



Ratings Range

400/230 V - 50 Hz

| | | |
|---------|-----|----|
| Standby | kW | 53 |
| | kVA | 66 |
| Prime | kW | 48 |
| | kVA | 60 |



Benefits and features

Rehiko 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

Rehiko 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

- Premium level engines, in-house or from strong partners
- High power density, small footprint
- Low temperature starting capability
- Long maintenance interval

Alternator

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

Cooling

- A compact and complete solution using a mechanically driven radiator fan
- Designed or optimized by Rehiko
- 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 1000 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

| | | Standby rating | | | Prime rating | |
|---------|----|----------------|-----|------|--------------|-----|
| | Hz | kWe | kVA | Amps | kWe | kVA |
| 220 TRI | 50 | 53 | 66 | 173 | 48 | 60 |
| 400/230 | 50 | 53 | 66 | 95 | 48 | 60 |
| 380/220 | 50 | 53 | 66 | 100 | 48 | 60 |
| 240 TRI | 50 | 53 | 66 | 159 | 48 | 60 |
| 230 TRI | 50 | 53 | 66 | 166 | 48 | 60 |
| 415/240 | 50 | 53 | 66 | 92 | 48 | 60 |

General Specifications

| | |
|---|--|
| Manufacturer | Rehiko |
| Engine ref. | 4045HFS85 |
| Alternator choices | KH00811T |
| Performance class | G3 |
| Voltage (V) | 220 TRI 400/230 380/220 240 TRI 230 TRI 415/240 |
| Controllers | APM303 APM403 M80 Terminal block |
| Consumption @ 100% load ESP (L/h)* | 17 |
| Consumption @ 100% load PRP (L/h)* | 15 |
| Emission level | Emission optimization - Stage IIIA Compliant |
| Type of Cooling | Radiator |
| Factory installed enclosures | M138 M138-DW M138-DW48 |
| *** Volumetric Fuel consumption is up to 4% higher when using HVO than Diesel Fuel" | |

Engine Specifications

| | |
|--|------------|
| Engine brand | JOHN DEERE |
| Engine ref. | 4045HFS85* |
| Air inlet system | Turbo |
| Cylinder configuration | 4 - L |
| Displacement (l) | 4,48 |
| Bore (mm) x Stroke (mm) | 106 x 127 |
| Compression ratio | 19 : 1 |
| Speed 50Hz (RPM) | 1500 |
| Maximum stand-by power at rated RPM (kW) | 61 |
| Governor type | Mechanical |
| Frequency regulation, steady state (%) | +/- 0.5% |

Lubrication System

| | |
|----------------------------------|---------|
| Oil Filter Quantity and type**** | |
| Charge Air coolant | Air/Air |

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

Fuel System

| | |
|---------------------------------------|-----------------|
| Maximum fuel pump flow (l/h) | |
| Max head on fuel return line (m fuel) | 2 |
| Fuel Filter Quantity and type | |
| Fuel | Diesel Fuel/HVO |

* 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 (gal/hr) | 4,4 |
| Fuel consumption @ PRP Max Power (gal/hr) | 3,9 |
| Fuel consumption @ 75% of PRP Power (gal/hr) | 3,1 |
| Fuel consumption @ 50% of PRP Power (gal/hr) | 2,3 |

Cooling system

| | |
|---|-----------------|
| Radiator & Engine capacity (l) | 17 |
| Fan power 50Hz (kW) | 2,9 |
| Fan air flow w/o restriction (cfm) | 5932,9 |
| Available restriction on air flow (in. H2O) | 0 |
| Type of coolant | Glycol-Ethylene |
| Radiated heat to ambient (kW) | 6 |
| Heat rejection to coolant HT (kW) | 37 |
| Outlet coolant temperature (°C) | 95 |
| Max coolant temperature, Shutdown (°C) | 110 |
| Thermostat begin of opening HT (°C) | 82 |
| Thermostat end of opening HT (°C) | 95 |

Exhaust system

| | |
|------------------------------------|-----|
| Heat rejection to exhaust (kW) | |
| Exhaust gas temperature @ ESP (°C) | 472 |
| Exhaust gas flow @ ESP (l/s) | 190 |

Electrical system

| | |
|---------------------|----|
| Battery voltage (V) | 12 |
|---------------------|----|

Air Intake system

| | |
|-------------------------------|------|
| Combustion air flow (l/s) | 78,8 |
| Radiated heat to ambient (kW) | 6 |

Alternator Specifications

| | |
|--|-----------|
| 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.



Basic terminal block

It is used as a basic terminal block for connecting a control unit. Offers the following functions:

- emergency stop button
- customer connection terminal block
- CE certified



M80 controller

The M80 is a dual-function control panel. It can be used as a basic terminal block for connecting a control unit and as an instrument panel with a direct read facility, with displays giving a global view of your generating set's basic parameters. Offers the following functions:

- Engine parameters: tachometer, working hours counter, coolant temperature indicator, oil pressure indicator
- emergency stop button
- customer connection terminal block
- CE certified



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 gensets are fitted with:

- Industrial water cooled DIESEL engine
- Electric starter & charge alternator
- Standard air filter
- Schneider or ABB 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
- 4 lifting points on the chassis, lifting bar on the top included from 165 kVA ESP or optional
- highly durable QUALICOAT certified epoxy paint
- frame height optimized to allow it to be moved safely by forklift
- enclosure made of new high-quality European steel with enhanced corrosion resistance
- IP 64 locks, made from stainless materials
- 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 110 kVA ESP
- Charged DC starting battery with electrolyte
- Emergency stop button on the outside
- Flexible fuel lines & lub oil drain cock
- Exhaust outlet with flexible and flanges
- User's manual (1 copy)
- Packing under plastic film
- Delivered with oil and antifreeze liquid

Dimensions and Weights

Compact version

| | |
|-------------------------------------|--------------------|
| Overall Size, max., L x W x H, (mm) | 1950 x 1084 x 1390 |
| Dry weight (kg) | 950 |
| Tank capacity (L) | 190 |



M138 - Dimensions soundproofed version

| | |
|---|--------------------|
| Overall Size, max., L x W x H, (mm) | 2572 x 1126 x 1571 |
| Tank capacity (L) | 190 |
| Dry weight (kg) | 1230 |
| Sound power level guaranteed (Lwa) 50Hz (75% PRP) | 92 |
| Acoustic pressure level @1m in dB(A) 50Hz (75% PRP) | 74 |
| Acoustic pressure level @7m in dB(A) 50Hz (75% PRP) | 62 |



M138 - Dimensions DW soundproofed version

| | |
|---|--------------------|
| Overall Size, max., L x W x H, (mm) | 2600 x 1150 x 1792 |
| Tank capacity (L) | 500 |
| Dry weight (kg) | 1535 |
| Sound power level guaranteed (Lwa) 50Hz (75% PRP) | 92 |
| Acoustic pressure level @1m in dB(A) 50Hz (75% PRP) | 73 |
| Acoustic pressure level @7m in dB(A) 50Hz (75% PRP) | 62 |



M138 - Dimensions DW 48h soundproofed version

| | |
|---|--------------------|
| Overall Size, max., L x W x H, (mm) | 2600 x 1150 x 1858 |
| Tank capacity (L) | 825 |
| Dry weight (kg) | 1570 |
| Sound power level guaranteed (Lwa) 50Hz (75% PRP) | 92 |
| Acoustic pressure level @1m in dB(A) 50Hz (75% PRP) | 73 |
| Acoustic pressure level @7m in dB(A) 50Hz (75% PRP) | 62 |



* 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.