



(800) 248-8498

## Diesel Hammer Energy Output and Pile Bearing Chart

### APE Model D70-42 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): 15,435

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	61,740	233	271	298	319	337	351	364	375	385	394	402	410	417	423	429	435	440	445	450
59	4.17	64,364	239	278	306	327	345	360	372	384	394	403	412	419	426	433	439	445	451	456	461
58	4.33	66,834	244	284	312	334	352	367	380	392	402	412	420	428	435	442	449	455	460	465	471
57	4.50	69,458	250	291	319	342	360	375	389	401	411	421	429	437	445	452	458	464	470	475	481
56	4.67	72,081	256	297	326	349	368	383	397	409	420	430	438	447	454	461	468	474	480	485	491
55	4.83	74,551	261	303	333	356	375	391	405	417	428	438	447	455	463	470	477	483	489	494	500
54	5.00	77,175	266	309	339	363	382	399	413	425	436	446	455	464	472	479	486	492	498	504	509
53	5.17	79,799	272	315	346	370	390	406	420	433	444	455	464	473	480	488	495	501	507	513	519
52	5.33	82,269	277	321	352	376	396	413	428	440	452	462	472	481	489	496	503	510	516	522	527
51	5.50	84,893	282	327	358	383	403	420	435	448	460	470	480	489	497	505	512	519	525	531	537
50	5.75	88,751	289	335	368	393	414	431	446	459	471	482	492	501	509	517	525	531	538	544	550
49	6.00	92,610	296	343	377	402	423	441	457	470	483	494	504	513	521	529	537	544	551	557	563
48	6.25	96,469	304	351	385	412	433	451	467	481	494	505	515	525	533	541	549	556	563	569	575
47	6.50	100,328	311	359	394	421	443	461	477	492	504	516	526	536	545	553	561	568	575	582	588
46	6.83	105,421	320	370	405	433	455	474	491	505	518	530	541	551	560	568	576	584	591	597	604
45	7.17	110,669	329	380	416	445	468	487	504	519	532	544	555	565	575	583	592	599	606	613	620
44	7.50	115,763	337	390	427	456	479	499	517	532	545	558	569	579	589	598	606	614	621	628	635
43	7.83	120,856	346	399	437	467	491	511	529	544	558	571	582	593	603	612	620	628	636	643	650
42	8.17	126,104	354	409	448	478	503	523	541	557	571	584	596	607	617	626	635	643	651	658	665
41	8.58	132,432	364	420	460	491	516	538	556	572	587	600	612	623	633	643	652	660	668	676	683
40	9.00	138,915	374	432	472	504	530	552	571	587	602	616	628	639	650	660	669	677	685	693	700
39	9.50	146,633	386	445	487	519	546	568	588	605	620	634	647	658	669	679	689	697	706	714	721
38	10.00	154,350	397	458	501	534	561	584	604	622	638	652	665	677	688	698	708	717	725	733	741
37	10.50	162,068	408	470	514	548	576	600	620	638	655	669	682	695	706	717	726	736	744	753	761
36	11.17	172,409	423	487	532	567	596	620	641	660	677	692	705	718	730	741	751	760	769	778	786