

Vertical | Technical Data Sheet

Description

Vertical is a traditional panel radiator that has been turned vertically in order to optimally utilise the wall surface area. It is narrow and discrete and provides a very high heating effect although the space is limited. For increased functionality in the kitchen a practical towel bar is available as an accessory. Complete with brackets including a set of screws and dowels with mounting instructions, side covers (excluding type 10) with fixing clamps, 3 brass blind plugs and an air vent.

Vertical is available in RAL 9016 (white) as a standard version. 70 other special colours are optionally available on request. For radiators in special colours, accessories such as the air vent, plug and decorative clip are available in silver RAL 9006 for a modern and better aesthetic look.

Connections

4 x G 1/2 " bottom connections

2 x G 1/2 " top connections – for mounting plug and air vent.

Accessories bundled with the radiator

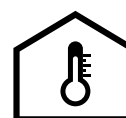
Wall brackets with screws and dowels, 3 brass blind plugs, air vent



* Thermostatic valve + head set presented on the image is not included. This accessory must be order separately.



max. 10 bar



max. 110 °C



Brand

All Purmo Group brands

Product

Vertical

Material

High-quality cold rolled steel sheet in accordance with EN 10130

Spacing of vertical water channels

33.3 mm

Conformity

CE test report EN 442

Colours

RAL 9016 white, other colours from the RAL colour palette are available on request.

Max operating pressure (MOP)

10 bar

Max test pressure

13 bar

Max operating temperature

110 °C

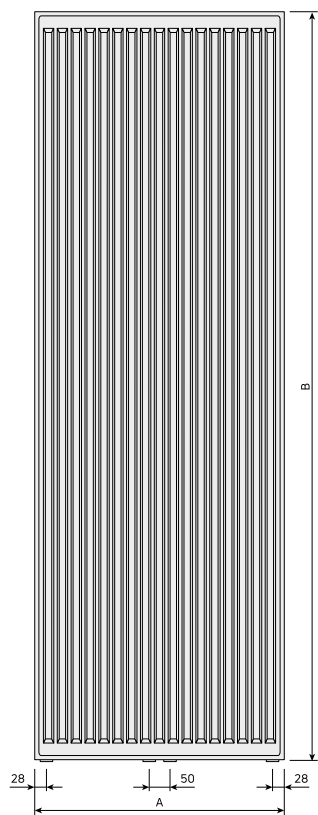
Warranty

10 years

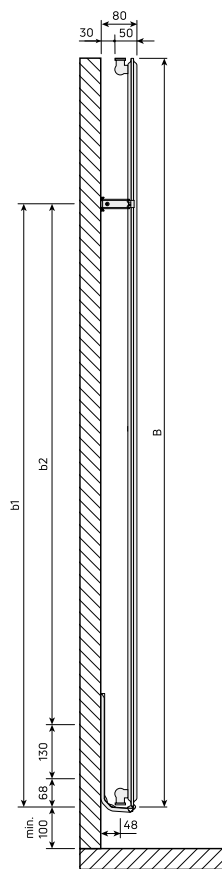


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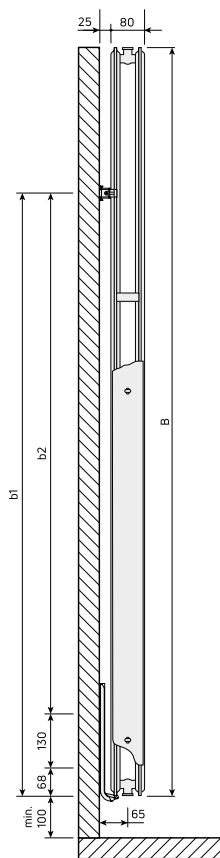
Front view



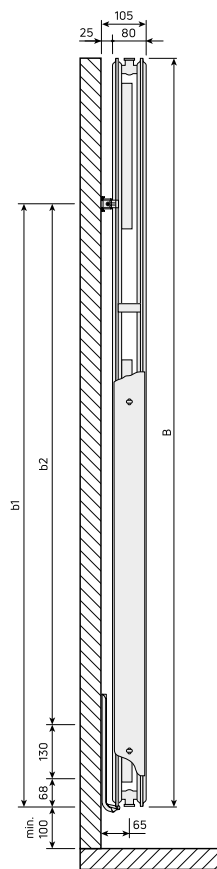
Side views



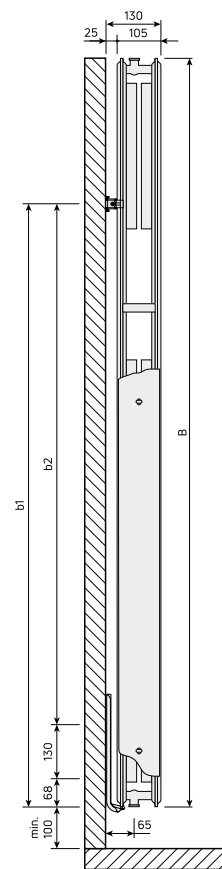
type 10



type 20



type 21



type 22

Bottom views



type 10



type 20



type 21



type 22

A = width
B = height
b1 = B - 350
b2 = B - 548

all dimensions in mm



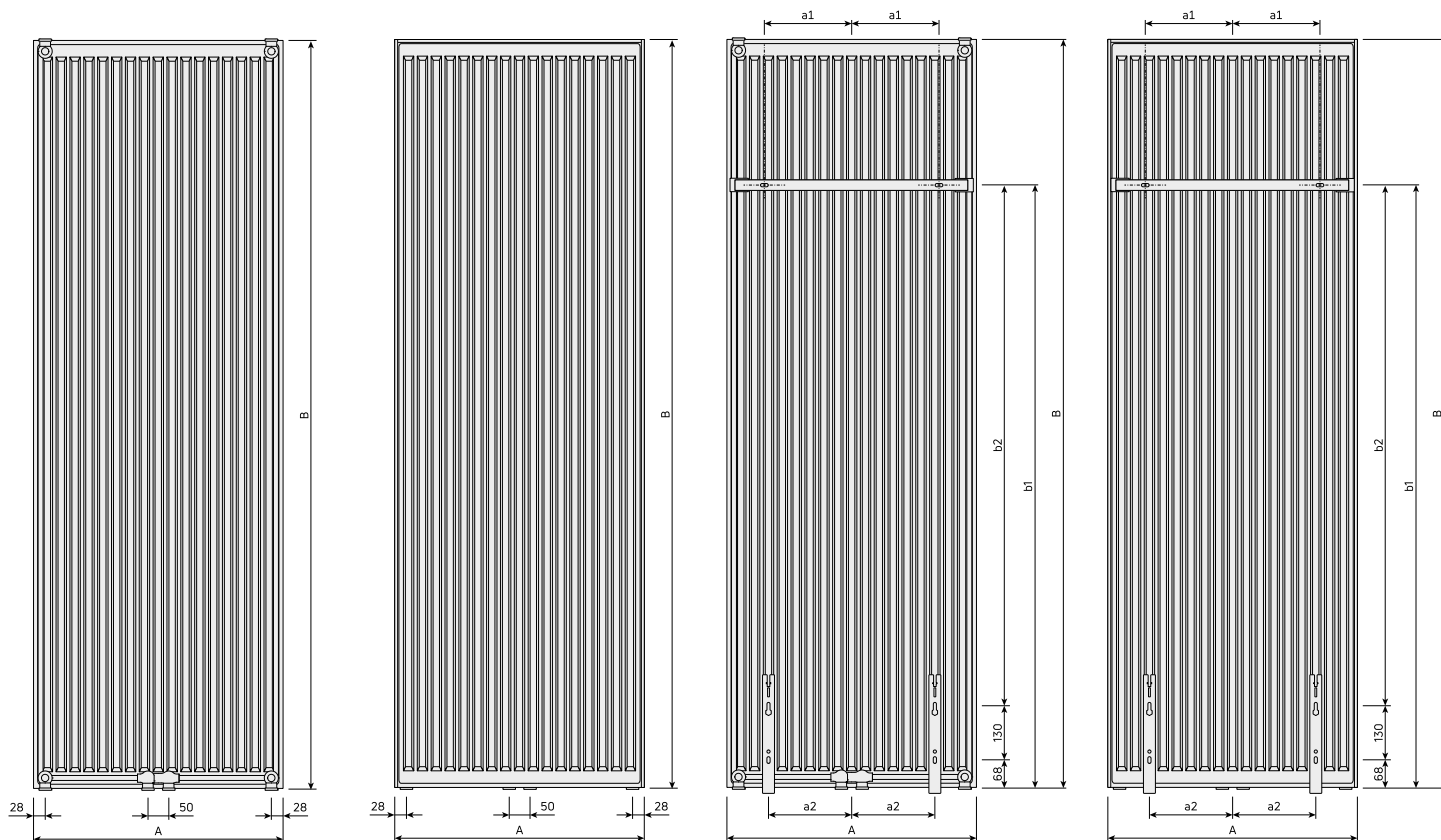
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Rear views without brackets type 10

types 20, 21, 22

Rear views with brackets type 10

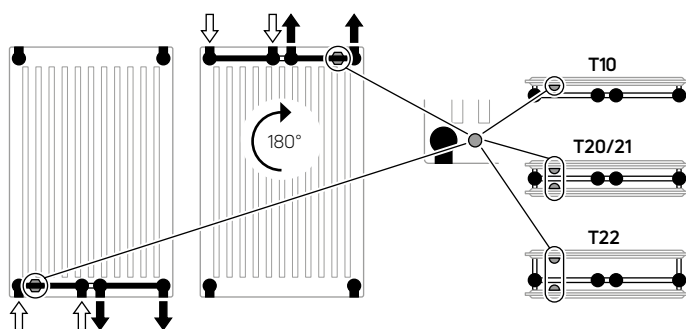
types 20, 21, 22



Mounting distances [mm]

B [mm]	1500	1800	1950	2100	2300
b1 [mm]	1150	1450	1600	1750	1950
b2 [mm]	952	1252	1402	1552	1752

A [mm]	300	450	600	750
a1 [mm]	60	135	210	285
a2 [mm]	75	125	200	250



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Thermal output

type 10						
 A [mm]	 [°C]	 B [mm]		 [W]		
		1500	1800	1950	2100	2300
300	75/65/20 55/45/20	- -	- -	- -	- -	- -
450	75/65/20 55/45/20	721 374	852 443	919 477	988 512	- -
600	75/65/20 55/45/20	933 483	1102 571	1189 615	1278 660	- -
750	75/65/20 55/45/20	- -	1346 694	1452 748	1561 804	- -

Thermal output of the radiators [W] in accordance with EN 442 for parameters: 75/65/20 °C (ΔT=50K), 55/45/20 °C (ΔT=30K) and 45/35/20 °C (ΔT=20K).

[W] 45/35/20°C (ΔT=20K)

type 10	1500	1800	1950	2100	2300
300	-	-	-	-	-
450	217	257	276	295	-
600	278	329	355	380	-
750	-	399	430	462	-

exponent n

type 10	1500	1800	1950	2100	2300
300	-	-	-	-	-
450	1,2823	1,2787	1,2837	1,2886	-
600	1,2903	1,2877	1,2905	1,2933	-
750	-	1,2966	1,2974	1,2981	-

type 20						
 A [mm]	 [°C]	 B [mm]		 [W]		
		1500	1800	1950	2100	2300
300	75/65/20 55/45/20	778 400	904 468	968 500	1032 531	- -
450	75/65/20 55/45/20	1122 576	1303 671	1395 718	1487 764	- -
600	75/65/20 55/45/20	1454 745	1689 866	1807 926	1927 987	- -
750	75/65/20 55/45/20	1777 909	2065 1054	2210 1128	2356 1203	- -

Thermal output of the radiators [W] in accordance with EN 442 for parameters: 75/65/20 °C (ΔT=50K), 55/45/20 °C (ΔT=30K) and 45/35/20 °C (ΔT=20K).

[W] 45/35/20°C (ΔT=20K)

type 20	1500	1800	1950	2100	2300
300	230	270	288	305	-
450	330	386	412	437	-
600	427	496	530	564	-
750	520	601	643	686	-

exponent n

type 20	1500	1800	1950	2100	2300
300	1,3002	1,2887	1,2939	1,2991	-
450	1,3040	1,2980	1,3015	1,3049	-
600	1,3077	1,3074	1,3090	1,3106	-
750	1,3115	1,3167	1,3166	1,3164	-

type 21						
 A [mm]	 [°C]	 B [mm]		 [W]		
		1500	1800	1950	2100	2300
300	75/65/20 55/45/20	896 461	1036 531	1108 567	1181 604	- -
450	75/65/20 55/45/20	1319 675	1526 779	1632 832	1740 886	- -
600	75/65/20 55/45/20	1737 884	2009 1022	2148 1091	2290 1161	- -
750	75/65/20 55/45/20	2150 1087	2486 1261	2658 1345	2835 1430	- -

Thermal output of the radiators [W] in accordance with EN 442 for parameters: 75/65/20 °C (ΔT=50K), 55/45/20 °C (ΔT=30K) and 45/35/20 °C (ΔT=20K).

[W] 45/35/20°C (ΔT=20K)

type 21	1500	1800	1950	2100	2300
300	265	304	324	345	-
450	386	444	474	504	-
600	502	581	619	658	-
750	615	715	761	808	-

exponent n

type 21	1500	1800	1950	2100	2300
300	1,2992	1,3091	1,3104	1,3116	-
450	1,3112	1,3157	1,3182	1,3208	-
600	1,3231	1,3222	1,3261	1,3299	-
750	1,3351	1,3288	1,3340	1,3391	-



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Thermal output

type 22						
 A [mm]	 [°C]	 B [mm]				
		 [W]				
		1500	1800	1950	2100	2300
300	75/65/20 55/45/20	1050 538	1197 613	1268 649	1337 684	1427 729
450	75/65/20 55/45/20	1556 793	1774 905	1879 960	1982 1012	2115 1080
600	75/65/20 55/45/20	2057 1043	2345 1193	2484 1266	2619 1335	2796 1425
750	75/65/20 55/45/20	2554 1288	2912 1476	3084 1567	3253 1654	3472 1767

Thermal output of the radiators [W] in accordance with EN 442 for parameters: 75/65/20 °C ($\Delta T=50K$), 55/45/20 °C ($\Delta T=30K$) and 45/35/20 °C ($\Delta T=20K$).

[W] 45/35/20°C ($\Delta T=20K$)

type 22	1500	1800	1950	2100	2300
300	307	350	371	391	416
450	451	516	548	577	615
600	591	678	720	760	811
750	727	837	890	940	1005

exponent n

type 22	1500	1800	1950	2100	2300
300	1,3102	1,3099	1,3098	1,3115	1,3137
450	1,3200	1,3166	1,3149	1,3156	1,3166
600	1,3297	1,3233	1,3201	1,3198	1,3194
750	1,3395	1,3300	1,3252	1,3240	1,3223

Water volume

[l]					
 A [mm]	 B [mm]				
	1500	1800	1950	2100	2300
type 10					
300	-	-	-	-	-
450	3,08	3,78	4,12	4,45	-
600	4,12	4,92	5,38	5,85	-
750	-	6,05	6,65	7,25	-
type 20					
300	4,00	4,80	5,20	5,60	-
450	6,10	7,23	7,80	8,37	-
600	8,20	9,67	10,40	11,13	-
750	10,30	12,10	13,00	13,90	-
type 21					
300	4,00	4,80	5,20	5,60	-
450	6,10	7,23	7,80	8,37	-
600	8,20	9,67	10,40	11,13	-
750	10,30	12,10	13,00	13,90	-
type 22					
300	4,05	4,85	5,25	5,65	6,05
450	6,15	7,28	7,85	8,42	9,35
600	8,25	9,72	10,45	11,18	12,65
750	10,35	12,15	13,05	13,95	15,95

Weight

[kg]					
 A [mm]	 B [mm]				
	1500	1800	1950	2100	2300
type 10					
300	-	-	-	-	-
450	13,40	15,90	17,19	18,48	-
600	17,60	20,90	22,63	24,37	-
750	-	25,90	28,08	30,25	-
type 20					
300	20,25	24,15	26,08	28,00	-
450	28,50	33,93	36,73	39,52	-
600	36,75	43,72	47,38	51,03	-
750	45,00	53,50	58,03	62,55	-
type 21					
300	22,10	25,75	27,75	29,75	-
450	31,67	37,32	40,18	43,03	-
600	41,23	48,88	52,60	56,32	-
750	50,80	60,45	65,03	69,60	-
type 22					
300	24,65	28,58	30,55	32,52	35,20
450	35,58	41,18	43,98	46,78	50,58
600	46,52	53,78	57,42	61,05	65,97
750	57,45	66,38	70,85	75,32	81,35



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Treatment and finish

Vertical is made in accordance with EN 10130 of the cold rolled steel delivered in form of coiled strips. Heating panels are produced from sheets of thickness in accordance with EN 442. Forming of heating panels with vertical water channels spaced at 33,3 mm is performed on fully automated, computer controlled production lines where one process line (interconnected with roller conveyors) delivers products ready for painting and packing. The processes of coating and packing are automated as well.

Painting

After passing through the first stages of the process line, the raw radiators are subjected to further processing providing a surface ready for varnishing. This processing consists of:

- preparing the surface (washing, degreasing, iron phosphatising, flushing) in a washer with a special chemical showering system,
- priming with the second generation cataforetic KTL II method by complete submerging of the radiators in a white priming paint ensuring an excellent corrosion protection,
- after-priming drying in a dripping chamber and a gas tunnel dryer,
- powder painting with an epoxy paint by electrostatic coating in a painting chamber, with the use of special painting tools,
- polymerization (curing) of the powder paint coat in a gas furnace at a temperature of about 190 °C.

Packaging

Vertical is delivered in a protective packaging. Radiators are protected alongside by durable brown eco cardboard sheets. Additionally both sides are protected by the same type of brown eco cardboard end boxes. All packed with recyclable thermo-shrinking film.

A single radiator placed on a wooden pallet and bound with a band in order to prevent uncontrolled movement during storage and transport.

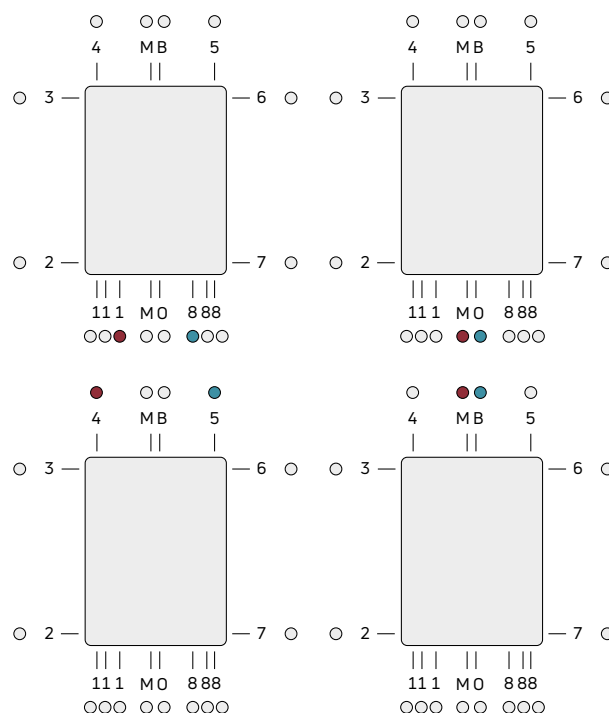
Colours

White RAL 9016 as a standard. Other colours from the RAL colour palette are available on request.

Mounting

The radiators are wall-mounted using 1 set of wall-mounting brackets.

Recommended connections (ETIM)



Standards

The heat output of the radiators, expressed in watts, are measured according to standard EN 442-2. The supply temperature is 75°C, the return temperature 65 °C and the ambient temperature is 20 °C.

Warranty

10 years



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Accessories

	DESCRIPTION	ITEM
	Angled thermostatic valve set with design cover white - RAL 9016 chrome matt stainless steel	AZ13TP0048008330 AZ13TP004800853SCHRO AZ13TP004800873S0112
	Straight thermostatic valve set with design cover white - RAL 9016 chrome matt stainless steel	AZ13TP0048008430 AZ13TP004800863SCHRO AZ13TP004800883S0112
	Angled thermostatic valve set VHX-D/RAX white - RAL 9016 chrome	AZ1TP00VV00010A0 AZ1TP00VV00010ASCHRO
	Angled thermostatic valve set white - RAL 9016 chrome matt anthracite grey - RAL 7016 (S0022) matt jet black - RAL 9005 (S0029)	AZ1XTPS9037005N0 AZ1XTPS9037005NSCHRO AZ1XTPS9037005NS0022 AZ1XTPS9037005NS0029
	Straight thermostatic valve set white - RAL 9016 chrome matt anthracite grey - RAL 7016 (S0022) matt jet black - RAL 9005 (S0029)	AZ1XTPS9037004N0 AZ1XTPS9037004NSCHRO AZ1XTPS9037004NS0022 AZ1XTPS9037004NS0029
	Towel bar white RAL9016 - for types 20, 21, 22 300 mm 450 mm 600 mm 750 mm	AZ04TRV590300000 AZ04TRV590450000 AZ04TRV590600000 AZ04TRV590750000

Verticals are not equipped with a built-in thermostatic insert. They can be installed by using external valve sets with CC 50 mm. Selection of types provided in the table above.

Purmo Group reserves the right to change product specifications without prior notice.
Purmo Group's general sales and delivery conditions apply.

