



Case Study

About: Peregrine Turbine Technologies, LLC

Based in the United States (Wiscasset, Maine), Peregrine Turbine Technologies is a unique and passionate company specializing in the development of innovative sCO₂ turbines for power, propulsion and oil & gas industry applications. With over 100 years of collective experience, Peregrine's team of expert engineers are innovators in the turbine development space.

CEO David Stapp, and COO Robert Brooks, founded Peregrine Turbine Technologies in 2012 and are leading the company's technology and business development.

www.peregrineturbine.com

About: SoftInWay, Inc.

SoftInWay Inc. is a global engineering company specializing in the development of efficient turbomachinery. The company offers extensive expertise through our flagship software suites, AxSTREAM® and AxCYCLE™ as well as training and engineering consulting services.



Client: Peregrine Turbine Technologies

Need: A highly advanced software tool for supercritical CO₂ turbine and compressor design

Solution: AxSTREAM® for custom design of a sCO₂ turbine engine

AxSTREAM® Used in Supercritical CO₂ Turbine Engine Design

The phrase “good things come in small packages” rings very true in the case of Peregrine Turbine Technologies. Although the company is small in size, they are succeeding in transforming the industry, producing technology which brings a whole new level of performance, fuel efficiency, and low emissions to the turbine world. Based on a proprietary thermodynamic cycle enabled by the unique properties of supercritical carbon dioxide (sCO₂), Peregrine is developing technology which achieves unheard-of thermal efficiencies for a primary cycle turbine engine. Successful production of innovative, high quality turbomachinery can be traced back to two things – a team of highly skilled engineers and a top-of-the-line design, analysis, and optimization software platform. It is with this in mind that Peregrine teamed up with SoftInWay Inc, to achieve exceptional and ground breaking results.

SoftInWay provides Peregrine with their best-in-class software solution known as AxSTREAM®. Peregrine has chosen AxSTREAM® as their software of choice for the development their sCO₂ turbine engine, including the compressor and turbine component, utilizing modules for preliminary design, meanline and streamline analysis, performance mapping, profiling and 3D blade design, and CFD analysis. Peregrine is also taking advantage of SoftInWay's technical support and engineering services team, providing the company with industry-leading response time and assistance.

“Aero-thermodynamic performance is at the very core of the value proposition of any turbomachinery company. We conducted a survey of industry software offerings and found AxSTREAM® to be an extremely versatile and effective tool; a stand-out from other offerings for the critical aero design of our turbomachine” said David Stapp, Peregrine's Founder and CEO. “With the help of AxSTREAM® and the knowledgeable staff at SoftInWay, we have no doubt that our sCO₂ turbine project will be a success, shaping the future of engine efficiency.”