



# AUTOPROP

ECO★STAR PROPELLER

When it was launched nearly thirty years ago the designers of the Autoprop could not possibly have realised how important their unique design was to become. Thousands of cruising yachtsmen around the world sail faster and motor further and more economically using Autoprops.

With this history and its unique abilities it is not surprising that a new version of the Autoprop called the Eco\*Star has been developed to propel the rapidly growing number of hybrid and purely electrically driven craft, both motor and sail, which are being launched around the world. Its development has been the work of a formidable team of expert naval architects, engineers and scientists from Bruntons, sister company Stone Marine Propulsion, and the world renowned Insean Research institute in Italy who provided invaluable assistance in evaluating and testing the propellers characteristics, mathematical modelling and optimisation.

On the opposite page we have listed the many benefits that come from fitting an Autoprop Eco\*Star propeller and the diverse range of vessel types it is already being fitted to is reflected by the images in this brochure.



Owners of displacement motor vessels are also realising that Autoprop's benefits apply to their vessels as well. It is not just a particular type of motor vessel either; pictured here are two very different craft with one common element – they both use Autoprops for propulsion. After very careful testing the owner of the 21 foot motor yacht chose an Autoprop over a fixed propeller for an Atlantic crossing and he commented, "Both propellers were capable of providing the same speed of about 8 knots at maximum revs; the Autoprop however delivered 6 knots at 1250 rpm, while the fixed bladed propeller required 1500 rpm to achieve the same speed. Cruising was therefore much more fuel efficient and the propeller runs very quietly and smoothly, without delay between forward and astern."

The owner of the 24 metre Dutch barge chose an Autoprop for his wing engine; although not the vessel's main engine it has a primary role in canals and other quiet waters where the propeller's ability to provide optimum thrust throughout the rev range ahead and astern proves very useful.

*"The ability of the props to push the boat forward 1 knot faster than previously is very significant, and they also create a lot less cavitation in higher seas – a big problem with the old props."*

**Oliver Stapleton,**  
13m Aluminium Catamaran  
Solomon Electric Drives



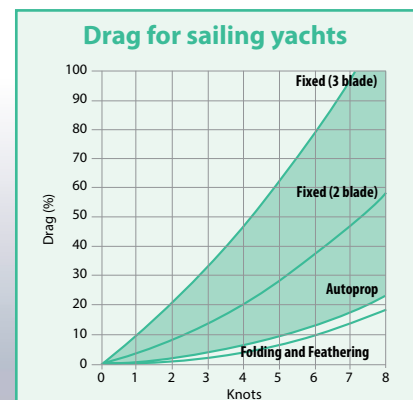
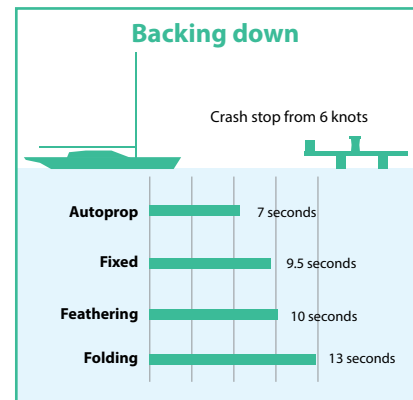
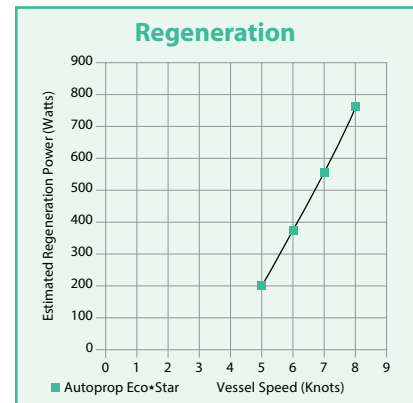
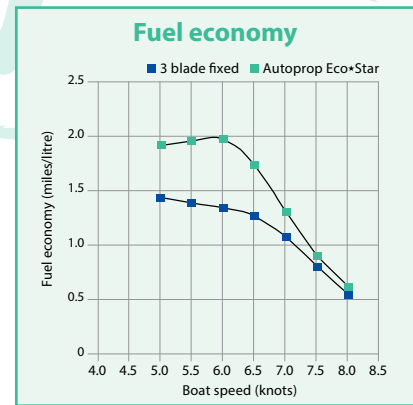
## The benefits

It's already acknowledged that Autoprops are highly efficient because of their ability to auto pitch depending on engine speed and weather and sea conditions; an ability that provides optimum thrust at all times. But with purely solar or with hybrid power the list of advantages provided by the new Autoprop Eco\*Star Propeller is further extended.

- ⚡ Electric motors, unlike diesels, provide a constant torque from zero to maximum rpm. Only the Autoprop Eco\*Star Propeller, using its auto pitching ability, can match its own efficiency curve with that of the electric motor. The result, a considerable improvement in the economy deliveries available compared with other propellers. Put simply, more boat speed but using much less energy.
- ⚡ On sailing yachts, when speed is not an issue but increasing battery energy is, the Autoprop Eco\*Star Propeller can be allowed to turn in the vessels wake and the drive motor automatically becomes a generator recharging the batteries. Up to 1Kw of power can be regenerated in this way.
- ⚡ All the original Autoprop benefits are still available with the Autoprop Eco\*Star Propeller. Backing down is much more efficient thanks to the propeller blades being the same optimum shape in astern as they are ahead.
- ⚡ Drag when sailing with the Autoprop Eco\*Star Propeller's blades feathered is reduced by up to 85%, providing speed increases of up to one knot.
- ⚡ For existing vessels the Autoprop Eco\*Star Propeller is 'retrofitable'. It comes already assembled to fit on an existing shaft or saildrive leg. It is silent in operation and optimises its pitch fully automatically. In short it provides the most environmentally responsible and efficient propulsion for any vessel powered by hybrid or solar systems.



The first yacht to sail around the world without using any fossil fuels! This is the Dutch yacht 'Ya' pictured as she arrived back at her home port to a richly deserved celebratory welcome. Her energy requirements came from solar panels, wind and water generation, the last power source provided by her two Autoprop Eco\*Star propellers.



# The Autoprop Eco★Star Propeller Range

## H5E, H20E, APSE

- ⚡ Diameters 380mm to 510mm or 15" to 20"
- ⚡ Shaft diameters 20mm to 35mm or 7/8" to 1 1/2"

## H6E, H9E, H62E

- ⚡ Diameters 470mm to 900mm or 19" to 35"
- ⚡ Shaft diameters 35mm to 75mm or 1 1/2" to 3"



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Dealer

### BRUNTONS CUSTOM DIVISION

Bruntons custom division provide solutions to naval architects, yacht owners and constructors around the world covering the most complicated of marine propulsion problems. Whether it is a fixed, folding, feathering or surface drive propeller at the end of the shaft, our highly qualified designers and engineers will supply the answer. Call us for help or to order a copy of our custom division brochure.