

# Adpower

## Generating Sets

# IA450

| 3 PHASE OUTPUTS     |          |                     |     |                 |     |
|---------------------|----------|---------------------|-----|-----------------|-----|
| GENERATOR SET MODEL | RATING   | 50HZ                |     | 60HZ            |     |
|                     |          | 380-415 V, 1500 rpm |     | 480 V, 1800 rpm |     |
|                     |          | KVA                 | KW  | KVA             | KW  |
| IA-450              | STAND-BY | 450                 | 360 | 528             | 422 |
|                     | PRIME    | 400                 | 320 | 480             | 384 |



POWERED BY:



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

### ALTERNATOR DATA

|                        |                                |
|------------------------|--------------------------------|
| Make                   | LINZ                           |
| Model                  | PRO28L G/4                     |
| No. of bearings        | 1                              |
| Insulation Class       | H                              |
| Total Harmonic Content | at no load <3 %<br>on load <3% |
| Wires                  | 6                              |
| Ingress Protection     | IP23                           |
| Excitation System      | SHUNT                          |
| Winding Pitch          | 2/3                            |
| AVR Model              | HVR30                          |
| Overspeed              | 2250 mn <sup>-1</sup>          |
| Voltage Regulation     | ± 1%                           |

### ENGINE / TECHNICAL DATA

|                                               |                                       |         |
|-----------------------------------------------|---------------------------------------|---------|
| Engine Make                                   | FPT/IVECO                             |         |
| Engine Model                                  | CURSOR-13TE3A.S551                    |         |
| Governing Type                                | Electronic Unit Injector              |         |
| Cylinder Arrangement                          | Vertical in line                      |         |
| Number of Cylinders                           | 6                                     |         |
| Bore and Stroke (mm)                          | 135 x 150                             |         |
| Displacement/Cubic Capacity liters            | 12.9                                  |         |
| Induction System                              | Turbocharged aftercooled air/air      |         |
| Cycle                                         | 4 stroke                              |         |
| Combustion System                             | Direct E. U. I.                       |         |
| Compression Ratio                             | 16.5:1                                |         |
| Rotation                                      | Anti-clockwise (viewed from flywheel) |         |
| Cooling System                                | Water-cooled                          |         |
| Frequency and Engine Speed                    | 50Hz & 1500rpm                        |         |
|                                               | Prime                                 | Standby |
| Gross Engine Power kWm                        | 366.2                                 | 401     |
| FUEL CONSUMPTION (L/H)                        | 50%                                   | 42.8    |
|                                               | 80%                                   | 70.4    |
|                                               | 100%                                  | 85.8    |
| Total Lubrication System Capacity [liters]    | 35                                    | 35      |
| Total Coolant Capacity (inc. radiator) [ltrs] | 67                                    | 67      |
| Exhaust Temperature °C                        | 458                                   | 458     |
| Fuel Tank Capacity                            | 800                                   | 800     |

### CONTROL PANEL

| Make                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Deepsea |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| The auto starting control panel with Deepsea Controller 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. Automatic starting control board versions are available as option. |         |

### Dimension and Weight

| DIMENSION  | OPEN    | SILENT  |
|------------|---------|---------|
| Length (L) | 3400 mm | 4350 mm |
| Width (W)  | 1150 mm | 1750 mm |
| Height (H) | 1850 mm | 2550 mm |
| Net Weight | 2750 kg | 3580 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

Electronic 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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