

Press release

Now available – the gripper for automated handling of six packs

With Piab's new gripper, six-packs with cardboard wrapping can be handled automatically, gently and without leaving any marks. This provides the beverage industry with a new solution for more efficient packaging and palletizing of bottles

After various discussions with customers from plant engineering and the beverage industry, it was clear to Piab's experts that a gripper for the simple automatic handling of six-packs with cardboard packaging was needed. Because this is how beer and beer-based mixed drinks are offered and must be packaged and palletized accordingly by the beverage industry. The difficulty with the automation of this process step has been that mechanical grippers cannot pick up the bottles from the top of the bottle caps, as these are usually sealed with a banderole made of aluminum or paper, which would be damaged. At the same time, the cardboard is very thin and unstable and must be handled with care. The gripper should also not leave any marks on the cardboard box to avoid an impression of the packaging being damaged.

The vacuum specialists from Piab, headed by Bernd Gries Manager Global S-Accounts, therefore developed a special gripper with rectangular suction cups. The rectangular suction cups take up the six-pack in only three places. In order to prevent the cardboard from being drawn into it due to the large suction surface and leaving marks, the Piab team developed a corresponding load support as part of the suction cups. This prevents the cardboard from being drawn in and getting damaged.

The gripper is manufactured using a 3D printing process and can therefore be easily adapted to different six-pack sizes. The fastest way to do this is via the exchangeable cheeks, which serve to stabilize the six-pack in the gripper during handling.

In addition to Piab's rectangular suction cups, the gripper contains powerful COAX® vacuum ejectors. One COAX® ejector is integrated decentrally for each square suction cup. This provides additional safety when handling, because each ejector works independently of the others. So if one ejector fails due to contamination, the six-pack will continue to be held reliably by the other two.

The gripper has an automatic blow-off pulse to enable the six-pack to be put down quickly. This cleans the ejector, channels and the suction cup at the same time.

For customers who have Industry 4.0 interfaces, the gripper offers query options for vacuum process data.

Photos



The gripper gently but firmly holds and lifts the sixpack without any damage to neither bottles, nor carton, nor label.





In addition to the fingers on the side, the main gripping force comes from the specially designed suction cups from the top, which are constructed in a way that they do not suck in the thin carton wrapping of the sixpack

About Piab

Piab provides smart solutions for the automated world, helping thousands of end users and machine producers in e-commerce logistics, food, pharma, automotive and other manufacturing industries to improve energy-efficiency, productivity and working environments. With more than 700 employees and SEK 1,2 bn in sales 2018, Piab is a global organization, serving customers in almost 70 countries from a network of subsidiaries and distributors. By leveraging the ongoing technological development in automation and robotics, and targeting high-growth segments and geographies, Piab's vision is to become the global leader in gripping and moving solutions.

For further information please contact
Andrea Bodenhagen, Global Ownership Content Manager

Tel: +49 (0) 6033-7960-107

E-mail: andrea.bodenhagen@piab.com