

TUBEMASTER Model 514

Programmable Power Source
For Orbital Weld Heads



Use with

- *Orbital Tube Weld Heads*
- *Tube-Tubesheet Heads*
- *Weld Lathes*

TUBEMASTER Model 514

Programmable Power Source For Orbital Weld Heads

Revolutionary, Not Evolutionary

The Model 514 is not merely a "new model" with modest improvements over existing technology, but a true "clean sheet of paper" design: half the size and weight of the previous model, with an increased output (200 amps). The Model 514 brings the benefits of true digital technology to the orbital welding customer: unparalleled accuracy, repeatability, and reliability. Digital technology forever eliminates the need for periodic Weld Head calibration – rotation speed remains accurate regardless of Head wear, and Heads can be interchanged without time-consuming calibration. Software upgrades are made by simply inserting a "Memory Key" into the front panel connector, or sent by e-mail attachment. The Model 514 is "Internet ready" for future enhancements such as web-based diagnostic service.

Features

- 200 Amp Output
- Up to 100 levels per program
- Stores 100 weld programs internally
- Wire feed capability for wire feed Heads
- AutoProgram automatically generates procedures
- Programmable "override limits" provide supervisory control
- Weld parameter monitoring/out-of-limits reporting for QA/QC purpose
- Transfer programs and QC data to PC using USB digital "Memory Key"
- AutoTack automatically generates tack weld programs
- Large color LCD display
- Stainless steel case with sealed membrane switches/display
- Head mounted membrane switches eliminate remote pendant (certain models only)
- Autoranging: 115/230V input
- Help files provide immediate information/assistance
- Password protection of key functions



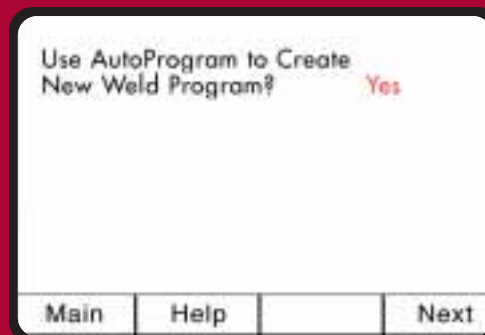
AutoProgram

Programming is simple and intuitive by manual entry or new AutoProgram which self-generates programs

Startup display



...automatically create a new weld program



...simply fill in



Options

- Detachable coolant recirculator mounts beneath power source with integral flow switch protection
- Cart with bottle rack
- Extension cables
- Rugged storage/shipping case
- Built-in printer
- Remote Pendant



Weld Monitoring/QC

Integral Weld Monitoring Software Provides Instant Information On Weld Quality.

Acceptable limits are programmed for each critical weld parameter. At the completion of each weld, a printout records the weld ID number, date and time, the operator's name and whether the weld was performed within the defined limits for acceptable weld quality. If any critical parameter falls outside the defined limits, the operator is immediately notified as to:

- Out of limit parameter
- Maximum deviation from programmed value
- Maximum deviation time
- Exact location in the weld

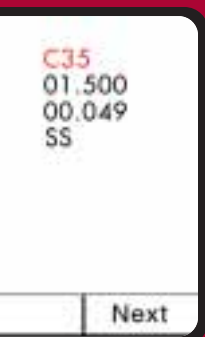
QC reports are immediately printed following each weld using the built-in printer option. Or, they can be stored internally and downloaded periodically to a PC using a standard "Memory Key". Import weld programs and QC data directly into a Word® or Excel® spreadsheet document.



cedures.

the blanks

...for a perfect weld, every time



Additional documentation and notes can be added to weld programs and QC records, providing traceability to individual drawings, projects, and customers

Weld No	009	Date	9-11-2003
OD	00.500	Wall Thickness	00.049
Head	C10	Position	5G
Project	P326-03		
Drawing	H220		
Elect Diam	0.062"	Length	00.292"
Shield Gas	AR/H	Flow Rate	020 CFH
Backing Gas	AR	Flow Rate	005 CFH
Tacking	No	Overrides	No

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Specifications

Application	For use with many Weld Head models (GTAW process), Welding Lathes, and dedicated Weld Systems
Functions Controlled	Welding Current Output/Current Pulsing, Weld Head Rotation, Weld Head Wire Feed Speed (Optional)
Output Power	0 – 200 Amps
Input Power Requirements (Rated Load)	115/230 VAC, 1Ø, 4.0 KVA, 50/60 Hz Autoranging (No modifications necessary)
Internal Memory Capacity	100 Weld Programs
Units of Measurement	Metric and Inch (Selectable)
Program Transfer	Solid State Digital Media
Language (Selection)	English, Spanish, German, French, others
Settable Override Limits	Individually scalable overrides on each function 0 – 100%
Maximum Open Circuit Voltage	80V
Water and Gas Flow Switches	Standard. Prevent damage to equipment and workpiece
Data Recording/Printout	Operator ID, Weld ID Number, Program Number, Material, OD, Wall Thickness, Date, Time, Weld Head Model, Project, Drawing, Programmed Parameters
QC-Parameter Monitoring/Recording/Printout	Records actual parameters and deviations from preprogrammed limits
Arc Start Type	HF
Operating/Storage Temperature	Operating: -18 to 50°C (0 to 120°F) Storage: -25 to 60°C (-20 to 140°F)
Humidity	To 98% RH (Non-Condensing)

Dimensions

	Model 514 Power Source	Model 904 Circulator
Length	48cm (19")	48cm (19")
Width	28cm (11")	28cm (11")
Height	32cm (12.75")	20cm (8")
Weight	24.5 Kgs (54 lbs)	12.2 Kgs (27 lbs)

The Tubemaster Power Supply can be used with many Weld Head models



C-Series



E-Head Series



Redhead Series

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