

# Adpower

## Generating Sets

# IA45

3 PHASE OUTPUTS					
GENERATOR SET MODEL	RATING	50HZ		60HZ	
		380-415 V, 1500 rpm		480 V, 1800 rpm	
		KVA	KW	KVA	KW
IA-45C	PRIME	45	36	60	48
	STAND-BY	50	40	66	52.8

POWERED BY:



### ALTERNATOR DATA

Make	LINZ
Model	PRO18L F/4
No. of bearings	1
Insulation Class	H
Total Harmonic Content	at no load <3 % on load <3%
Wires	6
Ingress Protection	IP23
Excitation System	SHUNT
Winding Pitch	2/3
AVR Model	HVR11
Overspeed	2250 mn <sup>-1</sup>
Voltage Regulation	± 1%

\* Ratings at 0.8 pf - Generator designed to operate in ambient temperatures up to 52 °C  
\* Generating Set photo is for reference only.

### ENGINE / TECHNICAL DATA

Engine Make	FPT/IVECO	
Engine Model	NEF45AM1A.S500	
Governing Type	Mechanical	
Cylinder Arrangement	Vertical in line	
Number of Cylinders	4	
Bore and Stroke (mm)	104 x 132	
Displacement/Cubic Capacity liters	4.5	
Induction System	Naturally Aspirated	
Cycle	4 stroke	
Combustion System	Direct Injection	
Compression Ratio	17.5:1	
Rotation	Anti-clockwise (viewed from flywheel)	
Cooling System	Water-cooled	
Frequency and Engine Speed	50Hz & 1500rpm	60Hz & 1800rpm
	Prime	Standby
Gross Engine Power kWm	42.7	47
FUEL CONSUMPTION (L/H)	50%	6.4
	80%	9.2
	100%	11.3
Total Lubrication System Capacity [liters]	12.8	12.8
Total Coolant Capacity (inc. radiator) [ltrs]	18.5	18.5
Exhaust Temperature °C	620	620
Fuel Tank Capacity	95	95

### CONTROL PANEL

Make Deepsea

This Auto Start Control Module (**DSE6110**) has been designed and built to combine all the instruments control and the warning lights for engine and alternator. The sheet steel made panel is carefully painted for tropical climates and is designed for a dusty environment. Includes following equipment:

- Ammeter with selector switch
- Water temperature meter
- oil pressure meter
- molded case three pole circuit breakers with thermal and magnetic release
- automatic shut down in case of HWT, LOP and over speed
- starting key and stop push button
- acoustical signal - warning light for high cooling water temperature, low oil pressure, battery charging
- hours meter

### Dimension and Weight

DIMENSION	OPEN	SILENT
Length (L)	1860 mm	2310 mm
Width (W)	760 mm	1000 mm
Height (H)	1400 mm	1400 mm
Net Weight	960 kg	1350 kg

### RATING DEFINITIONS:

**Prime Power** - These ratings are applicable for supplying continuous power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

**Standby Power** - These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these rating. When used at standby Rating the alternator will be peak continuous rated (according to ISO3046)

### STANDARD SPECIFICATIONS

#### 1. ENGINE

FPT/IVECO heavy duty diesel engine.

##### 1.1 GOVERNOR

Mechanical Governor.

#### 2. COOLING RADIATOR

Radiator and cooling fan complete with protection guards, designed to cool the engine in ambient temperatures up to 52° C. The radiator is mounted on the base frame to avoid vibrations coming from the engine.

#### 3. FILTRATION SYSTEM

Cartridge type air filter with dust indicator. Replaceable fuel and Lube Oil Filter with extended life for long maintenance intervals.

#### 4. EXHAUST SYSTEM

Heavy-duty industrial silencer.

#### 5. ELECTRICAL SYSTEM

12 Volt Electrical System with Battery Charging Alternator, Starter Motor, High Capacity Maintenance free lead acid battery, Battery Rack Mounted on the generating set base frame, and heavy duty Interconnecting Cables with terminals.

#### 6. ALTERNATOR

Screen protected and drip-proof, self-exciting, self-regulating brushless alternator. Four poles, STAR winding connection, suitable for tropical, humid and saline climates. H class insulation.

#### 7. AUTOMATIC VOLTAGE REGULATOR (AVR)

Static electronic design voltage regulator. Steady voltage precision within + 1 % from no load to full load including cold and hot variations, at any Power factor between 0.8 and unity.

#### 8. MOTOR STARTING

An overload capacity equivalent to between 160% to 300% (depending on alternator frame size) of full load impedance at zero power factor can be sustained for 10 seconds.

#### 9. MOUNTING ARRANGEMENT

##### 9.1 BASE FRAME

The complete generating set is mounted on heavy duty steel fabricated base frame which is anti rust coated.

##### 9.2 COUPLING

Engine and alternator are directly coupled by means of SAE flange so there is no possibility of misalignment after prolong use. The engine fly wheel is flexibly coupled to the alternator rotor.

##### 9.3 ANTI VIBRATION MOUNTING PADS

Anti vibration pads are fitted between engine-alternator base frame ensuring complete vibration isolation of rotating assemblies.

#### 10. FUEL SYSTEM

Base Mounted Heavy Duty Fuel tank of 08 hours operation capacity is equipped with visual fuel level indicator.

#### 11. DOCUMENTATION

A full set of operation and maintenance manual are provided.

#### 12. FACTORY TESTS

Generating set is subject to a strict load test before delivery. A test certificate can be provided as optional.

#### 13. QUALITY STANDARDS

Generating set meets the following standards ISO 8528, IEC 34.1, CEI 2.3, VDE 0530, BS 4999-5000, NF51-100.

#### 14. WARRANTY

Generating set is guaranteed for a period of 12 months from date of commissioning or 18 months from date of shipment which ever occurs earlier. (check warranty statement for more details, as it may vary for different countries)

In line with our policy of continuous product development, we reserve right to change specification without notice

### AVAILABLE OPTIONS & ACCESSORIES

We offer a range of optional features and accessories to tailor our generating sets to meet your needs.

#### OPTIONS

- Generator Set control and synchronizing panels
- Additional Protection alarms and shutdowns
- Water fuel separator
- Water jacket heater
- Battery charger

#### ACCESSORIES

- Genuine spare parts
- Fuel Tanks
- Manual and Automatic Transfer Switches

### STANDARD REFERENCE CONDITIONS

Output ratings are presented at 27°C air Inlet temperature, 1000 m bar and 30% relative humidity. Fuel consumption data at various loads, diesel fuel with a specific gravity of 0.85kg/L. De-ration may apply, please consult your dealer for specific site ratings.

*Some of the specifications are not standard on all Genset Models.*

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