PRODUCT SPECIFICATIONS FOR C280-8

ENGINE SPECIFICATIONS

Minimum Rating	2300 ekW
Maximum Rating	2710 ekW
Emissions	IMO Tier II/EPA Marine Tier 2
Displacement	148 l
Oil Change Interval	1000 h
Weight	49000 kg
Generator Set Control	Generator Monitoring System (GMS)
Aspiration	Turbocharged-Aftercooled
Stroke	300 mm
Engine Control	Electronic ADEM™ A3
Fuel System	EUI
Bore	280 mm

DIMENSIONS

Length	8140 mm
Height	3406 mm
Width	2326 mm

CAPACITY FOR LIQUIDS

Cooling System - Engine	530 l
Lube Oil System - Refill	1094 l

C280-8 STANDARD EQUIPMENT

PRODUCT CONSIST

The engine is a turbocharged, aftercooled, four-strokecycle-diesel, electronic unit injection engine with a280 mm (11 in) bore by 300 mm (11.8 in) stroke. SAEstandard rotation is counterclockwise as viewed from therear of engine flywheel.

EMISSIONS CERTIFICATIONS

GL and CCS approved IMO certificate — includesstatement of compliance or Engine International AirPollution Prevention (EIAPP) certificate, supplied by theRecognized Organization (RO) where available, andtechnical file to be kept on board per IMO regulations.

MARINE CERTIFICATION SOCIETY TYPE-APPROVAL

ABS, BV, CCS, DnV, GL, LRS

Spray shielding to meet SOLAS regulations for flammablefluids

EUROPEAN CERTIFICATIONS

Declaration of Incorporation for EU Machinery Safety

Directive and EU Low Voltage Safety Directive

AIR INLET SYSTEM

Fresh water aftercooler, corrosion resistant coated (airside)

Air inlet shutoff

Turbocharger, rear-mounted, oil lubricated

CONTROL SYSTEM

Single Cat ADEM A3 electronic engine control module withelectronic unit injector fuel system, rigid wiring harness(10 amp 24V power required to drive electronic enginecontrol modules)

COOLING SYSTEM

Gear-driven jacket water (JW) pump

Gear-driven separate-circuit aftercooler/oil cooler (AC/OC) pump

Engine coolant water drains

EXHAUST SYSTEM

Dry, gas tight exhaust manifold

FUEL SYSTEM

Distillate fuel (requires viscosity ranging from 1.4 cStto 20 cSt at 38°C)

Fuel pump, gear-driven

Fuel pump, gear-driven

Fuel transfer pump (mounted on left-hand side)

Duplex fuel filters, rear-engine-mounted

Electronically controlled unitinjectors

LUBE SYSTEM

Centrifugal oil filters with single shutoff, service-side enginemounted on cylinder block inspection covers (includesinstalled oil lines and single shutoff valve), filters centrifugebypass oil from the main lubricating oil pump (can be servicedwith the engine running)

Oil filler and dipstick

Oil pressure regulating valve

Dry engine-mounted sump system that gravity feeds intobase assembly integral sump

Engine-mounted duplex oil filter

Intermittent air prelube

Continuous electric prelube

Redundant prelube with continuous electric prelube andintermittent air prelube backup

Oil pan drain valves

Electric continuous prelube pump

Lube oil heater

Oil pump - gear drive

PROTECTION SYSTEM

Crankcase explosion relief valves

Alarm and shutdown during abnormal operation

INSTRUMENTATION

PLC-based system provides protection, monitoring, andcontrol housed in a NEMA 4 (IP66) enclosure.

GENERAL

Service Literature

C280-8 OPTIONAL EQUIPMENT

AIR INLET SYSTEM

90° adapter and straight adapters for air inlet to turbochargerAir cleaners

Air cleaners with Cat dry paper filter elements (approximately99.9% efficient at filtering SAE fine dust)

Soot filter

CONTROL SYSTEM

4-20 mA load feedback signal

Load sharing module

Direct rack module

COOLING SYSTEM

Separate Circuit Aftercooler (SCAC)

Customer water connections

Jacket water thermostats

AC/OC thermostats

Accessory module-mounted high volume expansion tank

Jacket water heater

Heat recovery connections and thermostats for use withwater maker system

ANSI connection adapters

EXHAUST SYSTEM

Exhaust manifold shields

Vertical or 30° outboard exhaust orientation options

Exhaust outlet expanders and weld flanges

FUEL SYSTEM

Manual fuel priming pump

Duplex primary fuel strainer

Flexible fuel hose connections

LUBE SYSTEM

Dry engine-mounted sump system that gravity feeds intobase assembly integral sump

Engine-mounted duplex oil filter

Intermittent air prelube

Continuous electric prelube

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- Redundant prelube with continuous electric prelube andintermittent air prelube backup
- Oil pan drain valves
- Electric continuous prelube pump
- Lube oil heater

PROTECTION SYSTEM

- Wiring meets MCS requirements
- Upgrade PLC monitor to industrial PC
- Upgrades AC/OC, JW and start air pressure from contactorsto transducers
- Raw water/sea water pressure transducer
- Modbus communication
- Beacon and horn
- Single engine remote display monitor
- Emergency pump start signal
- Cabinet cooler
- Generator power monitoring
- Remote relay panel
- Turbocharger speed sensors
- Cylinder pressure relief valve
- Oil mist detector
- Flywheel and damper guards

MOUNTING SYSTEM

- Base aseembly
- Vertically-restrained vibration isolators and weld plates

STARTING SYSTEM

- Single turbine air starters
- Boost control valve for extremely cold ambient conditions
- Air start pressure reducing valves

GENERAL

Torsional couplings

Mounting groups for engine, generator, and base

Accessory module to mount attachments such as theexpansion tank, heat exchanger, instrument panel andengine controls, annunciator panel, alarm and shutdowncontactors, fuel strainer

Flywheel

Engine barring device options:

One-year storage preservation

Oceanic transportation shipping protection (shrink wrapand tarp)

Engine testing — certified dynamometer test, fuelconsumption test, rated speed performance test, overloadtest, minimum power setting, peak firing pressure test,turbo work cert and crankshaft work cert

Standard and project-specific witness testing

Spare parts kits

LITERATURE

Project-specific installation drawings

Electrical schematics and P&ID drawings