



## 2000X Micro Actuator

**GENERAL DESCRIPTION:** The 2000X Micro is Branson's compact ultrasonic actuator designed for use in semi-automated and fully automated environments. The actuator may be mounted directly on a machine frame or with a fixed support. It operates with Branson's 2000X dt, 40 kHz, power supply.

This system offers multiple welding modes including distance (absolute and collapse), energy, time and peak power. In addition, the 2000X Micro system features Branson's patented Amplitude Stepping and proprietary closed loop circuitry, providing enhanced performance, consistency, and reliability. The 2000X dt power supply includes a touch screen user interface designed for ease of use in setup, operation, and troubleshooting. Branson's X Port software provides the option of downloading weld data through an Ethernet port in the power supply. This data can be used for real time process optimization and control through the Proficient SPC package.

The 2000X dt 40 kHz power supply is available in 400 & 800 watts (complete power supply information is included on data sheet for 2000X d/aed system).

### KEY ACTUATOR FEATURES:

- Small Footprint
- Low-force Applications
- Weld by Distance
- Amplitude Stepping
- Superior Process Control and Monitoring
- Enhanced Communications
- Process Diagnostics
- Automation Friendly
- Dynamic Follow-Through

- **Narrow width** – measuring 2.94" (74.7mm) – allows the 2000X Micro actuator to fit in very small spaces.
- **Internal linear optical encoder** measures weld distance enabling welding by specific part collapse (meltdown) or welding by absolute (to a finished part height) to a resolution of 0.0001" (0.0025mm).
- **A force transducer** provides digital setting of Trigger Force and allows the user to record and print out force data and graphs for evaluation.
- **Compact remote pneumatic panel** contains a precision air regulator with pressure transducer and precision down speed control mechanism for accurate and repeatable setting of air pressure and down speed.

## Ultrasonic Welding

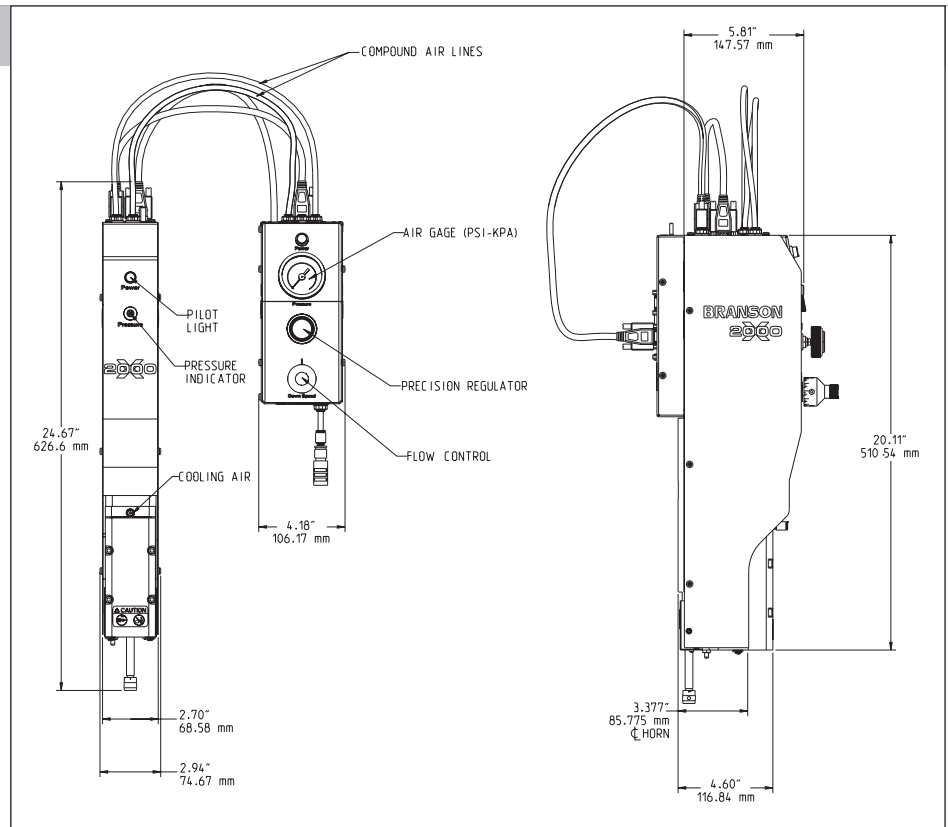
- The 1.57" (40mm) bore air cylinder provides better control of clamp force on low force applications.
- "Horn down" function enables ease of horn/fixture alignment.
- Converter cooling – cooling air is directed onto the converter during each operating cycle

**ORDERING INFORMATION:** 2000X Micro actuator with pneumatic control and inter-connect cables  
**Branson EDP No.** 101-134-290

Mounting plate kit

**Branson EDP No.** 100-063-887

Note: Does not include cables for interconnection with power supply.



The pneumatic control box must be located within 3' of the actuator. All specifications are subject to change without notice. All dimensions are nominal. All pneumatic and interconnect cables included.

## 2000X dt Power Supply

	40:0.4	40:0.8
Output power:	400 watts	800 watts
Line voltage:	117 V AC * 50/60 Hz, 1ph	
Max. current:	6 amps max.	12 amps max.
Receptacle required:	NEMA 5-15R	NEMA 5-15R
Frequency:	40 kHz	40 kHz
Receptacle required:	40 kHz	40 kHz
Max. cycle rate:	120 cpm **	120 cpm **
Ambient temp. range:	41-122° F (5-50°C)	
External inputs/outputs:	9-pin start connector; 44-pin user, I/O connector	

\*200-240 V AC optional. \*\*Application dependent

Actuator Model	2000X Micro
Cylinder diameter	1.57" (40 mm)
6 amps max.	12 amps max.
Stroke length:	1.91" (48.51 mm) max.
Max. clamp force on part (at 80psig/550 kPa)	115 lbs., 611 N
Dynamic triggering range:	5-140 lbs., 22-623 N
22-623 N Pneumatic requirement:	Clean (5 micron, filtered), dry, non-lubricated air at 80 psi (552 kPa)

# BRANSON

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**WARRANTY:** The Branson 2000X Series Micro ultrasonic actuators carry a three-year (single-shift) warranty on materials and workmanship; the 2000X dt power supplies carry a three-year (single-shift) warranty on materials and workmanship.

**Note:** All sales shall be subject to the Supplier's terms and conditions of sale as described in Branson's quotations and sales contracts.

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