

# **MAGNATECH**



#### SYNERGIC OPERATION

Of electrode speed/power output.

#### **400 AMP OUTPUT**

#### **AUTORANGING POWER INPUT**

Eliminates all internal modifications.

**CART WITH BOTTLE RACK** 

## FACTORY OPTIMIZED STORED PROGRAMS

For most materials.

#### INTEGRAL SWITCH

Prevents welding without torch gas flow.

#### COOLANT RECIRCULATOR

Coolant recirculator with integral flow switch protection.

## PROGRAMMABLE POWER SOURCE FOR MULTI-PASS ORBITAL GMAW/FCAW PIPE WELDING

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.



#### **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

#### **Applications**

- Fossil and nuclear power plant construction/ maintenance
- Steam generation equipment fabrication
- Gas and oil pipeline construction
- Marine pipeline construction

#### **Options**

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

- Chemical/petrochemical facility construction and maintenance
- Large diameter vessel fabrication
- Shipyard Construction

# SAFETY AND DURABILITY

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



#### **AUTOPROGRAM**

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.



# PRECISE ARC LENGTH REGULATION - AUTOMATICALLY

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



#### 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 par meters for specific jobs
- Warnings are displayed: Over temperature and low water level
- Error codes allow rapid diagnosis of problems



### Dimensions/weights

	POWER MODULE	CONTROLLER	WATER CIRCULATOR	WIRE FEEDER
Length	72.5 cm (28.5")	72.5 cm (28.5")	72.5 cm (28.5")	65 cm (25")
Width	29 cm (12")	29 cm (12")	29 cm (12")	29 cm (12")
Height	47 cm (18.5")	23 cm (9")	23 cm (9")	41 cm (16")
Weight	35 kg (77 lb.)	14.5 kg (32 lb)	13 kg (29 lb)	16 kg (35 lb)

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Application	For use with all Pipeliner GMAW/FCAW process weld heads	
Functions controlled	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	
Internal memory capability	80 synergic programs / 99 single point (voltage/wire speed) programs	
MPS 4000 POWER SOURCE		
Output rating	400 A @ 50% duty cycle, 320 A @ 100% duty cycle	
Max. open circuit voltage	70 V	
Cos phi/efficiency	0.99 / 88%	
Input power requirements (Rated load)	Volts – 200/230/400/460 (autoranging); amperes 35 A; KVA 12.7; frequency 50/60 Hz	
Degree of protection	IP23	
Type of cooling	AF (forced Air)	
Insulation class	F	
Applicable electrical standards	IEC 974-1 (IP-23S); CSA; EMC 89/336/EEC; EN 60 974-1	
MODEL 712 WELD HEAD CONTRO	DLLER	
Pendant cable length	7.6 m (25'). Extension cables available	
Degree of protection	IP23 (Excluding Remote Pendant)	
MPS 4000R WATER CIRCULATOR		
Dump	Contrifugal	

Pump	Centrifugal	
Cooling capacity	2000 – 2300 W (at 20 EC/68° F)	
Max. delivery capacity/pressure	3.5 liters/min (0.9 gal/min) at 4.2 bar (60 psi)	
Coolant volume	5.54 liters (1.46 gallons)	
Degree of protection	IP23	
MPS 4000 WIRE FEEDER		

Drive type	4 roll (various groove geometries available)	
Wire diameter	0.8 – 1.6 mm (0.03 – 0.62")	
Wire feed speed	0.5 – 22 m/min (20 – 866 ipm)	
Degree of protection	IP23	

#### **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.

