

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



MWB15 Actuator
on Integral Base



MWP15 Actuator
on Plate



MWA15
Actuator

Sonics' 15 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

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 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 | | |
|--|-----------------|-----|-----|
| | MXC | 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 | | |
|--|-----------------|-----|-----|
| | MXC | 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**



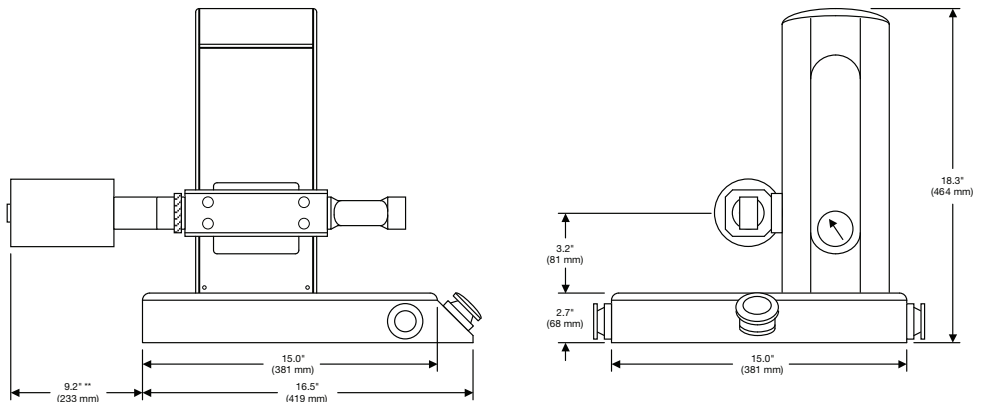
**Secondary Booster:
Aluminum or Titanium
Secondary Booster**



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



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 W or 6000 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:
 3000 W - 220 VAC @ 20A
 6000 W - 220 VAC @ 30A