



BFM-500-S2

BALLOON FORMING MACHINE

The Balloon Forming Machine (BFM-500-S2) is the second in a range of balloon forming machines that is being 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.

Available Options: Integrated High-Pressure Generation • Active Pressure Drop • Control (APDC) and Parison Pre-Heating



KEY FEATURES

- 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.
- Standard equipped with a safety light curtain with intuitive operator feedback.
- Large 19" full color touch screen user interface for easy overview of the machine behaviour.
- Standalone Flexible Process Interface software package available for off-line development of processes.
- Parison pre-heating system to reduce cycle times.
- Quick exchange of mold head (heat/cool block) without the need to manual connect/disconnect water hoses and connectors.

BALLOON FORMING

Innovations on heating systems and optimized cooling provide a much faster and even heating and cooling of the parison and balloon materials, allowing for shorter cycle times, thus increasing production capacity.

For the first time ever a balloon machine is available where you can actively control the pressure drop during the balloon blowing process. This APDC (option) provides a significant control handle to the blowing process and allows for more optimisation of your balloons.

Another high impact design optimisation step has been made in the process control software with the Flexible Process Interface (FPI). This allows for an almost limitless process control environment.

Every process cycle you desire or will desire in the future can easily be composed by yourselves. Furthermore the revolutionary but simple way of representing the process ensures you always know what is happening, what is going to happen and why. 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 being blown.

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TECHNICAL SPECIFICATION	BFM-500-S2
Stretch force	500 N 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 pressure	1-50 bar max +/- 0.2%
Pressure control	Active Pressure Drop Control (APDC)
Temperature heating system	20 °C - 220 °C +/- 0.5 °C
Preheat system	Internal and external parison pre-heating
Balloon diameter	1-50mm
Balloon length	1-320mm
GUI	19" color touch panel
Control software	Flexible Process Interface (FPI) Zoomable process graphs with process markers Recipe based Password levels (operator, engineer, calibrator) External FPI software available for off-line development Remote support option
Indicators	Optional signal light / acoustic alarm (user programmable)
Ethernet	2x
USB	4x
Required air pressure	7 bar minimum (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 high pressure buffer vessel
Power supply	3-phase 208VAC or 380VAC / 5kW
Cooling circuit	Cooler with 64L reservoir + temperature and level detection
Safety systems	Light curtain with intuitive operator feedback



Medical Production Technology is proud to be an MMT company – Leading provider of catheter balloon forming, folding and pleating, thermal bonding, and stent crimping solutions.

Medical Manufacturing Technologies (MMT) brings together applications expertise, technical solutions, and aftermarket support to revolutionize medical device manufacturing. [Learn more at mmt-inc.com](http://mmt-inc.com).