VORTRON®

Air Superiority News

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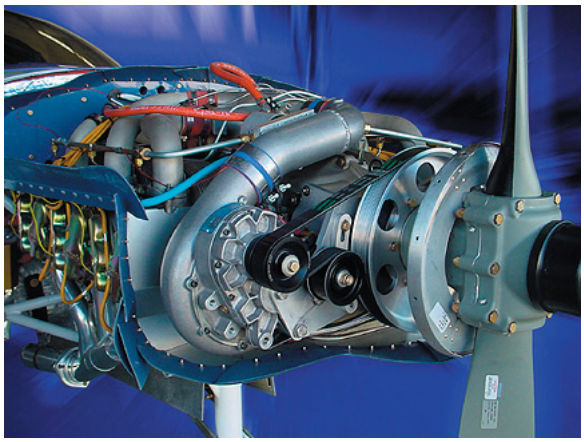
Vortron's Technology In Review – Supercharge to Fly Higher, Fly Faster

That challenge came in the form of creating the first commercial supercharger system for experimental aircraft. Rick Schrameck and Dennis Mortensen first determined that a supercharger is far more beneficial than a turbocharger—supercharging adds horsepower without having to touch the integrity of the aircraft's engine. In addition, their normalized and intermediate (available performance levels) supercharger kits produce a low outlet temperature so that an intercooler is not required.

State-of-the-Art Technology Assures The Best Return-On-Investment

Working with Vortech Engineering in Oxnard, California, a custom, belt-driven centrifugal supercharger was built. Next, was to install the supercharger into Rick's newly homebuilt Lancair Legacy. Dennis, whose background is in mechanical engineering, designed and built all the parts needed to mount the supercharger. Meanwhile, Rick developed the intake and fuel injection systems. Their combined efforts allowed the Legacy to break the world speed record at the 2002 Reno competition. For further details you may visit Aero Supercharger Solutions at www.aerosuperchargers.com.



Always Select the Best Product for the Job

This aircraft application is just one example of how Vortron technology and innovations provide lasting profit to the end user, our customers.

Air*Power**™ blowers are entirely different from others' 30 year-old conventional designs. All are clean-sheet designs developed from the ground up to deliver best performance, best durability, and best efficiency available, ***hands down! The ***Air*Power**™ Z40 easily attains the elusive 100 inch-Wc at 1,000 SCFM. Our X40 attains a peak efficiency of 79% - ***"Best in Class" by a wide margin!***

A fundamental difference that sets Vortron and the ***Air*Power**™ product line apart from the competitors is exhaustive testing. Vortron is the only compact blower manufacturer that publishes compressor maps, derived from actual test data gathered in accordance with SAE Standard J-1723, an industry first.

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Air Superiority Air Knife Systems

Increase Productivity

***Air*Power**™ high efficiency air blow-off systems assure increased productivity and the highest Return-On-Investment in the industry.

Eliminating label “skidding” in the food and beverage industry is just one example of how an Air-Power‘ air blow-off system can provide increased productivity and higher ROI.

To illustrate how, let us review an existing air blow-off drying station in a soda can conveyor system with a capacity of 12,000 cans per hour (200 CPM). An air blow-off station for 200 CPM will consist of air knives on both sides, and on top and bottom of the conveyor. The side air knives may be longer then the top and bottom air knives.

A competitive 20 HP blower can supply 1000 CFM to a 4-air knife drying station at a manifold pressure of 54” WC. At this flow and pressure the maximum exit velocity from an air knife is 29,604 FPM. The exit velocity is an indicator of the air curtain’s shear force available for removal of water.

An ***Air*Power**™ air blow-off system can increase productivity by supplying the same 1000 CFM airflow with a 15 HP blower but at a higher manifold pressure, 65” WC. Since the air knife manifold pressure is higher, the exit velocity will also be higher, and therefore the air curtain’s shear force will be higher. The exit velocity of the ***Air*-Power**™ air knife is 32,060 FPM, producing an impact force 8% higher then the competitive 20 HP system.

This increase in impact force equals better drying that will translate into productivity increases, i.e., more cans per hour. Depending on field conditions, the productivity increase could be as high as 50%. Additionally this productivity increase has been achieved at reduced power consumption; Vortron’s 15 HP vs. 20 HP. At $0.085/kWhr and 24/7 operation the ROI is $1,500/year. This is an annual savings, not a one time initial low price. Over the years the annual savings will continue along with the increased conveyor line capacity, a **“TWO for ONE”** benefit.

Visit our WEB site at www.vortron.com

For more extensive information on ***Air*Power**™ high efficiency blowers and air blow-off systems, please visit the following pages:

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