Box Type Durable Melting Furnace

10KG-3.000KG

- High-alloy antimagnetic aluminum casting side plates condensing magnetic area inside of furnace
- High heat gain by hydraulic controlled lid covering furnace intake full well and high durability fixed refractory put in lid
- Fixed Gas Ring vacuuming smoke through furnace intake
- Easy reach and treatment with removable rear/front cover

- Supported by steel construction stands
- Installation and commissioning in a short time
- Space saving with compact design
- Hydraulic safety with mechanical lock
- Hydraulic controlled furnace lid
- Fixed exhaust ring for environmental conditions
- Easy to service and maintenance
10T melting furnace during operation

425kW 500kg+750kg IGBT controlled melting system during casting – Kuala Lumpur - Malaysia
Steel Construction Shunted Furnaces

500KG-30,000KG

- High efficiency special design
- Long life quality equipment and labor
- Excellent insulation and safety by special materials
- Suitable design for safe and fast charging-discharging
- Special 5M design magnetic yokes preventing induction current diverging
- Maximum efficiency under busy working environment
- Easy to service and maintenance with demountable top cassette
- Minimum sound level under heavy working environment
- Long life coil via water cooled magnetic yokes winding coil
- High durability lining with extra water cooled turns completing bottom and top turns.
- Anti heat loss design for molten metal
- Hydraulic system secured by mechanical lock

Special furnace design

12T 5M Steel Construction furnace
Back view

Discharge outlet
Magnetic Yokes
Rectangular coil conductor
First class coil insulation
Automatic Lining Removal System
Hydraulic furnace lid
Gas vacuuming system
Demountable top cassette design
High insulated shielding system on energy inputs
Reinforced cooling turns in bottom and top concrete for homogeny cooling of furnace lining

4 Ton Steel melting furnace during operation - Iran

5M Furnace Workshop

15T Steel construction furnace manufacturing plant

5 Ton Brass melting furnace during operation - Iran
CORELESS INDUCTION MELTING FURNACES

Demountable top
Cassette system
Hydraulic cover lift
Front cover
Tilting lift
Mechanical lock
Top platform
Demontable furnace construction.

Coil
Magnetic yokes
Coil stud

Hydraulic safety lock.
When something happens on the hydraulic line during pouring period furnace will be stable and can not going to back without control.

Earthing antenna
Leakage sensors
Connection point for lining out apparatus

Furnace cross section

Electronic coil protection

Earth Leakage Sensitivity

■ Early Warning Detecting System
■ Controls the level of Earth Leakage
■ Gives idea about lining getting thinner
■ Adjustable sensitivities.
■ System can stop automatically by PLC when liquid metal approaches the coil.
■ Approach of metal to coil is prevented with thickness of lining and coil surface continuously controlled by electromagnetic control system.

High Purity, Copper Coil Conductor

SM Always use Rectangular type, High Purity Copper Coil Conductor

Other Producers

• Maximum efficiency of coil with its rectangular shape
• No use of low efficiency circular and oval cross sectioned conductors
• Rectangular cross-section electrolytic copper
• Conductivity ≥ 58
• Minimum power losses
• Resistant ≥ 1800 °C special pre-coat
• Coil winding with Special inflammable and special heat resistant materials
• Special design for increase in efficiency
Backward and forward movable exhausted furnace cover

Fixed exhaust gas suction system and hydraulic furnace cover

Backward Tilting System

Vibratory, pneumatic, automatic refractory forging device

Gas Suction

Gas Suction

Automatic Lining Removal System

Side ramming

Bottom ramming

Hydraulic controlled furnace cover

Vibratory furnace charging car

Furnace back barrier protection

Furnace Back Tilting System
5M serves in thousands of foundries and steel plants in 4 continent and 35 countries

5M INDUCTION, founded in 2002 by five shareholders who have an old head on their shoulders, has become the fastest growing company in casting sector with induction melting systems and other foundry solutions such as below:

- Induction Melting Systems for Steel Plants up to 400,000 ton/year
- Foundry Plants from 10kg up to 30ton/hour and more.
- Melting systems for Steel, Cast-Iron, Ductile Iron, Grey Iron, Copper, Brass, Aluminum and other ferrous and non-ferrous alloys.
- Turnkey Steel Plants
- Hot Rolling Mill for Rebar,
- Continuous Casting Machines,
- Mini melting sets for laboratories

- Easy to maintenance and operation
- Our unique ability to meet your needs and our successful track record in induction melting systems makes us an invaluable partner in foundry market. We look forward to forming a mutually rewarding relationship with you.
- Assist with fast service via experienced technical team
- World class spare parts with the same codes of manufacturers
- Wide range accessories for existing melting systems
- Various melting systems for different casting foundries

5M serves in thousands of foundries and steel plants in 4 continent and 35 countries

5M, keeps all rights to make changes in produced induction systems