



## CAMERA & SCREENS UPGRADE 1410 LASER WELDING MACHINE

### Improved Product Visualization

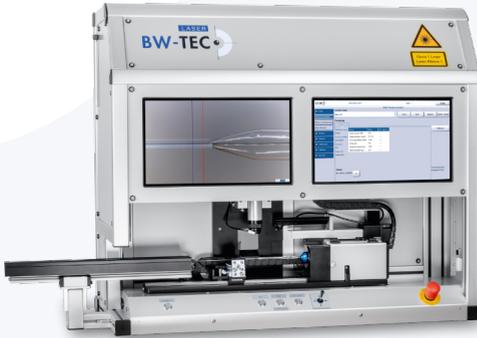
Laser welding is one of the most precise and repeatable methods for balloon catheter welding. To take advantage of these features, the operator must be able to see the product well and clearly.

This upgrade includes 2 large 17" screens and a high-resolution camera with a digital zoom.

The improved visualization helps the operator to position the product optimally and detect possible errors.

- ✓ 2x Full HD 17inch Touchscreens
- ✓ High image resolution: 1920 x 1080 (max), 640 x 480 (min)
- ✓ Camera: High resolution & digital zoom
- ✓ Orientation lines and camera settings can be set and saved for each recipe

*Order item number: 1410-UPGRADE-KIT-1*



## PENDULUM UPGRADE 1410 LASER WELDING MACHINE

### Option for Partial Welding

In the standard laser welding process, the product is permanently rotated 360°, which causes it to be welded around the entire circumference. For some products, e.g. some multi-lumen shafts, only partial welding is required.

With the pendulum option, the product can be rotated back and forth. This means that also partial welds from approx. 10° to 360° are freely selectable.

In addition, the upgrade includes a wider range of adjustable rotation speeds. The upgrade makes a whole new variety of products possible.

- ✓ New stepper motor and drive
- ✓ New software
- ✓ Speed ranges from 1-2500 rpm adjustable
- ✓ Selectable between rotation and pendulum option

*Order item number: 1410-UPGRADE-KIT-5*



## FORCE CONTROL UPGRADE 2550 BALLOON FORMING MACHINE

### New Process Controlling Parameter

Until now, the standard balloon molding process has been controlled primarily by two parameters - time and temperature. In case of material variations due to for example the delivered extrusion material, the ambient temperature or the air humidity, the recipe had to be adjusted to achieve the same results.

The upgrade comes with software that enables a force-controlled process. Instead of a set time to initiate the stretching process, the stretching process is triggered when the force sensors detect the set relaxation of the material. Some variations within the material can be compensated by this method.

A must have upgrade for every R&D department!

- ✓ Force sensors
- ✓ Software upgrade

*Order item number: 2550-UPGRADE-KIT-1*



## VACUUM UPGRADE

### 2550 BALLOON FORMING MACHINE

#### **New Recipe Option**

Some materials stick to the balloon mold after forming. This option allows the balloon to be deflated before removal from the balloon mold. It can prevent damage to the finished product, by minimizing contact with the mold when removing the balloon.

- ✓ Vacuum system
- ✓ Software upgrade

*Order item number: 2550201*



## FOCUS AXIS UPGRADE

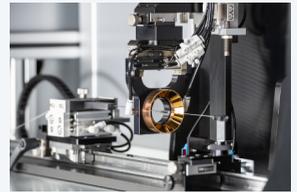
### 1530 MOTION LASER WELDING MACHINE

#### Automated Change of Focus

An essential recipe parameter for welding is the focus position. The focus determines the intensity of the laser on the product. The mirror position can now be set separately for each recipe step. The resulting spot sizes are then automatically applied within the process.

The upgrade can reduce production errors and decrease cycle times when the focus position varies within a workflow.

- ✓ Motorized focus axis
- ✓ Software upgrade



Order item number: 1530-UPGRADE-KIT-3



## **CAMERA & SCREENS UPGRADE**

### **1530 MOTION LASER WELDING MACHINE**

#### **Improved Product Visualization**

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*Order item number: 1530-UPGRADE-KIT-2*



## NECK DETECTION UPGRADE

### 1600 NECKING MACHINE

#### Improved Neck Detection

An important component for consistent results in balloon production is a constant length of the parison (unstretched part of the tube).

This upgrade can reduce production waste, such as varying balloon wall thicknesses or bursts, by improving the detection of the transition from the undrawn to the stretched tube.

- ✓ Replacement of neck detection sensor
- ✓ Software upgrade

*Order item number: 1600-UPGRADE-KIT-2*



## NECK DETECTION UPGRADE

### 1610 NECKING MACHINE

#### Improved Neck Detection

An important component for consistent results in balloon production is a constant length of the parison (unstretched part of the tube).

This upgrade can reduce production waste, such as varying balloon wall thicknesses or bursts, by improving the detection of the transition from the undrawn to the stretched tube.

- ✓ Replacement of neck detection sensor
- ✓ Software upgrade

*Order item number: 1610-UPGRADE-KIT-2*



## MULTIPOINT MEASUREMENT UPGRADE 2766 PRESSURE TESTER

### Multipoint Compliance Test

During the compliance test, the diameter of the balloon is measured at different pressures.

With the upgrade, up to ten measurement points of the balloon can be defined and named. The operator can then manually move to the defined points during the test so that these points can be measured precisely under the set pressure.

In the test report, uneven expansions within a balloon are thus clearly visible.

- ✓ Software upgrade



Order item number: 2766-UPGRADE-SW-1