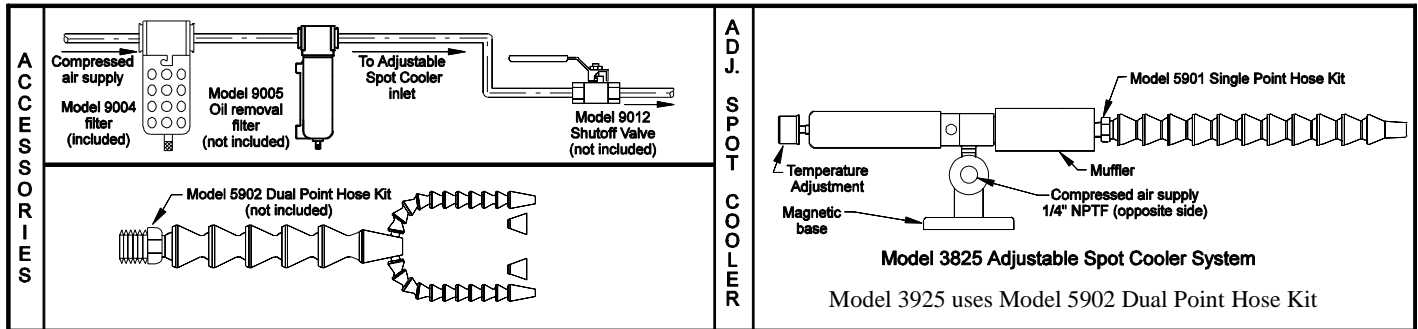




## ADJUSTABLE SPOT COOLER™ INSTALLATION & MAINTENANCE



### 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 10' (3m) long, 3/8" pipe up to 50' (15.2m) long, 1/2" pipe over 50' (15.2m). If compressed air hose is used, consider 3/8" I.D. hose to be the same as 1/4" pipe, 1/2" I.D. hose to be the same as 3/8" pipe, 5/8" I.D. hose to be the same as 1/2" pipe. Do not use restrictive fittings such as quick connects. They can "starve" the Adjustable Spot Cooler by causing excessive line pressure drop.

### COMPRESSED AIR SUPPLY

For best performance, use line pressure up to 100 PSIG (6.9 BAR, 689 kPa). The Adjustable Spot Cooler uses 15 to 30 SCFM (425 to 850 SLPM) depending on the generator installed.

With proper filtration and separation of dirt, moisture and oil from the compressed air supply, the Adjustable Spot Cooler will operate for years with no maintenance required. Included with the Adjustable Spot Cooler System is the Model 9004 Automatic Drain Filter. Replacement filter elements are available.

**For replacement or repair filter and regulator parts, contact EXAIR at 1-800-903-9247 or techelp@exair.com. Call (513) 671-3322 for outside the US and Canada.**

To prevent problems associated with oil, use an oil removal filter (Model 9005 Oil Removal Filter not included.) The oil removal filter should be used downstream from the automatic drain filter separator. Filters should be close to the Adjustable Spot Cooler, within 10 to 15' (3 to 4.6m) is best.

### **Failure To Use Or Properly Maintain Filter Voids EXAIR's Warranty On The Adjustable Spot Cooler.**

If air preparation units other than EXAIR models are being used, please note the following:

- **PRESSURE REGULATORS** – Must be pressure relieving and rated for a supply pressure of 250 PSIG (17.2 BAR, 1.72 MPa). Suggested operating pressure is 5-125 PSIG (0.3-8.6 BAR, 34-862 kPa). Flow should be minimum 50 SCFM (1416 SLPM).
- **AUTO DRAIN FILTER SEPARATORS** – Must be rated for a supply pressure of 250 PSIG (17.2 BAR, 1.72 MPa) and have 25 micron filtration. Flow should be minimum 50 SCFM (1416 SLPM).
- **OIL REMOVAL FILTERS** – Must be rated for a supply pressure of 250 PSIG (17.2 BAR, 1.72 MPa) and have 0.03 micron filtration. Flow should be minimum 50 SCFM (1416 SLPM).

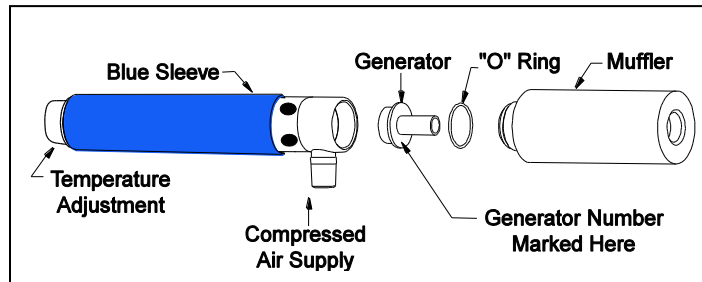
### USING THE ADJUSTABLE SPOT COOLER

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 a 1/2" (13mm).

## **CONTROLLING THE COLD AIR**

The Adjustable Spot Cooler gives instant cold air when compressed air is supplied to it. The temperature can be adjusted by turning the knob as indicated on the sleeve. As temperature is adjusted colder, the airflow will decrease.

There is a 25 SCFM (708 SLPM) generator installed that will produce up to 1,700 Btu/hr. (429 Kcal/hr.) If cooling is more than desired, the 15 SCFM (425 SLPM) generator which delivers 1,000 Btu/hr. (252 Kcal/hr.) can be easily installed. If more cooling is needed, the 30 SCFM (850 SLPM) generator can be installed for up to 2,000 Btu/hr. (504 Kcal/hr.)



To change generators (white plastic part), firmly grip the blue sleeve while unscrewing the muffler (counterclockwise). Note the position of the "O"-ring and generator during disassembly. Install the desired generator. (The flow rate is stamped on each generator.) Lower capacities produce less refrigeration and cold flow with reduced compressed air consumption.

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.

## **TROUBLESHOOTING & MAINTENANCE**

**If The Adjustable Spot Cooler Does Not Perform Properly**, check for these common problems:

1. **Inlet Pressure** - Low inlet pressure supply will cause poor performance. Measure the pressure at the compressed air inlet of the Adjustable Spot Cooler while it is operating. Restrictions in the compressed air supply line can cause excessive pressure drops and deteriorate performance.
2. **Inlet Temperature** - The Adjustable Spot 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 the Adjustable Spot Cooler deteriorates with back pressure on the cold end exhaust. Back pressure can be minimized by using the flexible segmented hose included with the Adjustable Spot Cooler System. If other hose or tube is desired, use minimum 3/8" (9.5mm) I.D. to maintain the outlet diameter of the muffler.
4. **No Cold Flow** - If internal freezing occurs, any one of the following will correct the problem:
  - (a) With compressed air on, turn temperature adjustment knob fully clockwise.
  - (b) Turn the Adjustable Spot Cooler off for a few minutes. It will thaw.
  - (c) Put a dryer on the compressed air supply. Use dry air with atmospheric dew point of -40°F or less.

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

1. Unscrew the flexible segmented hose. Remove the cold muffler, turning counterclockwise. Pin wrench holes are provided for this purpose.
2. Remove the "O"-ring and generator. Inspect for dirt and clean as necessary.
3. Re-install generator, "O"-ring and cold muffler.

If you have any questions or problems, please contact:

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