GCC SERIES

GENPOWER GENERATOR

When you need

GCC 38

STANDARD SPECIFICATIONS

General Specifications

Genset Model		GCC 38	Fuel		Diesel
Stand By Power	kVA / kW	38 / 30	Stand By Ampers	Amp.	55
Prime Power	kVA / kW	35 / 28	Prime Ampers	Amp.	51
Continuous Power	kVA / kW	23 / 18	Continuous Ampers	Amp.	33
Engine Brand		CUMMINS	Engine Model		X3.3G1
Alternator Brand		GENPOWER	Alternator Model		GNP 180 LA
Speed	rpm	1500	Frequency	Hz	50
Voltage	V	231 / 400	Power Factor	Cos φ	0,8
Cooling System		Water Cooled	Usage Type		Automatic / Manual

Genset Rating Classifications

The below ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.

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.

LIMITED TIME RUNNIG POWER - LTP

Gensets with a limited-time power rating are designed to operate at a maximum of 500 hours per year, although they can effectively manage an average load factor of up to 100 percent.

PRIME POWER RATING - PRP

PRP is available for unlimited hours per year in variable load application. Variable load should not exceed an average of 70% of the Prime Power rating during any operating period of 24 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 hours period of operation. Total operating time at the 10% overload power shall not exceed 25 hours per year.

STAND BY POWER (EMERGENCY) 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. A standby rated engine should be sized for a maximum of a 70% average load factor and 200 hours of operation per year. This includes less than 25 hours per year at the Standby Power 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.

TECHNICAL SPECIFICATIONS

GENPOWER®
GENERATOR

environment friendly

DIESEL ENGINE

STANDARD SPECIFICATIONS

Engine Technical Specifications

Technical Parameters

Number Of Cylinders		4
Configuration		Vertical, in line
Aspiration		Naturally
Combustion System		Direct injection
Compression Ratio		18.5:1
Bore	mm	91.4
Stroke	mm	127
Displacement	L	3,3
Governing Type		Mechanic
Governing Class		G2
Rotation		Counterclockwise
Firing order		1-3-4-2
Emission		Non-Regulated

Gross Engine Power	kW	36
Net Engine Power	kW	35,1
Fan and belt Power Consumption	kW	0,9
Other Power Loss	kW	-
Mean Effective Pressure	kPa	804
Intake Air Flow	m ³ /min.	2,34
Exhaust Temperature Limit	ºC	660
Exhaust Flow	m ³ /min.	2,3
Heat Rejection To Ambient (Radiated)	kW	7,2
Mean Piston Speed	m/s	6,35
Cooling Fan Air Flow	m ³/min.	102
Typical Generator Output Power	kVA	38
Generator Efficiency	%	86

Electrical System

Voltage	V	12
Starter	kW	2,8
Alternator Output Ampers	A	36
Alternator Output Voltage	V	14
Batteries Capacity	Ah	55

Heat Rejection

Energy In Fuel (Heat Of Combustion)	kW	103
Gross Heat To Power	kW	36
Energy To Coolant And Lubricating Oil	kW	19,8
Energy To Exhaust	kW	40,8
Heat To Radiation	kW	6,2

Fuel Consumption

Standby - Load 100%	(L/h)	10,4
Prime - Load 100%	(L/h)	8,5
Prime - Load 75%	(L/h)	6,1
Prime - Load %50	(L/h)	4,3

Note:The density of diesel is 0.835 kg/L

Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2 Diesel.

The fuel must be clean and without water

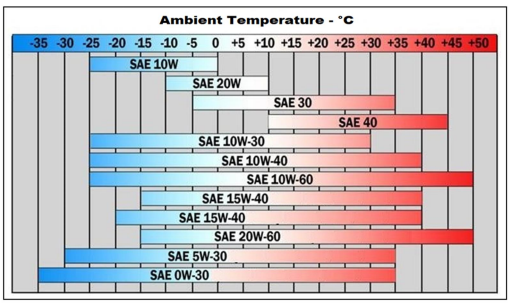
Cooling System

Radiator Type	50ºC	Tropical
Total Coolant Capacity	L	12,5
Max. Perm. Coolant Outlet Temperature	ºC	105
Max. Perm. Flow Resis. (Cool. System And Piping)	bar	0,5
Max. Temperature Of Coolant Warning	ºC	95
Max. Temperature Of Coolant Shutdown	ºC	98
Thermostat operation temperature- Initial Open	ºC	76
Thermostat operation temperature- Full Open	ºC	87
Delivery Of Coolant Pump	Lt /sec.	1,5
Min. Pressure Before Coolant Pump	bar	0,30
Radiator Face area	m²	0,24
Rows	Row	2
Matrix Density	Per/Inch	14
Material		Aluminum
Width Of Matrix	mm	425
Height Of Matrix	mm	570
Pressure Cap Setting	kPa	90
Estimated Cooling Air Flow Reserve	kPa	0,125
Engine Pre Heater Tube (with Circulation Pump)	W	1500

Lubrication System

Total System	L	8
Minimum Oil Level	L	6
Nominal Motor Operating Temperature	ºC	50
Lubricating Oil Pressure	bar	5,5
Relief Valve Opens	kPa	300
Oil, Fuel Consumption Ratio	%	<0,2
Normal Oil Temperature	ºC	120

Recommendation: SAE 15W40 to API CI4 Viscosity Lubricating oil, mono-grade or multi-grade oil



Fan

Diameter	mm	450
Drive Ratio		1.25:1
Number Of Blades		7
Material		Plastic
Type		Blowing

Filters

Air Filter	Dry Type, replaceable
Fuel Filter	With water seperator
Oil Filter	Element type, particulate trap

TECHNICAL SPECIFICATIONS

CE TÜV CERT ISO 9001:2008 OHSAS 18001:2007 ISO 14001:2004 TSE

GENPOWER®
GENERATOR

legend of power

ALTERNATOR
CANOPY & BASE FRAME

STANDARD SPECIFICATIONS

Alternator Technical Specifications

Technical Parameters

Insulation Class		H	Field Control system		Self excited
Winding Pitch		2/3 - (N° 6)	A.V.R. Model	Standard	SX460
Wires		12	Voltage Regulation	%	± 1
Protection		IP 23	Sustained Short-Circuit Current	10 sec	300% (3 IN)
Altitude	m	1000	Total Harmonic (*) TGH / THC	%	< 5
Overspeed	rpm	2250	Wave Form : NEMA = TIF - (*)		< 50
Air Flow	m³/sec	0.095	Wave Form : I.E.C. = THF - (*)	%	< 2
Bearing Drive	N/A	-	Bearing Non - Drive	Bearing	6306-2RZ
Rotor Winding	100%	Copper	Stator Winding	100%	Copper

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

Specifications

Standard: Genpower / GNP180MX - ***Optionally: Leroy Somer / TAL042D & Stamford / PI144H - S1L2-J1***						Frequency- Hz			50
						Power Factor- CosQ			0,8
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	35	35	36	23	38	38	40	25
	kW	28	28	29	19	30	30	32	20

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

Sound Proof Canopy Specifications

General Specifications

Special and registered Genpower Design
A1 quality DKP / HRU /Galvanized Steel
Sensitive twist on automatic Press Brake
Spray system chemical cleaning in 11 pools with nano technology before painting
Provide homogeniety on 280 meters of conveyor line
Glasswool isolation with A1 quality material with -50/+500C temperature durability
Hinges, locks, bolts, nuts made from rustproof material
Temperature tests for different environments
Cable exit connectors and conduits
Emergency stop button
Radiator water filling cap

Special and registered Genpower Color
Delicate Cut on Automatic Punch and Laser bench
Sensitive welding on robotic welding bench
Robotic painting with electrostatic powder paint
Drying and stabilizing on 200°C ovens
Special covering over glass wool
1500 hour salt test (accredited laboratory certificated)
Best sound level (in dBA)
Lifting and carrying equipments
High quality weatherstrips and shock absorbers
Internal and/or external exhaust mufflers (silencers)

Base Frame (Chasis) Specifications

General Specifications

Special and registered Genpower Design
A1 quality DKP / HRU /Galvanized Steel
Sensitive twist on automatic Press Brake
Spray system chemical cleaning in 11 pools with nano technology before painting
Provide homogeniety on 280 meters of conveyor line
Standart fuel tank is in the chasis (external tank is used for some models)
Fuel level gauge
Fuel drain cap
Lifting and carrying equipments

Special and registered Genpower Color
Delicate Cut on Automatic Punch and Laser bench
Sensitive welding on robotic welding bench
Robotic painting with electrostatic powder paint
Drying and stabilizing on 200°C ovens
Impermeability test for fuel tank with special equipments
Fuel filling cap
Fuel inlet and return records
Vibration absorbing and vacuumed feet under chasis

TECHNICAL SPECIFICATIONS

CE TÜV CERT ISO 9001:2008 OHSAS 18001:2007 ISO 14001:2004 TSE



GENPOWER GENERATOR

time to restart

CONTROL PANEL & MODULE

STANDARD SPECIFICATIONS

Control Panel Specifications

General Specifications

- Powder painted steel pannel with lockable door
- Emergency stop button
- ATS (automatic transfer panel) - optional (internal and/or external)
- Load output terminal
- Control relays
- Control module - backlit LCD screen 128x64 pixels
- Battery charger
- Circuit breaker - optional (internal and/or external)
- System protection MCB's
- Terminal Blocks

Control Module Technical Parameters

Brand	GENPOWER	Model	Trans-MIDIAMF.232.GP
Dimensions	120mm x 94mm	Protection Class	IP65 from the front
Weight	260 gr.	Environmental conditions	2000 meters above sea level
Ambient Humidity	90% max.	Ambient temperature	-20 ° C to + 70 ° C
DC Battery Supply Voltage	8 - 32 V	Battery Voltage Measurement	8 - 32 V
Network Frequency	5 - 99,9 Hz	Mains Voltage Measurement	3 - 300 V Phase-Neutral, 5 - 99.9 Hz
Generator Voltage Measurement	3 - 300 V	Generator Frequency	5 - 99.9 Hz
Current Transformer Secondary	5A	Working Period	Continuous
Charge Alternator Voltage Measurement	8 - 32 V	Charge Alternator Excitation	210mA & 12V, 105mA & 24V Nominal 2.5W
Communication Interface	RS-232	Analog Sender Measurement	0 - 1300ohm
Generator contactor Relay Output	5A & 250V	Mains contactor Relay Output	5A & 250V
Solenoid Transistor Outputs	1A with DC supply	Start Transistor Outputs	1A with DC supply
Configurable-3 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
- Keeping error records of past events.
- Communication interfaces GPRS, GSM
- Analog Modem
- Selectable protection alarm / shutdown
- Configurable analog inputs and outputs
- 3 phase Generator protections
  - High / low voltage
  - High / low frequency
  - Current / voltage asymmetry
  - Overcurrent / overload
- Working Hour
- Ground Leakage
- Engine Speed, Oil Pressure, Water Temperature, Hours of Operation, Battery Voltage Display
- Generator, Voltage, Current, Frequency, Phase Sequence, Earthing Display
- 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
- Overheat Control
- Mains, Generator ATS control.
- Ethernet, USB, RS232, RS485
- Modbus and SNMP
- Easy Parameter Setting via control module or computer
- Configurable programmable digital inputs and outputs
- 3 phase AMF function
  - High / low frequency
  - High / low voltage
  - High / low water temperature
  - High / low load
- Alarm Horn
- Heater Tube Thermostat control
- Single-Phase or Three-Phase, Phase Selection
- Network, Voltage, Frequency Display

Control Module Alerts

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

TECHNICAL SPECIFICATIONS

CE TÜV CERT ISO 9001:2008 OHSAS 18001:2007 ISO 14001:2004 TSE

GENPOWER®
GENERATOR

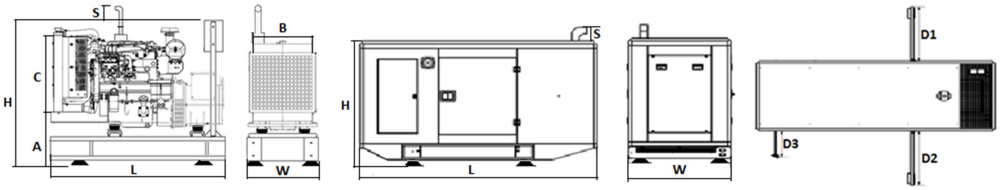
beyond the lines

GENERAL DIMENSIONS
SPECIAL PRODUCTS & CERTIFICATES

STANDARD SPECIFICATIONS

General Dimensions

SYMBOL	OPEN TYPE	CANOPY TYPE
L	1700	2260
W	700	960
H	1643	1470
S	210	150
A	540	0
B	425	0
C	570	0
D1	0	750
D2	0	750
D3	0	360
D4	0	0
D5	0	0



Open Type Generator Dimensions

Width	mm	700
Length	mm	1700
Height	mm	1643
Weight (Net)	Kg	709
Fuel Tank Capacity	L	134

Canopy Type Generator Dimensions

Width	mm	960
Length	mm	2260
Height	mm	1470
Weight (Net)	Kg	850
Fuel Tank Capacity	L	100

Special Products / Non - Standardized

Synchronised Systems
Scada Systems
Mobile Systems - On Trucks and Bus
Light Towers
Welding Machines - Generators
High Frequency Generators - 100-200-400-800-1000 Hz
Variable speed Generators
Super Silent Canopy
Ground Power Unit Generators - Mobile or Stationary
Generators - with Trailer
Medium Voltage - MV Generators
High Voltage - HV Generators
IP44-IP54 Class Generators
Marine Generators
Dual Generators
Direct Current - DC Generators
Power Plants
Cogeneration Systems
Trigeneration Systems
Generators - with Heavy Oil Engines
Generators - with Natural Gas Engines
Generators - with Biogas Engines
Generators - with Dual Fuel Engines
Generators - with LPG Engines
UPS Systems
Electrical Forflift / 0,5 - 3,5 Tons
Diesel Forklift / 1 -7,5 Tons
Automatic Voltage Stabilizers / 1-5000 kVA

Quality Documents & Certificates

ISO 9001 - 2015 Certificate
OHSAS 18001 - 2007 Certificate
TSE 8528 - 8 Certificate
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
2006/42/EC Machinery Directive
EN ISO 12100:2010 Certificate
EN 349:1993+A1:2008 Certificate
EN 61000-6-2,2019 Certificate
TS EN ISO 9227 Certificate
TS EN ISO 4628-5 Certificate
EAC - GOST Certificate/ For Diesel Generators and parts
EAC - GOST Certificate/ For Gasoline Generators and parts
EN ISO 8528-13,2016 Certificate
EN ISO 13857:2008 Certificate
Coatchem- Türkak 1500 hours Corrosion Durability Test Certificate
ISO 14001 - 2015 Certificate
TSE 8528 - 4 Certificate
TSE 8528 - 5 Certificate
Industrial Registry Certificate
Certificate of Competency for After Sales Services
Certificate of Manufacturing Competence
TSE- Service Adequacy Certificate
2014/30/EU Electromagnetic Compatibility Directive
EN 60204-1,2018 Certificate
EN ISO 14120:2015 Certificate
CE Certificate - EN ISO 17050-1,2004
TS EN ISO 4628-3 Certificate
TS EN ISO 4628-8 Certificate
TS EN 60034 - 1 Certificate
TS EN ISO 4628-4 Certificate
TS EN ISO 2409 Certificate
AB-0547-T Certificate
EN 61000-6-4,2007/A1:2011 Certificate
TS 9620 EN ISO 4628-2 Certificate

CE Certificate - 2000/14/AT - 2000/14 EC (CE 2195- Noise Emission in the Environment by Equipment for use Outdoors)

TECHNICAL SPECIFICATIONS

CE TÜV CERT ISO 9001:2008 OHSAS 18001:2007 ISO 14001:2004 TSE

GENPOWER GENERATOR

all around the world

GLOBAL BRAND

STANDARD SPECIFICATIONS

world's biggest generator factory

GENPOWER GENERATOR

Your life power

Factory Address
ASO II. Industrial Zone
2010 Street No: 18
06909 Temelli-Sincan/Ankara, Turkey

Tel/ Fax: +90(312) 641 32 22 - 641 32 32

info@genpower.com.tr
genpower@genpower.com.tr

www.genpower.com.tr

TECHNICAL SPECIFICATIONS

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