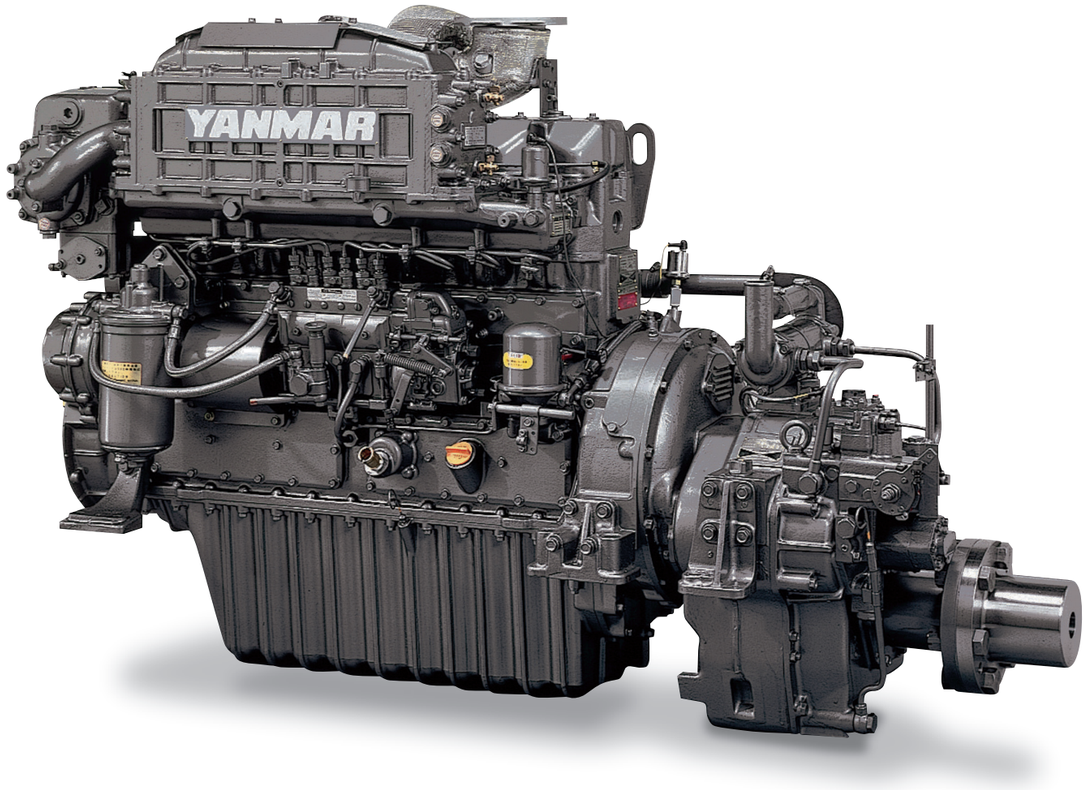
YANMAR

MARINE DIESEL ENGINE

CHE Series

L•M-rating 57.4~206kW [78~280mhp]



Photograph may show optional equipment.

Mechanical Engine Control

78mhp – 280mhp

Bestselling from 1977

Engine Specifications

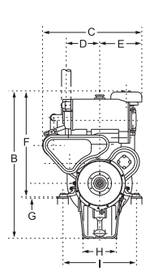
Model		4CHE3	6CHE3	6CH-HTE3	6CH-WUTE
Type		4-cycle, Vertical, natural aspirated, water cooled diesel engine		4-cycle, Vertical, Turbo-charged, water cooled diesel engine	
No. of cylinders, Bore × stroke	mm	4 in-line, 105 × 125	6 in-line, 105 × 125		
Displacement	lit.	4.330	6.494		
Ratedoutput	kW(hp)/rpm	M:57.4(78)/2550	M:84.6(115)/2550	M:125(170)/2550	M:188(255)/2550
		L:62.5(85)/2600	L:95.6(130)/2600	L:140(190)/2600	L:206(280)/2600
Emission		N/A	N/A	N/A	IMO Tier2
Fuel consumption (Rating M)	gr/kW·hr	252 at rated output	242 at rated output	232 at rated output	223 at rated output
Direction of rotation		Counterclockwise viewed from stern (crankshaft)			
Combustion system		Direct injection			
Cooling system		With Heat exchanger			
Cooling fresh water capacity	lit.	16 +0.8L (Reservoir tank)	20 +0.8L (Reservoir tank)	24 +0.8L (Reservoir tank)	23 +0.8L (Reservoir tank)
Lubricating system		Forced lubrication with gear pump			
Lubricating oil capacity	lit.	15	18.5	18.5	23
Lubricating oil grade		SAE30 or SAE40 at ambient temperature above 30 or above			
Starting system		Electric starting motor (DC 24V-4kW)			
Flywheel housing size		SAE #3 and 11-1/2 in.			
Dry weight (without marine gear)	kg	500	630	675	720

Marine Gear Specifications

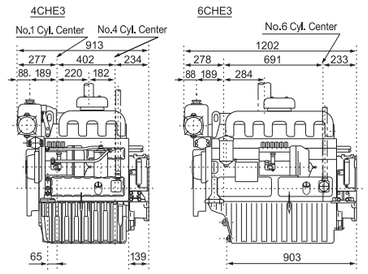
Engine Model	4CHE3		6CHE3		6CH-HTE3		6CH-WUTE	
Marine gear model	YX-30-2				YX-71			
Type	Hydraulic multi-disc clutch							
Reduction ratio	2.03	2.55	2.96	3.48	2.07	2.58	2.91	3.53
Direction of rotation	Clockwise or counter-clockwise viewed from stern							
Dry weight kg	70				220			

Dimensions (Unit : mm)

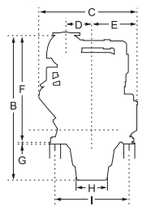
Engine only / Front view



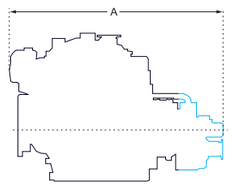
Engine only / Left side view



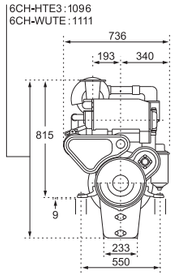
With gearbox / Rear view



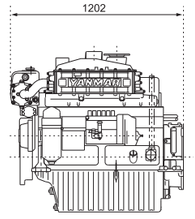
With gearbox / Left side view



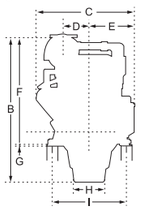
Engine only / Front view



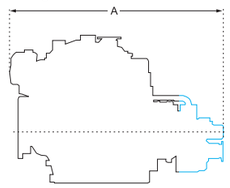
Engine only / Left side view



With gearbox / Front view



With gearbox / Left side view



Model	A	B	C	D	E	F	G	H	I
4CHE3 × YX-30-2	1258	1022	688	232	292	735	9	232	510
6CHE3 × YX-30-2	1496	1018	690	233	300	737	9	233	550
6CH-HTE3 × YX-71	1600	1096	736	193	340	815	9	233	550
6CH-WUTE × YX-71	1600	1111	736	193	340	815	9	233	550

Rating definitions : hp=0.7355kW Ratings are based on conditions of 100kPa, 30% relative humidity at 25˚C.
L=For applications where use of rated power is less than 2 hours continuous out of every 5 hours and operation is less than 2000 hours per year. When combined with a correctly matched propeller which allows the engine rated speed to be achieved in a fully loaded vessel state, the reduced-power operation can be at or below 50 min^{-1} of the rated speed.
M=For applications where use of rated power is less than 10 hours continuous out of every 16 hours and operation is less than 3000 hours per year. When combined with a correctly matched propeller which allows the engine rated speed to be achieved in a fully loaded vessel state, the reduced-power operation can be at or below 50 rpm of the rated speed.
Fuel rates : Specific gravity 0.835g/cc, low calorific value 42700kj/kg(10200kcal/kg), Cetane No.45.

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Note : All Data Subject to Change Without Notice.
Please contact Yanmar or local distributor for the details of each model.

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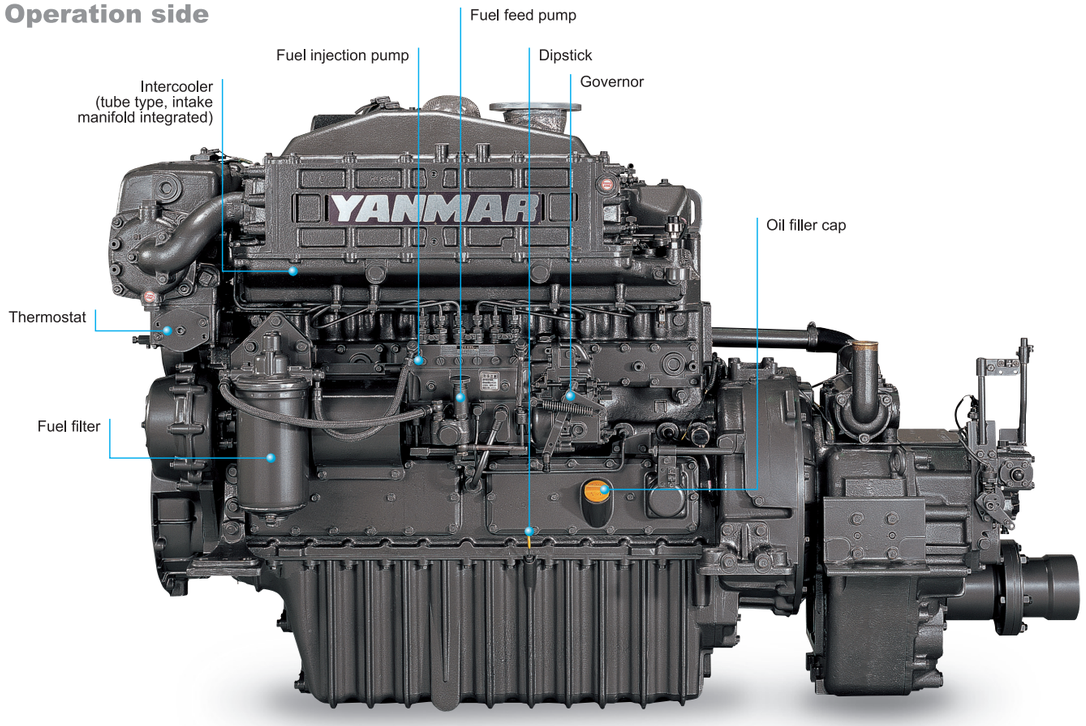
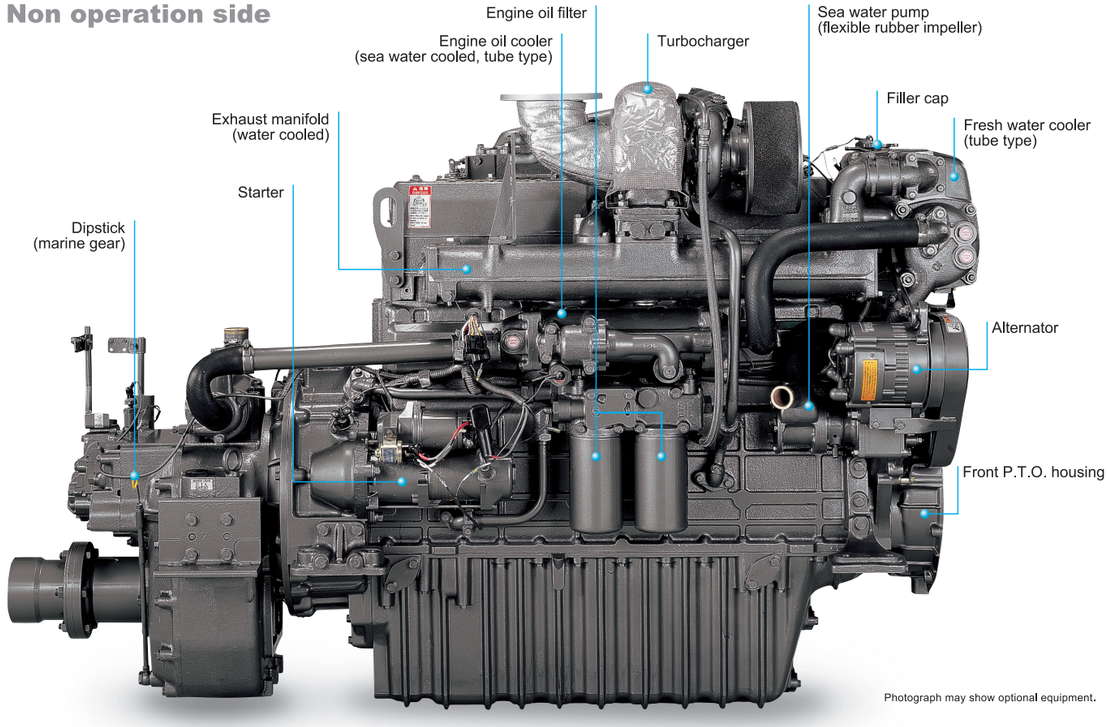
YANMAR, Providing Quality Propulsion Engine Packages for Over 60 Years.

Operation side



Non operation side



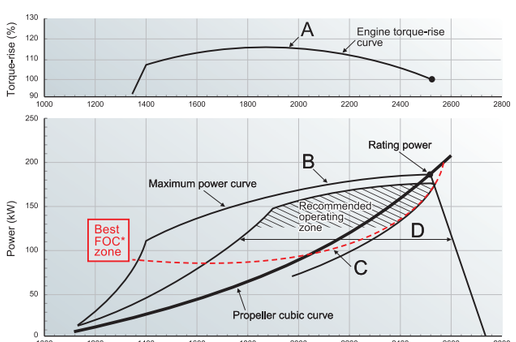
Photograph may show optional equipment.

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:

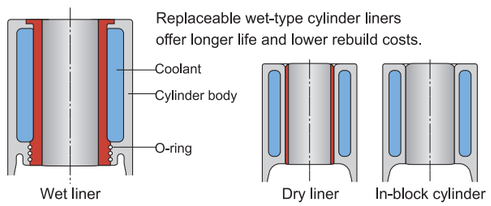
1. The engine torque-rise characteristics having much in reserve, (Line A)
   →Stable cruising with least speed reduction against sudden load changes.
2. Wide Max. Power Range, (Line B)
   →A wide range propeller matching, from the passenger ship (light/medium duty) to tug boat (heavy duty), is possible.
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 indicates in case of 6CH-WUTE (M-Rating)

Toughness

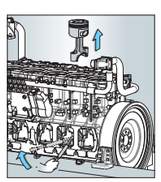
Replaceable wet-type cylinder liners offer longer life and lower rebuild costs.



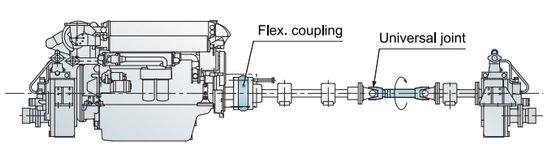
Lower Down Time

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.



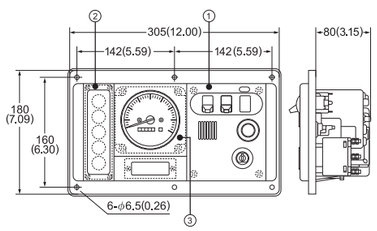
High capacity front PTO



Contact your local Yanmar distributor for further information.

Instrument panel contains following items [standard] (Unit : mm)

☐ New B-type For 4CHE3

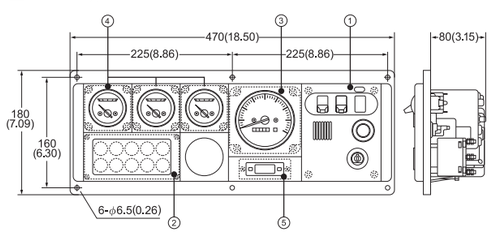


① **Switch unit**
- Key switch
- Alarm buzzer
- Alarm buzzer stop switch
- Illumination switch

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

③ **Tachometer unit**
- Tachometer with hour meter

☐ New D-type For 6CHE3/6CH-HTE3/6CH-WUTE



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 (Except 6CHE3)

⑤ **Clock unit**
- Clock

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.

Cast Iron Gear Case

For heavy duty applications.

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 flange) supplied as standard.