

ultrasonic tube sealing systems

ACTUATORS

FEATURES

- Single Piece, Dual Nodal Mount Horn and Booster Stack
- Compact System Profile
- High Force Frictionless Cam/Bearing Actuation
- Pivoting Lift and Carry Bar for Ergonomic Ease in Handling
- Fixed Trigger Handle with Low Force Trigger Switch
- 90° Keyed Tips and Anvils Provide 4 Weld Surfaces
- Charged Tubes are Crimped, Welded and Cut in less than 2 Seconds
- Explosion-proof Version Available



MWT20 Tube Sealer

Sonics' 20 kHz ultrasonic tube sealing systems consist of the actuator shown above and a power supply, the MX or MSC series, as shown below.

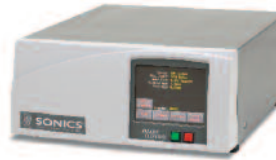
POWER SUPPLIES



MX Series Low Profile



MX Series High Profile



MSC Low Profile



MSC High Profile

MODELS

MXT Time Based Weld Mode

MXE Time and Energy Based Weld Modes

MSC *SmartControl* with Time, Energy and Height-Based Weld Modes

POWER LEVELS

- 1500 Watts Peak Power
- 2500 Watts Peak Power
- 4000 Watts Peak Power

Sonics' 20 kHz power supplies are available in 2 versions, the MX Series, with standard keypad operation and the *SmartControl* (MSC) Series with full color touch screen controls. The features of the models are compared below.

POWER SUPPLY FEATURES	MXT	MXE	MSC
Microprocessor Controlled	■	■	■
Automatic Frequency Tuning	■	■	■
Digital Amplitude Control	■	■	■
Digital Force Triggering	■	■	■
Weld Time Delay Setting	■	■	■
Afterburst Time Setting	■	■	■
Multiple Job Storage	■	■	■
Digital Stack Wattage Display	■	■	■
Digital Stack Frequency Display	■	■	■
Weld Cycle Counter	■	■	■
Upper and Lower Weld Mode Limit Settings	■	■	■
Soft Start Overload Protection Circuitry	■	■	■
Load Regulation Circuitry	■	■	■

POWER SUPPLY FEATURES	MXT	MXE	MSC
Color Touch Panel Operator Screen			■
Weld Cycle Graph Chart Screen			■
Weld Teach Mode			■
Weld Sequence Mode			■
Amplitude and Pressure Ramping			■
Timed Converter and Horn Air Cooling Cycle			■
English and Metric Weld-to-Height Settings			■
Password Protected Four-Level User Access			■
Serial Printer Port Connection	■	■	
PLC I/O Interface Connection	■	■	■
PC Interface Connection			■
Bar Code Scanner Connection			■

system options

SmartControl
Electronic
Pressure
and Height
Control



**Foot Pedal
Switch with
Emergency Stop**



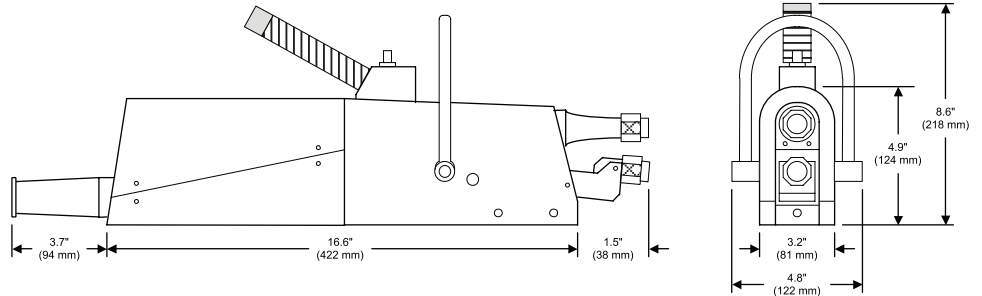
Smart Program:
SmartControl
System PC
Interface
Program



tube sealing process overview

1. The operator places the tube sealer over the fill tube and actuates the start switch.
2. A pneumatic cylinder advances a cam to clamp the tube closed and ultrasonic vibrations at the 20 kHz frequency vibrate the inner tube wall surfaces to form a true metallurgical weld.
3. The tube is then cut off from the fill head completing the cycle in under 2 seconds.

MWT20 dimensional data



specifications

Actuator Data:

MWT20 Tube Sealer Weight: 17 Lbs. (7.7 kg)
 Pneumatic Requirement: 60 psi Clean and Dry Air Service

Low Profile Power Supply Data:

Peak Output Power: 1500 W or 2500 W
 Power Supply Weight: 21 Lbs. (9.5 kg)
 Power Supply Dimensions: 15.2" (386 mm) Wide x 7.0" (178 mm) High x 18.7" (476 mm) Deep
 Power Requirement: 220 VAC @ 20A

High Profile Power Supply Data:

Peak Output Power: 4000 W
 Power Supply Weight: 70 Lbs. (31.7 kg)
 Power Supply Dimensions: 17.6" (447 mm) Wide x 10.7" (272 mm) High x 22.5" (571 mm) Deep
 Power Requirement: 220 VAC @30 A