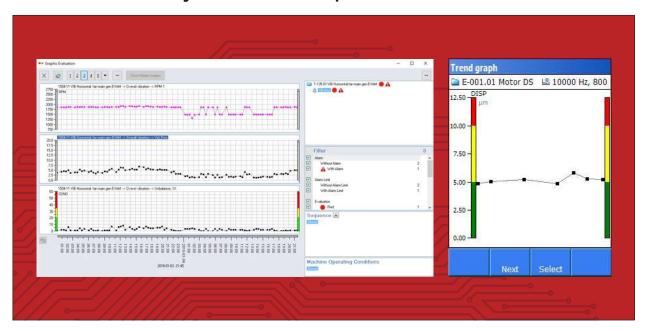# Condmaster® Ruby – Vibration Supreme

Vibration Supreme is a module in Condmaster Ruby for use with the portable instrument Leonova Emerald. As a combination of modules MOD135, MOD137, MOD139 and MOD199, the Vibration Supreme module contains:

EVAM (TD-591) generates three sets of machine condition data:
• Condition parameters, which are measured and calculated values describing various aspects of machine vibration.
• Vibration spectra where significant line patterns are found, highlighted and evaluated with the preset fault symptoms.
• Machine specific condition codes (green – yellow – red) and condition values, based on a statistical evaluation of the condition parameters and symptom values.

For each measuring point, the user can make an individual selection and define the type of data best suited for the surveillance of an individual machine. Alternatives include
• HD ENV
• Time Synchronous Averaging (TSA)
• Band values and averaging of measurement results for improved alert reliability.

Random high readings caused by disturbance are filtered out, minimizing the number of false alerts. As an alternative to spectrum analysis, cepstrum analysis can be used for gearboxes.

HD ENV (TD-608) is an ideal complement to conventional vibration techniques. Capable of detecting at a very early stage such machine problems which are generally difficult to find in good time with non-enveloping techniques – for example bearing damages and gear damage – the method utilizes cleverly engineered algorithms for digital signal processing to obtain optimal data for trending purposes.

Extended resolution and frequency range (TD-595) are sometimes required for FFT with symptoms, EVAM, SPM HD Expert or HD ENV, e.g. when monitoring high-speed gearboxes in turbines. Vibration Supreme provides 12 800 lines and 40 KHz.

Order Tracking is primarily used for analysis on variable speed machines. The method uses multiples of rotational speed (orders), rather than absolute frequency (Hz). The number of orders is input by the user. Order Tracking also minimizes the risk of smearing in spectrums.

Part numbers
MOD197   Vibration Supreme