

*VIBRATION MONITORING
FOR
Cooling Towers*

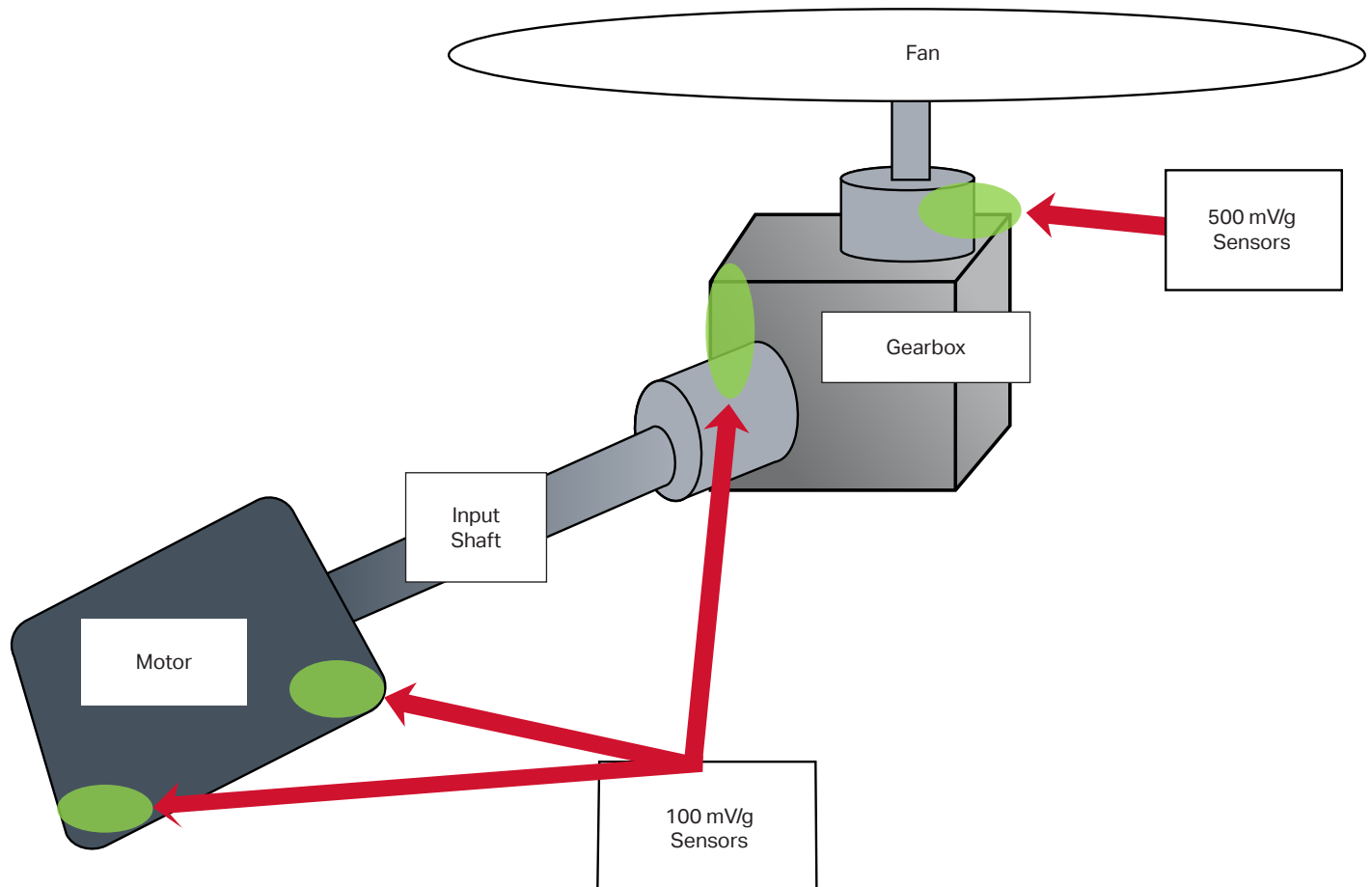


**WHEN RELIABILITY MATTERS
CONNECT TO CONFIDENCE**

Cooling towers are frequent choices for vibration monitoring due to their often critical role in maintaining operational efficiencies. Vibration analysis can be used to improve reliability and extend lifetime of cooling tower equipment. While cooling towers range from small single cell units to large multi-cell configurations, any configuration that employs the use of rotating parts requires effective monitoring.

How It Works

The machinery generally consists of three phases: motor, gearbox, and fan. In order to provide maximum reliability, all three phases should be monitored. To accomplish this, accelerometers should be placed at key places on the motor, gearbox, and fan bearings. Typically, vibration sensors are mounted on the bearing surface in either the horizontal, vertical, or axial directions.



What We Offer

Accelerometers:

For maximum coverage, six sensors should be used on both the motor and the gearbox for a total of 12 sensors per installation. General purpose sensors like CTC's AC102, AC104, AC192 and AC194 series sensors rated at 100 mV/g are recommended for applications over 30 CPM (0.5 Hz). Additionally, triaxial accelerometers like CTC's TREA Series are a great way to get three axes of data with lower cabling and installation costs.



AC102
Standard Size,
Top Exit



AC104
Standard Size,
Side Exit



AC192
Compact Size,
Top Exit



AC194
Compact Size,
Side Exit



TREA330
Mini Size,
Triaxial Side Exit

Low-frequency applications from 12 CPM to 30 CPM (0.2 Hz to 0.5 Hz) should use a 500 mV/g sensor like CTC's AC133, AC134, and TXFA331 series accelerometers.



AC133
Standard Size,
Top Exit



AC134
Standard Size,
Side Exit



TXFA331
Standard Size,
Triaxial Side Exit

Cables & Connectors:

CTC's V Series Viton™ Boot Connectors are ideal for use in the wet, caustic environment created by cooling towers. They create an IP69-rated seal with the sensor, and are excellent in highly-corrosive environments. CTC recommends using these connectors in conjunction with CTC's CB111 or CB119 FEP jacketed cables.



CB111
Two Conductor, Yellow FEP Jacket



CB119
Four Conductor, Orange FEP Jacket



V2R
Two Socket, PPS Insert



V3N
Three Socket, Nylon Insert



V4J
Four Socket, Polycarbonate Insert

V Series connectors come in 2, 3, and 4 pin options for use with single axis, biaxial, or triaxial sensors.