

Dataheet

BFMS-500-S2

Split Mold Balloon Forming Machine



INNOVATIVE DESIGN

Innovative features for a better controlled and faster balloon forming proces.

HIGH QUALITY BUILT

The BFMS-500-S2 is build with a very high quality benchmark resulting in a stable and robust design with minimal cost of ownership.

OPTIONS

Additional options such as integrated high pressure generation, Active Pressure Drop Control (APDC) and parison preheating can be added to the already complete basic machine

CONTACT

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- Flexible Process Interface for virtual limitless process cycle options on large 19" full color touch panel interface
- Fast and strong full servo controlled axis for repeatable and reliable stretching of the parison materials during the forming process
- Integrated safety light curtain with intuitive user interaction for safe operation.
- Optional High Pressure system integrated eliminating the need for a high pressure factory network or the use of N2-bottles

The Split Mold Balloon Forming Machine (BFMS-500-S2) is the third machine in a range of balloon forming machines that is beeing developed by MPT Europe BV and has full servo control on the proximal and distal axis. This allows for precise and fast stretching of the parisons during the balloon blowing process. The axis have force control and individual loadcell systems allowing forces to be monitored and used as control parameters during the process.

An innovative system lets the user exchange the split mold heat and cool heads without the use of any tooling in under 10 seconds. The split mold die allows for complex designs and can be quickly replaced. The high closing force and perfect alignment make the system reliable and stable in use.



The machine can fitted with the MPT Europe BV developed Active Pressure Drop Control (option) provides a significant control handle to the blowing process and allows for more optimization of your balloons.

Another high impact design optimization step has been made in the process control software with the Flexible Process Interface (FPI). This allows for a virtual limitless process control enviroment. Every process cycle you desire or will desire in the future can easily be composed by yourselves. Furthermore the revolutionar but simple way of representing the process ensures you always know what is happening , what is going to happen and why it is happening. Additional software tools are available for developing processes off-line on your desktop computer.

Graphic representation of the measured values (pressures, strokes, forces) can be selected to be shown on screen during the process for the operators or engineers to monitor the process and interpret the behaviour of the balloon beeing blown.



SAFETY

Standard equipped with a safety light curtain with intuitive operator feedback

COOLING UNIT

Delivered with standard high flow cooling unit for fast cooling of the mold assembly

USER INTERFACE

Large 19" full color touch screen user interface for easy overview of the machine behaviour.

OFF LINE PROGRAM

Standalone Flexible Process Interface software package available for off-line development of processes

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Technical Specification BFMS-500-S2 Split Mold Balloon Forming Machine

Stretch force	500N max
Stretch speed	250 mm/s max (servo controlled)
Stretch acceleration	2000 mm/s ²
Stretch length	500 mm proximal and 500 mm distal
Clamping	Self aligning high force distal and proximal clamps
Inflation pressures	1-50 bar max +/- 0.2%
Pressure control	Active Pressure Drop Control (APDC)
Temperature	20-220C +/- 0.5C
Preheat system	Proximal preheating system
Mold diameter	Upto 50 mm
Split Mold Block lengths	80 mm , 120 mm ,160 mm , 200 mm & other sizes possible
GUI	19" color touch panel
Control software	<p>Flexible Process Interface (FPI)</p> <p>Zoomable process graphs with process markers</p> <p>Recipe based</p> <p>Password levels (operator, engineer, calibrator)</p> <p>External FPI software available for off-line development</p> <p>Remote support option</p>
Indicators	Optional signal light / accoustic alarm (user programmable)
Ethernet	2x
USB	4x
Required airpressure	7 bar minium (pre-dried in case of integrated pressure boosting system)
N2 system	Using external N2 system (bottles or factory line) / optional high-pressure generator system require 7 bar feed pressure with internal 1L high pressure buffer vessel
Power supply	115 or 240VAC / 2kW
Cooling circuit	Cooler with 5L resevoir + temperature and level detection
Safety systems	Light curtain with intuitive operator feedback

