

VIBDIN VIBex



VI Bex - state-of-the-art vibrations monitoring system

VI Bex

Automated configuration of the system

Automated calculation of machine's characteristic frequencies

Automatic setting of alarm limits

Fast preparation of configuration reports

Diagnostics of machinery with the set of advanced spectral analysis tools

Quick diagnostics of rolling bearings, based on the method of enveloping

Clear and comprehensive guiding to the cause of the problem

Storage of machine's history of operation in the high performance database

Notification about detected limit violations via e-mail (also on dial-up connections)

Optimized remote access to the system



EC Systems Sp. z o.o.
Grupa Energocontrol



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VI Bex is the state-of-the-art system dedicated for vibration monitoring and diagnostics of rotating machinery, especially with rolling bearings.

VI Bex runs on PC under Windows 2000 or Windows XP Professional Edition. VI Bdin modules are used as data acquisition modules. The server is the industrial PC computer. It is possible to access the data in the server remotely.

The system can acquire data from vibration sensors: accelerometers (ICP type) or relative vibration sensors (eddy-current) as well as other sensors, which are used as operational parameters (e.g. power, rotational speed, temperatures, ...).

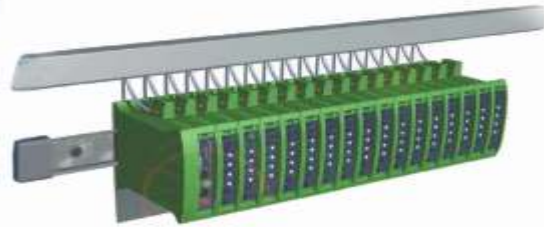
The system is installed on a machine with little effort. After sensors are connected to the VI Bdin module and it is connected to the VI Bex server, you can start configuration. The system is configured with easy-to-use graphical tool. After you setup input channels, you define mechanical features of your machine. The system automatically calculates speeds of shafts and characteristic frequencies of the machine.

Next, when you assign sensors to machine components, VI Bex automatically creates all numerical algorithms to monitor your machine. Applied algorithm range from basic overview of technical state, to advanced ones, like harmonics. Rolling bearings are monitored with the method of enveloping, which can detect symptoms of their wear much earlier than just looking to the spectrum.

VI Bex automatically creates limits for all calculated values, what saves hours of configuration work. The system also contains the tool for automatic calculation of values of limits (alerts and alarms), what will save you even more hours of configuration work.

After the system is setup and running, you can watch your machine in a variety of simple-to-use, but full-featured set of plots. You see the status of your system at a first glance, getting directly to the source of a problem (if there is one) just in one mouse click. Any detected alarm is presented in the tree view on the left and is propagated up, so that you can easily get to the source.

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There is a variety of plots available:

- mimic screen shows diagram of the machine with values of chosen channels, like rms or any other value available in the system; the user can build its own screens with the graphical tool
- data table shows current values from chosen channels
- alarm table shows events from given period, type, source etc
- waveform shows original waveform or its envelope; it is possible to play it as a sound or export to an external software as .wav or .csv file
- spectrum can be shown as normal or order spectrum in both frequency or order domain
- trend shows several channels on one plot; data can be filtered, so that only data from one state is presented

The VI Bex system is very user-friendly. You can open plots with just one mouse click, you can jump between different plots, or export them to your report (into MS Word or as a picture file).

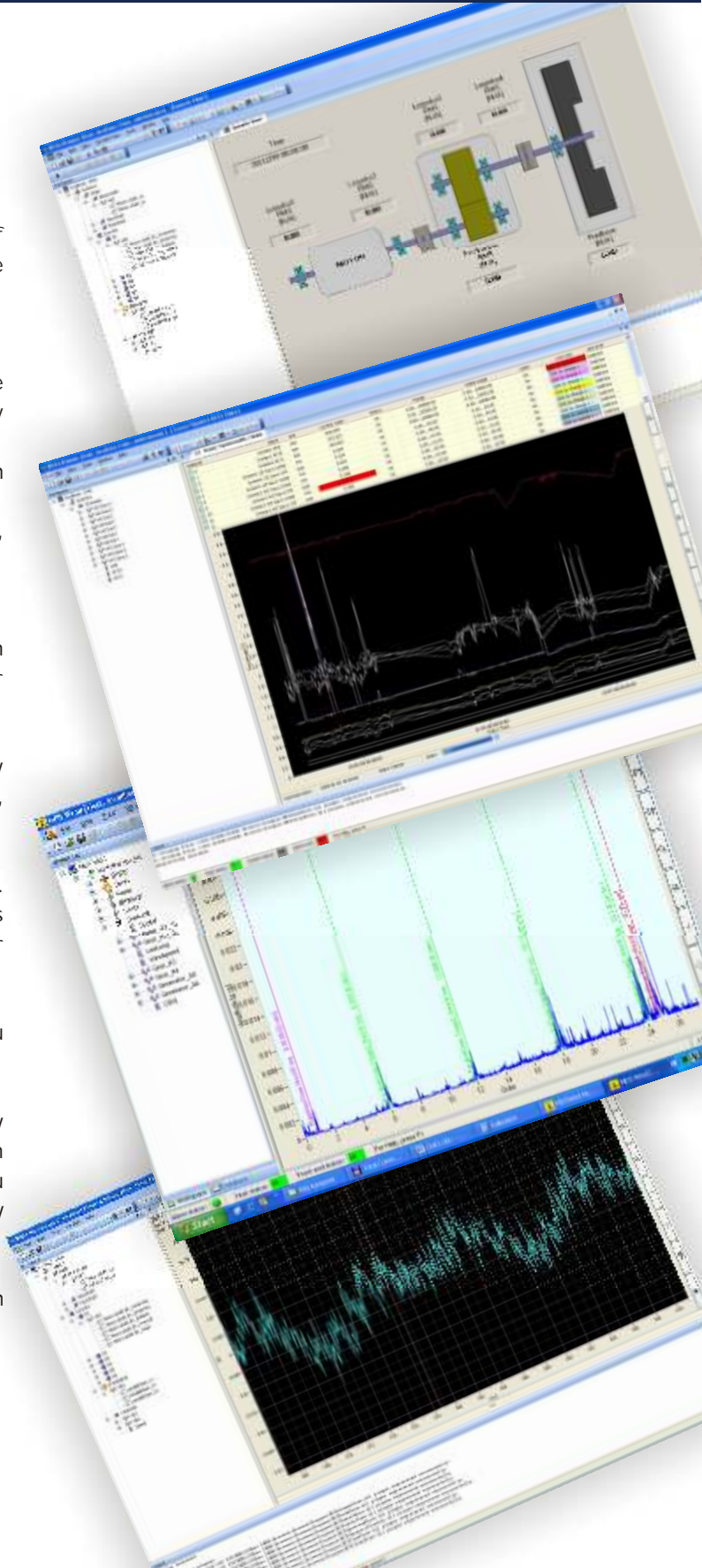
When you investigate spectrum of vibration signal you can easily add the reference spectrum (stored in known, good conditions), you can change unit, spectrum type or just colors.

You can also add harmonic lines of chosen mechanical components. You can even identify potential cause of a chosen spectral line. This adds new dimension to the laborious work of the engineer evaluating the data.

There are much more functions in the system, all giving you advanced, but easy to use tool to monitor your machinery.

Energocontrol sp. z o.o. also offers VI Bex within the turn-key project, together with data acquisition modules, installation and commissioning. In the operation we can also provide you with the diagnostic service to maintain your machinery in a best shape.

VI Bex was developed by EC Systems Sp. z o.o. in cooperation with AGH (University of Mining and Metallurgy, Krakow).





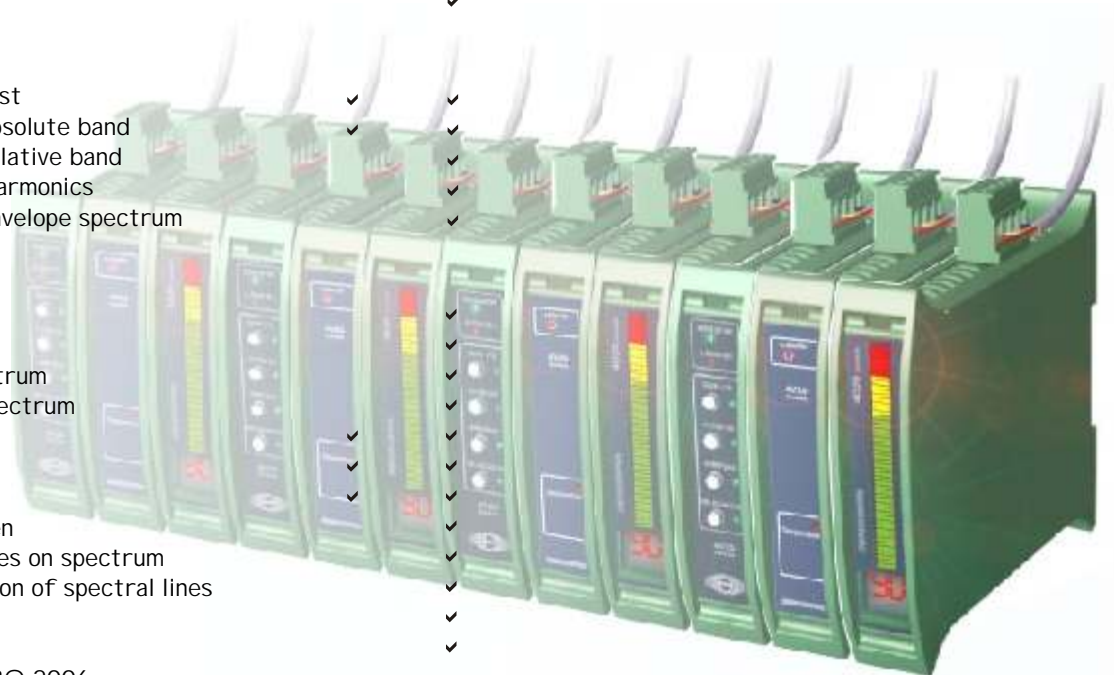
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VI Bex is available in two versions: Basic and Expert.
Following table shows features of both.

System modules:	Basic	Expert
Acquisition	✓	✓
Database	✓	✓
Limit checker	✓	✓
Data Replicator	✓	✓
Kinematics configuration		✓
Automatic alarm limit setting		✓
Messenger		✓
Analysis:		
rms, pp, crest	✓	✓
energy in absolute band	✓	✓
energy in relative band		✓
energy of harmonics		✓
energy in envelope spectrum		✓
Browser:		
Trend		✓
Spectrum		✓
Order spectrum		✓
Envelope spectrum		✓
Waveform	✓	✓
Data table	✓	✓
Alarm table	✓	✓
Mimic screen		✓
Spectral lines on spectrum		✓
Identification of spectral lines		✓
Waterfall*		✓
XY*		✓



More details and information about VIBDIN Sistem you can find
in EC Electronics® equipment promotional materials

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