



(800) 248-8498

Hammer Energy Output and Pile Bearing Chart APE Model 13-4 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.

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

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): 26,000

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	6,500	11	15	19	22	24	27	29	31	33	34	35	37	38	39	40	41	42	43	43
0.50	13,000	22	30	37	43	49	54	58	62	65	68	71	73	76	78	80	82	84	85	87
0.75	19,500	33	45	56	65	73	80	87	92	98	102	106	110	114	117	120	123	125	128	130
1.00	26,000	43	60	74	87	98	107	116	123	130	136	142	147	152	156	160	164	167	170	173
1.25	32,500	54	75	93	108	122	134	144	154	163	170	177	184	190	195	200	205	209	213	217
1.50	39,000	65	90	111	130	146	161	173	185	195	204	213	220	228	234	240	246	251	256	260
1.75	45,500	76	105	130	152	171	187	202	216	228	238	248	257	265	273	280	286	293	298	303
2.00	52,000	87	120	149	173	195	214	231	246	260	272	284	294	303	312	320	327	334	341	347
2.25	58,500	98	135	167	195	219	241	260	277	293	306	319	331	341	351	360	368	376	383	390
2.50	65,000	108	150	186	217	244	268	289	308	325	340	355	367	379	390	400	409	418	426	433
2.75	71,500	119	165	204	238	268	294	318	339	358	375	390	404	417	429	440	450	460	468	477
3.00	78,000	130	180	223	260	293	321	347	369	390	409	425	441	455	468	480	491	501	511	520
3.25	84,500	141	195	241	282	317	348	376	400	423	443	461	478	493	507	520	532	543	554	563
3.50	91,000	152	210	260	303	341	375	404	431	455	477	496	514	531	546	560	573	585	596	607
3.75	97,500	163	225	279	325	366	401	433	462	488	511	532	551	569	585	600	614	627	639	650
4.00	104,000	173	240	297	347	390	428	462	493	520	545	567	588	607	624	640	655	669	681	693