

See what VIBROTEST 60 can do for you!



Ordering Information

Module Description		Function
1 Overall Vibrations/BCU	1.1 Basic	Overall (selectable filters)
		BCU/Bandpass (BP)
		Speed
		Index of stored measurements
		Process values (DC)
		Keyboard input (DC)
	1.2 Extension	Overall vs. Time
		BCU/BP vs. Time
		Overall vs. Speed
		BCU/BP vs. Speed
2 Machine Diagnosis	2.1 Basic	FFT spectrum
	2.2 Extension	BSC/SED spectrum
		Cepstrum
3 Tracking		Vector vs. Speed or Time
5 Dual-Channel		Provides the functionality for modules 1, 2, 3 and 8
6 Data Collector		Supports all features from modules 1.1, 2 and 8
7 Balancing Expert		Dual Channel Field Balancing
		1-plane, 2-plane
		Non-linear compensation
		2-plane with prognosis
8 Advanced Fault Detection		CPB spectrum

Contact your local Brüel & Kjær Vibro representative today to find out more on how this and other Brüel & Kjær Vibro products and services can help you to improve your bottom line.



A vital tool for improving your bottom line ...

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...has been made even better!

Brüel & Kjær Vibro announces the new release of its **VIBROTEST 60** analyzer, data collector and balancing instrument together with the new Windows®-based **xms** Extended Monitoring Software. The overall monitoring versatility of this popular portable system has been greatly extended to provide more enhanced vibration measure-

ment functions for early fault detection, powerful diagnosis and analysis capability and an intelligent balancing function. All this plus an improved database and diagnosis user interface provide you with a powerful condition-monitoring tool for optimising your machines' life-cycle value.



Many applications, world-wide

The VIBROTEST 60 has already proven itself as an effective condition-monitoring tool in numerous industrial applications for a wide range of machines, for both beginners and experts alike.

The modular software packages allow the VIBROTEST 60 to cost-effectively match your specific monitoring requirements, and it can be easily upgraded to grow with your increasing experience and demands.

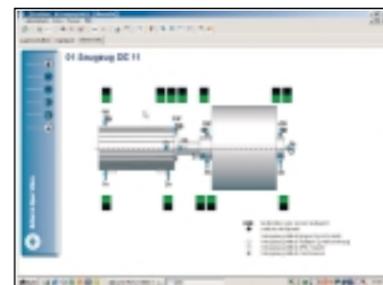
"It's simple to learn and operate yet powerful enough for diagnosing our most demanding machine faults."

Jafar Amjadi, head of the Condition Monitoring Department of the Tabriz Petrochemical Plant

xms - Entirely new monitoring software and database for the VIBROTEST 60

This Windows-based program greatly simplifies navigating through the monitored machines for assessing alarms, viewing plots and generating reports. Powerful features are available to make your analysis and diagnosis tasks

easier such as versatile plotting facilities and an extensive rolling-element bearing database. The software also allows several users to simultaneously access the program and database.



Intelligent Field Balancing

The new feature "Balancing in the Adaptive Mode" allows VIBROTEST 60 to identify a rotor that exhibits non-linear behavior during a balancing run, and then compensate for it! Another new function called "1-2 Plane Balancing with Prognosis" informs you already after just the first trial run, if

the rotor can be balanced to within the specified tolerance level for both planes by adding a correction weight to only one of the planes. This minimizes start-ups and saves you time - and money!

Enhanced Diagnostic Vibration Measurements

The previous compliment of overall measurements, tracking analysis measurements, FFT spectra and bearing condition measurements has been improved and expanded. Overall

and bandpass measurements now have user-selectable filters and can be plotted either against time or speed, and process data can now be manually entered.



The new diagnosis measurements include the following:

Constant Percentage Bandwidth (CPB) - This spectrum is simple to set up, simple to use, has good reproducibility, and is one of the most economical and reliable methods for detecting the widest possible range of machine faults at an early stage of development. Simplified speed compensation routine minimizes the risk of false alarms. It also offers quick, simple diagnosis capability.

Cepstrum - Harmonics, toothmeshes and sidebands from low frequency modulation sources can be easily identified as a single component in a cepstrum plot. This is very useful for detecting faults in a **gearbox** at an early stage of development. Cepstra, which are FFTs of an FFT, are relatively insensitive to changes in machine load and changes in

the transmission path between the sensor and the source of the vibration.

Selective Envelope Detection (SED) - The envelope analysis technique accurately isolates the specific low-level fault signals from **rolling-element bearings** from typically high-noise conditions. The high frequency resonances that are excited in the bearing structure by fault impacts is first filtered, then the resulting time signal - dominated by the faults pulses - is "rectified" by an envelope detector to end up with a clean signal. A spectrum analysis of this signal clearly shows peaks at the bearing frequencies corresponding to the bearing geometry.