AUTOMOTIVE GRID GRAVITY CASTING MACHINE
CA SERIES

» SUITABLE FOR LOW ANTIMONY AND CALCIUM ALLOYS
Automatic grid casting machine to cast grids up to 4 mm thickness for automotive power batteries, at speed up to 24 grids/minute.
AUTOMOTIVE GRID

GRAVITY CASTING MACHINE

The CA series is the SOVEMA grid caster designed for high productivity and for meeting the requirements of the present alloys for low-maintenance/maintenance-free batteries. The mechanical construction of the machine ensures the smooth operation at continuous high speed, with typical output 18 panels/minute by lead-Calcium alloys. The CA series Incorporates the most advanced features in grid casting:

- closed pouring ladle with electric heating and oxidation-preventing flames. Lead drip eliminator is provided for alloys including tin or similar components.
- grid transfer system designed to handle thin and soft grids without damage, from ejection to the accumulation stacker. Proper features are included to ensure correct spacing and alignment and to minimize the free fall distance of the grids;
- accurate temperature control of the mould; suited for alloys, such as Lead Calcium, with a narrow solidification range.
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The control is carried out by water cooling or multiple lines and by thermostatically controlled electric heaters. The tilting plate and the trim die are also water-cooled.

- continuously adjustable variable-speed main reduction gear. The speed of the machine is read out directly on the control console in castings/minute.
- ladle and mould are pneumatically operated, with adjustable speed to suit different conditions.
- automatic transfer of the trim scrap to the pot by an automatic built-in conveyor.
- adjustable grid stacker, with special two-speed mechanism for grid transport (the return stroke without the grid is done at higher speed than the transport stroke).

The CA is part of a complete system also including:
- LEAD MELTING POT AND FEEDING SYSTEM: the alternative are conventional level pots, with rotary pump, and raised pots with gravity feeding. In both cases the quantity of lead is metered by special valves.
- SOVEMA GRID MOULD: made to Customer’s specifications, characteristics depending on grid design and type of alloy
- RECIRCULATING SYSTEM for the mould cooling: utilizing an automatic temperature regulator provided with heating and cooling system. It ensures constant casting conditions and, at the same time, eliminates lime deposits inside the cooling ducts. Regulation of the mould conditions also continues when the machine stops.

The CA series is fully equipped with safety interlocks to stop the machine in case of irregular operation. All the instrumentation (including temperature and speed readouts) is grouped in a control console within easy reach of the operator; the main switchboard is fitted to the machine side.

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TECHNICAL DATA

A LEAD PUMP

Electrical requirements 220/380 V 50 Hz 3 phase (or as required)

Electric motor 0.55 kW
Weight 57 Kg

B LEAD DUSING VALVE

Compressed air pressure requirements 0.6 MPa (6 bar)

Weight 13 Kg

C LEAD DELIVERY PIPE

Power consumption up to 3 kW 8 kW

TECHNICAL DATA

SOVEMA LEAD POT

Overall Dimensions

<table>
<thead>
<tr>
<th></th>
<th>MODEL 3 T</th>
<th>MODEL 4,5 T</th>
<th>MODEL 3/TE 42</th>
<th>MODEL 3/TE 60</th>
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<td>Dimensions (mm)</td>
<td>A 1370</td>
<td>1560</td>
<td>1200</td>
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<tr>
<td></td>
<td>B 780</td>
<td>920</td>
<td>780</td>
<td>780</td>
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<tr>
<td></td>
<td>C 200</td>
<td>250</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Height</td>
<td>1020</td>
<td>1150</td>
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<td>920</td>
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<td>Capacity</td>
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<td>4.5 tons</td>
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<tr>
<td>requirements</td>
<td>single phase</td>
<td>3 phases</td>
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<tr>
<td>Electric motor</td>
<td>0.33 Hp</td>
<td>1.5 Hp</td>
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<tr>
<td>(burner fan)</td>
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<tr>
<td>Max voltage</td>
<td>–</td>
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<td>42 kW</td>
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<tr>
<td>Max. fuel</td>
<td>240,000 kcal/hour</td>
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<td>consumption</td>
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<tr>
<td>Machine weight (kg)</td>
<td>1200</td>
<td>1650</td>
<td>800</td>
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</tr>
</tbody>
</table>

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