CMT

monitoring innovation

WHEN FAILURE ISN'T AN OPTION, DON'T LEAVE ASSET HEALTH TO CHANCE!

Adash

VIBRATION TECHNOLOGY

ABOUT CMT

CMTs mission is to supply our customers with on-line and on-site condition monitoring solutions fitting their needs. Our range of products helps the onsite engineers to base their maintenance and repairs on solid information rather than guesswork.

CM Technologies, formerly known as Kittiwake GmbH help prevent unplanned breakdown and maximise plant availability. There are various different on-the-run tools available for condition monitoring.

This brochure contains only information about CM Technologies offer for vibration diagnostics. For other products please see our full product catalogue.

DNV

MANAGEMENT SYSTEM
CERTIFICATE

This is to certify that the management system of

CMT

CM Technologies GmbH
Marie-Curie-Straße 5, 25337 Elmshorn, Germany

has been found to conform to the Quality Management System standard:
ISO 9001:2015

This certificate is valid for the following scope:
Design, manufacturing, sales and installation of condition monitoring systems as well as measurement and evaluation services in the field of condition monitoring for shipping and industry.

Place and date:
Barendrecht, 16 February 2022

For the issuing office:
DNV - Business Assurance
Zwolseweg 1, 2994 LB Barendrecht, Netherlands

Eric Kunk
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.
ACCREDITED UNIT: DNV Business Assurance B.V. - Zwolseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance

Customer in over 70 countries rely on CMT products

CMT - VIBRATION DIAGNOSTICS TOOLS AND SOFTWARE SINCE 1991

- Manufacturer of vibration diagnostics tools
- Development of vibration diagnostics software
- Distribution network around the world

WHAT IS VIBRATION DIAGNOSTICS?

Vibration diagnostics is a major part of predictive machine maintenance programs. Vibration diagnostics has over the years proven to be the most effective method for checking "machinery health".

Vibration diagnostics tools are here to help us to predict the machine failures. When predictive maintenance is applied and the machines are checked regularly, machine faults can be discovered at an early stage and appropriate action can be taken. By doing so you can avoid unexpected machine shutdowns and you can prevent replacement of parts which are still in good condition.

CMT supplies a full range of vibration diagnostics equipment, from simple data collectors to advanced vibration analyzers and on-line monitoring systems. The data from the devices can be transferred to Adash software for further analysis.

HOW DOES IT WORK?

Running machines generate vibrations, which contain a lot of information about their condition. A vibration meter or analyzer is used to measure this vibration. The sensor needs to be mounted on an appropriate point on the machine (e.g. bearing housing). The instrument measures the vibration signal, tells you the severity of the vibrations and also possible machine faults. The most frequent faults are bearings faults, unbalance, misalignment and looseness.

WITH OUR DEVICES YOU CAN ...

- determine the condition of the machine according to ISO standards
- find machine mechanical faults
- determine the condition of roller bearings
- control the lubrication of bearings
- perform balancing
- evaluate operating deflection shapes
- use the stroboscope to check rotating parts

VM MARINE

VIBRATION METER SPECIFICALLY FOR MARINE APPLICATIONS

Crews of seagoing vessels are under constant stress and the crew changes in fixed intervals. Therefore to successfully use Vibration Monitoring on board it must be easily understandable by everyone. The Vibration Meter Marine offers measuring modes put together exclusively for the Marine industry.

A powerful Expert system provides on the spot useable results, even beginners can use these results right away without any training or knowledge about vibration analysis.

A lubrication mode allows monitoring and control of of grease lubricated machinery. This ensures proper lubrication and on the other hand spares costs and avoids damages due to over-lubrication.

Acceleration and velocity RMS values can be taken and stored and allow users a precise trending of the condition of a machine.

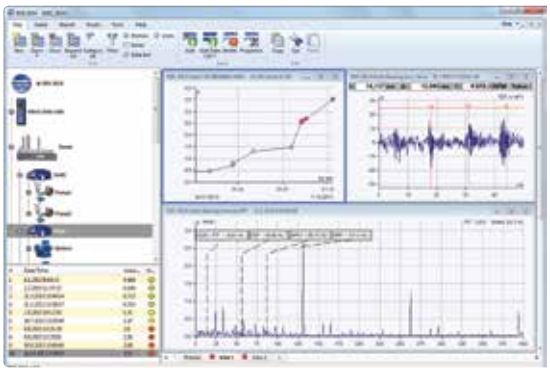
The device offers additionally an integrated IR temperature probe, a stroboscope and flash light which are valuable tools for the day to day work.

The powerful data diagnostic software (PLUS Version only) allows planning and uploading measurement routes as well as further in-depth analysis of the vibration data. Measurement routes allow every member of the crew to easily take out vibration measurements on ship machinery.

With the purchase of the Vibration Meter Marine you get everything you need to start right away. Scope of delivery includes the device, acceleration sensor, software (PLUS Version only) and accessories all in a small rugged case for storage in between usage.

Optional high quality headphones are available for the acoustic evaluation of the bearings. Using the headphones an experienced user is able to spot problems in seconds.

Free version of DDS software (limited database size)
(PLUS Version only)



Ordering Information

VIB-CT-50035
CMT Vibration Meter Marine
(including one acceleration sensor)

VIB-CT-50030
CMT Vibration Meter Marine PLUS
with Memory and PC software
(including one acceleration sensor)

VIB-CT-50017
PELTOR Heavy Duty Headphone
Signal: 8 Ohm / 0.5 W

VIB-CT-50075
Transport Case for VibrationMeter

- Tailor made for the Marine industry
- Easy to understand and use
- Quick diagnosis with traffic light system
- Optional route measurements

VIBRATION METER

VIBRATION METER, ANALYZER, DATA COLLECTOR

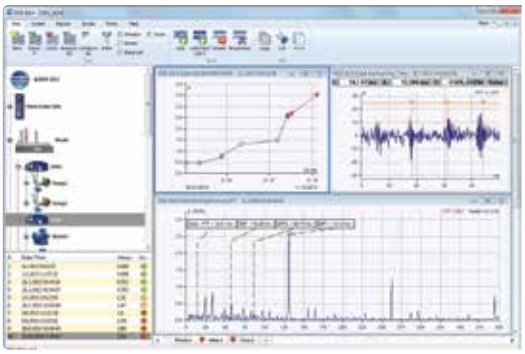
The Vibration Meter instrument allows you to perform all basic vibro-diagnostics measurements such as bearing condition, identification of mechanical faults and lubrication assessment.

The Vibration Meter PLUS is equipped with 4MB of memory for data storage. Data memory allows you to perform off-route and route measurements. The professional software DDS for Vibration Meter PLUS can be downloaded from the website free of charge.

Our expert system for automatic machine fault detection is included.

We also offer the Vibration Meter Ex, an intrinsically safe version of the Vibration Meter.

Free version of DDS software (limited database size)
(PLUS Version only)



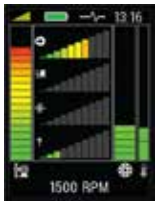
- Quality sensor
- Solid coiled cable
- Strong magnetic base

Ex certification:
- II 2 G Ex ib IIC T4 Gb

II	Non-mining
2	Zone 1
G	Gas atmosphere
Ex ib	Principle of protection: Intrinsic Safety EN 60079-11 , Zone 1
IIC	Gas group - Acetylene, Hydrogen
T4	Temperature class 135°C
Gb	Equipment Protection Level – Zone 1 (high protection)

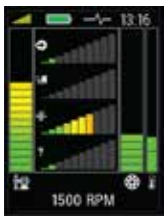
EXPERT SYSTEM

› Enables automatic machine fault detection on site



Unbalance

Looseness



Misalignment

Bearing fault

Ordering Information

VIB-CT-50001
CMT Vibration Meter
(including one acceleration sensor)

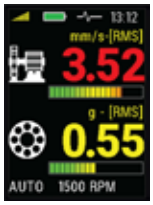
VIB-CT-50022
CMT Vibration Meter PLUS
with Memory and PC software
(including one acceleration sensor)

VIB-CT-50031
CMT Vibration Meter Ex
with Memory and PC software
(including one acceleration sensor)

VIB-CT-50017
PELTOR Heavy Duty Headphone
Signal: 8 Ohm / 0.5 W

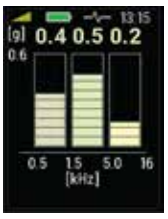
MEASUREMENTS

› ISO value [mm/s, ips]
› Bearing value [g]
› ISO 10816-3 included
› Automatic speed detection



Overall values

Time signal



Frequency bands

FFT Spectrum

Route measurement

SIMPLE TO USE

› Three button operation
› All functions are predefined
› Expert functions for fault detection
› Bright colour graphic display

TOP PANEL

› ACC ICP® - sensor input
› IR non-contact temperature sensor
› LED stroboscope
› Stethoscope output
› USB-C for data transfer and charging

INDUSTRIAL DESIGN

› Heavy-Duty aluminium housing
› Rechargeable Li-Ion battery
› 15 hours of operation

GREASE METER

OPTIMIZING THE LUBRICATION PROCESS

The Grease Meter is a maintenance tool used for monitoring and control of the lubrication process. The A4910 Lubri measures the actual bearing lubrication status and informs the operator when the lubrication state is optimal.

Application of the Grease Meter extends the bearing lifetime and saves lubricants. Headphones can be connected to listen to the bearing condition. The Grease Meter is simple to operate and also enables you to perform basic measurements and diagnoses of bearing condition.

Now the Grease Meter can store the data and perform route measurements as well (depending on verison).

Ordering Information

VIB-CT-50023
Grease Meter
(including one acceleration sensor and grease gun)

VIB-CT-50024
Standard Grease Gun

VIB-CT-50017
PELTOR Heavy Duty Headphone
Signal: 8 Ohm / 0.5 W

Free version of DDS software (limited database size) (depending on version)

- Increase bearing lifetime
- Basic vibrodiagnostics measurements

Values in traffic light colours tell you when to add the grease

Lubrication OK

Add grease

Dry bearing

- Monitoring and control of the lubrication process
- Bearing condition state

VIBRATION ANALYSER VA3PRO

The Vibration Analyser VA3Pro is the newest addition to our range of portable devices for vibration diagnostics.

There are 2 signal inputs and 1 tacho/trigger input. Input 2 offers connectivity to a triaxial sensor, therefore all 3 channels can be measured simultaneously. The expert system developed by Adash can automatically detect machine faults such as unbalance, looseness, misalignment and bearing faults.

There is a non-contact IR temperature sensor (for immediate bearing temperature measurement) and a LED stroboscope/torch. The Vibration Analyser VA3Pro is designed for one-handed operation. With a weight of just 780g and a battery life of more than 10 hours of operation, the unit is suitable for long route measurements.

The Vibration Analyser VA3Pro can be configured according to your requirements by choosing optional modules e.g. analyzer, route, balancer. Optional modules can be purchased also additionally and downloaded to the instrument without the need of sending it back to the factory.

- Low weight 780 g
- Long lasting battery
- Ideal for route measurement
- Route compatibility with Vibration Analyzer

- Includes stroboscope and torch

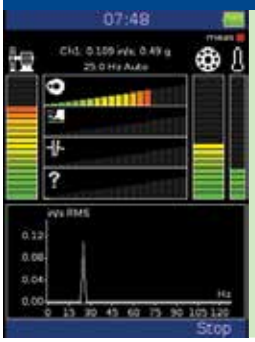
Meter
Expert system
Stroboscope
Route (Option)
Balancer (Option)
Analyzer (Option)
Recorder (Option)
Run-Up (Option)
Ultrasonic (Option)

A4300 VA3PRO MEASUREMENTS MODULES

METER

- Overall Vibration Values (RMS, 0-PEAK)
- FFT Spectrum
- Time Signal
- Frequency Bands
- Displacement
- Temperature

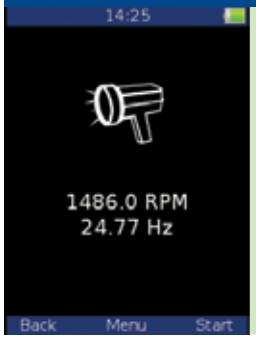
FASIT - EXPERT SYSTEM



Automatic detection of possible machine faults:

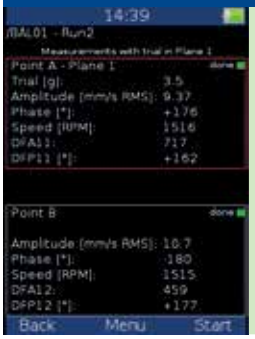
- UnbalanceMisalignment
- Looseness
- Bearing faults

STROBOSCOPE



Switch on the stroboscope to visually "freeze" the machine movement and check its rotating parts. Speed of the machine can also be detected.

BALANCER



Balancer allows you to perform one or two plane balancing job of rotating parts such as industrial fans, blowers, spindles etc.

ANALYSER

Select the type of the measurement (from simple overall values through FFTs and time signals to more advanced measurements with Proximity probes such as Orbits), set up the measurement settings according to your requirements (frequency range, sampling, units etc.) and take all the predefined measurements simultaneously (up to 3 channels).

Ordering Information

VIB-CT-50016
Vibration Analyser VA3Pro
(including one acceleration sensor)

VIB-CT-50117
Vibration Analyser VA3Pro EX
Rating: II 3G Ex ic op is IIC T3 Gc

Optional Test Modes

VIB-CT-50025	Analyser Mode
VIB-CT-50026	Route Mode
VIB-CT-50027	Balancer Mode
VIB-CT-50028	Recorder Mode
VIB-CT-50034	Run-Up Mode
VIB-CT-50037	Ultrasound

VIB-CT-50038
US-Microphone

VIB-CT-50006
Laser Tacho Probe

VIB-CT-50040
Silicone Protection Cover for VA3Pro

DATA PROCESSING

- Real time FFT
- DEMOD - ENVELOPE analysis
- ACMT - low speed bearing analysis
- Order analysis
- User band pass analysis
- RPM measurement
- DC measurement
- Orbit measurement

A/D CONVERSION

- 24 Bit A/D conversion
- 64 Bit signal processing
- 120 dB dynamic range
- No Auto-Gain

IDEAL FOR ROUTE MEASUREMENT

- Heavy-Duty aluminium housing
- Removable battery pack
- More than 10 hours of operation
- Colour display 240 x 320 px
- FFT resolution: 25600 lines
- Route memory: 8GB

TOP PANEL

- ACC ICP® - sensor input
- 2 signal inputs AC/DC (IN1,IN2)
- Input IN2 is ready for triaxial sensor
- Input for tacho/trigger
- IR non-contact temperature sensor
- LED stroboscope/torch
- Mini USB for data transfer

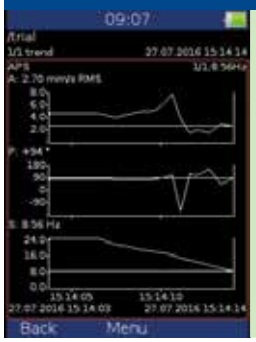
ATEX RATED VERSION

- Certified for extreme working conditions
- Intrinsically safe 3-channel analyser
- High ATEX rating
- Protective shielding from ignition sources and conductive dust
- Sealed against occasional gas, mist and vapours

ROUTE

Route module is used for day to day data collection of your factory machinery. Simply create your route tree and take the measurements regularly.

RUN UP



Similar to Analyzer mode where you can setup any measurement which you like. Run Up allows you to control the saving of data for example as soon as possible, by speed change, time change etc.

RECORDER

Recorder mode "records" the raw signal from the sensor (it means raw signal from the machine.) This allows you to make a post processing of the signal later on your PC.

ULTRASOUND

Measurement of sound unhearable for human ear – ultrasound. Typical application is air leak detection, electrical arcing or early bearing fault detection.

VIBRATION ANALYSER VA5PRO

THE FASTEST 4-CHANNEL VIBRATION ANALYZER

- Adash expert system for automatic machine fault detection
- Large colour display

4 channel signal recording

Ordering Information

VIB-CT-50065
Vibration Analyser VA5Pro
(Including one acceleration sensor and a case)

VIB-CT-50006
Laser Tacho Probe

VIB-CT-50038
US-Microphone

VIB-CT-50066
Transport Case for VA5

VIB-CT-50017
PELTOR Heavy Duty Headphone

VIB-CT-50067
Thermal Imaging Camera
Range: -10°C ~ 150°C

VIB-CT-50047
Acceleration Sensor Complete push /pull
(including spiral cable and magnet base)
Sensitivity 100 mV/g
Resonance Freq. 30 kHz

The Vibration Analyser VA5Pro is a unique instrument for machinery vibration diagnostics. The Vibration Analyser VA5Pro includes modules for analysing, data collecting and vibration signal recording. The instrument is enhanced by modules for dynamic balancing, measurement of run up and coast down, acoustic measurement mode, monitoring and control of lubrication process and listening to the vibration signal with the stethoscope feature. The instrument is equipped with an expert system which automatically detects machinery faults.

The Vibration Analyser VA5Pro is designed for engineers, technicians and researchers dealing with machinery and structural diagnostics as well as dynamic balancing of rotating machinery.

EXPERT SYSTEM

- Automatic machine fault detection
- ISO 10816-3 included
- Bearing database included

DATA PROCESSING

- FFT 3 276 800 lines in real time
- Frequency range up to 90 kHz
- 20 hours recording of 4 channels
- Demodulation - envelope analysis, Order analysis
- ACMT - low speed bearing analysis
- User defined frequency bands

TOP PANEL

INPUT CHANNELS

- 4 AC, ICP®(On/Off), +/- 12 V pp
- 4 DC process values, +/- 24 V
- 1 Tacho

A/D CONVERSION

- 24 Bit A/D conversion
- 64 Bit signal processing
- 120 dB dynamic range
- No Auto-Gain

USB PORT

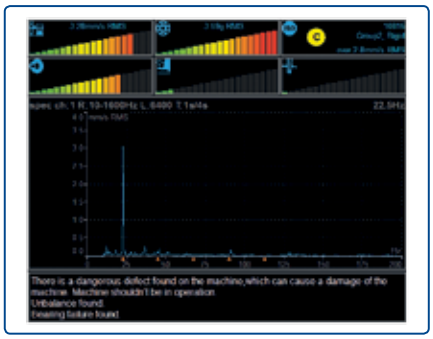
- High speed data transfer
- Quick connection

HEADPHONES

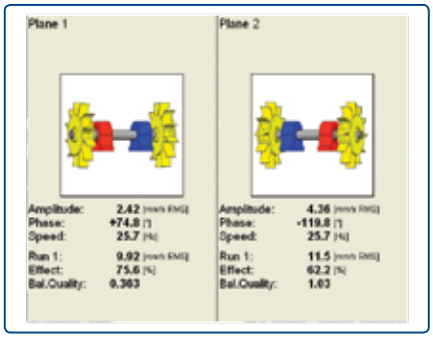
- Listening to vibration signal

VIBRATION ANALYSER VA5PRO MEASUREMENT MODES

ANALYZER
› 4 channels simultaneously

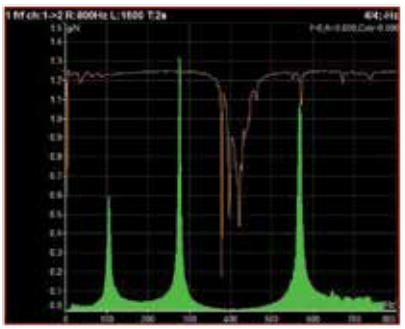


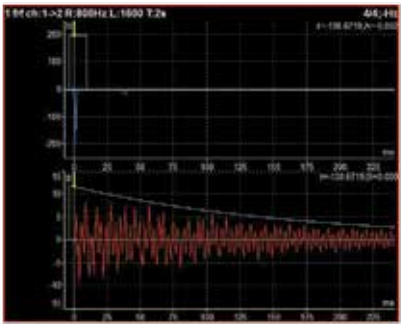
EXPERT SYSTEM
› Automatic fault detection



BALANCER
› Intuitive graphical balancing procedure

ROUTE
› 8000 measuring points
› DDS software





FREQUENCY RESPONSE FOR MODAL ANALYSIS

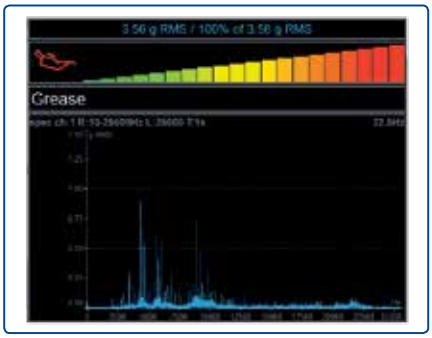
› The A4400 VA5Pro enables to measure frequency response for modal analysis purposes. It is attractive substitute for large systems, which are usually used for modal analysis measurements.

› Data are exported in UFF format. They are easily imported to every modal analysis software.

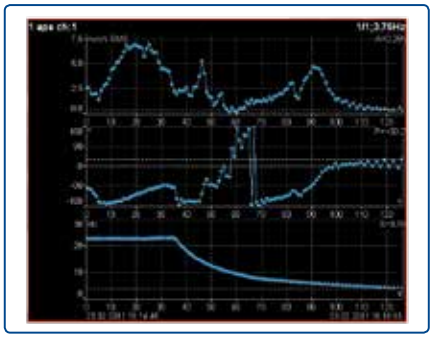
Type:	frf
	freerun single
Input:	1
Window:	transient
Shift[ms]:	-4
Length[ms]:	14
Output:	2
Window:	exponential
Shift[ms]:	-4
Length[ms]:	500
Result Type:	H1
Range[Hz]:	800
	fs=2048Hz
Lines:	1600
	t=2s,df=0.5Hz
Avg:	4
	total t=5s
Overlap:	50%
Save	

Trigger Mode:	single
Runup Mode:	time
Speed Change[Hz]:	1.00
Time Change[s]:	1
Trigger Source:	amplitude
Pretrig[%]:	25
Ampl Trig Channel:	1
Ampl Trig Level[N]:	-25
External Trig Edge:	rising
External Trig Level[V]:	1
Save	

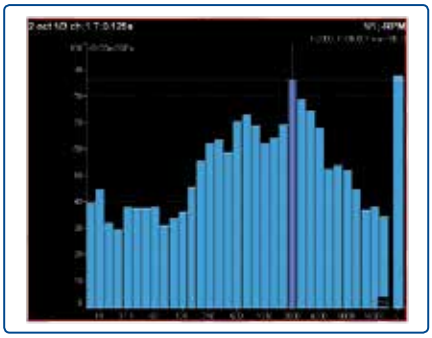
STETHOSCOPE
› Listening of vibration signal



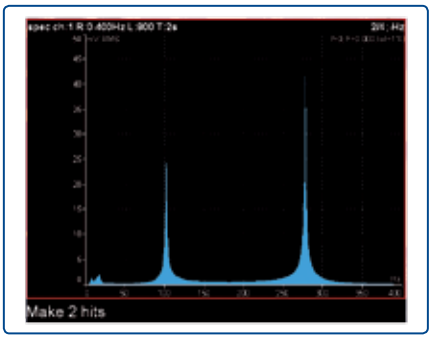
LUBRI
› Monitoring and control of lubrication process



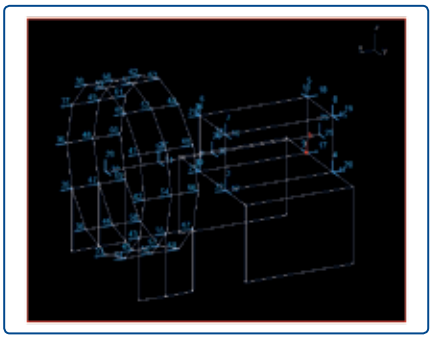
RUN UP/COAST DOWN



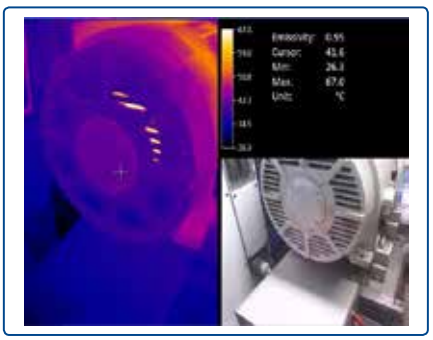
OCTAVE ANALYSIS



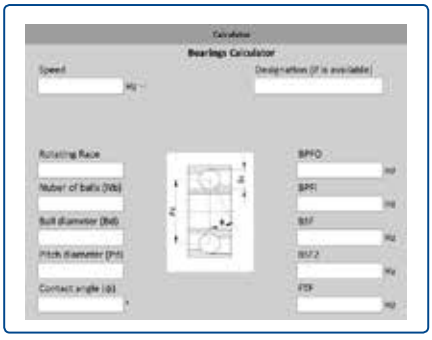
BUMP TEST



ADS
› Animated deflection shapes

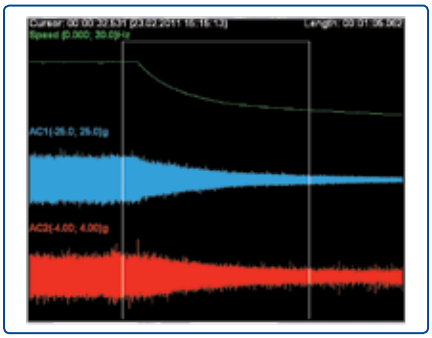


THERMAL IMAGING
› Shows temps from (-10) - 150 °C



CALCULATOR
› Simple calculator or conversions
› bearing fault frequencies
› belt frequencies
› gearbox calculators

RECORDER MODE - WHEN IT IS USEFUL



RECORDER
› 4 channels recording
› 20 hours signal recording

Let's say you are going to measure a big industrial blower to find out its behavior during run up. You place the sensor on the machine and set up your measurement. Then you ask the operator to run it and he starts the machine. After a few seconds you realize that you have set your measurements incorrectly and you ask the operator to stop the machine and run it again. But his answer is: "I am sorry sir, the control system will not allow me to run it again, we cannot stop the production now, you have to come over here next month." This could be a problem for you, couldn't it? With the Recorder mode you will avoid such a situation.

Just place the sensor on the machine, run the Recorder mode and record the raw signal during the run up of the machine. Later on, you can analyze this record in the office. In other words you can set any measurement which you like and play this recording again and again to get the required results.

RAW SIGNAL RECORDING

› Record the raw signal when you are not sure about the setting. Post-analyze the recorded signal later in the office.

› With the A4400 VA5Pro you can record up to 4 channels simultaneously.

› A4410 Virtual Unit software for post-analyzing is possible to download from Adash website free of charge.

› 20 hours signal recording (4 channels, 64 kHz sampling frequency)

POCKET ANALYSER & VIRTUAL UNIT

POCKET ANALYZER

Connect Pocket Analyser to your laptop and get all functions of 4 channel Vibration Analyser

Free download of Virtual Unit software enables you to try all functions of the analyzer on your computer

The Pocket Analyser is a pocket sized 4 channel vibration analyzer.

Connect the Pocket Analyser to any computer by USB and use the unit for data analysing, collecting and the recording of vibration signals. The instrument is enhanced by modules for dynamic balancing, measurement of run up and coast down and acoustic measurement mode. The instrument is equipped with an expert system which automatically detects machinery faults.

The instrument is powered directly by USB connection so no external power is needed.

Ordering Information

VIB-CT-50032
Pocket Analyser
(no sensor included)

VIB-CT-50047
Acceleration Sensor Complete push /pull
(including spiral cable and magnet base)

Sensitivity	100 mV/g
Resonance Freq.	30 kHz
Operating Temp.	-55 - 140 °C
Connector	push / pull

VIB-CT-50006
Laser Tacho Probe

VIB-CT-50038
US-Microphone

Virtual Unit Software

Pocket size 4 channel Vibration Analyzer
Input channels: 4 AC, ICP® (ON/OFF), 4 DC, 1 TACHO

STROBO

STROBOSCOPE

Stroboscope enables to ostensibly stop rotating or generally periodic (reciprocating) motion of a machine. It allows also to find out the speed of rotation or to perform synchronized measurements without having to use reflective markers on the shaft.
The A4950 stroboscope uses three ultra-bright LEDs with optical system as a source of flashes. The device is equipped with a colour graphic display and 3 operational buttons. Operation is very easy and intuitive. Two standard or rechargeable AA batteries are used for powering. The A4950 stroboscope can be used also as a tachometer by connecting an external speed probe.

- Flashing frequency range from 0.5 Hz to 500 Hz
- Control of the flash duration

Flashing controlled by internal or external triggering

Ordering Information

VIB-CT-50053
Strobo

VIB SIMULATOR

SENSOR SIMULATOR

The Vib Simulator device behaves like a standard ICP® acceleration sensor with a sensitivity of 100 mV/g. The unit generates precise amplitude levels on 80 Hz and 8 kHz frequencies. The Vib Simulator enables the user to check measurement precision and functionality of analyzers, vibration meters, protection and monitoring systems.

Vib Simulator

- Simulates the acceleration sensor 100mV/g
- Two output connectors - MIL, BNC

Quick check of cables, analyzers and monitoring systems

Ordering Information

VIB-CT-50042
VIB Simulator
Simulates one standard sensor
100 mV/g

VIBRATION MONITOR

ONLINE MONITORING SYSTEM - IT HAS NEVER BEEN EASIER!

The Vibration Monitor is a powerful online monitoring system for rotating machinery. The Vibration Monitor system can operate as an independent monitoring system or it can be used as an extension of an existing protection system.

Adaptive data acquisition algorithm

All channels are measured simultaneously. The modules can be easily combined to create a system with more channels.

Vibration Monitor Plus / Standard

- 16 channels AC
- 16 channels DC
- 4 TACHO inputs
- 16 BNC buffered sensor signal outputs
- 16 programmable relay outputs (plus version only)
- 16 programmable 4-20 mA outputs

Vibration Monitor Compact

- Optional number of input channels
- 4 – 16 channels AC
- 4 – 16 channels DC
- 1 – 4 TACHO inputs
- Adaptive algorithm of data acquisition
- Compact size, DIN rail mounting

Ordering Information

VIB-CT-50044
Vibration Monitor Plus (3U)
16 channel synchronous measurement

VIB-CT-50003
Vibration Monitor Standard (2U)
16 channel synchronous measurement

VIB-CT-50056
Vibration Monitor Compact
4 channel synchronous measurement
extendable to 4x4 channel multiplex

VIB-CT-50058
Vibration Monitor Compact WiFi Module
WiFi Standard 802.11b/g/n

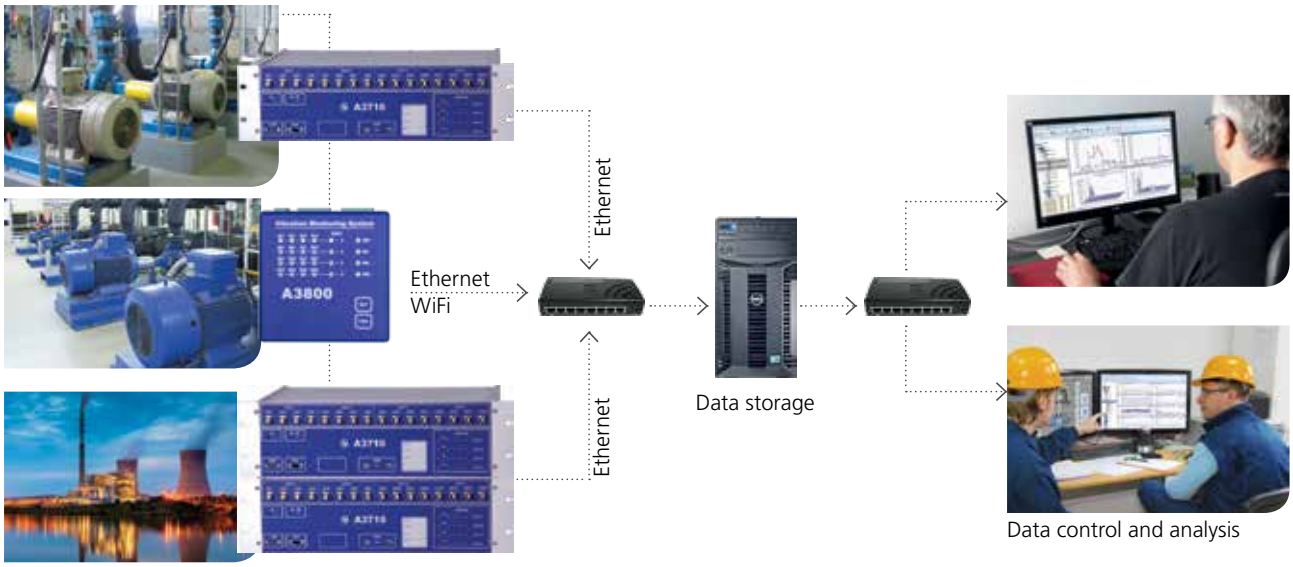
VIB-CT-50057
Vibration Monitor Compact License
(license for additional 4 channels)

VIB-CT-50006
Laser Tacho Probe

SEN-CT-16910
Inductive Tacho Sensor

VIB-CT-50059
Data Manager
Setup of Online Systems

APPLICATION SCHEME OF VIBRATION MONITOR UNITS



There are 3 version of the Vibration Monitor available.

- A3800 Vibration Monitor Compact
- A3716 Vibration Monitor Standard
- A3716 Vibration Monitor Plus

The A3800 Vibration Monitor Compact is a 4 to 16 channel on-line monitoring and diagnostic system. The compact size enables it to be placed directly on the DIN rail in the switchboard.

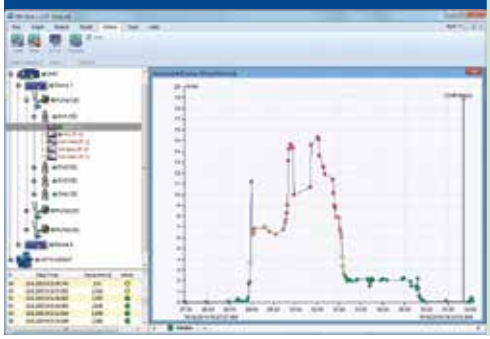
The unit has an optional number of AC and DC input channels - 4, 8, 12 or 16. AC and DC channels are separate. This means that the 4-channel configuration allows you to connect 4 AC and 4 DC channels. Depending on the number of active input channels, it uses 1 - 4 independent TACHO inputs.

The number of active channels can be extended by purchasing additional licenses. Each group of 4 channels allows fully simultaneous measurements. Groups of 4 input channels are switched via a multiplexer. The Vibration Monitor Compact is available with an optional WiFi module.

The A3716 Vibration Monitor Standard and Plus system contains 16 AC, 16 DC and 4 TACHO inputs. All channels are measured simultaneously.

The Standard version only needs 2 Slots (90mm height) in your 19" aluminium rack while the Plus version will need 3 Slots (135mm height). The Compact version is placed directly on the DIN rail in the switchboard.
The plus version also offers additional connections like 16 relay outputs, 16 (4-20mA) current loops and 16 BNC outputs.

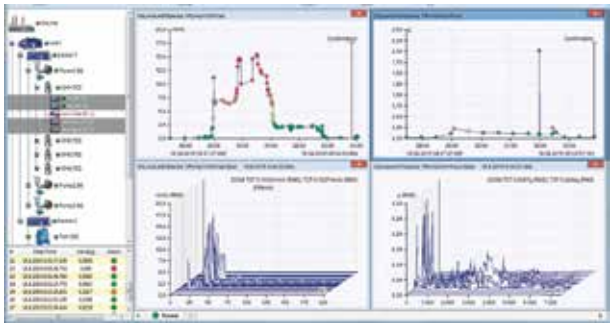
SETUP AND CONTROL



- The set up and control of the Online units is done by the Data Manager. The set up has never been easier. Storage of data and evaluation is handled with the DDS software.
- The new data acquisition control system was developed for the Vibration Monitor. Now the unit reads the vibration continuously, not only at predefined time intervals. The adaptive algorithm saves the readings to the database.
- The Vibration Monitor unit continuously monitores the required machines and adaptively saves the readings to the data storage computer. The data is accessible from various workstations for control and analysis.
- The great advantage of the DDS software is its very easy set-up. There is no difficult installation of the server anymore and no complicated set-up of parameters. The demands for transfer and data storage are minimized.

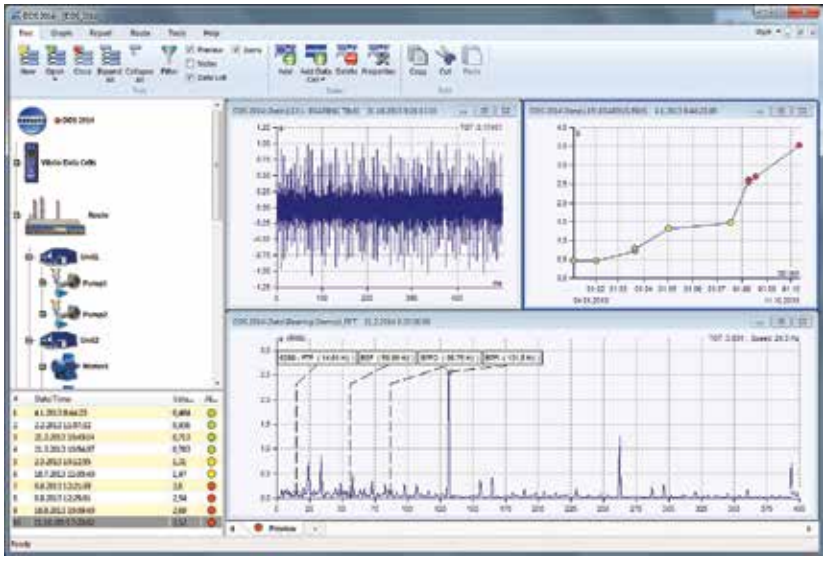
DDS-SOFTWARE

A POWERFUL TOOL FOR DATA STORING AND EVALUATION



Limit values

Report



Bearing-control

› User friendly
› High reliability

The Digital Diagnostics System software represents a powerful tool for storage and evaluation of vibration and technical diagnostics data. It allows the user to connect and work with data collected by portable data collectors and on-line monitoring systems. In the full configuration, it includes all the functions necessary for data transfer, analysis and data storage.

DDS software communicates with all vibration meters and analyzers and also with the online monitoring systems.

› Spot damages using trending and comparison
› Use the DDS software to collect data and analyze them later at your convenience
› An integrated easy to use reporting tool allows generation and transmission of standardized reports
› The extendable bearing database included in the software allows a precise analysis of damage causes
› Waterfall diagrams support the historical display of frequency spectra
› Quickly navigate measuring points and machines of your assets due to the established tree structure
› Fast and easy comparison of measuring points due to drag and drop capability

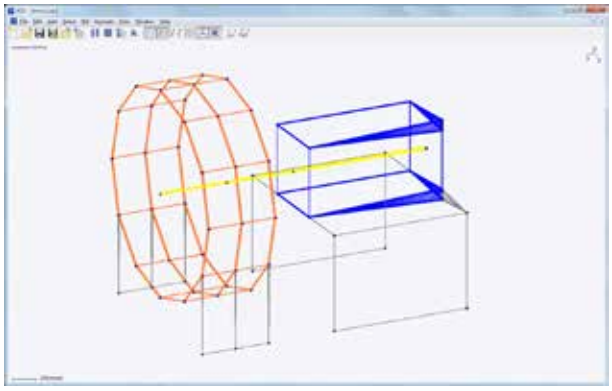
Ordering Information

VIB-CT-50004
DDS Data Diagnostic Software
(full access / no limits)

VIB-CT-50045
DDS Data Diagnostic View Software
(no changes of the tree)

ADS-SOFTWARE

VISUALISATION OF VIBRATION MOVEMENT



Immediate visualization of the vibration movement

The Animated Deflection Shapes software is based on the method of operating deflection shapes. This means that we visualize the vibrations of the machine by animation. During the animation the vibration movement is slowed down to very low frequency and the amplitude of the motion is increased so we can see the vibration.

It is a combination of vibration measurement and software processing. The output of the method is vibration movement animation on one forcing frequency or on multiple forcing frequencies.

The output of the method is easily understandable for everybody.

Ordering Information

VIB-CT-50033
ADS Animated Deflection Shapes Software

ROUTE DOWNLOADER

SEND THE ROUTE TO TECHNICIAN ON THE OTHER SIDE OF THE WORLD

Route Downloader is a simple tool for Route transfer. DDS software can create the Route tree as one small file. You can send this file through email to your technician who is far away and who does not have an access to DDS software. He will load the Route tree to his data collector through Route Downloader and will take the readings. Then he will create again one file in the Route Downloader and send you this file (with measured data) back to you. This file will be read by DDS and measured data will be stored into your DDS Route tree.

Route Downloader is compatible with all portable devices

Includes free software

Sensor, Cables and Connectors

Our range of AC 100mV/g accelerometers is designed for use with all types of data collectors and online systems using two-wire constant current method of drive. The range includes standard, high performance premium accelerometers, each manufactured to the highest ISO standards and backed by our outstanding technical customer support services.

Acceleration Sensor Complete

Acceleration Sensor Single

US-Microphone

Laser Tacho Probe

Options include sensitivities of standard 100mV/g, or choose from: 10mV/g, 30mV/g, 50mV/g, 250mV/g or 500mV/g.

The complete acceleration sensors do come with sensor, coiled cable and magnet since this is the most common combination for data collectors.

Ordering Information

VIB-CT-50047
Acceleration Sensor Complete push /pull
(including spiral cable and magnet base)

Sensitivity	100 mV/g
Resonance Freq.	30 kHz
Operating Temp.	-55 - 140 °C
Connector	push / pull

VIB-CT-50005
Acceleration Sensor Complete binder
(including spiral cable and magnet base)

Sensitivity	100 mV/g
Resonance Freq.	30 kHz
Operating Temp.	-55 - 140 °C
Connector	Binder 712

VIB-CT-50012
Acceleration Sensor Single

Sensitivity	100 mV/g
Sealing	IP68
Resonance Freq.	30 kHz
Operating Temp.	-55 - 140 °C
Connector	MIL2
Mounting Thread	1/4”-28 UNF female

VIB-CT-50015
MIL2 Connector for Acceleration Sensor

VIB-CT-50038
US-Microphone
Option for Vibration Analyser VA3 & VA5

VIB-CT-50006
Laser Tacho Probe
Option for Vibration Analyser VA3 & VA5
Option for Vibration Monitor A3716

VIB-CT-50009
5 m Extension Cable for Sensor
push / pull or Binder 712

VIB-CT-50010
10 m Extension Cable for Sensor
push / pull or Binder 712

Measuring Pads

To achieve a comparable measuring trend it is recommended to stick to the same routine at every measurement.

To help with consistent measurements CMT is offering Measurement Pads.

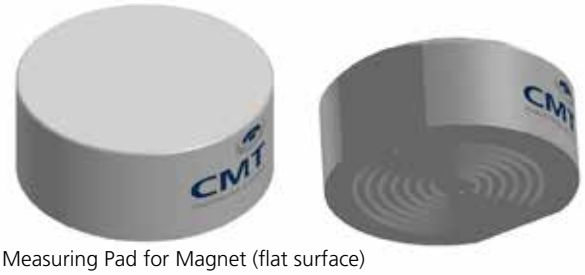
The Measuring Pads are glued on the machine to guarantee that the same measuring spot is being used at every measurement.

Most important for good results is a tight and firm connection between sensor and machine. The established best practice is to use CMT Measuring Pads.

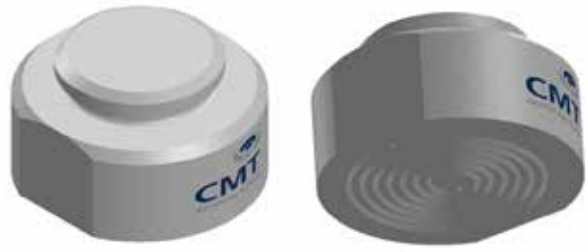
The Measuring Pads are equipped with a yellow protection cap for easy recognition and protection against any dirt or paint.

CMT uses specially packed rapid curing synthetic metal glue to permanently mount measuring pads on metal surfaces. Simple hand mixing ensures activation reaction between the concentrically packed components.

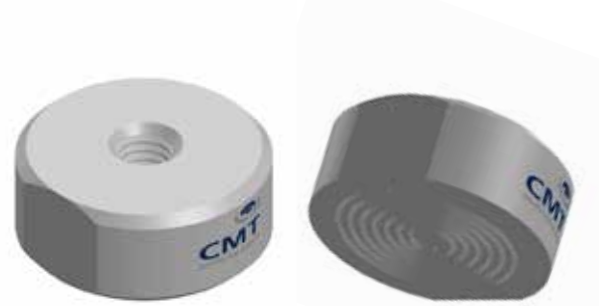
All loose material, rust and surface contaminants, including existing coatings, must be removed and the surface roughened by using an angle grinder etc.



Measuring Pad for Magnet (flat surface)



Quick Fit Measuring Pad



Measuring Pad for Studs

Ordering Information

VIB-CT-50051
Measuring Pad for Magnet (10)
Flat surface
(including protection cap)
Diameter / Hight: 24 /10 mm

VIB-CT-50050
Quick Fit Measuring Pad (10)
Mounting Thread quick fit
(including protection cap)
Diameter / Hight: 24/10 mm
Wrench size: 22 mm

VIB-CT-50011
Measuring Pad for Stud (10)
(recommended for permanent installation)
Mounting Thread M6 x 1 mm
Diameter / Hight: 24 /10 mm
Wrench size: 22 mm

VIB-CT-50052
Screw Studs (10)
Threads: M6 x 1 / 1/4"-28 UNF

VIB-CT-50018
Epoxy Metal Glue for Measuring Pads
Drying time: 2 hours at 20°C
Max. Temp: 120 °C
Handling time:
Capacity: 20 - 30 pads

Sensor Bases & Magnets

Magnet - Pole Piece

Magnet - Flat Face

Quick Fit Base for Sensor

As a standard connection to achieve reliable results it is intended to use a Measuring Pad on the machine with the magnet mounted to the sensor. CMT provides two different magnets for curved and flat surfaces.

The best results will be achieved with the newly designed CMT Quick Fit connection. This requires one Quick Fit Base attached to the sensor and on each measuring point, which are protected with a yellow cap while it is not in use.

Permanently installed sensors should have a bolt-on connection using the measuring pad with a stud.

Ordering Information

All Studs for Sensors	1/4"-28 UNF male
VIB-CT-50029	
Magnet - Pole Piece	
Diameter / Hight:	25 /18 mm
Pull Strength:	20 kg
VIB-CT-50021	
Magnet - Flat Face	
Diameter / Hight:	30 /10 mm
Pull Strength:	25 kg
VIB-CT-50048	
Quick Fit Base for Sensor	
Mounting Thread	quick fit
Diameter / Hight:	24 /10 mm
Wrench size:	22 mm

Quick Connection Box

Key features:

- Provides a terminal to take readings from accelerometers via a portable data-collector
- Multiple outputs via multiple connectors
- Compatible with all of CMT's vibration devices
- IP66 certified
- Intrinsically safe version available on request

The Connection Box is used as a terminal to collect the signals from multiple channels and to supply them for external readings.

There is no need to check on every measurement point. Just connect your sensors to the Quick Conntection Box and you can take all measure-ments at the box.
Easily switch from one Sensor to the next.

This high quality product is made from stainless steel and is IP 66 certified. That makes it perfect for the use on board of a vessel.

The Quick Connection Box is compatible with all of CMTs vibration devices. There are multiple output options available on request.

Ordering Information

VIB-CT-50055
Quick Connection Box
(BNC Output)

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