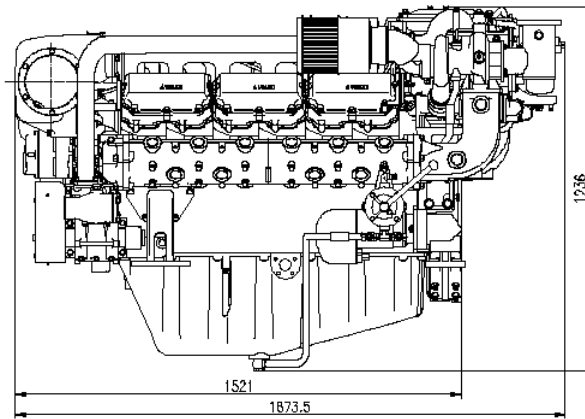
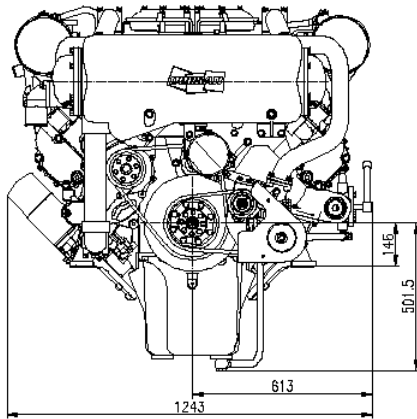


## POWER RATING

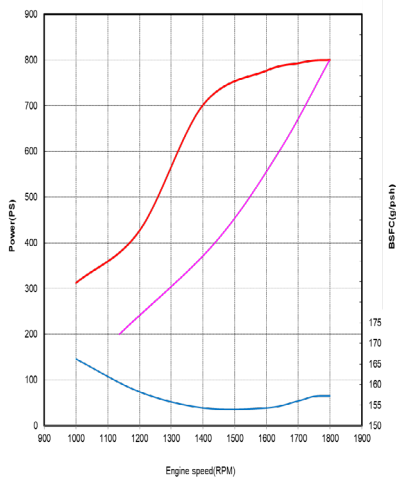
Production tolerance :  $\pm 3\%$

| MODEL    | CONDITIONS  | POWER           | rpm   | Base Engine |
|----------|-------------|-----------------|-------|-------------|
| 4V222TIH | HEAVY DUTY  | 588kW (800PS)   | 1,800 | D2842LB     |
| 4V222TIM | MEDIUM DUTY | 647kW (880PS)   | 2,100 |             |
| 4V222TIL | LIGHT DUTY  | 883kW (1,200PS) | 2,300 |             |

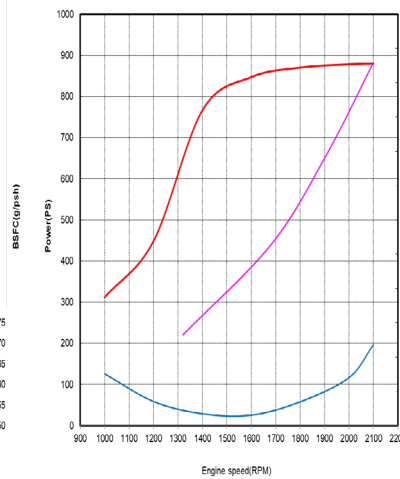
**Note : 1)** No reduction in rating for intake air temperature is up to 45 °C (318K) and sea water temperature is up to 32 °C (305K) , relative humidity is up to 60 % all data are based on operation to ISO 3046.



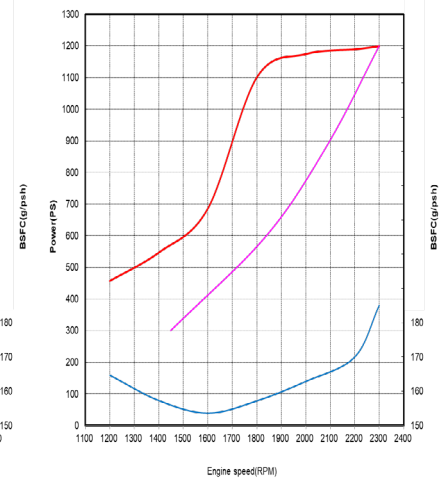
Heavy Duty



Medium Duty



Light Duty



- **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, Navy)

| Engine Specification               |              |                    |  |                |                  |
|------------------------------------|--------------|--------------------|--|----------------|------------------|
| Model                              |              | Units              | 4V222TIH   | 4V222TIM       | 4V222TIL         |
| Engine type                        |              |                    | 4 valve, 4 cycle, V type, direct- injection, water cooled with <b>wet turbo charger &amp; inter-cooler</b> |                |                  |
| Rating output (B.H.P)              |              | kW (PS)/rpm        | 588(800)/1,800   | 647(880)/2,100 | 883(1,200)/2,300 |
| Displacement                       |              | cc                 | 21,927   |                |                  |
| Cylinder number - bore(φ) x stroke |              | mm                 | 12 - φ128 x 142  |                |                  |
| Valve clearance at cold            | In / Ex      | mm                 | 0.40 / 0.50  |                |                  |
| Low idling rpm                     |              | rpm                | 725 ± 25   |                |                  |
| No load max. rpm                   |              | rpm                | below 2,070  | below 2,415    | below 2,645      |
| Mean effective pressure            |              | kg/cm <sup>2</sup> | 18.2   | 17.2           | 21.4             |
| Mean piston speed                  |              | m/sec.             | 8.52   | 9.94           | 10.89            |
| Compression ratio                  |              |                    | 15.8 : 1   | 15.8 : 1       | 15.8 : 1         |
| Firing order                       |              |                    | 1 - 12 - 5 - 8 - 3 - 10 - 6 - 7 - 2 - 11 - 4 - 9   |                |                  |
| Governor type of injection pump    |              |                    | Mechanical variable speed (R.Q.V)  |                |                  |
| Fuel consumption                   |              | g / PS.h           | 157  | 173            | 185              |
|                                    |              | Lit / h            | 152  | 184            | 267              |
| Starting system                    |              |                    | Electric Starting by starter motor   |                |                  |
| Starter motor capacity             |              | V - kW             | 24 - 6.6   |                |                  |
| Alternator capacity                |              | V - A              | 24 - 80  |                |                  |
| Battery                            |              | V - Ah             | 24 - 200   |                |                  |
| Cooling system                     |              |                    | Indirect sea water cooling with heat exchanger   |                |                  |
| Cooling water capacity             | Max. / Min.  | lit.               | 103 / 92   |                |                  |
| Fresh water pump type              |              |                    | Centrifugal type, driven by belt   |                |                  |
| Sea water pump type                |              |                    | Rubber impeller type driven by belt  |                |                  |
| Lubricating oil (Engine)           | pan capacity | lit.               | Max : 40, Min : 33 (Engine total : 43)   |                |                  |
|                                    | pressure     | kg/cm <sup>2</sup> | Full : 3.5, Idle : 1.2   |                |                  |
| Direction of revolution            | crankshaft   |                    | Counter clockwise viewed from stern side   |                |                  |
| Engine Size ( L x W x H )          |              | mm                 | 1,521 x 1,243 x 1,236  |                |                  |
| Engine dry weight                  |              | kg                 | 1,920  | 1,920          | 1,960            |

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.