



**PPE Required:** **Safety Glasses**

**Prohibited Clothing:** loose clothing, neckties, jewelry

**Machine Access Level:** **Supervised Only**

**Materials Allowed:** **Metals, Polycarbonates, Acrylics, Woods,**

Note: For all other materials see the AFL supervisor!

## Operating Procedure

### 1. Machine Safety Inspection and Work Area Check-Out

- A. **PPE:** Make sure you are wearing the proper PPE and not wearing any equipment listed on the first page that could create a hazard.
- B. **Machine Warning Signs:** Make sure you read and follow the machine warning signs that are attached to the machine. Then read the FLOW Operators Manual. If you have any questions, ASK!!
- C. **Work Area:** Make sure the work area is clean and the work area around the machine is free and clear of debris and personnel.

### 2. Work Supervision

- A. This machine requires supervision by an AFL employee. A supervisor or TA will assist you in the set-up and operation of the machine. **You may not operate this machine without supervision.**

### 3. Machine Adjustment

- A. **Nozzle guard:** Make sure the nozzle guard is properly installed before running. Use the nozzle guard at all times.
- B. **Check garnet hopper:** Look for the yellow/amber light at the bottom of the hopper. If the light is not illuminated, add more garnet. The TA will assist you with this step.
- C. **Adjust water level:** To reduce noise and prevent water splash, the water should come up from the ballast tank just above your part surface. The TA will assist you with this step.
- D. **Adjust speeds and feeds:** Make adjustments to feeds and speeds. These are automatically set by material thickness and type.
- E. **Secure the part:** The part **MUST** be securely clamped to the table. **You may NOT use your hand to hold the part!** Additional fixturing may be required. The TA will assist you with this step.
- F. **Adjust depth of cut:** Adjust the carbide nozzle so that it is no closer to the part than 0.100" and no farther than 0.200". This will depend on how accurate the part needs to hold tolerances, and how well it can be held to the table. The TA will assist you with this step.
- G. **Identify the machine controls:** Identify the red emergency stop button. This control stops the water jet.

### 4. Machine Operation

#### **NEVER OPERATE WATER JET WITHOUT MAIN WATER VALVE OPEN!**

- A. **Put guard and/or enclosure down:** The enclosure door must always be in the closed position to operate or cycle program. **DO NOT operate the pump or begin cutting without the guard down and in place.**
- B. **Turn the machine on:** Check with the TA that it is safe to turn on the machine. Follow the **"Start up Procedures"** as posted on the machine.
- C. **Watch the vacuum gage:** If the needle on the vacuum gage buries itself to the right side of the dial, you have a garnet clog. Ask the TA for help.
- D. **Turn the machine off:** When finished cutting, push the red stop button to stop the machine. **Never put your hand in the machine before the machine has been stopped.**

### 5. Clean Up

- A. **Disassemble work set-up:** Disassemble any fixturing or clamp used in the water jet. Return all parts to their proper location and the appearance of the water jet to how it looked when you started.
- B. **Clean up the area:** Clean up all messes (Example: mop the floor if it is wet after use) and return all tools, etc. The TA will check that the area is clean before you can sign-out of the AFL.