

# V6 OFFSHORE

## DEC MODEL

### Updated Yamaha V6 Offshore Combines New Benefits with Reliable Performance Legacy

*Built-in Digital Electric Steering (DES), Thrust Enhancing Reverse Exhaust (TERE) and other XTO-inspired features now available on F250 and F300 DEC models\**

When Yamaha asked customers how to improve upon the Yamaha V6 Offshore, they responded: "Don't change the basic design." Why would we, when over 97 percent\*\* of Yamaha 4.2-liter V6 Offshore models sold since 2014 have never had a warranty claim? Customers also gave Yamaha some great ideas for how to make the reliable platform even better. The result is the most feature-rich V6 outboard Yamaha has ever produced. Yamaha has updated its F300 and F250 4.2-liter V6 Offshore outboards with benefits previously only available on its flagship model, the XTO Offshore®. Combining a high performance, big block V6 featuring outstanding power and fuel efficiency with the availability of built-in Digital Electric Steering and a Thrust Enhancing Reverse Exhaust system (both Yamaha exclusives), Yamaha brings new levels of convenience and control to a proven performer.

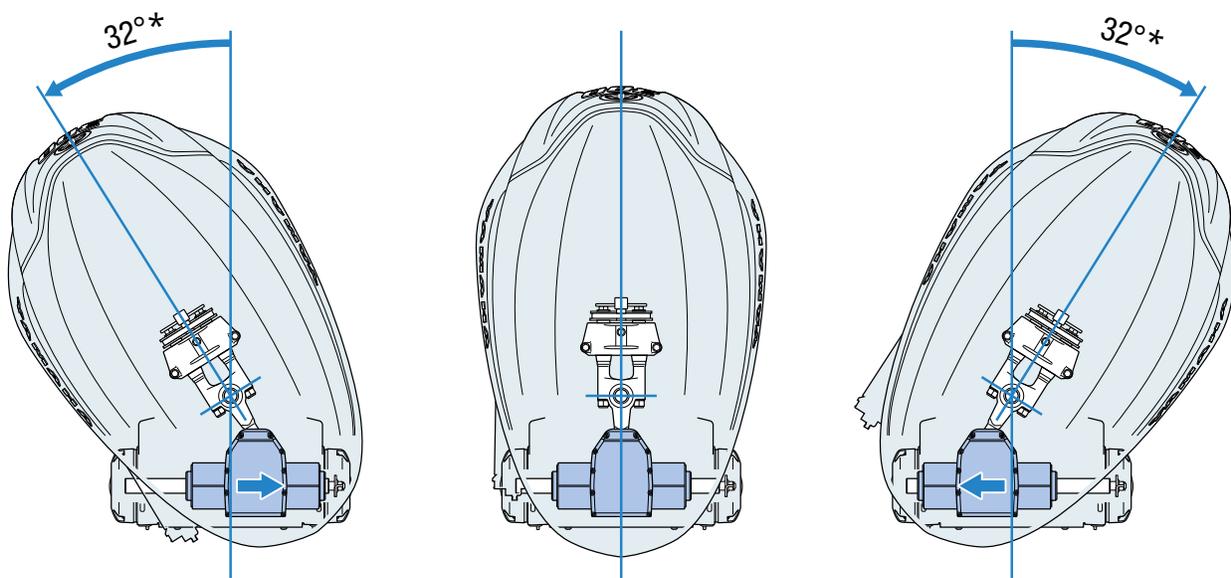
\*Mechanical F225, F250, and F300 models remain unchanged. \*\*Refers to analysis of warranty claim data for powerhead, lower unit, and/or trim/tilt unit only on subject outboards. This data was collected between January 1, 2014 and November 9, 2020, and incorporates outboards that are still covered under warranty and which may generate additional warranty claims prior to warranty expiration. Except as explicitly stated in a product's factory limited warranty statement or extended service contract, Yamaha Motor Corporation, U.S.A. makes no warranty of any kind, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose, for such product.



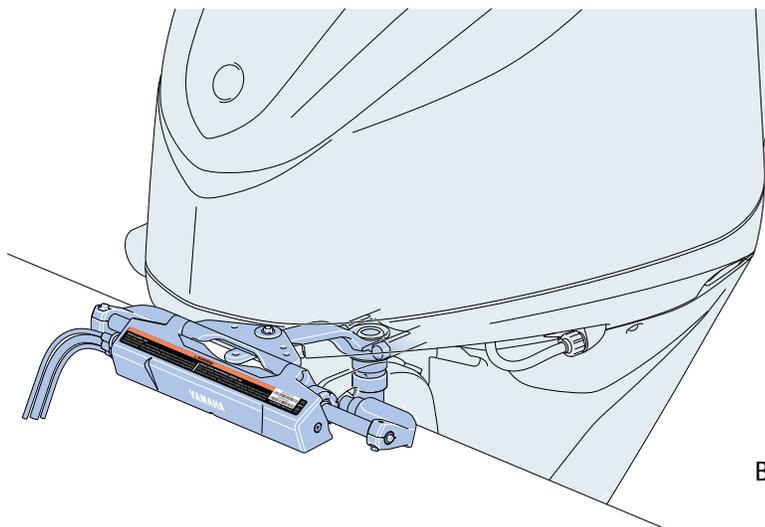
The new V6 Offshore DEC model is a product of Yamaha's **CommandBlue™** philosophy. CommandBlue represents Yamaha's commitment to move engineering development into the realm of the customer, ultimately delivering products that are easier to use and create greater satisfaction and confidence on the water.

## **SMOOTH, PRECISE DIGITAL ELECTRIC STEERING (DES)**

The same smooth, fast, and precise Digital Electric Steering that was introduced on the XTO Offshore is now built-in to F300 and F250 variants. DEC models can be equipped with the new bolt-on Helm Master® EX Digital Electric Steering as well. The result is significantly easier rigging and an uncluttered bilge - with no steering pumps, hoses, hydraulic lines or connections, no bleeding procedure, less complexity and straightforward serviceability. Both use the latest in boat steering technology to provide smooth, fast steering and, unlike some conventional steering systems, draw battery amperage only when actively in use.



Built-in Digital Electric Steering (DES)



Bolt-on Digital Electric Steering (DES)

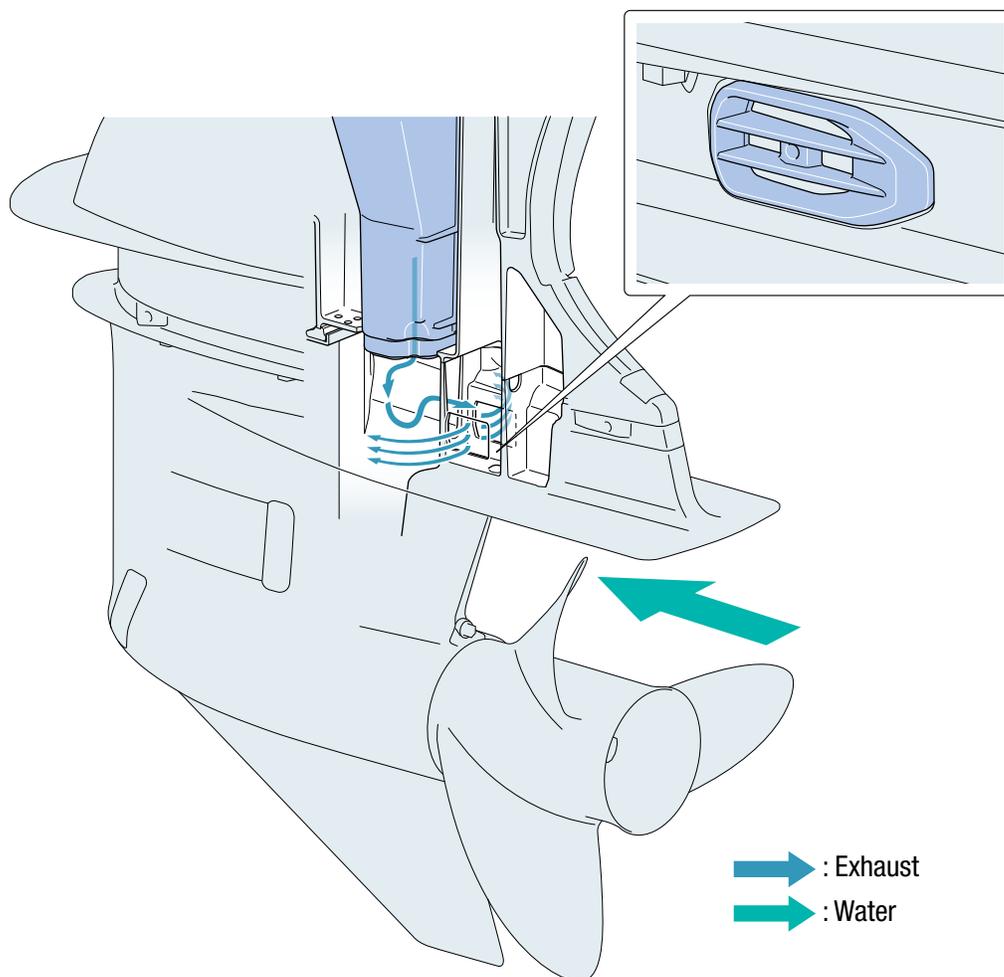
*\*Maximum available steering angle (does not account for possible physical obstruction).*

## **MORE CONVENIENCE AND CONTROL**

Little things make big differences, and the new, upgraded 4.2-liter V6 Offshore has them.

### **NEW BENEFITS INCLUDE:**

- **Stronger reverse and low-speed maneuvering** – Thrust Enhancing Reverse Exhaust (TERE) keeps exhaust bubbles above the anti-ventilation plate and out of the propeller below 2500 rpm when in reverse. This means the prop bites only clean water, resulting in outstanding reverse thrust and control to back down on fish. It's especially effective when combined with the fast precision of Digital Electric Steering and the Helm Master EX Full Maneuverability joystick – very helpful around docks and confined spaces.

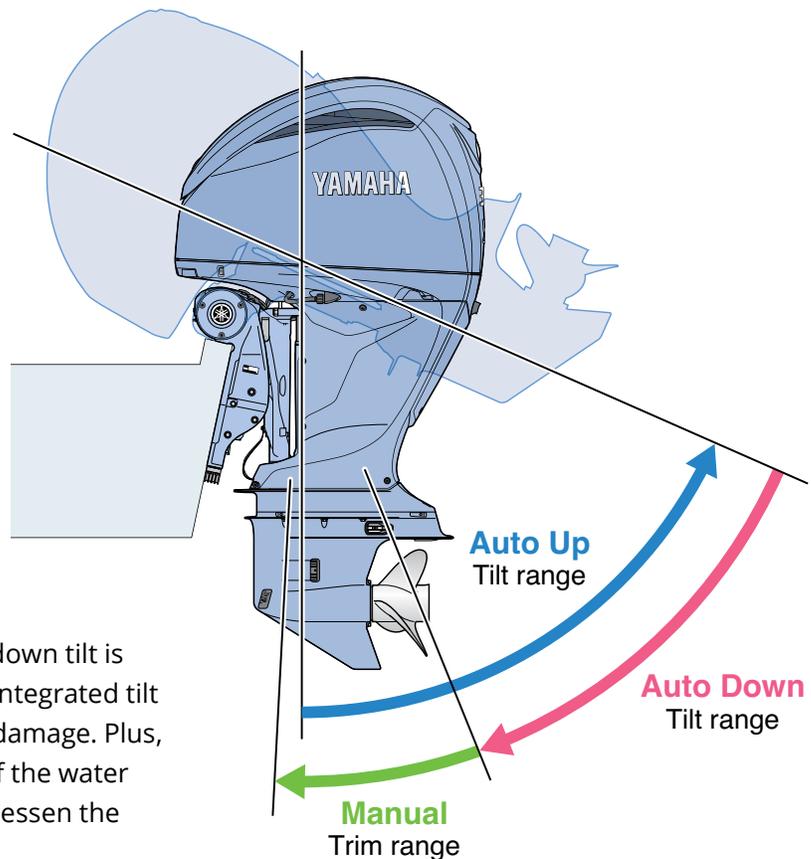




- **More flexibility, more control** – The new Helm Master EX DEC control brings modern amenities like speed control, trim assist and station selection to all DEC installations, in addition to useful convenience features like single-lever operation and center engine only to multi-engine DEC applications. Through easy-to-add Helm Master EX upgrades, boats can be equipped with Yamaha AutoPilot and even a Full Maneuverability Joystick. That includes single outboard boats!\*
- **Smoother ride** – Borrowed from the XTO Offshore, the lower motor mounts are larger and softer for less vibration while properly harnessing motor movement.

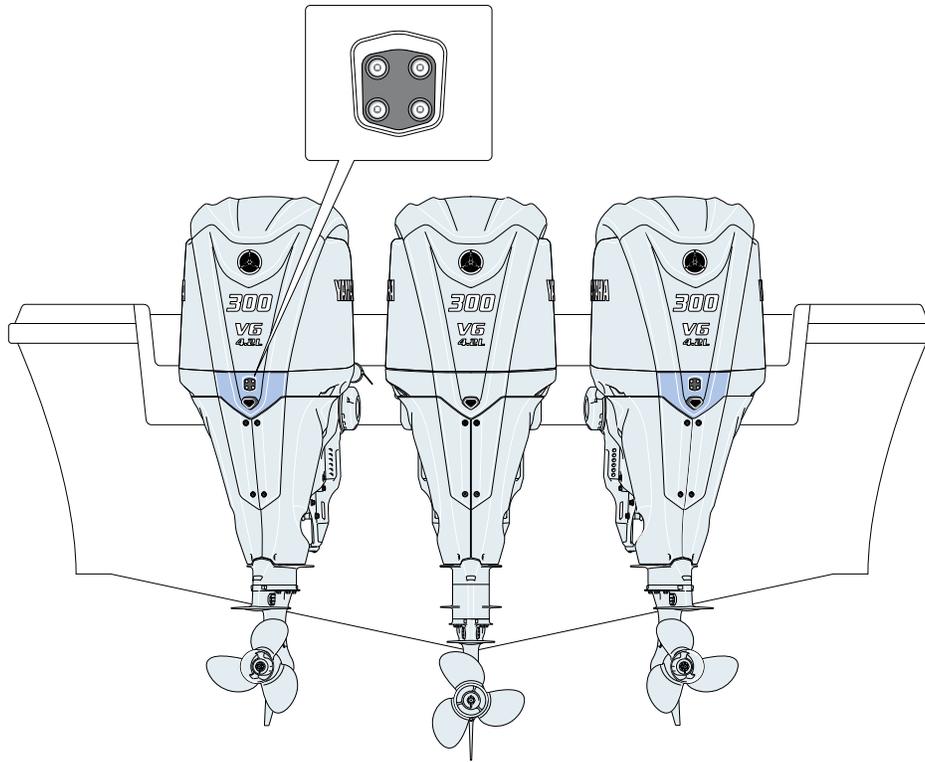
- **Faster, easier engine tilting**

– Yamaha's exclusive TotalTilt™ function allows complete tilt up from any position with a simple double-push of the "UP" trim/tilt button, or full tilt down (until trim ram contact) by the same double-push of the "DOWN" trim/tilt button. For safety, a warning horn will sound just before and during these operations. Movement and the horn can be stopped anywhere in between by pressing the tilt button again. No more holding the trim button makes for effortless trailering and convenience when complete up or down tilt is desired. There's also a new built-in integrated tilt limiter to help prevent inadvertent damage. Plus, built-in DES models tilt higher out of the water than previous models, which helps lessen the potential for corrosion.

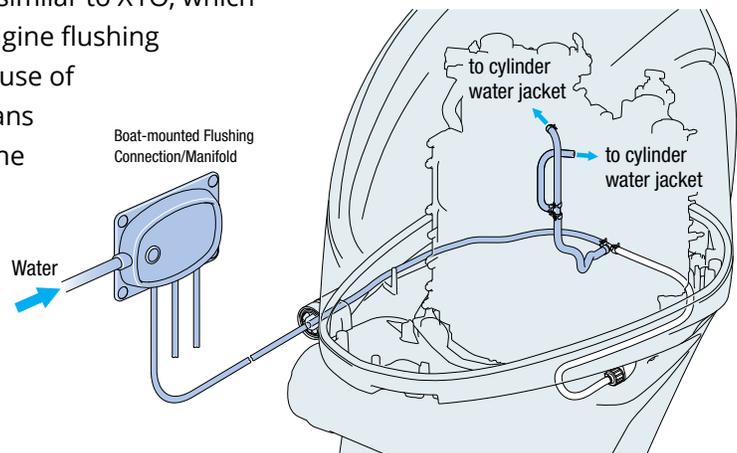


*\*All mobility, AutoPilot, and SetPoint® positioning functions work well in single-outboard Helm Master EX applications, except StayPoint and lateral operation resulting from direct input via the joystick, which do not function.*

- **Clean rigging** – Optional for boats featuring the new and upgraded V6 Offshore with Helm Master EX Full Maneuverability, there is an available Integrated Helm Master Light. The light mounts directly in the rear apron of the outboard(s) rather than requiring independent lights on the transom. These clearly indicate the boat is actively in Full Maneuverability mode to anyone approaching from abaft (requires Helm Master EX Prop Light Kit, p/n 6KA-762A0-00-8D for gray V6 Offshore models, p/n 6KA-762A0-00-CE for white V6 Offshore models).

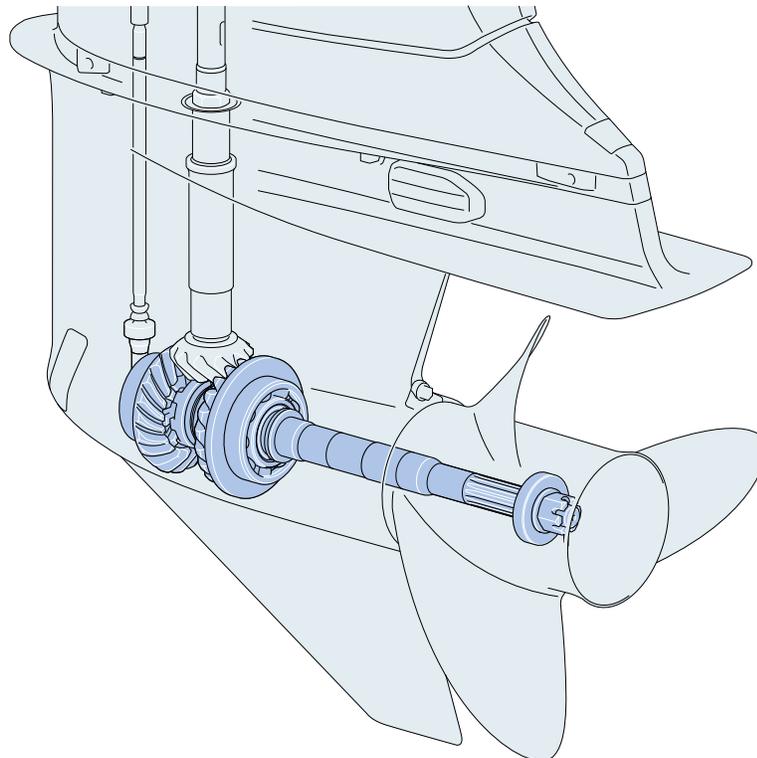


- **Easier flushing** – The engine flush hose can now be routed through a new rigging grommet inside the rigging tube, similar to XTO, which means automatic or manual on-board engine flushing systems can be used with ease (requires use of Flushing Kit, p/n 6KA-762Y0-00). This means cleaner rigging and easier operation of one of the most important maintenance procedures for the longevity of the outboard(s). In addition, all V6 Offshore outboards still feature a built-in external flush attachment. There's even a new side exhaust cover to help prevent inadvertent paint discoloration without sacrificing performance.



## **ENHANCED RELIABILITY AND DURABILITY**

Even after a decade of proven performance, the new 4.2-liter V6 Offshore has an improved lower unit featuring new components and design features that add durability, further increasing consumer confidence.



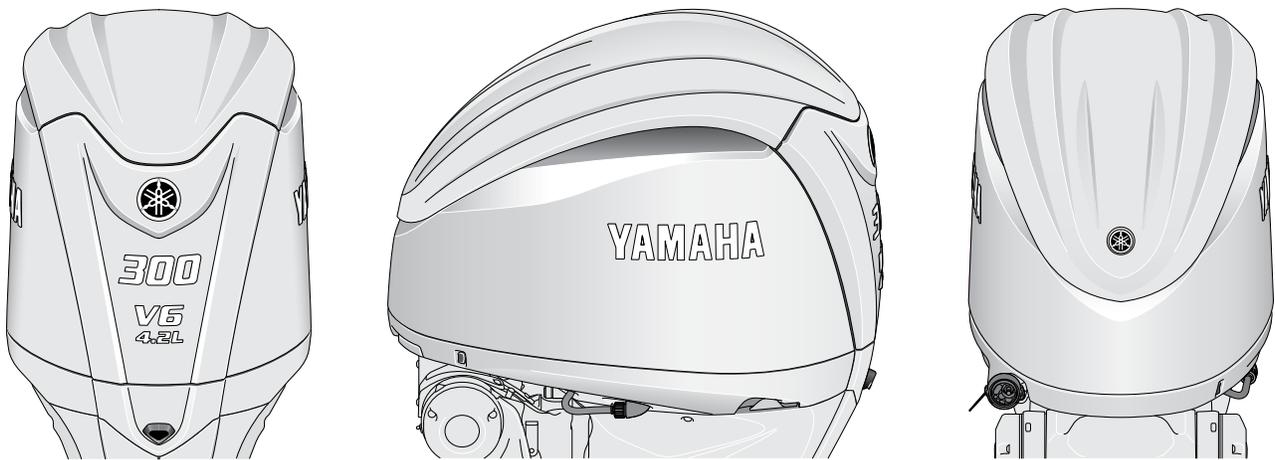
## **FLEXIBLE RIGGING OPTIONS**

With the new and upgraded V6 Offshore, you can choose different ignition control options on singles and twins (keyed or wireless fob). For displays, you can choose the full-function Multi-Function Display (MFD) – the CL7; the new small and thin touchscreen color display – the CL5; or use analog gauges through use of an Analog Gauge Interface (AGI). There are even multi-function display interfaces (MFDIs) available to pipe display and control features directly to select third-party MFDs.



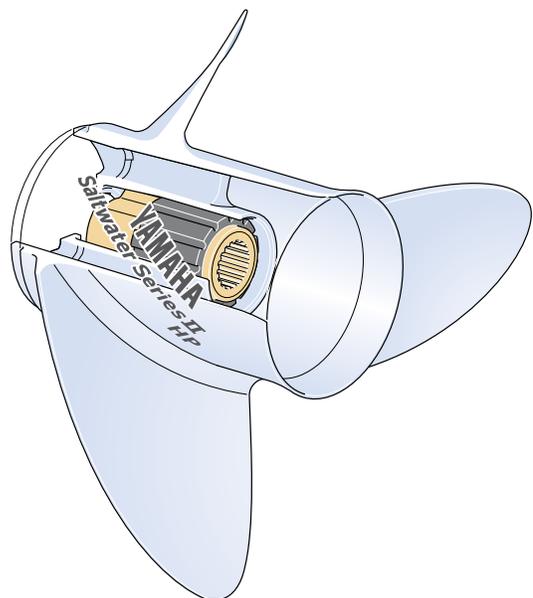
## **STRIKING NEW EXTERIOR DESIGN**

Capitalizing on many styling cues from its big brother, the XTO-like appearance in pearlescent white or signature Yamaha gray now feature a color-matched lower unit, a new one-piece top cowling with water-draining air duct molding, a new bottom cowling and apron shape and raised chrome graphics on built-in DES models only. Stunning new looks meet proven performance to compliment and complete even more premium boats.



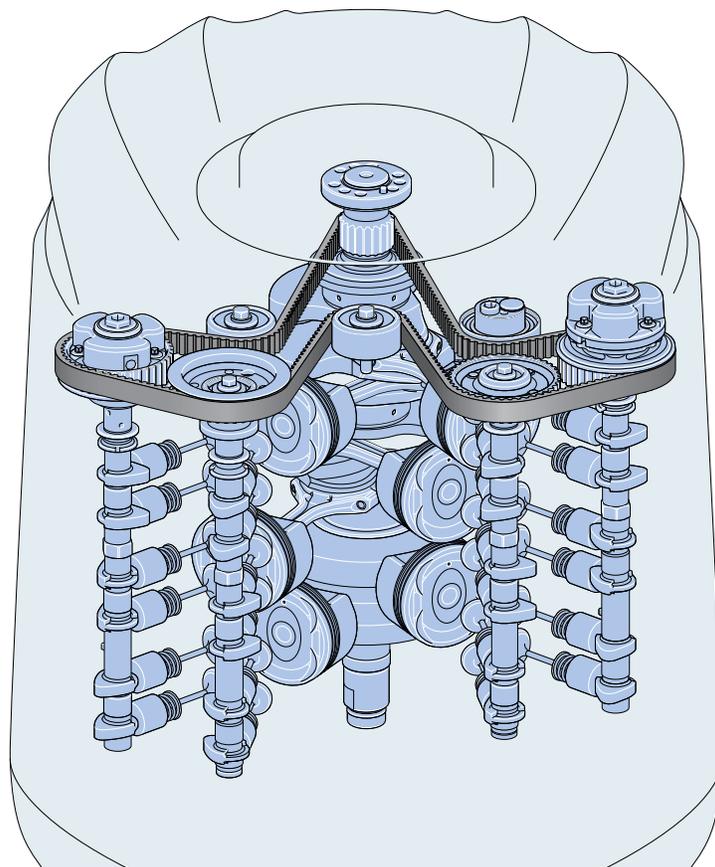
## **IMPROVED TOP SPEED POTENTIAL**

Compatible with Yamaha's new Saltwater Series II™ HP propeller, faster top speed without sacrificing acceleration is possible for lighter weight V6 Offshore applications where the propeller rides fully submerged, while the built-in Shift Dampener System (SDS®) helps keep shifting smooth and quiet (see *Saltwater Series II HP Propeller Hot Sheet* for more details).



## **INCREDIBLE POWER AND PERFORMANCE**

As the only outboard manufacturer using a highly advanced, thermally applied plasma fusion process on the cylinder walls, Yamaha's V6 Offshore outboards have no conventional steel cylinder sleeves, yet the cylinder walls are 60 percent harder than steel. That means larger cylinder bores for increased displacement result in more power and torque without increasing outer cylinder dimensions. It also results in significantly lighter weight, better cooling and "micro-textured" cylinder walls that dramatically reduce internal friction loss, further increase performance and enhance reliability.

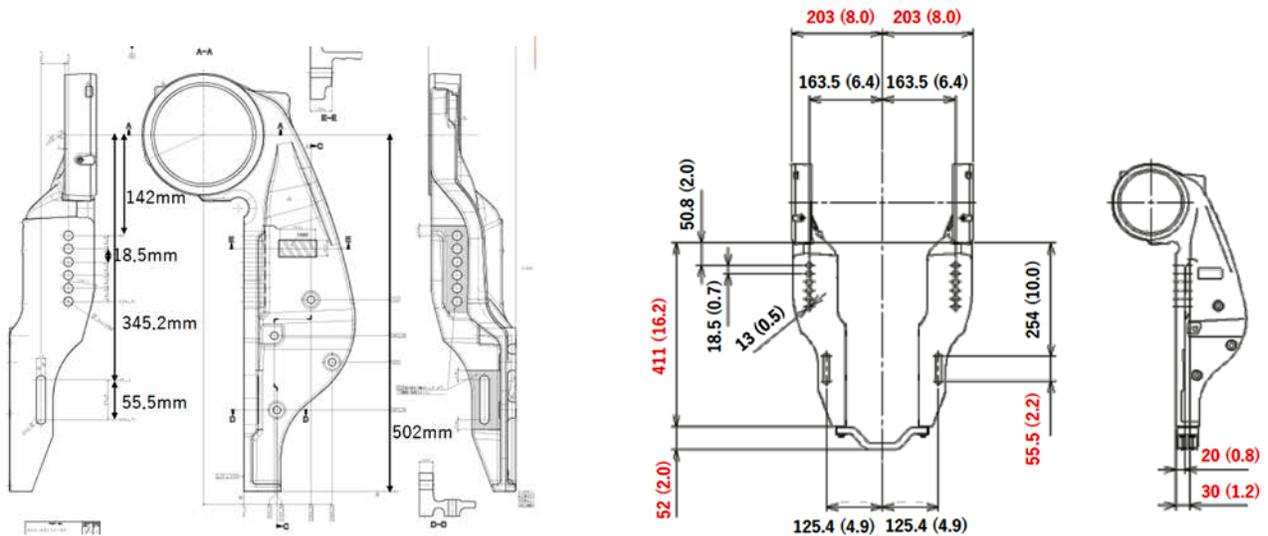


## **OUTSTANDING FUEL ECONOMY**

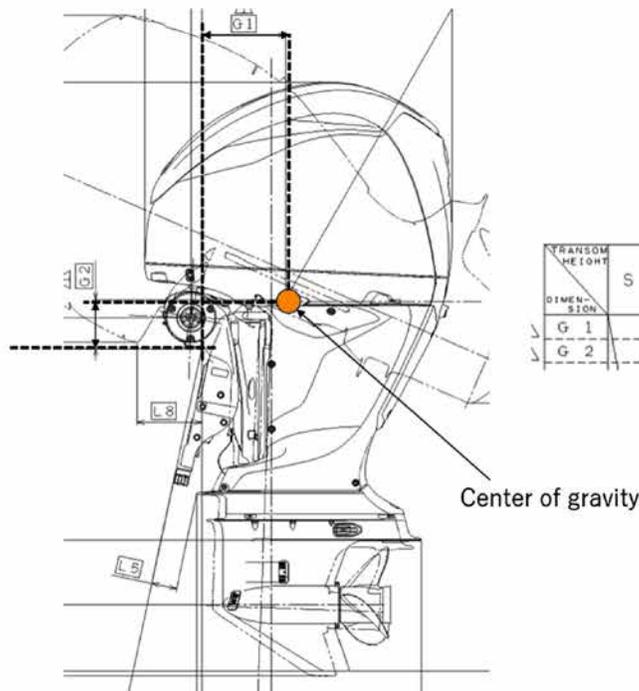
All air entering the engine block of each Yamaha V6 Offshore outboard is routed through a single 75mm electronically-controlled throttle valve. Working in concert with the Precision Multi-Point Fuel Injection System, these features help ensure the precise amount of air and fuel necessary for optimum power and fuel efficiency. The reduction in friction from the micro-textured cylinder walls further adds to this outboard's amazing fuel economy.

## MOUNTING BRACKET

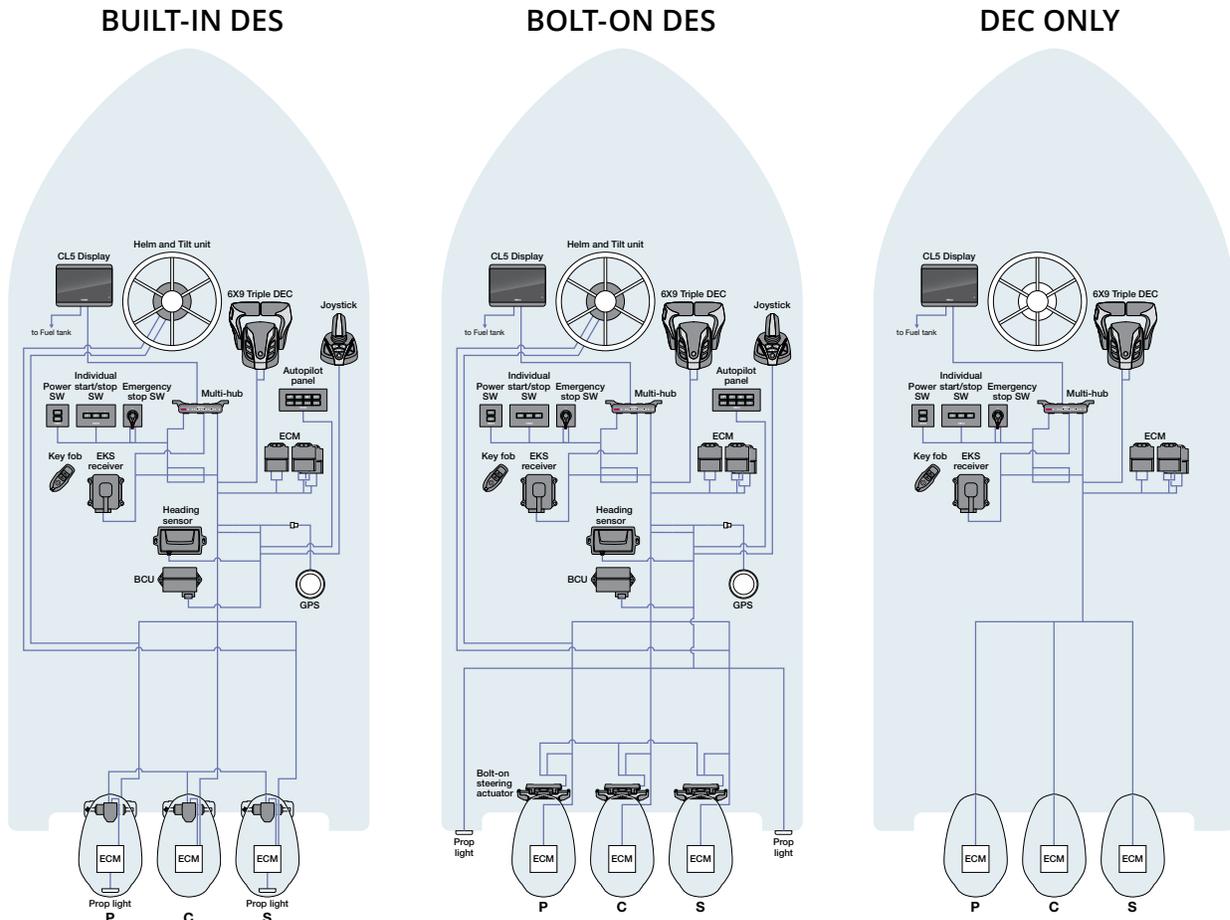
The mounting bracket and dimensions for models featuring built-in DES are shown below. Please note that built-in DEC models are mounted to the transom with six bolts, like Yamaha's XTO Offshore, as the powerhead is mounted 71mm higher than standard bracket models. This provides the additional height needed for the built-in DES, and the ability to use these models in most flat-transom applications. DEC models without built-in DES (for use with optional bolt-on DES) and mechanically controlled models have no bracket changes from current 4.2-liter V6 Offshore models.



- Center of gravity SBW spec



## RIGGING EXAMPLES



## RIGGING OPTIONS\*

### SYSTEM

- ✓ Helm Master EX DEC only w/ hydraulic steering
- ✓ Helm Master EX DEC + built in DES
- ✓ Helm Master EX DEC + bolt-on DES
- ✓ Helm Master EX DEC + DES + AutoPilot
- ✓ Helm Master EX DEC + DES + AutoPilot + Full Maneuverability (joystick)

### DISPLAYS

- ✓ CL5 Touchscreen Display
- ✓ CL7 Full-function MFD
- ✓ MFDI-1 for Garmin® MFDs
- ✓ MFDI-2 and Controller for non-Garmin® MFDs
- ✓ Analog Gauge Interface

*\*The new and updated 4.2-liter DEC outboards may use existing DEC and Helm Master systems until those rigging systems are no longer available.*

## FEATURES

- ECM control system
- Variable trolling rpm
- Digital Electronic Control (DEC)
- 70 amp high output alternator
- Water cooled rectifier regulator
- Closed fuel vapor system

- 2 factory colors
- Elegant, sleek, lightweight design
- Plastic lightweight bottom cowling
- Intake air draining system

- 24-valve, DOHC, 60-deg. V6 4.2L
- Multi-point electronic fuel injection
- Direct ignition
- Variable Camshaft Timing (VCT)
- Plasma-fused sleeveless cylinders
- Long intake manifold/Electronic throttle
- Compact in-bank exhaust
- Blow-by gas reburning system

- Built-in Digital Electric Steering (DES)
- TotalTilt™ function with integrated stop limit
- Updated engine mounts

- Lower unit
- Intermediate drive shaft and shift rod
- Saltwater Series II™ HP propeller available
- Counter rotation available

- Labyrinth exhaust system
- Water-sealed outer wall
- Thrust Enhancing Reverse Exhaust (TERE)
- Side exhaust outlet cover
- Exhaust pressure reduction system

### RIGGING ACCESSORIES

- Helm Master® EX ready
- Engine mount prop light (optional)

### WARNING & PROTECTION

Over-heat warning	Over-rev limiter	Low oil pressure Warning	Knock control
Sensor compensation system	YDIS	Yamaha immobilizer	

### YAMAHA IDEAL ANTI-CORROSION SYSTEM

- Self-sacrificing anodes
- Electrodeposited inside/outside paint process
- Anodized treatment
- Dual flush system

## AVAILABLE MODELS

Model	Rotation	Shaft	Color	Steering/Bracket	Weight (by Shaft Length)	Availability
<b>V6 Offshore with Built-in DES</b>						
<b>F300XSB</b>	Regular	25"	Gray	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>LF300XSB</b>	Counter	25"	Gray	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>F300XSB2</b>	Regular	25"	White	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>LF300XSB2</b>	Counter	25"	White	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>F300NSB</b>	LSC	25", 30", 35"	Gray	Integrated SBW, 6-bolt bracket	X = 611 lbs/277kg   U = 624 lbs/283 kg   E = 635 lbs/ 288 kg	February 2021
<b>F300NSB2</b>	LSC	25", 30", 35"	White	Integrated SBW, 6-bolt bracket	X = 611 lbs/277kg   U = 624 lbs/283 kg   E = 635 lbs/ 288 kg	February 2021
<b>F250XSB</b>	Regular	25"	Gray	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>LF250XSB</b>	Counter	25"	Gray	Integrated SBW, 6-bolt bracket	611 lbs/277 kg	February 2021
<b>F250NSB</b>	LSC	25", 30", 35"	Gray	Integrated SBW, 6-bolt bracket	X = 611 lbs/277kg   U = 624 lbs/283 kg   E = 635 lbs/ 288 kg	February 2021
<b>V6 Offshore without Built-in DES</b>						
<b>F300XCB</b>	Regular	25"	Gray	DES Optional, Existing Bracket	562 lbs/255 kg	March 2021
<b>LF300XCB</b>	Counter	25"	Gray	DES Optional, Existing Bracket	562 lbs/255 kg	March 2021
<b>F300NCB</b>	LSC	25", 30", 35"	Gray	DES Optional, Existing Bracket	X = 562 lbs/255 kg   U = 575 lbs/261 kg   E = 588 lbs/265 kg	March 2021
<b>F300NCB2</b>	LSC	25", 30", 35"	White	DES Optional, Existing Bracket	X = 562 lbs/255 kg   U = 575 lbs/261 kg   E = 588 lbs/265 kg	March 2021
<b>F250XCB</b>	Regular	25"	Gray	DES Optional, Existing Bracket	562 lbs/255 kg	March 2021
<b>LF250XCB</b>	Counter	25"	Gray	DES Optional, Existing Bracket	562 lbs/255 kg	March 2021
<b>F250NCB</b>	LSC	25", 30", 35"	Gray	DES Optional, Existing Bracket	X = 562 lbs/255 kg   U = 575 lbs/261 kg   E = 588 lbs/265 kg	March 2021
<b>Mechanical Controls (No Change)</b>						
<b>F300XA</b>	Regular	25"	Gray	Mechanical, Existing Bracket	551 lbs/255 kg	Now
<b>LF300XA</b>	Counter	25"	Gray	Mechanical, Existing Bracket	551 lbs/255 kg	Now
<b>F250XB</b>	Regular	25"	Gray	Mechanical, Existing Bracket	551 lbs/255 kg	Now
<b>LF250XB</b>	Counter	25"	Gray	Mechanical, Existing Bracket	551 lbs/255 kg	Now
<b>F225XB</b>	Regular	25"	Gray	Mechanical, Existing Bracket	551 lbs/255 kg	Now

## V6 OFFSHORE MODELS



**V6 Offshore  
with Built-in DES**



**V6 Offshore  
without Built-in DES**



**Mechanical Controls  
(No Change)**

This document contains many of the valuable trademarks and service marks owned and used by Yamaha throughout the world. The document may also contain references to other company, brand and product names that may be the trademarks/service marks of their respective owners. These company, brand and product names are used herein for identification purposes only, and references to any names, marks, products or services of third parties do not constitute or imply endorsement, sponsorship or recommendation of the third party or the products or services. Information and data contained herein is approximate and subject to many different factors and variables, including but not limited to atmosphere, water, equipment conditions, and operator ability. It is provided as a guideline only and should not be relied upon as a representative of actual performance. Due to Yamaha's ongoing commitment to product improvement, we reserve the right to change without notice, equipment, availability, specifications, and prices. Also, due to various factors, including the boat's actual weight and wind and water conditions, the product's performance may be different than the information contained herein. Please confirm the specifications and performance data on your specific boat/engine combination with your dealer prior to purchase.

**REMEMBER** to always observe all applicable boating laws. Never drink and drive. Dress properly with a USCG-approved personal flotation device and protective gear. Boat smart from the start. Take a boating safety course and get a free vessel safety check annually for your boat. For more information, contact: United States Coast Guard Auxiliary online at [www.cgaux.org](http://www.cgaux.org), or United States Power Squadrons at 888-for-usps or [www.usps.org](http://www.usps.org).

© 2021 Yamaha Motor Corporation, U.S.A. All rights reserved.