



## Spin Welder Model SW300

The Branson Model SW300 is a precision servo-driven spin welding system capable of welding circular joint interface parts with accurate control and highly consistent results. The SW300 can be configured to manual, semi-automated, or fully-automated manufacturing environments.

### KEY FEATURES:

- **Motor** (5.1 kW/6.8 hp) and **drive combination** capable of 30 Nm of peak torque at 240V AC, 3 ph input power
- **Settable servo motor speed** (250-3500 rpm @240V AC input power)
- **Servo motor** driven with accuracy of +/- 0.1 degree
- **Input power:** 240V AC - 480V AC, 3 ph (480V service provides the most torque further up the RPM range)
- **7" color touchscreen** (16:9 format) with intuitive, user-friendly interface layout that allows quicker movement between screens
- **USB Functionality:**
  - Up to 250 cycles of weld data can be downloaded to a USB stick
  - Recipes can be bulk export/imported to the welder via USB

### OTHER FEATURES:

- **Mechanical stop indicator** on the outside of the actuator
- **Three modes of operation:** Revolutions, Collapse, Absolute position
- **Counter clockwise or clockwise rotation** direction of the spinning tool
- **Linear encoder standard.** Allows for part clamp position triggering, collapse, and absolute modes. Also allows for process limits in any weld mode.
- **Two levels of welder HMI access:**
  - Operator – allows running parts, selecting recipes, and viewing data
  - Supervisor – access to all screens
- **User selectable units:** (SAE or metric)
- **User configurable I/O:** (four of each) typically used for tooling functions

## Spin Welding

- **Lo/High limits** available on the following: part clamp position, weld RPM, revolutions, collapse (meltdown), absolute height, peak torque, and final position (orientation)
- **Weld data information** for the last 15 weld cycles is available thru the data screen on the operator interface
- **Ethernet data output** (live data capturing): Utilizes Internet Protocol Version 4 (TCP/IPv4)
  - Cycle count, recipe name, mode, spin direction, pre-weld speed, peak weld speed, number of revolutions, final orientation position, peak torque, collapse distance, absolute position, trigger mode, trigger setpoint, dwell time, hold time, cycle time, weld time
- **Storage** of up to 30 recipes
- **Automation alarm** cable connection (15 pin)
  - Allows for automation/PLC connection
  - Inputs: up to 15 recipe selection, remote alarm reset
  - Outputs: ready to home, ready to index, ready to weld, weld active, alarm active, and post weld active signals
  - 24V DC and 0V DC pins
  - 2 spare pins
- **User selectable languages** (English, German, Italian, Czech, Polish, French, Spanish, Finnish)

**OPTIONS:**

- Higher speed motor setup, 250-4800 rpm at 480V AC, 3 ø
- 6-foot column
- Pneumatic package for vacuum in fixture (also can be used for part sensing in the fixture)
- Pneumatic package for slide/clamp in fixture (some tools require pneumatic clamps)
- Vacuum spindle assembly (includes pneumatic package for vacuum) for holding part in spinning tool prior to weld
- Upgrade to 3:1 gear box (reduces speed to 50-1000 rpm)
- Upgrade to 5:1 gear box (reduces speed to 50-750 rpm)
- Metric or SAE leveling plate
- Upgrade to 7.87" (200 mm) stroke
- Upgrade to 3.15" (8.0 mm) bore cylinder (allows for higher clamp force on part)
- Remote mounted operator interface on an adjustable arm
- Actuator is available without palm-button base for vertical mounting in automation, or without column and base for horizontal/vertical mounting in automation
- Light curtain with 80/20 and plexiglass guarding
- Can be incorporated into dial table systems (Branson Series 30 or 40, custom semi-automated or fully automated systems)

**MECHANICAL SPECIFICATIONS**

Actuator and stand weight	315 lbs. (143 kg)
Control box weight	88 lbs. (40 kg)
Stroke Length	3.94" (100 mm)
Height adjustment	27.2" (691 mm)
Throat (tooling centerline to column)	9.68" (245.9 mm)
Bottom of spindle to base distance	5.12" to 32.4" (130 to 822 mm)
Maximum force applied to part	225 lbs. (1.0 kN)
Pneumatic requirement	Clean (5 micron), dry air, 100 psi max.; 1 CFM
Cable length (actuator to control box)	118" (2997 mm)

**ELECTRICAL SPECIFICATIONS****POWER REQUIREMENT**

240-480 V AC, 3 Ø, 20 amps, 50/60 Hz

**ORDERING INFORMATION**

	<b>BRANSON EDP No.</b>
Model SW300	300-101-127

**Americas**

Branson Ultrasonics Corp.  
41 Eagle Road  
Danbury, CT 06813-1961  
T: 203-796-0400  
F: 203-796-9838  
[www.Emerson.com/Branson](http://www.Emerson.com/Branson)

**Europe**

Branson Ultraschall  
Niederlassung der Emerson  
Technologies GmbH & Co. OHG  
Waldstrasse 53-55  
63128 Dietzenbach, Germany  
T: +49-6074-497-0  
F: +49-6074-497-199  
[www.Emerson.com/Branson](http://www.Emerson.com/Branson)

**Asia**

Branson Ultrasonics (Shanghai) Co., Ltd.  
758 Rong Le Dong Road  
Song Jiang, Shanghai, PRC, 201613  
T: 86-21-3781-0588  
F: 86-21-5774-5100  
[www.Emerson.com/Branson](http://www.Emerson.com/Branson)