

OSSBERGER



PRESSBLOWER
Injection Blow Moulder



PRESSBLOWER DSE 140
PRESSBLOWER DSE 250



Tasks

Solutions

C. V. Joint Boots

To be used in ...



... commercial vehicles

Bellows used in automobiles are subject to permanent stress. Under quality aspects this means that closest tolerances must be kept and thus a precise production process needs to be chosen.



... passenger cars



In all world markets the PRESSBLOWER Injection Blow Moulding Process has already been proven to be the optimal solution. Nevertheless progress still continues.

The use of an efficient control system is advantageous for achieving more and more narrow targets and for fulfilling more and more stringent demands given by the automotive industry. At the same time new markets are opened, e. g. the use of thermoplastic elastomers for producing C. V. Joint Boots and Rack & Pinion Boots for commercial

vehicles.

For the plastics processor there are two new solutions now which are called

**PRESSBLOWER
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DSE 140**

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Rack & Pinion Boots



diverse articles





The **PRESSBLOWER** Process

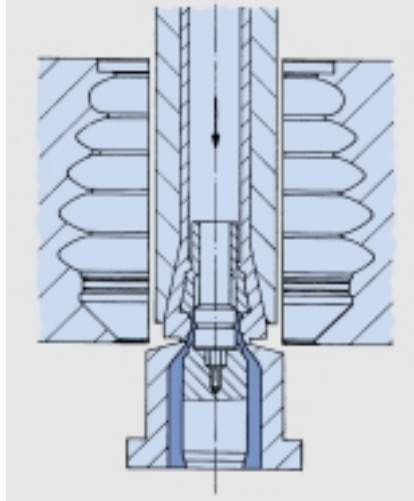
At the beginning of each production cycle an injection mould containing the shape of the future head moves down on an annular nozzle to tighten the same hermetically. The cavity which is gained this way is, at the first working step, filled with a well-dosified quantity of plastic material, then forming the finished head after cooling. Thus an important part of the boot, i.e. the small end diameter, is injection moulded at accurate dimensions.

While in the second working step the injection mould leaves upward a quantity of plastic melt conforming to the drawing speed is extruded through the ring nozzle. Retained by the injection mould on one hand and by the centered ring nozzle on the other a tubular parison of accurate wall thickness is formed. After this drawing procedure two blow mould halves close around the parison, tightening densely against the injection mould and the nozzle. In the blow mould which is thus obtained the parison is blown up to the finished product (3rd working step).

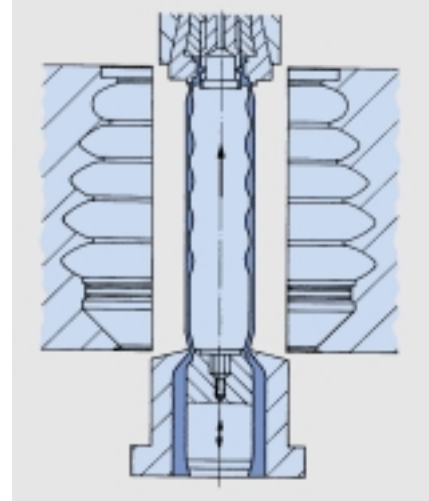
After an adjustable cooling time has elapsed injection mould and blow mould open, a gripper takes the ready-made product apart from the nozzle, conveying the same to the cutter. In the 4th working step a centrifugal cutter mechanism removes the bottom rest, by thus cutting the piece to its exact final length.

The accuracy of wall thicknesses is achieved by

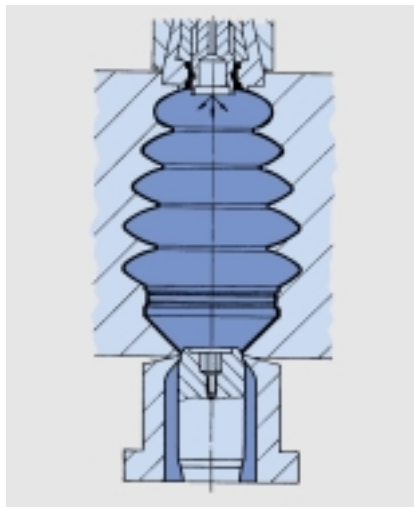
- a measurement and a regulation of all machine movements in accordance with the set strokes
- a profile regulation depending on the stroke
- regulations of pressure and speed



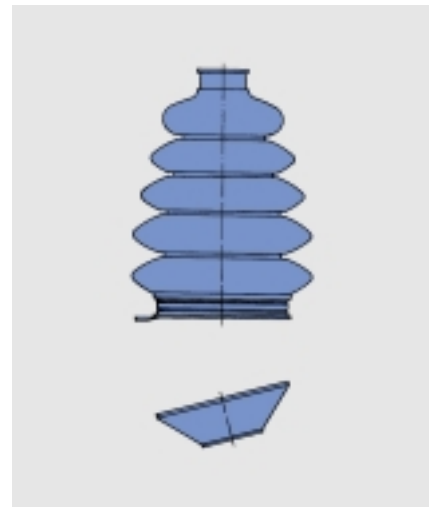
1st step: injection mould meets nozzle parts for injection moulding of head section



2nd step: Drawing of parison with closed loop speed and nozzle gap control



3rd step: Blowing of parison



4th step: Cutting to dimension and final design



PRESSBLOWER Injection Blow Moulder

DSE 140

The PRESSBLOWER Injection Blow Moulder DSE 140 represents the direct successor of the PRESSBLOWER Injection Blow Moulders of the types SBE 50/140 and DSE 50. So the PRESSBLOWER DSE 140 is mainly used for the production of boots and bellows of thermoplastic elastomers as they are used for passenger cars, e. g. outboard and inboard C. V. Joint Boots, Rack & Pinion Boots, bellows and covers for shock absorbers. Moreover the manufacturing range has been enlarged:

- Diameter for the injection moulded head: max. 46 mm
- Diameter of blow moulded section: max. 180 mm
- Article weight: max. 140 g

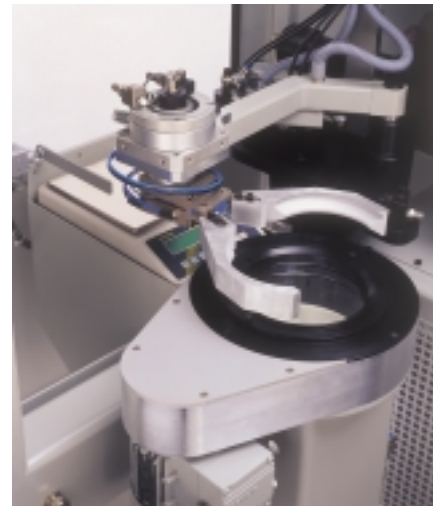
The PC based control system P-open is used. Visualising and servicing of the same are made through a touch-screen terminal. The 4 access authorisation levels have been defined through passwords respectively.

The control system P-open works with an ultrasonic stroke measuring system for all movements which are related to the definition of the article. The following new developments need to be emphasised:

- setting of all profile movements over 100 segments
- larger range of editing possibilities regarding the profile curves (e.g. displacement of a selected range towards the x or the y direction)
- storage of diverse profile variants within one recipe
- setting of the extrusion of the injection piston through speed profile
- improvement of the optimisation of drawing and extrusion movement
- display of the real profile above the nominal profile

The following details of the process data recording are important:

- All heating zones, the mass temperature and the part weight may be shown as trend graphics.
- Characteristic process data may be shown in the form of a chart.
- Data filing is made in the form of standardised ASCII-Files.
- Diverse machine movements as well as the injection piston pressure may be arranged freely in the form of graphics. Here up to three curves can be shown at the same time. Additionally a reference curve can be stored. Various configurations may be stored.

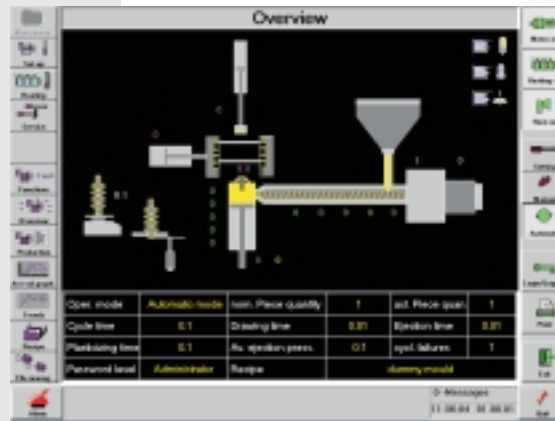


The well-known feature "integrated weight scale" has been standardised. The optional features "top cutting device" and "compression test" can be added anytime.



PRESSBLOWER Injection Blow Moulder

DSE 250

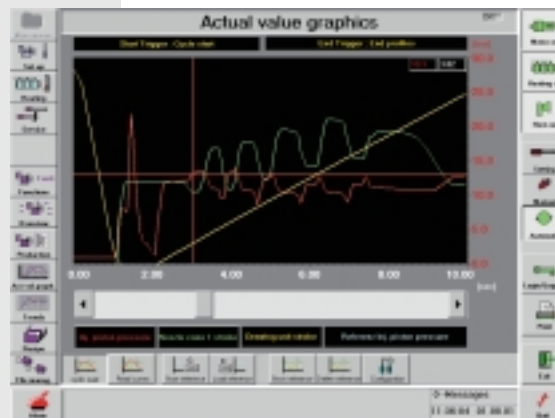


The PRESSBLOWER Injection Blow Moulder DSE 250 is based on the PRESSBLOWER DSE 140 (see description on preceding page). Its product range has been enlarged upward, so the PRESSBLOWER DSE 250 is different in two regards:

- Diameter for the injection moulded head: max. 54 mm
- Article weight: max. 250 g



A maximum diameter in the blow moulded area of 180 mm can be achieved (as with PRESSBLOWER DSE 140).



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Reserve to changes
