VibroMatrix®

VibroMatrix® softwarepackage included

i592 Solid base plate

2x InnoBeamer LX2

i535 Holding magnet

Adapter cable i205-0,5 3x BNC

i221-10 Sensor cable

Foot tips (blund and pointet)

Triaxial tansducer KS823B

The equipment shown depends on the respective VMSet-16

VMSet-16

The VMSet-16 comes in a handy case and provides you with everything you need for the measurement of human whole-body vibration acc. to ISO 20283-5:2016.

Vibrations in all three axes can be measured simultaneously. The complete solution offers more than small handheld units:

- The program guides you through the measurement reliably, with clear indications and graphics.

- Measured values as well as an asessment (red / yellow / green) are already indicated during the measurement.

- Each measurement is automatically transferred to the data storage with time stamp and can be completed with your own remarks.

- The Pro version additonally offers frequency analysis of both, weighted and unweighted vibration signal. Thus, components responsible for the excceedance are detected easily and time for development is reduced considerably.

Equipment	VMSet-16-01
	1 Measuring point
Hardware	
Sensor for Vibration Measurement	**1x Piezoelectric accelerometer, shear design** - Sensitivity: 500 mV/g, linear frequency range: 0.07 .. 6000 Hz - Operating temperature: -30 .. 90 °C - Accessories: Clamping magnet, tripod plate with screwable feet, 10m cable, cable adapter to 3x BNC
USB Box for Digitization	**2x InnoBeamer LX2** - Inputs: 2x analog for vibration sensor(s), 1x digital for photoelectric reflex switch - Signal frequency: 0.1 .. 3200 Hz - Supply current: < 500 mA with supply of all sensors - no mains adapter required - Operating temperature: -20 .. 50 °C, weight: 350 gr. - Accessories: Synchronisation cable and 1m USB cable
Software Licenses	
Globale Option Free Replay	✓
InnoMeter HVM 20283 Pro	✓
Number of	**3 x**

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Global Options - InnoMaster Replay

IDS2ASC and IDS2BIN - Export functions

If you want to analyze the raw data with your own software, we recommend to use the option IDS2ASC or IDS2BIN. The original InnomicDataStream (IDS) format for the InnoMaster Replay not only contains the raw data, but also many other pieces of information, for instance the wall clock time valid during the measurement, your notes etc. By means of the option IDS2ASC, the InnoMaster Replay extracts the pure measurement data and saves it in ASCII text format. Now the data can be indicated with an arbitrary text editor or it can be further processed with your own software. In contrast, the option IDS2BIN exports the measurement data in binary format, which allows more compact files than in text format.
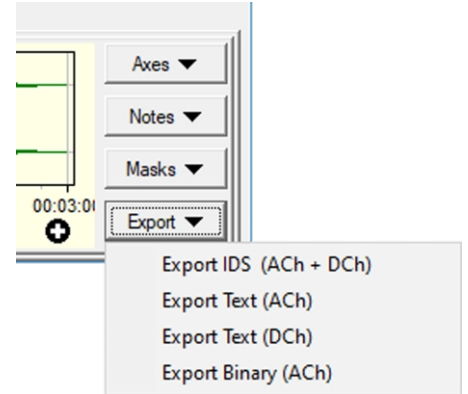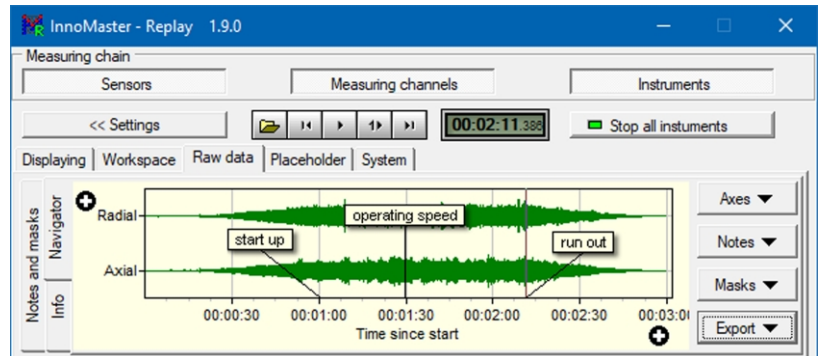
FRep - Free Replay

The complete off-line analysis of the InnoMaster Replay is available for you without extra charge if the same InnoBeamers are connected to the PC at both times, during measurement and off-line analysis. By means of Free Replay, that is not necessary. You can send the files with the raw data, the recipient downloads the free VibroMatrix software and can analyse the raw data. That is how you achieve an excellent team work between the field measurement staff and analysis team in your home company.
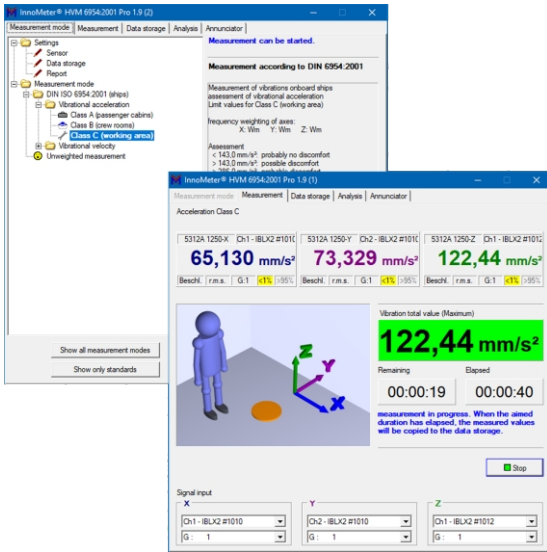
Free Replay means: Arbitrarily many persons at arbitrary locations at arbitrary times can replay and analyse the recorded raw data with the InnoMaster Replay.

Without the need to invest a single cent for measurement equipment. Thus, you mulitply the advantages of VibroMatrix.
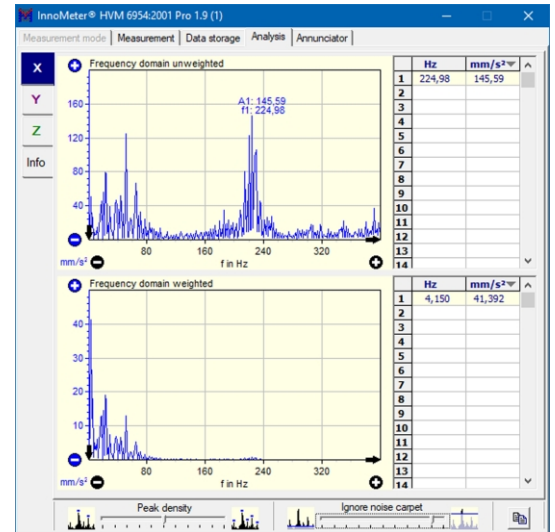
For analysis, the instruments which were licensed during data recording are available.

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SoftwareModule - InnoMeter 20283 Pro® 1.9
Measurements according to ISO 20283:2016

Clear selection and implementation of the measurement procedure

Integrated frequency analysis

Automatic storage of the measurement data

Application

Aboard passenger and merchant vessels vibrations can occur, which may negatively interfere with the work of the crew or which may diminish the comfort of passengers and crew. In order to assess complaints or to prevent them, measurements acc. to ISO 20283-5 are suitable, since they allow the evaluation of the vibration severity with regard to habitability aboard ships.

By using the InnoMeter HVM20283 one can easily perform these measurements conforming to standards. Additionally, the instrument contains a storage for recent measurement results.

Properties

Compared to usual hand-held instruments, the InnoMeter HVM 20283 possesses a user guide. The user is guided through measurement from the choice of measurement mode to the evaluation of measurement's results. Graphical drawings for sensor positioning ease multiaxial measurement and ensure a correct application of the standard.

Acc. to the standard, the InnoMeter 20283 is designed for simultaneous measurement in all 3 axes. The required vibration parameters and weighting filters are integrated. The classification defined in the standard (passenger cabins, crew rooms, working areas) is available together with the respective standard values. With the simple choice of the measurement mode, the parameters and standard values are adjusted automatically acc. to the standard.

Remarks about the measurements can be noted, measurements can be saved and read into again.

The Pro-Version additionally includes frequency analysis for both, the unweighted vibration signal and the signal weighted acc. to considerations concerning occupational health. This way, responsible components are quickly detected and vibration causes are eliminated purposefully.

Technical Data — Software Module - InnoMeter HVM 20283®

	InnoMeter HVM 20283 Pro®	InnoMeter HVM 2631®
Signal Processing		
Filter	W_m filter acc. to the standard	
Measurand, Unit	Vibration acceleration in m/s², vibration velocity in mm/s	
Characteristic value	measurement of Interval rms value	
Measurement duration	Adjustable 1 s .. 1 day	
Graphical Presentation		
Numeric Display	5 digits: 0.0001 .. 99999	
Refresh	1.. 4 times per second *	
Status Indicators	Sensor, measuring channel, measurand, parameter, gain, underload, overload	
Data Acquisition, Storage and Presentation		
Measurement Modes	- Vibration measurement acc. to ISO 20283-5:2016 - Evaluation acc. to class A, B, or C	
Measurement	- User guide, choice of the measurement mode - Indication of elapsed and remaining measurement duration - Indication of the interval rms value for all axes, Indication of the vibration total value	
Data Storage	- Saving up to 100000 measurements - Indication of measurement mode, selected parameters as well as a verbally expressed assessment (good, acceptable, bad) - Integrated calculation and indication of the admissible exposure duration - Indication of detailed data for the marked measurement - For each measurement, remarks can be noted - Save and reload measured values in CSV format - Printing a report about the meausrement, individual report examples can be configured	
Frequency Analysis	- Separate analysis for each measurement - Analysis already carried out while measuring - Analysis for each measurement is saved - Frequency resolution 1 Hz - Automatic amplitude recognition - Zooming and scaling	-
Event Annunciators		
Display	Display of total vibration value as well as evaluation of single measurement in traffic light colors	
Radio Switch	Binary signaling of single measurement's evaluation (good/bad)	
Digital Output	Binary signaling of single measurement's evaluation (good/bad)	
E-Mail	Transfer of total vibration value as well as evaluation of single measurement	
Miscellaneous		
Available as a Kit	VMSet-16	
General Functions	module is cloneable	

* Centrally managed in InnoMaster

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