheel	50 101
Straight, with bent union and handwheel	50 102
Angle, with union and handwheel	50 103
Straight, with union and lockshield	50 105
Straight, with bent union and lockshield	50 106
Angle, with union and lockshield	50 107
Regulating key	50 109

For connecting dimensions, see the following pages.

TECHNICAL DESCRIPTION

Application: Heating installations.
For potable water 50 101—910 is recommended. This valve is made in AMETAL[®], throughout and chromed. Also the TRIM programme is recommended, which is described under section 5.

Nominal pressure: PN 10

Max. working pressure: 10 bar = 1.0 MPa ≈ 150 psi

Max. working temperature: 100° C (194° F), water

Material: Valve body: die cast AMETAL[®]
Other parts: brass
Spindle sealing: O-ring
Handwheel: Acetal-plastic

Surface treatment: Nickel-plated

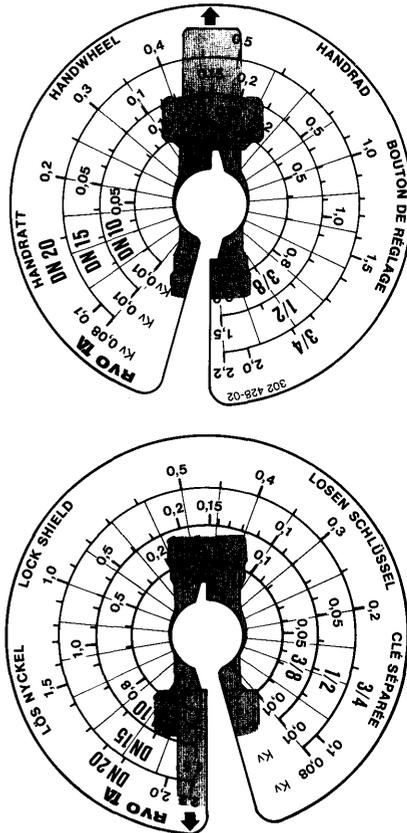
Testing: Each valve is individually tested before despatch, both for seat sealing and overall leak-tightness.

Packing: The valves are packed in cardboard boxes according to packing list.

Presetting:

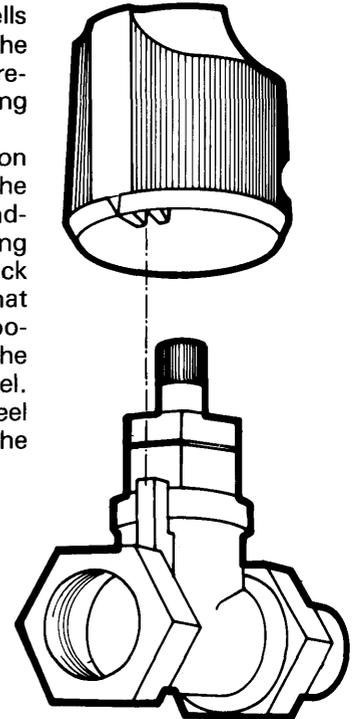
Presetting adjustment for different pressure drop conditions is done by limiting the maximum lifting height of the valve cone whereby the area is adapted so that the desired maximum flow is obtained. A template with TA scale is used for pre-setting.

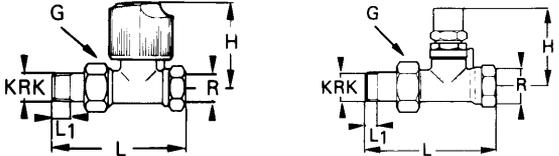
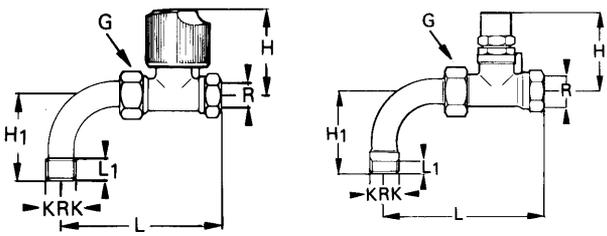
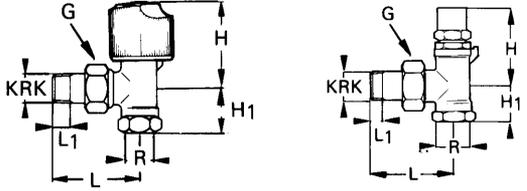
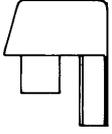
1. Close the valve
2. Loosen the handwheel screw.
3. Remove the handwheel without turning the valve spindle.
4. Place the template over the valve.
5. Fit on the handwheel so that it registers on the desired presetting value.
6. Tighten up the handwheel screw and open the valve.



In some areas e.g. stair wells it is favourable to lock the radiator valve in a fixed pre-setting value. The locking is done as follows:

- 1—5 as adjoining instruction
6. Open the valve to the stop. Remove the handwheel without turning the valve stem. Put back the handwheel so that the hook of the valve body fits between the hooks of the handwheel.
7. Tighten the handwheel screw and remove the template.



50 101	50 105 lockshield	TA.No.	R/KRK	L	L1	H	H1	G	Weight kg
		50 101-110	3/8	75	8	52	—	M22x1,5	0,20
		—115	1/2	88	10	53	—	M26x1,5	0,23
		—120	3/4	102	11	54	—	M34x1,5	0,39
		50 101-910*	3/8	75	8	52	—	M22x1,5	0,22
		50 105-110	3/8	75	8	48	—	M22x1,5	0,22
		—115	1/2	88	10	49	—	M26x1,5	0,30
—120	3/4	102	11	50	—	M34x1,5	0,42		
	50 106 lockshield	50 102-110	3/8	95	8	52	48	M22x1,5	0,23
		—115	1/2	104	10	53	56	M26x1,5	0,33
		—120	3/4	119	11	54	65	M34x1,5	0,40
		50 106-110	3/8	95	8	48	48	M22x1,5	0,24
		—115	1/2	104	10	49	56	M26x1,5	0,32
		—120	3/4	119	11	50	65	M34x1,5	0,52
	50 107 lockshield	50 103-110	3/8	50	8	52	20	M22x1,5	0,20
		—115	1/2	56	10	53	24	M26x1,5	0,28
		—120	3/4	68	11	54	28	M34x1,5	0,43
		50 107-110	3/8	50	8	48	20	M22x1,5	0,21
		—115	1/2	56	10	49	24	M26x1,5	0,24
		—120	3/4	68	11	50	28	M34x1,5	0,40
50 109 Regulating key for lockshield		50 109-001	—	—	—	—	—	—	0,01
									

* 50 101-910 of AMETAL® throughout, chromed

R = Cylindrical pipe thread (BSP Female)
 KRK = Short tapered pipe thread (BSP Male)
 H = Fully open valve

All valves can be connected to smooth tubes by means of the KOMBI compression coupling.

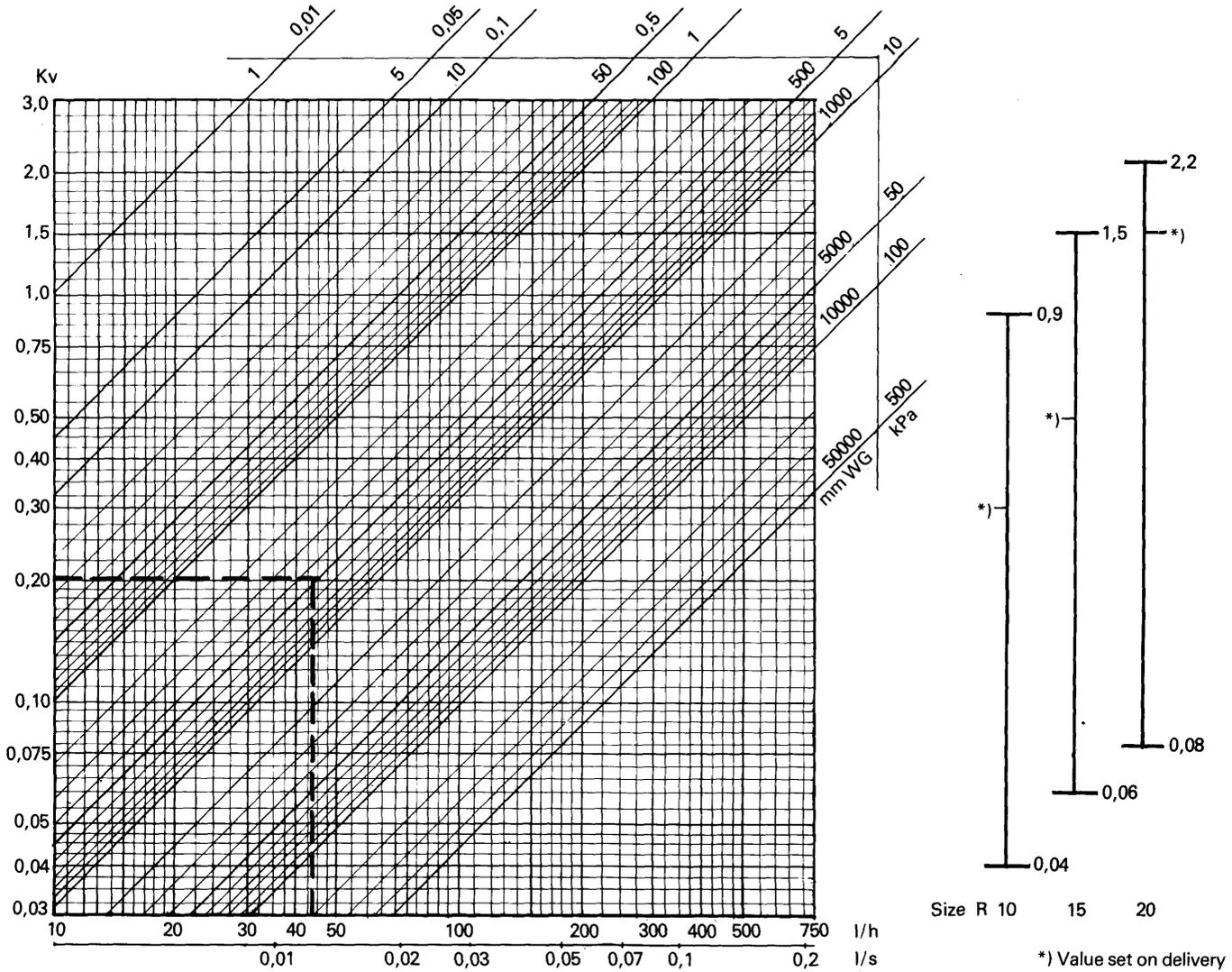
R	Pipe (mm)					
	8	10	12	15	16	18
3/8	53 235-103	53 235-104	53 235-107			
1/2	—108	—109	—111	53 235-113	53 235-114	
3/4				—117	—119	53 235-121

KOMBI ordered separately.

When ordering, specify TA-number of KOMBI coupling (53 235), connection R and pipe (mm).

Example: 53 235-3/8x8. Further information concerning KOMBI couplings can be found under section 4.

NOMOGRAM RADIATOR VALVE RVO



Calculation of pre-setting values

In order to obtain the correct flow and water quantity respectively at the existing pressure-drop over the valve, the valve is pre-adjustable. The pre-setting value is obtained by looking in the graph at the desired capacity in l/h or l/s and tracing straight upwards until the line intersects with that for the desired pressure-drop. From this intersecting point trace directly over to the left of the graph and read off and note the Kv-value and the size range within which the valve can be selected.

Pre-setting is carried out according to pre-setting card 302 428-02, which is directly graduated in K_V . After pre-setting, the valve cannot be opened to give more than the pre-set capacity. The valve coefficient K_V corresponds to the flow in m^3/h at a pressure-drop of 1 bar.

Example: At a power of 1000 W ($\Delta t = 20^\circ C$), i.e. 43 l/h and desired pressure-drop of 5 kPa, $K_V \approx 0.2$ (connection No. 10 recommended).