

Large Case Alternators

Mid Duty-Cycle, Large Frame Alternators

94-Series

94LY-Series

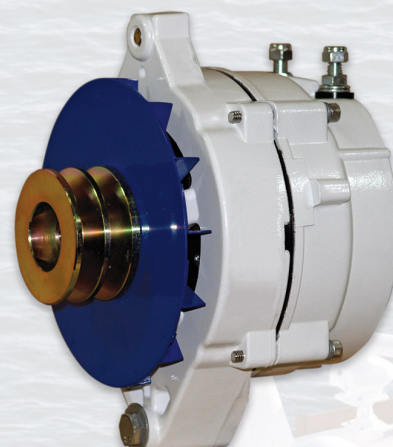
95-Series

- Extra Heavy Duty Windings, Diodes & Brushes
- Isolated Ground Termination
- Corrosion Resistant Powder Coated Finish
- Bi-Directional Cooling Fans on 94-Series & 95-Series
- Maximum RPM: 7,000
- USCG Title 33 Ignition Protection Compliant

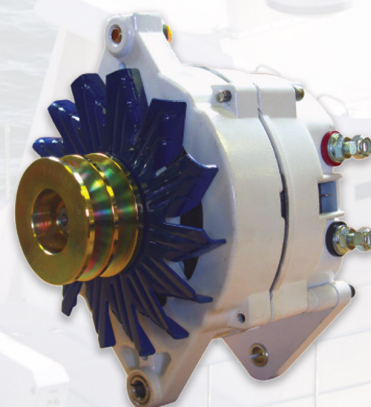
From world class ocean racers to commercial fishers and military patrol vessels, these large-frame alternators have a proven record for supporting large house battery banks and challenging electrical loads under some of the toughest marine conditions imaginable.

94-Series, 94LY-Series and 95-Series Alternators feature extra-large gauge custom wound stators and high amperage diode packs to ensure optimal charging performance. Built to meet USCG Title 33 ignition protection standards, 94-Series alternators deliver excellent low RPM output and terrific response throughout the power band.

All Balmar large case alternators are designed to be used with Balmar's external, Multi-Stage Regulators.



94-Series



94LY-Series



95-Series

Part Number	Output		Mounting Style	Minimum Pulley
	Volts	Amps		
94-12-165-IG	12	165	Single Foot 2" (Delco-style)	1/2" Dual Vee ⁽¹⁾
94-12-210-IG		210		
94-24-140-IG	24	140		
94LY-12-165-IG	12	165	Dual Foot 3.15" (Hitachi-style)	1/2" Dual Vee ⁽¹⁾
94LY-12-210-IG		210		
94LY-24-140-IG	24	140		
9504-12-165-IG	12	165	Dual Foot 4" (J180-style)	1/2" Dual Vee ⁽¹⁾
9504-12-210-IG		210		
9504-24-140-IG	24	140		
94LY-0050	Tensioner & Hardware Kit			

(1) All 9-Series Alternators can be outfitted with K6 or K8 Serpentine Pulleys.

(2) 9-Series Alternators are designed to be used with Balmar Multi-Stage Regulators

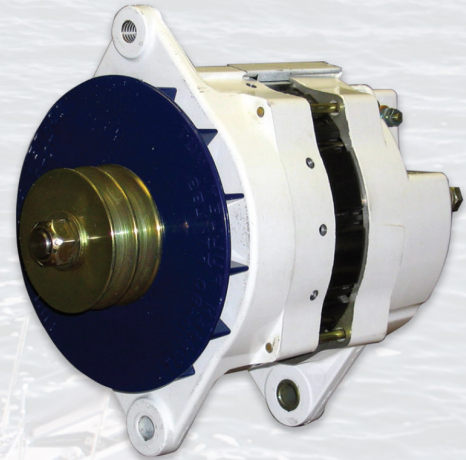
Offshore Repair Kits are available for most Balmar Alternators. See page 27 for details

Extra Large Case Alternators Heavy Duty-Cycle, Extra-Large Frame

97-Series

- Highly Efficient Brushless Design
- Isolated Ground Termination
- Bi-Directional Cooling Fan
- Maximum RPM: 7,000
- External Regulation Required
- USCG Title 33, CE, ISO 8849 and SAE J1171 Compliant

Built expressly for the added demands of large multi-battery banks, inverter loads and other substantial electrical demands, Extra-Large Case 97-Series Brushless Alternators provide the size, cooling and output across the range of engine RPM required to perform in a league with a small genset.



97-Series

Part Number ⁽²⁾	Output		Mounting Style	Minimum Pulley
	Volts	Amps		
9704-12-160-BL-IG	12	160	Dual Foot 4" (J180-style)	1/2" Dual Vee ⁽¹⁾
9704-24-140-BL-IG	24	140		

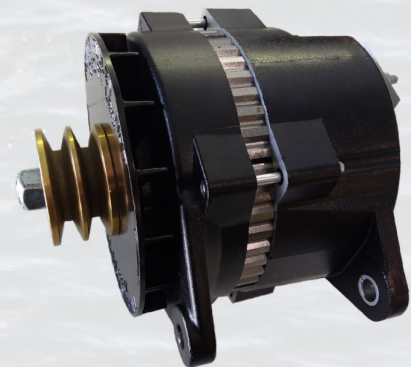
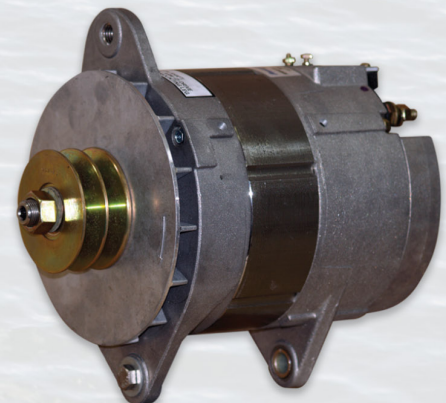
(1) All 97-Series Alternators can be outfitted with K6 or K8 Serpentine Pulleys.

(2) 97-Series Alternators are designed to be used with Balmar Multi-Stage Regulators

97EHD-Series

- Designed for Extended Duty Operation
- Case Ground or Isolated Ground Terminations Available
- Bi-Directional Cooling Fan
- Maximum RPM: 7,000
- External Regulation Required
- USCG Title 33 Compliant

Extra-Large Case 97EHD-Series Alternators are appropriate for large diesel applications such as Caterpillar, Cummins, MTU and John Deere to service extensive house battery loads.



97EHD-Series

Part Number ⁽²⁾	Output		Mounting Style	Minimum Pulley
	Volts	Amps		
97EHD-185-12(-IG) ⁽³⁾	12	185	Dual Foot 4" (J180-style)	1/2" Dual Vee ⁽¹⁾
97EHD-265-12(-IG) ⁽³⁾		265		
97EHD-85-24-IG	24	85		
97EHD-110-24-IG		110		
97EHD-190-24(-IG) ⁽³⁾		190		

(1) All 9-Series Alternators can be outfitted with K6 or K8 Serpentine Pulleys

(2) 97EHD Alternators are designed to be used with Balmar Multi-Stage Regulators

(3) 97EHD Alternators can be Delivered with Case or Isolated Ground (-IG)

Extra Large Case Alternators

Maximum Duty-Cycle, Extra-Large Frame

98-Series

- Highly Efficient Brushless Design
- Isolated Ground Termination
- Dual Cooling Fans, Oversized Bearings
- High Amperage Diodes
- Maximum RPM: 7,000
- Requires External Voltage Regulation
- USCG Title 33, CE, ISO 8846 and SAE J1171 Compliant

The **Extra-Large Case 98-Series Alternator** offers the capacity to produce nearly 5kW of DC output – on par with many small gensets. The 98-Series Alternator is currently used on USCG 43' Lifeboats.



98-Series

Part Number	Output		Mounting Style	Minimum Pulley
	Volts	Amps		
98-12-310-IG-BL	12	310	Dual Foot 4" (J180-style)	1/2" Dual Vee ⁽¹⁾
98-24-220-IG-BL	24	220		

(1) All 98-Series Alternators can be outfitted with K6 or K8 Serpentine Pulleys.

(2) 9-Series Alternators are designed to be used with Balmar Multi-Stage Regulators

Alternator Installation Hints

Battery Cable Sizing

Battery cable size must meet the increased output capacity of your alternator. The easiest method for determining the best cable size for your system is to compare your alternator's rated amperage output and the ROUND TRIP length of the cable running from the alternator to the battery being charged, and back to the alternator via ground to the chart at right.

Belt Tensioning

Under- or over-tensioned belts can result in belt slippage, premature belt wear, alternator overheating and belt failure. Belt deflection should typically be set between 1/4" and 3/8" when you push your thumb down on the back of the belt at mid-span between the crank and alternator pulleys. For more precise tensioning adjustments, use a commonly available tensioning gauge. The use of a belt tensioner, such as Balmar's Belt Buddy Universal Tensioning System (shown on the next page) makes it easier to adjust the belt tension by using a rotating and locking adjustment mechanism to push the crank pulley and the alternator pulley apart.

12 Volt Battery Cable Size Chart									
Run Length (ft)	5'	10'	15'	20'	25'	30'	40'	50'	75'
Alternator Output	Battery Cable Gauge								
75 A	8	6	4	2	2	1	1/0	2/0	4/0
100 A	8	4	2	2	1	3/0	3/0	4/0	
125 A	6	4	2	1	1/0	3/0	4/0		
150 A	6	2	1	1/0	2/0	3/0	4/0		
175 A	6	2	1	1/0	2/0	3/0	4/0		
200 A	4	2	1/0	2/0	3/0	4/0			
225 A	4	1	1/0	2/0	3/0	4/0			
250 A	2	1	2/0	3/0	4/0				
275 A	2	1	2/0	3/0	4/0				
300 A	2	1/0	3/0	4/0					