

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 .

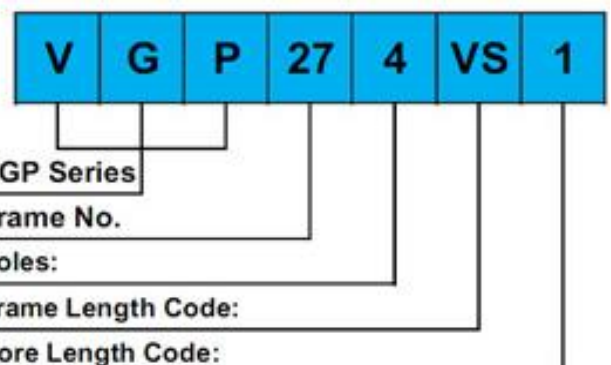
DIYPOWER VGP ALTERNATOR

VGP~314 Series

225-515 KVA

Brushless Synchronous Alternator

THE DEFINITION PRODUCT MODEL



Rated Date		50Hz - 1500 RPM							
Rating		kVA/ kW cos $\Phi=0.8$							
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
	Δ	220V	230V	240V		220V	230V	240V	
	YY				220V				220V
VGP314S1	KVA	225	225	225	225	265	265	265	265
	kW	180	180	180	180	212	212	212	212
VGP314S2	KVA	250	250	250	250	275	275	275	275
	kW	200	200	200	200	275	275	275	275
VGP314M3	KVA	275	275	275	260	302.5	302.5	302.5	287.5
	kW	220	220	220	208	242	242	242	230
VGP314M4	KVA	300	300	300	282.5	331.3	331.3	331.3	312.5
	kW	240	240	240	220	265	265	265	250
VGP314M5	KVA	325	325	325	295	347.5	347.5	347.5	318.5
	kW	260	260	260	236	278	278	278	255
VGP314L6	KVA	350	350	350	306.3	372.5	372.5	372.5	345
	kW	280	280	280	245	298	298	298	276
VGP314L7	KVA	375	375	375	340	392.5	392.5	392.5	362.5
	kW	300	300	300	272	314	314	314	290
VGP314L8	KVA	400	400	400	365	418.8	418.8	418.8	387.5
	kW	320	320	320	292	335	335	335	310

Rated Date		60Hz - 1800 RPM							
Rating		kVA/ kW cos $\Phi=0.8$							
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	416V	440V	480V	380V	416V	440V	480V
	Δ	220V	240V			220V	240V	220V	
	YY		208v	220V	240V				240V
VGP314S1	KVA	230	245	260	275	270	290	305	330
	kW	184	196	208	220	216	232	244	264
VGP314S2	KVA	255	270	285	300	295	315	327.5	355
	kW	204	216	228	240	236	252	262	284
VGP314M3	KVA	281.3	297.5	312.5	330	305	325	337.5	365
	kW	225	238	250	264	244	260	270	292
VGP314M4	KVA	310	325	340	360	327.5	347.5	360	387.5
	kW	248	260	272	288	262	278	288	310
VGP314M5	KVA	340	357.5	372.5	390	357.5	377.5	390	420
	kW	272	286	298	312	286	302	312	336
VGP314L6	KVA	362.5	380	400	420	382.5	405	420	452.5
	kW	290	304	320	336	306	324	336	362.3
VGP314L7	KVA	390	412.5	432.5	450	415	437.5	452.5	485
	kW	312	330	346	360	332	350	362	388
VGP314L8	KVA	417.5	440	460	480	445	467.5	485	515
	kW	334	352	368	384	356	374	388	412