

D18



PERFORMANCE

Rated power	Max. torque	Emission
37 kW (49 hp) @ 2800 rpm	165 Nm (16.8 kgf.m) @ 1600 rpm	Tier IV

MAIN SPECIFICATIONS

○ Engine model	D18
○ Engine type	In-line, 4 stroke, water cooled Turbocharged, inter cooled
○ Combustion type	Direct injection
○ Number of cylinders	3
○ Bore x stroke	90 x 94 mm
○ Displacement	1,794 cc
○ Compression ratio	17.0 : 1
○ Firing order	1 - 2 - 3
○ Dry weight *	Approx. 170 kg with wire harness without flywheel, flywheel housing, aftertreatment, alternator
○ Dimension (LxWxH) *	573.5 x 556 x 673 mm
○ Rotation	Counter clockwise viewed from flywheel



* Weight and Dimensions vary depending on the delivery scope

FUEL SYSTEM

○ Injection pump type	Common rail 1,800 bar
○ Injection pump	DELPHI DFP 4.4
○ Governor	E.C.U. (DELPHI)
○ Pump type	Gear type (with in DFP 4.4)
○ Injection nozzle	Solenoid valve type
○ Used fuel	Diesel fuel

LUBRICATION SYSTEM

○ Oil pump	Fully forced pressure feed, gear driven by crankshaft
○ Oil filter	Full flow, cartridge type (spin on)
○ Oil pan capacity	Max. 6.3 liters, min. 2.8 liters
○ Angularity limit	35 deg. in all directions at stationary operation
○ Lubricant	API CJ-4 or ACEA-E9 grade

VALVE TRAIN SYSTEM

○ Type	Over head valve
○ Number of valves	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.4 mm, exhaust 0.45 mm

COOLING SYSTEM

- Water pump
 - Anti-freeze water forced circulation
 - Centrifugal type driven by belt
- Water pump capacity
 - 110 liters/min @ 2,800 pump rpm
- Thermostat
 - Wax – pellet type
 - Opening temp. 82 °C
 - Full open temp. 97 °C

SCAVENGING SYSTEM

- Turbocharger
 - Controlled WGT
- EGR system
 - External cooled EGR

EMISSION AFTERTREATMENT

- Aftertreatment system
 - DOC (Tier4)

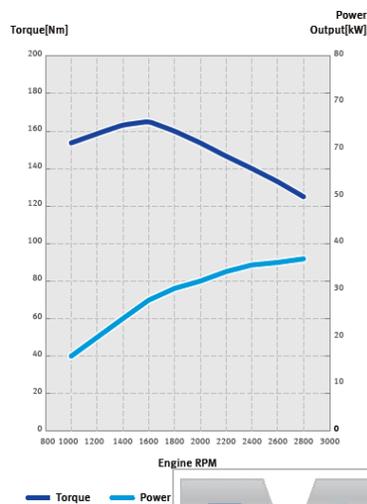
ELECTRICAL SYSTEM

- Charging generator
 - 12 V - 90 AMP alternator
- Voltage regulator
 - Built-in type IC regulator
- Starting motor
 - 12 V - 2.7 kW
- Battery Voltage
 - 12 V

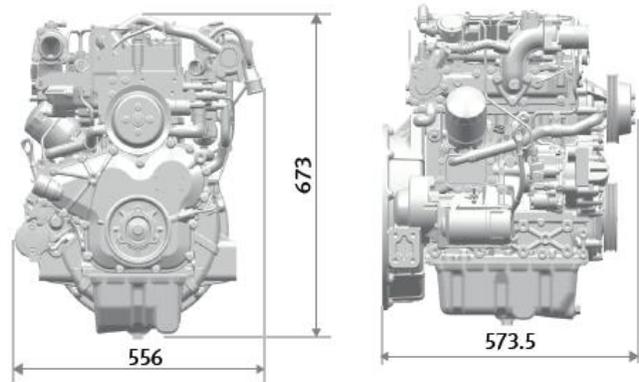
STARTABILITY

- Air heating system
 - Glow plug
- Cold startability
 - 20°C w/o aid

PERFORMANCE CURVE



ENGINE DIMENSIONS



* Dimensions vary depending on the delivery scope.

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