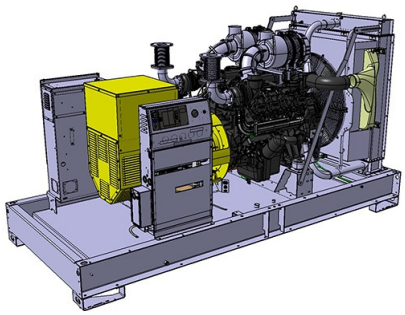

D550

Engine ref.	DP158LDF
Alternator ref.	AT01980T
Performance class	G2

GENERAL CHARACTERISTICS

Frequency (Hz)	50
Voltage (V)	400/230
Standard Control Panel	TELYS
Optional control panel	APM802
Optional Control Panel	Basic terminal block

POWER

Voltage	ESP		PRP		Standby Amps
	kWe	kVA	kWe	kVA	
415/240	440	550	400	500	765
400/230	440	550	400	500	794
380/220	440	550	400	500	836

DIMENSIONS COMPACT VERSION

Length (mm)	3470
Width (mm)	1500
Height (mm)	1815
Dry weight (kg)	3220
Tank capacity (L)	500

DIMENSIONS SOUNDPROOFED VERSION

Commercial reference of the enclosure	M229
Length (mm)	5031
Width (mm)	1560
Height (mm)	2435
Dry weight (kg)	4262
Tank capacity (L)	500
Acoustic pressure level @1m in dB(A)	84
Sound power level guaranteed (Lwa)	104
Acoustic pressure level @7m in dB(A)	74

DESCRIPTIVE

- Electronic governor
- Mechanically welded chassis with antivibration suspension
- Main line circuit breaker
- Radiator for core temperature of 48/50°C max with mechanical fan
- Protective grille for fan and rotating parts (CE option)
- 9 dB(A) silencer supplied separately
- Charger DC starting battery with electrolyte
- 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 Intlet 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.

D550

ENGINE CHARACTERISTICS

GENERAL ENGINE DATA

Engine brand	DOOSAN
Engine ref.	DP158LDF
Air inlet system	Turbo
Cylinders configuration	V
Number of cylinders	8
Displacement (L)	14,62
Charge Air coolant	Air/Air DC
Bore (mm) x Stroke (mm)	128,00 x 142,00
Compression ratio	15 : 1
Speed (RPM)	1500
Pistons speed (m/s)	7,10
Maximum stand-by power at rated RPM (kW)	510,00
Frequency regulation, steady state (%)	+/- 0.5%
BMEP (bar)	25,39
Governor type	Electronic

COOLING SYSTEM

Radiator & Engine capacity (L)	90,00
Max water temperature (°C)	103,00
Outlet water temperature (°C)	
Fan power (kW)	24,00
Fan air flow w/o restriction (m3/s)	11,70
Available restriction on air flow (mm H2O)	
Type of coolant	Glycol-Ethylene
Thermostat modulating range HT (°C)	71 - 85

EMISSIONS

Emission PM (g/kW.h)	
Emission CO (g/kW.h)	
Emission HC+NOx (g/kWh)	
Emission HC (g/kW.h)	

EXHAUST

Exhaust gas temperature @ ESP 50Hz (°C)	561
Exhaust gas flow @ ESP 50 Hz (L/s)	1630,00
Max. exhaust back pressure (mm H2O)	600

FUEL

Consumption @ 110% load (L/h)	127,80
Consumption @ 100% load (L/h)	115,10
Consumption @ 75% load (L/h)	83,40
Consumption @ 50% load (L/h)	55,10
Maximum fuel pump flow (L/h)	315,00

OIL

Oil capacity (L)	
Min. oil pressure (bar)	0,50
Max. oil pressure (bar)	
Oil consumption 100% load (L/h)	0,540
Oil sump capacity (L)	

HEAT BALANCE

Heat rejection to exhaust (kW)	473
Radiated heat to ambiant (kW)	48,00
Haet rejection to coolant (kW)	226

AIR INTAKE

Max. intake restriction (mm H2O)	220
Intake air flow (L/s)	552,00

D550

ALTERNATOR CHARACTERISTICS

GENERAL DATA

Alternator ref.	AT01980T
Number of Phase	Three phase
Power factor (Cos Phi)	0,8
Altitude (m)	0 to 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, standby 27°C	H / 163°K
%regulation_avr%	#regulation_avr#
Total Harmonic Distortion in no-load DHT (%)	2,6
Total Harmonic Distortion, on load DHT (%)	2,4
Wave form : NEMA=TIF	<40
Wave form : CEI=FHT	<2
Number of bearing	1
Coupling	Direct
Voltage regulation at established rating (+/- %)	0,50
Recovery time (Delta U = 20% transcient) (ms)	200
Indication of protection	IP 23
Technology	Without collar or brush
AVR Regulation	Yes

OTHER DATA

Continuous Nominal Rating 40°C (kVA)	500,0
Standby Rating 27°C (kVA)	546,0
Efficiencies 100% of load (%)	94,6
Air flow (m3/s)	0,900
Short circuit ratio (Kcc)	0,400
Direct axis synchro reactance unsaturated (Xd) (%)	258,7
Quadra axis synchro reactance unsaturated (Xq) (%)	111,8
Open circuit time constant (T'do) (ms)	2800,00
Direct axis transcient reactance saturated (X'd) (%)	18,0
Short circuit transcient time constant (T'd) (ms)	140,000
Direct axis subtranscient reactance saturated (X"d) (%)	9,8
Subtranscient time constant (T"d) (ms)	21,000
Quadra axis subtranscient reactance saturated (X"q) (%)	22,70
Subtranscient time constant (T"q) (ms)	16,0
Zero sequence reactance unsaturated (Xo) (%)	3,100
Negative sequence reactance saturated (X2) (%)	14,40
Armature time constant (Ta) (ms)	31,000
No load excitation current (io) (A)	0,70
Full load excitation current (ic) (A)	3,50
Full load excitation voltage (uc) (V)	31,0
Engine start (Delta U = 20% perm. or 50% trans.) (kVA)	1500,00
Transcient dip (4/4 load) - PF : 0,8 AR (%)	14,50
No load losses (W)	6335,00
Heat rejection (W)	22833,00
Unbalanced load acceptance ratio (%)	100

DIMENSIONS

Containment DW

Commercial reference of the enclosure	M229 DW
Length (mm)	5083
Width (mm)	1560
Height (mm)	2700
Dry weight (kg)	5044
Tank capacity (L)	1770
Acoustic pressure level @1m in dB(A)	84
Sound power level guaranteed (Lwa)	104
Acoustic pressure level @7m in dB(A)	74

D550

CONTROL PANEL

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.

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.