C18 ACERT™
Locomotive Engine

EU Stage V Locomotive
563 bkW/755 bhp @ 1800 rpm
600 bkW/805 bhp @ 1800 rpm

Image shown may not reflect actual configuration

Specifications

Cat® C18 ACERT™ Locomotive Engine	Metric	Imperial (English)
Configuration	I-6, 4-Stroke-Cycle Diesel	
Bore	145 mm	5.71 in
Stroke	183 mm	7.20 in
Displacement	18.1 L	1104.5 in^3
Aspiration	Turbocharged-Aftercooled	
Compression Ratio	16.0:1	
Rotation (from flywheel end)	Counterclockwise	
Capacity for Liquids — Cooling System Lube Oil System (refill)	 26.9 L 74 L	 7.1 U.S. gal 19.5 U.S. gal
Weight, Net Dry (approx) Engine (including flywheel)* Aftertreatment	 1542 kg 100 kg	 3399 lbs 220.5 lbs

*Final weight is dependent upon configuration

Features

Engine Design
Proven reliability and durability of engine and aftertreatment
Robust diesel strength design prolongs life and lowers owning and operating costs
Broad operating speed range
Diesel Oxidation Catalyst (DOC) system to meet EU Stage V emission standards
DEF free solution – eliminates the storage, logistics, and issues involved with SCR/DEF design engines
Equipped with dual turbo exhaust system for high power applications

Advanced Digital Engine Management
ADEM™ A4 engine management system integrates speed control, air/fuel ratio control, and ignition/detonation controls into a complete engine management system with integrated digital ignition, engine protection, and monitoring. ADEM A4 has improved user interface, display system, shutdown controls, and system diagnostics.

Full Range of Attachments
Large variety of factory-installed engine attachments reduces packaging time.

Testing
Every engine is full-load tested to ensure proper engine performance.

Product Support Offered Through Global Cat Dealer Network
More than 2,200 dealer outlets
- Caterpillar factory-trained dealer technicians service every aspect of your locomotive engine
- Caterpillar parts and labor warranty
- Preventive maintenance agreements available for repair-before-failure options

S•O•S℠ program matches your oil and coolant samples against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience
Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.
- Cast engine blocks, heads, cylinder liners, front and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site
For all your rail power requirements, visit www.cat.com/railway-power

Standard Equipment

Air Inlet System
Turbocharged-aftercooled

Control System
Electronic control system
Automatic altitude compensation
Power compensated for fuel temperature
Configurable software features
Engine monitoring system SAE J1939 broadcast and control,
Integrated Electronic Control Module (ECM), fuel cooled
Remote fan control

Cooling System
Vertical outlet thermostat housing
Centrifugal water pump
Guidance on cooling system design available to ensure machine reliability

Exhaust System
Exhaust dry manifold
Emission solution that includes a passive Diesel Oxidation Catalyst (DOC)

Flywheels and Flywheel Housing
SAE 1 flywheel housing

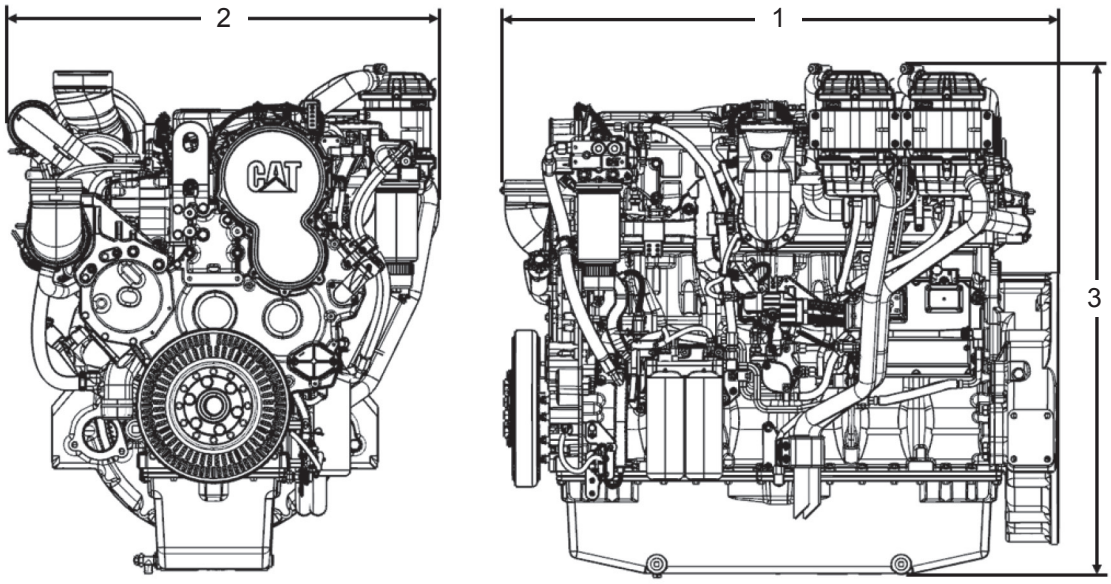
Fuel System
Mechanical Electronic Unit Injection (MEUI™)
Primary fuel filter
Secondary fuel filters
Fuel transfer pump
Electronic fuel priming pump

Lube System
Oil cooler — LH and RH provided
Oil filler — LH and RH provided
Oil filter
Oil dipstick — LH and RH provided
Oil pump (gear driven)

Power Take-off
SAE A, SAE B, SAE C drives available
Front housing PTO available for hydraulic pump

General
Caterpillar Yellow paint
Vibration damper
Lifting eyes

Engine Dimensions

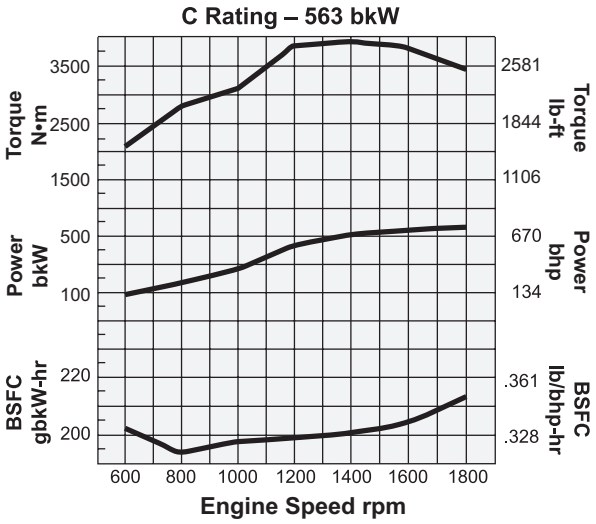


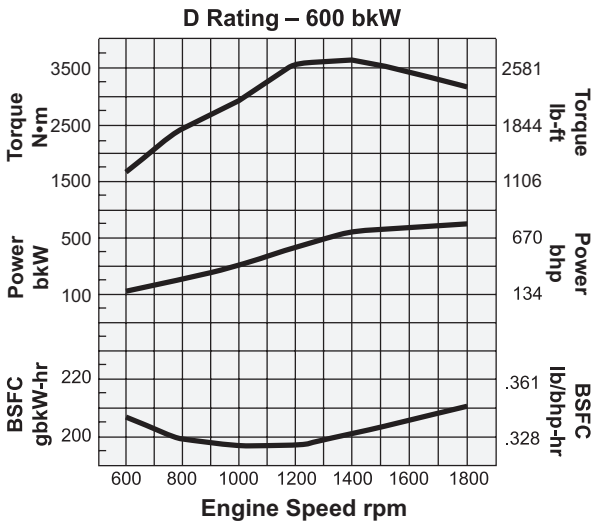
(1) Length — 1462 mm (57.5 in) (2) Width — 1194 mm (47 in) (3) Height — 1296 mm (51 in)

Note: Final dimensions dependent on selected options

Performance Data

Turbocharged-Aftercooled — 1800 rpm





Rating	Peak Power			Peak Torque		
	Speed rpm	Peak Power bkW	Peak Power bhp	Speed rpm	Peak Torque N•m	Peak Torque lb-ft
C	1800	563	755	1300	3495	2578
D	1800	600	805	1300	3689	2721

Ratings Definitions and Conditions

C Rating (Intermittent) service where maximum power and/or speed are cyclic (time at full load not to exceed 50% of the duty cycle).

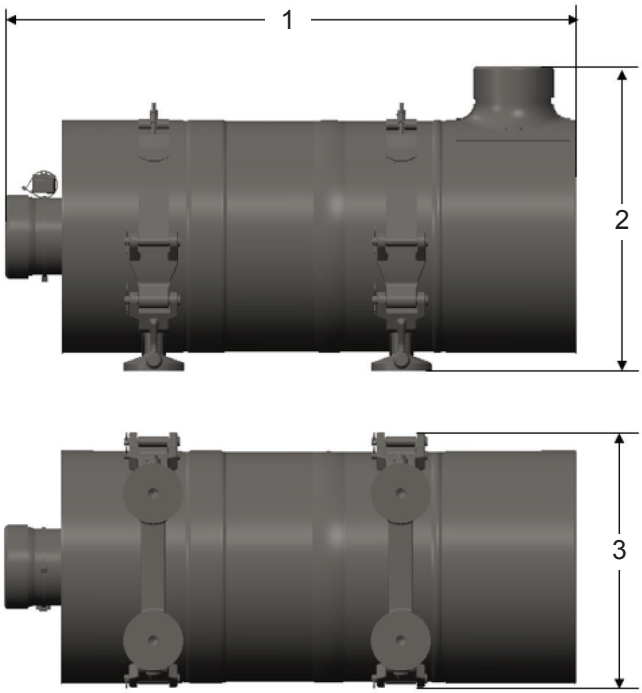
D Rating service where maximum power is required for periodic overloads (time at full load not to exceed 10% of the duty cycle).

Performance obtained and corrected in accordance with ISO3046/2 standard atmospheric conditions of 99 kPa (29.31 in Hg) and 25°C (77°F). These values correspond to the standard atmospheric pressure and temperature as shown on SAE J1995.

Performance and fuel consumption are based on 35 API 15°C (60°F) gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) where the density is 839.9 g/liter (7.001 lb/U.S. gal). Tolerance is +/-3%.

Engine equipped with fuel, lube oil, and water pumps.

Aftertreatment Configuration



BASE CONFIGURATION SHOWN
Approximate Size and Weight
(1) Length — 950 mm (37.4 in)
(2) Width — 506 mm (19.9 in)
(3) Height — 420 mm (16.5 in)

Weight — 100 kg (220.5 lb)

Standard Emissions Control Equipment

DOC: Diesel Oxidation Catalyst

NRS: NOx Reduction System

Materials and specifications are subject to change without notice.
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