



POWDER CUTTING TORCH SYSTEM

WHAT IS POWDER CUTTING?

WHAT IS OXY-FUEL CUTTING?

Oxy-fuel torch cutting is the thermal cutting of materials through oxidation after the base metal has been heated to ignition temperature. Mild steels ignite in the cutting oxygen when heated to about 1,600°F. Oxides that form on mild steel have a lower melting point than the base metal.

WILL AN OXY-FUEL CUTTING TORCH CUT STAINLESS STEEL?

Cutting stainless steel with a standard oxy-fuel cutting torch system is difficult, if not impossible. This is because stainless steel has an ignition temperature of about 2,800°F. The oxides that form on stainless steel have a higher melting point than the base metal. This creates a barrier and prevents cutting. Other metals such as cast iron and non-ferrous metals can be just as difficult to cut because they burn with less heat or they leech heat away from the cutting zone.

WHAT IS POWDER CUTTING?

Powder torch cutting is the cutting of materials by injecting iron powder into the flame of an oxy-fuel torch. The fluxing action of the burning iron powder increases the flame temperature to remove oxide barriers, making stainless steel and other non-ferrous metals as easy to cut as mild steel.

WILL A POWDER CUTTING TORCH CUT STAINLESS STEEL?

Powder cutting is an effective method for cutting stainless steel, tool steel, nickel, pure cast iron and other dense, difficult-to-cut non-ferrous metals. An oxy-fuel torch equipped with iron powder can also cut through coils or stacks of steel plate quickly and easily. This is because the iron powder carries the cut through the air gaps. Powder cutting torches are not recommended for aluminum, brass and some high-chrome alloys.



Scan here to see
it in action!



Call **440.255.0606** or visit **qccmfg.com** for more information today!



POWDER CUTTING TORCH SYSTEM

WHY CHOOSE POWDER CUTTING?

FEATURES

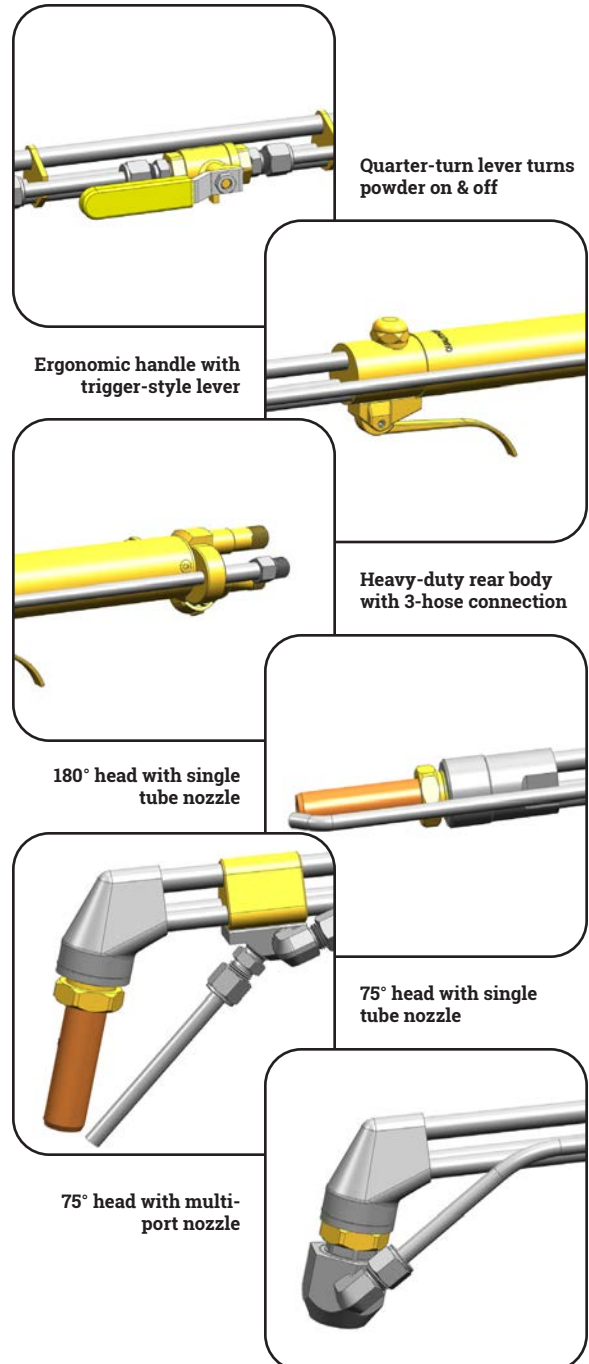
- Quarter-turn valve lever turns powder on & off for cutting both ferrous & non-ferrous metals
- Balanced & lightweight design enhances operator comfort, speed & efficiency
- Trigger-style lever located on bottom of handle
- Three tube design increases rigidity & sturdiness
- Single tube powder nozzle cuts in one direction & up to 36" deep
- Available multi-port powder nozzle can cut in any direction without changing torch orientation & up to 10" deep
- Powder dispenser holds 100 pounds of iron powder which provides 8 to 16 hours of continuous cutting
- Powder dispenser is portable allowing operator to travel to, from & around job site
- Iron powder is >90% pure iron by weight & has a melting point of 2,795°F
- Iron powder comes in 50 lb. resealable plastic pails with bulk quantities available upon request

ADVANTAGES

- All-in-one system includes everything you need
- Cuts through both ferrous & non-ferrous metals
- Extreme heat from powder can cut with little to no pre-heating allowing for flying starts
- Cuts across air gaps & spaces without restarting the cut making this setup perfect for coils & plate stacks
- Effective in most weather conditions

CUSTOMIZATION

- Available in both tip-mix & post-mix applications
- 70" cut depth available upon request
- Handheld torches are available with 75°, 90° or 180° head configurations
- Torches come in standard lengths with custom lengths ranging from 36" to 120" available upon request
- Optional heat shield increases operator safety
- Available with or without a skid for long reaches
- Can be added to most QCC oxy-fuel cutting torches



Call **440.255.0606** or visit **qccmfg.com** for more information today!



POWDER CUTTING TORCH SYSTEM

HOW DOES POWDER CUTTING COMPARE?

POWDER CUTTING VS BURNING BARS

- QCC's powder cutting system can reduce an operator's consumable costs by more than 80% over burning bars
- An iron powder cutting system has a monthly consumable cost savings of \$21,000 when compared to burning bars
- Burning bars require constant consumable swapping which slows down production & reduces operator safety
- Powder cutting can be continuously performed without stopping increasing efficiency, production & output
- 50 lbs. of iron powder will provide approx. 8 hours of cutting
- System will pay for itself in the first month of operation

	Burning Bars	Powder Cutting
Daily Use	100 bars	50 lb. pail
Cost per Day	\$1,200	\$200
Monthly Cost*	\$25,200	\$4,200

*Based on 21 working days.



Burning bars require constant swapping over 8 hours

50 lbs. of iron powder provides 8 hours of cutting on avg.



POWDER CUTTING VS PLASMA CUTTING

- Iron powder cutting systems provide faster, cleaner, deeper & more efficient cuts compared to plasma cutting
- Plasma cutting melts metal, decreasing scrap weight
- Powder cutting cuts metal, retaining scrap weight
- The heat from plasma cutting distorts & deforms metal
- Electric plasma cutting leaves behind a rough cut surface & provides a V-shaped cut on thick plate
- Powder cutting delivers a straight & clean cut without warping or affecting the surface area no matter thickness
- Plasma cutting equipment is heavier & more cumbersome to maneuver than QCC's portable powder dispenser

	Plasma Cutting	Powder Cutting
Depth of Cut	Up to 2"	Up to 36"
Thin Steel Plate	Warping Surface	Maintains Surface Integrity
Thick Steel Plate	V-Shaped Cut	Straight Cut



Electric plasma cuts metal up to 2" thick

Iron powder cuts metal up to 36" thick



Call **440.255.0606** or visit **qccmfg.com** for more information today!



POWDER CUTTING TORCH SYSTEM

WHAT CAN POWDER CUTTING DO FOR YOU?



304 STAINLESS STEEL



316 STAINLESS STEEL



400 STAINLESS STEEL



CAST IRON



Scan here to see
it in action!



CAST STEEL



CHROME-PLATED STEEL



CHROMOLY STEEL



MANGANESE STEEL

Call **440.255.0606** or visit **qccmfg.com** for more information today!