

# TUBING WELDING MACHINE

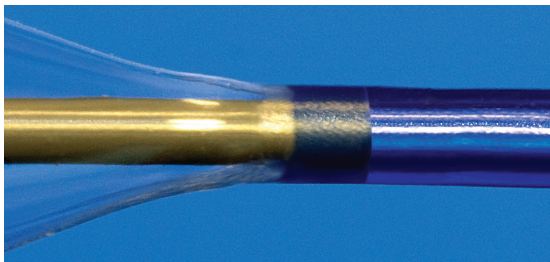
MODEL TBW-500 QX

Compact, easy to use and cost-effective for welding a wide range of tubing sizes and materials

- Easy programmable touchscreen with up to 16 storable weld configurations
- Vision system crosshairs feature delivers desired positioning for repeatable, high-quality welding results
- Vision system tablet PC supports high-resolution settings for detailed viewing of each weld with screen capture and save
- Automated heat shields protect surrounding catheter components, such as the balloon
- Quick exchange welding die for simplified setup and change out of die for multiple welding operations
- Wide range of custom dies for low-profile welds

## Description

The TBW-500 QX Tubing Welding Machine is a benchtop system that welds a variety of tubing sizes and materials. It is designed to weld similar polymer components such as inner lumen to distal shaft or balloon distal and proximal necks to the catheter shaft.



The TBW-500 QX provides a strong weld with a low profile and is easy to use while meeting key production requirements,

such as speed, accuracy and performance. The custom weld die and heat shields can be supplied with up to three weld grooves of different sizes to accommodate various shaft sizes without having to change out the die.

The quick exchange welding die is designed for easy removal and exchange for multiple welding operations. The welding die temperature setting feature will initiate welds only when the die is heated within 5°F (3°C) of the set point. This, along with the thermocouple burnout and wire disconnect detection feature, improves 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)

Confluent Medical Technologies  
Headquarters  
47533 Westinghouse Drive  
Fremont, CA 94539  
t 510-683-2000

ConfluentMedical.com



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## How It Works

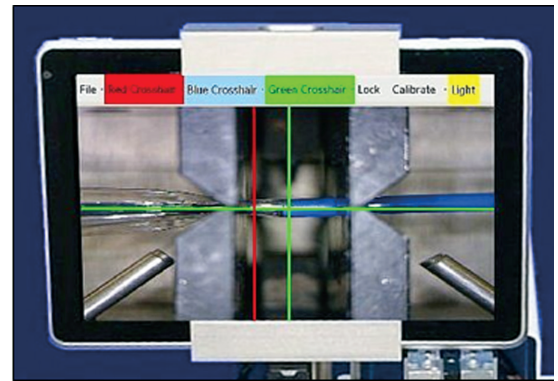
The TBW-500 QX programmable touchscreen configures die set point temperature, dwell time, air cool time, and single or double weld. It is programmable in either Fahrenheit or Celsius and provides a user-configurable lockout password. The QX welding die is exchanged by removing side panel screws and sliding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

Start the weld process by foot pedal or front panel activation, which will initiate the automated heat shield. The heat shield provides protection to surrounding catheter components, such as the balloon, from exposure to radiant heat of the die. Heat shields also provide precise positioning by clamping tubing or shaft so that the welding die can then engage the shaft accurately and symmetrically. The hot weld die grips the tubing and heats it to its fusing temperature, resulting in a strong, smooth, low-profile transitional weld.

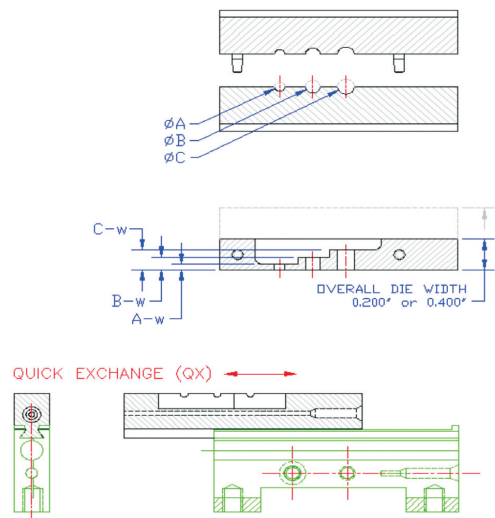
## Vision System Features

The vision system upgrade offers an LCD display that improves visibility of the welding operation. It is simple to operate and has the ability to store welding parameters (PC-controlled operation).

- The new vision system display contains a complete Windows 7™ operating system and supports high-resolution settings to produce detailed viewing of each individual weld.
- The display is a touchscreen system. Objects can be selected and adjusted by touch and drag.
- Files that have been previously saved in a library or in a designated location can be uploaded for repeatable welding results.
- A capture option produces an exact copy of what is displayed on the screen for operator and inline quality inspection.
- The crosshairs function works by simply touching the desired selection and the drop down box indicates the status of that selection.
- Auto align feature quickly repositions crosshairs when objects move and adjusts display screen accordingly.
- Three-position camera locking slide (e.g. front, middle and back) preset focus.



Vision System with Crosshairs



## WELDING DIE SPECIFICATIONS

$\phi$ "A" (distal)
$\phi$ "B" (proximal)
$\phi$ "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"

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