



# MIXING AND PASTING

## Description

### Paste mixer 800 kilograms capacity

The lead oxide coming from the oxide plant is mixed with additives, water and sulphuric acid to obtain the negative or positive mass

This machine is designed to ensure complete and perfect mixing of active ingredients and can be adapted to meet the specific needs of all different recipes existing on the market.

A blade rotary system in which each blade has a slightly different shape thoroughly mixes the material to ensure complete integration and the right degree of homogeneity of the final mass.

Easy inspection and maintenance through dust-proof doors on sides.

Quick, complete and automatic discharge of paste through a sliding door at the side of the mixer, pneumatically opened and closed.

Electric control board, PLC controlled included.

Cooling water requirements: about 5l/min

Compressed air pressure: 0,6 Mla (6 bar)

The paste mixer is equipped with:

- Water/acid automatic feeding system

The system consists of two transparent tanks for sulphuric acid, and water respectively. Each tank is provided with load cells or two level switches (one for negative and one positive paste), which automatically stop the filling at the desired level.

The water and acid flow into the mixer is started by means of two solenoid valves, operated by the PLC control system of the machine. The flow rate is adjusted by means of ball valves positioned below each tank.

Both water and acid are introduced into the central part of the mixer, and are distributed by means of a system consisting of a central funnel and two lead pipes, that rotate. In this way the pouring of the liquids is done on the whole mass of the paste, and not on a concentrated area.

The electric controls are included in the control board of the mixer.

The filling of water and acid, from the factory reservoir to the above mentioned tanks, is to be provided by the Customer, as well as the support structures.

- Lead oxide automatic feeding system

Oxide batching and dosing system by means of a small dosing silo (1.0 ton capacity) equipped with electronic load cell.

Oxide discharge by means of a butterfly valve driven by air cylinder and vibrator.

The dosing silo is refilled during the paste mixing cycle time. The electronic control board is enclosed in the main board of the mixer.

### Feeder

The feeder consists of a rotary cone, with a fixed scraper blade, and is designed to assure a regular and continuous filling of pasting machine hopper.

The flow of paste is mechanically adjusted by means of a shutter mounted at the mouth of the cone, operated by means of a handwheel.

The feeder is normally mounted below the mixer and receives the paste at the end of each cycle: the door at the bottom of the mixer is opened by an air cylinder, and the discharge takes place automatically with the rotation of the mullers.

The paste coming out first is also utilized first, so that the machine is always fed with fresh paste.

Capacity: max. 1400 kg of paste.

### Automatic grids pasting machine for automotive battery

Production rate up to 150 (thickness up to 2,5 mm) panels (double and selected grid) per minute.

Machine is suitable for pasting low-antimony or calcium grids.

Vacuum type grid feeding system is provided with variable speed, easily adjustable.  
Main drive motor, with variable speed, allows synchronization of pasting belt with grids feeder.  
This enables a minimum constant distance to be maintained between plates, thus reducing paste loss from belt.  
Pasting hopper fitted with its own motor, complete of independent main drive motor.  
Hopper unit raised and lowered by means of a powerful air cylinder. The stainless steel finishing roller fitted to the exit zone of the hopper gives accurate pasting even using thin and soft grids.  
Two paste rollers deliver paste to completely fill the grids; a special device fitted in the hopper enables the paste pressure adjustment on the grids during the pasting operation.  
Extremely robust thick steel hopper shoes having very long life.  
Rubber finishing rolls with water sprays, having solenoid valve interlocked with main motor, to cut off water supply when machine stops.  
Rapid belt change.  
Water sprays for belt cleaning.  
Machine complete with control panel fitted to the machine side and electric main board, pasting belt and one set hopper shoes to customer's specifications.

#### Flash drying oven:

Horizontal plate pre drying tunnel to dry the wet double plates coming from the pasting machine.  
Production: up to 200 double plates/minute (panel height 145 mm, depending on plate thickness).  
The oven is heated by warm air by means of the gas burners, max output 300.000 kCal/hr.  
The plates are transported on a stainless steel mesh driven by a gear ratio motor. At the output end, the operator collects the plates and put them into the special container (not furnished).  
Tunnel control is performed by the intervention of the modulation of the burner as a function of air temperature measured in the dry zone.  
Sturdy and fully insulated construction guarantees fuel saving and low temperature on the outside surface.

Manufacturer: COSMEC

Construction year: 1997