

Yanmar type 4LHA-DTP

The Powerful Gem

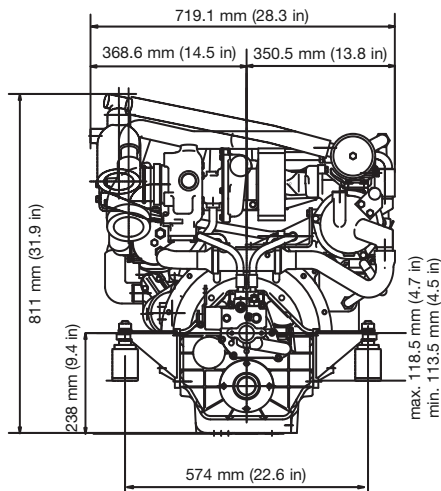


| | |
|---|---|
| Configuration | 4-stroke, vertical, water cooled diesel engine |
| Maximum output at crankshaft | * 147 kW (200 hp) / 3300 rpm ** 140 kW (190 hp) / 3300 rpm |
| Continuous rating output at crankshaft | 116 kW (158 hp) / 3100 rpm |
| Displacement | 3.455 L (211 cu in) |
| Bore x stroke | 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 | 365 kg (805 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 |

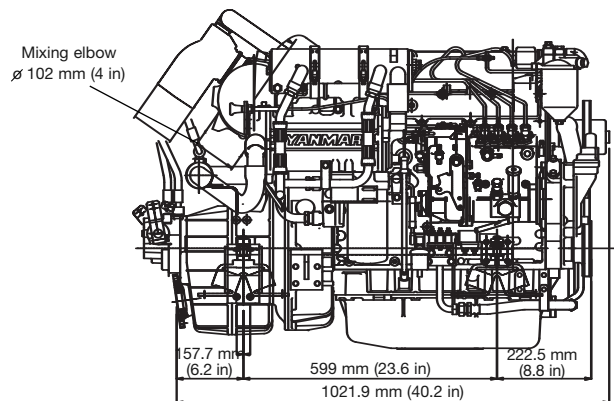
NOTE: Fuel condition: Density at 15°C = 0.860 g/cm³; 1 hp = 0.7355 kW
 * Fuel temperature 25°C at the inlet of the fuel injection pump (ISO 3046-1)
 ** Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)

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

Rear view

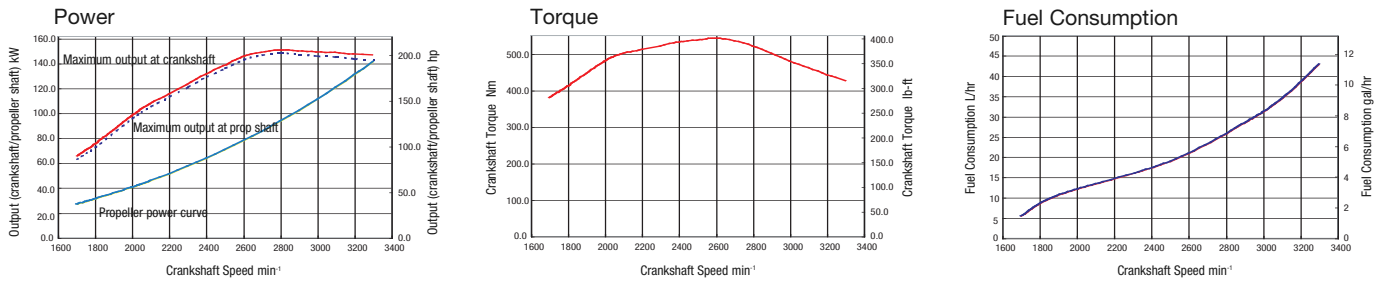


Right side view



4LHA-DTP w/ ZF45 marine gear

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



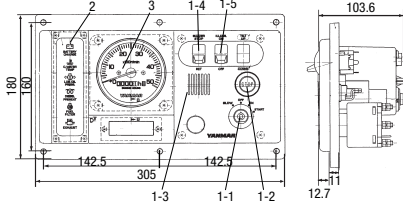
Marine Gears ***

| | | | | |
|---|---|-----------|-----------|-----------|
| Model | ZF45 | | | |
| Type | 8° down hydraulic | | | |
| Dry weight | 28 kg (62 lbs) | | | |
| Reduction ratio (fwd/asn) | 1.26/1.26 | 1.51/1.51 | 3.22/3.06 | 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) | | | |

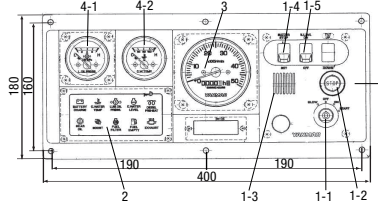
*** Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.

Instrument Panels

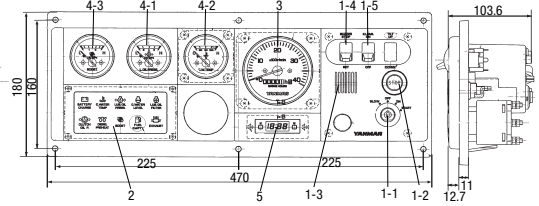
New B-type Panel



New C-type Panel



New D-type Panel



| Function | Type of instrument panel | | |
|--|--------------------------|------------------|------------------|
| | New B-type Panel | New C-type Panel | New D-type Panel |
| ① Switch unit | | | |
| 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 |
| ② Alarm lamp unit | | | |
| 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 |
| ③ Tachometer with hour meter | O | O | O |
| ④ Sub meter unit | | | |
| 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 |
| ⑤ Quartz clock | 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)

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