

# GVP SERIES

**DIESEL**  
Volvo Penta

# GENPOWER

GENERATOR



## GVP 175 - 50 Hz / GVP 177 - 60 Hz

### Output Ratings

Voltage, Frequency	Prime	Standby
GVP 172 - 400 Volt, 50 Hz	157 kVA / 125,6 kW	175 kVA / 140 kW
GVP 177 - 480 Volt, 60 Hz	161 kVA / 128,8 kW	177 kVA / 141,6 kW

#### Standard Reference Conditions:

The output power ratings that are given above are achieved at standard reference conditions.

-Air Inlet Temperature: 40°C

-Altitude: 1000 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

### 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

### Ratings and Performance Data

	GVP 175	GVP 177		
Engine Brand & Model:	Volvo Penta / TAD 731 GE			
Alternator Brand & Model:	Stamford / UCI274F			
Control Panel Make & Model:	Genpower / GNP 270 M1 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	264		
Fuel Consumption	50%	18,1	19,9	
	75%	Lt/h	26,3	28,5
	100%		34,9	37,5

### 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

## Engine Technical Data

No. of Cylinders	6	
Alignment	In Line	
Cycle	4 Stroke	
Induction	Turbocharged AAC*	
Bore / Stroke	108 / 130	
Compression Ratio	18.0:1	
Displacement	Lt	7,15
Cooling Method	Water	
Governing Type	Mechanical	
Governing Class	ISO 8528-G2	
Moment of Inertia	kg m <sup>2</sup> ( lb/in <sup>2</sup> )	3,09 (73,3)
Electrical System	Voltage / Ground	12 V / Negative
Charger Amps	Amps.	55

\* AAC : Air to air charge cooled

## Performance

	GVP 175	GVP 177
Engine Speed rpm	1500	1800
Net Engine Power kW (Hp)		
Prime	133 (180)	138 (188)
Standby	148 (201)	154 (210)

BMEP kPa ( Psi)		
Prime	1500 (224)	1400 (199)
Standby	1700 (248)	1500 (221)

## Air Systems

	GVP 175	GVP 177
Air Filter Type	Single stage paper cartridge	
Combustion Air Flow	m <sup>3</sup> /min (cfm)	
	Prime	13,33 (471)
	Standby	9,6 (339)

Max. Combustion Air Intake Restriction: kPa (in H2O)		
	6,0 (1,5)	6,0 (1,5)

## Lubrication System

Oil Filter Type	Spin-On, Full Flow	
Total Oil Capacity:	Lt.	20,0
Oil Pan	Lt.	17,0
Oil Type	API CH4 15W-40	
Oil Cooler	Ok.	
Oil Cooling Method	Water	

## Alternator

	GVP 175	GVP 177
Brand & Model	Stamford / UCI274F1	
Cont. Power	400 V - 160 kVA	480 V - 206 kVA
Efficiency %	92,3	92,7
AVR Model	AS440	

## 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
Voltage Regulation	±%1

Standartlar:

BS EN 60034, BS5000, VDE 0530, NEMA MG1-32, IEC34, CSA C22.2-

## Fuel System

Fuel Filter Type	Replaceable Element	
Recommended Fuel	Class A2 Diesel	

Fuel Consumption	Lt/h			
Prime	110%	100%	75%	50%
GVP 175	38,7	34,9	26,3	18,1
GVP 177	41,6	37,5	28,5	19,9
Standby		100%	75%	50%
GVP 175		38,7	29,0	19,7
GVP 177		41,6	31,3	21,4

Note: Based on diesel fuel with a specific gravity of 0.85 and conforming to

BS2869, Class A2

## Cooling System

	GVP 175	GVP 177
Cooling System Capacity	Lt.	23,8
Water Pump Type	Centrifugal	

## Heat Rejected to Water & Lube Oil

	kW ( BTU/min)	
Prime	76 (4305)	81 (4623)
Standby	83 (4743)	90 (5090)

## Heat Radiation to Room

	kW ( BTU/min)	
Prime	23,5 (1336)	29,0 (1649)
Standby	34,9 (1985)	44,8 (2548)

Radiator Fan Load	kW ( H <sub>f</sub> )	5,2 (7)	8,7 (12)
Radiator Cooling Airflow )	m <sup>3</sup> /sn	2,1	2,8
Air On Temp.	°C	49	54

External Restriction to Cooling Airfl	kPa	150
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Note: Designed to operate in ambient conditions up to 50°C .

## Exhaust System

	GVP 175	GVP 177	
Silencer Type	Industrial		
Pressure Drop Across Silencer syste	kPa	2,1	3,5
Silencer Noise Reduction Level	db/A	20	18
Maximum Allowable Back Pressure	kPa	5,0	7,0
Gas Flow m <sup>3</sup> /min (Cfm)	Prime	27,5 (971)	34,2 (1208)
	Standb	30,2 (1067)	31,3 (1105)
Gas Temperature °C	Prime	520	471
	Standb	540	480

## Alternator

	GVP 175	GVP 177
Brand & Model	Genpower / GNP 270M1 W12/4	
Cont. Power	400 V - 157 kVA	480 V - 190 kVA
Efficiency %	92,1	92,5
AVR Model	SX460	

## Performance Data

Overspeed	rpm	2250	
Short Circuit	-		
Total Harmonic content	No Load <%1,5		
Wave Form NEMA = TIF	50%		
R.F.I Radio Interference	VDE 875		
Cooling Air m <sup>3</sup> /sec.	0,514		
Radiant Heat kW (BTU min)	10,1 (574)	11,5 ( 653)	
Reaktans	Xd	2,02	2,16
	X'd	0,17	0,18
	X''d	0,12	0,12
Motor Starting Capability kVA*	350	520	

\* 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 Kontrol Paneli



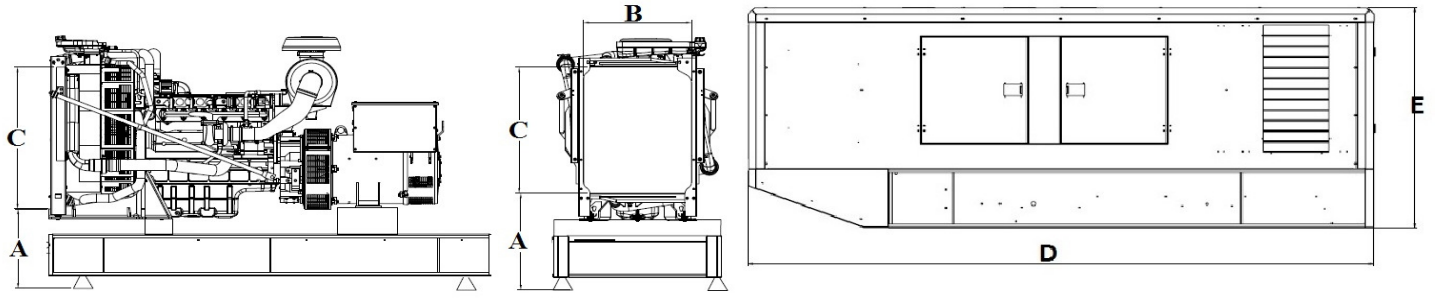
- ECU J1939 ile donatılmış motor destek ara birimi.
- Kapsamlı tanı mesajları , SPN / FMI kodları.
- Otomatik veya manuel çalıştırma.
- Push butonlar ve ledli basit kontrol sistemi
- Arkadan aydınlatmalı 128x64 piksel grafik LCD ekran.
- Kontrol modülü üzerinden veya bilgisayarla kolay par. ayarı.
- Şebeke ölçümleri 50/60 Hz, V ( 3 faz)
- Jeneratör ölçümleri 50/60 Hz, V , A ( 3 faz ) , kW , kVAR , kWh
- Seçilebilir koruma alarmı / kapatma
- Konfigüre analog giriş ve çıkışlar
- Akü voltajı , motor devri ( pikap ) ölçümü

- Konfigüre programlanabilir dijital giriş ve çıkışlar
- Geçmiş olaylara ilişkin hata kayıtları tutma.
- Programlanabilir zaman ayarlı motor ısıtma ve soğutma
- Şebeke, jeneratör ATS kontrolü.
- Konfigüre edilebilir dijital çıkışlar.
- İletişim arabirimleri GPRS , GSM / Analog modem , Ethernet, USB , RS232 , RS485
- Modbus ve SNMP
- 3 faz Jeneratör korumaları
  - Yüksek / düşük gerilimi
  - Yüksek / düşük frekans
  - Akım / gerilim asimetrisi
  - Aşırı akım / aşırı yük
- 3 faz AMF fonksiyonu
  - Yüksek / düşük frekans
  - Yüksek / düşük gerilimi
  - Gerilim asimetri
- Konfigüre edilebilir analog giriş
- Ayarlanabilir programlanabilir ikili girişler ve çıkışlar.
- Gerçek zamanlı saat ve tarih ayarı
- IP 65 koruma sınıfı

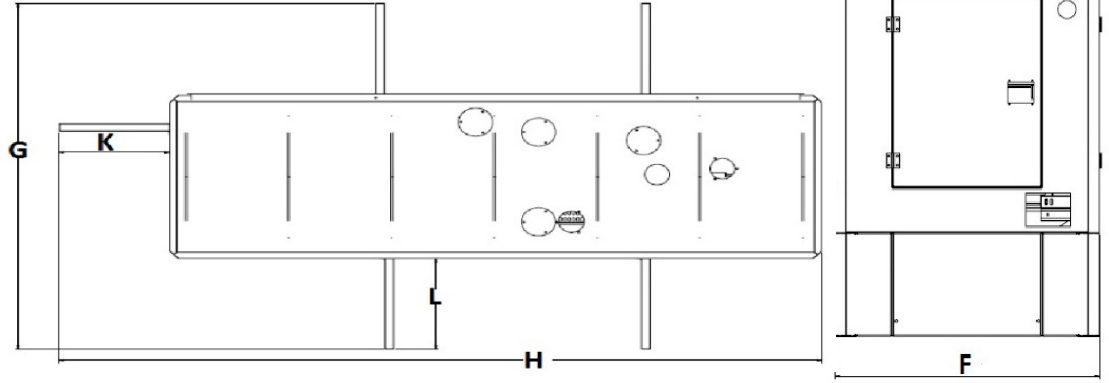
### Kontrol paneli LCD ekran üzerinden aşağıdaki ölçümler izlenmektedir.

- Motor İzlemesi:
  - Yağ basınç göstergesi
  - Soğutma suyu sıcaklığı göstergesi (Hararet göstergesi)
  - Yakıt seviye göstergesi (Elektronik şamandıra varsa)
  - Akü Voltajı göstergesi
  - J1939 motor parametreleri ( ECU, elektronik motorlarda)
- İstatistik
  - Çalışma saati
  - Marş sayısı
  - Acil durdurma sayısı
  - Bakım saati
  - Olay kayıtları tutma
- Alternatör izlemesi:
  - 3 faz Voltmetre (3 faz + nötr)
  - 3 faz Ampermetre
  - Frekansmetre
  - kW metre, kVAR metre
  - kWh ve kVARh enerji sayacı
- Şebeke izlemesi:
  - 3 faz Voltmetre (3 faz + nötr)
  - kW metre, kVAR metre
  - Frekansmetre

## Dimensions and Weights



A=525mm  
 B=652mm  
 C=700mm  
 D=3800  
 E=1570  
 F=1150  
 G=2456  
 H=4450  
 K=644  
 L=644



WidthxLengthxHeight. (mm 1200x2800x1750

1150x3800x2250

Width x Length: 2200 x 3800 mm

Dry weight (kg)

1855

2390

Concrete: © Class B. A. 300 doses of concrete

Iron: 1 row Q8-12 mm thin ribbed mesh, grid iron.



ISO 9001:2008  
 OHSAS 18001:2007  
 ISO 14001:2004



[www.genpower.com.tr](http://www.genpower.com.tr)