

TOOLBOX TALK	HAND-ARM VIBRATION B16				
Reason	To protect workers from excessive exposure to hand-arm vibration at work. Prolonged exposure to hand-arm vibration can cause a range of symptoms, known as hand-arm vibration syndrome				
Why	Many workers do not appreciate the possible dangers from vibration				
Outline	This talk covers the effects, sources and steps that can be taken to reduce the risk from vibration				

Effects of vibration

- 1. Prolonged exposure to hand-arm vibration can damage blood vessels, nerves, tendons, ligaments, muscles and bones
- 2. Symptoms include tingling, pins and needles, loss of feeling in the fingers, pain and throbbing in the fingers, loss of manual dexterity, painful joints and in particular pain when the hands warm up after getting cold
- 3. Carpal tunnel syndrome (CTS) is also caused by hand-arm vibration, and causes severe nerve pains in the palm of the hands, which is often worse at night
- 4. The effects of hand-arm vibration are often irreversible, causing sufferers pain & loss of amenity for the rest of their lives
- 5. Victims are often unable to do up buttons, tie shoe laces or undertake many simple tasks
- 6. The symptoms may start as tingling in the hands, but will develop and worsen with continued exposure to vibration

Sources of vibration

- 1. Hand-arm vibration is generated by both rotating and percussive hand-held tools. Some tools (such as hammer drills) are both rotary and percussive.
- 2. We use a number of reinstatement tools that generate significant levels of vibration including:
 - a. Cut-off saws
 - b. Plate compactors
 - c. Trench rammers
 - d. Hydraulic and petrol breakers

How to avoid excessive vibration exposure

- 1. Employers should try to avoid the use of hand-held tools that generate vibration (for example, by using an excavator-mounted breaker rather than a hand-held breaker)
- 2. If it is not possible to avoid using hand-held tools, then low vibration or vibration reduced tools should be selected
- 3. When using vibrating tools, it is important to take regular breaks. If working in a cold environment, warm your hands up and exercise your fingers during breaks
- 4. Use a good technique when using hand-tools do not apply excessive force, let the tool do the work
- 5. Keep hands warm and dry, such as by wearing gloves. However, do not rely on anti-vibration gloves as they have very little effect on vibration
- 6. If you experience any symptoms (such as pins and needles) tell your supervisor
- 7. If you have been given trigger time limits for vibrating tools, do not exceed them

Testing understanding: Suggested questions and discussions

- 1. What vibrating hand-held tools have you used on the sites you worked on?
- 2. What should you do during breaks to reduce the risk of HAVS?
- 3. How can your exposure to hand-arm vibration be reduced?
- 4. What must you do if you think you are experiencing early symptoms of HAVs?

THE LONG-TERM EFFECTS OF EXPOSURE TO VIBRATION CAN BE PERMANENT AND DISABLING. DON'T LET IT HAPPEN TO YOU.

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What the law says

- 1. The Vibration Regulations require you to:
 - a. make sure that risks from vibration are controlled;
 - b. provide information, instruction and training to employees on the risk and the actions being taken to control risk; and
 - c. provide suitable health surveillance.
- 2. The Vibration Regulations include an exposure action value (EAV) and an exposure limit value (ELV) based on a combination of the vibration at the grip point(s) on the equipment or work-piece and the time spent gripping it. The exposure action and limit values are:
 - a. a daily EAV of 2.5 m/s2 A(8) that represents a clear risk requiring management; and
 - b. a daily ELV of 5 m/s2 A(8) that represents a high risk above which employees should not be exposed.

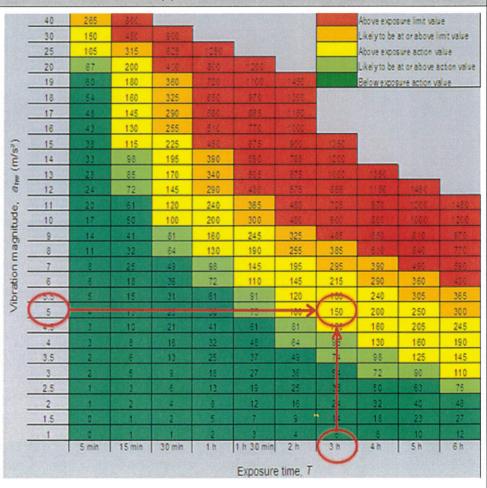
What is the exposure point system? How can I calculate my points?

This table is a 'ready reckoner' for calculating daily vibration exposures. All you need is the vibration magnitude (level) and exposure time. The ready-reckoner covers a range of vibration magnitudes up to 40 m/s2 and a range of exposure times up to 10 hours. The exposures for different combinations of vibration magnitude and exposure time are given in exposure points instead of values in m/s2 A(8). You may find the exposure points easier to work with than the A(8) values:

Exposure points change simply with time: twice the exposure time, twice the number of points;

Exposure points can be added together, for example where a worker is exposed to two or more different sources of vibration in a day;

The exposure action value (2.5 m/s2 A(8)) is equal to 100 points; the exposure limit value (5 m/s2 A(8)) is equal to 400 points.



Using the Ready Reckoner

- 1. Find the vibration magnitude (level) for the tool or process (or the nearest value) on the grey scale on the left of the table.
- 2. Find the exposure time (or the nearest value) on the grey scale across the bottom of the table.
- 3. Find the value in the table that lines up with the magnitude and time. The illustration shows how it works for a magnitude of 5 m/s2 and an exposure time of 3 hours: in this case the exposure corresponds to 150 points.
- 4. Compare the points value with the exposure action and limit values (100 and 400 points respectively). In this example the score of 150 points lies above the exposure action value.

The colour of the square containing the exposure points value tells you whether the exposure exceeds, or is likely to exceed, the exposure action or limit value.

5. If a worker is exposed to more than one tool or process during the day, repeat steps 1-3 for each one, add the points, and compare the total with the exposure action value (100) and the exposure limit value (400).

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What are the vibration magnitudes (level) of the tools you use?

Tool	Brand	Model	Vibration Magnitude (m/s2 r.m.s)	Mins to EAV	Mins to ELV	Exposure Points/Hr
Cut Off Saw	Cut Off Saw Stihl		3.9	197	789	30
Rammer (4 Stroke)	Bomag	BT60/4	8.1	46	183	131
Petrol Plate Compactor (14")	Bomag	BVP10/36	4.3	162	649	37
Petrol Breaker	Atlas Copco	Cobra MK1	2.3	567	1440	11
Hydraulic Breaker	Atlas Copco	LH230E	4.6	142	567	42
Pedestrian Roller Terex		MBR71	5.5	99	397	61

What job roles are at risk? Does my employer carry out monitoring?

1. There is no legal requirement for **continual** monitoring and recording of vibration exposure. What employers must do is decide what workers exposure is likely to be as part of a vibration risk assessment. USS have carried out a period of sample monitoring to help understand how long workers use particular tools in a typical day and those findings are listed below (note these are points per team not points per man)

Job Role / Process	Avg Points / Team	Max Points / Team
Grab Team	143	186
Tarmac Team	144	161
White Team	<10	<10

- 2. The findings in the table above show that our white workers were safely below the EAV on every sampling day. This job role is considered low risk for vibration exposure but workers and managers should use the ready reckoner to assess any large or non-standard works to avoid excessive exposure. The risk assessment for handheld vibrating tools should still be adhered with.
- 3. Survey results for both grab teams and tarmac teams provide results above the EAV for a single man, but below ELV level. These job roles are considered moderate risk. These teams contain at least two team workers and therefore as long as tasks are rotated, as per the risk assessment, then each team members will remain below the EAV.

Health Surveillance

- 1. Employers must provide health surveillance for all employees who, despite action to control the risk, are likely to be regularly exposed above the Exposure Action Value or are considered to be at risk for any other reason. The purpose of health surveillance is to:
 - a. Identify anyone exposed or about to be exposed to hand-arm vibration who may be at particular risk, for example people with blood circulatory diseases such as Raynaud's Disease;
 - b. Identify any vibration-related disease at an early stage in employees regularly exposed to hand-arm vibration;
 - c. Help you prevent disease progression and eventual disability;
 - d. Help people stay in work;
 - e. Check the effectiveness of your vibration control measures.
- 2. It is important that employees understand that the aim of health surveillance is to protect them from developing advanced symptoms of ill health so that they can continue to work. Their understanding and co-operation is of the utmost importance if health surveillance is to be effective.
- 3. If there are particular workers who, following medical advice, have restrictions placed on their vibration exposure, then a daily monitoring system may be introduced to ensure that that restricted level was not being exceeded. A similar system might be introduced for non-standard works involving vibration exposure.

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USSL Risk Assessment

	Risk Assessment No	24		Activity			Guided '		Locations			Works	
Assess	sment Undertaken by M. V	Vatson	A:	ssessment	Date		Jun-18		Review Date		1	/6/19	
	Persons at risk (PAR)	Г	Sever	ity / Harm F	Rating (S)	Risk Ratings			l ikalih	nood (L)			
E	Employees / Contractors	1		injury or no			1	Extremely	unlikely to occur at any				
P	Members of Public	2					2				ed for an i	ncident to o	ccur
٧	Visitors	3											
С	Clients	4	Single se	rious injury	or single de	ath	4			actor may result in an incident			
		5	Multiple d	eaths and o	or serious in		5	Almost ine	vitable that an incident	will result -	Highly like	ly to occur	
45				I. Further c		olerance rating ures are to be p		ace to reduc	e risk. When in place t	the level of	risk should	be re-asse	ssed for
	SIGNIFICANT RISK is			activity. Lo	ok critically a	at ways of reduc	cing the	level of risk	to a more tolerable lev	rel by impro	ving existir	ng control m	easures o
7	by introducing new co	300007-36000	isk is "as lo	ow as reaso	nably practi	cable". If not try	to redu	ce risk furth	er by improving control	I measures	Keep und	der review a	nd continu
10 1	with task/activity, but	with caution			2017	1153 495	9) 		· · · · · · · · · · · · · · · · · · ·				
	Initial Assessm			E will be ut	ilised as a	matter of cour	se duri	ng any worl	ks undertaken Risk Mitigation Me	easures			
em No	Hazard Identification	PAR	S	L	Score		Co	ntrol Measu		s	L	Revised	Risk
***************************************						Consider using	g other	tools or meti	nods or reducing the			Score	Acceptab
1	Contraction of the following diseases caused by regular exposure to HAVS: Vibration White Finger. Carpal Tunnel Syndrome. Permanent painful numbness and tingling in the hands and arms. Painful joints and muscle weakening. Damage to bones in the hands and arms.	E	3	4	12	need for the use of hand-held/hand guided tools Ensure that the hand-held/hand guided tools are suitable for the intended task Ensure that the hand-held/hand guided tools are used only for the conditions for which they are suitable. Ensure that the hand-held/hand guided tools are operated by personnel who are trained to use them Ensure that the hand-held/hand guided tools are maintained throughout their working life in order to sustain their best vibration performance. Attention should be paid to sharpening of tools, ensuring that stihl saw and floor saw blades should be changed when blunt Site supervisors must monitor the use of hand- held/hand guided tools in order to ensure that they are being used correctly Ensure that job rotation is implemented in order to reduce exposure times. Ensure that the hand-held/hand guided tools are used in times specified in the attached guidance. Only use anti-vibration jackhammers during excavation works. All employees must complete the Medical Questionnaire upon recruitment Regular health surveillance for all employees		3	2	6	Yes		
2	Petrol Breaker (Atlas Copco Cobra MK1)	E	3	3	9	good blood cire	to EAV during of hands to culation	: 567, Mins operation ogether in or	to ELV: 1440 der to encourage	3	1	3	Yes
3	Hydraulic Breaker (Atlas Copco LH230E)	E	3	3	9	Rotate work, k 4.6 m/s2, Mins Do not smoke Regularly rub I good blood circ	to EAV during of hands to	: 142, Mins operation ogether in or		3	1	3	Yes
4	Cut Off Saw (Stihl TS410)	E	3	3	9	Rotate work, keep hands and arms warm 3.9 m/s2, Mins to EAV: 197, Mins to ELV: 789 Do not smoke during operation Regularly rub hands together in order to encourage good blood circulation			3	1	3	Yes	
5	Trench Rammer (Bomag BT60/4)	E	3	4	12	good blood cire	to EAV during on hands to culation	: 46, Mins to operation ogether in or	ELV: 183	3	1	3	Yes
6	14* Plate Compactor (Bomag BVP10/36)	E	3	3	9	Actate work, keep hands and arms warm 4.3 m/s2, Mins to EAV: 162, Mins to ELV: 649 Do not smoke during operation Regularly rub hands together in order to encourage good blood circulation			3	1	3	Yes	
7	Single Drum Pedestrian Roller (Terex MBR71)	E	3	4	12	good blood circulation Rotate work, keep hands and arms warm 5.5 m/s2, Mins to EAV: 99, Mins to ELV: 397 Do not smoke during operation Regularly rub hands together in order to encourage				3	1	3	Yes

Safety First



HAV Guidance

Nixon Hire provide the latest tools and equipment to minimise the exposure of Hand and Arm Vibration. We comply with HSE guidance for the Control of vibration at work regulations 2005 and advise customers to use the informative HSE website for additional guidance and advice.

HSE website: http://www.hse.gov.uk/VIBRATION

A helpful tool available is the simple to use calculator which allows the viewer to calculate and plan how the risk of using vibration producing tools will affect the user.

What is Hand-Arm Vibration?

Hand-arm vibration is vibration transmitted into workers' hands and arms. This can come from use of hand-held power tools (such as grinders or road breakers), hand-guided equipment (such as powered lawnmowers or pedestrian controlled floor saws) or by holding materials being worked by hand-fed machines (such as pedestal grinders or forge hammers). Regular and frequent exposure to hand-arm vibration can lead to two forms of permanent ill health known as: hand-arm vibration syndrome (HAVS); and carpal tunnel syndrome (CTS).

What the law says

The Vibration Regulations require you to:

Make sure that risks from vibration are controlled; provide information, instruction and training to employees on the risk and the actions being taken to control risk; and provide suitable health surveillance.

The Vibration Regulations include an exposure action value (EAV) and an exposure limit value (ELV) based on a combination of the vibration at the grip point(s) of the equipment or work-piece and the time spent gripping it. The exposure action and limit values are: a daily EAV of 2.5 m/s represents a clear risk requiring management a daily ELV of 5 m/s represents a high risk above which employees should not be exposed.

How can I control the risks from HAVS?

You can reduce vibration exposure by reducing one or both of the vibration transmitted to the hand and the time spent holding vibrating equipment or work-pieces. As in any operation, training is key to the correct use of equipment to ensure the user does not put themselves at risk through incorrect use. It is the hirer's responsibility to carry out a thorough HAV risk assessment.

These two factors define limits in which a user can use a hand held tool and for the length of time. The Exposure Limit Value is what a tool user can be subjected to in a working day and must never be exceeded. Whilst exceeding this is not prohibited by law, this is the point in which a user will become at risk. This limit is set at 5.0m/s or 400 points. This is set on a typical 8 hour working day.

The **Exposure Action Value** is represented by numeric figures i.e. 2.5m/s or 100 points this is the current limit for EAV should a user be expected to exceed this figure a full risk assessment should be completed. This is a set to specified tasks.

How to use the EAV system

You can obtain the figure relating to EAV by using the table on page 5, which contains product descriptions, makes and models. E.g. Petrol Breaker - Atlas Copco MK1 - 2.3m/s . At this point the length of time required to complete a task needs to be ascertained. For example: 1 hour.

Then by using the coloured table below under the magnitude column you can find the magnitude reading closest to 2.3 m/s. In this example, this is 2.5 m/s. Follow the column along to 1 hour where you will find the number 13. This is the number of points the user will accrue when using an Atlas Copco MK1 for 1 hour.

	40	265	800					NO.	Above li	mit value	0.000000			
	30	150	450	900					the Real Property lies, the Re	be above li	mit value			
	25	105	315	625	1250	AND THE RESERVE		NAME OF TAXABLE PARTY.		be above a	ction value			
	20	67	200	400	800	1200			Below action value					
	16	60	180	380	720	1100	1450	CONTRACTOR OF THE PARTY OF THE						
	18	54	160	325	650	970	1300							
	17	48	145	290	580	865	1150							
	16	43	130	255	510	770	1000							
	15	38	115	225	450	675	900	1350	1000					
	14	33	98	195	390	590	785	1200						
	13	28	85	170	340	505	675	1000	1350	The same				
~ .	12	24	72	145	290	430	575	865	1150	1450				
m/s,	11	20	61	120	240	365	485	725	970	1200	1450			
de.	10	17	50	100	200	300	400	600	800	1000	1200			
magnitude,	9	14	41	61	160	245	325	485	650	810	970			
agin	8	11	32	64	130	190	255	385	510	640	770			
Ē.	7	8	25	49	98	145	195	295	390	450	590			
oil -	6	6	18	38	72	110	145	215	290	360	430			
Vibration	5.5	5	15	31	61	91	120	180	240	305	385			
5	5	4	15	25	50	73	100	150	200	250	300			
	4.5	3	10	21	41	61	81	120	160	205	245			
	4	3	- 8	16	32	48	64	96	130	160	190			
	3.5	2	6	13	25	37	49	74	98	125	145			
	3	2	5	9	18	27	36	54	72	90	110			
	2.5	416	3	6	13	19	25	38	50	63	75			
	2		12	1	8	112	15	24	32	40	48			
	1.5	0	115	2	5	7.	9	14	18	23	27			
	1	0	100 libe	15/15/2	2	3	, 4	8	8	10)	12			
	NAME OF THE OWNER, OWNE	5min	15min	30min	1hr	1h30min	2hr	3hr	4hr	5hr	6hr			
					Expo	osure tim	e, T							

Free information on both noise and HAV can be downloaded from the HSE website www.hse.gov.uk

Vibration Guide			
Air Tools	Make Make	Model	Vib.
Air Heavy Duty Breaker	MACDONALD	MACDONALD AIRTOOLS 28S-VR MACDONALD AIRTOOLS 28S-VRT	4.6
Air Heavy Duty Breaker Air Clay Digger / Demolition Pick	MACDONALD MACDONALD	MACDONALD AIR TOOLS DP11VRS	5.2
Air Clay Digger / Demolition Pick	MACDONALD	MACDONALD AIRTOOLS DM11VRS	5.2
Air Hammer Drill	MACDONALD	MACDONALD AIRTOOLS DR4	5.3
Air Hammer Drill	MACDONALD	MACDONALD AIRTOOLS DR4S-VR	5.3
Tunnelling Pick	SULLAIR	SULLAIR SK12	6
Air Hammer Drill	CHICAGO PNEUMATICS	CHICAGO PNEUMATICS CP0009	21.2
Air Clay Digger / Demolition Pick	CHICAGO PNEUMATICS	CHICAGO PNEUMATICS CP0222	22
Breakers, Drills & Screwdrivers	Make ATLAS COPCO	MODEL ATLAS COPCO COBRA MK1	Vib. 2.3
Petrol Breaker Hilti Dx 460 Mx Powder Actuated Tool	HILTI	HILTI DX460 MX	2.5
Hilti Sd 5000 Drywall Screwdriver	HILTI	HILTI SD5000	2.5
Hilti St 1800 Metal Construction Screwdriver	HILTI	HILTI ST1800	2.5
Hilti Te 6-A36-Avr Cordless Rotary Hammer Drill	HILTI	HILTI TE 6-A36-AVR	2.5
Right Angle Drill	MAKITA	MAKITA 6300LR	2.5
Finishing Nailer	PASLODE	PASLODE IM65	2.6
Finishing Nailer	PASLODE	PASLODE IMPULSE IM65 F16	2.6
Framing Nailer	PASLODE	PASLODE IMPULSE IM350	3
Hydraulic Breaker Av	ATLAS COPCO	ATLAS COPCO LH23E	3.3
Hilti Dd 130 Diamond Drilling Tool	HILTI	HILTI DD130M	3.5
Hitti Dd 130 Rig	HILTI	HILTI DD-ST130	3.5
Hitti Ud 30 Universal Drill Hydraulic Breaker Av	HILTI ATLAS COPCO	HILTI UD 30 ATLAS COPCO LH230E	4.6
Hilti Dd 110-D Diamond Core Tool	HILTI	HILTI DD 110-D	5.8
Hitti Dd 130 Diamond Drilling Tool	HILTI	HILTI DD130	6
Hilti Te 1000-Avr Demolition Breaker	HILTI	HILTI TE1000 AVR	6.5
Hilti Te 300-Avr Breaker	HILTI	HILTI TE 300 AVR	7
Hilti Te 3000-Avr Demolition Breaker	HILTI	HILTI TE3000 AVR	7
Hilti Te 60-Atc Combi Hammer	HILTI	HILTI TE60 ATC	7.5
Hilti Te 80-Atc Combi Hammer	HILTI	HILTI TE 80-ATC	8.5
Hilti Te 500-Avr Breaker	HILTI	HILTI TE 500 AVR	10.1
Hilti Te 40 Avr Combi Hammer	HILTI	HILTI TE40 AVR	10.5
Hilti Te 40 Avr Combi Hammer	HILTI	HILTI TE35 HILTI TE15	10.7
Hilti Te 30-C-Avr Combi Hammer Hilti Te 30-C-Avr Combi Hammer	HILTI	HILTI TE16C	12
Hitti Te 30-C-Avr Combi Hammer	HILTI	HILTI TE30C AVR	12
Hilti Te 2 Rotary Hammer Drill	HILTI	HILTI TE2	13.5
Hilti Uh 700 Hammer Drill	HILTI	HILTI UH700	14.2
Hilti Te 2-A Cordless Rotary Hammer Drill	HILTI	HILTI TE2-A	14.5
Hilti Te 7-C Rotary Hammer Drill	HILTI	HILTI TE5	17
Hilti Te 7-C Rotary Hammer Drill	HILTI	HILTI TE7-C	17
Kcalibre Magnum	XCALIBRE	XCALIBRE MAGNUM 15	<2.5
Compaction Equipment	Make FAIRPORT	MODEL	2,6
Plate Compactor - Petrol (16") Plate Compactor - Petrol (18")	FAIRPORT	FAIRPORT FPC400 FAIRPORT FPC450	2.87
Plate Compactor C/W Water Sprinkler Petrol	FAIRPORT	FAIRPORT FPC320	3.04
Plate Compactor - Petrol (12")	FAIRPORT	FAIRPORT FPC320	3.04
Plate Compactor - Petrol (14")	BOMAG	BOMAG BP10/35	4.3
Plate Compactor - Petrol (14")	BOMAG	BOMAG BP10/36-2	4.3
Plate Compactor - Petrol (14")	BOMAG	BOMAG BVP10/36	4.3
Plate Compactor - Petrol (12")	WACKER	WACKER WP 1030	4.5
Plate Compactor Hd Reversible Diesel 400 - 550Mm	M.B.W	M.B.W GPR68D	4.8
Plate Compactor Hd Reversible Diesel 551 - 650Mm	BOMAG	BOMAG BPR35/60D	5.7
Plate Compactor - Petrol (12")	BOMAG	BOMAG BP6/30	5.8
Plate Compactor C/W Water Sprinkler Petrol Plate Compactor - Petrol (18")	BOMAG BOMAG	BOMAG BVP18/45 BOMAG BVP18/45-2	5.8
Hate Compactor C/W Water Sprinkler Petrol	AMMANN	AMMANN APF1240	6.2
late Compactor Hd Reversible Diesel 400 - 550Mm	BOMAG	BOMAG BPR25/40D	6.2
late Compactor Hd Reversible Diesel 400 - 550Mm	BOMAG	BOMAG BPR35/42D	6.2
		BOMAG BPR35/42D BOMAG BPR35/42DE	_
late Compactor Hd Reversible Diesel 400 - 550Mm	BOMAG		6.2
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late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18")	BOMAG BOMAG BOMAG BOMAG FAIRPORT	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46	6.2 6.2 8.1 8.2 8.57
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late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H	6.2 6.2 8.1 8.2 8.57 8.77
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W WHITEMAN	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-8HMQP	6.2 6.2 8.1 8.2 8.57 8.77 Vib.
Hate Compactor Hd Reversible Diesel 400 - 550Mm lammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor - C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3
Hate Compactor Hd Reversible Diesel 400 - 550Mm tammer (4 Stroke) tammer (4 Stroke) tate Compactor - Petrol (18") late Compactor - C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSSOOH Whiteman BA4-8HMQP Norton Clipper MTA36	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3 6.6
Hate Compactor Hd Reversible Diesel 400 - 550Mm Iammer (4 Stroke) Iammer (4 Stroke) Iate Compactor - Petrol (18") Iate Compactor - W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3 6.6
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float	BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MAKE M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSSOOH Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W F46/H M.B.W Portavibe Model	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib.
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) alte Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Power Float ortable High Frequency Poker (4/Stroke) Saws Grinders & Cutters	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W MAKE HILTI	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSS00H Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W F46/H M.B.W Portavibe Model MILTI WSC 55	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib. 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 3" (1200Mm) Power Float 3" (1200Mm) Power Float Sws Grinders & Cutters ittl Wsc 55 Circular Saw litt Wsc 55 Circular Saw	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MAKE M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W M.B.W H.B.W	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W Portavibe Middl HILTI WSC 55 HILTI WSC 85	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib. 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 8" (1200Mm) Power Float s" (1200Mm) Power Float It (1200Mm) Fequency Poker (4/Stroke) Saws Grinders & Cutters It (1200Mm) Float Saw	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W M.B.W M.B.W M.B.W MAKITA	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W P46/H M.B.W P50** Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013	6.2 6.2 8.1 8.2 8.57 8.77 Vb. 5 6.3 6.6 7.5 7.5 8.5 Vb. 2.5 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 5" (200Mm) Power Float 10" (200Mm) Power 10" (200Mm	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MSke M.B.W WHITEMAN NORTON CLIPPER M.B.W MAKITA	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSS00H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F36/4H M.B.W P46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA JR3050T	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib. 2.5 2.5 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor - C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Power Float 1* (1200Mm)	BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W MARITA MAKITA MAKITA	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSS00H Whiteman BA4-SHMOP Norton Clipper MTA36 M.B.W F36/4H M.B.W F36/4H M.B.W F46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1018L	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib. 2.5 2.5 2.5 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 8" (1200Mm) Power Float crtable High Frequency Poker (4/Stroke) Saws Grinders & Cutters lift Wsc 55 Circular Saw lift Wsc 85 Circular Saw lift Wsc 85 Circular Saw litte Saw eciprocatting Saw litte Saw ench Saw - Wood	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA MAKITA BOMAG	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H M.B.W F36/4H M.B.W F36/4H M.B.W F46/H M.B.W P46/H M.B.W P46/H M.B.W P46/H M.B.W Dortavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1018L METABO TKHS315	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 7.5 7.5 8.5 Vib. 2.5 2.5 2.5 2.5 2.5
tate Compactor Hd Reversible Diesel 400 - 550Mm tammer (4 Stroke) tammer (4 Stroke) tate Compactor - Petrol (18") tate Compactor - Petrol (18") tate Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 8" (1200Mm) Power Float s" (1200Mm) Power Float it (1200Mm) Power Float it (1200Mm) Power Float s" (1200Mm) Power Float it (1200Mm) Power Float it (1200Mm) Power Float it (1200Mm) Power Float s" (1200Mm) Float	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA METABO STIHL	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP3 Model M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W P46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1018L METABO TKHS315 STIHL TS410	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 7.5 8.5 Vib. 2.5 2.5 2.5 2.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor - C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 0" (100Mm) Power Power 0" (100Mm) Power 0"	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA MAKITA BOMAG	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H M.B.W F36/4H M.B.W F36/4H M.B.W F46/H M.B.W P46/H M.B.W P46/H M.B.W P46/H M.B.W Dortavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1018L METABO TKHS315	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 8.5 Vib. 2.5 2.5 2.5 2.5 2.5 2.5 3.9
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor - C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Power Float 8* (1200Mm) Power Float 1* (1200Mm) Between Saw 1* (1200Mm) Power Float 1* (1200Mm)	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MSke WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W MILTI HILTI MAKITA MAKITA MAKITA MAKITA MAKITA STIHL	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSS00H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F36/4H M.B.W P76/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA JR3050T MAKITA LS1018L METABO TKHS315 STIHL TS410 STIHL TS410	6.2 6.2 8.1 8.2 8.57 8.77 Vib. 5 6.6 7.5 7.5 8.5 Vib. 2.5 2.5 2.5 2.5 2.5 3.9 3.9
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Power Float 8* (1200Mm) Power Float 5* (1200Mm) Power Float 5* (1200Mm) Power Float 10* (1400Mm) Power Float 10* (1400M	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Måke M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W MALW MILITI HILTI HILTI HILTI MAKITA MAKITA MAKITA METABO STIHL HILTI HILTI	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-SHMOP Norton Clipper MTA36 M.B.W F36/4H M.B.W F36/4H M.B.W F46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA JR3050T MAKITA LS1013 MAKITA LS1018L METABO TKHS315 STIHL TS410 STIHL TS460 HILTI DCSE 20	6.2 6.2 8.1 8.2 8.57 8.77 Vb. 5 6.3 6.6 7.5 7.5 7.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor C/W Water Sprinkler Petrol Concrete Equipment asy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 3" (1200Mm) Power Float 5" (300Mm) Power Float 5" (300Mm) Power Float 1" (200Mm) Power Float 1" Wsc 55 Circular Saw 1" Wsc 55 Circular Saw 1" Wsc 85 Circular Saw 1" Wsc 8	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA MAKITA MILL STIHL HILTI STIHL	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP46 M.B.W WS500H M.B.W WS500H M.B.W F36/4H M.B.W F36/4H M.B.W F46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA R3050T MAKITA LS1013L METABO TKHS315 STIHL TS410 STIHL TS410 STIHL TS460 HILTI DSSE 20 STIHL TS700	6.2 6.2 8.1 8.2 8.57 Vib. 6.3 6.6 7.5 7.5 2.5 2.5 2.5 2.5 2.5 2.5 4.5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor - C/W Water Sprinkler Petrol Concrete Equipment assy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 8" (1200Mm) Power Float 18" (1200Mm) Power Float	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Make M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W MAKE HILTI HILTI MAKITA MAKITA MAKITA MAKITA MISTA MISTIHL HILTI STIHL HILTI STIHL HILTI	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP46 M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W P46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1018L METABO TKHS315 STIHL TS410 STIHL TS460 HILTI DC6230-D HILTI DC6230-D	6.2 6.2 8.1 8.2 8.57 V/b. 5 6.3 6.6 7.5 8.5 V/b. 2.5 2.5 2.5 2.5 2.5 3.9 4.5 5
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor - C/W Water Sprinkler Petrol Concrete Equipment assy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Reversible 10* Saw little Saw little Saw leciprocating Saw litre Saw ench Saw - Wood 2* (1300Mm) Portable Cut Off Saw 18* Cut Off Saw little Dose 20 Wall Chaser 4* Portable Cut Off Saw little Dose 20 Wall Chaser 4* Portable Cut Off Saw little Dose 20-0 Angle Grinder 4* Petrol Floorsaw little Dag 125-S Angle Grinder	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MSke WHITEMAN NORTON CLIPPER M.B.W M	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WS500H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F36/4H M.B.W P646/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA JR3050T MAKITA LS1013L METABO TKHS315 STIHL TS410 STIHL TS460 HILTI DCSE 20 HILTI DCSE 20 NORTON CLIPPER C99	6.2 8.1 8.2 8.57 Vib. 6.3 6.6 7.5 7.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18*) late Compactor - Petrol (18*) late Compactor C/W Water Sprinkler Petrol Concrete Equipment assy Screed - Twin Handle 8* (1200Mm) Power Float 6* (900Mm) Power Float 6* (900Mm) Power Float 8* (1200Mm) Power Float 8* (1200Mm) Power Float 9* (1200Mm) Power Float 9* (1200Mm) Power Float 10* (1200	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT Måke M.B.W WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA MAKITA MAKITA MILTI HILTI NORTON CLIPPER HILTI	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 BOMAG BT65/4 FAIRPORT PP46 FAIRPORT PP46 M.B.W WS500H M.B.W WS500H M.B.W F36/H M.B.W F36/H M.B.W F46/H M.B.W F46/H M.B.W F46/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 HILTI WSC 85 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1018 METABO TKHS315 STIHL TS410 STIHL TS400 HILTI DC6230-D NORTON CLIPPER C99 HILTI DC6125-S HILTI DC6125-S HILTI DC6125-S HILTI DC6125-S	6.2 6.2 8.1 8.2 8.57 Vib. 6.3 6.6 6.5 7.5 7.5 8.5 Vib. 2.5 2.5 2.5 2.5 2.5 3.9 4.5 5 5 5 5 5 5 6.3 3 6.6 6.3 5 7.5 7.5 8.5 7.5 8.5 7.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8.5 8
late Compactor Hd Reversible Diesel 400 - 550Mm ammer (4 Stroke) ammer (4 Stroke) late Compactor - Petrol (18") late Compactor - Petrol (18") late Compactor - C/W Water Sprinkler Petrol Concrete Equipment assy Screed - Twin Handle 8" (1200Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 6" (900Mm) Power Float 8" (1200Mm) Power Float 0" (1000Mm) Power	BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG BOMAG FAIRPORT FAIRPORT MSke WHITEMAN NORTON CLIPPER M.B.W M.B.W M.B.W M.B.W M.B.W MAKITA MAKITA MAKITA MAKITA MILTI HILTI HILTI HILTI NORTON CLIPPER HILTI HILTI STIHL HILTI STIHL HILTI STIHL HILTI NORTON CLIPPER HILTI HILTI STIHL HILTI	BOMAG BPR35/42DE BOMAG BT60/4 BOMAG BT60/4 FAIRPORT PP46 FAIRPORT PP33 Model M.B.W WSS00H Whiteman BA4-8HMQP Norton Clipper MTA36 M.B.W F36/4H M.B.W F46/H M.B.W P64/H M.B.W Portavibe Model HILTI WSC 55 HILTI WSC 85 MAKITA LS1013 MAKITA LS1013 MAKITA LS1013 MAKITA US1031 MAKITA US1031 MAKITA US1031 MILTI WSC 85 MAKITA US1031 MAKITA US1031 MAKITA US1031 MILTI WSC 85 MAKITA US1031 MAKITA US1031 MILTI WSC 85 MAKITA US1031 MILTI DCG 25 MILTI DCG 25 HILTI DCG 25-S HILTI DCG 25-S HILTI DCG 125-S HILTI TCG125-S STIHL TS400	6.2 6.2 8.1 8.2 8.57 Vib. 5 6.3 6.6 7.5 8.5 Vib. 2.5 2.5 2.5 2.5 2.5 3.9 4.5 5 5 5 6.3 6.6 6.6 6.6 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5
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Our key to required Safety items:









Footwear Goggles

Protective

Gloves Ear

Defenders

COMPLIANCE

Nixon Hire are committed to putting safety first in all we do. We drive our company "Your Safety Is Our Priority" programme to ensure that all employees are dedicated to this goal. Your Safety is our Priority protects our customer as much as our own people as it is supported by a strong risk focused dynamic management system. Safety is the core of our operating practise and intrinsic to our Safety First culture. Nixon Hire operate 5 key Principles which drive our compliance culture:

- · We do everything safely or not at all
- We minimise our environmental impact by managing resource, recycling and reducing waste
- We source quality sustainable goods and service from approved suppliers
- We only provide safe, compliant tools and equipment
- Our safe systems and procedures minimise hazards and reduce risk

MANUAL HANDLING

The Manual Handling Operations Regulations require employers to protect their employees as far as is reasonably practical from hazardous manual handling tasks and if they cannot be avoided, then assess the risk and take action to reduce the risk. All small plant is clearly labelled if over 25kg in weight. All Nixon Hire staff are fully trained in Pristine Condition Manual Handling techniques. This technique trains our team to assess each load before moving it manually and requires that they seek assistance if required.

LOLER

All equipment that falls under the Lifting Operations and Lifting Equipment Regulations (LOLER) is subject to thorough examination by independent engineer surveyors - certificates for such examinations are uploaded to our system and can be supplied with each hire. It is a legal requirement for LOLER inspections to be carried out on an annual basis. Six monthly LOLER inspections are required for any item used to lift personnel or items classified as lifting accessories.

The Control of Noise Regulations 2005 came into force in April 2006. These regulations reduced the lower exposure action level to 80dB (A) and the upper exposure action level to 85dB (A). When purchasing new equipment we strive to obtain machines with the lowest possible noise levels.

FALLS FROM HEIGHT

The most common fatality on construction sites continues to be related to falls from height. At Nixon Hire our staff are fully inducted and trained on the dangers of working at height. Fall prevention and protection is fitted and supplied with all our delivery vehicles, with all relevant staff being trained and competent in its use.

STAFF TRAINING

All of our staff undergo a comprehensive induction programme and the company operates continuous training for all staff including CPCS and CSCS for operational staff. Our in-house Practical Trainers ensure all operational staff are trained to the Company standard. Our Training department, through our National Plant qualified Practical Trainers also ensure all staff are trained and competent in their areas of expertise.

Hand Arm Vibration Specify Intelligent Safety Ready Reckoner

Hand arm vibration syndrome (HAVS) is the painful and debilitating condition that can seriously affect your working and social life.

How to identify the risk:

- Look for the vibration rate of the equipment to be used,
 measured as metres per second squared (m/s2) vibration magnitude (left side of the chart)
- Identify the time the equipment is to be used exposure time (along the bottom of the chart)
- Where the two meet is the score, check the risk colour above the chart. To calculate the exposure time for two different pieces of equipment, repeat above and add the two scores together

It is your legal responsibility to ensure your employees are not exposed to vibrations exceeding the legal limit. This information sheet is aimed at helping you assess the risks. The figures given below are the manufacturers vibration readings but you should rely on your own research.

| Above exposture limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be at an allow limit value | 155 - 350 | Likely to be

Code	Vibration Reading m\s2	Product Description	Code	Vibration Reading m\s2	Product Description	Code	Vibration Reading m\s2	Product Description
02/0288		Wrench Impact Wrench 24v Cordless 1/2In Drive	12/0156	11	Drill / Screwdriver Cordless 24v	17/0022	10	Cutters Continued Metal Nibbler - Electric - 3.2mm
02/0294	11.5	Milwaukee HD18HIW32 Heavy Duty Cordless Impact Wrench 18v Impact Wrench 110v 1/2in Drive	12/0157	12 10	Impact Driver Cordless Milwaukee 900K Heavy Duty Demolition Hammer	17/0025 17/0032	6.5 18.5	Metal Shear - Electric - 1.6mm Metal Shear - Electric - 3.2mm
02/0296		Mitwaukee C12LD-22 Light Duty Cordless Impact Driver 12v Impact Wrench 110v 3/4in Drive	11/0410	10 2.4	Power Scraper Light Duty Rock Drill Atlas Copco TEX OSPE	17/0175	<2.5 2.5	Pipe Cutter - Universal Pipe Cutting Tool - Electric
02/0305	16 9.8	Impact Wrench Electric 1in Impact Driver Cordless 14.4v	19/0290 19/0310	5.3 6.72	Rock Drill - Air - Small Rock Drill - Air - Medium	17/0199 17/0206	16.4 <2.5	Pipe Reciprocating Saw - Electric Milwaukee C12PC-21 Cordless Copper Tube Cutter
19/0160 19/0165	3.4	Impact Wrench Air 1/2in Drive Impact Wrench Air 3/4in Drive	11/0210	13.5	Bresker Light Duty Breaker - TE300 - AVR	17/0218 17/0219	Zero < 2.5	Rebar Tying Machine DF16 Re-Bar Cutter - Electric
19/0170	4.3	Impact Wrench Air 1in Drive	11/0422	Hammer only: 11	Light Duty Breaker 5D5 Max	17/0222	<2.5	Stud Cutter - Cordless
05/0022	3.8	Gardening Striminer Domestic	11/0245	5.5 10.1	Medium Duty Breaker TE706AVR Medium Duty Breaker TE500AVR	17/0225	<2.5 2.5	Stud Cutter - Manual Re-Bar Cutter - Cordless
05/0030 05/0130	4.4 11.1	Brush Cutter Contractor Handheld Blower	11/0260	5 7	Heavy Duty Breaker Heavy Duty Breaker - 29.9kg - TE3000	17/0228 17/0295	<2.5 2.5	Re-Bar Cutter & Bender - 110v Conduit Threader - Electric
05/0131	3.9 1.8	Backpack Blower Hedge Trimmer 2 Stroke	11/0350	8 8.5	Heavy Duty Breaker Heavy Duty Road Breaker 2 Stroke BH23	17/0300	2.5	Hand Threader - Electric - Amige 2 Pipe Threader - Ridgid 300
05/0159	5	Hedge Trimmer Long Reach 2 Stroke	11/0540	12	BHSSR Heavy Duty Breaker	17/0350	2.5	Pipe Threader - Ridgid 1233
05/0200	5.4 2.5	Lawn Aerator - Petrol Lawn Rake - Electric	11/0545	10 9	Bosch GSH16-28 16kg Breaker Heavy Dury Road Breaker 110v HM1810TR	17/0352	2.5 2.5	Pipe Threader - Ridgid 1224 Pipe Jointing Tool-Cordless AC0202
05/0220	6.2 5.1	Lawn Scarifier - Petrol Flail Mower - Petrol	19/0105	6.5 4.6	Road Breaker Heavy Low Vibration Road Breaker Medium Low Vibration	17/0460	2.5 2.5	Pressed Joint Tool 15 - 35mm Pipe Jointing Tool - Supersize
05/0278	11.2 11.2	Rotary Push Mower - Petrol Rotary Self-Propelled Mower - Petrol	19/0125	6.4	Road Breaker Light Low Vibration Sander / Planer	18/0040	2.42	Compactor / Rammer / Poker Compactor Plate Petrol 300mm (12 in)
05/0298	7.2 2.5	Post Hole Borer Hydraulic Post Hole Borer 1 Man	12/0010	2.5 3.5	Biscuit Jointer Electric Power Plane Electric	18/0060 18/0070	3.25 4.74	Compactor Plate Petrol 300mm(12in) Compactor Plate Petrol 350mm (14in) Anti-Viewelop
05/0310	14 6,9	Petrol Post Hole Borer 2 Man Tiller Petrol 5Hp	12/0091	3 4	Power Planer Cordless	18/0080	<2.5	Forward / Reversible Compactor Plate Petrol 400mm (16in)
05/0326	2.9	Rotavator Heavy Duty 8Hp Petrol Rotavator Heavy Duty 9Hp	12/0105	2.5 2.5	Plunge Router Electric Belt Sander Electric 76mm (3in)	18/0102 18/0104	8.3 3.1	Forward / Reversible Compactor Plate Diesel 500mm (20in) Ans-vension Forward / Reversible Compactor Plate Diesel 400mm (16in)
05/0330	88	Rotavator Petrol 13Hp	12/0116	2.5	Belt Sander Electric 100mm (4in) Milwaukee BS1005 Heavy Duty Belt Sander	18/0109 18/0114	3.2 3.25	Forward / Reversible Plate Diesel 500mm (20in) Compactor Plate Petrol 300mm (12in) c/w Water Tank
05/0373		Stemp Grinder Petrol Tilling	12/0127	0,033 5,1	Edging Sander Standard 178mm (7in) Edging Sander Heavy Duty 178mm (7in)	18/0116	4.5 3.2	Compactor Plate Petrol 350mm (1in) Compactor Plate Petrol 400mm (1in)
06/0220	13.5 9.4	Floor Tile Stripper 110v Floor Tile Stripper Self Propelled 110v	12/0130	2.7	Floor Edging Sander Standard Floor Sander Standard 110v 200mm	18/0119	1.9 10	Compactor Plate Petrol 500mm (2in) Trench Rammer 4 Stroke (65kg)
06/0297	<2.5	Tile Cutting Saw Electric Nail Guns	12/0133	3 - 3	Floor Sander Heavy Duty Floor Sander Standard	18/0165	5.4 7.6	Trench Rammer Z Stroke (57kg) Trench Rammer Z Stroke (66kg)
06/0265	<2.5 18	Staple Gun Gas IM200 Cartridge Tool DX460	12/0144 12/0150	8.89 4.5	Floor Finishing Sander Random Orbital Sander Electric	18/0170	7.25m/s²	Trench Rammer - Belle RTX Diamond Grinder 150mm
08/0657	<2.5 9	Strip Nailer Gas IM350 (1st Fix)	12/0152	2.5	Orbital Sander Electric	18/0270	2.5	Hand Held Concrete Planer 110mm
08/0660	2.5	Portanailer Kit	13/0020	3	Palm Sander Electric Dustless Cutter 125mm (5in)	18/0300 18/0310	<2.5 5.6	Floor Grinder 110v Floor Grinder Petrol
08/0661 08/0663	9	Angled Brad Nailer Gas IM250a Concrete & Steel Nail Gun	13/0070 13/0071	4.5 7	Wallchaser Heavy Duty Electric Milwaukee WCE30 Diamond Wall Chaser 125mm	18/0320 18/0330	4.4 6.6	Floor Planer / Scarifier 1.10v Floor Planer / Scarifier Petrol 200mm
08/0680	<2.5	Milwaukee C12PN-O Cordless Palm Naiter Dritts	13/0186	6.1	Grinder Milwaukee HD18AG32 Cordless Angle Grinder 115mm	18/0340	5.3 3.8	Floor Planer / Scarifier Petrol 275mm Easy Screed Pro Drive Unit
	<2.5 (Rig mounted - triaxial) <2.5 (Rig mounted - triaxial)		13/0187	4.5 Sanding: 2.5	Angle Grinder Cordless 100mm (4in) Angle Grinder Cordless 115mm (4.5in)	18/0375 18/0380	7.1 - 11.7 7.1 - 11.7	Power Float 600mm (24in) Power Float 900mm (36in)
10/0042	<2.5 (Rig mounted - triaxial)	Diamond Drill Only DDec 1 Hand Held Diamond Drill - DD 110 D	13/0190	Artifical Wheel: 8.5	Angle Grinder Electric 100mm (4in)	18/0385	7.1 - 11.7	Power Float 1200mm (48in) Re - Bar Tier Cardiess RB392
10/0072	<2.5 (Rig mounted - triaxial) 9.5	Hand Held Diamond Drill - DD150-U Hand Held Diamond Core Drill	13/0200 13/0203	8 7.8	Angle Grinder Electric 115mm (4in)	18/0400	0.97 4	Roller Striker Drive Unit
10/0101	12	Milwaukee DD2160XE Dry Diamond Core Dritt	13/0210	13.5	Milwaukee AG12-115 Light Duty 115mm Angle Grinder Angle Grinder Electric 125mm (Sin)	18/0401	1.14 5.88	Re - Bar Tier Cordiess RB650 Twin Beam Tamper Drive Unit Petrol
10/0102 10/0167	4.85m/s² <2.5	DDM1 Drilling Machine Magnetic Drill & Stand ME3000 50mm	13/0229 13/0230	5,7 5.5	Milwaukee AG21-230 Heavy Duty Angle Grinder 230mm Angle Grinder Electric 230mm (9in)	18/0445	1.99 1.99	Vibrating High Frequency Poker 10 Metre 57mm Vibrating High Frequency Poker 57mm
10/0170	₹2.5	Mag Onit & Stand Minibor 32mm Mag Dritt	19/0135 19/0137	2.7 10	Air Grinder 100mm (4in) Air Grinder 172mm (7in)	18/0445	2.13 3.9	Vibrating High Frequency Poker 38mm Vibrating High Frequency Poker Sm 75mm
10/0174	1.67	Magnetic Drill & Stand Unibor 35mm Mag Drill & Stand Piccolo 30mm	19/0150	7.2	Air Grinder 300mm (12in) Cutters	18/0448 18/0450	1.77 3.5	Vibrating High Frequency Poker 52mm Vibrating Pneumatic Poker Air 28mm
10/0178		Mag Drill & Stand Unibor 100mm Magnetic Drill - Low Profile	13/0240	3.5 Front handle - 1.9	Cut Off Saw Electric 300mm (12in) Husqyarna K760 Oil Guard Cut Off Saw	18/0455	3 <2.5	Vibrating Pneumatic Poker Air 38mm Vibrating Pneumatic Poker Air 45mm
10/0270	Hammer Drilling: 14 Chiselling: 12	Light Duty Rotary Hammer Drift 2kg - G8H2	15/0230	Rear handle - 2.6 Front handle - 1.9	Masonry Cut Off Saw 2 Stroke 300mm (12in)	18/0465	<2.5	Vibrating Pneumatic Poker Air 65mm
10/0273	18	SDS+ Drill With Dust Extraction	15/0231	Rear handle - 2.6 Front handle - 2	Masonry Cut Off Saw 2 Stroke 350mm (14in)	18/0470 18/0475	2.86 <2.5	Vibrating Pneumatic Poker Air 75mm Vibrating Pneumatic Poker 105mm
10/0279	Drilling: 2.5 / Hammer	Milwaukee HD28PD-32C Heavy Duty Cordless Impact Drill 28v Heavy Duty Hammer Drill Cordless 24v	15/0232	Rear handle - 2.6 Front handle: 3,7	Masonry Cut Off Saw K970	18/0490	<2.5 3.64	Vibrating Poker Flex 25mm Vibrating Poker Flex 35mm
10/0281	Drilling: 14 / Chiseling: 12 20	Cordless Combi Hammer 36v	15/0257	Rear handle: 4.5	Mitwaukee CH5355 Abrasive Cut Off Saw	18/0500	4.77 6.38	Vibrating Poker Flex S5mm Vibrating Poker Flex S8mm
10/0283	13.6	Milwaukee HD18HX32 Heavy Duty SD5+ Cordless Hammer Drill Milwaukee C12PD-32 Light Duty Cordless Combi Drill 12v	15/0090	3.1 5.7	Chainsaw 2 Stroke 375mm (15in) Chainsaw 2 Stroke 450mm (18in)	18/0510 18/0520	7.89 4.75 - 6.45	Vibrating Poker Flex 75mm Vibrating Poker Unit Hand Held c/w Shaft - 110v
10/0329	<2.5 22.7	Cordless Combi Drill 14.4v Mihraukee M18CPD-32C Heavy Duty Cordless Combi Drill 18v	15/0100	8.A 2.9	Chainsaw 2 Stroke 500mm / 530mm (20 / 21in)	18/0550	8.8 6.3	Vibrating Poker Unit Hand Held c/w Shaft - Petrol Needle Gun Air
10/0350	Drilling: 2.5 Hammer Drilling: 10	Drill / Screwdriver Cordless 18v	15/0220	2.7m/s ² (Front handle)	Pole Saw 4 stroke power cutter EK7650H	19/0250 19/0260	5.2 5.2	Air Pick Demo Low Vibration
10/0352	13	GSB 18-2-Li with LED tight Paddte Mixing Dritt - Electric	15/0260	1.8m/s1 (Rear handle) <2.5	Bench Top Chop Saw Electric 355mm	19/0274	0	Air Pick Clay Digger Low Vibration Sell Pick
10/0385	3	Percussion Dritt Milwaukee T-TEC201 2 Speed Percussion Dritt	15/0264 15/0265	4.7	Masonry Floor Saw 110v 230mm (9in) Masonry Floor Saw 110v 450mm (18in)	19/0279 19/0330	10.3 3.8	Air Pick Tunnelling Low Vibration Hand Held Scabbler - Air - Single Head
10/0387	Drilling into Concrete: 22.7 Drilling into Metal: 2.28	Percussion Dritt - Brushless	15/0267	3 4	Floor Saw Light Duty Petrol 350mm (14in) Masonry Floor Saw Diesel 500mm (20in)	19/0340	4.9	Hand Held Scabbler - Air - Triple Head Pole Scabbler Air Low Vibration
10/0450	Screwing: 1.32	Date Call Sec. 117	15/0290 15/0300	3	Floor Saw Petrol 450mm (18in) Floor Saw Petrol 450mm (18in)	19/0355	3.86 3.58	Fioor Scabbler Crack Cutter Floor Scabbler Air Triple Head
10/0440	2.5	Rotary Drill 2 Speed 13mm Angle Drill 110v	15/0325	2.5 2.5	Masonry Saw 110v 300mm Mesonry Saw 110v 350mm	19/0370 19/0378	4.5 6.5	Floor Scabbler Air Five Head Pole Sraper - Air
10/0455 10/0464	<2.5	Angle Drill Cordless Milwaukee C18RAD31C Cordless Right Angle Drill	15/0340	2.5.4.7	Masonry Saw 110v 500mm	19/0422	6.5	Hydraulic Road Breaker Hydraulic Breaker Gun 30ltr HM25
11/0115	Drilling: 2.5 / Hammer	Hitti TE2 2kg Light Duty Rotary Hammer Drill Light Duty Rotary Hammer Drill 3.3kg	15/0360	3	Masonry Saw Petrol 350mm Masonry Saw Petrol 500mm	19/0503	1,9	Air Grinder / Saw Vibration Reduced Cengar PL905
11/0125	Drilling: 15 / Chiseiling: 11.5 11m/s ²	A36 -AVR Cordless Rotary Hammer	15/0379 15/0399	7.7 2.5	Masonry Walt Saw Circular / Ripsaw 36v Hilti WSC-70	19/1511 19/1512	3 18	Finishing Nailer Kit AF633X Bulk Nailer Kit AG125
11/0140	10	Heavy Duty Hammer Drill Cordless 36v Milwaukee HD28HX-32C Heavy Duty SDS Cordless Hammer	15/0410 15/0412	2.5 2.5	Circular Saw Wood Electric 190mm Metal Cutting Saw Electric	19/1513		Framing Naiter Kit AN943X Cleaners
11/0142	5.5m/s²	SDS Max Hemmer Drill Heavy Duty Rotary Hammer Drill 4kg TESOC	15/0420 15/0425	3 2.5	Circular Saw - Cordinas - 16 Smm (9in)	21/0070	₹2.5	Floor Scriffer 110v Floor Scrubber / Dryer
11/0170		Rotary Hammer Drill Hitti TE30 / TE25 / TE16 Milwaukee PLH20 2kg SDS+ Hammer Drill Milwaukee PLH20 2kg SDS+ Hammer Drill	15/0433	2.8	DOOR TRIMMING SAW Jigsaw Cordless	21/0090	¢2.5	Heavy Duty Scrubber Dryer 8840/10 Floor Scrubber
11/0180	,	303 Milk Comoi nammer 1230A481 / 1230	15/0440	6.5 6.5	Nigsaw Electric Milwaukee ISPE155TQX Heavy Duty Corded Jigsaw	21/0150 21/0180	<2.5 42.5	Steam Cleaner 110v Steam Cleaner 2A0v
11/0182	16/8.5	Milmaukee 5005 SDS Max Lightweight Breaker Light Duty Combi Hammer TE60ATC / TE56ATC	15/0477	6.3	Milwaukee HD18J532 Heavy Duty Cordless Jigsaw	21/0190	<2.5 <2.5	Pressure Washer Diesel 2500psi Pressure Washer Diesel 3000psi
11/0190	7	SDS Max Combi Hammer Combi Hammer Drill TE80	15/0450	8,5	Mitweuken HD28JSB-32C Heavy Duty Cordless Jigsaw Beciprocating Saw Electric	21/0202	2.7	Pressure Wisher Diese Sudopat HDS Compact Eto Hot Wester Pressure Washer Petrol 2000ps
11/0345	7.5 9.5	Combi Hammer Medium Duty 7kg Milwaukee 7505 SDS Max Combination Hammer	15/0456 15/0472	9	Reciprocating Saw Cordless Mitwaukee SSPE1500 Reciprocating Saw	21/0210 21/0220	<2.5 <2.5	Pressure Washer Petrol 3000psi
11/0516	7.5	Light Duty Combi Hammer HR4011C Milwaukee 5455 SDS Max Combination Hammer	15/0476 15/0480	10.5	Milwaukee HD18SX32 Cordless Reciprocating Saw Milwaukee C12HZ-22 Light Duty Cordless Reciprocating Saw 12v	27/0029		Plant Petrol Mini Dumper
11/0525	12.5	Heavy Duty Combi Hammer HR5211C Milwautree 9505 SD5 Max Combination Hammer	15/0481 15/0479	16.8 26	Milwaukee HD285K-52C Hevry Duty Reciprocating Saw Milwaukee SSD1100X Corded Reciprocating Saw	27/0030		Flat Bed Truck (Tracked Barrow) Rail
11/0195	Hammer Dritting: 7.5 Chisatting: 7	Medium Duty Combi Hartimer HR4511C	15/0460 15/0471	4 <2.5	General Purpose Saw Electric Milwaukee HD28CS-32C Heavy Duty Cordiess Circular Saw 165mm		5 - Front / 4.1 - Rear handle 5 - Front / 4.1 - Rear handle	K1260 Rell Disc Cutter K1260 IJR, Spec Rall Disc Cutter
11/0465	Drilling: 2.5	18v Cordiess Rotary Hammer Orlil	15/0473 15/0474	2.5	Milwaskee CS60 Circular Saw 184mm Cordless Metal Cutting Saw	35/0105 2 35/0110 2	5	Cembre LD ZEN Electric Rail Drill.
11/2/201	Hammer Drilling: 12.5 Chiselling: 9.5		15/0478	<2.5	Milwaukee H018C532 Heavy Duty Cordless Circular Saw 165mm Portable Band Saw 11Dv	35/0240 3	7	Cembre 509 P2 Petrol Sleeper Drill
11/0470	Hammer Drilling: 15	24v Cordiess Rotary Hommer Drill	15/0511	42.5	Milwaukee HD 188532 Heavy Duty Cordless Bandsaw 18v	35/0250 3 35/0265 5	72	Cembre SD9 P2 Petrol Sleeper Drill Cembre SD-1062-110v Sleeper Drill
11/0480	Hammer Drilling: 15.5	Light Duty Rotary Hammer Drill 2kg HR2460 SDS+	15/0463 15/0523	<2.5	Slide Mitre Saw Slide Mitre Saw Elektric LS1216	35/0830 7 35/0835 2	5	Combre Clipping Machine - Fastclip Cembre Clipping Machine - E-Clip
11/0482	Chiselting: 14 / Drilling: 22	Milwaukee PH26 2kg SD5+ Hammer Drill Milmaukee PH30 Power X 2kg SD5+ Hammer Drill (3 Mode)	15/0525 15/0528	2.5	Slide Compound Mitre Saw Electric LS1013 Milanuskee MS305DB Heavy Duty Double Compound Mitre Saw	35/08/60 9 35/08/75 4	6 to 11.8 2	Cembre Clipping Muchine - E-Clip Cembre Will 1 - Petrol Impact Wiresch Coach Screw M/C Petrol
12/0180	12	Heavy Duty Rotary Hammer Drill 4kg HR3000C Screendriver Dry Well 130v	15/0540	÷2.5	Compound Mitre Saw Electric DW707 / DW707L Fitp Over Saw Electric LF1000	35/0880 7 35/1340 A	to 11.6	Maxim Master 35 25mm Impact Wrench
12/0190	2.5	Screwdriver 110v Yek Screwdriver 110v Autofeed	15/0575	2.5	Table Saw - Electric - TKHS 315mm	35/1560 1	0,3	IACS Frog and Switch Grinder MP12 Roll Profile Grinder
12/0195	14.3	18v Condless Inspact Oriver	15/0585 15/0620	2.5	Table Saw - Electric - 2704X Site Saw Diesik Electric Start	35/1367 4 35/1395 A	36	Geismar MC3 Rail Grinder - U.R. Spec MP23 Rail Profile Grinder
12/0218	2.8 2.7	Mitwassbee C18LD32 Condiess Impact Oriver 18v Mitwassbee C12DD22 Light Duty Compact Condiess Drill Driver 12v	15/0650 17/0020		Site Saw Petrol Metal Nibbler - Electric - 1.6mm	35/1640 4 35/1650 3	5 7 - Front / 4.5 Rear handle	Cobra TT Petral Tie Tamper Husquarna K960
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Hand-arm vibration

A guide for employees



This is a web-friendly version of leaflet INDG296(rev2), published 06/14

Introduction

This pocket card is aimed at people who use handheld powered work equipment or workpieces which vibrate while being processed by powered machinery, such as pedestal grinders.

What is hand-arm vibration?

Hand-arm vibration is vibration transmitted into your hands and arms when you use this equipment. It can cause hand-arm vibration syndrome (HAVS) and carpal tunnel syndrome (CTS).

What is hand-arm vibration syndrome?

HAVS:

- affects the nerves, blood vessels, muscles and joints of the hand, wrist and arm:
- can become severely disabling if ignored;
- includes vibration white finger, which can cause severe pain in the affected fingers.

What is carpal tunnel syndrome?

Carpal tunnel syndrome is a nerve disorder which may involve pain, tingling, numbness and weakness in parts of the hand and can be caused by, among other things, exposure to vibration.

How can I help reduce the risks?

It is your employer's responsibility to protect you against HAVS and CTS, but you should help by asking your employer if your job could be done in a different way without using vibrating tools and machines. If this cannot happen:

- ask to 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;

Hand-arm vibration Page 1 of 2

- 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;
- use any control measures your employer has put in place to reduce the risk of HAVS:
- ask your trade union safety representative or employee representative for advice.

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

This pocket card is available at: www.hse.gov.uk/pubns/indg296.htm.

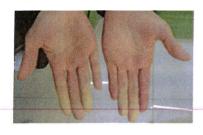
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Managing Exposure to Vibration



KEY POINTS



SYMPTOMS

- Tingling and numbness in the fingers- loss of feeling.
- Loss of strength in the hands (less able to pick up or hold heavy objects)
- In the cold and wet your fingers turn white (blanching) and becoming red and painful on recovery.

THE RISKS

- You are at risk if you regularly use hand-held or hand-guided vibratory power tools.
- Uncontrolled exposure can result in painful and disabling disorders of the blood vessels, nerves and joints of the hand, wrist or arm.
- HAVS caused by exposure to vibration at work is preventable, but once the damage is done it is usually permanent & disabling.

COMMON VIBRATORY TOOLS



CONTROLS -

- Use the correct tooling for the task and make sure it is in good order.
- Never force the tool this will result in you absorbing more vibration.
- Keep within your HSE points allowance exposure limit.
- Keep hands warm, wear dry gloves.
- Remember to record your daily usage on the NGN App.
- Rotate the task to have a break from exposure before you reach 100 points.

PLAN YOUR WORK The most efficient and effective way of controlling exposure to hand-arm vibration is to look for new or alternative work methods which eliminate or reduce exposure to vibration.

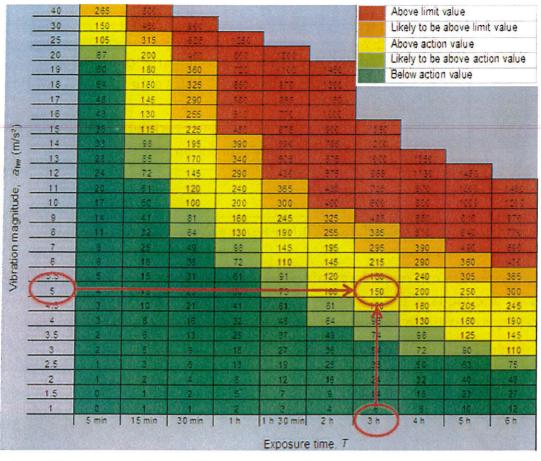
Use mechanical plant (Examples: Hydrailic Pecker/ Hornet Drills)



Managing Exposure to Vibration



We measure vibration using the HSE Points Ready Reckoner below:



The illustration shows how it works for a magnitude of 5 m/s2 and an exposure time of 3 hours: in this case the exposure corresponds to 150 points.

- 1. Find the vibration (level) for the tool or process (or the nearest value) on the grey scale on the left of the table.
- 2. Find the exposure time (or the nearest value) on the grey scale across the bottom of the table.
- 3. Find the value in the table that lines up with the magnitude and time. 4. Compare the points value with the exposure action and limit values (100 and 400 points respectively). In this example the score of 150 points lies above the exposure action value. The colour of the square containing the exposure points value tells you whether the exposure exceeds, or is likely to exceed, the exposure action or limit value:
- 5. If a worker is exposed to more than one tool or process during the day, repeat steps 1-3 for each one, add the points, and compare the total with the exposure action value (100) and the exposure limit value (400)

Questions & Answers

- Q. How many vibration points can you have in a normal 8 hour shift?
- A. You are allowed 400 HSE points if you do not have any restrictions but always try to stay below this allowance.
- Q. When should I change rotate my task?
- A. You should rotate your task ideally before you reach 100 points. (80-90 best practice)
- Q. What tools give off the most vibration?
- A. Rock drills, Road Breakers, Compaction Rammers & large Core drills are associated with high vibration levels so you should limit exposure as much as possible when using these tools.
- Q. What should I look out for when I am using work equipment to prevent HAV's?
- A. You should ensure that the tool is working normally for the task, if it is vibrating heavily you need to stop using the equipment and report this to your manager.
- Q. What if I have been diagnosed with HAV's?
- A. Your manager needs to sit down with you and complete a "Record of Discussion" so you are both aware of your restrictions and agree a course of action to prevent further over exposure.
- Q. What do I need to do if I start suffering from the symptoms before my next health screening session?
- A. You must report any symptoms to your manager immediately.