

Amp chart



Electrical formulas for computing alternator amperage:

Desired data	Single-phase	Three-phase	Direct current
Kilovolt-Amps (kVA)	$\frac{\text{Volts} \times \text{Amps}}{1,000}$	$\frac{\text{Volts} \times \text{Amps} \times 1.732}{1,000}$	
Kilowatts (kW)	kVA x Power Factor (PF)	kVA x Power Factor (PF)	$\frac{\text{Volts} \times \text{Amps}}{1,000}$
AMPS - When kW are known	$\frac{\text{kW} \times 1,000}{\text{Volts} \times \text{PF}}$	$\frac{\text{kW} \times 1,000}{1.732 \times \text{Volts} \times \text{PF}}$	$\frac{\text{kW} \times 1,000}{\text{Volts}}$
AMPS - When kVA is known	$\frac{\text{kVA} \times 1,000}{\text{Volts}}$	$\frac{\text{kVA} \times 1,000}{1.732 \times \text{Volts}}$	
AMPS - When Horsepower is known	$\frac{\text{HP} \times 746}{\text{Volts} \times \% \text{ Eff.} \times \text{PF}}$	$\frac{\text{HP} \times 746}{1.732 \times \text{Volts} \times \% \text{ Eff.} \times \text{PF}}$	$\frac{\text{HP} \times 746}{\text{Volts} \times \% \text{ Eff.}}$
Electric Motor Horsepower Output (HP)	$\frac{\text{Volts} \times \text{Amps} \times \% \text{ Eff.} \times \text{PF}}{746}$	$\frac{\text{Volts} \times \text{Amps} \times 1.732 \times \% \text{ Eff.} \times \text{PF}}{746}$	$\frac{\text{Volts} \times \text{Amps} \times \% \text{ Eff.}}{746}$

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.