

BRANSON

2000 SERIES

GENERAL DESCRIPTION

The 2000aodm is Branson's new micro ultrasonic actuator. It operates with Branson 2000d Series 40 kHz power supplies. These systems offer multiple welding modes including distance (collapse and absolute), time, energy, energy compensation, and peak power welding modes. In addition, the 2000d/aodm systems feature Branson's patented Amplitude Stepping. Multiple modes are valuable for applications requiring exacting levels of process control and weld quality. These systems include the improved UPS power supply module with Branson's patented closed loop circuitry, providing enhanced performance, consistency, and reliability.

The 2000d power supply includes a user interface with a 4-line vacuum fluorescent display designed for ease of use in setup, operation, and troubleshooting. The system also has enhanced data capabilities for configuration and information management. The 40 kHz power supply is available in 400 and 800 Watts. (Complete power supply information is included on data sheet 2000d/aed.)

The micro actuator is designed for use in semi-automated, or fully automated environments. The actuator may be mounted directly on a machine frame or with a fixed support on a column and hub.

KEY ACTUATOR FEATURES

- **Narrow width** – measuring 2.6" (65.8 mm) – allows the 2000aodm actuator to fit in very small spaces.
- **Internal linear optical encoder** measures weld distance enabling welding by specific part collapse (meltdown), or welding to a finished part height (absolute). Resolution on the encoder is 0.0001 inch.
- **A force transducer** provides digital setting of the Dynamic Trigger and allows the user to print out force data and graphs for performance evaluation and troubleshooting.
- **Pressure transducer** accurately monitors and displays air pressure and allows accurate and repeatable setting of weld force.



- **Converter cooling** - Cooling air is directed into the converter during each operating cycle.
- **The 1.5 inch bore air cylinder** provides better control of clamp force on low force applications.
- **Calibratable pressure gauge**
- **"Horn down" function** enables ease of horn/fixture alignment.

AVAILABLE OPTIONS

- ▶ **Solid mount boosters**
- ▶ **High-output 40 kHz converter** – produces 25% higher output amplitude for faster weld cycles.
- ▶ **Printer with cable** - printing of setup and cycle information for comparison and troubleshooting.
- ▶ **Terminal** - for screen-driven setup
- ▶ **Ground detect cable**

WARRANTY

The Branson 2000 Series micro ultrasonic actuators carry a one-year (single-shift) warranty on materials and workmanship; the 2000d power supplies carry a three-year (single-shift) warranty on materials and workmanship. Note: This warranty applies to equipment purchased and operated in North America. For warranty information on units purchased and/or operated outside the U.S. contact your local representative.

Ultrasonic Assembly Systems

2000aodm micro actuator

- ✓ **Small Footprint**
- ✓ **Enhanced Performance**
- ✓ **Weld by Distance**
- ✓ **Amplitude Stepping**
- ✓ **Force Measurement**
- ✓ **Calibration**

Applied
Technologies
Group

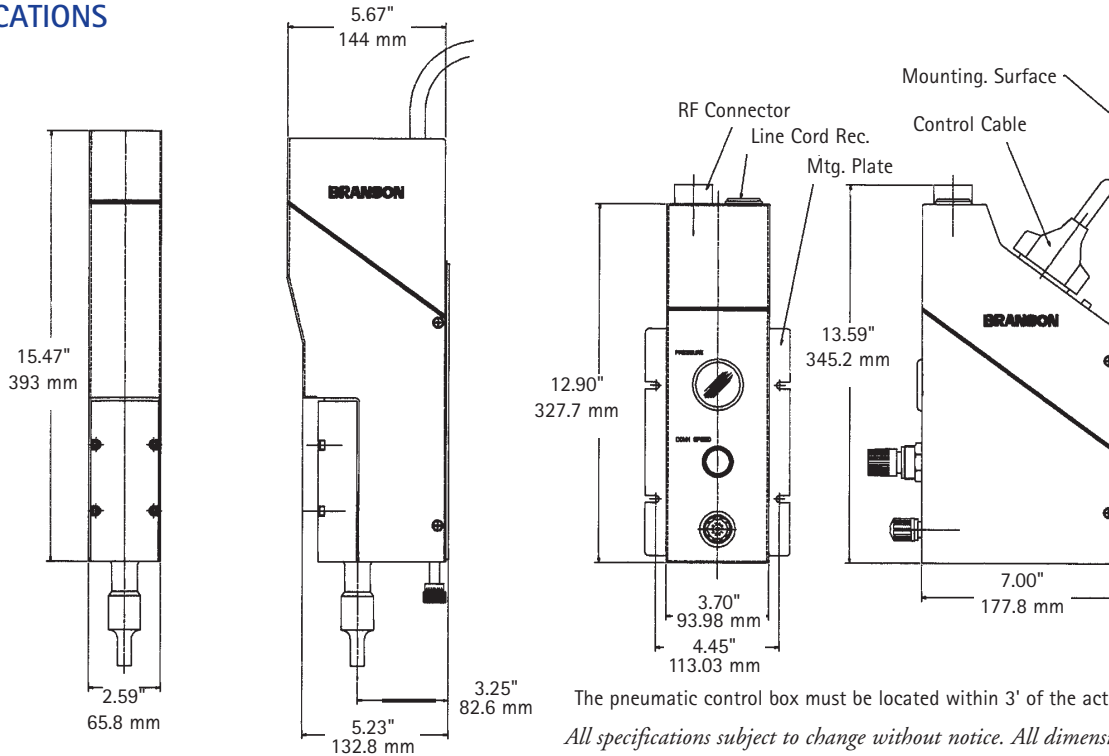
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welding • staking • insertion • swaging • forming • spot welding • degating • cutting & sealing



Most units are CE compliant, and comply with FCC rules and regulations governing radio frequency interference. Contact Branson, Danbury, for information.

SPECIFICATIONS



The pneumatic control box must be located within 3' of the actuator.

All specifications subject to change without notice. All dimensions are nominal.

2000d Power Supply	40:0.4	40:0.8
Output power:	400 Watts	800 Watts
Line voltage:	117 V AC *	117 V AC *
	50/60 Hz, 1ph	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
Max. cycle rate:	120 cpm **	
Ambient temp. range:	41-122° F (5-50°C)	
External inputs/outputs:	9-pin start connector; 44-pin user I/O connector	
Actuator Model	2000aodm 1.5	
Max. clamp force on part (at 100 psig/ 690 kPa)	140 lbs. 623 N	
Dynamic Triggering range:	5-140 lbf. 22-623 N	
Stroke length:	2" (50.8 mm) max.	
Pneumatic requirement:	Clean (5 micron, filtered), dry, non-lubricated air at 100 psi (690 kPa)	
* 200-240 V AC optional.		
** Application dependent.		



2000aodm Actuator (L) and Pneumatic Control (R)

ORDERING INFORMATION

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

Branson EDP No.

2000aodm actuator with pneumatic control and interconnect cables 159-134-204

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

Branson

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2000aodm