

Technical Specification

Diesel
Generator Set
OC 825 CUM

ORKSA
GENERATOR



Description

This Orksa® 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

Orksa® 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 |
|--------------|--------------|--------------|-----------------|
| OC 825 CUM | VTA28G6 | 750 kVA | 825 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 | Cummins Engine |
| Aspiration Type | Turbo Charged |
| Engine Rated Speed | 1500 rpm |
| Bore | 140 mm |
| Stroke | 152 mm |
| Displacement | 28.0 L |
| Cylinder block | 12 cylinder |
| Oil Capacity | 83 L |
| Coolant Capacity for Engine | 182 L |
| Starting voltage | 24 V |
| Fuel system | Direct injection |
| Fuel filter | Strata pore fuel filter |
| Air cleaner type | Heavy duty air cleaner |
| Compression ratio | 14.0:1 |
| Cycle | 4 stroke |
| Cooling system | Water cooled |
| Governor Type | Electronic |
| Fuel Consumption at 50% of generator set prime output | 91 L/hr |
| Fuel Consumption at 75% of generator set prime output | 140 L/hr |
| Fuel Consumption at 100% of generator set prime output | 195 L/hr |

Alternator Specifications

| | |
|--|--|
| Alternator brand | Mecc Alte - ECO 43-1M/4 A |
| Type | Brushless, revolving field |
| Frequency | 50-60 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)

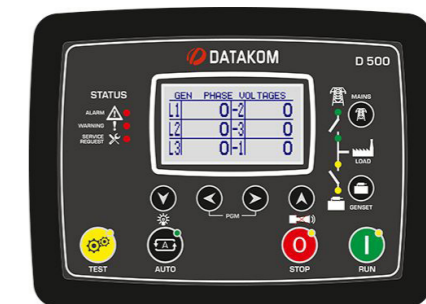
- Single server supports up to 60'000 devices
- Provides data security, data is sent to only server
- Uses internet-based interactive World map
- Real time display of status of devices are shown on the map, and on side panel
- Hierarchical configuration and clustering
- Remote control of devices
- Supports 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

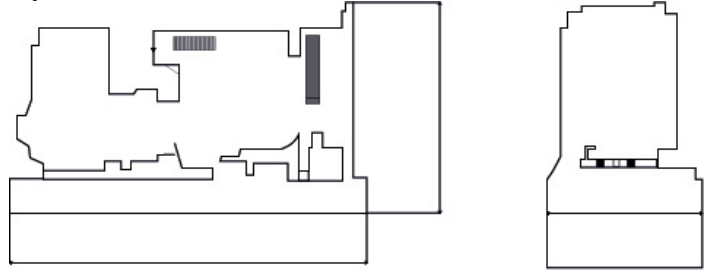


D-500LITE MK2 control operator / display panel

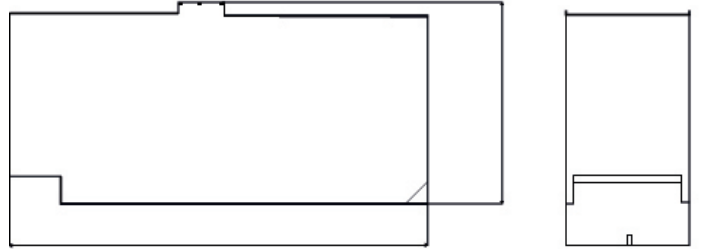
Canopy Standart Specifications

- 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.
- Orksa 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) |
|------------------|-----------------|-------------|------------|-------------|-------------------|
| Open type | 6360 | 5150 | 2000 | 2900 | 2600 |
| Canopy | 7460 | 5150 | 2000 | 3550 | 2600 |

Certificates



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



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



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



This generator set is available with CE certification.

ORKSA MAKİNA SATIŞ VE SERVİS SANAYİ LTD ŞTİ.

Adress: Bağdat Caddesi Kasadar Sokak
Köprü Ap. No.9/C
Bostancı/ İSTANBUL
Telephone: +90 216 362 17 77 (pbx)
E Mail: orksa@orks.com.tr

