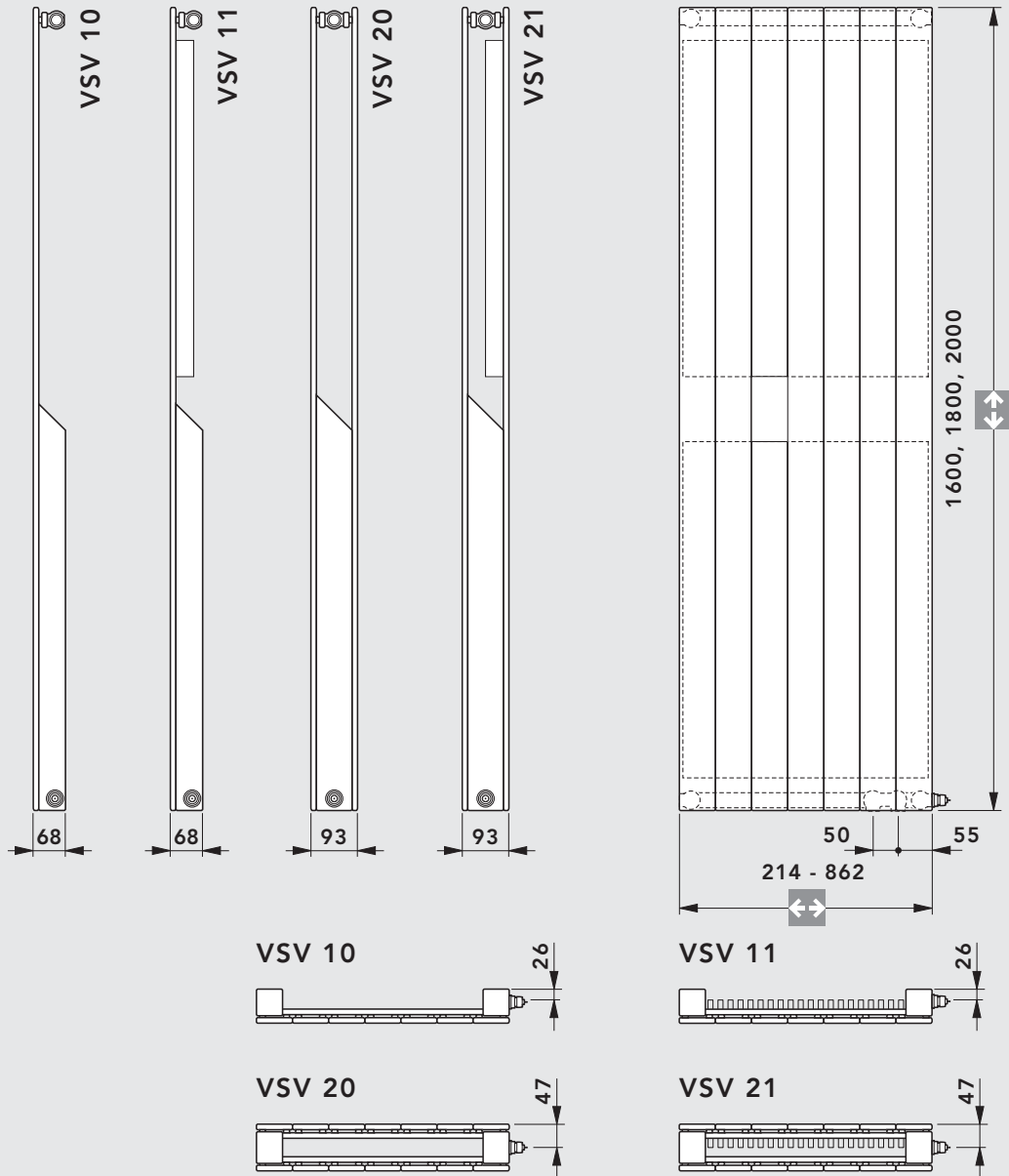


Vertical design, VSV models

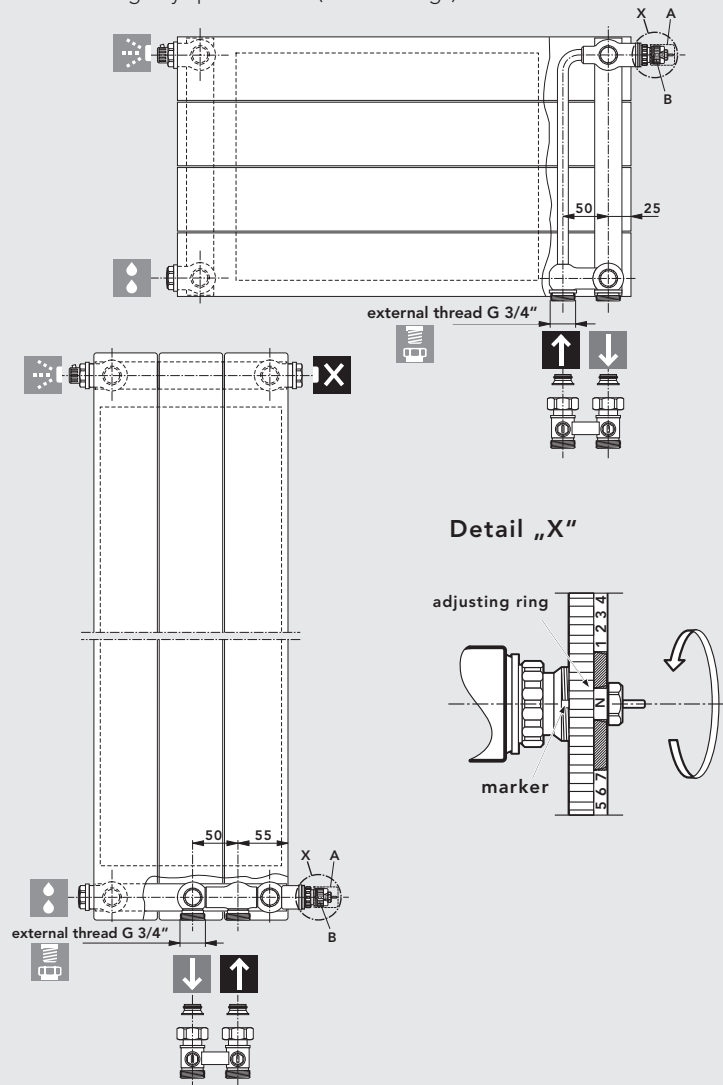


Schematic diagram

Model	VSV 10			VSV 11			VSV 20			VSV 21		
Overall height ↑ ↓ [mm]	1600	1800	2000	1600	1800	2000	1600	1800	2000	1600	1800	2000
Overall length ← → [mm]	214 - 862 mm											
Increments	72 mm											

Horizontal and vertical designs

It is easy to set the precise values required without using any special tools (see drawings).



Schematic diagram

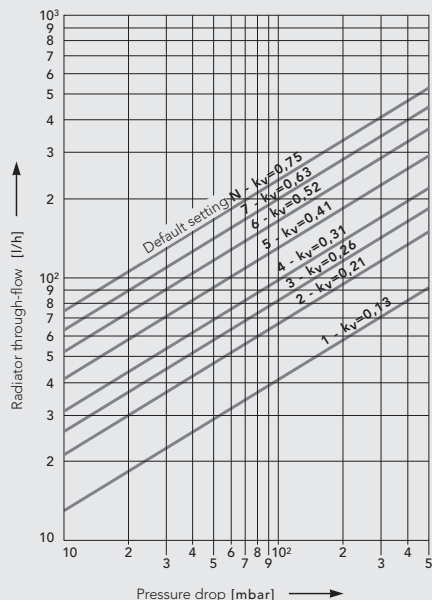


Chart 1:

Pressure drop [mbar] – double-pipe operation at 2K proportional offset.

It is of course possible to adjust the valve default setting, whilst there is pressure in the heating system.

The radiator will be delivered with a fitted protective cap. After removing the protective cap (item A), the following thermostat heads can be installed directly onto the built-in valve (item B): „RA 2000“, or „RAW“ from Danfoss, „VK“ from Heimeier, „D“ from Herz, „thera DA“ from MNG, and „UNI XD“ from Oventrop.

Adjustment tips:

- Remove protective cap and sensor
- Lift the adjusting ring and turn it anti-clockwise, to the setting required – the set value (1, 2, ...7, N) needs to be directly in line with the marker.
- Presetting is possible in steps of 0.5 between 1 and 7. The „N“ setting, cancels all presetting.

Note: Settings in the hatched areas must be avoided.

Guideline values for default settings

Basis:	
Supply temperature	70 °C
Return temperature	55 °C
Room temperature	20 °C

Default setting **1** $k_v = 0.13$
For radiators up to about 500 W

Default setting **2** $k_v = 0.21$
For radiators up to about 800 W

Default setting **3** $k_v = 0.26$
For radiators up to about 1000 W

Default setting **4** $k_v = 0.31$
For radiators up to about 1200 W

Default setting **5** $k_v = 0.41$
For radiators up to about 1600 W

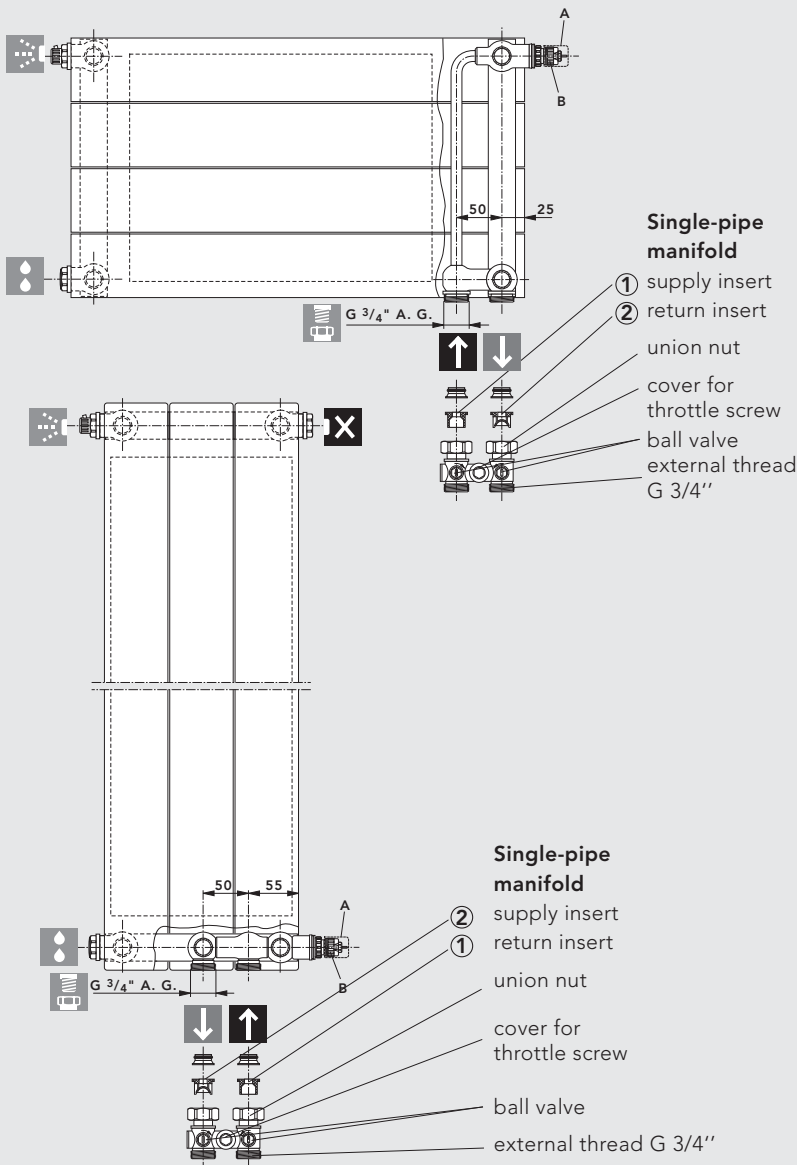
Default setting **6** $k_v = 0.52$
For radiators up to about. 2000 W

Default setting **7** $k_v = 0.63$
For radiators up to about 2400 W

Default setting **N** $k_v = 0.75$
For radiators of more than 2400 W

Horizontal and vertical designs

A valve default setting is not necessary as the valve will be delivered factory-adjusted (default setting N).



Schematic diagram

The radiator will be delivered with a fitted protective cap. After removing the protective cap (item A), the following thermostat heads can be installed directly onto the built-in valve (item B): „RA 2000“, or „RAW“ from Danfoss, „VK“ from Heimeier, „D“ from Herz, „thera DA“ from MNG, and „UNI XD“ from Oventrop.

Please note!

Horizontal design:

During the installation of the single-pipe manifold ensure that the return insert 2 is installed in the water return, and the supply insert 1 in the water supply.

Vertical design:

Prior to the installation of the one-pipe manifold it is essential to swap over the supply insert and the return insert so that the supply insert 1 is installed in the water supply, and the return insert 2 in the water return.

Default setting when using a single-pipe manifold:

radiator proportion 30% --- 3.50 revolutions *

radiator proportion 35% --- 3.00 revolutions *

radiator proportion 40% --- 2.50 revolutions *

radiator proportion 45% --- 2.00 revolutions *

radiator proportion 50% --- 1.75 revolutions *

*... before starting, turn the bypass spindle of the single-pipe manifold to the right as far as it will go.

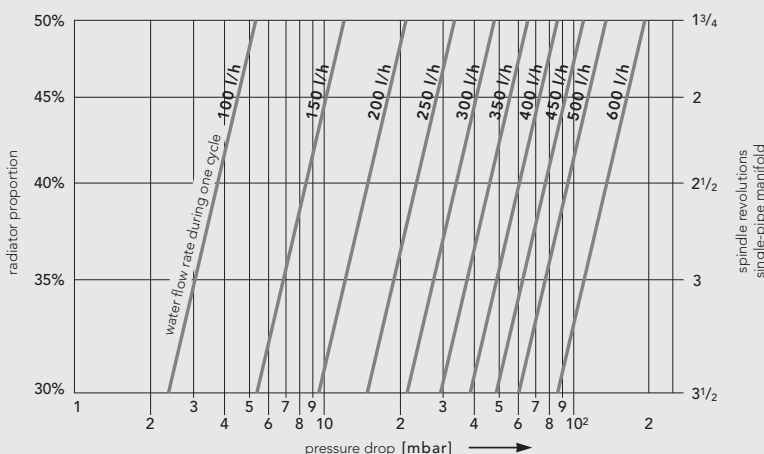
Chart 2:

Pressure drop [mbar] – single-pipe operation with a proportional deviation of 2K.

It is of course possible to change the radiator proportion, whilst there is pressure in the heating system.

Please take account of the maximum power per cycle (for single-pipe installations) of about 10 kW:

$$\Delta T = T_1 - T_2 = 20 \text{ K (at } T_1 = 90 \text{ }^\circ\text{C)}.$$



VSV models

Overall length

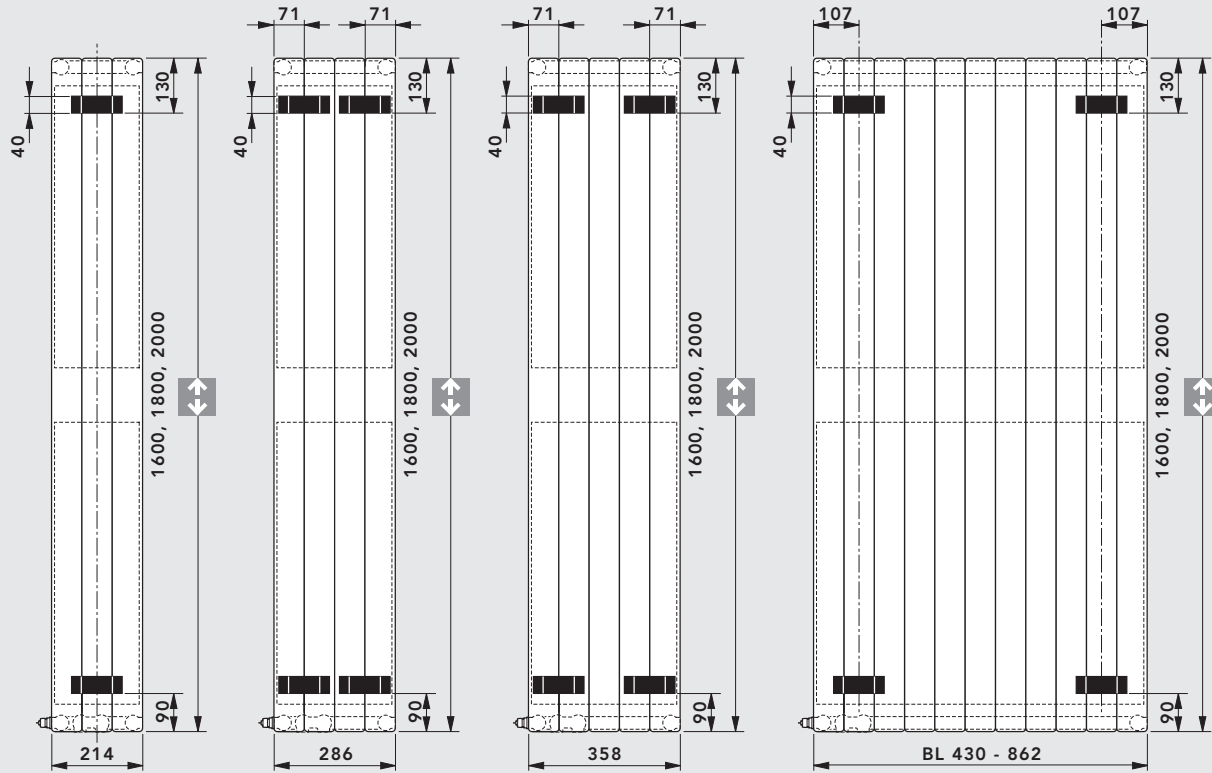
 [mm]

214

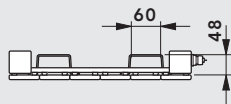
286

358

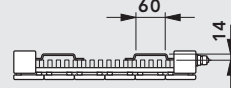
430 - 862



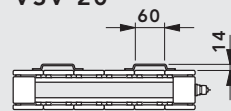
VSV 10



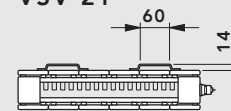
VSV 11



VSV 20



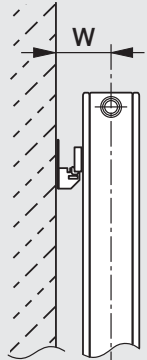
VSV 21



Schematic diagram

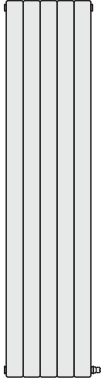
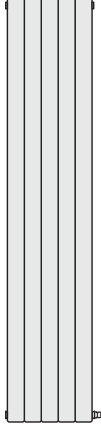
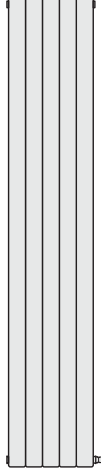




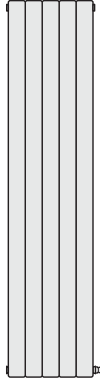
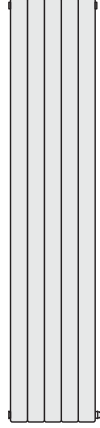
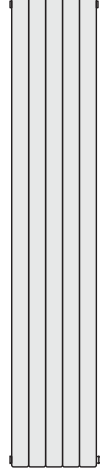




Wall clearance measurements: WA 10 and WA 11 wall mounting brackets for the VSV models

Connection – wall clearance

	Wall mounting brackets model	Vertical design model	Measurement W [mm]
	WA 10	VSV 10/11*	35
WA 10	VSV 20/21	79,5	
WA 11	VSV 10/11*	45	
WA 11	VSV 20/21	89,5	

***Note:** if you are installing the VSV 10 or VSV 11 models with a right-angled-design connection, please use the appropriate drilling consoles or angle-fishplate mounting brackets, to achieve the required wall clearance.

Schematic diagram

Heating output in compliance with DIN EN 442 , and ÖNORM EN 442 , at 75/65/20° C			
Side panels and top cover are included in the heat output specifications			
			
 Overall height [mm]	1600	1800	2000
 Overall length [mm]	214, 286, 358, 430, 502, 574, 646, 718, 790, 862		
Model	VSV 10	VSV 10	VSV 10
 Overall depth	68 mm	68 mm	68 mm
Watts / m 75/65/20	1738	1979	2232
Watts / m 70/55/20	1384	1577	1781
Watts / m 55/45/20	850	968	1097
Water content l / m	11,37	12,47	13,85
Weight kg / m	44,45	49,60	54,75
Radiator exponent n	1,40	1,40	1,39
Model	VSV 11	VSV 11	VSV 11
 Overall depth	68 mm	68 mm	68 mm
Watts / m 75/65/20	1979	2209	2450
Watts / m 70/55/20	1584	1768	1964
Watts / m 55/45/20	983	1097	1223
Water content l / m	11,37	12,47	13,85
Weight kg / m	63,39	68,53	73,69
Radiator exponent n	1,37	1,37	1,36
			
 Overall height [mm]	1600	1800	2000
 Overall length [mm]	214, 286, 358, 430, 502, 574, 646, 718, 790, 862		
Model	VSV 20	VSV 20	VSV 20
 Overall depth	93 mm	93 mm	93 mm
Watts / m 75/65/20	2932	3301	3672
Watts / m 70/55/20	2332	2629	2929
Watts / m 55/45/20	1427	1615	1805
Water content l / m	22,74	24,34	27,71
Weight kg / m	85,44	95,46	105,48
Radiator exponent n	1,41	1,40	1,39
Model	VSV 21	VSV 21	VSV 21
 Overall depth	68 mm	68 mm	68 mm
Watts / m 75/65/20	3184	3588	4012
Watts / m 70/55/20	2536	2857	3206
Watts / m 55/45/20	1557	1755	1983
Water content l / m	22,74	24,34	27,71
Weight kg / m	104,37	114,39	124,42
Radiator exponent n	1,40	1,40	1,38