

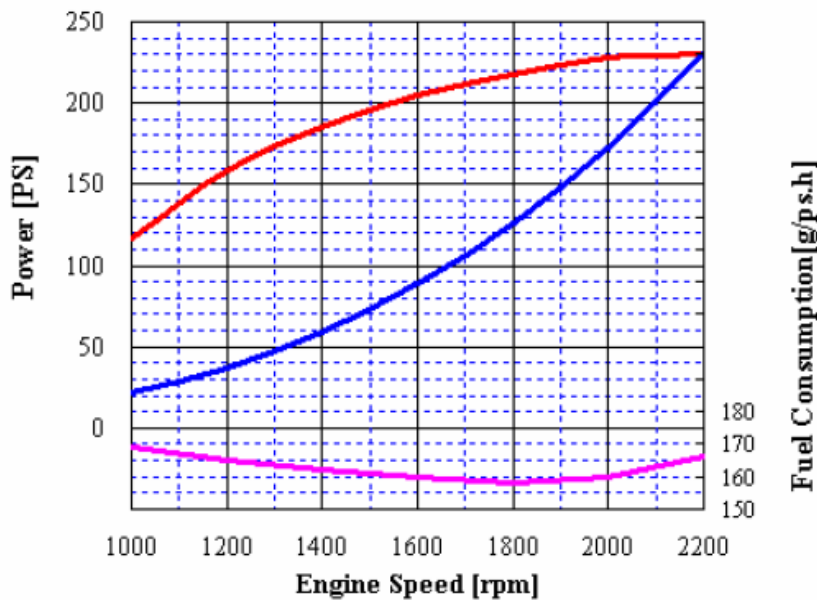
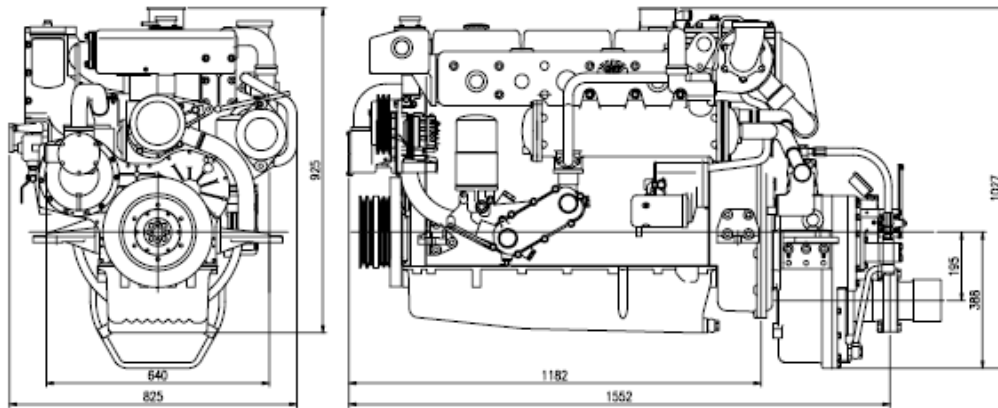
L136TI MARINE ENGINE

POWER RATING

Production tolerance : $\pm 3\%$

MODEL	CONDITIONS	POWER	rpm	Base Engine
L136TI	HEAVY DUTY	230PS (169kW)	2200	D1146TI

Note : 1) No reduction in rating for intake air temperature is up to 45 °C (318K) and sea water temperature is up to 32 °C (305K) , relative humidity is up to 60 % all data are based on operation to ISO 3046.



- **Heavy Duty :** Operation hours are unlimited per year, at average load is up to 90%,
 At full load is up to 80 %
 Typical gearbox ratio: 2.5 ~ 6
 (Fishing trawler, Tug boat, Pushing vessel, Cargo boat, Freighter, Ferry)

Engine Specification			
Model		Units	L136TI
Engine type			4 cycle, In line, direct- injection, water cooled with turbo – inter cooler
Rating output (B.H.P)		PS(kW)/rpm	230(169)/2200
Displacement		cc	8,071
Cylinder number - bore(ϕ) x stroke		mm	6 - ϕ 111 x 139
Valve clearance at cold	In / Ex	mm	0.3 / 0.3
Low idling rpm		rpm	725 \pm 25
No load max. rpm		rpm	below 2,400
Mean effective pressure		kg/cm ²	11.66
Mean piston speed		m/sec.	10.19
Compression ratio			16.7 : 1
Firing order			1 – 5 – 3 – 6 – 2 – 4
Compression pressure	at 200 rpm	kg/cm ²	28 (Initial Condition)
Governor type of injection pump			Mechanical all speed (R.S.V)
Fuel consumption		g/ps.h	162
		lit / h	45
Injection timing (B.T.D.C)		deg	14° \pm 1°
Fuel inj. nozzle opening pressure		kg/cm ²	214 + 8
Starting system			Electric Starting by starter motor
Starter motor capacity		V- kW	24 - 4.5
Alternator capacity		V- A	24 - 50
Battery		V- Ah	24 - 100
Cooling system			Indirect sea water cooling with heat exchanger
Cooling water capacity	Max. / Min.	lit	27 / 25
Fresh water pump type			Centrifugal type, driven by V- belt
Sea water pump type			Rubber impeller type driven by gear
Lubricating Oil (Engine)	pan capacity	lit	Max : 23 , Min : 17 (Engine total : 25)
	pressure	kg/cm ²	Full : 3.5 , Idle : 1.2
Marine Gear	Model		DMT110A (Dong-I)
	Gear ratio		1.77 2.09 2.42 2.82 3.19
Direction of revolution	crankshaft		Counter clockwise viewed from stern side
	propeller		Clockwise viewed from stern side
Engine size (L x W x H)	without M/G	mm	1,182 x 825 x 925
	with M. gear	mm	1,552 x 825 x 1,027
Engine dry weight	without M/G	kg	773
	with M. gear	kg	994

psi = kg/cm² x 14.22
 lb/ft. = N.m x 0.737
 kW = 0.2388 kcal/s

lb= kg x 2.205
 lb/PS.h = g/kW.h x 0.00162
 cfm = m³/min x 35.3

hp = PS x 0.98635
 U.S gal. = liter x 0.264