

Hand Arm Vibration Guide



CRP
GROUP

HIRE SOLUTIONS

Don't lose touch

*'Hand Arm Vibration Syndrome' can permanently stop blood flowing to your fingers.
Keep your senses.*

What is Hand Arm Vibration?

Hand Arm Vibration Syndrome (HAVS) is a condition that affects people who regularly use vibratory equipment. It is estimated by the Health and Safety Executive that up to 2 million people are exposed to the risks of HAVS throughout the UK in various industries such as construction, utilities, engineering, landscaping and manufacturing.

Hand Arm Vibration Syndrome causes damage to nerves, blood vessels and joints of the hand, wrist and arm. This can cause extreme pain and distress to sufferers - especially in cold weather conditions. A loss of dexterity and feeling in the hands can also be expected - meaning that simple daily tasks become impossible.

Hand Arm Vibration can be prevented, providing the operator and their employer take the appropriate early steps to reduce the risks of over exposure to vibration. Once Hand Arm Vibration Syndrome has been onset it is impossible to cure. It is therefore essential that individuals know the risks and employers take the preventative measures required to protect their employees from the damaging effects of HAVS.

Defend against HAVS

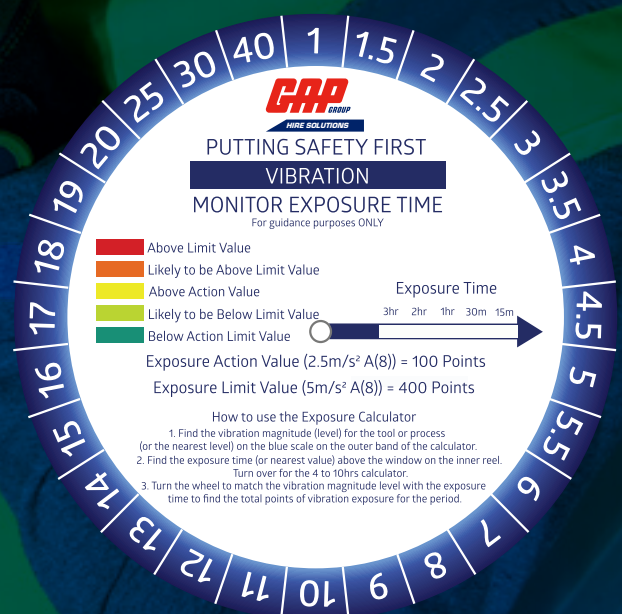
There are some key elements to note when using vibratory power tools which many people either overlook or simply do not know. Your health and wellbeing should always be the number one priority - never use a tool in the knowledge that you risk overexposing yourself or your employees to the damaging effects of HAVS. GAP recommends taking the following precautions to help keep you safe:

- The greatest danger from Hand Arm Vibration comes when the operator is cold and wet. This will restrict blood flow to the hands, greatly increasing the risk of HAVS. Ensure that your body (not just your hands) is kept dry and comfortable.
- Gloves keep hands warm, helping stimulate a healthy blood flow. Do not use tools without them and ensure you always select the correct PPE.
- Always use the right tool for the job. If the tool is struggling to do the job then the chances are the operator is exposed to excessive vibration. Where applicable, always go for a larger tool that will complete the task required with ease.
- Ensure tools are maintained properly and have all relevant paperwork and safety certificates upon hire. If you have any concerns over excessive vibration **cease using the tool immediatly**. Your health is not worth risking at the expense of a quick job.
- Do not apply excessive pressure to a tool. This can increase vibration significantly and there is also a chance that the tool will slip and cause injury.
- When using any tool the operator should ensure a comfortable and relaxed grip. Never grip a tool too tightly as this will increase blood pressure around the hands.
- When using power tools it is crucial the operator takes regular breaks from using power tools. This will allow blood to flow back into the hands after sustained use.
- Smoking reduces blood circulation, which can accelerate the onset of HAVS. By quitting, you reduce the damage of over exposure to HAV's.

Exposure Calculator

To help in your risk assessment our HAV Guide can be used in conjunction with our exposure calculator which converts vibration levels into HSE exposure points at defined times, thereby helping you plan and manage daily exposure.

If you require an exposure calculator, or would like further information, please contact our SHE department by emailing: SHEadmin@gap-group.co.uk



Should you experience the symptoms of HAVS consult your supervisor immediately and report it to the Occupational Health Department.

Reactec HAVWEAR- Personal HAV Protection

- HAVWEAR can assist employees and employers to monitor exposure to HAV.
- Dual ability to select either personal measured vibration of the wrist or pre-defined tool vibration in conjunction with tool tags.
- Real-time calculation and display of HSE exposure points.
- Real time wrist vibration experienced by the wearer is used to calculate personal exposure points.
- Operator alerted when personal Exposure Action Value (EAV) and Exposure Limit Value (ELV) are being exceeded.



HAVWEAR

Personal HAV Protection

REACTEC

INFORM : PROTECT : DEPLOY

The Components – What you need

Tool Label (pre-defined tool vibration mode only):

- The colour coded labels are small, extremely rugged components attached to each tool with vibration exposure.
- The Tool Label acts as an extremely accurate indicator to which the HAVWEAR device will communicate.

HAVWEAR:

- HAVWEAR devices are attached to a wrist mount at the start of each shift.
- Where applicable, the user will press the side button that will initiate communication of any of the operators tools that contain tool tags.
- The HAVWEAR device will show a live view of the operating tool id, HAV exposure levels and the operator id - ensuring that there can be no errors in the HAV reports.

Base Station:

- Each Base Station can accommodate up to 15 HAVWEAR modules.
- The HAVWEAR unit will charge fully in 15 minutes when connected.
- Before going on hire/receiving unit ensure the memory card **is blank** and no previous data is stored.
- The Base Station can transmit wireless - removing the requirement for a hardwired internet connection.

Swipe Cards & Data Download:

- Each operator has a swipe card containing personal details (name, NI/worker ID, photo (if required) & details any exposure limitations for maximum risk users.
- Each operator swipes in at the start of their shift & takes any HAVWEAR for the duration of their shift.
- At the end of the day the employee returns the HAVWEAR to the base station & data is downloaded.

Reactec HAVmeter - Complete Solution to HAV

- HAVmeter can assist employees and employers to monitor exposure to HAV.
- The meter records the amount of time an employee is exposed to vibration, alongside the level of vibration generated by the equipment used. At the end of the day, the information is downloaded and the data analysed.
- For high risk employees or those with existing signs of HAVS, we can customise their maximum exposure to limit risk.
- All GAP Plant & Tool depots are able to provide the full HAVmeter solution to customers nationwide, on both our own tools and the customers tools.
- Each GAP depot has been fully trained by Reactec allowing us to program and install in a fast and efficient manner.



HAVMETER
The complete solution to HAV.

REACTEC

INFORM : PROTECT : DEPLOY

The Components – What you need

Tool Tag:

- The Green, Amber and Red colour coded tags are small, extremely rugged components attached to each tool with vibration exposure.
- The Tool Tag acts as a magnetic base to which the HAVmeter is attached when working with the tool.

HAVmeter:

- Small durable device carried by the operator throughout their shift.
- No buttons/switches, device very rugged. Avoids time wasted with inputs from operator.
- HAVmeter is the size of a pager and attaches magnetically to the Tool Tag, displaying the HAV exposure and alerting the operator when reaching maximum limits.

Base Station:

- Each Base Station can accommodate up to 8 HAVmeters.
- When the HAVmeter is in the Base Station, it will charge whilst downloading the exposure information onto a memory card.
- Before going on hire/receiving unit ensure the memory card **is blank** and no previous data is stored.

Swipe Cards & Data Download:

- Each operator has a swipe card containing personal details (name, NI/worker ID, photo (if required) & details any exposure limitations for maximum risk users.
- Each operator swipes in at the start of their shift & takes any HAVmeter for the duration of their shift.
- At the end of the day the employee returns the HAVmeter to the base station & data is downloaded.
- The memory card from the base station is taken out and put into a PC or Laptop to enable detailed viewing of the data.



Standard Product Supplied

Item Number	Item	Manufacturer Model	HAV's Rating M/s2	Sound Level dB(a)	Weight kg
AT005	Chipping Hammer - Air	Atlas Copco TEX05PE	3.5	105.0	6.0
AT012	Rock Drill - Air H/D 25kg	MacDonald 2316 VR	13.0	105.0	6.5
AT021	Impact Wrench - Air 1/2"	CP749	6.8	107.0	2.5
AT046	Breaker - Air 28kg Anti-Vib	Sullair MK250	3.2	107.0	25.0
AT057	Breaker - Air 34kg Anti-Vib	Sullair MK31+	4.6	11.0	32.6
AT061	Chipping Hammer - Air Anti-Vib	Atlas Copco TEX05PE	3.5	105.0	6.0
AT063	Demo Hammer -Air 13kg Anti-Vib	Atlas Copco TEX12PE	5.4	105.0	12.0
CP001	Rammer BS52 - Pet	Wacker BS52Y	10.0	108.0	62.0
CP002	Rammer BS600 - Pet	Wacker BS600	15.0	108.0	63.0
CP006	Plate Compactor 20x24 - Pet	Wacker WP1550A	4.5	97.0	88.0
CP012	Plate Compactor F/R - 2440 Die	Wacker DPU2440	7.0	93.0	156.0
CP018	Plate Compactor 14 x 22 - Pet	Wacker VP1135A	2.8	93.0	62.0
CP019	Rammer BS52Y - Pet	Wacker BS52Y	10.0	108.0	62.0
CP021	Plate Compactor F/R - 2540 Die	Wacker DPU2540 LV	3.1	94.0	160.0
CP025	Plate Compactor 12x22 - Pet	Wacker VP1030A	4.4	88.0	52.0
CP027	Plate Compactor 14" C/W Water	Wacker WP1135A	4.5	97.0	60.0
DCOR	Diamond Drill - Core	Hilti DD110D	N/A	N/A	N/A
ET002	Drill - Percussion 13mm (1/2)	Makita HP1640	19.0	103.0	2.0
ET008	Drill - Cordless 3/8" 12v	Makita 8271D	10.5	90.0	1.6
ET013	Screwdriver Cordless & Charger	Makita DF030D	2.5	80.0	1.4
ET016	Road Breaker 28kg Ele	Hilti TE3000AVR	7.0	105.0	29.9
ET020	Drill - Rotary Hammer 4kg	Hilti TE30AVR	12.0	101.0	4.2
ET021	Drill - Rotary Hammer 6kg	Hilti TE50 AVR	11.4	104.0	5.8
ET022	Drill - Rotary Hammer 8kg	Hilti TE70 ATC	22.0	102.0	8.3
ET023	Drill - Rotary Hammer 10kg	Hilti TE80 ATC	8.8	102.0	9.7
ET029	Angle Grinder 4"/5"	Makita 9558NB	8.5	97.0	1.6
ET073	Resin Mixer - Hand Held	Makita UT120	2.5	94.0	5.0
ET074	Impact Wrench - 1/2" Ele	Makita TW0200	8.5	104.0	2.2
ET077	Resin Mixer - Slow Speed Drill	Makita UT120	2.5	94.0	5.0
ET082	Drill - Hammer 36v Cordless	Makita BHR261RDE	13.5	102.0	4.5
ET084	Drill - 24v Cordless	Makita DHP453RFE	7.5	78.0	1.7
ET092	Drill - 18v Cordless	Hilti TE6	9.0	88.0	4.0



Alternative Product Supplied

Item Number	Item	Manufacturer Model	HAV's Rating M/s2	Sound Level dB(a)	Weight kg
AT005	Chipping Hammer - Air	Sullair SK5S	7.2	95.1	5.1
AT012	Rock Drill - Air H/D 25kg	N/A	N/A	N/A	N/A
AT021	Impact Wrench - Air 1/2"	Universal UT8415	5.1	103	10.3
AT046	Breaker - Air 28kg Anti-Vib	Atlas Copco TEX28PE	3.0	109	30
AT057	Breaker - Air 34kg Anti-Vib	Atlas Copco TEX33PE	3.8	111	37.1
AT061	Chipping Hammer - Air Anti-Vib	Sullair SK5S	7.2	95.1	5.1
AT063	Demo Hammer -Air 13kg Anti-Vib	Sullair SK12A	9.2	107	14.4
CP001	Rammer BS52 - Pet	N/A	N/A	N/A	N/A
CP002	Rammer BS600 - Pet	N/A	N/A	N/A	N/A
CP006	Plate Compactor 20x24 - Pet	Belle PCX500	2.0	107	88
CP012	Plate Compactor F/R - 2440 Die	N/A	N/A	N/A	N/A
CP018	Plate Compactor 14 x 22 - Pet	Belle PCX350	4.5	107	82
CP019	Rammer BS52Y - Pet	N/A	N/A	N/A	N/A
CP021	Plate Compactor F/R - 2540 Die	N/A	N/A	N/A	N/A
CP025	Plate Compactor 12x22 - Pet	Belle PCLX310	3.3	107	53
CP027	Plate Compactor 14" C/W Water	Belle PCX350	4.5	107	82
DCOR	Diamond Drill - Core	Maikta DBM080	N/A	N/A	N/A
ET002	Drill - Percussion 13mm (1/2)	Hilti UH700	14.2	98	2.6
ET008	Drill - Cordless 3/8" 12v	Hilti SF22-A	2.5	86	3.3
ET013	Screwdriver Cordless & Charger	Makita BDF458	2.5	70	2.3
ET016	Road Breaker 28kg Ele	Makita HM1810	10.6	107	31.5
ET020	Drill - Rotary Hammer 4kg	Makita HR3210C	10.0	100	4.9
ET021	Drill - Rotary Hammer 6kg	Makita HR4000C	6.0	106	6.2
ET022	Drill - Rotary Hammer 8kg	Makita HR4501C	16.0	105	7.8
ET023	Drill - Rotary Hammer 10kg	Makita HR5211C	12.5	111	11.6
ET029	Angle Grinder 4"/5"	Hilti DAG125-S	5.9	90	2.2
ET073	Resin Mixer - Hand Held	Refina MM19/2	1.9	71	3.2
ET074	Impact Wrench - 1/2" Ele	Makita TW0350	11.5	93	2.9
ET077	Resin Mixer - Slow Speed Drill	Refina MM19/2	1.9	71	3.2
ET082	Drill - Hammer 36v Cordless	Hilti TE6-A36	9.0	99	4
ET084	Drill - 24v Cordless	Hilti TE4 -A22	11.0	99	4.1
ET092	Drill - 18v Cordless	Makita BTS145	12.0	104	1.3



Standard Product Supplied

Item Number	Item	Manufacturer Model	HAV's Rating M/s ²	Sound Level dB(a)	Weight kg
ET104	Demo Hammer 7kg - TE706 Avr	Hilti TE706 AVR	6.6	87.0	7.9
ET127	Impact Driver - Cordless	Makita BTD146	15.5	104.0	1.5
ET129	Impact Wrench - 1/2" 18v	Makita BTW070	8.0	102.0	1.5
FG011	Floor Planer - 8" Petrol	SPE BEF200-4	8.2	101.3	49.0
GM005	Brushcutter - 2 Stroke	Stihl FS410C	2.3	109.0	8.5
GM007	Hedge Trimmer - 2 Stroke	Stihl HS81T	2.5	104.0	5.0
GM019	Garden Vac - Blower	Stihl BG65	9.0	101.0	4.1
GM056	Hedge Trimmer - Long Reach Pet	Stihl HL95	5.2	102.0	6.9
GM065	Garden Blower - Stihl BR550	Stihl BR550	2.1	105.0	9.9
GM068	Kombi - Brushcutter Attachment	Stihl KM100	4.9	101.0	90.0
GM069	Kombi - Hedge Trimmer Att	Stihl KM100	4.9	101.0	90.0
GM070	Kombi Engine	Stihl KM100	4.9	101.0	90.0
HB009	Breaker - Cobra Two Stroke	Atlas Copco Cobra Pro	4.3	109.0	25.0
HB011	Breaker - Hydra 28kg Low Vib	JCB HM25LV	1.6	108.0	26.0
HB015	Breaker - Hydraulic 28kg	JCB HM25	7.0	108.0	25.0
SS002	Circular Saw - 9"	Makita 5703RK	3.5	93.0	5.2
SS003	Jigsaw	Makita 4350T	7.5	94.0	2.5
SS011	Cut Off Saw - 12" Pet	Stihl TS410	3.9	109.0	9.4
SS013	Cut Off Saw - 14" Pet	Stihl TS420	3.0	109.0	9.6
SS017	Chainsaw - 17" Two Stroke	Stihl MS390	5.9	111.0	6.9
SS023	Compound Mitre Saw - 8"	Makita MLS100	2.5	105.0	14.7
SS039	Floor Saw - 14" Petrol	Norton Clipper C71	6.1	105.0	92.0
SS039	Floor Saw - 14" Petrol	Norton Clipper C71	6.1	105.0	92.0
SS041	Floor Saw - 18" Petrol	Norton Clipper C99	5.7	105.0	100.0
SS042	Floor Saw - 18" Diesel	Norton Clipper CS451	2.4	105.0	115.0
SS086	Chainsaw - 25" 2 Stroke	Stihl MS391	4.4	105.0	6.2
SS088	Chainsaw - Pole	Stihl HT101	5.5	89.0	7.6
SS109	Chainsaw - 14" Two Stroke	Stihl MS171	4.1	109.0	4.3
SS110	Chainsaw - 15" Two Stroke	Stihl MS251	3.9	112.0	5.2
SS118	Chainsaw - 16" 2 Stroke	Stihl MS251	3.9	112.0	5.2



Alternative Product Supplied

Item Number	Item	Manufacturer Model	HAV's Rating M/s2	Sound Level dB(a)	Weight kg
ET104	Demo Hammer 7kg - TE706 Avr	N/A	N/A	N/A	N/A
ET127	Impact Driver - Cordless	Makita BTD147	14.5	106	1.5
ET129	Impact Wrench - 1/2" 18v	Makita BTW201	5.5	106	1.7
FG011	Floor Planer - 8" Petrol	N/A	N/A	N/A	N/A
GM005	Brushcutter - 2 Stroke	Stihl FS460	2.3	110	8.6
GM007	Hedge Trimmer - 2 Stroke	Stihl HS82R	3.0	106	5.7
GM019	Garden Vac - Blower	Stihl BG86C	1.7	103	4.5
GM056	Hedge Trimmer - Long Reach Pet	Stihl HL100	4.6	101	6.9
GM065	Garden Blower - Stihl BR550	N/A	N/A	N/A	N/A
GM068	Kombi - Brushcutter Attachment	Stihl KM130	5.8	106	6.7
GM069	Kombi - Hedge Trimmer Att	Stihl KM130	5.8	106	6.7
GM070	Kombi Engine	Stihl KM130	5.8	106	6.7
HB009	Breaker - Cobra Two Stroke	Wacker BH55RW	4.5	101	2.5
HB011	Breaker - Hydra 28kg Low Vib	JCB HM25	7.0	109	2.5
HB015	Breaker - Hydraulic 28kg	JCB HM25LV	1.6	108	26
		Stanley BR50	6.4	104	25
SS002	Circular Saw - 9"	Makita 5704RK	2.4	93	4.9
SS003	Jigsaw	Makita 4350CT	8.0	95	2.5
SS011	Cut Off Saw - 12" Pet	N/A	N/A	N/A	N/A
SS013	Cut Off Saw - 14" Pet	Stihl TS700	6.6	111	11.6
SS017	Chainsaw - 17" Two Stroke	Stihl MS280	3.4	110	6.3
SS023	Compound Mitre Saw - 8"	Makita LS1013	2.5	101	2.3
SS039	Floor Saw - 14" Petrol	Wacker BSF100	3.5	94	54
SS039	Floor Saw - 14" Petrol	Wacker BSF100	3.5	94	54
SS041	Floor Saw - 18" Petrol	Belle CFS450	8.0	106	184
SS042	Floor Saw - 18" Diesel	Belle CFS450	8.0	106	184
SS086	Chainsaw - 25" 2 Stroke	Stihl MS661	4.0	118	7.5
SS088	Chainsaw - Pole	Stihl HT131	4.7	106	7.8
SS109	Chainsaw - 14" Two Stroke	Stihl MS251	3.9	106	7.8
SS110	Chainsaw - 15" Two Stroke	Stihl MS231	3.9	106	7.8
SS118	Chainsaw - 16" 2 Stroke	Stihl MS231	3.9	106	7.8



HIRE SOLUTIONS



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Disclaimer: All ratings included in this guide are for reference only and every effort has been made to make the information as accurate as possible at the time of print. GAP Group Ltd can not accept any liability for any errors or misleading claims in this guide. For the latest information on HAV levels please contact the relevant manufacturer for the latest figures or visit the HSE website for further information.

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