

NEF

N60 ENT G

FOR AUTOMOTIVE APPLICATIONS

6 CYLINDERS IN LINE - OTTO CYCLE

147 kW (200 CV) @ 2700 rpm

650 Nm @ 1250 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**

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Technical code		F4BE0641A*G
Thermodynamic cycle		Otto 4 stroke - M.Pl.
Air intake		TAA
Arrangement		6L
Bore x Stroke	mm	102 X 120
Total displacement	l	5,9
Valves per cylinder		2
Cooling		liquid
Direction of rotation (viewed facing flywheel)		CCW
Compression ratio		11 : 1
Rotation mass moment of inertia (without flywheel)	kgm ²	0.31
Standard flywheel inertia	kgm ²	0.98

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 ³ /h)	507 (430)
Turbocharging pressure at full load/rated speed	kPa(bar)	50 (0.5)
Turbocharging air max temperature (engine inlet)	°C	36 (at 25°C amb.)
Heat rejected to intercooler at maximum power	kJ/s(kcal/h)	7.5 (6,429)
Intercooler system max pressure drop	kPa(bar)	3.5 (0.035)

Exhaust system

Max allowable backpressure	kPa(bar)	10 (0.1)
Max exhaust temperature at full load/rated speed	°C	770
Exhaust flow at max output	kg/h	542

Lubrication system

Minimum oil pressure at idle (with oil temp. 100°C)	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	25
max left hand and right hand	0/360	25
Total system capacity including pipes, filters etc.	liters	11.6

Cooling system

Coolant capacity (engine only)	liters	10
Water pump flow at rated speed	m ³ /h	14.3
Heat to reject by heat exchanger at max power	kW(kcal/h)	82 (70,286)
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 (0.035)

Fuel system

Injection system	Stoichiometric combustion	3 way catalyst
Injection pressure	kPa(bar)	900 ± 50 (9 ± 0.5)
Pressure regulator (from 200 bar to 20 bar)		METATRON M403
Pressure in final stage	kPa(bar)	850 to 950 (8.5 to 9.5)
Fuel specifications	Natural Gas	G20-G23-G25- Acc.to CE 2001/27
Gas max intake temperature	°C	Min +10 - Max +57

Electrical system

Voltage	V	24
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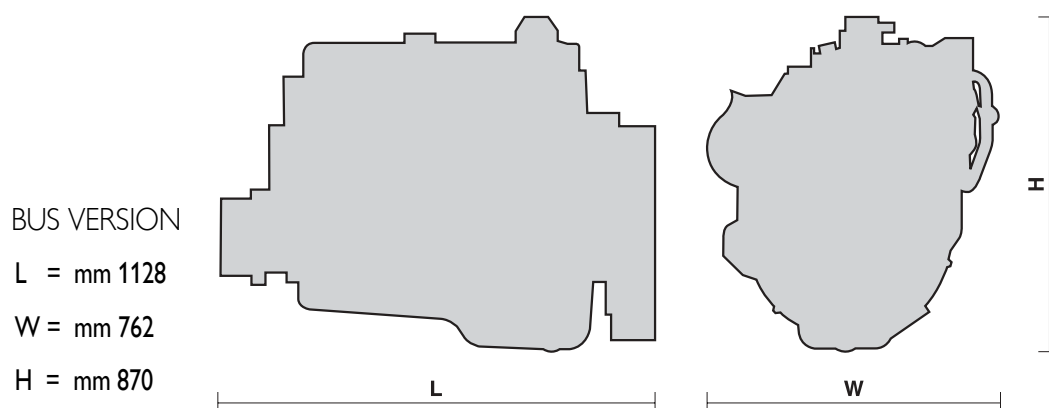
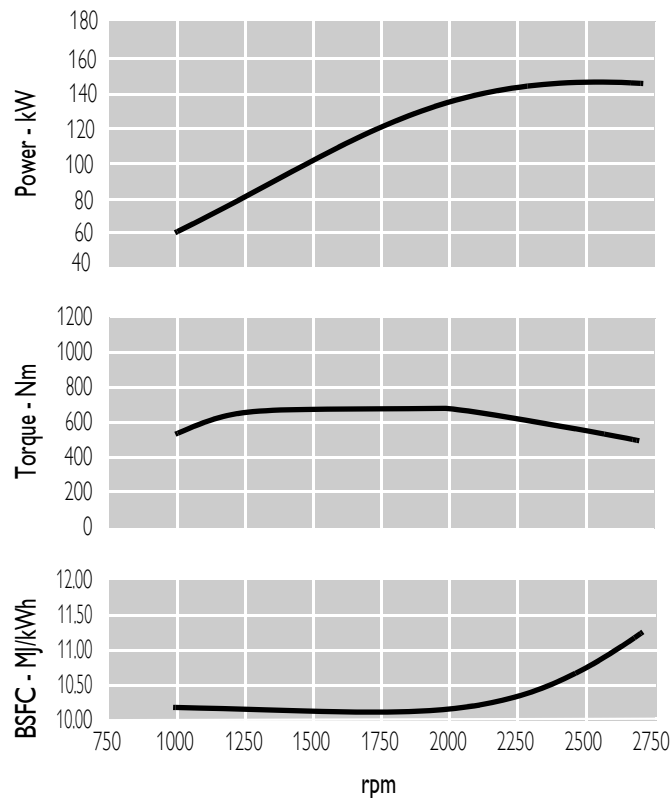
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Maximum rating *	kW(CV)	147 (200)
At speed	rpm	2700
Maximum torque	Nm (kgm)	650 (66)
At speed	rpm	1250
Maximum no load governed speed at max rating	rpm	2950
Minimum idling speed	rpm	650
Mean piston speed at rated speed	m/s	10.8
BMEP at max torque	kg/cm ²	14
Available certifications		EEV - 27/2001 CE (net) with G25
Specific fuel consumption at full load (best value)	MJ/kWh (g/kWh)	10.1 (212)
Oil consumption at max rating	(% of fuel consumption)	0.09
Noise at max rating (ISO 3744)	dBA	87
Minimum starting temperature without auxiliaries	°C	-15
Oil and oil filter maintenance interval for replacement	hours	600
Dry weight (standard configuration)	kg	520

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, Gas Natural fuel G20 - G23 - G 25.

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	SAE	2
Flywheel size		without
Intake manifold location		left side / middle position
Oxygen sensor		Lambda probe on the exhaust pipe
Throttle valve		on the inlet manifold
Exhaust manifold / turbocharger location		right side / middle position
Turbocharger		waste gate - water cooled
Turbocharger location		right side / middle position
Fan transmission ratio (for truck)		1 : 1 on crankshaft
Fan transmission (for bus)		remote on the vehicle
Fan location (for bus)		on the vehicle
Fuel filter		on the pressure regulator
Air compressor	cm ³	360 (for truck) - 630 (for bus)
Steering pump	l/min	16
Oil filter	n°	1 - right side
Oil sump (for truck)		sheet steel / front well
Oil sump (for bus)		sheet steel / rear well
Oil vapours blow-by circuit		predisposition for recirculation into engine
Oil heat exchanger		built in the crankcase
Oil filler		onto the valve cover
Exhaust counter flange		included
Starting motor		24 V - 4.5 kW
Alternator		24 V - 90 A
Engine stop device		electronic fuel shut down
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	color	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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