



Hammer Energy Output and Pile Bearing Chart
J&M Model 275 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): **27,500**

Stroke (in.)	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>
4	9,075	58	73	84	92	98	104	109	113	117	120	123	126	129	131	134	136	138	140	142
6	13,750	83	102	114	124	132	139	145	151	155	159	163	167	170	173	176	179	181	184	186
8	18,425	105	125	140	152	161	169	176	182	188	192	197	201	205	208	212	215	218	221	223
10	22,825	122	145	162	175	185	194	202	208	214	220	225	229	234	238	241	245	248	251	254
12	27,500	139	164	182	197	208	218	226	234	240	246	252	257	261	266	270	274	277	281	284
14	32,175	154	182	201	217	229	240	249	257	264	270	276	282	287	292	296	300	304	308	311
16	36,575	168	197	218	234	248	259	268	277	285	292	298	304	309	314	319	323	327	331	335
18	41,250	181	213	235	252	266	278	288	297	305	313	319	326	331	337	342	346	351	355	359
20	45,925	194	227	250	269	283	296	307	316	325	333	340	346	352	358	363	368	373	377	381
22	50,325	205	240	264	283	299	312	324	334	343	351	358	365	371	377	383	388	393	397	402
24	55,000	217	253	279	299	315	329	341	351	360	369	377	384	390	397	402	408	413	418	422
26	59,675	228	266	292	313	330	344	357	368	377	386	394	402	409	415	421	427	432	437	442
28	64,075	238	277	305	326	344	359	372	383	393	402	411	418	425	432	438	444	450	455	460
30	68,750	248	289	318	340	358	373	387	398	409	418	427	435	442	449	456	462	467	473	478
32	73,425	258	300	330	353	372	387	401	413	424	434	443	451	459	466	473	479	485	490	496
34	77,825	268	311	341	365	384	400	415	427	438	448	458	466	474	481	488	494	501	506	512
36	82,500	277	321	353	377	397	414	428	441	453	463	473	481	489	497	504	511	517	523	528
38	87,175	286	332	364	389	409	427	442	455	467	477	487	496	504	512	519	526	533	539	544
40	91,575	294	341	374	400	421	439	454	467	480	491	501	510	518	526	534	541	547	553	559
42	96,250	303	351	385	411	433	451	467	481	493	504	514	524	533	541	548	555	562	569	575
44	100,925	312	361	395	422	444	463	479	493	506	517	528	538	547	555	563	570	577	583	590
46	105,050	319	369	404	432	454	473	490	504	517	529	540	550	559	567	575	583	590	596	603
48	110,000	328	379	415	443	466	485	502	517	530	542	553	563	573	582	590	597	604	611	618