



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart

APE Model D128-42 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): 28,224

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	112,896	333	384	421	449	473	492	510	525	538	550	561	571	581	590	598	606	613	620	627
59	4.17	117,694	341	393	431	460	484	504	521	537	550	563	574	585	594	603	612	620	627	634	641
58	4.33	122,210	348	402	440	470	494	514	532	548	562	574	586	597	606	616	624	632	640	647	654
57	4.50	127,008	356	411	450	480	504	525	543	559	574	587	598	609	619	629	637	646	653	661	668
56	4.67	131,806	363	419	459	490	515	536	555	571	585	598	610	622	632	641	650	659	666	674	681
55	4.83	136,322	370	427	468	499	524	546	565	581	596	610	622	633	643	653	662	671	679	686	693
54	5.00	141,120	378	436	477	508	534	556	576	592	607	621	633	645	655	665	674	683	691	699	706
53	5.17	145,918	385	444	485	518	544	567	586	603	618	632	645	657	667	677	687	696	704	712	719
52	5.33	150,434	392	451	494	527	553	576	596	613	629	643	656	667	678	689	698	707	715	723	731
51	5.50	155,232	399	459	502	536	563	586	606	624	639	654	667	679	690	700	710	719	727	736	743
50	5.75	162,288	409	471	515	549	577	600	621	639	655	670	683	695	706	717	727	736	745	753	761
49	6.00	169,344	418	482	527	562	590	614	635	654	670	685	699	711	723	734	744	753	762	771	779
48	6.25	176,400	428	493	539	574	603	628	649	668	685	700	714	727	739	750	760	770	779	787	796
47	6.50	183,456	438	504	550	587	616	642	663	682	700	715	729	742	754	766	776	786	795	804	812
46	6.83	192,770	450	517	565	603	633	659	681	701	718	734	749	762	774	786	797	807	816	825	834
45	7.17	202,366	462	531	581	619	650	676	699	719	737	754	768	782	795	807	818	828	838	847	856
44	7.50	211,680	474	545	595	634	666	693	716	737	755	772	787	801	814	826	837	848	858	867	876
43	7.83	220,994	485	558	609	649	681	709	733	754	773	790	805	820	833	845	857	867	878	887	896
42	8.17	230,590	497	571	623	664	697	725	750	771	790	808	824	838	852	864	876	887	898	907	917
41	8.58	242,162	510	586	640	682	716	744	769	791	811	829	845	860	874	887	899	910	921	931	941
40	9.00	254,016	524	601	657	699	734	764	789	812	832	850	867	882	896	910	922	934	945	955	965
39	9.50	268,128	539	619	676	720	756	786	812	835	856	875	892	908	922	936	949	961	972	982	993
38	10.00	282,240	555	637	695	740	777	808	835	858	880	899	917	933	948	962	975	987	998	1009	1020
37	10.50	296,352	570	654	713	759	797	829	857	881	903	922	940	957	972	987	1000	1012	1024	1035	1046
36	11.17	315,262	589	676	737	785	824	856	885	910	933	953	971	989	1004	1019	1033	1046	1058	1070	1080