

Software innovations to make better medical balloons



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Recently [Medical Production Technology Europe BV](#) has introduced their [BFM-500 balloon forming machine](#). This machine has innovations helping the medical balloon manufacturers making better balloons, by allowing more process control with for example the Active Pressure Drop Control (APDC), as well as speed up the balloon forming process significantly, thus creating more balloons in a shorter time and be more economical.

The largest innovation however is found in the controlling software, and goes by the name of [Flexible Process Interface \(FPI\)](#).

This is an advanced control software interface, that was especially developed for this machine, to outperform existing machines on their control level, and create better products faster.

The old way.....constraints and risks

Conventional balloon forming machines are programmed by the user by activating or deactivating certain programmed functions

implemented by the machine manufacturer, and by changing the parameter values of these functions. The basic behaviour of the conventional machines are pretty much pre-determined and hard-coded in the machines.

This makes that the user, the balloon forming expert, is constraint by the possibilities, thought of by the machine developer and software coder. Who do not necessarily fully understand all the requirements of the balloon forming process for any specific balloon design.

Changing the software of conventional machines to implement user wishes and additional user requirements is a risk. It can easily create software maintenance and version issues, and bugs can be introduced without knowing because of the unforeseen impact of changes to the software. Basically every such a change would require a full (and expensive) software validation. A secondary risk is the support required from the manufacturer to implement these changes. Sometimes it takes a while or resources are simply not available (any more).

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The new approach.....flexibility and process ownership

The **FPI** allows the users to have full control at process cycle level. Building blocks are made available to graphically drag and drop a process. Like one would do on a sheet of paper. With intuitive status indications and parameter entry.

This means the balloon forming process is fully owned by the balloon blowing expert. And the expert can decide what to do or not to do. But always in a safe manner without risk of physical harm to operators or the machine.

The **FPI** will always check the process for impossibilities and logical issues. All of the functions are guarded by the **FPI** and the program will simply not run when not safe or physically possible. Not leaving the user in the dark on the cause of not running, but clearly showing, with graphics and text, where a modification is required to get things going again.

Years of machine building and software coding experience have made it possible for [Medical Production Technology Europe BV](#) to develop the **FPI**. The feedback of the users so far make us proud of the result and we are convinced this is the way to program your balloon forming machine.

It is now up to you, create your perfect balloon.

For more information contact us at info@mpteurope.com