



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart

APE Model D100-42 Diesel Impact Hammer

The energy output is based on the identical Piston/Travel calculations utilized in the FHWA Gates Formula.
 The pile bearing chart is based on the FHWA Gates Formula for pile bearing and is provided for the user's convenience only.
 Pile Bearing (tons) = $((1.75 * \text{SQRT "E" LOG}_{10} * 10N) - 100) / 2000$

E = Developed Energy and N = Number of Blows Per Inch

APE has no preference for these particular formulas and calculations over any other.

Ram Weight (lbs): 22,050

Blows (per minute)	Stroke (ft)	Energy (ft-lbs)	Pile Set (Blows per inch) *Measured in Tons																		
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60	4.00	88,200	288	334	366	391	412	429	445	458	470	480	490	499	508	515	523	530	536	542	548
59	4.17	91,949	295	342	375	401	422	440	455	469	481	492	502	511	519	527	535	542	548	555	561
58	4.33	95,477	302	349	383	409	431	449	465	478	491	502	512	522	530	538	546	553	560	566	572
57	4.50	99,225	309	357	392	418	440	459	475	489	501	513	523	533	542	550	558	565	572	578	584
56	4.67	102,974	315	365	400	427	449	468	484	499	512	523	534	544	553	561	569	576	583	590	596
55	4.83	106,502	322	372	407	435	458	477	493	508	521	533	544	554	563	571	579	587	594	601	607
54	5.00	110,250	328	379	415	444	467	486	503	518	531	543	554	564	574	582	590	598	605	612	619
53	5.17	113,999	334	386	423	452	475	495	512	527	541	553	564	575	584	593	601	609	616	623	630
52	5.33	117,527	340	393	431	460	483	503	521	536	550	562	574	584	594	603	611	619	627	634	640
51	5.50	121,275	346	400	438	468	492	512	530	545	559	572	584	594	604	613	622	630	637	644	651
50	5.75	126,788	355	410	449	479	504	525	543	559	573	586	598	609	619	628	637	645	653	660	667
49	6.00	132,300	364	420	460	491	516	537	556	572	587	600	612	623	633	643	651	660	668	675	682
48	6.25	137,813	373	430	470	502	528	549	568	585	600	613	625	637	647	657	666	675	683	690	697
47	6.50	143,325	381	439	481	513	539	561	580	597	613	626	639	650	661	671	680	689	697	705	712
46	6.83	150,602	392	452	494	527	554	577	596	614	629	643	656	668	679	689	698	707	716	724	731
45	7.17	158,099	403	464	507	541	569	592	612	630	646	660	673	685	697	707	717	726	735	743	751
44	7.50	165,375	413	476	520	555	583	607	627	645	662	676	690	702	714	724	734	744	752	761	769
43	7.83	172,652	423	487	532	568	596	621	642	661	677	692	706	719	730	741	751	761	770	778	787
42	8.17	180,149	433	499	545	581	610	635	657	676	693	708	722	735	747	758	769	778	788	796	805
41	8.58	189,189	445	512	560	597	627	652	674	694	711	727	741	755	767	778	789	799	808	817	826
40	9.00	198,450	457	526	574	612	643	669	692	712	730	746	760	774	787	798	809	819	829	838	847
39	9.50	209,475	471	542	592	630	662	689	712	733	751	768	783	797	809	821	833	843	853	863	872
38	10.00	220,500	485	557	608	648	681	708	732	753	772	789	804	819	832	844	856	866	877	886	895
37	10.50	231,525	498	572	625	665	699	727	751	773	792	809	825	840	854	866	878	889	900	909	919
36	11.17	246,299	515	591	646	688	722	751	776	799	818	836	853	868	882	895	907	919	929	940	949