



### Ratings Range

11000/6350 V - 50 Hz

<b>Standby</b>	<b>kW</b>	3600
	<b>kVA</b>	4500
<b>Prime</b>	<b>kW</b>	3272
	<b>kVA</b>	4090



## Benefits and features

### Rehko premium quality

- Rehko provides **one source responsibility** for the generating set and accessories
- The generator set, its components and a wide range of options have been **fully developed, prototype tested, factory built,** and production-tested
- Generators sets are designed in accordance with ISO8528-5, performance class G3.
- Generators sets accept the rated load in one step outside the ISO8528-5 operating limit values.
- Approved for use with HVO (Hydrotreated Vegetable Oil) according to EN15940

### Rehko premium performances

#### Engines

- Low fuel consumption thanks to a high technology common rail injection engine
- A smaller footprint thanks to a high power density
- Low temperature starting capability
- Long maintenance interval

#### Alternator

- Provide industry leading motor starting capability
- Excitation system to permit sustained overcurrent > 300% In, during 10 sec
- Built with a class H insulation and IP23

#### Cooling

- A flexible solution using an electrical driven radiator fan
- High temperature and altitude product capacity available

#### Control panel

- The Rehko wide controller range provide the reliability and performances you expect from your equipment. You can program, manage and diagnose it easily and in an efficient way

### Rehko worldwide support

- A standard three-year or 1000-hour limited warranty for standby applications.
- A standard two-year or 8700-hour limited warranty for prime power applications.
- A worldwide product support

## Generator sets ratings

	Hz	Standby rating			Prime rating	
		kWe	kVA	Amps	kWe	kVA
11000/6350	50	3600	4500	236	3272	4090

## General Specifications

Manufacturer	Rehko
Engine ref.	KD103V20-5CES
Alternator choices	KH09720T
Performance class	G3
One step load acceptance (out of ISO criteria)	100%
Voltage (V)	11000/6350
Controllers	M80-D APM802
Consumption @ 100% load ESP (L/h)*	0
Consumption @ 100% load PRP (L/h)*	0
Emission level	Emission optimization
Max. Data Center Continuous (DCC) Rating	4500 kVA 3600 kWe
Type of Cooling	None
Factory installed enclosures	

\*\*\* Volumetric Fuel consumption is up to 4% higher when using HVO than Diesel Fuel"

## Conscious Care™ Qualified

Reduce operating costs, fuel consumption, and greenhouse gas emissions with Conscious Care™ maintenance program.

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**Engine Specifications**


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Engine brand	Rehiko
Engine ref.	KD103V20-5CES*
Air inlet system	Turbo
Cylinder configuration	20 - V
Displacement (l)	103,43
Bore (mm) x Stroke (mm)	175 x 215
Compression ratio	16 : 1
Speed 50Hz (RPM)	1500
Maximum stand-by power at rated RPM (kW)	3800
Governor type	Electronic
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state (%)	+/- 0.25%

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**Lubrication System**


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Oil Filter Quantity and type****	Spin On / 10
Charge Air coolant	Water/Air

\*\*\*\*Rehiko recommends the use of genuine oil and filters.

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**Fuel System**


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Maximum fuel pump flow (l/h)	1200
Max head on fuel return line (m fuel)	3,5
Fuel	Diesel Fuel/HVO

\* Engine reference may be partially modified depending on genset application, options selected by the customer and lead time required.

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**Consumption with cooling system**


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At % load of Engine power rating	g/kWh	L/h**
100%	194	867,3
75%	207	694,1
50%	213	476,1
25%	238	266

\*\*Assumed volumetric fuel consumption with diesel fuel having an LHV of 42.7kJ/kg and weighting 0.85kg/L.

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**Optional cooling system (HT/LT)**


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Type of coolant	GENCOOL
Radiated heat to ambient (kW)	170
Heat rejection to coolant HT (kW)	1220

Outlet coolant temperature (°C)	95
Coolant capacity HT, engine only (l)	295
Max coolant temperature, Shutdown (°C)	103
Restriction pressure drop off engine – HT circuit (mbar)	700
Minimal pressure before HT pump (mbar)	400
Max. pressure at inlet of HT water pump (mbar)	2500
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	81
HT Standard pressure cap setting (kPa)	100

Coolant capacity LT, engine only (l)	105
Restriction pressure drop off engine – LT circuit (mbar)	700
Minimal pressure before LT pump (mbar)	400
Max. pressure at inlet of LT water pump (mbar)	2500
LT Standard pressure cap setting (kPa)	100

<b>Exhaust system</b>	
Heat rejection to exhaust (kW)	2630
Exhaust gas temperature @ ESP (°C)	465
Exhaust gas flow @ ESP (l/s)	12749
<b>Electrical system</b>	
Battery voltage (V)	24
<b>Air Intake system</b>	
Combustion air flow (l/s)	4850
Radiated heat to ambient (kW)	170

<b>Alternator Specifications</b>	
Number of pole	4
Technology	Brushless
AVR Regulation	Yes
Insulation class	H
Indication of protection	IP23
Number of bearing	2
Number of wires	06
Coupling	Semi-elastic
Overspeed (rpm)	2250
Voltage regulation at established rating (+/- %)	0,5
Unbalanced load acceptance ratio (%)	8

### Alternator standard features

- All models are brushless, rotating-field alternators
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting
- The AVR voltage regulator provides superior short circuit capability
- Self-ventilated and dip proof construction
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds
- Superior voltage waveform

*Note: See Alternator Data Sheets for alternator application data and ratings, efficiency curves, voltage dip with motor starting curves, and short circuit decrement curves.*



### M80-D controller

The M80-D can be used as a basic terminal block for connecting a control unit and as an instrument panel with a highly intuitive LCD screen giving an overview of your generating set's basic parameters:

- Oil gauge
- Coolant temperature
- Oil temperature
- Engine speed
- Battery voltage
- Charge air temperature
- Fuel consumption, etc.

The engine main functions can be controlled and events are recorded to facilitate diagnostics:

- Starting
- Speed adjustment
- Stopping
- Droop, etc.



### APM802 controller

#### Advanced power plant management control

Dedicated to power plant management APM802 provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility

- Graphic display with touchscreen
- User language selectable
- Specially researched ergonomics
- High level of equipment availability
- USB and Ethernet ports
- Modbus protocol
- Making it easy to extend the installation
- -Complies with the international standard IEC 61131-3

## Codes and Standards

Engine-generators set is designed and manufactured in facilities certified to standards ISO9001:2015 & ISO14001:2015. The generator sets and its components are prototype-tested, factory built and production tested and are in compliance with the relevant standards:

- Machinery Directive 2006/42/EC of May 17th 2006
- EMC Directive 2014/30/UE
- Safety objectives set out in the Low Voltage Directive 2014/35/UE
- EN ISO 8528-13, EN 60034-1, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 55011, EN 1679-1 et EN 60204-1

## Power ratings definition according to ISO8528-1 (2018-02 edition) and ISO-3046-1

**Emergency Standby Power (ESP):** The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Average load factor per 24 hours of operation is <85%.

**Prime Power (PRP):** At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour within 12 hour of operation. Average load factor per 24 hours of operation is <75%.

**Data Center Mission Critical (DCP):** Data Center Mission Critical power is defined as being the maximum power which a generating set is capable of delivering while supplying a variable or continuous electrical load and during unlimited run hours. Depending on the sites to supply and the availability of reliable utility, the generating set manufacturer is responsible to define what power level is able to supply to fulfil that requirement including hardware or software or maintenance plan adaptation.

## Warranty informations

Standard warranty period:

- for Products in "back-up" service
  - 30 months from the date the Product leaves the plant, extended to 42 months for KD series
  - 24 months from the Product's commissioning date, extended to 36 months for KD series
  - 1,000 running hours
- The warranty expires when one of the above conditions is met.
- for Products in "continuous" service (continuous supply of electricity, either in the absence of any normal electricity grid or to complement the grid),
  - 18 months from the date the Product leaves the plant, extended to 30 months for KD series
  - 12 months from the Product's commissioning date, extended to 24 months for KD series
  - 2,500 running hours, extended to 8700 running hours for KD series

The warranty expires when one of the above conditions is met. For more details regarding conditions of application and scope of the warranty please refer to our General "terms & conditions of sales".

## Standard scope of supply

All our KD Series gensets are fitted with:

- Industrial water cooled DIESEL engine
- Electric starter & charge alternator 24 V D.C
- Electronic governor
- Standard air filter
- Single bearing alternator IP 23 T° rise/ insulation to class H/H
- Welded steel base frame with 85% vibration attenuation mounts
- M80-D control panel
- Flexible fuel lines & lub oil drain pump
- Fuel water separator filter
- Exhaust outlet with flexible and flanges
- User's manual (1 copy)
- Packing under plastic film
- Delivered with oil

### Dimensions and Weights

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**Compact version**

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Overall Size, max., L x W x H, (mm)	6779 x 2248 x 2829
Dry weight (kg)	26100
Tank capacity (L)	0



*\* dimensions and weight without options*

Reference Conditions: 25°C Air Inlet Temperature, 40°C Fuel Inlet Temperature, 100 kPa Barometric Pressure; 10.7 g/kg of dry air Humidity. Intake Restriction set to maximum allowable limit for clean filter; Exhaust Back pressure set to maximum allowable limit; Fuel density at 0.85 kg/L.  
Data was taken from a single engine test according to the test methods, fuel specification and reference conditions stated above and is subjected to instrumentation and engine-to-engine variability. Test conducted with alternate test methods, instrumentation, fuel or reference conditions can yield different results. Data and specifications subject to change without notice.