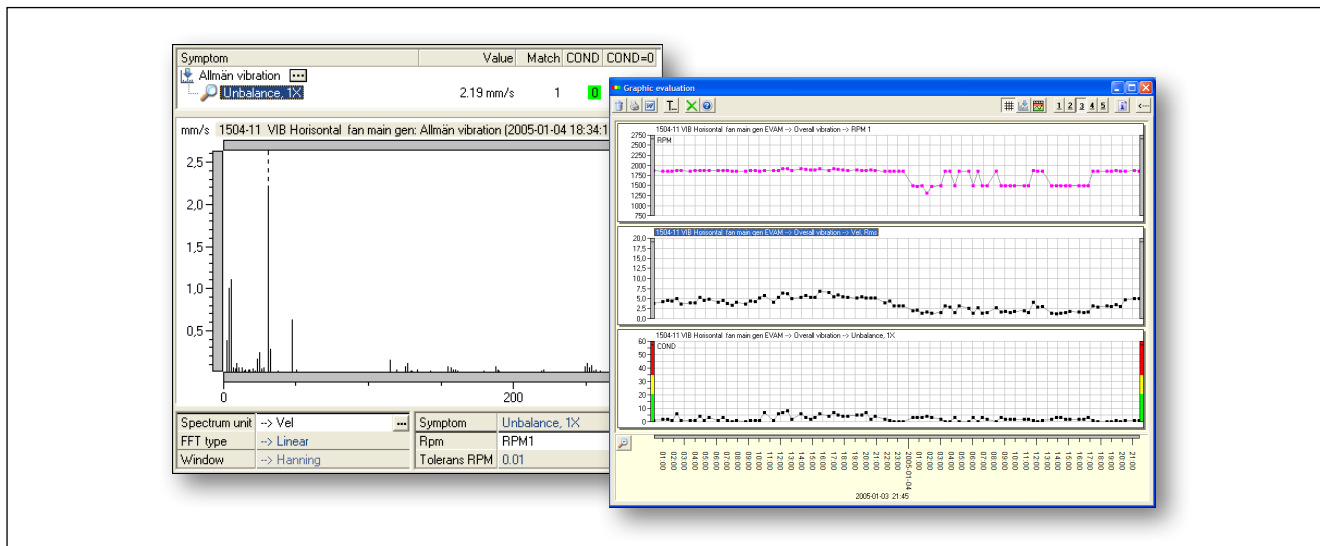


Condmaster® Nova - EVAM and Time Signal



EVAM stands for Evaluated Vibration Analysis Method. With Leonova and Intellinova, the EVAM method is offered as an analysing function with either limited or unlimited use.

The EVAM method 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 help of pre-set 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:

- enveloping
- time synchronous averaging
- band alarms and averaging of measurement results for improved alarm reliability.

Random high readings caused by resonance or other sources of disturbance are filtered out, minimizing the number of false alarms.

Condition parameters

Condition parameters are measured for a selected frequency range. They can be individually activated and are shown in measuring result tables and as diagrams. Available are:

- VEL RMS value of vibration velocity
- ACC RMS value of vibration acceleration
- DISP RMS value of vibration displacement
- CREST Crest value, difference between peak and RMS
- KURT Kurtosis, the amount of transients in the vibration signal

SKEW Skewness, the asymmetry of the vibration signal
 NL1 - 4 Noise level in the four quarters of the frequency range.

Peak and peak-to-peak values are shown in the unit selected for the time signal.

Spectrum analysis with 'symptoms'

For easy pattern recognition in spectra, EVAM supplies a range of ready made 'fault symptoms'. These are instructions to highlight a spectrum line pattern and display the sum of the lines' RMS values as a symptom parameter (which can be evaluated and trended). Most symptoms are automatically configured by using the rpm as a variable, for some an input is needed, e. g. the number of vanes on a rotor. Suitable symptoms and symptom groups are selected from a menu in Condmaster when the measuring point is set up.

Machine specific condition codes

In Condmaster, alarm limits can be set on all active parameters. Once measuring results are collected, an EVAM 'criterion' can be created that compares new parameter values with the statistical mean value and displays a dimensionless condition value against a green - yellow - red scale.

Phase measurement

A phase is a time delay expressed in degrees of rotation. Leonova Infinity or Intellinova calculates the time delay between the passage of the tachometer pulse and the peak of the frequency component of interest from the vibration transducer at the speed of rotation. The value presented is a relative angle, not an absolute, because there is no compensation for phase lag in the transducer or the electronic circuits.

Ordering numbers

- MOD135 EVAM + Time Signal, unlimited use
- MOD235 EVAM + Time Signal, limited use

