Maintaining Adequate Air Flow

Prevent and Eliminate Air Supply Restrictions

Common Causes of Restriction

- The air supply hose is too long.
- The inside diameter (I.D.) of the hose is too small.
- The air connections or fittings have inside diameters that are too small.
- There are too many air connections or fittings being used.
- If an inline filter is being used, the unit may be too small or the filter element may be plugged.
- If an inline regulator is being used, the unit may be to small, not adjusted properly or defective.
- The air supply hose, air fitting, air tool inlet or air tool exhaust may be plugged.
- If the air tool has a speed regulator, it may be closed.

Air Hose Supply

- Use the air supply hose with the correct inside diameter as is recommended by the air tool manufacturer.
- Use the shortest air supply hose possible for the task being performed.
- Longer air supply hoses require larger inside diameters.
- Coiled air supply hoses appear much shorter than they actually are. When using a coiled hose, make sure that the inside diameter is large enough to compensate for the length (see chart below).

Air Supply Hose Recommended Chart

- Choose the correct Inside Diameter (I.D.) and Length of Air Supply Hose.

NOTE: To increase the length of air supply hose it will be necessary to increase the inside diameter of the hose.

Air Motor SCFM (Standard Cubic Feet Per Minute)	Hose & Fitting I.D. Required	Recommended Length Air Supply Hose
22 SCFM (623 L/Min)	1/4" (8 mm)	1' - 8' (0.3048 m – 2.44 m)
28 SCFM (793 L/Min)	3/8" (10 mm)	1' - 25' (0.3048 m – 7.6 m)
35 SCFM (991 L/Min)	3/8" (10 mm)	1' - 20' (0.3048 m – 6.10 m)
45 SCFM (1,274 L/Min)	3/8" (10 mm)	1' - 10' (0.3048 m – 3.042 m)
73 SCFM (2,067 L/Min)	1/2" (15 mm)	1' - 20' (0.3048 m – 6.10 m)

The Cost Of An Air Hose Leak

One 1/16" hole in a hose leaks at 100 PSIG:

- 4.25 cubic feet per minute (CFM)
- 255 cubic feet per hour
- 2,040 cubic feet in an 8-hour day
- 6,120 cubic feet per 24 hours

*Costs will vary based on local charges per kilowatt-hour.

The cost of one leaking air hose:

240 working days per year **x** **6,120** leakage in cf per 24 hours **=** **1,468,800** air lost in cf per year

1,468,800 air lost in cf per year **x** **$.00041*** cost per cf based on typical energy costsper kilowatt-hour **=** **US $602.21*** total cost per year!