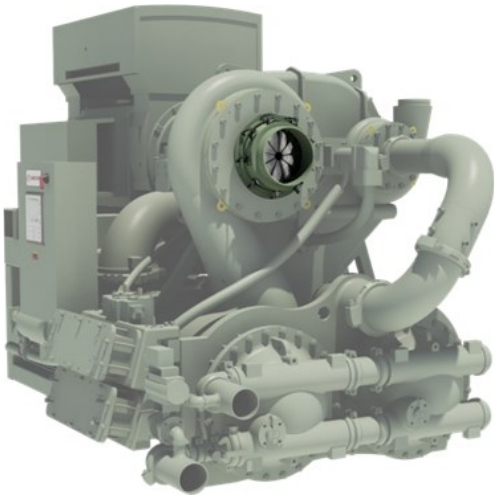
Upgrade - Variable Inlet Guide Vanes for Centrifugal Compressors

Our advanced Inlet Guide Vanes (IGVs) help in reducing the work input and offering power savings of up to 9% to your compression system. IGVs adjust the inlet air flow trajectory to match the same rotational direction as the first stage impeller and diffuser blades. The adjusted airflow requires the compressor to perform less work to deliver the rated air flow and pressure when the ambient temperature is below design day conditions.

Features



ENHANCED PERFORMANCE:

- Save energy when running at turndown points
- Additional energy savings opportunity when operating at colder than design day conditions
- Obtain maximum compressor flow rate range
- Optimize year-round operating costs
- Return on investment is frequently less than a year

UNIVERSAL DESIGN:

- Replaces the conventional inlet butterfly valve
- Mounts directly to the inlet flange of the compressor
- Designed for use on all Cameron centrifugal compressors

EASY TO INSTALL:

- Retrofit an existing centrifugal compressor with an inlet guide vane and an actuator to operate with the current control system. An inlet guide vane assembly is designed to mount right on the existing inlet flange of the compressor, so it can be installed with only minor piping modification.

FULLY ADJUSTABLE VANES:

- Rather than a single blade like a butterfly valve, an inlet guide vane uses multiple blades or vanes to control gas flow. Each vane is triangular in shape and aerodynamically profiled to minimize restriction in the full open position. They¡¦re completely variable for part load operation and can fully close for efficient compressor unloading.

HOW IT WORKS:

- When throttling back the compressor, the inlet vanes impart a whirling motion to the gas flow in the same

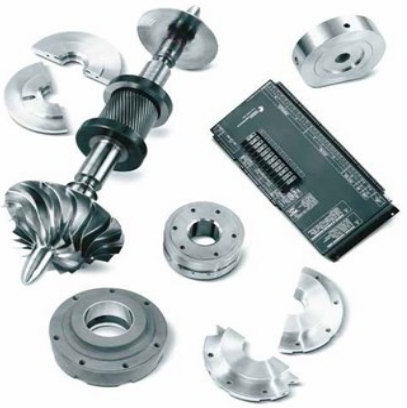
direction of rotation as the impeller. This motion reduces work input at the impeller, requiring less power to deliver target flow and pressure. The savings begins as soon as the inlet guide vane starts closing from the full open position. This could be from reduced demand or operating on days colder than the design point.

LOW TEMPERATURES PROVIDE ENERGY SAVINGS OPPORTUNITY:

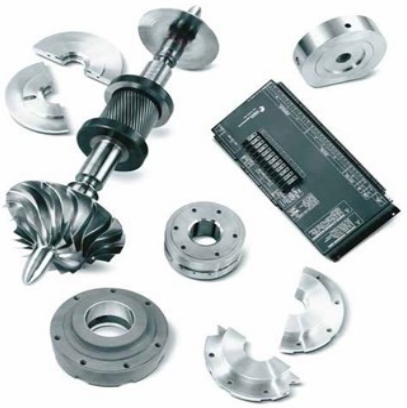
- Centrifugal compressors are designed to produce required process flow and pressure on the hottest day of the year at the installed location. Whenever the ambient temperature drops below the design point, the compressor can deliver more flow at the same design pressure. If this additional flow is not required, the compressor intake must be throttled back to maintain the capacity required. In this situation, an IGV can provide substantial power savings over an inlet butterfly valve.

Article – Variable Inlet Guide Vanes Boost Centrifugal Air Compressor Efficiency (http://www.airbestpractices.com/technology/air-compressors/variable-inlet-guide-vanes-boost-centrifugal-air-compressor-efficiency)

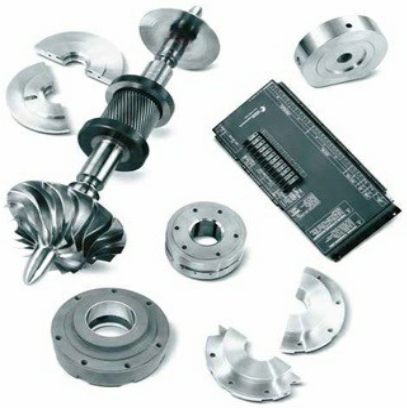
Parts & Accessories



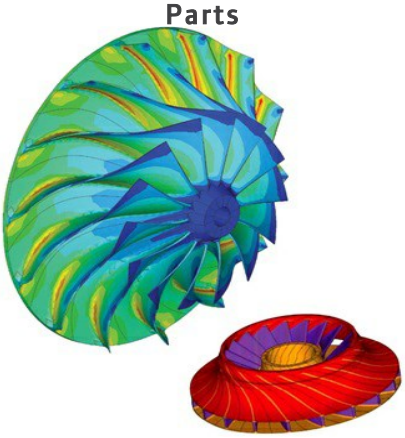
MSG® Centac® Centrifugal Compressor Replacement Parts



MSG® Centrifugal Compressor Replacement Parts



MSG® TURBO-AIR® Centrifugal Compressor Replacement Parts



Upgrade - Aerodynamic Enhancements for

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