NIOSH has developed a dataset of sound power levels (L_{WA}), hand-arm tools commonly used in construction settings. The tools were tested in a This table displays L_{WA} which is the maximum a-weighted sound power c

The purpose of the dataset is to provide the necessary information for to loss in occupational settings is a long term goal of NIOSH. To further thi operating tools with a sound power level (L_{WA}) above 85 dBA.

The hand-arm vibration data were acquired with triaxial accelerometers a of the left and right hands is reported. The injury potential of hand-trans acceleration value. Lower values of frequency weighted acceleration ha

This table is an excerpt of the NIOSH power tools dataset. The column
Column 1 Manufacturer Brand Name
Column 2 Model Number
Column 3 Sound Power Level A-weighted (L_{WA}) dBA
Column 4 Acceleration of Hands Frequency Weighted rms m/s^2
Column 5 Technical Specification Tool Bit Size, Blade Size, etc.
Column 6 Rated Electrical Power Watts
Column 7 Actual Electrical Power Watts

Disclaimer: The findings and conclusions in this report are those of the a of the National Institute for Occupational Safety and Health.

Circular Saw

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Porter Cable	345	103	2.4
Skil	5680	104	2.7
Porter Cable	314	104	4.1
Milwaukee	6370-20	104	8.3
Makita	5277NB	105	3.3
Makita	5057KB	105	3.6
Hilti	WSC 7.25-S	106	1.8
Hitachi	C7SB2	106	4.2
Porter Cable	423MAG	106	4.7
Bosch	CS5	106	6
Porter Cable	743	107	2.5
Bosch	CS20	107	3.1
DeWalt	DW364	108	2.1
Skil	SHD77	108	2.8
Ridgid	R3200	108	3
DeWalt	DW378G	108	4.7
Skil	5480-01	108	5.3
Milwaukee	6390-20	109	2.9
Makita	4200NH	109	3.3
Milwaukee	6391-21	109	4
Milwaukee	6375-20	109	4.4

DeWalt	DW369	109	5.1
DeWalt	DW384	109	5.7
Porter Cable	PC13CSL	109	6.1
Craftsman	172-0865	109	6.2
Skil	5380-01	109	7
Makita	5007FK	110	3
Porter Cable	324MAG	110	3.5
DeWalt	DW368	110	4
Milwaukee	6378	110	4.4
Skil	5400	110	5
Ryobi	CSB121	110	6.5
Skil	5750	111	4.3
Black and Decker	FS1300CS	111	5.1
Milwaukee	6460	111	6.8
Makita	5008NB	112	3
Skil	5600	112	5.6
Skil	5500	113	4.2

Drill

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Milwaukee	0299-20	91	4.3
Milwaukee	0302-20	91	4.5
Milwaukee	0300-20	91	5
Makita	6303H	91	5.2
Hitachi	D10VH	91	5.6
Makita	6408	91	13
Hitachi	D13VF	92	3.5
Milwaukee	0234-	92	3.9
Global Machinery Company	RAD45KUL	92	8
Black and Decker	DR211	93	4.6
Milwaukee	0201-20	93	6
DeWalt	DW235G	93	6.2
DeWalt	DW130	94	2.2
Black and Decker	DR501	94	3.8
Milwaukee	0375-	95	3.3
Makita	6402	96	5.3
Milwaukee	1675-	97	4.5
Skil	6265	98	5.6
Black and Decker	7152	99	3.3

Grinder

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Ryobi	AG401	95	7.4
Makita	9557PB	96	6.3
Ryobi	AG451	97	12
Hitachi	G12SR2	97	14
Ridgid	R1000	98	22
Milwaukee	6148-6	99	11
Bosch	1775E	99	11

Makita	GA7021	99	12
Bosch	1700A	99	12
DeWalt	DW402	99	23
McCulloch	MG832500	100	15
Hitachi	G18MR	100	17
Hitachi	G12SE2	101	10
Bosch	1700	101	13
DeWalt	DW818	101	14
Bosch	1347A	101	14
Milwaukee	6154-20	101	23
Makita	9527NB	101	23
Ingersoll-Rand	99V60P107	102	4
DeWalt	D28110	102	12
Skil	9290-01	102	14
DeWalt	DW400	102	17
DeWalt	D28115	102	18
Milwaukee	6156-20	103	21
Porter Cable	7430	103	22
Black and Decker	7750	104	8.7
Porter Cable	PC750AG	104	15
Bosch	1375A	104	19
Black and Decker	G950	105	7.7
DeWalt	28402K	105	18
Atlas Copco	LSV38ST12-427	106	4.3
Bosch	1752G7	107	16
Atlas Copco	LSV48SA085-727	109	9.5
Bosch	1752	109	27

Hammer Drill

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Bosch	11258VSR	99	29
Hitachi	DH24PE	101	26
DeWalt	D25103	101	40
Bosch	11224VSR	101	150
Bosch	11255VSR	102	28
Skil	6445-01	103	46
DeWalt	DW505	103	52
Bosch	11236VS	104	-
Black and Decker	FS6000HD	104	-
Makita	HP1501	104	32
Craftsman	315-265670	104	45
Black and Decker	DR601	105	-
Bosch	1199VSR	105	52
Hitachi	FDV16VB2	106	37
Bosch	1191VSRK	106	41
Bosch	1194AVSR	106	42
Porter Cable	PC650HD	106	42
Ridgid	R5011	107	40
Hitachi	DV20VB2	108	52
Milwaukee	5380-21	108	54
Bosch	11235EVS	116	-

Impact Wrench

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Ingersoll-Rand	231G	101	18
Husky	H4140	102	15
Husky	H4103	103	13
Atlas Copco	LMS37HR13	103	17
Makita	6953	107	12
Atlas Copco	W2211	107	14
Hitachi	WR16SA	107	21
Kobalt	-	110	28
Ridgid	R6300	110	29
DeWalt	DW292	110	31
DeWalt	DW290	111	33

Jig Saw

Manufacturer Name	Model Name	LWA dBA	Accel m/s^2
Makita	4329	97	5.8
Skil	4380	97	18
DeWalt	DW318	98	6.7
Milwaukee	6266-22	98	8
Skil	4690	98	14
Black and Decker	JS600	99	23
Bosch	1590EVS	100	10
Hitachi	CJ110MV	102	9.6

Miter Saw

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Delta	MS250	103	-
Hitachi	C10FCE	103	-
DeWalt	DW706	104	-
Global Machinery Company	MS1015AUL	110	-
Tradesman	M2501W	111	-
Tradesman	M3052LW	113	-

Muffler

Manufacturer Name	Model Name	LWA dBA	Accel m/s^2
Exair	9075	83	-
Exair	3913	90	-
Exair	9086	90	-
Exair	9088	92	-

Orbital Sander

Manufacturer Name	Model Name	L_{WA} dBA	Accel m/s^2
Black and Decker	MS500K	74	-
Black and Decker	MS550GB	76	-

Ridgid	R2610	85	-
Black and Decker	FS350	86	-
Bosch	ROS20VSK	86	-
Ryobi	CFS1501	87	-
DeWalt	DW421	88	-
Bosch	1295DVS	89	-
Black and Decker	FS540	89	-
Bosch	3107DVS	90	-
Ryobi	RS2418	91	-
DeWalt	DW411	91	-
Ryobi	RS280VS	92	-
Porter Cable	333	92	-
Ridgid	R2500	92	-
Porter Cable	340	92	-
Porter Cable	7346	93	-
Black and Decker	MS700G	94	-
DeWalt	D26451K	94	-
Hitachi	SV12SG	95	-
Makita	B04552	97	-

Reciprocating Saw

Manufacturer	Model	L_{WA}	Accel
Name	Name	dBA	m/s^2
DeWalt	DW309K	102	31
Black and Decker	RS500	103	24
Porter Cable	850RSOK	104	25
Milwaukee	6519-22	104	26
DeWalt	DW311	104	33
Milwaukee	6509-22	104	33
Milwaukee	6524-21	104	33
DeWalt	DW304P	105	28
DeWalt	DW310	105	33
Bosch	RS15	105	36
Ryobi	RJ161V	105	37
Porter Cable	9741	105	39
Skil	9205-01	106	18
Milwaukee	6520-21	106	29
Craftsman	172-71840	106	29
DeWalt	DW308M	107	22
Hitachi	CR13V	107	45
Porter Cable	9750	107	50
Ridgid	R3000	108	20
Porter Cable	9747	108	38
Milwaukee	6536-21	109	14
Milwaukee	6537-22	109	23
Bosch	RS35	109	27
Bosch	RS5	109	44
Makita	JR3030T	111	28
Milwaukee	6521-21	112	15

Screw Driver

Manufacturer	Model	L_{WA}	Accel

Name	Name	dBA	m/s^2
Makita	6821	90	11
Milwaukee	6742-20	90	22
DeWalt	DW257	91	8.6
DeWalt	DW268	91	12
Hitachi	W6V3	92	11
DeWalt	DW272	93	11
Ridgid	R6000-	94	8.7

vibration levels m/s^2, and technical specifications of powered hand
accordance with ANSI S12.15, ISO 3744, ISO 5349/1, and 5349/2.
of the loaded and unloaded conditions.

ool purchasers to buy quiet. Reduction of noise induced hearing
is goal, NIOSH recommends that hearing protection be worn, when

and the maximum of the total frequency weighted acceleration values
smitted vibration is estimated from the total frequency weighted
ave less risk of vibration-related health effects.

headings in the table are described in more detail below.

uthor(s) and do not necessarily represent the views

Technical Specification Blade Diameter	Elec. Power Rated Watts	Elec. Power Actual Watts
6 inch saw blade	1080	424
7 1/4 inch saw blade	1680	750
4 1/4 inch saw blade	540	304
8 inch metal cutting blade	1560	693
7 1/4 inch saw blade	1800	605
7 1/4 inch saw blade	1560	713
7 1/4 inch saw blade	1800	714
7 1/4 inch saw blade	1800	616
7 1/4 inch saw blade	1800	695
7 1/4 inch saw blade	1800	880
7 1/4 inch saw blade	1800	596
7 1/4 inch saw blade	1800	662
7 1/4 inch saw blade	1800	762
7 1/4 inch saw blade	1800	772
7 1/4 inch saw blade	1800	775
7 1/4 inch saw blade	1800	744
7 1/4 inch saw blade	1560	716
7 1/4 inch saw blade	1800	753
4 3/8 inch saw blade	1092	325
7 1/4 inch saw blade	1800	806
7 1/4 inch saw blade	1800	882

7 1/4 inch saw blade	1800	651
8 1/4 inch saw blade	1800	770
7 1/4 inch saw blade	1560	905
7 1/4 inch saw blade	1440	729
7 1/4 inch saw blade	1440	730
7 1/4 inch saw blade	1800	615
7 1/4 inch saw blade	1800	590
7 1/4 inch saw blade	1800	647
8 1/4 inch saw blade	1800	720
7 1/4 inch saw blade	1440	758
7 1/4 inch saw blade	1440	764
7 1/4 inch saw blade	1560	749
7 1/4 inch saw blade	1560	591
10 1/4 inch saw blade	1800	642
8 1/4 inch saw blade	1560	645
7 1/4 inch saw blade	1560	728
7 1/4 inch saw blade	1560	763

Technical Specification	Elec. Power Rated	Elec. Power Actual
Chuck Size	Watts	Watts
1/2 inch chuck	960	211
1/2 inch chuck	960	215
1/2 inch chuck	960	210
1/2 inch chuck	780	258
3/8 inch chuck	680	188
3/8 inch chuck	588	201
1/2 inch chuck	1020	262
1/2 inch chuck	660	198
3/8 inch chuck	630	144
3/8 inch chuck	600	223
3/8 inch chuck	840	229
1/2 inch chuck	936	220
1/2 inch chuck	840	386
1/2 inch chuck	720	275
3/8 inch chuck	420	146
3/8 inch chuck	624	257
1 3/8 inch auger bit	900	344
3/8 inch chuck	600	269
3/8 inch chuck	360	164

Technical Specification	Elec. Power Rated	Elec. Power Actual
Wheel Size	Watts	Watts
4 inch angle grinder	528	270
4 1/2 inch angle grinder	900	341
4 1/2 inch angle grinder	660	201
4 1/2 inch angle grinder	580	257
4 1/2 inch angle grinder	960	435
4 1/2 inch angle grinder	1020	404
5 inch tuckpoint grinder	1020	-

7 inch angle grinder	1800	707
4 1/2 inch angle grinder	840	346
4 1/2 inch angle grinder	900	327
5 inch angle grinder	900	222
7 inch angle grinder	1700	710
4 1/2 inch angle grinder	1080	334
4 1/2 inch angle grinder	840	343
4 1/2 inch angle grinder	936	465
4 1/2 inch angle grinder	720	286
4 1/2 inch angle grinder	1440	527
4 1/2 inch angle grinder	552	402
7 inch angle grinder	24609	-293
4 1/2 inch angle grinder	840	482
4 1/2 inch angle grinder	720	371
4 1/2 inch angle grinder	600	305
4 1/2 inch angle grinder	1560	708
5 inch angle grinder	1440	520
4 1/2 inch angle grinder	720	311
4 1/2 inch angle grinder	660	578
4 1/2 inch angle grinder	900	521
4 1/2 inch angle grinder	720	342
4 1/2 inch angle grinder	1020	535
4 1/2 inch angle grinder	960	538
4 inch angle grinder	2774	1640
7 inch angle grinder	1800	971
7 inch angle grinder	3444	1923
7 inch angle grinder	1800	971

Technical Specification Chuck Size	Elec. Power Rated Watts	Elec. Power Actual Watts
5/8 inch chuck	576	300
7/8 inch chuck	620	255
1 inch chuck	900	280
7/8 inch chuck	828	294
1 inch chuck	900	426
1/2 inch chuck	840	350
1/2 inch chuck	936	270
1 1/8 chuck	900	433
1/2 inch chuck	720	200
9/16 inch chuck	600	190
1/2 inch chuck	900	239
1/2 inch chuck	720	305
3/8 inch chuck	1020	341
1/2 inch chuck	550	213
1/2 inch chuck	840	344
1/2 inch chuck	960	312
1/2 inch chuck	780	323
1/2 inch chuck	1020	348
1/2 inch chuck	940	212
1/2 inch chuck	1080	303
1 3/4 inch chuck	1560	-

Technical Specification	Elec. Power Rated	Elec. Power Actual
Shaft Size	Watts	Watts
1/2 inch chuck	1230	-
1/2 inch chuck	1025	-
1/2 inch chuck	1172	-
1/2 inch chuck	1315	2704
1/2 inch chuck	300	153
1/2 inch chuck	880	1375
1/2 inch chuck	504	238
1/2 inch chuck	840	420
1/2 inch chuck	1020	413
1/2 inch chuck	900	358
1/2 inch chuck	900	326

Technical Specification	Elec. Power Rated	Elec. Power Actual
Stroke Length	Watts	Watts
11/16 inch stroke length	468	224
5/8 inch stroke length	444	248
1 inch stroke length	540	287
1 inch stroke length	744	257
13/16 inch stroke length	720	307
3/4 inch stroke length	540	282
1 inch stroke length	768	330
1 inch stroke length	660	293

Technical Specification	Elec. Power Rated	Elec. Power Actual
Blade Diameter	Watts	Watts
10 inch saw blade	1560	525
10 inch saw blade	1520	734
12 inch saw blade	1800	925
10 inch saw blade	1800	952
10 inch saw blade	1800	893
12 inch saw blade	1800	879

Technical Specification	Elec. Power Rated	Elec. Power Actual
Pipe Diameter	Watts	Watts
-	-	3371
-	-	3522
-	-	3283
-	-	3323

Technical Specification	Elec. Power Rated	Elec. Power Actual
Sander Size	Watts	Watts
3 5/8 x 5 1/4 inch triangle	60	46
3 5/8 x 5 1/4 inch triangle	60	43

6 inch disk	456	295
3 1/2 by 8 1/2 inch sheet	144	99
5 inch disk	300	177
5 1/2 inch disk	120	92
5 inch disk	240	193
5 inch disk	264	240
4 1/2 by 5 1/2 inch sheet	216	134
5 inch disk	396	-
5 inch disk	288	230
4 1/2 by 5 1/2 inch sheet	240	166
5 inch disk	336	300
5 inch disk	288	228
4 1/2 x 5 1/2 inch sheet	288	163
4 1/2 x 5 1/2 inch sheet	240	161
6 inch angle grinder	540	208
4 1/4 x 6 1/2 inch triangle	168	139
5 inch disk	360	218
4 1/2 x 5 1/2 inch sheet	204	143
4 1/2 x 5 1/2 inch sheet	192	115

Technical Specification	Elec. Power Rated	Elec. Power Actual
Stroke Length	Watts	Watts
1 1/4 inch stroke length	1416	548
1 1/8 inch stroke length	1020	407
1 1/8 inch stroke length	1020	430
1 1/8 inch stroke length	1200	517
1 1/8 inch stroke length	1560	569
3/4 inch stroke length	1200	540
3/4 inch stroke length	900	314
1 1/8 inch stroke length	1200	532
1 1/8 inch stroke length	1440	602
1 1/4 inch stroke length	1440	660
1 3/16 inch stroke length	780	345
1 1/8 inch stroke length	1080	616
1 1/8 inch stroke length	1020	487
1 1/8 inch stroke length	1440	685
1 1/8 inch stroke length	1200	452
3/4 inch stroke length	1140	520
1 1/8 inch stroke length	1200	414
1 1/4 inch stroke length	1380	615
1 1/8 inch stroke length	1080	394
1 1/4 inch stroke length	1380	559
1 1/4" stroke length	1560	723
1 1/4 inch stroke length	1200	603
1 1/4 inch stroke length	1800	808
1 1/8 inch stroke length	1080	424
1 3/32 inch stroke length	960	464
1 1/4 inch stroke length	1200	644

Technical Specification	Elec. Power Rated	Elec. Power Actual

Tool Bit Size	Watts	Watts
1/4 inch hex drive	624	227
1/4 inch hex drive	780	222
1/4 inch hex drive	744	215
1/4 inch hex drive	780	215
1/4 inch hex drive	768	276
1/4 inch hex drive	756	255
1/4 inch hex drive	780	250