



# Marine Diesel Engine MD196TI

- Compact Design
- Excellent Performance
- Low Fuel Consumption
- Easy Maintenance



- Rating output
  - 235kW (320PS)
- Displacement
  - 11,051cc
- Dimension (L × W × H)
  - 1,397 × 933 × 1,077mm
  - Without Reduction Gear

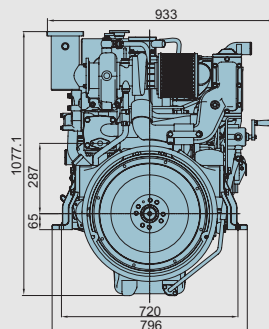
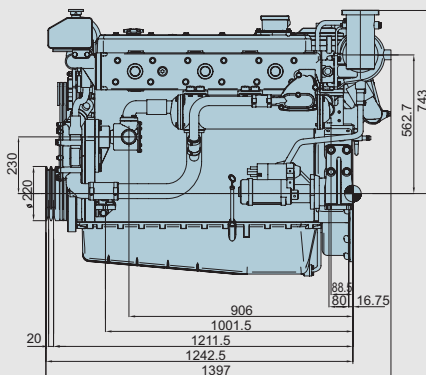
**Doosan Infracore  
Engine**

## Main Specification

| Model                                    | Units        | MD196TI   |
|--|--------------|---|
| Engine type                              |              | 4cycle, In line, direct-injection, water cooled with turbo charger & inter - cooler |
| Rating output                            | PS(kW) / rpm | 320(235)/2,000  |
| Displacement                             | cc           | 11,051  |
| Cylinder number - bore x stroke          | mm           | 6 - 123 x 155   |
| Flywheel housing & fly wheel             |              | SAE 1 & 14  |
| Low idling rpm                           | rpm          | 750 ± 50  |
| No load max. rpm                         | rpm          | below 2,200   |
| Compression ratio                        |              | 16.5 : 1  |
| Firing order                             |              | 1 - 5 - 3 - 6 - 2 - 4   |
| Governor type of injection pump          |              | Mechanical variable speed (R.S.V)   |
| Fuel consumption(only Ref.)@ rated power | g / PS.h     | 158   |
|  | Lit / h      | 61  |
| Starting system                          |              | Electric Starting by starter motor  |
| Starter motor capacity                   | V - kW       | 24 - 6.0  |
| Alternator capacity                      | V - A        | 24 - 50   |
| Battery                                  | V - Ah       | 24 - 150  |
| Cooling system                           |              | Indirect sea water cooling with heat exchanger                                      |
| Cooling water capacity                   | Max. / Min.  | lit 24 / 19   |
| Fresh water pump type                    |              | Centrifugal type, driven by gear  |
| Sea water pump type                      |              | Rubber impeller type driven by gear   |
| Lubricating oil(Engine)                  | Pan capacity | lit Max : 25, Min : 19 (Engine total : 27)  |
|  | 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)                   | Without M/G  | mm 1,397 x 933 x 1,077  |
| Engine dry weight                        | Without M/G  | kg 1,009  |

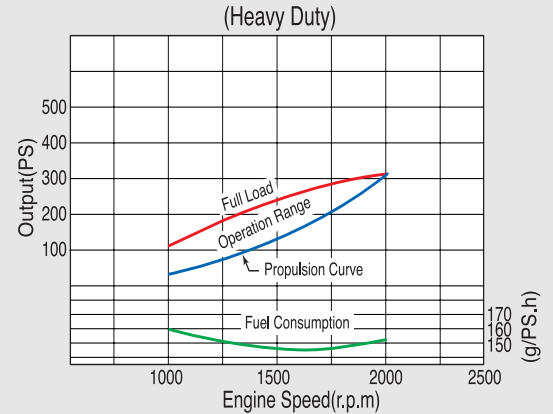
H : Heavy Duty, M : Medium Duty, L : Light Duty

## Engine Dimension



## Performance Curve

· Heavy duty : 235kW(320PS)@2,000rpm



### Marine rating to ISO 3046

#### (1) 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)

#### (2) 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 trawler, Pilot boat, Escort boat, Passenger boat, Freighter, Ferry, Cruising vessel)

#### (3) 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, Cruising vessel, Fast boat, Fire pump)

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## Doosan Infracore Engine

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AUTHORIZED DEALER

\* Specifications are subject to change without prior notice.