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How Much Compressed Air is Required to Clean A Dry Type Lint Filter and What Size Compressor Should be Used

Introduction: The question that is asked most during the planning and installation phase of an Energenics Dry Lint Filter is “what size compressor and what size pipe should be used”.

Application: It is important to note that a blowdown to clean the screen will last for approximately 6 seconds and will usually occur once or twice an hour. This means that after the filter cleans itself the compressor will have ample time to replenish the air in the tank. In simpler words, we use a lot of volume but not a lot of horsepower.

The standard 6-second blowdown is a consumption of 30 to 40 cubic feet of free air at 100 psi. Air should be supplied to the filter at 100 psi and should not drop below 80 psi after a 6-second blowdown. A supply of air of either a lesser quantity, or at a lower pressure will cause a plugged filter screen resulting in a hazardous operating condition and damage to the screen from the excess pressure.

A pressure gage is supplied with each filter and during a blowdown test must show an adequate supply before the dryer(s) connected to the filter can be safely operated.

It is important that a 1-inch pipe is connected to the filter air valves, whether supplying the larger 1-inch valve or the smaller $\frac{3}{4}$ inch valve.

In plants it may be necessary to install a 30 to 60-gallon receiver tank near the lint filters. Energenics has an economical tank source; we can drop ship it to the job site from the manufacturer in Indiana. If the laundry has no compressor, a standard 5 hp, 60-gallon tank Grainger or Home Depot compressor is satisfactory for all filters up to 15,000 cfm. We do recommend a 6 hp, 80-gallon tank for lint filters over 15,000 cfm.

The most common cause of screen failure is a lack of volume caused by the compressor being too small or the lack of volume cause by inadequate sizing of the compressed air tank or pipe size. Remember the six-second test... during a manual blowdown does the pressure start at 100 psi and drop no further than 80 psi?

