



# Arcair®

## Professional

# EXTREME™

## GOUGING TORCHES

### PRODUCT CATALOG

Volume 1

[www.tweco.com](http://www.tweco.com)



## **New & Improved Air Flow and Four Barrel Air Nozzle Gives Optimum Metal Removal**

Check out these exciting features of the new Extreme™ Gouging Torch from Arcair®:

### **Improved Torch Air Flow**

More efficient use of air supply. Improved metal removal.

### **New Four Barrel Air Nozzle**

Optimizes air flow to the arc. Efficiently cleans slag from groove edge.

### **Optimized Air Flow to Control Noise**

Allows usage in areas where noise cannot exceed 115 decibels. Able to use torch at lower air pressure and flow to obtain acceptable grooves.

### **Air Assist Positive Air Shut-Off**

Minimizes air supply unit cycling on and off. Allows torch usage when air supply is marginal.

### **Improved Cable Electrical Conduction**

Improves cable service life. Decreases heat build up in cable and torch.

### **Superior Outer Cable Cover**

Durable cover for improved cable life in a harsh environment. Resist breakdown due to exposure to heat produced by gouging.

### **Insulated Connection Boot & Hook-Up Kit**

Makes for easy torch hook-up. Virtually eliminates the possibility of arcing when contacting electrically hot parts.



**Angle-Arc®**  
Gouging Torches



**K-Series**  
Gouging Torches



**Tri-Arc®**  
Gouging Torches





## Angle-Arc® Manual Gouging Torches

Only Arcair® – the inventor of the original air carbon arc process and the industry leader for 50 years – could bring you the superb marriage of proven technology and improved design. Only Angle-Arc Torches work efficiently with the natural angles and movements of the arm and wrist. This major advance in gouging and cutting equipment delivers rugged reliability. The addition of superb support and complete technical backup makes Arcair the number one name in air carbon arc manual torches.

Arcair Angle-Arc Torches are highly efficient metal removal tools for fabrication jobs in steel fabrication plants, shipyards, railroads, farms . . . anywhere people want to save time and money. They speed up weld removal, backgouging, edge preparation, defect repair and many other metal removal jobs. They are ideal for almost all metals – with little or no deformation – because the heat input is so low.

Now a complete family of Angle-Arc Torches to meet your everyday needs. Just pick the best torch to fit your gouging applications.



<b>K2000</b>	<b>K3000</b>	<b>K4000</b>	<b>K5000</b>
Light Duty	Medium Duty	Heavy Duty	Extra Heavy Duty
<b>Accepts:</b> Pointed Carbons: 1/8" (3mm) to 1/4" (6mm) Flat Carbons: 3/8" (10mm) Maximum 450 Amps Compressed air: Pressure: 40 psi (2.8kg/cm <sup>2</sup> ) Flow Rate: 8 cfm (0.23m <sup>3</sup> /min) Torch & Cable Weight: 3.6 lbs. (1.6kg)	<b>Accepts:</b> Pointed Carbons: 1/8" (3mm) to 3/8" (10mm) Flat Carbons: 3/8" (10mm) & 5/8" (16mm) Maximum 600 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 21 cfm (0.60m <sup>3</sup> /min) Torch & Cable Weight: 4.0 lbs. (1.8kg)	<b>Accepts:</b> Pointed Carbons: 5/32" (4mm) to 1/2" (13mm) Flat Carbons: 3/8" (10mm) & 5/8" (16mm) Maximum 1000 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 28 cfm (0.79m <sup>3</sup> /min) Torch & Cable Weight: 5.4 lbs. (2.4kg)	<b>Accepts:</b> Pointed Carbons: 5/32" (4mm) to 5/8" (16mm) Flat Carbons: 3/8" (10mm) & 5/8" (16mm) Maximum 1250 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 30 cfm (0.85m <sup>3</sup> /min) Torch & Cable Weight: 6.8 lbs. (3.1kg)

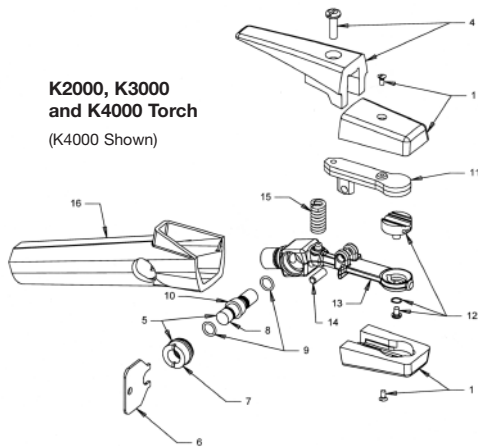
### ORDERING INFORMATION

	Torch Only	Torch w/ 7ft. Cable	Torch w/ 7ft. Cable & Insulated Hook-Up Kit	Torch w/ 10ft. Cable	Torch w/ 10ft. Cable & Insulated Hook-Up Kit
<b>K2000</b>	01-046-001	61-046-006	61-046-004	61-046-007	61-046-003
<b>K3000</b>	01-065-001	61-065-006	61-065-002	61-065-007	61-065-003
<b>K4000</b>	01-082-002	61-082-008	61-082-006	61-082-009	61-082-007
<b>K5000</b>	01-105-001	61-105-002	N/A	61-105-003	N/A

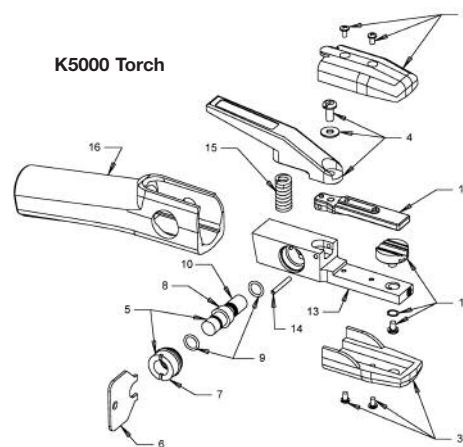
### FEATURES & BENEFITS

<b>Natural 15° Torch Angle</b>	Greater operator comfort	<b>Reduced Weight</b>	Optimum cable and torch weight to minimize fatigue
<b>360° Swivel Cable</b>	Less cable twist Less strain on operator	<b>High Quality Cable Hose</b>	Best quality cable hose offers high heat and abrasion resistance
<b>Positive Grip Handle</b>	Greater operator feel and ease in positioning the torch	<b>Rugged Construction</b>	Overall rugged construction for the harsh environment

## Angle-Arc® Manual Gouging Torch Parts



K2000, K3000  
and K4000 Torch  
(K4000 Shown)

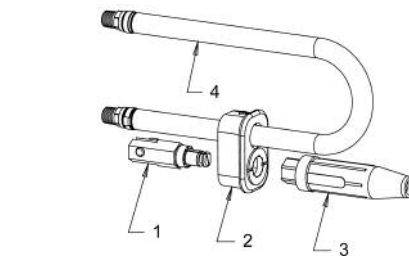


K5000 Torch

### Torch Assembly Replacement Parts

Item	Description	K2000	K3000	K4000	K5000
	<b>Complete Torch</b>	01-046-001	01-065-001	01-082-002	01-105-001
1	Insulators & Screws	94-433-193	94-433-193	94-433-183	N/A
2	Upper Insulator	N/A	N/A	N/A	94-433-202
3	Lower Insulator	N/A	N/A	N/A	94-433-204
4	Lever & Screw	94-476-080	94-476-080	94-476-066	94-476-085
5	Valve Bonnet	94-104-016	94-104-016	94-104-016	94-104-016
6	Bonnet Wrench	94-960-001	94-960-001	94-960-001	94-960-001
7	Bonnet Only	94-104-012	94-104-012	94-104-012	94-104-012
8	Spool & O-Rings	94-801-011	94-801-011	94-801-011	94-801-011
9	O-Ring (2 Reqd.)	94-710-036	94-710-036	94-710-036	94-710-036
10	Spool Only	94-801-010	94-801-010	94-801-010	94-801-010
11	Upper Arm	94-048-119	94-048-120	94-048-088	94-048-121
12	Head & Screw	94-378-364	94-378-366	94-378-368	94-378-366
13	Torch Body	94-103-233	94-103-232	94-103-206	94-103-235
14	Hinge Pin	94-632-100	94-632-101	94-632-094	94-632-105
15	Spring	94-800-191	94-800-191	94-800-077	94-800-077
16	Handle	94-370-179	94-370-179	94-370-163	94-370-189

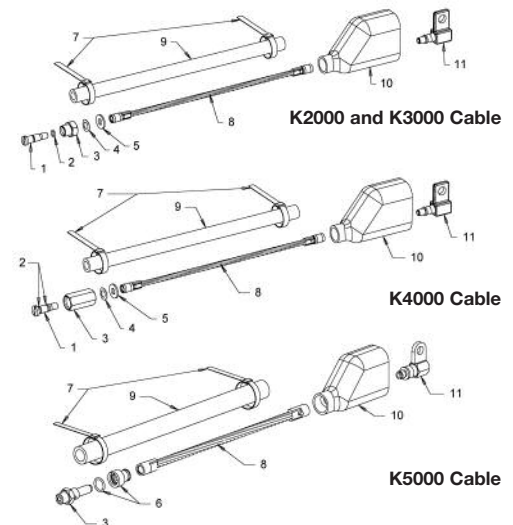
### Hook-Up Kit & Parts



Item	Description	Cat No.
	<b>Complete Hook-Up Kit</b>	94-463-045
1	Male Gouging Connector	94-170-181
2	Cable Boot Cap	94-105-027
3	4-WPC-R Connector	9425-1427
4	Pigtail Air Supply Hose	94-396-205

### Cable Assembly Replacement Parts

Item	Description	K2000	K3000	K4000	K5000
	<b>7' (2.1m) Cable Assembly</b>	70-088-107	70-088-107	70-084-207	70-128-507
	<b>10' (3m) Cable Assembly</b>	70-088-110	70-088-110	70-084-210	70-128-510
1	Retainer Screw	94-695-054	94-695-054	94-170-182	N/A
2	O-Ring	94-710-027	94-710-027	SEE ABOVE	N/A
3	Connector	94-170-178	94-170-178	SEE ABOVE	94-170-105
4	Spring Washer	94-940-104	94-940-104	94-940-104	N/A
5	Flat Washer	94-940-103	94-940-103	94-940-103	N/A
6	Swivel Sleeve	N/A	N/A	N/A	94-784-051
7	Clamp (2 Required)	98-167-010	98-167-010	98-167-010	98-167-012
8	7' (2.1m) Conductor	96-130-314	96-130-314	96-130-263	96-130-061
8	10' (3m) Conductor	96-130-315	96-130-315	96-130-261	N/A
9	7' (2.1m) Cover	94-171-273	94-171-274	94-171-274	94-171-004
9	10' (3m) Cover	94-171-274	94-171-274	94-171-274	N/A
10	Insulating Boot	94-105-014	94-105-014	94-105-014	94-105-017
11	Female Connector	94-170-150	94-170-150	94-170-150	94-170-087



K2000 and K3000 Cable

K4000 Cable

K5000 Cable



## Straight Handle Manual Gouging Torches

Only Arcair® – the inventor of the original air carbon arc process and the industry leader for 50 years – could bring you the superb marriage of proven technology and improved design. The K-3 and K-5 are just two torches in a line of gouging and cutting equipment that delivers rugged reliability. The addition of superb support and complete technical backup makes Arcair the number one name in air carbon arc manual torches.

The K-Model Manual Torches are an essential part of the money-saving air carbon arc metal removal process, which melts metal with an electric arc, then blows it away with a jet of ordinary shop compressed air.

These torches are highly efficient metal removal tools for fabrication jobs in steel fabrication plants, shipyards, railroads, farms . . . anywhere people want to save time and money. They speed up weld removal, backgouging, edge preparation, defect repair and many other metal removal jobs. They are ideal for almost all metals – with little or no deformation – because the heat input is so low.

The K-Model Torches offer the reliable and rugged design users expect from Arcair Torches, just pick the best torch to fit your gouging applications.



### K-3

Medium Duty

Accepts:  
 Pointed Carbons:  
 1/8" (3mm) to 3/8" (10mm)  
 Flat Carbons:  
 3/8" (10mm) & 5/8" (16mm)  
 Maximum 600 Amps  
 Compressed air:  
 Pressure:  
 80 psi (5.6kg/cm<sup>2</sup>)  
 Flow Rate:  
 21 cfm (0.60m<sup>3</sup>/min)  
 Torch & Cable Weight:  
 4.0 lbs. (1.8kg)

### K-5

Extra Heavy Duty

Accepts:  
 Pointed Carbons:  
 5/32" (4mm) to 5/8" (16mm)  
 Flat Carbons:  
 3/8" (10mm) & 5/8" (16mm)  
 Maximum 1250 Amps  
 Compressed air:  
 Pressure:  
 80 psi (5.6kg/cm<sup>2</sup>)  
 Flow Rate:  
 30 cfm (0.85m<sup>3</sup>/min)  
 Torch & Cable Weight:  
 6.8 lbs. (3.1kg)

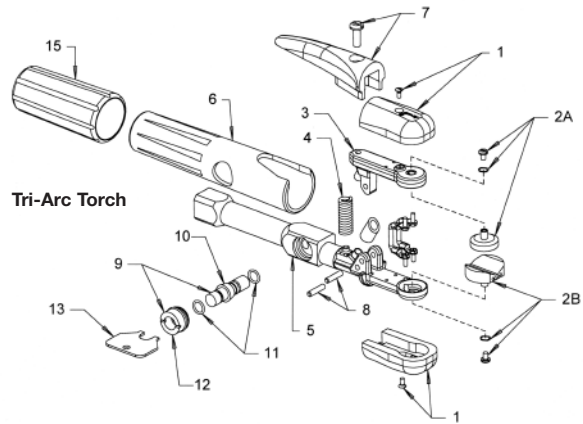
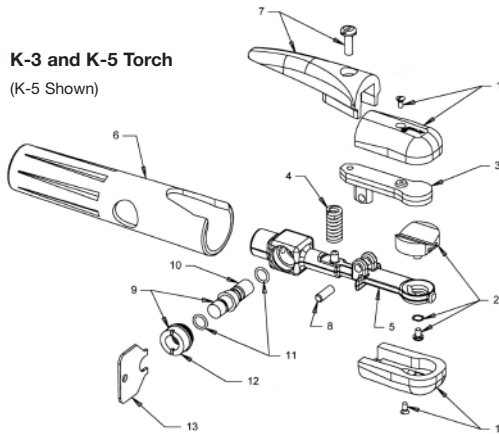
## ORDERING INFORMATION

	Torch Only	Torch w/ 7ft. Cable	Torch w/ 7ft. Cable & Insulated Hook-Up Kit	Torch w/ 10ft. Cable	Torch w/ 10ft. Cable & Insulated Hook-Up Kit
<b>K-3</b>	01-064-003	61-064-016	61-064-012	61-064-017	61-064-013
<b>K-5</b>	01-104-003	61-104-007	N/A	61-104-008	N/A

## FEATURES & BENEFITS

<b>Reliable Torch Design</b>	Greater operator comfort	<b>Reduced Weight</b>	Optimum cable and torch weight to minimize fatigue
<b>Swivel Cable</b>	Less cable twist Less strain on operator	<b>High Quality Cable Hose</b>	Best quality cable hose offers high heat and abrasion resistance
<b>Positive Grip Handle</b>	Greater operator feel and ease in positioning the torch	<b>Rugged Construction</b>	Overall rugged construction for the harsh environment

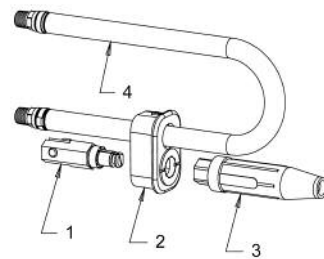
## K-Series and Tri-Arc® Manual Gouging Torch Parts



### Torch Assembly Replacement Parts

Item	Description	K-3	K-5	Tri-Arc
	<b>Complete Torch</b>	01-064-003	01-104-003	SEE PAGE 7
1	Insulators & Screws	94-433-118	94-433-118	94-433-118
2	Head & Screw	94-378-368	94-378-370	SEE PAGE 7
3	Upper Arm	94-048-087	94-048-088	94-048-110
4	Spring	94-800-077	94-800-077	94-800-088
5	Torch Body	94-103-114	94-103-114	94-103-221
6	Handle	94-370-079	94-370-079	94-370-079
7	Lever & Screw	94-476-034	94-476-034	94-476-034
8	Hinge Pin	94-632-094	94-632-094	94-632-063
9	Valve & Bonet Assembly	94-104-016	94-104-023	94-104-023
10	Spool & O-Rings	94-801-011	94-801-021	94-801-021
11	O-Ring	94-710-036	94-710-036	94-710-036
12	Valve Bonnet	94-104-012	94-104-012	94-104-012
13	Spanner Wrench	94-960-001	94-960-001	94-960-001
14	Always ON Valve Assy.	N/A	N/A	94-638-082
15	Torch Sleeve	N/A	N/A	94-784-045

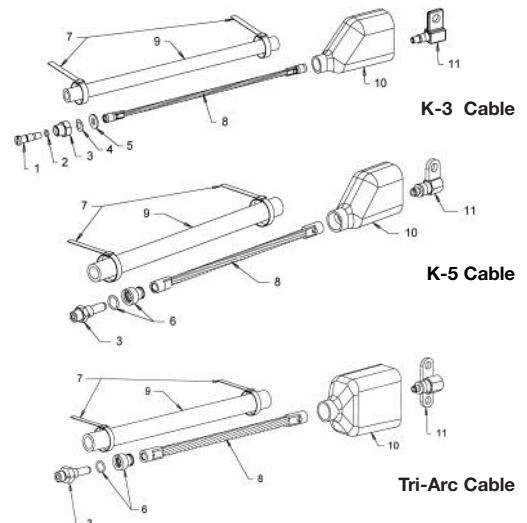
### Hook-Up Kit & Parts



Item	Description	Cat No.
	<b>Complete Hook-Up Kit</b>	94-463-045
1	Male Gouging Connector	94-170-181
2	Cable Boot Cap	94-105-027
3	4-WPC-R Connector	9425-1427
4	Pigtail Air Supply Hose	94-396-205

### Cable Assembly Replacement Parts

Item	Description	K-3	K-5	Tri-Arc STD	Tri-Arc EXHD
	<b>7' (2.1m) Cable Assembly</b>	70-088-907	70-128-507	74-143-607	74-161-907
	<b>10' (3m) Cable Assembly</b>	70-088-910	70-128-510	74-143-610	N/A
1	Retainer Screw	94-695-054	N/A	N/A	N/A
2	O-Ring	94-710-027	N/A	N/A	N/A
3	Male Connector	94-170-180	94-170-105	94-170-169	94-170-176
4	Spring Washer	94-940-104	N/A	N/A	N/A
5	Brass Washer	94-940-103	N/A	N/A	N/A
6	Swivel Sleeve	N/A	94-784-051	94-784-050	94-784-078
7	Clamp (2 Reqd.)	98-167-010	98-167-012	98-167-012	98-167-012
8	7' (2.1m) Conductor	96-130-314	96-130-061	96-130-063	96-130-286
8	10' (3m) Conductor	96-130-315	N/A	96-130-126	N/A
9	7' (2.1m) Cover	94-171-273	94-171-004	94-171-006	94-171-284
9	10' (3m) Cover	94-171-274	N/A	94-171-140	N/A
10	Insulating Boot	94-105-014	94-105-017	94-105-007	94-105-019
11	Female Connector	94-170-150	94-170-087	94-170-095	94-170-174





## Tri-Arc® Foundry Gouging Torches

Only Arcair® – the inventor of the original air carbon arc process and the industry leader for 50 years – could bring you the superb marriage of proven technology and improved design. The Tri-Arc Foundry Torch delivers the rugged reliability. The addition of superb support and complete technical backup makes Arcair the number one name in air carbon arc manual torches.

The original triple purpose torch is an essential part of the money-saving air carbon arc metal removal process, which melts metal with an electric arc, then blows it away with a jet of ordinary shop compressed air.

This torch is a highly efficient metal removal tool for all the heavy foundry applications . . . anywhere people want to save time and money. It speeds up padwashing, removes defects in castings and generally cleans castings of fins, nails and other unnecessary metal. This process is ideal for almost all metals – with little or no deformation – because the heat input is so low.

The Tri-Arc Torch offers one torch body that accepts three types of heads that can be tailored to fit your application best. Need several torch types for different applications? No problem the Tri-Arc offers different heads to fit in the same torch body to fit all your needs. No need for maintenance shops and distributors to stock several torches and confuse parts. Again the Tri-Arc gives you the reliable and rugged design users expect from Arcair Torches, just pick the best torch/head combination to fit your gouging applications.



Tri-Arc	Tri-Arc	Tri-Arc
Defect Removal Heads	Padwashing Heads	General Purpose Cleaning Heads
Accepts: Pointed or Jointed Carbons: 5/16" (6mm) to 3/4" (20mm) Maximum 2200 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 36 cfm (1.0m <sup>3</sup> /min) Torch Weight: 2.4 lbs. (1.1kg)	Accepts: Pointed or Jointed Carbons: 1/2" (13mm) to 1" (25mm) Maximum 2200 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 37 cfm (1.0m <sup>3</sup> /min) Torch Weight: 2.4 lbs. (1.1kg)	Accepts: Pointed or Jointed Carbons: 5/16" (6mm) to 3/4" (20mm) Maximum 2200 Amps Compressed air: Pressure: 80 psi (5.6kg/cm <sup>2</sup> ) Flow Rate: 40 cfm (1.1m <sup>3</sup> /min) Torch Weight: 2.4 lbs. (1.1kg)

### ORDERING INFORMATION

No Heads in Torch		1/2" (13mm) Electrodes		1/2" (13mm) Electrodes	
Torch Only	02-991-411	Torch Only	02-991-413	Torch Only	02-991-416
Torch & 7' (2.1m) Cable	62-991-417	Torch & 7' (2.1m) Cable	62-991-419	Torch & 7' (2.1m) Cable	62-991-422
		Replacement Heads	94-378-286	Replacement Heads	94-378-267
		5/8" (16mm) Electrodes		5/8" (16mm) Electrodes	
		Torch Only	02-991-414	Torch Only	02-991-417
		Torch & 7' (2.1m) Cable	62-991-420	Torch & 7' (2.1m) Cable	62-991-423
		Replacement Heads	94-378-289	Replacement Heads	94-378-270
5/16" (6mm) to 3/4" (19mm)		3/4" (19mm) Electrodes		3/4" (19mm) Electrodes	
Torch Only	02-991-425	Torch Only	02-991-415	Torch Only	02-991-418
Torch & 7' (2.1m) Cable	62-991-435	Torch & 7' (2.1m) Cable	62-991-421	Torch & 7' (2.1m) Cable	62-991-424
Replacement Heads	94-378-370	Replacement Heads	94-378-283	Replacement Heads	94-378-273
				1" (25mm) Electrodes	
				Torch Only	02-991-424
				Replacement Heads	94-378-344

## Current Requirements

Carbon Diameter	1/8" 3mm	5/32" 4mm	3/16" 5mm	1/4" 6mm	5/16" 8mm	3/8" 10mm	1/2" 13mm	5/8" 16mm
Min. Amps	60	90	200	300	350	450	800	1000
Max. Amps	90	150	250	400	450	600	1000	1250

## Techniques for Specific Materials

### Carbon Steel

This material can be easily gouged or cut using DCEP (reverse polarity). Normal conditions use a 35° electrode to work angle with a maximum of 7" (17.8cm) electrode stickout. The air blast is always positioned between the electrode and workpiece.

### Stainless Steel

These alloys can be easily gouged using the same techniques as described in carbon steel.

### Aluminum

The electrode stickout should be no more than 3" (7.6cm). Be careful not to touch the electrode to the work surface, as a carbon deposit will occur. The finish of the groove/cut will require a stainless steel brush to remove the black oxide (oxides not carbon) from the area. Recommend using DC Copperclad electrodes on DCEP (reverse polarity). If this doesn't work well, then switch to DCEN (straight polarity).

### Gray, Ductile & Malleable Cast Iron

These materials require a special operating procedure when attempting to gouge with CAC-A. It is recommended that the current range for gouging be 1000 amps or higher. This also requires using 1/2" (12.7 mm) diameter carbons or larger. Attempts to gouge with smaller carbons will deposit refractory slag (gray crystalline surface) resulting in little or no gouging progress while burning up carbons.

### Copper Base Alloys

Heat dissipation due to high conductivity of these materials makes them more difficult to cut or gouge than carbon steel. Use DC electrodes with DCEN (straight polarity) at the maximum amperage rating of the electrode or use AC electrodes with AC.

### High Nickel Alloys

The higher the nickel content the harder the material is to gouge. Use AC electrode on DCEP (straight polarity) or use AC electrodes on AC.

## Electrode Types

### DC Copperclad® Pointed

Standard all purpose gouging electrode. Controlled copper coating improves conductivity providing more efficient, cooler operation and helps maintain electrode diameter at the point of the arc.	1/8" x 12"	3.2mm x 30.5cm
	5/32" x 12"	4.0mm x 30.5cm
	3/16" x 12"	4.8mm x 30.5cm
	1/4" x 12"	6.4mm x 30.5cm
	5/16" x 12"	7.9mm x 30.5cm
	3/8" x 12"	9.5mm x 30.5cm
	1/2" x 14"	12.7mm x 35.6cm

### DC Copperclad Flat

Specially designed for close tolerance metal removal. Excellent for removing weld crowns, rivet heads and cladding.	3/8" x 5/32" x 12"	9.5mm x 4.0mm x 30.5cm
	5/8" x 3/16" x 12"	15.9mm x 4.8mm x 30.5cm

### DC Plain Pointed

Standard all purpose gouging electrode. Controlled copper coating improves conductivity providing more efficient, cooler operation and helps maintain electrode diameter at the point of the arc.	5/32" x 12"	4.0mm x 30.5cm
	3/16" x 12"	4.8mm x 30.5cm
	1/4" x 12"	6.4mm x 30.5cm
	5/16" x 12"	7.9mm x 30.5cm
	3/8" x 12"	9.5mm x 30.5cm
	1/2" x 14"	12.7mm x 35.6cm

### AC Copperclad® Pointed

Specially blended, with an added rare earth arc stabilizer, for use with AC power supplies.	3/16" x 12"	4.8mm x 30.5cm
	1/4" x 12"	6.4mm x 30.5cm
	3/8" x 12"	9.5mm x 30.5cm

**U.S. Customer Care: 800-426-1888 / FAX 800-535-0557 • International Customer Care: 905-827-9777 / FAX 905-827-9797**  
[www.tweco.com](http://www.tweco.com)



WORLD HEADQUARTERS: 16052 Swingley Ridge Road, Suite 300 • St. Louis, Missouri 63017 U.S.A.

**A Global Cutting & Welding Market Leader™**

#### THE AMERICAS

Denton, TX USA  
 U.S. Customer Care  
 Ph: (1) 800-426-1888  
 Fax: (1) 800-535-0557

Miami, FL USA  
 Sales Office, Latin America  
 Ph: (1) 954-727-8371  
 Fax: (1) 954-727-8376

West Lebanon, NH USA  
 Customer Care, Plasma  
 Ph: (1) 800-752-7621  
 Fax: (1) 800-221-4401

Oakville, Ontario, Canada  
 International Customer Care  
 Ph: (1) 905-827-9777  
 Fax: (1) 905-827-9797

Rio de Janeiro, Brazil  
 Customer Care  
 Ph: (55) 21-2485-8998  
 Fax: (55) 21-2485-8866

#### EUROPE

Chorley, United Kingdom  
 Customer Care  
 Ph: (44) 1257-261755  
 Fax: (44) 1257-224800

Milan, Italy  
 Sales Office  
 Ph: (39) 02-98-80320  
 Fax: (39) 02-98-281773

#### ASIA/PACIFIC

Cikarang, Indonesia  
 Customer Care  
 Ph: 62 21+ 8983-0011 / 0012  
 Fax: 62 21+ 893-6067

Osaka, Japan  
 Sales Office  
 Ph: 816-4809-8411  
 Fax: 816-4809-8412

Melbourne, Australia  
 Customer Care:  
 Ph: 1300-654-674  
 Fax: 613- 9474-7391

International:  
 Ph: 613+ 9474-7508  
 Fax: 613+ 9474-7488

Rawang, Malaysia  
 Customer Care  
 Ph: 603+ 6092-2988  
 Fax: 603+ 6092-1085

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