The new COS machine is designed for both AGM and PE batteries to improve the overall speed of the assembly process.
Sovema’s COS machine is engineered for both 6 and 12 Volt starter batteries with groups of thickness ranging between 23 and 120 mm.

**ROTARY TABLE**
The key part of the system is a rotary table with four working positions. The rotation is performed by a brushless motor which grants an accurate positioning.

**LOADING STATION**
An automatic system loads the groups into the rack by means of twelve rotating air-operated grippers (suitable for L and R layouts) by picking them up from the loading conveyor. The system is equipped with a plate and lug alignment device which includes a vibrating table suitable for PE or leaf-type GM separators.

**GROUP CASTING STATION**
The lead melting pot is electrically heated and specially designed with two sections to allow the pump to work with a fixed head. The mould is designed to cast 6 or 12 groups simultaneously, according to the dimensions. Its cooling system manages 6 independent circuits, one for each post and one for each half mould. Each circuit is equipped with dedicated thermal probes.

**LUG BRUSHING AND DEOXIDIZING STATION**
Three motorized brushes perform lug brushing, lug deoxidizing, and drop removal.

**LUG TINNING DEVICE (OPTIONAL)**
The device is suitable to be fitted to the lug brushing and deoxidizing station and improves the casting quality of thick lugs used in EFB and AGM applications.

**ADDITIONAL MELTING POT (OPTIONAL)**
An additional pot can be installed in case the system is required to work with two different alloys.

**MOULD PRE-HEATING DEVICE (OPTIONAL)**
The device manages the heating of an off-line mould to reduce the tool change-over downtime.

**UNLOADING STATION & BOXING**
The unit for the automatic unloading of the welded groups is endowed with twelve rotating air-operated grippers to pick up the output from the COS machine and place it inside the battery container. The unit performs the group boxing into the battery container in two steps: first, it inserts the groups into cells 1, 3, and 5 and, then, into cells 2, 4, and 6.

**AGM BATTERY BOXING DEVICE**
For AGM applications, the unloading station can be equipped with a device specifically designed for boxing, 6 cells of one complete battery with single operation.

**STRAP SIDE BRUSHING (OPTIONAL)**
Two rotary brushes clean the external sides of the straps from flashes; they are engineered to follow battery-specific paths.

**ADDITIONAL MELTING POT (OPTIONAL)**
An additional pot can be installed in case the system is required to work with two different alloys.
KEY FEATURES

- Automatic loading-unloading system: **REDUCTION OF MANUAL LABOUR**
- The COS machine is suitable for truck batteries: **CASTING OF ONE BATTERY PER CYCLE/6 GROUPS AT A TIME; UNLOADING SYSTEM WITH 6 GRIPPERS WHICH ROTATES BY 90 DEGREES FOR A 3 X 2 BOXING LAYOUT**

TECHNICAL DATA

OVERALL DIMENSIONS:
- Width: 4,500 mm
- Length: 7,100 mm
- Height: 3,700 mm

PRODUCTION SPECIFICATIONS:
Throughput:
- up to 6 Batteries/minute (Group Width: up to 55 mm)
- 2.5 Batteries/minute (Group Width: 56÷120 mm)

COMPONENT SIZE:
- Plate Height: 103-150 mm
- Plate Height Tolerance: ± 0.5 mm
- Separator Width: 110-165 mm (min-max)
- Minimum Gap between Total Plate Height and Separator Height: 5 mm
- Lug Condition: Oxidation Free at least 5 mm from the Upper Edge

STANDARD ELECTRICAL REQUIREMENTS:
- Voltage: 400 V, three phases + N (standard)
- Frequency: 50 Hz (standard)
- Installed Power:
  - Machine without Pot: 70 kW
  - Each electrically heated Pot: 30 kW
  - Optional Mould Pre-heating Device: 25 kW

WATER REQUIREMENTS:
- Average Consumption: 40 l/min @ 20°C
- Pressure: 4 bar
- Type of Water: Softened Water

COMPRESSED AIR:
- Pressure: 6 bar
- Installed: 2,000 Nl/min
- Average Consumption: 1,500 Nl/min

EXHAUST REQUIREMENTS:
- Suction Flow Rate: 10,000 m³/h

GAS REQUIREMENTS:
- Type of Gas: Methane or LPG
- Minimum Gas Requirements:
  - 20 mbar for Methane
  - 35 mbar for LPG
- Each Pot: 30,000 kcal/h

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