

# NEF

## N40 ENT C

**FOR AUTOMOTIVE APPLICATIONS**

4 CYLINDERS IN LINE - DIESEL CYCLE

125 kW (170 CV) @ 2700 rpm

560 Nm @ 1200 rpm



T E C H N O L O G I C A L E X C E L L E N C E

**IVECO  
MOTORS**

## N40 ENT C FOR AUTOMOTIVE APPLICATIONS

Technical code		F4AE0481A*C
Thermodynamic cycle		Diesel 4 stroke - C.R.
Air intake		TAA
Arrangement		4L
Bore x Stroke	mm	102 X 120
Total displacement	l	3.9
Valves per cylinder		4
Cooling		liquid
Direction of rotation (viewed facing flywheel)		CCW
Compression ratio		17.5 : 1
Rotation mass moment of inertia (without flywheel)	kgm <sup>2</sup>	0.19
Standard flywheel inertia	kgm <sup>2</sup>	0.64

### Air induction

Max suggested intake restriction with clean air filter	kPa(bar)	3.5 (0.035)
Max allowable restriction with dirty air filter	kPa(bar)	6.5 (0.065)
Air requirement for combustion at 100% load/rated speed	kg/h (m <sup>3</sup> /h)	650 (556)
Turbocharging pressure at full load/rated speed	kPa(bar)	163 (1.63)
Turbocharging air max temperature (engine inlet)	°C	50 (at 25°C amb.)
Heat rejected to intercooler at maximum power	kJ/s(kcal/h)	26 (22,360)
Intercooler system max pressure drop	kPa(bar)	12 (0.12)

### Exhaust system

Max allowable backpressure	kPa(bar)	10 (0.1)
Max exhaust temperature at full load/rated speed	°C	560
Exhaust flow at max output	kg/h	677

### Lubrication system

Minimum oil pressure at idle	kPa(bar)	70 (0.7)
Max oil temperature at full load/rated speed	°C	120
Engine angularity limits continuous operation: max front up and front down	0/360	20
max left hand and right hand	0/360	20
Total system capacity including pipes, filters etc.	liters	9.5

### Cooling system

Coolant capacity (engine only)	liters	8.5
Water pump flow at rated speed	m <sup>3</sup> /h	13.2
Heat to reject by heat exchanger at max power	kJ/s(kcal/h)	59 (50,740)
Thermostat (modulating range)	°C	83 to 95
Cooling liquid max temperature	°C	107
Max inner pressure in the cooling circuit	kPa (bar)	275 (2.75)
External cooling system max pressure drop	kPa (bar)	35 (0.35)

### Fuel system

Injection system		Common Rail
Gas oil max intake restriction	kPa(bar)	35 (0.35)
Gas oil max intake temperature	°C	70

### Electrical system

Voltage	V	24
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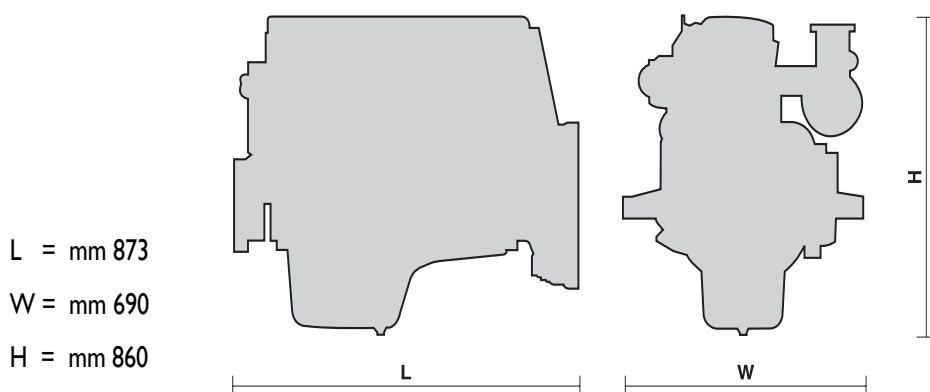
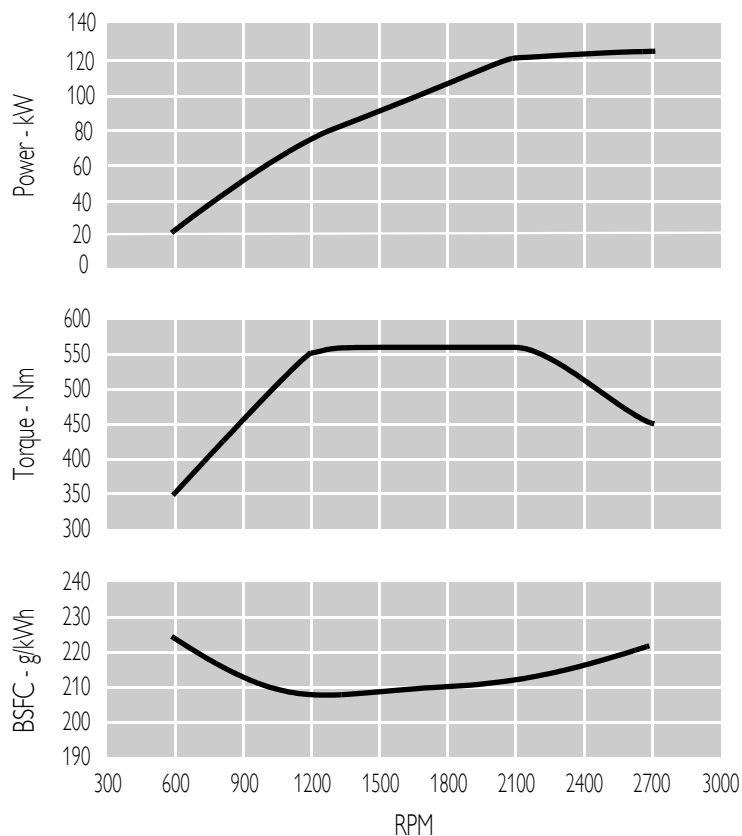
## N40 ENT C FOR AUTOMOTIVE APPLICATIONS

Maximum rating *	kW(CV)	125 (170)
At speed	rpm	2700
Maximum torque	Nm (kgm)	560 (57)
At speed	rpm	1200
Maximum no load governed speed at max rating	rpm	3025
Minimum idling speed	rpm	650
Mean piston speed at rated speed	m/s	10.8
BMEP at max torque	kg/cm <sup>2</sup>	18.4
Available certifications		2001 / 27 / EC - EURO 3
Specific fuel consumption at full load (best value)	g/kWh @ rpm	208 @ 1200/1400
Oil consumption at max rating	(% of fuel consumption)	0.07
Noise at max rating (ISO 3744)	dBA	92
Minimum starting temperature without auxiliaries	°C	-15
Oil and oil filter maintenance interval for replacement	hours	600
Dry weight (standard configuration)	kg	390

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

\* **Power** at flywheel according to 97/168 EC (without fan), after 50 hours running, 3% tolerance, fuel Diesel EN 590

**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.



## N40 ENT C FOR AUTOMOTIVE APPLICATIONS

### Standard configuration

Flywheel housing	SAE	2
Flywheel size	inch	13
Intake manifold location		left side
Exhaust manifold / turbocharger location		right side
Turbocharger		waste gate controlled
Turbocharger location		right side
Fan transmission ratio		1 : 1 on crankshaft
Distance between fan - crankshaft centers	mm	0
Fuel filter	n°	1 - left side
Fuel prefilter		included
Fuel pump		included
Oil filter	n°	1 - right side
Oil sump		sheet steel / front well
Oil vapours blow-by circuit		on flywheel housing
Oil heat exchanger		built in the crankcase
Oil filler		onto the valve cover
Exhaust counter flange		included
Starting motor		24 V - 4 kW
Alternator		24 V - 70 or 90 A
Engine stop device		function incorporated into E.C.U.
Wiring harness		interface wiring loom with accessories
Power take off (PTO)		in front of crankshaft by pulley
PTO transmission ratio		1 : 1
PTO maximum available torque		150 Nm
Painting	colour	grey

### Not included in the standard configuration

Battery - minimum capacity recommended	2 x 12 V	130 Ah
Battery - minimum cold cranking capacity recommended		800 A

**IVECO MOTORS 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 IVECO MOTORS SALES NETWORK.**

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