



Image shown may not reflect actual configuration

Cat® 3512E DGB SCAC

Well Service Engine

The Cat® 3512E DGB SCAC is a V 12, 4-stroke diesel engine with Dual Gas Blend (DGB) capability designed for land well service applications. Features SCAC (Separate Circuit Aftercooled), ADEM A5/A6 DGB electronic controls, and meets U.S. EPA Tier 4 Final emission standards. Power range: 1678-1864 bkW (2250-2500 bhp) at 1800 rpm. DEF-free Tier 4 Final solution with EGR/DOC technology.

Features and Benefits:

DEF-FREE TIER 4 FINAL PERFORMANCE

- Meets U.S. EPA Tier 4 Final emission standards using an EGR, DOC, and common rail fuel system architecture
- DEF-free design eliminates SCR systems and DEF fluid handling requirements, simplifying operation in remote well service environments
- Reduces maintenance burden and operating costs by avoiding DEF-related components and service considerations

ENGINEERED FOR CONTINUOUS HIGH-LOAD OILFIELD OPERATION

- SCAC (Separate Circuit Aftercooling) system helps maintain stable intake air temperatures and consistent engine performance across demanding well service applications, including fracturing, cementing, and kill pump operations. well service applications, including fracturing, cementing, and kill pump operations
- Broad operating speed range provides flexibility across varying load profiles and duty cycles
- Robust diesel engine design delivers long service life and durability in harsh oilfield conditions

ADVANCED CONTROLS & INTEGRATED PROTECTION

- ADEM™ A5 engine management system integrates speed control, air/fuel management, engine protection, and monitoring into a single platform
- Customer-programmable deration strategies help protect the engine during adverse operating conditions
- Air shutoff integration and emergency stop logic enhance equipment protection and operational safety

Specifications

Configuration	V 12, 4-Stroke-Cycle Diesel	Governor and Protection	Electronic (ADEM™5)
Emissions	U.S. EPA Tier 4 Final	Lube Oil System (refill)	170 L (45 gal)
Rated Engine Speed	1800 RPM	Cooling System (Engine)	197 L (52 gal)
Bore	170 mm (6.7 in)	Oil Change Interval	250 - 500 hours
Stroke	215 mm (8.5 in)	Rotation (from flywheel end)	Counterclockwise
Displacement	58.9 L (3596 in³)	Flywheel and Flywheel Housing	SAE No. 0
Aspiration	SCAC (Separate Circuit Aftercooled)	Flywheel Teeth	151 Teeth
Engine Control	ADEM A5 / A6 DGB		



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Ratings and Fuel Consumption

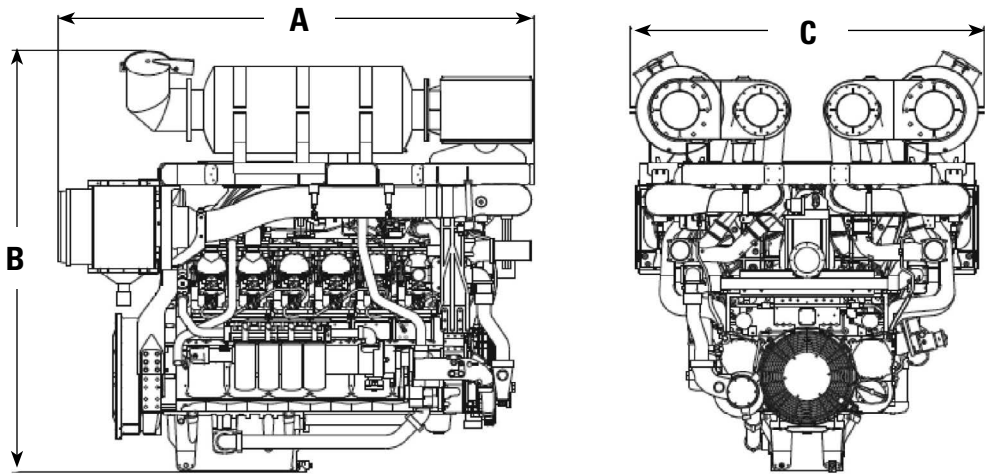
Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Continuous 60 Hz ekW (kVA)	Emissions Performance
1000 (1250)	1000 (1250)	910 (1137)	830 (1038)	Low Fuel Consumption

Rating Definitions and Conditions

Oil & Gas – E Rating: For fire pump, offshore cranes, well fracturing, and cementing/kill pump – the power and speed capability of the engine which can be used to power high-pressure well service equipment. For C32 engines and smaller, the maximum average load factor is 35%. For well fracturing engines, the maximum average load factor is 50%, and the maximum time at rated load and speed is less than 2.5 hours per year. For cementing and kill pump engines, the maximum average load factor is 40%, and the maximum time at rated load and speed is less than 2 hours per year.

Dimensions

All dimensions are approximate.



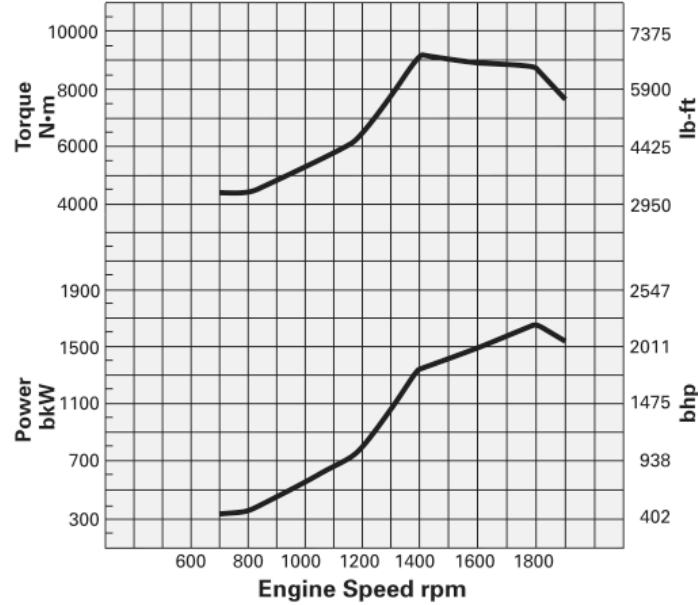
A Length	3494.0 mm	138.0 in	C Width	2308.0 mm	91.0 in
B Height	2747.0 mm	108.0 in	Weight (wet)	10,139 kg	22,352 lb

Note: Do not use for installation design. See general dimension drawings for detail. Weights and dimensions are approximations.

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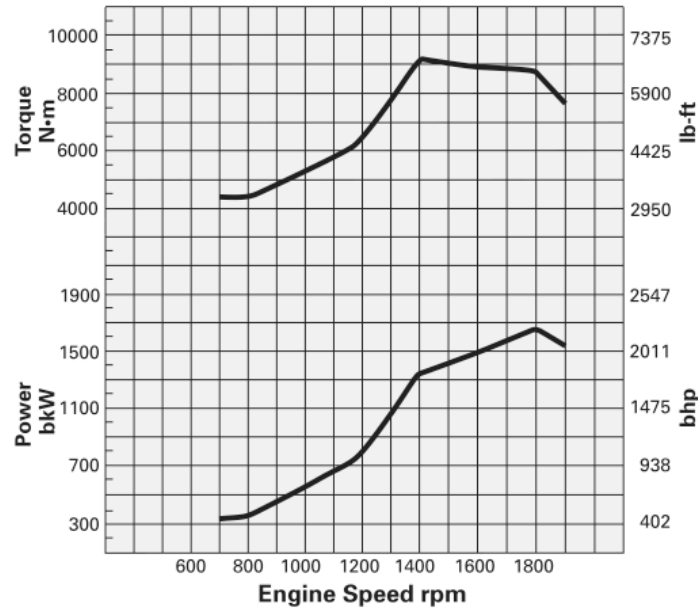
Performance Curves

1678 bkW (2250 bhp) @1800 rpm



Heat Rejection Data										
Engine Speed RPM	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1,800	1,678	2,250	1,299	73,907.0	212	12,056	1,369	77,875	187	10,622

1864 bkW (2500 bhp) @1800 rpm



Heat Rejection Data										
Engine Speed RPM	Engine Power		Rej to JW		Rej to Atmos		Rej to Exh		From 2nd Stage Aft Clr	
	bkW	bhp	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min	bkW	Btu/min
1,800	1,864	2,500	1,440	81,920.0	233	13,238	1,498	85,165	207	11,795

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Standard and Optional Equipment

Standard Equipment

Air Inlet System

- Heavy-duty air cleaners (2 element with precleaners)

Control System

- Cat ADEM A6 DGB controls

Cooling System

- SCAC system
- Thermostats and housing
- Jacket and separate circuit water pump, gear-driven centrifugal

Exhaust System

- Dual DDC
- Exhaust manifold, dry, bellows connection
- Four turbochargers with water-cooled bearings
- Exhaust outlet, dual 10-inch ANSI round flange

Flywheel and Flywheel Housings

- Flywheel, SAE No. 0, 151 teeth

Fuel System

- Primary/secondary fuel filters
- Fuel priming pump (electric)
- Common rail fuel system
- Fuel transfer pump
- Clean fuel module boost pump
- Engine mounted gas filter, water coalescing type

Lubrication System

- Closed crankcase ventilation
- Oil cooler - Oil filler and dipstick LH
- Oil pump
- Oil filter RH spin-on type
- Oil pan drain valve 1" NPT
- Oil scavenger pump

Mounting System

- Trunion front support
- Two-sided flywheel housing

Optional Equipment

Air Inlet System

- Heavy-duty air cleaners (2 element with precleaners)

Control System

- Local speed throttle control
- Throttle position sensors

Cooling System

- Coolant conditioner
- JW inlet and outlet hose barb connections
- JW outlet coupling-style connections
- JW inlet weld-flange connection
- SCAC inlet and outlet hose barb connections and coupling-style connections
- Water level switch gauge
- JW Heater installation connections

Exhaust System

- Flex pipe kit
- Residential mufflers (painted steel and stainless steel) with outlet elbow and rain cap

Flywheel and Flywheel Housings

- Allison and Twin Disc flywheel options

Instrumentation

- Product Link harness extensions
- LAN adapters

Lubrication System

- Rear or front deep sump oil pan
- 250 or 500-hour changing intervals

Power Take-Offs

- Front crankshaft stub shaft
- Front crankshaft adapter
- Accessory drive - upper RH

Protection System

- Hydraulic actuated air shutoff

Starting System

- Hydraulic starter - LH
- Dual hydraulic starter - LH
- Manual engine barring device
- EIRS automatic start/stop system available on factory orders

General

- 80, 95, or 150 amp charging alternator
- Air compressor
- Transmission oil cooler
- Transmission oil cooler 2-1 connections
- Torque converter connections
- Additional paint selections

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