

# FAQs

## Frequently Asked Questions -- Pressure Drop

**Q: How much pressure drop is normal between the compressor discharge and any point of use.**

**A:** A well designed compressed air system exhibits no more than 10% psig of pressure drop between the compressor discharge and any point of use.

**Q: How much does pressure drop cost me?**

**A:** That depends on a range of factors, but a common guideline for positive displacement compressors is that for every 2 psig of excess operating pressure, air compressor power consumption increases by approximately 1%.

**Q: Apart from pipe diameter, what else should I consider when designing an air distribution system in order to minimize pressure drop?**

**A:** Material of construction is an important consideration. Smooth bore pipes such as copper, aluminum, and plastic cause lower pressure drop than black iron. Keep pipe runs as short as practically possible. Minimize the use of 90° elbows. Minimize the length of rubber hose when connecting devices as this material has a high coefficient of friction and creates excessive pressure drop when used in long, coiled lengths.

**Q: My coalescing filter exhibits less than 1 psig in pressure drop across the filter, and it's been this way for a long time. Is this a cause for celebration or concern?**

**A:** If a filter element tears or ruptures, differential pressure across the filter will suddenly decrease. This absence of pressure drop can easily be mistaken for a sign that the filter is working well. In fact, a failed element passes contaminants downstream. Replace filter elements on a preventative maintenance schedule, regardless of differential pressure.