





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

GDZ 300 & 311

Genset General Information														
Generator	Frequency	Voltage	Power Factor	Speed		Diesel Engine			Alternat	tor	Type of	Gen	erator Ou	itput
Model	Hz	V	CosQ	rpm	Brand	Model	Serial	Brand	Model	Serial	Operation	kVA	kW	Α
GDZ 300	50	231/400	0,8	1500	D E U	TCD8.0	TCD	G E N P	G	270 LX	Stand By Prime Continuous	300,0 272,7 190,9	240,0 218,2 152,7	433,5 394,1 275,9
GDZ 311	60	277/480	0,8	1800	T Z	1656.0	ICD	O W E R	P	270 MX	Stand By Prime Continuous	310,9 282,6 197,9	248,7 226,1 158,3	449,3 408,4 285,9

Features and Benefits

- We are exclusive Distributor of DEUTZ Engine
- 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
- Original DEUTZ AG Products
- Low Noise Level
- Low Exhaust Emission
- Low Operating Cost
- Low Fuel Consumption
- Low Oil Consumption
- Tropical 50°C Radiator

- Global DEUTZ AG Warranty
- 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













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General Characteristics

50Hz - 1500-min -1			60Hz - 1800-min -1		
Engine			Engine		
Type Speed Net frequency Power standard Power level Exhaust emission standard	min ⁻¹ Hz	TCD8.0 1500 50 LTP - Fuel optimized	Type Speed Net frequency Power standard Power level Exhaust emission standard	min ⁻¹ Hz	TCD8.0 1800 60 LTP - Fuel optimized
General			General		
Aspiration Governing System Governor Brand No of cylinders Configuration Injection system Displacement Bore Stroke Compression ratio Mean effective pressure Piston speed Rotation (looking at flywheel) No of teeth on flywheel ring gear	l mm mm bar m/s	Turbo, CAC Electronic Bosch 6 in-line Common Rail 7,8 110 136 17:1 28 6,5 CCW 129	Aspiration Governing System Governor Brand No of cylinders Configuration Injection system Displacement Bore Stroke Compression ratio Mean effective pressure Piston speed Rotation (looking at flywheel) No of teeth on flywheel ring gear	l mm mm bar m/s	Turbo, CAC Electronic Bosch 6 in-line Common Rail 7,8 110 136 17:1 24 7,8 CCW 129
Governor performance			Governor performance		
Speed droop (static) mech. gov. Speed droop Common Rail. gov. (BOSCH) Governing standards to ISO 8528 Parts 1 and 5	% %	- 0 G3	Speed droop (static) mech. gov. Speed droop Common Rail. gov. (BOSCH) Governing standards to ISO 8528 Parts 1 and 5	% %	- 0 G3
Engine without flywheel Flywheel (standard genset spec.) Max. step load acceptance, 1st step Sound power at full load, incl. cooling system Sound press. (1m average, full load), incl. cool. syst.	kg m² kg m² % dB(A) dB(A)	0,57 2,60 - 112,1 97,6	Engine without flywheel Flywheel (standard genset spec.) Max. step load acceptance, 1st step Sound power at full load, incl. cooling system Sound press. (1m average, full load), incl. cool. syst.	kg m² kg m² % dB(A) dB(A)	0,57 2,60 - 117,1 102,6
Engine Weight			Engine Weight		
Engine dry, w/o cooling system Engine with cooling system	kg kg	764 954	Engine dry, w/o cooling system Engine with cooling system	kg kg	764 954
Lubrication system			Lubrication system		
Oil specification Oil consumption (as % of fuel consumption) Oil capacity (sump) Min. oil pressure (warning) Min. oil pressure (shut down) Max. permissible oil temperature (oil pan)	% I bar bar °C	15W40 / CI-4/SL 0,02 31 1,5 1,35 130	Oil specification Oil consumption (as % of fuel consumption) Oil capacity (sump) Min. oil pressure (warning) Min. oil pressure (shut down) Max. permissible oil temperature (oil pan)	% I bar bar °C	15W40 / CI-4/SL <0,05 31 1,5 1,35 130
Output			Output	<u> </u>	
Gross output(LTP or StandBy Power) Fan reduction Net flywheel Electrical output (Stand By) Gross output(PRP or Prime Power) Gross output(Continous Power)	kW kW kVA kVA	250 11,6 238,4 300 225 207	Gross output(LTP or StandBy Power) Fan reduction Net flywheel Electrical output (Stand By) Gross output(PRP or Prime Power) Gross output(Continous Power)	kW kW kW kVA kW	270 20 243 311 245 223







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50Hz - 1500-min -1			60Hz - 1800-min -1		
Fuel System, Fuel consumption			Fuel System, Fuel consumption	1	
25% load 50% load 75% load 100% load 25% load 50% load 75% load 100% load Max. suction head of fuel feed pump	I/h I/h I/h I/h g/kWh g/kWh g/kWh g/kWh m	15,2 28,1 39,9 51,6 230 212 201 195	25% load 50% load 75% load 100% load 25% load 50% load 75% load 100% load Max. suction head of fuel feed pump	l/h l/h l/h l/h g/kWh g/kWh g/kWh g/kWh m	16,9 32,9 46,8 58,2 240 233 221 206
Cooling System, General engine cooling data			Cooling System, General engine cooling data		
Max. perm. coolant outlet temperature Max. perm. flow resistance (cool. syst. and piping) Max. temperature of coolant (warning) Max. temperature of coolant (shutdown) Temperature at which thermostat starts to open Temperature at which thermostat is fully open Delivery of coolant pump Min. pressure before coolant pump Temperature at CAC outlet at standard conditions	°C bar °C °C °C m3/h bar °C	103 0,33 108 110 83 98 14,7 0,3	Max. perm. coolant outlet temperature Max. perm. flow resistance (cool. syst. and piping) Max. temperature of coolant (warning) Max. temperature of coolant (shutdown) Temperature at which thermostat starts to open Temperature at which thermostat is fully open Delivery of coolant pump Min. pressure before coolant pump Temperature at CAC outlet at standard conditions	°C bar °C °C °C °C m3/h bar °C	103 0,45 108 110 83 98 17,7 0,3
Engine Cooling System			Engine Cooling System		
Coolant capacity (engine) Coolant capacity (incl. cooling unit) Air to boil (max. permissible cool. air temp. at fan) Fan power consumption Cooling air flow Air pressure loss, external	I I °C kW m3/h mbar	9,8 27 54 11,6 16200 1,5	Coolant capacity (engine) Coolant capacity (incl. cooling unit) Air to boil (max. permissible cool. air temp. at fan) Fan power consumption Cooling air flow Air pressure loss, external	I I °C kW m3/h mbar	9,8 27 60 20 21240 2
Heat Balance			Heat Balance		
Heat dissipation (engine radiator) Heat dissipation (CAC) Heat dissipation (convection)	kW kW kW	122,3 48 25	Heat dissipation (engine radiator) Heat dissipation (CAC) Heat dissipation (convection)	kW kW kW	130,2 56,6 26
Inlet / Exhaust Data			Inlet / Exhaust Data		
Max. intake depression (Switch setting) Combustion air volume Max. exhaust back pressure Max. exhaust gas temperature Exhaust gas flow (at above temp) Exhaust flange / pipe diameter	mbar m3/h mbar °C m3/h mm	30 909 50 530 2547	Max. intake depression (Switch setting) Combustion air volume Max. exhaust back pressure Max. exhaust gas temperature Exhaust gas flow (at above temp) Exhaust flange / pipe diameter	mbar m3/h mbar °C m3/h mm	30 1027 50 490 2743
Electrical System			Electrical System		
Voltage Starter Alternator output Batteries (minimum capacity, cold start limit -5°C)	V Kw A Ah	24 5 80 2*85	Voltage Starter Alternator output Batteries (minimum capacity, cold start limit -5°C)	V Kw A Ah	24 5 80 2*85
Alternator Technical Parameters					

Insulation Class		Н	Field Cor
Winding Pitch		2/3 - (N° 6)	A.V.R. Mo
Wires		12	Voltage F
Protection		IP 23	Sustaine
Altitude	m	1000	Total Har
Overspeed	rpm	2250	Wave For
Air Flow	m³/sec	0.514	Wave Fo
Bearing Drive	N/A	-	Bearing I
Rotor Winding	100%	Copper	Stator Wi

Field Control System	
A.V.R. Model	
Voltage Regulation	
Sustained Short-Circuit Current	
Total Harmonic (*) TGH / THC	
rotar narmonic () rott/ mo	
Wave Form: NEMA = TIF - (*)	
, ,	
Wave Form: NEMA = TIF - (*)	

Standard
%
10 sec
%
%
Bearing
100%

Self Excited
AS440
± 1
300% (3 IN)
< 4
< 50
< 2
6310-2RZ

Copper

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

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







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Alternator Specifications

50 Hz - 231/40	0V - Cos Q 0,	8 - 1500 ı	rpm		50Hz						
Standard Using Alt	ernator			Optional Using	Alternator						
Brand/Model	Genpower	GNP 270	LX	Leroy Somer	TAL046E		Stamford	HC4D/S4L1DE)		
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	273,0	273,0	283,0	-	300,0	300,0	312,0	-		
Output Power	kW	218,4	218,4	226,4	-	240,0	240,0	249,6	-		

60 Hz - 277/48	0V - Cos Q 0,	8 - 1800		60Hz							
Standard Using Alt	ernator			Optional Using	Alternator						
Brand/Model	Genpower	GNP 270	MX	Leroy Somer	TAL046C		Stamford	UC274J			
Duty			Continuous				Stand By				
Ambient	C°		40°C				27°C				
Class/Temp. Rise	C°			H / 125° K			H / 16	3° 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	269,0	284,0	298,0	-	296,0	312,0	328,0	-		
Output Power	kW	215,2	227,2	238,4	-	236,8	249,6	262,4	-		

Other Details

Diesel Engine and Genset Rating Classifications

The below ratings represent the engine performance capabilities to conditions specified in TS ISO 8528/1, 8528-4, 8528-5, 8528-8, BS5000, ISO 3046/1:1986, NEMA MG-1.22.1, BS 5514/1.

STAND BY POWER RATING (ESP):

ESP is applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. Under no condition is an engine allowed to operate in parallel with the public utility at the Stand By Power rating. This rating should be applied where reliable utility power is available. A Stand By rated engine should be sized for a maximum of an 70% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Stand By Power rating. Stand By ratings should never be applied except in true emergency power outages. Negotiated power outages contracted with a utility company are not considered an emergency.

PRIME POWER RATING (PRP)

Applicable for supplying electric power in lieu of commercially purchased power. Prime Power applications must be in the form of one of the following two categories:

UNLIMITED TIME RUNNING PRIME POWER (ULTP):

PRP (Prime Power) is available for an unlimited number of hours per year in a variable load application. Variable load should not exceed a 70% average of the Prime Power rating during any operating period of 250 hours. The total operating time at 100% Prime Power shall not exceed 500 hours per year. A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

LIMITED TIME RUNNING PRIME POWER (LTP)

LTP (Limited Time Prime Power) is available for a limited number of hours in a nonvariable load application. It is intended for use in situations where power outages are contracted, such as in utility power curtailment. Engines may be operated in parallel to the public utility up to 750 hours per year at power levels never to exceed the Prime Power rating. The customer should be aware, however, that the life of any engine will be reduced by this constant high load operation. Any operation exceeding 750 hours per year at the Prime Power rating should use the Continuous Power rating.

CONTINUOUS POWER RATING (COP):

COP is the power that the engine can continue to use under the prescribed speed and the specified environment condition in the normal maintenance period stipulated in the manufacturing plant. And Continuous Power is applicable for supplying utility power at a constant 100% load for an unlimited number of hours per year. No overload capability is available for this rating.

PAY ATTENTION to the points below in picking and using the generator

- * Generators can work on Continuous Power at 70% of Prime power value if only all maintenances are done on time with original spare parts and high quality oils that manufacturer advice.
- * Generators should not operate below 50% of Prime Power value. In such a case, the engine will burn excessive oil and eventually have irreparable damage.
- * If your need is 1000 kVA or above, you should prefer Synchronic Systems with 2-3 generators with failure back up and simultaneous aging.
- * These points will provide advantage for you with purchasing and operating the generator









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Control Panel Specifications

Powder Painted Steel Pannel 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 Dimensions Weight Ambient Humidity DC Battery Supply Voltage Network Frequency Generator Voltage Measurement **Current Transformer Secondary** Charge Alternator Voltage Measurement

Communication Interface Generator Contactor Relay Output Solenoid Transistor Outputs Configurable-3 Transistor Outputs

GENPOWER/FORTRUST

120mm x 94mm 260 gr. 90% max. 8 - 32 V 5 - 99 9 Hz 3 - 300 V 5A 8 - 32 V RS-232 5A & 250V 1A with DC Supply 1A with DC Supply Model Protection Class **Environmental Conditions** Ambient Temperature **Battery Voltage Measurement** Mains Voltage Measurement Generator Frequency

Working Period Charge Alternator Excitation Analog Sender Measurement Mains Contactor Relay Output Start Transistor Outputs Configurable-4 Transistor Outputs 6120-D Version IP65 From the Front 2000 Meters Above Sea Level -20 ° C to + 70 ° C

8 - 32 V

3 - 300 V Phase-Neutral, 5 - 99.9 Hz 5 - 99.9 Hz

Continuous 210mA & 12V. 105mA & 24V Nominal 2.5W 0 - 1300ohm 5A & 250V 1A with DC Supply 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 Alarm Horn

Heater Tube Thermostat Control **Battery 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** Modbus and SNMP

Working Hour Oil Pressure

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

Ground Leakage Analog Modem

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

Ethernet, USB, RS232, RS485 Selectable Protection Alarm / Shutdown

Control Module Alerts

Emergency Stop Malfunction High Generator Voltage Low Generator Frequency Low Load Over Current **Unbalanced Current**

High Oil Temperature (Optional) Low Fuel Level (Optional)

Low Generator Voltage High Generator Frequency Phase Sequence Error Overload

Low Water Level (Optional) Low Oil Pressure High Battery Voltage Low Battery Voltage

Low Water Temperature Heat Sensor Broken Reverse Power Start Error Stop Error

Magnetic Pickup Error High Water Temperature

Charge Alternator Error Unbalanced Load Maintenance Time Alarm Low Speed

High Speed

Broken Oil Sensor Cable 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

Lifting and Carrying Equipments Internal Exhaust Mufflers (Silencers) 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)

External Exhaust Mufflers (Silencers) Radiator Water Filling Cap

Temperature Tests

Rustproof Accessories Cable Exit Connectors and Glands

Emergency Stop Button Fuel Level Gauge Fuel Drain Cap

Daily Fuel Tank

Fuel Inlet and Return Records Impermeability Test for Fuel Tank Vacummed Rubber Mounted High Quality Weatherstrips High Quality Shock Absorbers Fuel Filling Cap (with ventilation)

External Fuel Tank

Special Products / Non - Standardized

Synchronised Systems Scada Systems Mobile Systems **Light Towers Ground Power Unit Generators** Marine Generators

Dual Generators

Generators - with Trailer Medium Voltage - MV IP44-IP54 Class Generators Welding Machines Natural Gas Generator Automatic Voltage Stabilizers DC Generators High Voltage - HV Power Plants Trigeneration Systems Biogas Generator Electrical and Diesel Forklift High Frequency Generators Variable Speed Generators Super Silent Canopy Cogeneration Systems LPG Generator **HFO** Generator









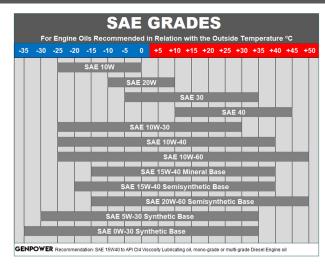
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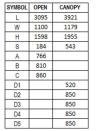
Generator Dimensions

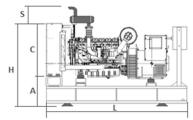
Oil Recommendation and Oil Grades

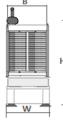
Values		Open Type Generator	Canopy Type Generator
Width	mm	1100	1179
Length	mm	3095	3921
Height	mm	1782	2498
Weight (Net)	Kg	2159	2600
Fuel Tank Capacity	L	475	673

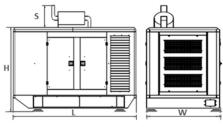


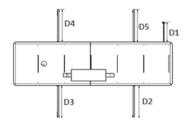
Generator Technical Drawings











Why You Should Buy GENPOWER?

Only because it is the biggest generator factory in the World? NO!

- * It is one of the most trustworthy and distinguished generator manufacturers in the world with its almost half century experience in the field.
- * It has interiorized the strategy of unconditional customer satisfaction and has been working with this work ethic together with its whole crew.
- * Customers and end users get their moneys' worth and more with every penny.
- * It has become a big family with customers and users who receive durable, long-lasting and high quality products.
- * It has been appreciated many times by customers and suppliers about the investments that have been made for quality enhancement.
- * Both its suppliers and customers always know GENPOWER is and will always be there for them. GENPOWER on their side in bad and good days.
- * In order not to harm brand reputation and recognition, each day, they work harder than the day before.
- * It continues its business only with the suppliers, customers, dealers and technical services that also embrace the same mind set and work ethics.
- * It proves its loyalty for quality and customer satisfaction with its mottos "Your power is the core of our business" and "nothing will be left unfinished"
- * The specifications and/or modifications you can receive with extra costs by other manufacturers are included in standard production in GENPOWER
- * When you purchase GENPOWER products, you are not a customer or a buyer but GENPOWER perceives and accepts you as a valuable member of its continuously growing family.

These are why you should buy from GENPOWER...





Factory Address

English 01-2022@2022 GDZ Series Generator

2010. Street No: 18 06909 Temelli-Sincan/Ankara, Turkey Tel/ Fax: +90(312) 641 32 22 - 641 32 23 genpower@genpower.com.tr