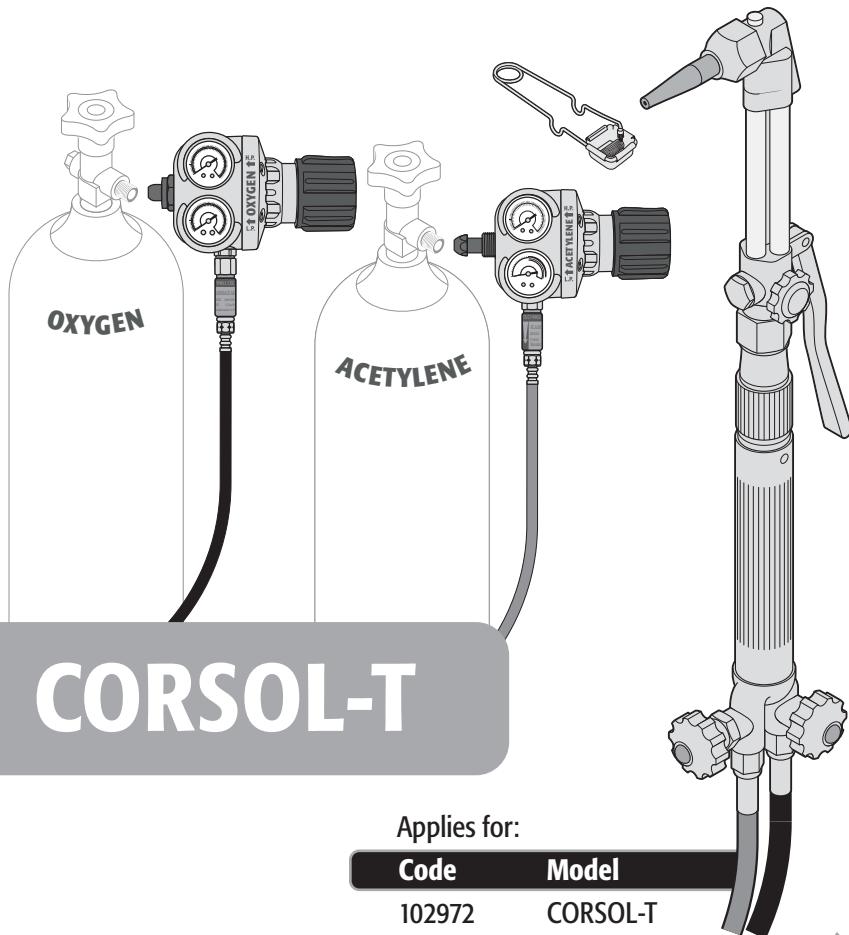


Manual

# Cutting and welding outfit

Heavy duty



## CORSOL-T

Applies for:

Code

102972

Model

CORSOL-T

**CAUTION**



Read this manual thoroughly  
before using the tool.



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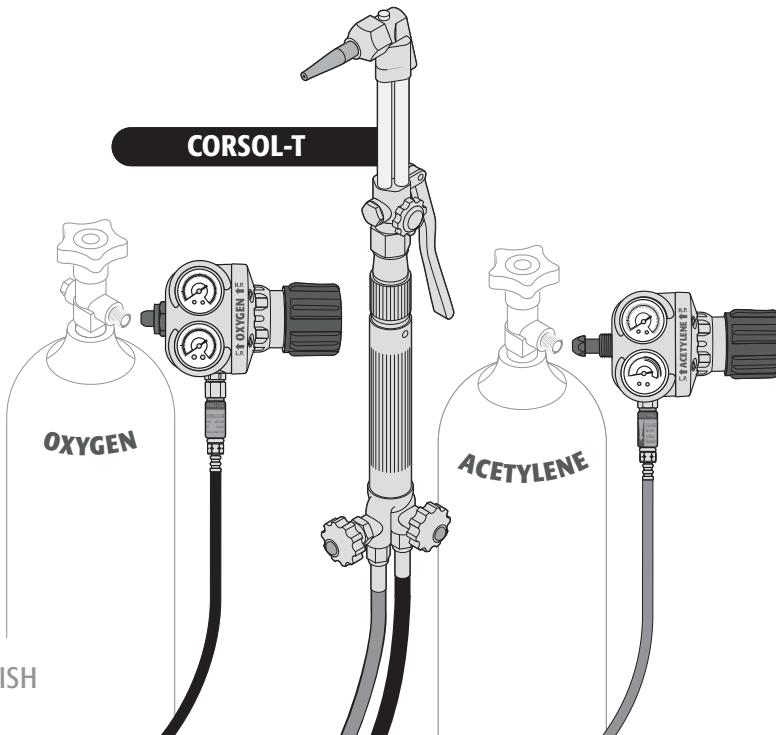
## ⚠ CAUTION

To get the most out of the tool, extend its lifespan, claim the warranty if necessary, and avoid serious risks or injuries, it is essential to read this manual in its entirety before using the tool.

Keep this manual for future references.

The illustrations in this manual are for reference and may differ from the real appearance of the tool.

## CORSOL-T



# Safety warnings

**⚠ WARNING** There are many risks associated with the use of oxyacetylene welding. It is necessary to take appropriate safety measures when working with this equipment.

## Work area

- Before welding or cutting, ensure that the work area is in perfect order to prevent accidents.
- ⚠ WARNING** • Work in well-ventilated areas.

## Safety equipment

- ⚠ CAUTION** • Always have a fire extinguisher on hand.
- ⚠ CAUTION** • Always use check valves in all connections. These safety valves help prevent accidents caused by gas regression or flame flashback in the system.
- Always use welding glasses to protect your eyes from sparks or bright rays.
- Always use special welding gloves and be cautious of sparks that may fall on the cuffs.
- ⚠ WARNING** • Do not wear torn or frayed clothing: a spark could ignite the tatters.

## Handling of cylinders (Not Included)

- ⚠ WARNING** • Do not smoke near the cylinders.
- ⚠ CAUTION** • Handle the cylinders with care, avoid dropping or hitting them, and do not expose them to heat or flame. Remember that they must always be in an upright position.
- ⚠ CAUTION** • Secure the cylinders in place before making connections to prevent them from falling. It is recommended to mount and chain them on a hand truck.
- Never use a dented cylinder.
- Protective caps on cylinders must always be in place when moving the cylinders or when not in use.
- Empty cylinders should be stored in a specific location and clearly marked as "Empty."
- Under no circumstances alter or force cylinder connections.

## Connections

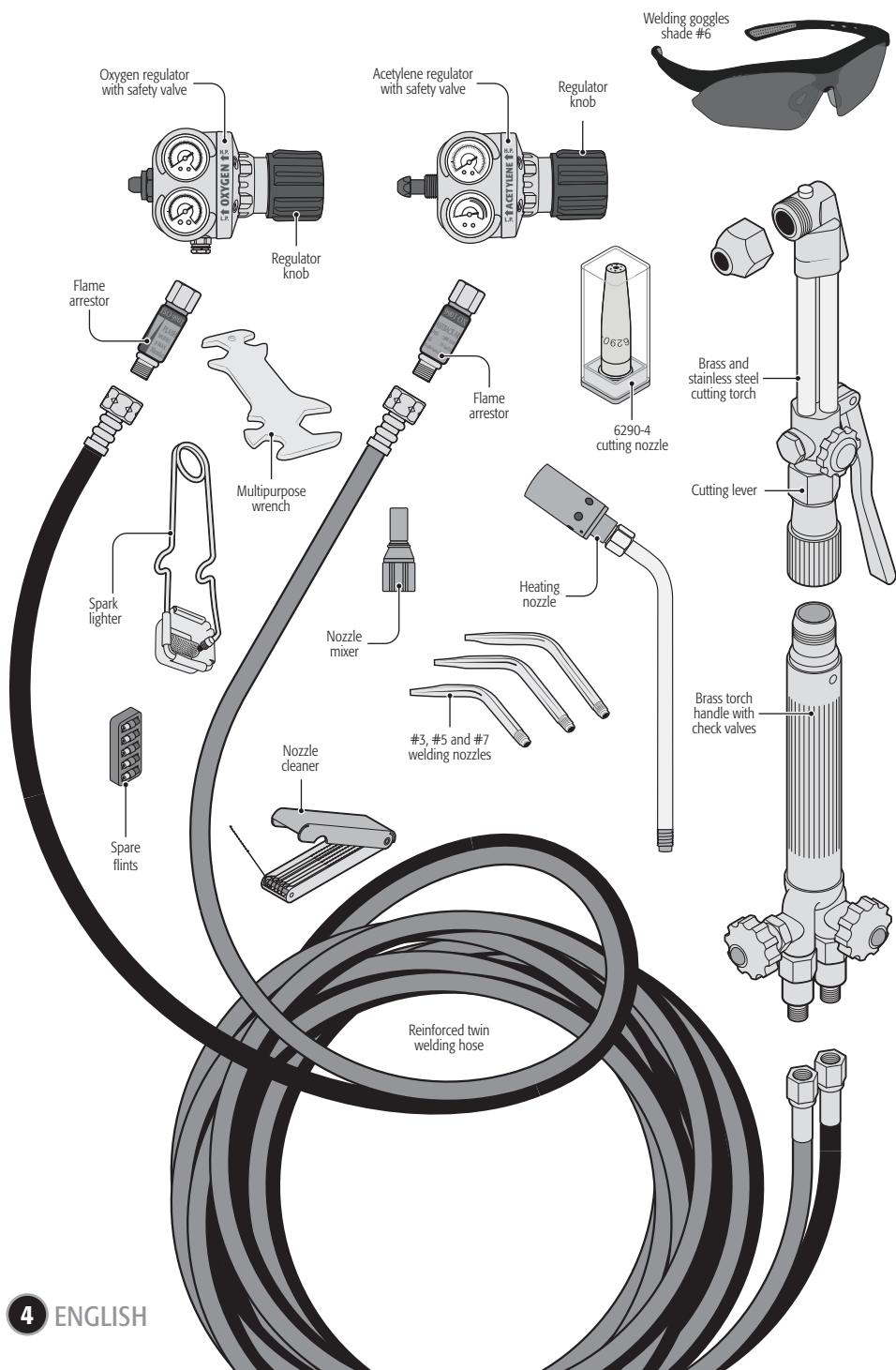
- ⚠ WARNING** • Do not smoke near connections.
- ⚠ WARNING** • Never use oil or grease on connections. The equipment does not require lubrication.
- Oil and lubricants burn violently in the presence of pressurized oxygen.
- ⚠ CAUTION** • Ensure that all connections and hoses are in good condition. Immediately replace any that show damage.
- When making connections, make sure they are securely tightened.
- ⚠ CAUTION** • Use soapy water to detect any leaks and correct them before ignition.
- ⚠ CAUTION** • Under no circumstances allow damaged or missing seals on the cone tip. If this were to happen, gases would mix inside the handle, which could lead to flame reversal or explosions.

## Pressure

- ⚠ CAUTION** • Purge oxygen and acetylene passages separately before ignition (see pages 5 and 6).
- Avoid wasting gas by using the appropriate pressure settings. If the regulators indicate extreme pressure, correct it immediately.
- The working pressure on the acetylene regulator MUST NEVER exceed 103.4 kPa (15 PSI) (1.03 bar).
- ⚠ CAUTION** • Purge the entire system after each use (see page 9). DO NOT disconnect the equipment with the cylinder valves open.
- In case of a leak, move the cylinder to an open area away from flammable material and report it immediately to your supervisor or Civil Protection.

## Usage restrictions

- ⚠ WARNING** • Never use oxygen to blow the workplace or your clothes. Any spark can cause a fire.
- Do not work with damaged or leaking equipment.
- Do not use the torch as a hammer or to remove burrs from the work material.



These instructions are provided to offer our best advice and recommendations for the safe use of gas cylinder pressure regulators and other related products. All instructions are mere recommendations, and above all, the safe use of all equipment rests with the operator.

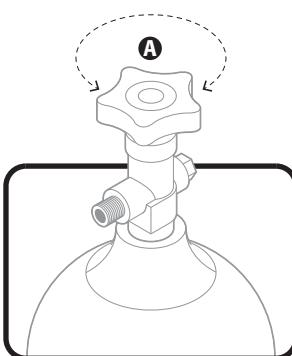
**⚠ CAUTION** • Ensure that you are in a flame-free and spark-free area when preparing the equipment.

**⚠ ATENCIÓN** • Before making connections, make sure to remove any dust or dirt particles accumulated on the outlet valves of both cylinders. Stand to the side of the tank and open valve (A) for two seconds to expel any particles that may enter the system, causing damage or accidents. Never stand in front of the tank when opening the pressure valve.

**⚠ CAUTION** • The operator must wear appropriate eye protection, gloves, and all recommended personal protective equipment (PPE) to protect against sparks and flames.

**⚠ CAUTION** • If you detect grease or oil, do not use the cylinder at all and contact the manufacturer or distributor immediately.

**⚠ CAUTION** • Verify that the regulators used are suitable for the type of gas in use and capable of reaching the correct operating pressure. Ensure they are free from damage and leaks before use.



**⚠ CAUTION** • Hose fittings must be free of dirt, oil, and grease, and show no signs of damage. Pay special attention to the condition of the seating surfaces.

**⚠ CAUTION** • Inspect all hoses to ensure they are in good condition and show no signs of cracking, cutting, or any other type of deterioration.

**1.** Place the two cylinders in an upright position and secure them (cylinders not included).

**2.** Connect the two regulators to the corresponding gas. Use the multi-use wrench for a secure connection. Make sure to tighten them in the correct direction: clockwise for oxygen and counterclockwise for acetylene.

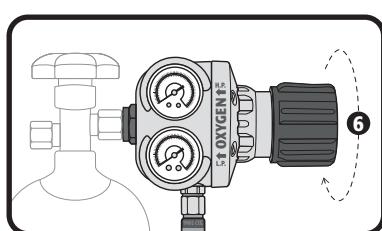
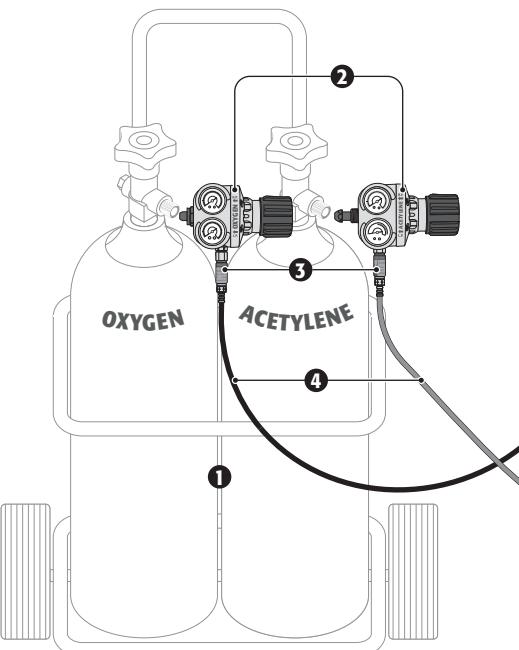
**3.** Place the flame arrester on the outlet of each regulator, ensuring that the colors of the labels match, and tighten the nut without applying too much force.

**4.** Connect the hoses to the arrestors. Green is for oxygen, and red is for acetylene. Tighten the couplings firmly with the wrench. If you detect any indication of grease or oil, discontinue use immediately.

**5.** Ensure that the torch valves are in the closed position before opening the cylinder valves.

**6.** Fully open the regulator handles by turning them slowly counterclockwise.

**⚠ CAUTION** Failure to do this, when opening the cylinder valve, the tank pressure can damage the internal components of the regulator.



**7.** Clean the inside of each hose by slowly opening the cylinder valve until it reaches 34.4 kPa (5 PSI) (0.34 bar). Allow gas to flow for 10 seconds to expel any residue from inside the hose, and then close the valve. Repeat the procedure with the other hose.

**! CAUTION** The acetylene cylinder valve should not be turned more than one turn when opening it so that, in case of a flame, it can be quickly closed. Hold the hose firmly before opening the valves to avoid injuries.

**8.** Connect the hoses to the corresponding holes on the torch. Tighten the couplings firmly with the multi-use wrench.

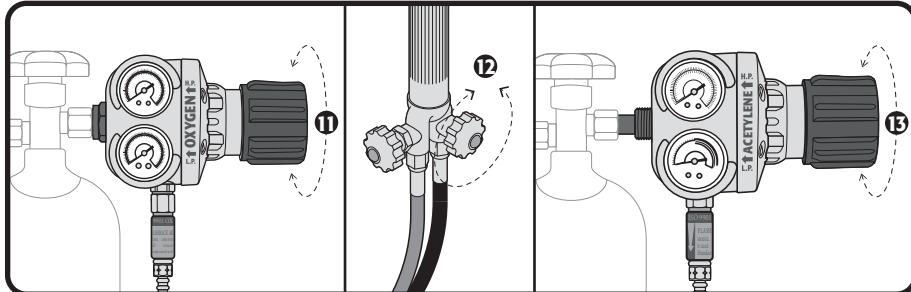
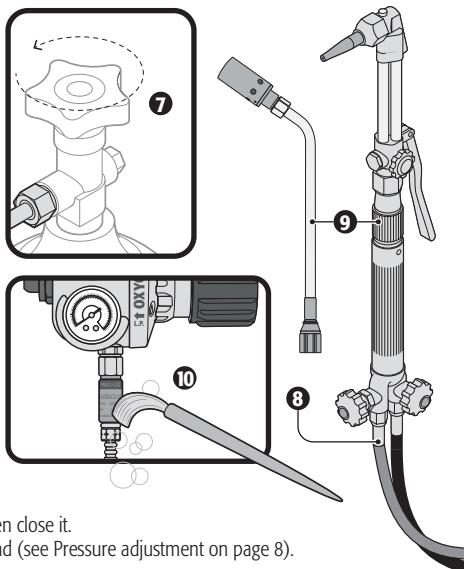
**9.** Depending on the task you are going to perform, connect the appropriate nozzle to the torch.

**10.** To detect possible leaks, apply soapy water solution to all connections. Open the valves of both cylinders and correct any leaks by tightening the connections. If the leak persists, stop work, and contact your supplier.

**11.** Adjust the regulators to the correct working pressure for your cutting applications (see Pressure adjustment on page 8).

**12.** Open the oxygen valve of the torch for two seconds and then close it.

**13.** Adjust the appropriate acetylene pressure for the task at hand (see Pressure adjustment on page 8).



## Startup

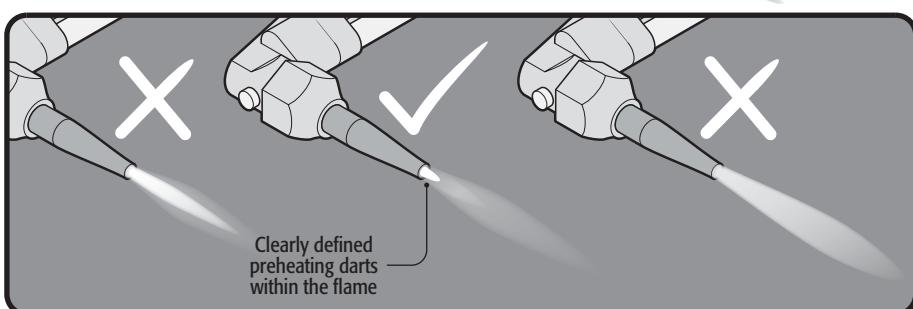
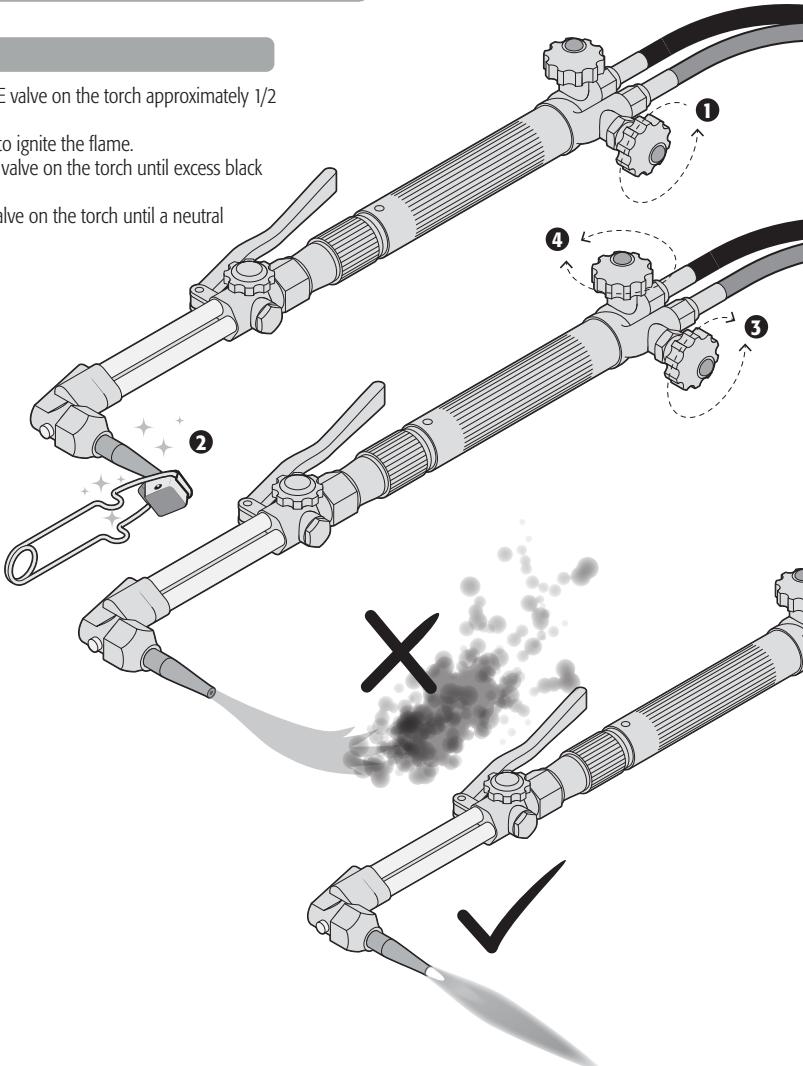
**! CAUTION** Examine the torch for possible external leaks, paying special attention to the inlets and the nozzle.

**! CAUTION** Before lighting the torch, purge the hoses individually away from open flames.

**! CAUTION** Never increase the pressure in the acetylene regulator to more than 103.4 kPa (15 PSI) (1.03 bar).

## Ignition

1. Open the ACETYLENE valve on the torch approximately 1/2 turn.
2. Use the spark lighter to ignite the flame.
3. Turn the ACETYLENE valve on the torch until excess black smoke is eliminated.
4. Open the OXYGEN valve on the torch until a neutral flame appears (A).



Oxidizing flame  
(excess of oxygen)

**A** Neutral flame  
(perfect gas balance)

Carburizing flame  
(excess of acetylene)

**CAUTION** For best consumption and performance results, it is recommended to use the process pressures shown in the tables below. These pressures are a guide, as the operation's outcome may vary depending on the specific conditions of each process.

### OXY-ACETYLENE CUTTING NOZZLES

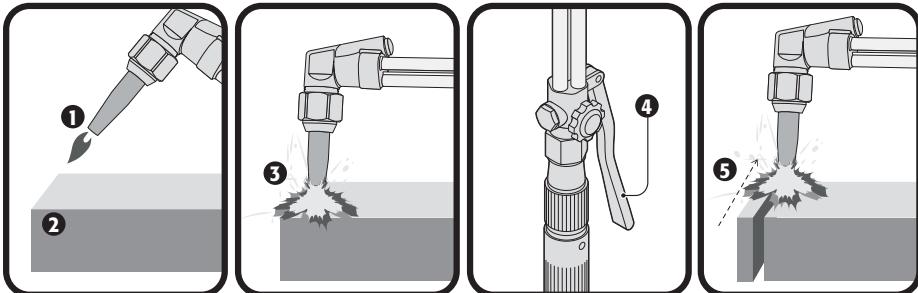
Nozzle no.	Cutting width (mm)	OXYGEN pressure (BAR)	ACETYLENE pressure (BAR)	Length (mm-inches)
000	0-5	1.5 (150 kPa)	0.5 (50 kPa)	61 (2.4")
00	5-10	1.5 (150 kPa)	0.5 (50 kPa)	61 (2.4")
0	10-15	2.0 (200 kPa)	1.0 (100 kPa)	61 (2.4")
1	15-25	2.5 (250 kPa)	1.0 (100 kPa)	61 (2.4")
2	25-50	3.0 (300 kPa)	1.0 (100 kPa)	61 (2.4")
3	50-100	3.5 (350 kPa)	1.0 (100 kPa)	61 (2.4")
4	100-175	4.0 (400 kPa)	1.5 (150 kPa)	61 (2.4")
5	175-250	5.0 (500 kPa)	1.5 (150 kPa)	61 (2.4")
6	250-300	6.0 (600 kPa)	1.5 (150 kPa)	61 (2.4")

### SOLDERING TIPS

Metal width (mm)	Nozzle no.	OXYGEN pressure (bar - kPa - PSI)	ACETYLENE pressure (bar - kPa - PSI)
0.5 (1/64")	0		0.2 / 20 / 3
1 (1/32")	1		0.2 / 20 / 3
1.5 (1/16")	2		0.2 / 20 / 3
2 (3/32")	3		0.34 / 34 / 4
2.8 (7/64")	4		0.34 / 34 / 4
3 (1/8")	5		0.34 / 34 / 4
4(5/32")	6		0.34 / 34 / 4
5 (3/16")	7		0.55 / 55 / 8
6.5 (1/4")	8		0.55 / 55 / 8
9.5 (3/8")	9		0.55 / 55 / 8

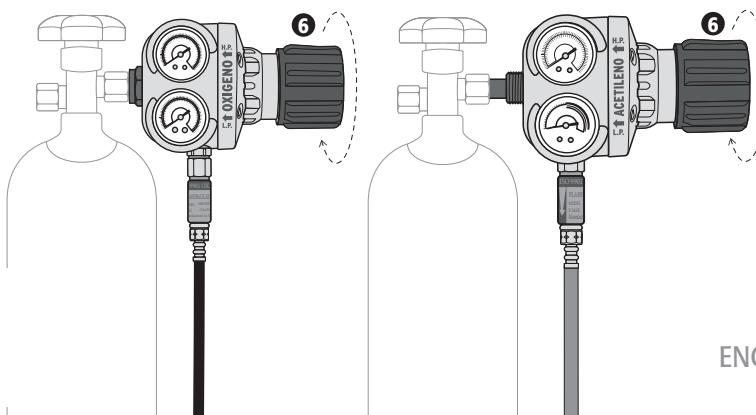
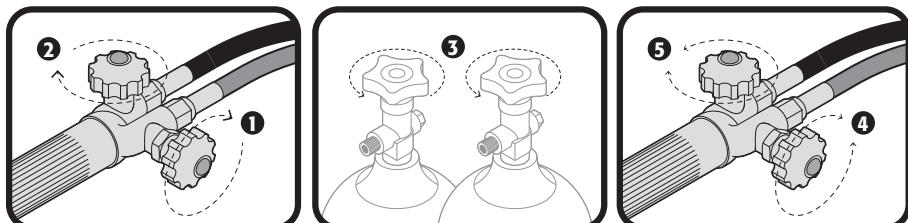
1. Bring the flame close to the piece you are going to cut.
2. Place the tip of the preheating dart above the material.
3. Heat the material until it becomes "red hot."
4. Slowly press the oxygen lever to initiate the cut.
5. Move the torch nozzle in the direction required for the cut.

**CAUTION** In the case of torch handles, fully open the oxygen valve for better performance.



## Shut off

1. Close the acetylene valve on the torch.
2. Close the oxygen valve on the torch.
3. Close the valves on both cylinders.
4. Open the acetylene valve on the torch to empty the line and close it again.
5. Open the oxygen valve on the torch to empty the line and close it again.
6. Release the regulator handles by turning them counterclockwise.



Problem	Cause	Corrective action
The welding nozzle is loose.	<ul style="list-style-type: none"><li>• Line pressure is too low.</li><li>• The nozzle is too long.</li><li>• It is too close to the workpiece.</li></ul>	<ul style="list-style-type: none"><li>• Increase the line pressure. Refer to the tables on page 8.</li><li>• Use the next smaller nozzle size.</li><li>• Move the nozzle farther away from the workpiece.</li></ul>
The flame is not clearly defined, uneven, or irregular.	<ul style="list-style-type: none"><li>• The nozzle is dirty.</li></ul>	<ul style="list-style-type: none"><li>• Use the nozzle cleaner to clean it.</li></ul>
Inconsistent pressure in the regulator.	<ul style="list-style-type: none"><li>• The seal is defective.</li></ul>	<ul style="list-style-type: none"><li>• Visit an authorized TRUPER service center to replace the regulator.</li></ul>
The cutting nozzle is loose.	<ul style="list-style-type: none"><li>• The nozzle is loose.</li><li>• The seal is chipped.</li></ul>	<ul style="list-style-type: none"><li>• Tighten the nozzle.</li><li>• Replace the nozzle.</li></ul>
Leakage around the control valve.	<ul style="list-style-type: none"><li>• The regulator handle is loose.</li></ul>	<ul style="list-style-type: none"><li>• Tighten the handle.</li></ul>
Difficulty in igniting the torch.	<ul style="list-style-type: none"><li>• There is too much pressure in the line.</li></ul>	<ul style="list-style-type: none"><li>• Decrease the line pressure. Refer to the tables on page 8.</li></ul>
Changes in the flame while cutting.	<ul style="list-style-type: none"><li>• The oxygen control valve is partially closed.</li><li>• The oxygen cylinder is nearly empty.</li></ul>	<ul style="list-style-type: none"><li>• Open the oxygen control valve more.</li><li>• Replace the oxygen cylinder with a full one.</li></ul>



For inquiries or assistance, please contact us at **800 0187873**.

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10-2023

