Cat® 3516E Industrial Engine
Industrial

Image shown may not reflect actual engine configuration.

The Cat® 3516E industrial diesel engine is offered at a continuous rating of 1566 kW (2100 hp) @ 1650 rpm and is designed for applications that require continuous heavy-duty service. These engines are capable of being operated at maximum power and speed up to 100% of the time without interuption or load cycling. The 3516E is certified to meet EU Stage V, U.S. EPA Tier 4 Final, and California Air Resources Board (CARB) standards, providing a single solution for higher regulated markets and simplifying installations for OEMs.

The 3516E offers unsurpassed performance and durability in a wide array of industries and applications, including shredders, chippers, grinders, bore and drill rigs, and pumps as well as other applications in forestry, general industrial, material handling, and mining.

Specifications

Power Rating		
Engine Configuration	V16, 4-Stroke-Cycle Diesel	
Bore	170 mm	6.69 in
Stroke	215 mm	8.46 in
Displacement	78 L	4760 in^3
Aspiration	Turbocharged-Aftercooled	
Compression Ratio	16.5:1	
Combustion System	MEUI	
Rotation (from flywheel end)	Counterclockwise	
Cooling System Capacity (engine)	200 L	12,205 in^3
Lube System (refill)*	308 L	325.5 qts

*Varies based on sump/oil pan selection

Engine Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	3105 mm	122.24 in
Width	1616 mm	63.62 in
Height	2108 mm	83.00 in
Weight – Net Dry (basic operating engine without attachments)	8176 kg	18025 lbs

Aftertreatment Dimensions (Approximate. Final dimensions dependent on selected options.)		
Length	2347 mm	92.40 in
Width	2075 mm	81.71 in
Height	809 mm	31.86 in
Weight – Net Dry (basic operating engine without attachments)	1079 kg	2378 lbs

Benefits & Features

High Continuous Power Density

The A-Rating means the 3516E is able to deliver the engine's full 2100 hp (1566 kW) @1650 rpm continuously without interruption or load cycling. That's the type of heavy duty usage that some applications demand and the 3516E delivers it.

Reliable, Quiet, and Durable Power

World-class manufacturing capability and processes coupled with proven core engine designs assure reliability, quiet operation, and many hours of productive life.

Fuel Efficiency

Fuel consumption is optimized to match operating cycles of a wide range of equipment and applications while maintaining low operating costs. Even with the addition of SCR aftertreatment and the required diesel exhaust fluid, the 3516E costs 1.3% less to operate than its predecessor.

Installation

The 3516E is certified for U.S. EPA Tier 4 Final, EU Stage V, and CARB, allowing a single installation to be used globally.

Quality

Every Cat engine is manufactured to stringent quality standards in order to assure customer satisfaction.

World-class Product Support Offered Through Global Cat Dealer Network

- Scheduled maintenance, including S•O•S℠ sample
- Customer Value Agreements (CVA)
- Extended Service Coverage (ESC)
- Superior dealer service network
- Extended dealer service network through the Cat Industrial Service Distributor (ISD) program

Standard Equipment

Air Inlet System

- Air-to-Air Aftercooled (ATAAC)
- Four turbochargers, center mounted

Control System

- ADEM™ A5 ECM Electronic Engine Control LH with electronic unit inject or fuel system (10 amp DC power required to drive electronic engine control)

Cooling System

- Thermostats and housing
- Gear-driven centrifugal jacket water pump
- Connections for radiator cooling

Exhaust System

- Exhaust manifold, dry
- Four turbochargers with watercooled bearings
- Two exhaust outlets, 203 mm (8 inch) round flange

Flywheels and Flywheel Housing

- Flywheel, SAE No. 18 or SAE No. 21
- Flywheel housing, SAE No. 0 or SAE No. 00
- SAE standard rotation

Fuel System

- Fuel filter, LH spin-on type
- Fuel transfer pump
- Electronically controlled unit injectors

Instrumentation

- No standard instrument or gauge panel

Lube System

- Crankcase breather, top mounted
- Oil cooler
- Oil filler and dipstick, LH
- Oil pump
- Oil filter, LH, spin-on type
- Front sump oil pan, 500-hour change interval

Mounting System

- Trunnion front support

Power Take Offs

- Front housing, two-sided

Standard Equipment (continued)

Protection System

- ADEM A5 ECM monitoring system to provide customer programmable engine derate strategies to protect against adverse operating condition
- Emergency stop logic inputs provided at 70-pin customer interface connection

Starting System

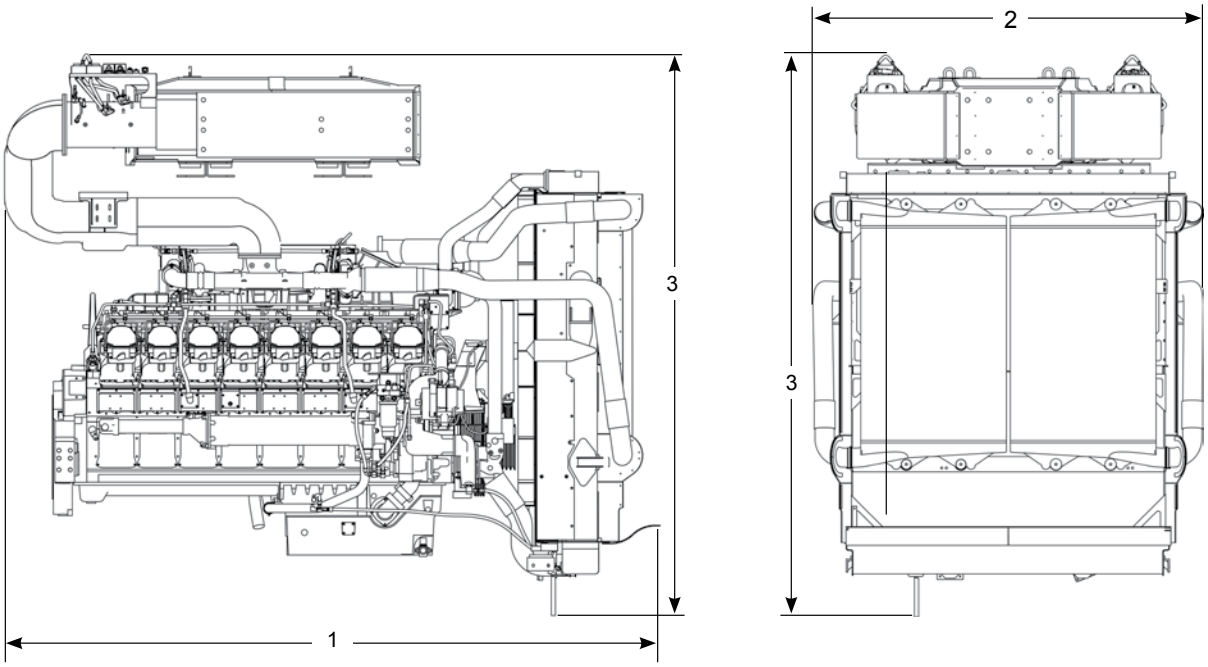
- Dual 24V electric starting motor, LH, unwired

General

- Caterpillar yellow paint standard, optional colors available
- Vibration damper lifting eyes

Dimensions

Engine and Aftertreatment Assembly



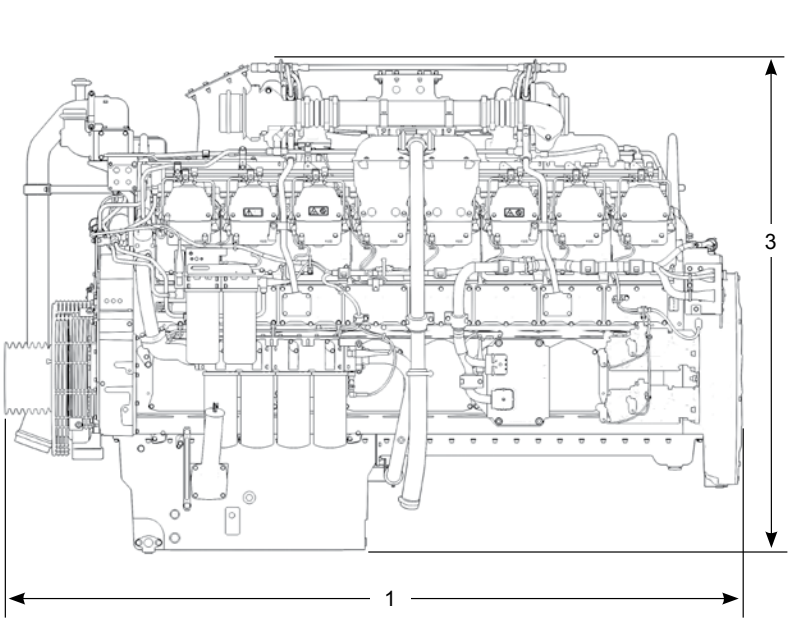
(1) Length
4323 mm (170.2 in)

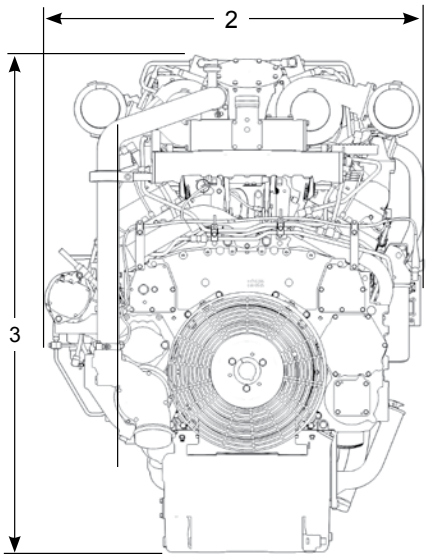
(2) Width
2570 mm (101.2 in)

(3) Height
3701 mm (146.7 in)

Dimensions (continued)

Engine



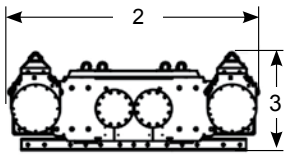


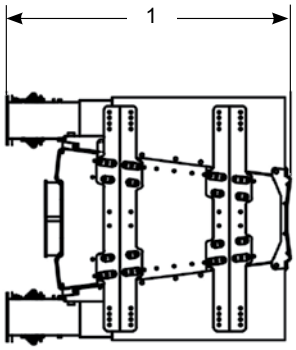
(1) Length
3105 mm (122.2 in)

(2) Width
1616 mm (63.6 in)

(3) Height
2108 mm (83.0 in)

Aftertreatment



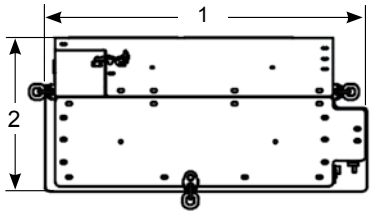


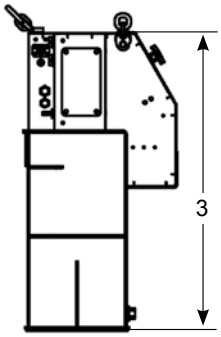
(1) Length
2347 mm (924 in)

(2) Width
2075 mm (81.7 in)

(3) Height
809 mm (31.9 in)

PETU





(1) Length
1328 mm (52.3 in)

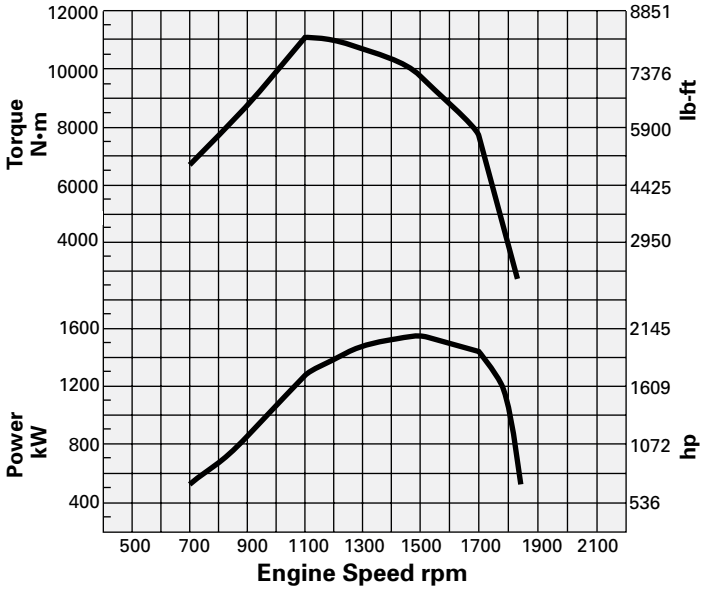
(2) Width
637 mm (25.1 in)

(3) Height
1231 mm (48.5 in)

Note: Final dimensions dependent on selected options

Performance Data

Turbocharged-Aftercooled (TA) **1566 kW/2100 hp**



Rating	Aspiration	Rated Speed rpm	Rated Power bkW	Rated Power bhp	Peak Torque N•m	Peak Torque lb-ft	Speed rpm
A	TA	1650	1566	2100	11220	8275	1200

Rating Definitions and Conditions

IND-A (Continuous) for heavy duty service where the engine is operated at maximum power and speed up to 100% of the time without interruption or load cycling.

Rating Conditions are based on SAE J1995, inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25ºC (77ºF) temperature. Performance measured using a standard fuel with fuel gravity of 35º API having a lower heating value of 42 780 kJ/kg (18,390 btu/lb) when used at 29ºC (84.2ºF) with a density of 838.9 g/L.