

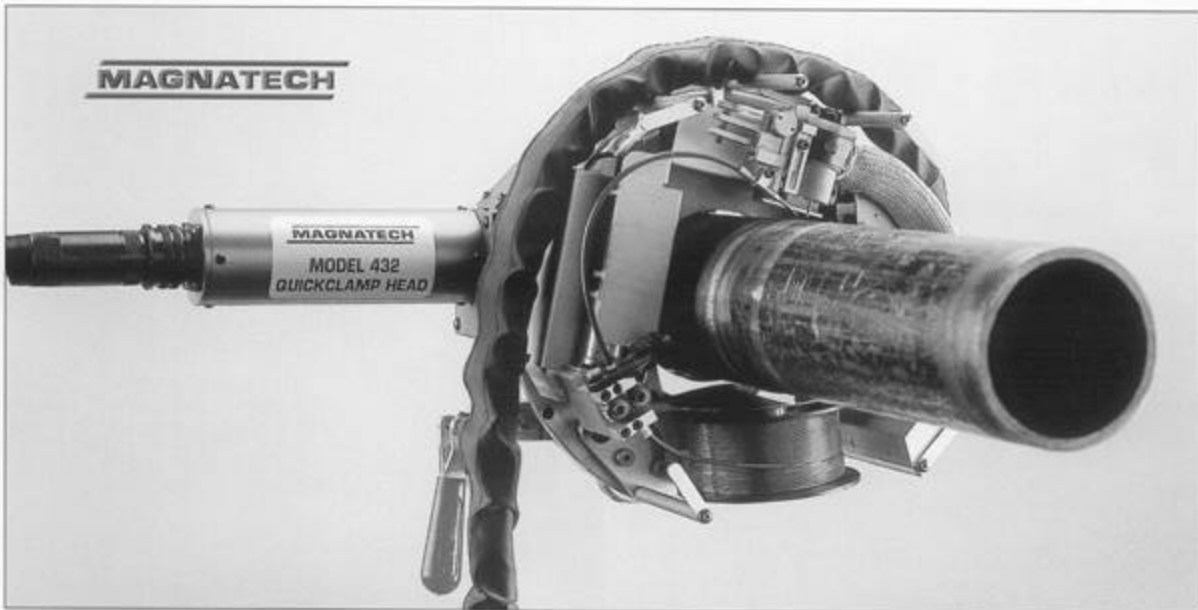
# QUICKCLAMP

## WELD HEAD MODELS 432 and 433 for Multi-Pass Orbital GTAW Pipe Welding

### PIPE WELDING TOOLS FOR INCREASING PRODUCTIVITY

The Quickclamp weld Heads are "full function" with the capability of reproducing all the precise motions of a skilled manual GTAW welder. Both models are specifically designed for multipass pipe welding applications. The weld Heads consistently produce welds meeting the most stringent code quality standards. The weld Head is simply slipped over the pipe and clamped with a toggle lever. The continuously adjustable clamp eliminates the need to interchange components when changing pipe sizes.

Used with all Pipemaster Power Source Models, these weld Heads improve productivity by increasing duty cycle, reducing repair rates and producing welds of consistent quality.



### FEATURES

- Multipass welding of tubes/pipes in all gravity positions
- Use economical standard 1 kg (2 lb.) wire spools
- Full function capability: torch rotation, filler wire feed, electronic arc gap control (AVC), electronic oscillation)
- Model 432 welds pipe 2.5cm (1") to 8.9cm (3.5")
- Model 433 welds pipe 6.0cm (2.375") to 16.8cm (6.625")
- Push button clutch for rapid cable unwind
- Heat tolerant steel bearings and chain drive
- Socket Welding Kit and Tilt AVC for angled torch applications

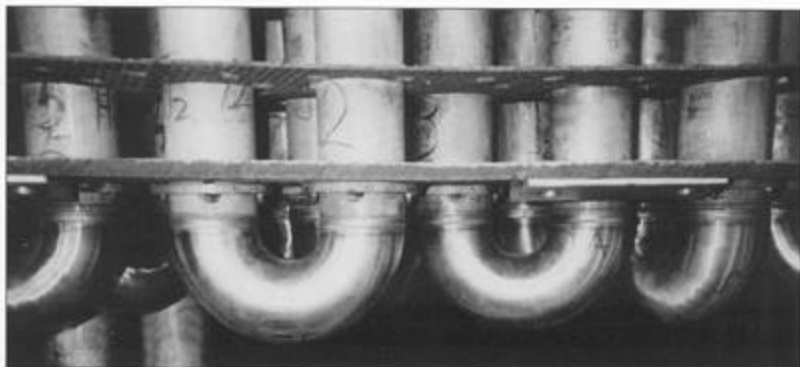
### APPLICATIONS

- Fossil power plant construction/maintenance
- Steam generation equipment fabrication
- Nuclear power plant construction/maintenance
- Shipyard construction

- Chemical/Petrochemical facility construction and maintenance
- Gas Transmission Pipelines
- Process Piping
- Fabrication shops

### OPTIONS

- Extension cables



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WELD HEAD MODELS 432 and 433  
for Multi-Pass Orbital GTAW Pipe Welding

## WELD HEAD MOUNTING/ROTATION

The weld Head is mounted on the pipe by means of an adjustable toggle clamp. The V-block is quickly adjusted to a new pipe size using an engraved scale. The wide V-block self centers and ensures that the Head is squarely mounted relative to the joint. Both Models use a chain drive system with electronic servo speed regulation.



The weld Head mounts entirely on one side of the joint, allowing use for pipe-to-fitting welds.

## WIRE FEEDER

The compact Head-mounted wire feeder is electronically controlled for accurate and repeatable filler wire delivery. Both Heads mount standard 0.9 kg (2 lb.) spools.

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

## TORCH OSCILLATION (WEAVE)

The width and speed of the torch oscillation stroke are independently programmed. Torch "Dwell" is independently adjustable at both oscillation stroke end points. A "Cross Seam Adjustment" steering control on the remote Pendant allows the welder to track the torch on the weld seam without the need for manual adjustments near the arc. Pulsed current is automatically synchronized with torch oscillation when both functions are operated simultaneously.

## ARC GAP CONTROL (ARC VOLTAGE CONTROL)

The Arc Gap Control electronically

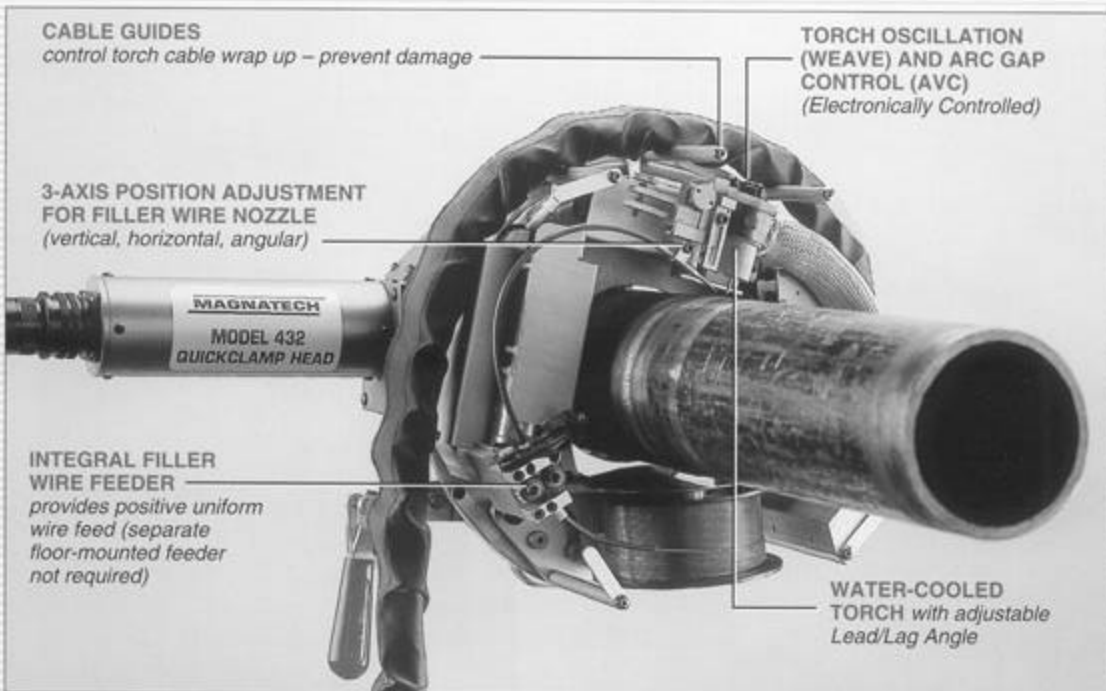
maintains a desired arc length as the torch rotates around the pipe. The entire actuator can be pivoted to allow socket welding, while maintaining the arc length correction motion along the tungsten electrode axis.

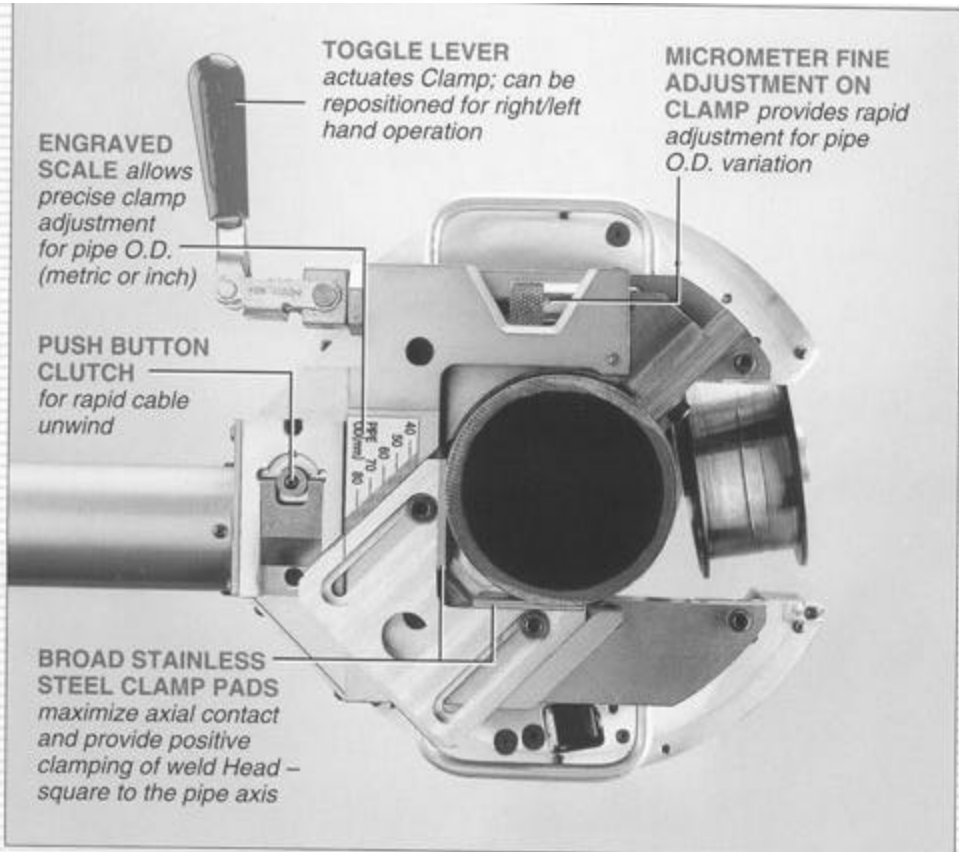
## USE ON PREHEATED PIPES

The Heads Drive Systems incorporates heat-tolerant components allowing use on Cr-Mo and other alloys requiring preheat.

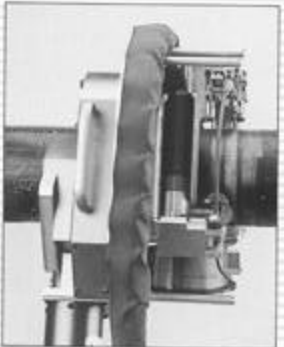


TILT-AVC standard. Both models allow the torch to be pivoted for socket/fillet welding applications, maintaining the arc length correction motion along the tungsten electrode axis (tilt-torch bracket also provided standard).





*Pivoting Spool Mount – Unique design maintains tension on wire, prevents bending (not required on Model 433)*



*Narrow Axial Profile*



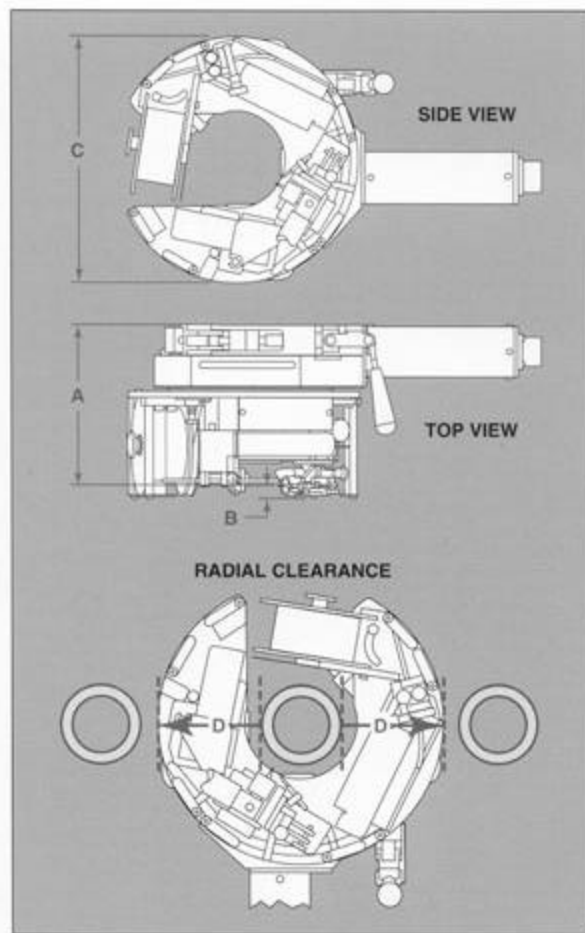
*The Quickclamp is ideal for use in Diverse Industries throughout the world*



# QUICKCLAMP Weld Head Models 432 and 433

## SPECIFICATIONS

<b>Applications</b>	
Pipe (Tube) Size	2.5cm (1") – 8.9cm (3.5") OD
Model 432	6.0cm (2-3/8") – 16.8cm (6-5/8") OD
Model 433	
<b>Filler Wire Module</b>	
Wire Size	0.8, 0.9, 1.0mm (.030, .035, .040")
Max. Speed Capability	356cm (140") per minute
Spool Size	Standard 1 kg (2 lb.)
<b>Oscillation Module</b>	
Max. Oscillation Stroke Amplitude	1.6mm (0.0625")
Max. Oscillation Speed	152cm (60") per minute
Oscillation Dwell	0–1 second
Cross Seam Adjustment	±6.4mm (±0.25")
<b>Arc Gap Control Module</b>	
Stroke	1.3cm (0.5")
<b>Torch Propulsion Module</b>	
Rotation Speed	
Model 432	0.1 – 1.8 rpm
Model 433	0.05 – 0.9 rpm
<b>Water-Cooled Torch</b>	
Amperage Capability	200 A Continuous
<b>Torch Adjust. Capability</b>	
Torch Lead/Lag Adjustment	±15 Degrees (manual)
Torch Tilt Adjustment	±10 Degrees (manual)
<b>Weight</b>	
Model 432	5.9 kg (13.0 lb.)
Model 433	8.1 kg (17.8 lb.)
<b>Power Supply Compatibility</b>	
	All Pipemaster Power Source Models



Head Dimensions	Model 432	Model 433
A. Axial Clearance (Torch Centerline to Rear Extremity)	15.8cm (6.24")	15.8cm (6.24")
B. Axial Clearance (Torch Centerline to Front Extremity)	1.0cm (0.41")	1.0cm (0.41")
C. Width	24.1cm (9.50")	32.1cm (12.63")
D. Radial Clearance Requirement	[24.1cm (9.50") - Pipe OD] ÷ 2 = Radial Clearance	[32.1cm (12.63") - Pipe OD] ÷ 2 = Radial Clearance

Represented By:

## MAGNATECH

Headquarters: MAGNATECH LIMITED PARTNERSHIP  
 6 Kripes Road, P.O. Box 260  
 East Granby, Connecticut 06026-0260  
 Telephone: (+1) 860 653-2573 • Fax: (+1) 860 653-0486  
 E-Mail: info@magnatech-lp.com  
 Web Site: www.magnatech-lp.com

European Office: MAGNATECH EUROPE BV  
 Ambachtshof 15, 8251 KV Dronten  
 The Netherlands  
 Telephone: + (31) 321 38 6677 • Fax: + (31) 321 31 4165  
 E-Mail: info@magnatech-europe.com  
 Web Site: www.magnatech-europe.com