

NEF series**SPECIFICATIONS**

Thermodynamic Cycle	Diesel 4 stroke
Air Handling	TAA
Arrangement	6L
Bore x Stroke (mm)	104 X 132
Total Displacement (l)	6,7
Valves per cylinder (n°)	4
Cooling System	liquid
Direction of Rotation (viewed facing flywheel)	CCW
Engine management	by EDC (Electronic Diesel Control)
InjectionSystem	ECR

STANDARD CONFIGURATION

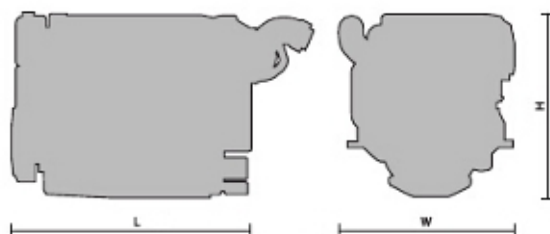
Flywheel housing (type)	SAE 3
Flywheel size (inch)	11 ½
Air Filter	rear side
Turbocharger	Waste Gate (water cooled) Turbo with Aftercooler (TAA)
Heat Exchanger	tube type
Exhaust gas water mixer - Exhaust cooled elbow	-
Water charge tank	included
Fuel filter (n°)	1 - left side
Fuel prefilter	included (loose)
Fuel Pump	included
Lift pump	-
Oil filter (n°)	1 - right side
Oil sump	aluminium
Oil vapours blow-by circuit	rear
Oil heat exchanger	built in the crankcase
Oil filler	by cylinder head cover
Starter	12V - 3kW
Alternator	12V - 90A
Engine stop device	by electronic central unit
Wiring harness	with negative to ground connection
Painting color	white "ICE"

**ELECTRICAL SYSTEM**

Voltage	12
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NOT INCLUDED IN STANDARD CONFIGURATION

Battery - minimum capacity recommended [*] (Ah)	120
Battery - minimum cold cranking capacity recommended [*] (A)	900

WEIGHT AND DIMENSIONS

L = 1089

W = 724

H = 788

Dry Weight (without marine gear)= Kg 600

Legend

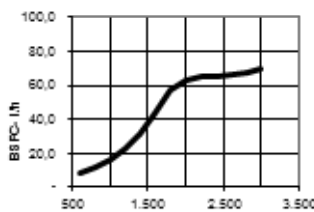
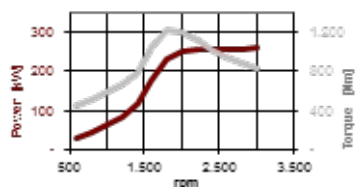
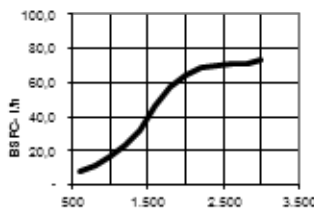
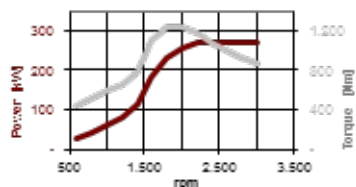
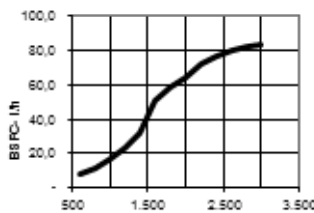
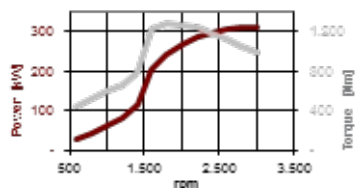
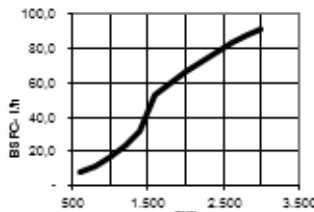
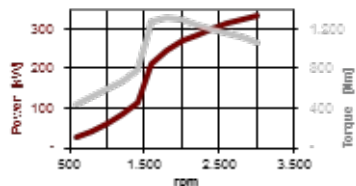
Arrangement	Air Handling	Turbocharger	InjectionSystem	
L (in line)	TAA (Turbocharged with aftercooler) TC (Turbocharged) NA (Naturally Aspirated)	WG (Wastegate) VGT (Variable Geometry Turbocharger)	M (Mechanical) ECR (Electronic Common Rail) EUI (Electronic Unit Injector)	SD: Stern Drive version PD (POD Drive version)

FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT INDUSTRIAL SALES NETWORK OR VISIT OUR SITE WWW.FPTINDUSTRIAL.COM



RATING TYPE	A1	A2	B	C
Maximum power (kW(HP)@rpm)	331 (450) @ 3000	309 (420) @ 3000	272 (370) @ 3000	258 (350) @ 3000
High idle speed (rpm)	3150	3150	3150	3150
Low idle speed (rpm)	± 600	± 600	± 600	± 600
Mean piston speed at rated speed (m/s)	13,2	13,2	13,2	13,2
BMEP at max power (kg/cm)	25,2	24,1	23,5	23
Specific fuel consumption at full load (best value) (g/kWh @ rpm)	210 @ 1800	210 @ 1800	210 @ 1800	210 @ 1800
Oil consumption at max rating (% of fuel cons.)			≤ 0,2	
Minimum starting temperature without auxiliaries (°C)			-10 °	
Oil and oil filter maintenance interval for replacement [****] (hours)			600	

* Net Power at flywheel according to ISO 3046/1, after 50 hours running, Fuel Diesel EN 590. Power tolerance 5%.



- A1 High Performance Crafts. 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.
- A2 Pleasure Commercial Vessels. Full throttle operation restricted within 10% of total use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1000 hours per year.
- B Light Duty: Full throttle operation restricted within 10% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1500 hours per year.
- C Medium Duty: Full throttle operation < 25% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 3000 hours per year.
- D Heavy Duty

FEATURES

SPECIFIC FEATURES

The NEF range features state-of-the-art diesel technologies (Common Rail, electronic systems, 4 valve/cylinder), thus ensuring high performance, lightness, compactness, design, low environmental impact (low smoke, noise and vibration) for cruisers, yachts and light/medium duties commercial boats up to 12 metres.

TECHNOLOGICAL INNOVATION

Features achieved using innovative technologies and production processes such as: Electronic Common Rail, ladder frame cylinder block, fracture split connecting rods, rear gear-train timing system.

TECHNOLOGICAL SOLUTIONS FOR SERVICING

To reduce maintenance operations and improve engine life and reliability, the NEF Series engines adopts plateau machined cylinder walls and oil cooled pistons by J-jets.

SOLUTIONS FOR LOW OPERATING COSTS

High functional engine design and solutions for long intervals in oil and filters replacement (up to 600 h).

MARINIZATION

Functional engine lay-out, design and specific settings focused on marine duties. Optimized engine and turbo-charging cooling systems.

COMPONENT INTEGRATION

Improved technical solutions such as: integrated oil cooler, integrated oil pump and water pump, blow-by system.

OPTION LIST

Wide range of accessories availability including electronic remote control, monitoring systems, international emission standards as IMO MARPOL, 2003/44/EC, 2004/26/EC, EPA Recreational & Commercial and propulsion homologation as RINA. Specific for pleasure duty, stern drive and POD drive availability completes and optimizes the NEF Series application for a wide range of boat types and propulsion solution.

SERVICEABILITY & MAINTAINABILITY

Easier engine servicing thanks to advanced diagnostic equipment & widespread worldwide service network.

BENEFITS

HIGH TORQUE AND POWER & PERFORMANCE
REDUCED FUEL CONSUMPTION AND EXHAUST GAS EMISSION

ENGINE EFFICIENCY AND STIFFNESS
VIBRATION & NOISE REDUCTION

REDUCED MAINTENANCE, LONGER ENGINE LIFE AND RELIABILITY

REDUCED MAINTENANCE NEEDS AND OPERATING COST

MARINE LAY-OUT AND SETTINGS
SAFETY AND PROTECTION ON BOARD

LEAKAGE PREVENTION

CUSTOMER ORIENTATION

QUICK AND ACCURATE SERVICE SUPPORT

FPT INDUSTRIAL 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

