Product Sheet

Compass 6000 – Detection and Trending Software
Introduction & Benefits

The **Type 3160-01 Detection and Trending Software** *is the basic application module software in the* **Compass 6000** **Monitoring System**. *It provides the fundamental condition monitoring functionality upon which the other software modules are added; Diagnostic Monitoring, Performance Monitoring or Advisory Monitoring module.*

Benefits of Condition-based Maintenance

In today's competitive manufacturing marketplace the machine operating and maintenance strategy are often defining factors which boost the profitability level and provide a competitive edge.

A prerequisite for a "**Condition-based Maintenance**" strategy is that information about the machines' condition must be continuously available. This allows maintenance action to be scheduled according to the machines' condition, i.e. let the machine condition prompt maintenance action.
The results are an optimisation of machine operation and availability, more efficient production and maintenance planning, more lead time to order spares, lower spares inventory and a corresponding increase in business profitability.

Trending

The powerful, advanced, user-friendly trending functions of the Detection and Trending Software provide an immediate, at-a-glance, visual update of changes in the machines' condition.
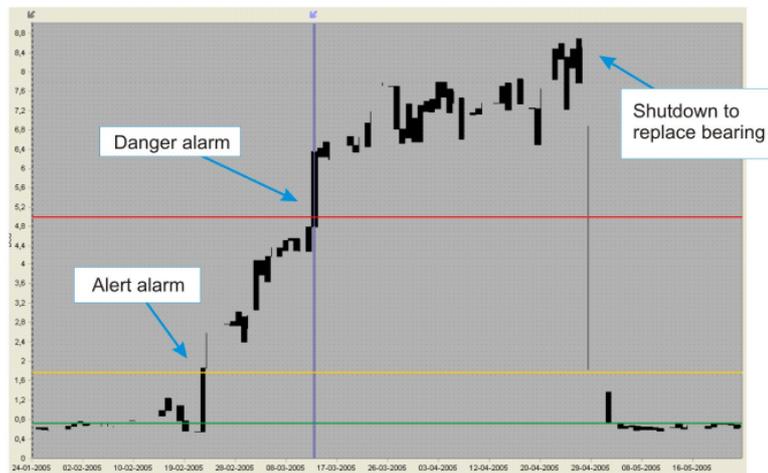
A trend prognosis allows you to see the future expected progress of machine condition, plan the maintenance action timing to suit production and thus maintain profitable uptime. A correlation of various trends allows relationships between operating mode/vibration or machine/machine to be viewed.

CPB for Early Detection

To obtain the earliest possible warning of any significant change of the machine's condition, an analysis of the signal is often required.

The CPB-spectrum has proven to be the ideal tool for providing reliable early detection of machine condition changes. It makes a rough analysis of the vibration

signal by putting the vibration in a number of vibration bands. CPB-spectrum envelope alarms provide sensitive monitoring of the entire vibration signal, without false alarms due to signal instability.

User-defined Bandpass

Most machine faults can be identified by an amplitude change within a specific range of frequencies. Narrow band monitoring allows you to monitor these faults from an early stage of development.

Calculated Values

Any combination of measured values can be used to derive and trend "*calculated values*". This allows you to set up user-defined

measurements for special applications.

Adaptive Monitoring

Machines have different vibration levels depending on the operation state. The integrity of a condition monitoring system may be compromised by raising the alarm limits in order to avoid false alarm due to changes in the machine's load and speed. The unique Compass 6000 adaptive monitoring strategy uses speed and/or digital inputs to automatically recognise a change in a machine's operating state, and thus maximize the monitoring system's integrity level.

30 Years of Data Storage.

Some machine defects like wear develop over long periods of time. In order to detect them and predict their impact on the machine integrity level, the database must be able to store values over several years. This also includes

storing faults that have occurred over the lifetime of the machine, overhauls, compressor washes, etc. Compass 6000 stores and maintains data for 30 years on all measurement points due to the unique data compression method. The entire machine's condition history is always at your fingertips.

The Software

The Detection and Trending Software operates under the familiar standard MS-Windows, and is an integrated part of the user interface; Compass 6000 Monitoring Workstation.

Configurable User Interface

The user interface of the Compass 6000 Monitoring System" can be customized with machine drawings and even photos of the machines, together with alarm lights, measurement value icons and plots. The mimic pages are extremely easy and fast

to set up. The user interface setup can be locked by the user-group based user management system.

The user interface is intuitively built up with browser tree structure.

Flexible alarm filters may be set up on a particular group of machines, measurements, and also on the alarm code level. This gives the operator an overview of his or her particular area of responsibility.

Monitoring Module Concept

The VC-6000^{TM} "Safety Monitoring System" provides the measurements that can be used for fault detection and trending in Compass 6000. The 3160-02 requires the 3160-00 rack-based license plus the 3160-01 Detection and Trending Software license.
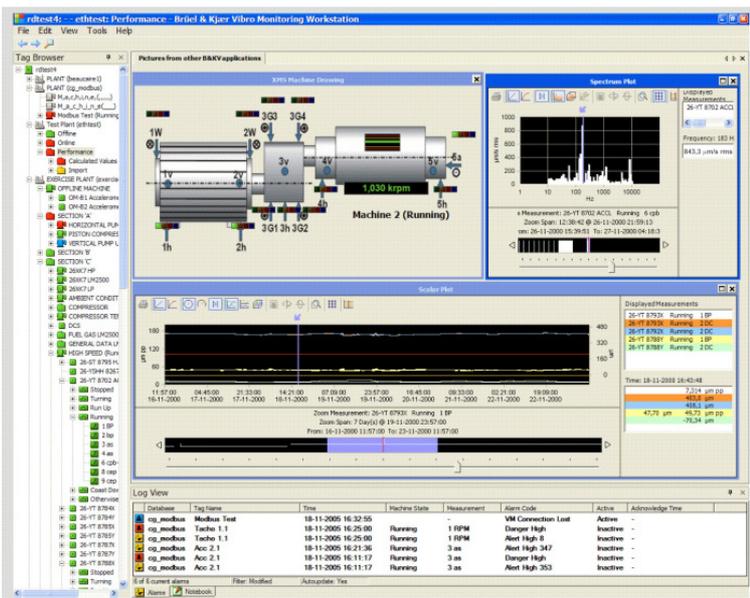
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