

## Technical Bulletin

### Inside Diameter Restrictions on Air Lines and Compressor Hookups

The biggest challenge for dry ice blasters is air. Often the air volume is available but the challenge is getting unrestricted volume to the machine. Here are two solutions for carrying the air volume needed to the machine or after cooler dryer.



The first option is a 3-way Universal Claw Coupling. This allows the use of two  $\frac{3}{4}$ " airlines to carry volume to the machine or after cooler dryer and combine the volume at the air inlet. Two  $\frac{1}{2}$ " airlines can also be used to carry volume to a three quarter inch or smaller machine in a plant.

Example 1: 185CFM portable compressor with a standard  $\frac{3}{4}$ " Y outlet. Use two of the 50' X  $\frac{3}{4}$ " barbed airlines that the rental company supplies to carry the air to the after cooler dryer inlet. From the outlet, use the 1" airline with the machine.

Example 2: Plant air with  $\frac{1}{2}$ " air hook ups. Use two  $\frac{1}{2}$ " but not more than  $\frac{3}{4}$ " airlines to carry air volume to the back of the machine.

Note: It is better to carry air in a line with a similar inside diameter to the smallest restriction and connect multiple airlines together at a junction of a larger airline than to connect larger lines after a restriction to carry volume. There is less CFM used in filling the inside diameter of the larger airlines after the restriction this way, causing less PSI drop.



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The second option is to take two restricted openings and merge them together to a standard one inch NPT opening with the device above. The standard portable compressor Y outlet has a small inside diameter restriction causing a pressure drop when connecting a 1" air hose. This device allows maximize flow from the compressor.

**NOTE:** All Chicago style fittings should have a safety pin installed before charging the air line.