# HILCO Carbon gouging rods

Air carbon arc cutting (CAC-A) rods - cutting & gouging

**Coating type:**
Copper coated

**Current:**
=+ =−

**Arc voltage:** 35-55V - power source needs OCV ≥ 60V

Carbon gouging rods are copper-coated air carbon arc cutting rods made from a mixture of graphite and pure carbon. Typical applications can be found in every field of metalworking, in foundries, steel constructions, shipbuilding, repair & maintenance. Carbon gouging rods are used for weld edge preparations, back-gouging in multipass welding, removing unsatisfactory welds, bolt and wire ends, spatter removal, all kinds of cutting.

**Base materials to be welded:**
- Carbon, low-alloyed steels
- Stainless steels
- Aluminium
- Nickel alloys
- Cast iron
- Copper alloys
- Magnesium

**Applications:**
- All industries related to welding

**Process description, recommendations for usage**
Carbon gouging rods remove molten metal with a jet of air. The intense heat of an arc between the carbon-graphite electrode and a workpiece melts a portion of the metal, while simultaneously a jet of air is passed through the arc to blow away the molten metal. The process (Air carbon arc cutting - CAC-A) is used for cutting and gouging, and it can be done manually or mechanized. Carbon steel, stainless steel, copper alloys, cast irons, aluminium, magnesium and nickel alloys can all be cut with Carbon gouging rods. The process requires an electrode holder, cutting electrodes, a power source and an air supply. Manual electrode holders are similar to shielded metal arc electrode holders (stick electrode holders). The electrode is held in a rotatable head containing air orifices. A valve is provided to turn the air on and off. Carbon gouging rods are round, pointed and copper coated. They are intended to use at DC current.

| Base material | Electrode | Current | Remarks |
|---|---|---|---|
| Carbon, low-alloyed steels | DC | = + | - |
| Stainless steels | DC | = + | - |
| Aluminium | DC | = + | Extend electrode no more than 10 cm. |
| Nickel alloys | DC | = - | - |
| Cast iron | DC | = - | At middle of electrode current range |
| | DC | = + | At maximum current only |
| Copper alloys | DC | = + | At maximum current only |
| Magnesium | DC | = + | Clean surface before welding |

**Packaging and welding data:**

| Dia. mm. | Length mm. | Current A |
|---|---|---|
| 6,3 | 305 | 200-400 |
| 8,0 | 305 | 250-450 |
| 10,0 | 305 | 350-600 |
| 12,0 | 305 | 450-800 |