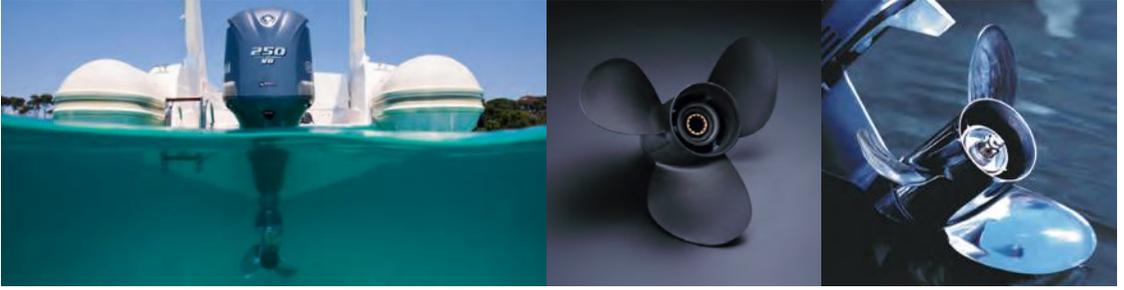


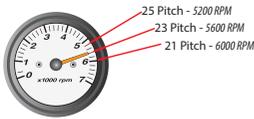
# Propellers and Propeller Accessories



## PROPELLER INFORMATION

### THE PROPELLER MAKES ALL THE DIFFERENCE.

If you haven't tried one of Yamaha's comprehensive range of propeller solutions, you're not getting the most out of your outboard. In fact, the right Yamaha propeller can maximize your outboard's acceleration, top speed, fuel economy and lifespan, all while providing a quieter ride and better handling. No matter what your application, there's a genuine Yamaha propeller that can help you achieve peak performance.



### PITCH

Pitch is the 'theoretical' distance (in inches) a propeller would travel in one full revolution, if it were travelling through solid matter. A prop with low pitch will deliver better acceleration/hole shot and pushing power but a lower top speed, while a higher pitch prop will provide less thrust, but with a higher top speed. The correct propeller will allow your engine to reach the upper portion of the W-O-T range specified by the manufacturer with a normal-to-heavy load, but without exceeding it. Each inch of pitch is equal to approximately 150 +/- 50 RPM.

### DIAMETER

Diameter means the total width of the "circle" at the blade tips as the propeller spins. Larger diameter props push more water and reach deeper down into the water, so they're typically used on large, heavy boats or ones with higher-placed engine mountings. A smaller diameter prop is usually used on lighter boats, where the prop operates closer to the surface of the water - or when you need a higher engine RPM.

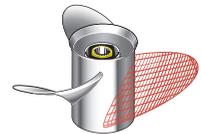


### NUMBER OF BLADES

Three-bladed propellers are the most common, offering good overall performance, top speed, and efficiency for most applications. While a four-bladed prop will provide increased bow and stern-lift and reduce prop ventilation, this normally means more drag on the engine, resulting in lower top speeds and different handling characteristics.

### BLADE GEOMETRY

Blade geometry refers to the actual shape of the blade (or ear). By manipulating the blade's shape, diameter and pitch progression, different performance characteristics can be created for each different type and style of propeller.



### BLADE SURFACE AREA

Blade surface area refers to the total surface of the blades. The greater the blade surface area, the more water the prop pushes, for better hole shot and increased planing efficiency. However, too much blade area can create significantly more drag, potentially restricting engine RPM and causing negative boat-handling issues.

### CUP

Cup is the small curved lip on the blade tip and/or trailing edge. Used in proper amounts, cup helps reduce ventilation and propeller slippage, allowing for higher engine mounting and greater bow lift. However, too much cup may cause excessive steering torque and bow lift - and limit the engine's ability to develop and maintain proper RPM at a certain pitch.



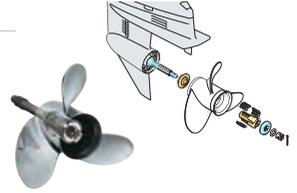


## RAKE

Rake is the angle of the blade in relation to the propeller's barrel, or centre, and is expressed in degrees. A high rake propeller is best suited to applications where the engine is mounted high, to help reduce ventilation and increase bow lift. However, too much rake can strain the engine, decrease hole shot and produce negative performance and handling results. A propeller with a low rake angle will cause less strain on the engine, resulting in potentially better hole shot and higher operating rpm at W-O-T.

## SDS - SHIFT DAMPENER SYSTEM

Reducing the annoying shift shock and noise normally associated with moving between gears, Yamaha's unique Shift Dampening System (SDS) uses a splined aft washer and a splined rubber hub to absorb noise and vibration. This carefully engineered solution brings smoother, quieter gear shifts.



## PROPELLER SERIES

### ALUMINUM/PLASTIC SERIES

Offering Yamaha design, quality and performance in a low-cost, lightweight propeller, this is a good all-around choice for your Yamaha outboard. Available in a wide variety of sizes and pitches for Yamaha outboards between 2 and 225 horse power, in right-hand and select left-hand rotation.



### DUAL THRUST SERIES

Specially designed for sailboats and other large-displacement craft, Yamaha's patented Dual Thrust propellers are built to handle the job of pushing heavy loads through water. The hub is carefully designed to redirect exhaust flow away from the blades, so Dual Thrust models cut through "clean water" for higher efficiency and better acceleration. It is recommended that you contact an authorised Yamaha Dealer for advice on installation.



### NEW TALON GP SERIES (WITH SDS)

Designed for outboards from F70 to F130. Our new Talon – SDS propeller with our exclusive Shift Dampener System (SDS™) brings a better top speed while offering a comfortable ride. The smooth shifting and quiet, in-gear operation, even at trolling speeds, will be particularly beneficial on smaller, in-line outboards.



### TALON SERIES (WITH SDS)

Specially engineered to reduce ventilation and enhance bow lift, Yamaha's TALON aluminum 3-bladed propellers offer excellent holding power in turns, with enhanced "grip" for improved control. In addition, they feature better overall performance and greater cruising efficiency in a planed trim position than conventional 3-bladed aluminum propellers. TALON props are especially effective on mid-sized deep- and mod-V aluminum boats, particularly in applications with the potential for aerated water beneath the boat. The new Yamaha SDS mechanism is integrated to reduce shifting vibration and noise. Can be used with standard spacer.





## BLACK STAINLESS STEEL SERIES

---

An excellent general-purpose choice, these props are made from stainless steel, with a cost-effective black paint coating, allowing for a blade that is thinner, more efficient and more durable than an aluminum propeller. Available in a wide variety of sizes and pitches for Yamaha outboards between 25 and 300 horse power, in right-hand and select left-hand rotation.



## RELIANCE SERIES (WITH SDS)

---

Reliance is CAD-designed to increase performance. Designed primarily for use with Yamaha's F150 and F200 in-line 4 outboards, it also provides excellent all-around performance. Faster at all RPM ranges and having better anti-ventilation characteristics (grip) in most applications than Yamaha's proven Black Stainless Steel props, Reliance Series props are highly-polished stainless steel, featuring impressive cast-in naming on the barrel and excellent corrosion resistance. Now available with Yamaha's exclusive Shift Dampener System (SDS).



## SALTWATER SERIES II (WITH SDS)

---

A powerful choice for today's larger offshore boats, Saltwater Series II propellers are a highly-polished, larger diameter design. Aggressive rake and extra cupping on the blades provide superior midrange fuel efficiency, along with excellent anti-ventilation characteristics. For offshore fishermen, that translates to longer cruising range and better handling in rough seas. Also available with the Yamaha Shift Dampener System (SDS).



## SALTWATER SERIES HS4 (WITH SDS)

---

A polished stainless steel propeller with 4 blades, for certain V6 4-stroke engines. Compared with the conventional 3-bladed propeller, the 4-blade configuration has a larger blade surface area, which can catch much more water and obtain higher thrust performance. As a result, this propeller will obtain better acceleration and be more stable in operation under rough water. However, top speed performance is generally slightly less than a 3-blade design. L/H rotation propellers are available.



## SALTWATER SERIES XL

---

A premium prop designed exclusively for the V8 5.3L 4-stroke Yamaha outboards. Designed to harness the awesome power of these engines and convert it into massive amounts of thrust, Saltwater XL propellers have more diameter and 21% more blade area than even our largest Saltwater Series II propellers. This helps the F350 generate up to 45% more thrust than other 250hp-class outboards, and provides large offshore boats with plenty of power to plane quickly, as well as great acceleration and top-end speed. Available with the SDS Shift Dampening System. (Note: deduct two inches of pitch for same or similar performance when converting non-SDS XL propellers to SDS-equipped Saltwater Series XL propellers.)