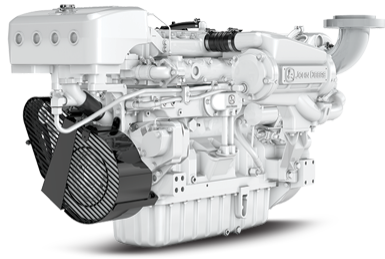


PowerTech™

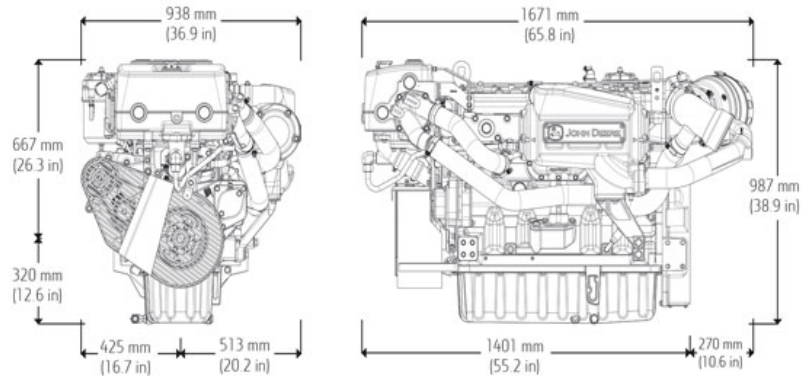
6090AFM85 Diesel Engine

Marine Generator Drive Engine Specifications



6090AFM85 shown

Dimensions



Certifications

EPA Commercial Marine Tier 3
IMO MARPOL Annex VI Compliant

General data

| | | | |
|---------------------------|---|---|---|
| Model | 6090AFM85 | Length - mm (in) | 1671 (65.8) |
| Number of cylinders | 6 | Width - mm (in) | 938 (36.9) |
| Displacement - L (cu in) | 9.0 (549) | Height, Centerline to Top-- mm. (in) | 667 (26.3) |
| Bore and Stroke-- mm (in) | 118 x 136 (4.65 x 5.35) | Height, Centerline to Bottom-- mm. (in) | 320 (12.6) |
| Compression Ratio | 16.3 : 1 | Weight, dry-- kg (lb) | 1055 (2326) |
| Engine Type | In-line, 4-cycle | Maximum Installed Angle | Front Up – degrees 12 Front Down – degrees 0 |
| Aspiration | Turbocharged and air-to-coolant aftercooled | | |

Features and benefits

Optional Low RPM Operation

- A lower speed option provides the user the ability to start the engine without going to the gen-set rated speed and allows the user to clutch in an accessory that may be driven by the engine.

4-Valve Cylinder Head

- Excellent airflow through 4-valve cylinder head delivers greater low-speed torque and better transient response time.

High-pressure Common-rail (HPCR)

- The HPCR fuel system provides variable common-rail pressure, multiple injections, and controls fuel injection timing and provides precise control for the start, duration, and end of injection.

Water-cooled Exhaust Manifold

- Integrated components eliminate external hoses and fittings that can leak or break. Wet exhaust manifold creates a cooler and quieter environment for passengers and crew.

Replaceable Cylinder Liners

- Replaceable wet-type cylinder liners are precision-machined and hardened for long life. Allows engine to be rebuilt to original specifications.

Electronic Engine Control Unit (ECU)

- Advanced fault code diagnostics and customizable engine protections ensure reliability and uptime. Provides highly customizable features and trim to integrate your vessel.

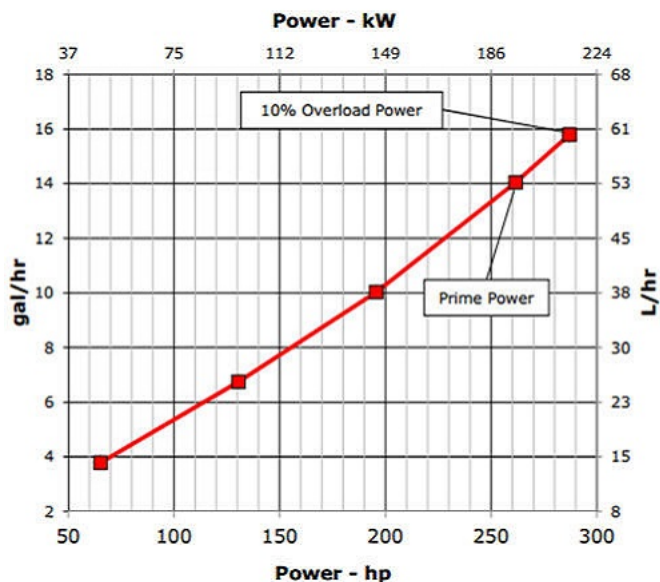
Keel-cooled or Heat Exchanger

- Closed cooling system in keel-cooled engine option eliminates the need for a sea strainer, seawater pump, or anodes. Heat exchanger option offers a lighter, more compact, and simpler engine installation.

Multiple Service Options

- Either-side oil fill/dipstick combinations and remote oil and fuel filter options are available for easier service access.

Performance curve



| System data | 1800 rpm | 1500 rpm |
|--|----------------------|----------------------|
| Air system | | |
| Engine air flow - m ³ /min (ft ³ /min) | 19.6 (692.2) | 17.0 (600.3) |
| Exhaust system | | |
| Dry - mm (in) | 114.3 (4.5) | 114.3 (4.5) |
| Wet - mm (in) | 127.0 (5.0) | 127.0 (5.0) |
| Cooling system | | |
| Coolant flow - L/min (gal/min) | 334 (88.2) | 268 (70.8) |
| Sea water system | | |
| Pump flow - L/min (gal/min) | | |
| Fuel system | | |
| Governor type | Electronic | Electronic |
| Governor regulation - % | Isochronous or Droop | Isochronous or Droop |
| Total fuel flow - L/hr (gal/hr) | 240 (63.4) | 240 (63.4) |

| Performance data | 1800 rpm | 1500 rpm |
|-------------------------------------|-------------|-------------|
| 10% overload engine Power - kW (hp) | 244 (327.2) | 214 (287.0) |
| Prime engine power - kW (hp) | 222 (297.7) | 195 (261.5) |
| Low idle speed - rpm | 1000 | 1000 |
| BMEP - kPa (psi) | NA | NA |

Performance data

| Hz (rpm) | Generator efficiency % | Keel cooled | | Power factor | Calculated gen-set rating | |
|-----------|------------------------|-------------|----|--------------|---------------------------|---------|
| | | (no fan) | | | kW | kVA |
| 50 (1500) | 88-92 | -- | -- | 0.8 | 171-179 | 214-224 |
| 60 (1800) | 88-92 | -- | -- | 0.8 | 195-204 | 244-255 |