

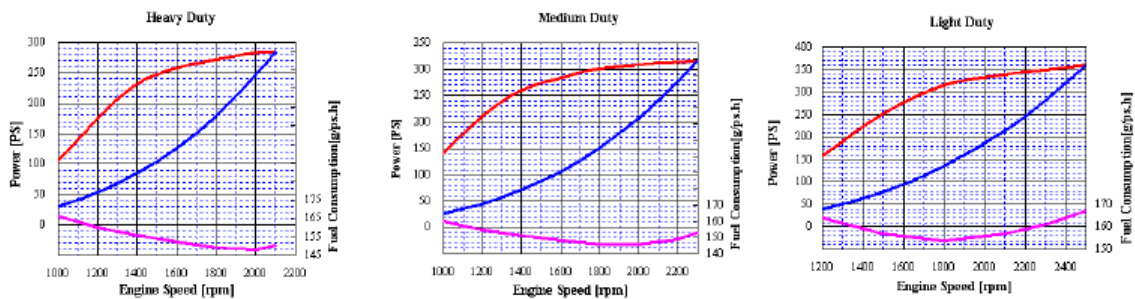
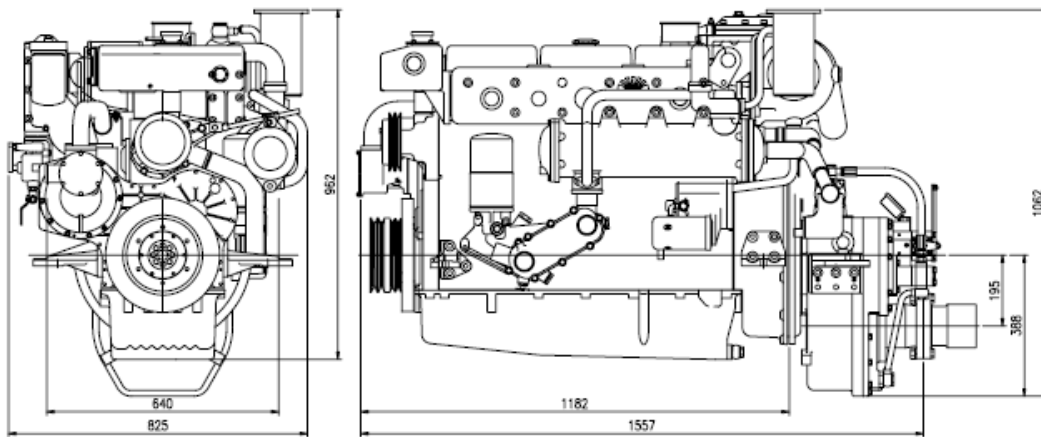
L086TI MARINE ENGINE

POWER RATING

Production tolerance : $\pm 3\%$

MODEL	CONDITIONS	POWER	rpm	Base Engine
L086TIH	HEAVY DUTY	285PS (210kW)	2,100	D1146TIB
L086TIM	MEDIUM DUTY	315PS (232kW)	2,300	
L086TIL	LIGHT DUTY	360PS (265kW)	2,500	

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)
- **Medium Duty :** Operation hours are up to 3,000 per year, at average load is up to 70 %
At full load is (up to 30 % / 4hrs per 12 hour operation period)
Typical gearbox ratio: 2 ~ 3.5
(Fishing boat, Pilot boat, Escort boat, Passenger boat, Ferry, Cruising vessel)
- **Light Duty :** Operation hours are up to 1,000 per year, at average load is up to 50 %
At full load is (up to 20 % / 2hrs per 12 hour operation period)
Typical gearbox ratio: 1 ~ 2.5
(Light weight fishing boat, Yacht, Coastguard boat, Fast boat, Fire pump)

Engine Specification					
Model		Units	L086TIH	L086TIM	L086TIL
Engine type			4 cycle, In line, direct- injection, water cooled with wet turbo charger & inter-cooler		
Rating output (B.H.P)		PS(kW)/rpm	285(210)/2,100	315(232)/2,300	360(265)/2,500
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	750 \pm 25		
No load max. rpm		rpm	below 2,310	below 2,530	below 2,750
Mean effective pressure		kg/cm ²	15.14	14.55	16.06
Mean piston speed		m/sec.	9.73	10.66	11.58
Compression ratio			16.7 : 1		15.3:1
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	152	163	167
		lit / h	52	62	72
Injection timing (B.T.D.C)		deg	15° \pm 1°	15° \pm 1°	15° \pm 1°
Fuel inj. Nozzle opening pressure		kg/cm ²	224		
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		
		pressure	kg/cm ²		
Marine gear		Model	DMT 110A (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		
		with M. gear	mm		
Engine dry weight		without M/G	kg		
		with M. gear	kg		

$$\text{psi} = \text{kg/cm}^2 \times 14.22$$

$$\text{lb/ft.} = \text{N.m} \times 0.737$$

$$\text{kW} = 0.2388 \text{ kcal/s}$$

$$\text{lb} = \text{kg} \times 2.205$$

$$\text{lb/PS.h} = \text{g/kW.h} \times 0.00162$$

$$\text{cfm} = \text{m}^3/\text{min} \times 35.3$$

$$\text{hp} = \text{PS} \times 0.98635$$

$$\text{U.S gal.} = \text{liter} \times 0.264$$