

RMAE Electrical Holding Furnace

insertec
Furnaces & Refractories

RMAE Holding Furnace - En

RMAE Furnaces are chamber-holding furnaces, reverberatory type, without crucible, for holding molten aluminium at required temperature and location close to the die-casting machine, heated by electrical resistances and with very low energy consumption.

The furnace incorporates a central heating chamber and two wells, one for charging molten metal and other for ladling. The heated cover houses overhead Resistance Heating element which ensure efficient transfer of heat to the molten metal and are easily replaced in the event of element failure. This cover is hinged in one side and a hydraulically but manual operated actuator enables maintenance and cleaning of the molten metal surface.

The furnace configuration and holding capacity is designed to suit both the orientation of the die-casting machine, the molten metal casting yield and the size of the dosing ladle.

The furnace also includes a drain off spout, complete with a manually driven tapping system, to facilitate emptying the furnace, for cleaning, alloy changes or emergencies.



RMAE Holding Furnace next to High Pressure Die casting Machine.

As molten aluminium is chemically active to refractory, non-wetting and lower porosity monolithic cast able is used in areas in contact with the molten metal. The wall between the central chamber and the molten metal charging well is a precast shape and manufactured with high strength refractory material, exhibiting excellent properties against temperature shock and with efficient heat transfer. This ensures improved temperature uniformity in the dosing well.

Heating system is provided by 6 spiral resistances, which are located in the heating chamber, cover and manufactured from Kanthal AF material wound over ceramic tubes. A module of thyristors regulates the power control.

The installed power is chosen, so it can recover temperature quickly following routine maintenance and also provides sufficient power to melt and metal solidification in the event of power failure. Insulated covers are provided to both the measurement and dosing wells to reduce thermal losses during operation and non-productive periods.



Ladling well with T/C and level sensor



Charging hopper with pneumatic lid

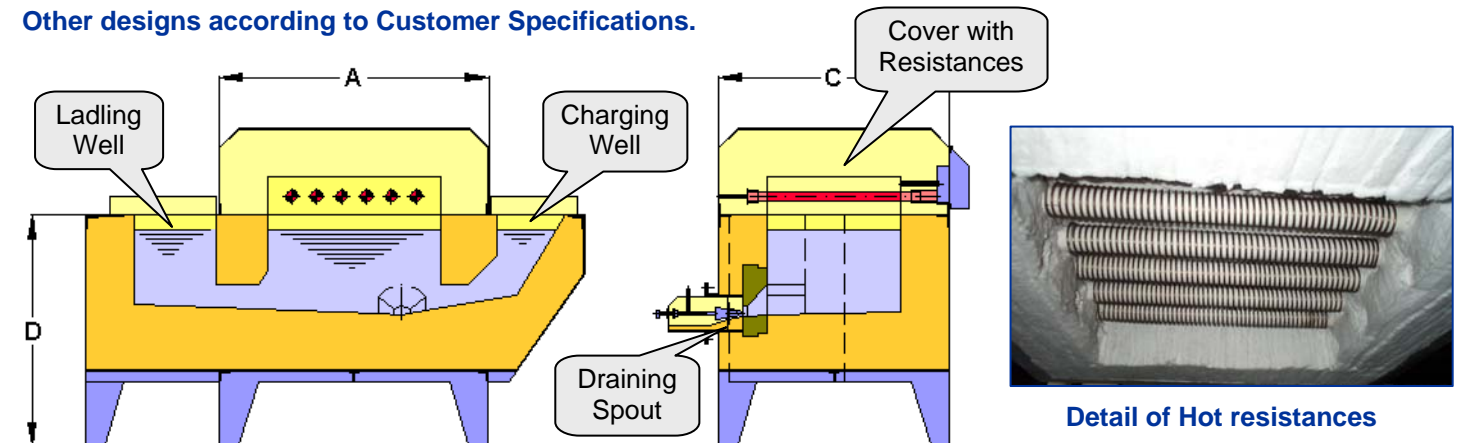
Features

- Excellent energy efficiency, by a good selection of refractory materials and chambers design.
- Draining spout for empty the furnace for cleaning, change of alloy or emergencies.
- Heated cover pneumatically or hydraulically actuated.
- Special precast refractory plate between central chamber and dipping well, with excellent heat transfer.
- Installed power, for superheating or remelting molten aluminium in the event of a power failure.
- Accurate temperature control of molten metal, with an immersed thermocouple
- Air over temperature control in heating chamber.
- Continuous charging and dosing
- Orientation according to the requirements of the Customer Plant layout.
- Optionally the furnace can incorporate plate filtration between the heating chamber and the dosing well.
- Compact design, with small footprint.



RMAE Holding Furnaces				
Standard Models	Molten metal Capacity (kg)		Electrical Power (KW)	
	Overall	Aprox. Lading Cap.	Installed	When Lading
RMAE - 22 - 550	550	300	22	8,5
RMAE - 30 - 850	850	500	30	10
RMAE - 36 - 1350	1350	800	36	12

Other designs according to Customer Specifications.



RMAE Holding Furnaces							
Standard Models	Basic Dimensions						
	A	B	B1	C	D	E	F
RMAE - 22 - 550	1200	2400	500	1100	900	400x450	200x300
RMAE - 30 - 850	1350	2600	500	1200	1100	400x450	200x300
RMAE - 36 - 1350	1500	2750	500	1200	1100	450x500	200x300