



4LHA-DTP Series

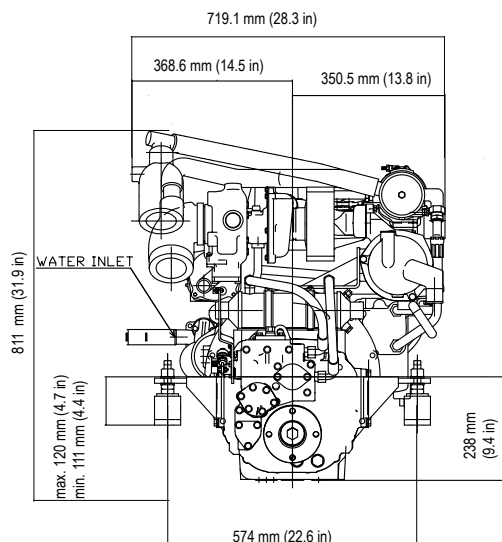
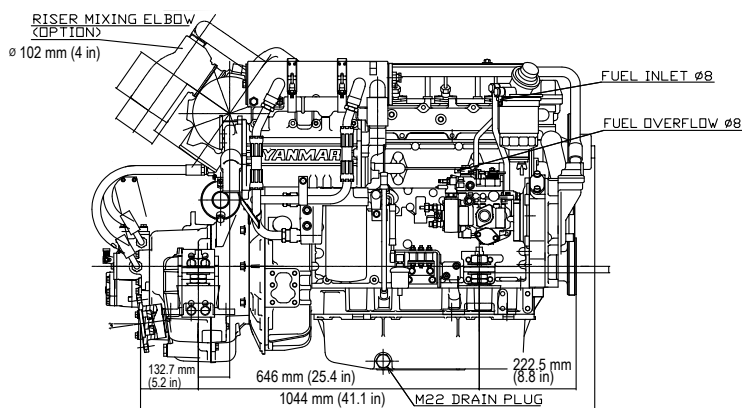
Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 147 kW@3300 rpm	[200 mhp@3300 rpm]	
	** 140 kW@3300 rpm	[190 mhp@3300 rpm]	
Displacement	3.455 L	[211 cu in]	
Bore x stroke	100 mm x 110 mm	[3.94 in x 4.33 in]	
Cylinders	In-line		
Combustion system	Direct injection		
Aspiration	Turbocharged with intercooler		
Starting system	Electrical starting 12V		
Alternator	12V - 80A		
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]	Counterclockwise viewed from stern		
Dry weight without gear	365 kg	[805 lbs]	
Emission compliance	EU: RCD 1	BSO II	EMC
	SOLAS MED 96/98/EC		
Engine mounting	Rubber type flexible mounting		

NOTE:Fuel condition: Density at 15°C = 0.842 g/cm³; 1 mhp = 1 ps = 0.7355 kW = 0.9863 bhp

* 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: 2006]

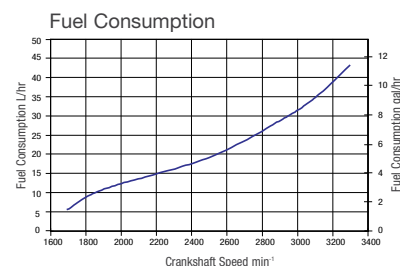
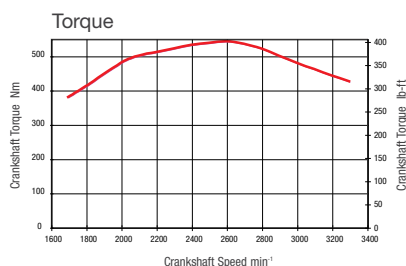
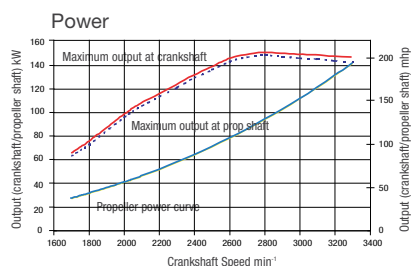
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS**Rear view****Right side view**

4LHA-DTP with KMH50A marine gear



PERFORMANCE CURVES (Output is according ISO 8665 - Output includes +/- 3% tolerance)



MARINE GEARS / DRIVE*

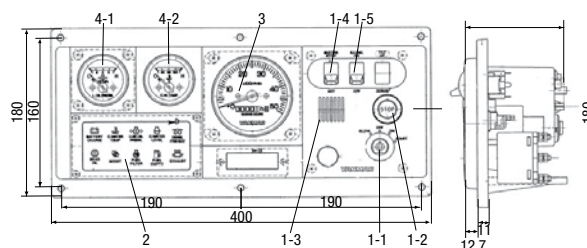
Model	KMH50A [down angle 8°]			ZF63A [down angle 8°]				
Type	Hydraulically actuated multi-disc clutch			Hydraulically actuated multi-disc clutch				
Dry weight**	57,6 kg [127 lbs]			44 kg [96,8 lbs]				
Reduction Ratio [fwd/rev]	1.67/1.67	2.13/2.13	2.43/2.43	1.22/1.22	1.56/1.58	2.04/2.02	2.52/2.54	2.68/2.71
Propeller speed [fwd/rev]	1976/1976	1549/1549	1358/1358	2714/2716	2111/2085	1620/1636	1308/1301	1230/1218
Direction of rotation (viewed from stern)	Clockwise & Counterclockwise			Clockwise & Counterclockwise				
Dry weight engine and gear/drive**	422,5 kg [931 lbs]			409 kg [902 lbs]				

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

** Dry weight includes cooler, brackets and damper disk.

INSTRUMENT PANELS

New C-type Panel



TYPE OF INSTRUMENT PANEL

NEW C-TYPE PANEL

Function

1-Switch unit

- 1-1 Key switch for GLOW/OFF/ON/START [4-position switch]
- 1-2 Engine stop switch
- 1-3 Alarm buzzer [C.W. Temp., L.O. Pressure]
- 1-4 Alarm buzzer stop switch
- 1-5 Illumination switch for meters

Equipped on panel
Equipped on panel
Equipped on panel
Equipped on panel
Equipped on panel

2-Alarm lamp unit

- Battery not charging
- C.W. high temperature
- L.O. low pressure
- Boost pressure high [for 4LHA-STP]

Equipped on panel
Equipped on panel
Equipped on panel
Equipped on panel

3-Tachometer with hour meter

Equipped on panel

4-Sub meter unit

Equipped on panel

- 4-1 L.O. pressure meter
- 4-2 C.W. Temperature meter
- 4-3 Boost meter [turbo]

Equipped on panel
Equipped on panel
Not equipped on panel

5-Quartz clock

Not equipped on panel

ACCESSORIES

Standard Package

- Sensor for various panels
- Exhaust/water mixing elbow [L-type]
- Alternator 12V - 80A

Optional

- Flexible mounts
- High-riser/water mixing elbow [instead of L-elbow]
- New C-type instrument panel
- Dual station Y harness
- Dipstick for opposite side
- Air venting device for cooling water tank

NOTE: All data subject to change without notice. Text and illustrations are not binding.