



® Zylo



**Preformed Pipe Casings and Pipe Boxing**

# **A Guide to Radiator Sizing and Heat Output**



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## Introduction

Existing heating systems often consist of a mix of old and new radiators, the outputs of which can be difficult to obtain or estimate.

This guide enables you to accurately estimate the heat output from a wide range of existing radiators and therefore select a modern replacement without resorting to complex heat loss calculations.

The following pages show approximate interpolated radiator outputs based upon a range of British manufacturers published data. Both new steel panel radiators and old, obsolete radiator designs are included.

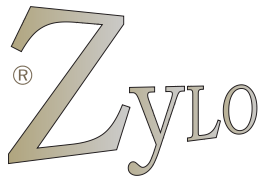
All sizes and outputs have been converted to metric units and are based upon a room temperature of 20°C and a radiator mean water

temperature of 75°C (**55°C differential**). This uniformity allows direct comparisons between old and new outputs published in this guide.

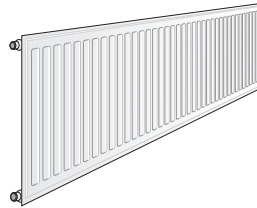
When ever possible, select your new radiator using the radiator manufacturers output data. This will usually be based upon a **60°C differential**.

To enable a direct comparison between the estimated output of the old radiator from this guide, and the proposed new radiator, the new radiator output (at **60°C differential**) must be **divided** by a factor of **1.12**, or the old radiator estimated output based upon **55°C differential** should be **multiplied** by **1.12**.

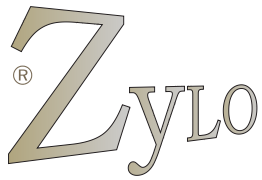
For further information, see **Heat Output Factor** on page nine.



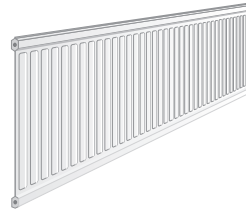
## Output Guide for Finned Steel Panel Radiators



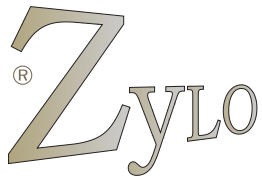
Height (mm)	Type	Output (W/m)
300	Finned Single Panel	541
300	Double Panel, Single Fin	820
300	Double Panel, Double Fin	1039
400	Finned Single Panel	707
400	Double Panel, Single Fin	1055
400	Double Panel, Double Fin	1318
450	Finned Single Panel	777
450	Double Panel, Single Fin	1165
450	Double Panel, Double Fin	1452
500	Finned Single Panel	864
500	Double Panel, Single Fin	1286
500	Double Panel, Double Fin	1601
600	Finned Single Panel	1006
600	Double Panel, Single Fin	1538
600	Double Panel, Double Fin	1857
700	Finned Single Panel	1155
700	Double Panel, Single Fin	1694
700	Double Panel, Double Fin	2128
750	Finned Single Panel	1218
750	Double Panel, Single Fin	1868
750	Double Panel, Double Fin	2258



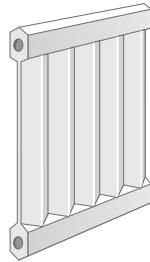
## Output Guide for Old Steel Panel Radiators (without fins)



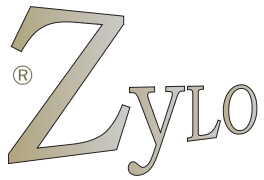
Height (mm)	Type	Output (W/m)
300	Single Panel	483
300	Double Panel	752
440	Single Panel	665
440	Double Panel	1042
590	Single Panel	856
590	Double Panel	1340
740	Single Panel	1042
740	Double Panel	1633



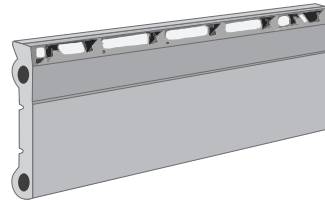
## Output Guide for Cast Iron Panel Radiators



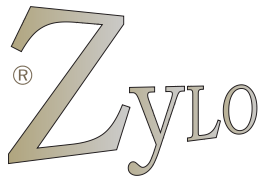
Height (mm)	Output (W/Section)
460	617
610	820
760	1015



## Output Guide for Cast Iron Skirting Heating



Height (mm)	Output (W/Section)
160	178
238	260
250	452



## Output Guide for Column Radiators



Height (mm)	Depth (mm)	Output (W/Section)
460	66	41
460	89	54
460	140	75
460	190	96
460	240	105
610	66	54
610	89	71
610	140	105
610	190	130
610	240	149
760	66	72
760	89	92
760	140	130
760	190	158
760	240	205
910	66	159
910	89	190
910	140	249



## Output Guide for Hospital Pattern Radiators



Height (mm)	Depth (mm)	Output (W/Section)
460	76	41
460	89	54
460	127	63
460	146	69
460	184	80
610	76	54
610	89	67
610	127	81
610	146	93
610	184	106
760	76	70
760	89	86
760	127	101
760	146	116
760	184	137
910	127	119
910	146	139
910	184	164

## Heat Output Factor

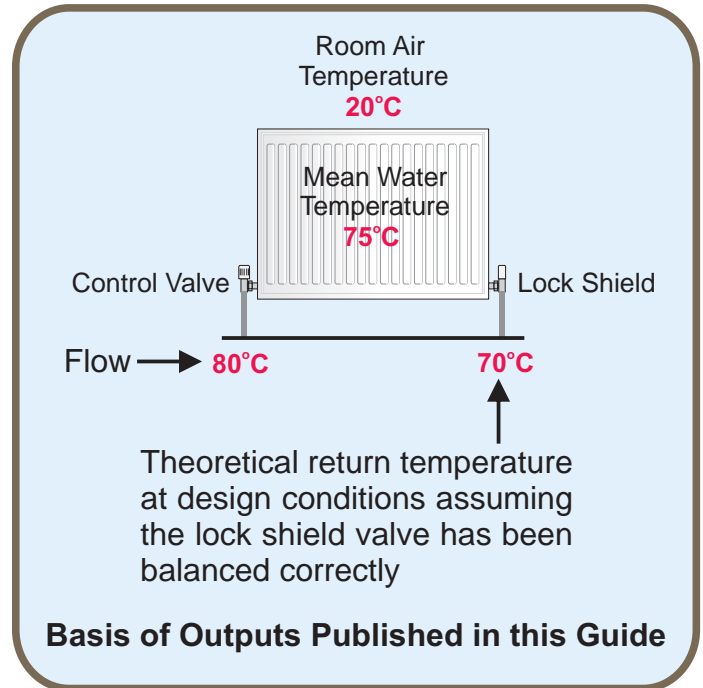
The radiator outputs in this guide are based upon the old standard of 55°C differential.

$$\begin{matrix} 75^{\circ}\text{C} & & 20^{\circ}\text{C} \\ \swarrow & & \swarrow \\ \text{Mean Water Temp} - \text{Room Temp} - & = & 55^{\circ}\text{C} \end{matrix}$$

Modern radiator catalogues are generally based upon a 60°C differential.

$$\begin{matrix} 80^{\circ}\text{C} & & 20^{\circ}\text{C} \\ \swarrow & & \swarrow \\ \text{Mean Water Temp} - \text{Room Temp} - & = & 60^{\circ}\text{C} \end{matrix}$$

Apply the appropriate conversion factor from the table below for an accurate comparison between the two as and when required.

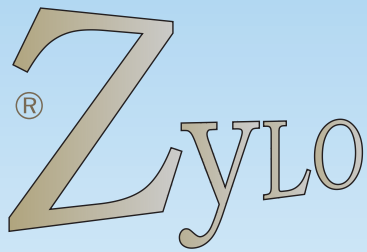


Conversion Factors for Radiator Outputs Other Than 55°C differential Temperature

Room Temp.	Mean Water Temperature					
	65	70	75	80	85	90
°C						
10	0.95	1.06	1.17	1.29	1.41	1.54
13	0.90	1.01	1.12	1.24	1.36	1.49
15	0.86	0.97	1.09	1.20	1.33	1.45
18	0.81	0.92	1.03	1.15	1.27	1.40
20	0.78	0.89	1.00	1.12	1.24	1.36
22	0.74	0.85	0.97	1.08	1.20	1.33
25	0.69	0.80	0.91	1.03	1.15	1.27

55°C differential  
(This Guide)

60°C differential  
(New Radiator Catalogues)



## **About Us**

**BSMW Products Ltd manufacture a wide range of commercial radiator covers, heater guards and pipe casings.**

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