

## #83338 MicroFlow™ COOLANT SYSTEM INSTRUCTIONS



- 1** Remove contents from carton. You should have the following items:
- Tank with white plastic lid, bubble-wrapped pump, cord and switch
  - Box with magnetic base and adjustable nozzle holder inside
  - Polybag with 3 nozzles, brass nozzle tube, O-ring and hose fitting for pump
  - Clear Plastic tubing
  - Bubble-wrapped transformer



- 2** Remove white plastic lid from tank. Gently tip tank to allow bubble-wrapped pump to pass through the opening. Catch the pump, remove the bubble wrap, and gently place the pump outside the tank as shown.



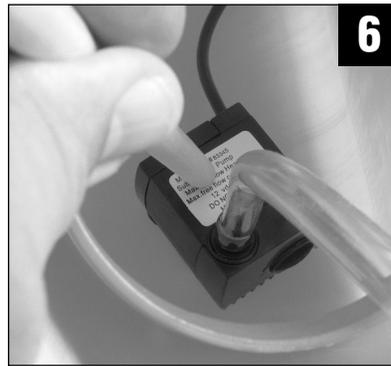
- 3** Remove black plastic hose fitting from polybag. Moisten small end of fitting and install one end of clear plastic tubing on this end.



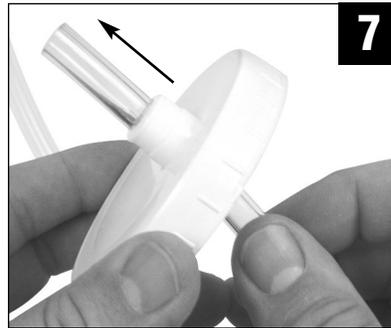
- 4** Press large end of fitting into outlet port of pump.



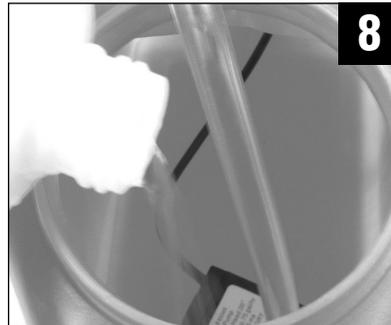
- 5** Check that the pump control is set to Maximum.



- 6** Moisten the suction cups on bottom of pump and gently lower it into the tank. Use a wood stick to gently press the pump into contact with the bottom of the tank. Suction cups should hold the pump in place during gentle side-to-side movement of the tank. If they do not, remove the pump, clean the suction cups, and try again.



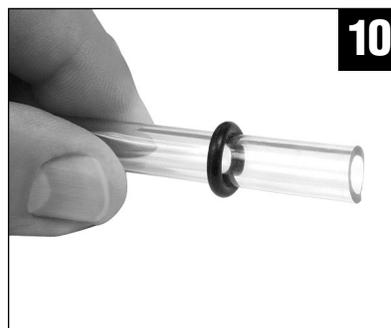
- 7** Feed the free end of the tubing through the hole in the lid in the direction shown.



- 8** Mix the coolant according to the instructions on the coolant container. Fill the tank with the mixed coolant.



- 9** Hold the tubing in one hand to keep it from twisting while you install the lid on the tank with your other hand.



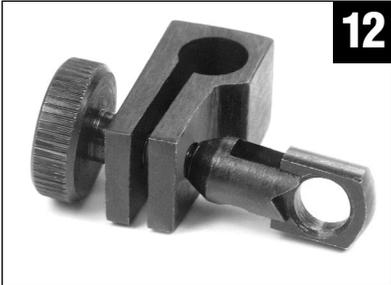
- 10** Install the O-ring on the free end of the clear tubing.



**11** Unpack the magnetic base/nozzle clamp from its box. Remove the metal disk from the bottom of the magnetic base to expose the magnet.



**17** Make sure the switch on the power cord is set to OFF (press the end of the button opposite the "I").



**12** Loosen the knob on the clamp and remove the clamp completely from the support rod. Open the clamp ring (you may need a small screwdriver to pry it open to the position shown).



**18** Plug the power cord into the wall transformer. Plug the transformer into a 110v AC wall socket.



**13** Install the brass nozzle tube through the clamp and reinstall on the support rod. Tighten the knob until the clamp just grabs the support rod (over-tightening will damage the brass tube).



Your MicroFlow Coolant System is now ready for use.



**14** Install the free end of the clear tubing (with the O-ring) over the plain end of the brass nozzle tube. Move the O-ring to the location shown to hold the clear tubing on the brass nozzle tube.



**15** Select a nozzle from the polybag:  
 Pink – Fine  
 Blue – Finer  
 Red – Finest  
 and screw it into the fitting located on the end of the brass nozzle tube.



**16** This is how the nozzle assembly should look.

### Tips for Operation:

We recommend the use of Micro-Mark #83340 MicroFlow Concentrated Coolant and Lubricant. This fluid inhibits bacterial growth, aids in chip removal, and increases the life of cutting tools. (Note: This coolant is not compatible with parts made of magnesium...do not use in this situation.)

A little coolant goes a long way. Select a nozzle that gives you the minimum flow required for good chip removal and cooling of the cutter. A towel placed under the machine is usually sufficient to catch excess liquid, but be sure the towel cannot get caught in the machinery. *Also be sure the liquid cannot run into any electrical circuitry.*

It is important to place the tank neither too high nor too low in relation to the tip. If placed more than 18" below the tip, the pump won't deliver coolant to the nozzle. If placed too high above the tip, the coolant will leak through the tip due to gravity and may not shut off. Ideally, the tank should be placed on the bench next to the machine. At this level, it works just fine.

**Note: Do not run the pump dry. Doing so will ruin the pump and void the warranty.**

We recommend that you empty the tank and rinse the system with water after each machining session; otherwise, slime can develop inside the tank and clog the tubing and nozzle. If you forget to rinse the system, slime can be removed quickly by rinsing the nozzle under running water and then blowing air through the narrow end of the tip. Slime in the clear tubing can be removed by running the pump for just a second with the nozzle removed.