

Domestic Heating Design Guide - Worksheet B – Heat Emitters and Pipework

Stage 1 - Job information

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Stage 2 - Room information - see section 5.5.1

Design flow temperature (°C) for room		Design return temperature (°C) for room					Mean water temperature (MWT) (°C) for room		Design room temperature (°C) (as per Worksheet A)		Mean water to air temperature (MW-Air) (°C)	
200	+	201	=	202	Divide	2	=	203	Minus	204	=	205

Stage 3 - Pipework emissions - see section 5.6.2

	Pipe diameter (mm)		Pipe total length (m)		Pipework emissions per length (W/m)		Pipe layout factor		A Pipework emissions' (watts)
	8		3x2	×	3x3	×	3x4	=	3x5
	10		3x2	×	3x3	×	3x4	=	3x5
	15		3x2	×	3x3	×	3x4	=	3x5
	22		3x2	×	3x3	×	3x4	=	3x5
	28		3x2	×	3x3	×	3x4	=	3x5
Other	3x1		3x2	×	3x3	×	3x4	=	3x5
Other	3x1		3x2	×	3x3	×	3x4	=	3x5
Other	3x1		3x2	×	3x3	×	3x4	=	3x5

Stage 4 - Radiator output requirements

Room Design Heat Loss (watts) (as per Worksheet A2)		Total pipework emissions' (watts) (sum of column A)		Heat emitter required output (watts)	(Note) this worksheet is intentionally only for the specication of radiators, not other types of heat emitter
400	Minus	401	=	402	

Stage 5 - Radiator output factors - see section 5.6.3

	Mean water to air temperature differential factor (f1)		Pipe connections factor (f2)		Enclosure factor (f3)		Finish factor (f4)		B Output emission factor (f)
Radiator 1	5x1	×	5x2	×	5x3	×	5x4	=	5x5
Radiator 2	5x1	×	5x2	×	5x3	×	5x4	=	5x5
Radiator 3	5x1	×	5x2	×	5x3	×	5x4	=	5x5
Radiator 4	5x1	×	5x2	×	5x3	×	5x4	=	5x5

Stage 6 - Radiator selection - see section 5.6.4

Radiator	Heat emitter required output (watts) (from stage 4)		Proportion of total heat emitter output supplied by radiator (%) (0% = 0, 100% = 1)		Proportion of total heat emitter output supplied by radiator (watts)		Output emission factor (f) (from column B)		Radiator listed output required (watts)
1	600	×	6x1	=	6x2	Divide	6x3	=	6x4
			+						
2		×	6x1	=	6x2	Divide	6x3	=	6x4
			+						
3		×	6x1	=	6x2	Divide	6x3	=	6x4
			+						
4		×	6x1	=	6x2	Divide	6x3	=	6x4
			=						
			1						

Stage 7 - Selected radiator(s)

	From manufactures catalogue for selected radiators						Output emission factor (f) (from column B)		Actual calculated output (watts) (for reference)
Radiator	Manufacturer, model and part number		Water content (litres)		Resistance (meters)		Listed output (watts)		
1	7x1		7x2		7x3		7x4	×	7x6
2	7x1		7x2		7x3		7x4	×	7x6
3	7x1		7x2		7x3		7x4	×	7x6
4	7x1		7x2		7x3		7x4	×	7x6