

ultrasonic spot welding systems

ACTUATORS

FEATURES

- Pneumatic Actuation
- 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



MWB15 Actuator
on Integral Base



MWP15 Actuator
on Plate



MWA15
Actuator

Sonics' 15 kHz ultrasonic metal welding systems consist of an actuator (available as a stand-alone unit or on a plate or a base, as shown above) and a power supply, the MX or MSC series, as shown below.

POWER SUPPLIES

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

- 3000 Watts Peak Power
- 6000 Watts Peak Power



MX Series High Profile



MSC High Profile

Sonics' 15 kHz power supplies come 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

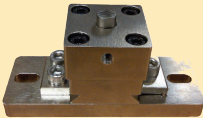
EKIT:
SmartControl
Electronic
Pressure
and Height
Control



**Foot Pedal
Switch with
Emergency Stop**



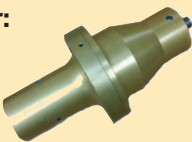
**X-Y Adjustable
Fixture Anvil**



**SmartControl
Bar Code
Scanner**



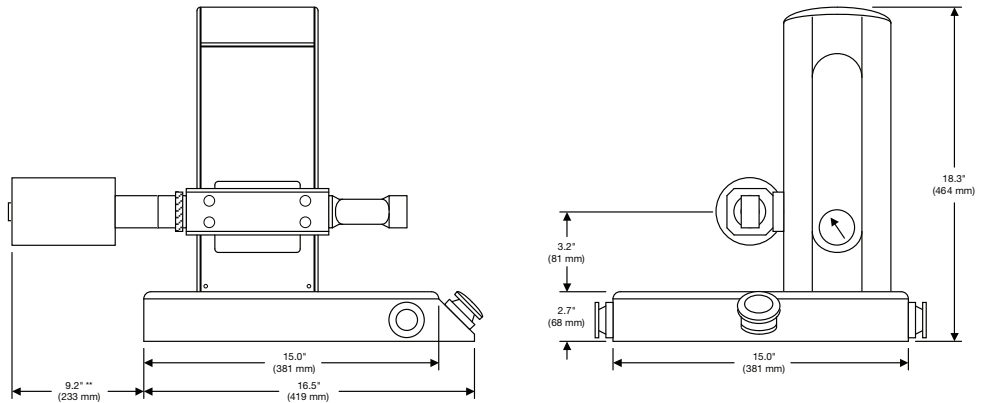
Secondary Booster:
Aluminum or
Titanium
Secondary
Booster



Smart Program:
SmartControl
System PC
Interface
Program



MWB15 dimensional data



** Add Approximately 7.5" (190 mm) for Secondary Booster

specifications

Actuator Data:

MWA15 Actuator Weight: 50 Lbs. (27.7 kg)
 MWP15 Actuator on Plate Weight: 62 Lbs. (28.1 kg)
 MWB15 Actuator on Integral Base Weight: 90 Lbs. (40.8 kg)
 Pneumatic Requirement: 80 PSI Clean and Dry Air Service

High Profile Power Supply Data:

Peak Output Power: 3000 Watts (3.0 kW) or 6000 Watts (6.0 kW)
 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 Single Phase