



(800) 248-8498

Diesel Hammer Energy Output and Pile Bearing Chart APE Model D80 -42 or -52 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.

$$\text{Pile Bearing (metric tons)} = (((1.75 * \text{SQRT "E" LOG}_{10} * 10N) - 100) / 2000) * 0.00045359237$$

E = Developed Energy and N = Number of Blows Per Inch

APE has no preference for these particular formulas and calculations over any other.

Enter Ram Weight in kgs: 8,000

| Blows (per minute) | Stroke (m) | Energy (kNm) | Pile Set (Blows per cm) | | | | | | | | | | | | | | | | | | |
|-----------------------|---------------|-----------------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | | 2.5 | 5.1 | 7.62 | 10 | 13 | 15 | 18 | 20 | 23 | 25 | 28 | 30 | 33 | 36 | 38 | 41 | 43 | 46 | 48 |
| 60 | 1.22 | 95.71 | 641 | 745 | 819 | 876 | 923 | 963 | 997 | 1027 | 1054 | 1078 | 1101 | 1121 | 1140 | 1158 | 1175 | 1190 | 1205 | 1219 | 1232 |
| 59 | 1.27 | 99.64 | 657 | 763 | 838 | 897 | 944 | 985 | 1020 | 1050 | 1078 | 1103 | 1126 | 1147 | 1166 | 1184 | 1201 | 1217 | 1232 | 1246 | 1259 |
| 58 | 1.32 | 103.56 | 672 | 780 | 857 | 917 | 965 | 1006 | 1042 | 1073 | 1101 | 1127 | 1150 | 1171 | 1191 | 1210 | 1227 | 1243 | 1258 | 1273 | 1286 |
| 57 | 1.37 | 107.48 | 687 | 797 | 876 | 936 | 986 | 1028 | 1064 | 1096 | 1125 | 1150 | 1174 | 1196 | 1216 | 1235 | 1252 | 1269 | 1284 | 1299 | 1313 |
| 56 | 1.42 | 111.40 | 702 | 814 | 894 | 955 | 1006 | 1048 | 1085 | 1118 | 1147 | 1174 | 1198 | 1220 | 1240 | 1259 | 1277 | 1294 | 1310 | 1325 | 1339 |
| 55 | 1.47 | 115.33 | 716 | 830 | 911 | 974 | 1026 | 1069 | 1107 | 1140 | 1169 | 1196 | 1221 | 1243 | 1264 | 1284 | 1302 | 1319 | 1335 | 1350 | 1365 |
| 54 | 1.52 | 119.25 | 731 | 847 | 929 | 993 | 1045 | 1089 | 1127 | 1161 | 1191 | 1219 | 1243 | 1266 | 1288 | 1307 | 1326 | 1343 | 1360 | 1375 | 1390 |
| 53 | 1.58 | 123.96 | 747 | 866 | 950 | 1015 | 1068 | 1113 | 1152 | 1186 | 1217 | 1245 | 1270 | 1294 | 1315 | 1335 | 1354 | 1372 | 1389 | 1404 | 1419 |
| 52 | 1.62 | 127.09 | 758 | 878 | 963 | 1029 | 1083 | 1129 | 1168 | 1203 | 1234 | 1262 | 1288 | 1311 | 1333 | 1354 | 1373 | 1391 | 1408 | 1424 | 1439 |
| 51 | 1.68 | 131.80 | 775 | 897 | 983 | 1050 | 1105 | 1152 | 1192 | 1227 | 1259 | 1288 | 1314 | 1338 | 1360 | 1381 | 1400 | 1419 | 1436 | 1452 | 1467 |
| 50 | 1.75 | 137.29 | 793 | 918 | 1006 | 1075 | 1131 | 1178 | 1219 | 1255 | 1287 | 1317 | 1343 | 1368 | 1391 | 1412 | 1432 | 1450 | 1468 | 1485 | 1500 |
| 49 | 1.83 | 143.57 | 814 | 941 | 1032 | 1102 | 1159 | 1207 | 1249 | 1286 | 1319 | 1349 | 1377 | 1402 | 1425 | 1447 | 1467 | 1486 | 1504 | 1521 | 1537 |
| 48 | 1.91 | 149.85 | 834 | 964 | 1057 | 1128 | 1187 | 1236 | 1279 | 1317 | 1351 | 1381 | 1409 | 1435 | 1459 | 1481 | 1502 | 1521 | 1539 | 1557 | 1573 |
| 47 | 1.98 | 155.34 | 852 | 984 | 1078 | 1151 | 1211 | 1261 | 1305 | 1343 | 1378 | 1409 | 1437 | 1463 | 1487 | 1510 | 1531 | 1551 | 1570 | 1587 | 1604 |
| 46 | 2.08 | 163.18 | 876 | 1012 | 1108 | 1183 | 1244 | 1296 | 1340 | 1380 | 1415 | 1447 | 1476 | 1503 | 1528 | 1551 | 1572 | 1593 | 1612 | 1630 | 1647 |
| 45 | 2.19 | 171.81 | 902 | 1042 | 1140 | 1217 | 1280 | 1333 | 1379 | 1419 | 1455 | 1488 | 1518 | 1545 | 1571 | 1595 | 1617 | 1638 | 1657 | 1676 | 1694 |
| 44 | 2.29 | 179.66 | 926 | 1068 | 1169 | 1248 | 1312 | 1366 | 1413 | 1454 | 1491 | 1525 | 1555 | 1583 | 1609 | 1634 | 1656 | 1677 | 1698 | 1717 | 1735 |
| 43 | 2.39 | 187.50 | 948 | 1094 | 1197 | 1277 | 1343 | 1398 | 1446 | 1488 | 1526 | 1560 | 1591 | 1620 | 1647 | 1672 | 1695 | 1716 | 1737 | 1756 | 1775 |
| 42 | 2.49 | 195.35 | 971 | 1119 | 1225 | 1306 | 1373 | 1430 | 1478 | 1522 | 1560 | 1595 | 1627 | 1656 | 1684 | 1709 | 1732 | 1755 | 1776 | 1795 | 1814 |
| 41 | 2.62 | 205.55 | 999 | 1151 | 1259 | 1343 | 1412 | 1470 | 1520 | 1564 | 1604 | 1640 | 1672 | 1702 | 1730 | 1756 | 1780 | 1803 | 1825 | 1845 | 1864 |
| 40 | 2.74 | 214.96 | 1024 | 1180 | 1291 | 1377 | 1447 | 1506 | 1557 | 1602 | 1643 | 1680 | 1713 | 1744 | 1772 | 1799 | 1824 | 1847 | 1869 | 1890 | 1909 |
| 39 | 2.90 | 227.51 | 1057 | 1218 | 1332 | 1420 | 1492 | 1553 | 1606 | 1652 | 1694 | 1732 | 1766 | 1798 | 1827 | 1854 | 1880 | 1904 | 1926 | 1948 | 1968 |
| 38 | 3.05 | 239.28 | 1088 | 1252 | 1369 | 1459 | 1533 | 1596 | 1650 | 1698 | 1740 | 1779 | 1814 | 1847 | 1877 | 1905 | 1931 | 1956 | 1979 | 2001 | 2021 |
| 37 | 3.20 | 251.05 | 1117 | 1286 | 1405 | 1498 | 1574 | 1638 | 1693 | 1742 | 1786 | 1825 | 1861 | 1895 | 1925 | 1954 | 1981 | 2006 | 2030 | 2052 | 2074 |
| 36 | 3.40 | 266.74 | 1156 | 1329 | 1452 | 1548 | 1626 | 1692 | 1749 | 1799 | 1845 | 1885 | 1923 | 1957 | 1989 | 2018 | 2046 | 2072 | 2096 | 2119 | 2141 |