



D HEAD 420

ORBITAL WELD HEAD FOR MULTI-PASS 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: 25-356mm (1-14”). The D Weld Head improves productivity by increasing duty cycle, reducing repair rates, and producing welds of consistent quality.

- Rugged design
- Generates high quality welds
- Unique tilt AGC option available for socket welding

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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.

WATER-COOLED TORCH



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	



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