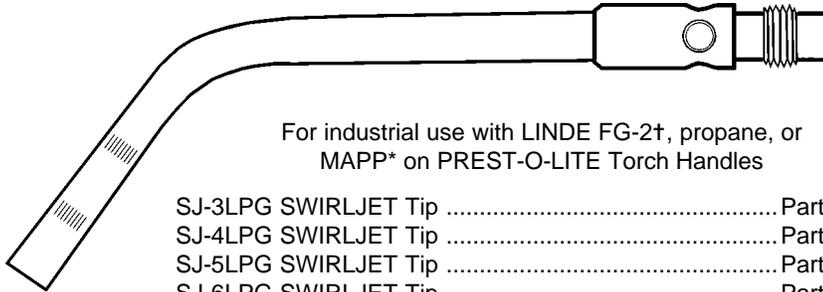


PREST-O-LITE®

SWIRLJET AIR-FUEL GAS TIPS



For industrial use with LINDE FG-2†, propane, or
MAPP* on PREST-O-LITE Torch Handles

- SJ-3LPG SWIRLJET Tip Part No. 21474
- SJ-4LPG SWIRLJET Tip Part No. 21475
- SJ-5LPG SWIRLJET Tip Part No. 21476
- SJ-6LPG SWIRLJET Tip Part No. 21477

! CAUTION

These INSTRUCTIONS are for experienced operators. If you are not fully familiar with the principles of operation and safe practices for air-fuel gas equipment, we urge you to read our booklet "Precautions and Safe Practices for Gas Welding, Cutting and Heating," Form 2035. Do NOT permit untrained persons to operate this equipment. Do NOT attempt to operate this equipment until you have read and fully understand these instructions. If you do not fully understand these instructions, contact your supplier for further information.

This SWIRLJET tip is designed for use with LINDE FG-2•, propane, or MAPP*. DO NOT ATTEMPT TO USE IT WITH ACETYLENE OR BUTANE. An acetylene or butane flame will quickly overheat and damage the tip.

1. The fuel gas should be supplied from a tank through a suitable regulator (such as PREST-O-LITE R-416 Regulator). However, SJ-3LPG, SJ-4LPG and SJ-5LPG tips may be attached to a small disposable cylinder of LINDE FG-2, propane, or Mapp using PREST-O-LITE LFG-2 Pressure Regulating Valve(P/N 999980). Instructions (Form F-12-796 are packed with the regulator. Do NOT use the SJ-6 LPG with LFG-2 regulator.
2. Follow all instructions supplied with the regulator and connect the regulator to the fuel gas tank. Using a special fuel gas hose (90F49), connect the PREST-O-LITE torch handle to the regulator. Then insert the SWIRLJET tip in the handle and hand tighten the tip connection nut on the handle. Do NOT overtighten.
3. To prevent a flame from overheating and possibly damaging the SWIRLJET tip, always operate with the torch valve WIDE OPEN and with the regulator adjusted to deliver the MINIMUM pressure specified below. Do NOT use a flame shorter than one produced under these conditions; therefore, do not adjust the flame with the torch valve. If longer flame is desired, increase the pressure at the regulator.

NOTE: If operating more than one torch from a regulator, higher delivery pressure may be required to insure the minimum specified gas pressure at each torch handle.

Tip Size	FG-2	Minimum Operating Pressure, psi	
		Propane	MAPP*
SJ-3LPG	32	24	36
SJ-4LPG	32	24	36
SJ-5LPG	32	24	36
SJ-6LPG	32	24	36

4. To light the flame, open the torch valve wide and use a friction lighter. DO NOT USE A MATCH. Use of a match can seriously burn your hand.
5. To stop work, close the torch valve. If shutting down for more than a few minutes (always for an overnight shutdown), release pressure from the regulator to prevent any occurrence of leakage or accidental release of fuel gas. Shut down as follows: (1) Close tank valve; (2) Open torch valve; (3) When delivery pressure drops to zero, back out the regulator pressure-adjusting screw and close torch valve.
6. SWIRLJET air-fuel gas tips provide adequate heat for soft-soldered or silver-soldered joints in copper tubing systems as follows:

Tip	Soft-Soldered	Silver-Soldered
SJ-3LPG	3/8-in. — 1-in. dia.	1/8-in. — 3/8-in. dia.
SJ-4LPG	3/8-in. — 1-1/2-in. dia.	1/4-in. — 5/8-in. dia.
SJ-5LPG	1-in. — 2-1/2-in. dia.	5/8-in. — 1-3/8-in. dia.
SJ-6LPG	1-1/2-in. — 6-in. dia.	7/8-in. — 2-1/8-in. dia.

7. If the tip overheats, even though fuel gas is being supplied at more than the minimum pressure specified, the orifice nozzle in the back end of the tip may be clogged (see

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* Registered trademark of Air Reduction Co.

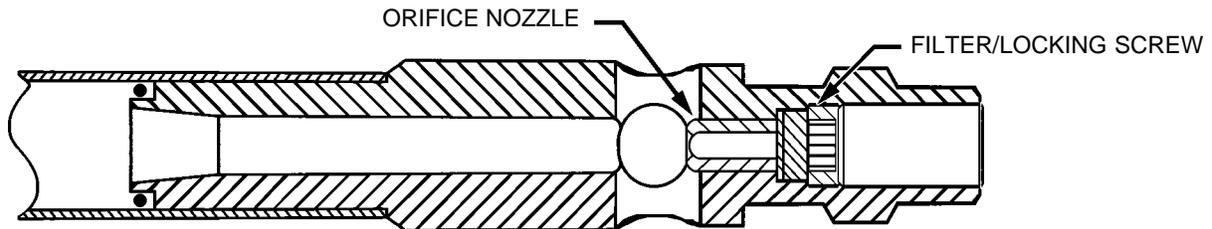
**Be sure this information reaches the operator.
You can get extra copies through your supplier.**



ESAB Welding & Cutting Products

illustration on back page). To clear, shut off the torch, allow the tip to cool, and then remove the tip. Use a 1/8-in. Allen wrench (key) to remove the filter screw recessed in the connection end, and then tap the tip to dislodge the orifice nozzle. Blowing air through the orifice nozzle from its front end will usually dislodge any dust which may have become lodged in the small orifice. If necessary, replace the orifice nozzle and filter screw with new parts. Do NOT attempt to clean orifice nozzle with a wire or other such object. The small orifice hole may become damaged and cause tip to operate improperly.

4. If you do not succeed in lighting a torch within two or three seconds after you've opened the valve, close the valve and wait several seconds before trying again. Otherwise, expansion of the fuel gas through the orifice may create a 'Freeze-up' of the very small orifice.
5. NEVER store or transport cylinders in car trunks, drawers, cabinets or other confined spaces, or in any location where the temperature may exceed 120-deg. F (40° C), or where sparks or flames may be present.
6. Keep cylinder and appliances out of the reach of children.



REPLACEMENT PARTS

998311	Filter Screw
21478	Orifice Nozzle for SJ-3LPG SWIRLJET TIP
21479	Orifice Nozzle for SJ-4LPG SWIRLJET TIP
21480	Orifice Nozzle for SJ-5LPG SWIRLJET TIP
21482	Orifice Nozzle for SJ-6LPG SWIRLJET TIP

SAFETY PRECAUTIONS

The following Safety Precautions apply mainly when using these tips with a disposable fuel gas cylinder. If using the tips from a fuel gas tank requiring the use of regulator, hose, and torch handle, be sure to read additional Safety Precautions in the instructions supplied with the regulator and torch handle.

Every worker should be familiar with the following personnel protection and fire prevention measures:

1. Read and follow all precautions on the cylinder label.
2. ALWAYS disconnect valve from cylinder when not in use. Be sure to close the valve whenever unit is not in actual use, to avoid accidental fires.
3. ALWAYS bear in mind that fuel gas is extremely flammable when mixed with air and may form explosive mixtures with air. Operate appliances ONLY in well ventilated areas. Before lighting, check for leakage around valve-to-cylinder connection by brushing soapy water solution around the joint. Bubbling of solution indicates leakage. Do NOT operate the appliance unless leakage can be stopped by further hand tightening. Do NOT test for leaks with a flame.

7. Do NOT use lighted torch in any place where flammable or explosive gases, liquids, or other materials may be accidentally ignited.
8. Do NOT leave lighted torch unattended. ALWAYS turn off torch when stopping work or when leaving work area.
9. Do NOT solder or heat a container that contains or has contained flammable liquids or vapors, such as gasoline, unless the container has been completely purged of all traces of flammable liquids and vapors.
10. Do NOT attempt to heat or warm the cylinder in any way to increase cylinder pressure or gas flow.
11. When the cylinder is exhausted, ALWAYS discard it in a safe place. Do NOT puncture or incinerate. NEVER attempt to refill it with any gas.
12. Do NOT alter equipment.
13. Fumes and gases can harm your health. Keep your head out of the fumes. Do not breathe fumes and gases caused by the flame. Use enough ventilation. The type and amount of fumes and gases depend on the equipment and supplies used. Air samples can be used to find out what respiratory protection is needed.
14. Heat rays (infrared radiation from the flame or hot metal) can injure eyes. Wear correct eye and body protection.
15. For more information on safety and health, refer to the following publications: (1) Form 2035; (2) OSHA Title 29 CFR 1910, Sub-Part Q, available from U.S. Government Printing Office, Washington, D.C. 20402; (3) American National Standard Z49.1, available from the American Welding Society, 550 N.W. LeJuene Rd., Miami, FL 33126.

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