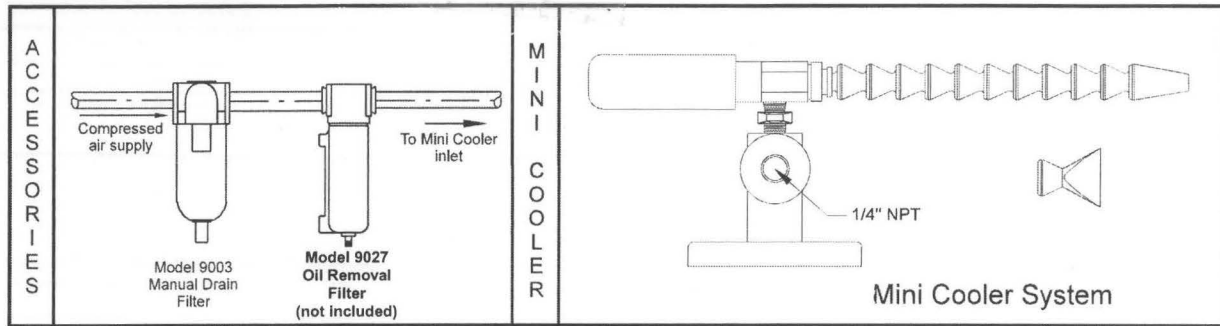


NC-1

NEEDLE COOLER INSTRUCTIONS



COMPRESSED AIR LINE SIZES

Compressed air lines should be sized to hold pressure drops to a minimum. When installing supply lines, use 1/4" pipe up to 25' (7.6m) long, 3/8" pipe up to 100' (30.5m) long. If compressed air hose is used, consider 3/8" I.D. hose to be the same as 1/4" pipe. Do not use restrictive fittings such as quick connects. They can "starve" the Mini Cooler by causing excessive line pressure drop.

COMPRESSED AIR SUPPLY

For best performance, use line pressure 80 to 100 PSIG (5.5 to 6.9 BAR). A Mini Cooler uses 8 SCFM (227 SLPM) at 100 PSIG (6.9 BAR) supply pressure.

With proper filtration and separation of dirt, moisture and oil from the compressed air supply, the Mini Cooler will operate for years with no maintenance required. Included with all Mini Cooler Systems is the Model 9003 Manual Drain Filter. Replacement filter elements (#EKF300-5 for Model 9003 Manual Drain Filter) are available.

For replacement or repair filter and regulator parts contact Nimmo Fluid Power at 1-888-646-6097.

To prevent problems associated with oil, use an oil removal filter (Model 9027 Oil Removal Filter not included). The oil removal filter should be used downstream from the manual drain filter. Filters should be close to the Mini Cooler, within 10 to 15' (3 to 4.6m) is best.

Failure to use or properly maintain filter voids warranty on the Mini Cooler.

USING THE MINI COOLER

Find the best mounting location. Direct the cold air at the part or point to be cooled using the segmented flexible hose. Use the nozzle that suits your application, cone or fan. Position the nozzle outlet as close as possible to the part or point to be cooled, preferably within 1/2" (13mm).

When the part to be cooled is stationary and the tool is moving (such as a grinding wheel), aim the cold air at the part. It should be directed to the point of contact to remove the heat as it is generated. When the part to be cooled is moving (such as a lathe), aim the cold air at the stationary tool. It should be directed at the point of contact as well.

Suitable for carriage by aircraft per 49CFR-173.21d/IATA902 Method 1

CONTROLLING THE COLD AIR

The Mini cooler gives instant cold air when compressed air is supplied to it. If less cold air is needed, the volume of cold air can be reduced by regulating the compressed air supply with the pressure regulator. Lower pressures give less cold flow and reduce compressed air consumption.

TROUBLESHOOTING & MAINTENANCE

If the Mini Cooler Does Not Perform Properly, check the four common problems listed below:

1. **Inlet Pressure** - Low inlet pressure supply will cause poor performance. Measure the pressure at the compressed air inlet of the Mini Cooler while it is operating. Restrictions in the compressed air supply line can cause excessive pressure drops and deteriorate performance.
2. **Inlet Temperature** - A Mini Cooler provides a temperature drop from supply air temperature. In some cases, the supply air is warmer than ambient air due to compressed air lines running across ceilings, near furnaces, direct sun, etc. In this case, the cold air may be warmer than anticipated and adequate refrigeration may not be available for the application.
3. **Back Pressure** - The performance of a Mini Cooler deteriorates with back pressure on the cold end exhaust. Use only the flexible segmented hose included with the Mini Cooler.
4. **No Cold Flow** - If the filter is not drained regularly, water may overflow into the Mini Cooler and cause internal freezing. This can reduce or even stop cold air flow. Drain the filter often, or crack open for a small continuous air bleed. If internal freezing occurs, any one of the following will correct the problem:
 - (a) Blow air (use an air gun) into the cold end fitting with the Mini Cooler off.
 - (b) Turn the Mini Cooler off for a few minutes. It will thaw.
 - (c) Put a dryer on the compressed air supply.

The Mini Cooler has no moving parts. Maintenance is not normally required provided the air filter is used. However, if internal cleaning should be necessary, the following procedure is recommended;

1. Unscrew the flexible segmented hose. Use a 5/8" wrench to remove the cold end fitting, turning counterclockwise.
2. Remove the "O"-ring, generator (white plastic part), brass taper sleeve and plastic washer. Inspect for dirt and clean as necessary.
3. Immerse all parts in mild cleaning or degreasing solution. Use an air gun to remove solution and contaminants.
4. Re-install plastic washer, brass taper sleeve, generator, "O"-ring, cold end fitting and flexible segmented hose.

