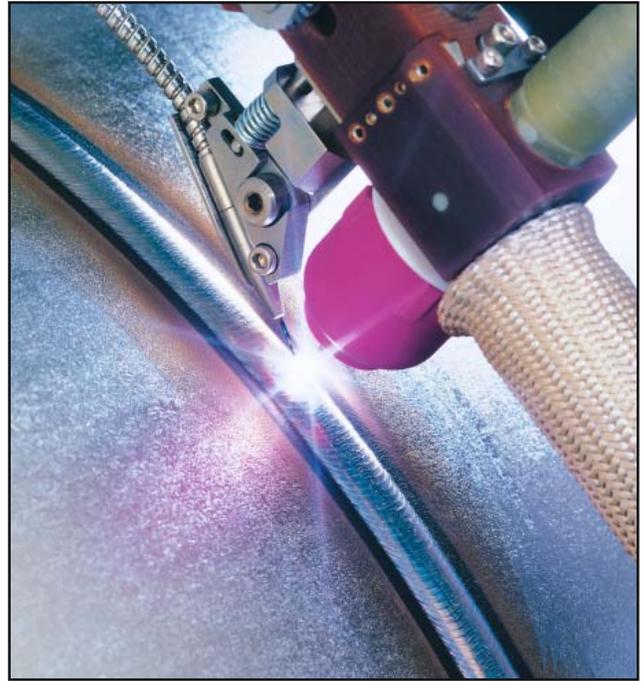




ARC MACHINES, INC.

The widest range of orbital welding equipment in the world

MODEL 15 LARGE-DIAMETER PIPE WELD HEAD



- Rugged, compact weld head with water-cooled torches
- Exclusive, zero-backlash gear drive (no friction drives) for positive, consistent travel speeds (uphill or downhill) in all positions
- Range from 3" pipe through all standard pipe sizes, such as 6", 8", 10", 12" up to any diameter. Flat track for flat plate welds and large-radius curved track are available
- Extremely quick mount / dismount
- Cross-seam steering
- Synchronized torch oscillation, AVC, rotation and wire feed
- On-board wire feed mechanics, single or dual wire feed system
- Compatible with AMI Model 227 or Model 415 Power Supplies

ARC MACHINES, INC.

AMI is an ISO Certified Company

www.arcmachines.com

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MODEL 15 LARGE-DIAMETER PIPE WELD HEAD

AMI's Model 15 is a field-proven weld head with a long history of reliability. It is a rugged, precision tool with low radial clearance for GTAW welding of all pipe sizes from 3-inch pipe up to an unlimited size, including flat plate. It is intended for field use in the nuclear, shipbuilding, chemical, petrochemical and construction industries where weld quality requirements are stringent and the use of the GTAW process is beneficial. This weld head features rotation, wire feed, automatic voltage control, cross-seam steering and torch oscillation.

The Model 15 is available in many configurations, from a "standard" head with a single-entry torch and a single wire feeder to a completely equipped head with dual wire feeders and vision system. It can be ordered or retro-fitted with numerous application-specific accessories customizing the head for a user's needs. Several torches are listed below; other options are available as standard products or AMI will custom-design to meet the customer's needs. Please contact the Arc Machines, Inc. Pipe Welder Product Manager for recommendations.

The Model 15 weld head is just one element of an automated pipe welding system. A torch assembly; precision guide rings, providing positive, gear-drive traction; one of several AMI power supplies; and other options comprise a complete system suitable for high-quality orbital pipe welding of a wide range of pipe sizes with excellent productivity.

Standard Torch Features and Options

Several different torch types are available. Each torch has different functions, features, and dimensions that are configured to the Model 15 weld head. This allows AMI to offer the most suitable and practical orbital system to each different customer or application. Most torches incorporate the following functions and adjustments:

- Cross-seam torch tilt (in /out)
- Electrode-to-wire-nozzle height adjustment
- Wire nozzle cross-seam adjustment
- Lead / lag adjustment
- Wire nozzle entry angle adjustment
- Accommodates a wide variety of gas cups and gas lenses
- Spring-loaded break-away mount that prevents accidental breakage of torch parts

Complete line of torch extensions, brackets and special modifications available. Consult factory for more information.

Single-Wire Entry - Model 15 "A" Torch

The type "A" torch is the smallest, lightest and simplest of the standard torches featuring a single-wire-feed manipulator. It is recommended for schedule 10 to schedule 80 pipe, pipe sizes from 3" to 20." This torch has been successfully used for many applications, including fossil, pharmaceutical, semiconductor plants and manufacturing facilities.

Offers:

- Excellent visibility and simplicity
- Accessories can expand capability to 5.0" wall
- Wire size range: 0.020 - 0.045" (0.030 - 0.035" recommended)
- Torch: Water-cooled, 300 amp
- Type HW 20, 17 or 27 gas lenses and gas cups are available



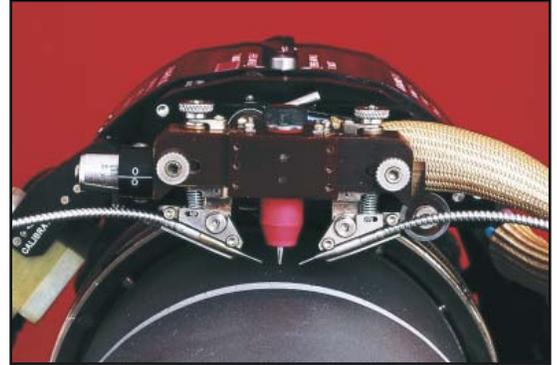
STANDARD TORCH FEATURES AND OPTIONS

Dual Wire Feed Mechanics - Model 15 “C” Torch

The type “C” torch is similar to the “A” torch except that it has an additional wire manipulator assembly used for bi-directional welding. This option eliminates the need to unwrap the weld head cables after two or three passes. It is recommended for any size pipe or wall thickness. This torch has been used for several heavy-wall main steam piping replacements, new construction, and for customer procedures requiring “double-uphill” welding. Requires the use of a second wire feeder on the Model 15 weld head.

Offers:

- Addition of filler wire while welding in either direction
- Excellent visibility
- Accessories can expand capability to 5.0” wall
- Wire size range: 0.020 - 0.045” (0.030 - 0.035” recommended)
- Torch: Water-cooled 300 amp
- Type HW 20, 17 or 27 gas lenses and gas cups are available



Remote Viewing - Model 15 “P” Torch

The “P” torch is only one of numerous torches designed for use with AMI’s remote welding video vision systems. It incorporates direct-view optics and color video cameras to show both the leading and trailing sides of the weld puddle. These optic assemblies are combined with remote-controlled dual wire manipulators to allow welding in both directions and to remotely observe the weld puddle. AMI’s patented arc light filtration, along with miniature video cameras allow for a very small and compact package with a minimum amount of cabling. It is recommended for any application requiring remote vision, such as high-radiation areas or where direct observation of the weld process by operators is limited. Some torches require the use of a second wire feeder on the Model 15 weld head and require video-related accessories.

Offers:

- A video system for remote operation and observation of the weld zone from leading and trailing directions
- Excellent display of filler wire position and entry point
- Addition of filler wire while welding in either direction
- Remote-controlled motorized wire feed nozzle manipulators
- Wire size range: 0.020 - 0.045” (0.030 - 0.035” recommended)
- Torch: Water-cooled 300 amp
- Type HW 20, 17 or 27 gas lenses and gas cups are available
- Heavy-wall thickness option available



MODEL 15 SPECIAL-FUNCTION OPTIONS

Right-Angle Drive: Allows the weld head to be mounted perpendicular to the pipe instead of parallel to it. Used for short radius elbows or tight axial clearance in conjunction with AVC / OSC Interchange.

15-CW Wire Feeder and Spool Holder: Additional (second) wire feeder. Allows welding in both directions of head travel; the power supply automatically selects proper wire feeder as a function of rotation direction.

Gas Cup / Gas Lens / Wire Manipulator Extender: This multi-part option allows most torches to be used to weld pipe with up to 5" wall thickness.

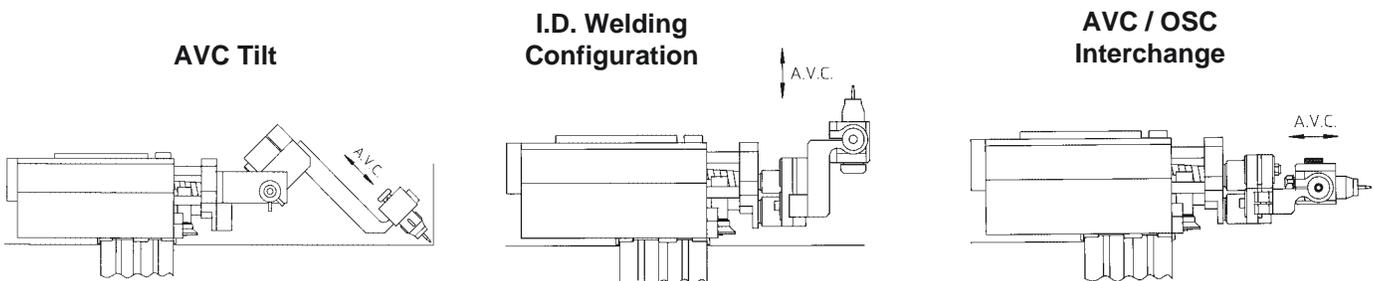
Cables: Extension cable assemblies are available which allow weld head operation up to 200 feet from the power supply.

Large Wire Spool Holders: Allows use of 8" (10 lb.) or 12" (30 lb.) wire spools under certain limited conditions.

300 IPM Wire Feed Motor: For use with special-application torches.

10 or 40 IPM Travel (rotation) Motors: For application requiring more torque or faster travel.

Optional Configurations



Technical Data

Process:	GTAW (TIG)	Torch Oscillation	
Torch AVC Stroke:	1.75"	Amplitude, max.:	1.00"
Travel Speed:	0.1 to 20 IPM	Wire Manipulator:	Vertical, Horizontal and Angular
Wire Feed Speed:	5 to 200 IPM	(Manual Adj.)	
Torch:	Water-cooled, 300 ADC	Filler Wire:	0.020 - 0.045", Standard: 0.035"
	100% duty cycle	Wire Spool Size:	2 lb., 4" standard spool
Torch Adjustments:	Torch specific	Radial Clearance	Depends on pipe diameter, torch type and configuration;
Tungsten Size:	3/32", 1/8" or 5/32"	Range:	3.750" (minimum)
Torch Cross-seam		Axial Clearance	Depends on torch type and options; 11.5" (minimum)
Steering Range:	2.00"	Range:	
Max. Wall Thickness:	Depends on torch type, options and accessories	Weight with "A" Torch:	18 lbs. (less cables)
		Outline Drawing:	40150075, 40150057, 40150055 40150070, 40150036, 40150058

ARC MACHINES, INC.