

UPGRADE NOTIFICATION

Axial Displacement Probe

Background

Operators recognize that a sound preventative maintenance program is a cost-effective means of minimizing the total life-cycle cost of high-speed rotating equipment. Trending analysis of operational and mechanical data is an essential tool allowing operators to observe, evaluate, and make critical decisions concerning the equipment's condition. Rotor radial vibration and axial displacement are standard monitoring parameters for rotating machinery where the designs permit access for the probe.

Axial displacement probes have always been available for FS-Elliott's single stage rotor assemblies (Figure 1). However, for assemblies with two impellers, the mounting of an axial displacement probe has not been practical in most cases due to space limitations.

New Hardware & Arrangement for Installation of Axial Displacement Probe of Two-Stage Rotor Assemblies

FS-Elliott is pleased to offer the installation of an axial displacement probe on any rotor assembly, including one and two-stage rotor assemblies with X-Y radial vibration probes. The axial displacement probe senses movement on the shaft end vertical surface for single stage rotor configurations. For two-stage rotor assemblies, the displacement probe references axial movement from the thrust collar vertical surface (Figure 2). In all cases, should the rotor assembly move beyond the alarm or trip set points, the control panel immediately notifies the operator of the issue.

To prevent movement and protect the wiring from oil spray and windage, wire clips are used to secure the cable wire to the wall of the gearcase (Figure 3). FS-Elliott's axial displacement probe retrofit package proposal will include a definition of the hardware modifications as well as review the control system to determine the solution compatible with the existing monitoring and emergency shutdown arrangements.

Please contact your local authorized FS-Elliott distributor or sales representative for an axial displacement probe package proposal for your existing air compressor installation.

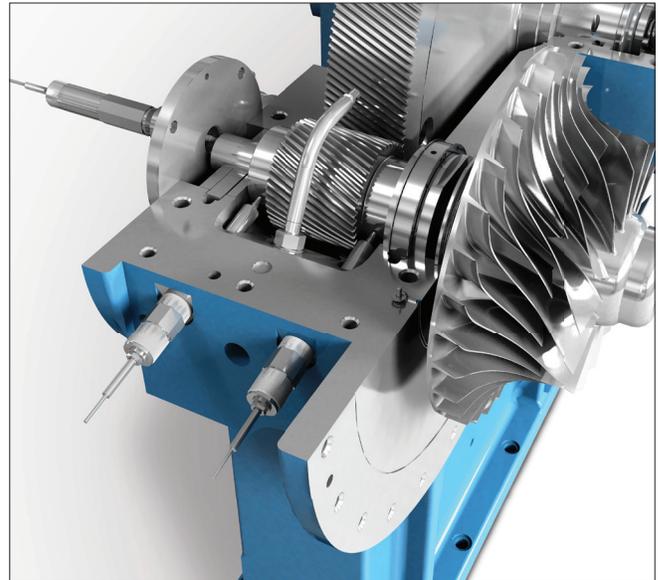


Figure 1 Traditional axial displacement probe displayed sensing shaft end position on a single-stage rotor assembly.

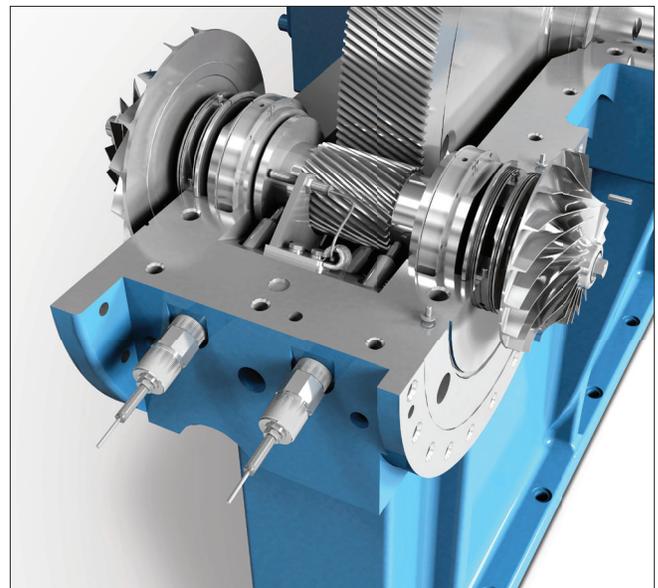


Figure 2 Axial displacement probe senses the thrust collar position for two-stage rotor assembly.

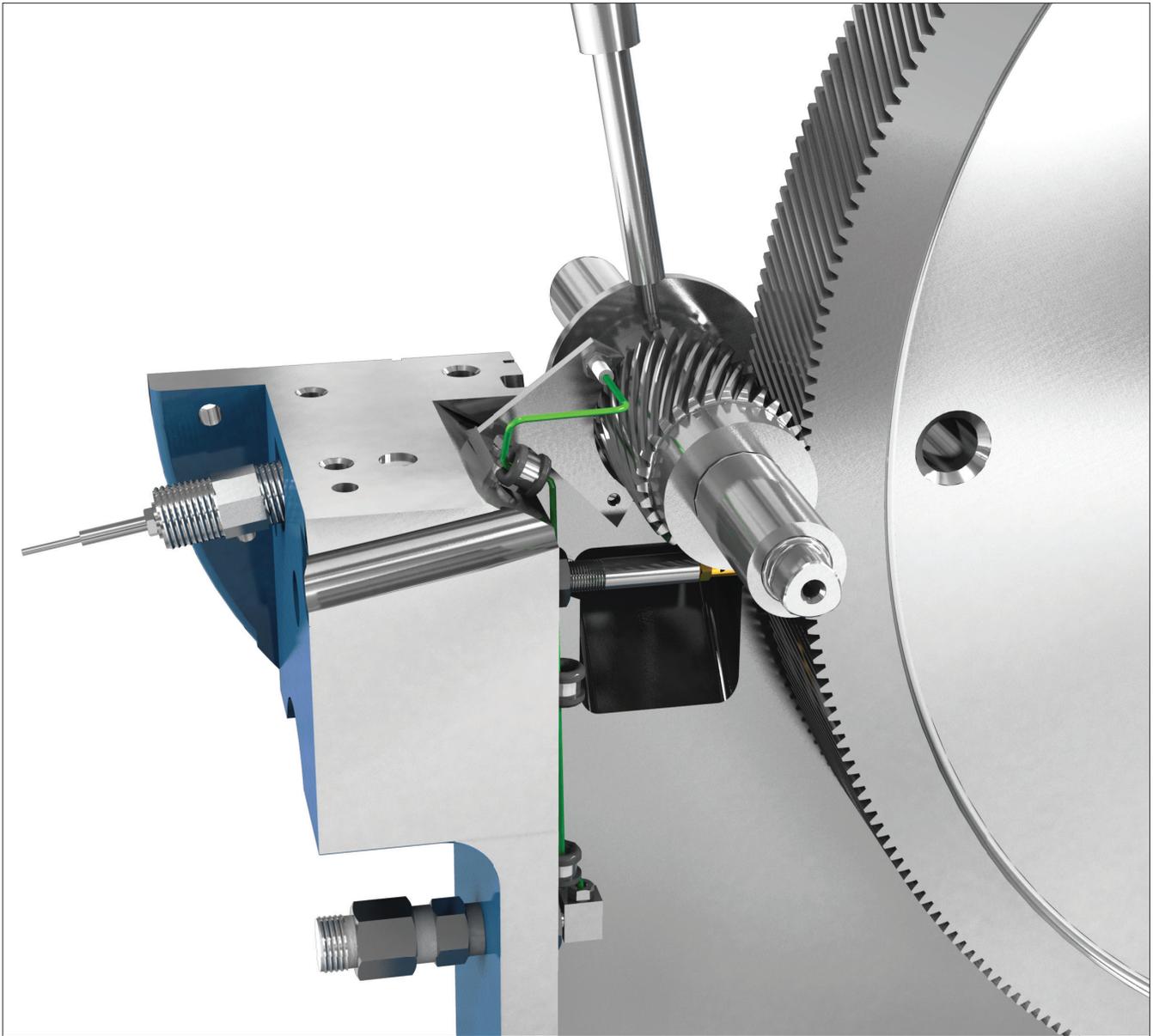


Figure 3 Axial displacement probe installation arrangement for two-stage rotor configuration. Note: Impellers have been removed to provide a better view of the package assembly.



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ISO 9001-certified for the design and manufacture of centrifugal compressors.

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