

PRELIMINARY



DESCRIPTIVE

- Mechanic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for wiring temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 12 V charge alternator and starter
- Delivered with oil and coolant -30°C
- Manual for use and installation

POWER DEFINITION

PRP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1.

ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1.

Overload is not allowed

TERMS OF USE

According to the standard, the nominal power assigned by the genset is given for 25°C Air Inlet Temperature, of a barometric pressure of 100 kPA (100 m A.S.L), and 30 % relative humidity. For particular conditions in your installation, refer to the derating table.

For the generating sets used indoor, where the acoustic pressure levels depends on the installation conditions, it is not possible to specify the ambient noise level in the exploitation and maintenance instructions . You will also find in our exploitation and maintenance instructions a warning concerning the air noise dangers and the need to implement appropriated preventive measures.

K16

Engine type	KDW1603
Alternator type	ECP3-3L/4

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Reference voltage (V)	400/230
Max power ESP (kVA)	16
Max power ESP (kWe)	12.8
Max power PRP (kVA)	14.5
Max power PRP (kWe)	11.6
Intensity (A)	23
Standard Control Panel	NEXYS
Optional control panel	TELYS

DIMENSIONS AND NOISE LEVELS

DIMENSIONS COMPACT VERSION

Length (mm)	1405
Width (mm)	715
Height (mm)	1053
Dry weight (kg)	406

DIMENSIONS SOUNDPROOFED VERSION

Canopy	M126
Length (mm).	1750
Width (mm).	775
Height (mm).	1230
Dry weight (kg).	580
Tank capacity (L).	50
Acoustic pressure level @1m in dB(A) ()	74 (0.7)
Sound power level guaranteed (Lwa)	90

POWERS

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	12.8	16	11.6	14.5	22
400/230	12.8	16	11.6	14.5	23
380/220	12.8	16	11.6	14.5	24
240 TRI	12.8	16	11.6	14.5	38
230 TRI	12.8	16	11.6	14.5	40
220 TRI	12.8	16	11.6	14.5	42
220/127	10.8	13.5	9.8	12.3	35
200/115	12.8	16	11.6	14.5	46

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ENGINE SPECIFICATIONS

GENERAL ENGINE DATAS

Engine model	KOHLER KDW1603 , 4- temps, Athmo , 3 X
Cylinder arrangement	L
Displacement (C.I.)	1.65
Bore (mm) x Stroke (mm)	88 x 90.4
Compression ratio	22 : 1
Speed (RPM)	1500
Pistons speed (m/s)	4.52
Maximum stand-by power at rated RPM (kW)	15.5
Frequency regulation (%)	+/- 2.5%
BMEP (bar)	6.79
Governor type	Mechanical

COOLING SYSTEM

Radiator & Engine capacity (L)	5.8
Max water temperature (°C)	110
Outlet water temperature (°C)	N/A
Fan power (kW)	N/A
Fan air flow w/o restriction (m3/s)	N/A
Available restriction on air flow (mm EC)	N/A
Type of coolant	Gencool
Thermostat (°C)	80

EMISSIONS

Emission PM (g/kW.h)	N/A
Emission CO (g/kW.h)	N/A
Emission HCNOx (g/kWh)	N/A
Emission HC (g/kW.h)	N/A

EXHAUST

Exhaust gas temperature (°C)	460
Exhaust gas flow (L/s)	19.2
Max. exhaust back pressure (mm EC)	515

FUEL

Consumption @ 110% load (L/h)	N/A
Consumption @ 100% load (L/h)	4.9
Consumption @ 75% load (L/h)	3.7
Consumption @ 50% load (L/h)	2.7
Maximum fuel pump flow (L/h)	65

OIL

Oil capacity (L)	N/A
Min. oil pressure (bar)	1.5
Max. oil pressure (bar)	10
Oil consumption 100% load (L/h)	N/A
Carter oil capacity (L)	3.8

HEAT BALANCE

Heat rejection to exhaust (kW)	N/A
Radiated heat to ambient (kW)	N/A
Heat rejection to coolant (kW)	N/A

AIR INTAKE

Max. intake restriction (mm EC)	200
Intake air flow (L/s)	19

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ALTERNATOR SPECIFICATIONS

GENERAL DATAS

Alternator brand	MECC ALTE
Alternator type	ECP3-3L/4
Number of phase	3
Power factor (Cos Phi)	0.8
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Excitation system	AVR
Insulation class / T° class, continuous 40°C	H / N/A
Regulation	SR7/2
Harmonic factor, no load TGH/THC	N/A
Wave form : NEMA=TIF-(TGH/THC)	< 50
Wave form : CEI=FHT-(TGH/THC)	< 2%
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (%)	N/A
Recovery time (Delta U = 20% transient) (ms)	N/A

OTHER DATAS

Continuous Nominal Rating 40°C (kVA)	15
Standby Rating 27°C (kVA)	16.5
Efficiencies 4/4 load (%)	85
Air flow (m3/s)	0.05
Short circuit ratio (Kcc)	1.1
Direct axis synchro reactance unsaturated (Xd) (%)	140
Quadra axis synchro reactance unsaturated (Xq) (%)	78
Open circuit time constant (T'do) (ms)	0.84
Direct axis transient reactance saturated (X'd) (%)	14.2
Short circuit transient time constant (T'd) (ms)	42
Direct axis subtransient reactance saturated (X''d) (%)	9.8
Subtransient time constant (T''d) (ms)	10.5
Quadra axis subtransient reactance saturated (X''q) (%)	52
Zero sequence reactance unsaturated (Xo) (%)	5.4
Negative sequence reactance saturated (X2) (%)	17.1
Armature time constant (Ta) (ms)	10
No load excitation current (io) (A)	0.35
Full load excitation current (ic) (A)	1.2
Full load excitation voltage (uc) (V)	N/A
Recovery time (Delta U = 20% transient) (ms)	N/A
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	N/A
Transient dip (4/4 load) - PF : 0,8 AR (%)	N/A
No load losses (W)	N/A
Heat rejection (W)	1905

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CONTROL PANEL

NEXYS, comprehensive and simple

TELYS, ergonomic and user-friendly



The NEXYS is a versatile control unit allowing operation in manual or automatic mode. Equipped with an LCD screen, the user-friendly NEXYS offers high-quality basic functions to guarantee simple, reliable operation of your generating set.

Offers the following functions:

Standard electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, engine speed, battery voltage, fuel level.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed (> 60 kVA), charging alternator fault, low fuel level, emergency stop.

For more information, please refer to the sales documentation.

The highly versatile TELYS control unit is complex yet accessible, thanks to the particular attention paid to optimising its ergonomics and ease of use. With its large display screen, buttons and scroll wheel, it places the accent on simplicity and communication.

The TELYS offers the following functions:

Electrical measurements: voltmeter, frequency meter, ammeter.

Engine parameters: working hours counter, oil pressure, coolant temperature, fuel level, engine speed, battery voltage.

Alarms and faults: oil pressure, coolant temperature, failure to start, overspeed, alternator min./max., battery voltage min./max., emergency stop, fuel level.

Ergonomics: wheel for navigating around the various menus.

Communication: remote control and operation software, USB connections, PC connection.

For more information on the product and its options, please refer to the sales documentation.