



## **Branson Ultraseal® 20 Ultrasonic Tube Welding System**

The Ultraseal® 20 is a compact and lightweight ergonomic system which is easy

to use and low cost to operate.

The Branson **Ultraseal® 20** is a rigid, lightweight and ergonomic metal joining system able to seal metal tubes from 4 mm capillary up to 12 mm diameter. It is easily operated directly on the charge line, supported by a balancer, or as a bench top unit to reliably seal pressurized charge tubes.

**Environmentally friendly**, the **Ultraseal® 20** requires no stored energy, minimal energy at 'standby - weld ready' and, with a stack efficiency of approximately 95%, delivers the lowest total operating cost over life of ownership.

The **Ultraseal® 20** mechanically crimps the tube closed and vibrates the inner surfaces together at 20,000 cycles per second. The intense scrubbing action mixes the molecules forming a metallurgical bond ensuring a hermetic seal.

### **MODES OF OPERATION:**

- **Pre-Height Search:** A pre-sonic crimp measurement instantly scans and automatically activates the optimum weld parameters from the controller's memory sealing the tube. This is used when tube size and/or hardness varies within a production line to produce repeatable and reliable welds.
- **Proximity Sensor:** The ultrasonic generator delivers high frequency vibratory energy sealing the tube to the preset final seal height. This is used when the tube size and hardness does not vary producing a repeatable and reliable seal.
- **Explosion Proof Ultraseal® 20EX:** Independently lab certified for use with isobutene refrigerants. A safety purge system removes potentially trapped gas from the weld actuator prior to electrical startup and remains continuously active while powered up, eliminating the potential of gas accumulation.

# Metal Welding

This provides optimum production line and operator safety.

## Superior Tool Life

Aside from labor, consumable tool cost is the largest expense in sealing tubes. Branson's replaceable tip technology provides high tool life at low cost.

## Ultraseal® 20 Tooling Options

- > 4-lobe single seal non-cut tip
- > 4-lobe single seal cut-off tip
- > 4-lobe double seal cut-off tip
- Branson tips are reversible for left or right-handed charge tube processing.
- Only Branson offers **Patented Double Seal** tooling with left and right hand tube seal /cut-off processing without tool change.
- Ultraseal® 20 multi-lobed tips are more economical than solid horn (sonotrode) technology.
- Tip rotation can be done in less than 2 minutes for more system up-time.
- Tip replacement in approximately 4 minutes for more system up-time.
- Adjustable tube stop for longer tool life.
- Proportioned air-cooling for increased tool life.

## Additional Benefits

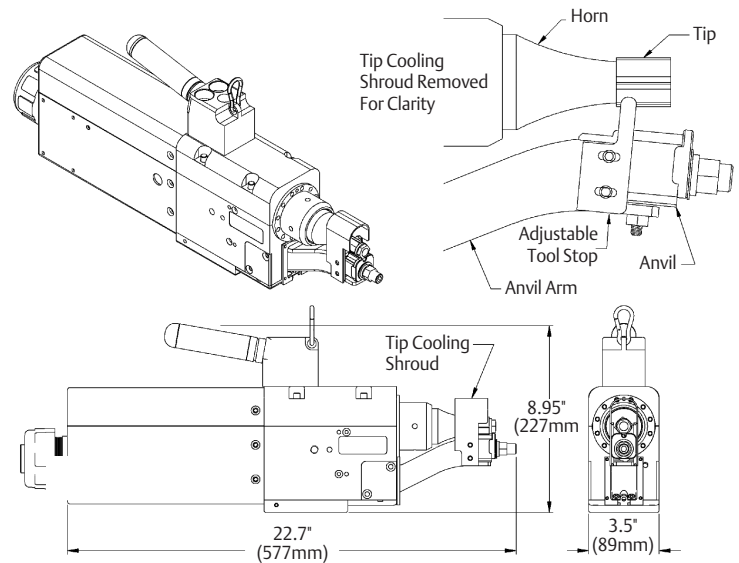
- Five levels of quality monitoring:
  - > Weld power
  - > Weld time
  - > Tube pre-height
  - > Tube final height
  - > Height with time compensation
- Lowest maintenance cost in the industry.
- 4.0kw generators.
- Multiple languages.
- Branson worldwide technical support.
- Data capture capable.
- Adjustable maintenance counters.

- 3 level password protection.
- Remote operator panel - option available.
- Automation or robotic operation capable.
- Automatic spares replenishment program.
- Over 25 years of industry experience.

## Operating Specifications

- Electrical: 245V AC, 50/60 Hz, 1, 15 amp.
- Pneumatic: 5.5 bar (80 psig) clean, dry (0.5µ coalescing filter) air.
- Actuator weight: 10.9 kg (24 lbs.).

## DIMENSIONS



**BRANSON**

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