Technicial Specification

Diesel
Generator Set
OR 140 D&M

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 standart integrated kit model radiator system designed and tested for nominal ambient temparatures, simplifres 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 certaintime ıntervals. 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 perod of operation,in accordance with ISO 3046.

Genset Model	Engine Model	Prime rating	Stand by rating	Max. kVA rating
OR 140 D&M	DDE 5.3 YTO	119 kVA	131 kVA	144 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	Detroit Engine
Aspiration Type	Turbocharged
Engine Rated Speed	1500 rpm
Bore	112 mm
Stroke	135 mm
Displacement	5.32 L
Cylinder block	4 cylinder,vertical
Oil Capacity	14 L
Coolant Capacity for Engine	6 L
Starting voltage	24 V
Fuel system	Direct injection
Fuel filter	Strata pore fuel filter
Air cleaner type	Heavy duty air cleaner
Compression ratio	17:1
Cycle	4 stroke
Cooling system	Water cooled
Governor Type	Electronic
Fuel Consumption at 50% of generator set prime output Fuel Consumption at 75% of generator set prime output Fuel Consumption at 100% of generator set prime output	12,52 L/hr 18,45 L/hr 22,80 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 125ºC ,Stand by 163ºC
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
☐ 5000 Working hours or 5 Years 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 MONİTORİNG (OPTİONAL)

• 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 (OPTİONAL)

• 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 conformıty assessment body).

Açık Tip
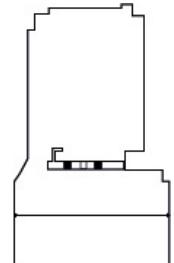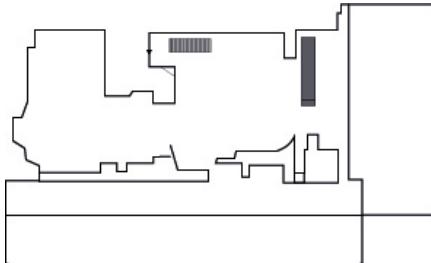
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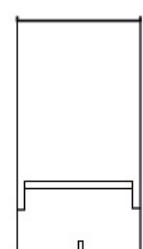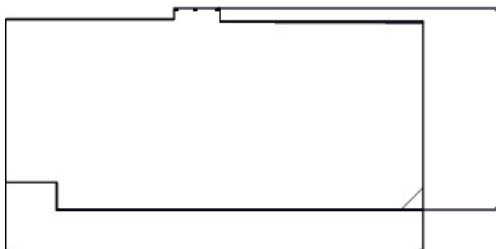
	Dry Weight (kg)	Lenght (mm)	Width (mm)	Height (mm)	Tank Capacity (L)
Open type	1050	2000	1050	1750	184,8
Canopy	1270	2500	1050	1900	184,8

Certificates

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

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

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

CE — 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@orksa.com.tr

ORKSA
GENERATOR
www.orksa.com.tr

Manufacturer reserves the right to make changes in model, technical specifications, color, equipment and accessories without prior notice.