



(800) 248-8498

Hammer Energy Output and Pile Bearing Chart APE Model 7-4 Hydraulic 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.

$$\text{Pile Bearing (tons)} = ((1.75 * \text{SQRT "E" LOG}_{10} * 10N) - 100) / 2$$

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): 14,000

Stroke (feet)	Energy (ft-lbs)	Pile Set (Blows per inch)																		
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0.25	3,500	17	26	33	38	42	46	49	51	54	56	58	59	61	63	64	65	67	68	69
0.50	7,000	45	58	67	74	80	85	89	93	96	99	102	105	107	109	111	113	115	117	118
0.75	10,500	67	82	94	102	109	115	121	125	129	133	136	140	142	145	148	150	152	154	156
1.00	14,000	85	103	116	126	134	141	147	152	157	161	165	169	172	175	178	181	183	186	188
1.25	17,500	101	121	135	147	156	164	170	176	182	186	191	195	198	202	205	208	211	214	216
1.50	21,000	115	137	153	165	175	184	191	198	204	209	214	218	222	226	229	233	236	239	242
1.75	24,500	128	152	169	183	194	203	211	218	224	230	235	240	244	248	252	255	259	262	265
2.00	28,000	140	166	185	199	210	220	229	236	243	249	254	260	264	269	273	277	280	284	287
2.25	31,500	152	179	199	214	226	237	246	253	261	267	273	278	283	288	292	296	300	304	307
2.50	35,000	163	192	212	228	241	252	262	270	277	284	290	296	301	306	311	315	319	323	327
2.75	38,500	173	204	225	242	255	267	277	286	293	300	307	313	318	324	328	333	337	341	345
3.00	42,000	183	215	237	255	269	281	291	300	309	316	323	329	335	340	345	350	354	359	363
3.25	45,500	193	226	249	267	282	294	305	315	323	331	338	345	351	356	361	366	371	375	379
3.50	49,000	202	236	260	279	294	307	319	329	337	345	353	359	366	371	377	382	387	391	396
3.75	52,500	211	246	271	291	306	320	332	342	351	359	367	374	380	386	392	397	402	407	411
4.00	56,000	219	256	282	302	318	332	344	355	364	373	381	388	394	401	406	412	417	422	426

Refusal for APE Hydraulic Impact Hammers is 10 blows per inch Maximum

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