

### Diesel Generator Set KD 275 O&M



#### Description

This Katana® Power Generation commercial generator set is a fully integrated power generation system, providing optimum performance, reliability, and versatility for stationary standby, prime power and continuous duty applications.

#### Features

**Katana® heavy-duty engine** - Rugged 4-cycle industrial diesel delivers reliable power, low emissions and fast response to load changes.

**Alternator** - Low reactance 2/3 pitch windings; low waveform distortion with non-linear loads, fault clearing short-circuits capability, and class H insulation.

**Cooling system** - The standard integrated kit model radiator system designed and tested for nominal ambient temperatures, simplifies facility design requirements for heat rejected.

**Control system** – Datakom electronic control is standard equipment and provides total genset system integration, including auto remote start/stop, alarm and status message display.

**Canopy Types** - Optionally it is possible to make it protective and soundproof against adverse climatic conditions

**Warranty and service** - Backed by a comprehensive warranty and worldwide aftersales support, 10 years of spare parts supplying.

**Stand by Rating (ESP):** It is the way that generators operate under variable load at certain time intervals. It can work as a backup power. It is not suitable to work under extreme load.

**Prime Rating (PRP):** Applicable for supplying power to varying electrical load for unlimited hours. PRP is in accordance with ISO 8528. 10 % overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046.

| Genset Model | Engine Model  | Prime rating | Stand by rating | Max. kVA rating |
|--------------|---------------|--------------|-----------------|-----------------|
| KD 275 O&M   | OPE 9.4 TWE-1 | 208 kVA      | 239 kVA         | 275 kVA         |

## Generator Set Specifications

|  |  |
|--|--|
| Governor regulation class                | ISO 8528 G3                                      |
| Voltage regulation, no load to full load | ± 1%   |
| Random voltage variation                 | ± 1%   |
| Frequency regulation                     | Isochronous                                      |
| Random frequency variation               | ± 0.25%  |
| EMS compatibility                        | In compliance with BS 800 and VDE levels G and N |

## Engine Specifications

|  |                         |
|--|-------------------------|
| Engine brand   | Optimus Engine          |
| Aspiration Type  | Turbocharged            |
| Engine Rated Speed                                     | 1500 rpm                |
| Bore   | 126 mm                  |
| Stroke   | 130 mm                  |
| Displacement   | 9,726 L                 |
| Cylinder block   | 6 cylinder, vertical    |
| Oil capacity   | 20 L                    |
| Cooling water  | 50 L                    |
| Starting voltage                                       | 24 V                    |
| Fuel system  | Direct injection        |
| Fuel filter  | Strata pore fuel filter |
| Air cleaner type                                       | Heavy duty air cleaner  |
| Compression ratio                                      | 16:1                    |
| Cycle  | 4 stroke                |
| Cooling system   | Water cooled            |
| Governor Type  | Mechanical              |
| Fuel Consumption at 50% of generator set prime output  | 29,8 L/hr               |
| Fuel Consumption at 75% of generator set prime output  | 37,4 L/hr               |
| Fuel Consumption at 100% of generator set prime output | 49,23 L/hr              |
| Fuel Consumption at 110% of generator set prime output | 54,7 L/hr               |

## Alternator Specifications

|  |  |
|--|--|
| Alternator brand                             | Megatron   |
| Type   | Brushless, revolving field                             |
| Frequency                                    | 50 Hz  |
| Winding pitch                                | 2/3 pitch  |
| Number of bearing                            | Single bearing   |
| Protection                                   | IP23   |
| Insulation system                            | Class H  |
| Standard temperature rise                    | Standart 125°C ,Stand by 163°C                         |
| Exciter type                                 | Self - excitation or other excitation by PMG           |
| Phase rotation                               | A (U), B (V), C (W)                                    |
| Alternator cooling                           | Direct drive centrifugal blower fan                    |
| AC waveform total harmonic distortion (THDV) | 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%  |

## Generator Set Options

### Engine

- Water jacket heater

### Cooling

- Antifreeze -25°

### Alternator

- H class insulation
- Exciter voltage regulator

### Control panel

- Datakom
- 3 pole main circuit breaker
- Motorised 4 pole circuit breaker

### Canopy Types

- Optional super silent

### Warranty

- Global warranty

## CONTROL SYSTEM

The D-500LITE MK2 is a cost effective modular genset controller ready for internet monitoring through plug-in modules.

## FEATURES

- Diesel and gas genset support
- 400Hz operation support
- 400 event logs, full snapshot
- All parameters front panel editable
- 3 level configuration password
- 128x64 graphical LCD display
- Downloadable languages
- Waveform display of V & I
- Harmonic analysis of V & I
- 16Amp MCB & GCB outputs
- 8 configurable digital inputs
- 6 configurable digital outputs
- 3 configurable analog inputs
- Both CANBUS-J1939 & MPU
- 3 configurable service alarms
- Multiple automatic exerciser
- Weekly operation schedule
- Dual mutual standby with equal aging of gensets
- Manual "speed fine adjust" on selected ECUs
- Automatic fuel pump control
- Disable protections feature
- Excess power protection
- Reverse power protection
- Overload IDMT protection
- Load shedding, dummy load
- Multiple load management
- Current unbalance protection
- Voltage unbalance protection
- Fuel filling & fuel theft alarms
- Battery back-up real time clock
- Idle speed control
- Battery charge run enabled
- Combat mode support
- Multiple nominal conditions
- Contactor & MCB drive
- 4 quadrant genset power counters
- Mains power counters
- Fuel filling counter
- Fuel consumption counter
- Modem diagnostics display
- Configurable through USB, RS-232 and GPRS
- Free configuration program
- Allows SMS controls
- Ready for central monitoring
- Mobile genset support • Automatic GSM geo-location
- GPS connectivity (RS232)
- Easy USB firmware upgrade
- IP65 rating with optional gasket

## FUNCTIONALITIES

- AMF unit
- ATS unit
- Remote Start Controller
- Manual Start Controller
- Engine Controller

## TOPOLOGIES

- 3 ph 4 w, star & delta
- 3 ph 3 w, 2 CTs
- 2 ph 3 w
- 1 phase 2 wires

## COMMUNICATION

- USB Device
- J1939-CANBUS
- Geo-locating through GSM
- Internet Central Monitoring
- SMS Message Sending
- E-mail Sending
- Free Pc Software: RainbowPlus
- Modbus RTU (2400-57600baud)
- Modbus TCP/IP

## REMOTE MONITORING (OPTIONAL)

- Single server supports up to 60'000 devices
- Provides data security, data is sent to only server
- Uses internet-based interactive World map
- Real time display of status of devices are shown on the map, and on side panel
- Hierarchical configuration and clustering
- Remote control of devices
- Supports all Datakom products, which are integrated with DKG 210 gateway
- Supports all devices, which supports Modbus protocol, by integrating DKG 210 gateway
- Data recording, analysis and reporting
- Tablet and smartphone interfaces

## PLUG-IN MODULES (OPTIONAL)

- GSM Modem (2G-3G-4G)
- Ethernet 100Mbps
- Wi-Fi (802.11 b/g/n)
- RS-485 (2400-57600baud)
- RS-232 (2400-57600baud)

## MEASUREMENTS

- Mains & genset PN/PP voltages
- Mains & genset frequency
- Mains & genset phase currents
- Mains & genset neutral currents
- Mains & genset, phase & total, kW, kVA, kVAr, pf
- Engine speed
- Battery voltage

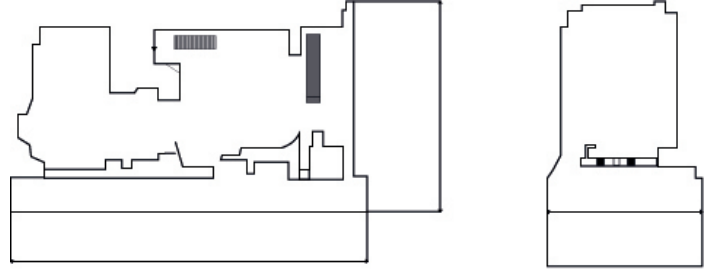


D-500LITE MK2 control operator / display panel

## Canopy Standart Specifications

- Compact design connection with non-welded nuts and bolts.
- Integrated canopy,generator set,exhaust system fuel tank.
- Body made from steel components treated with polyester powder coating
- Easy access to all service points
- Exhaust system inside canopy
- Large doors on each side
- Control panel viewing window in a lockable access door
- Emergency stop push button mounted on cabin exterior
- Fuel fill and battery can only be reached via lockable access doors.
- Customer options available to meet your applications needs.
- Katana makes its generating sets noise level tests in accordance with directive 2000/14/EC validation of the noise level test has been aproved by the notified body Szutest (CE conformity assessment body).

### Open



### Enclosed



|                  | Dry Weight (kg) | Lenght (mm) | Width (mm) | Height (mm) | Tank Capacity (L) |
|------------------|-----------------|-------------|------------|-------------|-------------------|
| <b>Open type</b> | 2000            | 2750        | 1050       | 1750        | 198               |
| <b>Canopy</b>    | 2300            | 3100        | 1050       | 2100        | 198               |

## Certificates



Katana Generator has Quality Management Systems certificate. ISO 9001:2015



Katana Generator has Occupational Health and Safety Management Systems certificate. ISO 45001: 2018



Katana Generator has Environmental Management System certification. ISO 14001:2015



This generator set is available with CE certification.

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