

# F32 MNS

61 kW (83 HP) @ 2500 rpm - 320 Nm @ 1250 rpm  
Stage IIIA / Tier 3

## SPECIFICATIONS

Technical code		F5C E5454B*A 004
Thermodynamic cycle		Diesel 4 stroke
Air intake		TC
Arrangement		4L
Bore x Stroke	mm	99 x 104
Total displacement	L	3.2
N° valves per cylinder		2
Cooling		liquid
Direction of rotation (seen from flywheel side)		CCW
Compression ratio		17 : 1
Rotation mass moment of inertia (without flywheel)	kgm <sup>2</sup>	0.28
Standard flywheel inertia	kgm <sup>2</sup>	0.776

## FUEL SYSTEM

Injection system		Mechanical
Maximum vacuum in diesel inlet (fuel pump intake)	kPa(bar)	15 (0.15)
Gas oil max intake temperature	°C	43 (at 25°C amb.)

## AIR INTAKE

Max suggested intake restriction with clean air filter	kPa(bar)	4.5 (0.045)
Max suggested intake restriction with dirty air filter	kPa(bar)	6.5 (0.065)
Air flow at 100% load / rated speed	kg/h	330 (273)
Turbocharging pressure at full load/rated speed	kPa(bar)	103 (1.03)
Turbocharging air max temperature (engine inlet)	°C	155
Heat rejected to intercooler at maximum power	kJ/s(kcal/h)	-
Intercooler system max pressure drop	kPa(bar)	-

## EXHAUST SYSTEM

Max allowable backpressure	kPa(bar)	10 (0.1)
Max exhaust temperature at full load/rated speed	°C	480
Exhaust flow at max output	kg/h	345

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## LUBRICATION SYSTEM

Minimum oil pressure at idle	kPa(bar)	200 (2.0)
Max oil pressure at idle	kPa(bar)	-
Max oil temperature at full load/rated speed	°C	115
Engine angularity limits continuous operation:		
max front up and front down	0/360°	35°
max left hand and right hand	0/360°	35°
Total system capacity including pipes, filters, etc.	L	-

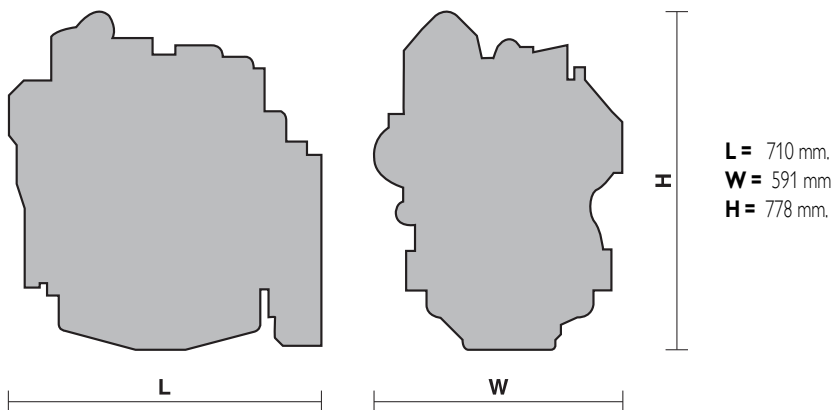
## COOLING SYSTEM

Coolant capacity (engine only)	L	4.72 (egr est)
Water pump flow at rated speed	m <sup>3</sup> /h	6.6
Heat to reject by heat exchanger at max power	kJ/s(kcal/h)	53.3 (43,800)
Thermostatic valve (adjustment range)	°C	78 ÷ 94
Cooling liquid max temperature	°C	110
Min/max inner pressure in the cooling circuit	kPa(bar)	-
External cooling system max pressure drop	kPa(bar)	35 (0.35)

## ELECTRICAL SYSTEM

Voltage	V	12
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## Dimensions



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## PERFORMANCE

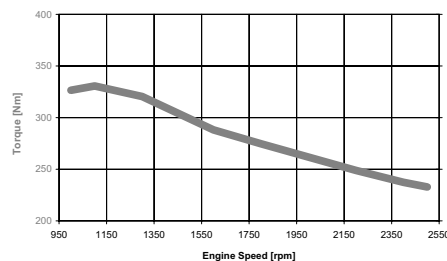
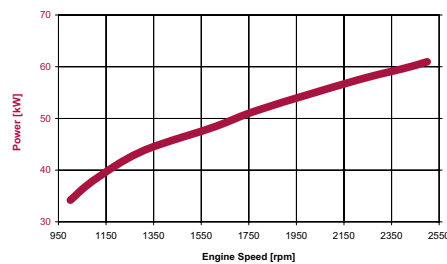
Rated power [*]	kW(HP)	61 (83)
At speed	rpm	2500
Peak power	kW(HP)	61 (83)
At speed	rpm	2500
Torque	Nm(kgm)	320 (33)
At speed	rpm	1250
Maximum no load governed speed at max rating	rpm	2750
Minimum idling speed	rpm	1150
Mean piston speed at rated speed	m/s	-
BMEP at max torque	bar	-
Available certifications		CE 97/68 Stage IIIA - EPA Tier 3
Specific fuel consumption at full load (best value)	g/kWh	231 @ 2500
Oil consumption at max rating	% fuel cons.	0.14%
Rumore alla potenza massima (ISO 3744)	dBA	93
Minimum starting temperature without auxiliaries	°C	-12
Oil and oil filter maintenance interval for replacement [**]	h	600
Dry weight (standard configuration without: oil, cooling, starter, clutch, Compressor A/C, alternator)	kg	300

**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 3
Flywheel size	inch.	10"
Intake manifold location		right side / frontward inlet
Exhaust manifold location		right side / backward outlet
Turbocharger		fixed geometry without WG
Turbocharger location		top frontward/right side
Fan transmission ratio		1.1 : 1
Distance between fan - crankshaft centers	mm	x = 0 ; y = 296
Fuel filter	n°	single cartridge - left side
Fuel prefilter		-
Fuel pump		mechanical rotary pump
Oil filter	n°	single cartridge - left side
Oil sump		sheet metal/front well
Oil vapours blow-by circuit		on timing cover
Oil heat exchanger		built in the crankcase
Oil filler		on timing cover
Exhaust counter flange		on plane flange with 3 holes
Starter		12V - 3kW
Alternator		12V - 90A with W contact
Engine stop device		incorporated in the pump
Wiring harness		sectioning connector on engine wiring for EGR control unit
Painting	color	grey

## NOT INCLUDED IN THE STANDARD CONFIGURATION

Power take off - transmission ratio		1.08 : 1
PTO maximum available torque	DIN 4/SAE B	140Nm
Battery - minimum capacity recommended		180Ah (12V)
Battery - minimum cold cranking capacity recommended		950A (12V)

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.

