

GRASP THE BENEFIT OF VERSATILITY AND MANEUVERABILITY

PRO-TORCH™ TIG TORCHES



KEY FEATURES

PRO-Torch™ TIG Torches are used for a variety of applications in aerospace, motorsports, education, power plant construction, job shops, tool and die work, construction sites and production plants. Light and easy to use, these torches give you the power of maximum versatility and maneuverability.

- Wide range of both air-cooled and water-cooled torches
- “F” model torches feature a flexible head for greater comfort and improved access to tight spaces
- “V” model torches have a convenient gas valve on the torch to easily control shielding gas flow for power sources that do not have built in gas solenoid valves

Processes »
TIG

Product Number »
See back for details

KEY FEATURES Continued

- Select TIG torch models are available with Ultra-Flex™ power cable providing over five times the flexibility of a standard power cable
- Comfortable knurled handle for a non-slip sure grip and precise control
- Molded lip on torch handle allows cable cover to be securely attached to torch handle
- 1-piece cables consist of a power conductor inside a rubber hose. 2-piece cables consist of a separate power conductor and a braided hose
- One-year Lincoln Electric warranty on torch

Gas Control Valve Models



Manual Gas Valve

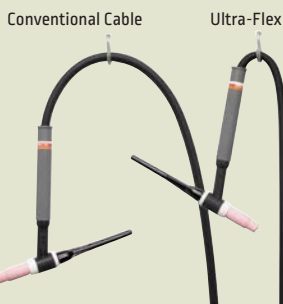
Flexible Head Models



1-Pc. Vs. 2-Pc. Cable Ends



Ultra-Flex Cable Models



Recommended Accessories

Twist-Mate™ Adapters, Collets, Collet Bodies, Gas Lens Collet Bodies, Alumina Nozzles, and Parts Kits including Tungsten Electrodes.

Expendable parts are also interchangeable with industry standard torches. Use the Industry Reference Numbers as a cross reference guide to order Lincoln Electric premium replacement parts.

Available Torches



PTA-9
Air-cooled TIG torch, rated 125 amps at 60% duty cycle.



PTW-20
Water-cooled TIG torch, rated 250 amps at 100% duty cycle.



PTA-17, PTA-17V, PTA-17F and PTA-17FV
Air-cooled TIG torch, rated 150 amps at 60% duty cycle. The PTA-17V is equipped with a valve for gas flow control. The PTA-17F is equipped with a flexible head for easy maneuverability into tight spaces. The PTA-17FV is equipped with both a gas valve and a flexible head.



PTW-18
Water-cooled TIG torch, rated 350 amps at 100% duty cycle.



Ultra-Flex PTA-9F TIG Torch Package
This torch package includes a PTA-9F flex head torch with a 12.5 ft. (3.8 m) Ultra-Flex cable and K1622-1 Twist-Mate adapter. Also includes a 1/16 in. (1.6 mm) gas lens collet body, collet and gas lens for connection to Square Wave™ TIG 175, Precision TIG® 225 and Invertec® V160-T power sources.



20H-320-25R
20 Series Heavy Duty 320 amp water-cooled TIG torch, rated 320 amps at 100% duty cycle. Includes cable cover.



PTA-26, PTA-26V, PTA-26F and PTA-26FV
Air-cooled TIG torch, rated 200 amps at 60% duty cycle. The PTA-26V is equipped with a valve for gas flow control. The PTA-26F is equipped with a flexible head for easy maneuverability into tight spaces. The PTA-26FV is equipped with both a gas valve and flexible head.

What You Need To Get Started

Along with your Pro-Torch TIG torch, you may need to purchase the following accessories to begin welding:

TIG Torch Adapter

A variety of adapters exist to connect to a variety of output terminals such as 1/2 in. (12.7 mm) studs, Twist-Mate output terminals and Precision TIG-style connectors.

Collets

These hold the tungsten firmly in your torch. They are purchased according to the tungsten size and must be used with the proper corresponding collet bodies, or gas lens collet bodies.

Collet Bodies and Gas Lens Collet Bodies

Collet bodies hold the collet and tungsten in place. Gas lens collet bodies are used in conjunction with gas lenses when precise control of shielding gas flow is required.

Alumina Nozzles

These nozzles, made of high temperature ceramic material, protect the collet body and direct the gas flow to the weld. Choose them according to the chart on this page 7, for your specific application.

Back Cap

Each torch comes with one back cap which is sufficient for most applications. PTA-9 and PTW-20 torches include a medium back cap. PTA-17, PTA-26 and PTW-18 torches include a long back cap. The 20H-320-25R includes a medium back cap. However, optional longer or shorter back caps are available for each torch.

Tungsten Electrode

Your welding supplier can provide you with the proper electrode for your application. Use the chart listed below, as a guide for ordering the appropriate tungsten.

Parts Kits

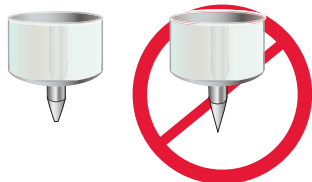
Parts Kits conveniently provide all the torch accessories you need to start welding. Parts Kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.

Tungsten - Pure Tungsten Is Not Recommended For Inverter Based Power Sources

| COLOR | TUNGSTEN TYPES | AC POLARITY | DC POLARITY | APPLICATIONS |
|----------------------|--|-------------|-------------|---|
| Gold | 1.5% Lanthanum | | • | Good choice for welding titanium, nickel, copper, mild steel and stainless steel |
| Blue | 2% Lanthanum | • | • | Good all around choice for both AC and DC, in welding low alloyed and non-corroding steels, aluminum, magnesium, titanium, nickel, and copper |
| Grey | 2% Ceriated | • | • | |
| Chartreuse or Purple | 1.5% Lanthanum, 0.08% Zirconium, 0.08% Yttrium | • | • | A very good choice for aluminum or magnesium alloys |
| White | 0.08% Zirconiated | • | | |

| Tungsten Diameter in (mm) | Cup Size | DC- Polarity Amp Range | | AC Polarity Amp Range | |
|---------------------------|------------|---|-------------------------------|-----------------------|---------------|
| | | Pure Tungsten and Tungsten with oxide additives | Tungsten with oxide additives | Pure Tungsten | Pure Tungsten |
| 0.020 (0.5) | 3, 4 or 5 | 2-20 | 2-20 | 2-15 | |
| 0.040 (1) | 4 or 5 | 15-80 | 15-80 | 10-60 | |
| 1/16 (1.6) | 4, 5 or 6 | 70-150 | 70-150 | 50-100 | |
| 3/32 (2.4) | 6, 7 or 8 | 150-250 | 140-235 | 100-160 | |
| 1/8 (3.2) | 7, 8 or 10 | 250-400 | 225-325 | 150-210 | |
| 5/32 (4) | 8 or 10 | 400-500 | 300-400 | 200-275 | |

TUNGSTEN SHAPING



Tungsten should have a slightly blunted tip.