

# MAGNATECH

ORBITAL WELDING SYSTEMS

PIPELINER

Model MPS 4000

Programmable Power Source  
for Orbital Welding Heads



*Use with*

*• Pipeliner Orbital FCAW Weld Head*

# PIPELINER Model MPS 4000

## Programmable Power Source for Multi-Pass Orbital GMAW/FCAW Pipe Welding

### Precise Weld Process Control

The MPS 4000 is a digital inverter power source for GMAW/FCAW process welding applications. The integral weld Head controller operates all Pipeliner weld Head models.

The MPS 4000 provides synergic control of electrode speed and power output – the welder has only to change electrode speed and the power supply will adaptively change the output parameters to maintain a stable process. Factory developed programs are stored for most combinations of alloy, electrode diameter, and shielding gas. The MPS 4000 wire feeder is used with the Wire Feed on Floor (WFOF) and Push-Pull (WFPP) versions of the weld Head.

### Applications

- Fossil and nuclear power plant construction/maintenance
- Steam generation equipment fabrication
- Gas and oil pipeline construction
- Marine pipeline construction
- Chemical/petrochemical facility construction and maintenance
- Large diameter vessel fabrication
- Shipyard Construction

### Features

- Multi-pass welding of pipes
- Operates all variants of Magnatech Pipeliner weld Heads (FCAW/GMAW process)
- 400 Amp output
- Autoranging power input eliminates all internal modifications
- Pulsed/spray modes
- Integral switch prevents welding without torch gas flow
- Coolant recirculator with integral flow switch protection
- Meets applicable NEMA, CE, CSA standards
- Pendant allows remote operation
- Synergic operation of electrode speed/power output
- Factory optimized stored programs for most materials
- Program development service available for special alloys
- Outdoor job site usage (IP23 rating)
- Cart with bottle rack

### Options

- Pendular oscillation
- Extension Cables
- Gas mixer kit
- Second bottle rack



### The MPS 4000 - An "Expert" Tool

The MPS 4000 comes with welding expertise already built-in. Power Source Controls stand out for their simplicity and ease of operation. Just set the wire diameter and type of material to access the factory preprogrammed optimized parameters that are stored in memory. The single-knob operation in synergic mode makes this job even easier. Power output is precisely synchronized with wire speed and is adjustable through its full range with the turn of a single knob.



## Remote Pendant

A handheld control is used to both program and remotely operate the system. The intuitive switch layout allows the welder to make program override corrections without lifting his hood.



## Safety and Rugged Durability

Rated IP23 – suitable and safe for field use without special protection. Field proven reliability.



## Optional Multi Level Programmer

Developed specifically for pipeline use, the compact module allows 4 passes to be programmed. The larger "Full Function" remote pendant is replaced with a compact pendant. The welder is limited to selecting one of the preprogrammed passes, and making override "trim" corrections to compensate for fit-up and bevel variations. The programmer mounts on the power source. The gasketed enclosure resists sand and moisture, and can be locked to prevent unauthorized weld program changes.



## Swivel-Mounted Wire Feeder

Portable feeder lifts off swivel. Extension cables allow remote operation. Hinged spool cover keeps wire clean.



## Precise Arc Length Regulation - Automatically

Digital technology maintains a constant arc length with microsecond response to change in stick out. Regulated process eliminates spatter.



## The Control Panel tells you all you need to know...

- Before welding, programmed values are displayed. During welding, actual values are displayed
- At weld completion, actual values are stored and displayed by "Hold" function
- Single point settings of wire speed and voltage can be stored and recalled allowing instant access to optimized parameters for specific jobs
- Warnings are displayed: Over temperature and low water level
- Error codes allow rapid diagnosis of problems



## Specifications

<b>Applications:</b>	For use with all Pipeliner GMAW/FCAW process weld Heads
<b>Functions Controlled:</b>	Power Module Power Output (Standard and Pulsed) Electrode Feed Speed Weld Head Rotation Weld Head Torch Oscillation (Linear Standard, Pendular optional) Weld Head Electronic Cross-Seam Adjustment Weld Head Arc Gap Control
<b>Internal Memory Capability:</b>	80 Synergic Programs / 99 Single Point (Voltage/Wire Speed) Programs

### MPS 4000 Power Source

<b>Output Rating:</b>	400A @ 50% Duty Cycle, 320A @ 100% Duty Cycle
<b>Max. Open Circuit Voltage:</b>	70V
<b>Cos phi/Efficiency:</b>	0.99 / 88%
<b>Input Power Requirements (Rated Load):</b>	Volts – 200/230/400/460 (Autoranging); Amperes 35A; KVA 12.7; Frequency 50/60 Hz
<b>Degree of protection:</b>	IP23
<b>Type of cooling:</b>	AF (Forced Air)
<b>Insulation class:</b>	F
<b>Applicable Electrical Standards:</b>	IEC 974-1 (IP-23S); CSA; EMC 89/336/EEC; EN 60 974-1

### Model 712 Weld Head Controller

<b>Pendant Cable Length*:</b>	8m (25') or 15m (50') standard. *Head model dependent.
<b>Degree of protection:</b>	IP23 (Excluding Remote Pendant)

### MPS 4000R Water Circulator

<b>Pump:</b>	Centrifugal
<b>Cooling Capacity:</b>	2000 – 2300W (at 20EC/68°F)
<b>Max. delivery capacity/pressure:</b>	3.5 liters/min (0.9 gal/min) at 4.2 bar (60 psi)
<b>Coolant volume:</b>	5.54 liters (1.46 gallons)
<b>Degree of protection:</b>	IP23

### MPS 4000 Wire Feeder

<b>Drive Type:</b>	4 Roll (various groove geometries available)
<b>Wire Diameter:</b>	0.8 – 1.6 mm (0.03 – 0.62")
<b>Wire Feed Speed:</b>	0.5 – 22 m/min (20 – 866 ipm)
<b>Degree of protection:</b>	IP23

## Dimensions & Weights

	Power Module	Controller	Water Circulator	Wire Feeder
<b>Length</b>	72.5 cm (28.5")	72.5 cm (28.5")	72.5 cm (28.5")	65 cm (25")
<b>Width</b>	29 cm (12")	29 cm (12")	29 cm (12")	29 cm (12")
<b>Height</b>	47 cm (18.5")	23 cm (9")	23 cm (9")	41 cm (16")
<b>Weight</b>	35 kg (77 lb.)	14.5 kg (32 lb)	13 kg (29 lb)	16 kg (35 lb)

Represented By:

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