



Clamp on - in Place Orbital Pipe Welding Heads

M Series

The M series clamp on weld heads provide economical full function capability for in place welding of assemblies, pipe and tube. An on-board wire spool holds ½ lb or 2 lb (0.25 kg – 1 kg) wire while an on floor option allows use of 25 lb spool. Wire can be pulsed or synchronized with current pulsing.

M series heads feature an innovative parallel clamping mechanism with tension setting for non slip mounting and self centering. The slim profile design allows industry leading, minimal radial and axial clearance.

The water cooled, 300 amp GTAW torch allows high duty cycle. The torch mechanism incorporates precision wire steering for proper placement and an adjustable mechanical cam follower to maintain tungsten to work piece distance. Torch can be fully adjusted for lead/lag and tilt also. An optional AVC and Oscillation module allows fully programmable weave and multi-pass welding.

Operator's pendant built into handle provides start/stop, jog, home and gas on/off control.

Head Features

- Slim, low profile design for maximum flexibility.
- Rotational and wire feed servo operation.
- On board wire spool holder with precision wire placement steering
- Water cooled, high amperage torch with high frequency start initiation. *Optional AVC/OSC module with touch start initiation.
- Unique parallel, self centering clamping mechanism with tension control.
- Adjustable torch lead/lag ($\pm 15^\circ$) and tilt ($+90^\circ -30^\circ$) along with wire nozzle for maximum flexibility.
- *Optional Auto Full Function AVC/OSC module provides fully programmable welding operation.
- Built in operator pendant in handle for ease of use.
- Light weight for portability and less operator fatigue.
- Suitable for use with all Liburdi Dimetrics GTAW power supplies.



Weld Quality Starts in the Arc

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M Series

Specifications	M250	M400	M600
Tube/Pipe Size Range OD: <i>Standard Pads</i>	0.84" - 2.875" (Ø 21.3 - 73.03 mm)	1.315" - 4.5" (Ø 33.4 - 114.30 mm)	2.875" - 6.625" (Ø 73.03 - 168.28 mm)
Tube/Pipe Size Range OD: <i>with Optional Thick Pads</i>	0.5" - 2.5" DN15 - 65	1" - 4" DN25 - 100	1" - 5" DN25 - 125
Rotor Surface Speed:	0.2 - 20 IPM	0.2 - 20 IPM	0.2 - 20 IPM
Wire Size:	Std 0.035" (Ø 0.9 mm) <i>other sizes available</i>	Std 0.035" (Ø 0.9 mm) <i>other sizes available</i>	Std 0.035" (Ø 0.9 mm) <i>other sizes available</i>
Wire Feed Rate:	0 to 75 IPM (0 - 190 cm/min)	0 to 75 IPM (0 - 190 cm/min)	0 to 75 IPM (0 - 190 cm/min)
Spool Holder:	0.3 lb. (0.14 kg) *25 lb (10 kg) <i>option off-board</i>	0.3 lb., 2 lb. (0.14 kg, 1 kg) *25 lb (10 kg) <i>option off-board</i>	0.3 lb., 2 lb. (0.14 kg, 1 kg) *25 lb (10 kg) <i>option off-board</i>
Oscillator Travel:	0 to 0.75" (0 - 19 mm)	0 to 0.75" (0 - 19 mm)	0 to 0.75" (0 - 19 mm)
Oscillator Rate:	50 IPM (127 cm/min)	50 IPM (127 cm/min)	50 IPM (127 cm/min)
Axial Clearances			
Total Depth (osc. out):	7.20" (182.9 mm)	7.82" (198.6 mm)	8.07" (205.1 mm)
Rear Face to Tungsten:	5.93"/5.18" (150.5/131.5 mm)	6.52"/5.77" (165.6/146.6 mm)	6.80"/6.05" (172.6/153.5 mm)
Forward Face to Tungsten:	1.28" (32.4 mm)	1.28" (32.4 mm)	1.28" (32.4 mm)
Radial Clearance			
Center of Work to O.D.:	**5.25" (133.4 mm)	7.10" (180.3 mm)	8.20" (208.3 mm)
Overall Length:	11.67" (296.5 mm) <i>**Off-board wire spool</i>	14.64" (371.8 mm)	17.96" (456.1 mm)

*Optional AVC/Oscillation Module for M Series Weld Heads

AVC: Provides 1" (25 mm) servo driven motion and 1.18" (30 mm) manual adjustment.

OSC: Provides ¾" (19 mm) servo driven motion and ¾" (19mm) manual adjustment.

Requires 4 axis weld power supply



***Wire drive and Off-board spool shown in separate enclosure configuration, wire spool on weldhead shown for radial clearance only.*



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