

# Clarification of the latest revision of the HSE vibration FAQ

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## 1) Must I continually monitor workers' exposure to vibration?

- There is no legal requirement to continually monitor in order to comply with the Regulation on the Control of Vibration at work Act 2015. However lawyers defending Civil Liability Claims against employers find monitoring data invaluable.
- The FAQ states *"...a period of monitoring to understand how long workers use particular tools in a typical day or week may be necessary – if it helps you to do your risk assessment"*.
- *"Your focus can shift to investigating, and taking, practical steps to reduce the exposure and the risks"*. This is supported by the Reactec online Analytics which automates the compilation of data in easy to use reports on the levels and source of exposure. This data enables employers to make data driven decisions which support effective controls and risk reduction plans

## 2) So I've stopped continual monitoring. Now what?

- While the question asked suggests there is no need for continual monitoring. The answer clearly advises how monitoring can be used to drive reduction of the exposure risk. *"It's likely that you can put your monitoring data to some use. It may give you enough information to decide what individuals or groups of workers are at risk from vibration, either routinely or on an intermittent basis". "Take positive action to reduce the exposure and the risks – eg change the work process to avoid the need to use hand tools, modify the work to improve ergonomics, change to better tools with lower vibration and good ergonomic design, maintain and look after the tools and consumables and train your workers. Make sure the action you take results in real changes – monitor your systems and make sure work instructions are being followed"*. The comprehensive yet granular information provided within the Reactec Analytics Platform from HAVwear monitoring data provides a far greater insight into what is needed to develop controls and validate their effectiveness.

## 3) I'm using monitoring to make sure my workers keep below the Exposure Limit. Isn't that sensible?

- Reactec promote strongly the same view as the answer to Q3, ie monitoring should not be used to work an employee to the limit. Rather Reactec customers are encouraged to use the capability of changeable thresholds to reduce limits and the power of the Analytics exposure reports to develop effective controls

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## 4) Why and when might it be helpful to have on-going monitoring?

- Reactec is unique in the ability for employers to set restricted limits and therefore address the guidance given in answering Q4

## 5) Our insurance company expects us to keep exposure records – why?

Many Reactec customers have been able to defend civil liability claims more robustly with the evidence gained from continuous monitoring. Your Insurance company can advise best if an individual's actual exposure will be a more effective defence to an individual claim than generic risk assessments and collective controls. Reactec's experience from supporting customers defending claims is a defence requires evidence of controls resulted in levels of exposure to an individual were ALARP.

## 6) What about the 'tool timers' and 'vibration meters' that can be bought?

The HAVwear can function as a "tool timer" and calculate exposure points in accordance with HSE guidance and the ISO standard detailing how to combine exposure from multiple tool use sessions. In the tool timer mode the HAVwear uses a static assumed vibration level for the tool.

The HAVwear also has a unique ability to determine the real-time vibration magnitude experienced by the wearer during tool use which Q6 advises most tool timers are unable to do. This information can be viewed online to compare the risk based on static data with that based on real-time data to further improve protection by identifying the unexpected risks from tool misuse, tool degradation or operator poor skill.

The Control of Vibration at Work Regulations 2005 requires an employer to carry out a suitable and sufficient assessment of the risk to health and safety of employees arising from exposure to vibration at work. Where an exposure action value is likely to be exceeded, the employer must reduce that exposure to the lowest reasonably practicable level. Such a risk assessment **may require** the measurement of a tool's vibration but only if an appropriate and relevant source of vibration data is not available.

Sources of vibration data that may be used in a risk assessment process may include manufacturer's data, OPERC, HSE guidelines. The responsibility lies with the duty holder (the employer) to determine that the vibration data used in a risk assessment is suitable i.e. that it reflects the probable magnitude of the vibration corresponding to the equipment used in the particular working conditions.

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## 7) Do hand-arm vibration measurements need to be taken “on the tool”? (NEW)

Yes, assuming the term “hand-arm vibration measurement” refers to the measurement of a tool's vibration magnitude taken in accordance with ISO5349 to determine a level of vibration on the grip point of a tool, which is likely to give rise to the risk of developing Hand Arm Vibration Syndrome.

The HAVwear is not designed to measure a tool's vibration magnitude emitted at the grip point and will give erroneous data if used in this way. The HAVwear is designed to assess the level of vibration on a tool user's wrist using the key mathematics of both ISO5349 and ISO8041. Reactec have developed a sophisticated compensation process such that the vibration magnitude determined by the HAVwear on the wrist correlates very strongly with an ISO5349 measurement taken on the tool by an ISO5349 compliant reference instrument. Reactec uses patented algorithms to ensure the HAVwear data is comparable with the vibrations emitted by the tool which are harmful to a tool user.

It should be noted that the HSE statement “There is currently no wrist or glove mounted device which measures vibration suitable for use in a vibration risk assessment” is purely an assumed view and not an assessed view. The HSE laboratories have not carried out evaluations of the HAVwear. Reactec have produced a white paper to detail their internal evaluations and have secured the services of the Institute of Occupational medicine to carry out an independent study.

## 8) I want to use a ‘tool timer’ monitoring system; does it have to be mounted on the tool? (NEW)

*“No - The location of a time monitoring system can be on or off the tool as long as the following criteria can be achieved:*

- it is capable of logging all of the time each tool is in use and the individual's total vibration exposure*
- the system estimates vibration exposure using vibration magnitude data from a reliable source that gives representative data of the tool, handle or workpiece in use”.*

Extensive validation of HAVwear has been undertaken to show that HAVwear is capable of logging all of the time each tool is in use and an individual's total vibration exposure. The system enables the duty holder to decide on a static vibration magnitude that gives representative data of the tool, handle or workpiece in use and additionally provides a real-time determination of vibration to give a check on the suitability of the assumed value.

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## Summary

### Key points

- Risk assessments do not require tools to be measured to ISO5349 to determine a tools vibration magnitude providing a representative value can be identified from a credible source.
- The Reactec White Paper demonstrates HAVwear's ability to assess the vibration in use.
- HAVwear provides the traditional assessment method based on a static tool vibration level in addition to one based on the vibration sensed in use to identify previously unknown risks.
- Risk assessments do not start and stop with trigger times and vibration numbers – it is an involved process of planning and estimating risk through understanding the actual risk faced to develop then monitor the effectiveness of controls to reduce risk.

Reactec do not position the HAVwear as a tool which in isolation can carry out a risk assessment based on the sensed vibration magnitude and the resulting data. Risk assessment requires careful consideration of all extenuating factors such as employee wellbeing as determined through occupational health screening and detailed process understanding to determine if the activities being assessed are a clear realisation of what will actually be undertaken. No tool in itself can bring this knowledge.

Reactec recommend the use of HAVwear with static tool vibration data in developing an initial risk level. Sensed vibration data is additional information that gives an extremely representative evaluation as to whether specific tasks by specific people give risk materially greater than the estimated risk. This allows controls over previously hidden risks.