

# MODEL 9 series

## FUSION (GTAW) WELD HEADS



*The widest range of orbital welding equipment in the world*



The Model 9 series of orbital weld heads are designed for fusion (TIG) welding of tube, pipe, fittings or other cylindrical components. Available in eight sizes and three versions, they accommodate diameters from 3/32" (2,3 mm) to 7.5" (190,5 mm) OD, and wall thicknesses from 0.01" (0,25 mm) to 0.16" (4 mm). Each weld head fits a wide range of tube sizes via easily replaced, size-specific clamps. These weld heads are compatible with all AMI Power Supplies.

The standard Model 9 incorporates a two-sided clamping mechanism to hold components being welded in line and concentric - eliminating the need for tack welding. Several of these heads incorporate a flip-up viewing window, for easy verification of fit-up. Most Model 9 weld heads are plumbed for water cooling of both the cables and internal weld head components - allowing increased duty-cycles.



### Conversion Kits

To enhance versatility, many Model 9 series weld heads may be converted to an alternate configuration by installing a conversion kit. The conversion takes 5 to 10 minutes, using only a screwdriver and a hex wrench.

	Model 9E	Model 9CT
Model 9-500/C		X
Model 9-750	X	X
Model 9-1500	X	X
Model 9-2500	X	
Model 9-3500	X	
Model 9-4500	X	
Model 9-7500	X	



# MODEL 9 SERIES FUSION ( GTAW ) WELD HEADS

## MODEL 9-250, MINI WELD HEAD

The Model 9-250 is a precision, orbital GTAW (TIG) weld head designed for fusion butt welding up to 1/4" (6,35 mm) OD tubing, mini-fittings, and valve bodies with extremely tight radial clearance limitations.

The tooling for the 9-250 is provided with a visual sight window to verify fit-up and it incorporates two sets of hardened clamp plates. The unique latch design provides a firm grip while maintaining concentric alignment of the parts to be welded.



## MODEL 9-500 & 9-500C MINI WELD HEADS

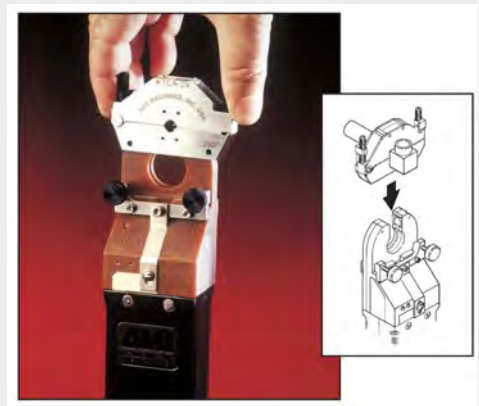
The Model 9-500 & Model 9-500C weld heads are designed mainly for welding of components with stick-out as short as 0.25" (6,35 mm) in diameters from 3/32" (2,3 mm) through 1/2" (12,2 mm). The Model 9-500C is water-cooled so it is capable of higher duty cycle applications. It is provided with a Quick Release Kit, which allows for remote loading of the clamp assemblies. The Quick Release Kit (optional for the Model 9-500) provides a 360° view of the weld joint, and facilitates the use of multiple clamp assemblies to further increase the duty-cycle. A wide variety of tooling is available for both models, such as clamp assemblies, tube clamp and fitting clamp inserts, and adjustable mini cubes.



Model 9-500C



Model 9-500



Quick Release Kit

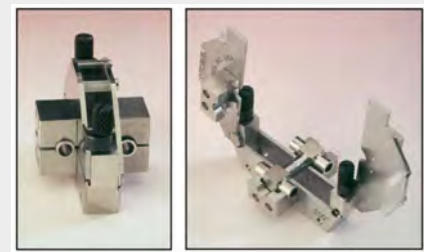
## TOOLING



Clamp assemblies



Clamp inserts

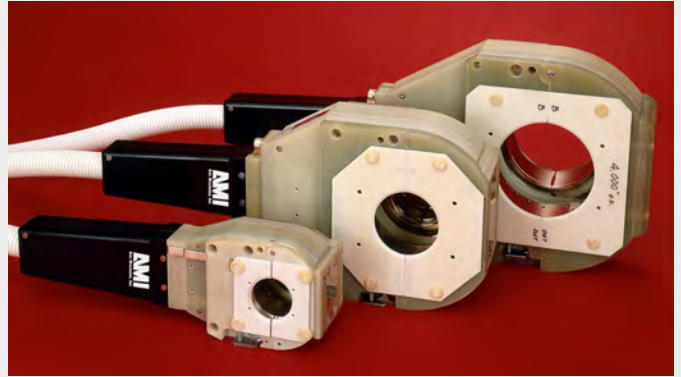


Adjustable mini cubes

# MODEL 9 SERIES FUSION ( GTAW ) WELD HEADS

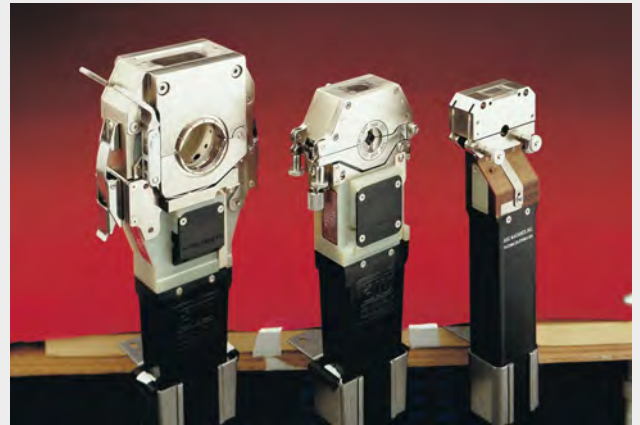
## MODEL 9E SERIES

The Model 9E series weld heads are designed for fusion (TIG) welding of tube or thin-wall pipe through the range of 0.25" (6,3 mm) to 6.625" (168,3 mm) OD. It's available in five sizes to weld components that do not provide enough stick-out for a double-clamp set up. An off-set electrode, single-sided clamp and gas seal make the Model 9E series weld heads adaptable to a wide variety of applications, e.g. pipe fitting and short sanitary ferrules. Clamp inserts and gas seals are available for all standard sizes as well as for custom applications.



## MODEL 9CT SERIES

Available in three sizes, the Model 9CT (Cassette Type) series weld heads are designed for fusion (TIG) welding of tube or thin-wall pipe through the range of 0.093" (2,3 mm) to 1.50" (38,1 mm) OD. The clamps on this type of head are mounted into a removable cassette module which acts as a fixturing device to align and hold the tubing or fittings prior to welding. It also allows 360° visibility of the weld joint. The use of multiple cassettes facilitates significantly higher production rates. All Model 9CT weld heads have built-in water cooling capability for high-duty cycle applications.



## ACCESSORIES

### Fitting Support Mandrel



Designed to facilitate the orbital welding of fitting-to-fitting assemblies which do not have sufficient straight length to be held in an orbital weld head. It also serves as an ID purge device. The tool is adaptable to a wide range of fitting sizes and assembly configurations.

### Additional Accessories

- Tungsten electrodes
- Off-set electrode holders
- Bench mount bracket
- Tube alignment gauge
- Conversion kits
- Extension cables
- Reusable, heavy-duty shipping/storage case

### Purge Mandrel Tool

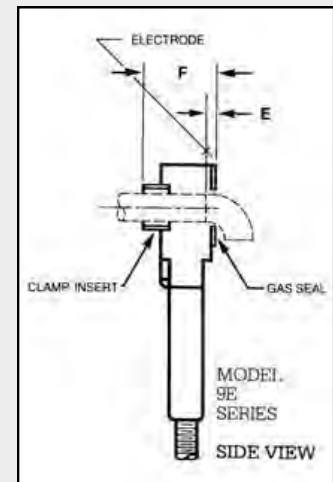
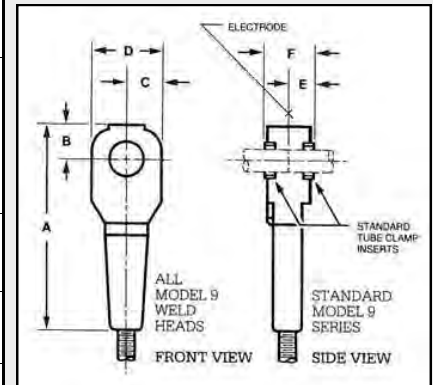


Provides a quick and easy method of aligning sanitary ferrules and other similar types of fitting without pre-tacking. It includes provisions for ID purging, and is adaptable for a wide range of ferrules and fitting types and sizes.

# MODEL 9 SERIES FUSION ( GTAW ) WELD HEADS

## OD RANGE/DIMENSIONS

Model No.	Tube/Pipe OD Range	Dimensions					
		A	B	C	D	E	F
9-250	0.093" - 0.250" 2,3 - 6,3 mm	10.00" 254 mm	0.83" 21 mm	0.66" 16,7 mm	1.31" 33,3 mm	0.25" 6,3 mm	0.48" 12,2 mm
9-500/C	0.093" - 0.500" 2,3 - 12,7 mm	9.60" 244 mm	0.96" 24,4 mm	1.29" 32,7 mm	2.58" 65,5 mm		
9-750	0.125" - 0.750" 3,2 - 19 mm	11.30" 287 mm	1.19" 30,2 mm	1.38" 35 mm	2.75" 69,8 mm	0.70" 17,8 mm	1.40" 35,5 mm
9-1500	0.250" - 1.500" 6,3 - 38,1 mm	13.00" 330 mm	1.88" 47,7 mm	2.00" 50,8 mm	4.00" 101,6 mm	1.41" 35,8 mm	2.81" 71,4 mm
9E-1500	0.250" - 1.315" 6,3 - 33,4 mm					0.37" 9,4 mm	2.85" 72,4 mm
9-2500	0.750" - 2.500" 19 - 63,5 mm	15.75" 400 mm	2.62" 66,5 mm	2.88" 73,1 mm	5.75" 146 mm	1.72" 43,7 mm	3.44" 87,4 mm
9E-2500	0.750" - 2.375" 19 - 69,4 mm					0.37" 9,4 mm	3.53" 89,6 mm
9-3500	1.000" - 3.500" 25,4 - 88,9 mm	16.75" 425 mm	3.12" 79,2 mm	3.63" 92,2 mm	7.25" 184,1 mm	1.72" 43,7 mm	3.44" 87,4 mm
9E-3500	1.000" - 3.250" 25,4 - 82,5 mm					0.37" 9,4 mm	3.53" 89,6 mm
9-4500	1.500" - 4.500" 38,1 - 114,3 mm	19.00" 483 mm	4.25" 107,9 mm	4.50" 114,3 mm	9.00" 228,6 mm	2.00" 50,8 mm	4.00" 101,6 mm
9E-4500	1.500" - 4.000" 38,1 - 101,6 mm					0.37" 9,4 mm	2.81" 71,4 mm
9ER-4500	1.500" - 4.500" 38,1 - 114,3 mm					2.16" 54,8 mm	4.32" 109,7 mm
9-7500	2.875" - 7.500" 73 - 190,5 mm	22.00" 559 mm	5.68" 144,3 mm	6.12" 155,4 mm	12.25" 311,1 mm	0.53" 13,4 mm	3.97" 100,8 mm
9E-7500	2.875" - 6.626" 73 - 168,3 mm					2.16" 54,8 mm	4.32" 109,7 mm



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Automated Orbital Welding

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