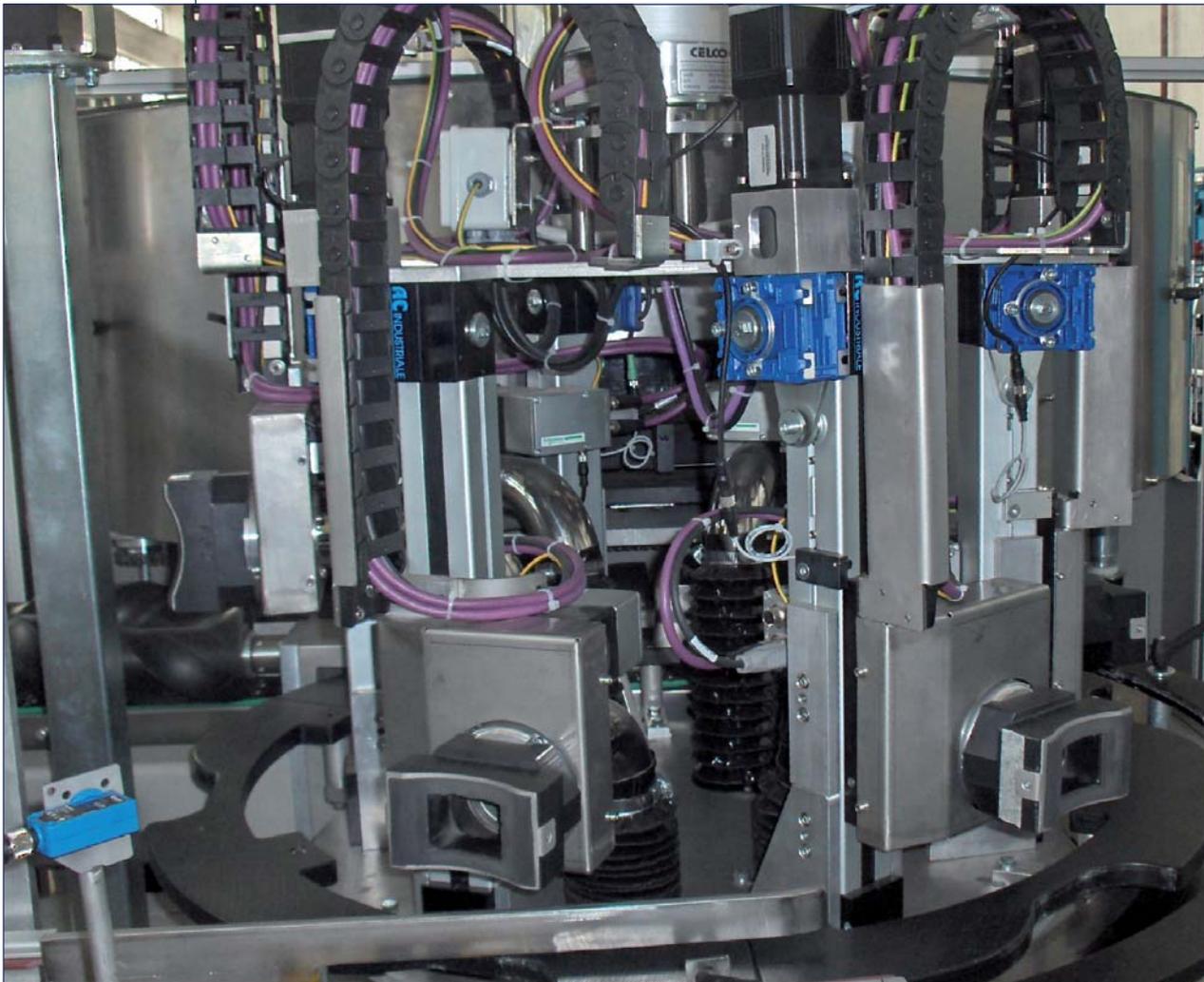




## puck feeder simple-block, super block and twister block



Lanfranchi has successfully entered the speciality market of production lines that use Puck to support the bottles during the unscrambler, filling, labelling process in order to compensate for frequent changeover and the instability of the bottles.

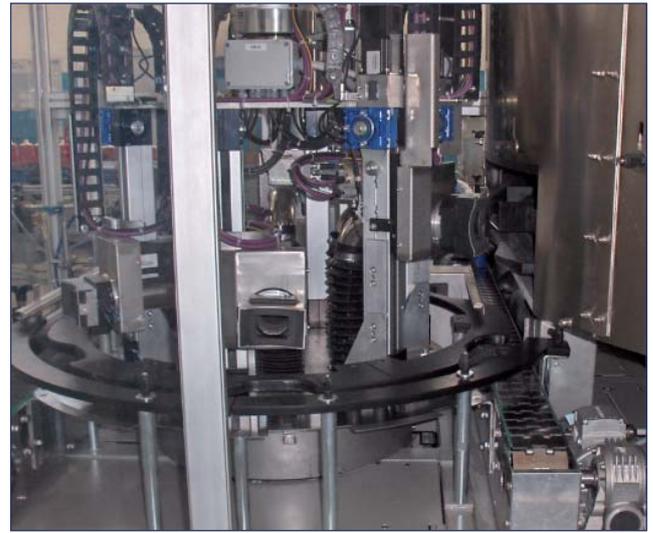
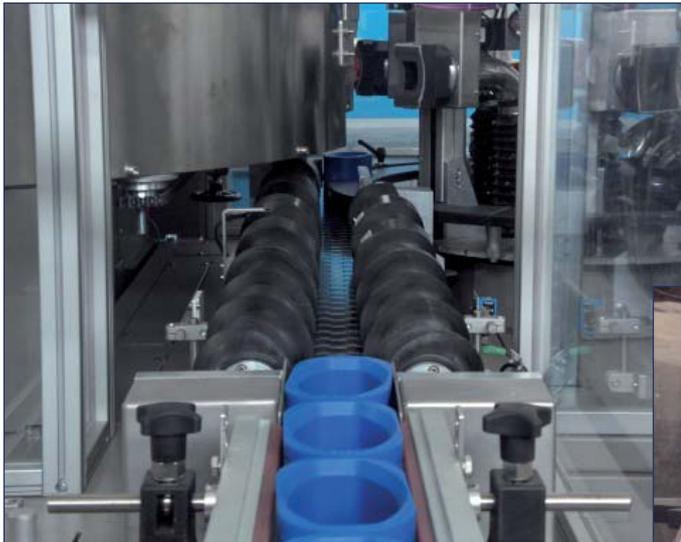
The puck feeder unit is offered in single block with the Lanfranchi bottle unscrambler and is available in the Simple-block configuration or in the Superblock configuration. A

Simple-block configuration is adopted for all the applications requiring unscrambler, orientation and puck insertion of the bottle while the Superblock configuration adds a third turret for special extra operations on the bottle before the insertion into puck. Twister Block uses the Twister technology for orientator to insert bottles in pucks with a high saving on the application cost.

Twister puck feeder

(low - medium speed, from 2,000 until 12,000 bph)

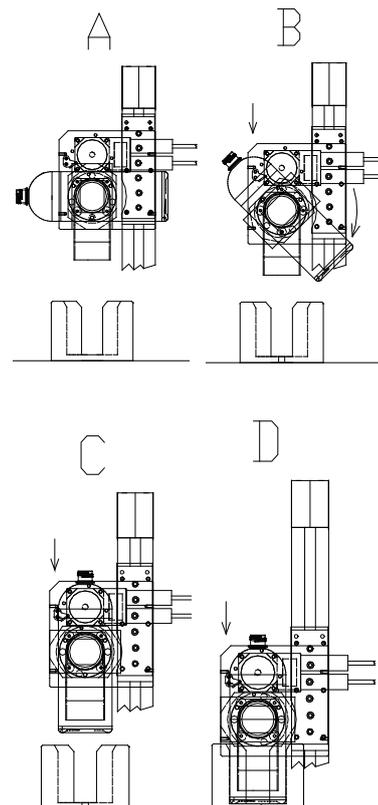
This new series of machines has been created for a very precise reason: let the slow and medium speed puck lines become as much compact as possible and improve the efficiency through the use of twister technology.



Twister puck feeder is a range of machine which can work from 2,000 until 12,000 bph speed, now with the most varied sizes.

Essentially, the selecting system remain the same of the Twister Bottle machines, as well as the orienting system, realized with the use of the Twister starwheel. The news is that the insertion of the containers into pucks is followed by the same starwheel.

The time needed for a change over is shorter than the average time needed in a normal unscrambler, it takes less than ten minutes for each model. A vision system allows to recognize precisely the positioning of bottles and a smart warscrew at the starwheel entrance use the no-bottle no-puck system, in this way we avoid the recirculation of pucks and the line gets more simple.



Puck feeder simple block and super block (over 12.000 bph)

Pucks are fed into the block through a special screw feed that releases a puck only when a bottle is present (1). The No-Bottle No-Puck feeding device simplifies the overall line layout by eliminating the empty puck recirculation loop at the machine's exit.

Bottles are transferred to the puck feeder with the vacuum extraction starwheel of the unscrambler with the addition of an automatic rejection of capsized bottle before reaching the puck feeder. Vision sensor or laser sensor placed inside the unscrambler detects up side down bottles and triggers the rejection mechanism.

From the vacuum starwheel the bottles are picked up with pneumatically operated pincers (3) and oriented before the controlled insertion movement begins (2-4).

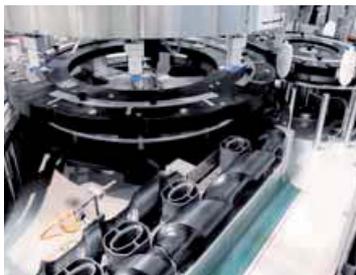
Bottle and puck are now a single product and they exit the machine (6) not before passing through a final quality control to reject misplaced bottles before they reach the

downstream equipment.

One important advantage of the Lanfranchi puck feeder is this constant positive handling of the bottle; the orienting and inserting operations are simple and accurate at any stage of the process.

Benefits are also generated for the puck design because they can be fabricated using tighter dimensions more accurate around the shape of the bottle resulting in higher stability; and better stability means less inefficiency at the filling, capping and labeling stations.

The addition of another turret (5) to the Simpleblock configuration before the bottles are inserted into pucks might be necessary and simple to implement when the bottles need special orientation due to their particular shape or packaging. Lanfranchi puck feeder output is available up to about 30,000 pucks/hour and for bottle sizes of 100ml to 1000ml. The puck feeder unit can be combined in block with any of the Lanfranchi unscrambler models.



1 - Puck insertion star-wheel



3 - Detail of pincer



4 - Detail of puck feeder



2 - Puck-feeder



5 - Lateral view of machine

