



1409 4th Street
Nisku, AB T9E 7M9
Phone: 780-955-3907



RAS
Welding Systems



979 Drennan Road
Conroe, Texas 77303
Phone: 713-400-8660

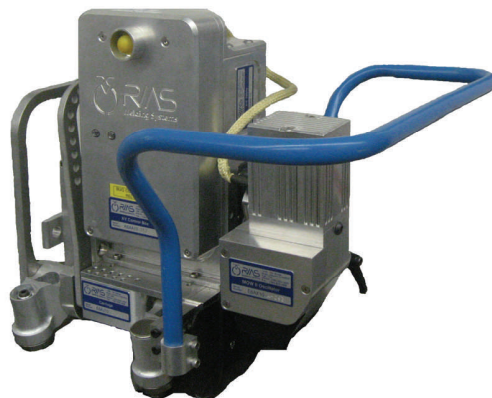
MECHANIZED ORBITAL WELDER MOW II FCAW

LEADING TECHNOLOGY

The MOW II is an industry leading **mechanized welding system**. The MOW II FCAW system offers digital control and monitoring of all critical weld parameters, and features through-the-arc tip-to-work distance tracking.

The system is configured in single-torch. One weld station is capable of performing hot, fill and cap pass welding.

The MOW II FCAW system consists of an external welder, torch assembly, pendant control, voltage control, current control, and remote wire feeders. The welding process is controlled by a hand-held pendant that can be field programmed with multiple welding procedures quickly and securely.



This system is ideal in slower production work environments and features the benefits of mechanized welding (higher deposition, increased consistency) and eliminates the need for a pipe facing crew.

Trials have indicated 33% production increase with the MOWII FCAW system over manual welding on 30", 0.750" WT. Productivity factor increases as wall thickness and diameter increase.

ADDITIONAL FEATURES

The MOW II FCAW system features through-the-arc tip-to-work distance tracking that maintains a constant amperage or voltage.

The MOW II FCAW system comes equipped with an easy to use remote control pendant that allows the user to modify weld specifications such as oscillation width, dwell time, travel speed, start and stop positions on the fly. The weld procedures can also be set and secured easily to prevent any unwanted changes to the parameters.

Can be packaged in either a shack environment with a wall mount wire feed or in a suitcase application for bell holes and fabrication work.

USES FOR MOWII FCAW

Tie Ins – Can be used with a short circuit controlled bead ie. Lincoln STT/ Fronius CMT/ Miller RMD to produce a low hydrogen weld and eliminate the 24 hour delay for quick inspection and backfill.

Mainline – Can be used in conjunction with SMAW bead and hot pass for lower production environments

Fabrication Work – Irathane Pipe in Oilsands applications. The system allows for precise heat input control and remote shut off capability necessary for working with internally lined pipe. This system has also been employed in mechanized pipe to fitting connections.

Feature	Benefit
Digital signal processor and micro processor control	Consistent weld quality and weld data traceability
Increased deposition rate	Higher production rates
Ease of operation	Expedited training process
Factory Bevels	No facing equipment or crew required
Consistent weld properties	Quality, repeatable welds



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MOW II FCAW

Welding Power Supplies Supported

Fronius TPS Series
Lincoln 350 PRO, DC 400
Miller 456MP, XMT304
Contact RMS for other power source support

Mechanical & Electrical Specifications

Physical Dimensions (Single Torch)		Horizontal & Vertical	
Length	241mm (9.5")	Horizontal Adjustment	Uses Digital Stepper Motor
Width	419mm (16.5")	Vertical Adjustment	Uses Digital Stepper Motor
Height	337mm (13 1/4")	Vertical Axis Stroke	2.0"
Weight	13.1 kg (29 lbs)	Horizontal Axis Stroke	1.5"
Operating Temperature Range	-50°C – +50°C (-60°F – +120°F)	Head Angle Adjustment	+/- 15 deg.

Oscillation		Welding Wire	
Oscillation Motor (DC Brush-type)	Controlled via digital encoder	Wire Spool Weight	4.5—18 kg (10—40 lbs)
Oscillation Rate	0 bpm – 300 bpm	Wire Feed	200 ipm – 750 ipm
Oscillation Width	0 – 1"	Wire Stop Delay	0 – 1000 ms
Dwell Time (Side Independent)	0 – 1 sec per side	Crater Fill Time	0 – 1000 ms

Travel		Controls	
Travel Motor (DC Brushless)	Controlled via Hall Effect Sensors	Voltage/Amperage Control	Automatic
Travel Speed	7.5-12.5 ipm	Communications	CAN
Travel Speed Adjustment (via pot)	0 - 100% Linear	Parameter Memory	1 - 32 procedure records
		Tilt Sensor	+/- 1% Accurate

Power		System Power	
Generator Requirements	30kVA at a variety of voltages, depending on the power source		
		System Power	120V-240V to DC 28V

Programmable Welding Parameters

- Direction of Travel - Pipe Diameter - Technician Security Code - Procedure Name - Procedure Enable / Disable - Travel Speed, Limits & Direction - Synergic Line - Hot Start Voltage - Inclinometer Start & Stop - Oscillation Width & Limits	- Oscillation Rate & Limits - Oscillation Dwell & Limits - Vertical Tracking Enable / Disable - Vertical Tracking Setpoint (Amperage or Voltage) - Vertical Tracking Correction Speed - Wirefeed Speed, Limits & Stop Delays - Arc Length Correction Setpoint & Limits - Dynamic & Pulse Correction Setpoints - Crater Fill Time - Gas Type (Dual Gas Supported)
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