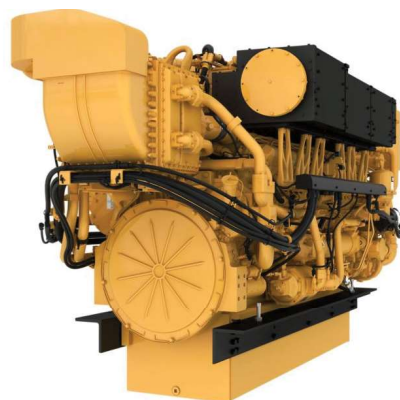
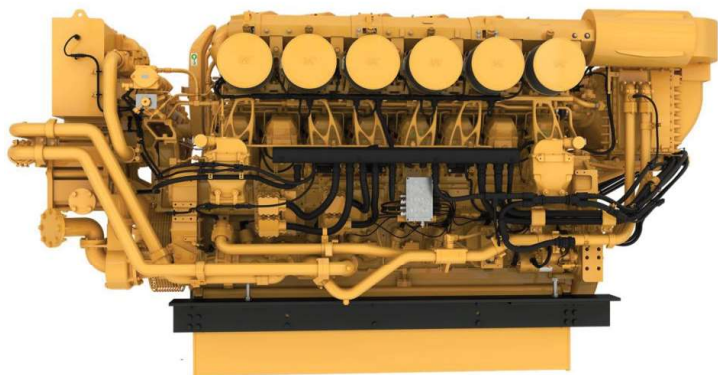


# 3516E

## Marine Propulsion Engine

### High Performance



## ENGINE SPECIFICATIONS

<b>CONFIGURATION</b>	V 16, 4-Stroke Cycle Diesel
<b>EMISSIONS</b>	IMO II / III Switchable
<b>RATED ENGINE SPEED</b>	1800 rpm
<b>DISPLACEMENT</b>	78.1 L / 4766 in <sup>3</sup>
<b>ASPIRATION</b>	Sequential Turbocharged / Aftercooled
<b>GOVERNOR</b>	Electronic (A5 ECM)

<b>BORE X STROKE</b>	170 mm x 215 mm / 6.69 in x 8.46 in
<b>REFILL CAPACITY LUBE OIL SYSTEM W/OIL FILTER CHANGE</b>	250 Hr. Shallow Sump: 189 L / 50 US gal 1000 Hr. Deep Sump: 798 L / 211 US gal
<b>OIL CHANGE INTERVAL</b>	250 hours (Shallow Sump) 1000 hours (Deep Sump)
<b>ROTATION (FROM FLYWHEEL END)</b>	Clockwise or Counterclockwise
<b>COOLING</b>	Heat Exchanger or Keel Cooled

## KEY FEATURES & BENEFITS

- Advanced combustion and sequential air system for optimized engine performance, acceleration, and efficiency
- Optimized Power Density (Rated Power vs. Weight) and Streamlined Engine Packaging (L x W x H)
- Enhanced control of fuel injection optimized through crank timing and the latest A5 ECM technology
- Utilizes a closed loop air assisted DEF dosing strategy that contributes to efficient mixing and control, extended service life before replacement, adapts to urea quality
- Optimized fuel injector nozzle geometry and electronic injection control for improved fuel delivery
- Improved low speed torque capability designed for tug and hybrid configurations
- Global dealer network for service in any location
- Utilizes Caterpillar's SCR technology for IMO III certification

## STANDARD EQUIPMENT

- Corrosion-resistant aftercooler core
- Dual A5 engine control modules with electronic unit injection and low pressure fuel system
- Sequential water-cooled turbochargers
- Water-cooled exhaust manifold
- Vibration damper and guard
- Duplex fuel filtration
- Self-cleaning (maintenance free) & centrifugal oil filtration
- Serviceable hard heat shields
- Meets SOLAS regulations
- LECP2 instrument control panel

## OPTIONAL ATTACHMENTS

- Rear-mounted plate-type heat exchanger
- SCAC and Jacket Water expansion tank
- Marine Classification Society compliance
- Power take-off
- Certified Marine alarm and protection system
- LECP3 instrument control panel
- Sea water auxiliary pump
- Mounting rails
- CW or CCW rotation
- Closed crankcase ventilation

# RATINGS & FUEL CONSUMPTION

## PROPULSION ENGINES

Rating	mhp	bhp	bkW	rpm	U.S. g/h	g/bkW-hr	IMO	U.S. EPA	EU	China
C	3195	3151	2350	1800	147.9	202.6	II/III	T4 <sup>1</sup>	NC	NC
D	3549	3500	2610	1800	165.6	204.1	II/III	T4 <sup>1</sup>	NC	NC
D	3807	3755	2800	1800	178.1	204.6	II/III	T4 <sup>1</sup>	NC	NC
D	4079	4023	3000	1800	192.3	206.2	II/III	T4 <sup>1</sup>	NC	NC

<sup>1</sup> Contact factory for T4 availability  
ISO 3046 / fluid consumption tolerance of -0 /+5 %

### Rating Definition Generator Sets and Auxiliary Engines:

#### C Rating (Maximum Continuous)

Typical applications: For vessels operating at rated load and rated speed up to 50% of the time with cyclical load and speed (20% to 80% load factor).  
Typical operation ranges from 2000 to 4000 hours per year.

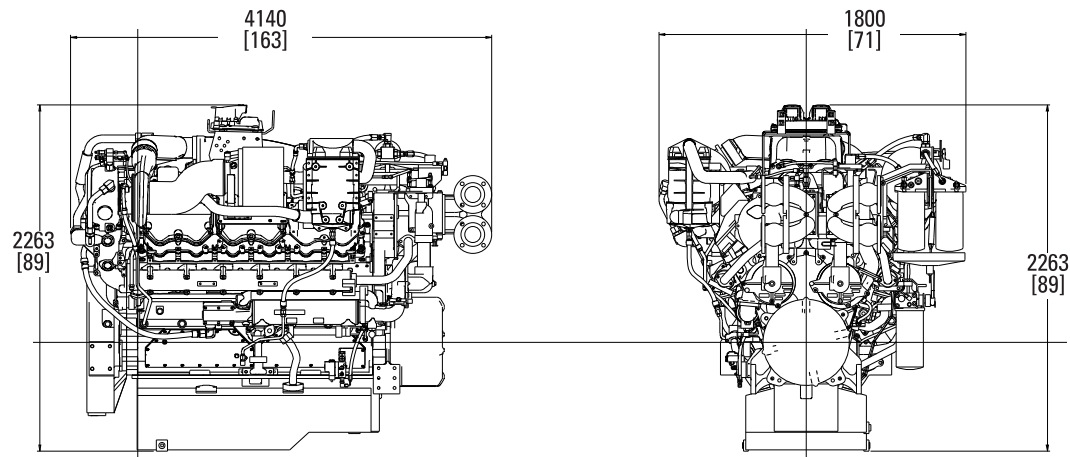
#### D Rating (Intermittent Duty)

Typical Applications: For Vessels operating at rated load and rated speed up to 16% of the time (up to 50% load factor).  
Typical operation ranges from 1000 to 3000 hours per year.

## ENGINE DIMENSIONS & WEIGHT

LENGTH (APPROX.)	163 in / 4140 mm
HEIGHT (APPROX.)	89 in / 2263 mm
WIDTH (APPROX.)	71 in / 1800 mm
DRY WEIGHT (APPROX.)	25353 lb / 11500 kg

Note: Dimensions and Weight are nominal and should not be relied upon for design. Contact dealer for your specific engine parameters.



# CLEAN EMISSIONS MODULE (CEM)

Dimensions and 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	---

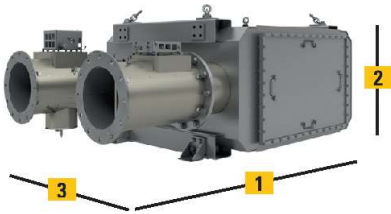
The 3516E engine requires Selective Catalyst Reduction (SCR) technology.

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
- IMO II-III switchable calibrations available
- 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.

## Aftertreatment Model

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



## Dosing Cabinet

