Wire cleaning requires intense ultrasonic action concentrated in the area immediately surrounding the wire in order to clean at high wire velocities. The WF3-16 transducer is designed to focus the energy from 16 piezoelectric transducer elements arrayed around a circular tube to create the forces necessary to remove scale, oxides, grease and drawing oils quickly and efficiently. The Branson wire cleaning product line ranges from a single WF3-16 transducer and generator to integrated cleaning systems containing up to 4 transducers and complete with heated solution reservoirs, entrance and exit vestibules, spray rinses, air wipes and recirculation pumps and filters.

APPLICATIONS
Successful cleaning applications include:
- Drawn carbon-steel wire
- Drawn welding wire
- Stainless steel welding wire
- Standard copper wire
- Copper clad wire
- Coaxial cable
- Flat metal strips
- Multi-strand catheter wire
- Small diameter tubing

FEATURES
- Cleans at high speeds
- High rate of liquid turnover
- Straight through wire feeding without bending
- Simplified work handling
- Expansion capability up to 4 transducers to adapt to high line speed requirements
- Single or multiple strand cleaning capability
- Cleans a variety of shapes
- Sanitary flange connections between modules for leak free operation

BASIC CLEANING LINE
A basic ultrasonic cleaning line consists of from one to four WF3-16 transducers,
their associated S8540-16 ultrasonic generators and the accessories required for keeping the transducers full of cleaning solution.

- Infeed vestibule with overflow weir
- WF3-16 transducer (up to 4 in series)
- S8540-16 Generator (up to 4 to match transducer quantity)
- Outfeed vestibule with overflow weir
- Interlock for low liquid level protection
- Solution supply pump and reservoir full of cleaning solution.

Optional accessories include:
- Spray rinse module clamps to outfeed vestibule
- Air wipe to dry the wire at line speed. Air wipes are custom machined to match wire size and shape
- Provided by customer
- Wire payout and take-up mechanisms
- Basic utilities: electricity, water, waste handling

**IWC-WF3-1 and IWC-WF3-2**

Integrated Wire Cleaners

Integrated Wire Cleaner series units are complete cleaning systems that require only connections to basic utilities and insertion into the wire feed line to become operational. They are designed for low volume production applications. They combine all the operating components mounted onto a common base.

**FEATURES**

- The IWC-WF3-1 has one transducer and one S8540-16 generator.
- The IWC-WF3-2 has 2 transducers and 2 S8540-16 generators.
- Stainless steel infeed and outfeed vestibules based on floodbox technology to allow straight in-line product feedthrough.
- Stainless steel 40 gallon covered storage tank for collection heating and recycling of cleaning solution.
- Stainless steel pump for pumping filtered cleaning solution from storage tank to outfeed vestibule.
- Liquid level interlock to prevent ultrasonic operation without solution in transducer cleaning chamber.
- Liquid level interlock to prevent heater and pump operation without solution in storage tank.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>IWC-WF3-1</th>
<th>IWC-WF3-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Dimensions</td>
<td>69.8 H x 52.4 W x 26.4 D inches (1777 D x 1331 W x 670 mm)</td>
<td></td>
</tr>
<tr>
<td>Transducer center line above floor</td>
<td>44 in (1118 mm)</td>
<td></td>
</tr>
<tr>
<td>Transducer length</td>
<td>8 in (203 mm)</td>
<td>16 in (406 mm)</td>
</tr>
<tr>
<td>Transducer inner diameter</td>
<td>2.94 in (75 mm)</td>
<td></td>
</tr>
<tr>
<td>Storage tank capacity</td>
<td>40 gallons (150 liters)</td>
<td></td>
</tr>
<tr>
<td>Ultrasonic power</td>
<td>672 Watts</td>
<td>1344 Watts</td>
</tr>
<tr>
<td>Pumping capacity</td>
<td>5 gpm (19 lpm)</td>
<td></td>
</tr>
<tr>
<td>Heating capacity</td>
<td>6 kW at 230 V</td>
<td></td>
</tr>
<tr>
<td>Maximum operating temperature</td>
<td>180 F (82 C)</td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td>208-230V/3 ph/50-60 Hz/8 kVA 460V/60 Hz /8 kVA</td>
<td>208-230V/3 ph/50-60 Hz/8 kVA 460V/60 Hz /8 kVA</td>
</tr>
</tbody>
</table>

**HDWC-WF3-2, HDWC-WF3-3, HDWC-WF3-4**

The Heavy Duty Wire Cleaner (HDWC) series units are designed for applications such as drawing compound removal and rod and wire descaling following mechanical breaking. They are complete cleaning systems that require only connections to basic utilities and insertion into the wire feed line to become operational. They are designed with 2, 3 or 4 transducers mounted above an all stainless steel three-compartment storage tank.
**FEATURES**

- The HDWC-WF3-2 has two transducers and 2 S8540-16 generators
- The HDWC-WF3-3 has 3 transducers and 3 S8540-16 generators
- The HDWC-WF3-4 has 4 transducers and 4 S8540-16 generators
- Receiving sump for collection of cleaning solution
- Settling sump where heavy particulate matter settles out of the cleaning solution
- Heating and pumping sump
- Stainless steel infeed and outfeed vestibules based on floodbox technology to allow straight in-line product feed through. This arrangement eliminates product bending and associated guides or rollers
- Stainless steel pump for pumping filtered cleaning solution from storage tank to outfeed vestibule.
- Liquid level interlock to prevent ultrasonic operation without solution in transducer cleaning chamber
- Liquid level interlock to prevent heater and pump operation without solution in storage tank
- Digitally controlled stainless steel electric immersion heater in storage tank for heating cleaning solution
- Switches and indicator lights for heater, pump and ultrasonic control
- All stainless steel plumbing
- Generators remotely located on open generator rack
- Provisions for coalescing system.
- Provisions for auto liquid make-up system

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th></th>
<th>HDWC-WF3-2</th>
<th>IWC-WF3-2</th>
<th>HDWC-WF3-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Dimensions</td>
<td>50.0 H x 75.0 W x 63.8 D inches (1270 D x 1905 W x 1620 mm)</td>
<td>44 in (1118 mm)</td>
<td>44 in (1118 mm)</td>
</tr>
<tr>
<td>Transducer center line above floor</td>
<td>44 in (1118 mm)</td>
<td>24 in (609 mm)</td>
<td>32 in (812 mm)</td>
</tr>
<tr>
<td>Transducer length</td>
<td>16 in (406 mm)</td>
<td>24 in (609 mm)</td>
<td>32 in (812 mm)</td>
</tr>
<tr>
<td>Transducer inner diameter</td>
<td>2.94 in (75 mm)</td>
<td>2.94 in (75 mm)</td>
<td>2.94 in (75 mm)</td>
</tr>
<tr>
<td>Storage tank capacity</td>
<td>220 gallons (833 liters)</td>
<td>220 gallons (833 liters)</td>
<td>220 gallons (833 liters)</td>
</tr>
<tr>
<td>Ultrasonic power</td>
<td>1344 Watts</td>
<td>2016 Watts</td>
<td>2688 Watts</td>
</tr>
<tr>
<td>Pumping capacity</td>
<td>5 gpm (19 lpm)</td>
<td>5 gpm (19 lpm)</td>
<td>5 gpm (19 lpm)</td>
</tr>
<tr>
<td>Heating capacity</td>
<td>30 kW at 230 V</td>
<td>30 kW at 230 V</td>
<td>30 kW at 230 V</td>
</tr>
<tr>
<td>Maximum operating temperature</td>
<td>180 F (82 C)</td>
<td>180 F (82 C)</td>
<td>180 F (82 C)</td>
</tr>
<tr>
<td>Electrical</td>
<td>208-230V/3 ph/50-60 Hz/33 kVA 460V/60 Hz/33 kVA</td>
<td>208-230V/3 ph/50-60 Hz/34 kVA 460V/60 Hz/34 kVA</td>
<td>208-230V/3 ph/50-60 Hz/35 kVA 460V/60 Hz/35 kVA</td>
</tr>
</tbody>
</table>
Ultrasonic Cleaning

Global Technologies. Local Solutions.

Branson’s unmatched global resources ensure optimal solutions for the most challenging materials joining and precision cleaning applications.

With 1600+ employees in over 70 sites worldwide, we can rapidly respond to our customers’ needs, wherever they are located. Branson understands local markets and regulations, and the open collaboration among our global offices and extensive staff of application specialists quickly produces solutions for customers. We partner with companies of every size and scope to help resolve critical issues ranging from market changes, product quality/life cycles and production costs, to employee safety and environmental compliance. And, Branson’s commitment to the publicly funded industrial collective research initiative and cooperation with various research centers have produced widespread innovations in plastics joining technology that are benefiting companies everywhere.

Branson is a leading innovator in the Industrial Automation division of Emerson, a diversified global manufacturing and technology company. Emerson is a progressive company working to develop products and processes to resolve global issues, including energy supply and distribution, information and networking, climate and environment, manufacturing efficiency, and product performance. Emerson is dedicated to the pursuit of breakthrough technology developments never before envisioned.

Branson brings exceptional quality, fast delivery and competitive prices for your tooling needs. Contact your nearest regional center today.

Americas
Branson Ultrasonics Corp.
41 Eagle Road
Danbury, CT 06810-1961
T: 800-732-9262
F: 203-796-2250
www.bransonultrasonics.com

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.branson.eu

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.branson-china.com