# 

# **E-PUSHER**

Type 2154





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The E-Pusher Type 2154 is a reliable robust system for the article transport at IS-Machines with conveyor speeds of up to 60 m/min. This system uses proven components such as stepper motor, crank drive, overload clutch and a frictional shaft-/hub connection.

#### **Pusher unit**

The Pusher mechanics is installed in an aluminium housing. The positive mounting at the machine conveyor is carried out by means of a base plate. The housing is supported by two studs at the base plate and finally secured with screws. Pneumatic connections are carried out automatically by mounting the housing at the base plate. Electrical connections are provided by means of quick release couplings.

### Control

The control for the Type 2154 is installed in a cabinet. This cabinet contains a master computer with LCD-display, stepper motor control boards and a power supply unit. For the connection at electronically controlled IS-Machines the pusher control contains an interface.

### Cable set

All required cables are preassembled.

The cable channel contains the wiring of the pusher units at the machine. By means of plus/minus-buttons the motor speed of all pusher motors can be jointly adapted to the speed of the machine conveyor.

## **Optional:**

## Compressed air channel

The compressed air channel consists of two air supply tubes with separately adjustable pressures for the forward and return movement of the pusher cylinders. The speed of each individual pusher cylinder is adjustable via two throttle valves. For each section two connections to the central oil lubrication (for lubricating the pusher cylinders) are existing.

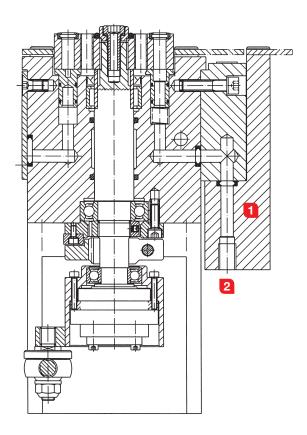
## Pocket air (3) on the dead plate.

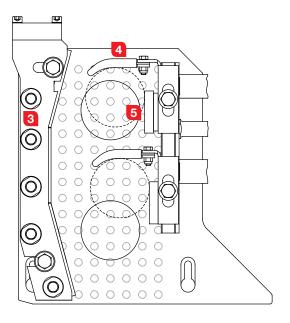
After placing the articles on the dead plate, the distances between the articles do not always correspond with the distances of the machine conveyor feed.

After the takeout has positioned the articles on the dead plate, air nozzles in the pocket air bar blow the bottles in direction of the fingers (4).

In this way the article is positioned smoothly in the pusher finger so that it contacts the finger tightly (5).

Thus, the article distance is adapted to the pusher finger distance.



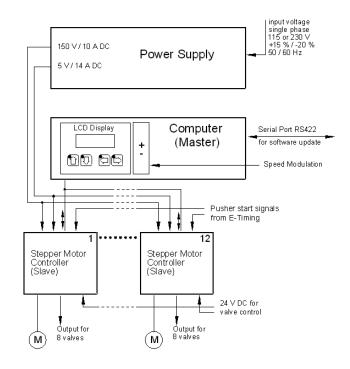




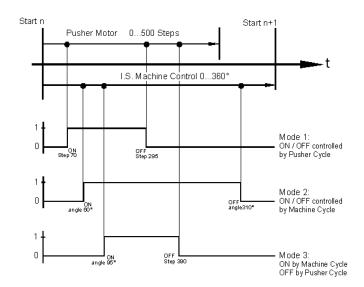
## STEPPER MOTOR CONTROL

## Advantages of the stepper motor control unit

- The angular speed of the stepper motor can be modulated. Thus, continuous changes in speed and an optimum adaption of the speed during the push-out motion are possible.
- Superimposed current modulation for the drive motor to limit the temperature rise of the motor.
- Eight control board outputs to control the pneumatic valves (e.g. for pusher cylinder forward/return, air jets at the dead plate, etc.).
- Fifteen speed profiles are directly accessible. Additional profiles can be loaded anytime using a personal computer.



- Base plate
- 2 Integrated air connections
- 3 Pocket air
- 4 Pusher fingers



## **OVERVIEW**

## **Advantages**

- The high torque of the stepper motor allows high push-out speeds and the movement of heavy finger plates.
- Standardised drive block for right-hand and left-hand delivery
- Adjustable rotation radius from 230 mm to 300 mm
- Positive mounting of the drive block at the base plate (1)
- Integrated air connections in the base plate (2)
- Timing is programmable in dependence on pusher cycle or machine cycle

## **Technical Data**

Machine conveyor speed up to 60 m/min.

 Dimensions of the pusher unit (without base plate and cylinder)
 width / height / depth
 252 / 297 / 140 mm

Dimensions of the control cabinet

width / height / depth 800 / 2100 / 400 mm

Ambient temperature

for the control unit max. 35°C

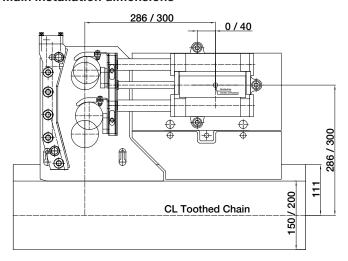
Weight of one pusher unit approx. 30 kg without cylinder

Weight of the cylinder approx. 10 kg with finger unit

 Energy supply Control: 230 V, 50/60 Hz, single-phase, approx. 2 kVA Compressed air channel: compressed air, max. 5 bar

■ The consumption of compressed air depends on the cylinder type which is used (approx. 1.5 I per section and cycle at max. 5 bar)

## Main installation dimensions



## **Emissions**

■ The A-weighted permanent sound pressure level of this system is below 70 dB(A)

1012/3

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