**Ultrasonic Metal Welder**

**NEW**

Highly Reliable Welding of Aluminum Cables to Copper Terminals

Welds Copper/Aluminum Harnesses, Bus Bars, and Foil Laminates

- **Spring Pressure Sync Mechanism**
  Excellent response to the pressure variations prevents slip between horn and work, reduces ultrasonic energy loss and minimizes dust and waste.

- **High Rigidity Pressure Mechanism**
  Maintains very small deflections to ensure uniform weld side pressure.

- **Unique, Original Design Ultrasonic Oscillation Frequency Automatic Tracking System**
  Ensures stable vibration amplitude during high loads.

- **High Performance Depth Control (1μm Resolution Linear Scale)**
  Oscillation is controlled by feedback of sinking of work and work height.

- **4 Types of Oscillation Control Method**
  Time, Work Sinking Value, Work Height, Applied Energy

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**Point A** indicates start of ultrasonic waves application.

**Without Spring Sync Function**

- Pressure
- Time
- Amplitude

**With Spring Sync Function (Avio)**

- Pressure
- Time
- Amplitude

Oscillation Time 0.1 sec

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**Air Pressure Method**

- Decreases the pressure with the work's deformation.

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**NIPPON AVIONICS CO., LTD.**
BEFORE OPERATION, read the Operation Manual carefully. This unit should be located away from water, moisture, steam, dust and soot to prevent fire, electrical shock, and operational problems.

*The appearance and specifications are subject to change without notice.

**Ultra-sonic Metal Welder**

### Easy Management
- **Easy Management with Graphic Monitor Function**
  - Ultrasonic Peak Output
  - Ultrasonic Energy
  - Sinking Amount of the Work
  - Work Height

### Simple Operation, Easy-to-read Display
- **7-inch LCD Touch Panel**
- **Intuitive Operation**
- **Graphic Display**

### Setting and Management of Data via Serial Communication (RS-232C)
- **Weld Conditions**
- **Monitor Value**
- **Judgment Result**

### Ultrasonic Generator SW-3500-20

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Output Power</td>
<td>3,500 W</td>
</tr>
<tr>
<td>Nominal Frequency</td>
<td>20 kHz</td>
</tr>
<tr>
<td>Oscillation Method</td>
<td>Automatic Tuning Hold Master Oscillator System (ATHMOS)</td>
</tr>
<tr>
<td>Amplitude Adjustment</td>
<td>Variable (30 - 100%, 1% step)</td>
</tr>
<tr>
<td>Control Mode</td>
<td>Time/Depth/Height/Energy</td>
</tr>
<tr>
<td>Power Source</td>
<td>3 Φ AC 200 V, 20 A</td>
</tr>
<tr>
<td>Dimension</td>
<td>W250 x D450 x H375 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>20 kg</td>
</tr>
</tbody>
</table>

### Ultrasonic Head SH-H3K7

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Pressure Follow-up Mechanism</td>
<td>Spring + Air</td>
</tr>
<tr>
<td>Adjustable Pressure Range</td>
<td>1,700 N - 3,700 N</td>
</tr>
<tr>
<td>Stroke</td>
<td>50 mm</td>
</tr>
<tr>
<td>Supply Air Pressure</td>
<td>0.5 MPa (Clean, Dry Air)</td>
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<tr>
<td>Dimension</td>
<td>W380 x D600 x H935 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>102 kg (Horn and Anvil excluded)</td>
</tr>
</tbody>
</table>

- **Graphic Monitor Function**
  - Ultrasonic Peak Output
  - Ultrasonic Energy
  - Sinking Amount of the Work
  - Work Height
- **Simple Operation, Easy-to-read Display**
  - 7-inch LCD Touch Panel
  - Intuitive Operation
  - Graphic Display
- **Setting and Management of Data via Serial Communication (RS-232C)**
  - Weld Conditions
  - Monitor Value
  - Judgment Result

**Requests for Sample Testing are Welcomed. Please Contact Us.**