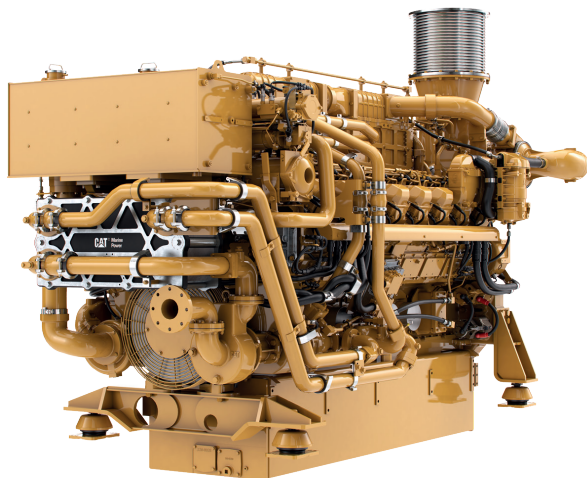


# 3516E

## MARINE PROPULSION ENGINE

2240 bkW (3004 bhp) @ 1800 rpm



3516E Marine Propulsion Engine  
U.S. EPA Tier 4 Final / IMO III

### ENGINE SPECIFICATIONS

#### Configurations

Vee 16, 4-stroke-cycle diesel

#### Emissions

U.S. EPA Tier 4 Final certified  
IMO III emissions certified  
(SCR required)

#### Rated Engine Speed

1800 rpm

#### Bore x Stroke

170 mm x 215 mm  
6.69 in x 8.46 in

#### Displacement

78 Liter  
4765 cu in

#### Aspiration

Turbocharged-aftercooled  
aspiration

#### Governor

Electronic (A5 ECM)

#### Refill Capacity

Lube Oil System w/ oil filter change:  
799 L (211 gal)/1000 hrs pan

#### Oil Change Interval

1000 hrs

#### Cooling

Heat exchanger or keel cooled

#### Flywheel Housing

SAE No. 00 with SAE No. 00 flywheel  
(183 teeth)

#### Rotation

Counterclockwise from flywheel end

### FEATURES AND BENEFITS

- Utilizes SCR Technology to enable U.S. EPA Tier 4 Final / IMO III 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
- Advanced engine combustion design process utilizing optimum configurations and cylinder geometry for maximum engine efficiency
- Enhanced control of fuel injection optimized through crank timing and the latest A5 ECM technology
- Optimal fuel injector nozzle geometry and electronic injection control for improved fuel delivery
- Strengthened cylinder heads and valves for increased durability and peak cylinder pressure capability resulting in higher engine duty cycle capability
- Industry-leading warranty coverage for factory packaged components
- Global dealer network for service in any location

### STANDARD ENGINE EQUIPMENT

- Corrosion-resistant aftercooler core
- Dual A5 engine control modules with electronic unit injection and low pressure fuel system
- Dual turbochargers with water-cooled bearings and heat shields
- Vibration damper and guard
- Meets SOLAS regulations
- Duplex Fuel and Oil Filtration
- Auxiliary fresh water pump
- Gear Driven, centrifugal jacket water pump with 40% more capacity

### OPTIONAL ATTACHMENTS

- Plate-type heat exchanger with integrated SCAC and JW Water expansion tanks
- Special appearance packages with chrome covers
- Marine society certifications
- Power take-off
- Certified marine alarm and protection safety system
- Standard instrument panel with color touchscreen display
- Mounting rails and trunnion mount options
- Engine mounted fuel cooler (SCAC Water Cooled)
- Sea water pump with 25% more capacity for cooling auxiliary vessel equipment
- Closed crank case ventilation

### A RATING (UNRESTRICTED CONTINUOUS) DEFINITION

Typical applications: For vessels operating at rated load and rated speed up to 100% of the time without interruption or cyclical load (80% to 100% load factor). Typical operation ranges from 5000 to 8000 hours per year.

# TECHNICAL DATA

## 3516E Marine Propulsion Engine

### PROP DEMAND FUEL & DEF CONSUMPTION (A RATING)

rpm	Brake Specific Fuel Consumption				DEF Consumption 32.5 % Concentration		DEF Consumption 40 % Concentration	
	bhp	lb/bhp-hr	bkW	g/bkW-hr	Gal/hr	Liters/hr	Gal/hr	Liters/hr
1800	3004	0.329	2240	200.4	7.9	30.0	6.0	22.7
1600	2109	0.320	1573	194.5	6.4	24.1	4.8	18.2
1400	1413	0.325	1054	197.6	5.2	19.8	3.9	14.9
1200	890	0.341	664	207.7	4.4	16.6	3.3	12.6
1000	515	0.352	384	214.2	2.0	7.6	1.5	5.7
800	264	0.367	197	223.4	0.3	1.2	0.2	0.9

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

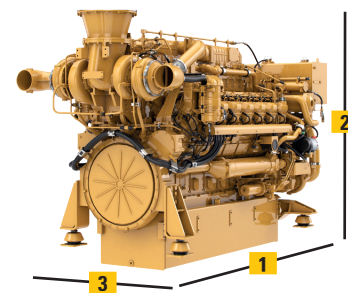
- ISO 3046/1 fluid consumption tolerance of -0/+5%
- Reference 32.5% DEF density of 1.0895 kg/L
- Reference 40% DEF density of 1.1120 kg/L

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.	146.6 in/3724 mm	90.9 in/2309 mm	72.8 in/1850 mm	22,060 lb/10,006 kg
max.			87.9 in/2230 mm	

Note: Do not use these dimensions for installation design.  
See general dimension drawings for detail - Drawing 5139209 (LH)/ 5139210 (RH)

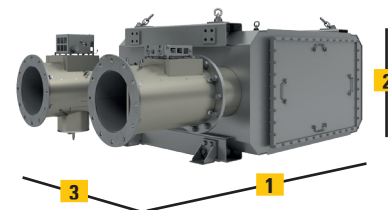


### CLEAN EMISSIONS MODULE (CEM)

Dimensions & Weight				
Model	Length (1)	Height (2)	Width (3)	Weight
16 Brick Z-Flow	3678.8 mm 144.83 in	1003.3 mm 39.50 in	1769.9 mm 69.67 in	1399 kg 3084.3 lb
16 Brick U-Flow	2945.4 mm 115.96 in	1003.2 mm 39.50 in	1769.7 mm 69.67 in	1390 kg 3064.43 lb
Dosing Cabinet	948.6 mm 37.35 in	534.5 mm 21.05 in	477.3 mm 18.79 in	---

#### Clean Emissions Module (CEM)

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



#### Dosing Cabinet



The 3516E engine requires Selective Catalyst Reduction (SCR) technology. The easy-to-install Cat® SCR System is an exhaust gas aftertreatment solution compliant with U.S. EPA Tier 4 Final / IMO III emission standards.

- Proven technology to meet U.S. EPA Tier 4 Final / 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.

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To find your nearest dealer, please visit: [www.cat.com/marine](http://www.cat.com/marine)

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