



Hand Arm Vibration

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10% of employees exposed at the exposure action level will contract HAVS within **12** years or within **6** years if exposed to the exposure limit level. (HSE)

“Exposure below the Action Value cannot be considered safe...” (HSE)





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Select methods to remove HAVS



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“Buy Smooth” to ensure low vibration tools are selected



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TOOL/EQUIPMENT	VIBRATION (M/S ²)	NAME OF PERSON		SITE																	DATE	Points Value
		Time to reach 100 points	Time to reach 400 points	DURATION USED (Minutes)																		
				Minutes	5	10	15	20	25	30	35	40	45	50	55	60	70	80	90	100		
		Minutes	5	10	15	20	25	30	35	40	45	50	55	60	70	80	90	100	110	120		
Pneumatic Breaker (medium)	22.6	6	23	85	170	256	341	426														
Pneumatic Breaker (large)	18.4	9	35	56	113	169	226	282	339	395	452											
Scabblers (3 head)	18.0	9	37	54	108	162	216	270	324	378	432											
Jumping Jack Rammer	17.3	10	40	50	100	150	200	250	300	349	400											
Hammer Drill	16.4	11	45	45	90	135	179	224	269	314	359	404										
Breaker (Hilti TE 104)	14.9	14	54	37	74	111	148	185	222	259	296	333	370	407								
Flat Plate Wacker (sets)	13.0	18	71	28	56	85	113	141	169	197	226	254	282	310	338	395	451					
Hammer Drill (Hilti TE5)	13.0	18	71	28	56	85	113	141	169	197	226	254	282	310	338	395	451					
Cordless Drill	13.0	18	71	28	56	85	113	141	169	197	226	254	282	310	338	395	451					
Pneumatic Breaker (small)	12.5	19	77	26	52	78	104	130	156	182	209	235	261	287	313	365	417					
Cord Screw driver	12.0	21	83	24	48	72	96	120	144	168	192	216	240	264	288	336	384	432				
Drill Breaker	11.3	23	94	21	43	64	85	106	128	149	170	192	213	234	256	298	341	383	426			
Drills (General)	11.0	25	99	20	40	61	81	101	121	141	161	182	202	222	242	283	323	363	404			
Stihl Saw (TS 400)	10.8	26	103	19	39	58	78	97	117	136	156	175	195	214	233	272	311	350	389	428		
Magic Screed	9.9	31	122	16	33	49	65	82	98	114	131	147	163	180	196	229	262	294	327	360	392	
Angle Grinder (5" Makita)	8.3	44	174	11	23	34	46	57	69	80	92	103	115	126	138	161	184	207	230	253	276	
Wet Core (2" into concrete)	7.9	48	192	10	21	31	42	52	62	73	83	94	104	115	125	146	167	187	208	229	250	
Jigsaw	7.1	60	238	8	17	25	34	42	50	59	67	76	84	92	101	118	135	151	168	185	202	
Poker	7.0	61	245	8	16	25	33	41	49	57	65	74	82	90	98	114	131	147	163	180	196	
Stihl Saw (TS 410)	7.0	61	245	8	16	25	33	41	49	57	65	74	82	90	98	114	131	147	163	180	196	
Bosch Jigsaw	6.5	71	284	7	14	21	28	35	42	49	56	63	70	78	85	99	113	127	141	153	169	
Chainsaw	6.1	81	322	6	12	19	25	31	37	43	50	56	62	68	74	87	99	112	124	137	149	
Bosch Planer	5.5	99	397	5	10	15	20	25	30	35	40	45	50	56	61	71	81	91	101	111	121	
Angle Grinder (9" Makita)	5.4	103	412	5	10	15	19	24	29	34	39	44	49	54	58	68	78	88	97	107	117	
Power Float (900mm)	5.0	120	480	4	8	13	17	21	25	29	33	38	42	46	50	58	67	75	83	92	100	
Bosch Sander	4.5	148	693	3	7	10	14	17	20	24	27	30	34	37	41	47	54	61	68	74	81	
Poker - 57mm	4.0	188	>	3	5	8	11	13	16	19	21	24	27	29	32	37	43	48	53	59	64	
Makita 9"Circ Saw	4.0	188	>	3	5	8	11	13	16	19	21	24	27	29	32	37	43	48	53	59	64	
Power Float (600mm)	3.8	208	>	2	5	7	10	12	14	17	19	22	24	26	29	34	39	43	48	53	58	
Nail Gun (2 nd Fix)	3.0	333	>	2	3	5	6	8	9	11	12	14	15	17	18	21	24	27	30	33	36	
Nail Gun (1 st Fix)	2.6	480	>	1	2	3	5	6	7	8	9	10	11	12	14	16	18	20	23	25	27	
Power Saw (Husqma K760)	2.5	480	>	1	2	3	4	5	6	7	8	9	10	11	13	15	17	19	21	23	25	
Hilti DX450 & DX460	2.5	480	>	1	2	3	4	5	6	7	8	9	10	11	13	15	17	19	21	23	25	
Pressure Washer (Taskman)	2.5	480	>	1	2	3	4	5	6	7	8	9	10	11	13	15	17	19	21	23	25	
Mitre Saw	2.5	480	>	1	2	3	4	5	6	7	8	9	10	11	13	15	17	19	21	23	25	
Forward/Reverse Wacker	1.9	480	>	1	1	2	2	3	4	4	5	5	6	7	7	8	10	11	12	13	14	
Other																						

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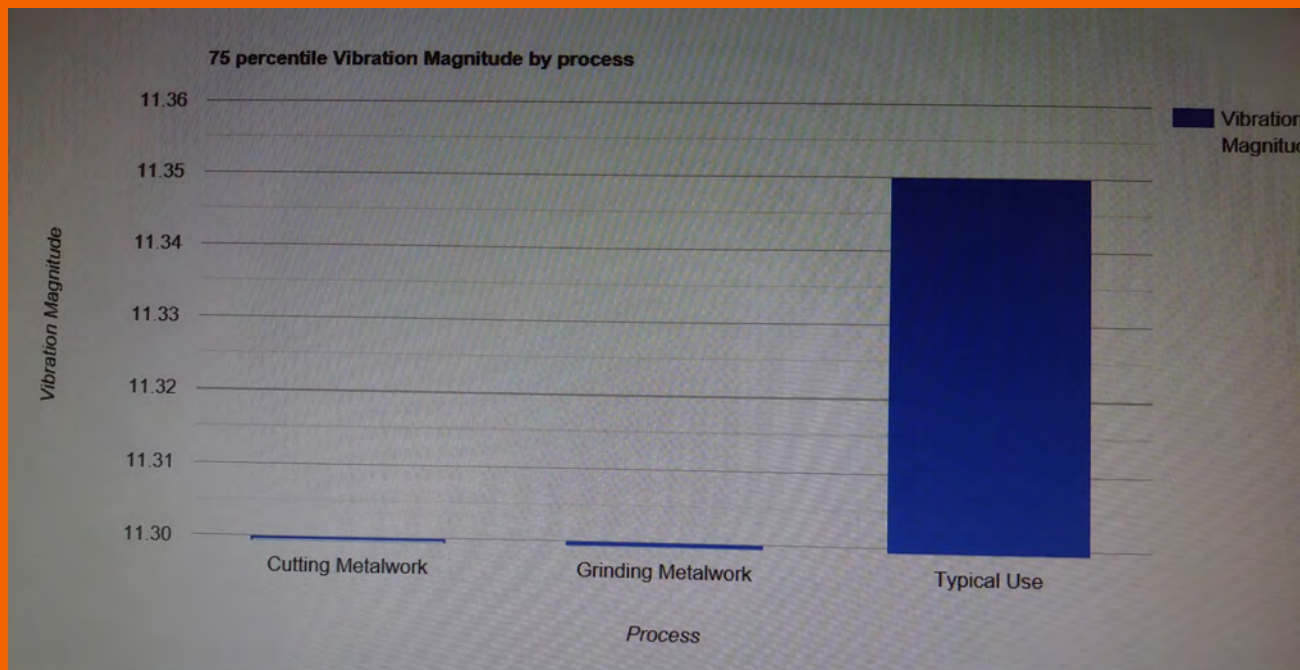


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Live tool test data – Not Manufacturer tool data

Sources of data:

www.thetooladvisor.com





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Live tool test data – Not Manufacturer tool data

Sources of data:

www.operc.com/havtec





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Live test to measure actual vibration exposure



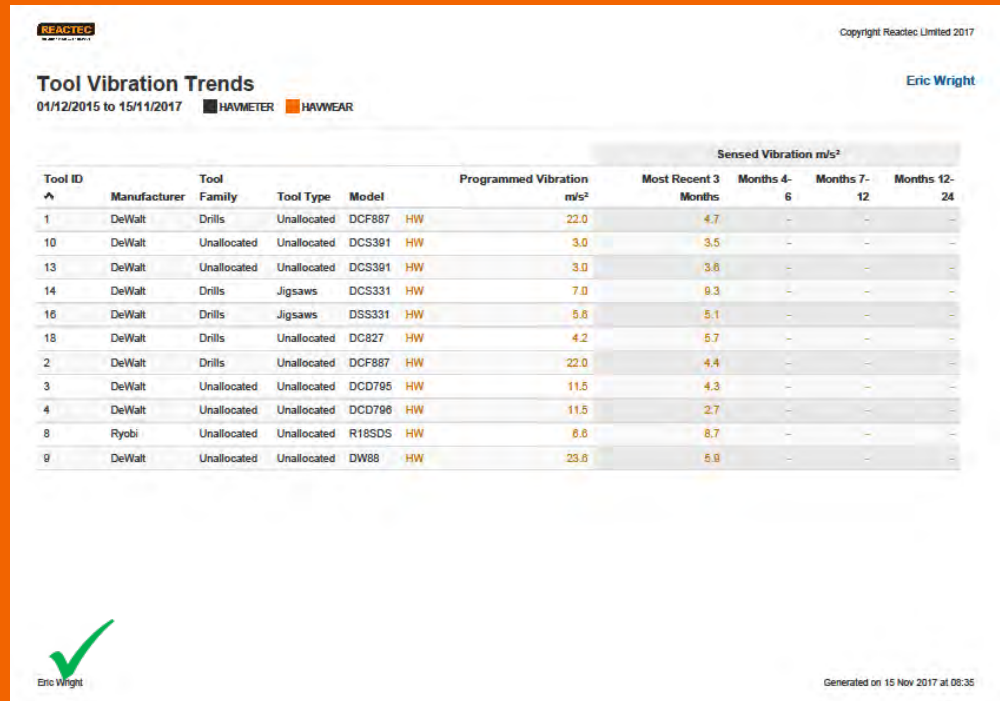


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monitor and record actual trigger time exposure



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Provide occupational health screening for staff identified at risk





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Keep tools and accessories maintained



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Keep tools accessories sharp





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Keep hands warm and dry





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Take regular breaks and massage hands to encourage blood flow and don't grip tool to tight





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What you can do...

- Try and use suitable low vibration tools;
- always use the right tool for each job (to do the job more quickly and expose you to less hand-arm vibration);
- check tools before using them to make sure they have been properly maintained and repaired to avoid increased vibration caused by faults or general wear;
- make sure cutting tools are kept sharp so that they remain efficient;
- reduce the amount of time you use a tool in one go, by doing other jobs in between;





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What you can do...

- avoid gripping or forcing a tool or workpiece more than you have to;
- store tools so that they do not have very cold handles when next used;
- encourage good blood circulation by: keeping warm and dry, eg wear warm waterproof clothing;
- giving up or cutting down on smoking because smoking reduces blood flow; and massaging and exercising your fingers during work breaks;
- report any problems with your hands promptly to your employer or the person who does your health checks;





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Anti vibration gloves...

HSE Statement:

Gloves and warm clothing

Gloves marketed as 'anti-vibration', which aim to isolate the wearer's hands from the effects of vibration, are available commercially. There are several different types, but many are only suitable for certain tasks, they are not particularly effective at reducing the frequency-weighted vibration associated with risk of HAVS and they can increase the vibration at some frequencies. It is not usually possible to assess the vibration reduction provided in use by anti-vibration gloves, so you should not generally rely on them to provide protection from vibration. However, gloves and other warm clothing can be useful to protect vibration-exposed workers from cold, helping to maintain circulation.





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Anti vibration gloves...

BS EN 10819:1996





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AROUND HERE WE ALWAYS:

- Design out the need to use vibrating tools where possible
- 'Buy Smooth' to source low vibrating tools
- Measure actual vibration exposure by live tool testing
- Monitor and record actual trigger time
- Keep tools and accessories maintained
- Keep HAV exposure levels as low as possible
- Monitor health by means of occupational health screening



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Questions

