



DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Radiator with mechanic fans (please see the performance table for the temperatures)
- Exhaust compensators with flanges
- 24 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.

ASSOCIATED UNCERTAINTY

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.

X1400C

Engine ref.	18V2000G26F_E
Alternator ref.	KH03541T
Performance class	G3

GENERAL CHARACTERISTICS

Frequency (Hz)	50 Hz
Voltage (V)	400/230
Standard Control Panel	NA
Optional control panel	M80
Optional Control Panel	TELYS
Optional control panel	APM802

POWER

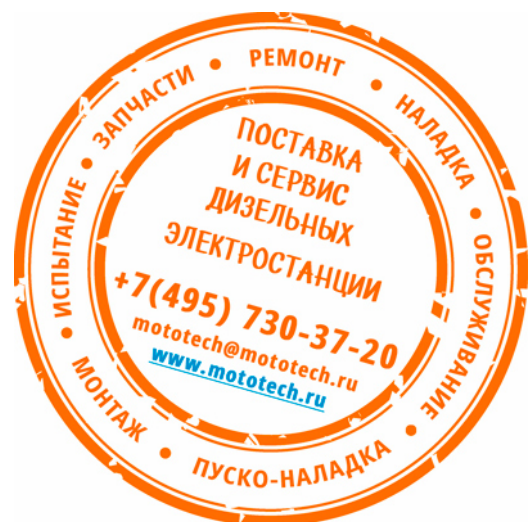
Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	1100	1375	1000	1250	1913
400/230	1100	1375	1000	1250	1985
380/220	1100	1375	1000	1250	2089

DIMENSIONS COMPACT VERSION

Length (mm)	4753
Width (mm)	1870
Height (mm)	2082
Dry weight (kg)	7731
Tank capacity (L)	

DIMENSIONS SOUNDPROOFED VERSION

Type soundproofing	ISO20 Si
Length (mm)	6058
Width (mm)	2438
Height (mm)	2896
Dry weight (kg)	13359
Tank capacity (L)	500
Acoustic pressure level @1m in dB(A)	92
Sound power level guaranteed (Lwa)	113
Acoustic pressure level @7m in dB(A)	83





X1400C

ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine brand	MTU
Engine ref.	18V2000G26F_E
Air inlet system	Turbo
Cylinders configuration	V
Number of cylinders	18
Displacement (L)	40,19
Charge Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	135 x 156
Compression ratio	17.5:1
Speed (RPM)	1500
Pistons speed (m/s)	7,80
Maximum stand-by power at rated RPM (kW)	1212
Frequency regulation, steady state (%)	
BMEP (bar)	21,90
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	183
Fan power (kW)	43
Fan air flow w/o restriction (m3/s)	26,70
Available restriction on air flow (mm H2O)	20
Type of coolant	Glycol-Ethylene

EMISSIONS

Emission PM (mg/Nm3) 5% O2	7
Emission CO (mg/Nm3) 5% O2	91
Emission HC+NOx (g/kWh)	0
Emission HC (mg/Nm3) 5% O2	35

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	480
Exhaust gas flow @ ESP 50 Hz (L/s)	3800
Max. exhaust back pressure (mm H2O)	500

FUEL

Consumption @ 110% load (L/h)	0
Consumption @ 100% load (L/h)	258
Consumption @ 75% load (L/h)	192,50
Consumption @ 50% load (L/h)	132,20
Maximum fuel pump flow (L/h)	1800

OIL

Oil capacity (L)	122
Min. oil pressure (bar)	4,50
Max. oil pressure (bar)	7,50
Oil consumption 100% ESP (L/h)	2,10
Oil sump capacity (L)	102

HEAT BALANCE

Heat rejection to exhaust (kW)	
Radiated heat to ambient (kW)	45
Heat rejection to coolant HT (kW)	425

AIR INTAKE

Max. intake restriction (mm H2O)	150
Intake air flow (L/s)	1480

GENERAL DATA

Alternator ref.	KH03541T
Number of Phase	Three phase
Power factor (Cos Phi)	0,80
Altitude (m)	0 à 1000
Overspeed (rpm)	2250
Number of pole	4
Capacity for maintaining short circuit at 3 In for 10 s	Yes
Insulation class	H
T° class (H/125°), continuous 40°C	H / 125°K
T° class (H/163°C), standby 27°C	H / 163°K
Total Harmonic Distortion in no-load DHT (%)	<3.5
AVR Regulation	Yes
Total Harmonic Distortion, on linear load DHT (%)	<3.5
Wave form : NEMA=TIF	<50
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	0,50
Recovery time (Delta U = 20% transient) (ms)	500
Indication of protection	IP 23
Technology	Without collar or brush

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	1250
Standby Rating 27°C (kVA)	1375
Efficiencies 100% of load (%)	95
Air flow (m3/s)	1,80
Short circuit ratio (Kcc)	0,3170
Direct axis synchro reactance unsaturated (Xd) (%)	392
Quadra axis synchro reactance unsaturated (Xq) (%)	200
Open circuit time constant (T'do) (ms)	3634
Direct axis transient reactance saturated (X'd) (%)	19,40
Short circuit transient time constant (T'd) (ms)	180
Direct axis subtransient reactance saturated (X''d) (%)	16,50
Subtransient time constant (T''d) (ms)	18
Quadra axis subtransient reactance saturated (X''q) (%)	17,30
Subtransient time constant (T''q) (ms)	18
Zero sequence reactance unsaturated (Xo) (%)	0,80
Negative sequence reactance saturated (X2) (%)	16,92
Armature time constant (Ta) (ms)	27
No load excitation current (io) (A)	0,82
Full load excitation current (ic) (A)	3,60
Full load excitation voltage (uc) (V)	45,20
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	2309,31
Transient dip (4/4 load) - PF : 0,8 AR (%)	13
No load losses (W)	14021,8
Heat rejection (W)	6
	51940,2
	2
Unbalanced load acceptance ratio (%)	50

DIMENSIONS

Contener dimensions ISO20 version

Type soundproofing	ISO20 Si
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Basic terminal block



The control unit can be used as a basic terminal block for connecting a control box.

Offers the following functions:

emergency stop button, customer connection terminal block, CE.

M80, transfer of information



The M80 is a dual-function control unit. It can be used as a basic terminal block for connecting a control box 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.

TELYS, ergonomic and user-friendly



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.

APM802 dedicated to power plant management



The new APM802 command/control system is specifically designed for operating and monitoring power plants for markets including hospitals, data centres, banks, the oil and gas sector, industries, IPP, rental and mining. This unit is available as standard on all generating sets from 275 Kva designed for coupling. It is optional on the rest of our range.

The Human Machine Interface, designed in collaboration with a company specialising in interface design, facilitates operations with a large 100% touch screen. The pre-configured system for power plant applications features a brand new customisation function which complies with the international standard IEC 61131-3. New communication functions (PLC and regulation), improve the high level of equipment availability in the installation.

Advantages:

- Dedicated to power plant management.
- Specially researched ergonomics.
- High level of equipment availability.
- Modularity and long service life guaranteed.
- Making it easy to extend the installation

For more information, please refer to the sales documentation.