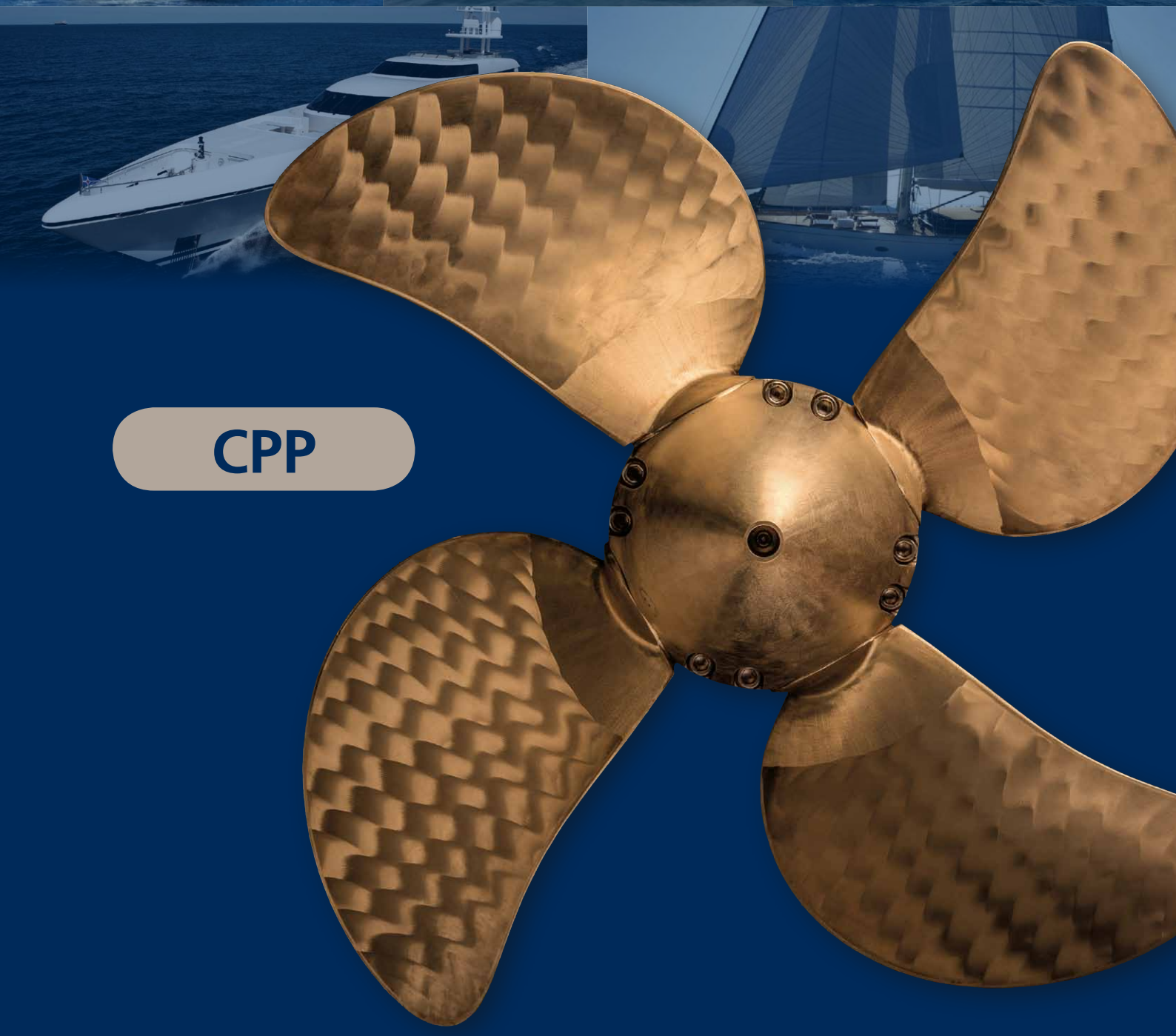
BRUNTONS
CPP SYSTEM

controllable pitch propellers



CPP

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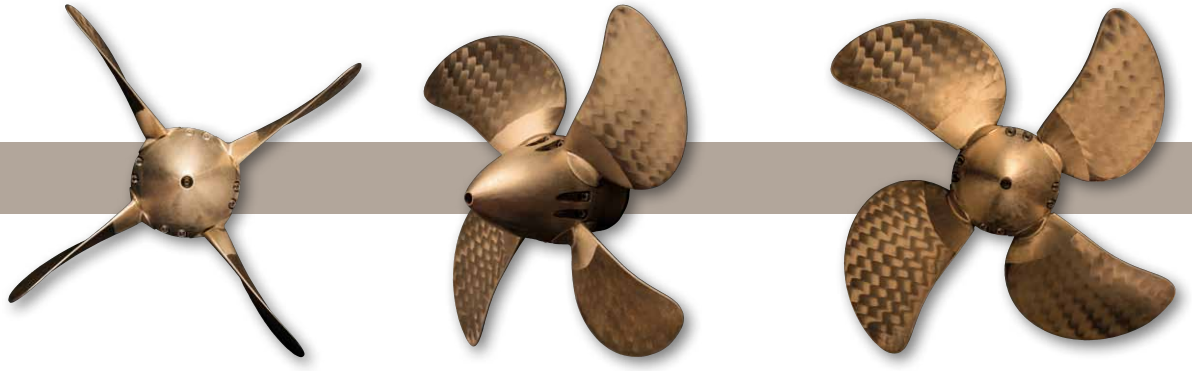

Controllable Pitch Propeller System

Bruntons Propellers, throughout its history has never been a 'me too' company. Every product designed and manufactured by us is the result of extensive research, development and testing with the resulting equipment being either a substantial improvement on currently available products, or completely unique in its field.

Whilst our new CPP system is entering a market which already has many other companies producing CPP propellers the new Bruntons system has so many revised and unique features it could almost be described as unique itself.

- Without a doubt the greatest innovation that awaits a user of the Bruntons CPP system is its ability to monitor required vessel speed and load, weather conditions and sea state, and then automatically set the correct propeller pitch to keep the required speed whilst maintaining maximum fuel efficiency. The system has different pitch control modes which allow the operator to select the one most relevant to the required operating requirements for example maximum power or, as described earlier, maximum fuel efficiency.
- The highly advanced computerised monitoring system can be used on hybrid powered vessels, not just for propulsion efficiency, but also for battery use optimisation and monitoring and will ensure that the system is optimising regeneration of electricity as well as usage.
- Our Naval Architects and Engineers having considered the current limitations of CPP propeller design have produced a system that overcomes two major problems associated with this type of propulsion; excessive blade wear and high spindle loads. Excessive blade wear will be dramatically reduced with the inclusion of a new blade retention system and high spindle loads with the introduction of a twin cam design believed to be unique.

As if these advantages where not enough our CPP systems propellers will all benefit from the following:

- Every propeller will be manufactured to the highest standard required for the use the vessel will be put to culminating in ISO class 1 with class 'S' pitch tolerances for the craft with the most exacting requirements.
- Every propeller will be custom designed for the vessel it is propelling to further improve performance and reduce cavitation.
- Pitch distribution across the propeller blades will be carefully designed to provide pitch reduction towards the blade tips. This will create 'tip unloading' a feature which reduces propeller pressure pulses against the hull.
- Rake and skew of every system will be custom designed to maximise clearance from the hull, strut and rudder.
- The hub will be faired into the aft strut bossing to create smooth water flow into the root sections.

Careful consideration was also given to other aspects of the systems design and its relevance to the vessel it is propelling.

- The system will be capable of fully feathering its propeller blades making it ideal for sailing vessels looking to minimise drag and resulting speed loss while sailing.
- On twin-screw motor vessels, when operating requirements allow it, one propeller can be fully feathered providing significant improvements in fuel economy whilst steaming under one engine.

This then is a brief outline of the many advantages to be gained by fitting a Bruntons CPP System to virtually any vessel, motor or sailing, naval, commercial or leisure. Currently the systems design can handle engines up to 2000hp but work is already underway to produce systems capable of handling significantly higher power outputs.

It is a system not just for today's generation of fossil fuelled vessels but just as much for those of the future which will be hybrid or purely electrically driven.

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