

# Vorso torsional vibration solution

Welcome to the next chapter in rotor dynamics. Continuing our legacy of machinery diagnostics services.

**60**  
years of  
experience in  
condition  
monitoring

Unmatched  
global  
experience



Non-contacting,  
no shaft preparation

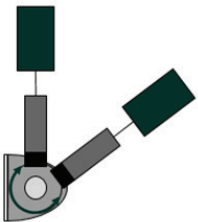


Proven ADRE connection,  
proactive and reactive analysis



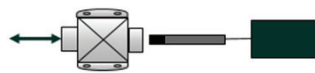
Validate models,  
reduce exclusion zones

## Look beyond radial and axial vibration



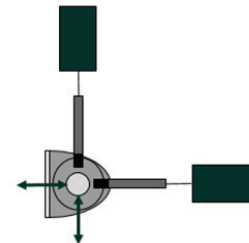
### Torsional vibration

Measurements of changing permeability of the shaft material enable calculation of dynamic torque and torsion resonance modes



### Axial vibration

Measurements along the direction of the shaft provide axial thrust and shaft position

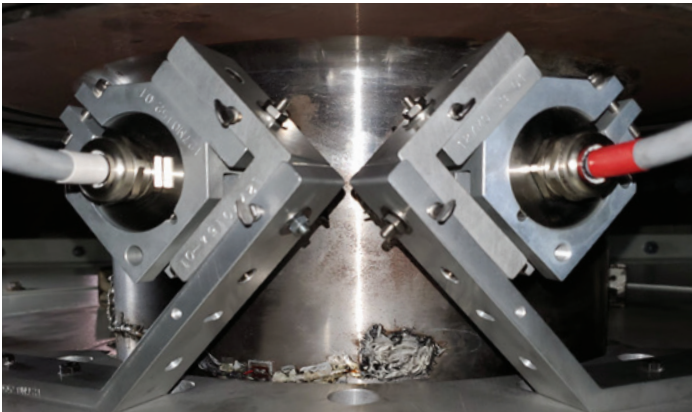


### Radial vibration

Combined X and Y radial vibration measurements enable calculation and plotting of shaft orbit

Our global team of experienced field engineers provides a comprehensive range of machinery diagnostic services (MDS) for rotating and reciprocating machinery—regardless of original equipment manufacturer.

The Cordant™ Vorso torsional vibration sensor system combined with industry-recognized ADRE data collection provides proactive and reactive torsional rotor dynamic analysis and troubleshooting services—helping operators avoid conditions that can cause drivetrain or machine damage.



- Reduce the operating exclusion zone margins
- Validate torsional natural frequency and amplitudes
- Entire machine train validation
- Torsional analysis reports

### Probe

Cable length	9 m (30 ft)
Operating and storage temperature	-40°C to +125°C (-40 to 257°F)
Dimensions	82 mm x 37 mm dia (3.2" x 1.4" dia)
Weight	255 g (probe) 1,255 g (probe + cable)
Material	PEEK tip with 304L SST case
Mounting	Bracket mounted
Vibration	MIL 202G-204D

### Interface module (IM)

Operating and storage temperature	-40°C to 85°C (-40 to 185°F)
Power	24 Vdc ±2V

### System

Stress range	0 – 300 MPa (0 – 43.5 ksi)
Accuracy (torsional frequencies)	0.1 Hz
Stress scale factor (SSF)	±10%
Frequency response, amplitude	±3 dB 1-1,000 Hz
Frequency response, phase	±20° 1-1,000 Hz

### Monitor

Max field wiring length	610 m (2,000 ft)
ADRE 408	Diagnostic services

### Operating conditions

Shaft hardness	30 – 33 RC
Shaft pre-treatment	Burnishing recommended
Shaft min diameter	76 mm (3")
Shaft material	4140 (others upon request)
Shaft speed	60 – 10k rpm



**Baker Hughes** 