

# Yanmar type 4LHA-STP

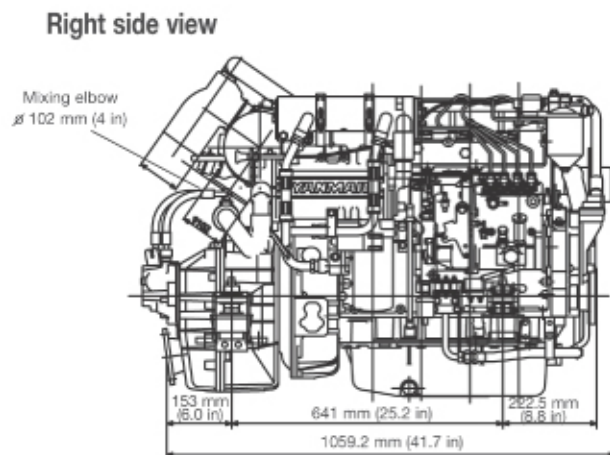
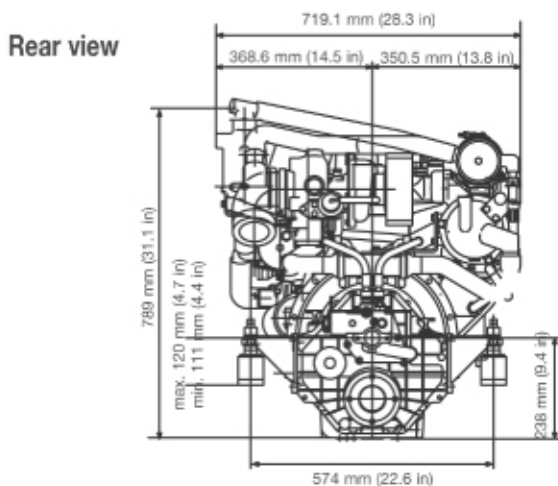
## The Powerful Gem



<b>Configuration</b>	4-stroke, vertical, water cooled diesel engine
<b>Maximum output at crankshaft</b>	* 177 kW (240 hp) / 3300 rpm ** 169 kW (230 hp) / 3300 rpm
<b>Continuous rating output at crankshaft</b>	140 kW (190 hp) / 3100 rpm
<b>Displacement</b>	3.455 L (211 cu in)
<b>Bore x stroke</b>	100 mm x 110 mm (3.94 in x 4.33 in)
<b>Cylinders</b>	4 in line
<b>Combustion system</b>	Direct injection
<b>Aspiration</b>	Turbocharged with intercooler
<b>Starting system</b>	Electrical starting 12 V - 2.5 kW
<b>Alternator</b>	12 V - 60 A (80 A optional)
<b>Cooling system</b>	Fresh water cooling by centrifugal fresh water pump and rubber impeller seawater pump
<b>Lubrication system</b>	Enclosed, forced lubricating system
<b>Direction of rotation (crankshaft)</b>	Counter clockwise viewed from stern
<b>Dry weight without gear</b>	365 kg (805 lbs)
<b>Environmental</b>	BSO II, SAV, EMC compliant and will meet the 2003/44/EC emission requirements effective from 2006
<b>Engine mounting</b>	Rubber type flexible mounting

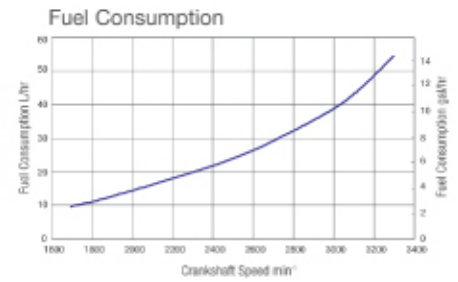
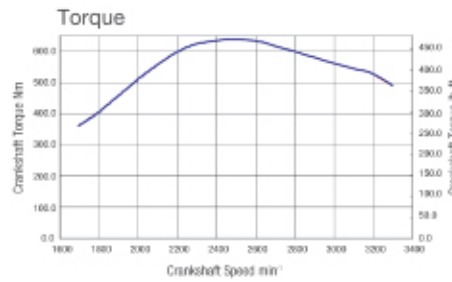
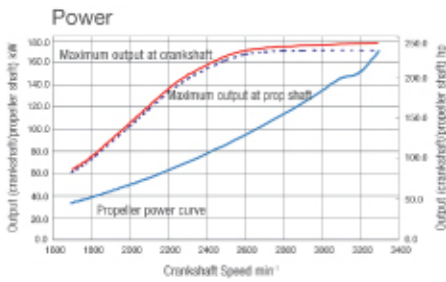
NOTE: Fuel condition: Density at 15°C = 0.860 g/cm<sup>3</sup>; 1 hp = 0.7355 kW  
 \* Fuel temperature 25°C at the inlet of the fuel injection pump (ISO 3046-1)  
 \*\* Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)

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



4LHA-STP w/ ZF63 marine gear

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



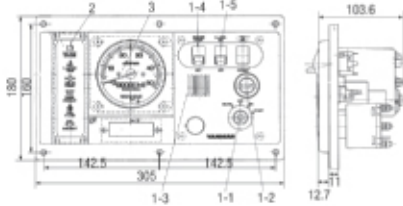
## Marine Gears \*\*\*

Model	ZF63A1			
Type	8° down angle hydraulic			
Dry weight	44 kg (97 lbs)			
Reduction ratio (fwd/asn)	1.22/1.21	1.56/1.58	2.04/2.10	2.52/2.53
Propeller speed (fwd/asn)	2541/2562	1987/1962	1520/1476	1230/1225
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from stern			
Dry weight engine and gear/drive	409 kg (902 lbs)			
Length engine and gear/drive	1001 mm (39 in)			

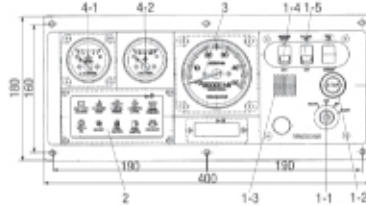
\*\*\* Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

## Instrument Panels

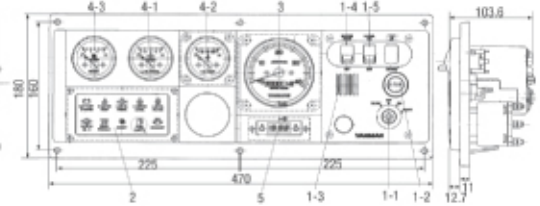
### New B-type Panel



### New C-type Panel



### New D-type Panel



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

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)

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