# PowerTech ™ 6090SFM85 Diesel Engine

**Propulsion Engine Specifications** 



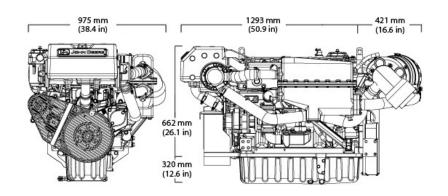


6090SFM85 shown

#### Certifications

**EPA Commercial Marine Tier 3** 

## **Dimensions**



IMO MARPOL Annex VI Compliant NRMM (97/68/EC) as amended

# General data

	Model	6090SFM85	Length - mm (in)	1714 (67.5)	
	Number of cylinders	6	Width - mm (in)	975 (38.4)	
	Displacement - L (cu in)	9.0 (549)	Height, Centerline to Top mm. (in)	662 (26.1)	
	Bore and Stroke mm (in)	118.4 x 136 (4.66 x 5.35)	Height, Centerline to Bottom mm. (in)	320 (12.6)	
	Compression Ratio	16.3:1	Weight, dry kg (lb)	1056 (2328)	
Engine Type	Engine Type	In-line, 4- Cycle	Maximum Installed Angle	Front Up – degrees	12
	Aspiration	Air-to-sea water		Front Down – degrees	0

# Features and benefits

# Turbocharged with Air-to-Sea Aftercooling

- Cooler operation enables higher power ratings and higher efficiencies.
- Seawater aftercooled engines excel in higher power/speed applications.

### Four Valves Per Cylinder

- The 4-valve cylinder head provides excellent airflow resulting in greater lowspeed torque and better transient response time.

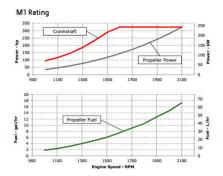
#### High-Pressure Common-Rail

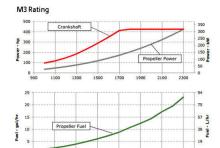
- The HPCR fuel system provides variable common-rail pressure, multiple injections, and controls fuel injection timing and provides precise control for the start, duration, and end of injection.

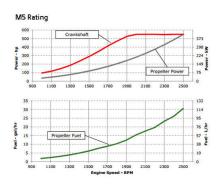
#### Integrated Heat Exchanger

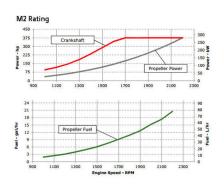
- Engine is cooled via seawater to engine coolant heat exchanger.
- Offers a lighter, more compact, and simpler engine installation versus keel cooling.

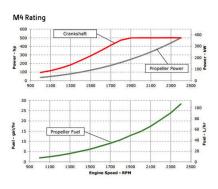
# Performance curve











Performance data	M5	M4	M3	M2	M1
Rated Power - kW (hp)	410 (550)	373 (500)	317 (425)	280 (375)	242 (325)
Rated Speed - rpm	2500	2400	2300	2200	2100
Low Idle Speed - rpm	650	650	650	650	650
Peak Torque - Nm (ft-lb)	1966 (1450)	1869 (1379)	1730 (1276)	1573 (1160)	1444 (1065)
Peak Torque Speed - rpm	1900	1900	1700	1700	1600
Fuel Consumption - L/h (gal/hr)	115.6 (30.5)	107.1 (28.3)	87.4 (23.1)	77.6 (20.5)	65.4 (17.3)

M rating	M5	M4	M3	M2	M1
Typical load factor	< =35%	< =40%	< =50%	< =65%	> 65%
Typical annual usage (hr)	300-1,000 hr	1,000-3,000 hr	2,000-4,000 hr	3,000-5,000 hr	Unrestricted
Typical full-power operation (hr)	0.5 of each 8 hr	1 of each 12 hr	4 of each 16 hr	16 of each 24 hr	Uninterrupted

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