MIDGET TORCH & CASTING TORCH OUTFITS

No. 14.160 - Midget Torch
No. 14.165 - Casting Torch

OPERATING INSTRUCTIONS

IS11421

Thank you for your purchase. If properly used and maintained, you should have many years of trouble-free performance. Please be sure to read all instructions before operating.

NOTICE:
Do not attempt to operate this equipment until you have read and fully understand these instructions including safety precautions. Keep these instructions handy for ready reference and review.

THE MIDGET TORCH
The MIDGET TORCH is recommended for soldering, melting and annealing operations as used in the manufacture and repair of jewelry.

THE CASTING TORCH
The CASTING TORCH is recommended for melting the larger amounts of metal used in casting and heavier work in general.

Either can be used with the following fuel gases in combination with oxygen: **Acetylene, Hydrogen, Natural Gas, Propane/Butane.**

WARNING:
An oxygen pressure regulator must be used on the oxygen tank, as well as proper regulators for acetylene and hydrogen, when using these for the fuel gas supply. Follow the instructions supplied with each regulator.

SPECIAL INSTRUCTIONS

FOR OXYGEN AND ACETYLENE

When starting the torch using acetylene, the oxygen torch valve should be slightly cracked first, then the acetylene. Light the resultant mixture. To cease operation, turn off the acetylene at the torch valve first and then shut the oxygen valve. This will cause a slight "pop", but will prevent the soot which forms when acetylene burns alone.

FOR OXYGEN AND HYDROGEN

Before lighting the flame let the hydrogen flow a few seconds, long enough to blow the air out of the hose and torch. Set hydrogen regulator to deliver 2-3 lbs. pressure, set oxygen regulator to deliver 4 lbs. pressure. When ceasing operations, shut both hydrogen and oxygen cylinder valves. Also shut oxygen torch valve. Let residual hydrogen burn off at torch tip. Open oxygen torch valve and let the residual oxygen escape into the room.

FOR OXYGEN AND NATURAL GAS

Connect the other end of the hose which goes to the *fuel gas* side of the torch to gas cock in the piping.

FOR OXYGEN and PROPANE/BUTANE

When using liquified bottled gases, it may not be necessary to open the gas valve wide, even when using the larger size tips, as bottled gas is usually furnished at higher pressure and has a higher heating value than city gas. If the flame shows a tendency to flicker, increase the oxygen supply by opening the oxygen valve or increasing the pressure at the oxygen regulator. It is proper to do this to increase flame stability until the two inner flame cones just coincide. Addition pf further oxygen will cool the flame or blow it out.

OPERATION

1. Make sure the *oxygen* and *fuel gas* needle valves on the torch are closed. Both are kept closed until the oxygen pressure is set.
2. Turn the pressure adjusting screw on both regulators completely to the left (counter-clockwise). This will cut the delivery pressure to zero and make ensure that the gases do not enter the hoses under pressure when the cylinder valves are opened.
3. To set the oxygen pressure, open the oxygen cylinder valve slowly and turn the pressure adjusting screw slowly clockwise until the low gauge shows approximately 4 lbs. delivery pressure.
4. Open the fuel gas cylinder valve slightly. If the fuel gas cylinder has a regulator, set it to deliver the pressure recommended in the specific instructions following this section.
5. Slightly crack the *fuel gas* needle valve on the torch and light the gas, using a spark lighter or alcohol lamp.
6. Open the oxygen needle valve on the torch until the desired flame intensity is obtained.
7. The length of the flame may be shortened or lengthened by cutting down or increasing the supply of oxygen and gas in proportionate amounts. This is done by manipulating the two needle valves on the torch (can be done with one hand). Both valves are usually turned in the same direction to change the length of the flame.
8. The intensity and size of the flame is altered by changing the torch tip size.

TO CEASE OPERATION

1. Shut the oxygen first, then the fuel gas at the torch valves.
2. To shut down completely, shut off the oxygen cylinder valve and fuel gas cylinder valve or gas supply line. After flame burns out, close both torch valves.
3. Do not forget to turn the pressure adjusting screws of both regulators to the left (counter-clockwise) to relieve the tension on the spring.

CAUTION

- Avoid dangling neckties, loose clothing or hair coming into contact with the flame.
- Keep work area free of flammable materials.
- Always wear goggles or protective glasses.
- Before starting work, always check for leaks by brushing a thick soap solution on all connections. Open valve and watch for bubbles to appear at points of leakage. Tighten loose connections with a wrench.
- Never use flame to check for leaks.
- Do not use a hose that is worn, or any equipment that is in need of repair.
- Never lay a torch down or leave it unattended, unless gas has been shut off and flame is out. When putting the torch aside while it is still hot, support it in a holder.
- Never use a tank with a leaky valve.
- Never follow full tank pressure to enter the hose. Always use a regulator when using fuel from a refillable cylinder that comes in a non-disposable tank.

SETTING UP

When setting up for the first time after unpacking, make sure the hose is clean and free of dust or packing material. To blow out, use oxygen or air - but never a fuel gas!

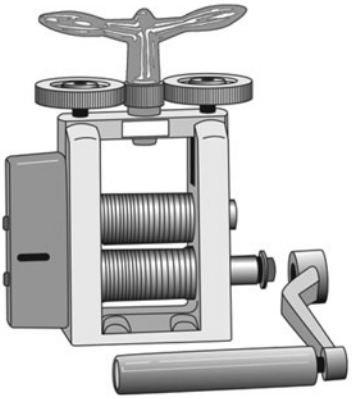
Use a $^{3}/_{16}$ I.D. braid reinforced hose to connect the torch to the oxygen and fuel gas supply.

Connect one hose to the outlet of the oxygen regulator and the other to the outlet of the fuel gas regulator or gas pipe. Use the correct fitting for this. The supplier of your gas cylinder and regulator will furnish these. Tighten the connection nuts with a wrench.

Make sure the hose connectors on the torch are seated properly. The fitting which goes on the *fuel gas* side has a left hand thread. The side marked *oxygen* has a right hand thread. Push the ends of the hose well up on the barbed hose connectors on the torch body.

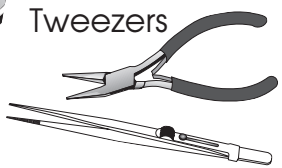
LOOK FOR THESE PRODUCTS

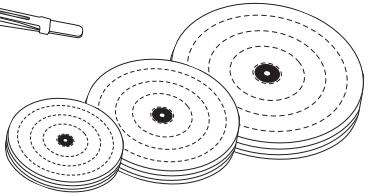
Panther Burs



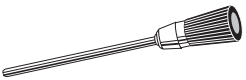
Rolling Mills

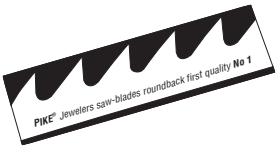
Pliers and Tweezers

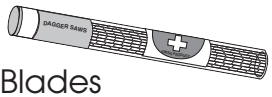




Brushes and Buffs







Swiss Saw Blades

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