



Introduction

Aksa power generation system, providing optimum performance, and reliability, for stationary standby, prime power, and continuous duty applications. All generator sets are factory build, and production tested.

Power

3 Phase, 50 Hz, PF 0.8

Voltage (V)	STANDBY RATING (ESP)		PRIME RATING (PRP)		STANDBY CURRENT (A)
	kW	kVA	kW	kVA	
380 / 220	10.0	12.5	9.52	11.9	19

STANDBY RATING (ESP) Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. ESP is in accordance with ISO 8528-1. Overload is not allowed.

PRIME RATING (PRP) Applicable for supplying power to varying electrical load for unlimited hours. PRP is in accordance with ISO 8528-1. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation.

General Characteristics

Model Name	APB 12500-T
Frequency (Hz)	50
Fuel Type	Diesel
Engine Make and Model	Aksa HR1105FD
Alternator Make and Model	Aksa 245x130(T)
Control Panel Model	HGM4020CAN
Canopy	APB 12500 KABIN

Engine Specifications

General Data

Manufacturer	Aksa
Engine Model	HR1105FD
Number of Cylinders / Type	1 cylinder
Bore mm (in)	105
Stroke mm (in)	88



Displacement l (cu. In)	456
Compression Ratio	20:1
Engine Speed (rpm)	3000
Standby Power (kW/hp)	17.7
Governor System	Electronic
Air Filter	UNKNOWN

Lubrication System

Oil Capacity l (gal)	2.2
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Fuel System

Fuel Type	Diesel
Injection Type	Direct
Type of Fuel Pump	N/A

Electrical System

Operating Voltage (Vdc)	UNKNOWN
Battery and Capacity (Qty/Ah)	36

Cooling System

Cooling Method	Air Cooled
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Exhaust System

Fuel Consumption

Fuel Cons. @100% Prime Load l/h (kg/h)	3.38
Fuel Cons. @75% Prime Load l/h (kg/h)	2.58
Fuel Cons. @50% Prime Load l/h (kg/h)	1.93

Alternator Characteristics

Manufacturer	Aksa
Alternator Model	245x130(T)
Frequency (Hz)	50
Voltage (V)	380
Phase	3
A.V.R.	UNKNOWN
Voltage Regulation	1
Insulation Class	H



Protection Class	IP23
Temperature Rise Class	H

Canopy Characteristics

Length mm	1130
Width mm	750
Height mm	885
Full Tank Capacity (l)	30

Control Panel

Manufacturer	SmartGen
Control Module Model	HGM4020CAN
Communication Ports	CANBUS



Standard Devices

1. Auto Mains Failure Control Panel

Panel Equipments:

- Control with HGM module
- Static battery charger
- Emergency stop push button

A) Generating set control module HGM6120CAN features:

- Configurable via PC software or the front panel
- 5 programmable inputs (configurable for digital or analog signals)
- 4 programmable relay outputs
- Monitors 3-phase generator and mains (utility) voltage
- Event log (50 records)
- Configurable timers and alarm protection thresholds
- Automatic shutdown or alarm upon fault detection



- Supports remote start/stop and load transfer
- Engine pre-heat control (relay output)
- Precision measurement and display of engine and electrical parameters
- Engine total run time accumulation
- Red LED indicators for alarms/shutdown
- LCD display with backlight, supports 8 language interfaces
- Front panel test button
- Modular design, flush mounting

B) Metering via LCD display:

- Generator Voltage (L-L / L-N)
- Generator Current (L1, L2, L3)
- Generator Frequency (Hz)
- Generator Power (Kw)
- Generator Power Factor (COS Φ)
- Accumulated Generator Energy (kWh)
- Load Percentage (%)
- Engine Oil Pressure (kPa / psi / bar)
- Engine Temperature ($^{\circ}\text{C}$ / $^{\circ}\text{F}$)
- Fuel Level (%)
- Battery Voltage (V)
- Charger Voltage (V)
- Mains Voltage (L-L / L-N)

C) Alarms:

- Under Speed / Over Speed
- Under Voltage / Over Voltage
- Under Frequency / Over Frequency
- Overload / Over Current / Overpower
- Low Engine Oil Pressure
- High Engine Coolant Temperature
- Low Fuel Level (Optional)
- Low / High Battery Voltage
- Emergency Stop
- Charge Fail
- Sensor Open Circuit
- Fail to Start
- ECU Communication Failure (for EFI engines)
- Maintenance Due
- Aftertreatment System Related Alarms (for aftertreatment EFI gensets)

2. Power Outlet Terminal Board Mounted on the Gen-set Base Frame



Standard Equipment

- High-quality, reliable, and complete power unit
- Compact design
- Easy starting and maintenance

Each generator set undergoes a comprehensive test program including full load testing, checking and testing of all control and safety stop functions

- Complete engineering solution with a wide range of options and accessories: Cabin, soundproof canopy, and road-suitable trailer

Aksa Certificates

Directive

- 2006/42/EC : Machinery Safety Directive
- 2014/30/EU : Electromagnetic Compatibility Directive
- 2014/35/EU : Low Voltage Directive

Standarts

- TS ISO 8528-5:2022 / TS EN ISO 8528-13:2018 : Reciprocating internal combustion engine-driven alternating current generating sets- Part:13: Safety

Quality Management Systems

- ISO 9001:2015
- ISO 14001:2015
- ISO 45001:2018
- ISO 50001:2018
- ISO 27001:2013
- ISO 10002:2018