

VFP138-6

DIESEL GENERATOR SET / SILENT



138

kVA

STANDBY POWER

125

kVA

PRIME POWER

60

Hz

FREQUENCY

440/254

V

VOLTAGE

FPT NEF45TM3.S500

3 phase · 0.8 PF · 1800 rpm

CONFIGURATION COMPARISON

Configuration	Dimensions (L × W × H)	Dry weight	Fuel tank
Silent set	2650 × 1100 × 1650 mm	1500 kg	310 L

Performance, engine, alternator and controller data are common to both configurations.

GENERAL CHARACTERISTICS

VFP138-6 · 60 Hz · 3 Phase

RATED PERFORMANCE

Standby Power (kVA)	138
Standby Power (kW)	110
Prime Power (kVA)	125
Prime Power (kW)	100
Power Factor (Cos Phi)	0.8
Diesel Engine	NEF45TM3.S500
Frequency (Hz)	60
Rated Speed (rpm)	1800
Phase	3
Standard Voltage (V)	440/254
Available Voltages (V)	220/127 or 480/277

POWER DEFINITIONS

STANDBY POWER (ESP)

Available for supplying emergency power during a utility interruption. The stated rating follows ISO 8528-1.

PRIME POWER (PRP)

Available for an unlimited number of annual operating hours in variable-load applications, in accordance with ISO 8528-1.

TERMS OF USE

Nominal power is stated at 25 °C inlet-air temperature, 100 kPa barometric pressure (100 m A.S.L.) and 30% relative humidity.

RATED OUTPUT CURRENT BY VOLTAGE

Rated voltage	Standby current (138 kVA)	Prime current (125 kVA)
220/127 V	362.2 A	328.0 A
440/254 V	181.1 A	164.0 A
480/277 V	166.0 A	150.4 A

ENGINE DATA

FPT NEF45TM3.S500

GENERAL ENGINE DATA

Engine brand	FPT
Engine model	NEF45TM3.S500
Engine type	4-stroke diesel
Governor type	Mechanical
Injection type	Direct
Aspiration type	Turbocharged aftercooled
Cylinders and arrangement	4-L

FUEL CONSUMPTION

100% load ESP	32.4 L/h
100% load PRP	29.3 L/h
75% load PRP	23.9 L/h
50% load PRP	15.3 L/h

AIR SYSTEM

Intake air flow	8.45 m³/min
Cooling air flow	/

GENERAL ENGINE DATA

Bore × stroke	104 × 132 mm
Displacement	4.5 L
Cooling system	Water-cooled
Lube oil consumption at full load	0.5%-1% of fuel consumption
Compression ratio	17.5:1
Air filter	Dry

EXHAUST SYSTEM

Maximum exhaust temperature	541 °C
Exhaust gas flow	8.45 m³/min
Maximum allowed back pressure	5 kPa

STARTING SYSTEM

Starting power	3 kW
Recommended battery	100 Ah
Number of batteries	1
Auxiliary voltage	12 VDC

OIL AND COOLING CAPACITIES

Engine oil capacity	12.8 L
Total coolant capacity	18.5 L

ALTERNATOR DATA

3-phase · Brushless · Electronic AVR

GENERAL ALTERNATOR DATA

Number of phases	3
Power factor (Cos Phi)	0.8
Poles	4
Winding connections (standard)	Star-series
Insulation	H class
Enclosure (according to IEC 34-5)	IP23
Excitation system	Self-excited, brushless
Voltage regulator	AVR (Electronic)
Number of bearings	Single bearing
Coupling system	Flexible disc
Coating type	Standard (vacuum impregnation)

CONTROL MODULE

Deep Sea DSE6120



SINGLE GEN-SET CONTROL

AMF CONTROL

Automatic mains failure controller for one gen-set, with three-phase mains and generator monitoring, flexible I/O and electronic or non-electronic engine versions.

CORE FUNCTIONS

01	Automatic transfer between mains and generator power	05	Event log for 10 events plus engine-hours counter
02	3-phase mains and generator voltage monitoring	06	6 digital inputs and 3 analog sender inputs
03	Generator current monitoring and protection	07	Six outputs; configuration depends on the engine version
04	CAN-engine or magnetic-pick-up/alternator-sensing versions	08	PC/front-panel configuration; optional IP65 front gasket

CONNECTIVITY

DSE6120 · Interfaces, sensing and I/O

USB CAN / MPU 6 INPUTS 6 OUTPUTS

COMMUNICATION AND MONITORING FEATURES

- | | | | |
|----|--|----|---|
| 01 | USB connects to DSE Configuration Suite for controller setup | 05 | Six digital inputs and three analog senders support field signals |
| 02 | Choose CAN-engine or magnetic-pick-up/alternator-sensing version | 06 | Four outputs are configurable on MPU/alternator version; six on CAN |
| 03 | DSE6120 includes dedicated 3-phase mains sensing | 07 | Remote-start input, test mode and configurable timers are included |
| 04 | 3-phase generator voltage and current monitoring is built in | | |

ORDERING OPTIONS

CAN ENGINE VERSION · MPU / ALTERNATOR VERSION

Engine sensing and output configuration depend on the selected controller variant.