

Yanmar type 4LHA-HTP

The Powerful Gem

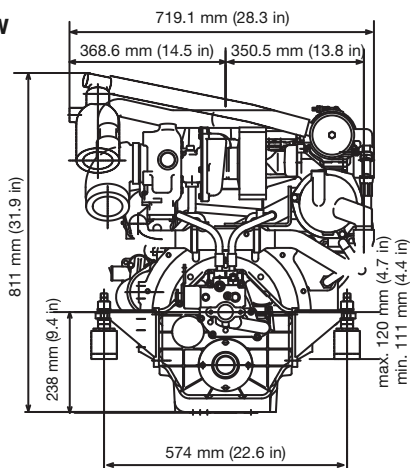


Configuration	4-stroke, vertical, water cooled diesel engine
Maximum output at crankshaft	* 118 kW (160 hp) / 3300 rpm ** 113 kW (154 hp) / 3300 rpm
Continuous rating output at crankshaft	91 kW (124 hp) / 3100 rpm
Displacement	3.455 L (211 cu in)
Bore x stroke	100 mm x 110 mm (3.94 in x 4.33 in)
Cylinders	4 in line
Combustion system	Direct injection
Aspiration	Turbocharged with intercooler
Starting system	Electrical starting 12 V - 2.5 kW
Alternator	12 V - 60 A (80 A optional)
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
Lubrication system	Enclosed, forced lubricating system
Direction of rotation (crankshaft)	Counter clockwise viewed from stern
Dry weight without gear	360 kg (794 lbs)
Environmental	BSO II, SAV, EMC compliant and will meet the 2003/44/EC emission requirements effective from 2006
Engine mounting	Rubber type flexible mounting

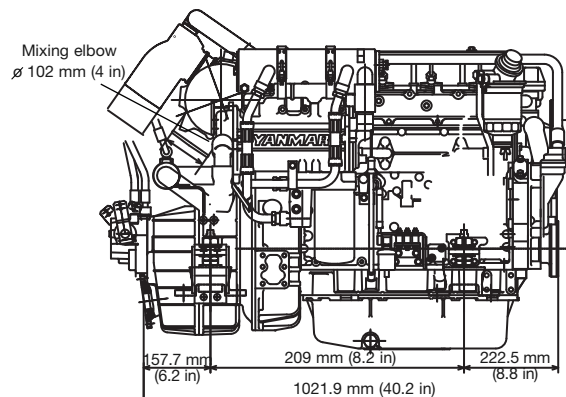
NOTE: Fuel condition: Density at 15°C = 0.860 g/cm³; 1 hp = 0.7355 kW
 * Fuel temperature 25°C at the inlet of the fuel injection pump (ISO 3046-1)
 ** Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)

Dimensions (For detailed line-drawings, please refer to our web-site: www.yanmarmarine.com)

Rear view

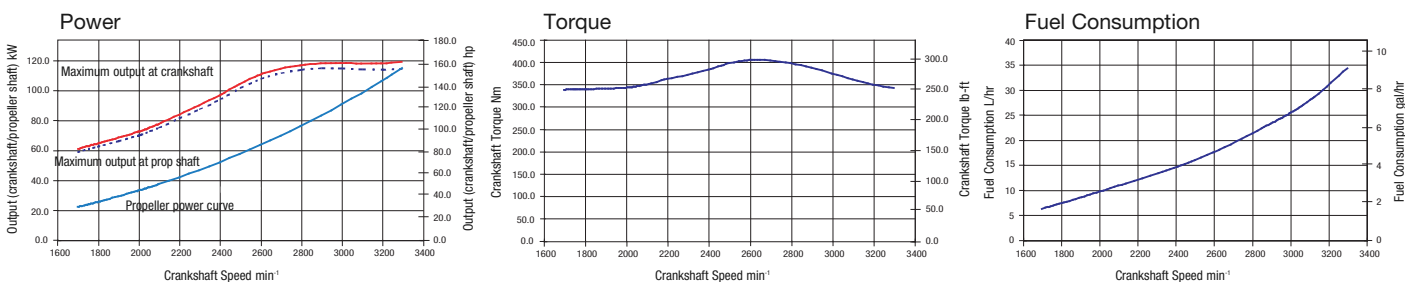


Right side view



4LHA-HTP w/ ZF45 marine gear

Performance Curves (Output is according ISO 8665 - Output includes +/- 3% tolerance)



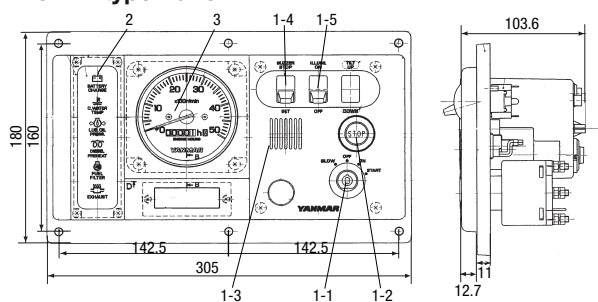
Marine Gears ***

Model	ZF45			
Type	8° down hydraulic			
Dry weight	28 kg (62 lbs)			
Reduction ratio (fwd/asn)	1.26/1.26	1.51/1.51	2.03/2.03	2.43/2.43
Propeller speed (fwd/asn)	2619/2619	2185/2185	1625/1625	1358/1358
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from stern			
Dry weight engine and gear/drive	398 kg (877 lbs)			
Length engine and gear/drive	1099 mm (43 in)			

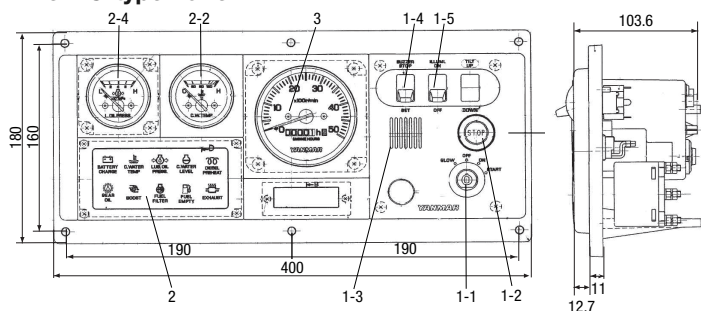
*** Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

Instrument Panels

New B-type Panel



New C-type Panel



Function	Type of instrument panel	
	New B-type Panel	New C-type Panel
① Switch unit		
1-1 Key switch for GLOW/OFF/ON/START (4-position switch)	O	O
1-2 Engine stop switch	O	O
1-3 Alarm buzzer (C.W. Temp., L.O. Pressure)	O	O
1-4 Alarm buzzer stop switch	O	O
1-5 Illumination switch for meters	O	O
② Alarm lamp unit		
Battery not charging	O	O
C.W. high temperature	O	O
L.O. low pressure	O	O
Boost pressure high (for 4LHA-STP)	O	O
③ Tachometer with hour meter	O	O
④ Sub meter unit	O	O
4-1 L.O. pressure meter	X	O
4-2 C.W. Temperature meter	X	O
4-3 Boost meter (turbo)	X	X
⑤ Quartz clock	X	X

Note: O = Equipped on panel X = Not equipped on panel

Accessories

Standard Package

- Sensor for various panels
- Exhaust/water mixing elbow (L-type)
- Cooling water hoses
- Alternator 12 V - 60 A

Optional

- Flexible mounts
- Fuel water separator
- Exhaust/water mixing elbow, U-type (high riser)
- Analog and digital (New B-type, New C-type and New D-type) instrument panels
- Dual station Y harness
- Sensor for VDO instrument panels
- Control heads
- Lub oil evacuation pump
- Dipstick for opposite side
- Air venting device for cooling water tank
- 12V - 80 A alternator (instead of 60 A)

Texts and illustrations are not binding. Yanmar Marine reserves the right to introduce adaptations without prior notification.