



**(800) 248-8498**

## Diesel Hammer Energy Output and Pile Bearing Chart

### APE Model D80-52 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.

$$\text{Pile Bearing (tons)} = ((1.75 * \text{SQRT "E" LOG}_{10} * 10N) - 100) / 2000$$

*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): 17,640

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	70,560	252	293	322	345	363	379	392	404	415	424	433	441	449	456	462	468	474	480	485
59	4.17	73,559	259	301	330	353	372	388	402	414	425	434	443	452	459	466	473	479	485	491	496
58	4.33	76,381	265	307	337	361	380	396	410	423	434	444	453	461	469	476	483	489	495	501	506
57	4.50	79,380	271	314	345	369	388	405	419	432	443	453	463	471	479	486	493	500	506	512	517
56	4.67	82,379	277	321	352	377	397	413	428	441	452	463	472	481	489	497	504	510	516	522	528
55	4.83	85,201	282	327	359	384	404	421	436	449	461	471	481	490	498	506	513	520	526	532	538
54	5.00	88,200	288	334	366	391	412	429	445	458	470	480	490	499	508	515	523	530	536	542	548
53	5.17	91,199	294	340	373	399	420	438	453	466	478	489	499	509	517	525	532	539	546	552	558
52	5.33	94,021	299	346	380	406	427	445	461	474	487	498	508	517	526	534	541	548	555	561	567
51	5.50	97,020	305	353	387	413	435	453	469	483	495	506	517	526	535	543	551	558	565	571	577
50	5.75	101,430	313	362	396	423	446	464	480	495	507	519	529	539	548	556	564	572	578	585	591
49	6.00	105,840	320	370	406	434	456	475	492	506	519	531	542	552	561	569	577	585	592	599	605
48	6.25	110,250	328	379	415	444	467	486	503	518	531	543	554	564	574	582	590	598	605	612	619
47	6.50	114,660	335	388	425	453	477	497	514	529	543	555	566	576	586	595	603	611	618	625	632
46	6.83	120,481	345	399	437	466	490	510	528	544	557	570	581	592	602	611	619	627	635	642	649
45	7.17	126,479	355	410	449	479	503	524	542	558	572	585	597	608	618	627	636	644	652	659	666
44	7.50	132,300	364	420	460	491	516	537	556	572	587	600	612	623	633	643	651	660	668	675	682
43	7.83	138,121	373	430	471	502	528	550	569	586	600	614	626	637	648	658	667	675	683	691	698
42	8.17	144,119	382	441	482	514	541	563	582	599	614	628	641	652	663	673	682	691	699	707	714
41	8.58	151,351	393	453	495	528	555	578	598	615	631	645	658	670	681	691	700	709	718	726	733
40	9.00	158,760	404	465	509	542	570	593	613	631	647	662	675	687	698	709	718	728	736	744	752
39	9.50	167,580	416	479	524	559	587	611	632	650	666	681	695	707	719	729	740	749	758	766	774
38	10.00	176,400	428	493	539	574	603	628	649	668	685	700	714	727	739	750	760	770	779	787	796
37	10.50	185,220	440	506	553	590	620	645	667	686	703	719	733	746	758	769	780	790	799	808	817
36	11.17	197,039	455	524	572	610	641	667	689	709	727	743	758	771	784	795	806	816	826	835	844