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RLink Operator toolbox talk

Why hand arm vibration is important

HAVS

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Hand-arm vibration syndrome

Health effects

- Hand-Arm Vibration Syndrome (HAVS) - causes white fingers, loss of grip strength, sensory loss
- Carpal Tunnel Syndrome (CTS) - causes numbness, tingling, motor function loss

Quality of life impact

- Loss of dexterity and strength affecting work performance
- Increased difficulty in cold or damp environments
- Pain and trouble performing fine motor tasks
- Sleep disruption

Symptoms may be intermittent but can become permanent; damage can begin within 6 months of exposure.

In the UK alone, over 2 Million workers are at risk & over 300 thousand are already affected



Common tools & vibration exposure

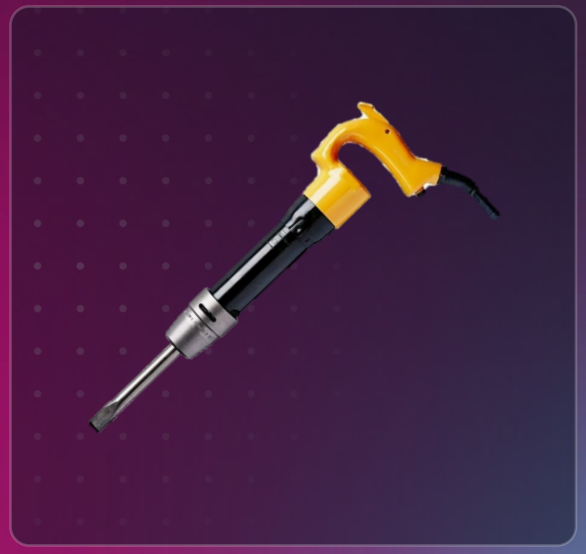
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How likely are you to develop HAVS?

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1 in 10 people exposed to 100 points a day, will develop HAVS within **12 years***

1 in 10 people exposed to 400 points a day, will develop HAVS within 6 years*

10% worker risk



*Data source here

HAV exposure limits

Globally recognized vibration exposure thresholds

Vibration magnitude a_{hw} (m/s²)	5 min	15 min	30 min	1 hr	1.5 hr	2 hr	3 hr	4 hr	5 hr	6 hr
40	265	800								
30	150	450	900							
25	105	315	825	1250						
20	67	200	400	800	1200					
19	60	180	360	720	1100	1450				
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			
14	33	98	195	390	590	785	1200			
13	28	85	170	340	505	675	1000	1350		
12	24	72	145	290	430	575	885	1150	1450	
11	20	61	120	240	365	485	725	970	1200	1450
10	17	50	100	200	300	400	600	800	1000	1200
9	14	41	81	160	245	325	485	660	810	970
8	11	32	64	130	190	255	385	510	640	770
7	8	25	49	98	145	195	295	390	490	500
6	6	18	36	72	110	145	215	290	360	455
5.5	5	15	31	61	91	120	180	240	395	365
5	4	13	25	50	75	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	1	3	6	13	19	25	38	50	63	75
2	1	2	4	8	12	16	24	32	40	48
1.5	0	1	2	5	7	9	14	18	23	27
1	0	1	1	2	3	4	6	8	10	12

Exposure Time (T)

- Above exposure limit
- Likely at/above exposure limit
- Above exposure action value
- Likely at/above action value
- Below exposure action value

Action Value (EAV) – 100 points - Take Actions

100 points = 8 hours of trigger time on a tool with 2.5m/s²
1 in 10 develop HAVS in 12 years at this level

Limit Value (ELV) – 400 points - Don't work above this

400 points = 8 hours of trigger time on a tool with 5m/s²
1 in 10 develop HAVS in 6 years at this level



Drill
2 - 5m/s²



Angle Grinder
3 - 11m/s²



Recip Saw
7 - 27m/s²



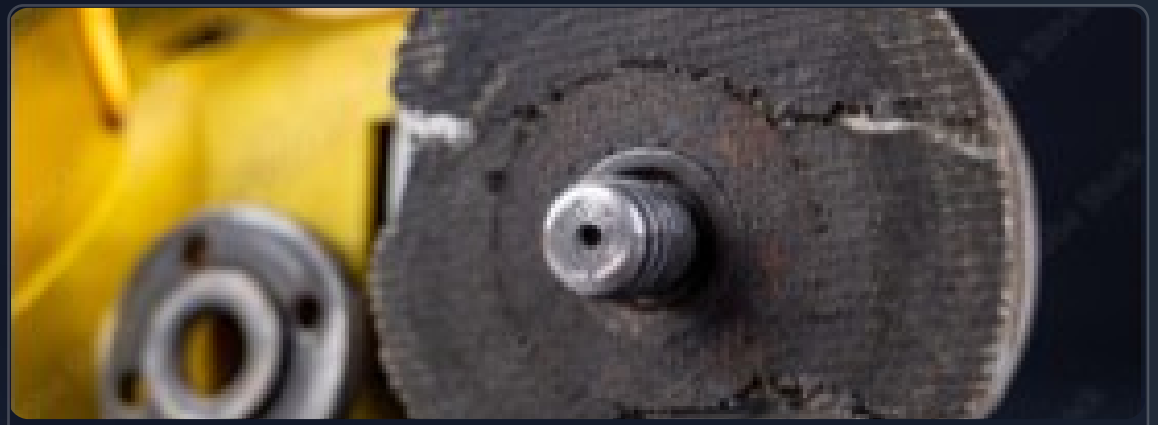
Jack hammer
11-22m/s²



Chipping hammer
10 - 21m/s²

What can make a difference?

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Tool condition



Tool selection



Grip & force on the tool



Adequate tool use training

Ideagen Wearable Safety

The key components



1. R-Link watch

Watch module independent of strap. R-Link is electronically assigned to individuals using RFID cards.



2. Charging Station & Gateway

Charging station charges watches & Gateway automatically sends data to the Analytics.



3. ID Cards

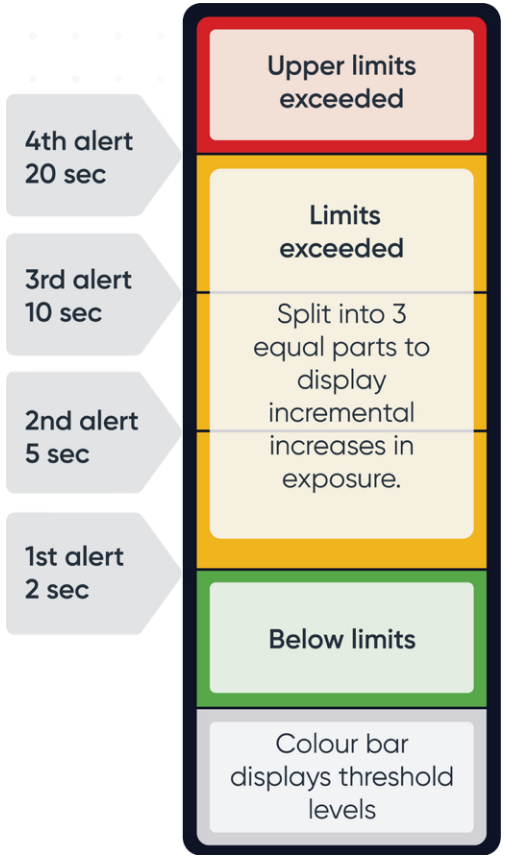
ID cards are assigned to workers to personalise data.



4. Tool tags

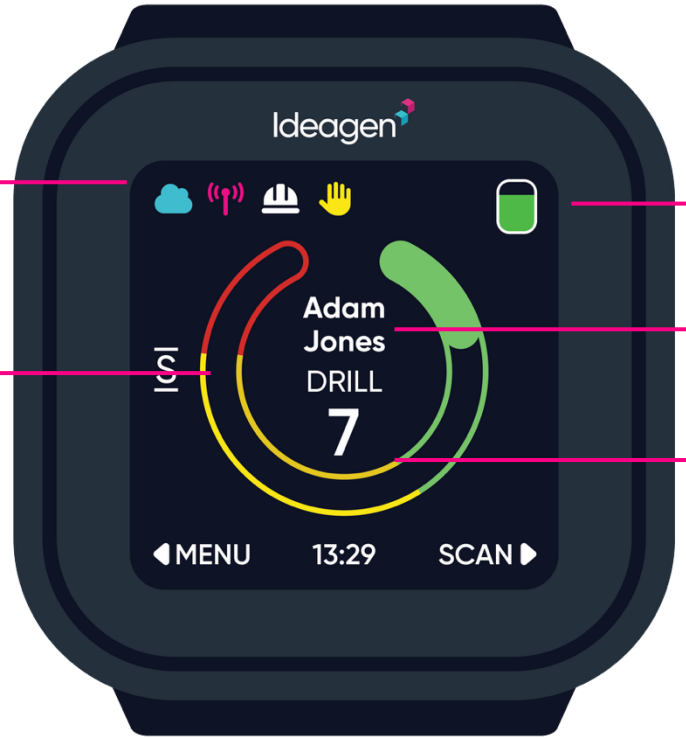
RFID tags are programmed with tool information to support tool performance & utilisation insight.

R-Link worker information



Interactive display
View enabled watch functions via icons

Real-time exposure
Calculated by the watch with alerts for user when limits have been exceeded



Battery level
Indicates battery level

Operator details
Full name of operator and tool being used

Vibration Points
Track number of vibration points accumulated

What you should know

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01

Pay attention to watch warnings!



02

If tools have RFID tags – connect to tags!



03

If moving off tools, switch watch “off ”

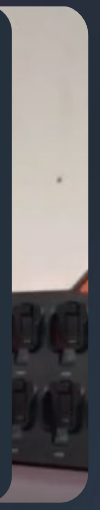
04

Wear the watch until the end of your shift



05

Return watch to charger at the end of the day



And finally...

As with all tools, the watch should be handled with care. The following video outlines helpful advice and tips on good watch care and maintenance.

