

WE ARE GLASS PEOPLE

HEYE

# PRESS DURATION CONTROL

Type 2321



**h** heye  
international

## HEYE PRESS DURATION CONTROL

The Heye Press Duration Control is an optional component of the Heye Process Control. It keeps the press duration of all cavities constant, provides for an equal heat dissipation and ensures reproducible wall thicknesses.

### Controlled press duration

With the Press Duration Control it is possible to control the individual phases of the pressing process. The patented procedure records how long the plunger stays in the glass and then regulates the pressure and time accordingly.

Control of the press duration, i.e. the time the plunger remains in the glass, ensures reproducible wall thicknesses. This is a critical quality feature in hollow glass production.

- If the press duration is too short, too much glass flows to the base after delivery of the parison to the blow mould. The result is a thin neck and a thick base.
- If the press duration is too long, the outer surface of the parison gets too cold. Then the parison cannot reheat sufficiently in the blow mould, so too much glass in the neck and shoulder area and a thin base are inevitable. In extreme cases, if the outer surface is too cold, the glass container can even burst open during the final blow.

The Press Duration Control from Heye International makes these article defects a thing of the past.

### Benefit

A consistent duration of the plunger within the glass ensures a reproducible wall thickness and therefore high quality.

### Control principle

After each pressing process the difference between set-point value and the press duration actual value is determined.

If the set-point and the actual value deviate, the controlled pressure (**P1**) is either increased or decreased a little, as required. This control principle ensures that the press duration actual value gradually approaches the set-point value. By regulating the pressure (**P1**), it is possible to eliminate different motion times of the plungers from the loading position to the beginning of the pressing process.

- Constant motion times and therefore consistent press duration times for all plungers within the machine are achieved.

The constant pressure stage (**P2**) determines the force which is used to press the parison against the blank mould profile during the press duration.

A pressure stage (**P3**) can be set to cushion the plunger downward movement.

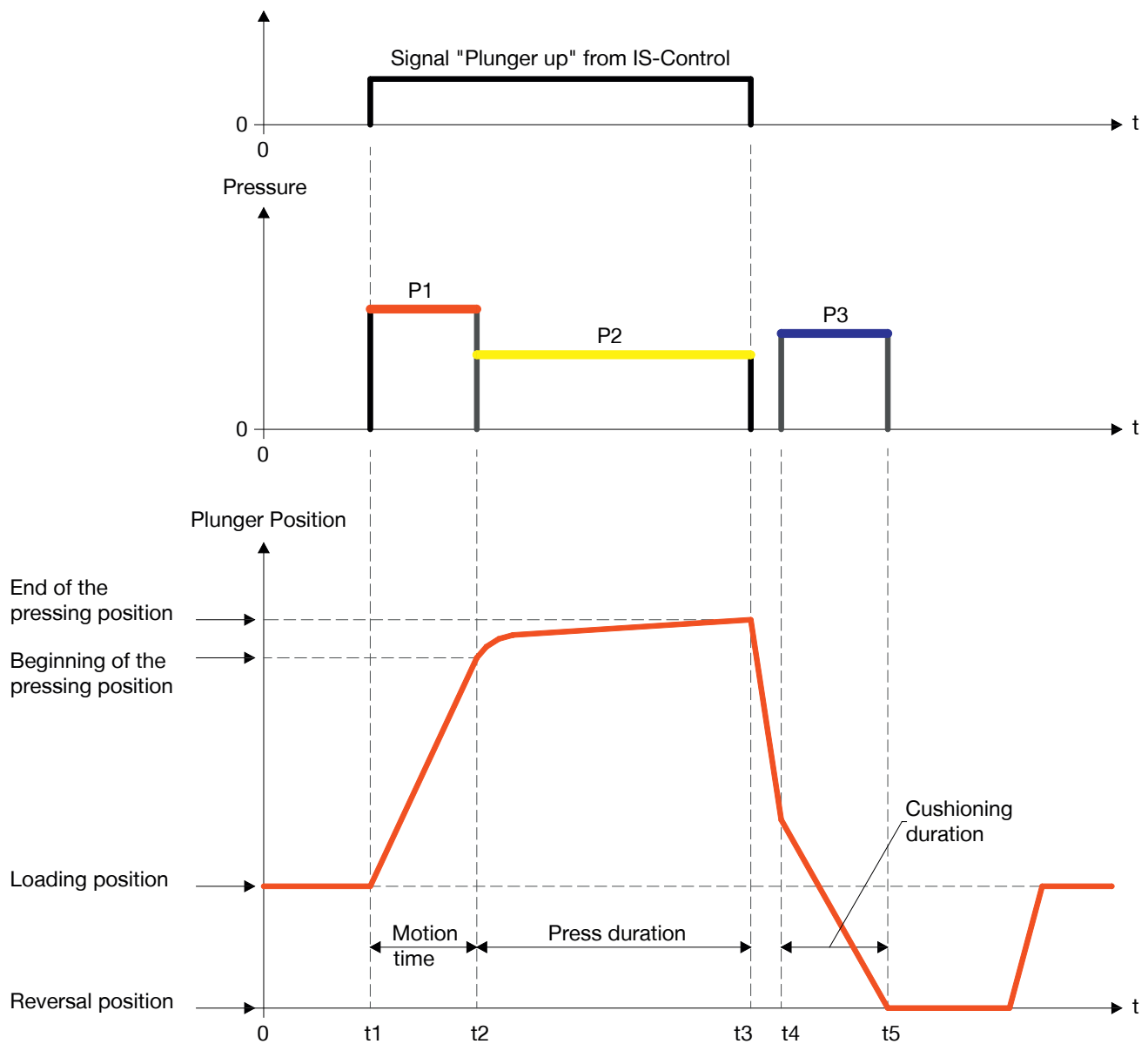


## PRESS DURATION CONTROL

Optionally, the Heye Process Control can be equipped with an additional control loop to control the press duration.

For it, the piston side of the pressing mechanism is pressurised with compressed air via a proportional valve:

- During the plunger motion time ( $t_1$  to  $t_2$ ) with a regulated pressure  $P_1$ .
- During the press duration ( $t_2$  to  $t_3$ ) with a constant pressure  $P_2$ .



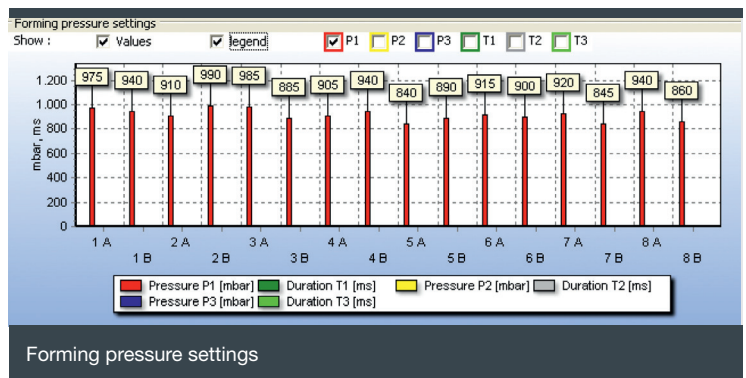
### Optimal usability

The Press Duration Control is an optional component of the Heye Process Control.

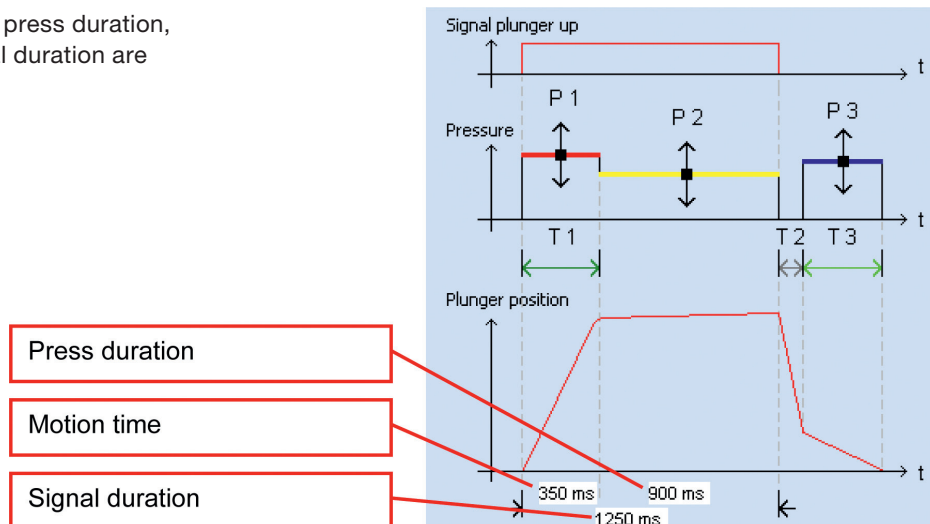
- A job database enables fast and convenient job changes
- All pressure and time values can be preset on the monitor
- A bar graph of the pressure stages shows pressure differences between individual cavities
- Limit value excesses are displayed in plain text
- A pressure sensor in the proportional valve shows the pressure course as a line diagram over time
- Extensive diagnostic tools are included in the package

### Graphic information

This bar diagram shows the pressure stages P1 – P3 and the duration T1 – T3 for each cavity. The control loop adapts the pressure stages P1 to the different mechanical conditions of the pressing mechanisms. Via the height of P1 you can evaluate the mechanical condition of the pressing mechanisms and mould tools.



The current values for press duration, motion time and signal duration are displayed:



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