

# YANMAR DIESEL ENGINE For Marine Use

## MODEL YSB LOW PROFILE series 5~12 HP

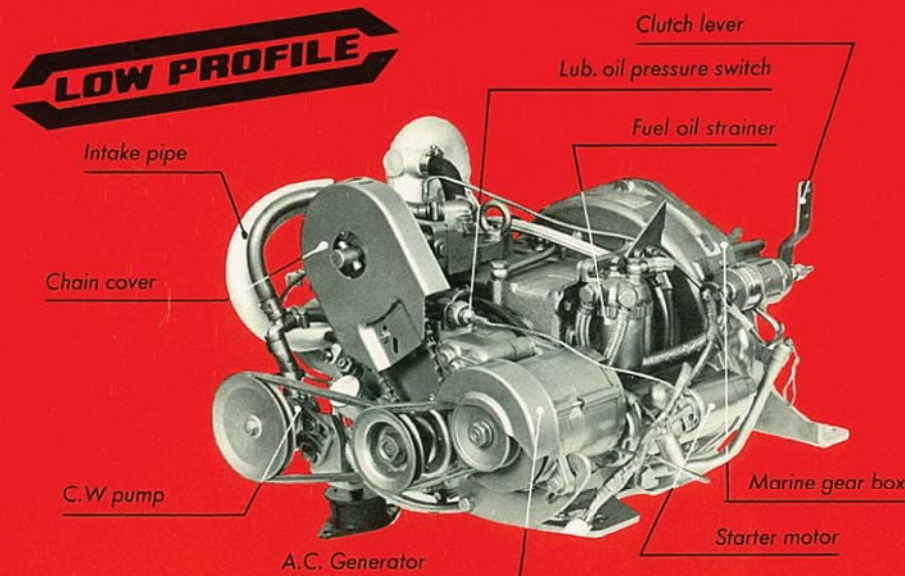
If you like yachting you'll love the new YSB series low profile diesels. The height of each model has been reduced over 20% (measuring from installation plate to starting handle shaft).

Every square inch of space saved can be put to good use. There's more space to move around. Less bruised knuckles. Engine adjustment and maintenance are easier. And if you need more engine power than you now have, but don't have the space,

our new series may be the perfect solution.

Designed for main propulsion use, YSB low profile diesels range from 5 to 12HP. They have a deserved reputation for rugged dependability, quiet running and easy operation. And fuel consumption is both economical and clean.

Compare YSB low profile models with your present engine. See for yourself how much extra space and/or power you can gain.



### SPECIFICATIONS

Photograph may show optional equipment.

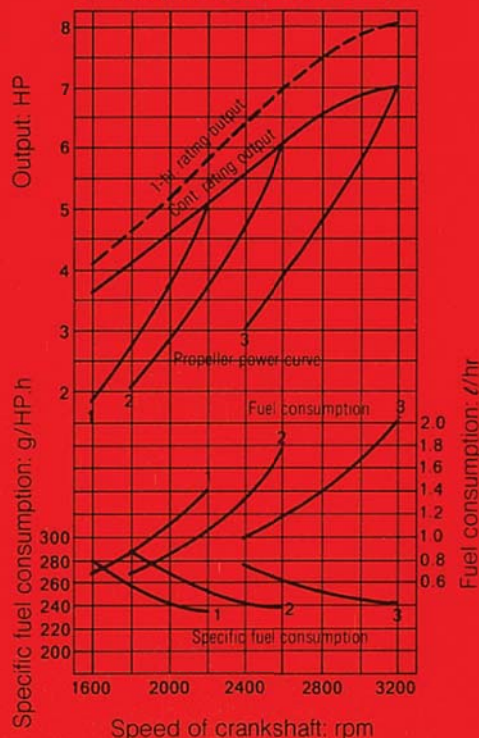
Model		YSB8/YSB8G			YSB12/YSB12G				
Type		4-cycle horizontal diesel engine							
Number of cylinders		1							
Bore × stroke		mm		75 × 75		85 × 90			
Displacement		ℓ		0.331		0.510			
Continuous rating output		HP/rpm		5/2200	6/2600	7/3200	8/2200	9/2600	10/3000
1-hr. rating output		HP/rpm		—	—	8/3200	—	—	12/3000
Reduction ratio (forward)		2/3				2/3			
Propeller shaft rpm (cont. rating)		1127/751	1332/888	1639/1093	1113/718	1316/849	1518/980		
Direction of rotation	Crankshaft	Counter-clockwise, viewed from stern side							
	Propeller shaft	Counter-clockwise, viewed from stern side							
Compression ratio		23.1				20.9			
Combustion system		Special swirl pre-combustion chamber							
Lubrication system		Enclosed full pressure lubrication with trochoid pump							
Cooling system		Water cooling with rotary pump							
Starting system		Electric with manual combination							
Gear system		Reduction & reversing gear with single disc plate mechanical clutch (wet type)							
Dry weight		104 (229)				134 (295)			

Remark: Above mentioned HP indicates shaft horse power.

### PERFORMANCE CURVES

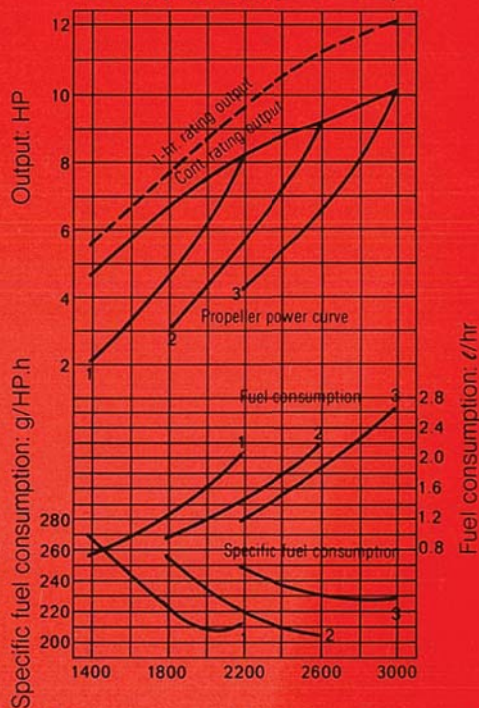
#### Model YSB8

1 = 2200rpm/2 = 2600rpm/3 = 3200rpm



#### Model YSB12

1 = 2200rpm/2 = 2600rpm/3 = 3000rpm



Note: These curves show the average performance of respective engines in test operation at our plant.

## DESIGN FEATURES

### Cylinder block

Cast iron, incorporated water jacket, crankcase and oil pan in one block. Lower profile horizontal cylinder design permits under-floor installation & lower center of gravity.

### Cylinder liner

Special cast iron, wet type for high abrasion resistance.

### Cylinder head

Cast iron, intake and exhaust valves are made of heat resistant steel.

### Combustion chamber

Swirl precombustion chamber for sure starting and better fuel economy.

## Crankshaft

Carbon steel, forge-molded construction. Pin and journal parts are induction hardened and grounded.

### Main bearing

Kelmet metal.

## Piston

Aluminum alloy, oval construction.

### Connecting rod

Carbon steel.

## Fuel system

Deckel type injection pump, pintle type injection valve and paper filter fuel strainer are used.

## Lubricating system

Complete forced lubrication by trochoid pump and full-flow type auto-clean lub. oil strainer for excellent durability.

## Cooling system

Direct sea-water cooling by rubber rotary pump. (V-belt driven); No need extra water to carry on board.

## Gear system

Constant mesh type reduction and reversing gear with wet single disc plate mechanical clutch connected to the fly-wheel directly. Output shaft (propeller driveshaft) designed below crankshaft permits optimum shaft angle for maximum efficiency.

### Governor system

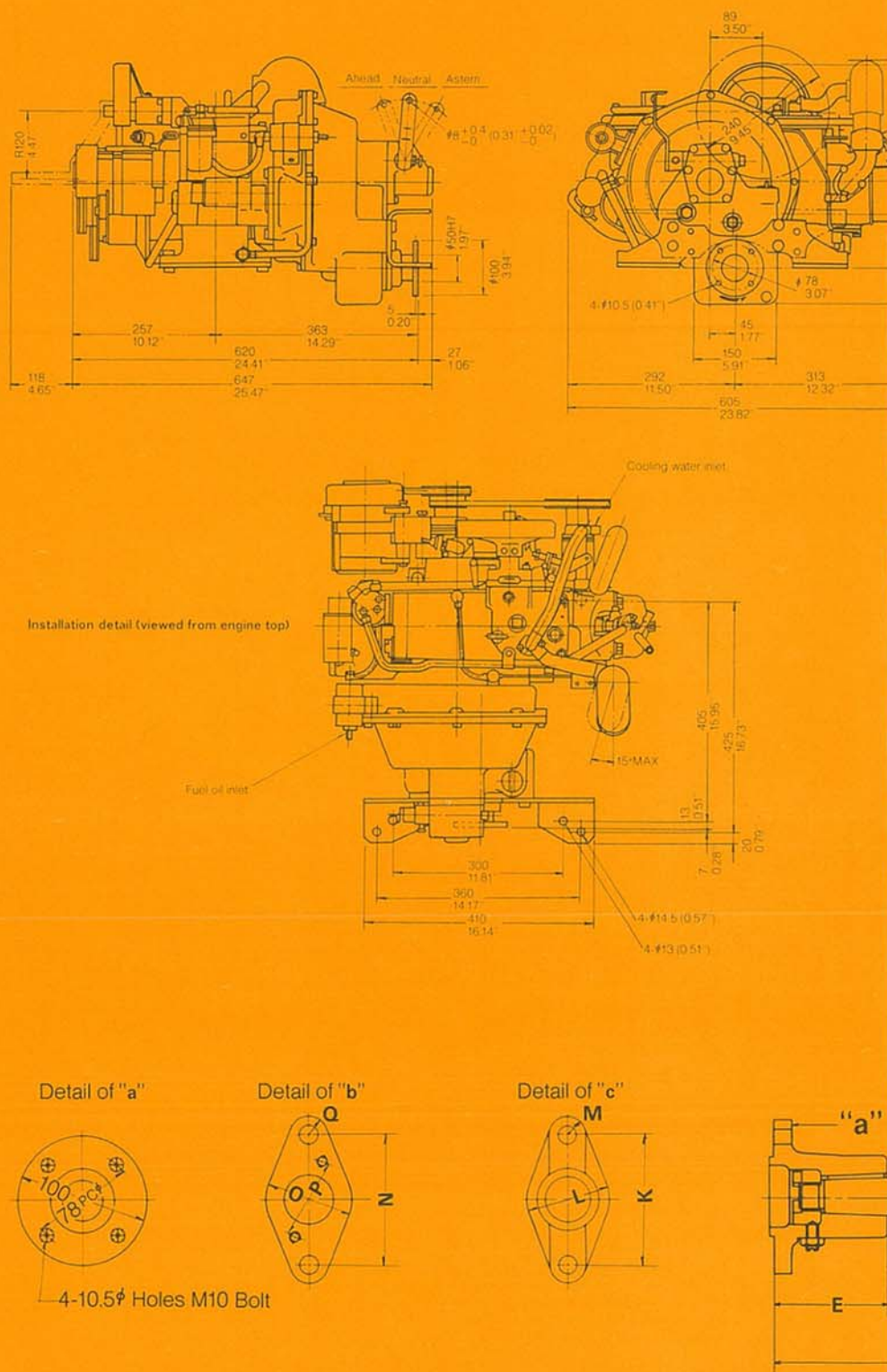
Centrifugal all-speed governor.

## Starting system

Electric with manual combination starting is available.

Unit:mm &amp; inch

**YSB8/YSB8G**





	Propeller shaft rpm	Propeller	
		Dia. (in)	Pitch (in)
YSB8	1127	14	9
	1332	13	8-1/2
	1639	12	7-1/2
YSB8G	751	18	12
	888	16-1/2	11
	1093	15	10
YSB12	1113	15	10
	1316	14	9
	1518	13	8-1/2
YSB12G	718	19	15
	849	18	13
	980	17	12

MODEL	Dia.	Length	A	B	C	D	E	F	G	H	I	J	K	L	M-Q	N	O	P
YSB8	22	1800	32	52	65	57	54	88	35	46	35	46	90	60	2-14 <sup>ø</sup> Holes, 1/2" Coach screw	90	60	54
YSB8G YSB12	25	2000	32	52	75	76	73	100	38	50	38	50	100	65	2-14 <sup>ø</sup> Holes, 1/2" Coach screw	100	65	62
YSB12G	28	2400	40	60	80	75	73	110	41	56	41	56	110	75	2-18 <sup>ø</sup> Holes, 5/8" Coach screw	110	75	70

**Note:** Standard propeller is of integrated 3-blade type, manganese bronze, with an area ratio of 0.36.

## ACCESSORIES

● Mark... Standard    ◆ Mark... Optional

	Name of Accessories	
Fuel	Fuel oil lift pump (electric drive)	●
	Fuel oil strainer (separate type)	●
Cooling water	Kingston cock with cooling waterhose (2m)	◆
	Thermostat for cooling water	●
Bilge	Bilge pump (mechanical type)	◆
Starting & operation	Electric starting device (Starting motor, A.C. Generator with regulator, L.O. & C.W. warning lamps, Starter switch, L.O. pressure switch, Wireharness, Dash board)	●
	Wireharness extension (3m) for remote control	◆
	Warning buzzer for L.O. Pressure, C.W. Temperature and Battery charger	◆
	Bracket for clutch remote control	●
	Hand starting device with chain cover	●
Exhaust	Water mixing elbow	●
Others	Flexible coupling & mounting	◆
	Spare parts kit	◆
	Packings kit	◆
	Propeller shaft half coupling (solid type)	◆
	Propeller shaft half coupling (slit type)	◆
	Keel type stern arrangement	◆
	Propeller (3-blade)	◆
	Special tools	◆
	Tools	●

## EXPORT SHIPMENT

Model	No. of Packing	m <sup>3</sup>	Gross weight kg (Approx)
YSB8 · YSB8G	1	0.42 (14.7 CFT)	149 (328 lbs)
YSB12 · YSB12	1	0.57 (20.1 CFT)	209 (460 lbs)

Note: All data subject to alteration without notice.



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