



Image shown may not reflect actual configuration

Cat® 3512E ATAAC

Well Service Engine

The Cat® 3512E ATAAC is a V 12, 4-stroke diesel engine designed for land well service applications including fire pumps, offshore cranes, well fracturing, and cementing/kill pumps. Features ATAAC (Air-to-Air Aftercooling), ADEM A5 electronic controls, and meets U.S. EPA Tier 4

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

- ATAAC (Air-to-Air Aftercooling) system supports consistent performance across demanding 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 / EU Stage V	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	ATAAC (Air-to-Air Aftercooled)	Flywheel Teeth	151 Teeth
Clean Emissions Module (CEM)	Dual DOC - Robust Metallic Substrate		



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Ratings and Fuel Consumption

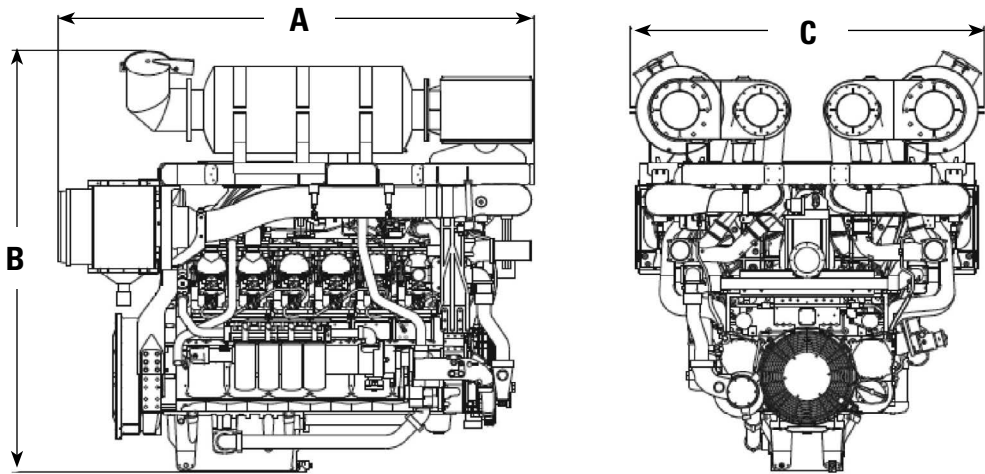
Standby 60 Hz ekW (kVA)	Mission Critical 60 Hz ekW (kVA)	Prime 60 Hz ekW (kVA)	Continuous 60 Hz ekW (kVA)	Emissions Performance
1000 (1250)	1000 (1250)	910 (1137)	830 (1038)	Low Fuel Consumption

Rating Definitions and Conditions

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, max avg load factor is 35%. For well fracturing engines, max avg load factor is 50%, max time at rated load <2.5 hours/year. For cementing/kill pump engines, max avg load factor is 40%, max time at rated load <2 hours/year. Engine Performance corrected to inlet air standard conditions of 99 kPa (29.31 in Hg) dry barometer and 25°C (77°F).

Dimensions

All dimensions are approximate.

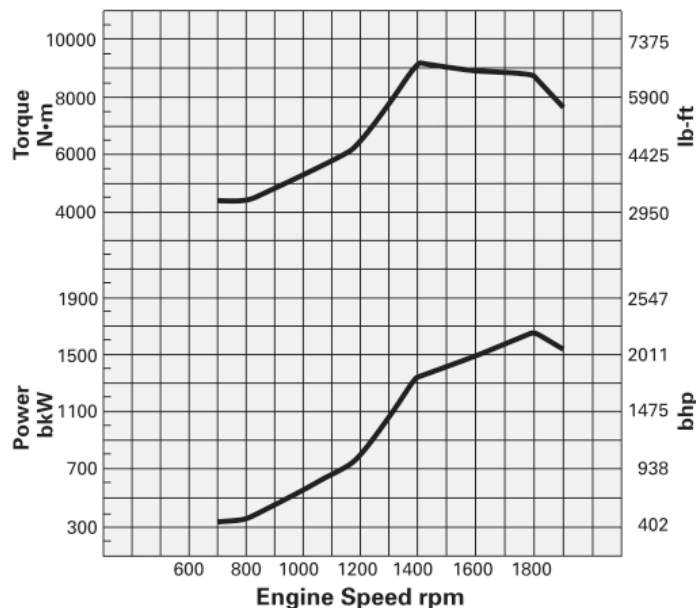


A Length	3110.0 mm	122.0 in	C Width	2308.0 mm	91.0 in
B Height	2922.0 mm	115.04 in	Weight (wet)	8970 kg	19,775 lb

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

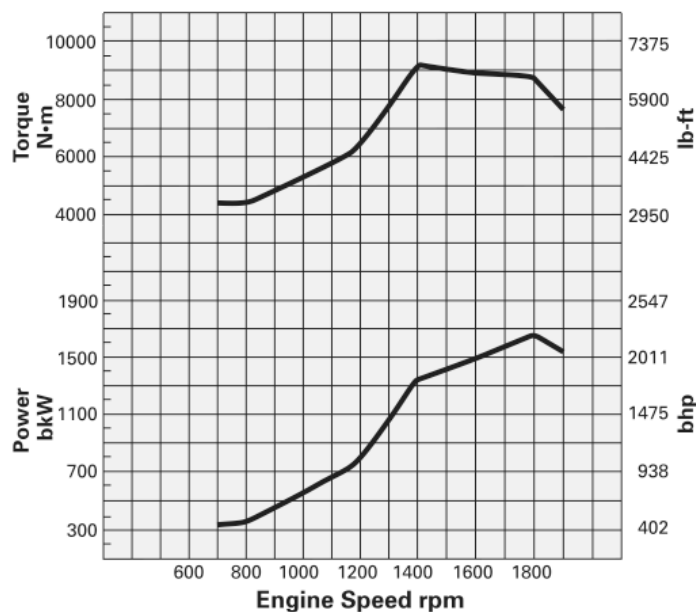
Performance Curves

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	933	53,068.0	220	12,526	1,386	78,847	518	29,443

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	1,026	58,345.0	237	13,494	1,475	83,857	589	33,484

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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 A5 ECU – LH with Common Rail Electronic Fuel Injection
- Product Link engine monitoring

Cooling System

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

Exhaust System

- Dual DOC - Robust Metallic Substrate
- Exhaust manifold, dry, bellows connection
- Four turbochargers with watercooled bearings
- 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

Lubrication System

- Crankcase breather – top mounted
- Fumes disposal
- 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
- Flywheel housing – two-sided

Optional Equipment

Air Inlet System

- Optional heavy-duty air cleaners (dual element/service indicator with precleaners)
- Four front-mounted turbochargers

Control System

- Throttle position sensors
- Local speed throttle control
- Governor conversion
- Variable speed radiator fan control

Cooling System

- Coolant regulator conversion
- Water level switch gauge
- Coolant level sensors and coolant conditioner
- External transmission cooler connections
- Variable speed hydraulic fan pump

Exhaust System

- Flexible exhaust fitting
- Elbows, flange, bellows, rain caps; Industrial and residential mufflers (painted steel and stainless steel)

Flywheel and Flywheel Housings

- Flywheel stub shaft
- Front crankshaft adapter

Fuel System

- Flexible fuel lines
- Primary fuel filter/fuel water separator

Instrumentation

- Remote panel display
- Remote cylinder temperature display

Lubrication System

- 500-hour deep sump oil pan (rear sump pan)

Power Take-Offs

- Flywheel stub shaft
- Front crankshaft adapter

Protection System

- Sensors
- Shutoff controls

Starting System

- Hydraulic starter - LH
- Hydraulic starter - RH
- Dual hydraulic starter - LHR
- Manual engine barring device

General

- Air compressor
- Aftertreatment support package
- Charging alternators

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