



**Hammer Energy Output and Pile Bearing Chart**  
**J&M Model 70 Hydraulic Impact Hammer**

The energy output is based on the identical Piston/Travel calculations utilized in the **FHWA Modified 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.

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): 7,000

Stroke (in.)	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
4	2,310	5	12	17	21	25	28	30	32	34	36	37	39	40	42	43	44	45	46	47
6	3,500	17	26	33	38	42	46	49	51	54	56	58	59	61	63	64	65	67	68	69
8	4,690	28	39	46	52	57	61	64	67	70	72	75	77	79	80	82	84	85	87	88
10	5,810	37	49	57	63	69	73	77	80	83	86	89	91	93	95	97	99	100	102	103
12	7,000	45	58	67	74	80	85	89	93	96	99	102	105	107	109	111	113	115	117	118
14	8,190	53	67	77	85	91	96	101	105	108	112	115	117	120	122	125	127	129	130	132
16	9,310	60	75	85	93	100	106	111	115	119	122	126	128	131	134	136	138	140	142	144
18	10,500	67	82	94	102	109	115	121	125	129	133	136	140	142	145	148	150	152	154	156
20	11,690	73	90	102	111	118	125	130	135	139	143	147	150	153	156	159	161	163	166	168
22	12,810	79	96	109	118	126	133	138	144	148	152	156	159	163	166	168	171	173	176	178
24	14,000	85	103	116	126	134	141	147	152	157	161	165	169	172	175	178	181	183	186	188
26	15,190	90	109	123	133	142	149	155	161	166	170	174	178	181	185	188	191	193	196	198
28	16,310	95	115	129	140	149	156	163	168	173	178	182	186	190	193	196	199	202	205	207
30	17,500	101	121	135	147	156	164	170	176	182	186	191	195	198	202	205	208	211	214	216
32	18,690	106	127	142	153	163	171	178	184	189	194	199	203	207	210	214	217	220	223	225
34	19,810	110	132	147	159	169	177	184	191	196	201	206	210	214	218	221	225	228	231	233
36	21,000	115	137	153	165	175	184	191	198	204	209	214	218	222	226	229	233	236	239	242

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