

# HELIX<sup>®</sup> M627

## ORBITAL WELD HEAD



### MECHANIZED GTAW - SIMPLIFIED

The HELIX M627 is the next innovation in our mechanized HELIX M Series orbital weld heads. With a low radial clearance of 2.87 in. (72.9 mm), the HELIX M627 weld head allows for precise, digitally controlled welding in a wide range of pipe and tube GTAW applications. With complete process control and operator-friendly design, the HELIX M627 delivers the market's leading solution for productivity and quality with mechanized GTAW.

#### Processes »

GTAW, Pulsed

#### Applications »

Fabrication, Power Generation, Pressure Vessels, Process Pipe

#### Output » Input »



#### Product Numbers »

K52283-1 – HELIX M627 Weld Head  
K52285-1 APEX<sup>®</sup> 30S M627 TIG Ready-Pak<sup>®</sup>

## KEY FEATURES

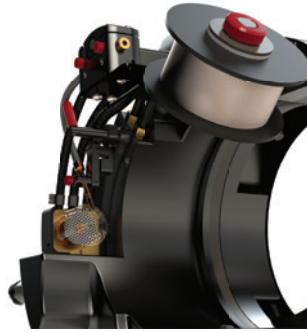
### Best-in-Class Performance

- Utilizing the latest in digital motor control technology, the HELIX M627 features consistent performance without the need for manual calibration at startup.
- APEX Auto Height, Auto Sector and AutoPilot Technology provides advanced travel speed and true oscillation width/speed control that delivers repeatable welds with minimal setup
- Automated control features minimizes operator training while improving operator availability.

### Versatile Design

- Low radial clearance – 2.87 in [68.5mm]
- Water-cooled motor housing and torch helps eliminate overheating
- Proven, versatile clamping mechanism allows the weld head to be disengaged and repositioned with one easy motion
- Interchangeable with HELIX M series family of weld heads.

## KEY CONTROLS



1. Integrated Wire Feeder
2. Water-Cooled Head

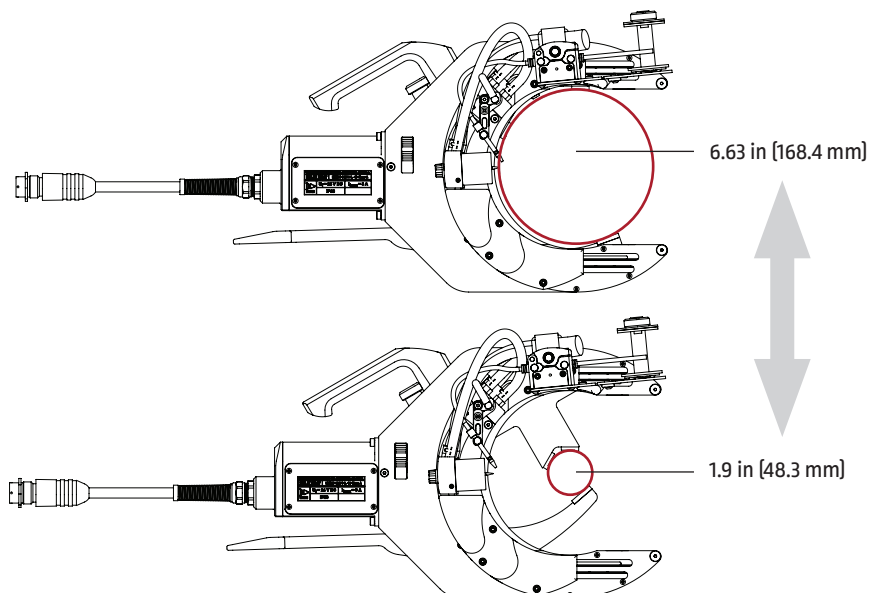


1. Simple Cable Management
2. Robust Design

## CONFIGURATION

### Application Flexibility

The HELIX M627 weld head provides flexibility for a wide range of tube and pipe applications, allowing quick adjustments to fit diameters ranging from 1.9 - 6.63 in [48.3 – 168.4 mm]



## WHATS INCLUDED



### HELIX M627 WELD HEAD – K52283-1

- HELIX M627 Weld Head
- Pelican Case for weld head storage
- HELIX M Clamp Expendables Kit
- Low Profile TIG Torch
- Low Profile Cable Retainer
- Clamp Shoe 6.625 in (168.3 mm)
- Clamp Shoe 5.563 in (141.3 mm)
- Clamp Shoe 4.5 in (114.3 mm)
- Clamp Shoe 4.0 in (101.6 mm)
- Clamp Shoe 3.5 in (88.9 mm)
- Clamp Shoe 2.875 in (73.0 mm)
- Clamp Shoe 2.375 in (60.3 mm)
- Clamp Shoe 1.9 in (48.3 mm)



### APEX 30S M627 TIG READY PAK – K52285-1

- Power Wave® S500 Advanced Process Welder
- APEX® 30S Mechanized Controller
- HELIX M627 Weld Head with Shoe Kit  
1.9 - 6.63 IN (48.3 - 168.3 MM)
- APEX® 3 Series TIG Pendant
- Cool Arc® 55 S Water Cooler
- Inverter and Wire Feeder Cart



## RECOMMENDED ACCESSORIES



### PART & ACCESSORIES

Part Number	Description
K52246-25	Water-Cooled Cable/Hose Extension 25 ft. (7.6 m)
KP52110-1	Low Profile Back Cap
KP4745-S	Back Cap Short
KP4745-M	Back Cap Medium
KP4745-L	Back Cap Long
KP2029-5B1	1/8 Collet
KP2029-4B1	3/32 Collet
KP2029-3B1	1/16 Collet
KP52145-1	Collet Body
KP52063-1	1/8 Tungsten Adapter
KP52063-2	3/32 Tungsten Adapter

### CLAMP SHOES

Part Number	Description
K52093-663	Clamp Shoe 6.625 in (168.3 mm)
K52093-556	Clamp Shoe 5.563 in (141.3 mm)
K52093-450	Clamp Shoe 4.5 in (114.3 mm)
K52093-400	Clamp Shoe 4.0 in (101.6 mm)
K52093-350	Clamp Shoe 3.5 in (88.9 mm)
K52093-288	Clamp Shoe 2.875 in (73.0 mm)
K52093-238	Clamp Shoe 2.375 in (60.3 mm)
K52093-190	Clamp Shoe 1.9 in (48.3 mm)
KP2093 - XXX	Custom Sizes Available

### DRIVE ROLL KITS

Part Number	Description
KP52094-030	Drive Roll Kit, Solid Wire .030 (0.8)
KP52094-035	Drive Roll Kit, Solid Wire .035 (0.9)
KP52094-040	Drive Roll Kit, Solid Wire .040 (1.0)
KP52094-045	Drive Roll Kit, Solid Wire .045 (1.2)
KP52100-035	Wire Guide Tip .030-.035 in. (0.8-0.9 mm)
KP52100-045	Wire Guide Tip .040-.045 in. (1.0-1.2 mm)
K52289-035	Onboard Feeder Inlet/Outlet Guide Set .030-.035 in. (0.8-0.9 mm)
K52289-045	Onboard Feeder Inlet/Outlet Guide Set .040-.045 in. (1.0-1.1 mm)



## PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Power	Rated Current	Wire Feed Speed ipm (m/min)	Wire Diameter in (mm)	Travel Speed
Helix M627	K52283-1	24 VDC	500 A	1-300 (0.03 - 7.62)	0.030-0.045 (0.8 - 1.2)	.04-4.76 rpm

Radial Clearance* in (mm)	Axial Clearance in (mm)	Oscillation Stroke in (mm)	Height Stroke in (mm)	Dimensions H x W x D in (mm)	Net Weight lb (kg)
2.87 (72.9)	8.32 (211.3)	1 (25.4)	3.79 (96.2)	8.32 x 11.4 x 26.0 (211.3 x 289.5 x 660.4)	32(14.5)

\*On a 6.625 in diameter pipe

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