POWER GENERATION Application

NEF series

N45 SM2A 73kW 72kW

73 kW @ 1500 rpm
72 kW @ 1800 rpm

Stage II

SPECIFICATIONS

Thermodynamic Cycle	Diesel 4 stroke	
Air Handling	TC	
Arrangement	4L	
Bore x Stroke (mm)	104 X 132	
Total Displacement (L)	4.5	
Valves per cylinder (n°)	2	
InjectionSystem	M	
Speed governor	M	
Cooling System	liquid (water - paraflu 50%)	
Direction of Rotation (viewed facing flywheel)	CCW	
Oil specifications	ACEA E3-E5	
Oil consumption	<0.1% of fuel consumption	
Fuel specifications	EN 590	
Oil and oil filter maintenance interval for replacement [**] (hours)	600	
Specific fuel consumption at:	**1500**	**1800**
- Stand-By l/h (g/kWh)	-	-
- 100% load l/h (g/kWh)	17.1 (214.2)	17.3 (215.5)
- 80% load l/h (g/kWh)	12.7 (212.1)	13 (216)
- 50% load l/h (g/kWh)	8.6 (24.1)	9 (225.9)
ATB (without canopy) (°C)	55	-
Coolant capacity: engine + radiator (l)	~ 185	
Coolant capacity: engine only (l)	~ 85	
Lube oil total system capacity including pipes, filters etc. (l)	~ 12.8	
Electric system (isolated return)	12	
Starting batteries: recommended capacity (Ah)	1 x 100	
Discharge Current (EN50342) A	650	
Cold starting: without preheating (°C)	-10	
Cold starting: with preheating (°C)	-25	

WEIGHT AND DIMENSIONS

Dimensions (LxWxH)	1259 X 657 X 1016
Dry Weight	Kg 450

PERFORMANCE

Ratings [1]	1500 rpm		1800 rpm	
	PRIME	STAND-BY	PRIME	STAND-BY
Rated Power kVA (kWe) [2]	66	73	65	72

1) Ratings in accordance with ISO 8528. For duty at temperature over 40°C and/or altitude over 1000 meters must be considered a power derating factor. Contact the FPT sales organization.
2) Net power at flywheel available after 50 hours running with a ±3% tolerance.

PRIME POWER: The prime power is the maximum power available with varying loads for an unlimited number of hours. The average power output during a 24h period of operation must not exceed 80% of the declared prime power between the prescribed maintenance intervals and at standard environmental conditions. A 10% overload is permissible for 1 hour every 12 hours of operation.

STAND-BY POWER: The stand-by power is the maximum power available for a period of 500 hours/year with a mean load factor of 90% of the declared stand-by power. No kind of overloads is permissible for this use.

CONTINUOS POWER: Contact the FPT sales organization.

Legend

Arrangement	Air Handling	InjectionSystem	Emission Standard
L (in line) V (90° "V" configuration)	TAA (Turbocharged with aftercooler) TC (Turbocharged) NA (Naturally Aspirated)	M (Mechanical) ECR (Electronic Common Rail) EUI (Electronic Unit Injector)	I-EGR (Internal EGR)

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

FPT POWERTRAIN TECHNOLOGIES

FEATURES	BENEFITS
PERFORMANCE Class G2 of ISO 8528 standard certification of excellent performance related to load acceptance.	EXCELLENT TRANSIENT LOAD RESPONSE FOR SEVERAL POWER GENERATION APPLICATIONS
INJECTION SYSTEM Mechanical rotary pump, with high worldwide serviceability, is the heart of the NEF mechanical engine family.The system, is based on direct fuel injection for accurate fuel delivery and is consistent with standard andalternative fuels. The NEF mechanical injection system is the best compromise between product costeffectiveness and performance.	RELIABLE AND COST EFFECTIVE SOLUTION, CONSISTENT WITH STANDARD AND ALTERNATIVE FUELS
DUAL SPEED MODE Possibility to switch from 1500 rpm to 1800 rpm (only one homologation engine rate).	ENGINE ADAPTABLE TO MARKET REQUEST
SPECIFIC FEATURES Minimum cold starting temperature without auxiliaries down to -10°C (with grid heater down to -25°). Tier 3 and Stage IIIA performances achieved without external EGR or VGT.	HIGH PERFORMANCE GUARANTEED IN ALL CONDITIONS
AIR HANDLING NEF series engines are available in Naturally Aspirated, turbocharged and turbocharged with aftercoolerversions in order to reach the highest engine performance in terms of load acceptance & fuel consumption.These features allow OEM customers to optimise their engine installation & final Genset performance.	HIGH ENGINE POWER DENSITY WITH SHORTEST POSSIBLE LOAD RESPONSE TIME
600h OIL INTERVAL CHANGE NEF series adopt combustion chambers optimized to reduce oil dilution and are designed with anoptimum engine design in terms of mechanical clearances, piston rings and engine oil system calculation.	REDUCED MAINTENANCE NEEDS AND OPERATING COST
SERVICEABILITY & MAINTAINABILITY Worldwide service network. Engines featured with a proven mechanical injection system without electronic interfaces and without external EGR.	QUICK SERVICE SUPPORT AND FAST MAINTENANCE ACTIVITIES
COMPONENT INTEGRATION Integrated CCV (Closed Crankcase Ventilation) system and engine design oriented to high component integration. Water-oil cooler, oil and water pumps with by-pass are fully integrated in the block.	LEAKAGE PREVENTION
ENGINE DESIGN Balancer counterweights incorporated in crankshaft webs, rear gear train layout, camshaft in crankcase,suspended oil pan, ladder frame cylinder block.	VIBRATION & NOISE REDUCTION

STANDARD CONFIGURATION

FPT engine N45 SM2A equipped with:
- Mounted radiator
- Mounted belt driven pusher fan
- Fan guard
- Mounted air filter with replaceable cartridges
- Fuel filter
- Primary fuel filter/water separator
- Replaceable oil filter
- Front engine mounting brackets
- Flywheel housing SAE3 and flywheel 11”1/2
- Re-directable exhaust gas elbow
- Recirculed oil breather system
- Oil dipstick
- HWT and LOP sensors
- 12 Vdc electrical system
- User’s handbook

THE ENGINE IS SUPPLIED WITHOUT LIQUIDS

OPTIONAL EQUIPMENT

On request the engine can be supplied with:
- Oil drain pump
- Oil drain valve
- 120/230 Volt water jacket heater
- WT and OP sensors for gauges
- Low water level sensor
- Turbo and exhaust gas guards
- Exhaust gas flexible joint
- 24 Volt electrical system

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