



(800) 248-8498

Hammer Energy Output and Pile Bearing Chart APE Model 8-4 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

Ram Weight(lbs): 16,000

APE has no preference for these particular formulas and calculations over any other.

Stroke (feet)	Energy (ft-lbs)	Pile Set (Blows per inch)																		
		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>
0.25	4,000	22	32	39	44	48	52	55	58	61	63	65	67	69	70	72	73	75	76	77
0.50	8,000	52	66	75	83	89	94	99	103	107	110	113	115	118	120	122	125	127	128	130
0.75	12,000	75	92	104	113	120	127	132	137	142	146	149	153	156	159	161	164	166	168	171
1.00	16,000	94	113	127	138	147	154	161	166	171	176	180	184	188	191	194	197	200	202	205
1.25	20,000	111	133	148	160	170	178	185	192	197	203	207	212	216	219	223	226	229	232	235
1.50	24,000	126	150	167	180	191	200	208	215	221	227	232	237	241	245	249	252	256	259	262
1.75	28,000	140	166	185	199	210	220	229	236	243	249	254	260	264	269	273	277	280	284	287
2.00	32,000	154	181	201	216	228	239	248	256	263	270	275	281	286	291	295	299	303	307	310
2.25	36,000	166	195	216	232	245	256	266	274	282	289	295	301	306	311	316	320	324	328	332
2.50	40,000	178	208	230	247	261	273	283	292	300	307	314	320	326	331	336	340	345	349	353
2.75	44,000	189	221	244	262	276	289	299	309	317	325	332	338	344	349	355	359	364	368	372
3.00	48,000	199	233	257	276	291	304	315	325	333	341	349	355	361	367	373	378	382	387	391
3.25	52,000	210	245	270	289	305	318	330	340	349	357	365	372	378	384	390	395	400	405	409
3.50	56,000	219	256	282	302	318	332	344	355	364	373	381	388	394	401	406	412	417	422	426
3.75	60,000	229	267	293	314	331	345	358	369	379	388	396	403	410	416	422	428	433	438	443
4.00	64,000	238	277	305	326	344	358	371	383	393	402	410	418	425	432	438	444	449	454	459

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

7032 South 196th Street
Kent, WA 98032-2185
Tel: 253/872-0141
Fax: 253/872-8710