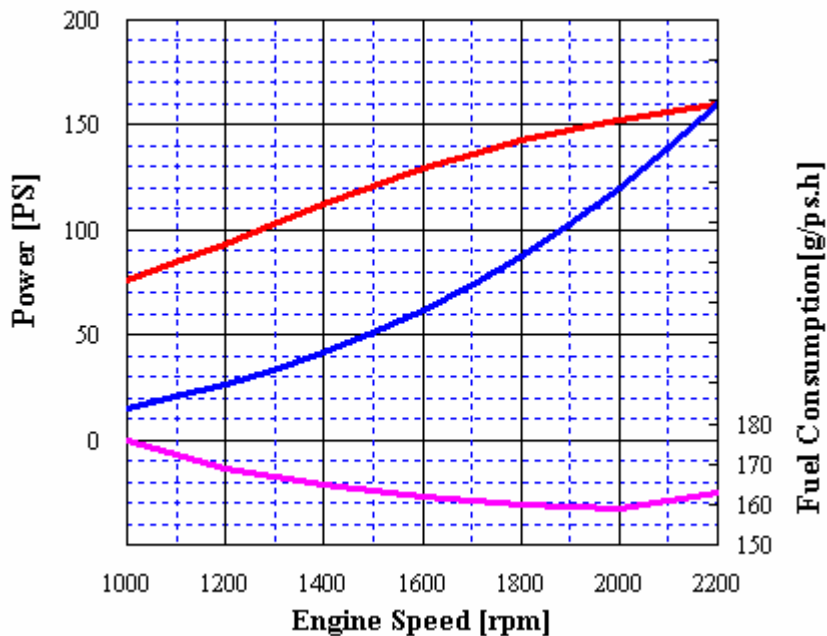
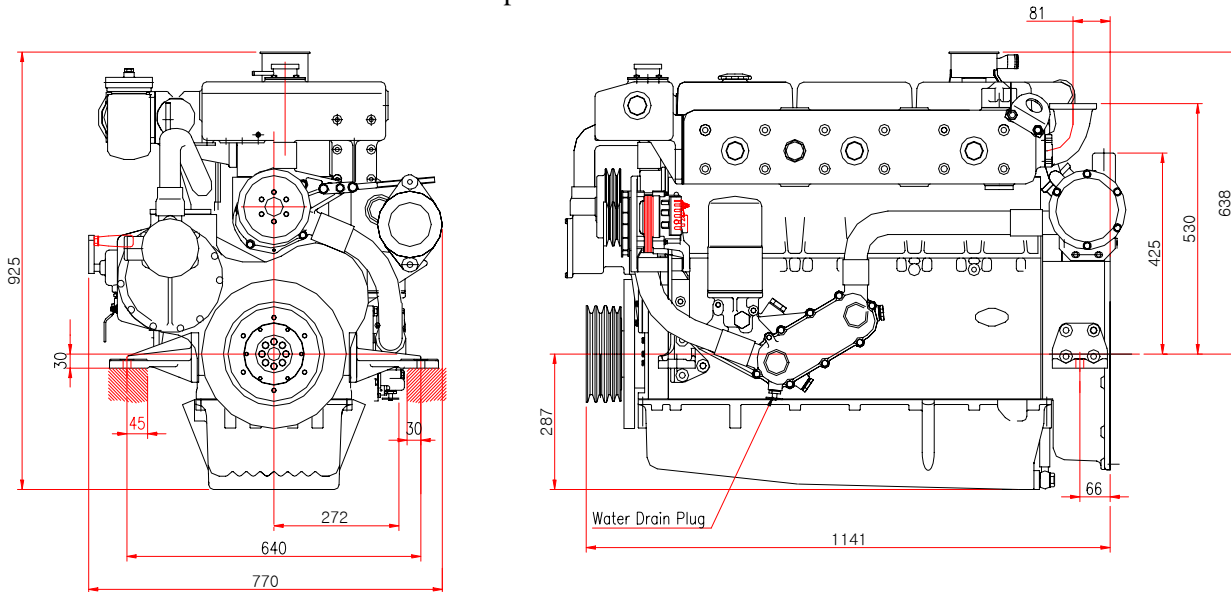


POWER RATING

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 ² | 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 ² | 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 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 | 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 | Max : 23 , Min : 17 (Engine total : 25) |
| | pressure | kg/cm ² | Full : 3.5 , Idle : 1.5 |
| 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 | 1,182 x 770 x 925 |
| | with M. gear | mm | 1,542 x 770 x 963 |
| Engine dry weight | without M/G | kg | 743 |
| | with M. gear | kg | 928 |

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

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※ Specifications are subject to change without prior notice.