



MELTOWER® Tilting Tower FADB

insertec
Furnaces & Refractories

Meltower FADB - En

MELTOWER® Melting Furnace designed for ingots and in house foundry returns, used as central bulk melting furnace where a continuous production of liquid aluminium is required.

Process Description

Charge Preheating. A skip charge elevator lifts the materials up to the point of entry at the top of the tower. The materials are then preheated by transfer of energy from the exhaust gas. After preheating the materials, descend in the tower for melting on an inclined dry hearth.

Melting Burners are positioned adjacent to the dry hearth and melt by direct flame impingement philosophy. Then, the metal drains by gravity from the inclined dry-hearth into the holding chamber. An additional proprietary dry hearth Burner avoids unmelted metal remaining on the hearth whilst enhancing molten metal fluidity during transfer to the holding chamber.

Metal Losses. Our proven combustion combined with direct flame impingement philosophy will melt metal on demand and with the very minimum of oxidation. The short exposure of the materials to high temperatures, results in a high metal recovery.



3 ton/hr Tilting Meltower General view

A single burner maintains temperature uniformity at all times in the **holding chamber** during melting and holding.

All the products of combustion are exhausted through the tower to maximize the thermal efficiency.

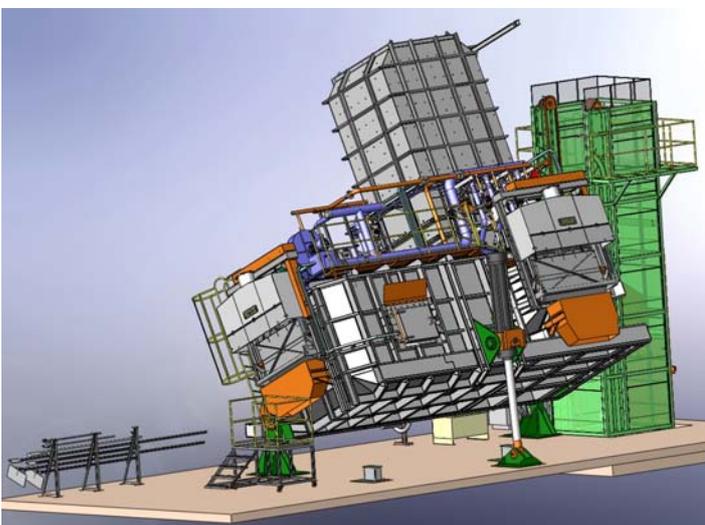
A **molten metal level sensor** in the holding chamber provides security for the operator.

There is a **charge level sensor** provided in the preheating tower, to ensure full preheating capability and initiating the automatic charging. The temperature of the waste gas is monitored and used to control the melting burners.

Material **charging equipment** is designed to suit the physical nature of the charge materials, access and ease for charging and the foundry layout of the melting furnace.



A visual display of measured temperatures and control parameters is provided including the temperatures of the molten metal, exhaust gas and holding chamber atmosphere.



Tilting MELTOWER

Ingeniería y Servicios Técnicos, S.A.

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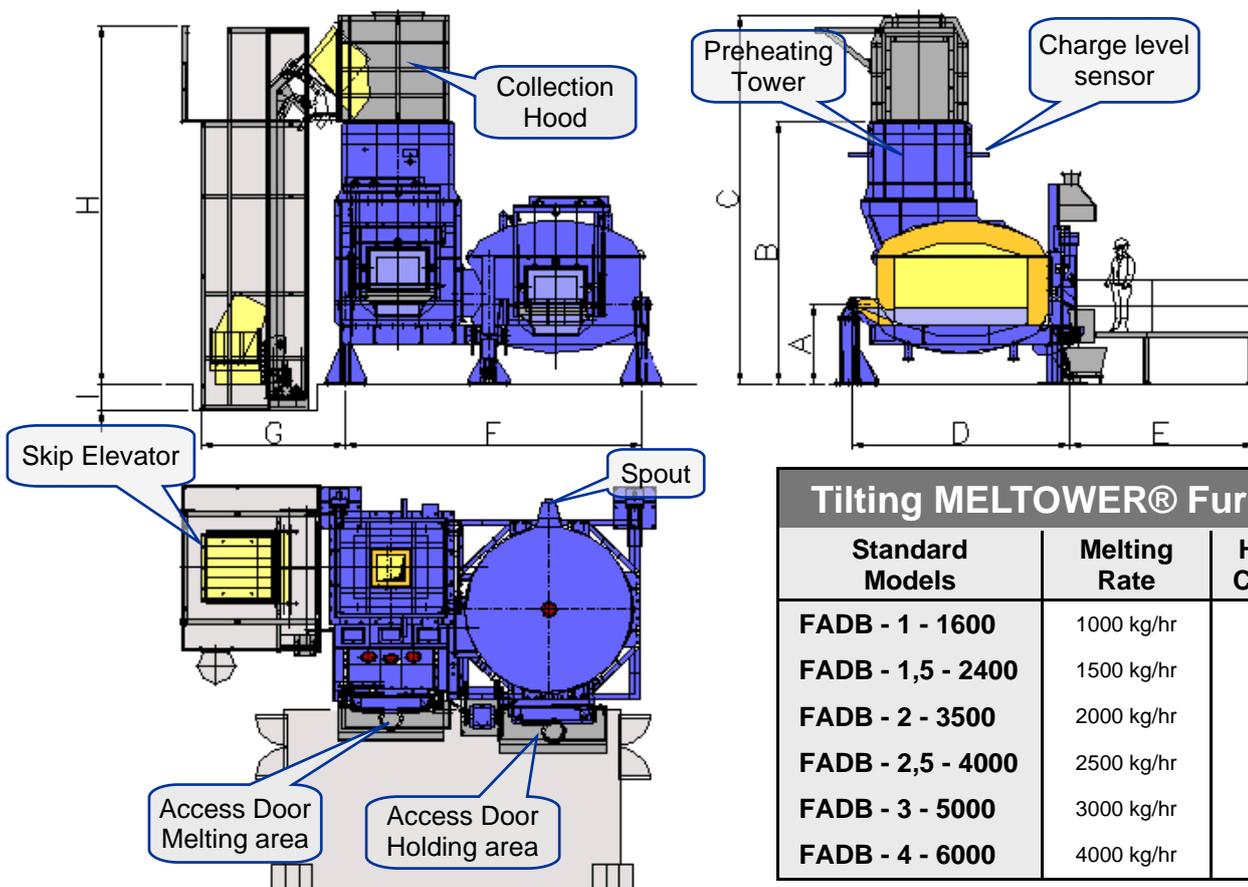
Features:

- Excellent thermal efficiency.
- High metal recovery.
- Clear and unobstructed access to chambers, for maintenance and ease of cleaning and inspection.
- Independent temperature regulation for the melting and holding chambers.
- Automatic bath level monitoring.
- Material charge level detection by photocell sensor.
- Automatic skip elevator charging system
- Lip axis pour.

MELTOWER furnace is distinguished from other designs available in the market in:

- its holding chamber of circular section,
- excellent mechanical rigidity with independent frame support,
- durability of refractory lining, easy access for cleaning and minimum space.

That joined to the long experience achieved by **INSERTEC** in the use of non-wetting castables allow to design and build with guarantee this kind of holding chambers.



Tilting MELTOWER® Furnace		
Standard Models	Melting Rate	Holding Capacity
FADB - 1 - 1600	1000 kg/hr	1600 kg
FADB - 1,5 - 2400	1500 kg/hr	2400 kg
FADB - 2 - 3500	2000 kg/hr	3500 kg
FADB - 2,5 - 4000	2500 kg/hr	4000 kg
FADB - 3 - 5000	3000 kg/hr	5000 kg
FADB - 4 - 6000	4000 kg/hr	6000 kg

Tilting MELTOWER® Furnace							
Standard Models	Dimensions (mm)						
	A	B	D	E	F	H	I
FADB - 1 - 1600	1200	3600	3000	3000	5400	5600	500
FADB - 1,5 - 2400	1200	4600	3200	3000	5600	6600	500
FADB - 2 - 3500	1350	4700	3400	3500	5900	6700	500
FADB - 2,5 - 4000	1350	4800	3500	3500	6100	6800	500
FADB - 3 - 5000	1500	5500	3800	4000	6900	7500	500
FADB - 4 - 6000	1500	6000	4100	4000	7300	8000	500