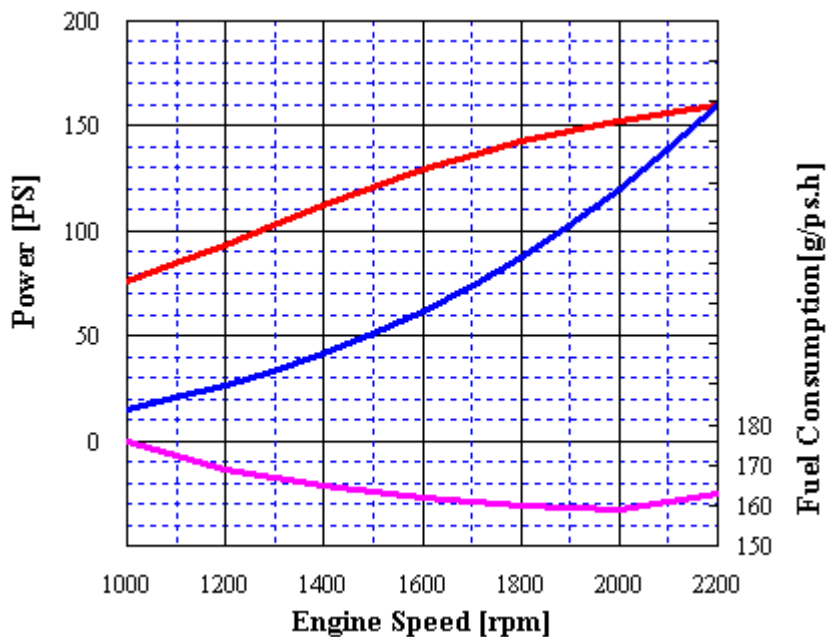
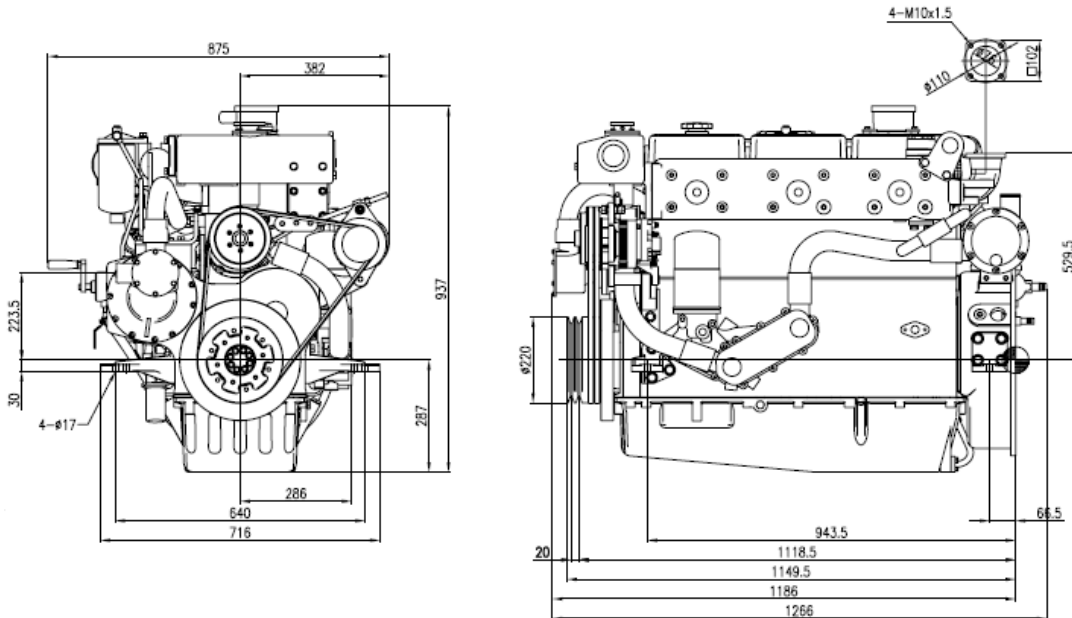


## POWER RATING

Production tolerance :  $\pm 3\%$

MODEL	CONDITIONS	POWER	rpm	Base Engine
L136	HEAVY DUTY	160PS (118kW)	2200	D1146

**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	L136
Engine type			4 cycle, In line, direct- injection, water cooled, aspirated naturally
Rating output (B.H.P)		PS(kW)/rpm	160(118)/2200
Displacement		cc	8,071
Cylinder number - bore(φ) x stroke		mm	6 - φ111 x 139
Valve clearance at cold	In / Ex	mm	0.3 / 0.3
Low idling rpm		rpm	725 ± 25
No load max. rpm		rpm	below 2,420
Mean effective pressure		kg/cm <sup>2</sup>	8.07
Mean piston speed		m/sec.	10.19
Compression ratio			17.6 : 1
Firing order			1 - 5 - 3 - 6 - 2 - 4
Compression pressure	at 200 rpm	kg/cm <sup>2</sup>	28 ( Initial Condition)
Governor type of injection pump			Mechanical all speed (R.S.V)
Fuel consumption		g/ps.h	165
		lit / h	32
Injection timing (B.T.D.C)		Deg	22° ± 1°
Fuel inj. nozzle opening pressure		kg/cm <sup>2</sup>	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	25 / 23
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 <sup>2</sup>
Marine gear		Model	DMT90AF (Dong-I)
		Gear ratio	1.61 2.06 2.45 2.82 3.12 3.46
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

psi = kg/cm<sup>2</sup> 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 = m<sup>3</sup>/min x 35.3

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

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※ Specifications are subject to change without prior notice.