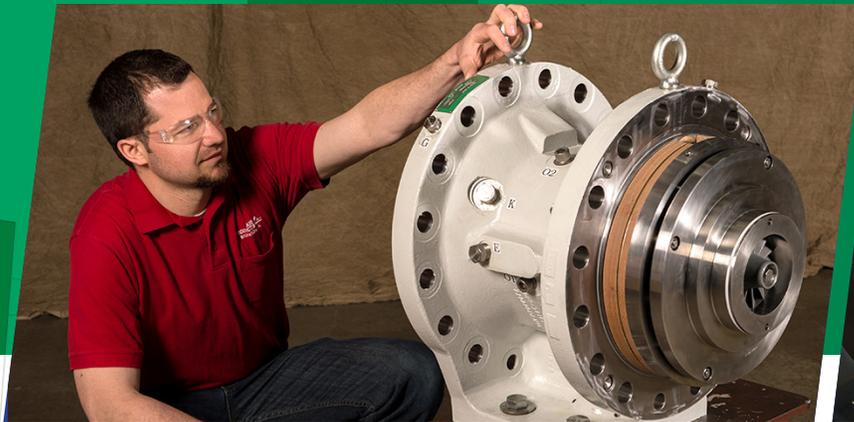


ROTOFLOW TURBOMACHINERY

Spare Turboexpander Plug-in



Experience is the difference

Plant downtime results in dissatisfied customers and lost profits. By not having appropriate spares available for unforeseen circumstances, plants can be left inoperable for extended periods of time. For critical turboexpander machinery, Rotoflow offers fully assembled plug-in units to optimize a customer's sparing strategy.

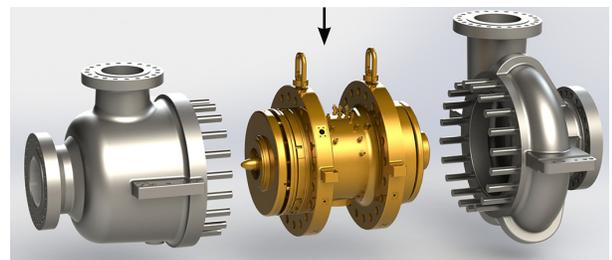
A plug-in is a complete spare expander unit that can easily be "plugged" into the existing piping. It consists of a fully assembled and mechanically spin tested unit minus the pressure containing housings. The plug-in includes all rotating components, bearings, seals, nozzle assembly and stationary shroud with shims and clearances pre-set. Having a spare Rotoflow® expander plug-in available allows for minimized downtime, easy installation, and reliable plant restart. As a plant owner and operator, we use plug-ins as a sparing philosophy and we recommend the same approach for our customers.

Rotoflow has been building safe, reliable and efficient turbomachinery for over 70 years to meet growing market demands and customer requirements. Since 1940, we have built over 4,000 expanders and have more than 3,000 units operating worldwide. No matter what your application for turbomachinery requirements, Rotoflow has the experience, technology, and solutions to meet your needs.

Benefits

- Modular plug-in design results in quick installation
- Allows an expander to be replaced in 8 to 16 hours by simply disconnecting and reconnecting process piping and instrumentation
- Fastest time to get your plant back on-stream compared to other sparing methods
- Mechanical spin testing offered on spare plug-ins
- Shims and clearances are pre-set
- Eliminates risk of not having replacements for damaged parts
- Specialized mechanics are not required for field installation
- Impeller shrouds and nozzle assemblies included
- Plug-in units are built in our ISO 9001:2015 certified manufacturing facility
- Safety is our first priority and our performance is consistently among the leaders in our industry

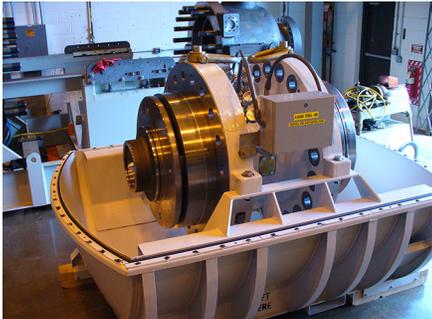
Turboexpander plug-in



Spare Turboexpander Plug-in

Spare plug-ins available for all types expanders

Compressor-loaded expanders



Energy-dissipating expanders



Integrally-gear generator expanders



Dense-fluid expanders



Experience more. *Together.*

Rotoflow, an Air Products business, combines one of the industry's most trusted names in turbomachinery with world-leading industrial gas expertise. We're transforming the hydrocarbon, LNG, petrochemical, and industrial gas markets with superior equipment performance and unrivaled reliability, safety, and value. Our combined capabilities are the key to this new level of quality. Technological innovations expertly integrated with decades of know-how are the foundation for Rotoflow's valued products, proven performance, and world-class service. This synergy helps customers around the world reach their unique technology and operational targets more efficiently than ever before.

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