

THERMOPANEL **Radiators**

January 2, 2014

Complete Radiator, Ready to Install!

Installation

Thermopanel radiators are supplied complete with side panels, grille and brackets for wall mounting. The brackets are suitable for all types of walls, but it is advisable to check the strength of the wall before installation.

An extra bracket is enclosed with radiators whose length is over 1800 mm (70"). Assembly instructions are supplied in the box. We recommend that the protective packaging be left intact while construction is in progress.

Connection

The patented V4 assembly has a bottom and side connection. The valve housing has a pre-assembled Macon insert suitable for a Macon self-contained non-electric thermostat #MTW-28 (maconcontrols.com). AR-MOD shut-offs connect directly to the built-in V-4 assembly (union x 1/2" female NPT). Each radiator comes with a built-in air vent.

Maximum Working Pressure: 145 PSI Cv for Thermopanel Valve System = .65 PSI Suggested Maximum PD per Radiator = 2.2 PSI

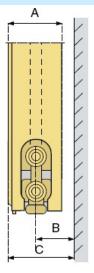
Color: RAL 9016 White; Powder Paint with Epoxy-Polyester

Type 22	RADIATOR HEIGHT in MM (In.)							
Length in MM (In.)	300 (12")	400 (16")	500 (20")	600 (24")	900 (36")			
400 (16")	\$314	\$336	\$365	\$380	\$463			
700 (28")	\$365	\$403	\$443	\$470	\$597			
900 (36")	\$406	\$455	\$505	\$560	\$690			
1000 (40")	\$426	\$480	\$548	\$579	\$740			
1200 (48")	\$467	\$528	\$598	\$679	\$839			
1300 (52")	\$496	\$565	\$656	\$717	\$899			
1600 (64")	\$561	\$642	\$758	\$840	\$1,050			
1800 (72")	\$624	\$712	\$841	\$906				
2000 (80")	\$665	\$767	\$912	\$982				
2300 (92")	\$740	\$856	\$975	\$1,099				
2600 (104")	\$784	\$914	\$1,049	\$1,203				
3000 (120")	\$896	\$1,046	\$1,200	\$1,370				

lte m	Part #	Description	List
	MTW-28	Direct Mount, Built in Sensor	\$62
(0)	MFK	Tamper Resistant Cover for MTW-28 *	\$38
	AR-MOD	AR Shut-Off 1/2" NPT #6290136	\$28
	WTP-MFK	Adapter for MTW-28 #4037301 **	\$19
Let	PFB-TP22	Pedestal Floor Bracket *	\$32
* Optional			

* Only required if using MFK

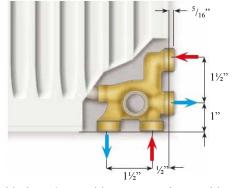
Distance from wall to radiator: C minus A.



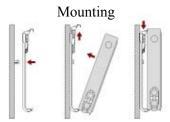
Installed Measurements

Radiator type	A Radiator depth	B Center of Con- nection to wall	C Installed depth		
TP 22	102mm	81mm	132mm		
	(4")	(3½")	(5½")		

Connection measurements



With the V4 assembly, you can choose either bottom or side connection.



Thermopanel is supplied complete with brackets for hanging.



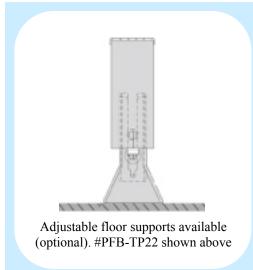
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Simple and ideal flexibility - The TP 22-V4 radiator can be fed from either left or right just by turning the radiator around. The front and back are identical.





Thermopanel Ratings* based on 190°EWT and 170°LWT, 68°F EAT

MODEL: TP 22 - BTU's					Factors for various							
Length in	RADIATOR HEIGHT in MM (In.)				Average Water Temperatures (AWT)							
MM (In.)	300 (12")	400 (16")	500 (20")	600 (24")	900 (36")	AWT (°F)	BTU		Factor]	BTU/ Radiator	
400 (16")	1,748	2,225	2,684	3,127	4,389	190°	8,053	X	1.12	=	9,019	
700 (28'')	3,059	3,894	4,698	5,472	7,680	180°	8,053	X	1.00	=	8,053	
900 (36")	3,933	5,007	6,040	7,035	9,874	170°	8,053	X	0.88	=	7,087	
1000 (40")	4,370	5,563	6,711	7,817	10,971	160°	8,053	X	0.76	=	6,120	
1200 (48")	5,244	6,676	8,053	9,380	13,166	150°	8,053	X	0.66	=	5,315	
1300 (52")	6,118	7,789	9,395	10,944	15,360	140°	8,053	X	0.55	=	4,429	
1600 (64")	6,992	8,901	10,737	12,507	17,554	130°	8,053	X	0.46	=	3,704	
1800 (72")	7,866	10,014	12,079	14,070		Example: TP22-512 (20"H x 48"L)					(x 48''L)	
2000 (80")	8,740	11,127	13,421	15,634		8,053 BTU @ 190° EWT, 20° Δ T = 180° AWT Pressure Drop formula @ 1.0 gpm, 20° Δ T					$C = 180^{\circ} AWT$	
2300 (92")	10,051	12,796	15,435	17,979	N/A						gpm, 20° Δ T	
2600 (104")	11,362	14,464	17,448	20,324		1 GPM = 10,000 BTU/hr based on 20° temperature drop						
3000 (120")	13,111	16,690	20,132	23,451		$PD = (GPM/Cv)^2$						
					GPM: 8,053 btu ÷ 10,000 = .8053 GPM							
					Cv = .65 per radiator							
					$PD = (.8053/.65)^2 = (1.24 \times 1.24) = 1.54 \text{ pressure drop}$							

^{*}These are ISO (International Organization for Standardization) Ratings and do not include the heating effect of 15% additional output when installed on an outside wall. IBR ratings already have this 15% heating effect included in their rating.