



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart

APE Model D320 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): 66,150

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	264,600	536	615	671	715	750	780	807	830	850	869	886	901	916	929	942	954	965	976	986
59	4.17	275,846	548	629	686	731	767	798	825	848	869	888	906	921	936	950	963	975	986	997	1007
58	4.33	286,430	559	642	700	746	783	814	841	865	887	906	924	940	955	969	982	995	1006	1017	1028
57	4.50	297,675	571	655	715	761	799	831	859	883	905	925	943	959	975	989	1002	1015	1027	1038	1049
56	4.67	308,921	583	668	729	776	815	847	876	900	923	943	961	978	994	1008	1022	1035	1047	1058	1069
55	4.83	319,505	593	681	742	790	829	863	891	917	939	960	978	996	1011	1026	1040	1053	1065	1077	1088
54	5.00	330,750	605	693	756	805	845	878	908	933	956	977	996	1014	1030	1045	1059	1072	1085	1097	1108
53	5.17	341,996	616	706	770	819	860	894	924	950	973	995	1014	1032	1048	1064	1078	1091	1104	1116	1127
52	5.33	352,580	626	717	782	833	874	909	939	965	989	1011	1030	1048	1065	1081	1095	1109	1122	1134	1146
51	5.50	363,825	637	730	796	847	888	924	954	981	1006	1027	1047	1066	1083	1099	1113	1127	1140	1153	1164
50	5.75	380,363	652	747	815	867	910	946	977	1005	1029	1052	1072	1091	1108	1124	1139	1154	1167	1180	1192
49	6.00	396,900	667	764	833	887	930	967	999	1027	1053	1075	1096	1115	1133	1150	1165	1180	1193	1206	1218
48	6.25	413,438	682	781	851	906	950	988	1021	1049	1075	1099	1120	1139	1157	1174	1190	1205	1219	1232	1245
47	6.50	429,975	696	798	869	925	970	1009	1042	1071	1098	1121	1143	1163	1181	1199	1215	1230	1244	1257	1270
46	6.83	451,805	715	819	892	949	996	1035	1069	1099	1126	1151	1173	1193	1212	1230	1246	1262	1276	1290	1303
45	7.17	474,296	734	840	915	974	1022	1062	1097	1128	1155	1180	1203	1224	1243	1261	1278	1294	1309	1323	1337
44	7.50	496,125	752	860	937	997	1046	1087	1123	1154	1183	1208	1231	1253	1273	1291	1308	1325	1340	1354	1368
43	7.83	517,955	769	880	959	1020	1070	1112	1148	1181	1209	1236	1259	1281	1301	1320	1338	1355	1370	1385	1399
42	8.17	540,446	787	900	981	1043	1094	1137	1174	1207	1237	1263	1287	1310	1331	1350	1368	1385	1401	1416	1430
41	8.58	567,567	808	924	1006	1070	1122	1166	1205	1238	1268	1296	1321	1344	1365	1384	1403	1420	1437	1452	1467
40	9.00	595,350	828	947	1032	1097	1151	1196	1235	1269	1300	1328	1354	1377	1399	1419	1438	1456	1473	1488	1504
39	9.50	628,425	852	975	1061	1128	1183	1230	1270	1306	1337	1366	1392	1416	1439	1459	1479	1497	1514	1531	1546
38	10.00	661,500	876	1001	1090	1159	1215	1263	1304	1341	1373	1403	1430	1454	1477	1499	1519	1537	1555	1572	1588
37	10.50	694,575	899	1027	1118	1189	1247	1296	1338	1375	1408	1439	1466	1492	1515	1537	1557	1577	1595	1612	1628
36	11.17	738,896	929	1061	1155	1228	1287	1338	1381	1420	1454	1485	1514	1540	1564	1587	1608	1628	1646	1664	1681