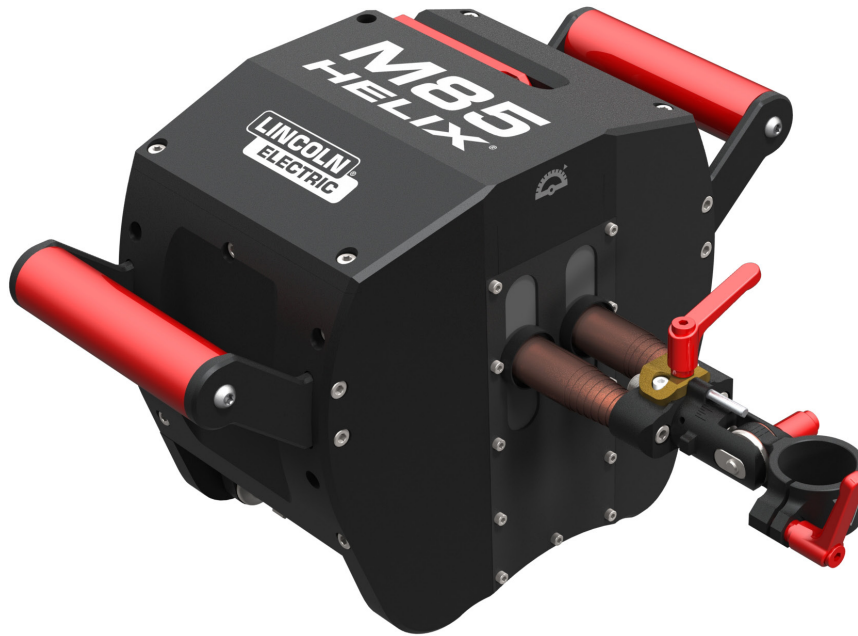


# HELIX M85 WELD HEAD

THE BENCHMARK FOR MULTI-PROCESS MECHANIZED WELDING



## KEY FEATURES

The HELIX® M85 is the first next-generation orbital welding head. It incorporates digital capabilities in an intuitive ergonomic design, bringing the hyphenate: best-in-class for all of your orbital and plate welding needs from GMAW and FCAW to GTAW and Hot Wire Laser.

The HELIX M85 weld head removes the steep learning curve that is required with most other orbital equipment due to its clean design. All of the motors and harnesses are packaged inside the weld head, reducing visual confusion when working in the shop and providing protection from harsh environments when out in the field. The red color coding makes it easy for new operators to identify where adjustments to the weld head can be made.

With a light weight, compact and durable design, the M85 weld head's low axial clearance enables welding close to flanges and other obstructions near the joint. An inclinometer is included in its mechanics and major upgrades can be accomplished with limited technical capability due to the digital nature of the weld head. To add onboard wire-feeding capability, only a simple Allen wrench is required. Everything else just plugs in line with the common control cable.

The mechanized APEX® 3 Series welding system sets up quickly and delivers precision calculation and control of travel time, weld distance, weld speed and other essential variables. The HELIX M85 weld head, a central component of this system, provides consistent, high quality results with little or no time wasted on setup or rework.

**Processes »**  
GMAW/FCAW, GTAW,  
HOT WIRE GTAW

**Applications »**  
Fabrication, Pipeline,  
Power Generation,  
Pressure Vessels, Process Pipe

**Input »**



**Product Number »**  
K52101-1

## PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Input Current	Travel Speed ipm (mm)	Clearance - in (mm)		Oscillation Stroke in. (mm)	Motorized Height Control Stroke in (mm)	Lead/Lag	Torch Tilt		H x W x D in (mm)
					Radial	Axial				In	Out	
HELIX® M85 Weld Head	K52101-1	24V DC	9A Max	0.1 min-120 max (2.54 min-3048 max)	8.5 (215.9)	19.75 (501.7)	2.00 (50.8)	2.00 (50.8)	360°	60° max	30° max	8.33 x 14.25 x 6.85 (211.6 x 362.0 x 174.0)

## RECOMMENDED ACCESSORIES

DESCRIPTION		Product Number
<b>HELIX M85 WELD HEAD AND ACCESSORIES</b>		
Torch Dropper 5 in (127 mm)		KP52164-05
Torch Dropper 8 in (203 mm)		KP52164-08
Torch Dropper 10 in (254 mm)		KP52164-10
Torch Holder Assembly 1.25 in (31.8mm)		K52222-125
Torch Holder Assembly 1.38 in (34.9 mm)		K52222-138
Torch Holder Assembly 1.50 in (38.1 mm)		K52222-150
Universal Torch Holder		K52242-1
HELIX Control Cable, 15 ft. (4.6 m)		K52107-15
HELIX Control Cable, 25 ft. (7.6 m)		K52107-25
HELIX Control Cable, 50 ft. (15.2 m)		K52107-50
<b>HELIX M85 TORCHES</b>		
Magnum PRO 550 Mechanized 15 ft (4.6 m) cable length	<b>GMAW</b>	K52106-15
Magnum PRO 550 Mechanized 25 ft (7.6 m) cable length	<b>GMAW</b>	K52106-25
Magnum PRO 550 Mechanized 10 in barrel (254 mm) 15 ft (4.6 m) cable length	<b>GMAW</b>	K52153-15
Magnum PRO 550 Mechanized 10 in barrel (254 mm) 25 ft (7.6 m) cable length	<b>GMAW</b>	K52153-25
Magnum PRO 550 LP12 Mechanized 25 ft (7.6 m) cable length	<b>GMAW</b>	K52223-25
PTW-18M-500 Mechanized 25 ft (7.6 m) cable length	<b>GTAW</b>	K52229-25
Wire Guide Torch Clamp Kit	<b>GTAW</b>	K52232-1
<b>HELIX M85 ONBOARD WIRE FEEDERS &amp; WIRE MANIPULATOR KITS</b>		
HELIX SF70A-1 M85 Onboard Wire Feeder	<b>GMAW</b>	K52230-1
HELIX SF70A-2 M85 Onboard Wire Feeder	<b>GMAW</b>	K52230-2
HELIX SF70A-1 M85 Onboard Wire Feeder & Wire Manipulator Kit	<b>GTAW</b>	K52245-1
HELIX SF70A-2 M85 Onboard Wire Feeder & Wire Manipulator Kit	<b>GTAW</b>	K52245-2



HELIX M85 Weld Head shown with: K52106-15 Torch



HELIX M85 Weld Head shown with: K52230-1 Wire Feeder and K52223-25 Torch



HELIX M85 Weld Head shown with: K52245-1, Onboard Wire Feeder & Wire Manipulator Kit  
K52229-25, Torch  
K52222-138, Torch Holder  
K52245-2, Onboard Wire Feeder & Wire Manipulator Kit  
K52232-1, Wire Guide Torch Clamp Kit

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The Lincoln Electric Company

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