



## TBW-500 QX

### Tube Welding Machine

The TBW-500 QX Tube Welding Machine is a benchtop system designed to weld various tubing sizes and materials. It specializes in welding similar polymer components, such as inner lumen to distal shaft or balloon distal and proximal necks to the catheter shaft. The TBW-500 QX delivers a strong, low-profile weld and is easy to use while meeting key production requirements, including speed, accuracy, and performance. The custom weld die and heat shields can be supplied with up to three weld grooves of different sizes, accommodating various shaft sizes without needing to change the die. The quick-exchange welding die is engineered for easy removal and replacement during multiple welding operations. Additionally, the welding die temperature setting feature ensures welds are initiated only when the die is within 5°F (3°C) of the set point. This feature, combined with thermocouple burnout and wire disconnect detection, helps improve production yields.

## Specifications

<b>Dimensions:</b>	14" H x 22 1/2" W x 15" D
<b>Power Options:</b>	Part #724017-1 (110 V) Part #724017-2 (220 V)
<b>Heating Power:</b>	25 W (110 V), 50 W (220 V)
<b>Pressure Gauge Range:</b>	0 - 11 bar (0-160 psi)
<b>Pressure Accuracy:</b>	±0.2 bar (±3.0 psi)
<b>Dwell Time Range:</b>	0 - 99.9 sec
<b>Heater Die Temperature Setting Range:</b>	70 to 600°F, 20 to 316°C
<b>Temperature Controller:</b>	1°F/C increments
<b>Temperature Accuracy:</b>	±2°F, ±1°C
<b>Heat Conductor:</b>	Heat-treated stainless steel
<b>Vision System Magnification:</b>	200X continuous magnification
<b>Storable Recipes:</b>	16 recipes (8 on two screens)



## Key Features

- Easy-to-program touchscreen with up to 16 storable weld configurations
- Vision system crosshairs ensure precise positioning for repeatable, high-quality welds
- Vision system tablet PC supports high-resolution settings for detailed viewing of each weld, with screen capture and save functionality
- Automated heat shields protect surrounding catheter components, such as the balloon
- Quick-change welding die allows simplified setup and easy replacement for multiple welding operations
- Wide range of custom dies available for low-profile welds

To learn more about the TBW-500 QX, including a comprehensive list of features and specifications, please visit:



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## How it works:

The TBW-500 QX programmable touchscreen allows configuration of die set point temperature, dwell time, air cool time, and single or double weld options. It can be programmed in either Fahrenheit or Celsius and includes a user-configurable lockout password. The QX welding die is exchanged by removing side panel screws and sliding the new die in or out—a simple two-step process for multiple welding operations as needed.

The weld process is started by either a foot pedal or front panel activation, which initiates the automated heat shield. This heat shield protects surrounding catheter components, such as the balloon, from the radiant heat of the die. Additionally, the heat shields provide precise positioning by clamping the tubing or shaft, allowing the welding die to engage the shaft accurately and symmetrically. The hot weld die grips the tubing and heats it to its fusing temperature, producing a strong, smooth, low-profile transitional weld.

## Welding Die Specifications:

Ø "A" (distal)  
Ø "B" (proximal)  
Ø "C" (lower to upper shaft)  
"A-w" (distal width)  
"B-w" (proximal width)  
"C-w" (lower to upper shaft)  
Overall Die Width: 0.200" or 0.400"

## Vision System Features:

The vision system upgrade features an LCD display that enhances visibility during the welding operation. It is easy to operate and can store welding parameters through PC-controlled operation.

- The new vision system display runs a full Windows 7™ operating system and supports high-resolution settings for detailed viewing of each individual weld.
- The display is a touchscreen system, allowing users to select and adjust objects by touch and drag.
- Previously saved files can be uploaded from a library or designated location to ensure repeatable welding results.
- A capture option produces an exact copy of the screen display for operator review and inline quality inspection.
- The crosshairs function works by simply touching the desired selection, with a drop-down box indicating the status of that selection.
- The auto-align feature quickly repositions crosshairs when objects move and adjusts the display screen accordingly.
- A three-position camera locking slide (e.g., front, middle, and back) provides preset focus options.



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