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.

Publication E14.600 | Issue Date 09/25

www.lincolnelectric.com

THE CARBONELITE® PERFORMANCE STANDARD

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)

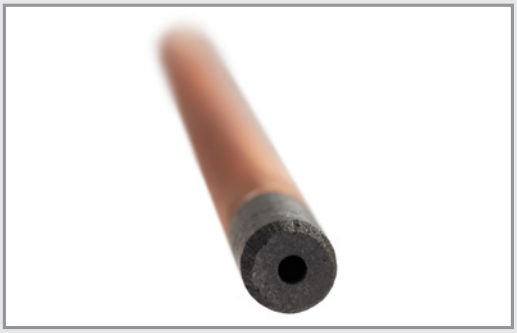
Jointed

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

	Carbon Electrode Dimensions					
Groove Depth	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.

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