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# Hand Arm Vibration; Daily Points Exposure Guide ©

**Under the Vibration at Work Regulations 2005 employers must ensure that employees are not exposed to harmful levels of Hand Arm Vibration (HAV). This chart has been developed by HSE Solutions Ltd and Vibrotag Ltd to assist you in ensuring compliance.**

The Vibration at Work Regulations set two key values after which action must be taken. These are the Exposure Action Value (EAV) of an A(8) of 2.5 m/s$^2$ and an Exposure Limit Value (ELV) of an A(8) of 5.0m/s$^2$. Using the point system below these levels equate as follows. The EAV equals 100 points and the ELV equals 400 points. If you wish to discuss the requirements at each of these levels, wish training, or require your equipment to be assessed contact HSE Solutions Ltd at www.hse-solutions.co.uk. or telephone 0141 332 3199

**To use chart**

1. Identify machine vibration level on the left.
2. Compare the time of use with those at the bottom of the chart.
3. The point at which they meet indicates the operator's "Daily Exposure in points".
4. Compare this with the limit values on the right to identify action required.

**Example**

If a machine has a vibration level of 5m/s$^2$ and it is used for ½ an hour the operator would have been exposed to 25 points.

If they then used another tool at 7.0 m/s$^2$ for 45 minutes they would have been exposed to 74 points, thus 99 points in total. This can then be compared against the column on the right to see that this is just below the EAV.

Vibrotag® provides a vibration exposure management system that allows the designation of exposure points dependent on the time of use. This makes it easy to calculate overall exposure when using more than one machine. The range of colour coded Vibrotag® can also be attached to the tool to display an immediate visual reference of the HAV risk level associated with each piece of equipment. More information on the unique system can be seen at www.vibrotag.com.

| Vibration Level in m/s$^2$ | 1/4 | 1/2 | 3/4 | 1 | 1 1/4 | 1 1/2 | 1 3/4 | 2 | 2 1/4 | 2 1/2 | 2 3/4 | 3 | 3 1/4 | 3 1/2 | 3 3/4 | 4 | 4 1/4 | 4 1/2 | 4 3/4 | 5 | 5 1/4 | 5 1/2 | 5 3/4 | 6 | 6 1/4 | 6 1/2 | 6 3/4 | 7 | 7 1/4 | 7 1/2 | 7 3/4 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 600 |
| 32 | 512 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 580 |
| 30 | 450 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 560 |
| 28 | 392 | 784 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 540 |
| 26 | 338 | 676 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 520 |
| 24 | 288 | 576 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 500 |
| 22 | 242 | 484 | 726 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 480 |
| 20 | 200 | 400 | 600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 460 |
| 19 | 181 | 361 | 542 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 440 |
| 18 | 162 | 324 | 486 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 420 |
| 17 | 145 | 289 | 434 | 578 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 400 |
| 16 | 128 | 256 | 384 | 512 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 380 |
| 15 | 113 | 225 | 338 | 450 | 563 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 360 |
| 14 | 98 | 196 | 294 | 392 | 490 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 340 |
| 13 | 85 | 169 | 254 | 338 | 423 | 507 | | | | | | | | | | | | | | | | | | | | | | | | | | | 320 |
| 12 | 72 | 144 | 216 | 288 | 360 | 432 | 504 | | | | | | | | | | | | | | | | | | | | | | | | | | 300 |
| 11 | 61 | 121 | 182 | 242 | 303 | 363 | 424 | 484 | | | | | | | | | | | | | | | | | | | | | | | | | 280 |
| 10 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | | | | | | | | | | | | | | | | | | | | | | | | 260 |
| 9.5 | 45 | 90 | 135 | 181 | 226 | 271 | 316 | 361 | 406 | 451 | | | | | | | | | | | | | | | | | | | | | | | 250 |
| 9 | 41 | 81 | 122 | 162 | 203 | 243 | 284 | 324 | 365 | 405 | 446 | | | | | | | | | | | | | | | | | | | | | | 240 |
| 8.5 | 36 | 72 | 108 | 145 | 181 | 217 | 253 | 289 | 325 | 361 | 397 | 434 | 470 | | | | | | | | | | | | | | | | | | | | 230 |
| 8 | 32 | 64 | 96 | 128 | 160 | 192 | 224 | 256 | 288 | 320 | 352 | 384 | 416 | 448 | 480 | | | | | | | | | | | | | | | | | | 220 |
| 7.5 | 28 | 56 | 84 | 113 | 141 | 169 | 197 | 225 | 253 | 281 | 309 | 338 | 366 | 394 | 422 | 450 | 478 | | | | | | | | | | | | | | | | 210 |
| 7 | 25 | 49 | 74 | 98 | 123 | 147 | 172 | 196 | 221 | 245 | 270 | 294 | 319 | 343 | 368 | 392 | 417 | 441 | 466 | | | | | | | | | | | | | | 200 |
| 6.5 | 21 | 42 | 63 | 85 | 106 | 127 | 148 | 169 | 190 | 211 | 232 | 254 | 275 | 296 | 317 | 338 | 359 | 380 | 401 | 423 | 444 | 465 | 486 | | | | | | | | | | 190 |
| 6 | 18 | 36 | 54 | 72 | 90 | 108 | 126 | 144 | 162 | 180 | 198 | 216 | 234 | 252 | 270 | 288 | 306 | 324 | 342 | 360 | 378 | 396 | 414 | 432 | 450 | 468 | 486 | | | | | | 180 |
| 5.5 | 15 | 30 | 45 | 61 | 76 | 91 | 106 | 121 | 136 | 151 | 166 | 182 | 197 | 212 | 227 | 242 | 257 | 272 | 287 | 303 | 318 | 333 | 348 | 363 | 378 | 393 | 408 | 424 | 439 | 454 | 469 | 484 | 170 |
| 5 | 13 | 25 | 38 | 50 | 63 | 75 | 88 | 100 | 113 | 125 | 138 | 150 | 163 | 175 | 188 | 200 | 213 | 225 | 238 | 250 | 263 | 275 | 288 | 300 | 313 | 325 | 338 | 350 | 363 | 375 | 388 | 400 | 160 |
| 4.5 | 10 | 20 | 30 | 41 | 51 | 61 | 71 | 81 | 91 | 101 | 111 | 122 | 132 | 142 | 152 | 162 | 172 | 182 | 192 | 203 | 213 | 223 | 233 | 243 | 253 | 263 | 273 | 284 | 294 | 304 | 314 | 324 | 150 |
| 4 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 104 | 112 | 120 | 128 | 136 | 144 | 152 | 160 | 168 | 176 | 184 | 192 | 200 | 208 | 216 | 224 | 232 | 240 | 248 | 256 | 140 |
| 3.5 | 6 | 12 | 18 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 74 | 80 | 86 | 92 | 98 | 104 | 110 | 116 | 123 | 129 | 135 | 141 | 147 | 153 | 159 | 165 | 172 | 178 | 184 | 190 | 196 | 130 |
| 3 | 5 | 9 | 14 | 18 | 23 | 27 | 32 | 36 | 41 | 45 | 50 | 54 | 59 | 63 | 68 | 72 | 77 | 81 | 86 | 90 | 95 | 99 | 104 | 108 | 113 | 117 | 122 | 126 | 131 | 135 | 140 | 144 | 120 |
| 2.5 | 3 | 6 | 9 | 13 | 16 | 19 | 22 | 25 | 28 | 31 | 34 | 38 | 41 | 44 | 47 | 50 | 53 | 56 | 59 | 63 | 66 | 69 | 72 | 75 | 78 | 81 | 84 | 88 | 91 | 94 | 97 | 100 | 110 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 100 |
| 1.5 | 1 | 2 | 3 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 32 | 33 | 34 | 35 | 36 | 90 |
| 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 10 | 11 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 80 |
| 0.5 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 70 |

ELV

EAV

Time of use in 1/4 hour increments