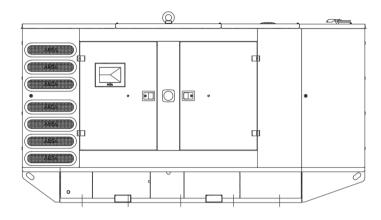
### aksa POWER GENERATION

### APD400BD





400 kVA / 320kW POWERED by BAUDOUIN

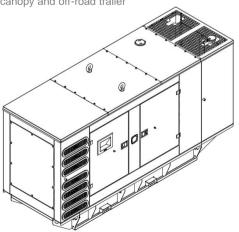
# DIESEL GENERATING SET 400/230 V - 50 Hz - 3 Phase

MODEL			APD400BD
Power Pf. 0.8	Standby	kVA	400
		kW	320
	Prime	kVA	365
		kW	292

Standby: Continuous running at variable load for duration of an emergency. No overload is permitted on these ratings. In accordance with ISO 3046.

Prime: Continuous running at variable load for unlimited periods with 10% overload available for 1 hour in any 12 hours period. In accordance with ISO 8528, ISO 3046.

- ✓ High quality, reliable and complete power unit
- ✓ Compact design
- ✓ Easy start and maintenance possibility
- Every generating set is subject to a comprehensive test program which includes full load testing, checking and provision of all control and safety shut down functions testing
- ✓ Fully engineered with a wide range of options and accessories: Canopy, sound proof canopy and off-road trailer













# ENGINE

BAUDOUIN						
Model		6M21G400/5				
Engine Power Output	kWm	385				
at rated rpm	HP	516				
Aspiration and Cooling		Turbocharged and Aftercooled				
Total Displacement	Litre	12.54				
No. of Cylinders and Build		6 - Inline				
Engine Speed	rpm	1500				
Bore and Stroke	mm×mm	127 × 165				
Compression Ratio		16:1				
Governor		Electronic				
Fuel Consumption at full load	L/hr	82.1				
Fuel Tank Capacity	Litre	470				
Oil Capacity	Litre	40				
Coolant Capacity	Litre	47				
Radiator Cooling Air	m³/min	470				
Air Intake – Engine	m³/min	24				
Exhaust Gas Flow	m³/min	65				

- ✓ Heavy duty diesel engine
- √ Four stroke, water cooled
- ✓ Direct injection fuel system
- ✓ Electronic Governor system
- ✓ 24Vdc starter and charge alternator
- ✓ Replaceable fuel filter, oil filter and dry element air filter
- ✓ Cooling radiator and fan
- ✓ Starter battery (with lead acid) including Rack and Cables
- ✓ Flexible fuel connection hoses and manual oil sump drain valve
- ✓ Industrial capacity exhaust silencer and steel bellows
- ✓ Jacket water heater(at automatic models)
- ✓ Operation manuals and circuit diagram documents

### **ALTERNATOR**

Design	Brushless single bearing, revolving field
Stator	2/3 pitch
Rotor	Single bearing, flexible disc
Insulation System	Class H
Standard Temperature Rise	125 - 163°C Continuous
Exciter Type	Self Excited
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct drive centrifugal blower fan
AC Waveform Total Harmonic Distortion	No load < 1.5%. Non distorting balanced linear load < 5%
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<2%

- ✓ Brushless, single bearing system, flexible disc, 4 poles
- ✓ Insulation class H
- ✓ Standard degree of protection IP22 (\*IP23 is available.)
- ✓ Self-exciting and self-regulating

- ✓ Impregnation with tropicalized epoxy varnish
- ✓ Solid state Automatic Voltage Regulator
- ✓ Stator winding with 2/3 pitch for improved harmonics



### **CONTROL SYSTEM**

Control supervision and protection panel is mounted on the genset base frame. The control panel is equipped as follows:

#### 1. Auto Mains Failure Control Panel

Panel equipments:

- ✓ Control with AMF module
- ✓ Static battery charger
- ✓ Emergency stop push button



DSE 7320

#### a) Generating set control module DSE 7320 features:

- √The module is used to monitor a mains supply and starts and stops a standby generating set
- √ Micro-processor based design
- ✓ Automatic control of mains and generator contactors
- √ Monitors engine performance and AC power output
- ✓ LED alarm indication
- ✓ Front panel configuration of timers and alarm trip points
- ✓Easy push button control STOP/RESET - MANUAL -TEST- AUTO - MUTE ALARM - START

#### b) Metering via LED display:

- ✓ Generator Volts (L-L / L-N)
- ✓ Engine oil pressure (PSI-Bar)
- ✓ Generator Ampere (L1,L2,L3)
- √ Engine temperature (° C&° F)
- ✓ Generator Frequency (Hz)
- ✓ Plant battery volts
- ✓ Engine hours run
- ✓ Mains Volts (Ph-Ph/Ph-N)
- ✓ Generator kVA, kWh
- ✓ Generator kW as % of rated kW setting
- ✓ Generator Cos (σ)

#### c) Alarms:

- ✓ Over and Under Speed
- ✓ Low and High Battery Volt.
- √ Start and Stop Failure
- √ Charge fail
- ✓ Over Current
- ✓ Under / Over Generator Voltage
- √ Low Oil Pressure
- √ Emergency stop
- √ High engine temperature
- √ kW overload
- ✓ Unbalanced load
- ✓ Independent earth fault trip

#### d) LED indications

Four configurable LED's like:

- ✓ Mains available
- √ Generator available
- ✓ Mains on load
- √ Generator on load

### 2. Power Outlet Terminal Board Mounted on the Genset Base Frame

## **OPTIONAL EQUIPMENTS**

### **Diesel Engine**

√Oil heater

#### **Alternator**

- √ 3/4 Pole Output Circuit Breaker
- ✓ Anti-condensation Heater

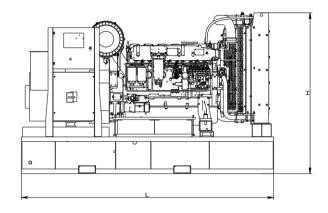
#### **Panel**

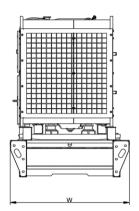
- ✓ Charge ammeter
- ✓ Transfer Switch 3Pole
- ✓ Transfer Switch 4 Pole
- ✓ Earth Fault ,single set

#### **Accessories**

- ✓ Bulk fuel tank
- ✓ Automatic filling system
- ✓ Fuel-water separator filter
- ✓ Low fuel level alarm
- √ Residential silencer
- ✓ Enclosure or sound proof canopy
- ✓ Trailer
- √ Manual oil drain pump
- ✓ Tool kit for maintenance

### **CHASSIS**



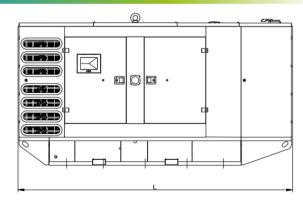


- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 1000 kVA)
   ✓ The generating set can be lifted or carefully pushed / pulled by the base frame
- Dial type fuel gauge and drain plug on the fuel tank
- ✓ Forklift pockets within base frame (up to 500kVA)

### **DIMENSIONS**

OPEN TYPE							
DIMENSIONS (L×W×H)	mm	2994x1300x1808					
DRY WEIGHT	kg	2800					
SOUND ATTENUATED TYPE							
DIMENSIONS (L×W×H)	mm	3933x1356x2172					
DRY WEIGHT	kg	3600					

### **CANOPY**



- Q
- ✓ All canopy parts are designed with modular principles
- Without welding assembly
- ✓ Doors on each side
- ✓ All metal canopy parts are painted by electrostatic polyester powder paint
- ✓ Exhaust silencer is protected against environment influences
- Thermally insulated engine exhaust system
- Emergency stop push button is installed outside of the canopy
- Easy lifting and moving
- ✓ Easy maintenance and operation