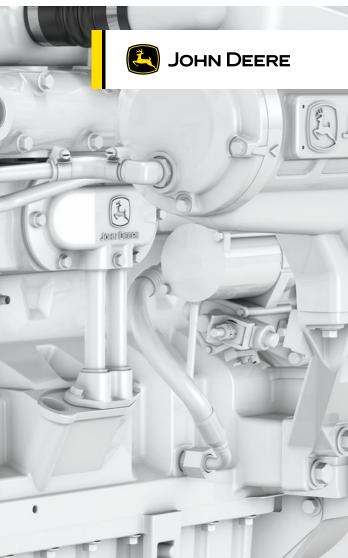
Marine Applications

Diesel Engine Ratings



Nothing Runs Like A Deere[™]

John Deere PowerTech[™] engines are as powerful in the water as they are on the land. Our marine propulsion and generator engines share the same reputation for performance and reliability that their agricultural and industrial counterparts have enjoyed for decades. They are also backed by a vast service network that will keep you operating — no matter where you go.

When you choose John Deere, you get the support of one of the strongest engine and equipment companies in the world. See for yourself why more vessels are powered by John Deere.





CONTENTS

| Meeting regulations around the world | 4 |
|--|-----------|
| Dimensions and weights | 5 |
| Engine identification | 6 – 7 |
| Propulsion M ratings | 8 – 9 |
| Propulsion power ratings | 10 – 11 |
| PowerTech 4.5L marine engines | . 12 – 13 |
| PowerTech 6.8L marine engines | 14 – 15 |
| PowerTech 9.0L marine engines | 16 – 17 |
| PowerTech 13.5L marine engines | 18 – 19 |
| Generator and constant-speed auxiliary engines | 20 – 23 |
| Variable-speed auxiliary engines | 24 – 25 |
| Customer support | 26 |



Meeting regulations around the world

John Deere marine engines comply with international, European, and United States emissions standards for regulated vessels. John Deere meets U.S. Environmental Protection Agency (EPA) Marine Tier 3 emissions regulations with a complete line of PowerTech engines for newly constructed vessels as well as repowered boats.

Engines for non-regulated territories

In addition to the engines for various emissions regulations mentioned, John Deere offers engines for the non-regulated regions throughout the world.

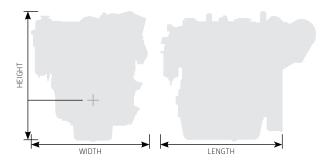
Marine classification societies

John Deere provides a full line of marine engines designed to meet the requirements of the various marine classification societies.





Dimensions and weights



Engine dimensions and weights listed in this guide use the following variables:

Length mm (in) = length to rear face of flywheel housing

Width mm (in) = maximum width minus width of elbow

Height mm (in) = crank centerline to top plus crank centerline to bottom

Weight kg (lb) = with oil, no coolant – includes engine, flywheel, and electronics

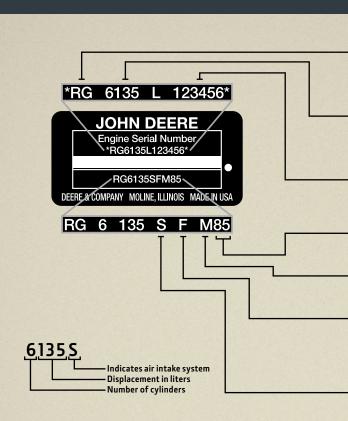
Dimensions may vary according to options selected. Contact your distributor for more information. All specifications are at rated speed and power with standard options unless otherwise noted.



Engine identification

Model designation key

A John Deere marine engine model designated as 61355FM85 is a 6-cylinder, 13.5-liter turbocharged and aftercooled, air-to-seawater engine that is emissions regulated.



| Factory | / manufactured | hv |
|---------|----------------|----|
| | | |

| RG | Waterloo, Iowa, USA |
|----|---------------------|
| CD | Saran, France |
| PE | Torreón, Mexico |

Number of cylinders and total displacement

| 6 cylinders, 13.5 liters |
|--------------------------|
| 6 cylinders, 9.0 liters |
| 6 cylinders, 6.8 liters |
| 4 cylinders, 4.5 liters |
| |

- Engine serial number

Emissions

| 50 | Non-emissions regulated |
|------------------|-------------------------|
| - 70, 75, 76, 85 | Emissions regulated |

Engine type — M

Marine

User type F

OEM (John Deere Power Systems)

| Air intake system | |
|-------------------|---|
| D | Naturally aspirated |
| Т | Turbocharged |
| А | Turbocharged and aftercooled, air-to-engine coolant |
| <u> </u> | Turbocharged and aftercooled, air-to-seawater* |
| Н | Turbocharged and aftercooled, air-to-air |

*S engines can be modified to be turbocharged and aftercooled, air-to-engine coolant, in dual-circuit keeled-cooled applications. Contact your John Deere engine distributor.

Marine propulsion M ratings

Ratings are based on the ISO 8665/SAE J1225 standard power rating and the ISO 3046/SAE J1995 crankshaft power rating. The M rating definitions are provided as a guide to help in the selection of the engine that best fits the application requirements. It is recommended to consult a John Deere marine dealer or engine distributor to verify the optimal rating for the specific application.

| NA 197 43 | |
|-----------|--|
| MI | The M1 rating is for marine propulsion applications that may operate up to 24 hours per day at uninterrupted full power and have load factors* greater than 65 percent. |
| M2 | The M2 rating is for marine propulsion applications that typically operate between 3,000 to 5,000 hours per year and have load factors* up to 65 percent. This rating is for applications that are in continuous use and use full power for no more than 16 hours of each 24 hours of operation. The remaining time of operation is at or below cruising [†] speed. |
| M3 | The M3 rating is for marine propulsion applications that typically operate between 2,000 to 4,000 hours per year and have load factors* up to 50 percent. This rating is for applications that use full power for no more than four hours out of each 12 hours of operation. The remaining time of operation is at or below cruising [†] speed. |
| M4 | The M4 rating is for marine propulsion applications that typically operate between 1,000 to 3,000 hours per year and have load factors* below 40 percent. This rating is for applications that use full power no more than one hour out of each 12 hours of operation. The remaining time of operation is at or below cruising' speed. |
| M5 | The M5 rating is for marine recreational propulsion and certification for light-duty commercial Tier 3 applications that operate up to 1,000 hours per year and have load factors* below 35 percent. This rating is for applications that use full power for no more than 30 minutes out of each eight hours. The remaining time of operation is at or below cruising' speed. |

| M rating | Typical load factor | Typical annual usage | Typical full power operation |
|----------|------------------------|-------------------------|---------------------------------|
| MI | > 65% | Unrestricted | Uninterrupted |
| M2 | ≤ 65% | 3,000 – 5,000 hr | 16 of each 24 hr |
| M3 | ≤ 50% | 2,000 – 4,000 hr | 4 of each 12 hr |
| M4 | ≤ 40% | 1,000 – 3,000 hr | 1 of each 12 hr |
| M5 | ≤ 35% | Up to 1,000 hr | 0.5 of each 8 hr |

Possible applications: Line hauls tugs and towboats, fish and shrimp trawlers/draggers, and displacement hull fishing boats.

Possible applications:

Short-range tugs and towboats, long-range ferryboats, large passenger vessels, and offshore displacement hull fishing boats.

Possible applications: Coastal fishing boats, offshore crew boats, research boats, short range ferryboats, and dinner cruise boats.

Possible applications: Inshore crew boats, charter fishing boats, pilot boats, dive boats, and planing hull commercial fishing boats.

Possible applications:

Recreational boats, tactical military vessels, and rescue boats.

- * Load factor is the actual fuel burned over a period of time divided by the full-power fuel consumption for the same period of time. For example, if an engine burns 160 liters of fuel during an eight-hour run, and the full-power fuel consumption is 60 liters per hour, the load factor is 160 liters / 160 liters per hour x 8 hours] = 33.3 percent.
- t Cruising is any operating time where the engine speed is more than 200 rpm less than the maximum attainable engine speed.

Marine engine propulsion power ratings

Propulsion power ratings - IMO compliant and non-certified engines

| Engine | Power rating | | | | | | | |
|-----------------------|-----------------------------|-----|------|------|------------|------|------|-----|
| 4045DFM70 | 60 kW (80 hp) | | | | | | | |
| 4045TFM50 | 90 – 112 kW (120 – 150 hp) | | | | | | | |
| 6068TFM50 | 115 – 168 kW (154 – 225 hp) | | | | | | | |
| 6068TFM75 | 118 – 150 kW (158 – 201 hp) | | | | | | | |
| 6068AFM75 | 172 – 246 kW (230 – 330 hp) | | | | | | | |
| 6068SFM75 | 186 – 298 kW (249 – 400 hp) | | | | | | | |
| 6090AFM75 | 213 – 317 kW (285 – 425 hp) | | | | | | | |
| 6090SFM75 | 242 – 410 kW (325 – 550 hp) | | | | | | | |
| Ratinas are subject i | to change Please contact kW | 0 2 | 25 5 | 50 7 | , 75 10 | 00 1 | 25 1 | 150 |

Ratinas are subject to change. Please contact your John Deere marine dealer for details.

hp 0 34

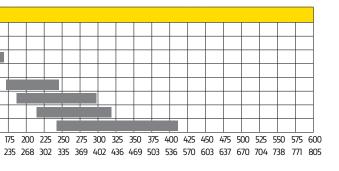
67

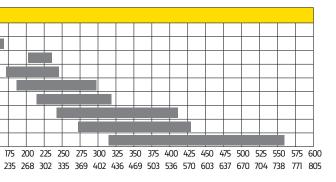
101 134 168 201

Propulsion power ratings - IMO & EPA compliant engines

| Engine | Power rating | | | | | | | | |
|-----------|---------------------------|-----|-----|------|------|-------|-------|-----|-----|
| 4045TFM85 | 75 – 93 kW (100 – 125 h | p) | | | | | | | |
| 4045AFM85 | 119 – 168 kW (160 – 225 l | hp) | | | | | | | |
| 4045SFM85 | 205 – 235 kW (275 – 315 | hp) | | | | | | | |
| 6068AFM85 | 172 – 246 kW (230 – 330 | hp) | | | | | | | T |
| 6068SFM85 | 186 – 298 kW (249 – 400 | hp) | | | | | | | Τ |
| 6090AFM85 | 213 – 317 kW (285 – 425 ł | np) | | | | | | | Τ |
| 6090SFM85 | 242 – 410 kW (325 – 550 | hp) | | | | | | | |
| 6135AFM85 | 272 – 429 kW (365 – 575 | hp) | | | | | | | Τ |
| 6135SFM85 | 317 – 559 kW (425 – 750 | hp) | | | | | | | |
| | to change. Please contact | W | 0 2 | 25 5 | 50 7 | 75 1 | 100 1 | 125 | 150 |
| | | hp | 0 7 | 34 6 | 67 1 | 101 1 | 134 1 | 168 | 201 |

10

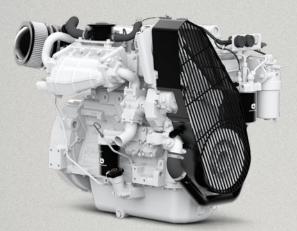






PowerTech 4.5L marine engines

- Keel-cooled or heat exchanger configurations
- Naturally aspirated, turbocharged non-aftercooled, or turbocharged with air-to-seawater or air-to-coolant aftercooling
- Feature constant power to 400 rpm below rated speed
- Excellent choice for launches, work boats, trawler yachts, and patrol craft



| Engine | Emissions | | | | Rated power | | Rated speed | Rated fuel consumption | |
|---|-----------|--------|-------|--------|----------------|-----|----------------|---------------------------|-------|
| model | IMO | EPA | EU | RCD | kW | hp | rpm | L/hr | gal/h |
| IMO compliant and non-certified engines | | | | | | | | | |
| 4045DFM70 | | | | | | | | | |
| M2 | ΕX | - | III A | - | 60 | 80 | 2500 | 17.5 | 4.6 |
| 4045TFM50 | | | | | | | | | |
| M2* | ΕX | - | - | - | 90 | 120 | 2400 | 22.7 | 6.0 |
| M3* | ΕX | - | - | - | 101 | 135 | 2500 | 26.3 | 6.9 |
| M4 | ΕX | - | - | - | 112 | 150 | 2600 | 29.7 | 7.8 |
| MO & EPA con | npliant e | ngines | | | | | | | |
| 4045TFM85 | | | | | | | | | |
| M1 | EX | Tier 3 | III A | RCD II | 75 | 100 | 2400 | 21.4 | 5.7 |
| M2 | ΕX | Tier 3 | III A | RCD II | 93 | 125 | 2500 | 29 | 8 |
| 4045AFM85 | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCD II | 119 | 160 | 2300 | 33.2 | 8.8 |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 134 | 180 | 2400 | 37 | 10 |
| M3 | Tier 2 | Tier 3 | III A | RCD II | 149 | 200 | 2500 | 44 | 12 |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 168 | 225 | 2600 | 49 | 13 |
| 4045SFM85 | | | | | | | | | |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 205 | 275 | 2600 | 54 | 14 |
| M5 | Tier 2 | Tier 3 | III A | RCD II | 235 | 315 | 2800 | 62 | 16 |

EX = MARPOL Annex VI exempt

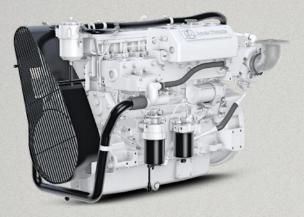
Not available in all countries.

| Engine Length, to rear of block | | Wi | idth | Hei | ght | Weight, dry | | |
|------------------------------------|-----|------|-----------|-------------|-----|-------------|-----|-------|
| model | mm | in | mm | mm in r | | in | kg | lb |
| 4045DFM70 ⁺ | 756 | 29.8 | 703–731 | 27.7 – 28.8 | 901 | 35.4 | 437 | 963 |
| 4045TFM50 | 748 | 29.4 | 703 | 27.7 | 912 | 35.9 | 461 | 1,017 |
| 4045TFM85 [†] | 739 | 29.1 | 692 – 703 | 27.3–27.6 | 912 | 35.9 | 507 | 1,117 |
| 4045AFM85 [†] | 752 | 29.6 | 692 – 771 | 27.3 - 30.4 | 964 | 37.9 | 578 | 1,274 |
| 4045SFM85 | 762 | 30.0 | 820 | 32.3 | 922 | 36.2 | 558 | 1,230 |

[†]Engine configuration may vary.

PowerTech 6.8L marine engines

- Keel-cooled or heat exchanger configurations
- Turbocharged non-aftercooled, or turbocharged with air-to-seawater or air-to-coolant aftercooling
- Excellent choice for recreational boats, launches, work boats, trawler yachts, and patrol craft



| Engine | Length, to rear of block | | Wi | dth | Hei | ght | Weight, dry | |
|------------------------|--------------------------|------|-----------|-------------|-----|------|-------------|------|
| model | mm | in | mm | in | mm | in | kg | lb |
| 6068TFM75 | 1004 | 39.5 | 712 | 28.0 | 882 | 34.7 | 730 | 1609 |
| 6068TFM50 | 1004 | 39.5 | 712 | 28.0 | 881 | 34.7 | 730 | 1609 |
| 6068AFM75 [†] | 1034 | 40.7 | 806 - 865 | 31.7 - 34.0 | 912 | 35.9 | 786 | 1732 |
| 6068SFM75 | 1034 | 40.7 | 872 | 34.3 | 959 | 37.7 | 890 | 1962 |
| 6068AFM85 [†] | 1034 | 40.7 | 806 - 865 | 31.7 - 34.0 | 935 | 36.9 | 787 | 1735 |
| 6068SFM85 | 1034 | 40.7 | 872 | 34.3 | 931 | 36.7 | 763 | 1682 |

[†]Engine configuration may vary.

| Engine | | Emissions | | | | | Rated speed | | |
|---------------|-----------|-----------|---------|--------|-----|-----|----------------|------|-------|
| model | IMO | EPA | EU | RCD | kW | hp | rpm | L/hr | gal/h |
| 10 compliant | and nor | n-certifi | ed engi | nes | | | | | |
| 068TFM75 | | | | | | | | | |
| M1 | EX | - | III A | - | 118 | 158 | 2400 | 33.7 | 8.9 |
| M2 | Tier 2 | - | III A | - | 133 | 178 | 2500 | 38.3 | 10.1 |
| M3 | Tier 2 | - | III A | - | 150 | 201 | 2600 | 44.1 | 11.6 |
| 068TFM50 | | | | | | | | | |
| M1 | EX | - | - | - | 115 | 154 | 2300 | 29.6 | 7.8 |
| M2 | - | - | - | - | 130 | 175 | 2400 | 34.7 | 9.2 |
| M3 | - | - | - | - | 149 | 200 | 2500 | 38.8 | 10.3 |
| M4 | - | - | - | - | 168 | 225 | 2600 | 44.3 | 11.7 |
| 068AFM75 | | | | | | | | | |
| M1 | Tier 2 | - | III A | - | 172 | 230 | 2300 | 43.7 | 11.6 |
| M2 | Tier 2 | - | III A | - | 198 | 265 | 2400 | 50.0 | 13.0 |
| M3 | Tier 2 | - | III A | - | 224 | 300 | 2500 | 57.0 | 15.0 |
| M4 | Tier 2 | - | III A | - | 246 | 330 | 2600 | 64.0 | 17.0 |
| 068SFM75 | | | | | | | | | |
| M1 | Tier 2 | - | III A | - | 186 | 249 | 2400 | 47.2 | 12.5 |
| M2 | Tier 2 | - | III A | - | 209 | 280 | 2500 | 52.3 | 13.8 |
| M3 | Tier 2 | - | III A | - | 239 | 321 | 2600 | 60.2 | 15.9 |
| M4 | Tier 2 | - | III A | - | 265 | 355 | 2700 | 66.8 | 17.7 |
| M5 | Tier 2 | - | III A | - | 298 | 400 | 2800 | 77.6 | 20.5 |
| /IO & EPA cor | npliant e | ngines | | | | | | | |
| 068AFM85 | | 2 | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCDII | 172 | 230 | 2300 | 50.9 | 13.4 |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 198 | 265 | 2400 | 58.0 | 15.0 |
| M3 | Tier 2 | Tier 3 | IIIA | RCD II | 224 | 300 | 2500 | 65.0 | 17.0 |
| M4 | Tier 2 | Tier 3 | IIIA | RCD II | 246 | 330 | 2600 | 71.0 | 19.0 |
| 068SFM85 | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | IIIA | RCD II | 186 | 249 | 2400 | 51.0 | 13.0 |
| M2 | Tier 2 | Tier 3 | IIIA | RCDII | 209 | 280 | 2500 | 57.0 | 15.0 |
| M3 | Tier 2 | Tier 3 | IIIA | RCDII | 239 | 321 | 2600 | 63.0 | 17.0 |
| M4 | Tier 2 | Tier 3 | IIIA | RCDII | 265 | 355 | 2700 | 69.0 | 18.0 |
| M5 | Tier 2 | Tier 3 | IIIA | RCDII | | 400 | 2800 | 81.0 | 21.0 |

EX = MARPOL Annex VI exempt

PowerTech 9.0L marine engines

- Keel-cooled or heat exchanger configurations
- Turbocharged with air-to-seawater or air-to-coolant aftercooling
- 4-valve cylinder head
- Electronically controlled HPCR fuel system
- Front or side service
- Excellent choice for patrol craft, launches, work boats, fishing boats, trawler yachts, and sportfishing boats

See your John Deere engine distributor for options to combine the high power density of our 9.0L SFM marine engines in dual-circuit keel-cooled applications.



| Engine | | Emissions | | | | | Rated speed | Rate consu | d fuel nptior | |
|--------------|-----------|-----------|---------|--------|-----|-----|----------------|---------------|------------------|--|
| model | IMO | EPA | EU | RCD | kW | hp | rpm | L/hr | gal/h | |
| MO compliant | and nor | n-certifi | ed engi | nes | | | | | | |
| 090AFM75 | | | | | | | | | | |
| M1 | Tier 2 | - | III A | - | 213 | 285 | 2100 | 56.0 | 15.0 | |
| M2 | Tier 2 | - | III A | - | 242 | 325 | 2200 | 62.0 | 16.0 | |
| M3 | Tier 2 | - | III A | - | 280 | 375 | 2300 | 76.0 | 20.0 | |
| M4 | Tier 2 | - | III A | - | 317 | 425 | 2400 | 86.0 | 23.0 | |
| 5090SFM75 | | | | | | | | | | |
| M1 | Tier 2 | - | III A | - | 242 | 325 | 2100 | 56.3 | 14.9 | |
| M2 | Tier 2 | - | III A | - | 280 | 375 | 2200 | 64.0 | 17.0 | |
| M3 | Tier 2 | - | III A | - | 317 | 425 | 2300 | 74.0 | 20.0 | |
| M4 | Tier 2 | - | III A | - | 373 | 500 | 2400 | 88.0 | 23.0 | |
| M5 | Tier 2 | - | III A | - | 410 | 550 | 2500 | 108.0 | 29.0 | |
| MO & EPA cor | npliant e | ngines | | | | | | | | |
| 090AFM85 | | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCD II | 213 | 285 | 2100 | 64.6 | 17.1 | |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 242 | 325 | 2200 | 71.0 | 19.0 | |
| M3 | Tier 2 | Tier 3 | III A | RCD II | 280 | 375 | 2300 | 81.0 | 21.0 | |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 317 | 425 | 2400 | 91.0 | 24.0 | |
| 090SFM85 | | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCD II | 242 | 325 | 2100 | 65.4 | 17.3 | |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 280 | 375 | 2200 | 78.0 | 21.0 | |
| M3 | Tier 2 | Tier 3 | III A | RCD II | 317 | 425 | 2300 | 87.0 | 23.0 | |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 373 | 500 | 2400 | 107.0 | 28.0 | |
| M5 | Tier 2 | Tier 3 | III A | RCD II | 410 | 550 | 2500 | 116.0 | 31.0 | |

EX = MARPOL Annex VI exempt

| Engine | Length, to rear of block | | Width | | Height | | Weight, dry | |
|-----------|-----------------------------|------|-------|------|--------|------|-------------|------|
| model | mm | in | mm | in | mm | in | kg | lb |
| 6090AFM75 | 1682 | 66.2 | 938 | 36.9 | 984 | 38.8 | 1011 | 2229 |
| 6090SFM75 | 1297 | 51.1 | 914 | 36.0 | 983 | 38.7 | 1056 | 2327 |
| 6090AFM85 | 1297 | 51.1 | 938 | 36.9 | 983 | 38.7 | 1055 | 2325 |
| 6090SFM85 | 1297 | 51.1 | 938 | 36.9 | 983 | 38.7 | 1056 | 2327 |

PowerTech 13.5L marine engines

- Keel-cooled or heat exchanger configurations
- Turbocharged with air-to-seawater or air-to-coolant aftercooling
- 4-valve cylinder head
- Feature constant power to 400 rpm below rated speed
- Excellent choice for patrol craft, launches, work boats, fishing boats, trawler yachts, and sportfishing boats

See your John Deere engine distributor for options to combine the high power density of our 13.5L SFM marine engines in dual-circuit keel-cooled applications.



| Engine | | Emis | sions | | Rated power | | Rated speed | Rated fuel consumption | | |
|-----------------------------|--------|--------|-------|--------|----------------|-----|----------------|------------------------|--------|--|
| model | IMO | EPA | EU | RCD | kW | hp | rpm | L/hr | gal/hr | |
| IMO & EPA compliant engines | | | | | | | | | | |
| 6135AFM85 | | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCD II | 272 | 365 | 1800 | 76.7 | 20.3 | |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 317 | 425 | 1900 | 86.0 | 23.0 | |
| M3 | Tier 2 | Tier 3 | III A | RCD II | 373 | 500 | 2000 | 102.0 | 27.0 | |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 429 | 575 | 2100 | 119.0 | 31.0 | |
| 6135SFM85 | | | | | | | | | | |
| M1 | Tier 2 | Tier 3 | III A | RCD II | 317 | 425 | 1800 | 79.5 | 21.0 | |
| M2 | Tier 2 | Tier 3 | III A | RCD II | 373 | 500 | 1900 | 94.0 | 25.0 | |
| M3 | Tier 2 | Tier 3 | III A | RCD II | 429 | 575 | 2000 | 111.0 | 29.0 | |
| M4 | Tier 2 | Tier 3 | III A | RCD II | 485 | 650 | 2100 | 124.0 | 33.0 | |
| M5 | Tier 2 | Tier 3 | III A | RCD II | 559 | 750 | 2200 | 146.0 | 39.0 | |

| Engine | Length, to rear of block | | Width | | Height | | Weight, dry | |
|-----------|--------------------------|------|-------|------|--------|------|-------------|------|
| model | mm | in | mm | in | mm | in | kg | lb |
| 6135AFM85 | 1316 | 51.8 | 990 | 39.0 | 1182 | 46.5 | 1410 | 3108 |
| 6135SFM85 | 1335 | 52.6 | 990 | 39.0 | 1176 | 46.3 | 1426 | 3143 |

Marine generator drive and constant-speed auxiliary engine ratings

The marine generator engine rating is the power available under normal varying electrical load factors* for an unlimited number of hours per year in commercial applications. This rating incorporates a 10 percent overload capability and conforms to ISO 8528 prime power. Average load over a 24-hour period shall not exceed 67 percent of the prime rating, of which no more than two hours are between 100 percent and 110 percent of the prime rating.

This rating is used for applications that require constant speed in auxiliary applications.



* Load factor is the actual fuel burned over a period of time divided by the full-power fuel consumption for the same period of time. For example, if an engine burns 160 liters of fuel during an eight-hour run, and the full-power fuel consumption is 60 liters per hour, the load factor is 160 liters / 60 liters per hour x 8 hours) = 33.3 percent.



Conversions

Generator drive rating (kWe)

kWe = [Engine power (kW) -Fan power loss (kW)] x Generator efficiency

Note: DFM, TFM, AFM, and SFM generator drive ratings do not have fan power loss.

Power factor (PF)

PF = kWe/kVA = Real power

Apparent power PF constant = 0.80

Formulas

(Standby power, kWe) = (Prime power, kWe) x (110% Overload capacity) kWe rating/0.8 = kVA rating

Estimated electrical power is calculated from the typical generator efficiency and fan power percentages shown. Applications may vary.

PowerTech marine generator and constant-speed auxiliary engines

- Quiet, smooth operation
- Preferred provider of generator drive engines worldwide
- Available in 1500 rpm for 50 Hz and 1800 rpm for 60 Hz configurations
- This rating is capable of a 10 percent overload capability and conforms to ISO 8528 prime power



| Engine | Emis | sions | Prime power ratings | | | | | | | |
|---|--------|--------------|---------------------|-----|-----|-----|--|--|--|--|
| model | IMO | EPA | kW | hp | kVA | kWe | | | | |
| 1500 rpm / 50Hz | | | | | | | | | | |
| IMO compliant and non-certified engines | | | | | | | | | | |
| 4045DFM70 | ΕX | - | 40 | 54 | 45 | 36 | | | | |
| 4045TFM50 | EX | - | 57 | 76 | 64 | 51 | | | | |
| 4045TFM85 | EX | - | 61 | 82 | 69 | 55 | | | | |
| 4045AFM85 | EX | - | 89 | 120 | 102 | 82 | | | | |
| 6068TFM50 | ΕX | - | 89 | 119 | 102 | 82 | | | | |
| 6068AFM85 | ΕX | - | 117 | 157 | 132 | 106 | | | | |
| 6068AFM85 | Tier 2 | - | 139 | 187 | 160 | 128 | | | | |
| 6068AFM75 | Tier 2 | - | 139 | 187 | 160 | 128 | | | | |
| 6068SFM85 | Tier 2 | - | 168 | 226 | 188 | 150 | | | | |
| 6090AFM75 | Tier 2 | - | 195 | 261 | 219 | 175 | | | | |
| 6090SFM75 | Tier 2 | - | 222 | 297 | 250 | 200 | | | | |
| 6090AFM85 | Tier 2 | - | 195 | 261 | 219 | 175 | | | | |
| 6090SFM85 | Tier 2 | - | 222 | 297 | 250 | 200 | | | | |
| 6135AFM85 | Tier 2 | - | 278 | 373 | 313 | 250 | | | | |
| 6135SFM85 | Tier 2 | - | 334 | 447 | 375 | 300 | | | | |
| 1800 rpm / 60 | | | | | | | | | | |
| IMO compliant | | rtified engi | | 63 | 50 | 1.0 | | | | |
| 4045DFM70 | EX | - | 46 | 62 | 50 | 40 | | | | |
| 4045TFM50 | EX | - | 71 | 95 | 80 | 64 | | | | |
| 6068TFM50 | EX | - | 115 | 154 | 124 | 99 | | | | |
| 6068AFM75 | Tier 2 | - | 166 | 223 | 188 | 150 | | | | |
| 6090AFM75 | Tier 2 | - | 222 | 297 | 250 | 200 | | | | |
| 6090SFM75 | Tier 2 | - | 278 | 373 | 313 | 250 | | | | |
| IMO & EPA com | | | 7/ | 0.0 | 01 | 65 | | | | |
| 4045TFM85 | EX | Tier 3 | 74 | 99 | 81 | 65 | | | | |
| 4045TF285 | Tier 2 | Tier 3 | 71 | 95 | 74 | 60 | | | | |
| 4045AFM85 | Tier 2 | Tier 3 | 110 | 148 | 124 | 99 | | | | |
| 4045HF285 | Tier 2 | Tier 3 | 117 | 157 | 123 | 99 | | | | |
| 6068AFM85 | Tier 2 | Tier 3 | 166 | 223 | 188 | 150 | | | | |
| 6068SFM85 | Tier 2 | Tier 3 | 195 | 262 | 218 | 175 | | | | |
| 6090AFM85 | Tier 2 | Tier 3 | 222 | 297 | 250 | 200 | | | | |
| 6090HFM85 | - | Tier 3 | 238 | 319 | 249 | 200 | | | | |
| 6090SFM85 | Tier 2 | Tier 3 | 278 | 373 | 313 | 250 | | | | |
| 6135AFM85 | Tier 2 | Tier 3 | 334 | 447 | 375 | 300 | | | | |
| 6135HFM85 | - | Tier 3 | 416 | 558 | 436 | 350 | | | | |
| 6135SFM85 | Tier 2 | Tier 3 | 416 | 558 | 469 | 375 | | | | |

EX = MARPOL Annex VI exempt

PowerTech variable-speed auxiliary engines

John Deere PowerTech radiator-cooled, dry-exhaust manifold engines (TF and HF models) are compliant with EPA Marine Tier 3 emissions regulations* and engineered to run vessel auxiliaries such as pumps, winches, deck cranes, and hydraulics. We also offer a choice of options and accessories.

John Deere PowerTech radiator-cooled, wet-exhaust manifold marine engines (HFM models) are rated to provide dependable auxiliary power for oceangoing vessels and other applications that require type approval for marine classification societies.



| Engine | Emis | sions | Rated | Rated speed | | | | | | |
|---------------|-----------------------------|--------|-------|----------------|------|--|--|--|--|--|
| model | IMO | EPA | kW hp | | rpm | | | | | |
| IMO & EPA com | IMO & EPA compliant engines | | | | | | | | | |
| 4045TF285 | Tier 2 | Tier 3 | 74 | 99 | 2200 | | | | | |
| 6068HF485 | Tier 2 | Tier 3 | 187 | 251 | 2200 | | | | | |
| 6090HFM85 | - | Tier 3 | 242 | 325 | 2000 | | | | | |
| 6090HF485 | Tier 2 | Tier 3 | 280 | 375 | 2200 | | | | | |
| 6135HFM85 | - | Tier 3 | 373 | 500 | 2000 | | | | | |
| 6135HF485 | Tier 2 | Tier 3 | 448 | 600 | 2100 | | | | | |



Customer support

You can rely on us

With more than 4,000 service locations worldwide, John Deere is always there when you need service and support. Locate your closest John Deere engine distributor or service dealer at **JohnDeere.com/Dealer**.

The right parts. At the right price. Right now.

Whether you've got a brand new John Deere marine engine, one that's been working for years, or a mixed fleet — John Deere is ready to keep you up and running. You can rely on us for your choice of genuine John Deere parts, remanufactured components, and all-makes products. Whatever your choice, find it exclusively at your authorized John Deere marine dealer or engine distributor, or by visiting **JDParts.com**.

Warranty support when you need it

Every John Deere marine engine comes with a solid 2-year/2,000-hour standard warranty that applies not only to the engine but also to John Deere parts and accessories added by a John Deere engine distributor.*

Registering your John Deere marine engine enables your John Deere marine dealer or engine distributor to respond should you need a warrantable repair.[‡] Register the warranty for your engine at **JohnDeere.com/OEMWarranty**.

^{*} When sold by John Deere, its authorized dealers and distributors, and delivered to the first retail purchaser.

⁴ See specific OEM product warranty language for applicable terms and conditions. Refer to the John Deere new marine engine warranty for complete warranty coverage details.



Worldwide locations

North America, South America, and Caribbean

John Deere Power Systems 3801 West Ridgeway Avenue P.O. Box 5100 Waterloo, IA 50704-5100 Phone: 800-533-6446 (U.S.) Phone: 319-292-6060 (Outside the U.S.) Phone: +33-2-38-82-61-19 Fax: 319-292-5075 Email: JDPower@JohnDeere.com

Mexico and Central America

Industrias John Deere S.A. de C.V. Boulevard Diaz Ordaz No. 500 Garza Garcia, Nuevo Leon 66210 Mexico Phone: + 52-81-8288-1212 Fax: + 52-81-8288-8284 Email: MexWeb@JohnDeere.com

Europe, Africa, and Middle East

John Deere Power Systems Orléans-Saran Unit La Foulonnerie – B.P. 11013 45401 Fleury-les-Aubrais Cedex France Fax: +33-2-38-84-62-66 Email: JDMarineEngine@JohnDeere.com

Australia and New Zealand

John Deere Limited Power Systems Division P.O. Box 1126. Camden NSW 2570 Australia Phone: + 61-2-4654-5501 Fax: + 61-2-4646-1236 Email: 23SYDDC@JohnDeere.com JohnDeere.com.au JohnDeere co nz

Far East

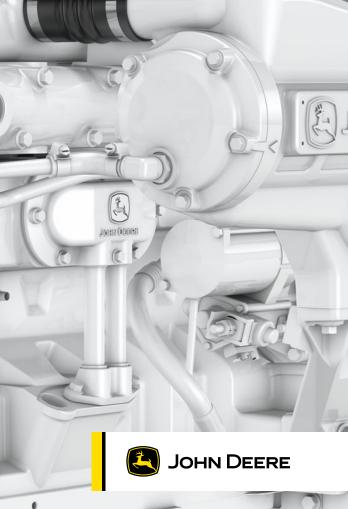
John Deere Asia (Singapore) Pte. Ltd. #06-02/03 Alexandra Point 438 Alexandra Road 119958 Singapore Phone: +65-6879-8800 Fax: +65-6278-0363 Email: JDAsiaEngines@JohnDeere.com

Go to JohnDeere.com/Dealer to find the service dealer nearest you.









This literature has been compiled for worldwide circulation. While general information, pictures and descriptions are provided, some illustrations and text may include finance, credit, insurance, product options and accessories NOT AVAILABLE in all regions. PLEASE CONTACT YOUR LOCAL DEALER OR DISTRIBUTOR, AS APPLICABLE, FOR DETAILS. John Deere reserves the right to change specification, design and price of the products described in this literature without notice. John Deere's green and yellow color schemes, the leaping deer symbol, and JOHN DEERE are trademarks of Deere & Company.



DSWT59 (17-10)

JohnDeere.com/Marine