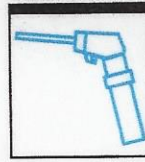


WELDING CONSUMABLES STAINLESS STEEL AND SPECIAL ELECTRODES



SECTION THREE

ARCAIR® DC GOUGING CARBONS



- ▲ Fast, Clean, Smooth, hassle-free Gouging.
- ▲ To Remove Metal from a Wide Range of Common Ferrous & Non-Ferrous Metals.
- ▲ Designed for DC Operation.
- ▲ Superior arc stability.

Description and Applications:

CIGWELD Arcair DC gouging carbons are made by mixing carbon/graphite with a binder, baking, and then coating with a controlled thickness of copper. Carbons are available in three types; Pointed, Jointed and Flat.

- Pointed carbons are the standard all purpose gouging electrode. Controlled copper coating improves electrical conductivity providing more efficient, cooler operation and helps maintain electrode diameter at the point of the arc.
- Jointed carbons have the added benefit of working without stub loss, with each rod having a female socket and matching male tang. They can be used with semi and fully automatic torches.
- Flat carbons are specially designed for close tolerance metal removal and scarfing applications, producing a rectangular groove.

Air-carbon arc gouging is done in the downhand, vertical, horizontal and overhead position with a stick out of 180mm and an electrode angle of approximately 35 degrees, depending on the application.

The groove width obtained will be approximately 3mm wider than the carbon size.

The gouging action occurs when the arc is struck, removing molten metal as the electrode is moved along the workpiece. A slow travel speed produces a deep groove, a fast travel speed produces a shallow groove.

The air flow must be turned on before gouging commences. The operator must ensure that adequate eye (shade 12-14), ear and clothing protection is worn.

CIGWELD Arcair gouging carbons are used for the efficient gouging, back gouging, plate edge preparation, touching up and removal of old or defective hardfacing and stainless steel weld deposits. They are used for reworking plates, dies, castings, pipes, armour plating etc. They gouge and sever ferrous and non-ferrous metals such as carbon steel, low alloy steel, stainless steel, cast iron, nickel alloys (nickel less than 80%), magnesium alloys and aluminium on DCEP. Copper alloys, aluminium bronze alloys and aluminium nickel bronze alloys can be gouged using DCEN.

Air carbon-arc gouging is used in many industries such as agriculture, automotive, heavy fabrication, construction, foundries, maintenance and repair shops, mining and quarrying, military, shipyards, power plants, railroads, steel mills to name a few.

Packaging and Operating Data:

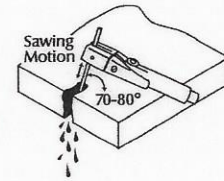
| | CIGWELD Part No. | Size (mm) | Rods per pack | Current range (Amps) | Air Pressure (kPa) | Air Pressure (lpm) |
|---------|------------------|--------------|---------------|----------------------|--------------------|--------------------|
| POINTED | 22043003 | 6.5 x 305 | 50 | 300 - 400 | 550 - 690 | 450 |
| | 22053003 | 8 x 305 | 50 | 350 - 450 | 550 - 690 | 450 |
| | 22063003 | 9.5 x 305 | 50 | 450 - 600 | 550 - 690 | 450 |
| JOINTED | 24104003 | 16 x 430 | 100 | 1000 - 1250 | 550 - 690 | 930 |
| | 24124003 | 19 x 430 | 100 | 1250 - 1600 | 550 - 690 | 930 |
| FLAT | 35033003 | 15 x 5 x 305 | 50 | 450 - 600 | 550 - 690 | 450 |

Conditioning Data:

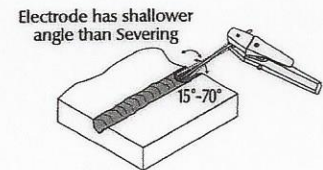
If carbons are damp, they should be redried at 180°C for 10 hours, otherwise they may shatter.

Technical TIP

Severing (cutting) is a form of gouging where the operator holds the electrode at a steeper travel angle (70 - 80°) to the workpiece and moves the arc in a sawing motion (Figure 1). A gouging carbon can cut non-ferrous materials 1.5 times its own thickness.



Washing is a form of gouging that allows the removal of metal from large areas, hardfacing deposits and riser pads on castings. An arc is struck and then the electrode is weaved from side to side using a travel angle of 15 - 70° to the workpiece, depending on the required depth of the gouge. (Figure 2)



Bevelling can be achieved by using a travel angle of 90 degrees and a work angle equal to the bevel angle (Figure 3).

