LINE FOR THE SECONDARY PACKAGING OF WRAPPED BARS INTO CARDBOARD BOXES

- **OUTPUT CAPACITY**: Up to 55 cardboard displays/minute (up to 500 bars/minute coming into secondary packaging cells)

- **VERSATILITY**: 2 different cardboard boxes size

- **USER-FRIENDLINESS**: Fast and controlled production changeover

- **RELIABILITY**: Designed and built to operate continuously, 3 working shifts per day

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500 pcs/min
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`FSC` Supply Scope Limit

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55 pcs/min
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n.1 station for automatic packaging

n.1 station for automatic closing

ABRIGO S.p.A.
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**DESCRIPTION AND TECHNICAL SPECIFICATIONS**

- Handling of the flowpack products through plastic chain conveyors.
- The line can pack into the cardboard boxes the flowpack products coming from one line (500 products/min, output capacity up to 50 boxes/min).
- n.1 FSC – cardboard boxes forming machines in special execution ⇒ Handling of the displays between the forming machines and the packaging cells by means of plastic chain conveyors.
- Three section conveyor, with n’3 AC motor under frequency converter, for phasing and feeding the products into the following sorting system.
- Vertical sorter conveyor, equipped with n’3 servo-drive motor, for collecting the products into a series of pockets and preparing the batches for the picking of the Abrigo robots.
- n.2 R1R2 - pick & place robotic cells, Abrigo MRS, with n.2 two-axis servo-controlled Abrigo robots; robot mounted on the top side of the cell, for maximum compactness, accessibility and ease of cleanliness of the cell.
- Picking gripper equipped with sensor to detect the presence/absence of the products.
- Automatic adjustable picking gripper, to change the interaxis between point of picking and point of deposit.
- Handling system for the cardboard displays with 3 shuttles (equipped with suction cups) on an single linear axis module. The empty boxes are loaded on this conveyor with the use of a two axis gantry system.
- n.1 R3 - covering robotic cell, Abrigo MRS, with n.1 two-axis servo-controlled Abrigo robots; robot mounted on the top side of the cell, for maximum compactness, accessibility and ease of cleanliness of the cell.
- Covering gripper, equipped with n’8 pneumatic heads, for closing as many displays per cycle. Before the closing system, the displays, moved on the shuttles conveyor, are sprinkled with glue by a hot-melt applicator with electric guns.
- Rejecting system, composed by pneumatic blow and a container, to discharge the wrong boxes (uncompleted or not well closed).

**WAY OF PACKAGING**

High speed sorting of the products. The bars are collected into a series of pockets before the picking of the robots. The products are put into the cardboard displays in horizontal position and can be arranged in batches, thanks to the movement of the picking gripper.

<table>
<thead>
<tr>
<th><strong>Power Supply</strong></th>
<th>3f + n, 400V, 50Hz</th>
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<tbody>
<tr>
<td><strong>Installed Power</strong></td>
<td>63kW</td>
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<tr>
<td><strong>Packaging cell dimensions (L x W x H)</strong></td>
<td>7000 x 2500 x 2500mm</td>
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<tr>
<td><strong>Compressed Air</strong></td>
<td>5bar, 3700NL/min</td>
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</table>

Technical data are just for reference purpose and refer to a specific application.