1) Power Indicator Light
2) Overheat / Fault Indicator Light
3) Weld Amperage Control Knob
4) Stick/Lift TIG Process Switch
5) Negative Weld Output 50 mm Dinse Receptacle
6) Positive Weld Output 50 mm Dinse Receptacle
161 S INVERTER:

The Thermal Arc® 161 S Portable DC Welder is designed for Stick & Lift TIG welding operations and provides a greater range of output for the advanced hobbyist or light industrial applications.

It is capable of delivering 110 Amps on 115 Volt circuits for Stick & TIG welding. When used on 208-230 Volt circuits, maximum output is 160 Amps for either welding process.

This welder features optimized hot start and arc-force circuits delivering superior arc starting and control when Stick welding.

**MACHINE FEATURES:**
- Versatile, multi-process Stick/TIG capability
- 160 Amps maximum welding output
- Multi-voltage input power 115 & 208/230 VAC
- Excellent, smooth & stable arc performance
- Highly efficient inverter design
- Lightweight and portable
- Simple & easy, ready to weld package

### MACHINE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Type: Constant Current</th>
<th>DC Stick &amp; TIG Welder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Output</td>
<td>160A</td>
</tr>
<tr>
<td>Welding Amperage Range</td>
<td></td>
</tr>
<tr>
<td>115V Stick &amp; TIG</td>
<td>10-110A</td>
</tr>
<tr>
<td>230V Stick &amp; TIG</td>
<td>10-160A</td>
</tr>
<tr>
<td>Rated Output:</td>
<td></td>
</tr>
<tr>
<td>Stick 115V, 15A</td>
<td>70A / 22.8V @ 60%</td>
</tr>
<tr>
<td>TIG 115V, 15A</td>
<td>100A / 14V @ 60%</td>
</tr>
<tr>
<td>Stick 115V, 20A</td>
<td>100A / 24V @ 35%</td>
</tr>
<tr>
<td>TIG 115V, 20A</td>
<td>110A / 14.4V @ 30%</td>
</tr>
<tr>
<td>Stick 230V</td>
<td>160A / 26.4V @ 30%</td>
</tr>
<tr>
<td>TIG 230V</td>
<td>160A / 16.4V @ 30%</td>
</tr>
<tr>
<td>Nominal OCV Volt/DC</td>
<td>71V</td>
</tr>
<tr>
<td>Power Source Dimensions</td>
<td>9.0” (229mm) x 5.3” (135mm) x 15.5” (394mm)</td>
</tr>
<tr>
<td>Power Source Weight</td>
<td>17.4 lbs. (7.9kg)</td>
</tr>
<tr>
<td>Warranty</td>
<td>3 Years</td>
</tr>
</tbody>
</table>

### PRIMARY POWER

- **Primary Voltage:** 115/208-230V
- **Hertz:** 50/60 Hz
- **Phase:** 1 PH
- **Designed To:** IP23S
- **Approvals:** EN 60974-1

**Stick Welding Package** (Part No. W1003602)
- Thermal Arc 161 S inverter welding power source
- Tweco® WeldSkill® 200 Amp electrode holder with 13ft (4m) lead
- Tweco WeldSkill 200 Amp ground clamp with 10ft (3m) lead
- Adapter plug from 230V 50 Amp to 115V 15 Amp circuits
- Operating manual
- Product family overview DVD
- 4 general purpose stick electrodes (E6013)
- Carry case

**Stick/TIG Package** (Part No. W1003603)

**INCLUDES ALL ITEMS ABOVE PLUS:**
- 17V style TIG torch 12.5ft (3.8m) & accy. kit
- Victor® Argon regulator / flow gauge

---

Form No. 84-1009 (03/02/11) © 2011 Thermadyne Industries, Inc. www.thermadyne.com Printed in U.S.A.