

**SPECIFICATION**



PROFESSIONAL  
HEATING,  
PLUMBING AND  
BATHROOM  
PRODUCTS

**ProRad**

**COMPACT RADIATORS**

**HIGH EFFICIENCY  
HIGH OUTPUT**

5 YEAR WARRANTY • MANUFACTURED TO BS EN 442 • LICENSE NO: KM 266 98

# Prorad

**PRORAD OFFERS AN UP TO DATE COMPACT DESIGN WITH ALL THE STYLE AND QUALITY OF MORE EXPENSIVE RADIATORS**

## HEAVY DUTY PACKAGING

Corner and edge cartons plus generous bubble wrap designed to protect from damage during transportation and installation.

## SLIM DESIGN

For ease of siting.

## FACTORY FITTED GRILLS AND END PANELS

For solid construction and improved appearance.

## ALL ACCESSORIES INCLUDED

Air vent, blanking plug, 4 wall plugs, 4 screws and 4 plastic protectors for brackets - for quick and simple mounting.

### EN442 CERTIFICATION DATA HLK

Tested in accordance with BS EN 442

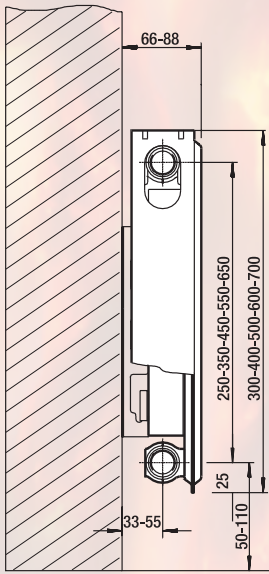
Type	Type 11				Type 21				Type 22			
Height	300	400	500	600	700	500	600	300	400	500	600	700
W/m at 75/65/20	506	647	780	906	1026	1160	1343	947	1203	1444	1672	1888
n-coefficients	1.29	1.29	1.29	1.30	1.30	1.33	1.34	1.31	1.31	1.32	1.33	1.33
Weight (kg/m)	9.07	12.09	15.11	18.13	21.24	25.10	30.50	17.50	23.57	29.63	35.70	41.70
Water Contents (l/m)	1.87	2.24	2.62	3.00	3.38	5.08	5.83	3.60	4.37	5.13	5.90	6.57

## SIZES & OUTPUTS (Delta T 50)

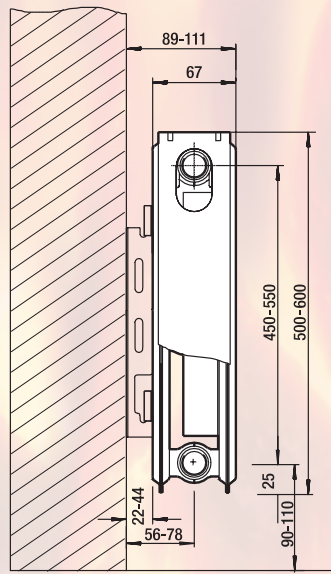
	TYPE 11 Single Convactor			TYPE 21 Double Panel Single Convactor			TYPE 22 Double Panel Double Convactor		
	mm	Code	BTU / Watts	Code	BTU / Watts	Code	BTU / Watts		
300 HEIGHT IN MM	400	411304	690 / 202	~	~ / ~	422304	1294 / 379		
	800	411308	1382 / 405	~	~ / ~	422308	2587 / 758		
	1400	411314	2416 / 708	~	~ / ~	422314	4525 / 1326		
	1800	411318	3109 / 911	~	~ / ~	422318	5818 / 1705		
	2000	411320	3454 / 1012	~	~ / ~	422320	6463 / 1894		
400 HEIGHT IN MM	500	411405	1106 / 324	~	~ / ~	422405	2055 / 602		
	600	411406	1324 / 388	~	~ / ~	422406	2464 / 722		
	800	411408	1768 / 518	~	~ / ~	422408	3283 / 962		
	1000	411410	2208 / 647	~	~ / ~	422410	4105 / 1203		
	1200	411412	2648 / 776	~	~ / ~	422412	4928 / 1444		
	1400	411414	3092 / 906	~	~ / ~	422414	5747 / 1684		
	1600	411416	3532 / 1035	~	~ / ~	422416	6569 / 1925		
	1800	411418	3974 / 1165	~	~ / ~	422418	7388 / 2165		
2000	411420	4416 / 1294	~	~ / ~	422420	8210 / 2406			
500 HEIGHT IN MM	400	411504	1065 / 312	421504	1582 / 464	422504	1973 / 578		
	500	411505	1331 / 390	421505	1978 / 580	422505	2464 / 722		
	600	411506	1597 / 468	421506	2373 / 696	422506	2957 / 866		
	700	411507	1864 / 546	421507	2769 / 812	422507	3450 / 1011		
	800	411508	2130 / 624	421508	3164 / 928	422508	3942 / 1155		
	900	411509	2396 / 702	421509	3560 / 1044	422509	4436 / 1300		
	1000	411510	2662 / 780	421510	3956 / 1160	422510	4928 / 1444		
	1100	411511	2928 / 858	~	~ / ~	422511	5419 / 1588		
	1200	411512	3194 / 936	421512	4747 / 1392	422512	5914 / 1733		
	1300	411513	3460 / 1014	~	~ / ~	422513	6405 / 1877		
	1400	411514	3727 / 1092	421514	5538 / 1624	422514	6900 / 2022		
	1600	411516	4259 / 1248	421516	6329 / 1856	422516	7883 / 2310		
1800	411518	4791 / 1404	~	~ / ~	422518	8869 / 2599			
2000	411520	5323 / 1560	~	~ / ~	422520	9855 / 2888			
2400	411524	6388 / 1872	~	~ / ~	422524	11827 / 3466			
600 HEIGHT IN MM	400	411604	1236 / 362	421604	1833 / 537	422604	2283 / 669		
	500	411605	1546 / 453	421605	2293 / 672	422605	2853 / 836		
	600	411606	1857 / 544	421606	2751 / 806	422606	3423 / 1003		
	700	411607	2164 / 634	421607	3208 / 940	422607	3993 / 1170		
	800	411608	2474 / 725	421608	3665 / 1074	422608	4566 / 1338		
	900	411609	2781 / 815	421609	4126 / 1209	422609	5136 / 1505		
	1000	411610	3092 / 906	421610	4583 / 1343	422610	5706 / 1672		
	1100	411611	3402 / 997	~	~ / ~	422611	6275 / 1839		
	1200	411612	3709 / 1087	421612	5501 / 1612	422612	6845 / 2006		
	1300	411613	4020 / 1178	~	~ / ~	422613	7418 / 2174		
	1400	411614	4327 / 1268	421614	6415 / 1880	422614	7988 / 2341		
	1600	411616	4948 / 1450	421616	7333 / 2149	422616	9128 / 2675		
1800	411618	5566 / 1631	~	~ / ~	422618	10271 / 3010			
2000	411620	6183 / 1812	~	~ / ~	422620	11411 / 3344			
2400	411624	7418 / 2174	~	~ / ~	422624	13693 / 4013			
700 HEIGHT IN MM	400	411704	1399 / 410	~	~ / ~	422704	2577 / 755		
	500	411705	1751 / 513	~	~ / ~	422705	3222 / 944		
	600	411706	2102 / 616	~	~ / ~	422706	3866 / 1133		
	700	411707	2450 / 718	~	~ / ~	422707	4511 / 1322		
	800	411708	2802 / 821	~	~ / ~	422708	5153 / 1510		
	900	411709	3150 / 923	~	~ / ~	422709	5798 / 1699		
	1000	411710	3501 / 1026	~	~ / ~	422710	6443 / 1888		
	1200	411712	4201 / 1231	~	~ / ~	422712	7732 / 2266		
1400	411714	4900 / 1436	~	~ / ~	422714	9019 / 2643			
1600	411716	5603 / 1642	~	~ / ~	422716	10309 / 3021			
1800	411718	6303 / 1847	~	~ / ~	422718	11595 / 3398			

# DIMENSIONS AND WALL MOUNTING INFORMATION

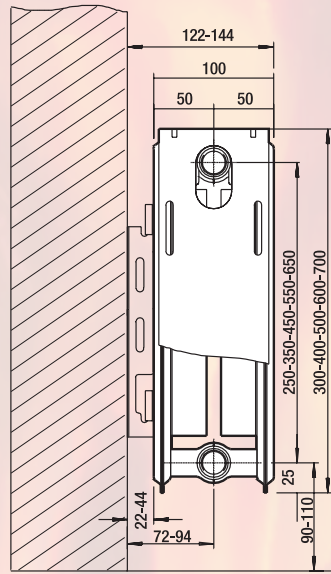
**TYPE 11**  
Single Convector



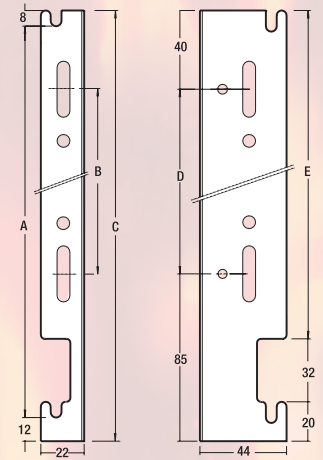
**TYPE 21**  
Double Panel Single Convector



**TYPE 22**  
Double Panel Double Convector

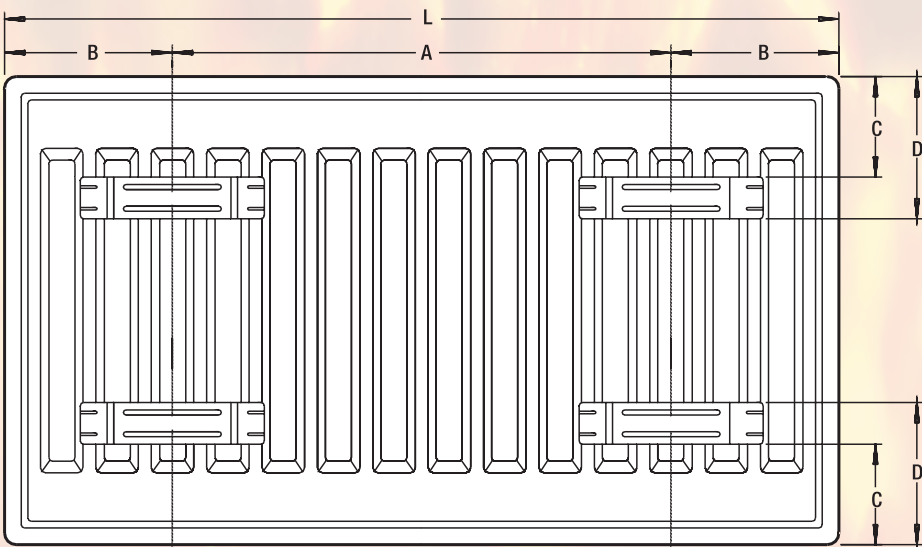
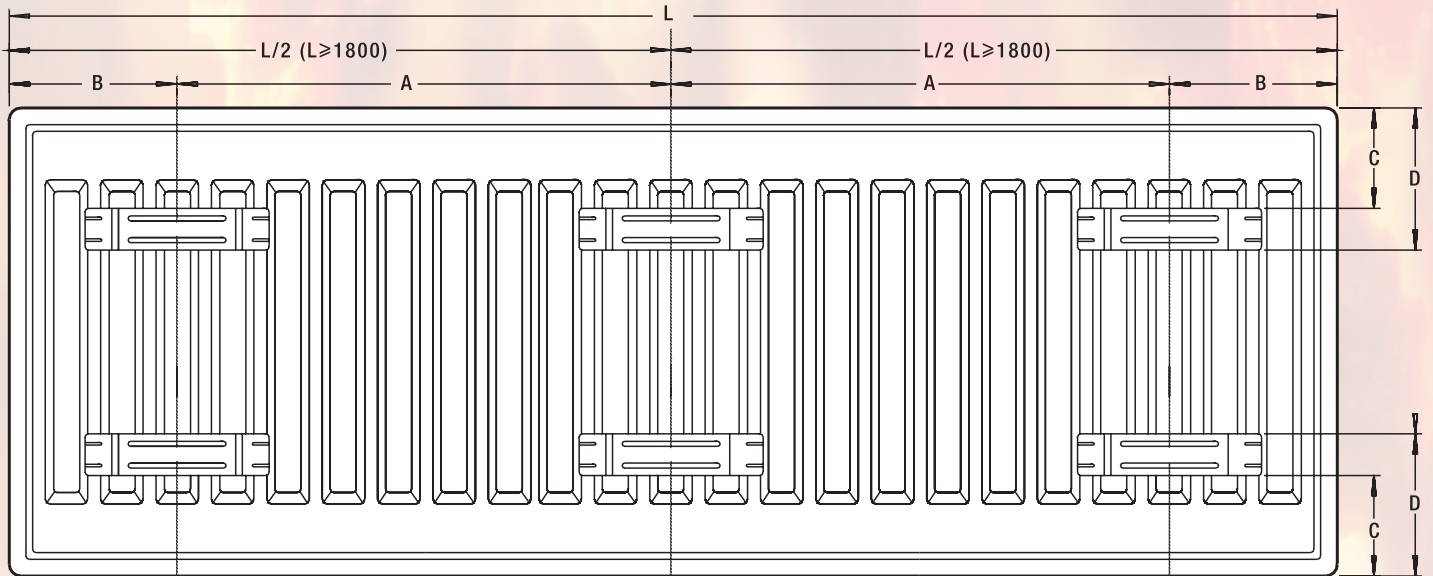


**RADIATOR BRACKET PROFILES**



Height	A	B	C	D	E
300	155	50	175	~	123
400	255	150	275	150	223
500	355	250	375	250	323
600	455	350	475	350	423
700	555	450	575	450	523

## RADIATOR LUG POSITIONS



L (mm)	A (mm)		B (mm)		C (mm)	D (mm)	No. of Lugs
	Type 11	Type 21/22	Type 11	Type 21/22			
400	170	200	115	100	60	85	2
500	270	300	115	100	60	85	2
600	370	400	115	100	60	85	2
700	470	500	115	100	60	85	2
800	570	600	115	100	60	85	2
900	670	700	115	100	60	85	2
1000	770	800	115	100	60	85	2
1100	870	900	115	100	60	85	2
1200	970	1000	115	100	60	85	2
1300	1070	1100	115	100	60	85	2
1400	1170	1200	115	100	60	85	2
1600	1370	1400	115	100	60	85	2
1800	785	800	115	100	60	85	3
2000	885	900	115	100	60	85	3
2400	1085	1100	115	100	60	85	3

## NOTES

### TESTING & OPERATING PRESSURES

All models are high pressure tested to withstand 145 psi (13 bar), to perform at a maximum working pressure of 101.5 psi (10 bar) at a maximum temperature of 95°C.

### CONNECTIONS

Each Prorad radiator has 4 x 1/2 inch connections as standard.

### APPLICATIONS

Prorad radiators are suitable for two pipe installations. For single pipe applications, it is advisable to use diversion tees in the pipework, as this will assist in obtaining design performance from the radiators.

Although Prorad is suitable for Microbore pipework, the back tappings make it unsuitable for twin entry valves.

### INSTALLATION

Everything required for installation can be found within the robust packaging.

Brackets are of a strong design, with open top and deep slots, which facilitate easy and secure installation. Plastic inserts seat the radiator precisely on the bracket minimizing expansion and contraction noise.

The neat nickel-plated plug and vent provide a watertight joint, whilst complementing the superior finish.

Recommended height from the floor to the base of the radiator is 150 mm minimum. This allows adequate airflow when the radiator is placed on the bracket.

### WATER TREATMENT

On completion of the installation the system should be properly flushed and filled in accordance with the British Standard Code of Practice for the Treatment of Water in Domestic Hot Water Central Heating Systems BS 7593.

This will remove flux residues and installation debris, which might promote corrosion and damage within the system.

If it is decided to apply a corrosion inhibitor to maximize the working life of the system, it should be applied in accordance with the manufacturer's instructions and should be suitable for the particular metals within the system.

### COAT PAINT PROCESS

Each Prorad radiator is subjected to a multi stage cleaning process before the paint is applied. This involves several rinsing stages, including an iron phosphate and demineralization rinse.

The first coat of paint is an environmental friendly water based primer paint. The radiator is then stoved and cooled. The second powder coat, in warm white (RAL 9010) is applied and the radiator goes through a final curing stage. It is then allowed to cool prior to packaging.

### CAUTION

When designing for domestic systems we recommend that Prorad be used only in heating systems complying with British Standard Code of Practice for Central Heating For Domestic Premises BS5449 Part 1.

Single feed, indirect cylinders are not recommended as should interchange of water occur, fresh aerated water would enter the heating system, resulting in corrosion.

### TEMPERATURE TABLE

To apply the factors shown in the table to our quoted outputs, multiply the quoted output by the chosen operating factor to give new output.

To apply the factor to required output, divide required output by factor to give correct radiator from the Prorad range.

#### TEMPERATURES

Factors for differences between mean water temperature and room temperature in °C and °F other than 60°C (108°F)

	°C		°F
5°C	0.046	10°F	0.055
10°C	0.108	20°F	0.122
15°C	0.179	30°F	0.207
20°C	0.256	40°F	0.293
25°C	0.338	50°F	0.384
30°C	0.423	60°F	0.477
35°C	0.512	70°F	0.590
40°C	0.605	80°F	0.690
45°C	0.700	90°F	0.800
50°C	0.798	100°F	0.910
55°C	0.898	110°F	1.026
60°C	1.000	120°F	1.141
65°C	1.104	130°F	1.125
70°C	1.211	140°F	1.377
75°C	1.319		

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