# Amp chart

Power Generation

## Electrical formulas for computing alternator amperage:

| Desired data | Single-phase | Three-phase | Direct current |
|---|---|---|---|
| **Kilovolt-Amps (kVA)** | Volts x Amps / 1,000 | Volts x Amps x 1.732 / 1,000 | |
| **Kilowatts (kW)** | kVA x Power Factor (PF) | kVA x Power Factor (PF) | Volts x Amps / 1,000 |
| **AMPS - When kW are known** | kW x 1,000 / Volts x PF | kW x 1,000 / 1.732 x Volts x PF | kW x 1,000 / Volts |
| **AMPS - When kVA is known** | kVA x 1,000 / Volts | kVA x 1,000 / 1.732 x Volts | |
| **AMPS - When Horsepower is known** | HP x 746 / Volts x % Eff. x PF | HP x 746 / 1.732 x Volts x % Eff. x PF | HP x 746 / Volts x % Eff. |
| **Electric Motor Horsepower Output (HP)** | Volts x Amps x % Eff. x PF / 746 | Volts x Amps x 1.732 x % Eff. x PF / 746 | Volts x Amps x % Eff. / 746 |

| Generator rating: | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **kVA** | **kW @0.8 PF** | **120 Volts** | **208 Volts** | **220 Volts** | **240 Volts** | **440 Volts** | **480 Volts** | **600 Volts** | **2400 Volts** | **3300 Volts** | **4160 Volts** | **6900 Volts** | **11,500 Volts** | **13,800 Volts** |
| **Alternator amperes (for 3-phase alternators):** | | | | | | | | | | | | | | |
| 18.7 | 15 | 90 | 52 | 49 | 45 | 25 | 23 | 18 | - | - | - | - | - | - |
| 25 | 20 | 120 | 69 | 66 | 60 | 33 | 30 | 24 | 6 | 4 | 3 | - | - | - |
| 31.3 | 25 | 151 | 87 | 82 | 75 | 41 | 38 | 8 | 5 | 4 | 2 | 1.5 | 1 | - |
| 37.5 | 30 | 170 | 104 | 99 | 90 | 49 | 45 | 36 | 9 | 7 | 5 | 3 | 2 | 1.5 |
| 50 | 40 | 240 | 139 | 131 | 120 | 66 | 60 | 48 | 12 | 9 | 7 | 4 | 2.5 | 2 |
| 62.5 | 50 | 301 | 173 | 164 | 151 | 82 | 75 | 60 | 15 | 11 | 9 | 5 | 3 | 2.5 |
| 75 | 60 | 361 | 208 | 197 | 181 | 99 | 90 | 72 | 18 | 13 | 10 | 6 | 4 | 3 |
| 93.8 | 75 | 452 | 261 | 246 | 226 | 123 | 113 | 90 | 23 | 16 | 13 | 8 | 5 | 4 |
| 100 | 80 | 482 | 278 | 263 | 241 | 131 | 120 | 96 | 24 | 17 | 14 | 8 | 5 | 4 |
| 125 | 100 | 602 | 347 | 328 | 301 | 164 | 151 | 120 | 30 | 22 | 17 | 10 | 6 | 5 |
| 156 | 125 | 751 | 433 | 410 | 376 | 205 | 188 | 150 | 38 | 27 | 22 | 13 | 8 | 6 |
| 187 | 150 | 901 | 520 | 491 | 450 | 246 | 225 | 180 | 45 | 33 | 26 | 16 | 9 | 8 |
| 219 | 175 | 1055 | 609 | 575 | 527 | 288 | 264 | 211 | 53 | 38 | 30 | 18 | 11 | 8 |
| 250 | 200 | 1204 | 695 | 657 | 602 | 328 | 301 | 241 | 60 | 44 | 35 | 21 | 13 | 10 |
| 312 | 250 | 1503 | 867 | 820 | 751 | 410 | 376 | 300 | 75 | 55 | 43 | 26 | 16 | 13 |
| 375 | 300 | 1806 | 1042 | 985 | 903 | 493 | 452 | 361 | 90 | 66 | 52 | 31 | 19 | 16 |
| 438 | 350 | 2110 | 1217 | 1151 | 1055 | 575 | 527 | 422 | 105 | 77 | 61 | 37 | 22 | 18 |
| 500 | 400 | 2408 | 1389 | 1314 | 1204 | 657 | 602 | 482 | 120 | 86 | 69 | 42 | 25 | 21 |
| 625 | 500 | 3010 | 1737 | 1642 | 1505 | 821 | 753 | 602 | 150 | 109 | 87 | 52 | 31 | 26 |
| 750 | 600 | 3612 | 2084 | 1970 | 1806 | 985 | 903 | 722 | 181 | 131 | 104 | 63 | 38 | 31 |
| 875 | 700 | 4215 | 2431 | 2299 | 2107 | 1149 | 1054 | 843 | 211 | 153 | 122 | 73 | 44 | 37 |
| 1000 | 800 | 4817 | 2779 | 2627 | 2408 | 1314 | 1204 | 963 | 241 | 175 | 139 | 84 | 50 | 42 |
| 1125 | 900 | 5419 | 3126 | 2956 | 2709 | 1478 | 1355 | 1084 | 271 | 197 | 156 | 94 | 57 | 47 |
| 1250 | 1000 | 6021 | 3474 | 3284 | 3010 | 1642 | 1505 | 1204 | 301 | 219 | 174 | 105 | 63 | 52 |
| 1563 | 1250 | 7527 | 4343 | 4106 | 3764 | 2053 | 1881 | 1506 | 376 | 274 | 217 | 131 | 79 | 65 |
| 1875 | 1500 | 9031 | - | - | 4516 | 2463 | 2258 | 1806 | 452 | 328 | 260 | 157 | 94 | 78 |
| 2188 | 1750 | 10539 | - | - | - | 2874 | 2635 | 1806 | 452 | 383 | 304 | 183 | 110 | 92 |
| 2500 | 2000 | 12042 | - | - | - | 3284 | 3010 | 2408 | 602 | 438 | 347 | 209 | 126 | 105 |

Actual measurements may vary depending upon the application and load size.

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