



## ULTRASEAL® 20EX Explosion Proof Ultrasonic Tube Welding System

The Explosion Proof **Ultraseal® 20EX** is a

compact and light-weight ergonomic system which is easy to use and low cost to operate.

Afforded ATEX certification, **Ultraseal® 20EX** can seal metal tubes filled with flammable refrigerants. A safety purge system removes potentially trapped gas from the weld actuator prior to the electrical startup and remains continuously active while powered up, eliminating the potential of gas accumulation. This provides optimum production line and operator safety.

The Branson **Ultraseal® 20EX** is a rigid, lightweight and ergonomic metal joining system able to seal metal tubes from 4mm capillary up to 12mm 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® 20EX** requires no stored energy, minimal energy at 'standby weld already' and, with a stack efficiency of approximately 95%, delivers the lowest total operating cost over life of ownership.

The **Ultraseal® 20EX** 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 metal-lurgical 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 present final seal height. This is used when the tube size and hardness do not vary producing a repeatable and reliable seal.

### Ultrasonic Controller Option

The **Ultraseal® 20EX** can work with ATEX certification approved ATP-2040e touchscreen controller.

# Metal Welding

## 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® 20EX 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® 20EX** multi-lobed tips are more economical than solid horn (sonotrode) technology.
  - Tip rotation can be done in less than 2 minutes for more systems up-time.
  - Tip replacement in approximately 4 minutes for more systems up-time.
  - Adjustable tube stop for longer tool life.
  - Proportioned air-cooling for increased tool life.

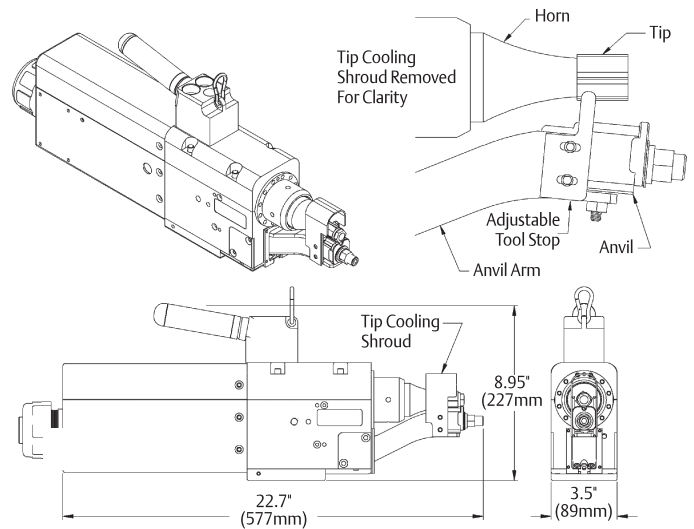
## Additional Benefits

- 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 spares replenishment program.
- Over 25 years of industry experience.

## Operating Specifications

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

## DIMENSIONS



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