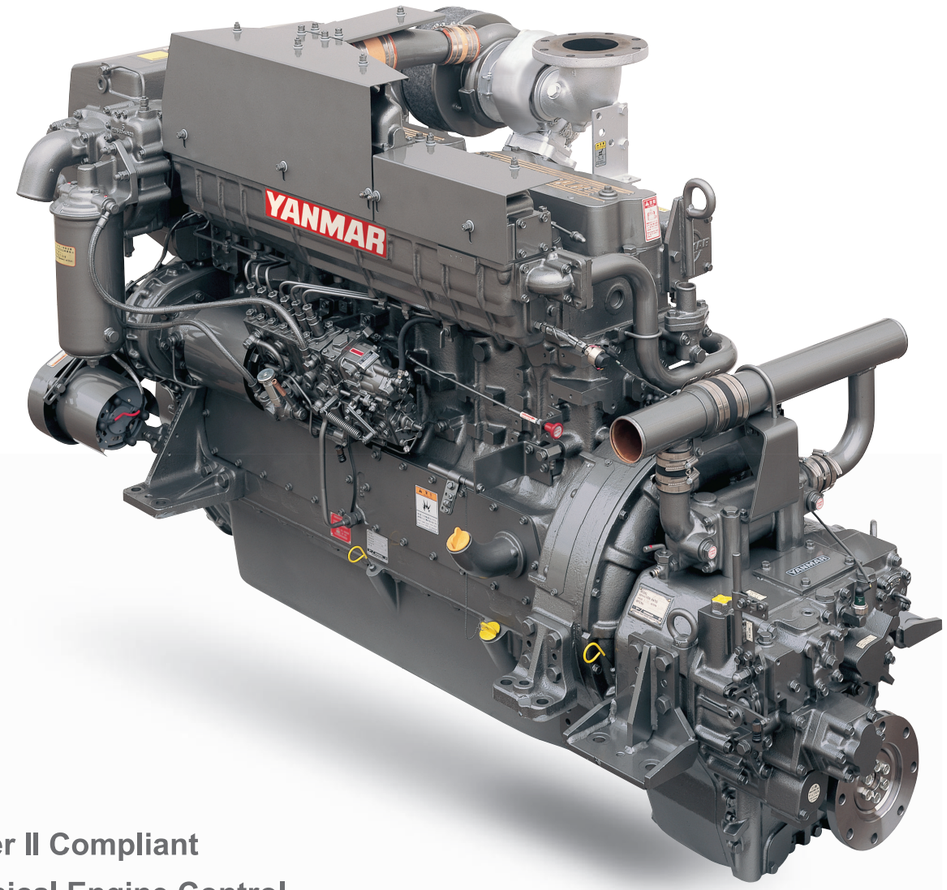
YANMAR

MARINE DIESEL ENGINE

6HA2M-WHT | 6HA2M-WDT

M-rating 257kW [350mhp] | M-rating 298kW [405mhp]



IMO Tier Ⅱ Compliant

Mechanical Engine Control

Photograph may show optional equipment.

350mhp

405mhp

LONG STROKE

Engine Specifications

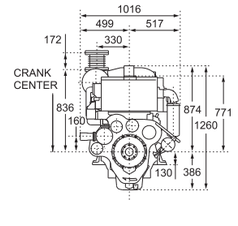
Model	6HA2M-WHT		6HA2M-WDT
Type	4-cycle, Vertical, Turbo-charged with Fresh watercooled intercooler diesel engine		
No. of cylinders, Bore × stroke mm	6 in-line, 130 × 165		
Displacement lit.	13.140		
Ratedoutput kW(hp)/rpm	M:257(350) / 1950	H:204(278) / 1880	M:298(405) / 1950
Emission	IMO Tier II		
Fuel consumption gr/kW · hr	M:217(at rated output)	H:217(at rated output)	M:215(at rated output)
Direction of rotation	Counterclockwise viewed from stern (crankshaft)		
Combustion system	Direct injection		
Cooling system	Constant high temperature cooling with Heat exchanger		
Cooling fresh water capacity lit.	Engine:66 + Reserve tank:1.5		
Lubricating system	Forced lubrication with gear pump		
Lubricating oil capacity lit.	38		
Lubricating oil grade	SAE30, 40		
Starting system	Electric starting motor (DC 24V)		
Flywheel housing size inch	SAE #1, 14		
Dry weight kg	1455		1465

Marine Gear Specifications

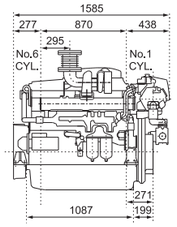
Engine Model	6HA2M-WHT						6HA2M-WDT					
Marine gear model	YX-120				YX-120L		YX-120			YX-120L		
Type	Hydraulic multi-disc clutch											
Reduction ratio	2.03	2.57	3.04	3.55	4.00	4.59	2.03	2.57	3.04	3.46	4.00	4.59
Prop. shaft speed at rated output rpm	960	758	641	550	488	425	960	758	641	563	488	425
Direction of rotation	Clockwise or Counterclockwise											
Dry weight kg	315				411		315			411		

Dimensions (Unit : mm)

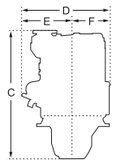
Engine only / Front view



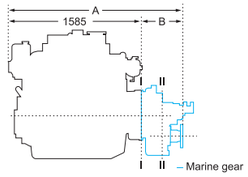
Engine only / Right side view



With YX120 gearbox / Front view



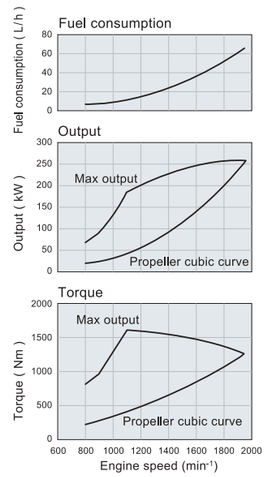
With YX120 gearbox / Left side view



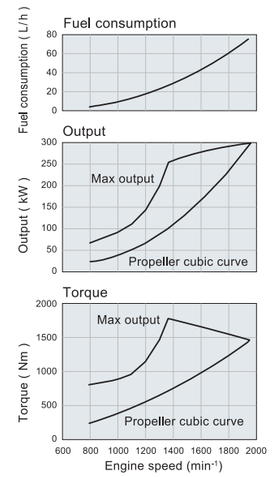
Model	A	B	C	D	E	F
6HA2M-WHT × YX-120	2005	420	1272	1016	499	517
6HA2M-WHT × YX-120L	2039	454	1384	1016	499	517
6HA2M-WDT × YX-120	2005	420	1272	1036	519	517
6HA2M-WDT × YX-120L	2039	454	1384	1036	519	517

Performance Curves

6HA2M-WHT (M rating)

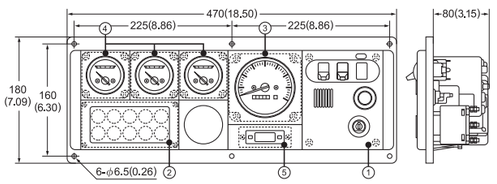


6HA2M-WDT (M rating)



Rating definitions : hp=0.7355kW Ratings are based on conditions of 100kPa, 30% relative humidity at 25˚C.
M=For applications where use of rated power is less than 10 hours continuous and operation is less than 3000 hours per year.
H=For applications where use of rated power is less than 24 hours continuous and operation is less than 4000 hours per year.
Fuel rates : Specific gravity 0.835g/cc, low calorific value 42700kj/kg (10200kcal/kg), Cetane No.45.

Detail of instrument panel D-type (Unit : mm)



① Switch unit
- Key switch
- Alarm buzzer
- Alarm buzzer stop switch
- Illumination switch

② Alarm lamp unit with Alarm monitor device
- Battery not charging
- C.W. high temp.
- L.O. low pressure
- Clutch oil pressure
- L.O. filter clogged
- C.W.level

③ Tachometer unit
- Tachometer with hour meter

④ Sub meter unit
- L.O. pressure meter
- C.W. temp. meter
- Boost meter (Turbo)

⑤ Clock unit
- Clock

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Note : All Data Subject to Change Without Notice.

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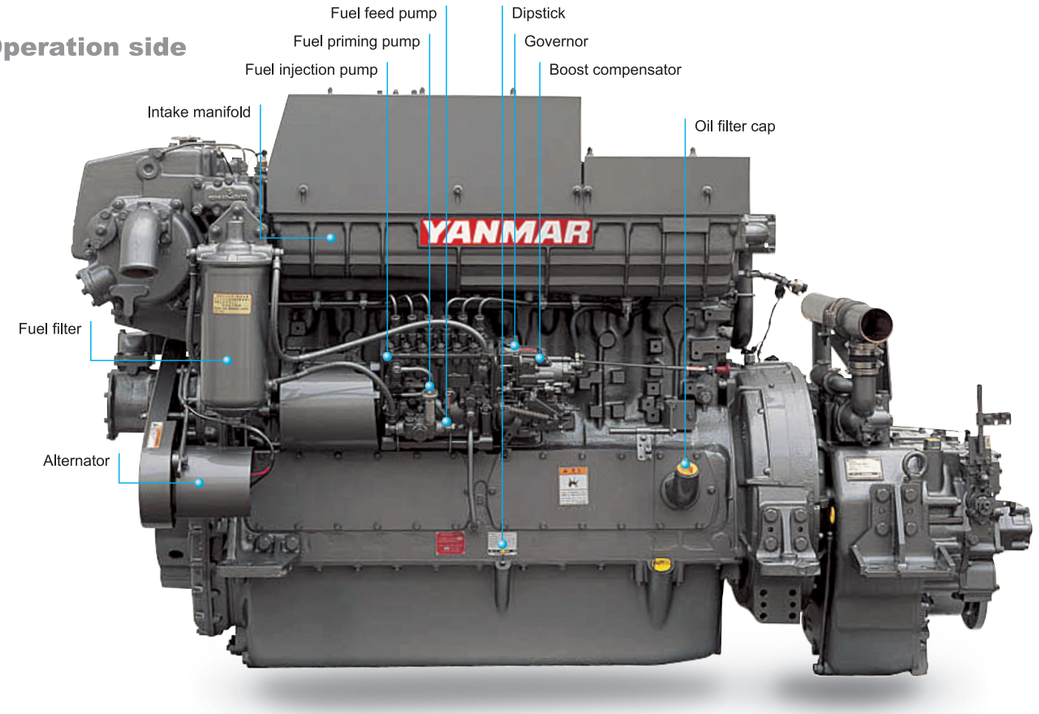
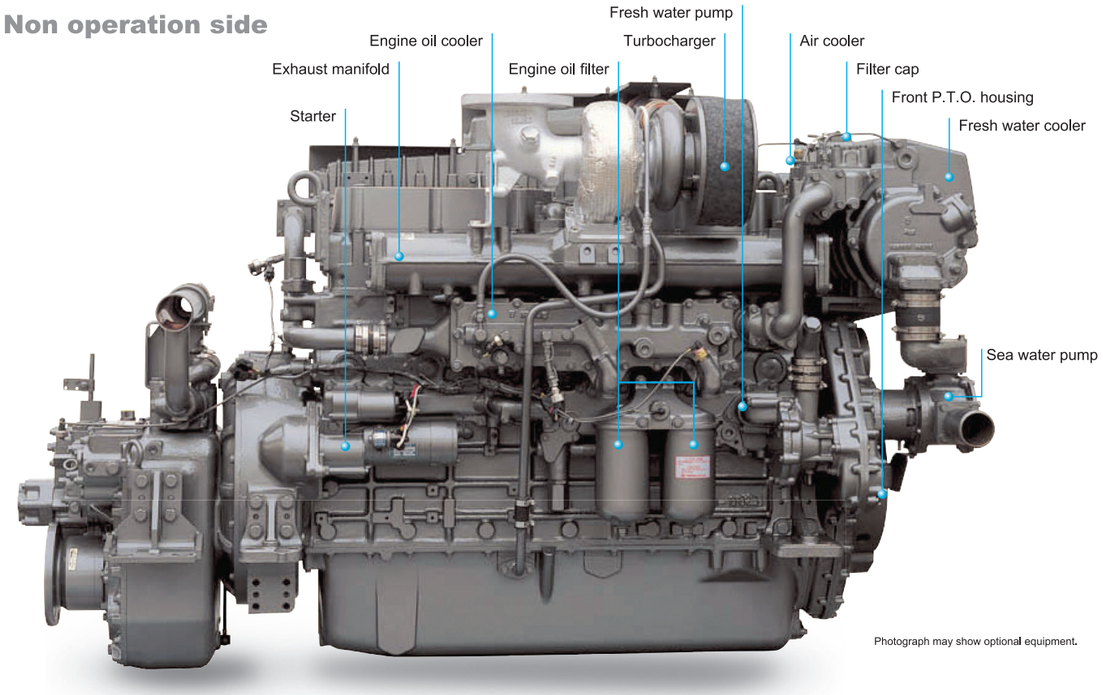
YANMAR, Providing Quality Propulsion Engine Packages for Over 60 Years.

Operation side



Non operation side



Photograph may show optional equipment.

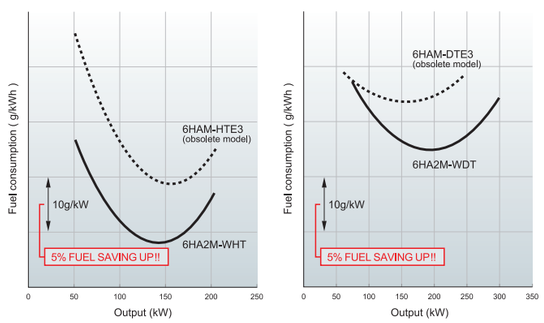
Getting the most boat performance out of the least amount of fuel is one of the top priorities of today's work boat owners. Which is why Yanmar has introduced this new marine diesel engine, specifically built for fuel-saving, ocean-going service. It is a no-nonsense engine built up of quality components developed from Yanmar's vast experience with marine engines, and the needs of the persons who run them.

Performance

405hp (298kW) at 1950rpm
This 165 mm long stroker 13 liter class diesel, with 24 valves, fresh water cooled intercooler.

350hp (257kW) at 1950rpm
This 165 mm long stroker 13 liter class diesel, with 12 valves, fresh water cooled intercooler.

Fuel Consumption

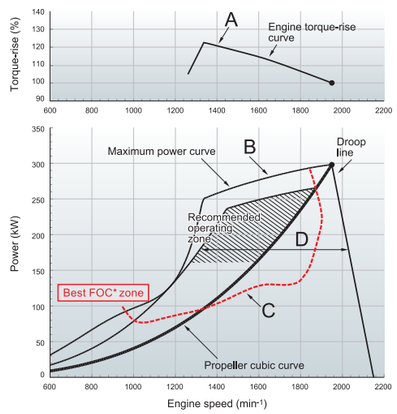


High Torque

Excellent Torque-Rise Characteristics in High Speed and High Load Range Enable Stable Performance of Job Duties even at High Load

The Engine Performance Gives Following Advantages:

1. The engine torque-rise characteristics having much in reserve, (Line A)
   →Stable cruising with least speed reduction against sudden load changes.
2. Wide Max. Power Range, (Line B)
   →A wide range propeller matching, from the passenger ship (light/medium duty) to tug boat (heavy duty), is possible.
3. Min. Fuel Consumption Range is Wide, (Line C) Best FOC* zone
   →Economical with wide min. fuel consumption range both during cruising or performing job duties. * FOC: Fuel Oil Consumption
4. Wide Medium Load Range, (Line D)
   →Produces stable engine performance even doing other job duties.



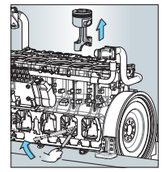
This figure indicate in case of 6HA2M-WDT (M-rating)

Toughness

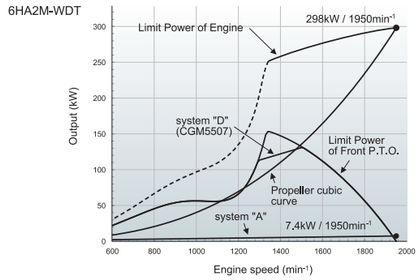
1. Low, stable LOC (Lubricating Oil Consumption) and long overhaul interval, thanks to tufftride treatment cylinder liner and nitrided stainless steel rings and the finely judged clearance between piston and liner.
2. Purpose built marine engine with long stroke, optimized flywheel weight, water cooled exhaust manifold and special treatment injection nozzle.
3. Type Approved by Class Societies.

Lower Down Time

Easier Routine Inspection, Easier Maintenance.
Large inspection windows on the side of the block allow in-site replacement of pistons. Lube Oil filter is easy-to-replace cartridge type. Full mechanical engine management avoids the chance of delicate and expensive electronics failing in hot, marine engine room conditions. 500 hours service interval.



High capacity front PTO



YANMAR original marine gear that can be adapted to a wide range of applications

YANMAR provides our original gearbox, which enables us to supply total marine engineering & servicing to customers!

High-Performance Marine Gear
YANMAR's original marine gear is designed to draw out best performance of YANMAR engines.

Steal Made Gear Case
For heavy duty applications.

Easier Maintenance
A cartridge system is now used for the L.O. filter.

Damping of Fluctuating Torque
Proven, time tested, rubber block reduces the fluctuating torque that is input to the marine gear. It reduces rattling and prevents torsional vibration to protect the power transmission parts.

Accessories
Optional Trolling Device.
Propeller shaft half coupling (counter frange) supplied as standard.