

VGP series includes **164/184/224/274/314/354/404/454** total **8 frames**, from 5kW(6.25kVA) to 2240kw(2800kVA). The technical performance and mounting dimension of VGP series alternators are international IEC 34-1 and national GB755 standards compliant, the quality of product can reach current international standard.



DIY Power produces 8KVA-3250KVA diesel generator sets and low-voltage switchgear assemblies and full range of services including the unit installation, full-automatic distribution, generator room environmental engineering, unit maintenance, spare parts supply, etc.

The units produced by DIY Power all use international brand engines and generators with excellent quality. Through ten years of product development and technology accumulation, DIY Power's products gradually become more mature. In order to meet the different needs of customers worldwide, we will renovate continuously technologies and improve products.



INTRODUCTION:

VGP Series three-phase (or single-phase) brushless synchronous, by introducing and developing on foreign advanced technology of well-known generators, are our newly developed products, all data updated synchronously with international well-known generators. VGP series generators can be manufactured in both double and single bearing versions with a range of easy coupling to internal and international engines. Its body is constructed by steel shell, stator core is made of whole disc and rotor core is made as whole salient pole type with full-damping, with brushless self-exciting method and AVR automatic control. It has following features: small-size, light-weight, good appearance, perfect performance, and easy access for installation and maintenance.

VGP series alternators meet the quality standard of international well-known generators, we guarantee the quality by strictly-controlled production design, manufacturing technology, tooling, selection of raw materials, production, testing equipment and quality control. Selection of raw materials includes cold rolled silicon sheet and magnet wire, which are purchased from the best of internal supplier, producing and test equipment such as coil winder can effectively control the magnet wire's pulling force while winding, tooling such as stator laminated tooling is very advanced and it can ensure the stator core's quality, manufacturing technology such as VPI and wet-winding technology can ensure that the windings have the high level of protection. All of quality control including field control is carried out according to ISO9001 standard.

FEATURES:

1. Excellent compatibility with drive systems: standard mounting dimensions can be coupled to any diesel engines from would wide, many S.A.E flanges and S.A.E drive can be easily interchangeable.
2. Good environmentally-friendly protection system: the standard enclosure protection is IP23, insulation class is H, and VGP alternators made with advanced manufacturing technologies are suitable for harsh environments.
3. Reliable and powerful automatic voltage regulators can provide consistent excitation on all occasions, so the alternators can run reliably, and have high performance of magnet on exciter stator which can rapidly build voltage while starting; all AVR's have numerous features for voltage adjustment, stability adjustment, low frequency protection and exterior voltage adjustment.

Standard AVR: SX460;

Option AVR: AX440/SX440/KR440... (can be suitable for operation in parallel), MX341 is suited for auxiliary windings, thus providing the alternator with the best design for nonlinear load, performance on start and short-circuit.

4. VGP alternators are provide with a 2/3 winding pitch as standard, therefore are perfectly suitable for installations with distorting loads, and easy to be operated with other alternators in parallel; several types of windings are available in 50Hz and 60Hz versions to optimize performance according to voltage required on site and the demands of application (max. voltages available range up to 690V).
5. VGP alternators are provide with three phase as standard, it's easy to alter the voltage by reconnection for 12-leads on terminal plate, also the units can be run as single phase by changing the output connecting (except for VGP354/404/454 series), but single-phase's power is about 58% of the three-phase's; for single phase generator, it can be designed for special winding.
6. The damp winding on rotor and the surge suppressor on rectifier can provide the alternator with stability and reliability.
7. For balanced rotor with two sealed and quality ball bearing, VGP alternator have the features of little vibration and low noise.
8. Easy access for installation and maintenance, including: coupling to engines, connecting for lead wire, adjustment for AVR, connecting for rectifier, integrating with current transformers

OPTION FEATURES:

1. Interchangeable S.A.E flanges and S.A.E drive discs
2. Convenient filters on air inlets and outlets

3. Protection for windings in harsh environments
4. Different AVR type
5. Different windings
6. Exterior potentiometer
7. Space heaters
8. Stator thermal protection
9. PMG or auxiliary windings
10. Droop current transformers (C.T.)

ENVIRONMENT CONDITIONS:

In the following environments, the alternator could run continuously:

1. Altitude: do not exceed 1000m.
2. Cooling air temperature: 250~313K (-15°C~40°C).
3. Relative air humidity: do not exceed 90%.

Note: If environment conditions exceed the scope mentioned-above, please feel free to contact us.

MAIN PERFORMANCE DATA:

1. The standard protection for VGP series generators is IP23;
2. Winding are insulated to class H;
3. Full-damping whole salient construction guarantees generator to be operated stably in any conditions, and enable it to run under 150% rated speed(2250 r/min) for 2 minutes;
4. VGP alternator are provided with a 2/3 winding pitch as standard, can effectively eliminated the third harmonic (3rd, 9th, 15th ...etc.), and are therefore perfectly suited to installations with distorting loads, and easy to operate with the other alternator in parallel;
5. Adjusting rate of stable voltage $\leq 1\%$, adjusting rate of instant voltage: $-15\% \sim +20\%$ (60&In, $\text{COS } \Phi \leq 0.4$ lagging), instant voltage recovery time $\leq 1.5\text{s}$;
6. Wave aberration rate of voltage THD $\leq 3\%$, telephone harmony wave factor THF $\leq 2\%$, telephone effective factor of TIF ≤ 50 .

DIYPOWER VGP ALTERNATOR

VGP~404 Series

710-1500 KVA

Brushless Synchronous Alternator

THE DEFINITION PRODUCT MODEL



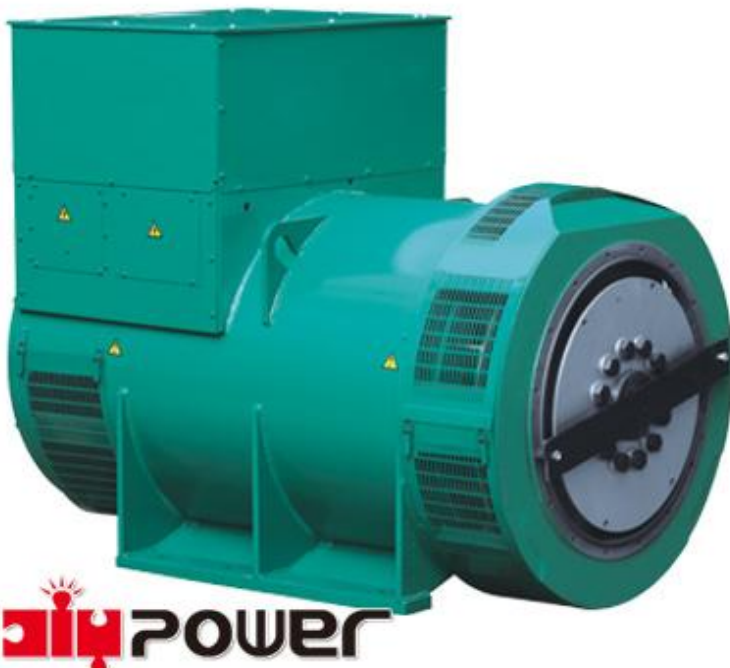
VGP Series

Frame No.

Poles:

Frame Length Code:

Core Length Code:



Rated Date		50Hz - 1500 RPM							
Rating		kVA/ kW cos Φ=0.8							
Duty/Ambient T °		Continuous/ 40°C				Stand by/27°C			
Ins. Class/ T ° Rise		H / 125 ° K				H/163° K			
Phase		3 Phase				3 Phase			
Voltage	Y	380V	400V	415V	440V	380V	400V	415V	440V
	YY*	190V	200V	208V	220V	190V	200V	208V	220V
	Δ*	220V	230V	240V	254V	220V	230V	240V	254V
VGP404S1	KVA	710	750	750	680		825		
	kW	568	600	600	544		660		
VGP404S2	KVA	760	800	800	725		880		
	kW	608	640	640	580		704		
VGP404S3	KVA	865	910	910	825		1000		
	kW	692	728	728	660		800		
VGP4004S4	KVA	950	1000	1000	910		1100		
	kW	760	800	800	728		880		
VGP404S5	KVA	1075	1130	1130	1025		1265		
	kW	860	904	904	820		1012		
VGP404M6	KVA	1190	1250	1250	1135		1375		
	kW	952	1000	1000	908		1100		
VGP404M7	KVA	1310	1375	1375	1275		1512.5		
	kW	1048	1100	1100	1020		1210		
VGP404M8	KVA	1425	1500	1500	1375		1650		
	kW	1140	1200	1200	1100		1320		

Rated Date		60Hz - 1800 RPM							
Rating		kVA/ kW cos Φ=0.8							
Duty/Ambient T °		Continuous/ 40°C				Stand by/27°C			
Ins. Class/ T ° Rise		H / 125 ° K				H/163° K			
Phase		3 Phase				3 Phase			
Voltage	Y	416V	440V	460V	480V	416V	440V	460V	480V
	YY*	208V	220V	230V	240V	208V	220V	230V	240V
	Δ*	240V	524V	266V	277V	240V	524V	266V	277V
VGP404S1	KVA	810	855	895	937.5			1000	
	kW	648	684	716	750			800	
VGP404S2	KVA	865	916.3	957.5	1000			1075	
	kW	692	733	766	800			860	
VGP404S3	KVA	986.25	1053.75	1090	1137.5			1250	
	kW	789	843	872	910			1000	
VGP4004S4	KVA	1082.5	1145	1197.5	1250			1350	
	kW	866	916	958	1000			1080	
VGP404S5	KVA	1203.75	1273.8	1332.5	1390			1500	
	kW	963	1019	1066	1112			1200	
VGP404M6	KVA	1310	1386.3	1448.8	1512.5			1650	
	kW	1048	1109	1159	1210			1320	
VGP404M7	KVA	1387.5	1450	1500	1625			1762.5	
	kW	1110	1160	1200	1300			1410	
VGP404M8	KVA	1487.5	1625	1725	1875			1875	
	kW	1190	1300	1380	1500			1500	