



D HEAD 420

MAGNATECH

USE ON PREHEATED PIPES

Heat-tolerant components and water-cooled housing allows use on alloys requiring preheat.

TORCH OSCILLATION (WEAVE)

Width, speed, and endpoint "dwell" independently programmable. Torch "cross seam" steering electronically controlled using remote pendant. Pulsed current automatically synchronized with torch oscillation.

ARC GAP CONTROL (ARC VOLTAGE CONTROL)

Electronically maintains programmed arc length.

COMPACT HEAD-MOUNTED WIRE FEEDER

Accommodates range of wire diameters.

FILLER WIRE SPOOL

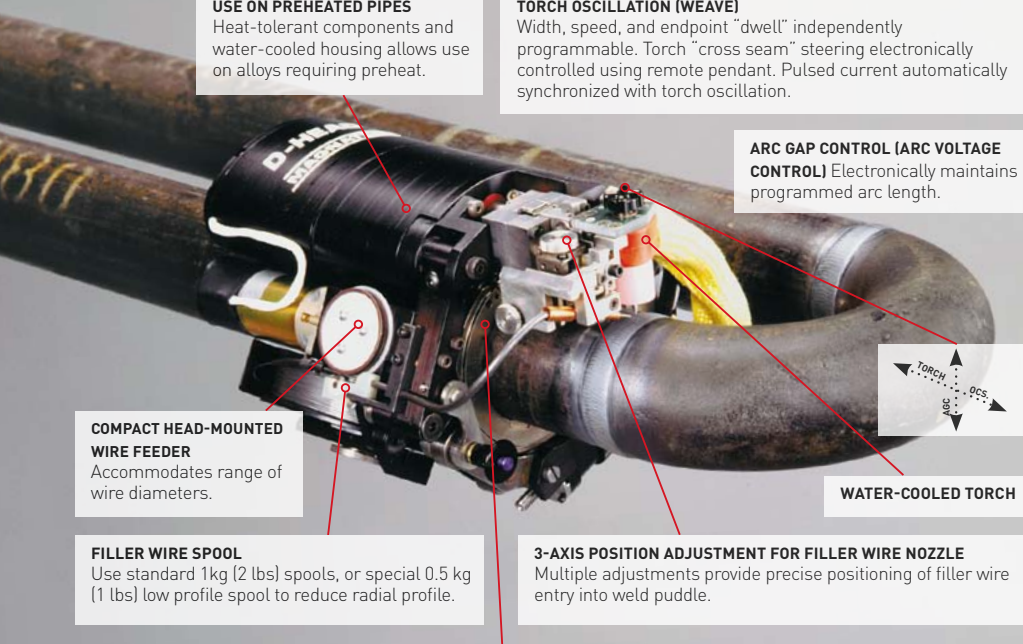
Use standard 1kg (2 lbs) spools, or special 0.5 kg (1 lbs) low profile spool to reduce radial profile.

3-AXIS POSITION ADJUSTMENT FOR FILLER WIRE NOZZLE

Multiple adjustments provide precise positioning of filler wire entry into weld puddle.

WELD HEAD MOUNTING/ROTATION

Metal guide rings attach head to pipe. Positive sprocket drive system guarantees uniform rotation speed.



ORBITAL WELD HEAD FOR MULTIPASS GTAW PIPE WELDING

The Magnatech D Weld Head is designed to make pipe-to-pipe and pipe-to-fitting welds. It is “full function” – with the capability of reproducing all the motions of a skilled welder. The D Weld Head is used for applications with radial and axial clearance constraints. Interchangeable guide rings provide mounting on the pipe, and allow the D Weld Head to cover a broad size range: 1” - 14”. The D Weld Head improves productivity by increasing duty cycle, reducing repair rates, and producing welds of consistent quality.



Features

- Full function Capability (Torch Rotation, Filler Wire Feed, Electronic Arc Gap Control, Electronic Oscillation)
- Broad size range
- Guide Rings available for standard Tube/Pipe sizes
- Waterproof Carry Case/Tool Kit standard
- Water-Cooled Torch uses standard Expendables

Guide Rings Mount Head on Pipe. Available for all nominal pipe sizes 48 mm – 356 mm (1 1/2” – 14”) and Tube sizes 44 mm – 127 mm (1.75” – 5” O.D.)



Applications

- Fossil Power Plant Construction/Maintenance
- Steam Generation Equipment Fabrication
- Nuclear Power Plant Construction/Maintenance
- Chemical/Petrochemical Facility Construction Maintenance
- Shipyard Construction
- Gas Transmission Pipelines
- Process Piping



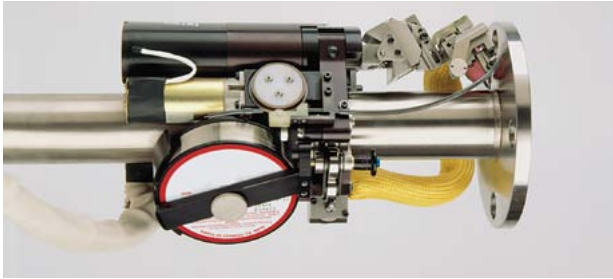
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Options

SOCKET WELD KIT allows torch to be angled 45° (does not angle AVC motion).

EXTENSION CABLES

TILT AVC (Adjustable) allows torch to be pivoted up to 60° for socket/fillet welds. Maintains arc length correction motion along tungsten electrode axis.



LOW PROFILE SPOOL KIT reduces radial profile of D Weld Head to 50mm (2"); Low Profile Wire Spool 0.5kg (1lb.) required.



GUIDE RING ADAPTOR KITS allow Guide Rings to be used on smaller pipe sizes. Use with oversized Guide Rings on preheated pipe to prevent heat damage.



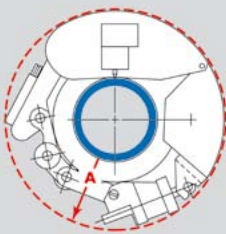
VIDEO ARC MONITORING. Various configurations allow remote operation.



Specifications

Application	Multi-pass orbital GTAW pipe-to-pipe, pipe-to-fitting	
Cable length	7.6 m (25') standard. Extension cables available	
Pipe (tube) size range	25 – 356 mm (1 – 14")	
Filler wire module	Wire size	0.8, 0.9, 1.0 mm (0.03", 0.035", 0.040")
	Max. speed capability	2540 mm/min. (100 IPM)
	Spool size	1 kg (2 lbs) std; 0.5 kg (1 lbs) low profile
Oscillation module	Max. oscillation stroke amplitude	16 mm (0.6725")
	Max. oscillation speed	1520 mm/min. (60 IPM)
	Oscillation dwell	0 – 1 second
	Cross seam adjustment	± 6.4 mm (0.25")
Arc gap control module	13 mm (0.5") stroke. Additional mechanical adjustment allows welding heavier wall pipe	
Torch propulsion module	250 mm (10 IPM) maximum rotation speed	
Water-cooled torch	200 A continuous capability	
Torch adjustment capability	Torch lead/lag adjustment	± 15 degrees (manual)
	Torch tilt adjustment	± 10 degrees (manual)
Power supply compatibility	Pipemaster 515, Pipemaster 516	

Dimensions/weights



Weight	3.6 kg (8 lbs.)
Axial Clearance	Torch C/L to Rear Extremity: 220 mm (8.51")
	Torch C/L to Front Extremity: 10 mm (0.41")
"A" Radial Clearance Requirement for Pipe	64 mm (2.5") with Standard Spool*
44.45mm (1.75") and larger	51 mm (2.0") with Low Profile Spool*

* For pipe/tube OD's less than 44.45mm (1.75"), Radial Clearance Requirement increases with decreasing diameter. Contact Factory.