

# C32

## MARINE AUXILIARY / DIESEL ELECTRIC PROPULSION ENGINE

874 bkW (1172 bhp) @ 1500 rpm/50 Hz

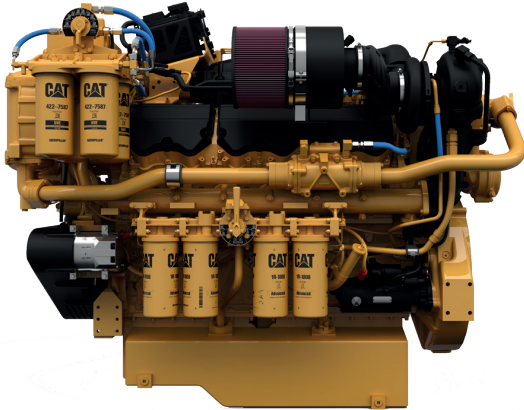


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### ENGINE SPECIFICATIONS

#### Configurations

Vee 12, 4-stroke-cycle diesel

#### Emissions

IMO III emissions certified  
(SCR required)

#### Rated Engine Speed

1500 rpm

#### Bore x Stroke

145 mm x 162 mm / 5.71 in x 6.38 in

#### Displacement

32.1 Liter / 1959 cu in

#### Aspiration

Turbocharged-aftercooled  
aspiration

#### Governor

Electronic (A5 ECM)

#### Refill Capacity

Lube Oil System w/ oil filter change:  
146 L (38.5 gal) - deep pan

#### Oil Change Interval

750 hrs - deep pan

#### Cooling

Heat exchanger or keel cooled

#### Flywheel Housing

SAE No. 0 with SAE No. 18  
flywheel (136 teeth)

#### Rotation

Counterclockwise from flywheel end

### FEATURES AND BENEFITS

- Utilizes SCR Technology to enable U.S. EPA Tier 4 Final emission regulations compliance while lowering operational costs
- Utilizes closed loop air assisted DEF dosing control strategy that delivers:
  - Highest efficiency mixing and control to lower operational costs
  - Extends emissions useful life
  - Ensures compliance
  - Flexible to urea quality
- Enhanced control of fuel injection optimized through crank timing and the A5 ECM technology
- Industry leading power reserve
- Wide range of available Marine Society certifications
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

### STANDARD ENGINE EQUIPMENT

- Separate circuit aftercooled (SCAC)
- Heat exchanger or Keel Cooling
- Watercooled exhaust manifold and turbocharger
- Deep or shallow sump oil pan
- Right or left hand service sides
- Oil fill, simplex filter and dipstick
- Duplex fuel filters with hybrid fuel lines
- Shipped loose primary fuel filter with water separator
- Air cleaner
- Hard seawater lines – no flexible hoses
- Fuel transfer and priming pump
- Adjustable front support mounting system
- Customer wiring and service tool connector
- Flanges for cooling connections, ANSI or DIN
- 24V control system

### OPTIONAL ATTACHMENTS

- Closed crankcase fumes disposal
- Starting motors – air, electric or redundant
- Charging alternator
- Duplex oil filters
- MECP I control panel
- MECP III B control panel with Cat® Alarm and Protection System
- Front drives including stub shaft and pump drive
- Rear SAE A or B pump drives
- Manual or electric fuel priming pump
- Water-in-fuel and exhaust temperature sensors
- Fuel cooler

### RATING DEFINITION AND CONDITION - PRIME POWER

Typical applications: For vessels operating with generator sets that provide power to the propulsion systems. All ratings are Prime Ratings according to ISO 8528-1 for unlimited usage per year at a load factor of  $\leq 70\%$ . 10% overload capability is required for a maximum of 1 hour out of every 12 and a maximum of 25 hours total per year.

Ratings are based on SAE J3046 and J1349 standard conditions of 100 kPa (29.61 in Hg) and 25°C (77°F). These ratings also apply at ISO8665, ISO3046-1:2002E, DIN6271-3, and BS5514 standard conditions of 100 kPa (29.61 in Hg), 27°C (81°F), and 60% relative humidity.

Fuel rates are based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.).

Marine Auxiliary Engines are mainly used as generator set engines; however, they can be used for electrically driven pumps, winches, conveyors, thrusters, when it is specified. Engines can be radiator cooled or heat exchanger/keel cooled.

**BUILT FOR IT.™**



# TECHNICAL DATA

## C32 Marine Auxiliary / DEP Engine

### CONSTANT SPEED FUEL & DEF CONSUMPTION - 1500 RPM, 50 HZ

| % Power | Brake Specific Fuel Consumption |           |     |          | DEF Consumption<br>32.5 % Concentration |           | DEF Consumption<br>40 % Concentration |           |
|---------|---------------------------------|-----------|-----|----------|---|-----------|---------------------------------------|-----------|
|         | bhp                             | lb/bhp-hr | bkW | g/bkW-hr | Gal/hr                                  | Liters/hr | Gal/hr                                | Liters/hr |
| 100     | 1172                            | 0.326     | 874 | 198.2    | 3.8                                     | 14.3      | 2.8                                   | 10.8      |
| 90      | 1055                            | 0.327     | 787 | 199.2    | 3.2                                     | 12.4      | 2.5                                   | 9.3       |
| 80      | 938                             | 0.332     | 699 | 202.3    | 2.6                                     | 9.8       | 2.0                                   | 7.4       |
| 70      | 820                             | 0.331     | 612 | 201.3    | 2.4                                     | 8.8       | 1.8                                   | 6.7       |
| 60      | 703                             | 0.336     | 524 | 204.2    | 1.9                                     | 7.0       | 1.4                                   | 5.2       |
| 50      | 586                             | 0.342     | 437 | 208.1    | 1.4                                     | 5.1       | 1.0                                   | 3.8       |
| 40      | 469                             | 0.350     | 350 | 212.6    | 1.1                                     | 4.0       | 0.8                                   | 3.0       |
| 30      | 352                             | 0.359     | 262 | 218.6    | 0.8                                     | 2.9       | 0.6                                   | 2.3       |

For Cat® dealers:  
Please reference TMI  
Web for most current  
information.

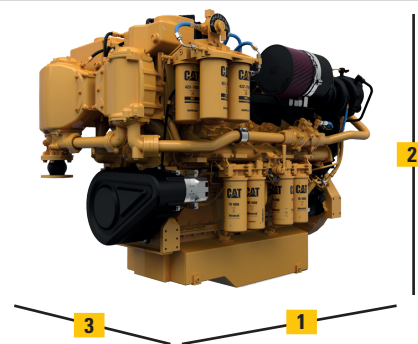
- ISO 3046/1 fluid consumption tolerance of -0/+5%
- Reference 32.5% DEF density of 1.0895 kg/L
- Reference 40% DEF density of 1.1120 kg/L

Consult your local Cat® dealer to create a customized engine  
TCO (Total Cost of Ownership) analysis specific to your vessel.

### DIMENSIONS & WEIGHT

|      | Length (1)      | Height (2)      | Width (3)       | Engine dry weight |
|------|-----------------|-----------------|-----------------|-------------------|
| min. | 83.9 in/2130 mm | 59.3 in/1507 mm | 57.1 in/1451 mm | 6950 lb/3152 kg   |
| max. | 89.8 in/2280 mm | 63.5 in/1613 mm | 57.3 in/1455 mm | 7160 lb/3248 kg   |

Note: Do not use these dimensions for installation design.  
See general dimension drawings for detail.



### CLEAN EMISSIONS MODULE (CEM)

| Dimensions & Weight |                  |                |                 |                |
|---------------------|------------------|----------------|-----------------|----------------|
| Model               | Length (1)       | Height (2)     | Width (3)       | Weight¹        |
| 6 Brick Z-Flow      | 147.7 in/3751 mm | 23.5 in/597 mm | 43.5 in/1106 mm | 1246 lb/565 kg |
| 6 Brick U-Flow      | 85.0 in/2159 mm  | 23.5 in/597 mm | 56.9 in/1445 mm | 1235 lb/560 kg |
| Dosing Cabinet      | 37.4 in/949 mm   | 22.8 in/579 mm | 18.8 in/477 mm  | 209 lb/95 kg   |

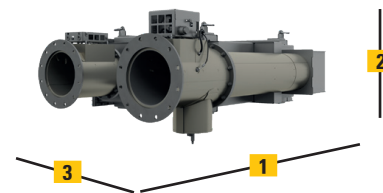
¹ Weight with catalysts installed

The C32 engine requires Selective Catalyst Reduction (SCR) technology.  
The easy-to-install Cat® SCR System is an exhaust gas aftertreatment solution  
compliant with IMO III emission standards.

- Proven technology to meet IMO III emission standards
- Maintains engine efficiency, durability and reliability
- Easy to install with minimum impact to vessel design
- Compact package from one single source
- Available for new builds and retrofits
- For detailed dimensions and installation requirements, please refer to latest revision of A&I guide LEBM0023.

#### Clean Emissions Module (CEM)

Available in U-flow configurations (shown)  
and Z-flow configurations.



#### Dosing Cabinet



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