



### **Benefits and features**

### Rehlko 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

### Rehlko 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-guality enclosures
- Protection of installations and people
- Approved in line with the most stringent standards .

#### Engines

- Premium level engines, in-house or from strong partners ٠
- 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 Rehlko •
- 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

		St	andby ra	ating	Prime	rating
	Hz	kWe	kVA	Amps	kWe	kVA
480/277	60	300	375	451	273	341

Manufacturer Engine ref. Alternator choices Performance class

Ratings Range

kW

kVA

kW kVA

Standby

Prime

480/277 V - 60 Hz

300

375 273

341

**General Specifications** 

Voltage (V) Controllers

Consumption @ 100% load ESP (L/h)\* Consumption @ 100% load PRP (L/h)\* Emission level

Type of Cooling Factory installed enclosures

Radiator M237 M237-DW

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

Rehlko G3

P126TI-II KH01721T 480/277

APM303 APM403 Terminal block

M80

87

73

Fuel consumption optimization





Engine	Specifications
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Engine brand	DOOSAN / HYUNDAI
Engine ref.	P126TI-II*
Air inlet system	Turbo
Cylinder configuration	6 - L
Displacement (I)	11,05
Bore (mm) x Stroke (mm)	123 x 155
Compression ratio	17 : 1
Speed (RPM)	1800
Maximum stand-by power at rated RPM 60Hz (kW)	342
Governor type	Electronic
Frequency regulation, steady state (%)	+/- 0.25%
Lubrication System	
Oil Filter Quantity and type****	
Charge Air coolant	Air/Air
****Rehlko recommends the use filters.	e of genuine oil and

Fuel System	
Maximum fuel pump flow 60Hz (I/h)	320
Max head on fuel return line (m fuel)	1
Fuel Filter Quantity and type	
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 60Hz (I/h)	89,5
Fuel consumption @ PRP Max Power 60Hz (I/h)	73.8
Fuel consumption @ 75% of PRP Power 60Hz (I/h)	56
Fuel consumption @ 50% of PRP Power 60Hz (I/h)	37
Cooling system	
Radiator & Engine capacity (I)	50,5
Fan power 60Hz (kW)	15
Fan air flow w/o restriction (m3/s)	7,3
Available restriction on air flow (mm H2O)	25
Type of coolant	Glycol-Ethylene
Radiated heat to ambiant (kW)	41
Heat rejection to coolant HT (kW)	135
Coolant capacity HT, engine only (I)	19
Max coolant temperature, Shutdown (°C)	103
Max. pressure at inlet of HT water pump (mbar)	883
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	85

# Industrial Generator Set - D300U



Exhaust system	
Heat rejection to exhaust (kW)	288
Exhaust gas temperature @ ESP 60Hz (°C)	580
Exhaust gas flow @ ESP 60Hz (I/s)	1070
Electrical system	
Battery voltage (V)	24
Air Intake system	
Combustion air flow (l/s)	470
Radiated heat to ambiant (kW)	41

Alternator Specifications	
Number of pole	4
Technology	Brushless
AVR Regulation	Yes
Insulation class	Н
Indication of protection	IP23
Number of bearing	1
Number of wires	12
Coupling	Direct
Overspeed (rpm)	2250
Voltage regulation at established rating (+/- %)	1
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 constructio
- 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.

# Industrial Generator Set - D300U





#### **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 Directive2014/30/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 shortcircuit 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)
- Excluded from the supply:
- For XPRESS products, from 25 to 1500 kVA: oil and antifreeze liquid



# **Dimensions and Weights**

Compact version	
Overall Size, max., L x W x H, (mm)	2970 x 1346 x 1708
Dry weight (kg)	2550
Tank capacity (L)	390



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### M237 soundproofed version - Not compliant with 2000/14/CE noise emissions Directive\*\* 4100 x 1410 x 2147

Overall Size, max., L x W x H, (mm)	4100 x 1410 x 2147
Tank capacity (L)	390
Dry weight (kg)	3289
Guaranteed acoustic power level (Lwa) 60Hz (100% PRP)	
Acoustic pressure level @1m in dB(A) 60Hz (100% PRP)	87
Acoustic pressure level @7m in dB(A) 60Hz (100% PRP)	77
M237 DW soundproofed version - Not compli emissions Directive**	ant with 2000/14/CE noise
	4450 - 4440 - 0004
Overall Size, max., L x W x H, (mm)	4152 x 1410 x 2361
Tank capacity (L)	950
Tank capacity (L)	950
Tank capacity (L) Dry weight (kg) Guaranteed acoustic power level (Lwa) 60Hz	950

\* 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.