GPR SERIES

GENPOWER GENERATOR

GPR 50 - 50 Hz / GPR 59 - 60 Hz

Output Ratings (3 Phases, GF 0.8)

Voltage, Frequency	Prime	Standby
GPR 50 400 Volt, 50 Hz	42.5 kVA / 34.0 kW	50.0 kVA / 40.0 kW
GPR 59 480 Volt, 60 Hz	53.0 kVA / 42.4 kW	59.0 kVA / 47.2 kW

Standard Reference Conditions:
The output power ratings that are given above are achieved at standard reference conditions.
-Air Inlet Temperature: 25°C
-Altitude: 100 meters
-Relative Humidity: 60%
Genpower Generator Sets have the compliance against the reference standards that are given below:
TS ISO 8528, ISO 8528, BS5000, ISO 3046, IEC 60034, NEMA MG-1.22.
The options for voltage rates at 50 Hz and 60 Hz are given below. The desired alternative output voltage rate could be achieved by using the matching connection types for the desired voltage with the related alternator output connection terminals
For 50 Hz:
200/115V - 220/110V - 220/127V - 230/115V - 380/220 V 400/230V - 415/240V
For 60 Hz.
208/120V - 220/127V - 240/139V - 380/220V - 440/254V-480/277V

Prime Power
It is the continuous operation mode of the generator under variable load where there is no main power. The average of the variable load should not exceed %80 of the prime power rating of the generator. The generator should be not operated more than maximum one hour under %10 overload of the prime power rating in a 12-hours of operation.

Standby:
It is the variable work load mode of the generator as a back-up power supply to the main power. The stand-by power is the maximum allowable power. The operation under overload is not permitted. The maximum annual operation period is limited with 500 working hours

Ratings and Performance Data

			GPR 50	GPR 59
Engine Brand & Model:			Perkins / 1103A-33TG1	
Alternator Brand & Model:			Stamford / UCI224D Genpower / GNP 225S2 W12/4	
Control Panel Make & Model:			ComAp / AMF25	
Base Frame			Heavy Duty Fabricated Steel	
Engine Speed		rpm	1500	1800
Frequency		Hz	50	60
Fuel Tank Capacity		Litres	126	
Fuel Consumption	50%	Lt/h	5,7	7,1
	75%		8,2	9,9
	100%		10,7	12,9

General Features

- Tropical type radiator, fan, belt and enclosures.
- Vibration dampers.
- Open type gensets industrial type exhaust silencer.
- AMF control panel.
- Built-in type fuel tank chassis.
- Mechanical fuel level indicator
- Battery pack and cable set.
- The original engine oil, fuel, dry type air filter.

Options

Contact your supplier for non-standard requests.

- The generator output breaker (MCCB)
- External type transfer switch (ATS)
- Dual operating systems
- Low water level switch
- Fuel tank heating and insulation systems
- Single-and double-axle trailer
- Synchronous systems
- Private quiet cabins (cabins SSC)
- Private hospital type and juicy exhaust systems
- Mobile vehicle applications
- Arep or PMG alternator application
- Alarm and Long range tracking system

Canopy

- Easy lifting and moving
- Metal parts are coated with electrostatic polyester coated, powder painted
- 25-30 dbA series, Heat-insulated exhaust system.
- Acoustic insulation with rot*proof, moisture-repellent and non-flammable material (per DIN 4102 A2)
- Double swinging doors for ease of service

Engine Technical Data

No. of Cylinders		3
Alignment		In Line
Cycle		4 Stroke
Induction		Turbocharged
Bore / Stroke		105 x 127
Compression Ratio		17.25:1
Displacement	Lt	3,3
Cooling Method		Water
Governing Type		Mechanical
Governing Class		ISO 8528-G2
Moment of Inertia	kg m² (lb/in²)	1,14 (3896)
Electrical System	Voltage / Ground	12 / Negative
Charger Amps	Amps.	65

Performance	GPR 50	GPR 59
Engine Speed rpm	1500	1800
Gross Engine Power kW (Hp)		
Prime	42,2 (57,0)	50,5 (68,0)
Standby	46,5 (62,0)	55,6 (75,0)
BMEP kPA (Psi)		
Prime	1023,0 (148,4)	1020,0 (148,0)
Standby	1127,0 (163,5)	1124,0 (163,0)

Air Systems	GPR 50	GPR 59
Air Filter Type	Replaceable Element	
Combustion Air Flow	m³/min (cfm)	
Prime	2,9 (102,0)	3,7 (131,0)
Standby	3,1 (109,0)	3,9 (138,0)
Max. Combustion Air Intake Restriction: kPa (in H2O)		
	8,0 (32,1)	8,0 (32,1)

Lubrication System

Oil Filter Type	Replaceable Element	
Total Oil Capacity:	Lt.	8,3
Oil Pan	Lt.	7,8
Oil Type	API CG4 / CH4 15W-40	
Oil Cooler	Ok.	
Oil Cooling Method	Water	

Alternator	GPR 50	GPR 59
Brand and Model	Stamford / UCI224D	
Cont. Power	400 V - 42,5 kVA	480 V - 55,0 kVA
Efficiency %	87,1	88,1
AVR Model	AS460	

Alternator	General Information
No. of Bearings	Single bearing
Insulation Class:	H
Winding Pitch Code:	2/3
Wires	12
Ingress Protection Rating	IP 23
Excitation System	Self - Excited Shunt type
Voltage regulation	±%1

Standartlar:

Fuel System

Fuel Filter Type	Replaceable Element
Recommended Fuel	Class A2 Diesel

Fuel Consumption Lt/h

Prime	110%	100%	75%	50%
GPR 50	11,7	10,7	8,2	5,7
GPR 59	13,5	12,9	9,9	7,1

Standby	110%	100%	75%	50%
GPR 50	_	11,9	9,2	6,1
GPR 59	_	14,5	10,9	7,6

Note: Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2

Cooling System		GPR 50	GPR 59
Cooling System Capacity	Lt.	10,2	
Water Pump Type		Centrifugal	
Heat Rejected to Water & Lube Oil			
	kW (BTU/min)		
	Prime	26,1 (1484)	31,0 (1763)
	Standby	30,0 (1706)	34,0 (1934)
Heat Radiation to Room			
	kW (BTU/min)		
	Prime	11,5 (654)	13,4 (762)
	Standby	13,4 (762)	15,3 (870)
Radiator Fan Load	kW (Hp)	0,5 (0,7)	0,9 (1,2)
Radiator Cooling Airflow m³/dak. (Cfm)		86,4 (3051)	105,6 (3729)
External Restriction to Cooling Airflow Pa (inH2O)			125 (0,5)

Note: Designed to operate in ambient conditions up to 50°C .

Exhaust System	GPR 50	GPR 59
Silencer Type	Industrial	
Pressure Drop Across Silencer system (kPa)	1,8	2,0
Silencer Noise Reduction Level db/A	20	18
Maximum Allowable Back Pressure (kPa)	10,0	15,0
Exhaust Gas Flow m³/min (Cfm)		
Prime	7 (247)	8,8 (311)
Standby	7,7 (272)	9,5 ,(335)
Exhaust Gas Temperature ℃		
Prime	500	520
Standby	540	555

Alternator	GPR 50	GPR 59
Brand and Model	Genpower / GNP 225S2 W12/4	
Cont. Power	400 V - 52 kVA	480 V - 65 kVA
Efficiency %	87	88
AVR Model	SX460	

Alternator Performance Data		GPR 50	GPR 59
Overspeed		2250	
Short Circuit		-	
Total Harmonic content		No Load <%1,5	
Wave Form NEMA = TIF		50%	
R.F.I Radio Interference		VDE 875	
Cooling Air m³/sec.		0,216	0,281
Radiant Heat kW (BTU m		5,4 (307)	6,3(358)
Reaktans	Xd	2,03	2,5
	X'd	0,16	0,18
	X"d	0,10	0,12

* Based on 30% voltage dip at 0 power factor.

Control Panel

Automatic Type Control Panel, Standard Equipment


- ComAp AMF 25 control panel
- Battery charger 12V/5A
- Isıtıcı tüp sürmek için 9 A kontaktör.
- 9A contactor to drive the heater tube
- Control relay
- System protection insurance
- Emergency stop button
- 2 pieces suitable for the power generator contactor (ATS), optional
- The load output terminal (canopy types)

Manual Type Control Panel, Standard Equipment


- ComAp AMF 25 control panel
- Control relay
- System protection insurance
- Emergency stop button
- Suitable for the power generator output breaker (TMS), optional
- The load output terminal (canopy types)

ComAp AMF 25 Control Panel

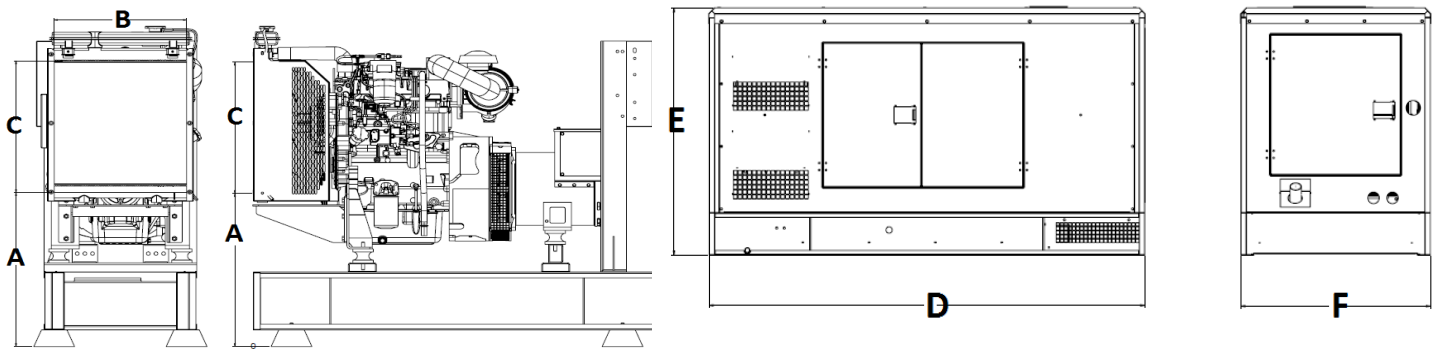
- Configurable analog inputs
- Selectable protections alarm / shutdown
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator and Mains control with feedback and return timer
- Modem communication support
- Sealed to IP65

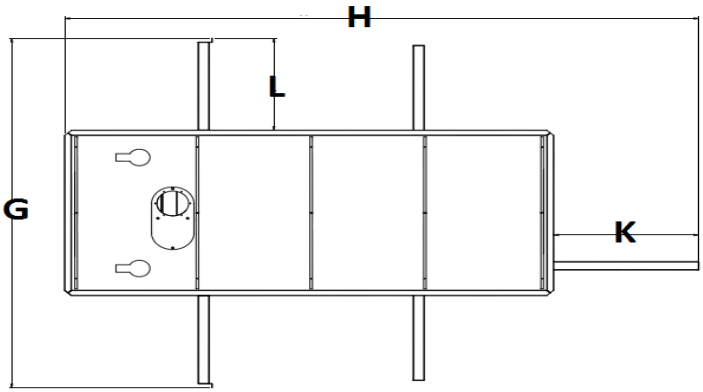
- Support of engines equipped with ECU (J1939 interface)
- Comprehensive diagnostic messages; SPN/FMIcodes; KWP2000support
- Automatic or manual start/stop of the genset
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display 128x64 pixels
- 6 LED indicators
- Parameters adjustable via keyboard or PC
- Mains measurements 50/60 Hz, V (3 phase)
- Generator measurements 50/60 Hz,V,A (3 phase), kW,kVAr,kWh
- 3 phase Generator protections
  - Over-/under voltage
  - Over-/under frequency
  - Current/voltage asymmetry
  - Overcurrent/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltage asymmetry

The control panel via the LCD display the following measures are followed.

- Engine Monitoring:
  - -Oil pressure gauge
  - -Cooling water temperature indicator (Temperature gauge)
  - -Fuel level indicator (Electronic float if applicable)
  - -Battery voltage indicator
  - -J1939 engine parameters (EC, electronic motors)
- Statistics
  - -Working Hours
  - -The number-starter
  - -Emergency stop number
  - -Maintenance time
  - -Event records retention
- Alternator monitoring:
  - -3 phase Voltmeter (3 phase + neutral)
  - -3 Phase ammeter
  - -Frequency
  - -kW meter, kVAr meter
  - -kWh and kVArh energy meter
- Network monitoring:
  - -3 phase Voltmeter (3 phase + neutral)
  - -Frequency
  - -kW meter kVAr meter

Dimensions and Weights





A: 670 mm
B: 520 mm
C: 570 mm
D: 2300 mm
E: 1270 mm
F: 1000 mm
G: 2130 mm
H: 2990 mm
K: 690 mm
L: 565 mm

	Open Type	Canopy Type
WidthxLengthxHeight. (mm	800x1920x1530	1000x2300x1470
Dry weight (kg)	915	1200

Width x Length:	1760 x 2600 mm
Concrete: © Class B. A. 300 doses of concrete	
Iron: 1 row Q8-12 mm thin ribbed mesh, grid iron.	