

APD 200 C







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 (kVA) 3 Phase,50 Hz, PF 0.8

Voltage	STANDBY RATING (ESP)		PRIME RATING (PRP)		Standby Amper
Voltage	kW	kVA	kW	kVA	·
400/231	160,00	200,00	144,00	180,00	288,68

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	APD 200 C
Frequency (Hz)	50
Fuel Type	Diesel
Engine Made and Model	CUMMINS 6CTA8.3-G2
Alternator Made and Model	AK 4150
Control Panel Model	DSE 6120
Canopy	AK 49

ENGINE SPECIFICATIONS

Engine Model 6CTA8.3-G2 Number of Cylinder (L) 6 cylinders - in line Bore (mm.) 114 Stroke (mm.) 135 Displacement (lt.) 8,30 Aspiration Turbo Charged and AfterCooled Compression Ratio 17.3:1 RPM (d/dk) 1500		
Number of Cylinder (L) Bore (mm.) Stroke (mm.) Displacement (It.) Aspiration Compression Ratio 6 cylinders - in line 114 135 135 7 Turbo Charged and AfterCooled 17.3:1	Engine	CUMMINS
Bore (mm.) Stroke (mm.) Displacement (lt.) Aspiration Turbo Charged and AfterCooled Compression Ratio 17.3:1	Engine Model	6CTA8.3-G2
Stroke (mm.) Displacement (lt.) Aspiration Compression Ratio 135 8,30 Turbo Charged and AfterCooled 17.3:1	Number of Cylinder (L)	6 cylinders - in line
Displacement (It.) 8,30 Aspiration Turbo Charged and AfterCooled Compression Ratio 17.3:1	Bore (mm.)	114
Aspiration Turbo Charged and AfterCooled Compression Ratio 17.3:1	Stroke (mm.)	135
Compression Ratio 17.3:1	Displacement (It.)	8,30
	Aspiration	Turbo Charged and AfterCooled
RPM (d/dk) 1500	Compression Ratio	17.3:1
	RPM (d/dk)	1500



APD 200 C



Standby Power (kW/HP) 180/241 Prime Power 163/218 Block Heater QTY 1 Block Heater Power (Watt) 1500 Fuel Type Diesel Injection Type and System Direct Type of Fuel Pump BYC PB Governor System Electronic Operating Voltage (Vdc) 24 Vdc Battery and Capacity (Qty/Ah) 2x85 Charge Alternator (A) 40 Cooling Method Water Cooled Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (it) 12.3/41.3 Air Filter Dry Type Fuel Cons. Prime With %150 Load (it/hr) 42 Fuel Cons. Prime With %15 Load (it/hr) 31 Fuel Cons. Prime With %50 Load (it/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (Y) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/)11% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AlR (m*/min) 30.84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 DRY WEIGHT (kg.) 1880 TANK CAPACITY (IL.) 473	Oil Capacity (Total With Filter) (It)	16,6
Block Heater QTY	Standby Power (kW/HP)	180/241
Block Heater Power (Watt) 1500	Prime Power	163/218
Fuel Type	Block Heater QTY	1
Injection Type and System	Block Heater Power (Watt)	1500
Type of Fuel Pump	Fuel Type	Diesel
Governor System	Injection Type and System	Direct
Operating Voltage (Vdc) 24 Vdc Battery and Capacity (Qty/Ah) 2x85 Charge Alternator (A) 40 Cooling Method Water Cooled Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (lt) 12.3/41.3 Air Filter Dry Type Fuel Cons. Prime With %100 Load (lt/hr) 42 Fuel Cons. Prime With %50 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30.84 Open Gen.Set Dimensions (mm) LENGTH 2600 </td <td>Type of Fuel Pump</td> <td>BYC PB</td>	Type of Fuel Pump	BYC PB
Battery and Capacity (Cty/Ah) 2x85 Charge Alternator (A) 40 Cooling Method Water Cooled Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (it) 12.3/41.3 Air Flitter Dry Type Fuel Cons. Prime With %100 Load (lt/hr) 42 Fuel Cons. Prime With %75 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Governor System	Electronic
Charge Alternator (A) 40 Cooling Method Water Cooled Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (it) 12.3/41.3 Air Filter Dry Type Fuel Cons. Prime With %100 Load (lt/hr) 42 Fuel Cons. Prime With %50 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1/m% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 260 LENGTH 1684 DRY WEIGHT (kg.) 1880	Operating Voltage (Vdc)	24 Vdc
Cooling Method Water Cooled Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (lt) 12.3/41.3 Air Filter Dry Type Fuel Cons. Prime With %100 Load (lt/hr) 42 Fuel Cons. Prime With %50 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (H2) 50 Power (k/A) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP, GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Battery and Capacity (Qty/Ah)	2x85
Cooling Fan Air Flow (m3/min) 278 Coolant Capacity (engine only / with radiator) (It) 12.3/41.3 Air Filter Dry Type Fuel Cons. Prime With %100 Load (It/hr) 42 Fuel Cons. Prime With %55 Load (It/hr) 31 Fuel Cons. Prime With %55 Load (It/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (k/A) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 280 LENGTH 1684 DRY WEIGHT (kg.) 1880	Charge Alternator (A)	40
Coolant Capacity (engine only / with radiator) (it) Air Filter Dry Type Fuel Cons. Prime With %100 Load (it/hr) Fuel Cons. Prime With %75 Load (it/hr) Fuel Cons. Prime With %50 Load (it/hr) ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model Frequency (Hz) Power (kVA) Power (kVA) AV.R. Voltage (V) Phase 3 A.V.R. Voltage Regulation Insulation System Protection IP22 Rated Power Factor WEIGHT COMP. GENERATOR (Kg) COOLING AIR (m³/min) Den Gen.Set Dimensions (mm) LENGTH BEGOT BEGOT DRY WEIGHT (kg.) 1880	Cooling Method	Water Cooled
Air Filter Dry Type Fuel Cons. Prime With %100 Load (lt/hr) 42 Fuel Cons. Prime With %75 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Aksa Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1/% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Cooling Fan Air Flow (m3/min)	278
Fuel Cons. Prime With %100 Load (It/hr) Fuel Cons. Prime With %75 Load (It/hr) Fuel Cons. Prime With %50 Load (It/hr) ALTERNATOR CHARACTERISTICS Manufacturer Alternator Made and Model AK 4150 Frequency (Hz) Fower (kVA) Voltage (V) Phase A.V.R. Voltage Regulation Insulation System H Protection Protection WEIGHT COMP. GENERATOR (Kg) COOLING AIR (m³/min) LENGTH DRY WEIGHT (kg.) 1880	Coolant Capacity (engine only / with radiator) (It)	12.3/41.3
Fuel Cons. Prime With %75 Load (lt/hr) 31 Fuel Cons. Prime With %50 Load (lt/hr) 21 ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30.84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Air Filter	Dry Type
Fuel Cons. Prime With %50 Load (lt/hr) ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30.84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Fuel Cons. Prime With %100 Load (lt/hr)	42
ALTERNATOR CHARACTERISTICS Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Fuel Cons. Prime With %75 Load (lt/hr)	31
Manufacturer Aksa Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Fuel Cons. Prime With %50 Load (lt/hr)	21
Alternator Made and Model AK 4150 Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT (kg.) 1880	ALTERNATOR CHARACTERISTICS	
Frequency (Hz) 50 Power (kVA) 187.5 Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Manufacturer	Aksa
Power (kVA)	Alternator Made and Model	AK 4150
Voltage (V) 400 Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Frequency (Hz)	50
Phase 3 A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Power (kVA)	187.5
A.V.R. SX440 Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Voltage (V)	400
Voltage Regulation (+/-)1%% Insulation System H Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Phase	3
Insulation System	A.V.R.	SX440
Protection IP22 Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Voltage Regulation	(+/-)1%%
Rated Power Factor 0.8 WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Insulation System	Н
WEIGHT COMP. GENERATOR (Kg) 580 COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Protection	IP22
COOLING AIR (m³/min) 30,84 Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Rated Power Factor	0.8
Open Gen.Set Dimensions (mm) LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	WEIGHT COMP. GENERATOR (Kg)	580
LENGTH 2600 WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	COOLING AIR (m³/min)	30,84
WIDTH 1250 HEIGHT 1684 DRY WEIGHT (kg.) 1880	Open Gen.Set Dimensions (mm)	
HEIGHT 1684 DRY WEIGHT (kg.) 1880	LENGTH	2600
DRY WEIGHT (kg.) 1880	WIDTH	1250
	HEIGHT	1684
TANK CAPACITY (It.) 473	DRY WEIGHT (kg.)	1880
	TANK CAPACITY (It.)	473



APD 200 C



Gen.Set Canopy Dimensions (mm)

LENGTH	3404
WIDTH	1136
HEIGHT	2020
DRY WEIGHT (kg.)	2140
TANK CAPACITY (It.)	340



- 1. Steel structures
- 2. Emergency stop push button
- 3. Control panel is right side of the set.
- 4. Corrosion.resistant locks and hinges
- 5. Sump drains valves
- 6. Sound proof foam metarial
- 7. Lifting Points

INTRODUCTION

Sound–attenuated and Weather-protective Enclosures Sound-attenuated and weather protective enclosures for generating sets from Aksa, meet event the sound requirements and provide optimum protection from inclement weather and development by our specialist acoustic engineers. Our modular designed sound insulated canopies provide ease of access for servicing and general maintenance and interchangeable components permitting on-site repair. Enclosures are designed to optimize genset cooling performance, providing you with confidence that genset ratings and ambient capability.

Control Panel

Control Module	DSE
Control Module Model	DSE 6120
Communication Ports	CANBUS



- 1. Menu navigation buttons
- 2. Close mains button
- 3. Main Status and instrumentation display
- 4. Alarm LED's
- 5. Close generator button
- 6. Status LED's
- 7. Operation selecting buttons

Devices

- -DSE, model 6120 Auto Mains Failure control module.
- -Battery charger input 198-264 volt, output 27,6 V 5 A (24 V) or 13,8 Volt 5A (12V)
- -Emergency stop push button and fuses for control circuits.

CONSTRUCTION and FINISH

-Components installed in sheet steel enclosure. Phosphate chemical, pre-coating of steel provides corrosion resistant surface. Polyester composite powder topcoat forms high gloss and extremely durable finish. Lockable and hinged panel door provides easy access to components.

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APD 200 C



INSTALLATION

Control panel is mounted on baseframe with steel stand. Located at the right side of the generator set (When you look at the Gen.Set. from Alternator)

GENERATING SET CONTROL UNIT

The DSE 6120 module has been designed to monitor generator frequency, volt, current, engine oil pressure, coolant temperature running hours and battery volts.

Module monitors the mains supply and switch over to the generator when the mains power fails.

The DSE6120 also indicates operational status and fault conditions, Automatically shutting down the Gen. Set and giving true first up fault condition of Gen. Set failure. The LCD display indicates the fault.

STANDARD SPECIFICATIONS

- -Microprocessor controlled.
- -LCD display makes information easy to read.
- -Automatically transfers between mains (utilty) and generator power.
- -Manual programming on front panel.
- -User-friendly set-up and button layout.
- -Remote start.
- -Event logging (50) showing date and time.
- -Controls: Stop/Reset, Manual, Auto, Test, Start, buttons. An additional push button next to the LCD display is used to scroll through the modules' metering displays.

Instruments

ENGINE

- -Engine speed.
- -Oil pressure.
- -Coolant temperature.
- -Run time.
- -Battery volts.
- -Configurable timing.

GENERATOR

- -Voltage (L-L, L-N).
- -Current (L1-L2-L3).
- -Frequency.
- -Gen. Set ready.
- -Gen. Set enabled.

MAINS

- -Mains ready.
- -Mains enabled.

WARNING

- -Charge failure.
- -Battery Low/High voltage.
- -Fail to stop.

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- -Low /High generator voltage.
- -Under /Over generator frequency.
- -Over /Under speed.
- -Low oil pressure.
- -High coolant temperature.

SHUT DOWNS

- -Fail to start.
- -Emergency stop.
- -Low oil pressure.
- -High coolant temperature.
- -Over /Under speed.
- -Under/over generator frequency.
- -Under/over generator voltage.
- -Oil pressure sensor open.
- -Coolant temperature sensor open.

ELECTRICAL TRIP

-Generator over current.

Options

- -Flexible sensor can be controlled with temperature, pressure, percentage (warning/shutdown/electrical trip)
- -Local setting parameters and monitoring from PC to control module with USB connection (max 6 mt).

Standards

- -Elecrical Safety / EMC compatibility
- -BS EN 60950 Electrical business equipment.
- -BS EN 61000-6-2 EMC immunity standard.
- -BS EN 61000-6-4 EMC emission standard

STATIC BATTERY CHARGER

- Battery charger is manufactured with switching-mode and SMD technology and it has high efficiency.
- Battery charger models' output V-I characteristic is very close to square and output is 5 amper, 13,8 V for 12 volt and 27,6 V for 24 V . Input 198 264 volt AC.
- The charger is fitted with a protection diode across the output.
- Connect charge fail relay coil between positive output and CF output.
- They are equipped with RFI filter to reduce electrical noise radiated from the device.
- Galvanically isolated input and output typically 4kV for high reliability.

STANDARD SPECIFICATIONS

- Water cooled, Diesel engine
- Radiator with mechanical fan
- Protective grille for rotating and hot parts
- Electric starter and charge alternator

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APD 200 C



- Starting battery (with lead acid) including rack and cables
- Engine coolant heater
- Base frame design incorporates an integral fuel tank and anti-vibration isolators
- Flexible fuel connection hoses
- Single bearing, class H alternator
- Industrial exhaust silencer and steel bellows supplied separately(for open sets)
- Static battery charger
- Manual for application and installation

OPTIONAL EQUIPMENTS

ENGINE

Remote Radiator Cooling

Fuel-Water Seperator Filter

Oil heater

ALTERNATOR

Anti-Condensation Heater

Main line circuit breaker

CONTROL SYSTEM

Earth fault, single set

Charge Ammeter

TRANSFER SWITCH

Three Pole Contactor

Four Pole Contactor

Three or four pole motor operated circuit breaker

OTHER ACCESSORIES

Main Fuel Tank

Automatic or manual fuel filling system

Manual oil drain pump

Low and high fuel level alarm

Enclosure: weater protective or sound attenuated

Trailer

Tool kit for maintenance

Automatic transfer switch

AKSA CERTIFICATES

- TS ISO 9001-2008