



Full Function 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 (.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 GTAW torch with touch start arc 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 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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Specifications	M250	M400	M600	M1000
Pipe Size Range:	0.5" to 2.5" (12.7 - 63.5mm)	0.5" to 4" (13 - 102mm)	1 to 6" (25 - 152mm)	2 to 10" (51 - 254mm)
Maximum Pipe/Tube O.D.:	.80" to 3.00" (Ø 20 - 76 mm)	.80" to 4.50" (Ø 21 - 115 mm)	1.30" to 6.70" (Ø 33 - 170 mm)	2.40" to 10.80" (Ø 60 - 275 mm)
Rotor Surface Speed:	0.2 to 20 ipm	0.2 to 20 ipm	0.2 to 20 ipm	0.2 to 20 ipm
Wire Size:	.035" to .040" (Ø 0.9 - 1.0 mm)	.035" to .040" (Ø 0.9 - 1.0 mm)	.035" to .040" (Ø 0.9 - 1.0 mm)	.035" to .040" (Ø 0.9 - 1.0 mm)
Wire Feed Rate:	0 to 100 IPM (0 - 250 cm/min.)	0 to 100 IPM (0 - 250 cm/min.)	0 to 100 IPM (0 - 250 cm/min.)	0 to 100 IPM (0 - 250 cm/min.)
Spool Holder:	0.5 lb. (.25 kg) 25 lb option off-weldhead	0.5 lb., 2 lb. (.25 kg, 1 kg) 25 lb option off-weldhead	0.5 lb., 2 lb. (.25 kg, 1 kg) 25 lb option off-weldhead	0.5 lb., 2 lb. (.25 kg, 1 kg) 25 lb option off-weldhead
Oscillator Travel:	0 to 0.75" (0 - 19 mm)	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	50 IPM	50 IPM	50 IPM
AVC Travel:	0.75" (19 mm)	0.75" (19 mm)	0.75" (19 mm)	0.75" (19 mm)
Axial Clearances				
Total Depth (osc. out):	4.76" (120 mm)	4.76" (120 mm)	4.76" (120 mm)	4.76" (120 mm)
Rear Face to Tungsten:	4.26"/3.26" (106.5/81.1 mm)	4.26"/3.26" (106.5/81.1 mm)	4.26"/3.26" (106.5/81.1 mm)	4.26"/3.26" (106.5/81.1 mm)
Forward Face to Tungsten:	0.5" (13 mm)	0.5" (13 mm)	0.5" (13 mm)	0.5" (13 mm)
Radial Clearance				
Center of Work to O.D.:	2.85" (72.0mm)	4.23" (106 mm)	5.75" (145 mm)	8.37" (212 mm)
Overall Length:	8.20" (208 mm)	11.4" (289 mm)	12.4" (315 mm)	16.65" (423 mm)

*CE Compliant Version Available

*Optional AVC/Oscillation Module for M Series Weld Heads

- Provides 1 ½" AVC motion (¾" servo driven and ¾" manual adjustment)
- Provides 1 ½" OSC motion (¾" servo driven and ¾" manual adjustment)
- Requires 4 axis weld power supply



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



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