

FISHER RANGER



HYBRID VEHICLE AUXILIARY POWER UNITS

INTRODUCING

FISHER RANGER

**BATTERY CHARGING WHEN YOU NEED IT,
WHERE YOU NEED IT**

Range extension for EVs is now available in one convenient package that can be towed behind any electric vehicle. Charge your batteries as you drive and get the efficiency of an electric vehicle but with the extended range of an internal combustion engine.

Space in your vehicle is limited. The RANGER uses no under-the-hood space because it is towed behind your vehicle and is detachable. Use it when you need it for longer journeys and when battery charging facilities are not available.

The RANGER combines the high performance and high power of Fisher's lightweight alternators with a small internal combustion engine and a Fisher AC to DC converter.

In the last 3 years, FISHER alternators have been specified for battery charging in hybrid electric vehicles by more than 15 universities and have helped win numerous competitions and races.

The RANGER's standard engine is a 20 hp industrial rated 4 cycle engine. Standard fuel is gasoline; other fuels and engines are available.

In the RANGER, all components are protected from weather and road hazards in a streamlined housing and mounted on a lightweight trailer. The housing lifts for easy engine maintenance and latches securely closed. The trailer is road legal, fully sprung, and comes equipped with brake and tail lights powered by the vehicle's 12 Volt accessory battery supply.



Alternator Specifications:

Output:	13.5 kW
Loaded Voltage:	240 V*
Current:	56 Amps
Speed:	3000 rpm
Phases:	3 (Y connected)
Weight:	30 lbs.
Diameter:	10 inches
Length:	6 inches
Cooling:	Forced air

Engine Specifications:

Type:	4-cycle horizontal shaft OHV, V-twin; electric start
Output:	20 hp at 3600 rpm
Fuel:	Gasoline *
Cooling:	Liquid
Weight:	92 lbs.
Charging Coil:	12 V-20 Amp with rectifier

AC to DC Converter Specifications:

Includes rectifier, shunts, fuses, and contactors matched to alternator output

Trailer Specifications:

Dimensions:	90 inches long 37 inches wide 37 inches high
Weight:	250 lbs

6.3 gal marine quality removable fuel tank with fuel gauge

Leaf spring suspension

Optional Features: Engine tachometer, charging status (voltage and current) indicators, remote controls

* Other voltages, fuel systems and air cooled engines available

FISHER can custom-build an alternator to match your battery charging requirements. We can also adapt our mountings to fit your choice of engines.

CONVENIENT BATTERY CHARGING

HIGH EFFICIENCY ALTERNATOR

LIGHTWEIGHT PACKAGE

SMALL SIZE

WATER COOLED ENGINE

WEATHER PROTECTED

FISHER alternators use a patented flux management system which optimizes alternator efficiency, output per pound, output per cubic inch, and minimizes torque per amp. This flux management system combines the high magnetic energy density of Neodymium-Iron-Boron magnets (super-magnets) with a patented lamination design to produce alternators with superior performance characteristics.

Call us today with your electric vehicle requirements and discover the Fisher advantage in auxiliary power units for your vehicle.

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