INNOVATION

SPOTLIGHT from the brands of Altra Industrial Motion Corp.

AMERIDRIVES COUPLINGS HELP MEET THE WORLD'S GROWING NEED FOR PORTABLE POWER GENERATION

Portable aeroderivative gas turbine generators are utilized in almost every country in the world to provide temporary power for all types of industrial installations. Portable generator systems can be quickly dispatched to support initial facility start-ups, scheduled plant shutdowns, equipment maintenance or natural disaster relief such as the 2011 combined earthquake and tsunami that left large areas of Japan without power.

A flight-proven aircraft gas turbine engine is at the core of the these systems. The engine is modified with an output shaft which is connected to a generator that typically creates 25 megawatts of power. Other major system components include an exhaust diffuser, collector box, diaphragm coupling, fire suppression system and control room.

These portable, modular power generation packages can be either truck-mounted or positioned on concrete pads. The self-contained units can often be set-up and operational within 24 hours of their arrival on-site.

AMERIFLEX COUPLINGS: DESIGNED FOR GAS TURBINE APPLICATIONS

Over the years, reliable Ameriflex diaphragm couplings from Ameridrives have become the preferred choice by the leading aeroderivative gas turbine generator OEMs. The couplings provide the critical link between the gas turbine engine and the generator. Powerful, lightweight Ameriflex couplings were developed specifically to meet the rigorous demands of this type of turbomachinery application.

www.altraenergyoilandgas.com

Ameridrives®
Altra Industrial Motion

INNOVATION

SPOTLIGHT from the brands of Altra Industrial Motion Corp.

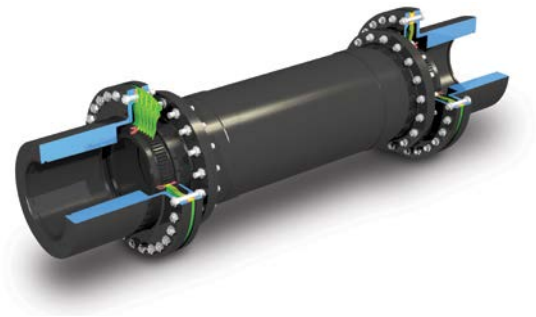
NEW ENGINE SYSTEM INTEGRATION

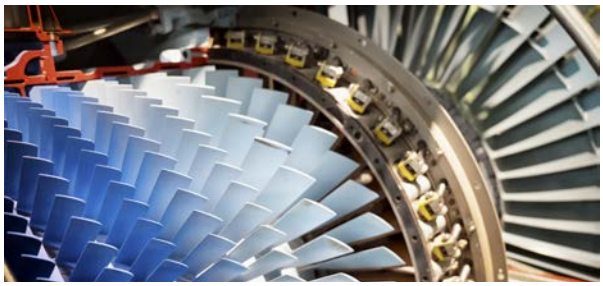
Aeroderivative gas turbine generator OEMs have begun to develop larger systems to meet the growing global demand for increased portable power generation capacity.

Due to their industry-wide reputation for providing reliable couplings, Ameridrives was contacted by a major OEM's engineering team to help design and integrate a coupling solution for their completely new, next-generation engine design. The new engine will be larger than previous models and be able to generate 50 megawatts of power. Dual engine configurations feed a common generator to create a full 120 MW of power.

Recognizing the critical role of the coupling within the drivetrain assembly, the OEM engineers wanted to be sure that they considered the impact of the Ameridrives coupling on their comprehensive package design.

The new dual-engine package will require 2 Ameriflex couplings. The couplings will connect the two turbine engines to the common generator positioned between them. Each 124" long coupling weighs approximately 1,500 lbs. and features a 4,400 RPM speed capacity.





INNOVATIVE ALTRA OVERLOAD DEVICE PROVIDES SIGNIFICANT COST SAVINGS

Power moves through energy grid systems at a certain frequency, usually 60 Hz in North America. Power added to the grid from all sources, including mobile generators, must be introduced into the system at the same frequency for a smooth, integrated flow. If the output frequency is not synchronized with the grid frequency, a short circuit overload can occur causing damage to the turbine and other system components.

While this type of short circuit event is extremely rare, the OEM had specified a very expensive overload protection device from another vendor to shield the turbine from potential damage and associated downtime.

Upon review of the drivetrain overload protection required, Ameridrives engineers designed and proposed a new, economical shear section that could easily be integrated onto the drive end of the Ameriflex couplings supplied.

The innovative Ameridrives shear device saved the customer 90% when compared to the originally specified 3rd party device.

US (Application Assistance)
1-814-480-5000
ameridrives.com