# aksa POWER GENERATION

# **AVP763-6**





763kVA / 610.4kW POWERED by VOLVO

## DIESEL GENERATING SET 480/277V, 440/254V, 380/220V, 220/127V- 60 Hz-3 Phase

| MODEL            |         |     | AVP763-6 |
|------------------|---------|-----|----------|
| Power<br>Pf. 0.8 | Standby | kVA | 763      |
|                  |         | kW  | 610.4    |
|                  | Prime   | kVA | 694      |
|                  |         | kW  | 555.2    |

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 hour 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**

| VOLVO PENTA                   |        |                                   |  |  |  |  |
|-------------------------------|--------|-----------------------------------|--|--|--|--|
| Model                         |        | TWD1643GE                         |  |  |  |  |
| Engine Power Output           | kWm    | 674                               |  |  |  |  |
| at rated rpm                  | HP     | 917                               |  |  |  |  |
| Aspiration and Cooling        |        | Turbocharged-Change Air Cooled    |  |  |  |  |
| Total Displacement            | Litre  | 16.12                             |  |  |  |  |
| No. of Cylinders and Build    |        | 6 Cylinder,In-Line                |  |  |  |  |
| Engine Speed                  | rpm    | 1800                              |  |  |  |  |
| Bore and Stroke               | mmxmm  | 144 × 165                         |  |  |  |  |
| Compression Ratio             |        | 16.5:1                            |  |  |  |  |
| Governor                      |        | Electronic control(Volvo / EMS 2) |  |  |  |  |
| Fuel Consumption at 100% load | L/hr   | 146.2                             |  |  |  |  |
| Fuel Tank Capacity            | Litre  | Open:1000/Canopy:1000             |  |  |  |  |
| Oil Capacity                  | Litre  | 48                                |  |  |  |  |
| Coolant Capacity              | Litre  | 95                                |  |  |  |  |
| Radiator Cooling Air          | m³/min | 805.4                             |  |  |  |  |
| Air Intake – Engine           | m³/min | 54.85                             |  |  |  |  |
| Exhaust Gas Flow              | m³/min | 130.1                             |  |  |  |  |

- ✓ Heavy duty Volvo Penta diesel engine
- ✓ Four stroke, water cooled, turbocharged
- ✓ Direct injection fuel system
- √ Electronic Governor system
- √ 24 V D.C. 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 IP21 (\*IP22/IP23 is available.)
- ✓ Self-exciting and self-regulating

- √ All wound components are impregnated with materials and processes designed specifically
- ✓ 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

### 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)

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DSE 7320

#### 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

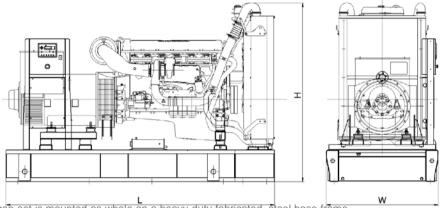
#### **Panel**

- ✓ Charge ammeter
- ✓ Transfer Switch 3 Pole
- ✓ 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

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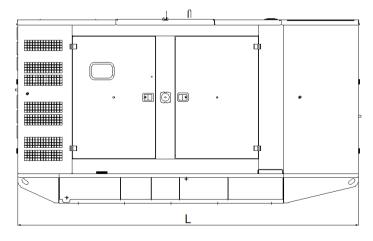


- ✓ The complete gen-set is mounted as whole on a heavy-duty fabricated, steel base frame
- ✓ Anti-vibration pads are fixed between the engine/ alternator feet and the base frame
- ✓ Base frame design incorporates an integral fuel tank (Up to 750 kVA)
   ✓ The generating set can be lifted or carefully pushed / pulled by the base frame
- ✓ Dial type fuel gauge and drain plug on the fuel tank

## **DIMENSIONS**

| OPEN TYPE          |    |                |  |  |  |  |
|--------------------|----|----------------|--|--|--|--|
| DIMENSIONS (LxWxH) | mm | 3537x1550x2253 |  |  |  |  |
| DRY WEIGHT         | kg | 4630           |  |  |  |  |
| CANOPY TYPE        |    |                |  |  |  |  |
| DIMENSIONS (LxWxH) | mm | 5313x1606x2658 |  |  |  |  |
| DRY WEIGHT         | kg | 5660           |  |  |  |  |

# **CANOPY**



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- 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