



### **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-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 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 ٠ 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

		Standby rating			Prime rating	
	Hz	kWe	kVA	Amps	kWe	kVA
400/230	50	800	1000	1443	727	909
380/220	50	800	1000	1519	727	909
415/240	50	800	1000	1391	727	909

## **General Specifications**

400/230 V - 50 Hz

800

727

909

1000

**Ratings Range** 

kW

kVA

kW

kVA

Standby

Prime

Manufacturer	Rehlko
Engine ref.	DP222CC
Alternator choices	KH03450T
	KH03860T
Performance class	G3
Voltage (V)	400/230
	380/220
	415/240
Controllers	APM403
Consumption @ 100% load ESP (L/h)*	209
Consumption @ 100% load PRP (L/h)*	188
Emission level	Fuel consumption optimization
Controllers Consumption @ 100% load ESP (L/h)* Consumption @ 100% load PRP (L/h)*	380/220 415/240 APM403 209 188

Type of Cooling Radiator Factory installed enclosures M427 Volumetric Fuel consumption is up to 4% higher when using HVO than Diesel Fuel"





#### **Engine Specifications**

Engine Specifications		
Engine brand	DOOSAN / HYUNDAI	
Engine ref.	DP222CC*	
Air inlet system	Turbo	
Cylinder configuration	12 - V	
Displacement (I)	21,93	
Bore (mm) x Stroke (mm)	128 x 142	
Compression ratio	14.6 : 1	
Speed 50Hz (RPM)	1500	
Maximum stand-by power at rated RPM (kW)	875	
Governor type	Electronic	
Frequency regulation, steady state (%)	+/- 0.25%	
Lubrication System		
Oil Filter Quantity and type****		

OII FIIter	Quantity	anu	type	

Charge Air coolant

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

Air/Air

Fuel System	
Maximum fuel pump flow (I/h)	386
Max head on fuel return line (m fuel)	2,4
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.

Cooling system	
Radiator & Engine capacity (I)	90
Fan power 50Hz (kW)	21
Fan air flow w/o restriction (m3/s)	12,8
Available restriction on air flow (mm H2O)	13,2
Type of coolant	Glycol-Ethylene
Radiated heat to ambiant (kW)	67
Heat rejection to coolant HT (kW)	372
Coolant capacity HT, engine only (I)	24
Max coolant temperature, Shutdown (°C)	103
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	85

# Industrial Generator Set - D1000



Exhaust system	
Heat rejection to exhaust (kW)	618
Exhaust gas temperature @ ESP (°C)	535
Exhaust gas flow @ ESP (I/s)	2450
Electrical system	
Battery voltage (V)	24
Air Intake system	
Combustion air flow (I/s)	800
Radiated heat to ambiant (kW)	67

Alternator Specifications	
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 (+/- %)	0,5
Unbalanced load acceptance ratio (%)	8

### **Industrial Generator Set - D1000**





#### 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

### 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
  D 44 solve and a form static lange materials
- 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)	3726 x 1720 x 2079		
Dry weight (kg)	5740		
Tank capacity (L)	500		



M427 - Dimensions	soundproo	fed version

Overall Size, max., L x W x H, (mm)	6412 x 2160 x 2753
Tank capacity (L)	1035
Dry weight (kg)	7820
Sound power level guaranteed (Lwa) 50Hz (75% PRP)	107
Acoustic pressure level @1m in dB(A) 50Hz (75% PRP)	87
Acoustic pressure level @7m in dB(A) 50Hz (75% PRP)	77



\* 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.