

Balloon Forming Machine BF 208-300

With the BF 208-300, it is possible to process pre-treated tubes in single-piece production (eg for PTA balloons) and to machine longer tubes in a continuous process. So even larger quantities can be produced economically.



BF 208-300

Hardware

In case of single-piece production, the tubes are inserted into the one-sided opening mold. In chain production, the hose is pulled continuously through the mold.

Heating

The mold of the BF 208-300 is heated by an infrared heater, which allows a fast, precise and reproducible tempering of the balloon. The infrared radiators of the machine are arranged radially around the balloon form in order to achieve uniform heating.

Balloon mold

The usable length of the balloon mold can be expanded and shortened in 25 mm intervals, thus balloons with a total length of up to 300 mm and a diameter of up to 50 mm, without a necessary rebuilding of the balloon forming machine, can be manufactured.

In addition, the balloon mold of the BF 208-300 can be exchanged easily and quickly at any time. The use of balloon shapes made of various materials such as **glass, metal and plastic** is possible. This allows to use the advantages of each balloon mold individually, which ensures a high flexibility in the balloon process depending on the desired requirements with only one machine.

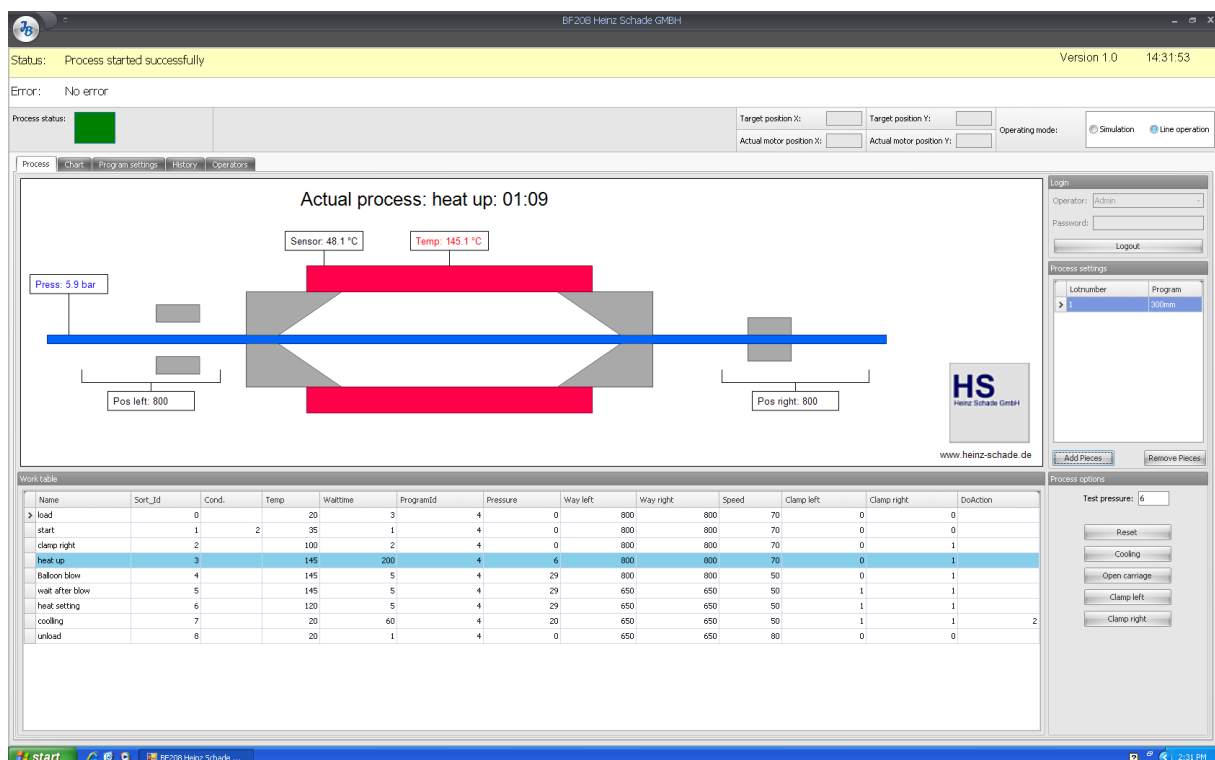
Balloon forming

Balloons are formed via an electronic pressure regulator, which also allows multi-stage processes. So, it is possible to implement test steps in the process. To ensure safe pressurization in the tube, the pressure port and the clamp are not coupled to the drafting unit. The two individually controlled, programmable drafting units draw material from the balloon cones in the process. As a result, a smaller wall thickness is achieved in the balloon cones and the balloon ends are additionally tapered.

The BF 208-300 also has a slide with a clamping force of up to 1000 N, which ensures safe closing of the balloon mold even at high pressure. The slide allows easy loading and unloading of large tubes and finished balloons.

Software

The software complies with the requirements of EN 13485 and the FDA and is adapted to the needs of medical technology production. Thus, a program management, employee management, a logbook and a history are already integrated in the program. The clear software enables simple and safe operation, as well as easy and clear programming in safe mode.



The screenshot displays the software interface for the BF208 Heinz Schade GmbH. The top status bar shows "Status: Process started successfully" and "Version 1.0 14:31:53". Below this, there are fields for "Error: No error" and "Process status" (indicated by a green bar). The main control area includes "Target position X: Y:" and "Actual motor position X: Y:" fields, along with "Operating mode" options for "Simulation" and "Line operation".

The central part of the interface features a diagram of the balloon forming process. It shows a blue tube being drawn into a mold. Labels include "Actual process: heat up: 01:09", "Sensor: 48.1 °C", "Temp: 145.1 °C", "Press: 5.9 bar", "Pos left: 800", and "Pos right: 800". The HS logo and website "www.heinz-schade.de" are also visible.

Below the diagram is a "Work table" with the following data:

Name	Sort_Id	Cond.	Temp	Walttime	ProgramId	Pressure	Way left	Way right	Speed	Clamp left	Clamp right	DoAction
load	0			20	3	4	800	800	70	0	0	
start	1	2	35	1	4	0	800	800	70	0	0	
clamp right	2		100	2	4	0	800	800	70	0	1	
heat up	3		145	200	4	6	800	800	70	0	1	
balloon blow	4		145	5	4	29	800	800	50	0	1	
wait after blow	5		145	5	4	29	650	650	50	1	1	
heat setting	6		120	5	4	29	650	650	50	1	1	
cooling	7		20	60	4	20	650	650	50	1	1	2
unload	8		20	1	4	0	650	650	80	0	0	

On the right side, there is a "Login" section with fields for "Operator: Admin" and "Password:", and a "Logout" button. Below that is a "Process settings" table with columns for "Lotnumber" and "Program", showing a single entry with lot number "1" and program "30/min". At the bottom right, there are "Process options" including a "Test pressure: 6" field and buttons for "Reset", "Cooling", "Open carriage", "Clamp left", and "Clamp right".

Technical specifications

Materials:	<ul style="list-style-type: none"> • PA • PET • PU • ...
Balloon mold diameter:	1 – 50 mm
Balloon mold length:	<ul style="list-style-type: none"> • Standard heating length: 175 mm • Extension / shortening to 25 – 300 mm in 25 mm steps (specify desired length with order)
Balloon molds:	<ul style="list-style-type: none"> • Metal • Glass • Plastic • Loading- and Closed mold • Change time < 1 min
Heating:	<ul style="list-style-type: none"> • Infrared 1500 W • 30 – 300 °C • Control with IR sensor
Cooling:	air
Mold pressure:	<ul style="list-style-type: none"> • Electronic pressure controller 30 bar (optional 50 bar) • 4 mm OD tube for external supply
Draw units:	<ul style="list-style-type: none"> • 2 stretchable drawing units à 90 mm • Automatic pneumatic tube clamp on the drawing units
Control:	Windows-PC by included software
Dimensions without PC:	<ul style="list-style-type: none"> • L/W/H: 1300 x 500 x 300 mm • Weight: 100 kg
Housing:	<ul style="list-style-type: none"> • Clean-room compliant design • Top made of stainless steel
Supply:	<ul style="list-style-type: none"> • 110 - 230 V • 50 - 60 Hz • 2000 W • Consumption approx. 0,5 kW/h • 6 mm OD compressed air 6 – 8 bar filtered, approx. 100 l/min (intermittent) • USB-Interface

Heinz Schade GmbH; Schießwieslenstraße 18; D-72766 Reutlingen

Scope of delivery:

- Basic unit
- Software
- Dongle
- Operation instruction English

Accessories:

- Balloon mold
- Windows PC for programming

Miscellaneous: Special sizes and customizations on request



Made in Germany

All technical specifications and illustrations are subject to change without notice.