



(800) 248-8498

## Diesel Hammer Energy Output and Pile Bearing Chart

### APE Model D250-42 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): 55,125

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	220,500	485	557	608	648	681	708	732	753	772	789	804	819	832	844	856	866	877	886	895
59	4.17	229,871	496	570	622	663	696	724	748	770	789	806	822	837	850	863	875	886	896	906	915
58	4.33	238,691	506	581	635	676	710	739	764	785	805	823	839	854	867	880	892	903	914	924	934
57	4.50	248,063	517	594	648	690	725	754	779	802	822	840	856	871	885	898	911	922	933	943	953
56	4.67	257,434	528	606	661	704	739	769	795	818	838	856	873	888	903	916	929	940	951	962	972
55	4.83	266,254	537	617	673	717	753	783	809	832	853	872	889	904	919	933	945	957	968	979	989
54	5.00	275,625	548	629	686	730	767	798	824	848	869	888	905	921	936	950	963	975	986	997	1007
53	5.17	284,996	558	640	698	744	781	812	839	863	884	904	921	937	952	966	980	992	1003	1014	1025
52	5.33	293,816	567	651	710	756	793	825	853	877	899	918	936	953	968	982	995	1008	1020	1031	1041
51	5.50	303,188	577	662	722	769	807	839	867	892	914	934	952	968	984	998	1012	1025	1037	1048	1059
50	5.75	316,969	591	678	739	787	826	859	888	913	935	956	974	991	1007	1022	1036	1049	1061	1073	1084
49	6.00	330,750	605	693	756	805	845	878	908	933	956	977	996	1014	1030	1045	1059	1072	1085	1097	1108
48	6.25	344,531	618	709	773	823	863	898	927	954	977	998	1018	1036	1052	1068	1082	1096	1108	1120	1132
47	6.50	358,313	631	724	789	840	881	916	947	974	998	1019	1039	1057	1074	1090	1104	1118	1131	1144	1155
46	6.83	376,504	649	743	810	862	905	941	972	999	1024	1046	1066	1085	1102	1118	1133	1148	1161	1173	1185
45	7.17	395,246	666	763	831	885	928	965	997	1025	1050	1073	1094	1113	1131	1147	1162	1177	1191	1204	1216
44	7.50	413,438	682	781	851	906	950	988	1021	1049	1075	1099	1120	1139	1157	1174	1190	1205	1219	1232	1245
43	7.83	431,629	698	799	871	927	972	1011	1044	1073	1100	1124	1145	1165	1184	1201	1217	1232	1246	1260	1273
42	8.17	450,371	714	817	891	948	994	1033	1068	1098	1124	1149	1171	1191	1210	1228	1244	1260	1274	1288	1301
41	8.58	472,973	733	839	914	972	1020	1060	1095	1126	1154	1178	1201	1222	1241	1259	1276	1292	1307	1321	1335
40	9.00	496,125	752	860	937	997	1046	1087	1123	1154	1183	1208	1231	1253	1273	1291	1308	1325	1340	1354	1368
39	9.50	523,688	774	885	964	1026	1076	1118	1155	1187	1216	1243	1267	1289	1309	1328	1346	1362	1378	1393	1407
38	10.00	551,250	795	910	991	1054	1105	1149	1186	1220	1249	1276	1301	1323	1344	1364	1382	1399	1415	1430	1445
37	10.50	578,813	816	933	1016	1081	1134	1178	1217	1251	1281	1309	1334	1357	1379	1399	1417	1435	1451	1467	1482
36	11.17	615,746	843	964	1050	1117	1171	1217	1257	1292	1323	1352	1378	1401	1424	1444	1463	1481	1498	1515	1530