

NEF 100

N45 MNA M10

FOR MARINE APPLICATIONS
4 CYLINDERS IN LINE - DIESEL CYCLE
74 kW (100 CV) @ 2800 rpm (A1)
66.5 kW (90 CV) @ 2800 rpm (B)
63 kW (85 CV) @ 2800 rpm (C)
63 kW (85 CV) @ 2800 rpm (D)

PRELIMINARY



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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Thermodynamic cycle		Diesel 4 stroke - D.I.
Air intake		NA
Arrangement		4L
Bore x Stroke	mm	104 X 132
Total displacement	l	4.5
Valves per cylinder		2
Cooling		liquid
Direction of rotation (viewed facing flywheel)		CCW
Compression ratio		17.5 : 1
Rotation mass moment of inertia (without flywheel)	kgm ²	0.16
Standard flywheel inertia	kgm ²	0.69

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 (comb. + ventilation)	kg/h (m ³ /h)	2700 (2300)
Turbocharging pressure at full load/rated speed	kPa(bar)	-
Turbocharging air max temperature (engine inlet)	°C	-

Exhaust system

Max allowable backpressure	kPa(bar)	7 (0.07)
Max exhaust temperature at maximum power	°C	700
Exhaust flow at max output	kg/h	400

Lubrication system

Minimum oil pressure at idle (at 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	28
max left hand and right hand	0/360	28
Total system capacity including pipes, filters etc.	liters	12

Sea water cooling system (open circuit)

Max intake restriction	kPa(bar)	20 (0.2)
Sea water pump flow	m ³ /h	8.6
Heat rejected (total) at max power	kJ/s(kcal/h)	56 (48,000)
Sacrificial zinc anodes	n°	1

Cooling system (closed circuit)

Coolant capacity (engine only)	liters	10
Water pump flow at rated speed	m ³ /h	10.5
Thermostat (modulating range)	°C	72 ÷ 84
Cooling liquid max temperature	°C	106
Min/max inner pressure in the cooling circuit (for keel cooling)	kPa(bar)	30/100 (0.3/1)
External cooling system max pressure drop (for keel cooling)	kPa(bar)	35 (0.35)

Fuel system

Injection system		mechanical pump
Gas oil max intake restriction	kPa(bar)	20 (0.2)
Gas oil max intake temperature	°C	60
Max fuel backpressure to tank	kPa(bar)	10 (0.1)

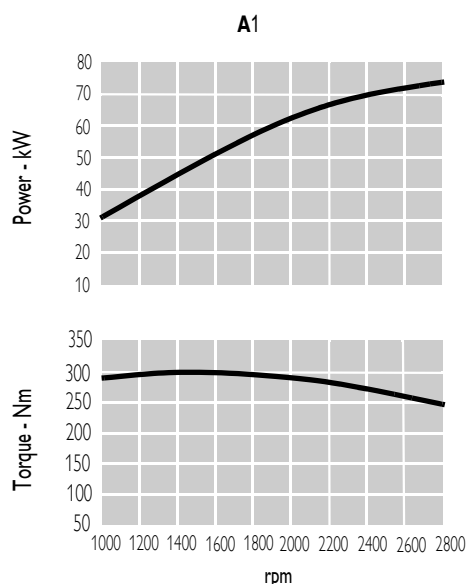
Electrical system

Voltage	V	12
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Rating type		A1	B	C	D
Maximum power *	kW(CV)	74 (100)	66.5 (90)	63 (85)	63 (85)
At speed	rpm	2800	2800	2800	2800
Maximum no load governed speed at max rating	rpm	3100	3100	3100	3100
Minimum idling speed	rpm	650	650	650	650
Mean piston speed at rated speed	m/s	12.3	12.3	12.3	12.3
BMEP at max torque	kg/cm ²	8.6			
Available certifications					
Specific fuel consumption at full load (best value)	g/kWh @ rpm		230 @ 1800		
Oil consumption at max rating	(% of fuel consumption)		0.1		
Minimum starting temperature without auxiliaries	°C		-15		
Oil and oil filter maintenance interval for replacement	hours		600		
Dry weight (without marine gear)	kg				

* **Net Power** at flywheel according to ISO 3046/1, after 50 hours running, fuel Diesel EN 590. Power tolerance 5%
Test conditions : ISO 3046/1, 25 °C air temperature, 100 kPa atmospheric pressure, 30 % relative humidity.



A1 = High performance crafts.

B = Light duty.

Full throttle operation restricted within 10% of total use period.

Cruising speed at engine rpm < 90% of rated speed setting - Maximum usage :

- 300 hours per year (A1 service)

- 1500 hours per year (B service).

C = Medium duty.

Full throttle operation < 25% of use period.

Cruising speed at engine rpm < 90% of rated speed setting - Maximum useage 3000 hours per year.

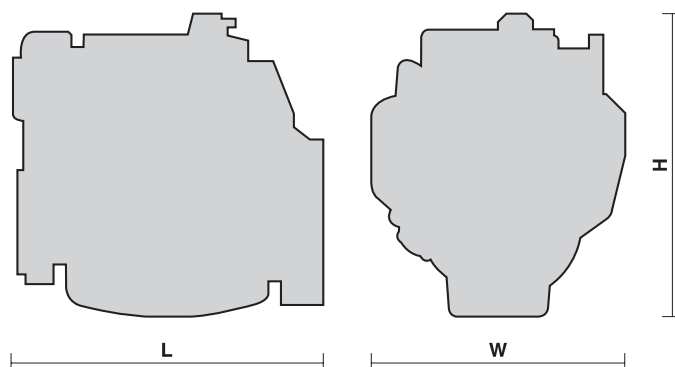
D = Heavy duty.

Maximum rating utilisation up to 100% of use period, for unlimited hours per year.

L = 830 mm

W = 683 mm

H = 830 mm



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Standard configuration

Flywheel housing	SAE	3
Flywheel size	inch	10
Air filter		left side
Turbocharger		-
Heat exchanger		tube type
Exhaust cooled elbow		-
Water charge tank		included
Fuel filter	n°	1
Fuel prefilter		included (loose)
Fuel pump		included
Oil filter	n°	1
Oil sump		cast iron
Oil vapours blow-by circuit		on valve cover
Oil heat exchanger		built in the crankcase
Oil filler		on valve cover
Starting motor		12 V - 3 kW
Alternator		12 V - 90 A with W contact
Engine stop device		electrical excitation
Wiring harness		engine wiring
Painting	colour	white "ICE"

Not included in the standard configuration

Battery - minimum capacity recommended	180 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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