ULTRASPLICE® 2032/2050

20 kHz ULTRASONIC SPLICING SYSTEMS

The Ultrasplice® 2032/2050 is a full-range ergonomic wire splicing system to produce high-quality splices at the lowest cost operation.

Application requirements demand a full-range ultrasonic splicing system capable of processing up to 50mm^2 CSA (cross sectional area). AmTech offers two new Ultrasplice® systems to cover the full range of splices. The *Model 2032* is capable of splicing from 0.7 to 32mm^2, and for larger splices the Ultrasplice *Model 2050* is capable of splicing from 0.7 to 50 mm^2. Both utilize a retractable anvil and will automatically sequence to produce the full range of splices required. All critical splice parameters are monitored to ensure the highest quality splice.

The ultrasonic horn and actuator housing design provides the operator with optimum ergonomic conditions allowing for ease of use.

Features

The Ultrasplice 2032 and 2050 units are easy to maintain and access:

- Special 'keyed connector' (single point) air and electrical disconnect permit instant replacement of a production actuator at the workstation in under two minutes for off-line maintenance and maximum production.
- Critical tooling clearances and alignment do not change with use.

Automatic Parameter Change

Production of a wide ranges of splices as found on a harness board or in today's 'just-in-time' manufacturing require equipment to automatically adjust. The 2032/2050 automatically and instantly adjusts splice parameters, including splice width, pressure, amplitude, and energy.

Other Features

- ✔ Precise, programmable adjustment of splice width
- ✔ Electronic pressure regulator to accurately control splice force
- ✔ Electronic amplitude control for precise one-micron adjustment
- ✔ Quality limits stored in system memory for instant recall and automatic setup
- ✔ Programmable sequencing of splices for automatic switching after a preset number for optimum production efficiency

Ease of Operation

Easy loading and unloading of splices provided by:

- ✔ Fully-retractable anvil providing maximum wire load area
- ✔ Retractable gather tool for easy splice removal

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Production Flexible Design

- ✔ Bench-top unit
- ✔ Mount in a workstation table
- ✔ Use with a barcode wand for instant 'non-programmable' 'just-in-time' production
- ✔ Connect to a computer or network

Patented Anti-Side Splice Feature

One of most common causes for field failures is side splicing (Figure 1). If the operator is allowed to place the wires flat on the tip, only the tangent point of each cable is welded together; this results in an extremely weak splice. Our patented anti-side splice feature enables the operator to vertically stack the cables (Figure 2). This vertical stacking of the cables prevents side splicing and provides the highest quality splice possible.

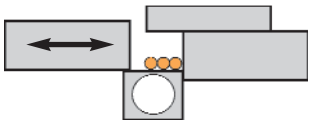

Figure 1. Side splicing

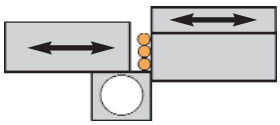

Figure 2. Patented anti-side splicing feature

Proportioned Cooling Air

Cooling air directed at the application tooling increases tool life in high-production environments. AmTech's proportional cooling air automatically applies the correct amount of cooling, based upon the wire size, for optimum tool life at minimum cost

Ultrasplice® Tooling

Aside from labor, consumable tool cost is the largest expense in producing splices. AmTech's replaceable tip technology provides high tool life at low cost.

- 4-lobe keyed tip and 4-lobe anvil
- Ultrasplice® tips are more economical than solid horn (sonotrode) technology, producing up to one million cycles depending upon splice size and parameters
- Tip rotation/replacement in less than two minutes for more system up time.

Additional Benefits

- Four levels of quality monitoring
  - Weld power
  - Weld time
  - Wire pre-sonic height
  - Wire final height
- Auto line voltage compensation ±15%
- Lowest maintenance cost in the industry
- 3.3 kW/4.0 kW generator
- Multiple languages
- AmTech worldwide technical support
- Data capture capable
- Adjustable maintenance counters
- Tri-level controller password protection
- Automation or robotic operation capable
- AmTech's over 25 years of industry experience.

Operating Specifications

Electrical:	245V AC, 50/60 Hz, 1Ø, 20 amp
Pneumatic:	5.5 bar (80 psig) clean, dry (0.5µ coalescing filter) air

ISO 9001:2000 and ISO 14001 Certified