



ESTIMATED WATTAGE REQUIREMENTS

The following tables can be used to make quick estimates of wattage requirements. Read across in table from nearest amount in pounds of steel to desired temperature rise column and note kilowatts to heat in one hour.

Kilowatt-Hours to Heat Steel¹

Amount of Steel (lb.)	Temperature Rise °F						
	50 °	100 °	200 °	300 °	400 °	500 °	600 °
	Kilowatts to Heat in One Hour						
25	0.05	0.11	0.21	0.32	0.42	0.53	0.63
50	0.11	0.21	0.42	.63	0.84	1.06	1.27
100	0.21	0.42	0.84	1.27	1.69	2.11	2.53
150	0.32	0.63	1.27	1.90	2.53	3.17	3.80
200	0.42	0.84	1.69	2.53	3.38	4.22	5.06
250	0.53	1.06	2.11	3.17	4.22	5.28	6.33
300	0.63	1.27	2.53	3.80	5.06	6.33	7.60
400	0.84	1.69	3.38	5.06	6.75	8.44	10.13
500	1.06	2.11	4.22	6.33	8.44	10.55	12.66
600	1.27	2.53	5.06	7.60	10.13	12.66	15.19
700	1.48	2.95	5.91	8.86	11.82	14.77	17.73
800	1.69	3.38	6.75	10.13	13.51	16.88	20.26
900	1.90	3.80	7.60	11.40	15.19	18.99	22.79
1000	2.11	4.22	8.44	12.66	16.88	21.10	25.32

Base on a specific heat of 0.12

kW To Heat Steel¹

$$\text{kW} = \frac{\text{Pounds} \cdot \text{Temperature Rise (°F)}}{23697 \cdot \text{Heat-Up Time (hrs)}}$$

OR

$$\text{kW} = \frac{\text{Kilograms} \cdot \text{Temperature Rise (°C)}}{5971 \cdot \text{Heat-up Time (hrs)}}$$

¹ Includes a 20 percent safety factor