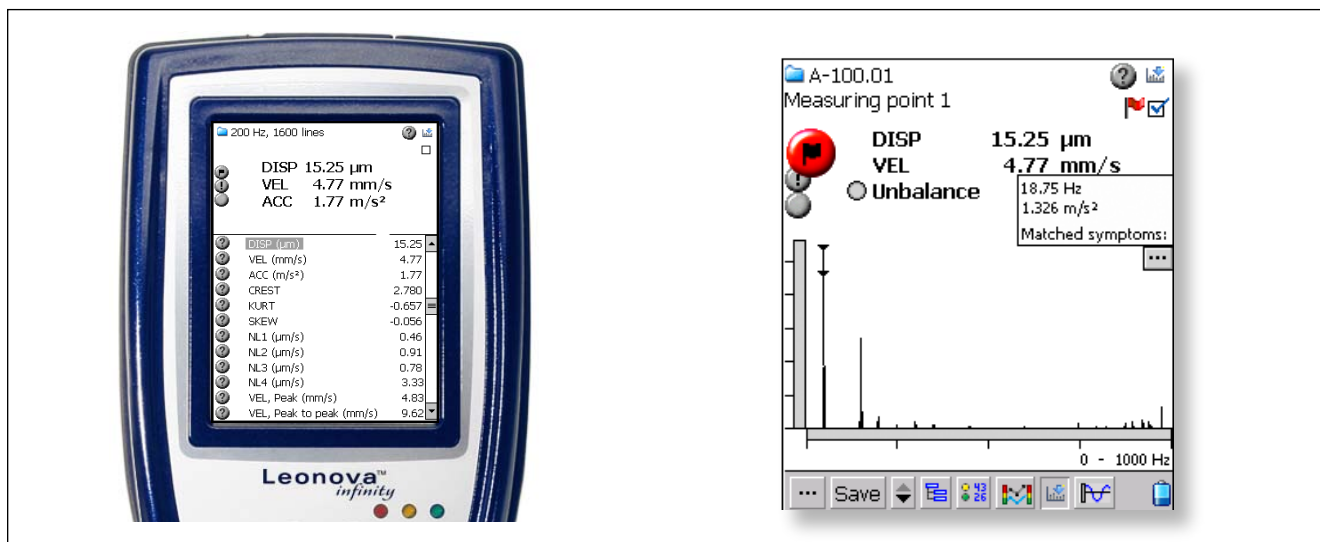


Leonova™ Infinity – EVAM evaluated vibration analysis



EVAM stands for Evaluated Vibration Analysis Method. With Leonova, 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.

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.

Technical data

Frequency limit, lower:	0.5, 2, 10 or 100 Hz
Frequency limit, upper:	100, 200, 500, 1000, 2000, 5000, 10000, 20000 Hz
Envelope high pass filters:	100, 200, 500, 1000, 2000, 5000, 10000 Hz
Measurement windows:	Rectangle, Hanning, Hamming, Flat Top
Averages:	time synch, FFT linear, FFT exponential, FFT peak-hold
Spectrum lines:	400, 800, 1600, 3200, 6400
Frequency units:	Hz, CPM, orders
Saving options:	peaks only, full spectrum, time signal
Spectrum types displayed:	linear, power, PSD
Zoom:	true FFT zoom, visual zoom
Transducer types:	Vibration transducer SLD144 or IEPE (ICP®) type transducers with voltage output

As an option, the frequency range can be extended to 40000 Hz, the number of spectrum lines to 12800.

Ordering numbers

LEO135	EVAM evaluated vibration analysis, unlimited use
LEO235	EVAM evaluated vibration analysis, limited use
LEO139	12 800 lines, 40 kHz, option

