

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 nine 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.

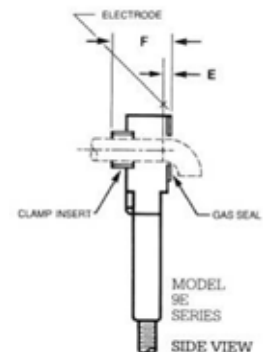
The standard Model 9 incorporates a two-sided clamping mechanism to hold components being welded in line and concentric - minimizing the need for tack welding. Several of these heads incorporate a flip-up viewing window, for easy verification of fit-up. Most Model 9 weld heads are plumbed for water cooling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

FUSION INDUSTRIES

- Semiconductor
- Bio and Pharmaceutical
- Aerospace
- Food, Dairy & Beverage
- Energy

OD RANGE/DIMENSIONS

Model No.	Tube/Pipe OD Range	Dimensions					
		A	B	C	D	E	F
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
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
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
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
9-7500	2.875" - 7.500" 73 - 190.5 mm					2.16" 54.8 mm	4.32" 109.7 mm



Visit arcmachines.com for more information.

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 & MODEL 9-500C WELD HEADS

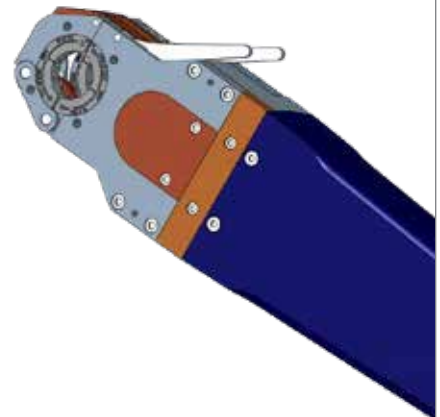
The Model 9-500 & Model 9-500C weld heads are designed mainly for welding of components with stick-out as short as 0.25" (6.35 mm) in diameters from 3/32" (2.3 mm) through 1/2" (12.2 mm). The Model 9-500C is water-cooled so it is capable of higher duty cycle applications. It is provided with a Quick 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.



THE MODEL 9-675/750 ULTRA LOW PROFILE WELD HEAD

The Model 9-675/750 weld head is the newest addition to the AMI Model 9-series weld heads and was designed for special request to accommodate extremely tight radial clearance applications.

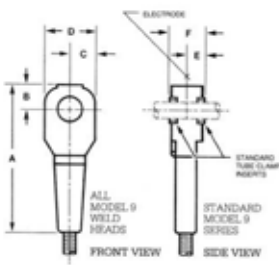
- OD Range: 0.093" - 0.750" (2.3 mm - 19 mm)
- Electrode Size: 0.062" (1.6 mm)
- Drive Motor: 28V DC with integral gearbox and tachometer
- Max. Current Capacity: 200 A (pulsed basis)
- Max. Rotation Speed: 9.9 RPM
- Optional electrode location symmetrical to clamps available
- No tools required to operate
- No gas cups required
- Water cooled rotor, lower clamps and cables
- Double hinged clamps suitable for low radial clearances



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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			
9-675	0.93" - 0.675" 2.3 - 17.2 mm	10.71" 27.2 mm	1.05" 26.7 mm		1.97" 50 mm		1.49" 37.8 mm	
9-675/750	0.93" - 0.750" 2.3 - 19 mm	10.71" 27.2 mm	1.05" 26.7 mm		1.97" 50 mm		1.49" 37.8 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	

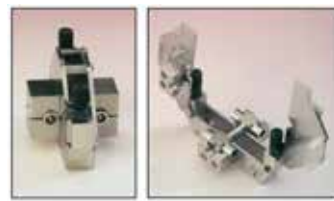
TOOLING



CLAMP ASSEMBLIES



CLAMP INSERTS



ADJUSTABLE MINI CUBES



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 doubleclamp 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.



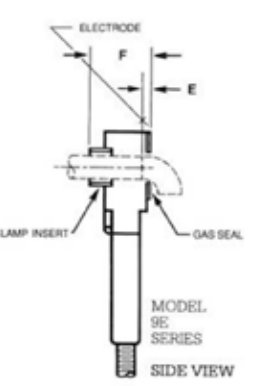
MODEL 9CT SERIES

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.

OD RANGE/DIMENSIONS

Model No.	Tube/Pipe OD Range	Dimensions					
		A	B	C	D	E	F
9E-1500	0.250" - 1.315" 6.3 - 33.4 mm	13.00" 330 mm	1.88" 47.7 mm	2.00" 50.8 mm	4.00" 101.6 mm	0.37" 9.4 mm	2.85" 72.4 mm
9E-2500	0.750" - 2.375" 19 - 69.4 mm	15.75" 400 mm	2.62" 66.5 mm	2.88" 73.1 mm	5.75" 146 mm	0.37" 9.4 mm	3.53" 89.6 mm
9E-3500	1.000" - 3.250" 25.4 - 82.5 mm	16.75" 425 mm	3.12" 79.2 mm	3.63" 92.2 mm	7.25" 184.1 mm	0.37" 9.4 mm	3.53" 89.6 mm
9E-4500	1.500" - 4.000" 38.1 - 101.6 mm	19.00" 483 mm	4.25" 107.9 mm	4.50" 114.3 mm	9.00" 228.6 mm	0.37" 9.4 mm	2.81" 71.4 mm
9ER-4500	1.500" - 4.500" 38.1 - 114.3 mm						



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		•	
Model 9-750	•	•	
Model 9-1500	•	•	
Model 9-2500	•		
Model 9-3500	•		
Model 9-4500	•		
Model 9-7500	•		

ADDITIONAL ACCESSORIES

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

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.



PURGE MANDREL TOOL

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.



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