OrbiMIG II™

Orbital MIG Welding System

The innovative design of the OrbiMIG II™ is setting a new industry standard for automatic MIG welding. An ideal system for pipeline, power piping, process piping, large diameter vessel and weld overlay applications; specifically, heavy-wall and high-temperature/high pressure service piping. With the speed of MIG and the repeatability of PC-based control, the OrbiMIG II™ welding system gets the job done fast and exceeds the user's code, quality and production requirements.

System Components

The OrbiMIG II™ System includes our LCX™ Universal PC-Based controlled, integrated GMA welding power supply with travel, wire feed, oscillation, arc gap controls and our *Orbital Pendant* for parameter control at the weld joint. Available water cooled head provides full function capability.

Exclusive Features

All position 360° Orbital MIG welding capability. Automatic, open root/butt capability without using copper backing rings.

Power Supply

The OrbiMIG II™ system utilizes commercially available, advanced multi-process, inverter power supplies. Available systems can provide up to 450 amps welding current, 100% duty cycle for maximum productivity.

Available Weld Head

Our new K Head™ provides full function capability in a lightweight package while maintaining an industry leading 6.5" radial clearance. Water cooled torch uses commercially available consumables and incorporates tilt/lead/lag adjustments. The innovative quick release clutch mechanism combined with our patented Dimetrics track systems allows for quick set up to maximize weld efficiency. High speed servo motors provide travel speeds to 45 ipm (114 cm/min) and wire speeds to 800 ipm (2,032 cm/min). The on-board wire spool holder allows use of flux core or solid wire.

LIBURDI DIMETRICS®

Weld Quality Starts in the Arc

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LCX™ Universal Weld Controller

- PC Based Controller
- VGA LCD screen
- Remote Orbital Pendant
  (*Optional configurable key pendant)
- PRODUCTION or TEACH mode selection
- Ethernet/USB connectivity
- Multi Language support

Pushbutton Controls

• Operation Modes:	Weld/Test
• Welding Functions:	Sequence Start/Stop Manual PURGE
• Program Functions:	CTRL-LOAD CTRL-SAVE CTRL-COPY CTRL-PRINT

Programmable Welding Parameters

- Internal memory storage holds up to 100 welding procedures, each with 16 segments
- USB interface for loading and backup of welding schedules
- On screen weld schedule programming with over ride limit values, data logging and fault bands

Initial and Final Parameters

• Pre-Purge/Post Purge:	0 - 999 seconds
• Travel Direction:	Forward / Reverse
• Proximity:	1 – 99 percent
• Segment Advance Mode:	TIMED / MANUAL
• Wire Retract:	0 - 2.0 inches

Segment Parameters

• Segment Time:	0 - 999.9 seconds
• Slope Time:	0 - 999.9 seconds
• Oscillator Amplitude (width):	0 - 1.80 inches
• Oscillator Excursion:	0.1 - 2.50 seconds
• Oscillator IN / OUT Dwell:	0.1 - 2.50 seconds
• Pulse Mode:	CV/CC/Pulse MIG
• Wire Jog Feed / Retract:	0 - 800 IPM (20m/min)
• Travel Jog Rate:	0 - 60.0 IPM (1.5m/min)
• Voltage/Trim:	0 - 100

General

• Dimensions:	37”D x 23”W x 47”H (940 x 584 x 1,194mm)
• Net Weight:	300 lbs. (130kg)
• Inert Gas Control:	5 to 50 SCFH @ 40 to 60 (2.4 to 24m/min @ 280-420 kPa) PSI: Internal gas control solenoid

Electrical
Primary Input Power

• Input Voltage:	208/230/400/460/575 VAC +/- 10%
• CE Version:	3 x 400V+/-15%, 50/60 Hz 16A
• Line Current:	30 Amperes @200 VAC
• Frequency:	50/60 Hz, Three Phase

Secondary Output

• Welding Range:	up to 450 Amperes
• Peak Current:	450 Amperes* *with suitable power source*
• Duty Cycle:	100% up to 450 amperes
• Continuous Power:	6 KW
• Voltage:	20 Volts @ 450 amperes
• Cooling:	Forced Air

K Head™

• Pipe Size Range:	4” nominal and up; (Ø114.3mm O.D.)
• Flat Surfaces:	Rigid Flat Track
• Curved Surfaces:	Flexible Track
• Axial Clearance:	20 inches (510mm)
• Radial Clearance:	6.5 inches (165mm)
• Torch Rating:	500 amperes, 100% duty cycle
• Torch Cooling:	Water Cooled
• Torch Lead/Lag:	+/-45°
• Oscillator Stroke:	2.00” (51mm)
• Weld Direction:	Dual direction
• Wire Diameter:	.030” to .062” (Ø0.8-1.6mm)
• Wire Spool: (on board holder)	8” (Ø200mm)(10 lb.) Standard, (15 lb.) Option
• Weight:	20 lbs. (9kg)
• Cable Length:	35’ (11m)
• Extension Cables:	increments of 50ft(15mm) or 100ft(30mm)

** Optional Orbital Pendant with Lens Shield Available*

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