



V MAX SHO® Family Expands Again with Versatile 90 Horsepower for Multi-species and Inshore Boats

The smallest of the V MAX SHO family packs the biggest punch of any 90-horse on the market. For customers who are replacing a two-stroke 90, the clean, quiet V MAX SHO 90 means you'll never need an oil tank again, and it's the quietest 90 anywhere. Class-leading torque and top speed in both 20- and 25-inch shaft versions. Available March, 2018

Power and Performance

- Leads the 90-horsepower class in torque and top speed
- Single overhead camshaft drives four valves per cylinder for weight savings. More power from less weight. Yamaha's main four-stroke competitor has only eight valves

Convenience and Control

- Not only the fastest, it's quiet, which means a better time fishing
- It's even quieter with Yamaha propellers featuring the exclusive Shift Dampener System™ (SDS™), such as the Talon® SS4™ SDS propeller
- Compatible with Yamaha's variable trolling RPM switch (VTS™) for slow trolling and better fishing
- No oil tank needed, which means more space for storage or batteries
- Can be rigged for use with Yamaha's award-winning multifunction tiller handle
- A full 35 amps of alternator power
- Yamaha Y-COP® compatible for increased theft protection
- Features long-span mounting system for less vibration



continued on next page

Available in short- and long-shaft versions.

Available Models: VF90LA, VF90XA



V MAX SHO® 90

Rigging Options[▲]

CONTROLS

- Mechanical (Cable) *Compatible*

GAUGES

- Command Link® *Compatible*
- Yamaha Multifunction *Compatible*
- External NMEA-2000® Display *Compatible*
- Analog *Compatible*

PROPELLERS

- NEW** Talon Propellers with SDS *Compatible*
- Yamaha "K" Series Stainless or Aluminum *Compatible*

KEY SWITCHES

- Command Link® *Compatible*
- Conventional *Compatible*

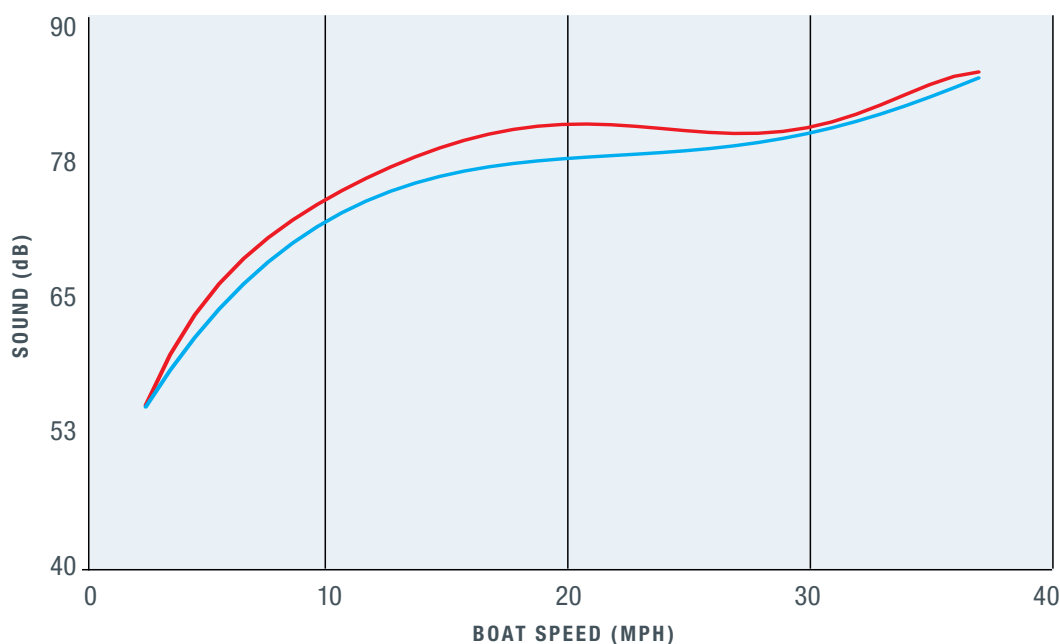
MISCELLANEOUS

- Command Link® Gateway *Compatible*
- Command Link® Multisensor *Compatible*
- Y-COP® (Immobilizer) *Compatible*
- Variable Trolling RPM Switch (VTS®) *Compatible*

[▲] Consult appropriate Yamaha rigging information and Yamaha Rigging Sheet on YMBS for complete rigging compatibility and requirements information for particular configurations. All rigging items sold separately.

Sound

(Testing conducted by Yamaha at Yamaha's US Test Facility on a G3 Model 1860 CC under the same conditions and with each rigged for maximum performance.)



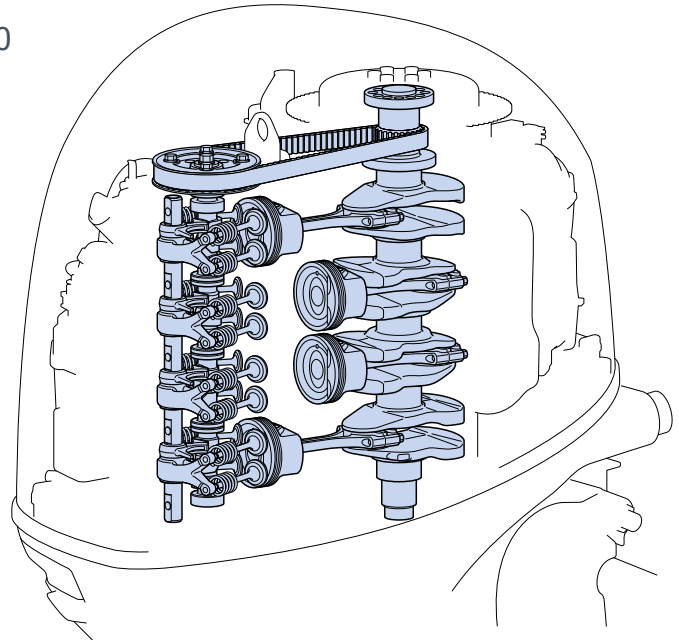
**THE NEW YAMAHA
V MAX SHO 90
IS QUIETER**

— Competitor
— V MAX SHO 90

V MAX SHO® 90

Single Overhead Camshaft with Four Valves Per Cylinder

To keep weight down and efficiency up, the V MAX SHO 90 features a single overhead camshaft but still uses four valves per cylinder. This setup means less mass in the cylinder head and reduced weight for the overall outboard. At the same time, four valves per cylinder means great engine combustion, which contributes to horsepower, torque and fuel efficiency.



Variable Trolling RPM

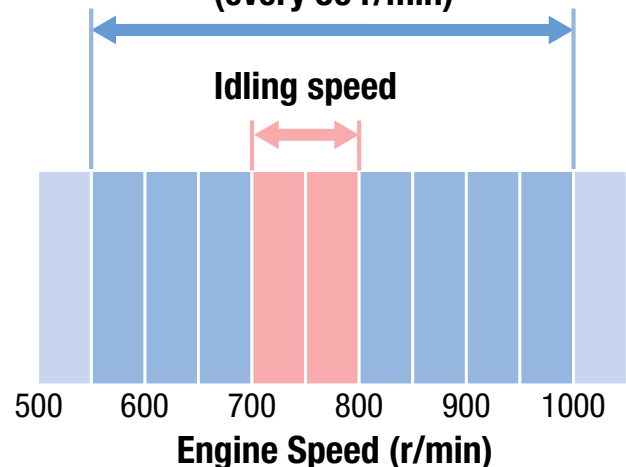
If the outboard is equipped with Yamaha's Multi-Function Tiller Handle, Command Link display, or the new remote switch, the operator can adjust the engine's trolling speed from 550 to 1000 RPM in 50 RPM increments. Trolling can take place at 200 RPM below idle speed!



DOWN UP

Variable trolling feature

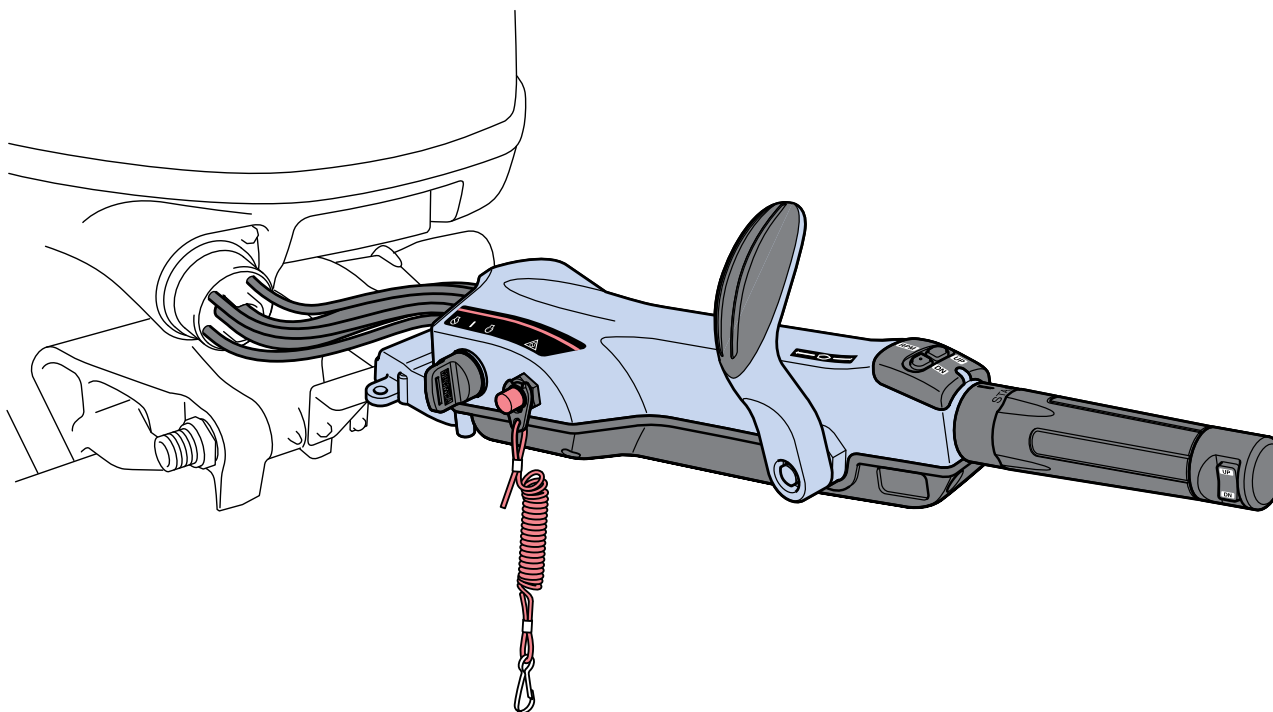
**Variable trolling
RPM range adjustment
(every 50 r/min)**



V MAX SHO® 90

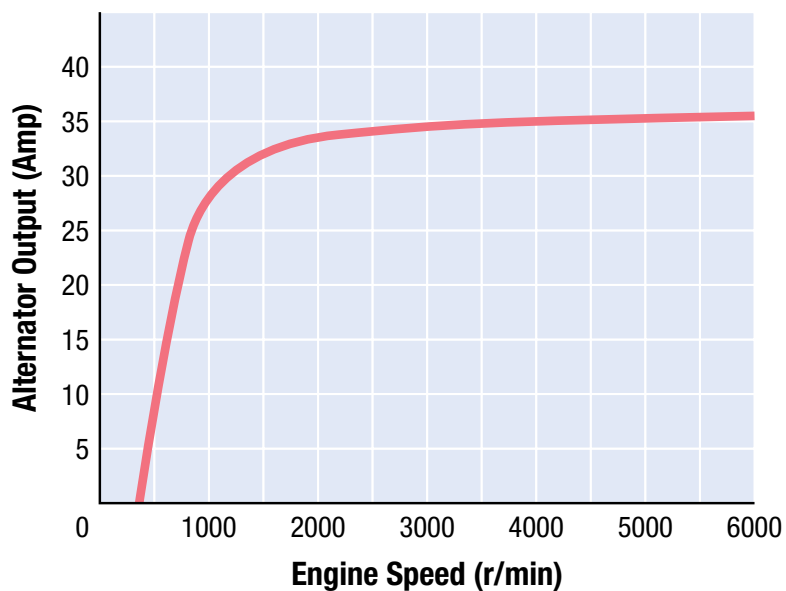
Multi-Function Tiller Handle

Yamaha's award winning Multi-Function Tiller Handle incorporates engine start/stop, emergency stop, gear shift, power trim and tilt operation, variable trolling switch, warning and controls all in one. It can be added as an accessory to the V MAX SHO 90.



Alternator

The V MAX SHO 90 features a three-phase alternator that produces up to 35 amps of power. That means there is plenty of electrical power for battery charging, accessories and more left to spare.



V MAX SHO® 90

Command Link® Compatibility

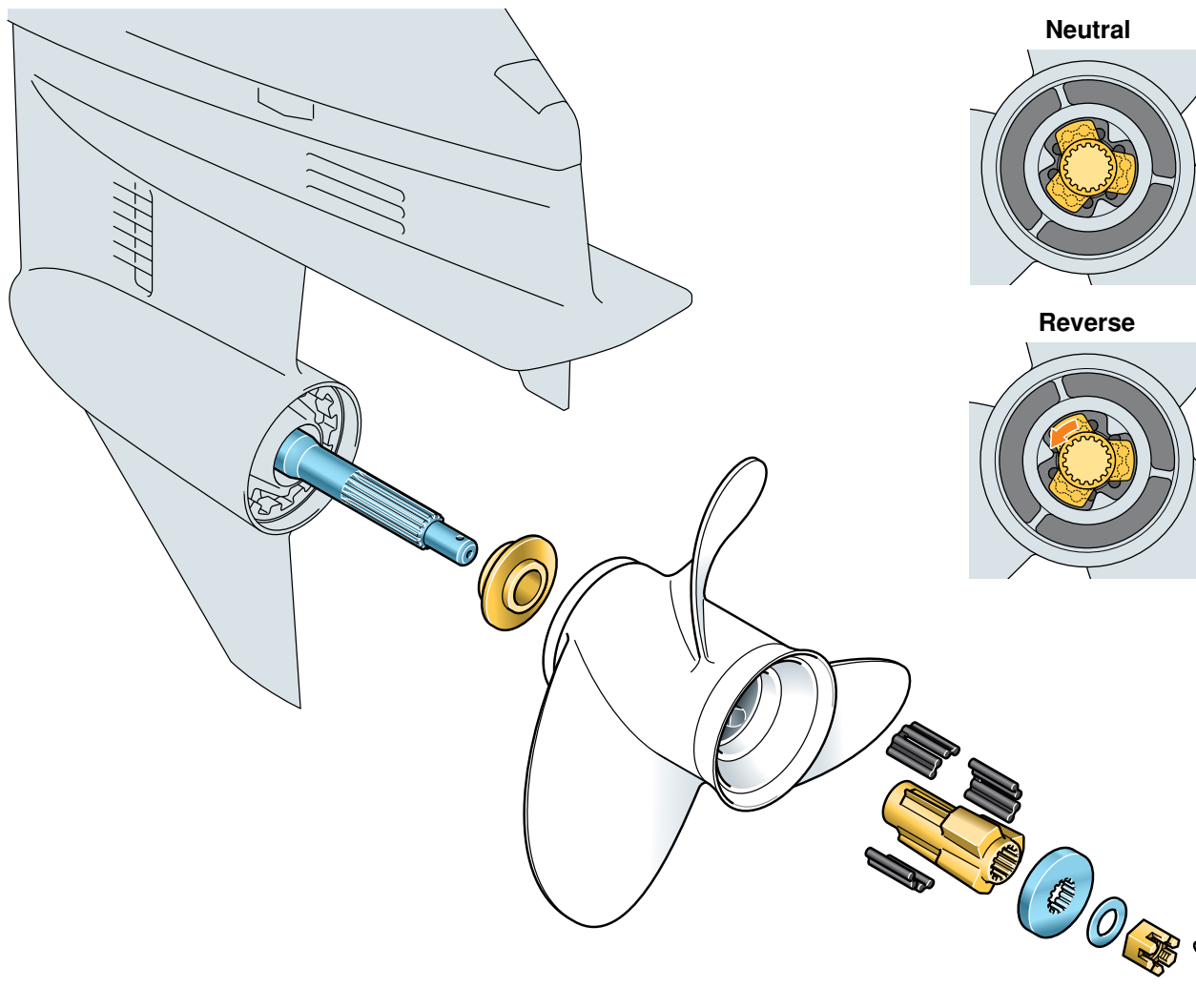
The V MAX SHO 90 is compatible with Yamaha's Command Link 6Y8 and 6YC digital gauges. The new outboards are also compatible with the Yamaha Customer Outboard Protection or Y-COP®, the Yamaha theft deterrent system.



V MAX SHO® 90








Shift Dampener System (SDS®)





Yamaha's Shift Dampener System (SDS®) greatly reduces the noise commonly associated with shifting gears. Using a new design and components specific to Yamaha "K" size propellers (4.25"), much of the force of shifting is absorbed. SDS is standard on Yamaha's Talon® series of propellers, which means smooth and quiet operation when both shifting and while in gear. Talon propellers require no special hardware for proper operation. Talon SDS props work with the new V MAX SHO 90.



V MAX SHO® 90

Features

-  Micro-computer control
-  Variable trolling rpm switch (VTS™) compatible
-  Coaxial reduction starting motor
-  35-Amp high output alternator
-  Water cooled rectifier/regulator
-  Water detection fuel filter
-  (YDIS) Yamaha Diagnostic Interface System

-  Redesigned rubber engine mounts/Long-span mounting system
-  Single ram PTT unit
-  Heat-treated gears
-  Propeller dampener cooling system








-  SOHC L4 16-valve engine
-  Multi-point electronic fuel injection
-  Light-weight camshaft drive train
-  Offset crankshaft
-  Cogged drive belt
-  Flange mounted flywheel
-  Single big-bore throttle body
-  Tuned long-track intake manifold
-  4-to-1 exhaust manifold
-  Ultra low-noise labyrinth exhaust system
-  2-piece upper casing/oil pan with oil cooling system

-  Side intake cowling
-  Water-draining air intake duct
-  New light-weight bottom cowling
-  New light-weight apron

Options

-  Tilt limiter application
-  6Y8 or 6YC digital gauge
-  Command Link® compatible
-  New Talon® Series SDS™ propellers










Environmental Protection

-  EPA-compliant CARB 3 stars
- 3-stage Hydro-carbon gas confinement system**
-  Fuel vaporization control system
-  Fuel vapor accumulation system
-  Blow-by gas reburning system
-  Cartridge oil catch tray

Corrosion Prevention

- Ultimate Corrosion Protection Phase Five™ paint system**
-  YDC30, marine aluminum alloy
-  Multiple sacrificial anodes
-  Heavy duty anodized muffler
-  Stainless steel water pump housing
-  Stainless steel water tube
-  Freshwater flushing device

Warning and protection systems

-  Over-rev protection
-  Overheat protection
-  Low oil pressure warning
-  Start-in-gear protection
-  Y-COP theft prevention system (optional)
-  Knock detection system
-  Sensor compensation system
-  Water-in-fuel detection
-  Emergency engine stop lanyard

V MAX SHO® 90

Specifications

ENGINE

Type	In-Line, Four Cylinder
Displacement	1832cc/111.8 ci
Bore x Stroke	81 x 88.9mm (3.19 x 3.5in)
Full Throttle RPM Range	5000 – 6000
Variable Trolling RPM Range	550 – 1000 RPM
Horsepower Rating at Propshaft	90hp @ 5500 RPM
Compression Ratio	10.0:1
Fuel Induction/Scavenging	SOHC, 4 valves per cylinder
Alternator Output	35
Starting Method	Electric w/ PTT
Ignition	TCI Microcomputer
Lubrication	Wet Sump
Degree of Trim	-4° through +16°
Degree of Tilt	-4° through +66°
Exhaust	Through Propeller
Cooling	Water, Thermostatic Control

DRIVE

Gear Shift	F-N-R
Gear Ratio	(28/12) 2.33
Control Method	Mechanical

SHAFT LENGTH

See Model Code	L = 20" X=25"
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FUEL and LUBRICATION

Recommended Fuel	Regular Unleaded (Minimum Pump Octane 87)
Recommended Oil	Yamalube® 4-M
Engine Oil Capacity	3.2L / 3.0L (w/without filter) 3.4qt / 3.2qt (w/without filter)

LIMITED WARRANTY

Pleasure	Three Years
Government	Three Years
Commercial	One Year

WEIGHT

VF90LA = 160kg/353lbs, VF90XA = 164kg/362lbs

*Weight estimated at time of publishing. Weight is measured without motor oil, gearcase oil and propeller.

Features

POWER/PERFORMANCE

- New Light-weight, Compact, Powerful Design
- 1.8L High Output Four Cylinder
- 4 Valves Per Cylinder
- Single Overhead Camshaft
- Tuned Long-Track Induction System
- Electronic Multi-Point Precision Fuel Injection
- 4 Independent Fuel Injectors
- 4-to-1 Exhaust

RELIABILITY/DURABILITY

- TCI Micro-computer Ignition System
- Direct Drive System
- Wet Sump Lubrication
- Engine Warning System
- Water Separator
- Mechanical Single Throttle Valve Intake System
- Water Draining Air Intake Duct
- Magnetic Drain Plug
- SST Drive, Prop, Shift Shafts
- SST Steering Tube
- Sacrificial Anodes
- YDC-30™ Aluminum Alloy
- Phaze Five™ Paint Process
- Electro-deposited Powerhead Paint Process
- Alumite Exhaust Anodization

CONVENIENCE/CONTROL

- High Output Alternator
- Command Link® or Analog Gauge Compatibility
- External NMEA-2000® Display Compatibility
- Power Trim & Tilt
- Available with Yamaha multi-function tiller handle
- Freshwater Flush
- Easy Maintenance
- Vibration Reduction Mounting System
- Reversible PTT Switch
- Yamaha Diagnostic System
- Single Cogged Timing Belt System with Automatic Tensioner
- C.A.R.B. Ultra Low Emissions 3 Star Rating
- Meets All Current Federal EPA Emission Standards

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