

GDD SERIES

GDD 345 & 400



GENPOWER[®]

GENERATOR

231/400V - 50Hz & 277/480V - 60Hz



Features and Benefits

- Half Century Experience in Generator Manufacturing
- Diesel Engines with Advanced Technology and Quality
- Alternators with Advanced Technology and Quality
- Control Panel Suitable for Flexible Application
- High Quality and Reliable Technology
- Patented Compact Designed and Soundproof Canopy
- Low Noise Level
- Low Exhaust Emission
- Low Operating Cost
- Low Fuel Consumption
- Low Oil Consumption
- Tropical 50°C Radiator
- Suitable for Heavy-Duty
- Durability
- Wide Range of Affordable Spare Parts
- Fuel Filter with Water and Particle Separator
- First Class Product Support
- Global Technical Service and Maintenance Support

Generator General Information

Generator	Frequency	Voltage	Power Factor	Speed	Diesel Engine			Alternator			Type of	Generator Output		
Model	Hz	V	CosQ	rpm	Brand	Model	Series	Brand	Model	Series	Operation	kVA	kW	A
GDD 345	50	231/400	0,8	1500	D O O S A N	P126TI-II	P	G E N P O W E R	G N P	270 LXA	Stand By	345,0	276,0	498,6
				Prime							313,6	250,9	453,2	
				Continuous						219,5	175,6	317,3		
GDD 400	60	277/480	0,8	1800						270 LXA	Stand By	400,0	320,0	578,0
				Prime	363,6	290,9	525,5							
					Continuous	254,5	203,6	367,8						

DOOSAN (HYUNDAI-DOOSAN) Diesel Engine Technical Parameters

GENERAL ENGINE DATA

Engine Model
Engine Type
Bore x stroke
Displacement
Compression ratio
Rotation
Firing order
Fuel System
Governor
Governor Class

COOLING SYSTEM

Total system coolant capacity
Thermostat operation range
Maximum temperature to engine
Minimum temperature to engine
Coolant temperature alarm
Limits of the environment temperature

P126TI-II
4-Cycle, In-line, 6-Cylinder Diesel, water cooled, Turbo charged & intercooled
123 x 155 mm
11.051 liters
17.1 : 1
Counter clockwise viewed from Flywheel
1-5-3-6-2-4
Zexel in-line "P" type
Electronic
G3
19L
80~90°C
105 °C
70 °C
105 °C
52 °C

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LUBRICATION SYSTEM

○ Lubrication oil capacity

○ Lubrication oil pressure

○ Lubrication oil temperature

○ Lubrication oil consumption as % of fuel consumption

○ Pressure of oil relief valve opening

ELECTRICAL SYSTEM

○ Alternator

○ Starter motor

FAN SYSTEM

○ Diameter

○ Number of blade

○ Material

23L

min 250 kPa (50Hz) / min 300 kPa (60Hz)

At normal operation 105 °C, Maximum 125 °C

0.1 % maximum

550 ± 50 kPa

28.5V x 45A alternator

24V x 6.0 kW

755 mm

7

Plastic

GENPOWER Alternator Technical Parameters and Specifications

Alternator Technical Parameters

Insulation Class		H	Field Control System		Self Excited
Winding Pitch		2/3 - (N° 6)	A.V.R. Model	Standard	AS440
Wires		12	Voltage Regulation	%	± 1
Protection		IP 23	Sustained Short-Circuit Current	10 sec	300% (3 IN)
Altitude	m	1000	Total Harmonic (*) TGH / THC	%	< 4
Overspeed	rpm	2250	Wave Form :NEMA = TIF - (*)		< 50
Air Flow	m³/sec	0.514	Wave Form :I.E.C. = THF - (*)	%	< 2
Bearing Drive	N/A	-	Bearing Non - Drive	Bearing	6310-2RZ
Rotor Winding	100%	Copper	Stator Winding	100%	Copper

(*) Total harmonic content line to line, at no load or full rated linear and balanced load

Genpower synchron alternators are produced according to TSE 60034-1; IEC 60034-22; GB755; BS4999-5000; NEMA MG 1.22 standards

Alternator Specifications

50 Hz - 231/400V - Cos Q 0,8 - 1500 rpm									
Standard Using Alternator				Optional Using Alternator					
Brand/Model	Genpower	270 LXA		Leroy Somer	TAL046F		Stamford	S4L1D-D4	
Duty		Continuous				Stand By			
Ambient	C°	40°C				27°C			
Class/Temp. Rise	C°	H / 125° K				H / 163° K			
Series Star (V)	V	380/220	400/231	415/240	1 Phase	380/220	400/231	415/240	1 Phase
Parallel Star (V)	V	190/110	200/115	208/120	220	190/110	200/115	208/120	220
Series Delta (V)	V	220	230	240	230	220	230	240	230
Output Power	kVA	318,0	318,0	330,0	-	350,0	350,0	363,0	-
Output Power	kW	254,4	254,4	264,0	-	280,0	280,0	290,4	-

60 Hz - 277/480V - Cos Q 0,8 - 1800 rpm									
Standard Using Alternator				Optional Using Alternator					
Brand/Model	Genpower	270 LXA		Leroy Somer	TAL046F		Stamford	S4L1D-D4	
Duty		Continuous				Stand By			
Ambient	C°	40°C				27°C			
Class/Temp. Rise	C°	H / 125° K				H / 163° K			
Series Star (V)	V	416/240	440/254	480/277	1 Phase	416/240	440/254	480/277	1 Phase
Parallel Star (V)	V	208/120	220/127	240/138	-	208/120	220/127	240/138	-
Series Delta (V)	V	240	254	277	240	240	254	277	240
Output Power	kVA	358,0	377,0	398,0	-	394,0	415,0	437,0	-
Output Power	kW	286,4	301,6	318,4	-	315,2	332,0	349,6	-

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Control Panel Specifications

Powder Painted Steel Panel with Lockable Door
ATS (Automatic Transfer Panel) - Optional
Control Module

Battery Charger
Emergency Stop Button
Backlit, 128x64 Pixels

Control Relays
Terminal Blocks
Load Output Terminal

System Protection MCBs
Circuit Breaker - Optional
LCD Screen

Control Module Technical Parameters

Brand GENPOWER/Fortrust JV
Dimensions 221mm x 152mmx56,8mm
Weight 800 gr.
Ambient Humidity 90% max.
DC Battery Supply Voltage 8 - 32 V
Network Frequency 5 - 99,9 Hz
Generator Voltage Measurement 3 - 300 V
Current Transformer Secondary 5A
Charge Alternator Voltage Measurement 8 - 32 V
Communication Interface RS-232
Generator Contactor Relay Output 5A & 250V
Solenoid Transistor Outputs 1A with DC Supply
Configurable-3 Transistor Outputs 1A with DC Supply

Model 6120 D Version
Protection Class IP65 From the Front
Environmental Conditions 2000 Meters Above Sea Level
Ambient Temperature -20 ° C to + 70 ° C
Battery Voltage Measurement 8 - 32 V
Mains Voltage Measurement 3 - 300 V Phase-Neutral, 5 - 99.9 Hz
Generator Frequency 5 - 99.9 Hz
Working Period Continuous
Charge Alternator Excitation 210mA & 12V, 105mA & 24V Nominal 2.5W
Analog Sender Measurement 0 - 1300ohm
Mains Contactor Relay Output 5A & 250V
Start Transistor Outputs 1A with DC Supply
Configurable-4 Transistor Outputs 1A with DC Supply

Control Module Functions

Mains Voltage Level Control
Network Frequency Level Control
Engine Operating Option Control
Engine Stop Option Control
Engine Speed (RPM) Level Control
Battery Voltage Options Control
Check Engine Maintenance Times
Communication Interfaces GPRS, GSM
Engine Speed
Voltage
Generator Voltage Level Control
Generator Frequency Level Control
Generator Current Level Control
Generator Power Level Control
Generator Work Schedule and Timing Control
Oil Pressure Controllers Control
Configurable Analog Inputs and Outputs
Keeping Error Records of Past Events
Configurable Programmable Digital Inputs and Outputs
Current and Frequency

3 phase Generator Protections
- High / Low Voltage
- High / Low Frequency
- Current / Voltage Asymmetry
- Overcurrent / Overload
Overheat Control
1 Phase or 3 Phase, Phase Selection
Parameter Setting via Control Module
Water Temperature
Phase Sequence

3 phase AMF Function
- High / Low Frequency
- High / Low Voltage
- High / Low Water Temperature
- High / Low Load
Mains, Generator ATS control
Network, Voltage, Frequency Display
Parameter Setting via Computer
Hours of Operation
Earting

Alarm Horn
Heater Tube Thermostat Control
Modbus and SNMP
Working Hour
Ground Leakage
Analog Modem
Ethernet, USB, RS232, RS485
Selectable Protection Alarm / Shutdown
Battery Voltage
Oil Pressure

Control Module Alerts

Emergency Stop Malfunction
High Generator Voltage
Low Generator Frequency
Low Load
Over Current
Unbalanced Current
Low Generator Voltage
High Generator Frequency
Phase Sequence Error
Overload
Low Water Level (Optional)
Low Oil Pressure
Low Water Temperature
Heat Sensor Broken
Reverse Power
Start Error
Stop Error
Magnetic Pickup Error
Charge Alternator Error
Unbalanced Load
Maintenance Time Alarm
Low Speed
High Speed
Broken Oil Sensor Cable
High Oil Temperature (Optional)
Low Fuel Level (Optional)
High Battery Voltage
Low Battery Voltage
High Water Temperature
Electronic Canbus Errors (ECU)

Sound Proof Canopy and Base Frame (Chassis) Specifications

Special, Registered GENPOWER Design and Color
A1 Quality DKP / HRU /Galvanized Steel
Sensitive Twist on Automatic Press Brake
Delicate Cut on Automatic Punch and Laser Bench
Sensitive Welding on Robotic Welding Bench
Chemical Cleaning Nano Technology Before Painting
Robotic Painting with Electrostatic Powder Paint
Drying and Stabilizing on 200°C Ovens
1500 Hour Salt Test
Glasswool Isolation, A1 Class Material -50/+500°C
Special Covering Over Glass Wool
Best Sound Level (in dBA)

Temperature Tests
Rustproof Accessories
Cable Exit Connectors and Glands
Emergency Stop Button
Fuel Level Gauge
Fuel Drain Cap
Fuel Inlet and Return Records
Impermeability Test for Fuel Tank
Vacuummed Rubber Mounted
High Quality Weatherstrips
High Quality Shock Absorbers
Fuel Filling Cap (with ventilation)

Lifting and Carrying Equipments
Internal Exhaust Mufflers (Silencers)
External Exhaust Mufflers (Silencers)
Radiator Water Filling Cap
Daily Fuel Tank
External Fuel Tank

Special Products / Non - Standardized

Synchronised Systems
Scada Systems
Mobile Systems
Light Towers
Ground Power Unit Generators
Generators - with Trailer
Medium Voltage - MV
IP44-IP54 Class Generators
Welding Machines
Natural Gas Generator
DC Generators
High Voltage - HV
Power Plants
Trigeneration Systems
Biogas Generator
High Frequency Generators
Variable Speed Generators
Super Silent Canopy
Cogeneration Systems
LPG Generator
Marine Generators
Dual Generators
Automatic Voltage Stabilizers
Electrical and Diesel Forklift
HFO Generator

Quality Documents & Certificates

Trademark Registration Certificate
Capacity Report (32400 Units / Year)
Made in Turkey Certificate- For Generator/1-5000 kVA
Made in Turkey Certificate-For Alternator/1-5000kVA
Made in Turkey Certificate- For Engine/1-5000 kW
Certificate of Competency for After Sales Services
2014/30/EU Electromagnetic Compatibility Directive
CE Certificate - 2000/14/AT - 2000/14 EC (CE 2195)
Industrial Registry Certificate
Certificate of Manufacturing Competence
TSE- Service Adequacy Certificate
ISO 9001 - 2015 Certificate
ISO 14001 - 2015 Certificate
OHSAS 18001 - 2007 Certificate
2006/42/EC Machinery Directive
Coatchem- Türkak 1500 Hours Corrosion Durability Test Certificate
TSE 8528 - 4 Certificate
TSE 8528 - 5 Certificate
TSE 8528 - 8 Certificate
AB-0547-T Certificate
EAC - GOST Certificate/ Diesel Generator
EAC - GOST Certificate/ Gasoline Generator
CE Certificate - EN ISO 17050-1,2004
TS EN ISO 2409 Certificate
TS EN ISO 4628-3 Certificate
TS EN ISO 4628-4 Certificate
TS EN ISO 4628-5 Certificate
TS EN ISO 4628-8 Certificate
TS EN ISO 9227 Certificate
TS 9620 EN ISO 4628-2 Certificate
TS EN 60034 - 1 Certificate
EN ISO 8528-13,2016 Certificate
EN ISO 12100:2010 Certificate
EN ISO 13857:2008 Certificate
EN ISO 14120:2015 Certificate
EN 349:1993+A1:2008 Certificate
EN 60204-1,2018 Certificate
EN 61000-6-2,2019 Certificate
EN 61000-6-4,2007/A1:2011 Certificate

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Generator Dimensions

Values		Open Type Generator	Canopy Type Generator
Width	mm	1100	1140
Length	mm	3095	4100
Height	mm	1782	1900
Weight (Net)	Kg	2163	2600
Fuel Tank Capacity	L	475	678

Generator Technical Drawings

SYMBOL	OPEN	CANOP
L	3095	4000
W	1500	1140
M	1598	2000
S	184	600
A	766	
B	810	
C	860	
D1		990
D2		990
D3		990
D4		990
D5		990