

ultrasonic spot welding systems

ACTUATORS

FEATURES

- Rigid I-Beam Cast Center Frame
- Patented 90° Self-Orienting Keyed Horns and Tips
- Single Piece, Dual Nodal Mount Horn and Booster Stack
- Precision Micrometer Stack Up and Down Stops
- Independent Horn and Converter Air Cooling Flow Control
- Pre-Lubricated and Sealed Linear Bearings
- Pneumatic Actuation



MWB20 Actuator
on Integral Base



MWP20 Actuator
on Plate



MWA20
Actuator

Sonics' 20 kHz ultrasonic metal welding systems consist of an actuator, available versions shown above, and a power supply, the MX or MSC series, shown below.

POWER SUPPLIES



MX Series Low Profile



MX Series High Profile



MSC Low Profile



MSC High Profile

MODELS

- MXC** Remote Impulse Actuation
- 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
- 4500 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	MXC	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	MXC	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

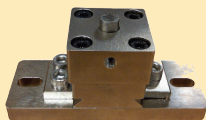
**SmartControl
Electronic
Pressure
and Height
Control**



**Foot Pedal
Switch with
Emergency Stop**



**X-Y Adjustable
Fixture Anvil**



**SmartControl
Bar Code
Scanner**



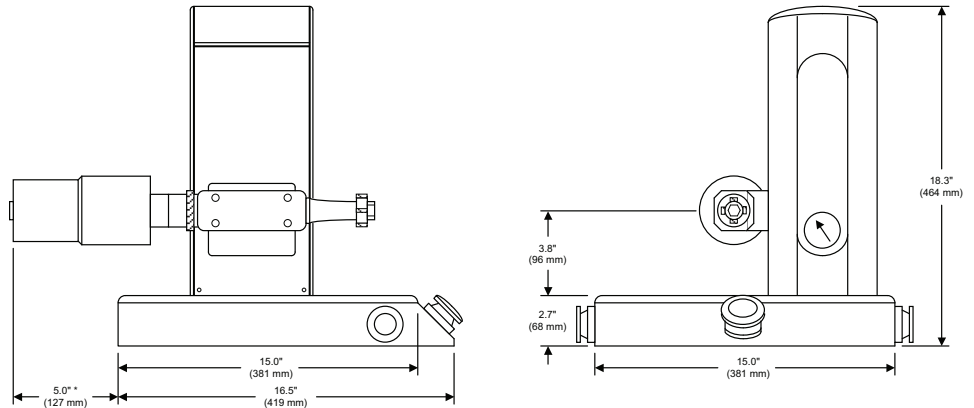
**Secondary Booster:
Aluminum or Titanium
Secondary Booster**



**Smart Program:
SmartControl System PC Interface
Program**



MWB20 dimensional data



* Add Approximately 5.5" (140 mm) for Secondary Booster

specifications

Actuator Data:

MWA20 Actuator Weight: 44 Lbs. (19.9 kg)
 MWP20 Actuator on Plate Weight: 56 Lbs. (25.4 kg)
 MWB20 Actuator on Integral Base Weight: 85 Lbs. (38.5 kg)
 Pneumatic Requirement: 80 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: 4500 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 @ 30A