



THANK YOU

For selecting the Lightning® MIG Gun. The Lightning® Gun is for welding professionals who want durability and comfort while working in harsh welding environments. This technical guide with instructions and illustrations is designed to make it easy to maintain your Lightning® Gun. Please read and follow all the safety procedures. For technical support, please call our Customer Service department at 1-800-371-8477 between 8:00 AM and 5:00 PM EST Monday through Friday. We are committed to providing the best-quality products and services. We are constantly working to improve our products. We would appreciate hearing your suggestions.

The **LIGHTNING** Family of MIG Guns, Consumables and Accessories

Semi-Auto MIG Gun

LIGHTNING
SEMI-AUTOMATIC MIG

VIRTUALLY INDESTRUCTIBLE

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. This solid construction puts Lightning® in a class of its own.
Lifetime Warranty on handle and trigger switch.

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 Hylite™, is kink and impact resistant for smooth and reliable wire feed.
Copper strand-count and gauge is optimized for each cable's ampere 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.

Specs
Type Semi-automatic
Air-cooled MIG
Amperage 250, 350, 450, 550
Cable Length 9' - 25'
Gooseneck 180°, 22°, 45°, 60°
Wire Size .030 - .052
1/16" - 5/64"
Compatibility Compatible with a complete range of welding machines and wire feeders.
Lifetime Warranty Handle and trigger switch have a Lifetime Warranty.

*Hylite is a registered trademark of DuPont™ and is a trademark of E.I. du Pont de Nemours & Co. Lightning Torch Company is a licensee of this technology.

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

Learn more at our website: AmericanTorchTip.com/lightning or call us at 800-342-8477

LIGHTNING
Made in the USA by American Torch Tip

Large Curve MIG Gun

LIGHTNING CURVE
LARGE CURVE SEMI-AUTOMATIC MIG

VIRTUALLY INDESTRUCTIBLE

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Protective inner armor – a brass alloy insert – guards against wear and extends nozzle life.
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Specs
Type Semi-automatic
Air-cooled MIG
Amperage 250, 350, 450, 550
Cable Length 9' - 25'
Gooseneck 180°, 22°, 45°, 60°
Wire Size .030 - .052
1/16" - 5/64"
Compatibility Compatible with a complete range of welding machines and wire feeders.
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LIGHTNING
Made in the USA by American Torch Tip

Small Curve MIG Gun

LIGHTNING CURVE
SMALL CURVE SEMI-AUTOMATIC MIG

VIRTUALLY INDESTRUCTIBLE

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. This solid construction puts Lightning® in a class of its own.
Lifetime Warranty on handle and trigger switch.

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 Hylite™, is kink and impact resistant for smooth and reliable wire feed.
Copper strand-count and gauge is optimized for each cable's ampere rating, resulting in a perfect blend of flexibility and strength.

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Specs
Type Semi-automatic
Air-cooled MIG
Amperage 250, 350, 450
Cable Length 9' - 25'
Gooseneck 180°, 22°, 45°, 60°
Wire Size .030 - .052
1/16" - 5/64"
Compatibility Compatible with a complete range of welding machines and wire feeders.
Lifetime Warranty Handle and trigger switch have a Lifetime Warranty.

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

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LIGHTNING
Made in the USA by American Torch Tip

Automatic MIG Gun

LIGHTNING AUTO
FIXED-AUTOMATIC MIG

VIRTUALLY INDESTRUCTIBLE

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 Hylite™, is kink and impact resistant for smooth and reliable wire feed.
Copper strand-count and gauge is optimized for each cable's ampere 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.

Specs
Type Automatic
Machine Air-cooled
Amperage 500
Cable Length 4' - 10', plus custom lengths
Gooseneck 180°, 22°, 45°, 60°
Wire Size .030 - .052
1/16" - 5/64"
Compatibility Compatible with a complete range of welding machines and wire feeders.

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

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LIGHTNING
Made in the USA by American Torch Tip

Robotic MIG Gun

LIGHTNING
ROBOTIC MIG

VIRTUALLY INDESTRUCTIBLE

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.
Lifetime Warranty on handle and trigger switch.

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 Hylite™, is kink and impact-resistant for smooth and reliable wire feed.
Copper strand-count and gauge is optimized for each cable's ampere 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.

Specs
Type Robotic
Air-cooled
Amperage 500
Cable Length 4' - 10', plus custom lengths
Gooseneck 22°, 45°, plus custom angles
Wire Size .030 - .052
1/16" - 5/64"
Compatibility Compatible with a complete range of welding machines. Adapters are also available for most wire feeders.

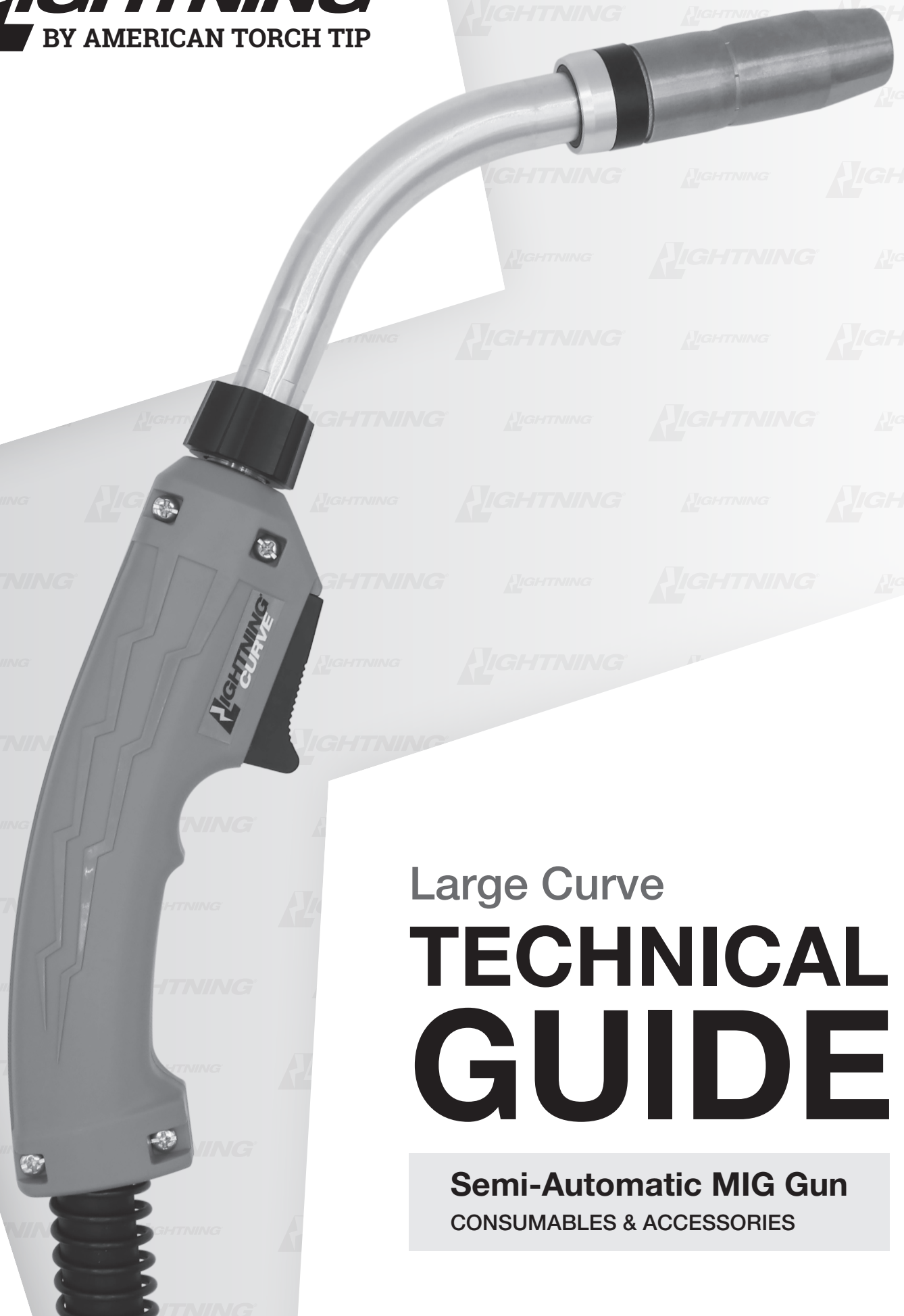
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More information, contact tips, nozzles, and gun part numbers – page 2

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Made in the USA by
American Torch Tip.
ZZ-MAR-TECH-MIG-002 1023



Large Curve

TECHNICAL GUIDE

Semi-Automatic MIG Gun
CONSUMABLES & ACCESSORIES

FEATURES & BENEFITS

The highly-durable Lightning® series of MIG guns has been engineered and built for high production and comfort.

Contact Tip

Tapered seating tip allows for better conductivity, with a dual start-point thread that rotates 180°, allowing you to extend the life of the tip.

Handle

Ergonomic plastic handle is engineered with special impact additives that stand up to extreme contact, making it indestructible. Lifetime Warranty on handle.

Trigger

The trigger is easy to pull, causing less welder fatigue. Lifetime Warranty.

AMPERAGE RATINGS (DUTY CYCLE)

Model	100% Duty Cycle		60% Duty Cycle	
	Co ²	Mixed	Co ²	Mixed
250	200	120	300	250
350	350	200	400	350
450	450	300	525	450
550	550	350	650	550

SEMI-AUTOMATIC GUN ORDERING SYSTEM

LIGHTNING® HANDLE

L Lightning Straight
LC Large Curve
SC Small Curve
FL Flash Straight
FLC Flash Curve

SWIVEL

S (optional)

POWER PIN

5T Tweco #5
T Tweco/Std.
B Bernard
E Euro
H Hitachi
LN Lincoln
M Miller
P Panasonic

GUN MODEL

20 250 amp
30 350 amp
40 450 amp
50 550 amp

CABLE LENGTH

10 10 feet
12 12 feet
15 15 feet
20 20 feet
25 25 feet

WIRE SIZE

30 .030"
35 .035"
10 1.0 mm
45 .045"
52 .052"
116 1/16"
332 3/32"
364 3/64" al
564 5/64"

LC

S

T

40

15

45

STANDARD GUN CONFIGURATION (Lightning)

Description	Tips	Nozzles	Diffuser	Liner	Shock Washer	Gooseneck
250 AMP	63-11xx	63-2150	63-3103	64-4xxx	63-6103	63-5160
350 AMP	63-11xx	63-2150	63-3103	64-4xxx	63-6202	63-5160
450 AMP	63-11xx	65-2562	63-3103	64-4xxx	63-6202-HD	64-5160
550 AMP	63-11xx	65-2562	63-3103	64-4xxx	63-6202-HD	65-5160

* Extra-Heavy duty setup is available on request.

Flash Straight
HandleFlash Curve
Handle**NOZZLES****ID**

63-2138	HD Flush	3/8"	(09.5mm)
63-2662	HD 1/8" Stick-Out	5/8"	(15.9mm)
63-2150	HD 1/8" Tip Recess	1/2"	(12.7mm)
63-2162	HD 1/8" Tip Recess	5/8"	(15.9mm)
63-2175	HD 1/8" Tip Recess	3/4"	(19.1mm)
64-2562	Extra HD Cu 1/4" Tip Rec.	5/8"	(15.9mm)
64-2575	Extra HD Cu 1/4" Tip Rec.	3/4"	(19.1mm)
65-2550	HD Cu 1/8" Tip Recess	1/2"	(12.7mm)
65-2562	HD Cu 1/8" Tip Recess	5/8"	(15.9mm)
65-2575	HD Cu 1/8" Tip Recess	3/4"	(19.1mm)
64-2950	HD Bottleneck 1/8 Stick-out	1/2"	(12.7mm)
63-2950	HD Bottleneck 1/8 Recess	1/2"	(12.7mm)
65-2662	Extra HD 1/8 Stick-out	5/8"	(15.9mm)
65-2362	Extra HD Brass 1/8 Stick-out	5/8"	(15.9mm)

Threaded versions available for all nozzles.
Add the letter "T" to the end of the part number.

CONTACT TIPS**ID**

63-1130	HD	.030	(0.8mm)	.037
63-1135	HD	.035	(0.9mm)	.043
63-1140	HD	.040	(1.0mm)	.048
63-1145	HD	.045	(1.2mm)	.055
63-1152	HD	.052	(1.3mm)	.063
63-1178	HD	5/64	(2.0mm)	.093
63-1193	HD	3/32	(2.4mm)	.110
63-1162	HD	1/16"	(1.6mm)	.073
63-1230	HD Tapered	.030	(0.8mm)	.037
63-1235	HD Tapered	.035	(0.9mm)	.043
63-1245	HD Tapered	.045	(1.2mm)	.055
63-1252	HD Tapered	.052	(1.3mm)	.063
63-1335	HD CuCr **	.035	(0.9mm)	.043
63-1345	HD CuCr	.045	(1.2mm)	.050
63-1352	HD CuCr	.052	(1.3mm)	.059
63-1362	HD CuCr	1/16"	(1.6mm)	.073
63-1378	HD CuCr	5/64"	(2.0mm)	.093
63-1394	HD CuCr	3/32"	(2.4mm)	.110
65-1130	Extra HD	.030		.037
65-1135	Extra HD	.035		.043
65-1145	Extra HD	.045		.055
65-1162	Extra HD	1/16		.067
65-1178	Extra HD	5/64		.093
65-1193	Extra HD	3/32		.110
65-11120	Extra HD	7/64		.120
65-11125	Extra HD	1/8		.136
65-1235	Extra HD	.035 tprd		.043
65-1245	Extra HD	.045 tprd		.055
65-1252	Extra HD	.052 tprd		.063
65-1335	Extra HD CuCr	.035		.040
65-1345	Extra HD CuCr	.045		.050
65-1352	Extra HD CuCr	.052		.060
65-1362	Extra HD CuCr	1/16		.060

NOTE: 65-11xx series tips are only to be used with 65 series Lightning® diffusers.

GAS DIFFUSERS & RETAINER

63-3201	Diffuser for HD Contact Tip 2-Piece
63-3104	Nozzle Retainer (for 63-3201 above)
63-3103	Diffuser HD*
63-3103-2	Tapered HD Diffuser
65-3103	Diffuser Extra HD

*Copper Zirconium Chromium

65-3103-2	Robotic Extra HD
63-3116	HD Diffuser, Threaded
65-3116	Tapered Extra HD Diffuser, Threaded
63-3301	Gas Diffuser O-Ring

SHOCK WASHERS

63-6103	Plastic
63-6202	HD (Heavy Duty)
63-6202	

GOOSENECKS (INCLUDES BODY ASSEMBLY)

Add LF to the end of part number for Flash Goosenecks

Add LFLC to the end of part number for Flash Curve Goosenecks

62-5160C	Fixed	60°	250
63-5100C	Fixed	180°	250-350
63-5145C	Fixed	45°	250-350
63-5160C	Fixed	60°	250-350
64-5100C	Fixed	180°	450
64-5145C	Fixed	45°	450
64-5160C	Fixed	60°	450
65-5100C	Fixed	180°	550
65-5145C	Fixed	45°	550
65-5160C	Fixed	60°	550

Swivel Goosenecks for Straight and Curve Handle

63-5160S	Swivel	60°	250-350
64-5160S	Swivel	60°	450
65-5160S	Swivel	60°	550

LINERS

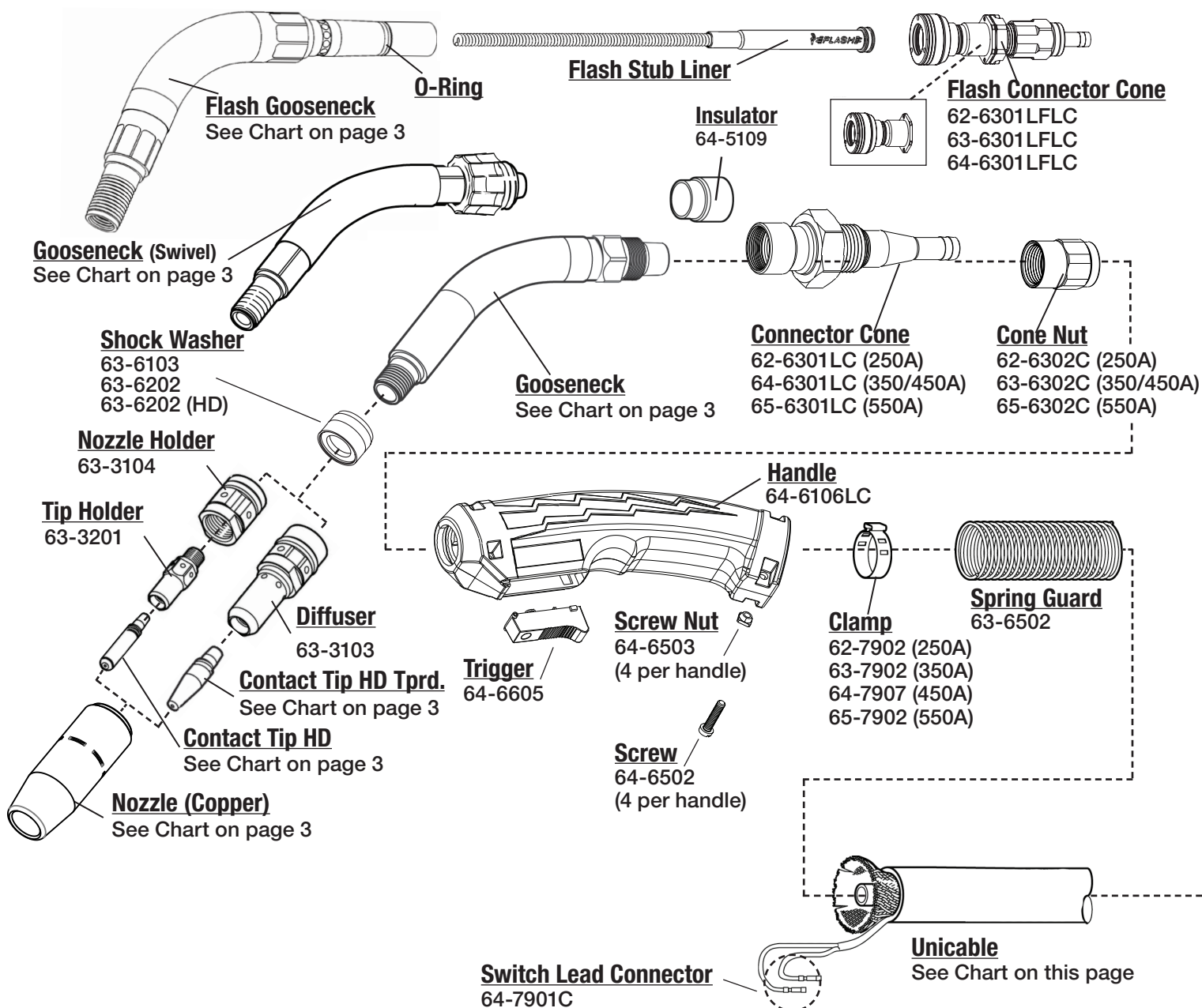
Wire Size	Length	Part#	OD
.023" (.6mm)	15'	64-4115	0.150
.035" (.9mm)	15'	62-4315	0.156
.035" (.9mm)	25'	62-4325	0.156
.045" (1.6mm)	15'	62-4515	0.156
.045" (1.6mm)	25'	62-4525	0.156
.030" (.8mm)	15'	64-4215	0.182
.035" (.9mm)	10'	64-4310	0.175
.035" (.9mm)	15'	64-4315	0.175
.035" (.9mm)	25'	64-4325	0.175
.035" (.9mm)	25'	64-4325	0.175
.035" (.9mm)al	15'	64-4415	0.189
.045" (1.6mm)	10'	64-4510	0.189
.045" (1.6mm)	15'	64-4515	0.189
.045" (1.6mm)	25'	64-4525	0.189
3/64" (1.6mm)	10'	64-4510	0.189
3/64" (1.6mm)	15'	64-4515	0.189
3/64" (1.6mm)	25'	64-4525	0.189
.52" (1.6mm)	10'	64-4510	0.189
.52" (1.6mm)	15'	64-4515	0.189
.52" (1.6mm)	25'	64-4525	0.189
1/16" (1.6mm)	10'	64-4510	0.189
1/16" (1.6mm)	15'	64-4515	0.189
1/16" (1.6mm)	25'	64-4525	0.189
3/64-1/16al	15'	64-4615	0.189
5/64-3/32	15' Flat	64-4715	0.189
5/64-3/32	25' Flat	64-4725	0.21
5/64 & 1/16"	FC 10'	64-4815	0.21
.035 - .045	15'	64-4915	0.192

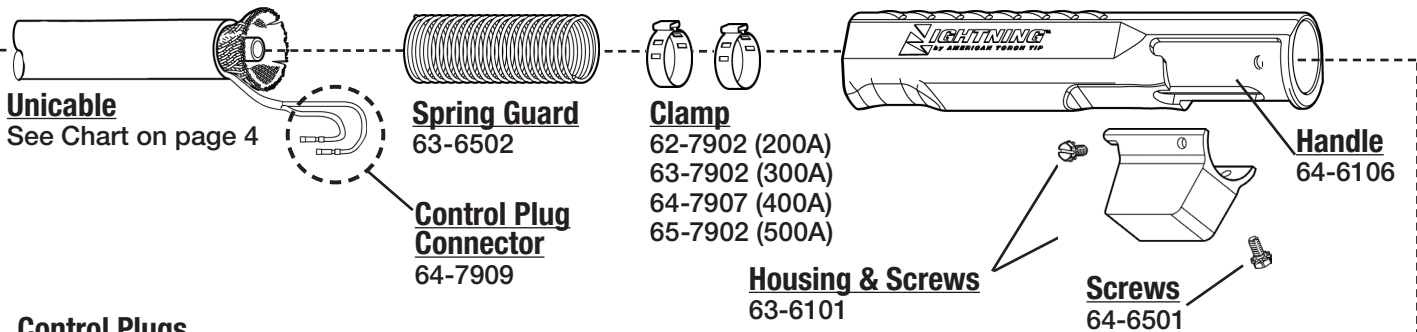
(for S.S. Wire)

Flash Straight
HandleFlash Curve
Handle

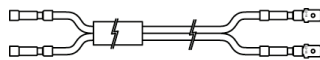
UNICABLE CUT LENGTHS

250A	10'	62-7110	350A	15'	63-7115	450A	25'	64-7125	<i>Unicable Bulk (Per foot)</i>		
250A	12'	62-7112	350A	20'	63-7120	550A	10'	65-7110	250A	Bulk	62-7300
250A	15'	62-7115	350A	25'	63-7125	550A	12'	65-7112	350A	Bulk	63-7300
250A	20'	62-7120	450A	10'	64-7110	550A	15'	65-7115	450A	Bulk	64-7300-1
250A	25'	62-7125	450A	12'	64-7112	550A	20'	65-7120	550A	Bulk	65-7300-1
350A	10'	63-7110	450A	15'	64-7115				550A	25'	65-7125
350A	12'	63-7112	450A	20'	64-7120						

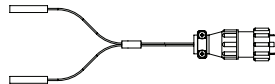




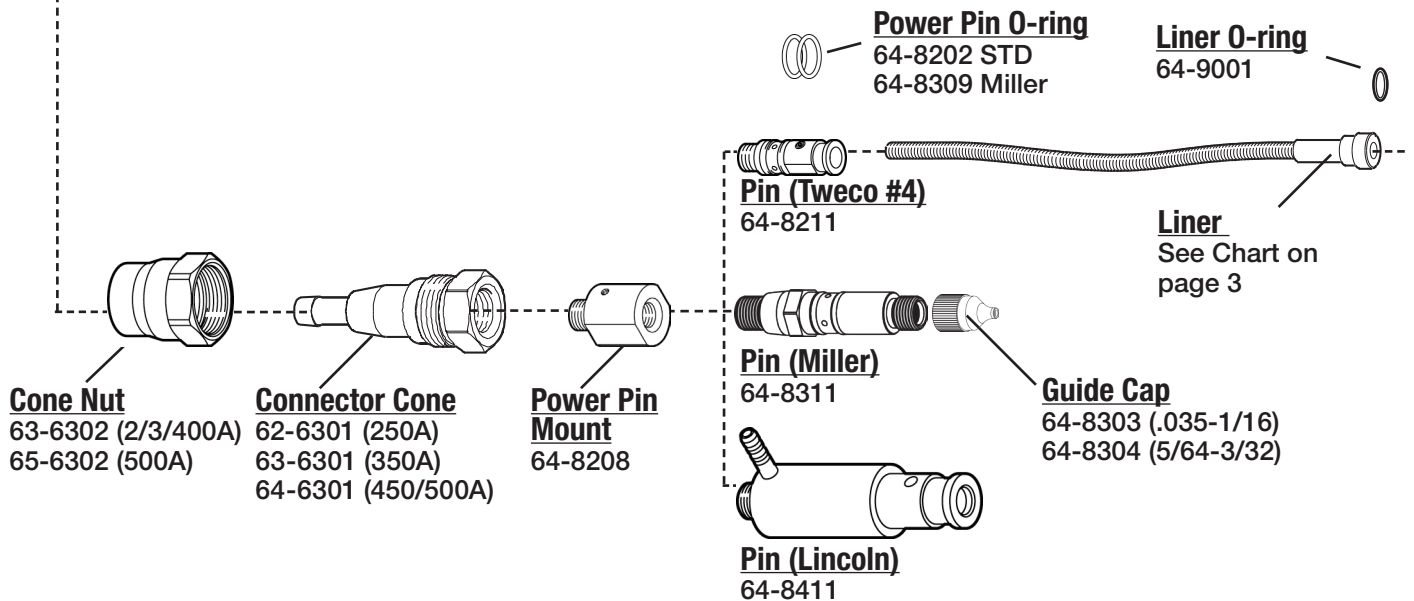
Control Plugs



64-8404 (Spade)



64-8306 (Miller Amphenol 2 pin)
64-8403 (Lincoln Control/Bell plug)



NOZZLE AND CONTACT TIP SYSTEMS

REMOVAL AND REPLACEMENT

Pull slip-on nozzles off with a clockwise twisting motion.

When installing nozzle, exposed insulator should nest inside shock washer to assure concentricity.

Shock washers are positioned on the end of the gooseneck with the large insulated counterbore facing the nozzle.

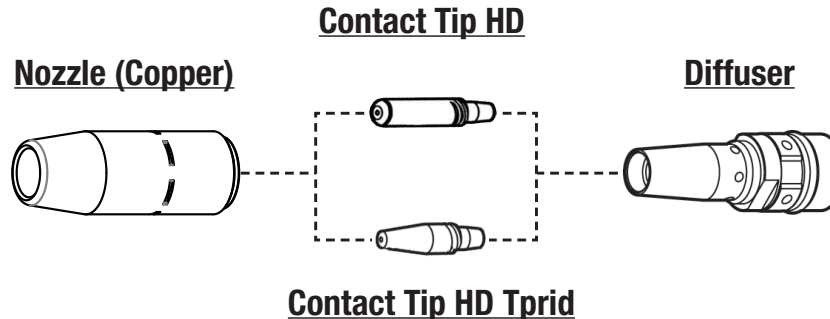
Replace nozzle retainer with deep counterbore toward the gooseneck.
Tighten until retainer and shock washer are secure.

IMPORTANT

Shock washer must be in place before welding to maintain insulation of gooseneck. Be sure all parts are tightened well before welding.

When using the heavy duty retaining head make sure it is tightened with a 11/16" wrench to prevent overheating of diffuser and contact tip.

To prevent scoring on heavy duty retaining head, do not use pliers. Welding pliers, however, are recommended for tip installation and removal.



1.1 LINER REPLACEMENT

TOOLS REQUIRED

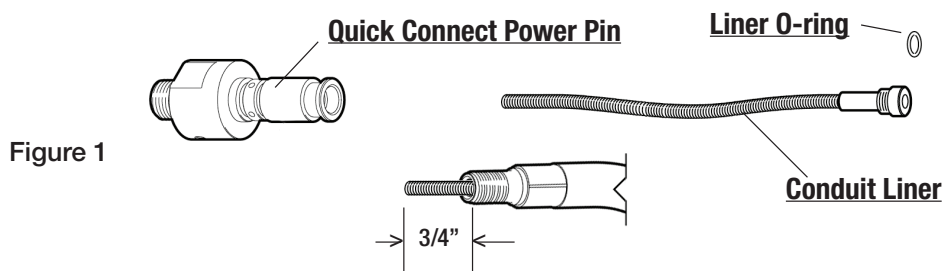
Vise
Lineman pliers

1. Remove nozzle, contact tip and tip holder from gooseneck. (Not shown)
2. Using pliers, unthread liner and remove from gun.
3. Install new liner by feeding through gun. Use short strokes to avoid kinking. Use clockwise rotation as needed.
4. Be sure o-rings on liner head seats into inside bore of power pin.
5. Using pliers, trim liner to extend to 3/4" (20mm) from end of gooseneck.
6. Remove any burrs on the inside and outside of liner to ensure smooth wire flow and proper seating inside diffuser.

Continued on next page.

LINER REPLACEMENT (continued)

7. Reinstall tip holder, contact tip and nozzle onto gooseneck.
Note: Liner should be visible through gas holes of tip holder.
8. Install gun to feeder.



* Trim dimension may change depending on front end consumables being used.

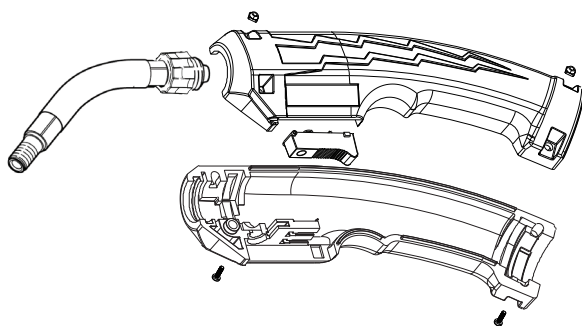
CHANGING THE HANDLE & SWITCH

2.1 HANDLE AND SWITCH REPLACEMENT

TOOLS REQUIRED

Phillips Head Screwdriver, Flat-head Screwdriver

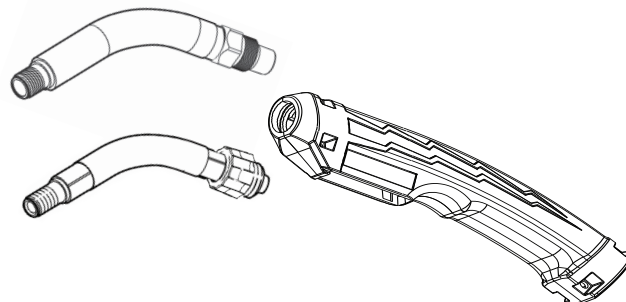
1. Loosen screws but do not fully remove.
2. Use flat-head screwdriver to help separate handle halves. Trigger should remove easily.
3. To replace trigger, install into handle halves with pivot posts inserted into handle cavities so movement is not impaired. Tighten screws. Torque to 10 in-lb.



2. To install the neck, perform the above instructions in reverse order and tighten lock nut to 16 ft-lbs. Be sure nut insulator is in place.
3. Liner may need to be changed if switching to a neck of a different bend angle or length.

Changing the Neck - Swivel

1. To remove neck, grasp lock nut and rotate counterclockwise. Rotation will free neck from connector cone. To install the neck, perform the above instructions in reverse order and torque to 37 in-lbs.
2. Liner may need to be changed if switching to a neck of a different bend angle or length.



CHANGING THE NECK

3.1 NECK REPLACEMENT

TOOL REQUIRED

3/4" Wrench

Changing the Neck - Fixed

To remove neck, remove the nut insulator.

1. Using a wrench, rotate brass nut counterclockwise, rotation will free neck from connector cone.

Lightning® Troubleshooting

A. Wire not feeding or bumpy feeding

Possible Cause	Possible Solution
1. Feeder relay / malfunction	Consult feeder manufacturer.
2. Broken control lead	Connect spare control leads.
3. Poor adaptor connection	Test and replace leads and/or contact pins.
4. Incorrect type of drive roll	Use manufacturers recommended drive rolls
5. Improper drive rolls size	Replace with proper size.
6. Drive roll tension misadjusted	Adjust tension at feeder.
7. Burn back to contact tip	See "E. <u>Contact tip burn back.</u> "
8. Wrong size liner	Replace with correct size.
9. Buildup inside of liner	Replace liner, check condition of electrode.
10. Worn drive roll	Replace with new drive roll.
11. Improper guide tube relationship	Eliminate all gaps in electrode path.
12. Improper wire guide diameter	Replace with proper guide diameter.
13. Gaps at liner into gas diffuser	Reset liner and lock or replace with new liner

B. Premature contact tip failure

Possible Cause	Possible Solution
1. Improper voltage or wire feed speed	Set parameters.
2. Erratic wire feeding	See "G. <u>Erratic arc.</u> "
3. Improper tip stickout	Adjust nozzle/tip relationship.
4. Improper electrode stickout	Change length of wire stickout.

C. MIG Gun running hot

Possible Cause	Possible Solution
1. Exceeding duty cycle	Replace with properly rated duty cycle MIG Gun. Decrease parameters to within Gun rating.
2. Loose or poor power connection	Clean and retighten all electrical connection. Check rating and condition of ground clamp.

D. Porosity in weld

Possible Cause	Possible Solution
1. Nozzle/Insulator/O-rings worn	Replace.
2. Retaining head spring/band	Replace retaining head.
3. Extreme heat or duty cycle	Use X-heavy-duty consumables.
4. Gas not getting to the weld	Check gas regulator/flowmeter/cylinder
5. Gas ports plugged	Clean or replace gas diffuser/nozzle.
6. Loose fittings or cut gas hose	Tighten or repair hose lines.

Lightning® Troubleshooting

E. Contact tip burn back

Possible Cause	Possible Solution
1. Improper voltage and/or wire feed speed	Set parameters.
2. Erratic wire feeding	See "G. Erratic arc."
3. Improper tip stickout	Adjust nozzle / tip relationship.
4. Improper electrode stickout	Adjust torch to base metal relationship.
5. Faulty ground	Repair all cables and connectors.

F. Tip disengages from retaining head

Possible Cause	Possible Solution
1. Worn retaining head	Replace tip and/or retaining head.
2. Improper tip installation	Finger tighten then slightly tighten with correct tool.

G. Erratic arc

Possible Cause	Possible Solution
1. Worn contact tip	Replace.
2. Buildup inside of liner	Replace liner, check condition of electrode.
3. Wrong tip size	Replace with correct tip size.
4. Incorrect welding parameters	Use wire manufacturers parameters.

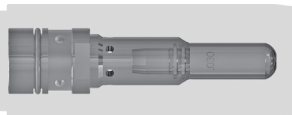
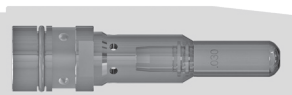
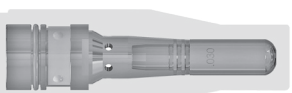
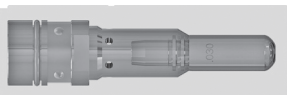
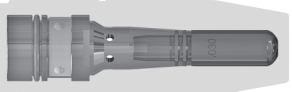
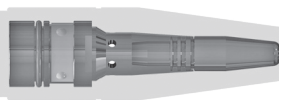
H. Excess spatter

Possible Cause	Possible Solution
1. Improper machine parameters	Adjust parameters.
2. Incorrect tip or installation	Adjust nozzle / tip relationship.
3. Incorrect nozzle or shielding	Use correct nozzle and shielding gas coverage.
4. Contaminated wire or work piece	Replace wire and clean work piece.

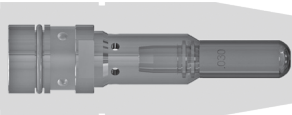
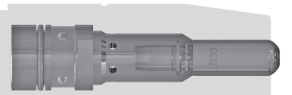
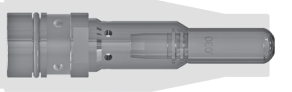
I. Discolored Liner

Possible Cause	Possible Solution
1. Short circuit to electrode	Check for wire short circuiting in feeder
2. Cuts in outer jacket, copper exposed	Replace gun.

LIGHTNING® MIG Consumable Parts Reference



Nozzle	63-2138 3/8" Bore Flush Copper 0.938" O.D.	63-2150 1/2" Bore 1/8" Recess Copper 0.938" O.D.	63-2162 5/8" Bore 1/8" Recess Copper 0.938" O.D.	63-2175 3/4" Bore 1/8" Recess Copper 0.938" O.D. Straight Bore	63-2362 5/8" Bore 1/8" Recess Brass 1.120" O.D. Straight Bore	63-2662 5/8" Bore 1/8" Stickout Copper 0.938" O.D.	63-2950B 1/2" Bore 1/8" Recess Brass 0.938" O.D. Straight Bore	64-2562 5/8" Bore 1/4" Recess Copper 1.062" O.D.	64-2575 3/4" Bore 1/4" Recess Copper 1.062" O.D.
Diffuser	63-3103-2	63-3103-2	63-3103	63-3103	63-3103	63-3103	63-3103-2	63-3103	63-3103
Tip	63-12XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX



Nozzle	64-2387 7/8" Bore 1/4" Recess Brass 1.062" O.D. Straight Bore	64-2950 1/2" Bore 1/8" Stickout Brass 0.938" O.D. Straight Bore	64-2962 5/8" Bore Flush Copper 1.062" O.D. Bottle Neck	65-2562 5/8" Bore 1/8" Recess Copper 1.062" O.D.	65-2362 5/8" Bore 1/8" Stickout Brass 1.062" O.D.	65-2375 3/4" Bore 1/4" Recess Brass 1.120" O.D. Straight Bore	65-2575 3/4" Bore 1/8" Recess Copper 1.062" O.D.	65-2662 5/8" Bore 1/8" Stickout Copper 1.062" O.D.	65-2550 1/2" Bore 1/8" Recess Copper 1.062" O.D.
Diffuser	63-3103	63-3103	63-3103	63-3103	63-3103	63-3103	63-3103	63-3103	63-3103
Tip	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX	63-11XX

All Lightning® consumables are interchangeable for custom configurations.
All nozzles are available in threaded versions for use with threaded diffuser.

XX denotes wire size.
See chart on page 3 for details.



Visit AmericanTorchTip.com/Lightning for more information
and helpful MIG resources, including catalogs, videos and articles.



LIMITED WARRANTY – Subject to the terms and conditions below

American Torch Tip Co. (ATTC) warrants its products to the original end user for the periods listed below:

PLASMA	MIG
LIFETIME *PHD and PHDX Torch Bodies	LIFETIME *Lightning® Handle and Trigger Switch ONE YEAR *Lightning® Semi-Automatic MIG Guns *Lightning® Robotic MIG Guns *Lightning® Fixed Automation MIG Guns 180 DAYS *All Other Gun Models
THERMAL SPRAY	TIG
ONE YEAR *Thermal Spray Guns	ONE YEAR *TIG Torches

*Limited Warranty on Manufacturing and Material Defects. Warranty Terms Do Not Apply to Consumable Products.

Warranty Terms

This warranty shall not apply to any product that has been modified or used in a manner inconsistent with ATTC's installation instructions and operating guidelines. Within the warranty periods listed above and at ATTC's sole discretion, ATTC will repair or replace any warranted parts or components that fail due to such defects in material or workmanship. ATTC must be notified within thirty (30) days of such defect or failure, at which time ATTC will determine if a Return Goods Authorization (RGA) is justified and issue an RGA number, authorization of a RGA number shall not be unreasonably withheld. ATTC will supply a RGA form, which must be included with the returned products for inspection by ATTC. Shipping and packing costs shall be the responsibility of the party returning the goods. Once received, ATTC shall inspect and determine if a warranty claim is justified and at ATTC's sole discretion authorize a repair or replacement. Once authorization has been granted ATTC shall provide instructions on the warranty claim procedures to be followed. Where authorized, repair or replacement constitutes the sole remedy for breach of warranty and expressly excludes claims for lost revenue, down time and other consequential damages. The warranty is limited to the conditions stated above and excludes, to the fullest extent permitted by law, all conditions, warranties and representations express or implied by statute, law or otherwise in relation to the supply or delay in supplying the goods/services. There are no agreements, promises or understandings, either verbal or written that are not fully expressed in this warranty. This warranty may be amended or altered only if agreed to in writing and signed by ATTC.

ATTC Limited Warranty 0418

