What is Static Pressure?

Static Pressure is resistance to flow caused by friction and the channeling of airflow through a round pipe. If you turn on a dust collector without anything attached to it – spiral pipe, flexible hose, or filter bags, it will pull max volume at free air without any resistance. Attach filter bags and 10 feet of spiral pipe to the inlet and you have added resistance. Add 20 more feet of spiral pipe and so on – you increase resistance as you add more spiral pipe and fittings.

It is the dust collector's job to overcome the duct work resistance and pull the proper amount of CFM when you open a branch or branches in a central dust collection system. When you drink a soda with a regular straw it does not take much effort. If you have ever seen kids trying to drink a soda with a curly straw, they strain trying to get the soda to flow. They are trying to overcome the resistance of the long run.

You can run as much duct work in a system as long as the resistance has been compensated for and the CFM is delivered as required.

"Inches of Water" on a scale is used to measure the resistance in a duct system. It can be equated to the resistance to lift water by inches in a tube.

One more resistance analogy is from the old days of siphoning gas. Remember the resistance in the garden hose we had to overcome to get the gas flowing?

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