

BETTER BY DESIGN



By capitalising on the latest advances in CFD and FEA design software, robotic patternless mould making, CNC machining and product handling automation, our operation is amongst the most technically advanced and efficient in the world of propulsion.

This critical technology, backed by volumes of data and the knowledge of our people, enables us to manufacture propellers, prop shafts, P-brackets, rudders and stern gear quickly and efficiently, and to the most exacting tolerances.

We never use standard off-the-shelf patterns or a handmade close match approach, and we only design and manufacture for a specific vessel. This provides our customers with peace of mind that everything we supply is going to perform exactly as expected with maximum performance, efficiency, longevity and ride comfort.

So confident are we in the quality of our manufacturing output, we have developed our own precision data acquisition system to scientifically validate our claims. TrialsApp uses a range of on-board sensors and GPS to provide an easy-to-use, highly accurate means of recording all aspects of a vessel's performance during sea trials.

THE RESULTS SPEAK FOR THEMSELVES

Because every CJR propulsion system is designed bespoke to Class S standards, when replacing propellers like for like, we regularly achieve speed increases of two knots, whilst simultaneously extending range, reducing noise and vibration levels, and offering best-in-class propulsion efficiency.

FIT FOR THE JOB

The demanding and high-performance nature of luxury recreational vessels and sports fishing boats means their propulsion systems need to satisfy a set of distinct requirements. Rapid acceleration, high top speeds, peak efficiency, exceptional ride comfort, and low levels of noise are all essential. Delivering on each of these fronts is fundamental to our offering, and our complete propulsion systems are proven to exceed expectations across the board.



DRIVEN BY PASSION
DESIGNED BY SCIENCE
MANUFACTURED BY TECHNOLOGY

THE INTELLIGENT CHOICE FOR PROPULSION

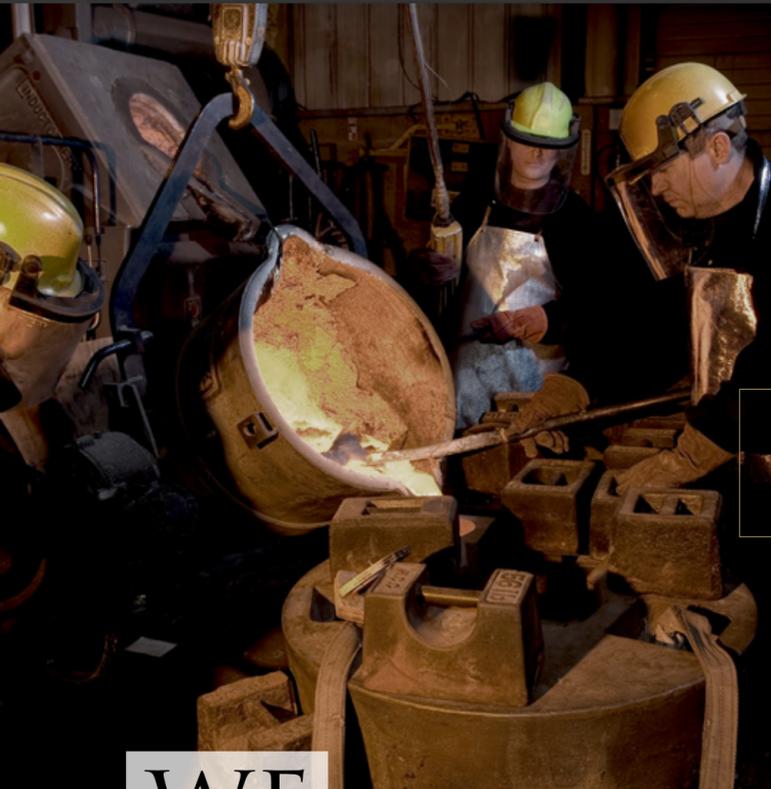
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WE NEVER REST

At CJR, we continuously strive to redefine propulsion excellence, leveraging new innovations to push the boundaries of what modern propulsion systems can offer. Throughout our 50-year history, our goal has never changed: to use every tool at our disposal to develop innovative solutions that exceed our customers' expectations.

Our dedication to creating the best possible products is demonstrated through regular investment in design and manufacturing technology, our state-of-the-art facilities, and our highly-experienced team – all of which combine to create propulsion systems that consistently outperform the competition and offer real value. This is the reason we are globally recognised as an industry leader, approved by the six leading classification bodies, and able to maintain long-term relationships with the world's leading boatbuilders and most discerning owners.

Most recently, we have launched a unique rapid design and manufacturing service to deliver bespoke, fully-machined Class S propellers in just two weeks.

The reduction in lead times – for propellers up to 1.5 metres in diameter – is achieved through an end-to-end process that combines our in-house design and manufacturing capabilities with 3D mobile scanning and a global network of support partners, meaning that six weeks or more can be saved, and a superior product supplied anywhere in the world.

The service has specifically been developed to meet the needs of charter businesses, owners, and new-build and refit yards who need a high quality but timely solution. In one instance, a US-based superyacht owner was able to replace his damaged props in just 12 days, securing hundreds of thousands of pounds in charter revenue.

In addition to providing an unrivalled solution for when a prop is damaged, the service is also ideally suited for any boat that isn't meeting its expected performance, where vibration or poor ride comfort is an issue or when a spare set of props is required in a hurry.



RAPID TURNAROUND SERVICE



FLOW-ALIGNED RUDDERS



When considered as part of a fully optimised propulsion package, well-designed rudders can have a notable impact on fuel consumption and maximising boat speed, as well as directly reducing noise, vibration and cavitation levels.

Although traditionally motor yacht rudders are straight, they operate in an area of uneven water flow directly behind the propellers. As a result, a suction

pressure peak can form at or near the leading edge of the rudder. Through another unique CJR innovation, we are able to accurately simulate these forces and can predict how they would impact the propulsion system's performance. With this comprehensive understanding, we're able to design a rudder with a unique 'twisted' profile – one which is perfectly aligned with the propeller flow angles along the entire span.

KEY FEATURES

- Optimised profile of each rudder delivered through CFD.
- Significantly improved propulsive efficiency, with no impact on vessel manoeuvrability or steering performance.
- Reduced rotational losses and minimised drag provide the potential to increase top speed by up to two knots.
- Power savings provide the opportunity to reduce engine load by up to 3% at the same RPM, in turn significantly reducing fuel burn.
- Lower suction pressure peaks to reduce cavitation, noise and vibration, improve both ride comfort and rudder lifespan.
- Potential to downsize the steering rams to save weight and cost.
- Manufactured to any classification society rules, including all IACS societies.