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AFWERX Selects Revolutionary Turbomachinery Technology for Award

AFWERX, the Air Force Technology Accelerator, has selected a revolutionary diffuser design from P3 Technologies for a Phase II SBIR award. The selected effort is in support of P3's recently patented pump and compressor diffuser technology that improves any new or existing system's performance.

In Phase II, P3 Technologies will develop a Multiple Channel Diffuser (MCD) that can be integrated into launch vehicle engines that drastically improve engine performance while improving turbomachinery life. The technology has been shown to provide up to 20% increase in pressure-recovery performance and significantly increased life by lowering part stress an order-of-magnitude.

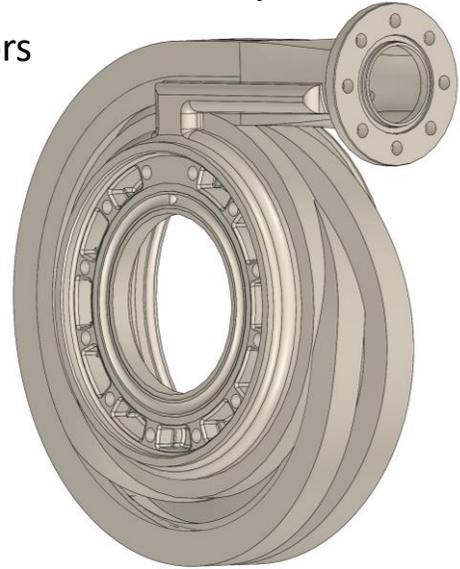
The MCD helps to solve the United States Space Force challenge of reliable, low-cost launch by providing a replacement for the lowest performing, life-limiting component of the launch system with a solution that increases performance, operating range, life, and reusability. P3 would like to extend a special thanks to AFWERX for selecting this technology for award, the Air Force Research Laboratory for providing additional sponsorship, the support of the Space and Missile Systems Center as the end-user, and Blue Origin for providing the engine design for evaluation of this technology.

Multi-Channel Diffuser (MCD)

The new standard in diffuser technology

Get the technology that pays for itself in less than one year

- Works with both Pumps and Compressors
- Easy to incorporate into new designs or retrofit into existing products
- 20% increase in discharge pressure, or
- 20% decrease in power consumption
- 50% increase in operating range
- Physically smaller
 - 15% smaller (more possible)
 - 25% lower weight
- Longer life
 - Order-of-magnitude lower stress
- Lower cost – a third the cost of comparable diffusers



*Centrifugal Compressors
for Turbine Engines*



*Turbochargers for
Land or Air Vehicles*



*Water Pumps for Swimming
Pools and Municipal Pumps*



*Pumps and Compressors
for Industrial Chillers*



*Turbopumps for
Commercial and
Government Launch*



***Reduces energy consumption billions of dollars annually
and saves our environment from millions of tons of CO2 annually***