



(800) 248-8498

Hammer Energy Output and Pile Bearing Chart APE Model 40-4 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): 80,000

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	20,000	111	133	148	160	170	178	185	192	197	203	207	212	216	219	223	226	229	232	235
0.50	40,000	178	208	230	247	261	273	283	292	300	307	314	320	326	331	336	340	345	349	353
0.75	60,000	229	267	293	314	331	345	358	369	379	388	396	403	410	416	422	428	433	438	443
1.00	80,000	272	316	346	370	390	407	421	434	445	455	465	473	481	489	495	502	508	514	519
1.25	100,000	310	359	393	420	442	461	477	491	503	515	525	535	544	552	560	567	574	581	587
1.50	120,000	344	398	436	465	489	509	527	542	556	569	580	591	601	610	618	626	634	641	647
1.75	140,000	376	434	475	506	532	554	573	590	605	618	631	642	653	662	672	680	688	696	703
2.00	160,000	405	467	511	545	572	596	616	634	650	664	678	690	701	712	721	731	739	748	755
2.25	180,000	433	498	545	581	610	635	656	675	692	708	722	735	747	758	768	778	787	796	804
2.50	200,000	459	528	577	615	646	672	695	715	733	749	764	777	790	802	812	823	833	842	850
2.75	220,000	484	556	608	647	680	707	731	752	771	788	803	818	831	843	855	865	876	885	894
3.00	240,000	508	583	637	678	712	741	766	788	807	825	841	856	870	883	895	906	917	927	936
3.25	260,000	530	609	665	708	743	773	799	822	842	861	878	893	908	921	933	945	956	967	977

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