



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart

APE Model D225-42 Diesel 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): 49,613

Blows (per minute)	Stroke (ft)	Energy (ft-lbs)	Pile Set (Blows per inch) *Measured in Tons																		
			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
60	4.00	198,452	457	526	574	612	643	669	692	712	730	746	760	774	787	798	809	819	829	838	847
59	4.17	206,886	468	538	588	626	658	684	707	728	746	762	777	791	804	816	827	838	848	857	866
58	4.33	214,824	478	549	600	639	671	698	722	743	761	778	793	807	820	833	844	855	865	874	883
57	4.50	223,259	488	561	612	652	685	713	737	758	777	794	810	824	837	850	861	872	882	892	901
56	4.67	231,693	498	572	625	666	699	727	752	773	792	810	826	840	854	867	878	889	900	910	919
55	4.83	239,631	507	583	636	678	712	740	765	787	807	824	841	855	869	882	894	905	916	926	936
54	5.00	248,065	517	594	648	690	725	754	779	802	822	840	856	871	885	898	911	922	933	943	953
53	5.17	256,499	527	605	660	703	738	768	793	816	836	855	871	887	901	914	927	938	949	960	970
52	5.33	264,437	535	615	671	714	750	780	806	829	850	869	886	901	916	929	942	954	965	975	985
51	5.50	272,872	545	625	682	727	763	793	820	843	864	883	900	916	931	945	957	969	981	992	1002
50	5.75	285,275	558	640	699	744	781	812	839	863	885	904	922	938	953	967	980	992	1004	1015	1025
49	6.00	297,678	571	655	715	761	799	831	859	883	905	925	943	959	975	989	1002	1015	1027	1038	1049
48	6.25	310,081	584	670	731	778	816	849	877	902	924	945	963	980	996	1010	1024	1037	1049	1060	1071
47	6.50	322,485	596	684	746	794	834	867	896	921	944	964	983	1000	1016	1031	1045	1058	1071	1082	1093
46	6.83	338,857	613	702	766	815	856	890	919	945	969	990	1009	1027	1043	1058	1073	1086	1099	1111	1122
45	7.17	355,725	629	721	786	837	878	913	943	970	994	1015	1035	1053	1070	1086	1100	1114	1127	1139	1151
44	7.50	372,098	644	738	805	857	899	935	966	993	1017	1040	1060	1078	1095	1111	1126	1140	1154	1166	1178
43	7.83	388,470	660	756	824	877	920	956	988	1016	1041	1063	1084	1103	1120	1137	1152	1166	1180	1193	1205
42	8.17	405,338	675	773	842	896	941	978	1010	1039	1064	1087	1108	1128	1146	1162	1178	1193	1206	1219	1232
41	8.58	425,680	693	793	865	920	965	1003	1036	1066	1092	1115	1137	1157	1175	1192	1208	1223	1238	1251	1264
40	9.00	446,517	711	814	887	943	990	1029	1063	1093	1119	1144	1166	1186	1205	1222	1239	1254	1269	1282	1295
39	9.50	471,324	732	837	912	971	1018	1058	1093	1124	1151	1176	1199	1220	1239	1257	1274	1290	1305	1319	1332
38	10.00	496,130	752	860	937	997	1046	1087	1123	1154	1183	1208	1231	1253	1273	1291	1308	1325	1340	1354	1368
37	10.50	520,937	772	883	962	1023	1073	1115	1152	1184	1213	1239	1263	1285	1305	1324	1342	1359	1374	1389	1403
36	11.17	554,177	797	912	994	1057	1108	1152	1190	1223	1253	1280	1304	1327	1348	1367	1386	1403	1419	1434	1449