Innovation, Service and Quality

Thermal Arc® has an extensive range of arc welding products designed to be tough, efficient and easy to use. Thermal Arc's line of products include high tech portable inverters, heavy duty industrial inverters, traditional transformer welders, wire feeders, welding generators and advanced plasma welding systems. Thermal Arc is known for machines that deliver outstanding arc characteristics through advanced designs and long experience in what it takes to make a superior weld. Great products are backed by a wide range of accessories and parts and team of experts that will get you started and keep you up and running at maximum efficiency. So, in a tough competitive world where you need the right answer fast, look to Thermal Arc for products give you the edge.

Three Year Warranty

With our Thermal Arc products you won't have to worry! All Thermal Arc Systems come with our exclusive three year warranty which offers:

- Three years for all major parts and labor
- One call to Technical Service; no paperwork; a hassle free claim process
- Parts shipped from factory for no extra charge next day air

Our three year, hassle free warranty is one of the best warranties in the business!

(All engines are warranted by the engine manufacturer. See the engine manufacturer's warranty for details.)
The Power of Information . . .

Time is money! You need to get the job done, you need information and advice, you don’t need frustration and delay. Thermal Arc® aims to get you the information you need fast. Call the customer service team, go online or visit the nearest Thermal Arc distributor for all your information needs.

Product Brochures

Specific to each product, these data sheets tell you the machine specifications and features and give you concise detail on the controls, accessories, options, compatibility with other products and ordering information. Call 1-800-255-5846 for more information or visit www.thermalarc.com to get the literature that you need downloaded from the website.

Technical Service
1-800-462-2782
1-800-440-0155 FAX

Years of experience in the welding business is the hallmark of this group. Detailed product selection and performance advice, trouble shooting, welding procedure development and training are what this group offers to Thermal Arc customers.

Customer Service
1-800-255-5846
1-800-332-0946 FAX

Thermal Arc customer service knows their products and how to help you get the right equipment fast. Price, product, availability and a can do attitude are the output of this experienced group.

CONTENTS

Introduction .............................................. 2-3
Product Descriptions (overview) ............ 4-5
NEW Inverter Series Introduction .......... 6-7
Product Selection Guide ......................... 8-9

STICK (SMAW)
Dragster™ 80 ........................................... 10
P-Wee® 160S ............................................. 11
Pro-Lite® 250S ......................................... 12
Pro-Plus® 400S ........................................ 13

TIG (GTAW)
P-Wee® 160TS ........................................... 14
Pro-Lite® 250TS ........................................ 15
Pro-Plus® 400TS ....................................... 16
Pro-Wave® 185TSW ................................. 17
Pro-Wave® 300TSW ................................. 18
Pro-Wave® 400GTSW ............................... 19

Plasma Arc Welding
Ultima® 150 ............................................. 20
300 Amp Modular Systems, Accessories . 21

MIG (GMAW)
Fabricator® 130, 180 ................................. 22
Fabricator® 210, 250 ................................. 23
Fabstar® 4030 ........................................... 24

Multi-Process
Pro-Lite® LM-300 ...................................... 25
Pro-Plus® 400MST ..................................... 26
Power-Master® 500 ................................... 27
Power-Master® 500P .................................. 28
Ultra Flex™ 350 Pulse .............................. 29

Wire Feeders
Hefty® II CC/CV, Hefty® II Stainless ..... 30
Heavy Duty CC/CV ................................. 31
Model 17A, Porta-Feed® 17A ................. 32
Ultrafeed® 1000, Mijit® 1000 ................. 33
Ultrafeed® 4000 ..................................... 34
HMC-410 ............................................... 35
SP-2001 Spool Gun, SPC-2001 ............... 36
Control Box, AG-2000 Assist Gun ......... 37
Cobramatic® Push-Pull System .............. 38

Automation .............................................. 38-39

Engine Driven
Scout® TA-4/170-H ................................. 41
Raider® 10,000 Pro ................................. 42
Explorer™ TA-8/300-KAT ....................... 43
Hercules® TA-20/500-DZ ....................... 44

Accessories ............................................ 45-46

International Voltages ......................... 47

Thermal Arc Website .............................. 47
Consumables ......................................... 48
Thermadyne Contact Information ............ 48

cont e nts
Product Descriptions

Thermal Arc®'s product descriptions have been designed and illustrated to provide our customers the information they need in a clear and concise manner so information on Thermal Arc equipment can be obtained in the least amount of time.

The uniformity and readability of the descriptions, along with the design of the easily recognizable icons, allow the reader to scan through each page and be informed on a specific product. Pertinent information, including the welding process, product input/output information, ordering information and product specifications, along with features and benefits and other product-specific data, are provided in order for our customer to make a knowledgeable and intelligent decision on which Thermal Arc product will add “More Power” to your process.

Additional detailed literature and manuals are available by contacting 1-800-255-5846, or on our website at www.thermalarc.com, or feel free to contact any of our knowledgeable field or customer service representatives.
### ICON KEY

<table>
<thead>
<tr>
<th>Input</th>
<th>Phase</th>
<th>Frequency</th>
<th>Product Icon</th>
<th>Type</th>
<th>Current</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1" alt="1 Phase Icon" /></td>
<td><img src="image2" alt="60 Hertz Icon" /></td>
<td><img src="image3" alt="Inverter, Transformer, Wire Feeder / Welder, Plasma Welder Icon" /></td>
<td>DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image4" alt="Engine Type Icon" /></td>
<td><img src="image5" alt="4 kW Icon" /></td>
<td><img src="image6" alt="Engine Driven Welder Generator Icon" /></td>
<td>DC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image7" alt="Voltage Icon" /></td>
<td><img src="image8" alt="50 Hz Icon" /></td>
<td><img src="image9" alt="Wire Feeder Icon" /></td>
<td>AC</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ICON IDENTIFICATION

#### Phase
- **Single Phase**
- **Three Phase**
- **Single or Three Phase**

#### Engine Type
- **Gas Engine**
- **Diesel Engine**
- **Propane Engine**

#### Voltage
- **115 VAC**
- **15-100 DC**

#### Frequency
- **50 Hertz**
- **60 Hertz**
- **50 / 60 Hertz**

#### Product Icon
- **Inverter Welder**
- **Transformer Welder**
- **Wire Feeder / Transformer Welder**
- **2 Roll Wire Feeder**
- **4 Roll Wire Feeder**
- **Engine Driven Welding Generator**
- **Plasma Arc Welder**

#### Type (Welding Characteristics)
- **Constant Current**
- **Constant Voltage**
- **Constant Current / Voltage**

#### Current (Voltage Type)
- **AC**
- **DC**
- **AC / DC**

#### Maximum kW (Auxiliary Power)
- **4 Kilowatts**
- **5.5 Kilowatts**
- **8.5 Kilowatts**
- **9 Kilowatts**
- **10 Kilowatts**
- **20 Kilowatts**

#### Wire Feeder Type
- **Voltage Sensing**
- **Constant Speed**

---

Call 1-800-255-5846 for more information
Introducing . . .
The next generation in Inverter power supplies!

Thermal Arc® has moved inverter technology into the 21st century with an all new line of high performance portable welding power sources for STICK (SMAW), TIG (GTAW), and Multi-Process applications.

Exciting new design and performance features include:

• Simplified push button controls with digital meters
• Voltage Reduction Device (VRD™), an added safety feature for STICK welding
• Energy saving technology
• Portable with a compact, durable / stackable case design

Our nine new highly portable inverter models range in weight from 19-63 lbs. and all come with control panel covers to protect against the elements. The new “flag-ship” Pro-Wave® 185TSW, an exceptional valve for AC/DC TIG welding, offers a full range capability of 5-185 amps and features included Current Sloper, Current Pulser and variable frequency, wave balance control, and Lift or HF assisted starting.
Introducing Our Exciting New Line of Arc Welding Inverter Power Supplies
For Stick, TIG and Multi-Process

All of our redesigned family of Inverters feature fully digital controls, new Voltage Reduction Device (VRD™) for safety and a new durable design, easy for stacking.

**STICK (SMAW)**

**P-Wee® 160S** - 5-85A (115V), 5-160A (230V); 50/60 Hz
**Pro-Lite® 250S** - 5-250A; 208-230/460V; 50/60 Hz
**Pro-Plus® 400S** - 5-400A; 208-230/460V; 50/60 Hz (not shown)

**Key Features**
- Hot Start
- Arc Control

**TIG (GTAW)**

**P-Wee® 160TS** - 5-85A (115V), 5-160A (230V); 50/60 Hz
**Pro-Lite® 250TS** - 5-250A; 208-230/460V; 50/60 Hz
**Pro-Plus® 400TS** - 5-400A; 208-230/460V; 50/60 Hz
**Pro-Wave® 185TSW** - 5-185A (DC), 10-185 (AC); 208-230V; 50/60 Hz
**Pro-Wave® 300TSW** - 5-300A (DC), 10-300A (AC); 208-230/460V; 50/60 Hz

**Key Features**
- Full Featured Current Pulser & Current Sloper
- AC Frequency Control (185TSW & 300TSW only)
- Wave Balance Control (185TSW & 300TSW only)

**MULTI-PROCESS**

**Pro-Plus® 400MST** - 5-400A; 208-230/460V; 50/60 Hz

**Key Features**
- Inductance Control
- Save Welding Programs
- Remote 14 Pin & 19 Pin Connections

Contact Thermal Arc to take advantage of this exciting new line of Arc Welding Inverters!
## Product Selection Guide

### TIG (GTAW)

<table>
<thead>
<tr>
<th>Type</th>
<th>Current</th>
<th>Range (Amps)</th>
<th>STICK</th>
<th>TIG Scratch</th>
<th>TIG Lift</th>
<th>TIG Hi-Freq</th>
<th>TIG Pulse</th>
<th>MIG</th>
<th>Flux Cored</th>
<th>CAG</th>
<th>Sub Arc</th>
<th>Frequency (Hz)</th>
<th>Page</th>
<th>Literature Form No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dragster™ 80</td>
<td>CC DC</td>
<td>10-80</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 50/60</td>
<td>10</td>
<td>84-9916</td>
</tr>
<tr>
<td>P-Wee® 160S</td>
<td>CC DC</td>
<td>5-160 (230V)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 50/60</td>
<td>11</td>
<td>84-2218</td>
</tr>
<tr>
<td>Pro-Lite® 250S</td>
<td>CC DC</td>
<td>5-250</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>12</td>
<td>84-2221</td>
</tr>
<tr>
<td>Pro-Plus® 400S</td>
<td>CC DC</td>
<td>5-400</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>13</td>
<td>84-2224</td>
</tr>
<tr>
<td>P-Wee® 160TS</td>
<td>CC DC</td>
<td>1-160 (230V)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 50/60</td>
<td>14</td>
<td>84-2219</td>
</tr>
<tr>
<td>Pro-Lite® 250TS</td>
<td>CC DC</td>
<td>1-250</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>15</td>
<td>84-2222</td>
</tr>
<tr>
<td>Pro-Plus® 400TS</td>
<td>CC DC</td>
<td>5-400</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>16</td>
<td>84-2225</td>
</tr>
<tr>
<td>Pro-Wave® 185TSW</td>
<td>CC AC/DC</td>
<td>5-185</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 50/60</td>
<td>17</td>
<td>84-2220</td>
</tr>
<tr>
<td>Pro-Wave® 300TSW</td>
<td>CC AC/DC</td>
<td>5-300</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>18</td>
<td>84-2223</td>
</tr>
<tr>
<td>Pro-Wave® 400GTWS</td>
<td>CC AC/DC</td>
<td>10-470</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1/3 50/60</td>
<td>19</td>
<td>0-0804</td>
</tr>
</tbody>
</table>

### MIG (GMAW)

<table>
<thead>
<tr>
<th>Type</th>
<th>Current</th>
<th>Range (Amps)</th>
<th>PAW</th>
<th>Frequency (Hz)</th>
<th>Page</th>
<th>Literature Form No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabricator® 130</td>
<td>CV DC</td>
<td>30-130</td>
<td>X</td>
<td>X</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 180</td>
<td>CV DC</td>
<td>40-180</td>
<td>X</td>
<td>X</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 210</td>
<td>CV DC</td>
<td>30-210</td>
<td>X</td>
<td>X</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 250</td>
<td>CV DC</td>
<td>30-250</td>
<td>X</td>
<td>X</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 4030</td>
<td>CV DC</td>
<td>40-400</td>
<td>X</td>
<td>X</td>
<td>3</td>
<td>60</td>
</tr>
</tbody>
</table>

### MULTI-PROCESS

<table>
<thead>
<tr>
<th>Type</th>
<th>Current</th>
<th>Range (Amps)</th>
<th>Process</th>
<th>Frequency (Hz)</th>
<th>Page</th>
<th>Literature Form No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-Lite® LM-300</td>
<td>CC/CV DC</td>
<td>5-300</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>1/3</td>
</tr>
<tr>
<td>Pro-Plus® 400MST</td>
<td>CC/CV DC</td>
<td>5-400</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>1/3</td>
</tr>
<tr>
<td>Power-Master® 500</td>
<td>CC/CV DC</td>
<td>5-560</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>Power-Master® 500P</td>
<td>CC/CV DC</td>
<td>5-560</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>3</td>
</tr>
<tr>
<td>Ultra Flex® 350 Pulse</td>
<td>CC/CV DC</td>
<td>5-350</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>1/3</td>
</tr>
</tbody>
</table>

### PLASMA ARC WELDING (PAW)

<table>
<thead>
<tr>
<th>Type</th>
<th>Current</th>
<th>Range (Amps)</th>
<th>Process</th>
<th>Frequency (Hz)</th>
<th>Page</th>
<th>Literature Form No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultima® 150</td>
<td>CC DC</td>
<td>0.5-150</td>
<td>X</td>
<td>1/3</td>
<td>50/60</td>
<td>16</td>
</tr>
</tbody>
</table>
To design your automation package, just call 1-800-462-2782, and talk with one of Thermal Arc’s technical and applications specialists.
Designed for light duty STICK (SMAW or CC) welding, the Dragster™ 80 plugs into any standard 115 VAC receptacle and requires only a 20 Amp circuit. With an output range of 10 to 80 Amps, the Dragster 80 allows you to weld material up to 1/8”.

The Dragster 80 features 25mm twist lock output terminals which allow for easy polarity reversal and cable change. Complete with thermal overload protection and a convenient on/off switch and carrying strap, this light, compact unit weighs under 8 lbs. / 3.5 kg.

**Features**
- Designed for Light Duty STICK (SMAW or CC) Welding
  - 1/16” and 3/32” E6013 Electrodes
  - 1/16” and 3/32” Stainless Steel Electrodes
  - Scratch Start TIG Welding
- Output Range of 10 to 80 Amps Welds Material up to 1/8”
- Plugs into Standard 115 VAC Receptacle Only Requires 20 Amp Circuit
- 25mm Twist Lock Output Terminals Rugged Output Terminals Allow Easy Polarity Reversal and Cable Changes
- Heavy Duty 6 Gauge Welding Cables
  - 15 ft. Electrode Cable and Tweco Brand Electrode Holder
  - 10 ft. Work (Ground) Cable and Rugged Clamp
- Thermal Overload Protection

**Applications**
- Hobbyist
- Home Garage
- Agricultural
- HVAC

**Accessories**
- TIG Kit

**Thermal Arc® Three Year Warranty**
All Thermal Arc Systems come with our exclusive three year warranty:
- Three years for all major parts and labor
- One call to Technical Service; no paperwork; a hassle free claim process
- Parts shipped from factory for no extra charge next day air

All engines are warranted by the engine manufacturer. See the engine manufacturer’s warranty for details.
The Thermal Arc® P-Wee® 160S series is a DC inverter arc welding power supply with Constant Current (CC) output characteristics offering the highest value and performance in a STICK welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 160S comes with a digital Volt/Amp meter allowing for precise set up and output control. Welding current control includes adjustable hot start (0-70 Amps) and arc control which allows the arc force to be adjusted. For TIG welding, LIFT TIG is standard, and the front panel has a socket available to connect a foot control or a remote control pendant. VRD (Voltage Reduction Device) is standard and automatically reduces the open circuit voltage when the arc is off, improving safety protection when stick welding without compromising arc starting.

A tough, lightweight and compact design makes the 160S ideal for light industrial applications.

**FEATURES**

- Smart Link™ Capability
  - Automatically link to either 115 or 230 VAC
- Push Button Control Panel
  - Easy access to all functions and controls
- Dinse Twist Lock Output Terminals
  - Rugged output terminals allow for easy polarity reversal and cable change
- Remote Receptacle
  - Allows remote devices to be connected for controlling amperage and output contactor
- Weighs less than 20 lbs.
  - Portability, easy to carry
- Warning Code Circuitry
  - Alerts operator of power supply abnormalities
- VRD Inside
  - VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Adapter, Hand Held Pendant, Foot Control, 8 Pin Extension Cable, 8 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S
The Thermal Arc® Pro-Lite® 250S series is a DC inverter arc welding power supply with Constant Current (CC) output characteristics offering the highest value and performance in a STICK welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 250S includes a digital AMP/Volt Meter, Hot Start, Arc Control, remote control capabilities, and VRD (Voltage Reduction Device) circuit as standard features.

A tough, lightweight and compact design makes the 250S ideal for light to medium industrial applications.

**FEATURES**
- **Smart Logic® Capability**
  - Eliminates damage if the machine is accidentally installed to the improper voltage
- **Push Button Control Panel**
  - Easy access to all functions and controls
- **Dinse Twist Lock Output Terminals**
  - Rugged output terminals allow for easy polarity reversal and cable change
- **Remote Receptacle**
  - Allows remote devices to be connected for controlling amperage and output contactor
- **Weighs less than 40 lbs.**
  - Portability, easy to carry
- **Warning Code Circuitry**
  - Alerts operator of power supply abnormalities
- **VRD Inside**
  - VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**
STICK Kit, TIG Kit, Dinse Connector, Adapter, Hand Held Pendant, Foot Control, 8 Pin Extension Cable, 8 Pin Torch Switch

**APPROVALS**
IEC 974-1, IP23S
The Thermal Arc® Pro-Plus® 400S series is a DC inverter arc welding power supply with Constant Current (CC) output characteristics offering the highest value and performance in a STICK welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 400S includes a digital AMP/Volt Meter, Arc Control, Hot Start, remote control capabilities, and VRD (Voltage Reduction Device) circuit as standard features.

A tough, lightweight and compact design makes the 400S ideal for industrial applications.

**FEATURES**

- Smart Logic® Capability
  - Eliminates damage if the machine is accidentally installed to the improper voltage
- Push Button Control Panel
  - Easy access to all functions and controls
- Dinse Twist Lock Output Terminals
  - Rugged output terminals allow for easy polarity reversal and cable change
- Remote Receptacle
  - Allows remote devices to be connected for controlling amperage and output contactor
- Weighs less than 51 lbs.
  - Portability, easy to carry
- Warning Code Circuitry
  - Alerts operator of power supply abnormalities
- VRD Inside
  - VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Portable Mounting, Hand Held Pendant, Foot Control, 14 Pin Extension Cable, 14 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S

---

**PRO-PLUS® 400S**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Rated Output @ Duty Cycle</th>
<th>Output Range</th>
<th>Dimensions (H x W x D)</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-3070</td>
<td>400 A / 36 V @ 25% (208-230 / 460 V, 3 ph)</td>
<td>5 - 400 Amps</td>
<td>16.5” x 8.3” x 17.7” 420 x 210 x 450 (mm)</td>
<td>50.7 lbs. (23.0 kg)</td>
</tr>
<tr>
<td></td>
<td>300 A / 32 V @ 60% (208-230 / 460 V, 3 ph)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>300 A / 32 V @ 25% (208-230 V, 1 ph)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NEW**

**PROCESS**

<table>
<thead>
<tr>
<th>STICK</th>
<th>LIFT TIG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Thermal Arc® P-Wee® 160TS series is a DC TIG power supply offering the highest value and performance in a TIG welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 160TS is a fully featured TIG machine with a digital Amp/Volt meter for precise setup and output control, fitted Gas Solenoid Valve and the ability to plug in a Foot Control or a Remote Pendant. Available output modes are Standard, Slope, Repeat and Spot. Pulse Current Output is built in and is fully adjustable. Pulse Parameter Adjustment allows the base current and peak current to be set between 1-160 amps and the pulse time and pulse frequency to be varied to suit the application. The result is very precise control over the weld pool and bead shape. VRD (Voltage Reduction Device) is standard and automatically reduces the open circuit voltage when the arc is off, improving safety protection when stick welding without compromising arc starting.

The design of the 160TS handles just about any job with the full range capability from 160 amps down to 1 amp. A tough, lightweight and compact design makes the 160TS ideal for light industrial applications.

**FEATURES**

- **Smart Link™ Capability**  
  Automatically link to either 115 or 230 VAC
- **Push Button Control Panel**  
  Easy access to all functions and controls
- **Pulse Mode (Standard)**  
  Fully Adjustable pulse parameters for precise control of weld shape
- **TIG Modes (Slope Repeat and Spot)**  
  Control over the start and weld crater, repeatable weld cycle
- **Remote Receptacle**  
  Allows remote devices to be connected for controlling amperage and output contactor
- **Warning Code Circuitry**  
  Alerts operator of power supply abnormalities
- **VRD Inside**  
  VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Adapter, Hand Held Pendant, Foot Control, 8 Pin Extension Cable, 8 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S
The Thermal Arc® Pro-Lite® 250TS series is a DC TIG inverter arc welding power supply with Constant Current (CC) output characteristics offering the highest value and performance in a TIG welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 250TS includes a digital AMP/Volt Meter, Gas Solenoid Valve, remote control capabilities, VRD (Voltage Reduction Device) circuit, Current Pulsing and Sloping with Repeat Function as standard features.

A tough, lightweight and compact design makes the 250TS ideal for light to medium industrial applications.

**FEATURES**

- **Smart Logic® Capability**
  Eliminates damage if the machine is accidentally installed to the improper voltage

- **Push Button Control Panel**
  Easy access to all functions and controls

- **Pulse Mode (Standard)**
  Fully Adjustable pulse parameters for precise control of weld shape

- **TIG Modes (Slope Repeat and Spot)**
  Control over the start and weld crater, repeatable weld cycle

- **Remote Receptacle**
  Allows remote devices to be connected for controlling amperage and output contactor

- **Warning Code Circuitry**
  Alerts operator of power supply abnormalities

- **VRD Inside**
  VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Adapter, Hand Held Pendant, Foot Control, 8 Pin Extension Cable, 8 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S
The Thermal Arc® Pro-Plus® 4000TS series is a DC TIG inverter arc welding power supply with Constant Current (CC) output characteristics offering the highest value and performance in a TIG welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 400TS includes a digital AMP/Volt Meter, Gas Solenoid Valve, remote control capabilities, VRD (Voltage Reduction Device) circuit, Current Pulsing and Sloping with Repeat Function, and Programmable controls allowing for 5 welding programs to be saved for maximum flexibility as standard features.

A tough, lightweight, and compact design makes the 400TS ideal for industrial applications.

**FEATURES**

- **Smart Logic® Capability**
  - Eliminates damage if the machine is accidentally installed to the improper voltage
- **Push Button Control Panel**
  - Easy access to all functions and controls
- **Pulse Mode (Standard)**
  - Fully Adjustable pulse parameters for precise control of weld shape
- **TIG Modes (Slope Repeat and Spot)**
  - Control over the start and weld crater, repeatable weld cycle
- **Programmable**
  - Easily save up to five welding parameter programs
- **Warning Code Circuitry**
  - Alerts operator of power supply abnormalities
- **VRD Inside**
  - VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Portable Mounting, Hand Held Pendant, Foot Control, 14 Pin Extension Cable, 14 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S
The Thermal Arc® Pro-Wave® 185TSW series is an AC/DC TIG power supply offering the highest value and performance in a TIG welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted. The 185TSW includes a digital AMP / Volt Meter, Gas Solenoid Valve, remote control capabilities, VRD (Voltage Reduction Device) circuit, Current Pulsing and Sloping with Repeat Function as standard features.

The design of the 185TSW offers both AC/DC TIG welding and handles just about any job with the full range capability from 185 amps down to 5 amps. The 185TSW yields welds with superior purity and exceptionally clean appearance, as well as x-ray quality welds on all metals. Precise wave shaping allows the operator to control the cleaning, penetration, and heat input of any aluminum application.

FEATURES

- **Smart Logic® Capability**
  Eliminates damage if the machine is accidentally installed to the improper voltage
- **Push Button Control Panel**
  Easy access to all functions and controls
- **True Square Wave AC Output**
  Provides AC TIG wave-shaping to control weld bead
- **Pulse Mode (Standard)**
  Fully Adjustable pulse parameters for precise control of weld shape
- **TIG Modes (Slope Repeat and Spot)**
  Control over the start and weld crater, repeatable weld cycle
- **Remote Receptacle**
  Allows remote devices to be connected for controlling amperage and output contactor
- **Warning Code Circuitry**
  Alerts operator of power supply abnormalities
- **VRD Inside**
  VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

ACCESSORIES

STICK Kit, TIG Kit, Dinse Connector, Adapter, Hand Held Pendant, Foot Control, 8 Pin Extension Cable, 8 Pin Torch Switch

APPROVALS

IEC 974-1, IP23S

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Rated Output @ Duty Cycle</th>
<th>Output Range</th>
<th>Dimensions (H x W x D)</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-3073</td>
<td>185 A / 17.4 V @ 30%</td>
<td>5 - 185 Amps</td>
<td>14.2&quot; x 7.1&quot; x 16.5&quot;</td>
<td>41.8 lbs. (19.0 kg)</td>
</tr>
<tr>
<td>(208-230 V)</td>
<td>160 A / 26 V @ 40%</td>
<td></td>
<td>360 x 180 x 420 (mm)</td>
<td></td>
</tr>
</tbody>
</table>
The Thermal Arc® Pro-Wave® 300TSW series is an AC/DC TIG power supply offering the highest value and performance in a TIG welding power source. All functions and controls are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

The 300TSW includes a digital AMP/Volt Meter, Gas Solenoid Valve, remote control capabilities, VRD (Voltage Reduction Device) circuit, Current Pulsing and Sloping with Repeat Function, and Programmable controls allowing for 5 welding programs to be saved for maximum flexibility as standard features.

The design of the 300TSW offers both AC/DC TIG welding and handles just about any job with the full range capability from 300 amps down to 5 amps. 300TSW yields welds with superior purity and exceptionally clean appearance, as well as x-ray quality welds on all metals. Precise wave shaping allows the operator to control the cleaning, penetration, and heat input of any aluminum application.

**FEATURES**

- **Smart Logic® Capability**
  Eliminates damage if the machine is accidentally installed to the improper voltage
- **Push Button Control Panel**
  Easy access to all functions and controls
- **True Square Wave AC Output**
  Provides AC TIG wave-shaping to control weld bead
- **Pulse Mode (Standard)**
  Fully Adjustable pulse parameters for precise control of weld shape
- **TIG Modes (Slope Repeat and Spot)**
  Control over the start and weld crater, repeatable weld cycle
- **Programmable**
  Easily save up to five welding parameter programs
- **Warning Code Circuitry**
  Alerts operator of power supply abnormalities
- **VRD Inside**
  VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for added on voltage reducers, and has no effect on arc starting

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Portable Mounting, Hand Held Pendant, Foot Control, 14 Pin Extension Cable, 14 Pin Torch Switch

**APPROVALS**

IEC 974-1, IP23S
The Thermal Arc® 400GTSW delivers both AC and DC welding power using proven IGBT power transformation technology to provide reliable service and unmatched arc control. This unit can provide stable arc characteristics down to 10 Amps on AC and 5 Amps on DC.

The 400GTSW uses a unique design that provides a true square wave (AC) GTAW operation with no continuous high frequency and power input draw as much as 50% under standard square wave machines.

Standard on the 400GTSW are AC balance control, AC frequency control, a built-in TIG Pulser, slope control, gas pre-flow and post-flow, gas solenoid, hot start and arc starting with either high frequency or lift TIG.

This unit is ideal for aircraft / airframe, boat marine, thin gauge aluminum, small fabrication shops, automated AC GTAW applications and any AC GTAW applications with limited input power or difficulties with high frequency interference.

**FEATURES**

- Heavy Duty IGBT Inverter Design
- AC Welding with No Continuous H.F.
- 40% Duty Cycle @ 400 Amps (60% @ 325 Amps)
- Single Output Range
- AC Balance Control and Frequency Control
- Reduced Current Draw (29 Amps @ 400 Amps Output)
- 208 / 230 / 460 Volt, Single / Three Phase Input with Smart Link™
- 115 Volt Duplex Outlet (1.5 kVA)

**ACCESSORIES**

Foot Control, Amp Control, Water Cooled TIG Block, TIG Starter Kit, STICK Kit

**Effect of Wave Balance Adjustment on AC/GTAW-Complete Welding Control**

Pro-Wave power sources’ AC output uses a manually adjusted balance control. This control of the wave form changes the amount of time spent on DCEP (‘cleaning’) and DCEN (‘penetration’) parts of each cycle, increasing arc stability. The DCEP cycle insures that the aluminum oxide is thoroughly removed allowing the DCEN cycle a thorough penetration of the base metal. Both cycles enhance weld quality and significantly improve performance.

When a conventional system changes its wave balance, there can be as much as a 50% increase in amperage draw. Thermal Arc’s Pro-Wave amperage draw is unaffected by any adjustments. Pro-Wave increases efficiency and eliminates tungsten spitting, and enables the use of a smaller diameter tungsten electrodes to operate at higher current levels. Figures 1 & 2 show the difference in the TIG torch electrode and heat and cleaning variations.

**Pro-Wave® 400GTSW**

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>HF TIG</th>
<th>LIFT TIG</th>
<th>STICK</th>
<th>PULSE TIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Rated Output @ Duty Cycle</td>
<td>Output Range</td>
<td>Dimensions (H x W x D)</td>
<td>Net Weight</td>
</tr>
<tr>
<td>10-1042 (208 - 230 / 460 V)</td>
<td>400 A / 36 V @ 40%</td>
<td>10 - 470 Amps (AC)</td>
<td>32” x 16.25” x 20.75”</td>
<td>220 lbs. (100 kg)</td>
</tr>
</tbody>
</table>

10-1042 (208 - 230 / 460 V) | 300 A / 32 V @ 60% | 5 - 470 Amps (DC) | 810 x 410 x 529 (mm) | 220 lbs. (100 kg) |
The Ultima® 150 plasma welding system has many advantages over traditional automated TIG welding including increased productivity, consistent arc starting, improved process control and reduced electrical emission interference.

This unique plasma welding system is self contained in a small package with a 150 Amp power supply, coolant recirculator and control console. Our design reduces floor space and simplifies installation, making the initial price competitive with automated TIG systems while its increased productivity and repeatable performance allow it to pay for itself in a shorter period of time.

**FEATURES**
- 0.5-15 and 5-150 Amp Current Range
- Smooth DC Arc
- Pilot Arc
- Multiple Voltage Input
- Smart Logic®
- Preview Set Current
- Protection Devices
- Pilot Arc
- Repeatable Arc Starting Reducing defects and Rework
- Multiple Voltage Input
- 260-460 VAC, 1 or 3 Phase, 50/60 Hz (575 VAC with Optional Module)
- Smart Logic®
- Circuit Protects Unit from Damage if Improper Voltage is Applied
- Current Limiter
- Limits Power Source Output to Torch Capability to Avoid Torch Damage
- Preview Set Current
- Eliminates Costly Test Set-Ups/Displays Actual Current/Voltage
- Protection Devices
- Coolant Dionizer and Ionized Coolant Protection
- Coolant Flow Protection/Interlock
- Coolant Temperature Protection/Interlock
- Console Temperature Overload Detection/Interlock
- Simple Interface
- Automated or Manual Control
- Can Utilize a Number of Current Thermal Arc Torches

**APPLICATIONS**
- Aerospace/Aircraft
- Automotive
- Robotics
- Appliances
- Medical
- Office Equipment
- Electrical
- Fabrication

**ACCESSORIES**
Ultima® 150 - 575 VAC Transformer Module, Weld Sequencer Package (includes the following: WT-1 Weld Timer, CS-1 Current Sloper, CP-1 Pulser, WSE Enclosure), WT-1 Weld Timer Including Enclosure, HP-100 Hand Remote Control (requires 7-3316), Adapter Cable, RP-1 Remote Control, Remote Control Cable (20 ft. / 6.1m), Remote Control Cable (10 ft. / 3m), Foot Control (includes 7-3316), Argon Regulator, Argon Hydrogen Regulator

**APPROVALS**
CSA
300 Amp Plasma Welding Modular Systems

Reliable, easy-to-operate Thermal Arc® Plasma Welding Systems boost profits and productivity by helping you achieve consistently high quality repeatable welds – manually or automatically. Whatever your application needs, the broad, versatile line of Thermal Arc® consoles, torches, power supplies and accessories provide the right tools for the job. All have been carefully designed to work together in producing high quality welds in most metals such as stainless steels, high-nickel alloys, high-strength alloys, carbon steels, copper and copper/nickel alloys.

**PRO-PLUS® 400S & POWER-MASTER® 500 FEATURES**

- Pro-Plus® 400S Single Range 5 - 400 Amps
- Power-Master® 500 Single Range 5 - 560 Amps
- Compact Size Requires a Minimum of Floor Space
- Constant Fast Switching at all Current Levels to Provide an Extremely Smooth DC Output and Improved Arc Characteristics
- Response Time Less Than 1 Millisecond with Precise Arc Characteristics and Stability
- Can Easily be Interfaced with the Thermal Arc WC-1 Weld Controller and WF-100 Capstan Wire Feeder

**APPLICATIONS**

- Aerospace/Aircraft
- Automotive
- Robotics
- Appliances
- Medical
- Office Equipment
- Electrical
- Fabrication

**APPROVALS**

CSA

**WC-1 and WF-100**

**Thermal Arc WC-1 Controller**

The Thermal Arc WC-1, Controller allows a compact packaged micro-processor system to be added onto a Thermal Arc Ultima-150™ or WC-100B Component plasma welding package to provide accurate, and repeatable parameter control over the entire welding system. The Controller provides a full-featured current Pulser to aid in controlling warpage, penetration and the weld puddle. The Sloper function is designed to permit the development of a complete sequence of operation for a specific welding job. Two programmable outputs are featured, one is used to control the Plasma power source and the second, controls a Cold Wire Feed Motor Drive Control. The Controller provides 32 user selectable weld schedules.

**WF-100 Cold Wire Capstan Feeder**

The Thermal Arc WF-100 Cold Wire Capstan Feeder is a compact, lightweight, precision wire feeder for robotic or automation fixture applications. The Capstan’s small size and lightweight (less than 6 lbs.) allows the wire feeder to be placed directly on the automated fixture or robot wrist. The Capstan also provides an increase in wire drive contact area by wrapping the wire around the wire drive wheel.

**WC 100B WELDING CONSOLE**

**Automatic / Manual Operation, Pilot Arc**

Usable with any of the Thermal Dynamics® line of plasma welding torches, the WC 100B features reliable arc starting by means of a pilot arc. It offers advantages in low-current welding operations, and in repetitive, high-duty-cycle, fast cycling welding. The pilot arc can be used in either the interrupted or continuous mode. The latter provides greater arc stability along with instant arc starting at low currents or in high-duty-cycle, fast cycling welding. Among other WC 100B features are: LED amperage/voltage display; large, readable plasma and shield gas flowmeters; internal torch leads connections for increased safety; hi/low pilot current switch to provide the best arc starting characteristics at various main arc current levels; plug-in enclosed relays; and auxiliary control receptacle for automatic or manual operation.

**Dimensions:** 15” H x 18 5/8” W x 19 5/8” D (381 mm x 473 mm x 498 mm)

**Shipping Weight:** 125 lbs. (56.7 kg)

**HE 100A COOLANT RECIRCULATOR**

**For All Thermal Arc Torches to 300 Amps**

High efficiency and completely non-ferrous internal construction (including a reusable metal filter) make the HE 100A a useful, dependable companion for any Thermal Arc® plasma welding system to 300 Amps. A positive displacement, rotary vane pump delivers a maximum of 2.3 gpm (8.7 lpm) at 100 psi (.91 lpm at 7 kg/cm²). The pressure is adjustable. Maximum rating is 20,000 BTU/hr (5040 K/Cal/hr) [based on 100° F (38.8° C) difference between ambient air and high coolant temperature and 40° F (4° C) difference between high and low coolant temperature].

**Coolant Capacity:** 1 3/4 gal. (6.6 L)

**Dimensions:** 24” H x 20” W x 20” D (610 mm x 508 mm x 508 mm)

**Shipping Weight:** 125 lbs. (56.7 kg)

**For power supply specifics, see page 13 for the Pro-Plus 400S and page 27 for the Power-Master 500.**
**Fabricator® 130, 180**

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>MIG</th>
<th>FLUX CORED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part Number</strong></td>
<td><strong>Rated Output @ Duty Cycle</strong></td>
<td><strong>Output Range</strong></td>
</tr>
<tr>
<td>100038-001 (115 V)</td>
<td>130</td>
<td>30 - 130 Amps</td>
</tr>
<tr>
<td>100051-001 (230 V)</td>
<td>180</td>
<td>40 - 180 Amps</td>
</tr>
</tbody>
</table>

Designed for welding with mild and stainless steel, flux-cored and aluminum wires, the Fabricator® 130 and 180 are ideal for auto body shops, farm use, car restoration, metal working hobbyists and light sheet metal fabricators. Both units come with a rugged feed head powered by a low noise, powerful feed motor and can take 4” and 8” wire spools up to 10 lbs.

The Fabricator® 130 plugs into any standard 115V duplex receptacle and requires only a 20 Amp circuit. With a current range of 30 – 130 Amps it can weld from 26 gauge (0.55mm) up to 3/16” (5mm) materials. The Fabricator® 130 comes with a 10 ft. welding gun, 8 ft. input power lead, 11 ft. work cable with clamp, 1 lb. / .023” (0.6mm) spool of welding wire and .023” (0.6mm) contact tips.

The Fabricator® 180 runs on 230 VAC with an output of 40 – 180 Amps and is suitable for welding material from 26 gauge (0.55mm) to 3/16” (5mm). The Fabricator 180 comes equipped with a 10 ft. welding gun, 8 ft. input power lead, 11 ft. work cable with clamp and a 1 lb. spool of .035” (0.9mm) welding wire.

**FEATURES**

**Fabricator® 130**
- Designed for Welding with Wires
  - Mild Steel and Stainless Steel
    - .023” (0.6mm), .030” (0.8mm), .035” (0.9mm)
  - .030”, .035” Flux Cored
- Aluminum
  - .030” (0.8mm), .035” (0.9mm)
- Output Range of 30 to 130 Amps
  - Materials down to 26 Gauge (0.55mm)
  - Materials up to 3/16” (5mm)
- Plugs Into Standard 115 VAC Duplex Receptacle (20 Amp)

**Fabricator® 180**
- Designed for Welding with Wires
  - Mild Steel and Stainless Steel
    - .023” (0.6mm), .030” (0.8mm), .035” (0.9mm)
  - .030”, .035” Flux Cored
- Aluminum
  - .030” (0.8mm), .035” (0.9mm)
- Output Range of 40 to 130 Amps
  - Materials down to 26 Gauge (0.55mm)
  - Materials up to 3/16” (5mm)
- Plugs Into 230 VAC

**Fabricator® 130 & 180**
- Rugged Slim Line Tweco® Welding Gun
- Low Voltage 24 VAC Gun Trigger Circuit
- Easy Access Polarity Change
- Thermal Overload Protection
- Gas Solenoid Standard

**SUGGESTED WIRE FEEDERS**
Includes built-in wire feeder

**ACCESSORIES**
Gas Regulator and Hose Kit, Contact Tips, Cored Wire Kit, Aluminum Kit, Running Gear/Cylinder Rack

**APPROVALS**
CSA
The Fabricator® Series is a combination built-in wire feeder and 208 / 230 VAC DC constant voltage power source designed to be the leading, low cost, single phase machine in its class.

The machine is delivered standard with a Tweco® MIG gun 12.5 ft. (3.4 m), Victor® regulator flow gauge, portable mounting, cylinder rack, extra contact tips, .030-.035" (0.8 mm – 0.9 mm) / .045" (1.2 mm) drive rolls and a 10 ft. / 3.4 m work lead and ground clamp assembled. A 6 ft. / 1 m primary cord with plug and receptacle is included with this 208 / 230 VAC unit.

The Fabricator® Series is designed with a sloped control panel that makes the controls easy to see and access. Unique features include: a 14-pin amphenol; stitch, spot, trigger hold and adjustable burnback controls; along with fine and coarse adjustments across the 16-step voltage controls, allowing for precise control of voltage output.

Both the Fabricator® 210 and 250 accept the Tweco® Spool Master Spool Gun as a direct plug in to the 14 pin amphenol on the front of the machine. No auxiliary control box is needed. The Spool Master Gun accepts wire from .030" (0.8mm) to .045" (1.2mm) and is shipped standard with .035" (0.9mm) drive rolls and a standard length of 25 ft. (7.6m).

**FEATURES**
- 50% Duty Cycle at 250 Amps (250 Model Only)
- 22-250 / (250) Amps DC / CV Output
- Weld Materials up to 3/8" / 12mm Thick
- Fine / Coarse Voltage Output
- Provides Precise Control
- Stitch / SPOT Controls Standard
- Flexible for difficult Operations
- BURNBACK Control Standard
- Eliminates Wire Sticking in the Weld Crater
- Trigger Hold Standard
- For Long Welding Runs
- Refined Inductance
- Adapts to a Wide Range of Shielding Gases
- Extremely Stable at Low Current
- Excellent on Thin Material
- Gas / Gasless Operation
- GMAW (MIG) / FCAW (Flux Cored)
- Direct Plug In Spool Gun

**SPOOL MASTER Spool Gun**
Part No. 830844
25 ft. (7.6m) Cable
.030" (0.8mm) to .045" (1.2mm) Wire
Rated 250 Amps @ 50% Duty Cycle

**ACCESSORIES**
Contact Tips, Diffusers, Nozzles, Spot Nozzles, Conductor Tubes, Digital Meter Kit, and Drive Rolls

**APPROVALS**
IEC 974-1, CSA
FABSTAR® 4030 is a reliable, versatile, three phase constant voltage MIG power source. An output selector switch on the 4030 lets you choose either forceful or soft arc characteristics. Exceptional CV dynamic response gives superior low-end characteristics, arc starting and recovery.

The FABSTAR® 4030 is rated 400 Amps at 60% Duty Cycle and 300 amps at 100% Duty Cycle. FABSTAR provides excellent arc performance with solid wire in short circuit, globular and spray transfers, and with flux or metal cored wires in globular and spray transfer modes.

Standard features include: a 19-pin amphenol connector and dual auxiliary power outlets (115 VAC, 10 A circuit breaker protected), single voltage range, solid state contactor, output voltage regulation, built-in overload protection, volt and amp meters, burnback and environmental protection for optimum reliability in harsh environments.

**FEATURES**

- **Solid State Control**
  - Gives closed loop voltage regulation on a single, protected, reliable circuit board
- **Single Range Voltage Control**
  - Entire unit output controlled by one low voltage potentiometer
- **Solid State Contactor**
  - No mechanical devices to open and close.
  - Provides long life in repetitive welding applications
- **Output Voltage Regulation**
  - Line voltage compensation
  - Unit automatically monitors output voltage and makes required changes to compensate for line voltage fluctuation, machine drift, etc.
- **Designed for Ease of Maintenance**
  - All components are easily accessible and can be removed with normal hand tools
  - All control circuits are on one PC board.
  - All connections to this board are made with multiple pin plugs

**SUGGESTED WIRE FEEDERS**

Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Ultrafeed® 4000, HMC-410

**ACCESSORIES**

Portable Mounting with Bottle Rack, Fan Thermostat Kit

**APPROVALS**

CSA
The Pro-Lite® LM-300 is designed for 300 Amps and lower amperage applications where portability and/or performance are required. This unit is designed for superior welding with mild steel wires for short arc, globular, or spray operation and stainless steel wires. It provides smooth operation for all gases, even straight CO₂.

LM-300 is compact and lightweight with an easy to carry handle. The unit also features arc control adjustment, excellent for all types of STICK electrodes, particularly the Lincoln 5P® and Lift Start TIG for high quality TIG starting with no high frequency. LM-300 is also provided with Easy-Link™, so the proper voltage can be set with the flip of a switch, and Smart Logic® control, which eliminates damage if the machine is accidentally installed to the improper input voltage.

**FEATURES**
- Superior Performance for all Processes
- Arc Adjustment Control
- Excellent for STICK Electrodes
- Easy-Link™ and Smart Logic® Capabilities
- Portable and Easy to Carry
- Energy Saving Technology

**SUGGESTED WIRE FEEDERS**
Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, HMC-410

**ACCESSORIES**
Torch Switch Remote Control, Hand Pendant Remote Control, Remote Foot Control, Extension Cables for Remote Controls, TIG Kit, STICK Kit, Dinse TIG Block Adapter

**APPROVALS**
CSA
The Pro-Plus® 400MST is designed to withstand the rigors in today’s portable industrial welding machine environment. Built small, lightweight and tough, welding parameters with MIG, & Flux Cored wires, STICK, Lift TIG and Carbon Arc Gouging are easily set through robust, easy to use push button switches on the front panel. Each function is marked by a symbol and lighted LED that clearly marks which function is being adjusted.

Thermal Arc®'s 400MST has the ability to program your toughest welding applications and save five distinct programs, making it easy to change settings between projects.

The 400MST includes a digital Amp/Volt Meter, Remote control capabilities including a 14 and 19 pin receptacle, Smart Logic, and VRD (Voltage Reduction Device) circuit, all as standard features.

**FEATURES**

- **Smart Logic® Capability**
  Eliminates damage if the machine is accidentally installed to the improper voltage
- **Push Button Control Panel**
  Easy access to all functions and controls
- **Multi-Process**
  STICK, TIG, MIG, Carbon Arc Gouging all in one package
- **Remote 14 & 19 Pin Receptacles**
  Makes compatibility of Thermal Arc, competitive wire feeders and remote devices simple
- **Programmable**
  Easily save up to five welding parameter programs
- **Warning Code Circuitry**
  Alerts operator of power supply abnormalities
- **VRD Inside**
  VRD (Voltage Reduction Device) reduces the OCV when the power supply is not in use, eliminates the need for add on voltage reducers, and has no effect on arc starting

**SUGGESTED WIRE FEEDERS**

Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, HMC-410

**ACCESSORIES**

STICK Kit, TIG Kit, Dinse Connector, Portable Mounting, Hand Held Pendant, Foot Control, 14 Pin Extension Cable, Torch Switch

**APPROVALS**

IEC 974-1, IP23S

---

**PRO-PLUS® 400MST**

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>STICK</th>
<th>LIFT TIG</th>
<th>MIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Rated Output @ Duty Cycle</td>
<td>Output Range</td>
<td>Dimensions (H x W x D)</td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>400 A / 36 V @ 25% (208-230/460V, 3 ph)</td>
<td>5 - 400 Amps</td>
<td>16.5” x 8.3” x 17.7”</td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>300 A / 32 V @ 60% (208-230/460V, 3 ph)</td>
<td>420 x 210 x 450 (mm)</td>
<td></td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>300 A / 32 V @ 25% (208-230, 1 ph)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, HMC-410

Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, HMC-410

Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, HMC-410

---

**PRO-PLUS® 400MST**

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>STICK</th>
<th>LIFT TIG</th>
<th>MIG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Rated Output @ Duty Cycle</td>
<td>Output Range</td>
<td>Dimensions (H x W x D)</td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>400 A / 36 V @ 25% (208-230/460V, 3 ph)</td>
<td>5 - 400 Amps</td>
<td>16.5” x 8.3” x 17.7”</td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>300 A / 32 V @ 60% (208-230/460V, 3 ph)</td>
<td></td>
<td>420 x 210 x 450 (mm)</td>
</tr>
<tr>
<td>10-3072 (208-230 / 460 V)</td>
<td>300 A / 32 V @ 25% (208-230, 1 ph)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Power-Master® 500 is a heavy-duty inverter power source rated at 560 Amps 60% Duty Cycle. It has built-in electronic controls which have been optimized for most constant current and constant voltage weld processes. Each weld process has a dedicated electronic control which has been optimized for that process, which include Gas Tungsten Arc Welding with Lift Start, Shielded Metal Arc Welding, Carbon Arc Gouging, Gas Metal Arc Welding including short-arc, globular and spray transfer, and Flux Cored Arc Welding.

The Power-Master® 500 provides both 24 Volt and 115 Volt AC through a 14-pin and a 19-pin receptacle to power wire feeders and other accessories. The power source also provides 115 Volt AC power through a duplex on the rear of the machine.

**FEATURES**

- 34 KHz IGBT Based Inverter Design
  - Means Small, Lightweight, Excellent Performance
- Heavy Duty Multi-Process Output for CC and CV
  - SMAW, GTAW, GMAW / FCAW, CAC-A
- Electronic Waveform Control for GMAW
  - Positive Arc Initiation, Low Spatter Even with CO2
- High Efficiency
  - Means Reduced Electrical Power Consumption
- Arc Force Control for SMAW and Inductance Control for GMAW
  - Allows Arc Characteristics to be Fine Tuned for Different Applications
- Digital Meter for Accurate Preset of Amperage or Voltage
- Built to NEMA, CSA, IEC 974 and IP23S Water Protection

**SUGGESTED WIRE FEEDERS**

Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, HMC-410

**ACCESSORIES**

Portable Mounting with Bottle Rack, Remote Hand Controls, Foot Controls, Torch Mounted Remote Control, Cables, AM Pulser, Dual Feeder Interlock

**APPROVALS**

CSA
The Power-Master® 500P is the pulse version of the Power-Master® 500. This 560 Amp DC power source is energy efficient and is truly multi-process with Pulse MIG / Stick / MIG / FCW / Lift TIG / CAG capability. The machine comes with 24 factory set pulse programs in the Pulsed GMAW Mode and with the addition of the Graphical User Software (GUS) option, the pulse parameters can be modified and saved. Whether it is mild steel, stainless steel, aluminum, nickel alloys or silicon bronze, the pulse conditions can be modified using a standard personal computer in real time arc on conditions.

Switch to GMAW mode and run in short arc or spray mode using either solid or flux cored wires. In SMAW mode is for Stick welding and Arc Gouging, while the GTAW mode is for DC Lift TIG welding.

With both 115 V and 24 VAC through 14 and 19 pin receptacles, most wire feeders and remote controls can be used. There is also 115 VAC duplex for other accessories.

The Power-Master® 500P offers versatility and performance for semi-automatic welding and is an ideal power source for automation.

**FEATURES**
- Multi-Process CC/CV
  - Pulsed GMAW / GMAW / Lift GTAW / SMAW / CAG Modes, 24 Preset Pulse Programs
  - Programmable
    - Pulse Ref/Amps/Volts- Max. and Min. Limits, Wire Sharpening, Wave Shape Design, Lockouts, Data Monitoring, Save to File, RS232 Port, CAN port.
  - Energy Efficient
    - Draws less than 40 Amps on 460 Amp, 3 Phase at Max. Output
  - Simple Controls
    - Twin Digital Meters for Accurate Preset and Output Monitoring, Mode and Pulse Controls Protected by a Steel Door Cover, Multi-Turn Output Control for Amps / Volts / Pulse Ref.
  - Arc Force Control for SMAW and Inductance Control for GMAW
    - Allows Arc Force Adjustment with Stick Welding and MIG Short Arc Characteristics to be Adjusted
  - Automation
    - Interface with Fanuc, ABB, Motorman Robots

**SUGGESTED WIRE FEEDERS**
Operates on all standard Thermal Arc Wire Feeders. The Ultrafeed® 1000, Ultrafeed® 4000 and HMC-410 are ideal.

**ACCESSORIES**
Portable Mounting with Bottle Rack, Remote Hand Controls, Foot Controls, Torch Mounted Remote Control, CD Arc Starter, Cables, AM Pulser (for TIG Pulsing), Dual Feeder Interlock, GUS (Graphical User Software), Programming Interface Cable

**APPROVALS**
CSA
Designed to meet the demanding needs of the construction, shipyard, power plant and industrial fabrication industries it serves, the Ultra Flex™ 350 Pulse is a lightweight portable inverter power source. Rated at 350 Amps 60% Duty Cycle, this unit comes equipped with a number of standard features including, standard automatic voltage linking, microprocessor control, safe feature, membrane switch control, wire sharpening circuit, arc force control, lift arc TIG control, ground fault protection, over/under voltage shutdown, and over current/over temperature shutdown.

The Ultra Flex™ 350 Pulse is capable of STICK (SMAW) welding with arc force, Lift Arc TIG (GTAW) welding, MIG (GMAW) welding with variable inductance control, and MIG (GMAW-P) Pulse welding with 8 standard pulse programs.

**FEATURES**
- Variable Inductance Control
  - Allows for Fine Tuning of the Short Circuiting Arc
  - Reduces Spatter even when using CO2 Shielding Gas
- Pulse MIG “Built-In”
  - No Need for Add-On Pulser and Associated Cables
  - Compatible with all Thermal Arc Feeders
- Steel and Plastic Construction
  Provides Durability with Ease of Service
- Simple Interface with Automatic Panels
  - Compatible with Thermal Arc HMC-410 Controls
- IEC 974-1, CSA and NEMA EW-1 Rated

**SUGGESTED WIRE FEEDERS**
Model 17A, Porta-Feed® 17A, Ultrafeed® 1000, Mijit® 1000, Ultrafeed® 4000, Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, HMC-410

**ACCESSORIES**
Dual Feeder Interlock, Small Under Carriage with Bottle Rack, Under Carriage without Bottle Rack, Dinse Style Connectors, Dinse Style TIG Adapter, Dinse to Tweco® Conversion, Remote Foot Pedal, Remote Slide Control, Remote Pendant, AM Pulser, Pulse Programming Pendant

**APPROVALS**
CSA
### HEFTY® II CC/CV, HEFTY® II STAINLESS

#### PROCESS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Feed Rolls</th>
<th>Wire Speed Range</th>
<th>Wire Size Range</th>
<th>Dimensions (H x W x D)</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>100035-001</td>
<td>CC/CV</td>
<td>50 - 700 (IPM)</td>
<td>.024” - 5/64”</td>
<td>14.8” x 9.1” x 23.2”</td>
<td>29 lbs. (13.2 kg)</td>
</tr>
<tr>
<td>100035-002</td>
<td>CC/CV</td>
<td>1.3 - 17.8 (m/min.)</td>
<td>0.6 - 2.0 (mm)</td>
<td>375 x 230 x 587 (mm)</td>
<td></td>
</tr>
<tr>
<td>100035-003</td>
<td>CC/CV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100052-001</td>
<td>STAINLESS</td>
<td>50 - 700 (IPM)</td>
<td>.024” - 5/64”</td>
<td>13.7” x 10.1” x 20.3”</td>
<td>38 lbs. (17.2 kg)</td>
</tr>
<tr>
<td>100052-002</td>
<td>STAINLESS</td>
<td>1.3 - 17.8 (m/min.)</td>
<td>0.6 - 2.0 (mm)</td>
<td>348 x 257 x 515 (mm)</td>
<td></td>
</tr>
</tbody>
</table>

The Hefty® II CC/CV is a portable, solid state controlled, voltage sensing wire feeder that operates on arc voltage and can be used with most constant voltage (CV) and constant current (CC) DC-type power sources. The unique design of the Hefty® II CC/CV allows operation in a constant wire feed speed mode when used with CV power sources, and in a voltage sensing wire feed speed mode when used with CC power sources.

The Hefty® II CC/CV’s rugged steel-reinforced, flame-retardant polyethylene case totally encloses the solid state control circuitry, welding wire, and wire drive system. This portable and lightweight unit is designed with a hinged, latched door allowing quick and easy access to the contactor, welding wire and feedhead assembly. It has an insulated top carrying handle and the control panel is recessed to protect the controls.

Features of the Hefty® II CC/CV include quick change feed rolls allowing the operator to change feed rolls without the use of tools, a hand operated plastic knob for clamping the welding gun into the feedhead and two gear driven feed rolls which will accommodate wire sizes up to and including 5/64” diameter.

The Hefty® II Stainless version has a rugged stainless steel case, capable of supporting 250 lbs., and totally encloses the solid state control circuitry, welding wire, and wire drive system. This portable and lightweight unit is designed with a hinged, latched door allowing quick and easy access to the welding wire and feedhead assembly.

#### FEATURES

- Quick change feed rolls can be changed without the use of tools
- Contactor allows welding wire to remain electrically “cold” until the gun switch trigger is depressed
- Gas valve controls “on-off” flow of shielding gas
- Powerful, Permanent Magnet DC Drive Motor accommodates fast speed demands of small diameter wire and low speed, high torque demands of large diameter wire
- Operates on either straight or reverse polarity
- Electronic controlled protection circuitry protects against voltage spikes, shorted or locked motor, shorted contactor coil and shorted gas valve coil
- Electronic brake offers quick stopping of motor to prevent wire overrun
- Feed roll pressure release allows operator to change feed rolls or wire while retaining preset feed roll pressure

#### ACCESSORIES

Inch/Purge Kit, Flowmeter Kit, Wire Feed Speed Meter and Arc Voltage Meter Kit, Spool Adapters, Coil Adapter, Control Pot Shaft Friction Lock, Remote Voltage / Current Control Kits, Euro-Style Gun Adapter, Feed Roll Kits

#### APPROVALS

CSA, CE
Ideal for welding hard surface applications, the Heavy Duty CC/CV is a solid state, CC and CV wire feeder. The four drive roll assembly feeds up to 600 IPM and is designed primarily for gas metal arc welding (GMAW) and flux cored arc welding (FCAW).

The front panel features a large knob for easy wire feed speed adjustment. Other features include quick wire release and a variable speed motor that handles the fast speed demands of smaller diameter wire, as well as the low speed high torque demands for larger diameter wire. The quick torch connector is standard and easily fits most Tweco® MIG guns. The unit also comes equipped with multiple overload protection devices to prevent damage due to faults and an enhanced run-in-circuit which allows for smooth arc starting.

**FEATURES**
- Works with most CC & CV DC-type Power Sources
- 4 Drive Roll Design for GMAW and FCAW
- Control Circuitry Enclosed in Water Resistant Sheet Metal Case
- Gas Valve and 1 Set of Feed Rolls Supplied Standard
- No Control Cables Required
- Rugged Design for Tough Environments
- Dynamic Wire Stop Brake Circuit
- Replaceable Motor Brushes

**ACCESSORIES**
Feed Roll Kits, Feeder Cart Kit, Swivel Base Assembly, Handle Kit, Spool Adapters, Coil Adapters, Lifting Eye, Spool Cover, Control Pot Shaft Friction Lock, 3/4” Gun Adapter, Contactor Kit, Wire Reel Kit, Euro-Style Gun Adapter

**APPROVALS**
CSA NRTL/C, NEMA EW3

**Thermal Arc® Distributor Locator**
Check out our Distributor Locator online. We give you instant access to the Distributors in any area in the United States (and Canada), searchable by state or within as close as a 5 mile radius. Distributor listings include all contact information, Thermadyne brands sold, plus a direct link to a map to their location. Try out Distributor Locator on the Web at:

http://www.thermadyne.com/distributor.asp

You can select from any of our Thermadyne brands to search for the right Distributor for your needs.
The Thermal Arc® Model 17A and Porta-Feed® 17A are a family of semiautomatic feeders that are designed to meet a wide variety of industrial applications. The portable and lightweight units have a 100% Duty Cycle which eliminates the nuisance of shutdowns due to overtemperature.

The 17A Series of wire feeders are equipped with an abundance of standard features including an on/off switch, inch/purge switch, adjustable wire feed speed control, quick change feed rolls and a 6 ft. / 1.8m control cable. These feeders are designed to work with most power supplies that provide 115 VAC. Both the feed rolls and welding gun can be changed without the use of tools. The unit operates on straight or reverse polarity and comes standard with Inch / Purge allowing “cold” inching of wire at set wire feed speed and purging of gas without running wire.

**FEATURES**
- Designed to work with most CV or CC/CV Power Sources
- Simple to Use Controls
- Quick Change Feed Rolls
- Feed Rolls are Gear Driven for Feedability of Wire Sizes up to and Including 5/64" Diameter
- Variac Control offers Low Cost and Improved Reliability
- On/Off Switch with Circuit Breaker
- Polarity Insensitive
- Gas Valve Solenoid
- Electromechanical Brake
- Replaceable Motor Brushes
- Needle Bearing Construction on Motor Output Shaft

**ACCESSORIES**
Spool Adapters, Coil Adapters, Lifting Eye Kit, Spool Cover, Swivel Base Kit, Gun Holder Kit, Feeder Cart Kit, Wire Reel Kit Assembly, Flowmeter Kit, Ground Fault Interrupt Kit, Dual Amphenol Splitter Kit, Dual Feeder Interlock Box, Control Cable Extensions, Adapter Cables, Control Pot Shaft Friction Lock, Tveco® MIG Gun, Euro-Style Gun Adapter, Feed Roll Kits

**APPROVALS**
CSA

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Feed Rolls</th>
<th>Wire Speed Range</th>
<th>Wire Size Range</th>
<th>Dimensions (H x W x D)</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>100011-001 (Model 17A)</td>
<td>2</td>
<td>30 - 650 (IPM) 0.8 - 16.5 (m/min.)</td>
<td>.024&quot; - 5/64&quot; 0.6 - 2.0 (mm)</td>
<td>10.25&quot; x 12.4&quot; x 19&quot; 260 x 314 x 483 (mm)</td>
<td>30 lbs. (13.6 kg)</td>
</tr>
<tr>
<td>100012-001 (Porta-Feed® 17A)</td>
<td>2</td>
<td>30 - 650 (IPM) 0.8 - 16.5 (m/min.)</td>
<td>.024&quot; - 5/64&quot; 0.6 - 2.0 (mm)</td>
<td>14.75&quot; x 9.1&quot; x 23.2&quot; 375 x 230 x 587 (mm)</td>
<td>28 lbs. (12.7 kg)</td>
</tr>
</tbody>
</table>
The Ultrafeed® 1000 and Mijit® 1000 are semiautomatic constant speed, solid state controlled wire feeders, capable of 100% Duty Cycle. These units, designed to meet a wide variety of industrial applications, offer both load and line voltage compensation helping to maintain constant wire feed speed even with changes in the input voltage and load.

The Ultrafeed® 1000’s sheet metal control box encloses the solid state control circuitry and wire drive system. Portable and lightweight, the unit is designed with a hinged, latched door allowing quick and easy access to the feedhead assembly.

The Mijit® 1000’s rugged steel-reinforced, flame-retardant polyethylene case totally encloses the solid state control circuitry, welding wire, and wire drive system. Portable and lightweight, the unit is designed with a hinged, latched door allowing quick and easy access to the welding wire and feedhead assembly.

Features of the Ultrafeed® 1000 and Mijit® 1000 include: quick change feed rolls allowing the operator to change feed rolls without the use of tools, a hand operated plastic knob for clamping the welding gun into the feedhead, a ground fault circuit to prevent weld current from disabling the ground wiring, 2 step / 4 step gun switch operation, and a feed monitor display allowing the operator to monitor the feed system components (tips, liners, feed rolls, etc.) which helps to determine when these components should be checked and/or replaced.

**FEATURES**

- Quick change feed rolls (both gear-driven) can be changed without the use of tools
- LED meter clearly displays wire feed speed or arc voltage information
- Remote voltage allows adjustment of power source arc voltage from the wire feeder
- 2 step/4 step (trigger hold) reduces operator finger fatigue
- Gas valve controls “on-off” flow of shielding gas
- Run-in time adjustment allows adjustment of wire run-in time to improve arc starting
- Inch/purge allows “cold” inching of wire at set wire feed speed and purging of gas without running wire
- Ground fault protection protects the ground wiring from weld current
- Operates in either straight or reverse polarity
- Electronic brake offers precise stopping of the wire
- In-line motor fuse provides protection against a locked motor condition
- 100% Duty Cycle eliminates nuisance shutdowns due to overtemperature
- Welding gun quick connect offers a quick and easy connection for welding guns
- A/B contactor protection provides self-reset protection against overload conditions

**ACCESSORIES**

- 19 Pin Control Cables, Feeder Cart, Feed Roll Kits, Dual Amphenol Splitter Kit, Control Pot Shaft Friction Lock, Adapter Cables, Spool Adapters, Dual Feeder Interlock Box, Preflow/Postflow/Weld Timer Kit, Gun Holder Kit, Lifting Eye Kit, Swivel Base Kit, Coil Adapters, Spool Cover, Euro-Style Gun Adapter

**APPROVALS**

- CSA, CE
The Ultrafeed® 4000 is a heavy duty yet compact, constant speed 4-roll wire feeder designed for semi-automatic welding. Key features are outstanding speed control through built-in compensation for changes in line voltage and/or load on the feed rolls and the ability to upgrade the standard unit with easy plug in options. Other user friendly features include quick change feed rolls without tools, a rotatable feed head to limit the bends in the gun cable and a welding gun quick disconnect.

The standard unit comes with an inch switch, purge switch, gun trigger hold, remote voltage control and the ability to adjust the run in speed and ramp up to match the power source start characteristics. Ground fault protection, electronic motor protection and an input circuit breaker are all designed to keep the unit running in tough conditions. The feed system is compact yet provides heavy duty power for large diameter solid and flux cored wires.

Option kits that can be field fitted to the standard unit are:
- **Ultrafeed® 4000 Timer Kit**, allows adjustable timing on preflow, post flow, burnback and spot time.
- **Ultrafeed® 4000 Dual Schedule Kit**, provides a second schedule for wire speed and voltage.
- **Ultrafeed® 4000 Digital Meter Kit**, provides digital meters for wire speed, voltage (preset and actual), arc current and a feed force monitor. Includes a field installable tachometer.
- **Ultrafeed® 4000 Advanced Interface Kit** – interface for automation through a 19 pin connector for stop/start, schedule select, inch, purge inputs; Arc, standby and fault outputs; 0-10 VDC analog inputs for wire speed and voltage control; includes a RS 232 Serial port for communication to a PC and a CAN port for communication with other select Thermal Arc® power sources.

### FEATURES
- Electronic Speed Control and Dynamic Breaking
- Remote Voltage Control
- Quick Change Feed Rolls
- Geared Top and Bottom Feed Rolls
- Gun Trigger Hold
- Rotatable Feed Head
- Run in Speed Adjustment
- Run in Speed Adjustment
- Weld Gun Quick Disconnect
- Ground Fault and Electronic Motor Protection
- Easy Fit Options
- Control Cable and Feed Roll Kit Standard
- Control Cable Extensions, Cable Adapters, Spool Adapter, Spool Cover, Wire Reel Kit, Feeder Cart, Swivel Base
- Accessory Kit
- Control Switch
- Accessory Kit
- Control Switch
- Accessory Kit
- Control Switch

### ACCESSORIES
Control Cable Extensions, Cable Adapters, Spool Adapter, Spool Cover, Wire Reel Kit, Feeder Cart, Swivel Base

### APPROVALS
CSA, IEC 974-1, NEMA
The Thermal Arc® HMC-410 control panel and feedhead assembly are designed to exceed the demanding expectations of semiautomatic and automatic industrial applications. The heavy-duty feedhead assembly provides a 4-roll system with tach-feedback for consistent, reliable operation. A standard program/weld switch provides security to prevent unauthorized program changes.

The HMC-410 is loaded with standard equipment including inch and purge switches, continuous turn knobs, a test switch permitting a practice run through of programmed weld sequences without welding, self-diagnostic routine, remote pendant amphenol, dynamic brake, input circuit breaker, multiple on-board fuses, ground fault circuit, 100% Duty Cycle and remote operation to 100 feet.

The unit also features 10 schedules with user programmed parameters from preflow to postflow operations, and LED’s display preset and actual weld parameters including volts, wire feed speed, amps and weld time. The unit is also capable of additional features and capabilities with optional software upgrades. Consult the factory for customized software upgrades.

**FEATURES**
- Solid State Control
- Weld/Program Keyswitch
- 10 Weld Schedules
- 4 Weld Subsegments for Each Schedule
- Tach-Feedback for Improved Wire Feed Speed Accuracy
- Multiple LED Displays
- Self-Diagnostics Routine
- Optional or Custom Software Upgrades
- Remote Pendant Amphenol Port
- Auxiliary Amphenol Port
- Softswitch Screen for Programming of System Capabilities
- Four Gear-Driven Feed Rolls for Increased Feedability
- Rugged Heavy Duty Motor
- Gas Solenoid Valve Standard

**ACCESSORIES**
Feed Roll Kits, 19 Pin Control Cables, Wire Spool Kit Assembly, Wire Reel Kit Assembly, Base Plate, Remote Pendant, Semi-automatic Trigger Hold and Subsegment Controls, Random Schedule Select Cable, Multiple Software Upgrades, Wire Reel/Spool Support Assembly, Coil Adapters, Spool Cover, Lifting Eye Kit, Dual Feeder Interlock Box, Auxiliary Cables, Euro-Style Gun Adapter

**APPROVALS**
NEMA EW3, CSA NRTL/C
Two items ideal for applications in fabricating, repair/maintenance, production welding, auto body shops, vocational/technical schools and trailer and fleet construction repair are the SP-2001 Spool Gun and the SPC-2001 Control Box.

The SP-2001 spool gun is designed for .030” / 0.76 mm, .035” / 0.89 mm and 3/64” / 1.2 mm diameter soft wire such as aluminum wire with argon as a shielding gas. The SP-2001 is out of the box ready-to-weld and has six extra tips included with the gun. Two different lead lengths allow this lightweight gun to extend and reach up to 25 ft. / 7.6 m or 50 ft. / 15.2 m away from the power source. With an adjustable nozzle and heavy duty front end parts, the SP-2001 is ideal for “tough-to-weld” jobs. By locating the wire spool next to the feed rolls, the SP-2001 spool gun, with associated SPC-2001 control box, solves the problem typically associated with feeding soft alloy wires (such as aluminum) long distances.

The SPC-2001 Control Box can operate on either CV or CC/CV power sources. In addition to controlling wire feed speed, the control box controls both run-in speed and gas valve operation. The control module box is available to operate on power supplies with either 115 VAC or 24 VAC with output contactor.

The AG-2000 Assist Gun was designed for MIG (GMAW) applications using .030”, .035” and 3/64” aluminum wire in conjunction with a Thermal Arc® wire feeder system. The AG-2000 Assist Gun requires the AG-2000 control box to complete the system.

**FEATURES**

**SP-2001 Spool Gun**
- 25 ft. / 7.6 m and 50 ft. / 15.2 m Leads Available
- Lightweight Torch
- Clear Gun and Spool Covers
- Drive Roll Lever for Purging and Wire Threading
- Easy to Use Trigger
- Wire Feed Speed Adjustment in Handle
- Adjustable Wire Feed Speed

**SPC-2001 Control Box**
- Two Models
  - 14 Pin Amphenol for 24 VAC Power Supplies and 25 mm male Dinse Connector
  - 19 Pin Amphenol for 115 VAC Power Supplies and 1/2” Lug Connector
- Built-In Gas Solenoid and Gas Preflow Adjustment
- Quick Connection to Machines
- 6 ft. / 1.8 m Control Cable Supplied
- 6 ft. / 1.8 m Weld Cable Supplied
- Run-In Speed Control Adjustment

**ACCESSORIES**

Front End Adjustable Nozzles, Adapter Cables, Control Pot Shaft Friction Lock
The Cobramatic® Push-Pull Wire Feed System is the field proven method for feeding soft aluminum wire. Since inception in 1966, the patented Push-Pull welding technology to feed wire through a welding conduit has dominated the aluminum welding industry. Whether its Marine, Aerospace, Transportation or Industrial, the Cobramatic Welding System is unsurpassed for Quality and Performance. The Cobramatic wire feeder employs a constant-torque slave motor drive system that is always trying to feed wire faster than the torch motor demands. Conversely, a variable speed DC motor is located in the welding torch and it is this motor that is responsible for controlling the actual wire feed speed through the system. This combination of non-synchronized motors provides reliable, consistent and repeatable wire feed speeds, with torch lead lengths up to 50 feet from the wire feed cabinet. The Cobramatic systems are easy to set-up, operate and maintain. As a result, tens of thousands of systems are in operation throughout the world feeding various types of wires, including aluminum alloys, copper alloys, solid and cored wire and other exotic alloys.

**COBRAMATIC PUSH-PULL WIRE FEEDER**

The Cobramatic Push-Pull Wire Feeder cabinet has some striking new features. The patented Wire Retainer performs two important functions:

- a) spool drag tension
- b) wire leveling on the spool

Another patented feature includes a simple “one lever” wire selector for precise tension and smooth wire feed regardless of material. The PosaStart® circuit provides smooth starts when used with Constant Current DC power supplies including gas drives, multiple grid systems and Constant Voltage power supplies. The cabinet accommodates 12” wire spools.

**PYTHON® ADVANCED GOOSENECK TORCH**

Power and Performance is the best way to describe the Python Torch, a torch so advanced that even the competition is on edge. Taking a lesson from both the Cobra® Gooseneck and the Prince® XL, the Python adds its own unique set of features with time proven design to bring together the most advanced welding torch available. Convenient trigger location and “finger-tip” wire speed adjustment makes the Python destined to be a favorite among both new and experienced welders. One look at this new torch and you will know why MK is still the world leader in wire feeding technology.

**PACKAGES**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Power Rolls</th>
<th>Wire Speed Range</th>
<th>Wire Size Range</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>600284 (115 V Cabinet)</td>
<td>2</td>
<td>800 IPM (20.3m/min.) Max.</td>
<td>.030” - 1/16” (0.8 - 1.6 mm)</td>
<td>47 lbs.</td>
</tr>
<tr>
<td>225-825 (Python 25’ Torch)</td>
<td>2</td>
<td>.030” - .045” (0.8 - 1.1 mm) Solid &amp; Hard Wire</td>
<td>.030” - 1/16” (0.8 - 1.6 mm) Aluminum &amp; Cored Wire</td>
<td>47 lbs.</td>
</tr>
</tbody>
</table>

Cobramatic®, Cobra®, Prince® XL, Python® and PosaStart® are registered trademarks of MK Products Inc.
Thermal Arc has quality Power Sources and Feeders that integrate with robotic arc welding systems.

**Power Sources**

The Power-Master® 500 and the Power-Master® 500P are ideal for powering robotic arc welding. Both can be integrated to a robot controller and offer 450 Amp DC power @ 100% Duty cycle. The Power-Master® 500P allows pulse arc welding, and with the optional Graphical User Software (GUS), the waveform can be adjusted to suit any number of special welding procedures.

**Wire Feeders**

The Ultrafeed® 4000, fitted with the advanced interface kit, allows remote control by PLC’s or other automation equipment. A CAN interface is available for high level digital communication with select Thermal Arc® power sources and a RS232 interface for communication with personal computers.

The HMC 410 feeder with the Advanced Interface provides a higher level of integration with robot interfaces with additional analog and digital inputs and outputs. This allows additional features such as wire reverse, gas flow, wire feed and arc on fault detection. The HMC 410 interface allows weld control to be entirely with the robot or from the feeder control box or a mix of both. For example, the start and crater control settings may be with the feeder while the main weld settings are with the robot controller.

**Typical Robot Interface Packages**

**Motoman Robots with Motoman Feed System**
- Power-Master 500P: Part No. 100054
- Remote Schedule Kit: Part No. 830985

**Power Source & Wire Feeder Package**
- Power-Master 500P: Part No. 100054
- HMC 410 Control Box: Part No. 100050-001
- Lightweight Feedhead: Part No. 870298-002
- ABB Interface Kit: Part No. 870236-001
- Fanuc Interface Kit: Part No. 870236-002
- Control Cables (Both needed):
  - 25’ Control Cable: Part No. 170552-002
  - Hi-Flex Control Cable: Part No. 870339
- Optional Mounting Base: Part No. 170962

Motoman® is a registered trademark of Motoman, Inc. ABB® is a registered trademark of ABB Group, Inc. Fanuc® is a registered trademark of GE Fanuc Automation, Inc.
Robotic Arc Welding Systems
Tweco Robotics® offers a range of quick release robot welding torches that combine with Tweco® robotic deflection mounts for collision protection. The Tweco® robot product line also includes a nozzle cleaning station, a wire cutting station and an anti-spatter mist applicator.

Plasma Welding
Thermal Arc®, the leader in plasma welding, offers the Ultima® 150 as a fully integrated plasma welding system. Also available are modular systems for 300 Amp and 500 Amp plasma welding. Plasma welding is ideal for repetitive high quality welds. Pilot arc starting produces instant, defect free starts and reduced electrical emission interference.

For more information on the Tweco Robotics® line of products, call Tweco® Customer Service at (800) 231-9353

To design your automation package, just call 1-800-462-2782, and talk with one of Thermal Arc’s technical and applications specialists.
with Thermal Arc®
Power-Plus
Welding Generators
Utilizing Popular
Thermal Dynamics®
Plasma Cutting Systems

• Remote Locations Easily Accessible
• Use Auxiliary Power Offered on Welding Generator
• Power-Plus Generators Compatible with Thermal Dynamics’ Most Popular Systems
Portable welders depend on the Scout® for quality weld output and consistent auxiliary power. The Scout®, TA-4/170-H, is an engine-driven welding generator with excellent performance for STICK and TIG welding. The heavy-duty design provides 60% Duty Cycle at 170 Amps with 30-170 Amps weld output and delivers the highest available auxiliary power while welding. The heavy-duty rugged roll case design is standard along with HF protection, muffler, low oil pressure shutdown, hour meter, and scratch start TIG.

The unique Power-Plus® patented alternator delivers a smooth weld output. Its brushless design increases efficiency – reducing maintenance and extending the life of the machine. Separate windings are used for welding and auxiliary power, offering the highest quality auxiliary power. The generator is powered by a rugged 1-cylinder, gas fuel, air-cooled Honda engine. Honda industrial engines provide high fuel efficiency and performance and are backed by Honda’s strong parts and service support.

The Scout® is ideal for applications in general construction, structural fabrication, pipe welding, rental operations, professional welding, maintenance vehicles, mobile repair vehicles, in-plant maintenance, mining, railroad maintenance and stand-by power.

**APPLICATIONS**
- General Construction
- Structural Fabrication
- Pipe Welding
- Rental Operations
- Professional Welding
- Maintenance Vehicles
- Mobile repair vehicles
- In-Plant Maintenance
- Mining
- Railroad Maintenance
- Contractors
- Utility Companies

**FEATURES**
- 115 VAC / 230 VAC
- Single Phase
- Outstanding Low End Performance
  - Excellent E6010 Electrode Operation
  - Easy Start TIG Operation
- Auxiliary Power
  - Highest Available While Welding

**SUGGESTED WIRE FEEDERS**
Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV

**ENGINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Honda GX200 OHV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>1-cylinder</td>
</tr>
<tr>
<td></td>
<td>air-cooled gas</td>
</tr>
<tr>
<td>HP &amp; Welding</td>
<td>9 HP @ 3,600 RPM</td>
</tr>
<tr>
<td>Speed</td>
<td></td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>1.6 gal. / 6 L</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>1 qt. / 1.1 L</td>
</tr>
</tbody>
</table>

**ACCESSORIES**
Running Gear, Paralleling Kit, STICK Kit, TIG Kit, Dinse Connector

**APPROVALS**
CSA

**APPROVALS**

**SUGGESTED WIRE FEEDERS**

| Running Gear, Paralleling Kit, STICK Kit, TIG Kit, Dinse Connector |

**APPLICATIONS**

<table>
<thead>
<tr>
<th>230 V, 60 Hz, 1 PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2kVA</td>
</tr>
</tbody>
</table>

**ENGINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Honda GX200 OHV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>1-cylinder</td>
</tr>
<tr>
<td></td>
<td>air-cooled gas</td>
</tr>
<tr>
<td>HP &amp; Welding</td>
<td>9 HP @ 3,600 RPM</td>
</tr>
<tr>
<td>Speed</td>
<td></td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>1.6 gal. / 6 L</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>1 qt. / 1.1 L</td>
</tr>
</tbody>
</table>

**APPLICATIONS**

<table>
<thead>
<tr>
<th>230 V, 60 Hz, 1 PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4kVA</td>
</tr>
</tbody>
</table>

**ENGINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Honda GX200 OHV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>1-cylinder</td>
</tr>
<tr>
<td></td>
<td>air-cooled gas</td>
</tr>
<tr>
<td>HP &amp; Welding</td>
<td>9 HP @ 3,600 RPM</td>
</tr>
<tr>
<td>Speed</td>
<td></td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>1.6 gal. / 6 L</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>1 qt. / 1.1 L</td>
</tr>
</tbody>
</table>
The Raider® is a multiple process machine with capability of high quality welding. Its heavy-duty design, built to fit on a truck or trailer, provides performance on STICK / Lift Start TIG / MIG and Carbon Arc Gouging at 100% Duty Cycle @ 250 Amps weld output. The unique Power-Plus® patented alternator delivers a smooth weld output. Its brushless design increases efficiency reducing maintenance and extending the life of the machine. Separate windings are used for welding and auxiliary power, offering the highest quality auxiliary power. A rugged 20 HP, 2-cylinder, gas fueled, air-cooled Honda engine, powers the generator.

Standard features include HF protection, warning systems, muffler and rain cap, low oil level shutdown, and its idle automatically adjusts for amperage draw and efficient fuel consumption. The Raider 10000 Pro is designed to deliver the best available welds/auxiliary power for contractors, owner-operators and welding professionals.

**FEATURES**
- Excellent E6010 and E7018 Performance
- One Turn Welding Control Knob
- Idle Automatically Adjusts to Amperage Draw
- 115/230/460V Auxiliary Power Available While Welding
- Idle Automatically Adjusts for Current Draw, Saves Fuel and Reduces Noise
- Dinse Twist Lock Output Terminals
- Rugged, Stainless Steel 10 ga. Fuel Tank
- Rugged, Heavy Duty Stainless Steel Full Canopy Design
- Engine Warning System and Low Oil Shut Down
- 14 Pin Receptacle Configured for 24V & 115V Feeders & Remote Devices
- Honda Gas Engine
- 2-cylinder, 20 HP, Air-Cooled
- 12V Electric Start
- Easy Start, Low Noise Engine
- CE, IP23S

**APPLICATIONS**
- General Construction
- Structural Fabrication
- Pipe Welding
- Rental Operations
- Professional Welding
- Maintenance Vehicles
- Mobile repair vehicles
- In-Plant Maintenance
- Mining
- Railroad Maintenance
- Contractors
- Utility Companies

**SUGGESTED WIRE FEEDERS**
Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV, Portafeed® 17A, Model 17A, Ultrafeed® 4000.

**ENGINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Honda GX620K1VX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>2-cylinder air-cooled gas</td>
</tr>
<tr>
<td>HP &amp; Welding Speed</td>
<td>20 HP @ 3,600 RPM</td>
</tr>
<tr>
<td>Idle Speed</td>
<td>2,400 RPM</td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>10 gal. / 38 L</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>.42 gal. / 1.5 L</td>
</tr>
</tbody>
</table>

Raider® 10,000 Pro
Data Sheet #84-2307

**AUXILIARY POWER**

- 10 kVA
- 8.5 kVA
- 8.5 kVA
- 460 V, 60 Hz, 3 PHASE
- 230 V, 60 Hz, 1 PHASE
- 115 V, 60 Hz, 1 PHASE
The Explorer™, TA-8/300-KAT, is a multiple process machine with capability for high quality welding. The heavy-duty design, built to fit on a truck or trailer, provides performance on STICK / Lift Start TIG / MIG and Carbon Arc Gouging at 100% Duty Cycle @ 250 Amps weld output. Standard features include HF protection, warning systems, muffler and rain cap, low oil/pressure shutdown, and its idle automatically adjusts for amperage draw and efficient fuel consumption.

The unique Power-Plus® patented alternator delivers a smooth weld output. Its brushless design increases efficiency – reducing maintenance and extending the life of the machine. Separate windings are used for welding and auxiliary power, offering the highest quality auxiliary power. A rugged 23 HP, 3-cylinder, diesel, water-cooled Kubota engine, powers the generator.

The Explorer is designed to deliver the best available welds / auxiliary power for contractors, owner-operators and welding professionals.

### FEATURES
- 115 VAC / 230 VAC / 460 VAC
- Single Phase Auxiliary Power
- Outstanding Low End Performance
  Excellent E6010 Electrode Operation
- Multi-Processes
  MIG / STICK / Lift TIG / Carbon Arc Gouging
- Single Sided Panel Service Center allows for Easy Maintenance
- Infinite Control of Voltage / Current

### ENGINE SPECIFICATIONS
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Rated Output @ Duty Cycle</th>
<th>Output Range</th>
<th>Dimensions (H x W x D)</th>
<th>Net Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-1010</td>
<td>300 A / 32 V @ 60% 250 A / 29 V @ 100%</td>
<td>30 - 300 Amps</td>
<td>33.5” x 21” x 52.5” 850 x 530 x 1330 (mm)</td>
<td>665 lbs. (302 kg)</td>
</tr>
</tbody>
</table>

### APPLICATIONS
- General Construction
- Structural Fabrication
- Pipe Welding
- Rental Operations
- Professional Welding
- Maintenance Vehicles
- Mobile repair vehicles
- In-Plant Maintenance
- Mining
- Railroad Maintenance
- Contractors
- Utility Companies

### SUGGESTED WIRE FEEDERS
Porta-Feed® 17A, Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV

### ACCESSORIES
Running Gear, Paralleling Kit, TIG Kit, STICK Kit, On/Off Torch Switch Control, Remote 14 Pin, Remote Foot Control, Hand Pendant, Extension Cables, Dinse Connector, Highway-Ready Trailer

---

**ENGINE DRIVE**

EXPLORER™ TA-8/300-KAT

**PROCESS**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>MIG</th>
<th>FLUX CORED</th>
<th>STICK</th>
<th>LIFT TIG</th>
<th>CAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-1010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AUXILIARY POWER**

<table>
<thead>
<tr>
<th></th>
<th>230 V, 60 Hz, 1 PHASE</th>
<th>115 V, 60 Hz, 1 PHASE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.5kVA</td>
<td>3.5kVA</td>
</tr>
</tbody>
</table>

---

**Got Power...?**
The heavy-duty design of the Hercules® TA-20/500-DZ is perfect for portable welders who warrant a multiple process machine and depend on high quality welding and consistent auxiliary power. Built to fit on a truck or trailer, this unit provides performance on STICK / Lift Start TIG / MIG and Carbon Arc Gouging at 100% Duty Cycle @ 400 Amps with 15-500 Amps weld output while delivering a consistent 20 kVA auxiliary output. The auxiliary power is constant over the 15-500 Amp weld output range and is available to use as an AC generator unit. Standard features include HF protection, muffler and rain cap, low oil/pressure shutdown, low fuel shutdown, amperage/voltage control-infinite control over entire range, 14 pin amphenol, and hinged panel covers controls.

The unique Power-Plus® patented alternator delivers a smooth weld output. Its brushless design increases efficiency – reducing maintenance and extending the life of the machine. Separate windings are used for welding and auxiliary power, offering the highest quality auxiliary power. The generator is powered by a rugged, 42 HP, 3-cylinder, diesel fuel, air-cooled Deutz engine.

**FEATURES**
- 115 VAC / 230 VAC / 460 VAC
- Single and Three Phase Auxiliary Power
- Isonerized / Quiet
- Outstanding Low End Performance
- Excellent E6010 Electrode Operation
- Multi-Processes
- MIG / STICK / Lift Start TIG / Carbon Arc Gouging
- Single Sided Panel Service Center allows for Easy Maintenance
- Designed for Heavy-Duty Operation
- Diesel Engine
  - Air-Cooled 42 HP Deutz
  - 12 Volt Battery with 500 Cold Cranking Amps for Electric Start
  - Digital Fuel Injection for Easy Starts and Low Fuel Consumption

**ENGINE SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Engine</th>
<th>Deutz F3L 912</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>3-cylinder air-cooled diesel</td>
</tr>
<tr>
<td>HP &amp; Welding Speed</td>
<td>42 HP @ 1,800 RPM</td>
</tr>
<tr>
<td>Idle Speed</td>
<td>1,300 RPM</td>
</tr>
<tr>
<td>Fuel Tank</td>
<td>23 gal. / 87 L</td>
</tr>
<tr>
<td>Oil Capacity</td>
<td>2.13 gal. / 8 L</td>
</tr>
</tbody>
</table>

**APPLICATIONS**
- General Construction
- Structural Fabrication
- Pipe Welding
- Rental Operations
- Professional Welding
- Maintenance Vehicles
- Mobile repair vehicles
- In-Plant Maintenance
- Mining
- Railroad Maintenance
- Contractors
- Utility Companies

**SUGGESTED WIRE FEEDERS**
Porta-Feed® 17A, Hefty® II CC/CV, Hefty® II Stainless, Heavy Duty CC/CV

**ACCESSORIES**
Meter Kit, TIG Kit, STICK Kit, On/Off Torch Switch Control, Remote 14 Pin, Remote Foot Control, Hand Pendant, Extension Cables, Dinse Connector, Highway-Ready Trailer, CO2 MIG Kit

**APPROVALS**
CSA
## Accessories

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Product Used On</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Pack Rack w/ Electrical</td>
<td>Pro-Plus® 400S Pro-Plus® 400TS Pro-Plus® 400MST Pro-Wave® 300TSW</td>
<td>Machine racks complete with electrical box, lifting eyes, weather cover and skids.</td>
</tr>
<tr>
<td>6 Pack Rack w/ Electrical</td>
<td>Pro-Plus® 400TS Pro-Plus® 400MST Pro-Wave® 300TSW</td>
<td>Portable mounting with cylinder rack and wire feeder shelf. Accommodates two gas bottles or one gas bottle plus a vertical circulator.</td>
</tr>
<tr>
<td>8 Pack Rack w/ Electrical</td>
<td>Pro-Plus® 400S Pro-Plus® 400TS Pro-Plus® 400MST Pro-Wave® 300TSW Pro-Lite® LM-300 Ultra Flex™ 350 Pulse</td>
<td>Portable mounting with wire feeder shelf.</td>
</tr>
<tr>
<td>Running Gear</td>
<td>205199</td>
<td>Pro-Plus® 400S Pro-Plus® 400TS Pro-Plus® 400MST Pro-Wave® 300TSW Pro-Lite® LM-300 Ultra Flex™ 350 Pulse</td>
</tr>
<tr>
<td>Running Gear</td>
<td>11-2013</td>
<td>Power-Plus® Scout®</td>
</tr>
<tr>
<td>Running Gear</td>
<td>11-3648</td>
<td>Power-Plus® Raider® Power-Plus® Explorer™</td>
</tr>
<tr>
<td>Running Gear</td>
<td>830544</td>
<td>Fabricator® 130 Fabricator® 180</td>
</tr>
<tr>
<td>Running Gear</td>
<td>910230B-007</td>
<td>Fabstar® 4030</td>
</tr>
<tr>
<td>AM Pulser</td>
<td>204297A-001</td>
<td>Power-Master® 500 Ultra Flex™ 350 Pulse</td>
</tr>
<tr>
<td>Dual Feeder Interlock</td>
<td>870008-001</td>
<td>Power-Master® 500 Ultra Flex™ 350 Pulse Model 17A Porta-Feed® 17A Ultrafeed® 1000 Mijit® 1000 HMC-410 Ultrafeed® 4000</td>
</tr>
<tr>
<td>Pulse Programming Pendant</td>
<td>204180A-001</td>
<td>Ultra Flex™ 350 Pulse</td>
</tr>
<tr>
<td>Cool Flo-12</td>
<td>170844-001</td>
<td>Power-Plus® 400S Power-Plus® 400TS Power-Plus® 400MST Pro-Wave® 300TSW Power-Master® 500 Power-Master® 500P Ultra Flex™ 350 Pulse</td>
</tr>
<tr>
<td>Dual Amphenol Splitter Kit</td>
<td>204395A</td>
<td>Model 17A Porta-Feed® 17A Ultrafeed® 1000 Mijit® 1000 Ultrafeed® 4000</td>
</tr>
</tbody>
</table>
## Accessories

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Product Used On</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highway Ready Trailers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-2024</td>
<td>Power-Plus® Scout®</td>
<td>Industrial built designs complete with fender kit, 2” ball coupler, lights</td>
</tr>
<tr>
<td>11-2025</td>
<td>Power-Plus® Hercules®</td>
<td>with guards and wiring, jack stand and safety chain.</td>
</tr>
<tr>
<td>800036</td>
<td>Power-Plus® Raider®</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power-Plus® Explorer™</td>
<td></td>
</tr>
<tr>
<td><strong>STICK Kits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90924</td>
<td>P-Wee® 160S</td>
<td>Includes work cable with 10 ft. cable and STICK electrode holder with 13 ft.</td>
</tr>
<tr>
<td>90925</td>
<td>Pro-Lite® 250S</td>
<td>cable.</td>
</tr>
<tr>
<td></td>
<td>Pro-Lite® 250TS</td>
<td></td>
</tr>
<tr>
<td>10-4082</td>
<td>Pro-Plus® 400S</td>
<td>Includes work cable with 12 ft. cable and STICK electrode holder with 15 ft.</td>
</tr>
<tr>
<td></td>
<td>Pro-Plus® 400TS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pro-Plus® 400MST</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pro-Wave® 300TSW</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ultra Flex™ 350 Pulse</td>
<td></td>
</tr>
<tr>
<td><strong>TIG Kits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600288</td>
<td>Dragster™ 80</td>
<td>Includes regulator / flow gauge, 12.5 ft. air-cooled torch, torch</td>
</tr>
<tr>
<td>600290</td>
<td>Pro-Lite® 250S</td>
<td>accessory kit, work clamp with 10 ft. cable.</td>
</tr>
<tr>
<td></td>
<td>Pro-Lite® 250TS</td>
<td></td>
</tr>
<tr>
<td>10-4080</td>
<td>Pro-Plus® 400S</td>
<td>Includes regulator / flow gauge, 12.5 ft. air-cooled torch, torch</td>
</tr>
<tr>
<td></td>
<td>Pro-Plus® 400MST</td>
<td>accessory kit, work clamp with 12 ft. cable.</td>
</tr>
<tr>
<td>600289</td>
<td>P-Wee® 160S</td>
<td>Includes regulator / flow gauge, 12.5 ft. air-cooled torch, torch</td>
</tr>
<tr>
<td>600291</td>
<td>Pro-Lite® 185TSW</td>
<td>accessory kit, 10 ft. gas hose, work clamp with 10 ft. cable.</td>
</tr>
<tr>
<td>10-4081</td>
<td>Pro-Plus® 400TS</td>
<td>Includes regulator / flow gauge, 12.5 ft. air-cooled torch, torch</td>
</tr>
<tr>
<td></td>
<td>Pro-Wave® 185TSW</td>
<td>accessory kit, 10 ft. gas hose, work clamp with 12 ft. cable.</td>
</tr>
<tr>
<td><strong>Remote Torch Switch</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-4006</td>
<td>P-Wee® 160S</td>
<td>12 ft. (4.6m) 8 Pin (male) - Torch mounted ON/OFF switch.</td>
</tr>
<tr>
<td>10-4007</td>
<td>Pro-Lite® 250S</td>
<td>25 ft. (7.6m) 8 Pin (male) - Torch mounted ON/OFF switch.</td>
</tr>
<tr>
<td>10-4010</td>
<td>Pro-Wave® 185TSW</td>
<td>25 ft. (7.6m) 14 Pin (male) - Torch mounted ON/OFF switch.</td>
</tr>
<tr>
<td><strong>Torch Switch with Current Control (12 ft., 8 Pin)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-4008</td>
<td>P-Wee® 160S</td>
<td>5/8” - 7/8” (16mm - 22mm) handle.</td>
</tr>
<tr>
<td>10-4009</td>
<td>P-Wee® 160TS</td>
<td>7/8” - 1-1/8” (22mm - 29mm) handle.</td>
</tr>
<tr>
<td>10-4011</td>
<td>Pro-Lite® 250S</td>
<td>1-1/8” - 1-3/8” (29mm - 35mm) handle.</td>
</tr>
<tr>
<td>10-4012</td>
<td>Pro-Lite® 250TS</td>
<td>5/8” - 7/8” (16mm - 22mm) handle.</td>
</tr>
<tr>
<td>10-4013</td>
<td>Pro-Wave® 185TSW</td>
<td>7/8” - 1-1/8” (22mm - 29mm) handle.</td>
</tr>
<tr>
<td><strong>Torch Switch with Current Control (25 ft., 14 Pin)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-2002</td>
<td>Pro-Plus® 400S</td>
<td>5/8” - 7/8” (16mm - 22mm) handle.</td>
</tr>
<tr>
<td>10-2003</td>
<td>Pro-Plus® 400TS</td>
<td>7/8” - 1-1/8” (22mm - 29mm) handle.</td>
</tr>
<tr>
<td>10-2004</td>
<td>Pro-Plus® 400MST</td>
<td>1-1/8” - 1-3/8” (29mm - 35mm) handle.</td>
</tr>
<tr>
<td><strong>Torch Switch with Current Control (25 ft., 19 Pin)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-2002</td>
<td>Fabstar® 4030</td>
<td>5/8” - 7/8” (16mm - 22mm) handle.</td>
</tr>
<tr>
<td>10-2003</td>
<td>Power-Master® 500</td>
<td>7/8” - 1-1/8” (22mm - 29mm) handle.</td>
</tr>
<tr>
<td>10-2004</td>
<td>Power-Master® 500P</td>
<td>1-1/8” - 1-3/8” (29mm - 35mm) handle.</td>
</tr>
<tr>
<td><strong>Foot Controls</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-4015</td>
<td>P-Wee® 160S</td>
<td>15 ft. with 8 Pin (male) plug.</td>
</tr>
<tr>
<td>10-4016</td>
<td>P-Wee® 160TS</td>
<td>25 ft. with 8 Pin (male) plug.</td>
</tr>
<tr>
<td>10-2008</td>
<td>Pro-Plus® 400S</td>
<td>15 ft. with 14 Pin (male) plug.</td>
</tr>
<tr>
<td>10-2007</td>
<td>Pro-Plus® 400TS</td>
<td>25 ft. with 14 Pin (male) plug.</td>
</tr>
<tr>
<td>200460-007</td>
<td>Fabstar® 4030</td>
<td>25 ft. with 19 Pin (male) plug.</td>
</tr>
</tbody>
</table>
### International Voltages & Approvals

#### WIRE FEEDER

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input Volts</th>
<th>Feed Rolls</th>
<th>Pin</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hefty® II CC/CV 100035-001</td>
<td>Voltage Sensing</td>
<td>2</td>
<td>CE/CSA</td>
<td></td>
</tr>
<tr>
<td>Hefty® II CC/CV 100035-002</td>
<td>Voltage Sensing</td>
<td>2</td>
<td>CE/CSA</td>
<td></td>
</tr>
<tr>
<td>Hefty® II CC/CV 100035-003</td>
<td>Voltage Sensing</td>
<td>2</td>
<td>CE/CSA</td>
<td></td>
</tr>
<tr>
<td>Hefty® II Stainless 100036-001</td>
<td>Voltage Sensing</td>
<td>2</td>
<td>CSA</td>
<td></td>
</tr>
<tr>
<td>Heavy Duty CC/CV SP6877B-001</td>
<td>Voltage Sensing</td>
<td>4</td>
<td>CSA</td>
<td></td>
</tr>
<tr>
<td>Model 17A 100011-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>Model 17A 100011-003</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CE</td>
</tr>
<tr>
<td>Porta-Feed® 17A 100012-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>Ultrafeed® 1000 100034-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CE/CSA</td>
</tr>
<tr>
<td>Ultrafeed® 4000 100055-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>HMC-410 500019C-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>Pro-Wave® 40040TSW 100055-001</td>
<td>200/230/400/460</td>
<td>1/3</td>
<td>50/60</td>
<td>CSA</td>
</tr>
<tr>
<td>Pro-Wave® 40050TSW 100056-001</td>
<td>200/230/400/460</td>
<td>1/3</td>
<td>50/60</td>
<td>CSA</td>
</tr>
<tr>
<td>Ultra Flex™ 350 Pulse 500237A-001</td>
<td>200/230/400/460</td>
<td>1/3</td>
<td>50/60</td>
<td>CSA</td>
</tr>
<tr>
<td>Ultra Flex™ 350 Pulse 100055-001</td>
<td>460/575</td>
<td>1/3</td>
<td>50/60</td>
<td>CSA</td>
</tr>
</tbody>
</table>

#### TIG (GTAW)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input Volts</th>
<th>Phase Hz.</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-Wee® 160TS 10-3067</td>
<td>115/230</td>
<td>1</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Lite® 125TS 10-3068</td>
<td>208-230/460</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Wave® 300TSW 10-3073</td>
<td>208-230</td>
<td>1</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Wave® 400GTTSW 10-3037</td>
<td>380/415</td>
<td>1/3</td>
<td>50/60</td>
</tr>
</tbody>
</table>

#### MIG (GMAW)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input Volts</th>
<th>Phase Hz.</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabricator® 130 100038-001</td>
<td>115</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 210 10-3242CSA</td>
<td>208-230</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabricator® 250 10-3243CSA</td>
<td>208-230</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Fabstar® 4030 100010A-001</td>
<td>200/230/460/575</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Fabstar® 4030 100010A-002</td>
<td>200/230/400/460/500/575</td>
<td>3</td>
<td>50/60</td>
</tr>
</tbody>
</table>

#### PLASMA ARC WELDING

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input Volts</th>
<th>Phase Hz.</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultima® 150 1-155X-XX</td>
<td>200-460</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Ultima® 150 1-155X-XX</td>
<td>380/415</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>WC 100B 3-2646-XX</td>
<td>220-460</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>WC 100B 3-2657-XX</td>
<td>220-460</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>WC 100B 3-2659-XX</td>
<td>575</td>
<td>1</td>
<td>60</td>
</tr>
</tbody>
</table>

#### MULTI-PROCESS

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Input Volts</th>
<th>Phase Hz.</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro-Lite® LM-300 10-3012</td>
<td>208-230/460</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Lite® LM-300 10-3013</td>
<td>380/415</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Lite® LM-300 10-3043</td>
<td>380/415</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Lite® LM-300 10-3014</td>
<td>460/575</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Pro-Plus® 400MST 10-3072</td>
<td>208-230/460</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Power-Master® 500 100060</td>
<td>208-230/400/460</td>
<td>3</td>
<td>50/60</td>
</tr>
<tr>
<td>Power-Master® 500P 100054</td>
<td>208-230/400/460</td>
<td>3</td>
<td>50/60</td>
</tr>
<tr>
<td>Ultra Flex™ 350 Pulse 500237A-001</td>
<td>200/230/400/460</td>
<td>1/3</td>
<td>50/60</td>
</tr>
<tr>
<td>Ultra Flex™ 350 Pulse 100055-001</td>
<td>460/575</td>
<td>1/3</td>
<td>50/60</td>
</tr>
</tbody>
</table>

#### ENGINE DRIVEN

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Aux. Power</th>
<th>Phase/Max kVA</th>
<th>Hz.</th>
<th>Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scout® 11-1002</td>
<td>115/230</td>
<td>1 ph / 4 kVA</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>Raider® 10,000 Pro 11-1021</td>
<td>115/230 (1ph) 460 (3ph)</td>
<td>1/3 ph / 8.5-10 kVA</td>
<td>60</td>
<td>CE, IP23S</td>
</tr>
<tr>
<td>Explorer® 11-1010</td>
<td>115/230</td>
<td>1 ph / 8.5 kVA</td>
<td>60</td>
<td>CSA</td>
</tr>
<tr>
<td>Hercules® 11-1013</td>
<td>115/230 (1ph) 220/460 (3ph)</td>
<td>1/3</td>
<td>10-20 kVA</td>
<td>60</td>
</tr>
</tbody>
</table>

#### Thermal Arc Website

Visit us at www.thermalarc.com for information on the following:

- Find the Nearest Distributor
- Latest Product Updates
- Welding Show Appearances
- Contact Information
- Product Literature including Data Sheets, Brochures, Owners Manuals, Service Manuals and Price Books
- Warranty Information
- Technical Advice
- Find the District Manager in your Area
- Order Printed Literature
- Links to our Sister Companies Offering Other Quality Welding Products

---

Thermal Arc Website

---

Visit us at www.thermalarc.com for more information on:
CONSUMABLES
Thermal Arc® also supplies a line of solid wire and flux-cored products.

TR S-6 Solid Wire
TR S-6 is an exceptional mild steel, copper coated wire for GMAW welding under CO₂ or Ar / CO₂ shielding gases. With its higher levels of manganese and silicon, low spatter level and minimal post-weld clean up, TR S-6 is an excellent choice for welding through mill scale, rust or dirt.

SF-1A Seamless Flux-Cored Wire
SF-1A has a rutile type flux for use with Ar / CO₂ shielding gas. The arc is stable with low spatter, excellent bead appearance and an easily removed slag cover. Weldability is excellent in all positions and high efficiency welding can be performed.

Find your local distributor on our website at www.thermalarc.com

DISTRIBUTED BY:

© Thermal Arc Inc., 2003 www.thermalarc.com Printed in U.S.A.