# Hydromax 150

## Never run out of 12V power.

Always be sure of a full battery wherever you are in your camper or on your boat.

Motor homers, caravanners and boaters increasingly need a dependable source of power for their TVs and satellite receivers.

Navigation equipment, laptops, heating and lighting are no longer luxuries but necessities and they all consume power.

Without mains hook-up, batteries discharge and even large solar panels can't always provide the power that's required. As for generators, they are becoming increasingly unacceptable on campsites and in marinas.

The Hydromax 150: charging current without noise and hazardous fuel!



# The Hydromax works slightly differently from other fuel cells.

#### Safe for humans and the environment.

The fuel is neither inflammable nor explosive and so can be easily transported and safely stored. A saline solution in conjunction with malic acid, (found in apples and other fruit) supplies the chemical reaction. The only waste product is a liquid, which consists of a small quantity of malic acid, mixed with water. This mixture is not harmful to the environment and is usually collected in a holding tank and discharged later.



#### Long life

Dynad International has chosen to develop its own generating process. By the use of non-inflammable liquids as fuel, hydrogen is produced and it is this that produces power in the fuel cell. As well as being non-explosive and non-inflammable, there are other benefits to using the special Hydromax fuel; there is no risk of damaging the fuel cell's reactor and a long life expectancy is the result.



#### Easy operation.

Operation of the Hydromax is by two buttons. The unit comes optional with a remote control, so that the performance can be monitored. Of course, this is particularly useful if the Hydromax is stowed away and the small size of the unit makes this a very practical option.

#### Low noise

Only the pumps of the Hydromax, which carry the fluid are audible. A sound level of 54 dB means that, if the unit is installed correctly, it's barely audible in operation.

### **Easy to transport**

Using a special salt solution in combination with malic acid means that Hydromax fuel is not only safe, but also easily transportable. The supply of salt powder has a small volume and weight is low. The jerry can with salt solution weighs 1 kg. The fuel can be easily made in plastic jerry cans by mixing the special salt powder with water. For four week's average use, two jerry cans are enough.

#### Maintenance free.

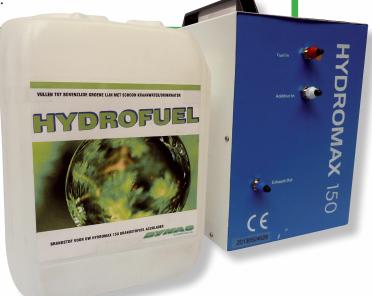
The Hydromax requires no periodic maintenance. The Hydromax cleans itself after every loading procedure. Only if the fluids are consumed, a new 5 liter container can be connected. With a can you can do an average of two weeks.

#### Very competitive price / performance ratio

To keep the purchase price attractive, some fuel cells are supplied in various capacities (output) and a higher output usually means a significantly higher purchase price. With a relatively low purchase price but an output of 25 to 50 watts, you run the risk of poor or inadequate performance. The Hydromax comes with a standard capacity of 150 watts - a very attractive "Price / Watt ratio"!



Fuel cells, through a direct chemical reaction, deliver reliable electrical energy, safely, quietly and without excessive generation of heat. When a vehicle's battery discharges to a certain point, the fuel cell automatically turns on and charges the battery. When the battery is sufficiently charged, the fuel cell turns off again. The system operates automatically and is therefore also ideal for use in remote locations, for security installations for example.



# Fuel cell operation

A fuel cell supplies electrical power using hydrogen and oxygen. Because hydrogen is difficult to transport in practice, it is produced in the fuel cell itself. In the case of the Hydromax, hydrogen is produced by combining a salt solution with malic acid.

The salt solution and the malic acid are stored in separate tanks and are then pumped into the Hydromax. The chemical action of mixing the two fluids produces hydrogen.

The hydrogen molecules are then split by a catalytic converter and this process produces electrons. Finally, the split hydrogen molecules come into contact with oxygen (O2) and water (H2O) is now created as a waste product.

After the Hydromax has been used, a washing cycle ensures that the remnants of water and malic acid are discharged into a holding tank, so that they can be safely disposed of later. The waste water itself is completely safe and non-toxic.

# Operation in your boat, camper or remote location.

The vehicle battery is constantly monitored by the fuel cell in order to maintain a full charge. Any type of 12V battery can be used and there's a 24V version available as well. Low voltage in the battery will start the Hydromax automatically and the battery begins to be charged. When the battery is fully charged, the Hydromax automatically stops and begins a cleaning cycle. The waste liquid is pumped into a waste container.



### Smooth service and accessibility

The Hydromax is designed in such a way, that all components can be easily replaced by any Hydromax dealer.

#### **TECHNICAL DETAILS**

HYDROMAX 150	
Maximum Power	180 W
Charging capacity/day	3600 Ah
Rated voltage	12 V
Nominal consumption/Kwh	1,25
Connectable batteries	Led battery
	Gel battery
	AGM battery
	Li-ion barrety
Weight	9,0 kg
Size	40 x 19 x 31 cm (27 cm Without handle)
Operating temperature	-20 tot +40 °C
Warranty	2 years

Dealer addresses can be found on the dealer list and on our website www.dynad - hydromax.com