

Bandsaw Aid - Homemade Coolant System

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If you are like me (cheap!), you may own or are thinking about the cheap horizontal-vertical bandsaw sold by Harbor Freight. There is a whole lot to be desired about these tools but they are hard to beat at \$165- \$200 (depending on sales) (item 93762). You will want to spring for a decent bimetal blade (~\$20 each), so anything that keeps the blade cutting longer is not to be sneered at. A simple way to better than double the life time of the blade is a coolant drip. Of course, you could buy a commercial unit (about 50% or more of the base cost of the saw), but if that's your path, you probably will buy a better saw in the first place. A real simple system consists of a :

- A: The saw
- B. The nozzle (delivery tube)
- C. The hose (1/4" rubber)
- D. A valve
- E. A plastic bottle
- F. A light

The optimal bottle is something like a Gaterarde bottle - but anything with a molded shape that you can tie a string around will do. Screw an anchor above the saw and hang the bottle. You can set up a siphon system - consisting of a cork with two holes - one for an air vent (a short piece of tubing just long enough to get through the cork), the other for a piece of metal tubing (~ 12" long). I've found that the stuff we use for mosiac pins from the Ace hardware stores is fine. Hook a 24" piece of rubber tubing to the tube (get it when you buy the tubing and make sure it fits). We've already hit the hard parrr - keeping the rubber tubing from crimping. You can either bend the metal tubing into a "U" (good luck!) or wire a scrap piece of PCV pipe (anything ~ 1" diameter) into the system so that the rubber tubing makes the 90 degree change without crimping. Place a small needle valve on the end of the tubing (back to Ace if you didn't read all of this before going shopping) and then connect more tubing to reach the saw. As you can see in the pictures, I drilled and tapped a hole midway on the saw frame and attached a plate. A magnet from a dead hard disk and some scrap made a nozzle locator

The end of the hose goes into the nozzle (or you could use an old syringe). Once the siphon has been established, all you have to do is (1) position the end of the hose over the cut location (as shown in the pics), open the valve enough to get a steady drip and turn the saw on. An alternative arrangement would be to hand the bottle upside down, rig the air vent as the "U" shaped tube and hook the delivery hose to the short tube (the trade off is maintaining a siphon versus a leaky cork).



The only thing left is "what coolant"? I've found that a product available from MSC (<http://mscdirect.com>) - BandAde - works wonderfully. It comes in gallon jugs as a concentrate (9:1 dilution), runs about \$11 or so, and does not promote rust.