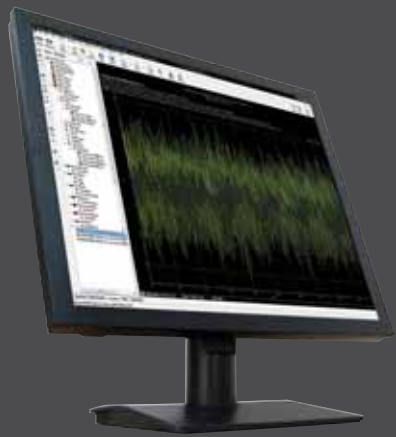


· ascent[®]



commtest
The Revolution

BENEFITS OF ASCENT

Ascent® vibration analysis software is a comprehensive and powerful data analysis and archiving tool, integral to the vbSeries® from Commtest®.

Although highly developed with an impressive list of advanced features, the simplicity of the Ascent program makes it an invaluable tool ideal for those implementing a vibration analysis program for the first time.

Ascent software is provided in three levels, with each new level providing greater benefits and more advanced capabilities.



Simple

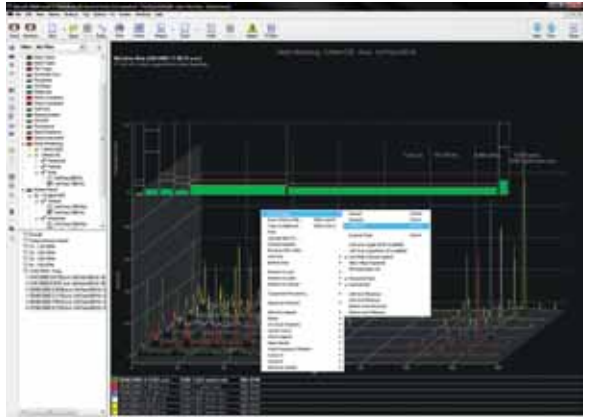


Level 1

Ascent Level 1 covers the essential needs of both new and veteran analysts. It provides the ability to carry out in-depth fault analysis but will not overwhelm entry-level vibration analysts with confusing features. Powerful simplicity is the hallmark of Ascent Level 1.

Flexible and interactive charting

Zoom and pan your charts to see close-up detail; rescale charts to compare the size of different peaks and overlay fault frequencies to help identify machine component problems. A simple right click gives you the ability to adjust cursor settings, change X and Y units, toggle between metric and imperial units, and between Orders, Hz and CPM.



Customizable interface, customizable charts and reports

Change the way you work with the software by re-positioning or hiding tools, changing chart colors and turning off button captions. Customize your own charts and reports to display information in a manner that is meaningful to you.

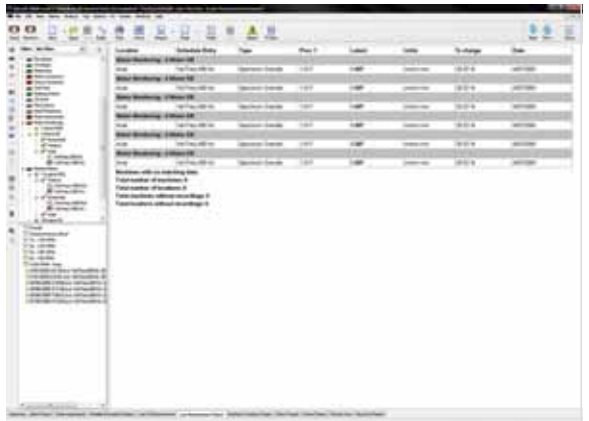
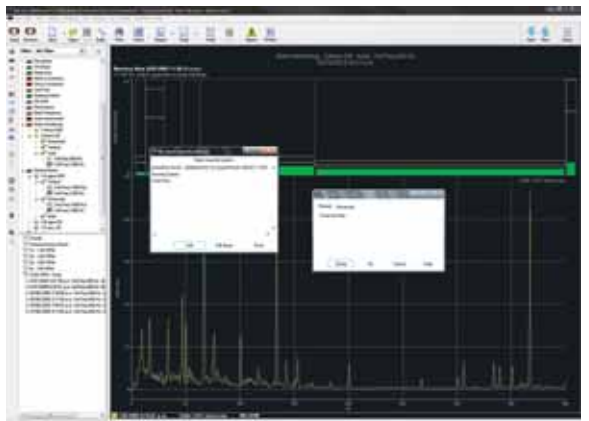


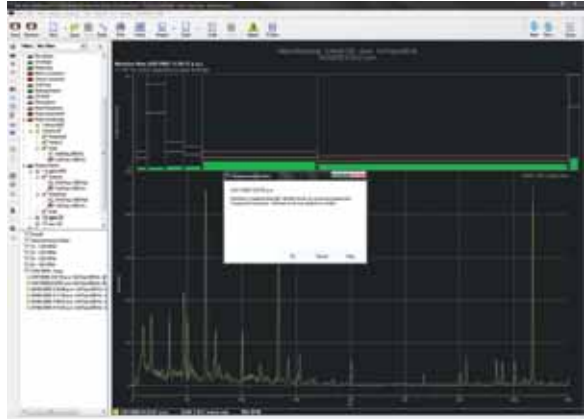
Chart annotation facility

Add your own remarks to pertinent peaks on the spectra. A library of user-created remarks is provided for your time-saving convenience.



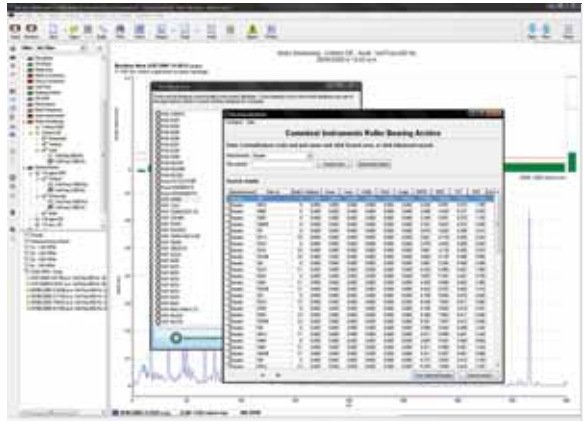
Machine note creation and editing

Notes can be added at the machine, point and recording level providing useful historical reference to suspected faults and meaningful recommendations on service activities.



Commtest Bearing Database with over 30,000 bearings

Over 30,000 bearings with corresponding fault frequencies are included as an integral part of Ascent Level 1. Additional bearing entries can be entered as required.



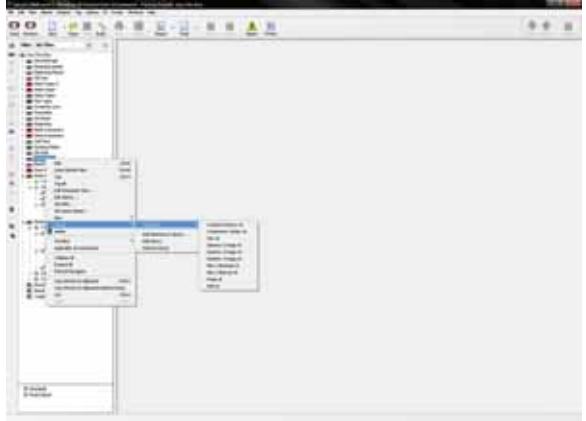
Route creation and editing

Quickly set up lists of machines and measurement points for data collection. Routes can be easily modified after initial creation.



Component storage library

Frequently re-used components can be created once then stored in the software 'library'. To create a new item based on an existing one, simply retrieve the template and create a copy; modify this as required to create entirely new machine components.



Machine and alarm template creation

Set up your machines and alarms quickly and easily by creating re-usable templates.



Linear speed support

Let the software do the math for you. Rollers and pulleys with different dimensions will not run at the same speed. The software can keep track of component speed differences on linear speed machines.



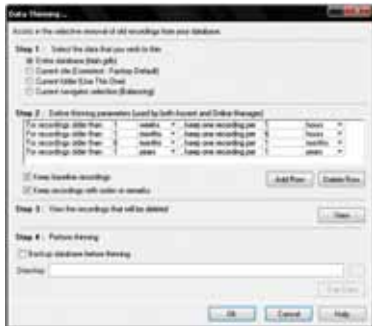
Balancing report

The Ascent program provides the ability to store historical balancing reports. Balancing reports can be printed and exported into Microsoft® Word®.



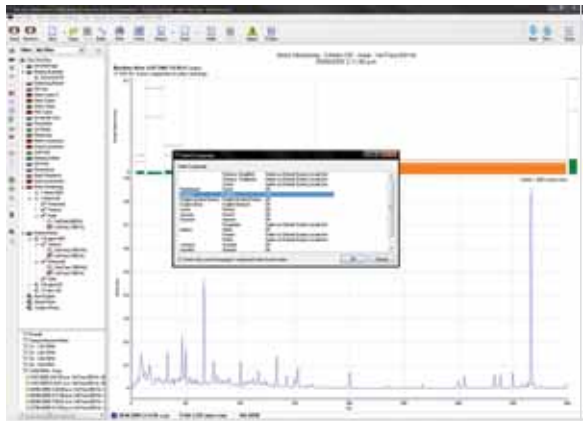
Selectable database thinning

No need to worry about database files growing large and sluggish. You can periodically trim your database file to keep only the most useful data accessible on a daily basis.



Multiple language support

The Ascent program has been translated into several languages. This enables international companies to standardize on one software application that can be used in different locales with ease.



Other features common to all Ascent Levels

- Baseline record and display – make instant comparisons against known good data
- Convert waveforms to spectra with ease
- Export your favorite charts and reports to Microsoft® Word® with one click
- Process parameter trending
- Intuitive database backup and restore facility



Accurate



Level 2

Ascent Level 2 streamlines the vibration analysis process, optimizing time efficiency and simplifying the task of the maintenance engineer and vibration analyst, regardless of experience.

Ascent Level 2 provides greater benefit for both novice and advanced analysts. Novice analysts will appreciate the automated machine, measurement and alarm setups provided by "The Proven Method". Experienced analysts can use this same tool to objectively evaluate and fine-tune their alarm settings and measurement criteria. Both groups can obtain greatest value by using the statistically generated alarm thresholds to create the most accurate warning system possible for individual machines.



System Requirements

Ascent, OnlineManager, AscentWatcher

- Microsoft® Windows® 2000 SP4, XP® SP2, Server 2003® or Vista® [x32/x64] operating systems
- Intel® Pentium® 2 400 MHz processor (or equivalent) or faster
- 256 MB of system RAM
- 500 MB of available hard disk space
- A CD-ROM compatible optical drive
- Windows-compatible mouse,

- touchpad or other pointing device
- An unused COM or USB port for instrument communications
- Microsoft .NET Framework® Version 2.0 or higher

AscentView

- Microsoft IIS 4 web server or higher
- Microsoft .NET Framework Version 2.0 or higher
- Windows Internet Explorer 5 or higher running on client PCs

AscentOPC

- Microsoft .NET Framework Version 2.0 or higher

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Ascent®, vbSeries®, vbOnline® and Commtest® are registered trademarks of Commtest Instruments Ltd.

All other trademarks and registered trademarks are the property of their respective owners.

No machine history? No problem

If you have no prior experience or lack previously recorded data, you can use "The Proven Method"* to establish a ready-to-use measurement program. Ascent software creates optimized measurement and alarm setups for you. "The Proven Method" allows you to select from a large menu of pre-defined machines and machine tools, complete with measurement parameters and alarms. Assess your first recordings against these proven standards and group together 'families' of similar machines so you can more readily discover which machines are operating in an abnormal state.



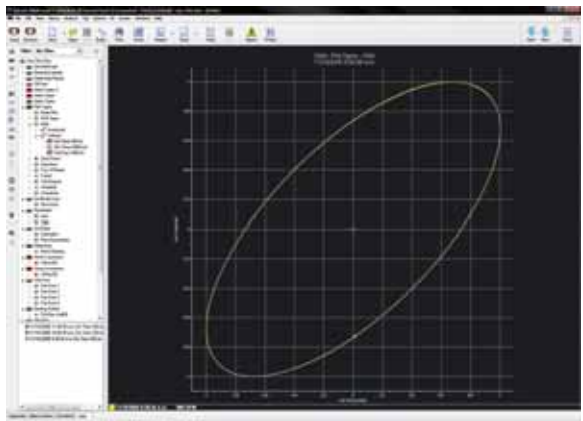
Detect faults earlier and more accurately

You can detect fault conditions sooner, and with a greater degree of certainty by applying pre-defined statistical alarm thresholds to your alarms. Combining "The Proven Method" with our pre-defined statistical alarm thresholds removes the guesswork from alarm creation, as identifying and fine-tuning of fault bands is done for you. This will lead to earlier detection of problems and reduce the incidence of false alarms.

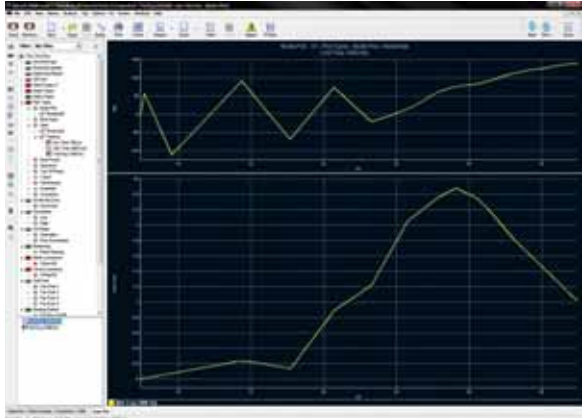


Get the bigger picture of machine condition

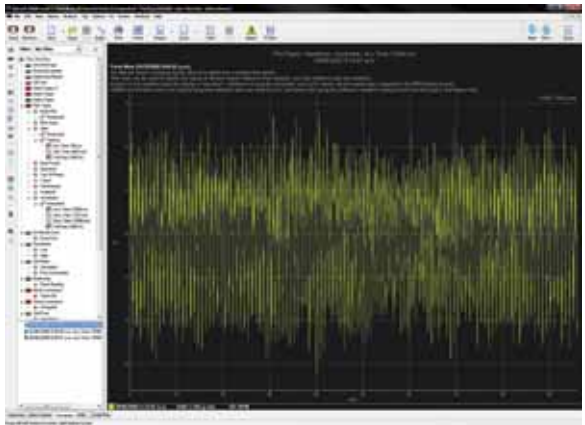
Additional tools provide advanced analysis capability. Orbit plots add greater analytical power. Rotor rub, pre-load and critical speed faults will not show up in standard spectral or waveform plots; Orbit plots expose the abnormal shaft movements which typify these potential machine failure conditions.



Bode plots identify resonant frequencies. Simple adjustments to identified machine running speed, increasing the stiffness, or altering the structural mass will reduce the likelihood of machine failure.



Our proprietary **Waveform analysis tools** provide additional benefits for veteran analysts, allowing you to convert slices of waveform or spectral frequencies from one form to the other.



*** Further information on “The Proven Method”**

“The Proven Method” is a time-tested technique that specifies peak velocity spectral alarm levels and frequency bands for measurements taken on healthy general plant machinery.

“The Proven Method” was created by Technical Associates of Charlotte, North Carolina – one of the world’s most renowned vibration analysis teaching and consulting firms.

Ascent Level 2 is available with two licensing options

1. Single user license. Usable with database files stored on a single local computer.
2. Network license for multiple users. Usable with database files stored on a single local computer or on a network server.

Please discuss your current and future software needs with your local Commtest sales representative.



Level 3

Ascent Level 3 is a comprehensive software suite that is provided as an integral software complement to our vbOnline™ product. While Ascent Level 3 is a must-have component of the complete vbOnline surveillance system, there are many valuable benefits for those relying on portable data collection alone.

Ascent Level 3 includes the following applications:

- Ascent® (Network License)
- AscentWatcher™
- AscentView™
- AscentOPC™
- OnlineManager™

Ascent Level 3 provides you with enhanced information accessibility. Install the Ascent software on your company network then either limit access to specific users, or allow open access to anyone within the network. The choice is yours. Use the Ascent software's communications abilities to automatically receive text or e-mail messages alerting you of alarm states, or use a web browser to view your data in real-time from anywhere in the world. Our software can even be connected to your existing DCS systems, and configured to take automatic scheduled recordings while your machines are operating, day or night.

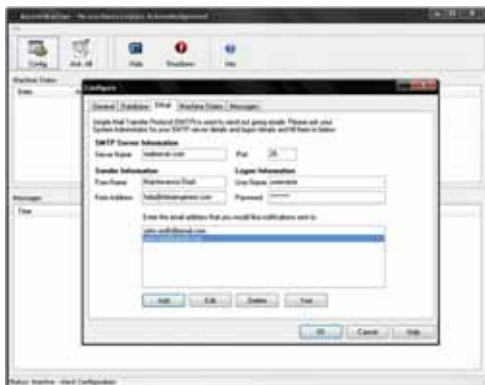
Flexible access to shared data

Having your data examined by more than one analyst can speed up fault finding and increase the effective diagnosis of machine faults. The network deployment feature provided with Ascent Level 3 allows several analysts to work with your information simultaneously from their own PCs.



Receive alarm notifications at any location 24/7

The AscentWatcher program sends automated alert messages wherever you are to nominated personnel when a machine's status changes. You can choose from text, e-mail or computer screen pop-up messages and create distribution lists to notify several people at the same time.



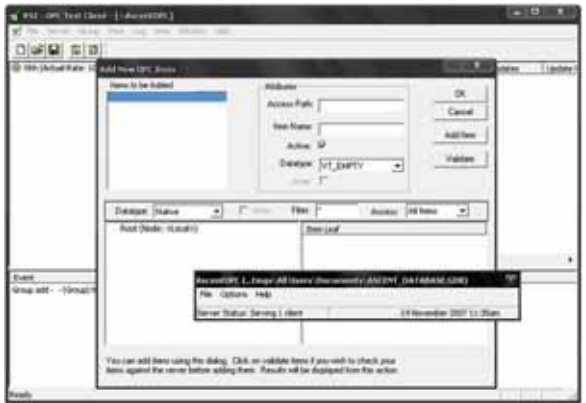
View machine status anywhere anytime

Monitor the status of your machines offsite with the AscentView web browser application. With a live Internet connection and Windows® Internet Explorer® you can access your machine information and display the latest status reports.



Enhance your existing plant monitoring system

The AscentOPC application publishes machine vibration data and makes this available via the industry standard OPC protocol, easily integrating into your company's existing Distributed Control System (DCS). Alarm conditions are updated continuously, thus allowing your engineering team to plan their activities based on up-to-the-minute machine status.



Minimize man power allocated for routine data collection

The OnlineManager software continuously collects the data for you. As an integral part of the vbOnline surveillance system, the OnlineManager software executes your collection schedules and automatically alters the measurement recording routines based on changeable machine operating conditions.



Automated database file management

Forget the worries of data loss. When properly configured by an administrator, the Ascent program automatically performs routine database backups and data thinning so you can simply set and forget.





Ascent® Software Product Matrix

Level 1, 2 and 3 Software Features

Feature	Ascent Level 1	Ascent Level 2	Ascent Level 3
Interactive Charting	✓	✓	✓
Chart Annotations	✓	✓	✓
Machine Notes	✓	✓	✓
Bearing Database (CBDb)	✓	✓	✓
Route Creation/Editing	✓	✓	✓
Component Library	✓	✓	✓
Alarm Templates	✓	✓	✓
Linear Speed Support	✓	✓	✓
Balancing Reports	✓	✓	✓
Database Thinning	✓	✓	✓
Baseline Record/Display	✓	✓	✓
Waveform/Spectra Conversion	✓	✓	✓
Export to Microsoft® Word®	✓	✓	✓
Process Parameter Trending	✓	✓	✓
Database Backup/Restore	✓	✓	✓
Multi-Lingual Interface Support	✓	✓	✓
Advanced TWF Analysis Tool		✓	✓
Orbit Plots		✓	✓
Bode Plots		✓	✓
Custom Reports		✓	✓
ISO Standards (2372/10816)		✓	✓
The Proven Method™		✓	✓
Statistical Alarms		✓	✓
Networking		*	✓
Automated Data Management			✓#
Machine Templates			✓
AscentWatcher™			✓
OnlineManager™			✓
AscentOPC™			✓

* Included in Ascent Level 2 with Network.

Applies to vbOnline® instruments only.

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Machinery Health – What is it?

Machinery Health probably has a more technical definition but it is basically the ability to be able to use an asset to its potential when needed. In other words, when the call is made, the machine must be ready. Monitoring and maintaining a piece of equipment has historically been done one of two ways – reactively or proactively. Reactive is very expensive as you are maintaining equipment after it has failed and there is most likely more damage as a result of the failure. Additionally, failures rarely happen on a convenient schedule for production or maintenance. Proactive maintenance involves the practices of preventative, predictive and root cause analysis.

Reactive Maintenance run to failure, also known as breakdown maintenance

Preventative Maintenance time based or interval based inspection

Predictive Maintenance monitor some condition and predict breakdown

Root Cause Analysis modify design based on analysis of persistent faults

A well rounded maintenance program may employ all of these methodologies to maintain their equipment. This is based on a cost / benefit analysis that should be engaged against the type of equipment and also a criticality assessment.

Because of the high cost of run-to-failure maintenance, facilities are migrating to a more proactive maintenance approach.

To move toward a more Predictive maintenance strategy, there is a migration towards technology that can help in the monitoring the condition of the asset. Vibration analysis is one of those tools. Commtest's Ascent® software is a great tool in identifying machine conditions and the fault modes surrounding these conditions. Data is brought in via an on-line system or a handheld data collector. The same software, Ascent®, can manipulate data from either system in a common platform. This is helpful as some assets are very critical and are monitored with an on-line system and other assets are monitored on a monthly or bi-weekly basis.

The ability to trend data, analyze data, and report on those findings allows for informed decisions on the health of the equipment and the eventual impact on production. Vibration analysis is not magic but one of the many tools for an informed workforce and increased machinery health. The resultant impact is really on improved business performance.

Rod Acklin CMRP

Product Manager, Vibration

ISO Category II Vibration Analyst