



## Ratings Range

400/230 V - 50 Hz

Standby	kW	160
	kVA	200
Prime	kW	146
	kVA	182



## Benefits and features

### Rehko premium quality

- Design offices using the latest technical innovations
- Modern fully certified factories
- A cutting edge laboratory
- The generating set, its components and a wide range of options have been fully developed, prototype tested, factory built, and production tested
- Approved for use with HVO (Hydrotreated Vegetable Oil) according to EN15940

### Rehko premium performances

- Optimized and certified sound levels
- Reliable power, even in extreme conditions
- Optimized fuel consumption
- Compact footprint
- Best quality of electricity, high starting and loading capacity, according to ISO8528-5
- Robust base frames and high-quality enclosures
- Protection of installations and people
- Approved in line with the most stringent standards

### Engines

- Rehko Premium level engines
- High power density, small footprint
- Low temperature starting capability
- Long maintenance interval

### Alternator

- Provide industry leading motor starting capability
- Built with a class H insulation and IP23

### Cooling

- A compact and complete solution using a mechanically driven radiator fan
- Designed or optimized by Rehko
- High temperature and altitude product capacity available

### Base frame and enclosure

- High quality steel with enhanced corrosion resistance
- Highly durable QUALICOAT-certified epoxy paint
- Minimum 1500 hours of resistance to salt spray in accordance with ISO12944
- Ergonomic access to allow easy maintenance and connection of the generator
- Robust design optimized for transportation

## Generator sets ratings

	Hz	Standby rating			Prime rating	
		kWe	kVA	Amps	kWe	kVA
400/230	50	160	200	289	146	182
230 TRI	50	160	200	502	146	182
240 TRI	50	160	200	481	146	182
415/240	50	160	200	278	146	182
380/220	50	160	200	304	146	182

## General Specifications

Manufacturer	Rehko
Engine ref.	KD83L06T-AW56
Alternator choices	KH01680T
Performance class	G3
Voltage (V)	400/230 230 TRI 240 TRI 415/240 380/220
Controllers	APM303 APM403
Consumption @ 100% load ESP (L/h)*	44
Consumption @ 100% load PRP (L/h)*	40
Emission level	Not certified
Type of Cooling	Radiator
Factory installed enclosures	M149

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

## Engine Specifications

Engine brand	REHLKO
Engine ref.	KD83L06T-AW56*
Air inlet system	Turbo
Cylinder configuration	6 - L
Displacement (l)	8,27
Bore (mm) x Stroke (mm)	114 x 135
Compression ratio	16.7:1
Speed 50Hz (RPM)	1500
Maximum stand-by power at rated RPM (kW)	180

Governor type	Electronic
Frequency regulation, steady state (%)	0,5

## Lubrication System

Oil Filter Quantity and type****	Spin On / 1
Charge Air coolant	Water/Air

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

## Fuel System

Maximum fuel pump flow (l/h)	83
Fuel filter: Qty, type	1 / 1 Primary Engine Filter / Fuel Water Separator
Fuel	Diesel Fuel

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

## Consumption with cooling system

Fuel consumption @ ESP Max Power (l/h)	46
Fuel consumption @ PRP Max Power (l/h)	40
Fuel consumption @ 75% of PRP Power (l/h)	30
Fuel consumption @ 50% of PRP Power (l/h)	20

## Cooling system

Radiator & Engine capacity (l)	30,9
Fan power 50Hz (kW)	8,26
Fan air flow w/o restriction (m3/s)	2,8
Available restriction on air flow (mm H2O)	25
Type of coolant	Glycol-Ethylene
Radiated heat to ambient (kW)	26
Heat rejection to coolant HT (kW)	97
Coolant capacity HT, engine only (l)	12,3
Max coolant temperature, Shutdown (°C)	104
Thermostat begin of opening HT (°C)	82
Thermostat end of opening HT (°C)	95

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## Exhaust system

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Exhaust gas temperature @ ESP (°C) 590

Exhaust gas flow @ ESP (l/s) 539

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## Electrical system

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Battery voltage (V) 12

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## Air Intake system

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Combustion air flow (l/s) 206

Radiated heat to ambient (kW) 26

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## Alternator Specifications

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Number of pole	4
Technology	Brushless
AVR Regulation	Yes
Insulation class	H
Indication of protection	IP23
Number of bearing	1
Number of wires	06
Coupling	Direct
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
- 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.*

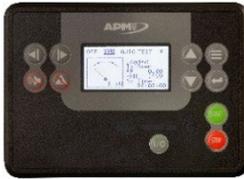


### APM303 controller

The APM303 is a versatile unit which can be operated in manual or automatic mode. It offers the following features:

- Measurements: phase-to-neutral and phase-to-phase voltages, fuel level (In option : active power currents, effective power, power factors, Kw/h energy meter, oil pressure and coolant temperature levels)
- Supervision: Modbus RTU communication on RS485
- Reports: (In option : 2 configurable reports)
- Safety features: Overspeed, oil pressure, coolant temperatures, minimum and maximum voltage, minimum and maximum frequency (Maximum active power P<66kVA)
- Traceability: Stack of 12 stored events

For further information, please refer to the data sheet for the APM303



### APM403 controller

The APM403 is a versatile control unit which allows operation in manual or automatic mode

- Measurements : voltage and current
- kW/kWh/kVA power meters
- Standard specifications: Voltmeter, Frequency meter.
- Optional : Battery ammeter.
- J1939 CAN ECU engine control
- Alarms and faults: Oil pressure, Coolant temperature, Overspeed, Start-up failure, alternator min/max, Emergency stop button.
- Engine parameters: Fuel level, hour counter, battery voltage.
- Optional (standard at 24V): Oil pressure, water temperature.
- Event log/ Management of the last 300 genset events.
- Mains and genset protection
- Clock management
- USB connections, USB Host and PC,
- Communications : RS485 INTERFACE
- ModBUS protocol /SNMP
- Optional : Ethernet, GPRS, remote control, 3G, 4G
- Websupervisor, SMS, E-mails

## 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 <70%.

**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 <70%.

## Standard scope of supply:

All our open gensets are fitted with:

- Industrial water-cooled DIESEL engine
- Engine electronic governor
- Electric starter & charge alternator
- Battery<sup>(1)</sup>
- Standard air filter
- Electric circuit breaker, adapted to the short-circuit current of the generating set
- Single bearing alternator IP 23 T° rise/ insulation to class H/H
- Welded steel base frame with 85% vibration attenuation mounts
- frame height optimized to allow it to be moved safely by forklift
- enclosure made of new high-quality European steel with enhanced corrosion resistance
- enclosures and base frames tested and analyzed by the French Corrosion Institut
- 100% of tanks tested for permeability
- Personal protection ensured by protective grilles on hot and rotating parts
- Separate 9 dB(A) silencer
- Fuel tank welded inside the genset frame
- Retention bund included for gensets up to 250 kVA ESP
- Emergency stop button on the outside
- Flexible fuel lines & lub oil drain cock
- Oil<sup>(2)</sup> and antifreeze liquid<sup>(2)</sup>
- Exhaust outlet with flexible and flanges
- User's manual (1 copy)
- Packing under plastic film

<sup>(1)</sup> excluded from the supply up to 165 kVA ESP if assembled outside Europe

<sup>(2)</sup> excluded from the supply up to 830 kVA ESP if assembled outside Europe

## Dimensions and Weights

### Compact version

Overall Size, max., L x W x H, (mm)	2497 x 1103 x 1644
Dry weight (kg)	1740
Tank capacity (L)	344



### M149 - Dimensions soundproofed version

Overall Size, max., L x W x H, (mm)	3590 x 1147 x 1899
Tank capacity (L)	344
Dry weight (kg)	2300
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	96
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	81
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	71



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.