

***AMERICAN TORCH TIP* ATTC®**

ALL GUNS ARE MADE BY ATTC TO OUR
HIGHEST QUALITY STANDARDS AND ARE GUARANTEED
AGAINST ALL MATERIAL OR MANUFACTURING DEFECTS.



T-500 MIG GUN

Compatible with Tweco® 500 AMP

RATING:
500A C02 350A MIXED GAS @ 100% DUTY CYCLE
0.035mm TO 3/32" WIRE

Technical Guide

MIG Gun Part Numbering System 500 AMP

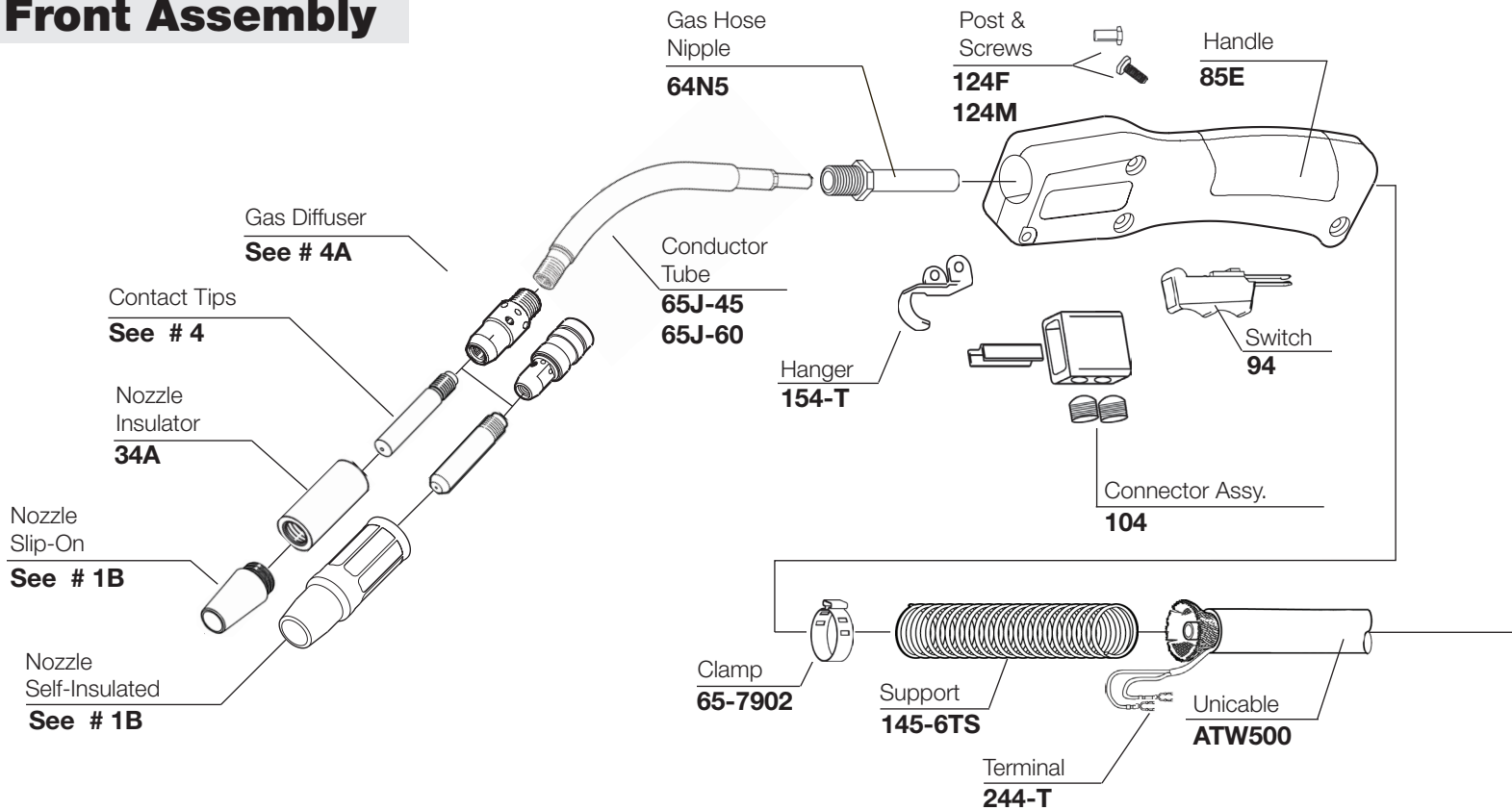
AT510 - 35		
Plugs		Wire Size
AT = Tweco		23 - .023
ALN = Lincoln		30 - .030
AX = Euro		35 - .035
AM = Miller		40 - .040
Gun Amperage	Length	45 - .045
5 = 500 amp	10 = 10 ft	52 - .052
	12 = 12 ft	116 - 1/16
	15 = 15 ft	
	20 = 20 ft	
	25 = 25 ft	

Special Part Numbering System

AT510 - 35 - X

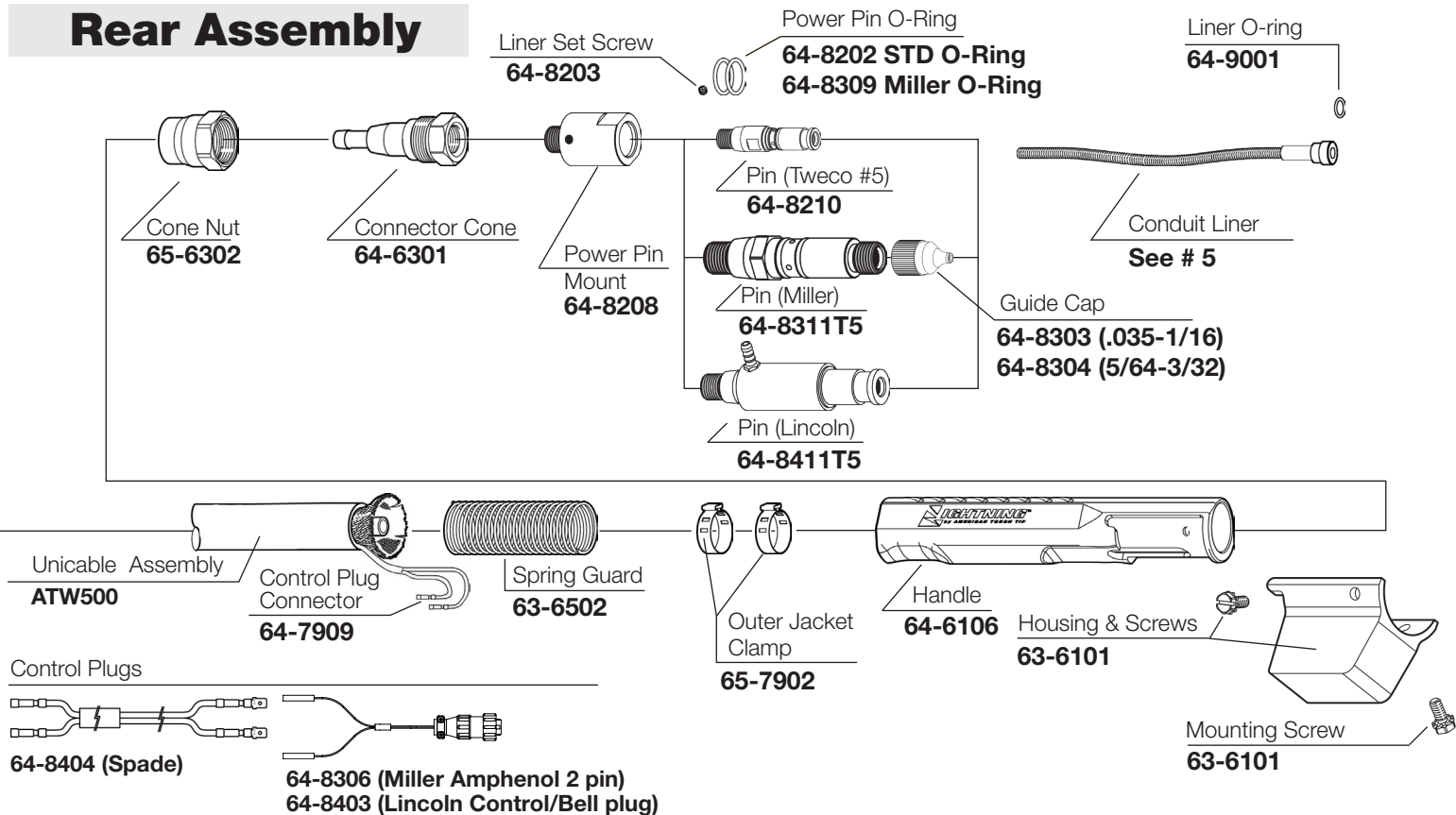
Special Setup
If Required

Front Assembly



No.	Part No.	Description	I.D.	No.	Part No.	Description	I.D.	
1A	25CT-50	Nozzle Coarse Thread	1/2" (12.7mm)	3B	16S-35	Contact Tip	.035 (1.2mm) .044	
	25CT-62	Nozzle Coarse Thread	5/8" (15.9mm)		16S-40	Contact Tip	.040 (1.0mm) .048	
	25CT-75	Nozzle Coarse Thread	3/4" (19.1mm)		16S-45	Contact Tip	.045 (0.9mm) .054	
1B	HD24L-50	Nozzle Std. Recess	1/2" (12.7mm)		16S-52	Contact Tip	.052 (1.3mm) .064	
	HD24L-62	Nozzle Std.	5/8" (15.9mm)		16S-116	Contact Tip	1/16" (1.6mm) .073	
	HD24L-75	Nozzle Std.	3/4" (19.1mm)		16S-564	Contact Tip AL	3/64" (2.0mm) .093	
	HD24L-50F	Nozzle Flush	1/2"		16AS-364	Contact Tip AL	3/64" (1.2mm) .059	
	HD24L-62F	Nozzle Flush	5/8"		16AS-116	Contact Tip AL	1/16" (1.6mm) .082	
	HD24L-75F	Nozzle Flush	3/4"					
	HD24-50	Nozzle H.D. Recess	1/8"					
	HD24-62	Nozzle H.D. Recess	5/8"					
	HD24-75	Nozzle H.D. Recess	3/4"					
	HD-24-50F	Nozzle H.D. Flush	1/2"					
	HD24-62F	Nozzle H.D. Flush	5/8"					
	HD24-75F	Nozzle H.D. Flush	3/4"					
No.	Part No.	Description		No.	Part No	Description	Liner	
2	35CT	Nozzle Insulator Coarse Thread		4A	55	Gas Diffuser	Use with 45N-116, 45-564	
					55H	Gas Diffuser	Use with 45H-332, 45H-764	
					55SW	Gas Diffuser	Use with 45-3545, 45116	
				4B	HD54-16	Gas Diffuser		
No.	Part No.	Description	I.D.	No.	Part No	Description		
3A	15AH-364	Contact Tip H.D.	3/64" Al. (1.2mm) .059	5	45-116-15	Liner Assy. 15'	1/16" .076 .188	
	15AH-116	Contact Tip H.D.	1/16" Al. (1.6mm) .081		45-116-25	Liner Assy. 25'	1/16" .076 .188	
	15H-35	Contact Tip H.D.	.035 (0.9mm) .043		45-3545-15	Liner Assy. 15'	.035-.045 .066 .188	
	15H-45	Contact Tip H.D.	.045 (1.2mm) .055		45-3545-25	Liner Assy. 25'	.035-.045 .066 .148	
	15H-52	Contact Tip H.D.	.052 (1.3mm) .063		45-564-15	Liner Assy. 15'	5/64" .098 .238	
	15H-116	Contact Tip H.D.	1/16" (1.6mm) .073		45-564-25	Liner Assy. 25'	5/64" .098 .238	
	15H-564	Contact Tip H.D.	5/64" (2.0mm) .093		45H-332-15	Liner Assy. 15'	3/32" .124 .268	
	15H-332	Contact Tip H.D.	3/32" (2.4mm) .110		45H-764-15	Liner Assy. 15'	7/64" .130 .268	
	15H-764	Contact Tip H.D.	7/64" (2.8mm) .120		45N-116-15	Liner Assy. 15'	1/16" .100 .185	
	15H-18	Contact Tip H.D.	1/8" (3.2mm) .144		45N-3545-15	Liner Assy. 15'	.035-.045 .066 .188	
					65-4725	Liner Assy. 25'		
					65-4715	Liner Assy. 15'	5/64"-3/32"	

Rear Assembly



GENERAL SAFETY

1. Disconnect all power before servicing or changing welding gun components. Failure to disconnect power can lead to dangerous electrical shock which can kill.
2. Smoke, fumes and gases can be dangerous to your health. Keep smoke, fumes and gases from the breathing area. Fumes from welding are of various types and strengths, depending on the kind of base metal being welded.
3. Arc welding produces dangerous light radiation. Adequate eye protection must be worn.
4. All exposed skin must be covered with flame resistant, protective clothing. Do not wear clothing made from flammable synthetic fibers.
5. Protective screens or barriers should be used to protect others from spatter, flash and glare while welding.

TROUBLESHOOTING

Poor Wire Feed:

Liner clogged or kinked. Incorrect liner size or contact tip size. Liner cut to short and not seating properly in gas diffuser.

Gun Overheating:

Loose connection at the wire feeder. Gun being run beyond its amperage range. Insufficient gauge power cable or ground cable.

Weld Porosity:

Spatter built up in nozzle blocking gas. Leaks in gas hose or improper connection.

Short Tip Life:

Drive rolls too tight resulting in scoring of welding wire. Welding wire dirty, rusty or too much cast. Wrong tip size. Torch over rated duty cycle.

Warranty

180-day limited Warranty on manufacturing and material defects. Warranty terms DO NOT apply to consumable products.

LIGHTNING Semi-Auto MIG Gun

Inner Armor
Protective inner armor – a brass alloy insert – guards against wear and extends nozzle life.

The cool-running Lightning® tapered-seat contact tip is designed to dissipate heat quickly through increased surface area, and maximize electrical conductivity.

Dual start-point threads allow re-seating of the tip when wire wear begins to affect performance. Just rotate the tip counter-clockwise 180° to a new wear-point and double the life of the contact tip.

Insulated aircraft aluminum protects the 650 AMP capacity gooseneck.

Hard Body
High-strength plastic handle is engineered with special impact additives and reinforcing ribs, making it virtually indestructible. The solid construction puts Lightning® in a class of its own.

Defensive Shield
The secret behind Lightning's super tough cable is electron-beam accelerators that modify and strengthen the outer cover. This protective shield guards against tearing, stretching and abrasion.

Inner tubing, made of Hyflex™, is kink and impact resistant for smooth and reliable wire feed.

Copper strand-count and gauge is optimized for each cable's amperage rating, resulting in a perfect blend of flexibility and strength.

Plug-and-Play
Lightning® is ready to work right out of the box with most popular welding systems. Components are designed for quick, easy switch-outs.

More information, contact tips, nozzles, and gun part numbers – page 2

Specs

Type	Semi-automatic MIG
Air-cooled	
Amperage	250-350, 400, 500
Cable Length	4' - 25'
Gooseneck	180°/22°/45°/90°
Wire Size	.030 - .063
Wire Size	1/16" - 5/16"
Compatibility	Compatible with a complete range of welding machines and wire feeders.
Lifetime Warranty	Handles and Trigger switch have a Lifetime Warranty.

LIGHTNING Robotic MIG Gun

Inner Armor
Protective inner armor – a brass alloy insert – guards against wear and extends nozzle life.

The cool-running Lightning® tapered-seat contact tip is designed to dissipate heat quickly through increased surface area, and maximize electrical conductivity.

Dual start-point threads allow re-seating of the tip when wire wear begins to affect performance. Just rotate the tip counter-clockwise 180° to a new wear-point and double the life of the contact tip.

Insulated aircraft aluminum protects the 650 AMP capacity gooseneck.

Hard Body
Solid-body design created from aircraft aluminum that stands up to extreme impact.

Defensive Shield
The secret behind Lightning's super tough cable is electron-beam accelerators that modify and strengthen the outer cover. This protective shield guards against tearing, stretching and abrasion.

Inner tubing, made of Hyflex™, is kink and impact resistant for smooth and reliable wire feed.

Copper strand-count and gauge is optimized for each cable's amperage rating, resulting in a perfect blend of flexibility and strength.

Plug-and-Play
Lightning® is ready to work right out of the box with most popular welding systems. Components are designed for quick, easy switch-outs.

More information, contact tips, nozzles, and gun part numbers – page 2

Specs

Type	Robotic MIG
Air-cooled	
Amperage	500
Cable Length	4' - 15', plus custom lengths
Gooseneck	22°/45° plus custom angles
Wire Size	.030 - .050
Wire Size	1/16" - 5/16"
Compatibility	Compatible with a complete range of welding machines. Adapters are also available for most wire feeders.

LIGHTNING Automatic MIG Gun

Inner Armor
Protective inner armor – a brass alloy insert – guards against wear and extends nozzle life.

The cool-running Lightning® tapered-seat contact tip is designed to dissipate heat quickly through increased surface area, and maximize electrical conductivity.

Dual start-point threads allow re-seating of the tip when wire wear begins to affect performance. Just rotate the tip counter-clockwise 180° to a new wear-point and double the life of the contact tip.

Insulated aircraft aluminum protects the 650 AMP capacity gooseneck.

Hard Body
Lifetime Warranty on gun body. Fiber reinforced resin stands up to extreme heat and impact. Slim compact design. Lifetime Warranty on gun body.

Defensive Shield
The secret behind Lightning's super tough cable is electron-beam accelerators that modify and strengthen the outer cover. This protective shield guards against tearing, stretching and abrasion.

Inner tubing, made of Hyflex™, is kink and impact resistant for smooth and reliable wire feed.

Copper strand-count and gauge is optimized for each cable's amperage rating, resulting in a perfect blend of flexibility and strength.

Plug-and-Play
Lightning® is ready to work right out of the box with most popular welding systems. Components are designed for quick, easy switch-outs.

More information, contact tips, nozzles, and gun part numbers – page 2

Specs

Type	Automatic MIG
Air-cooled	
Amperage	500
Cable Length	4' - 15', plus custom lengths
Gooseneck	180°/22°/45°/90°
Wire Size	.030 - .050
Wire Size	1/16" - 5/16"
Compatibility	Compatible with a complete range of welding machines and wire feeders.