

C10 ENT

315 kW (428 HP) @ 2100 rpm - 1890 Nm @ 1500 rpm
Stage IIIA / Tier 3

SPECIFICATIONS

Technical code		F3AE9687A*EXX
Thermodynamic cycle		Diesel 4 stroke
Air intake		TAA
Arrangement		6L
Bore x Stroke	mm	125 x 140
Total displacement	L	10.3
N° valves per cylinder		4
Cooling		liquid
Direction of rotation (seen from flywheel side)		CCW
Compression ratio		16.5 : 1
Rotation mass moment of inertia (without flywheel)	kgm ²	0.78
Standard flywheel inertia	kgm ²	2.16

FUEL SYSTEM

Injection system		Electronic Unit Injector
Maximum vacuum in diesel inlet (fuel pump intake)	kPa(bar)	30 (0.3)
Gas oil max intake temperature	°C	40 (at 25°C amb.)

AIR INTAKE

Max suggested intake restriction with clean air filter	kPa(bar)	3.5 (0.035)
Max suggested intake restriction with dirty air filter	kPa(bar)	6.0 (0.060)
Air flow at 100% load / rated speed	kg/h	1725 (1460)
Turbocharging pressure at full load/rated speed	kPa(bar)	220 (2,2)
Turbocharging air max temperature (engine inlet)	°C	50 (at 25°C amb.)
Heat rejected to intercooler at maximum power	kJ/s(kcal/h)	65 (56,000)
Intercooler system max pressure drop	kPa(bar)	10 (0.1)

EXHAUST SYSTEM

Max allowable backpressure	kPa(bar)	10 (0.1)
Max exhaust temperature at full load/rated speed	°C	530
Exhaust flow at max output	kg/h	1795

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LUBRICATION SYSTEM

Minimum oil pressure at idle	kPa(bar)	150 (1,5)
Max oil pressure at idle	kPa(bar)	TBD
Max oil temperature at full load/rated speed	°C	120
Engine angularity limits continuous operation:		
max front up and front down	0/360°	17°
max left hand and right hand	0/360°	17°
Total system capacity including pipes, filters, etc.	L	30

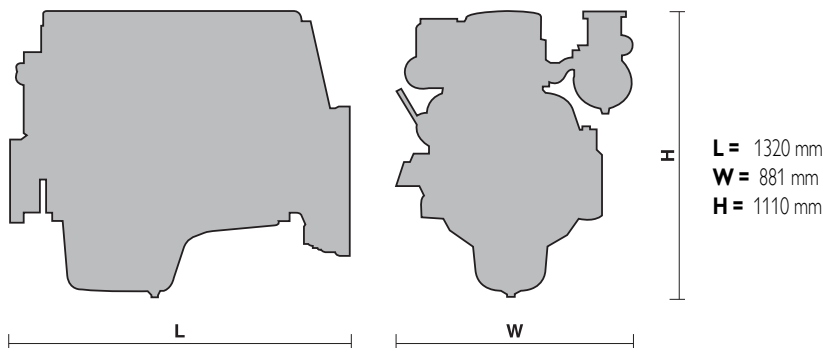
COOLING SYSTEM

Coolant capacity (engine only)	L	15
Water pump flow at rated speed	m ³ /h	29
Heat to reject by heat exchanger at max power	kJ/s(kcal/h)	145 (124,700)
Thermostatic valve (adjustment range)	°C	84 ÷ 94
Cooling liquid max temperature	°C	106
Min/max inner pressure in the cooling circuit	kPa(bar)	30/160 (0.3/1.6)
External cooling system max pressure drop	kPa(bar)	35 (0.35)

ELECTRICAL SYSTEM

Voltage	V	24
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Dimensions



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PERFORMANCE

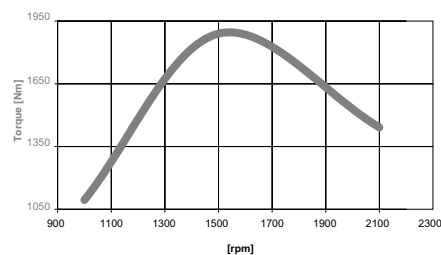
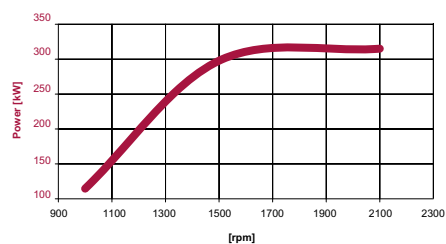
Rated power [*]	kW(HP)	315 (428)
At speed	rpm	2100
Peak power	kW(HP)	315 (428)
At speed	rpm	2100
Peak torque	Nm(kgm)	1890 (193)
At speed	rpm	1500
Maximum no load governed speed at max rating	rpm	2300
Minimum idling speed	rpm	800
Mean piston speed at rated speed	m/s	9.8
BMEP at max torque	bar	23.1
Available certifications		CE 97/68 Stage IIIA - EPA Tier 3
Specific fuel consumption at full load (best value)	g/kWh	214 @ 1650
Oil consumption at max rating	% fuel cons.	< 0.2%
Rumore alla potenza massima (ISO 3744)	dBA	96
Minimum starting temperature without auxiliaries	°C	-15
Oil and oil filter maintenance interval for replacement [**]	h	600
Dry weight (standard configuration without: oil, cooling, starter, clutch, Compressor A/C, alternator)	kg	950

FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT SALES NETWORK.

[*] Power at flywheel according to 97/68 EC (without fan), after 50 hours running, 3% tolerance, Fuel Diesel EN 560.

[**] Oil type: Approved engine oil specification: 15W-40 ACEA E7 / API CI-4 or 10W-30 ACEA E7 / API CI-4 (ambient temperature below -15°C). 10W-40 ACEA E9/API CJ-4 as alternative.

Test conditions: ISO 3046/1, 25 °C air temperature, 100 kPa atmospheric pressure, 30 % relative humidity - Applicable also to DIN 6271, BS 5514, SAE J1349 Standards.



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STANDARD CONFIGURATION

Flywheel housing	type	SAE 1 - aluminium
Flywheel size	inch.	14"
Intake manifold location		middle high / right side / front
Exhaust manifold location		middle high / left side / rear
Turbocharger		fixed geometry with Waste Gate
Turbocharger location		middle / left side
Fan transmission ratio		1.25 : 1
Distance between fan - crankshaft centers	mm	x = 0 ; y = 225
Fuel filter	n°	single cartridge - right side
Fuel prefilter		included, supplied loose
Fuel pump		mechanical
Oil filter	n°	double cartridge - left side
Oil sump		insuspended sheet steel / front sump
Oil vapours blow-by circuit		ricirculated
Oil heat exchanger		integrated into the block
Oil filler		on timing cover
Starter		24V - 5.5kW
Alternator		24V - 90A
Engine stop device		by ECU
Wiring harness		interface wiring with accessories kit
Painting	color	grey

NOT INCLUDED IN THE STANDARD CONFIGURATION

Power take off - transmission ratio		1.36 : 1
PTO maximum available torque	SAE A	150Nm (9 teeth ANSI B92,1)
	SAE B	150Nm (13 teeth ANSI B92,1)
	SAE B	200Nm (grooved DIN 5482)
Battery - minimum capacity recommended		180Ah (24V)
Battery - minimum cold cranking capacity recommended		800A (24V)

FPT OFFERS THE WIDEST AVAILABILITY OF ENGINE BUILD OPTIONS TO CUSTOMER SPECIFIC REQUIREMENTS WITHIN THE ENGINE SUPPLY.
TO FIND OUT MORE ABOUT THE CONFIGURATIONS AND ACCESSORIES WHICH ARE AVAILABLE, CONTACT THE FPT SALES NETWORK.

