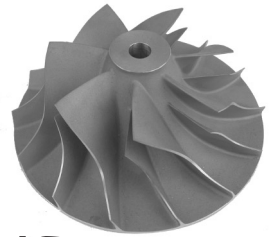




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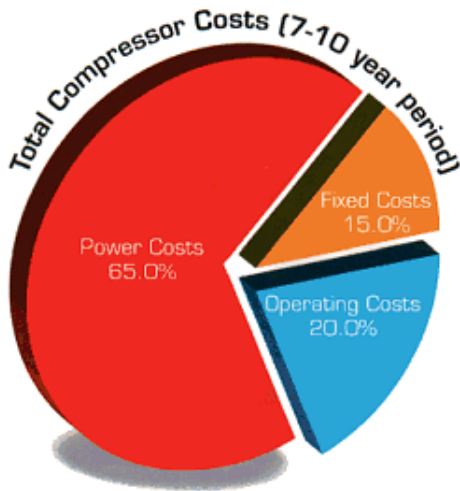
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Vortron's Technology In Review – Part 2 - Seize Energy Savings

By Eliminating Inappropriate Compressed Air Use

Compressors are not by their nature very energy efficient. In fact, it can take 7 to 8 horsepower of electric power to produce 1 HP of compressed air power. Energy costs for operating a compressor can exceed the initial cost of the unit in the 1st year alone.

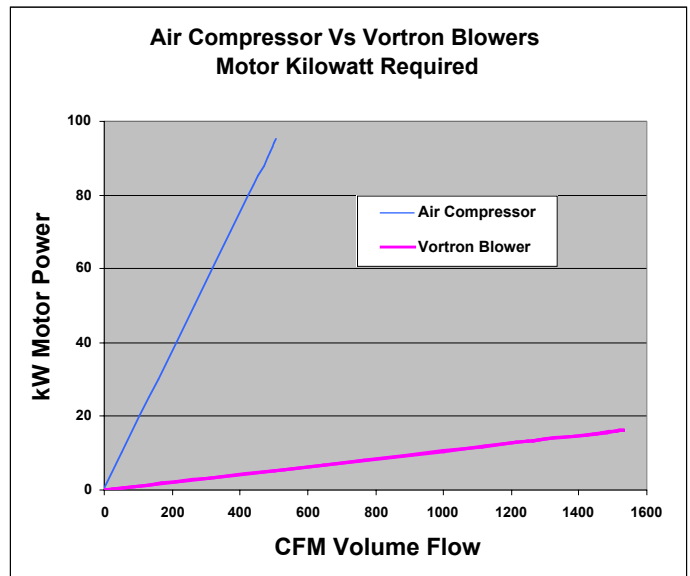


Of 100 kilowatts of electricity that enter the motor of an air compressor only 10 to 15 percent of these kilowatts do real, useful work - an efficiency of only 10% / 15%. A compressor is in effect an electric heater with an efficiency of about 85% that releases high-pressure air as a by-product. For a utility rate of .05 \$/kWh (for example) the cost of a kWh of compressed air as an energy source may be as high as 50 cents. Compare this to other energy sources and you can see why 4th utility can be the most expensive. By seeking alternatives a company could easily save many 1,000's of dollars.

Compressed air is an expensive energy source, but it is also an expensive cooling source, especially when low-pressure blower systems would be sufficient and are readily available. As a source of conveyance it is expensive. Alternatives such as blowers, mechanical conveyors etc. need to be considered first. It is also used as a cleaning medium, a duster, an airbrush, and even as a way to keep flies out of production areas. Unlike many other energy sources it is difficult to measure and control. It's high velocities and compressibility, require expensive dryers, metering and filtering systems.

Vortron's AirPower Blowers Assures Energy Savings

An alternative to compressed air is Vortron's high efficiency blowers that utilize ambient air with energy saving up to 90% over compressed air. Vortron's **AirPower™** line of compact centrifugal blowers can attain peak efficiencies of up to 79%.



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Email Comments - Homer Fager:hfager@vortron.com

Air Knife Blow-Off Applications

Material Processing & Manufacturing

Many manufacturing processes require removal of surface liquid or other debris. The removal process can be very expensive if done by hand or by using compressed air. Personnel assigned to this process could be otherwise assigned more productive duties. If hand held "air guns" supplier with compressed air (plant air) is used to clean parts or for general housekeeping, it's an expensive convenience.

A prime example is after aqueous washing and degreasing parts need to be dried before the next process or prior to packing. In many shops this drying process is most commonly carried out using hand held "air guns", a very expensive convenience.

Some of the many blow-off application are:

- Drying machined parts and casings after washing, controlling "drag-out" from wash and rinse tanks;
- Aid the drying of painted/stained products;
- Removing excess coating solution from strip material (metal, plastic & rubber), wire & wire cloth (ex. during galvanizing), etc;
- Dust removal from finish wood products, bricks, conveyors, etc;
- Water removal from cans, bottles and jars prior to labeling;
- Drying of reusable plastic crates; and
- Spread seasonings – batter, spices, chocolate, egg glaze, etc.

Low-pressure air knife blow-off is an alternative to manual removal or the use of compressed air that overcomes many of their associated problems and costs.

AirPower™ Air Knives

Vortron's **AirPower™** line of air knives delivers superior Low Pressure Resistance and Maximum Air-Flow Capacity achieving efficiencies exceeding 95%. Their design achieves optimum aerodynamic performance with an extended edge (Coanda effect) to achieve a controlled stream of high velocity laminar flow air.



Vortron's **AirPower™** line of air knives can be supplied either in extruded aluminum or stainless steel. We manufacture air knives with manifold sizes of 3.5" and 5" and lengths up to 154 inches. Since our air knife gap (slot size) is adjustable we can supply a range of gaps from 0.015" up to 0.070". This flexibility in air knife gap allows us to design the airflow (volume) to match the application needs.

Vortron's high efficiency blowers–air knife systems provide vastly improved system efficiency, increasing **Energy Conservation and Operation Productivity.**