

Image shown may not reflect actual engine configuration

CAT® PACKAGE SPECIFICATIONS

I-6, 4-Stroke-Cycle Diesel

Emissions	Non-certified
Peak Torque at Speed	2161 N•m (1594 lb-ft) @ 1400 rpm
Bore	137 mm (5.4 in)
Stroke	165 mm (6.5 in)
Displacement	14.6 L (893 in ³)
Aspiration	Turbocharged-Aftercooled
Governor and Protection	Hydromechanical
Weight, Net Dry (approx)	3620 kg (7982 lbs)
Capacity for Liquids	
Lube System (refill)	37.9 L (40 U.S. qts)
Cooling System	137.2 L (145 U.S. qts)
Oil Change Interval	250 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE 1
Flywheel Teeth	113

FEATURES

Improving Workforce Efficiency

- Standard factory certifications improve worksite safety
 - ATEX Directive (2014/34/EU) Group II Category 3G (Zone 2), Gas Group IIA and Temperature Class T3
- Non-electrical configuration is also suitable for Class I Division 2 (NEC 500) and Class I Zone 2 (NEC 505) areas but certification and marking do not apply
- Certified flameproof intake system prevents any internal explosions from propagating to atmosphere

Making Your Investment Work Harder

- Maintains high power over broad range of operating speeds, improving performance
- Steady torque rise provides superior load acceptance
- Optimized ambient and altitude capabilities for operating flexibility

Driving Down Total Cost of Ownership

- Improved serviceability versus the competition
- Industry-leading component overhaul life

STANDARD PACKAGE EQUIPMENT

Air Inlet System

Dry-type two-element air filter with restriction indicator, aftercooler with ATEX-approved air shutoff valve, inlet flame arrestor

Control System

LH-side remote positive-lock speed control lever, hydromechanical governor, pneumatic or hydraulic shutdown control input for air shutoff valve and fuel shutoff cylinder, overspeed and temperature monitoring to provide control of air shutoff valve

Cooling System

Cooling package designed for 45°C ambient capability; single cooling circuit for jacket water, exhaust cooler, and aftercooler; offshore-capable radiator is manufactured using steel fabrications, galvanized solder dipped cooling elements and all stainless steel nuts and bolts; exhaust pipe work in mild steel with Victaulic connections; water pump is gear-driven, centrifugal; radiator mounted fan with ATEX-compliant fan drive and guarding; all guards designed, manufactured, and fitted in accordance with the Machinery Directive 2006/42/EC

Exhaust System

Exhaust gas cooler, plenum, and outlet box assembly; ATEX-compliant – designed to limit the exhaust gas and exhaust duct surface temperatures to T3 (200°C); exhaust gas flametraps suitable for Gas Group IIA;

designed and tested in accordance with the recommendations of EN 1834-1 and EN 13463-1; wet and dry exhaust flexibles; ship-loose ATEX-compliant spark arresting muffler

Flywheel and Flywheel Housing

SAE No. 1 cast iron housing; flywheel for SAE-1 housing, provides LH and RH starter bore location

Fuel System

Mechanical fuel injection, fuel priming pump, primary filter and water separator, engine-mounted secondary fuel filter

General

Package ambient capability is -20°C to 45°C designed for Gas Group IIA; all systems meet temperature class T3 (200°C limit); includes a declaration of conformity for the entire package scope; radiator package, engine, and exhaust system fitted to sub-frame; air filter, fuel/water separator, remote oil filter installed and mounted; earth bonding per standard EN 60079-14; gear-driven two-cylinder air compressor, 12 cfm

Lube System

Oil cooler, LH oil gauge, remote-mounted oil filters for easy service

OPTIONAL EQUIPMENT

Air Compressor

Gear-driven, two-cylinder, single-stage, reciprocating with a rated displacement of 12 cfm at 1250 rpm compressor speed; includes one environmental drain

Charging System

24V 35A EX d ATEX compliant alternator for Gas Group IIB, temperature class T3; heavy-duty, brushless.

24V 65A alternator, NEC 500 Class 1 Division 2 for Gas Groups C&D, temperature Class T3; heavy-duty, brushless.

24V 55Ah EX d e II T4 increased safety deep discharge battery pack with integral junction box and isolator switch.

Control System

- Air or hydraulic shutdown system input options available
- **Basic control panel** – includes start button, run/stop switch, and emergency stop button.
- **PCS2 control board** – provides supervisory safety system function and overspeed shutdown control; includes shipped loose start button, run/stop switch, emergency stop button for integration in customer control panel; switches and sensors for exhaust gas temperature, coolant temperature, oil pressure, and engine speed shutdowns; user configurable alarm and shutdown relay inputs

- **ExSCS** - a configurable PLC-based gas detection shutdown system, for the protection of offshore diesel engines operating in hazardous zone 2 area applications. The Ex SCS shutdown system will quickly and reliably trigger a safety shutdown on detection of a diesel engine over speed, high exhaust gas and coolant temperatures, low oil pressure, flammable gas detection in the engine air inlet and manual emergency stop activation.

There are three variants of the Ex SCS shutdown system:

- Ex SCS - FG (Fire & Gas)
- Ex SCS - Single
- Ex SCS - Twin

All three variants have a touchscreen Human Machine Interface (HMI) that displays the current status of the safety shutdown system. The Ex SCS FG has the additional capability to monitor an infrared fire & smoke detection sensors and has a voltage free relay output signal for the activation of a 3rd party fire deluge system.

The Ex SCS Single, enables the system to be applied to single engine applications. The Ex SCS Twin enables the system to be applied to twin engine applications.

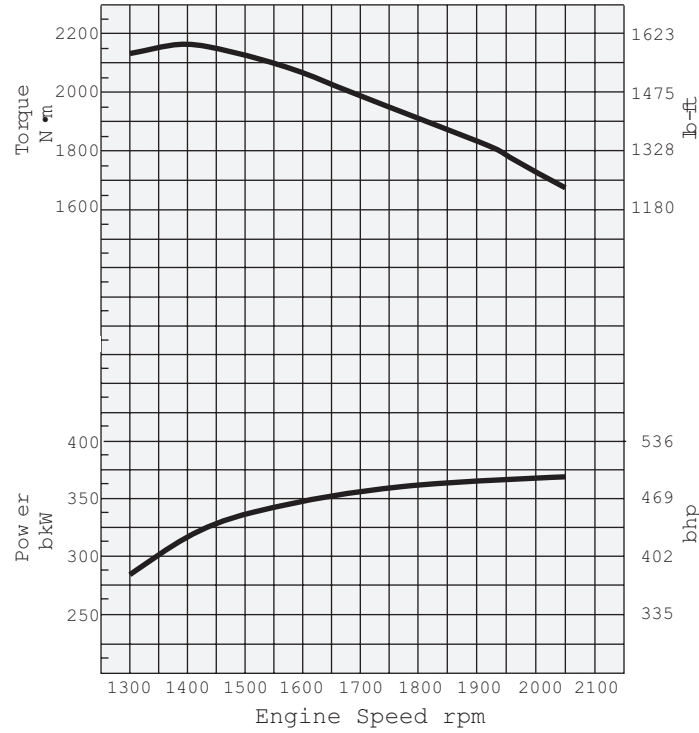
Starting System

ATEX-certified pneumatic and hydraulic starters

PERFORMANCE DATA

Turbocharged-Aftercooled — 2100 rpm
 DM2559-00

Rated Speed



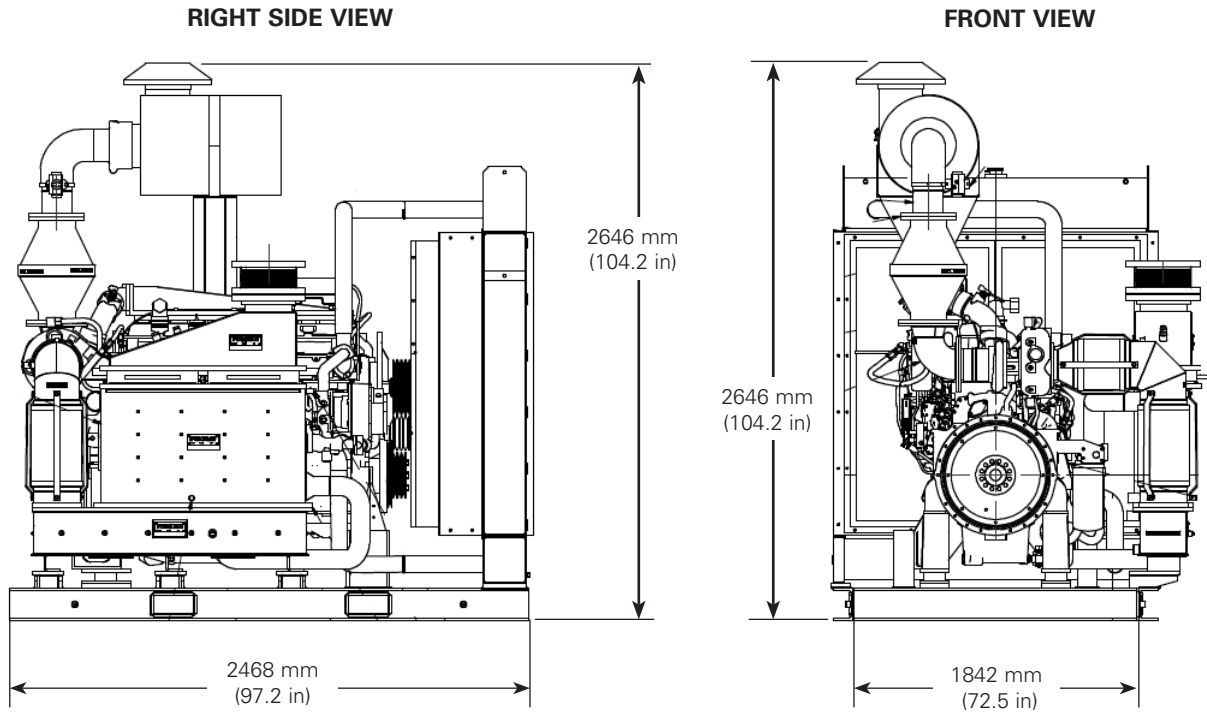
Engine Speed rpm	Engine Power		Engine Torque	
	bkW	bhp	N•m	lb-ft
2100	365.5	490	1662	1226
2000	366.5	491	1750	1291
1900	365.2	490	1836	1354
1800	361.3	485	1917	1414
1700	354.8	476	1993	1470
1600	347.0	465	2071	1527
1500	334.6	449	2130	1571
1400	316.8	425	2161	1594
1300	292.0	392	2145	1582

Maximum fan power loss at 2100 rpm 26.5 bkW at 20°C

Estimated peak power with fan: 339 bkW @ 2100 rpm

Estimated peak torque with fan: 2100 N•m @ 1400 rpm

DIMENSIONS



DIMENSIONS*		
Length	mm (in)	2468 (97.2)
Width	mm (in)	1842 (72.5)
Height	mm (in)	2646 (104.2)
Shipping Weight	kg (lb)	3620 (7982.1)

*Maximum dimensions are shown. Dimensions may be less depending on the alternator, fan adapter, and air shutoff selected.