

T HEAD

Model 419

Orbital Weld Head for
Multi-Pass GTAW Pipe Welding

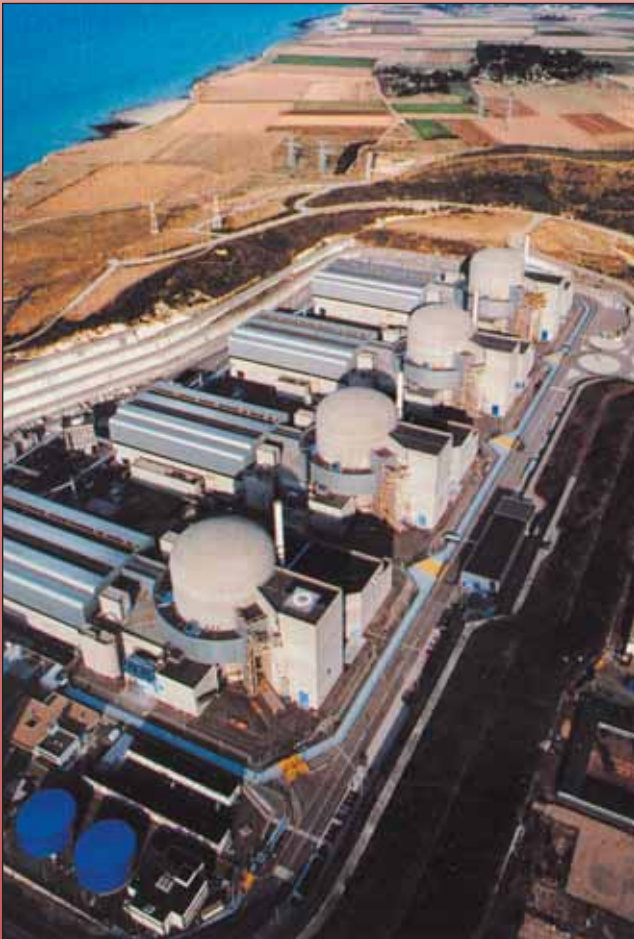


Use with

- *Pipemaster Model 516
Power Source*

Applications

- Fossil Power Plant Construction/Maintenance
- Steam Generation Equipment Fabrication
- Nuclear Power Plant Construction/Maintenance
- Chemical Facility Construction/Maintenance
- Shipyard Construction
- Gas Transmission Pipelines
- Process Piping



Options

- Extension cables
- Single or dual wire feeder configurations
- Video Arc Monitoring. Various configurations allow remote operation.

Guide Rings Allow Use on Preheated Pipe

Mounting the Head on an oversize Guide Ring with adaptor feet allows use on CrMo and other alloys requiring preheat. The adaptor feet create an air space and prevent heat damage to the Head.



Three types of Adaptors can be simply screwed to each of the standard square tubes which are mounted on the Guide Ring.

- 25mm (1") Adaptor Square tube
- 50mm (2") Adaptor Square tube
- 3-12mm (.13-.5") Adaptor Solid Bar (Magnatech can provide these in any dimension)

Flx-Track™

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

- Flexible track allows mounting on complex curved surfaces
- Standard 2.3m (7.5') Track sections bolt together for longer lengths
- Magnetic or Vacuum attachment



T Head Model 419

Orbital Weld Head for Multi-Pass GTAW Pipe Welding

Precision Tools for Perfect, Repeatable Welds

The Magnatech T Model Weld Head is designed to make pipe-to-pipe and pipe-to-fitting welds. It is "full function" – with the capability of reproducing all the motions of a skilled manual welder. The T Head is used for larger diameter/heavy wall applications, requiring the precise weld process control of Gas Tungsten Arc Welding. Interchangeable Guide Rings provide mounting on the pipe, and allow the T Weld Head to cover a broad size range. The T Head improves productivity by increasing duty cycle, reducing repair rates, and producing welds of consistent quality.

Torch Oscillation (Weave).

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 (Arc Voltage Control).

Electronically maintains programmed arc length.

Head-Mounted Wire Feeder
accommodates range of wire diameters

Filler Wire Spool.
Use standard
1kg (2lb.) spools



3-Axis Position Adjustment for Filler Wire Nozzle.

Multiple adjustments provide precise positioning of filler wire entry into weld puddle.

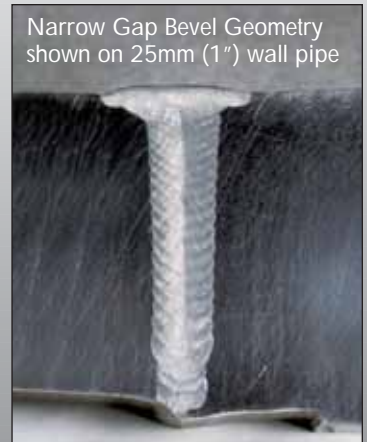
Water-cooled Torch

Weld Head Mounting/Rotation.

Guide Rings attach Head to pipe.

Features

- Full function Capability (Torch Rotation, Filler Wire Feed, Electronic Arc Gap Control, Electronic Oscillation)
- Broad size range
- Guide Rings available for standard Pipe sizes
- Water-Cooled Torch uses standard Expendables
- Tool Kit standard

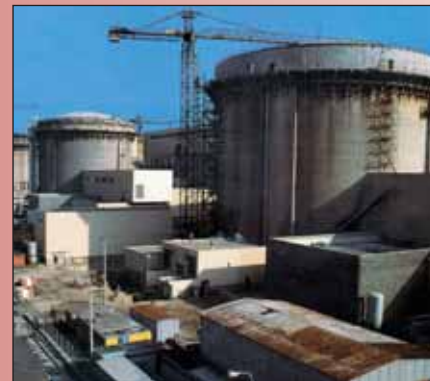


Specifications

Application	Multi-Pass Orbital GTAW pipe-to-pipe, pipe-to-fitting
Cable Length	8m (25') Standard. Extension cables available
Pipe (Tube) Size Range	168–1524mm (6-60") and larger
Filler Wire Module	Wire Size: 0.8, 0.9, 1.0, 1.2mm (.030", .035", .040, .045") Max. Speed Capability: 254cm/min. (100 IPM) Spool Size: 1kg (2 lb.) Std
Oscillation Module	Max. Oscillation Stroke Amplitude: 16mm (0.6725") Max. Oscillation Speed: 152cm/min. (60 IPM) Oscillation Dwell: 0–1 Second Cross Seam Adjustment: ±6.4mm (0.25") Fine Adjustment ±38mm (1.5") Course Adjustment
Arc Gap Control Module Stroke	66mm (2.6") Stroke. Additional mechanical adjustment allows welding heavier wall pipe
Torch Propulsion Module	25cm/min. (10 IPM) Maximum rotation speed
Water-Cooled Torch	300A Continuous
Torch Adjustment Capability	Torch Lead/Lag Adjustment: ±15 Degrees (Manual) Torch Tilt Adjustment: ±10 Degrees (Manual)
Power Supply Compatibility	Pipemaster Model 516

Weights/Dimensions

Weight	11.8kg (26 lbs.) Single wire feeder without wire spool 13.4kg (29.5 lbs.) Dual wire feeders without wire spools
Axial Clearance	Torch C/L to Rear Extremity: 495cm (19.5") Torch C/L to Front Extremity: 29cm (1.1")
Radial Clearance	25cm (9.8")



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