



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart

APE Model D46-52 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): 10,143

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	40,572	179	210	232	249	263	275	285	294	302	310	316	323	328	334	338	343	347	352	356
59	4.17	42,296	184	216	238	256	270	282	292	302	310	317	324	330	336	342	347	351	356	360	364
58	4.33	43,919	189	221	244	262	276	288	299	308	317	324	331	338	344	349	354	359	364	368	372
57	4.50	45,644	193	226	249	268	282	295	306	315	324	332	339	345	351	357	362	367	372	376	380
56	4.67	47,368	198	231	255	274	289	301	312	322	331	339	346	353	359	364	370	375	379	384	388
55	4.83	48,991	202	236	260	279	294	307	319	328	337	345	353	359	366	371	377	382	387	391	396
54	5.00	50,715	206	241	266	285	300	314	325	335	344	352	360	367	373	379	384	390	394	399	403
53	5.17	52,439	211	246	271	290	306	320	331	342	351	359	367	374	380	386	392	397	402	407	411
52	5.33	54,062	215	251	276	296	312	325	337	348	357	365	373	380	387	393	398	404	409	414	418
51	5.50	55,787	219	255	281	301	317	331	343	354	363	372	380	387	394	400	406	411	416	421	426
50	5.75	58,322	225	262	289	309	326	340	352	363	373	381	389	397	404	410	416	421	427	432	436
49	6.00	60,858	231	269	296	317	334	348	361	372	382	391	399	406	413	420	426	431	437	442	447
48	6.25	63,394	237	275	303	324	342	356	369	381	391	400	408	416	423	429	436	441	447	452	457
47	6.50	65,930	242	282	310	332	349	365	378	389	399	409	417	425	432	439	445	451	457	462	467
46	6.83	69,277	250	290	319	341	360	375	388	400	411	420	429	437	444	451	458	464	469	475	480
45	7.17	72,725	257	299	328	351	370	385	399	411	422	432	441	449	456	463	470	476	482	488	493
44	7.50	76,073	264	306	337	360	379	395	409	422	433	443	452	460	468	475	482	488	494	500	505
43	7.83	79,420	271	314	345	369	388	405	419	432	443	453	463	471	479	487	494	500	506	512	517
42	8.17	82,868	278	322	354	378	398	415	429	442	454	464	474	482	491	498	505	512	518	524	530
41	8.58	87,027	286	331	364	389	409	426	441	454	466	477	487	496	504	512	519	526	532	538	544
40	9.00	91,287	294	341	374	399	420	438	453	467	479	490	500	509	517	525	533	540	546	552	558
39	9.50	96,359	303	351	385	411	433	451	467	481	493	504	515	524	533	541	549	556	563	569	575
38	10.00	101,430	313	362	396	423	446	464	480	495	507	519	529	539	548	556	564	572	578	585	591
37	10.50	106,502	322	372	407	435	458	477	493	508	521	533	544	554	563	571	579	587	594	601	607
36	11.17	113,297	333	385	422	450	474	493	511	526	539	551	562	573	582	591	599	607	614	621	628