

Power REAM™

Robotic Torch Maintenance Center

Maintain high quality and productivity in your MIG robotic welding cell with the Power REAM from Lincoln Electric. This automatic nozzle cleaning station removes and reduces spatter accumulation for improved performance. The Power REAM clamps the torch nozzle firmly in place while a constant torque air-motor drives a high-speed reamer, cutting away spatter from the nozzle, contact tip, and gas diffuser. A vortex action anti-spatter sprayer provides a radial spray pattern to uniformly coat the inside of the nozzle for superior protection against weld spatter buildup.



Processes

Reamer Sprayer Wire Clipper

Advantage Lincoln

- The Power REAM delivers features unmatched in current competitive models. The design of the Power REAM offers a simple pushbutton “No Error” programming technique, with the added advantage of interactive process monitoring.
- The Power REAM is the only reamer to offer an automatic retry feature. It detects when excessive spatter builds up, preventing the reamer from fully extending into the nozzle. When this occurs, the reamer retracts and automatically retries.
- Diamond-shaped clamp design provides a positive, self-centering grip on all nozzle sizes.
- Input and output signals are easily configured, allowing easy integration for all makes and models of robot systems.
- Maintenance features such as on-board diagnostic indicator lights and error codes allow trouble-free setup, fast maintenance, and easy replacement of standard components.
- One year warranty on parts and labor.
- Standard integrated wire clipper provides consistent wire stickout and removes the ball end of the welding wire to provide superior arc starting performance for .030”- 1/16” (0.8-1.6mm) solid wires.

Description

Output    Input  

Base Unit Includes

- Reaming Station (5/8” reamer bit included)
- Spray System
- Wire Cutter
- 20 ft. (6.0m) Input Cable

Recommended General Options

Power Ream Robot Cable, Remote Power Ream Reservoir Kit, Reaming Bit, Anti-Spatter Fluid, Power Ream Utility Stand

Order

K2391-1 Power REAM

TECHNICAL SPECIFICATIONS

Product Name	Product Number	Input Power	Input Air Pressure and Flow	Rated Output	Input Current	Dimensions H x W x D inches (mm)	Net Weight lbs (kg)
Power REAM	K2391-1	24V DC	80 PSI 15 SCFM	1100 rpm, 0.65 HP	0.50A DC	with reservoir attached 24.9 x 8.9 x 13.2 (633 x 228 x 337) without reservoir 19.5 x 8.9 x 13.2 (495 x 228 x 337)	62 (28)

PERFORMANCE

The Power REAM controls the entire reaming process with its internal microcontroller. Every aspect of the reaming cycle is commanded, monitored and checked by the controller. The feedback signal to the robot is a true “complete” signal indicating that the entire sequence has been executed without error.



KEY CONTROLS

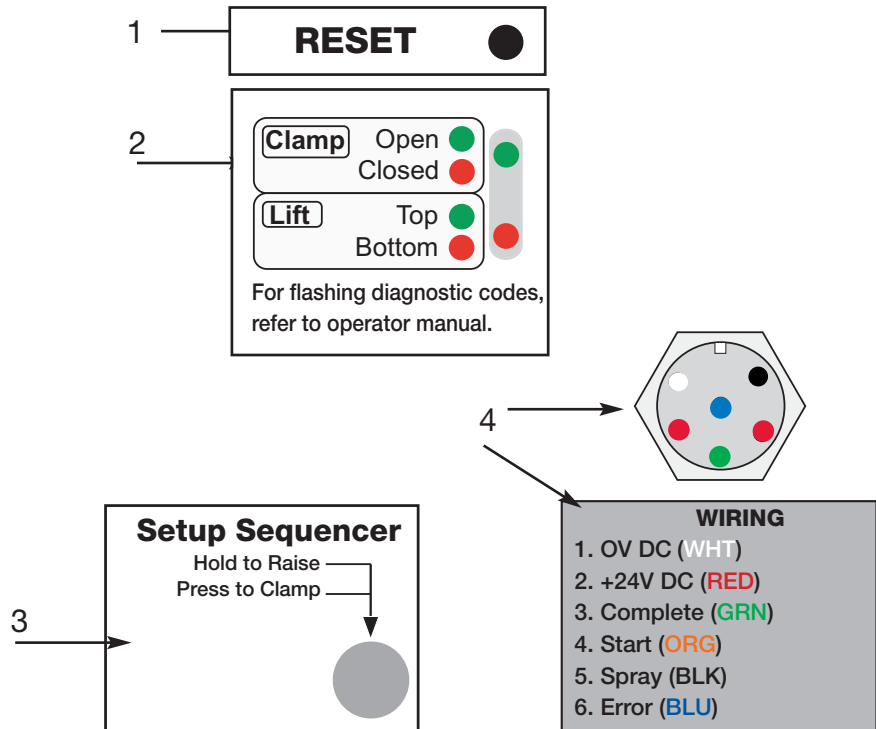
1 Fail-safe reset pushbutton overrides the microcontroller’s commands to the cylinders and sends them back to their home position.

2 Diagnostic LEDs are visible to an operator and provide an indication of the position of the air cylinders. If an error occurs, corresponding flash error codes make troubleshooting much easier.

3 “No Error” programming: The setup push-button is used to sequence the reamer solenoids for easy programming of the correct position the very first time. Subsequent pressing of the button will raise the reaming head (without spinning the ream bit), then grip and release the nozzle.

4 Easy configuration of sinking vs. sourcing inputs and outputs. No need to open the case to set internal dip-switches during installation!

-Error signal feedback to the robot: If an error occurs in the process, then the Power REAM returns to its home position and sends an error signal to the robot.



QUALITY AND RELIABILITY

- Powerful constant torque drive system provides non-stall capability. The motor travels with the reaming bit, a design feature that aids reliability and extends motor service life, up to 2.4 million cycles.
- Reaming bits are precision manufactured from tool steel with titanium nitride coating.

- Dry-run feature helps prevent accidental damage to the unit.
- Synchronous timing belt does not allow slippage, avoiding excessive belt wear.
- Wire cutter jaws designed for up to 90,000 cycles.
- One-year warranty on parts and labor.

GENERAL OPTIONS



Power Ream Robot Cable
20 feet (6.0m) replacement control cable. Reamer side has a thread on connector. Controller side has stripped wires for connection to a terminal strip.
Order K2433-1



Anti Spatter Fluid
1 Gallon
Order KP2457-1



Remote Power Ream Reservoir Kit
Includes mounting bracket and fittings to remount the anti-spatter spray reservoir from the top of the reamer to another location within the robotic cell.
Order K2434-1



Power Ream Utility Stand
Lifts Power Ream to convenient work height.
Order L10412-51



Reaming Bit 1/2" (12mm)
Spatter reaming bit for a 1/2" I.D. gun nozzle.
Order KP2435-1



Reaming Bit, 5/8" (15.5mm)
Spatter reaming bit for a 5/8" (15.5mm) I.D. gun nozzle.
Order KP2435-3



Reaming Bit, 3/4" (19mm)
Spatter reaming bit for a 3/4" (19mm) I.D. gun nozzle.
Order KP2435-5

POWER REAM ORDER FORM

PRODUCT DESCRIPTION	ORDER NUMBER	QUANTITY	PRICE
POWER REAM	K2391-1		
RECOMMENDED GENERAL OPTIONS			
Power Ream Robot Cable, 20 ft. (6.1m)	K2433-1		
Remote Power Ream Reservoir Kit	K2434-1		
Reaming Bit, 1/2" (12mm), w/ Washer	KP2435-1		
Reaming Bit, 5/8" (15.5mm), w/ Washer	KP2435-3		
Reaming Bit, 3/4" (19mm), w/ Washer	KP2435-5		
Anti Spatter Fluid, 1 Gallon	KP2457-1		
Power Ream Utility Stand	L10412-51		
	TOTAL:		

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for advice or information about their use of our products. We respond to our customers based on the best information in our possession at that time. Lincoln Electric is not in a position to warrant or guarantee such advice, and assumes no liability, with respect to such information or advice. We expressly disclaim any warranty of any kind, including any warranty of fitness for any customer's particular purpose, with respect to such information or advice. As a matter of practical consideration, we also cannot assume any responsibility for updating or correcting any such information or advice once it has been given, nor does the provision of information or advice create, expand or alter any warranty with respect to the sale of our products.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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