

AIR/FUEL APPARATUS

For Soldering, Brazing and Heating

Instructions and Operation Manual

KNOW AND USE ALL SAFETY PRECAUTIONS BEFORE ANY BRAZING, SOLDERING OR HEATING OPERATION!!

There are many hazards to be considered when using air-fuel brazing, soldering and heating equipment. GENSTAR products should only be used by well-trained professional technicians.

This handbook is offered as a practical guide for the safe operation of this equipment.

READ THOROUGHLY BEFORE OPERATING EQUIPMENT.

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Printed In China
August-2010

Form No. 9-WI-AF

IMPORTANT SAFETY PRECAUTION TO REMEMBER

- Use designated fuel gas only.
- Always have a fire extinguisher handy.
- Secure cylinder to cart, wall or post to prevent them from falling.
- All cylinders should be used and stored in an upright position.
- Never drop or strike a cylinder or use a damaged cylinder.
- Never use oil or grease on any inlet or outlet connections or cylinder valves.
- Examine hoses for cuts, burns or worn areas before each use. Also inspect fittings and replace any found damaged.
- Do not repair hose with tape.
- Always wear gloves made of leather or suitable substitute.
- Always wear goggles with at least shade #4 filter lens for brazing.
- Always wear appropriate protection clothing such as aprons, safety shoes. Do not wear torn or ragged clothes. Sparks can ignite ragged end.
- Never use oxygen or fuel gas to blow soot or dirt off clothes.
- Never test for gas leaks with a flame. Use approved leak-detector products.
- Upon completion of work, inspect area for any possible fire or smoldering material.
- Acetylene is highly flammable. Working pressure on acetylene regulator should never be set above 15 PSIG.
- Operate equipment in an open, well-ventilated area. Prepare your work area by moving out of the vicinity, any combustible material.
- Refer to ANSI Standard Z49-1, "Safety in Welding & Cutting".
- Do not heat or solder any pressurized container or vessel.

Note: SAVE THESE INSTRUCTIONS.

SETUP AND OPERATING GUIDE

1. Secure cylinder. (As noted in safety precautions.)
2. While standing to one side, "crack" cylinder valve by quickly opening and closing the valve, allowing gas to escape and clear the valve of any foreign material, such as accumulated dirt.

WARNING! If oil or grease is found, discontinue use of cylinder immediately and contact your supplier.

3. Attach regulator to proper cylinder. A wrench should be used to insure tight connections. Make sure they are tightened in correct directions.

WARNING! Never stand in front of or in back of a regulator when opening a cylinder valve.

4. Regulator adjusting screws should be turned counterclockwise to relieve pressure on diaphragm before opening cylinder valves. If this is not done, pressure from cylinder can damage diaphragm and render regulator inoperable.
5. Both cylinder valves and regulator connections should be checked for leaks. Stand so the cylinder valve is between you and the regulator. Slowly open cylinder valve. An approved leak detector should be used.
CAUTION! Acetylene cylinder valve should be opened a maximum of one turn.
6. Connect proper hose to regulator. (Left hand threads) Tighten nuts securely with wrench.

WARNING! Never stand in front of or in back of a regulator when opening a industrial cylinder valve.

7. Blowing out hose: Do this in a well-ventilated area to avoid creating conditions for fires or explosions. Turn adjusting screw to allow 5 PSI to pass through hose. Allow fuel gas to flow approximately 10 seconds to purge the hose.

Note: New hose contains preservative talc that must be blown out before using.

8. Connect hose to the torch handle. Connect tip of proper size for job to torch handle. (see Technical Data of Tips)

WARNING! Always check connection end of tip and torch head for damage or oil and grease presence. If either is found, discontinue use immediately and contact your supplier

9. To check for leakage with leak test material, close torch shut-off valve and then completely release spring tension of regulator by turning adjusting screw knob to counterclockwise. Slowly open the tank shut-off valve 3/4 turn. Turn adjusting knob of GENSTAR regulator to full open (**DO NOT force**). If leakage is found, check the connection and retighten the leaking connections. Do not light the torch if leaks are present.

WARNING! Never set acetylene regulator above 15 PSI working pressure. Gloves, goggles, appropriate protection clothing such as aprons and safety shoes must be worn at all times when operating the torch.

10. Open torch valve slightly (one turn). Light the torch with striker in gloved hand. For auto-ignite tip, push the trigger slowly to light the flame. (Note: Pushing trigger too rapidly will cause difficulty in lighting the flame.)

WARNING! Never light the flame using matches or a cigarette. Always point torch away from any person.

11. To obtain proper flame, turn the torch valve to adjust the flame. To avoid overheating the tip end, use flame length longer than 1" and hold the torch in proper distance to object. The best heating zone is between one or two tip diameters from the tip end.

SHUTTING DOWN EQUIPMENT

1. Turn off torch valve rapidly.
2. Close cylinder valve tightly.
3. Open torch valve to release the pressure in the hose and regulator.
4. Close torch valve.
5. Turn the pressure adjusting screw on the regulator counterclockwise until there is no pressure on the adjusting spring and the screw turns freely. Pressure or content gauges should read zero "0".
6. Remove all equipment from cylinder with wrench.
7. Store the equipment in compliance with state or local regulations.

TECHNICAL DATA OF TIPS

AIR ACETYLENE, SWIRL FLAME TIPS

Quick Connect	Screw Connect	Copper Tubing Size Capacity @15 psig Acetylene		
		Soft Solder	Silver Solder	Gas Flow (SCFH)
Part # (Model #)	Part # (Model #)			
120710202 (6Q-2TA)		1/8"-1/2"	1/8"-1/4"	2.1
120710301 (6Q-3TA)	120730302 (7S-3TA)	1/4"-1"	1/8"-1/2"	3.7
120710801 (6Q-5TA)	120730502 (7S-8TA)	3/4"-1 1/2"	1/4"-3/4"	5.9
120711401 (6Q-8TA)	120730801 (7S-8TA)	1"-2"	1/2"-1"	8.5
120711101 (6Q-11TA)	120731101 (7S-11TA)	1 1/2"-3"	7/8"-1 5/8"	11.1
120710501 (6Q-14TA)		2"-3 1/2"	1"-2"	14.5

AIR ACETYLENE, SOFT FLAME TIPS

Quick Connect	Screw Connect	Copper Tubing Size Capacity @15 psig Acetylene		
		Soldering	Brazing	Gas Flow (SCFH)
Part # (Model #)	Part # (Model #)			
120720102 (6Q-1SA)	120720101 (7S-1SA)	1/16"-1/8"	up to 1/16"	0.9
120720202 (6Q-2SA)	120720201 (7S-2SA)	1/8"-3/8"	up to 1/8"	1.7
120720302 (6Q-3SA)	120720301 (7S-3SA)	3/8"-1/2"	up to 3/8"	3.1
120720402 (6Q-4SA)	120720401 (7S-4SA)	1/2"-1"	up to 1/2"	5.7
120720502 (6Q-5SA)	120720501 (7S-5SA)	3/4"-1 1/2"	1/2"-3/4"	11.1
120720602 (6Q-6SA)	120720601 (7S-6SA)	1"-4"	3/4"-1 1/2"	14.5

AIR PROPANE/MAPP, SWIRL FLAME TIPS

Quick Connect	Screw Connect	Copper Tubing Size Capacity Using 25 ~ 35 psig			
		Propane Gas		MAPP Gas	
		Soft Solder	Silver Solder	Soft Solder	Silver Solder
Part # (Model #)	Part # (Model #)				
120710201 (6Q-2TP)	120730201 (7S-2TP)	1/8"-1/4"	1/16"-1/4"	1/8"-1/2"	1/8"-1/4"
120710302 (6Q-3TP)	120730301 (7S-3TP)	1/4"-1"	1/8"-1/2"	1/4"-1 1/2"	1/4"-1/2"
120710401 (6Q-4TP)	120730401 (7S-4TP)	1/4"-1 1/2"	1/4"-3/4"	1/4"-2 1/2"	1/4"-1 1/4"
120710502 (6Q-5TP)	120730501 (7S-5TP)	1 1/2"-2 1/2"	1/2"-1 1/4"	1"-4"	1/2"-2"
120710602 (6Q-6TP)		1 1/2"-4"	3/4"-2"	1 1/2"-6"	3/4"-4"

TECHNICAL DATA OF AUTO-IGNITE TIPS

AIR ACETYLENE, SWIRL FLAME, AUTO-IGNITE TIPS

Quick Connect	Replacement Tip End	Copper Tubing Size Capacity @15 psig Acetylene		
		Soft Solder	Silver Solder	Gas Flow (SCFH)
Part # (Model #)	Part # (Model #)			
120750100 (6Q-3TASL)	220470110 (6Q-3TAESL)	1/4"-1"	1/8"-1/2"	3.5
120750110 (6Q-5TASL)	220470120 (6Q-5TAESL)	3/4"-1 1/2"	1/4"-3/4"	5.1
120750120 (6Q-8TASL)	220470130 (6Q-8TAESL)	1"-2"	1/2"-1"	6.8
120750130 (6Q-12TASL)	220470140 (6Q-12TAESL)	2"-4"	1"-2"	9.1

AIR PROPANE/MAPP, SWIRL FLAME, AUTO-IGNITE TIPS

Quick Connect	Replacement Tip End	Copper Tubing Size Capacity Using 25 ~ 40 psig			
		Propane Gas		MAPP Gas	
		Soft Solder	Silver Solder	Soft Solder	Silver Solder
Part # (Model #)	Part # (Model #)				
120750210 (6Q-3TPSL)	220470210 (6Q-3TPESL)	1/4"-1"	1/8"-1/2"	1/4"-1 1/2"	1/4"-1/2"
120750220 (6Q-4TPSL)	220470220 (6Q-4TPESL)	1/4"-1 1/2"	1/4"-3/4"	1/4"-2 1/2"	1/4"-1 1/4"
120750230 (6Q-5TPSL)	220470230 (6Q-5TPESL)	1 1/2"-2 1/2"	1/2"-1 1/4"	1"-4"	1/2"-2"