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How to Choose a Hot Rod Alternator

1) Determine the amp load of the vehicle.

Amperage Requirements

Several factors must be taken into consideration when choosing an alternator that is right for a Hot Rod. It is best to calculate the amp draw of the accessories and items installed, and then the size of the alternator to the loads.

Accessory	Amp Draw
Headlights/tailights	4-6
Halogen bulbs up to 10 amps per bulb	
Power Windows	15-20*
Dash Lights	2-4
Air Conditioning	19-22
Electric Fans	30-50
Radio	4-10
Audio Amplifiers	15-250+
HEI Ignition	10-12
Electric Water Pump	18-25
Electric Fuel Pump	8-10
Air Suspension Compressors	20-50 *

*Intermittent Draw

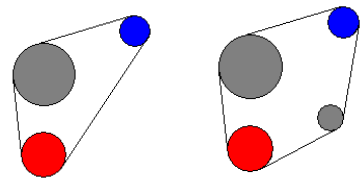
Charge Wire Requirements

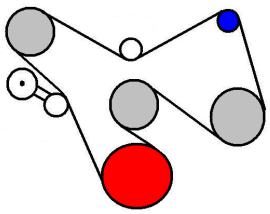
The connection between the alternator and the battery is very important. An undersized charge wire or improperly attached terminals could result in voltage loss. When upgrading your alternator you have increased the volume of current and in most cases you will need to increase the size of the charge wire to accommodate the increase in amps. Using too small of a charge wire will result in voltage drop.

TIP: With a hand held voltage meter, check the voltage out of the back of your alternator. Check all other points in your system with all accessories on. You should see no more than a 0.5 volt drop from alternator to battery.

Amps	0-4'	4'-7'	7'-10'	10'-13'	13'-16'	16'-19'	19'-22'	22'-28'
35-50	12	12	10	10	10	8	8	8
50-65	10	8	8	6	6	6	6	4
65-85	10	8	8	6	6	4	4	4
85-105	8	8	6	4	4	4	4	2
105-125	6	6	4	4	2	2	2	0
125-150	6	6	4	2	2	2	2	0
150-175	4	4	4	2	2	0	0	0
175-200	4	4	2	2	0	0	0	00
Wire Size								

2) Determine available space and proper mounting location for alternator.
3) Determine what style alternator you need.
4) Determine how you want to wire your alternator. (One wire? OE?)
5) Decide what kind of finish you want.





Calculating Alternator RPM

When considering idle output of an alternator, pulley ratio must be taken into account. All measurements of output of an alternator can only be taken at the shaft of the alternator. Thus, idle amperage is calculated at 2,400 alternator RPM. On a street vehicle, the average pulley ratio is 3:1, meaning that 2,400 alternator RPM is equal to 800 engine RPM.

Alternator RPM = **Crank Pulley / Alternator Pulley** X **Engine RPM**

Call Powermaster Tech Support at **630-849-7754** with any questions or concerns