Incarobot/Decarobot

Automatic crater/decrater

Sidel

AUTOMATIC CRATER/DECRATER DESIGNED SPECIFICALLY FOR RETURNABLE GLASS BOTTLE FILLING LINES WITH RAPID FORMAT CHANGEOVERS.

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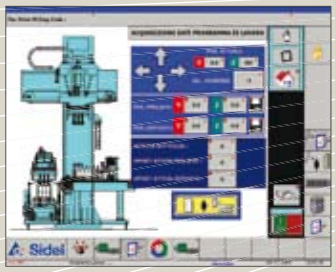
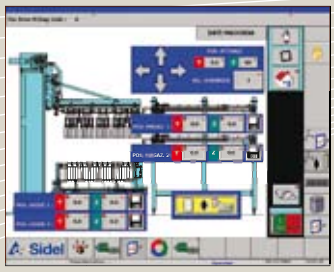
The movements of this automated machine are programmed to perform high-speed crating/decrating. Suitable for various applications, the machine is very flexible thanks to the modularity/orientation of the units, wide working area and combined operations. Easy access and minimal floor space requirements mean it can be readily fitted into existing lines.





Main features

- Bottle handling system by means of individual, pneumatically operated grippers, grouped on gripping heads adapted for the various sizes of crates to be handled
- the beam supporting the gripping heads can move on three axes; two are used for crating/decrating operations, while the third is used for automatic format changeovers
- movements controlled by self-braking brushless motors
- fully automatic operation, controlled by PLC Siemens S7.

The standard machine is supplied complete with:

- vertical column in welded steel, supporting the beam with the heads, and moving it on two axes
- sturdy horizontal beam in welded steel carrying the gripping heads.
- bottle charge/discharge conveyor table with self-supporting structure in AISI 304 stainless steel and stainless steel chains with 85 mm pitch.
- crate conveyor with AISI 304 stainless steel structure and stainless steel chain and case synchronization system
- system for adjusting machine speed according to bottle presence on conveyor.

Electric system on the machine, complete with:

- main electric panel in painted steel, to be positioned at max 3 m from the machine, complete with PLC Siemens and power elements
- touch screen operator panel, with faults display, also enabling, when required, manual mode control of the individual functions in the operating cycle
- complete electric wiring with galvanized steel cable trays
- complete pneumatic system with filter and pressure reducer
- lubrication of the main units at centralized points
- epoxy paint, with one coat of primer after sandblasting
- safety guards around the machine
- single set of parts (handling one size and type of bottle in one size and type of plastic crate) includes:
  - *set of gripping heads with pneumatic grippers*
  - *set of pneumatically operated mobile crate centering devices.*

Cluster pack gripping heads

Brushless head motorization with toothed drive belts

Incarobot/Decarobot
system

Double crater for bottles and cluster pack application

The movement of the beam carrying the heads is alternate. The bottles are gripped by individual, pneumatically-operated grippers.
During normal production, operation is fully automatic.

The movements are driven by electromechanical drive units electronically controlled by PLC.
When required, the individual movements can be controlled and operated independently by selecting "manual" mode on the operator panel. When several formats of bottles/crates are to be handled, the machine can be equipped with a rack to house the various sets of gripping heads.

Automatic changeover

The fact the beam carrying the gripping heads can move along a third axis means automated, rapid changeovers can be made.

By selecting the automatic changeover mode on the operator panel, the beam carrying the heads automatically deposits the set of heads in the rack at a pre-defined position and picks up the set of heads required for the next run.

Changeover times are thus greatly reduced.

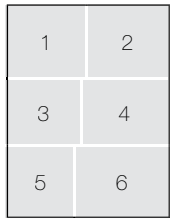
Technical features

Performance

Item	Specifications
Max. allowable load	60 Kg / head
Crate length (min/max)	310/475 mm
Crate width (min/max)	260/475 mm
Crate height (max)	400 mm
Bottle diameter (max)	120 mm
Bottle height (max)	360 mm

Power consumption weight

Item	Specifications
Installed mechanical power	15 kW
Free air consumption	200 NL/1’
Air feeding pressure	5 bar
Power voltage	380 volt
Frequency	50/60 Hz
Auxiliary voltage	24 DC volt
Total weight	4,000 kg



1 - *Double applications: clusters and bottles*
2 - *Crater: 8 heads, single lane*
3 - *Detail: adjustable guides*
4 - *Cluster gripping heads*
5 - *Crater: 5 heads, single lane*
6 - *Decrater: 8 heads, single lane*

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