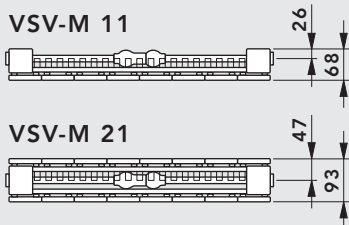
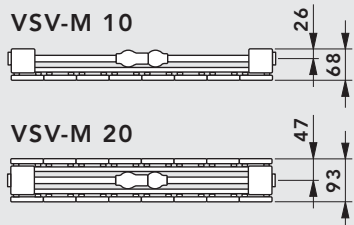
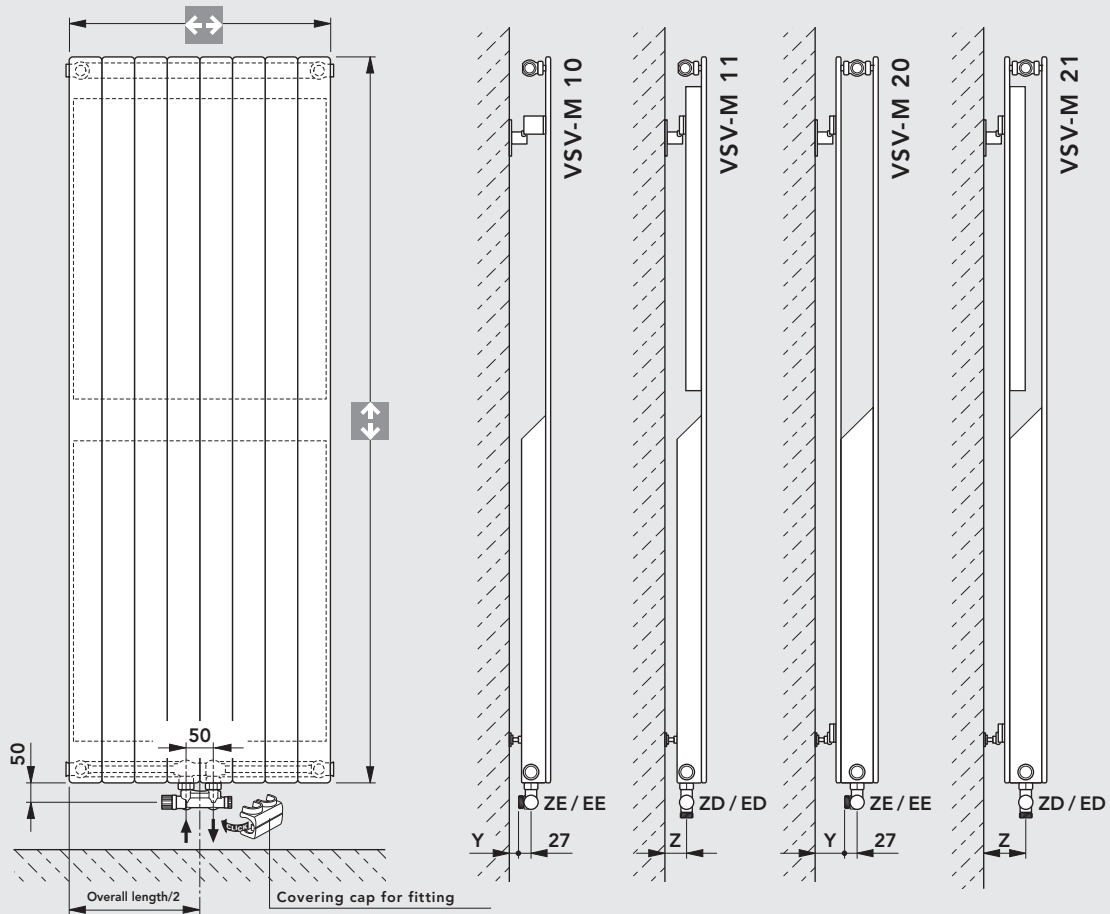


Model overview / connection dimensions: vertical design, VSV-M models



- Connection set**
ZE Double-pipe operation angled design
ZD Double-pipe operation through-flow design
EE Single-pipe operation angled design
ED Single-pipe operation through-flow design

Angled design connection set

Connection set in through-flow design

Fastening set	Model	Measurement Y [mm]
*	VSV-M 10	*
WA 10	VSV-M 20/21	53
*	VSV-M 11	*
WA 11	VSV-M 20/21	63

Fastening set	Model	Measurement Z [mm]
WA 10	VSV-M 10/11	35
WA 10	VSV-M 20/21	79,5
WA 11	VSV-M 10/11	45
WA 11	VSV-M 20/21	89,5

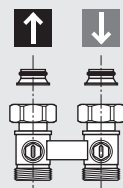
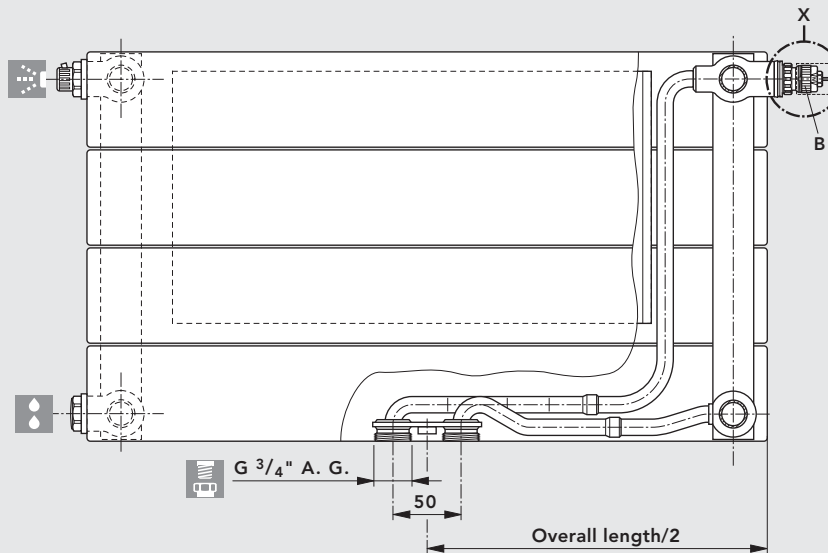
Schematic diagram

* **Note:** when installing the VSV-M 10 and VSV-M 11 models with an angled connection set (ZE, EE), please use the appropriate drill consoles and angled fishplates to ensure that the required distance from the wall is maintained.

Model	VSV-M 10			VSV-M 11			VSV-M 20			VSV-M 21		
Overall height	600	800	1000	800	1000	1200	600	800	1000	800	1000	1200
 [mm]	1200	1400	1600	1400	1600	1800	1200	1400	1600	1400	1600	1800
	1800	2000	2200	2000	2200		1800	2000	2200	2000	2200	
Overall length	2400	2600					2400	2600				
 [mm]	214 - 862 mm											
Increments	72 mm											

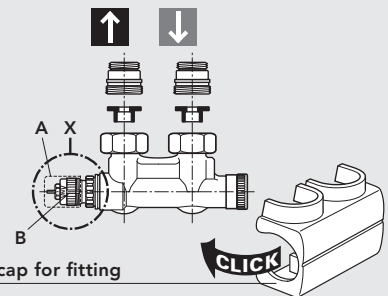
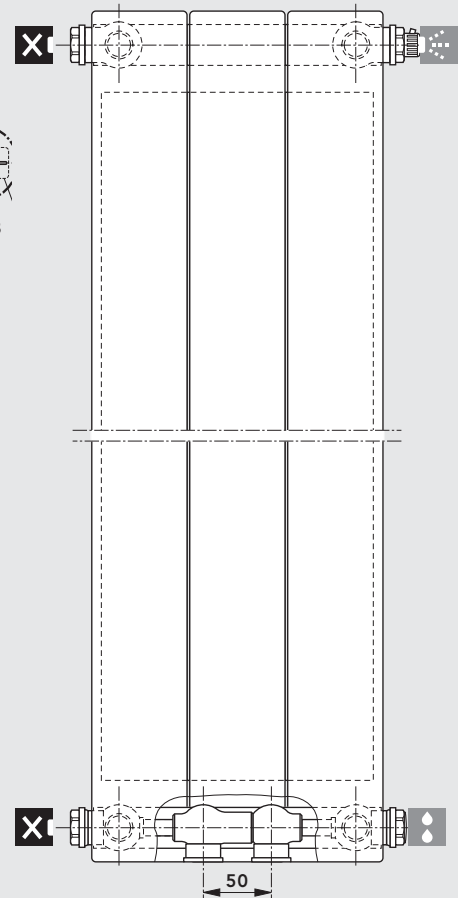
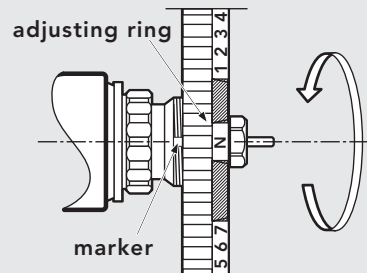
Horizontal and vertical designs

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



Detail „X“

Note:
Settings in the hatched area must be avoided.



Covering cap for fitting

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.

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.

Vertical design

Guideline values for default settings

Basis:

Supply temperature **70 °C**

Return temperature **55 °C**

Room temperature **20 °C**

Default setting **4** $k_v = 0.12$
For radiators up to about 450 W

Default setting **5** $k_v = 0.19$
For radiators up to about 700 W

Default setting **6** $k_v = 0.27$
For radiators up to about 1000 W

Default setting **7** $k_v = 0.33$
For radiators up to about 1200 W

Default setting **N** $k_v = 0.48$
For radiators of more than 1200 W

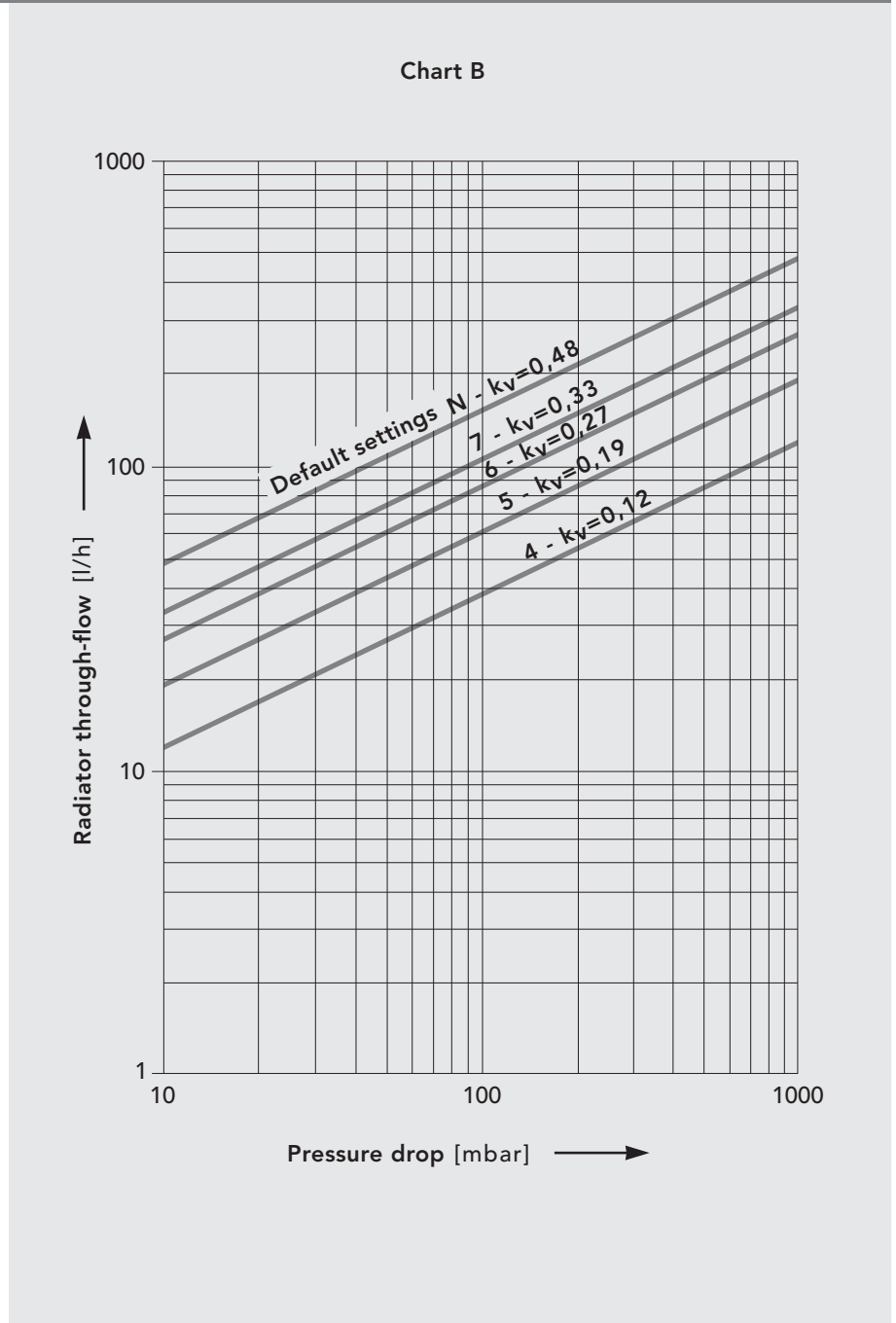


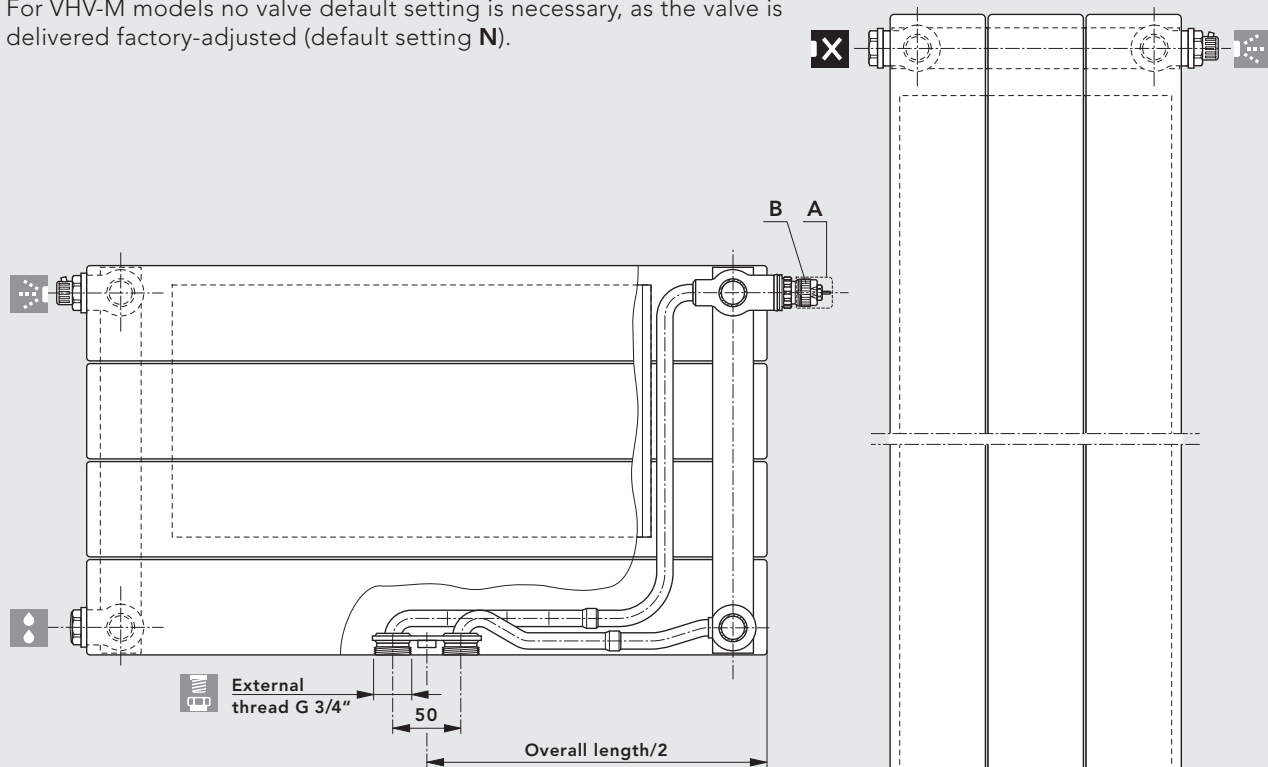
Chart B:

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.

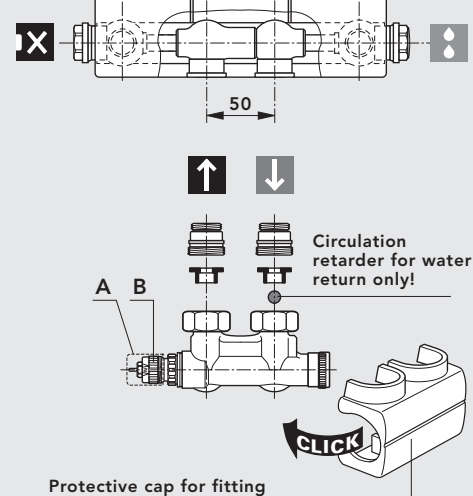
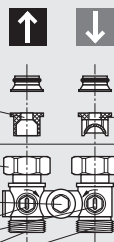
Horizontal and vertical design

For VHV-M models no valve default setting is necessary, as the valve is delivered factory-adjusted (default setting **N**).



Single-pipe manifold

- ① Supply insert
- ② Return insert
- Union nut
- Cover for throttle screw
- Ball valve
- External thread 3/4"



Schematic diagram

The radiator valve (VHV-M models) and the connection set (VSV-M models) will both 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:

When fitting the single-pipe operation connection set, ensure that the **circulation retarder** is installed in the water return.

Horizontal design

Default setting when using a single-pipe manifold: radiator proportion 40 % --- 2.50 revolutions*
 radiator proportion 30 % --- 3.50 revolutions*
 radiator proportion 35 % --- 3 revolutions*
 radiator proportion 45 % --- 2 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**.

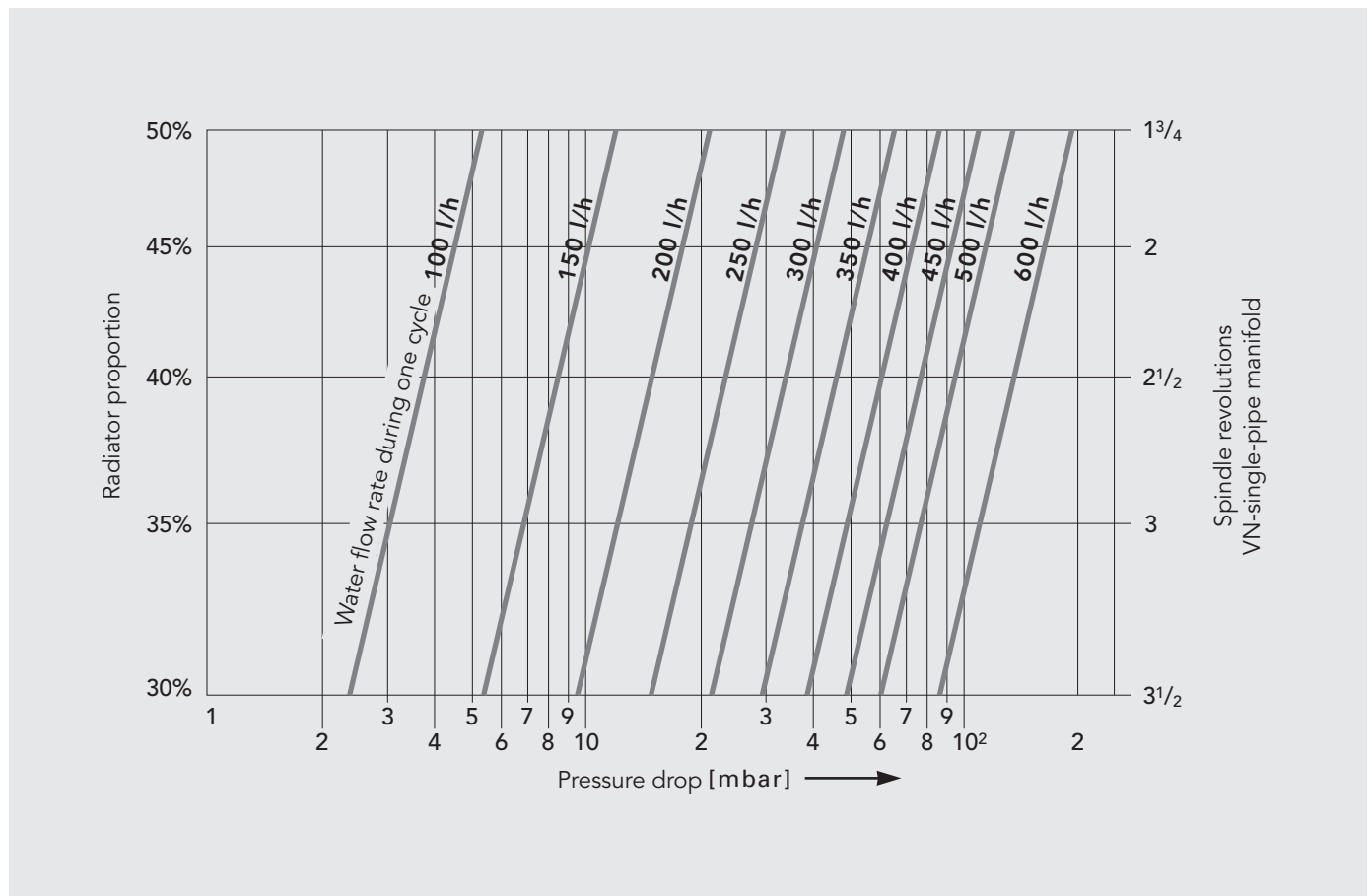


Diagram:

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 $T_1 = 90 \text{ }^\circ\text{C}$).

Vertical design

The connection set radiator proportion comes preset at 40 %.

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-M models

Overall length



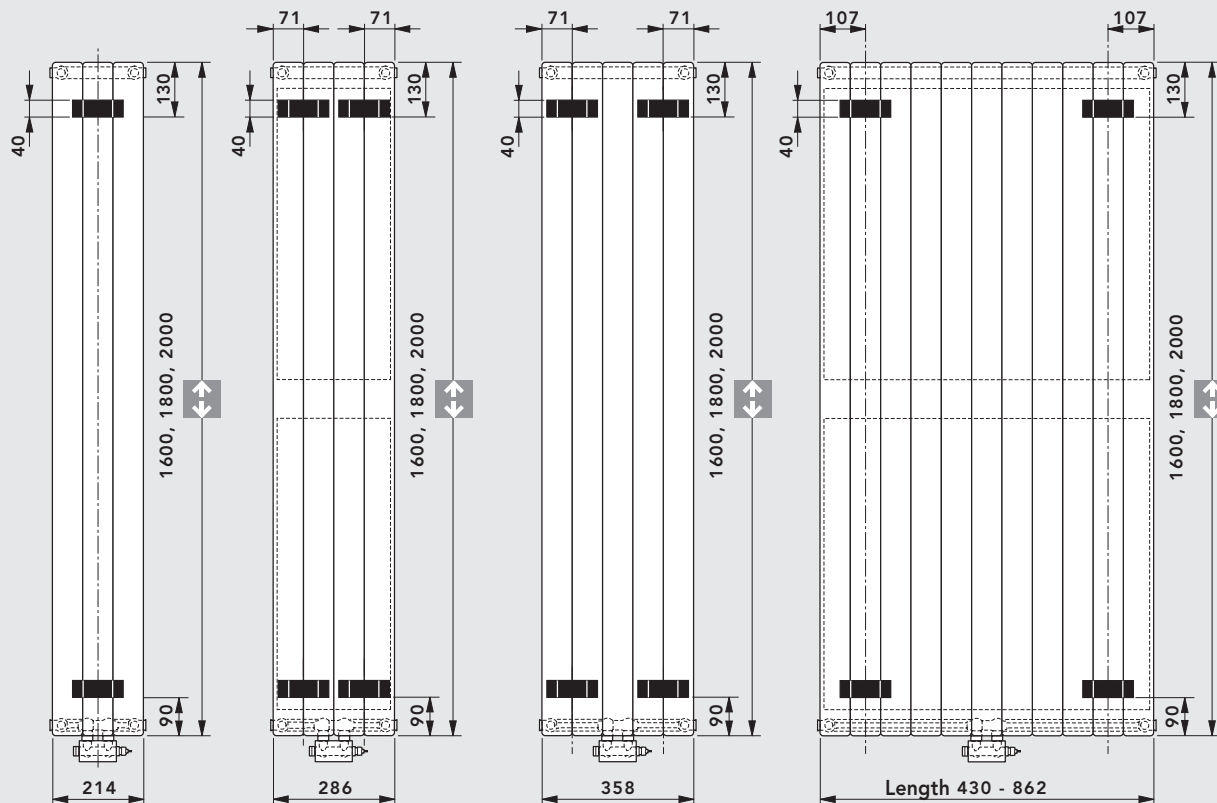
[mm]

214

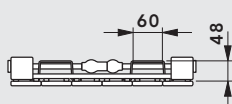
286

358

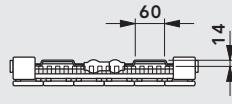
430 - 862



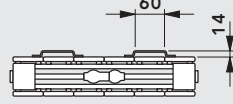
VSV-M 10



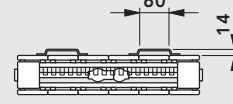
VSV-M 11



VSV-M 20



VSV-M 21



Schematic diagram

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

Connection – wall clearance

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

***Note!** if you are using **WA 10** or **WA 11** wall mounting brackets for the installation of the **VSV-M 10** or **VSV-M 11** model with a right-angled-design connection, please follow the instructions in the diagram on page 267.

Schematic diagram