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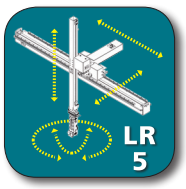
http://app.dr–boy.de

eBOY Spritzgiessautomaten

BOY–Linear-Handling has everything under control

Additional product line enhances the sales programme

The linear robot LR 5 newly developed by BOY is used for the automation of injection moulding machines. The handling developed by BOY has a positioning accuracy of +/- 0.1 mm.



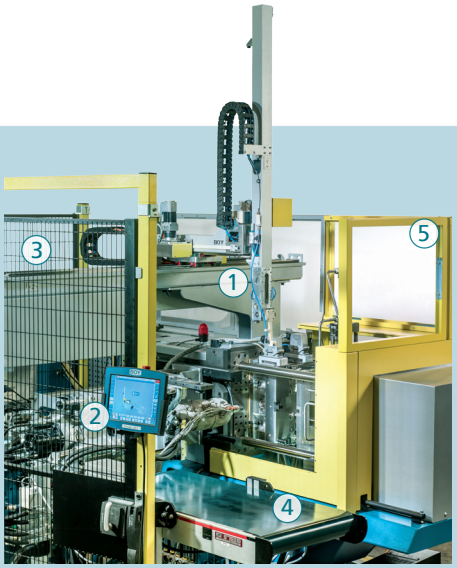
BOY – Handling

The main task of the BOY-Handling is the removal of the injected parts from the mould area. With the palletizing function of the Procan LR 5 Handling system, the plastic parts can subsequently be positioned on the conveyor belt in a user-defined set-down pattern. Further automation tasks of the BOY LR 5 are the insertion of semi-finished products into the mould of the injection moulding machine as well as the gating-separation. A customized conveyor belt is available as an option.

Due to the modular design of the BOY LR 5, the servo-motor-driven linear axes are available with individual travel distances (X-axis with max. 500 mm, Y-axis max. 1,000 mm and Z-axis max. 2000 mm). In addition to the three linear axes, the LR 5 has a pneumatic swivel axis (C- axis) for swivel movements from 0° to 90°. Additionally it is expandable by a pneumatic rotary axis (B axis) for rotary movements from 0° to 180°.

The Y-axis has a D-Sub-interface with four inputs for the gripper-head-query and four outputs for the gripper control. In addition, two separate controllable pneumatic circuits are already available in the basic version, which can be used for vacuum suckers or grippers. Optionally, the BOY LR 5 can be extended by up to six additional pneumatic circuits; vacuum monitoring is also possible.

According to the Machinery Directive, proper operation is therefore only possible in combination with an injection moulding machine and a protection housing. If the BOY LR 5 is operated without a BOY injection moulding machine, the operator must observe the binding standards and safety guidelines.



1. Five–axes–industrial robots in different axis lengths, positioned on the frame of the injection moulding machine.
2. 10“ TFT-Display Procan LR5 with graphical input function for an easy control /programming of the handling.
3. CE–compliant protection housing from solid, powder-coated metal and monitored access door.
4. Optional conveyor belt with manual removal switch and reflex light barriers.
5. Individual protection housing, adapted to the injection moulding machine.

Procan LR 5

The operator panel was designed with the same intuitive usability as that of the Procan ALPHA injection moulding machine control. This allows users to quickly find their way through a familiar operating concept. In particular, the menu navigation as well as the user and data record management are similar to that of the injection moulding machine control system Procan ALPHA.

With the graphical configurator processes of any kind can be can generated. A variety of functional elements is at the user's disposal, such as travel movements, status inquiries and inquiry-related jumps, palletizing programmes and freely configurable sub-programmes available. All travel distances can be individually equipped with speeds, acceleration- and braking ramps and priorities as well, so that complex movements can already occur with just a few functional elements.

By establishing protection zones, injection moulds and peripherals in the working area of the LR 5 can be protected from collision. It is operated via a manual operating unit with touch display or, if required, via a VNC-connection, which can be set up via the standard Ethernet-interface.

The mobile manual operating unit is equipped with an emergency stop switch, a key switch and a three-level enabling button, which are evaluated via a separate safety control. In addition, the safety circuit and the emergency stop circuit of the injection moulding machine are monitored, so that the drives are stopped in a controlled manner via the stop-category 1 in case of a malfunction.

Interfaces

The BOY LR5 and the protection housing of the handling have the standardized Euromap. Interfaces for the communication with an injection moulding machine.

The safety-related release-signals are transferred via the user-defined signals of the Euromap 67 and Euromap 78 interfaces.

> Product sheet LR 5 <

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