

CARBONELITE® ARC GOUGING CARBONS

Premium Copper Coated Carbon Electrodes



Shown:
KP3800-5/16

ELITE PERFORMANCE

CarbonElite® arc gouging carbon electrodes are made of a proprietary composition to deliver high efficiency metal removal. The copper coating on the carbon electrodes increases arc stability and decreases heat generation, which can result in a more controlled melt-off rate. Available in multiple types and dimensions for use in a wide range of gouging applications.

Performance

- First class metal removal rates
- More consistent melt off rate allows for uniform, smooth grooves
- Dense copper coating improves arc stability
- High mechanical strength for improved durability

Carbon Electrode Types

- Pointed/Round
- Jointed
- Flat
- Hollow

Processes »

CAC-A (gouging)

Applications »

Removing defective welds, preparing joints for welding, severing, pad washing, beveling

Dimensions »

17 separate models ranging from 1/8 x 12 in. to 3/4 x 17 in.



Consistent Melt Off Rate – Optimized composition to maximize metal removal while maintaining an efficient melt off rate to help control usage

Lower Heat Generation – Excessive heat generation can result in an inefficient melt off rate, which in-turn can increase costs

Excellent Arc Stability – Dense copper coating helps provide consistent conductivity for smoother, more uniform groove profiles

Improved Durability – High density formula has elevated mechanical strength which is less prone to cracking or breaking

CARBON ELECTRODE TYPES

Pointed



Versatile multi-purpose round gouging electrode (most popular type)

Jointed



Round electrode with male & female ends to help eliminate stub loss

Flat



Rectangle shape for close tolerance metal removal and/or to create rectangle grooves

Hollow



Round electrode with hollow core allows for faster travel speed without sacrificing groove depth

DIAMETERS/PACKAGING

Product Name	Part Number	Diameter in (mm)	Length in. (mm)	Package
CarbonElite® Pointed	KP3800-1/8	1/8 [3.2]	12 [305]	100 Pcs Carton
	KP3800-5/32	5/32 [4.0]		50 Pcs Carton
	KP3800-3/16	3/16 [5.0]		
	KP3800-1/4	1/4 [6.5]		
	KP3800-5/16	5/16 [8.0]		
	KP3800-3/8	3/8 [9.5]		
	KP3800-1/2	1/2 [13.0]	14 [355]	
CarbonElite® Hollow	KP3801-1/4	1/4 [6.5]	12 [305]	50 Pcs Carton
	KP3801-5/16	5/16 [8.0]		
	KP3801-3/8	3/8 [9.5]		
	KP3801-1/4	1/4 [6.5]		
CarbonElite® Flat	KP3802-3/8	3/8 X 5/32 [9.5 x 4.0]	12 [305]	50 Pcs Carton
	KP3802-5/8	5/8 X 3/16 [16 x 5.0]		
CarbonElite® Jointed	KP3803-3/8	3/8 [9.5]	17 [430]	100 Pcs Carton
	KP3803-1/2	1/2 [13.0]		
	KP3803-5/8	5/8 [16.0]		
	KP3803-3/4	3/4 [19.0]		

TYPICAL OPERATING PROCEDURES

Electrode Diameter in (mm)	Current Range Amps	Polarity	Output Type	Air Pressure PSI	Min/Max Stickout in (mm) ^[3]
1/8 [3.2]	60 - 90	DC+	CC	40 – 80 ^[1]	2 / 7 [50 / 178]
5/32 [4.0]	90 - 150		CC	40 – 80 ^[1]	
3/16 [5.0]	200 - 250		CC	80	
1/4 [6.5]	300 - 400		CC	80	
5/16 [8.0]	350 - 450		CC/CV	80	
3/8 [9.5]	450 - 600		CC/CV	80	
1/2 [13.0]	800 - 1000		CC/CV	60 -100 ^[2]	
5/8 [16.0]	1000 - 1250		CC/CV	60 -100 ^[2]	
3/4 [19.0]	1250 - 1600		CC/CV	60 -100 ^[2]	
3/8 X 5/32 [9.5 x 4.0]	250 - 450		CC/CV	80	
5/8 X 3/16 [16 x 5.0]	300 - 500		CC/CV	80	

[1] Varies based on torch size and duty cycle
[2] Automated gouging applications for jointed carbons tend can potentially use 60-80 PSI while manual is traditional between 80 and 100
[3] Use max 3" [76 mm] stickout if base material is aluminum

TYPICAL POINTED CARBON ELECTRODE EFFICIENCY

Groove Depth	Carbon Electrode Dimensions					
	5/32 x 12 in.	3/16 x 12 in.	1/4 x 12 in.	5/16 x 12 in.	3/8 x 12 in.	1/2 x 14 in.
1/8 in.	64 - 66 in.	69 - 71 in.	80 - 82 in.	-	-	-
5/32 in.	56 - 58 in.	64 - 66 in.	69 - 71 in.	80 - 82 in.	-	-
3/16 in.	-	56 - 58 in.	65 - 67 in.	71 - 73 in.	81 - 83 in.	-
1/4 in.	-	45- 47 in.	57 - 59 in.	65 - 67 in.	71 - 73 in.	111 - 113 in.
5/16 in.	-	19 - 21 in. [MP]	45 - 47 in.	57 - 59 in.	65 - 67 in.	99 - 101 in.
3/8 in.	-	11 - 13 in. [MP]	23 - 25 in. [MP]	46 - 48 in.	58 - 60 in.	87 - 89 in.
1/2 in.	-	-	13 - 15 in. [MP]	25 - 27 in. [MP]	46 - 48 in.	72 - 74 in.
5/8 in.	-	-	-	15 - 17 in. [MP]	25 - 27 in. [MP]	56 - 58 in.
3/4 in.	-	-	-	-	15 - 17 in. [MP]	42 - 44 in.
7/8 in.	-	-	-	-	-	34 - 36 in. [MP]
1 in.	-	-	-	-	-	27 - 29 in. [MP]

Efficiency results were completed in a controlled environment. Actual results may vary depending on many factors, including but not limited to, amperage, voltage, travel speed, operator skill and base material.
Table above provides estimated length of groove which can be achieved based on groove depth and electrode dimensions.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers' particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

Subject to Change – This information is accurate to the best of our knowledge at the time of printing. Please refer to www.lincolnelectric.com for any updated information.

THE LINCOLN ELECTRIC COMPANY

22801 Saint Clair Avenue · Cleveland, OH · 44117 · U.S.A.
Phone: +1 216.481.8100 · www.lincolnelectric.com