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
Data Sheet #84-2224

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

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

APPLICATIONS

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

APPROVALS

CSA

Power-Master® 500
Brochure #84-9902

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, automatic applications.

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/cm^2). 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)