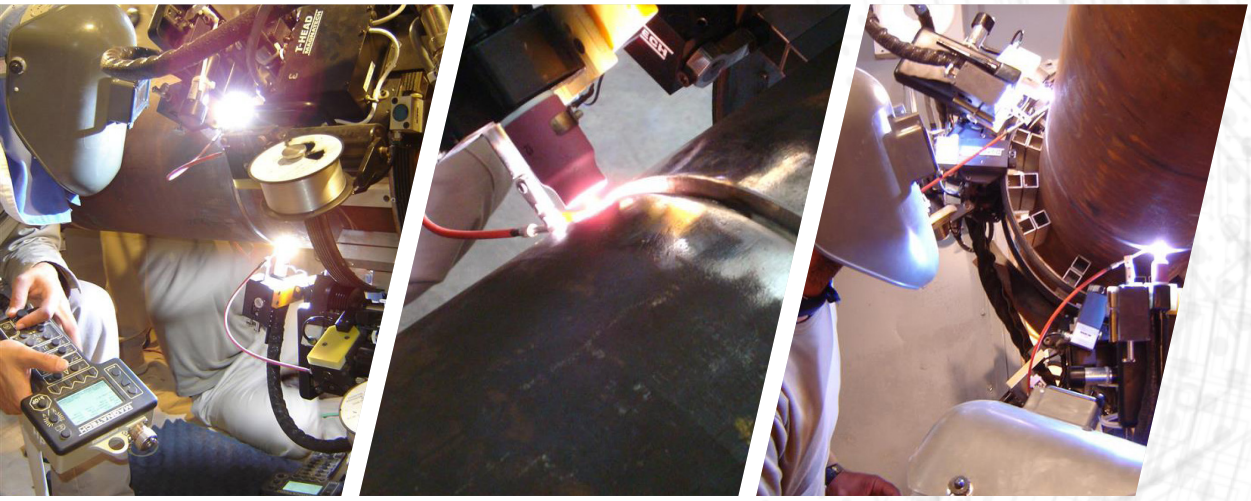
T-HEAD 419 WELD HEAD

4.5 - 84" / 114.30 - 2,134 mm o/d (larger sizes available on demand)



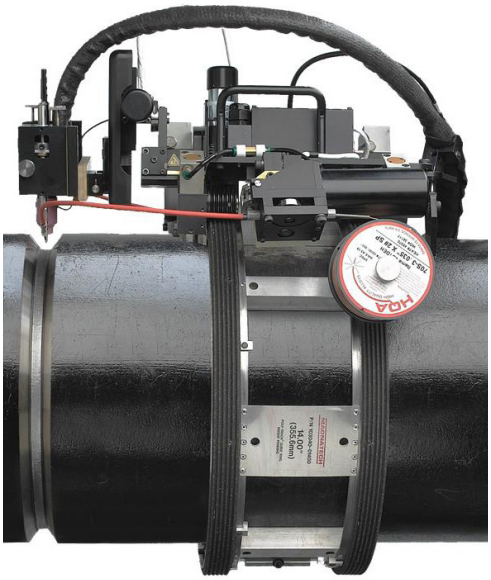
MAGNATECH
AN SPE GROUP BRAND

Daonte
Tecnología Metalmecánica

MAGNATECH T-HEAD 419 WELDING HEAD

4.5 - 84" / 114.30 - 2,134 mm o/d (larger sizes available on demand)

- **Function:** multi-pass orbital GTAW pipe-to-pipe, pipe-to-fitting
- **Materials:** carbon based and exotic alloys
- **Power supply compatibility:** Pipemaster 515 and Pipemaster 516



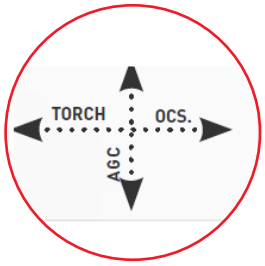
The Magnatech T-head 419 welding head is designed to make pipe-to-pipe and pipe-to-fitting welds. Its full function capabilities allows it to replicate all the motions of a skilled manual welder.

The T-Head 419 welding head is used for larger diameter/ heavy wall applications, requiring GTAW process. Interchangeable guide rings provide mounting on the pipe, and allow the welding head to cover a broad size range.

Mounting the head on an oversize guide ring with adaptor feet allows use on materials requiring preheat. In addition to welding pipe, the T Head 419 is also used for ID and OD welding on larger tanks, vessels, and ductwork. This versatility is made possible by a patented flexible track system, enabling stable installation on complex, curved surfaces.

The T-Head 419 welding head improves productivity by increasing duty cycle and reducing repair rates.

MAIN FEATURES



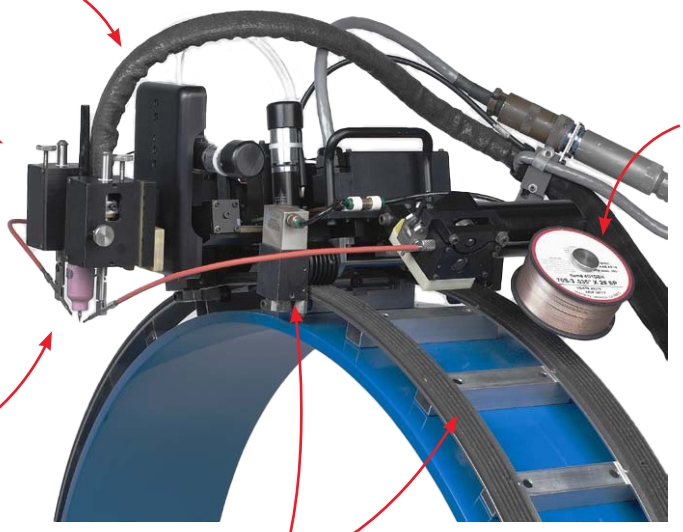
TORCH OSCILLATION (WEAVING)
Width, speed, and endpoint "dwell" independently programmable. Torch "cross seam" steering electronically controlled using remote pendant. Pulsed current automatically synchronized with torch oscillation.

ARC GAP CONTROL (AGC)
AGC allows real time control of the distance between the electrode and the workpiece by maintaining the gap rather than just the voltage alone, ensuring consistent and precise welding performance.

Water cooled torch

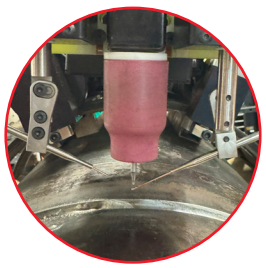
RAPID REPOSITIONNING SYSTEM
allows for quick and stable torch recentering. Up to 4" (101.6 mm) of motion.

3-AXIS POSITION ADJUSTMENT FOR FILLER WIRE NOZZLE
Multiple adjustments provide precise positioning of filler wire entry into weld puddle.



HEADMOUNTED WIRE FEEDER
Accommodates range of wire diameters:
0.030", 0.035", 0.040", 0.045"
(0.8, 0.9, 1.0, 1.2 mm).

FILLER WIRE SPOOL
Uses standard 1 kg (2 lbs) spools. Optional 5 kg (10 lbs) available upon request.



DUAL WIRE FEEDER CONFIGURATION

To allow for double up welding on larger diameters.

WELD HEAD MOUNTING/ROTATION
Patented pneumatic clamping system delivers fast, secure, and tool-free installation. Powered by compressed gas, it ensures precise, repeatable clamping while reducing setup time and enhancing safety. Clutch system allows the head to be positioned on the pipe very quickly.

MODEL

PART NO.	DESCRIPTION
419AULBPG0	T-Head 419 welding head, digital, dual wire feeder

Every T-Head 419 welding head comes fully equipped for convenience and optimal weld performance.

Includes :

- a complete wire size kit ranging from 0.030" (0.8 mm) to 0.045" (1.2 mm)
- durable wire conduits
- all required accessories to operate the head
- position switches to sectorize programming on the tube
- tool kit for mechanical adjustement
- miscellaneous screw package

All securely packed in a rugged, heavy-duty storage case for maximum protection and portability.

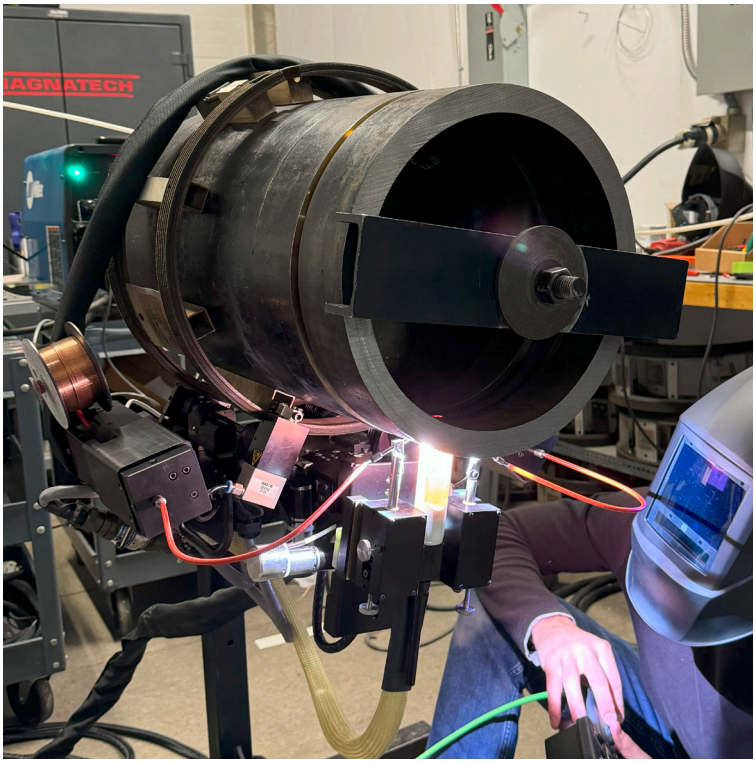
ACCESSORIES INCLUDED



DELIVERY AND STORAGE







GUIDE RINGS



The guide rings are used to fix the welding head around the pipe and to allow accurate rotation of the head around it. Rotation of the welding head around the pipe is accomplished by a friction drive system, consisting of the powered V-rollers driving against the two V-belts which are attached to the guide ring surface.

Guide rings consist of two identical half sections which hinge open.

They are available in 38 standard sizes.

Guide rings may be used on smaller pipe diameter than what they are designed for by using adaptor foot kits (see below section adaptor foot kits).

PART NO.	DESCRIPTION
103040-00663	Guide ring, 6" pipe, 6.625"/ 168.30 mm
103040-00863	Guide ring, 8" pipe, 8.625" / 219.10 mm
103040-01075	Guide ring, 10" pipe, 10.750" / 273.00 mm
103040-01275	Guide ring, 12" pipe, 12.750" / 323.9 mm
103040-01400	Guide ring, 14" pipe, 14.000" / 355.60 mm
103040-01600	Guide ring, 16" pipe, 16.000" / 406.40 mm
103040-01800	Guide ring, 18" pipe, 18.000" / 457.00 mm
103040-02000	Guide ring, 20" pipe, 20.000" / 508.00 mm
103040-02200	Guide ring, 22" pipe, 22.000" / 559.00 mm
103040-02400	Guide ring, 24" pipe, 24.000" / 610.00 mm
103040-02600	Guide ring, 26" pipe, 26.000"/ 660.00 mm
103040-02700	Guide ring, 27"pipe, 27.000" / 686.00 mm
103040-02800	Guide ring, 28"pipe, 28.000" / 711.00 mm
103040-03000	Guide ring, 30" pipe, 30.000" / 762.00 mm
103040-03200	Guide ring, 32" pipe, 32.000" / 813.00 mm
103040-03400	Guide ring, 34" pipe, 34.000" / 864.00 mm
103040-03600	Guide ring, 36" pipe, 36.000" / 914.00 mm
103040-03800	Guide ring, 38" pipe, 38.000" / 965.00 mm
103040-04000	Guide ring, 40" pipe, 40.000" / 1016.00 mm
103040-04200	Guide ring, 42" pipe, 42.000" / 1067.00 mm
103040-04400	Guide ring, 44" pipe, 44.000" / 1118.00 mm
103040-04600	Guide ring, 46" pipe, 46.000" / 1168.00 mm
103040-04800	Guide ring, 48" pipe, 48.000" / 1219.00 mm
103040-05000	Guide ring, 50" pipe, 50.000" / 1270.00 mm
103040-05200	Guide ring, 52" pipe, 52.000" / 1321.00 mm
103040-05300	Guide ring, 53" pipe, 53.000" / 1346.00 mm
103040-05400	Guide ring, 54" pipe, 54.000" / 1372.00 mm
103040-05600	Guide ring, 56" pipe, 56.000" / 1422.00mm
103040-05800	Guide ring, 58" pipe, 58.000" / 1473.00 mm
103040-06000	Guide ring, 60" pipe, 60.000" / 1524.00 mm
103040-06200	Guide ring, 62" pipe, 62.000". / 1575.00 mm
103040-06500	Guide ring, 65" pipe, 65.000" / 1651.00 mm
103040-06600	Guide ring, 66" pipe, 66.000" / 1676.00 mm
103040-06800	Guide ring, 68" pipe, 68.000". / 1727.00 mm
103040-07200	Guide ring, 72" pipe, 72.000". / 1829.00 mm
103040-07600	Guide ring, 76" pipe, 76.000" / 1930.00 mm
103040-07800	Guide ring, 78" pipe, 78.000" / 1981.00 mm
103040-08400	Guide ring, 84" pipe, 84.000"/ 2134.00 mm

ADAPTATOR FOOT KITS

Adaptor foot kits may be used with larger guide rings on smaller pipe diameters when preheating is required, preventing overheating of the weld head. They are necessary to reach pipe diameters smaller than 6.625“ / 168.30mm (down to 4.5” / 114.30mm).

Three types of adaptors can be screwed simply to the guide ring:

- 1" (25.4 mm) adaptor square tube
- 2" (50.8 mm) adaptor square tube
- .13 - .5" (3.3-12.7 mm) adaptor solid bar

(Magnatech can provide these in any dimension)

PART NO.	DESCRIPTION	PICTURE
103070-XXXX*	Adaptor foot set	

*The quantity of feet necessary for a complete set is defined by the guide ring size. Contact us for more information.

POSITION SWITCH TRIP KITS

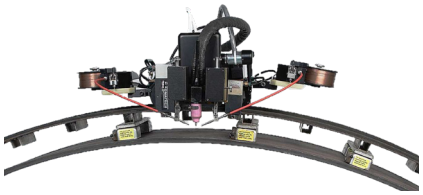
Position switches allow to divide the tube into several sectors whose parameters can be adjusted directly in the welding program.

PART NO.	DESCRIPTION	PICTURE
105156-6	Position switch trip kit, 6 positions	
105156-12	Position switch trip kit, 12 positions	

FLX-TRACK™

In addition to welding pipe, the T Head 419 welding head is also used for ID and OD welding on larger tanks, vessels, and ductwork:

- Flexible track allows mounting on complex curved surfaces.
- Standard 2.3 m (7.5’) track sections. Multiple sections can be bolted together for longer lengths.
- Magnetic or vacuum attachments are available depending on the pipe material.

PART NO.	DESCRIPTION	PICTURE
SK2460-090	Flex-Track assembly, 90" / 2,286 mm	
SK2474-1	Magnet assembly large diameter, Flex-Track	
104294-1	Vacuum cup kit 90" Flex Track	



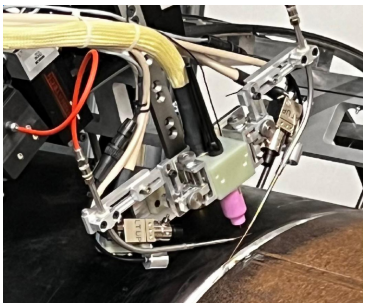


VIDEO ARC MONITORING

The Video Arc Monitoring (VAM) system is an optional feature that enhances the T-Head 419 welding head's capabilities. It integrates miniature video cameras with special filtering to allow operators to:

- Inspect fit-up before welding to ensure proper workpiece alignment.
- Monitor the weld and observe the welding puddle during the weld..
- Inspect the completed weld for quality assurance.

Available in single or dual cameras set-up.

PART NO.	DESCRIPTION	PICTURE
Available on request	Video arc monitoring for T-head 419 welding head	

EXTENSIONS CABLES

Available extension cable in 25 ft / 7.6 m and 50 ft / 15.2 m. Maximum extension allowed is 100 ft / 30.4 m, including the 25 ft of standard weld head cable.

PART NO.	DESCRIPTION	PICTURE
1003157-25P	25 ft / 7.6 m extension cable kit for Pipemaster 515 and 516	
1003157-50P	50 ft / 15.2 m extension cable kit for Pipemaster 515 and 516	

CONSUMABLES

EXPENDABLES PART KIT

The expendables parts kit includes all consumables required to operate the T-head 419 welding head: gas cup ,collet, gas lens collet body, insulator, long back cap, gas nozzle, narrow gap insulator for gas lens, tube-wire guide, wire guide tube and wire nozzle.

PART NO.	DESCRIPTION	PICTURE
EXPEND/419A	Expendables part kit Model 419A	

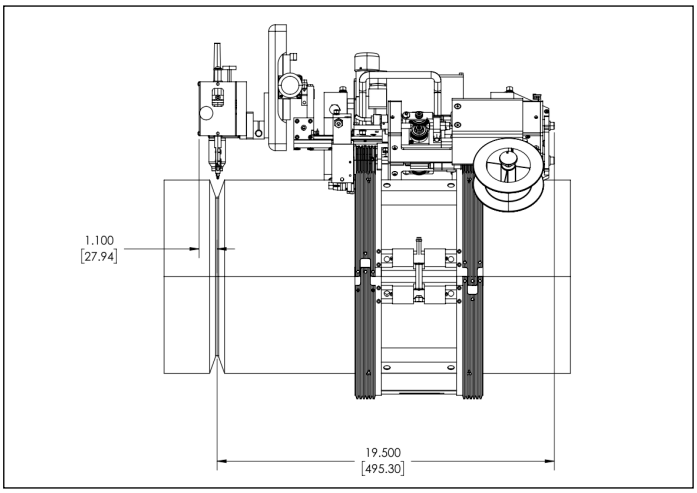
TECHNICAL SPECIFICATIONS

PIPE (TUBE) SIZE RANGE	4.5 - 84" / 114.30 - 2,134 mm	
CABLE LENGTH	25" / 7.6 m standard	
FILLER WIRE MODULE	Wire size	0.030", 0.035", 0.040", 0.045" / 0.8, 0.9, 1.0, 1.2 mm
	Max. speed capability	100 IPM / 2540 mm/min.
	Spool size	2 lbs / 1 kg standard
OSCILLATION MODULE	Max. oscillation stroke amplitude	2" / 50.8 mm
	Max. oscillation speed	60 IPM / 1.52m/min.
	Oscillation dwell	0 – 1 second
	Cross seam adjustment	3" (76.20 mm) course adjustment
ARC GAP CONTROL MODULE	2" / 50.8 mm stroke. Additional mechanical adjustment allows welding heavier wall pipe	
TORCH PROPULSION MODULE	10 IPM / 25.4 cm/min maximum rotation speed	
WATER-COOLED TORCH	300 A continuous	
TORCH ADJUSTMENT CAPABILITY	Torch lead/lag adjustment	± 30 degrees (manual)
	Torch tilt adjustment	± 15 degrees (manual)

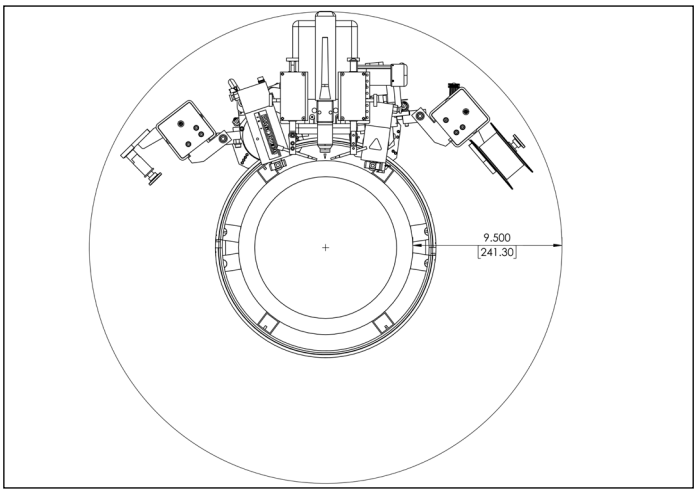
DIMENSIONS/WEIGHTS

WEIGHT	29.5 lbs. / 13.4 kg Dual wire feeders without wire spools (not including torch cable)
AXIAL CLEARANCE	Torch center line to Rear Extremity: 19.5" / 495.3 mm Torch center line to Front Extremity: 1.1" / 28 mm
RADIAL CLEARANCE	9.5" / 241.30 mm

AXIAL CLEARANCE



RADIAL CLEARANCE



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