

GRIDS CASTING

Description

Lead melting pot - 1,5 ton capacity

The melting pot is designed for floor installation, the dimensions are 1,2x1,2x1(h), without the aspiration hood and gas burner.

Heating is provided by a gas burner (about 85.000 Kcal/h), LPG, with automatic ignition.

Complete with thermocouple for temperature control.

Gas consumption: max about 3,5Nm³/h - Pressure: max about 40mbar

Lead metering and delivery system

The lead feeding is controlled by a pneumatically operated poppet valve, synchronized with the casting m/c.

The duration of the flow is adjusted by means of a timer.

The feed line is insulated and electrically heated, with thermostatic control.

The system is composed of a lead rotary pump, a poppet valve, a lead feeding pipe.

Automatic grids casting machine

Fully automatic machine designed to cast low antimony as well as lead-calcium alloys. The lead alloy is cast in form of double grid.

The speed is continuously adjustable, by acting on a variable speed motor reduction gear, until 14 castings/min (The practical speed depends on alloy, grid size and thickness).

Typical productivity: until 6500 grids/shift

The main characteristics of the machine are:

- Lead pouring ladle heated by electric resistances, completely closed and surrounded by flames for preventing alloy oxidation. The operation of the ladle is pneumatic and its temperature is thermostatically controlled.
- Mould opening and closing and grid ejection pneumatically operated. The speed of the air pistons is easily adjustable acting on the control valves.
- Two cooling systems including manifolds, flexible pipes and taps, the first for the cooling of fixed and movable mould, the second for the trim die and tilting grids transfer plate (new machinery).
- Grid transfer system studied for the handling of soft grids. The grids cast from the mould are conveyed by a continuous belt, provided with two steel rollers for decelerating and aligning them after ejection. The first roller is pneumatically driven. They are transferred to the trim die by a tilting plate, with internal water cooling ducts; mechanically driven knurled rollers are provided both at the entrance and at the exit of the die to control the speed of the grid and minimize free fall distance.
- Stacker with adjustable width for the grids storage and collection; its feeding mechanism features a different speed for the transport and return stroke, and is equipped with a device for the automatic release of the grid over the stacker.
- Main drive motor, with variable speed reduction gear.
- Motorized internal honeycomb conveyor belt for the automatic transfer of the trim scrap.
- Automatic stop of the machine in case of irregular operation.
- Electric control panel, fitted on the stacker's side for convenient operator's monitoring, including the temperature readouts for the mould and ladle, ammeters for each heating resistance. The separate main switchboard is mounted on the machine side.
- Belt conveyor for scraps recycling to the pot

The machine needs compressed air, max pressure 6 bar, and cooling water.

Grids trimmers

This trimmers are mounted on the grids casting machine to trim the risers of the double grids, complete with the cutting system

The system can cut the grids width 143mm

Production grid moulds

The mould is heated electrically, and by 4 heaters, 3 horizontal cooling lines on the upper part of each half mould, plus one additional horizontal line on the lower part of the movable half and one vertical line on the fixed half only, 3 rows of, 2 or 3 vent bars according to grid size on the movable half, 3 thermocouples for temperature control, radial design of the grid.

The mould consists of fixed and movable part.

The fixed a part is completed with extraction pins.

Manufacturer : COSMEC

Construction year: 1997