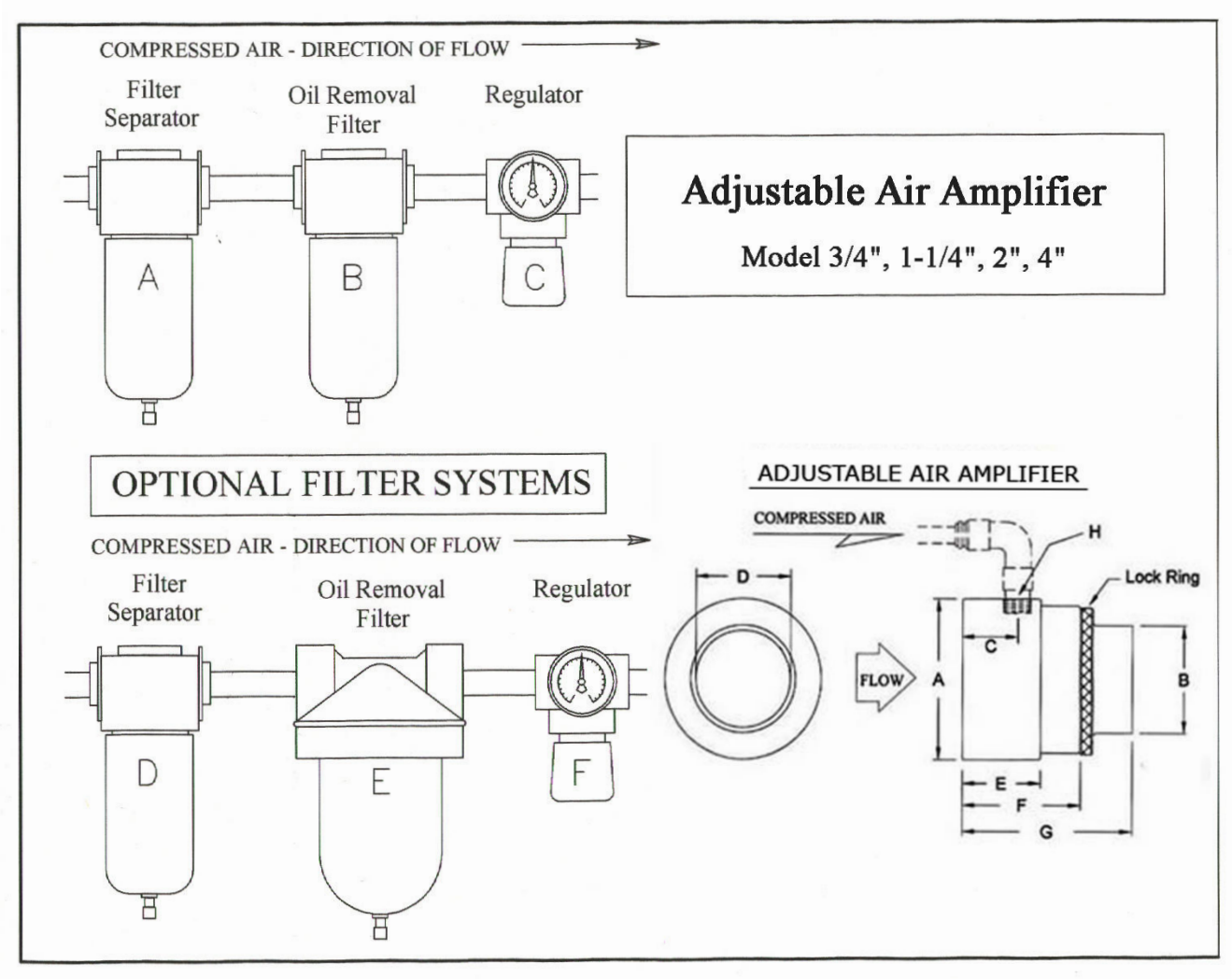
NEX FLOW™
Leading Technology Into The Future

NEX FLOW™ ADJUSTABLE AIR AMPLIFIER INSTALLATION & MAINTENANCE



Installation and Size of Compressed Air Lines

It is important to minimize the pressure loss to an Nex Flow™ Adjustable Air Amplifier or series of them. Keep airline sizes adequately large.

For small Air Amplifiers up to 2" outside diameter (Model 40002, 40002G and 40002S) it is recommended to use ¼" pipe or 3/8" hose for runs up to 25 feet. For 50 foot runs, use 3/8" pipe or ½" hose and for runs over 50 feet, use ½" pipe or larger.
Never use fittings which can be "restrictive" thereby starving the Adjustable Air Amplifiers of air and creating a large pressure loss in the airline.

For larger Nex Flow™ Adjustable Air Amplifiers (Model 40003 and 40003S), use a supply pipe size equal or greater than the connection size on the amplifier.

Care Of The Compressed Air Supply

Because Nex Flow™ Adjustable Air Amplifiers utilize a small "gap" for the air outlet, it is important to keep the air lines free of moisture, oil and dirt which may clog the unit. By using proper filtration the units can run maintenance free for many years.

For water removal, a minimum 10 micron filter complete with an automatic (float type) drain is recommended. It should be sized to handle the total air flow of the Nex Flow™ Adjustable Air Amplifiers at the pressure they will be used. If oil could be a concern, an oil removal filter should be added downstream from the water removal filter and should also have an automatic (float type) drain. Again, they should be sized to handle the total flow of the Nex Flow™ Adjustable Air Amplifiers. Filters should be mounted near any Adjustable Air Amplfiier, typically within 10 to 15 feet.

Using the Nex Flow™ Adjustable Air Amplifier - Increasing & Reducing Force and the Conservation of Air

In many cases the Nex Flow™ Adjustable Air Amplifier can either be supported by the compressed air supply piping or, by clamping to the unit.

Best performance is to keep the target within 12" of the Nex Flow™ Adjustable Air Amplifier. Force begins to decrease after 12" away although it may still be adequate for many applications up to 24" away from the Air Amplifier.

The “gap” in the Nex Flow™ Adjustable Air Amplifier is preset to .002" and is locked in place with a lock ring. To increase the force you can unlock the lock ring, and open the gap further to .004" maximum, thereby doubling the gap. This will increase mass flow, velocity and force but also increase air consumption so care must be taken to insure proper airline size. If you open the gap, assume the doubling of the Nex Flow™ Adjustable Air Amplifier air use and size accordingly.

By moving the Nex Flow™ Adjustable Air Amplifier toward or away from the target, an optimum distance for operation can be found.

To decrease force, a regulator may be added and simply reduce the pressure to reduce the force required. Also, the gap may be reduced to .001". However, if making the gap smaller, it is recommended to use at least a 5 micron air filter to prevent premature clogging from dirt.

To conserve compressed air, it is best to use a regulator to reduce the pressure to the point where the Nex Flow™ Adjustable Air Amplifier still performs as it must, but by minimizing compressed air use by utilizing the air at a lower pressure. The Nex Flow™ Adjustable Air Amplifiers are especially ideal for applications where intermittent blow off is required. A sensor or timer can have the compressed go on and off to the Nex Flow™ Adjustable Air Amplifier system as required utilizing a solenoid valve. Energy is only consumed when the unit is operating.

Cleaning

If the Nex Flow™ Adjustable Air Amplifier does get clogged from contamination, simply dismantle the unit, clean, and re-assemble.

Sometimes a build up of a dirty film can occur on the throat of the Adjustable Air Amplifier due to vapor in the surrounding atmosphere. Clean this surface using a mild solvent and clean rag. To prevent contaminants from getting pushed back into the Adjustable Air Amplifier gap, do the cleaning with a small amount of compressed air passing through the unit.

Troubleshooting

With zero moving parts, there is little that can go with an Adjustable Air Amplifier. However, certain factors can cause a reduction in flow or force and thereby reducing the performance of the unit.

If the force or flow seems to be below normal, install a pressure gage near the inlet of the Adjustable Air Amplifier. If the pressure is low, it may be due to undersized airlines, perhaps restrictive fittings, or from clogged filter elements. These things should be checked, in particular the fittings used and the filter elements.

If you have any questions or problems, please contact:

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