

Dehumidifier

By: Cletus L. Berkeley

Lathes and other fine machines and tools seem to have an affinity for rust.

My lathe rust prevention scheme is as follows:

1. Keep lathe clean, lubricated and all exposed metal surfaces covered with a light coat of oil.
2. Keep lathe covered. I have a canvas/leatherette cover for my lathe which allows some breathing.
3. A dehumidifier and desiccant silica-gel is kept below the lathe bed so as to keep the immediate surrounding air dry thus preventing moisture buildup due to condensation.

So, here's an easy to build dehumidifier:

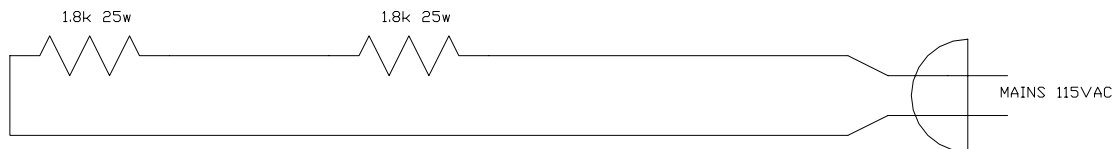


Completed dehumidifier

Parts Needed:

- Line cord with plug
- 2 1800-ohm 25-w Resistors
- About a foot of 1 x 1 aluminum square tube
- 2 Plastic end caps to fit the Alu. Tubing.
- Silicone sealant

Here's the schematic diagram:



The dehumidifier consists of two 1800-ohm, 25-watt wire-wound resistors (readily available at parts stores) series-connected to the mains via a suitable cord and plug.

At 115VAC the resistors dissipate 3.7 watts of power. The 25-watt resistors are grossly overrated and were chosen because their large physical size which provides greater surface area for radiation of heat to the surrounding air.

The entire unit is enclosed in the aluminum tubing and RTV Silicone-sealant is used to keep everything in place. I have drilled a few 1/4" holes in the tube to inject some sealant to keep the internals in-place.

So, just place it under the ways and leave it plugged-in and it keeps everything just warm.