



## BT-NG

### THERMAL BONDING MACHINE

Robust and stable thermal bonding machine designed to provide the user with an effective and reliable production machine for bonding all sorts of balloon and catheter components with minimal cost of ownership.



#### MACHINE VERSIONS

- **BT-NG-1:** 1-Up version
- **BT-NG-2:** 2-Up version to produce two products at the same time.
- **BT-NG-ST:** Side Shift Table: Bond proximal and distal bond without reclamping the product.
- **BT-NG-LT:** Low Table option to bond large OD balloons.
- **BT-NG-PT:** Product Tray: pre-assemble the product apart from the machine on a separate dedicated product tray/carrier, while the other tray is processing on the machine.

#### KEY FEATURES

- 13" color touch panel interface with parameter setting and recipe control.
- Standard color camera with recipe-driven crosshair options for easy alignment of the products by the operator.
- Quick exchange die-unit for easy switching between various products.
- Stepper position controlled die unit for recipe-driven alignment and fast positioning setup.
- Fast heating and stable stainless steel dies. Automatic temperature adjustment when switching to a different die cavity.
- The BT-NG type thermal bonders are built with a very high-quality benchmark resulting in a stable and robust design with minimal cost of ownership.
- Innovative features for changing bonding die configuration in a matter of seconds.

#### THERMAL BONDING

The BT-NG machines is a thermal bonding machine based on the hot-jaw principle. It incorporates 25 years of experience with the thermal bonding process. The small stainless steel dies used in the machines have accurate temperature control and heat up very fast.

The BT-NG has a maximum of four cavities per die set (depending on size) that can be utilized at two different temperatures. The cavity position is software-controlled. Each exchange unit has 2 die sets and has independent temperature control. Each die set can have multiple cavities, depending on size. (Max Ø12mm Max L=16mm)

The dies and closing gripper are mounted in an exchangeable unit. This allows for very fast switching between dies by replacing this unit with another unit with a different set of dies. Alignment is accurate and therefore the machine can be operational again in seconds. The unit has a fully automated plug-in system so no more manual plugging of the unit is required.

The BT-NG machines can be equipped with a Cognex vision camera for automatic part presence/alignment detection aiding the operator with easy and repeatable alignment. The camera image is projected on the user interface where horizontal and vertical crosshairs can be added to aid in the alignment.

The software is ready to connect to customer internal networks (i.e. SCADA system). The machine is recipe-controlled and temperatures, welding times, crosshair positions, colors, and more are part of the recipe. When switching between cavities (but actuating the turning knob at the front) parameters are automatically loaded according to the recipe setup.

The machine can be optionally equipped with a servo-pneumatic axial compression unit. This allows for the application of a small axial force (max. 40N) during the welding process to aid in reflow. This unit can be mounted on either side of the machine (specify on ordering)

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TECHNICAL SPECIFICATION	BT-NG
Die system	Two split die sets on a quick exchange unit
Maximum temperature	285C (optional higher temperatures possible)
Number of cavities	Up to 4 cavities per die set, depending on cavity size
Temperature zones	2 temperature zones
Product handling	Product fixed on a table with interchangeable inlays and clamps, side shift table, or separate product carrier.
Product alignment	Optical with the aid of color video camera and max. 20 software crosshairs (both horizontal as vertical)
Axial compression	Optional axial compression unit to be mounted to the product table providing max. 40N of axial pressure during the welding
Air cooling	Air cooling to allow for fast cooling of the welded product
GUI	13", 15.4" or 19" colour touch panel
Control software	Recipe based Password levels (operator, engineer, calibrator) Remote support option
Ethernet	1x
USB	2x
Required air pressure	7 bar minimum
Power supply	115 / 240VAC / 0.5kW

### AVAILABLE OPTIONS

- **ACU: Axial Compression Unit:** Apply a constant axial force on the product during the bonding process.
- **Cover:** Additional safety cover that shields the bonding area while in-process.
- **Product support gutter:** Supporting long products on either side of the machine. Can be easily attached/detached.
- Can be equipped with a foot switch.
- Can be equipped with a Cognex vision camera to detect and/or align product parts.
- Machine can be connected to customer's internal network to communicate with f.e. SCADA software.



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