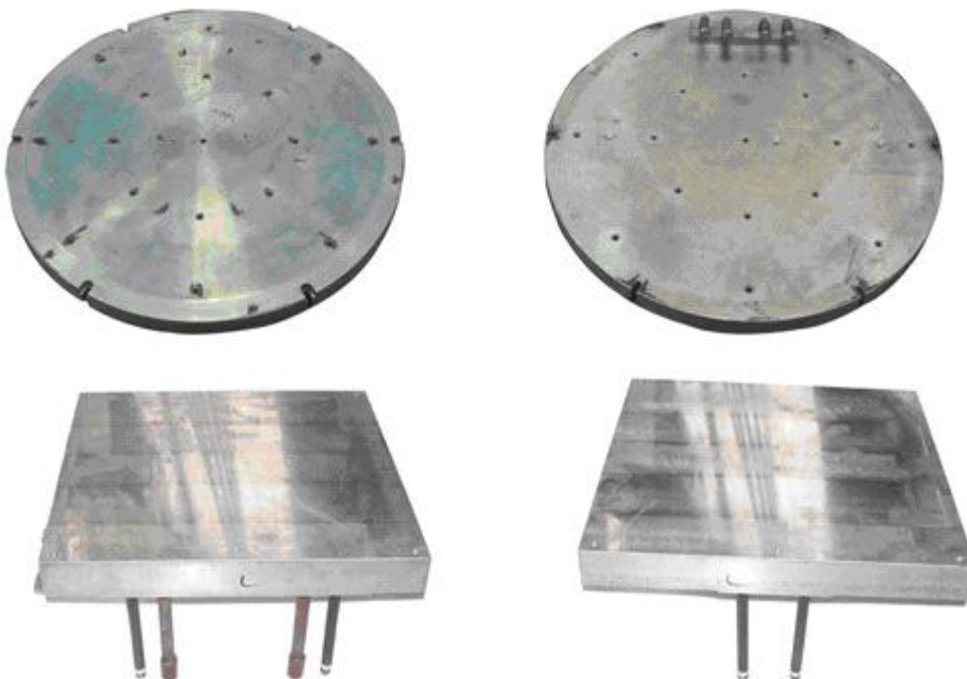


Cast-In Heater



Application

Semiconductor Manufacturing, Medical Equipment, Lab Equipment, Hot Glue Melt, Other Industries etc.



Cast-In material and operating temperature

Material	Application	Operating Temperature	Option
Aluminum	Low cost	Up to 300°C	Standard
Copper	Good heat conduction	Up to 500°C	Optional
Iron	High temperature	Up to 650°C	Optional

For other special materials, please contact us.

Typical maximum watt density

32 w/inch² or 5 w/cm²

Standard Specification

All Cast-In heaters are produced by order please indicate following information when inquiry or order.

- Cast-In Material: refer to item 2, if not mentioned, aluminum will be produced.
- Size and shape: ☉ Maximum size is 150 cmx150cm ☉ A drawing is necessary.
- Voltages: Maximum is 480V.
- Wattages.
- Phases: Single phase or 3 phases.
- Working temperature: Maximum is 650°C.
- Termination and connection: providing drawing.
- Heater exit location.
- Application and circumstance.

Technical Information

(1). How to calculate required wattage :

$$Kw = \frac{M \times Cs \times \Delta T}{864 \times t(h)} (1 + H \text{ loss})$$

M : Weight of heating object. t(h) : Time(hour).

Cs : Heating rate. 864 : Rate of K cal. change to K watt.

ΔT : Temperature difference. H loss : Heating loss (about 20%~30%).

(2). Various material character and heating rate sheet :

Material	Weight rate (kg/dm ²)	Heating rate (KCal/Kg°C)	Melted temp.°C
Water	1.00	1.000	0
Iron,cast	7.20	0.120	1176
Inconel 600	8.41	0.126	1371
Incoloy 800	8.00	0.130	1371
Gold	19.32	0.032	1062
Silver	10.49	0.057	960
Brass-yellow	8.47	0.096	932
Copper	8.91	0.095	1082
Steel	7.86	0.122	1515
Stainless steel 304	7.91	0.120	1398
Stainless steel 430	7.61	0.110	1454
Lead liquid	10.71	0.037	
Lead solid	11.34	0.032	326
Magnesium	1.74	0.270	650
MgO (Compacted)	3.10	0.209	
Nickel 200	8.88	0.120	1435
Nichrome 80/20	8.35	0.110	1398
Tin liquid	7.00	0.065	
Tin solid	7.27	0.052	232
Solder(Sn-Pb5%)	8.92	0.051	182

Aluminum	2.71	0.240	643
Cement board	1.94	0.250	
Brickwork	2.10	0.220	
Asphalt	2.10	0.400	
Molybdenum	10.21	0.071	2621
Mica	2.82	0.210	
Paraffin	0.88	0.690	56
Steatite	2.60	0.200	
Teflon	2.15	0.250	
Platinum	21.45	0.035	1773
Phenolic	1.27	0.400	
Monel 400	8.82	0.110	1315
Tantalum	16.60	0.035	2996
Tungsten	19.30	0.040	3410
Zinc	7.17	0.096	419
Titanium	4.53	0.130	1668
Sulfur	2.07	0.175	119
Zirconium	6.47	0.067	1848

Contact

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