NZPGS AIRMAN

New Zealand distributor for Airman Generators

Easier Operation and more advanced generator

AIRMAN SDG series

Since 1970, Airman has developed and sold the brash-less generators, our advanced generators, which is developed by our long experience and original technologies, succeeded to spread through our new machines.

Airman will strive to develop our products which has the concept “Environmentally and ECO” friendly day by day.

	Prime(kVA)	50Hz	10.5	20	37	50	80	100	125	200	270	350	450	555	700
		60Hz	13	25	45	60	100	125	150	220	300	400	500	610	800
Certified Japanese diesel engine emission control Stage 3	Leak guard	SDG-L													
	Large tank leak guard	SDG-LX													
	3 and Single phase capable dual output	SDG-LA													
	Large tank leak guard/3 and Single phase capable dual output/Able generator	SDG-LAX													
	Standard	SDG-3B1													
	Ultra Super Silent	SDG-AS-3B1/7B1													
	Ultra Super Silent/Leak guard	SDG-ZL													
	Ultra Super Silent/Large tank leak guard	SDG-ZLX													
	Ultra Super Silent/3 and Single phase capable dual output	SDG-ZLA													
	Ultra Super Silent/Large tank leak guard/3 and Single phase capable dual output/Able generator	SDG-ZLAX													
	Built-in Inverter	V-Pump													
JPN Stage 2	Standard	SDG-3A5/3A6/3A7/3A8													
	Oil fence	SDG-7A6													
	Ultra Super Silent/Oil fence	SDG-AS-7A6													
	Ultra Super Silent	SDG-AS-3A6													

Certified Japanese diesel engine emission standards stage 3

Leak guard
SDG-L series
〈20～400 kVA〉

Large fuel tank mounted
Leak guard
SDG-LX series
〈10.5～150 kVA〉

Three/Single Phase capable
multi output
SDG-LA series
〈20～100 kVA〉

Large fuel tank mounted
Leak guard
Three/Single Phase capable multi output
SDG-LAX series
〈10.5～100 kVA〉

▸▸ P.07

Certified Japanese diesel engine emission standards stage 3

Standard
SDG-3B1 series
〈10.5～150 kVA〉

Ultra Super Silent
SDG-AS series
〈20～60 kVA〉

Ultra Super Silent
Leak guard
SDG-ZL series
〈20～45 kVA〉

Ultra Super Silent
Large fuel tank mounted Leak guard
SDG-ZLX series
〈20～45 kVA〉

Ultra Super Silent
Leak guard
3/Single Phase capable multi output
SDG-ZLA series
〈20～45 kVA〉

Ultra Super Silent
Large fuel tank mounted Leak guard
3/Single Phase capable multi output
SDG-ZLAX series
〈20～45 kVA〉

▸▸ P.15

Certified Japanese diesel engine emission standards stage 3

Built-in Inverter
Large fuel tank mounted Leak guard
V-PUMP series 〈20～60 kVA〉

▸▸ P.23

JPN Stage 2

Standard
SDG-3A6 /3A5/3A7/3A8
〈20～800 kVA〉

Ultra Super Silent/Oil fence
SDG-AS-7A6
〈50～150kVA〉

Oil fence
SDG-7A6
〈50/60 kVA〉

Ultra Super Silent
SDG-AS
〈50～150 kVA〉

▸▸ P.25

High Performance

Outstanding generation performance

Due to the big drop of Transient Reactance and the reinforcement of the damper winding, we are succeeded to improve our brushless alternator much tolerance dose and few distortion of the wave form.
It is suitable for use of invertor, thyristor, PC, lightning, precision instrument, measurement hardware.

Preset Voltage Regulation
within 0.5%

Portable AC (Alternating current) generator driven by diesel engine

These products must be in accordance with JEM1398 portable generator driven by diesel engine. * JEM1398 : The Japan electrical manufacturers' association regulation.

Cation Electrodeposition Coating

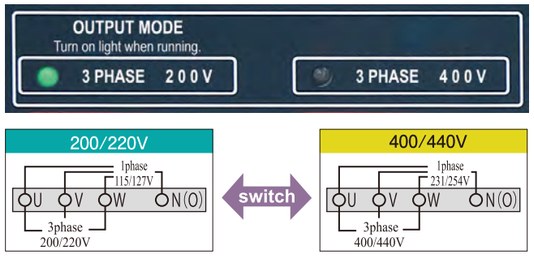
(up to SDG400)

We have adopted the electrodeposition coating, baking finish coating for weather proof, and anti-corrosion and salt pollution.

Dual Voltage: Standard Specification

(From SDG45 to SDG800)

We can convert 200/220V ⇔ 400/440V of 3 phase voltage each other by switching short-circuit plates in the control box.
When the engine is started, the indicator light in the operation box is turn on , and we can recognize the voltage level immediately.



Portable generator facility

These products are certified in accordance with technological standards by N E G A (Nippon Engine Generator Association).

Auto Parallel Operation

※ Excluded SDG150S-3A6, SDG220S-3A7, SDG300S-3A6.

By attached controller in the generator, it is synchronized and shared "stop and go running" automatically.
And according to the load, Up to 8 units of machines will be operated each other.

Manual Parallel Operation

(From SDG150S to SDG800S)

With our well-controlled AVR (Automatic Voltage Regulator) and CCR (Cross Current Regulator), Machine is controlled by the Manual Parallel Operation.(When they are running, we must always monitor them.)

Big capacity single-phase output

It is attached an standard external connection terminal which can take single phase output in case of SDG25 ×1set, SDG45-SDG150 × 2sets.

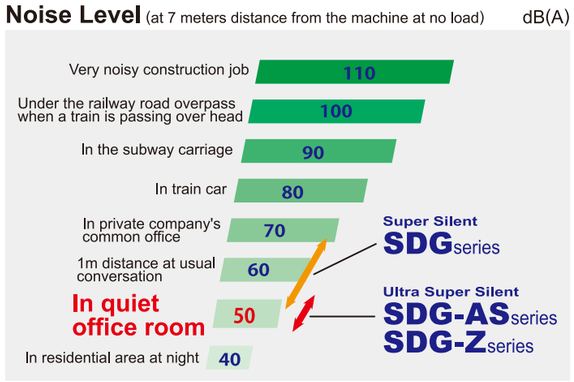
Environmental resistance

Advanced silence

We are succeeded to be silent by adopting the silent engine, the high-performance muffler, and the special exhaust-duct structure.
Furthermore we are succeeded to achieve less noise level by adopting the perfect sealed panel and super-silent "intake duct".
And we have achieved less vibration by applying the new support method of the muffler.

Super Silent
SDG13～220
Ultra Super Silent
SDG25AS～150AS
SDG25Z / 45Z

Super Silent
SDG300～800



Compliant with emissions regulations

SDG13-400 is applicable for the regulation of Japanese gas emission Stage 3.

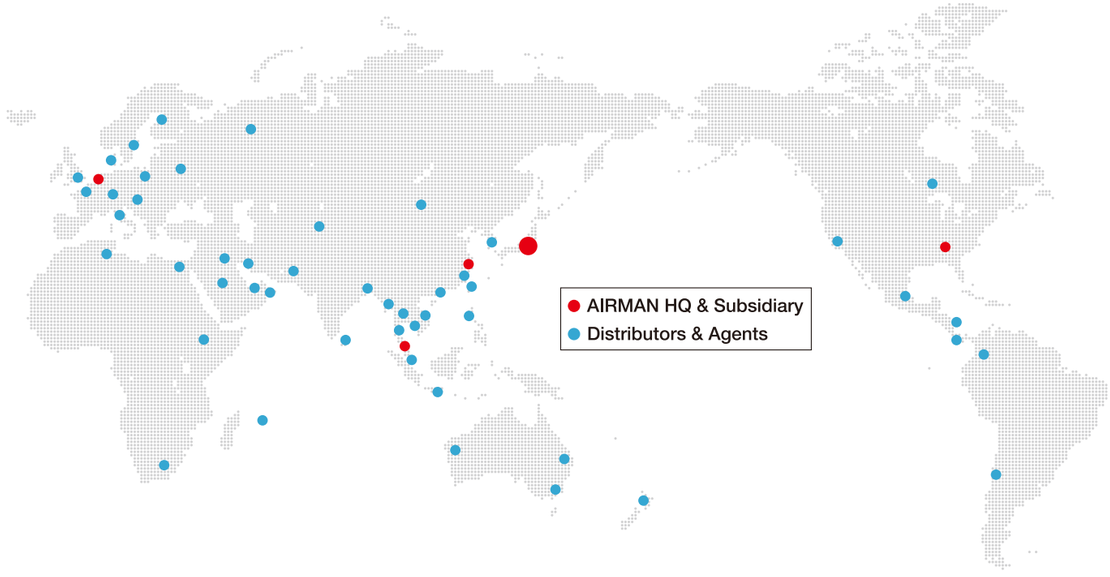
※ Excluded models with no applicable engine.

Blow-by gas (SDG13～220)

They are applied PCV (Positive crankcase ventilation) system which blow-by gas is recirculated internally to avoid the carbon clogging. They are environmentally friendly engines.

※ Excluded SDG220 and models with engines such as emissions standards "JPN Stage 2" and "EPA Tier 2".

AIRMAN Service network



Easy operation

Quick-start engine

[SDG13- SDG220]
We are applying the quick-heating “glow-plug” for preheat engine. And we are succeed to be quick start in low temperature.

[SDG220 – SDG800]
We are mounting the quick-start engine which has improved turbo and governor for using the hand-auger or vibro-hammer.

Electronic Governor

Rotation speed adjustments can be done easily and stable engine rotation speed can be obtained.
Frequency changing can be done easily by a switch (idling (warming up gas) ⇔ running)

※ Excluded models with no applicable engine. (SDG60-300)

Control Box

We have developed “one” control panel which is combined engine control and generator control.

SDG60L Panel

① 200V,400V signals
② Alarm lamp
③ Panel light
④ Frequency meter
⑤ Amp meter
⑥ Voltage meter
⑦ Voltage controller
⑧ 3Phase breaker
⑨ Single phase breaker
⑩ Water temperature meter
⑪ Fuel Meter & Time meter
⑫ Electric Leakage Relay
⑬ Starter switch
⑭ Frequency switching switch
⑮ Frequency adjustment switch
⑯ Operation Mode switching switch

Safety

Various kinds of safety devices

Over current / short circuit protection device

At overload or short circuit, the circuit breaker will shut off to protect the generator.

Earth leakage protection device

At the time of electric leakage, the alarm lamp lights up, and the three-phase / single-phase breaker shut off.

Oil Fence Alarm

If fuel, oil, water, etc. accumulate in the oil fence by more than a specified amount, it will be announced by an alarm lamp on the monitor.

Crankcase internal pressure alarm

(SDG100-150S-3B1、100LA-5B1、100-150L/LX-5B1 only)

In case the crank case internal pressure rises more than normal, monitor lamp lights on and engine stops emergently.

Main alarm and emergency stop

Display example

Model	Over Roating	Oil level down	Water Temp High	Charge Failure	Crankcase internal pressure High	Filter Clog	Over Current・Short	Leakage
SDG13~45	■	■	■	■	–	□	△	△※
SDG60S-3B1、SDG60AS-3B1/7B1、SDG60L/LX/LXR-5B1、SDG220L-5B1	■	■	■	□	–	□	△	□△
SDG60LA/LAX-5B1	■	■	■	□	–	□	△	△※
SDG100/125/150S-3B1、SDG100L/LA/LX/LAX/LXR-5B1、SDG125L/LX-5B1、SDG150L/LX-5B1	■	■	■	□	■	□	△	△※
SDG300/400L-5B1	■△	■△	■△	□	–	□	△	△※
SDG60S-3A6/7A6、SDG60AS-3A6/7A6、SDG100S-3A5、SDG100AS-3A6、SDG125/150S-3A6、SDG150AS-3A6、SDG220S-3A7、SDG300S-3A6	■△	■△	■△	□	–	□	△	□△
SDG400/500S-3A6、	■	■	■	□	–	□	△	△※
SDG610S-3AK6、SDG800S-3A6	■△	■△	■△	□	–	□	△	△※

■:Alarm lamp on or blink + Engine emergency stop □:Alarm Lamp on
△:Breaker shut down ※Warning lamp of relay surface lights on.

Easy maintenance

Easy maintenance

Open the right-side doors, and it is easily access for daily checking (ex. Oil check, coolant check).

Maintenance cycle

(hrs)

Item / Model	Engine oil	Oil filter	Fuel filter	Air Element
SDG13/25	250 *1	500 *1	500	1,000
SDG45～220	500 *1	500 *1	500	1,000
SDG300～800	500 *2	500 *2	500	1,000
SDG220/300*3	250 *2	250 *2	500	1,000

*1 First time exchange 50hrs *2 First time exchange 250hrs
*3 Models with no applicable engine

Panel structure

The bonnet adopts a piling-up structure based on the panel structure, improving disassembly / assembly at the time of maintenance.

※ Excluded SDG100S-3A5 and models with no applicable engine.

Radiator inspection・cleaning

By removing the front cover and split fan shroud on both sides inspection and cleaning of radiator can be done easily.Larger-sized models ≧ 220 kVA have inspection windows on the front cover makes easier to inspect and clean. In addition, the L / LX / LA / LAX series has mounted an inspection and cleaning door for the radiator cleaning on the front cover.

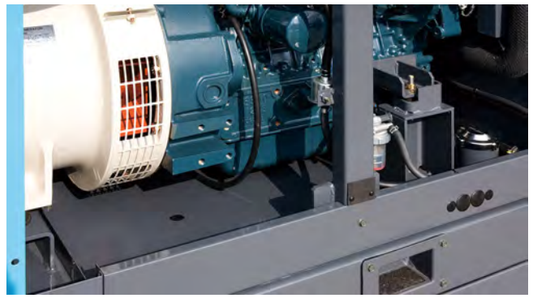
(Exclude SDG13L/25L, 25Z)

Flat frame

(SDG-3B1 series, SDG60S-7B1)

It is a flat frame structure in which the inside of the machine can be cleaned easily.

(Exclude SDG100S/60AS/150AS)



Automatic Air Bleeding System

(SDG13~150)

Automatic Air Bleeding Device is equipped to automatically bleed air from fuel system. This eliminates the need to prime the fuel system in case the generator stops due to running out of fuel. Simply top up the fuel and turn the key switch to operation position, air in the fuel system will be bled automatically.
As for both SDG125S/150S/150AS, it is possible to automatically bleed air by pushing the button provided on the operation panel.

Stainless Bolts

We use stainless bolts on front cover and left-side door which have to be removed, when performing maintenance to prevent bolts from rusting. Also we reduce the risk of broken bolts on bonnet that might be resulted from knocking by minimizing the bolts’ quantity.

SDG-L
Leak guard engine generator

SDG-LX
Large fuel tank mounted
leak guard engine generator

SDG-LA
3 and single phase capable multi output
leak-guard Able generator

SDG-LAX
Large fuel tank mounted leak guard engine generator
3 and single phase capable multi output leak-guard Able generator

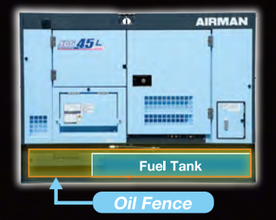
SDG-L
Leak guard engine generator

SDG-L
L = Prevent outflow of oil etc. as much as possible.

Prevent as much as possible outflow of oil etc. Oil fence mounted “LEAK GUARD” type

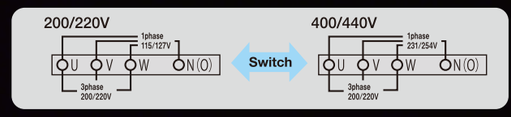
In case of leakage of fuel or oil on the oil fence, it will prevent leakage to the outside as much as possible. Space capacity of the oil fence has secured more than ×100% (fuel + oil + cooling water).

*All oil leaks are not guaranteed.

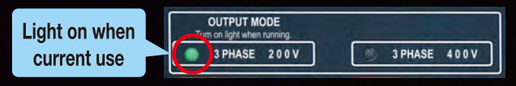


Dual voltage is standard.

3 phase Voltage can switch to 200/220V ⇔ 400/440v
When starting the engine, the three-phase output voltage indicator on the control panel lights and you can see the voltage being used at a glance.

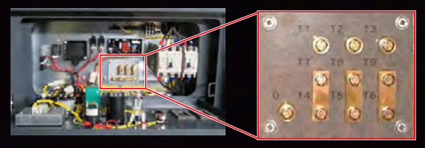


Can see the voltage being used at a glance.



Bus bar type voltage switching board

To switch the voltage of three-phase output (200 / 220V ⇔ 400 / 440V), a bus bar type voltage switching board which can be switched easily is attached.



Drainage hose makes it easy to drain oil

Engine oil discharge hose is equipped as standard.
It is easily possible to discharge the engine oil.

Equipped with a convenient earth bar storage box.

Equipped the earth bar box beside the frame.
You can store it with keeping attached the wire.

Equipped the emergency stop button.

Equipped the emergency stop button beside the operation panel.

Considered convenience Total heights below 1,350mm

By setting the total height of the SDG25L/45L/60L to 1350 mm or less.

*SDG25L is total height 1090mm

SDG45L model is equipped with less unburned fuel emissions Engine.

SDG45L model is equipped with less unburned fuel emissions engine in the low load, V3600-T-K3A which is applied swirl chamber type turbocharged engine.

SDG-LX
Large fuel tank mounted leak guard engine generator

SDG-LX
L = Prevent outflow of oil etc.as much as possible.
+
X = Large fuel tank.

Large fuel tank mounted

Large fuel tank mounted as standard. It makes possible long time operation without external fuel tank.

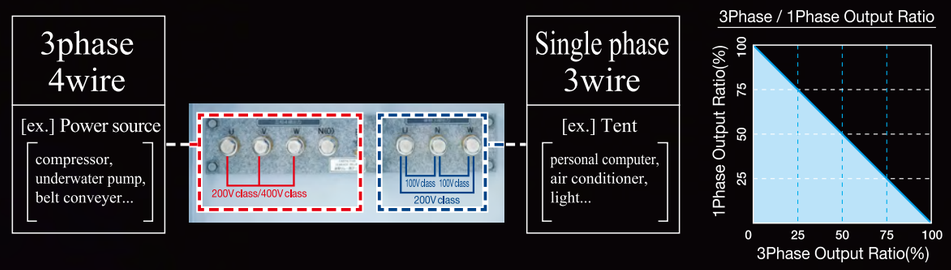
SDG-LA

3 and single phase capable multi output
leak-guard Able generator

SDG-LA
L = Prevent outflow of oil etc.as much as possible.
+
A = 3P3W / 1P3W Multi output.

3phase4wires /single phase3wires capable multi output / No need to switch

Three-phase 4-wire and single-phase 3 wire can be used at the same time. One unit can handle various power supplies.



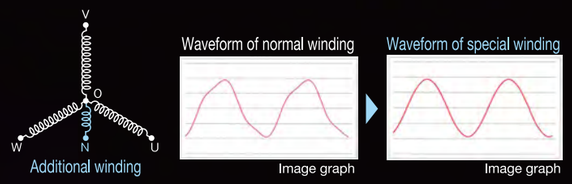
Easy checking of power generation status with ammeter

The total current of three phases and single phase can be confirmed with the familiar analog amp meter as before. Allowable current value is listed on the inscription next to ammeter, so it is obvious.

Ammeter Caution Plate

Excellent voltage waveform

Special winding is adopted as additional winding, and even in single phase 3 wire output, it provides high quality electricity with less distortion of waveform. (Patent has already been applied)



Adopted a leakage relay of "selective cutoff method"

Detect whether three-phase or single-phase electric leakage is occurring, and only tripping the circuit breaker with the electric leakage.

SDG-LAX

Large fuel tank mounted leak guard engine generator
3 and single phase capable multi output leak-guard Able generator

SDG-LAX
L = Prevent outflow of oil etc.as much as possible.
+
A = 3P3W / 1P3W Multi output.
+
X = Large fuel tank.

Large fuel tank mounted

Large fuel tank mounted as standard. It makes possible long time operation without external fuel tank.

SDG25L-5B1

SDG45L-5B2

SDG60L-5B1

SDG100L-5B1

SDG125L-5B1

200 ↔ 400 Dual Voltage

Item		Model	SDG25L-5B1		SDG45L-5B2		SDG60L-5B1		SDG100L-5B1		SDG125L-5B1	
			Leak Guard Type									
Generator												
Frequency		Hz	50	60	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage									
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45	50	60	80	100	100	125
	Stanby output		22	27.5	40.7	49.5	55	66	88	110	110	137.5
	Voltage	V	400	440	400	440	400	440	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59.0	72.2	78.7	115	131	144	164
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45	50	60	80	100	100	125
	Stanby output		22	27.5	40.7	49.5	55	66	88	110	110	137.5
	Voltage	V	200	220	200	220	200	220	200	220	200	220
	Ampere	A	57.7	65.6	107	118	144	157	231	262	289	328
Pole		P	4									
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0									
Diesel Engine												
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A		ISUZU BJ-4JJ1X		ISUZU BI-4HK1X			
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged		4Cylinder, Direct-Injection, Turbo-Charged, Intercooled					
Total displacement		L	2.434		3.62		2.999		5.193			
Rated output		kW	19.1	23.7	35.0	42.5	51.6	61.0	96.3	113.6	96.3	113.6
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil									
Fuel tank capacity		L	70		110		140		250			
Fuel consumption	50% Load	L/hr	3.1	3.9	4.9	6.1	5.7	7.0	9.9	12.8	11.9	15.4
	75% Load	L/hr	4.2	5.2	7.0	8.6	8.3	10.1	14.5	18.2	17.8	21.9
Engine Oil volume		L	9.5		13.2		15.0		20.5			
Coolant water volume		L	7.0		11.0		13.2		22.2			
Battery × unit			85D26R×1				95D31R×1		170F51×1			
Weight Dimension												
Length × Width × Hight		mm	1,540×700×1,090		1,850×860×1,350		2,080×1,000×1,350		2,530×1,150×1,580			
Dry(Operating) weight		kg	675 (750)		990 (1,100)		1,200 (1,340)		1,830 (2,080)		1,880 (2,130)	
Emission, Noise												
Sound Power level LwA		dB	90		88		89		91			
Sound pressure level (7m 4direction/no load)		dB (A)	59	63	57	60	59	62	60	63	60	63
Emission control			JPN Stage 3									

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG150L-5B1

200 ↔ 400 Dual Voltage

SDG220L-5B1

200 ↔ 400 Dual Voltage

SDG300L-5B1

200 ↔ 400 Dual Voltage

SDG400L-5B1

200 ↔ 400 Dual Voltage

Item		Model	SDG150L-5B1		SDG220L-5B1		SDG300L-5B1		SDG400L-5B1	
			Leak Guard Type							
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage							
3phase 4wires 400V Class	Prime output	kVA	125	150	200	220	270	300	350	400
	Stanby output	kVA	137.5	165	220	242	297	330	385	440
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	180	197	289	289	390	394	505	525
3phase 4wires 200V Class	Prime output	kVA	125	150	200	220	270	300	350	400
	Stanby output	kVA	137.5	165	220	242	297	330	385	440
	Voltage	V	200	220	200	220	200	220	200	220
	Ampere	A	361	394	577	577	779	787	1,010	1,050
Pole		P	4							
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0							
Diesel Engine										
Model name			ISUZU BH-6HK1X		ISUZU BH-6UZ1X		KOMATSU SAA6D125E-5-B		KOMATSU SAA6D140E-5-C	
System			6Cylinder, Direct-Injection, Turbo-Charged, Intercooled							
Total displacement		L	7.790		9.839		11.04		15.24	
Rated output		kW	119	142	203	230	234	259	310	357
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	250		400		490			
Fuel consumption	50% Load	L/hr	15.8	18.5	22.9	26.9	31.0	35.8	40.0	46.3
	75% Load	L/hr	22.8	26.1	33.2	37.4	46.5	53.6	60.0	69.2
Engine Oil volume		L	38.0		41.0		61.0		84.0	
Coolant water volume		L	28.3		47.5		54.0		67.5	
Battery × unit			95D31R×2		170F51×2				225H52×2	
Length × Width × Hight		mm	3,100×1,180×1,670		3,550×1,380×1,770		4,000×1,500×1,850		4,500×1,500×2,090	
Dry(Operating) weight		kg	2,420(2,690)		3,250(3,660)		4,510(5,020)		5,680(6,220)	
Emission, Noise										
Sound Power level LwA		dB	94				98		101	
Sound pressure level (7m 4direction/no load)		dB(A)	62	65	61	65	65	69	66	72
Emission control			JPN Stage 3							

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG13LX-5B1

3P4W ↔ 1P3W 3P/1P Alternative Output

SDG25LX-5B1

200 ↔ 400 Dual Voltage

SDG45LX-5B2

200 ↔ 400 Dual Voltage

SDG60LX-5B1

200 ↔ 400 Dual Voltage

SDG100LX-5B1

200 ↔ 400 Dual Voltage

SDG125LX-5B1

200 ↔ 400 Dual Voltage

SDG150LX-5B1

200 ↔ 400 Dual Voltage

Item		Model	SDG13LX-5B1		SDG25LX-5B1		SDG45LX-5B2		SDG60LX-5B1		SDG100LX-5B1		SDG125LX-5B1		SDG150LX-5B1	
			Large fuel tank & Leak Guard Type													
Generator																
Frequency		Hz	50	60	50	60	50	60	50	60	50	60	50	60	50	60
Power Supply			Three ⇔ Single Phase Alternative Output		Dual Voltage											
3phase 4wires 400V Class	Prime output	kVA	–	–	20	25	37	45	50	60	80	100	100	125	125	150
	Stanby output	kVA	–	–	22	27.5	40.7	49.5	55	66	88	110	110	137.5	137.5	165
	Voltage	V	–	–	400	440	400	440	400	440	400	440	400	440	400	440
	Ampere	A	–	–	28.9	32.8	53.4	59	72.2	78.7	115	131	144	164	180	197
3phase 4wires 200V Class	Prime output	kVA	10.5	13	20	25	37	45	50	60	80	100	100	125	125	150
	Stanby output	kVA	11.5	14.3	22	27.5	40.7	49.5	55	66	88	110	110	137.5	137.5	165
	Voltage	V	200	220	200	220	200	220	200	220	200	220	200	220	200	220
	Ampere	A	30.3	34.1	57.7	65.6	107	118	144	157	231	262	289	328	361	394
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	6.1	7.5	–	–	–	–	–	–	–	–	–	–	–	–
	Stanby output	kVA	6.7	8.2	–	–	–	–	–	–	–	–	–	–	–	–
	Voltage	V	200/100	220/110	–	–	–	–	–	–	–	–	–	–	–	–
	Ampere	A	30.3/30.3×2	34.1/34.1×2	–	–	–	–	–	–	–	–	–	–	–	–
Pole		P	4													
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0													
Diesel Engine																
Model name			KUBOTA D1503-K3A		KUBOTA V2403-K3A		KUBOTA V3600-T-K3A		ISUZU BJ-4JJ1X		ISUZU BI-4HK1X				ISUZU BH-6HK1X	
System			3Cylinder, Swirl chamber		4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged		4Cylinder, Direct-Injection, Turbo-Charged, Intercooled						6Cylinder, Direct-Injection, Turbo-Charged, Intercooled	
Total displacement		L	1.499		2.434		3.62		2.999		5.193				7.790	
Rated output		kW	11.5	13.7	19.1	23.7	35.0	42.5	51.6	61.0	96.3	113.6	96.3	113.6	119	142
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil													
Fuel tank capacity		L	100		180		355		420		750				900	
Fuel consumption	50% Load	L/hr	2.0	2.4	3.1	3.9	4.9	6.1	5.7	7.0	9.9	12.8	11.9	15.4	15.8	18.5
	75% Load	L/hr	2.6	3.2	4.2	5.2	7.0	8.6	8.3	10.1	14.5	18.2	17.8	21.9	22.8	26.1
Engine Oil volume		L	6.5		9.5		13.2		15.0		20.5				38.0	
Coolant water volume		L	6.5		7.0		11.0		13.2		22.2				28.3	
Battery × unit			85D26R×1						95D31R×1		170F51×1				95D31R×2	
Weight Dimension																
Length × Width × Hight		mm	1,390×650×1,160		1,540×700×1,250		1,850×860×1,560		2,080×1,000×1,490		2,530×1,150×1,760				3,100×1,180×1,850	
Dry(Operating) weight		kg	580(675)		720(890)		1,070(1,390)		1,260(1,630)		1,970(2,630)		2,020(2,680)		2,570(3,370)	
Emission, Noise																
Sound Power level LwA		dB	84		90		88		90		91				95	
Sound pressure level (7m 4direction/no load)		dB(A)	55	58	59	63	57	60	59	62	60	63	60	63	62	66
Emission control			JPN Stage 3													

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG25LA-5B1

SDG45LA-5B2

SDG60LA-5B1

SDG100LA-5B1

3P4W & 1P3W 3P/1P Multi output | 200 ↔ 400 Dual Voltage

Item \ Model			Leak Guard & Dual OutputType							
			SDG25LA-5B1		SDG45LA-5B2		SDG60LA-5B1		SDG100LA-5B1	
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage / Three ⇔ Single Phase Multi Output							
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45	50	60	80	100
	Stanby output		22	27.5	40.7	49.5	55	66	88	110
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59	72.2	78.7	115	131
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45	50	60	80	100
	Stanby output		22	27.5	40.7	49.5	55	66	88	110
	Voltage	V	200	220	200	220	200	220	200	220
	Ampere	A	57.7	65.6	107	118	144	157	231	262
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	6(12)	7.5(15)	11(22)	13.5(27)	15(30)	18(36)	23.5(47)	29.0(58)
	Stanby output		6.6(13.2)	8.2(16.5)	12.1(24.2)	14.8(29.7)	16.5(33)	19.8(39.6)	25.8(51.7)	31.9(63.8)
	Voltage	V	200/100	220/110	200/100	220/110	200/100	220/110	200/100	220/110
	Ampere	A	30/30×2(60/60×2)	34.1/34.1×2(68.2/68.2×2)	55/55×2(110/110×2)	61.4/61.4×2(123/123×2)	75/75×2(150/150×2)	81.8/81.8×2(164/164×2)	117.5/117.5×2(235/235×2)	132/132×2(264/264×2)
Pole		P	4							
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0							
Diesel Engine										
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A		ISUZU BJ-4JJ1X		ISUZU BI-4HK1X	
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged		4Cylinder, Direct-Injection, Turbo-Charged, Intercooled			
Total displacement		L	2.434		3.62		2.999		5.193	
Rated output		kW	19.1	23.7	35.0	42.5	51.6	61.0	96.3	113.6
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	70		110		140		250	
Fuel consumption	50% Load	L/hr	3.1	3.9	5.0	6.3	6.0	7.6	9.7	12.5
	75% Load	L/hr	4.2	5.2	7.0	8.9	8.9	10.7	14.1	17.8
Engine Oil volume		L	9.5		13.2		15.0		20.5	
Coolant water volume		L	7.0		11.0		13.2		22.2	
Battery × unit			85D26R×1				95D31R×1		170F51×1	
Weight Dimension										
Length × Width × Hight		mm	1,540×700×1,090		1,850×860×1,350		2,080×1,000×1,350		2,530×1,150×1,580	
Dry(Operating) weight		kg	695(770)		1,040(1,150)		1,250(1,390)		1,890(2,140)	
Emission, Noise										
Sound Power level LwA		dB	90		88		90		91	
Sound pressure level (7m 4direction/no load)		dB(A)	59	62	57	60	60	63	60	63
Emission control			JPN Stage 3							

※( ) It is the value for "3phase 4wires 200v class / Single 3wires 100v".
※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG13LAX-5B1

SDG25LAX-5B1

SDG45LAX-5B2

SDG60LAX-5B1

SDG100LAX-5B1

3P4W & 1P3W 3P/1P Multi output | 200 ↔ 400 Dual Voltage

Item \ Model			Large fuel tank & Leak Guard & Dual OutputType									
			SDG13LAX-5B1		SDG25LAX-5B1		SDG45LAX-5B2		SDG60LAX-5B1		SDG100LAX-5B1	
Generator												
Frequency		Hz	50	60	50	60	50	60	50	60	50	60
Power Supply			Three ⇔ Single Phase Multi Output		Dual Voltage / Three ⇔ Single Phase Multi Output							
3phase 4wires 400V Class	Prime output	kVA	–	–	20	25	37	45	50	60	80	100
	Stanby output		–	–	22	27.5	40.7	49.5	55	66	88	110
	Voltage	V	–	–	400	440	400	440	400	440	400	440
	Ampere	A	–	–	28.9	32.8	53.4	59	72.2	78.7	115	131
3phase 4wires 200V Class	Prime output	kVA	10.5	13	20	25	37	45	50	60	80	100
	Stanby output		11.5	14.3	22	27.5	40.7	49.5	55	66	88	110
	Voltage	V	200	220	200	220	200	220	200	220	200	220
	Ampere	A	30.3	34.1	57.7	65.6	107	118	144	157	231	262
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	6.5	7.5	6(12)	7.5(15)	11(22)	13.5(27)	15(30)	18(36)	23.5(47)	29.0(58)
	Stanby output		7.1	8.2	6.6(13.2)	8.2(16.5)	12.1(24.2)	14.8(29.7)	16.5(33)	19.8(39.6)	25.8(51.7)	31.9(63.8)
	Voltage	V	200/100	220/110	200/100	220/110	200/100	220/110	200/100	220/110	200/100	220/110
	Ampere	A	32.5/32.5×2	34.1/34.1×2	30/30×2 (60/60×2)	34.1/34.1×2 (68.2/68.2×2)	55/55×2 (110/110×2)	61.4/61.4×2 (123/123×2)	75/75×2 (150/150×2)	81.8/81.8×2 (164/164×2)	117.5/117.5×2 (235/235×2)	132/132×2 (264/264×2)
Pole		P	4									
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0									
Diesel Engine												
Model name			KUBOTA D1503-K3A		KUBOTA V2403-K3A		KUBOTA V3600-T-K3A		ISUZU BJ-4JJ1X		ISUZU BI-4HK1X	
System			3Cylinder, Swirl chamber		4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged		4Cylinder, Direct-Injection, Turbo-Charged, Intercooled			
Total displacement		L	1.499		2.434		3.62		2.999		5.193	
Rated output		kW	11.5	13.7	19.1	23.7	35.0	42.5	51.6	61.0	96.3	113.6
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil									
Fuel tank capacity		L	100		180		355		420		750	
Fuel consumption	50% Load	L/hr	2.0	2.4	3.1	3.9	5.0	6.3	6.0	7.6	9.7	12.5
	75% Load	L/hr	2.6	3.2	4.2	5.2	7.0	8.9	8.9	10.7	14.1	17.8
Engine Oil volume		L	6.5		9.5		13.2		15.0		20.5	
Coolant water volume		L	6.5		7.0		11.0		13.2		22.2	
Battery × unit			85D26R×1						95D31R×1		170F51×1	
Weight Dimension												
Length × Width × Hight		mm	1,390×650×1,160		1,540×700×1,250		1,850×860×1,560		2,080×1,000×1,490		2,530×1,150×1,760	
Dry(Operating) weight		kg	585(680)		740(910)		1,110(1,430)		1,310(1,680)		2,030(2,690)	
Emission, Noise												
Sound Power level LwA		dB	84		89		88		89		91	
Sound pressure level (7m 4direction/no load)		dB(A)	55	58	59	62	57	60	60	63	60	63
Emission control			JPN Stage 3									

※( ) It is the value for "3phase 4wires 200v class / Single 3wires 100v".
※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG-3B1

Standard engine generator

S D G - 3B1

3B1 = Standard type.

SDG-AS

Ultra-super silent engine generator

S D G - AS

AS = Ultra super silent type.

SDG-Z

Ultra-super silent engine generator

S D G - Z L

Z = Ultra super silent type.
+
L = Prevent outflow of oil etc.as much as possible.

S D G - Z L X

Z = Ultra super silent type.
+
L = Prevent outflow of oil etc.as much as possible.
+
X = Large fuel tank.

S D G - Z L A

Z = Ultra super silent type.
+
L = Prevent outflow of oil etc.as much as possible.
+
A = 3P3W / 1P3W Multi output.

S D G - Z L A X

Z = Ultra super silent type.
+
L = Prevent outflow of oil etc.as much as possible.
+
A = 3P3W / 1P3W Multi output.
+
X = Large fuel tank.

We have succeeded to reduce the running noise level by mounting the low-noise engine, the big size muffler, the special exhaust duct structure for muffling of exhaust / exhaust air.
SDG25S ～ 60S, 150S, 25AS～150AS, 25/45Z by thoroughly eliminating gaps in the panel structure and adopting a matching in take duct, we have achieved even quieter operation. In addition, the special muffler support structure also reduced overall vibration.

SDG13S-3B1

200 ↔ 400
Dual Voltage

SDG25S-3B1

200 ↔ 400
Dual Voltage

SDG45S-3B2

200 ↔ 400
Dual Voltage

Item		Model / Unit	Standard Type SDG13S-3B1		SDG25S-3B1		SDG45S-3B2		SDG45SE-3B2	
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage						Single Voltage	
3phase 4wires 400V Class	Prime output	kVA	10.5	13	20	25	37	45	37	45
	Stanby output	kVA	11.5	14.3	22	27.5	40.7	49.5	40.7	49.5
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	15.2	17.1	28.9	32.8	53.4	59	53.4	59
3phase 4wires 200V Class	Prime output	kVA	10.5	13	20	25	37	45	–	–
	Stanby output	kVA	11.5	14.3	22	27.5	40.7	49.5	–	–
	Voltage	V	200	220	200	220	200	220	–	–
	Ampere	A	30.3	34.1	57.7	65.6	107	118	–	–
Pole		P	4							
Power Factor			3-phase 0.8（lagging） / Single-phase 1.0							
Diesel Engine										
Model name			KUBOTA D1503-K3A		KUBOTA V2403-K3A		KUBOTA V3600-T-K3A			
System			3Cylinder, Swirl chamber		4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged			
Total displacement		L	1.499		2.434		3.620			
Rated output		kW	11.5	13.7	19.1	23.7	35.0	42.5	35.0	42.5
Rated rotation speed		min^{-1}	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	58		70		100			
Fuel consumption	50% Load	L/hr	2.0	2.4	3.1	3.9	4.9	6.1	4.9	6.1
	75% Load	L/hr	2.6	3.2	4.2	5.2	7.0	8.6	7.0	8.6
Engine Oil volume		L	6.5		9.5		13.2			
Coolant water volume		L	5.7		7.0		11.0			
Battery × unit			85D26R×1							
Weight Dimension										
Length × Width × Hight		mm	1,480×650×950		1,550×700×980		1,870×860×1,220			
Dry(Operating) weight		kg	520（580）		610（680）		910（1,020）			
Emission, Noise										
Sound Power level LwA		dB	83		90		88			
Sound pressure level (7m 4direction/no load)		dB（A）	55	57	59	63	58	61	58	61
Emission control			JPN Stage 3							

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG60S-3B1

SDG100S-3B1

SDG125S-3B1

SDG150S-3B1

200 ↔ 400 Dual Voltage

Item \ Model			Standard Type							
			SDG60S-3B1		SDG100S-3B1		SDG125S-3B1		SDG150S-3B1	
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage							
3phase 4wires 400V Class	Prime output	kVA	50	60	80	100	100	125	125	150
	Stanby output		55	66	88	110	110	137.5	137.5	165
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	72.2	78.7	115	131	144	164	180	197
3phase 4wires 200V Class	Prime output	kVA	50	60	80	100	100	125	125	150
	Stanby output		55	66	88	110	110	137.5	137.5	165
	Voltage	V	200	220	200	220	200	220	200	220
	Ampere	A	144	157	231	262	289	328	361	394
Pole		P	4							
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0							
Diesel Engine										
Model name			ISUZU BJ-4JJ1X		ISUZU BI-4HK1X				ISUZU BH-6HK1X	
System			4Cylinder, Direct-Injection, Turbo-Charged, Intercooled						6Cylinder, Direct-Injection, Turbo-Charged, Intercooled	
Total displacement		L	2.999		5.193				7.79	
Rated output		kW	51.6	61.0	96.3	113.6	96.3	113.6	119	142
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	125		220		250			
Fuel consumption	50% Load	L/hr	5.7	7.0	9.9	12.8	11.9	15.4	15.8	18.5
	75% Load	L/hr	8.3	10.1	14.5	18.2	17.8	21.9	22.8	26.1
Engine Oil volume		L	15.0		20.5				38.0	
Coolant water volume		L	11.5		21.5				28.3	
Battery × unit			95D31R×1		170F51×1				95D31R×2	
Weight Dimension										
Length × Width × Hight		mm	2,080×1,000×1,220		2,460×1,180×1,380		2,690×1,180×1,380		3,190×1,180×1,470	
Dry(Operating) weight		kg	1,110 (1,240)		1,700 (1,930)		1,820 (2,070)		2,210 (2,480)	
Emission, Noise										
Sound Power level LwA		dB	90		92				95	
Sound pressure level (7m 4direction/no load)		dB (A)	58	62	60	64	61	64	63	66
Emission control			JPN Stage 3							

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG25AS-3B1

SDG45AS-3B1

SDG60AS-3B1

SDG60AS-7B1

200 ↔ 400 Dual Voltage

Item \ Model			Ultra super silent type						Oil fence mounted & Ultra super silent Type	
			SDG25AS-3B1		SDG45AS-3B1		SDG60AS-3B1		SDG60AS-7B1	
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage							
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45	50	60	50	60
	Stanby output		22	27.5	40.7	49.5	55	66	55	66
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59	72.2	78.7	72.2	78.7
3phase 4wires 200V Class	Prime output	kVA	20	25	40.7	49.5	50	60	50	60
	Stanby output		22	27.5	37	45	55	66	55	66
	Voltage	V	200	220	200	220	200	220	200	220
	Ampere	A	57.7	65.6	107	118	144	157	144	157
Pole		P	4							
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0							
Diesel Engine										
Model name			KUBOTA V2403-K3A		KUBOTA V3800-DI-T-K3A		ISUZU BJ-4JJ1X			
System			4Cylinder, Swirl chamber		4Cylinder, Direct-Injection, Turbo-Charged		4Cylinder, Direct-Injection, Turbo-Charged, Intercooled			
Total displacement		L	2.434		3.769		2.999			
Rated output		kW	19.1	23.7	38.0	45.6	51.6	61.0	51.6	61.0
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	80		165		170		400	
Fuel consumption	50% Load	L/hr	3.1	3.9	5.1	6.4	5.7	7.0	5.7	7.0
	75% Load	L/hr	4.2	5.2	7.3	9.1	8.3	10.1	8.3	10.1
Engine Oil volume		L	9.5		13.2		15.0			
Coolant water volume		L	9.0		11.0		11.5			
Battery × unit			85D26R×1				95D31R×1			
Weight Dimension										
Length × Width × Hight		mm	1,570×800×1,090		1,995×950×1,300		2,080×1,080×1,300		2,080×1,080×1,640	
Dry(Operating) weight		kg	730 (810)		1,060 (1,215)		1,240 (1,400)		1,370 (1,730)	
Emission, Noise										
Sound Power level LwA		dB	83		82		86		85	
Sound pressure level (7m 4direction/no load)		dB (A)	53	56	51	54	55	57	54	56
Emission control			JPN Stage 3							

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG25ZL-5B1

SDG45ZL-5B2

200 ↔ 400 Dual Voltage

Item \ Model			Leak Guard & Ultra super silent type			
			SDG25ZL-5B1		**SDG45ZL**-5B2	
Generator						
Frequency		Hz	50	60	50	60
Power Supply			Dual Voltage			
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59.0
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	200	220	200	220
	Ampere	A	57.7	65.6	107	118
Pole		P	4			
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0			
Diesel Engine						
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A	
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged	
Total displacement		L	2.434		3.62	
Rated output		kW	19.1	23.7	35.0	42.5
Rated rotation speed		min-1	1,500	1,800	1,500	1,800
Use fuel			Diesel oil			
Fuel tank capacity		L	80		175	
Fuel consumption	50% Load	L/hr	3.1	3.9	4.9	6.1
	75% Load	L/hr	4.2	5.2	7.0	8.6
Engine Oil volume		L	9.5		13.2	
Coolant water volume		L	9.0		12.1	
Battery × unit			85D26R×1			
Weight Dimension						
Length × Width × Hight		mm	1,570×800×1,260		1,920×1,080×1,490	
Dry(Operating) weight		kg	800(880)		1,210(1,380)	
Emission, Noise						
Sound Power level LwA		dB	79		81	
Sound pressure level (7m 4direction/no load)		dB(A)	49	51	50	53
Emission control			JPN Stage 3			

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

| SDG-3B1 | SDG-AS | SDG-Z |

SDG25ZLX-5B1

SDG45ZLX-5B2

200 ↔ 400 Dual Voltage

Item \ Model			Large fuel tank & Leak Guard & Ultra super silent type			
			SDG25ZLX-5B1		**SDG45ZLX**-5B2	
Generator						
Frequency		Hz	50	60	50	60
Power Supply			Dual Voltage			
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59.0
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	200	220	200	220
	Ampere	A	57.7	65.6	107	118
Pole		P	4			
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0			
Diesel Engine						
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A	
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged	
Total displacement		L	2.434		3.62	
Rated output		kW	19.1	23.7	35.0	42.5
Rated rotation speed		min-1	1,500	1,800	1,500	1,800
Use fuel			Diesel oil			
Fuel tank capacity		L	190		355	
Fuel consumption	50% Load	L/hr	3.1	3.9	4.9	6.1
	75% Load	L/hr	4.2	5.2	7.0	8.6
Engine Oil volume		L	9.5		13.2	
Coolant water volume		L	9.0		12.1	
Battery × unit			85D26R×1			
Weight Dimension						
Length × Width × Hight		mm	1,570×800×1,350		1,920×1,080×1,580	
Dry(Operating) weight		kg	830(1,010)		1,270(1,590)	
Emission, Noise						
Sound Power level LwA		dB	79		81	
Sound pressure level (7m 4direction/no load)		dB(A)	49	52	49	53
Emission control			JPN Stage 3			

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG25ZLA-5B1

3P4W & 1P3W 3P/1P Multi output

200 ↔ 400 Dual Voltage

SDG45ZLA-5B2

3P4W & 1P3W 3P/1P Multi output

200 ↔ 400 Dual Voltage

Item \ Model			Leak Guard & Dual Output & Ultra super silent type			
			SDG25ZLA-5B1		SDG45ZLA-5B2	
Generator						
Frequency		Hz	50	60	50	60
Power Supply			Dual Voltage / Three ⇔ Single Phase Multi Output			
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	200	220	200	220
	Ampere	A	57.7	65.6	107	118
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	6(12)	7.5(15)	11(22)	13.5(27)
	Stanby output		6.6(13.2)	8.2(16.5)	12.1(24.2)	14.8(29.7)
	Voltage	V	200/100	220/110	200/100	220/110
	Ampere	A	30/30×2(60/60×2)	34.1/34.1×2(68.2/68.2×2)	55/55×2(110/110×2)	61.4/61.4×2(123/123×2)
Pole		P	4			
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0			
Diesel Engine						
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A	
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged	
Total displacement		L	2.434		3.62	
Rated output		kW	19.1	23.7	35.0	42.5
Rated rotation speed		min-1	1,500	1,800	1,500	1,800
Use fuel			Diesel oil			
Fuel tank capacity		L	80		175	
Fuel consumption	50% Load	L/hr	3.1	3.9	5.0	6.3
	75% Load	L/hr	4.2	5.2	7.0	8.9
Engine Oil volume		L	9.5		13.2	
Coolant water volume		L	9.0		12.1	
Battery × unit			85D26R×1			
Weight Dimension						
Length × Width × Hight		mm	1,570×800×1,260		1,920×1,080×1,490	
Dry(Operating) weight		kg	820(900)		1,250(1,420)	
Emission, Noise						
Sound Power level LwA		dB	79		80	
Sound pressure level (7m 4direction/no load)		dB(A)	49	51	50	53
Emission control			JPN Stage 3			

※ ( ) It is the value for "3phase 4wires 200v class / Single 3wires 100v".
※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

| SDG-3B1 | SDG-AS | SDG-Z |

SDG25ZLAX-5B1

3P4W & 1P3W 3P/1P Multi output

200 ↔ 400 Dual Voltage

SDG45ZLAX-5B2

3P4W & 1P3W 3P/1P Multi output

200 ↔ 400 Dual Voltage

Item \ Model			Large fuel tank & Leak Guard & Dual Output & Ultra super silent type			
			SDG25ZLAX-5B1		SDG45ZLAX-5B2	
Generator						
Frequency		Hz	50	60	50	60
Power Supply			Dual Voltage / Three ⇔ Single Phase Multi Output			
3phase 4wires 400V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	400	440	400	440
	Ampere	A	28.9	32.8	53.4	59
3phase 4wires 200V Class	Prime output	kVA	20	25	37	45
	Stanby output		22	27.5	40.7	49.5
	Voltage	V	200	220	200	220
	Ampere	A	57.7	65.6	107	118
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	6(12)	7.5(15)	11(22)	13.5(27)
	Stanby output		6.6(13.2)	8.2(16.5)	12.1(24.2)	14.8(29.7)
	Voltage	V	200/100	220/110	200/100	220/110
	Ampere	A	30/30×2(60/60×2)	34.1/34.1×2(68.2/68.2×2)	55/55×2(110/110×2)	61.4/61.4×2(123/123×2)
Pole		P	4			
Power Factor			3-phase 0.8(lagging) / Single-phase 1.0			
Diesel Engine						
Model name			KUBOTA V2403-K3A		KUBOTA V3600-T-K3A	
System			4Cylinder, Swirl chamber		4Cylinder, Swirl chamber, Turbo-Charged	
Total displacement		L	2.434		3.62	
Rated output		kW	19.1	23.7	35.0	42.5
Rated rotation speed		min-1	1,500	1,800	1,500	1,800
Use fuel			Diesel oil			
Fuel tank capacity		L	190		355	
Fuel consumption	50% Load	L/hr	3.1	3.9	5.0	6.3
	75% Load	L/hr	4.2	5.2	7.0	8.9
Engine Oil volume		L	9.5		13.2	
Coolant water volume		L	9.0		12.1	
Battery × unit			85D26R×1			
Weight Dimension						
Length × Width × Hight		mm	1,570×800×1,350		1,920×1,080×1,580	
Dry(Operating) weight		kg	850(1,030)		1,310(1,630)	
Emission, Noise						
Sound Power level LwA		dB	79		80	
Sound pressure level (7m 4direction/no load)		dB(A)	49	52	49	53
Emission control			JPN Stage 3			

※ ( ) It is the value for "3phase 4wires 200v class / Single 3wires 100v".
※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

New Power Generation Solution !!

Normally — Required generator capacity would be 2-3 times the motor starting load

But Now — Generator Capacity ≒ Motor Starting Load

This model is perfect for submersible pumps!!

V-Pump 15 INVERTER

V-Pump 30 INVERTER

V-Pump 37 INVERTER

Diesel Engine Generator
With Built-in Inverter System

V-Pump30

V = Variable (Inverter control)
Pump = Submersible pump
30 = Submersible pump total output

Benefits and features

Allows for up to 3 times the maximum starting load by reducing starting current.

Submersible pump	3 inch 3.7kW	4 inch 7.5kW	6 inch 11kW	8 inch 15kW	6 inch×2 22kW	6 inch×2+4 inch 29.5kW	6 inch×2+8 inch 37kW
Standard	SDG13S	SDG25S	SDG45S	SDG60S	SDG100S	SDG125S	SDG150S
V-Pump		V-Pump15 →					
			V-Pump30 →				
				V-Pump37 →			

Generator capacity of a standard models is calculated under the following conditions: - Input start-up characteristic (β) 7.2, coefficient of starting method (C) 1.0 (DOL), generator constant (Xd') 0.2, voltage drop rate (ΔV) 30%.

The submersible pump discharge volume (speed) of can be controlled by adjusting the frequency of the inverter with the knob on the control panel.
Fuel economy can be improved by controlling the power consumption of the submersible pump.

- Not effective for inverter type machine.
- Cannot be using for single-phase motors. In the case of a single-phase motor, the inverter control circuit determines that the motor is missing a phase (protection circuit) and output will be stopped.
- If the load has a start switch (self-holding), motor and generator must be direct connected using wire.

Switchable between inverter output mode and standard output mode

The two outputs of "inverter" and "three-phase" can be easily switched through the cam switch.

※The inverter output is effective only when direct and simultaneous starting. It's not effective when star-delta starting and sequential starting.

V-Pump15

V-Pump30

V-Pump37

Item		Model	Large fuel tank & Leak Guard & Built-in Inverter System type											
			V-Pump15 (SDG25LXV-5B1)				V-Pump30 (SDG45LXV-5B2)				V-Pump37 (SDG60LXV-5B1)			
			200V Type		400V Type		200V Type		400V Type		200V Type		400V Type	
Generator														
Frequency		Hz	50	60	50	60	50	60	50	60	50	60	50	60
Power Supply			Single Voltage / Inverter Output											
3phase 4wires 400V Class	Prime output	kVA	—	—	20	25	—	—	37	45	—	—	50	60
	Stanby output	kVA	—	—	22	27.5	—	—	40.7	49.5	—	—	55	66
	Voltage	V	—	—	400	440	—	—	400	440	—	—	400	440
	Ampere	A	—	—	28.9	32.8	—	—	53.4	59	—	—	72.2	78.7
3phase 4wires 200V Class	Prime output	kVA	20	25	—	—	37	45	—	—	50	60	—	—
	Stanby output	kVA	22	27.5	—	—	40.7	49.5	—	—	55	66	—	—
	Voltage	V	200	220	—	—	200	220	—	—	200	220	—	—
	Ampere	A	57.7	65.6	—	—	107	118	—	—	144	157	—	—
Single phase 3wires 200V Class/ 100V Class	Prime output	kVA	11.5	14.4	—	—	21.4	26	—	—	30	36	—	—
	Stanby output	kVA	12.6	15.8	—	—	23.5	28.6	—	—	33	39.6	—	—
	Voltage	V	200/100	220/110	—	—	200/100	220/110	—	—	200/100	220/110	—	—
	Ampere	A	57.7/57.7×2	65.6/65.6×2	—	—	107/107×2	118/118×2	—	—	150/150×2	164/164×2	—	—
Pole		P	4											
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0		3-phase 0.8 (lagging)		3-phase 0.8 (lagging) / Single-phase 1.0		3-phase 0.8 (lagging)		3-phase 0.8 (lagging) / Single-phase 1.0		3-phase 0.8 (lagging)	
Diesel Engine														
Model name			KUBOTA V2403-K3A				KUBOTA V3600-T-K3A				ISUZU BJ-4JJ1X			
System			4Cylinder, Swirl chamber				4Cylinder, Swirl chamber, Turbo-Charged				4Cylinder, Direct-Injection, Turbo-Charged, Intercooled			
Total displacement		L	2.434				3.62				2.999			
Rated output		kW	19.1	23.7	19.1	23.7	35.0	42.5	35.0	42.5	51.6	61.0	51.6	61.0
Rated rotation speed		min^{-1}	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil											
Fuel tank capacity		L	180				355				420			
Fuel consumption	50% Load	L/hr	3.1	3.9	3.1	3.9	4.9	6.1	4.9	6.1	6.0	7.6	6.0	7.6
	75% Load	L/hr	4.2	5.2	4.2	5.2	7.0	8.6	7.0	8.6	8.9	10.7	8.9	10.7
Engine Oil volume		L	9.5				13.2				15.0			
Coolant water volume		L	7.0				11.0				13.2			
Battery × unit			85D26R×1								95D31R×1			
Weight Dimension														
Length × Width × Hight		mm	1,540×700×1,250				1,850×860×1,560				2,080×1,000×1,490			
Dry(Operating) weight		kg	740 (910)				1,120 (1,440)				1,340 (1,710)		1,290 (1,660)	
Emission, Noise														
Sound Power level LwA		dB	90				89							
Sound pressure level (7m 4direction/no load)		dB (A)	60	63	60	63	57	60	57	60	60	63	60	63
Emission control			JPN Stage 3											

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.

SDG25S-3A8

SDG60S-3A6

200 ↔ 400 Dual Voltage

Item \ Model			Standard Type					
			SDG25S-3A8		**SDG25S**-3A8R		**SDG60S**-3A6	
Generator								
Frequency		Hz	50	60	50	60	50	60
Power Supply			Single Voltage				Dual Voltage	
3phase 4wires 400V Class	Prime output	kVA	20	25	20	25	50	60
	Stanby output		22	27.5	22	27.5	55	66
	Voltage	V	400	440	400	440	400	440
	Ampere	A	28.9	32.8	28.9	32.8	72.2	78.7
3phase 4wires 200V Class	Prime output	kVA	—	—	—	—	50	60
	Stanby output		—	—	—	—	55	66
	Voltage	V	—	—	—	—	200	220
	Ampere	A	—	—	—	—	144	157
Pole		P	4					
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0					
Diesel Engine								
Model name			KUBOTA V2403-E2B				ISUZU BB-4BG1T	
System			4Cylinder, Swirl chamber				4Cylinder, Direct-Injection, Turbo-Charged	
Total displacement		L	2.434				4.329	
Rated output		kW	19.1	23.7	19.1	23.7	48.1	57.4
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil					
Fuel tank capacity		L	70		62		135	
Fuel consumption	50% Load	L/hr	2.8	3.5	2.8	3.5	5.9	7.1
	75% Load	L/hr	4.3	5.3	4.3	5.3	8.9	10.8
Engine Oil volume		L	9.5				14.0	
Coolant water volume		L	7.0				15.0	
Battery × unit			85D26R×1					
Weight Dimension								
Length × Width × Hight		mm	1,550×700×1,010		1,640×650×900		2,090×860×1,220	
Dry(Operating) weight		kg	625 (695)		610 (680)		1,120 (1,260)	
Emission, Noise								
Sound Power level LwA		dB	92				90	
Sound pressure level (7m 4direction/no load)		dB (A)	61	64	63	66	59	63
Emission control			JPN Stage 2					

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

| SDG-3A5 | SDG-3A6 | SDG-3A7 | SDG-3A8 |

SDG100S-3A5

SDG125S-3A6

SDG150S-3A6

200 ↔ 400 Dual Voltage

Item \ Model			Standard Type					
			SDG100S-3A5		**SDG125S**-3A6		**SDG150S**-3A6	
Generator								
Frequency		Hz	50	60	50	60	50	60
Power Supply			Dual Voltage					
3phase 4wires 400V Class	Prime output	kVA	80	100	100	125	125	150
	Stanby output		88	110	110	137.5	137.5	165
	Voltage	V	400	440	400	440	400	440
	Ampere	A	115	131	144	164	180	197
3phase 4wires 200V Class	Prime output	kVA	80	100	100	125	125	150
	Stanby output		88	110	110	137.5	137.5	165
	Voltage	V	200	220	200	220	200	220
	Ampere	A	231	262	289	328	361	394
Pole		P	4					
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0					
Diesel Engine								
Model name			ISUZU DD-6BG1T		HINO J08C-UP		HINO J08C-UD	
System			6Cylinder, Direct-Injection, Turbo-Charged				6Cylinder, Direct-Injection, Turbo-Charged, Intercooled	
Total displacement		L	6.494		7.961			
Rated output		kW	73.6	91.2	96.3	112.5	118	140
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil					
Fuel tank capacity		L	225		250			
Fuel consumption	50% Load	L/hr	9.7	12.0	11.6	14.7	13.5	16.4
	75% Load	L/hr	14.6	18.1	17.3	22.1	20.3	24.7
Engine Oil volume		L	18.0		24.5			
Coolant water volume		L	24.0		22.0			
Battery × unit			95D31R×2					
Weight Dimension								
Length × Width × Hight		mm	2,600×1,000×1,400		2,990×1,180×1,480			
Dry(Operating) weight		kg	1,640 (1,870)		2,050 (2,300)		2,180 (2,430)	
Emission, Noise								
Sound Power level LwA		dB	91		92		94	
Sound pressure level (7m 4direction/no load)		dB (A)	61	64	63	65	63	66
Emission control			JPN Stage 2					

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG220S-3A7

SDG300S-3A6

SDG400S-3A6

SDG500S-3A6

200 ↔ 400 Dual Voltage

Item \ Model			Standard Type							
			SDG220S-3A7		**SDG300S**-3A6		**SDG400S**-3A6		**SDG500S**-3A6	
Generator										
Frequency		Hz	50	60	50	60	50	60	50	60
Power Supply			Dual Voltage (Manual parallel)							
3phase 4wires 400V Class	Prime output	kVA	200	220	270	300	350	400	450	500
	Stanby output	kVA	220	242	297	330	385	440	495	550
	Voltage	V	400	440	400	440	400	440	400	440
	Ampere	A	289	289	390	394	505	525	650	656
3phase 4wires 200V Class	Prime output	kVA	200	220	270	300	350	400	450	500
	Stanby output	kVA	220	242	297	330	385	440	495	550
	Voltage	V	200	220	200	220	200	220	200	220
	Ampere	A	577	577	779	787	1,010	1,050	1,299	1,312
Pole		P	4							
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0							
Diesel Engine										
Model name			KOMATSU SAA6D125E-2-B				KOMATSU SA6D140E-3-A		KOMATSU SAA6D140E-3-B	
System			6Cylinder, Direct-Injection, Turbo-Charged, Intercooled							
Total displacement		L	11.04				15.24			
Rated output		kW	178	204	232	257	310	357	382	427
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil							
Fuel tank capacity		L	390		490					
Fuel consumption	50% Load	L/hr	22.6	26.4	31.1	33.0	39.6	45.5	50.2	56.4
	75% Load	L/hr	32.3	37.1	46.7	49.4	59.4	68.0	74.9	83.9
Engine Oil volume		L	42.0		62.0		79.0		91.5	
Coolant water volume		L	46.4		48.4		75.0		91.5	
Battery × unit			170F51×2				225H52×2			
Length × Width × Hight		mm	3,700×1,300×1,750		3,900×1,400×1,760		4,150×1,400×2,040		4,550×1,600×2,090	
Dry(Operating) weight		kg	3,290 (3,700)		3,790 (4,290)		5,120 (5,670)		6,170 (6,750)	
Emission, Noise										
Sound Power level LwA		dB	95		98		99			
Sound pressure level (7m 4direction/no load)		dB (A)	64	65	66	69	67	70	67	70
Emission control			JPN Stage 2							

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

| SDG-3A5 | SDG-3A6 | SDG-3A7 | SDG-3A8 |

SDG610S-3AK6

SDG800S-3A6

200 ↔ 400 Dual Voltage

Item \ Model			Standard Type					
			SDG610S-3AK6		**SDG610S**-3AV6		**SDG800S**-3A6	
Generator								
Frequency		Hz	50	60	50	60	50	60
Power Supply			Dual Voltage (Manual parallel)					
3phase 4wires 400V Class	Prime output	kVA	555	610	555	610	700	800
	Stanby output	kVA	610	671	610	671	770	880
	Voltage	V	400	440	400	440	400	440
	Ampere	A	801	800	801	800	1,010	1,050
3phase 4wires 200V Class	Prime output	kVA	555	610	555	610	700	800
	Stanby output	kVA	610	671	610	671	770	880
	Voltage	V	200	220	200	220	200	220
	Ampere	A	1,602	1,600	1,602	1,600	2,021	2,100
Pole		P	4					
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0					
Diesel Engine								
Model name			KOMATSU SA6D170-A-1		VOLVO TAD1642GE		KOMATSU SAA6D170E2-3	
System			6Cylinder, Direct-Injection, Turbo-Charged, Intercooled					
Total displacement		L	23.15		16.12		23.15	
Rated output		kW	485	561	503	532	613	752
Rated rotation speed		min-1	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil					
Fuel tank capacity		L	490					
Fuel consumption	50% Load	L/hr	62.7	70.2	59.0	67.7	74.8	85.1
	75% Load	L/hr	94.1	105.1	88.5	101.3	112.1	127.4
Engine Oil volume		L	119		48.0		145	
Coolant water volume		L	141		60.0		153	
Battery × unit			225H52×2				245H52×2	
Weight Dimension								
Length × Width × Hight		mm	4,650×1,600×2,350				5,350×1,900×2,450	
Dry(Operating) weight		kg	7,320 (7,960)		6,145 (6,640)		9,380 (10,060)	
Emission, Noise								
Sound Power level LwA		dB	102		105		102	
Sound pressure level (7m 4direction/no load)		dB (A)	69	72	71	75	67	72
Emission control			—		EPA Tier 2			

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG60S-7A6

200 ↔ 400
Dual Voltage

Item \ Model			Oil Fence Type SDG60S-7A6	
Generator				
Frequency		Hz	50	60
Power Supply			Dual Voltage	
3phase 4wires 400V Class	Prime output	kVA	50	60
	Stanby output		55	66
	Voltage	V	400	440
	Ampere	A	72.2	78.7
3phase 4wires 200V Class	Prime output	kVA	50	60
	Stanby output		55	66
	Voltage	V	200	220
	Ampere	A	144	157
Pole		P	4	
Power Factor			3-phase 0.8（lagging） / Single-phase 1.0	
Diesel Engine				
Model name			ISUZU BB-4BG1T	
System			4Cylinder, Direct-Injection, Turbo-Charged	
Total displacement		L	4.329	
Rated output		kW	48.1	57.4
Rated rotation speed		min-1	1,500	1,800
Use fuel			Diesel oil	
Fuel tank capacity		L	400	
Fuel consumption	50% Load	L/hr	5.9	7.1
	75% Load	L/hr	8.9	10.8
Engine Oil volume		L	14.0	
Coolant water volume		L	15.0	
Battery × unit			85D26R×1	
Weight Dimension				
Length × Width × Hight		mm	2,050×860×1,630	
Dry(Operating) weight		kg	1,290（1,650）	
Emission, Noise				
Sound Power level LwA		dB	89	
Sound pressure level (7m 4direction/no load)		dB（A）	59	61
Emission control			JPN Stage 2	

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG60AS-7A6

200 ↔ 400
Dual Voltage

Item \ Model			Ultra Super Silent & Oil Fence Type SDG60AS-7A6	
Generator				
Frequency		Hz	50	60
Power Supply			Dual Voltage	
3phase 4wires 400V Class	Prime output	kVA	50	60
	Stanby output		55	66
	Voltage	V	400	440
	Ampere	A	72.2	78.7
3phase 4wires 200V Class	Prime output	kVA	50	60
	Stanby output		55	66
	Voltage	V	200	220
	Ampere	A	144	157
Pole		P	4	
Power Factor			3-phase 0.8（lagging） / Single-phase 1.0	
Diesel Engine				
Model name			ISUZU BB-4BG1T	
System			4Cylinder, Direct-Injection, Turbo-Charged	
Total displacement		L	4.329	
Rated output		kW	48.1	57.4
Rated rotation speed		min-1	1,500	1,800
Use fuel			Diesel oil	
Fuel tank capacity		L	400	
Fuel consumption	50% Load	L/hr	5.9	7.1
	75% Load	L/hr	8.9	10.8
Engine Oil volume		L	14.0	
Coolant water volume		L	15.0	
Battery × unit			85D26R×1	
Weight Dimension				
Length × Width × Hight		mm	2,080×1,000×1,640	
Dry(Operating) weight		kg	1,370（1,725）	
Emission, Noise				
Sound Power level LwA		dB	83	
Sound pressure level (7m 4direction/no load)		dB（A）	54	56
Emission control			JPN Stage 2	

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

SDG60AS-3A6

SDG100AS-3A6

SDG150AS-3A6

200 ↔ 400 Dual Voltage

200 ↔ 400 Dual Voltage

200 ↔ 400 Dual Voltage

Item		Model	Ultra super silent type					
			SDG60AS-3A6		SDG100AS-3A6		SDG150AS-3A6	
Generator								
Frequency		Hz	50	60	50	60	50	60
Power Supply			Dual Voltage					
3phase 4wires 400V Class	Prime output	kVA	50	60	80	100	125	150
	Stanby output		55	66	88	110	137.5	165
	Voltage	V	400	440	400	440	400	440
	Ampere	A	72.2	78.7	115	131	180	197
3phase 4wires 200V Class	Prime output	kVA	50	60	80	100	125	150
	Stanby output		55	66	88	110	137.5	165
	Voltage	V	200	220	200	220	200	220
	Ampere	A	144	157	231	262	361	394
Pole		P	4					
Power Factor			3-phase 0.8 (lagging) / Single-phase 1.0					
Diesel Engine								
Model name			ISUZU BB-4BG1T		ISUZU DD-6BG1T		HINO J08C-UD	
System			4Cylinder, Direct-Injection, Turbo-Charged		6Cylinder, Direct-Injection, Turbo-Charged		6Cylinder, Direct-Injection, Turbo-Charged, Intercooled	
Total displacement		L	4.329		6.494		7.961	
Rated output		kW	48.1	57.4	73.6	91.2	118	140
Rated rotation speed		min^{-1}	1,500	1,800	1,500	1,800	1,500	1,800
Use fuel			Diesel oil					
Fuel tank capacity		L	170		225		265	
Fuel consumption	50% Load	L/hr	5.9	7.1	9.7	12.0	13.5	16.4
	75% Load	L/hr	8.9	10.8	14.6	18.1	20.3	24.7
Engine Oil volume		L	14.0		18.0		24.5	
Coolant water volume		L	15.0		24.0		22.0	
Battery × unit			85D26R×1		95D31R×2			
Weight Dimension								
Length × Width × Hight		mm	2,090×950×1,300		2,700×1,140×1,500		3,200×1,200×1,630	
Dry(Operating) weight		kg	1,280 (1,440)		1,870 (2,100)		2,590 (2,850)	
Emission, Noise								
Sound Power level LwA		dB	83		84		88	
Sound pressure level (7m 4direction/no load)		dB (A)	55	56	54	57	55	58
Emission control			JPN Stage 2					

※ Sound power level is measured at 60Hz, no load and rated speed of revolution.
※ Above figures are applied under operation in standard atmosphere conditions as per JIS D0006.
※ "Standby Output" rating is applied only under intermittent or emergency operation for approximately 1 hour.

General purpose Emergency backup Generator for failure of utility source SDG-E series

When an electric utility outage takes place, the device is automatically switches from the utility source to the backup generator, and when the utility power is restored, it is automatically switches back to the utility power source.

ATS panel

＊ATS panel in photo is ground standing type for outdoor use.
(upon customer' request before production process this is available.)

Three Attempts starting operation

If the engine failed to start up after 10 seconds cranking, additional two more attempts to start will be included to ensure the engine to be started up. "Difficulty in starting" indication lamp will turn on after engine failed to start three attempts.

Trial (Test) operation availability

Test operation is available for maintenance and inspection as standard function.

Built-in Battery charger

ATS panel incorporates a battery charger to keep charging the battery of a standby generator.

Fault Indication Lamp

Generator fault indication lamp is equipped on the ATS panel. This is a consolidated indication for out of fuel, fuel filter clogging, low engine oil pressure, high coolant temperature, overcurrent and earth leakage.

Features and benefits

1. Simplified construction incorporating all required functions
2. Light-weight and compact
3. Easy connection between ATS panel and generator

Examples of Backup Power Supply

- Poultry farms and Swinery
- Gas-stations
- Housing, Villa residence, Office and Factories
- Communication station, Broadcasting station, Lighting facilities and Traffic signal stations
- On-line system of bank, Credit union, Agricultural cooperative associations
- Battery for portable telephones base
- Facilities for draining water for underground engineering construction

●Specifications of ATS panel

	For SDG13/25	For SDG45/60	For SDG100/125/150	For SDG220/300	For SDG400/500/610
Type	Wall mounted type		Floor standing type		
Rated voltage(V)	AC 200/220				
Control voltage(V)	DC 12		DC 24		
L×W×H(mm)	850×550×300	1,000×600×300	1,600×650×300	1,700×800×500	1,700×750×600
Mass(kg)	57	75	125	260/280	300

Selection of Optimum Generators

Example of AC arc welder

● AC arc welder is in general single phase load. So when a three phase generator is used for single phase load, it shall be equally connected to three phase.

● Three times more generating power is required for single load welding.

Generators are capable of operating following numbers of arc welders.

Model	SDG25		SDG45		SDG60		SDG100		SDG125		SDG150		SDG220		SDG300		SDG400		SDG500		SDG610		SDG800	
Frequency(Hz)	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60	50	60
180A	1	1	3	3	3	5	7	8	10	12	13	14	18	20										
200A		1	2	2	3	4	6	6	8	9	10	11	15	16										
250A			2	2	3	3	5	6	7	8	9	10	14	15										
300A				1	2	2	3	3	5	6	6	7	10	11	14	17	19	21	24	27	30	33	35	39
400A						1	2	3	3	3	5	5	6	7	9	12	13	14	16	19	21	24	25	27
500A								2	3	3	3	3	5	6	7	10	11	12	13	15	17	18	20	23

Note:Numbers of welders in the above table are for such ones without condensers equipped for reference purpose only. When using generators for extremely low efficientwelders, reduce the numbers of welders. When using generators for AC arc welders equipped with condenser, it is necessary to be very careful for self-exciting phenomena (Output voltage of generator extremely increases in case of no load or light load).
The above table shows the numbers of welders when operating 40%. In case of more Percentage than 40%, reduce the numbers of welders. When using generators for more welders than 2 units , connect evenly it to each welder, not concentrating one unit only.

Example of electric motors
(three-phase squirrel-cage motor)

Engine generators are used for large and small various type electric motors.

In general capacity of electric motor is specified in kW or PS.

This shows motor output capacity, not motor input capacity or not required to operate motor (machine). The relation between motor output and input is shown in the following formula.

1 PS = 0.7355 kW

Efficiency = 90% (three phase induction motor)

Power factor = 0.8 (three phase induction motor)

$$\frac{\text{Output(kW)}}{\text{Efficiency}} = \frac{0.7355 \times \text{Output(PS)}}{\text{Efficiency}} = \text{Input(kW)}$$

$$\frac{\text{Input(kW)}}{\text{Power factor}} = \text{Input(kVA)}$$

Motor starting capacity

Model		SDG13		SDG25		SDG45		SDG60		SDG100		SDG125		SDG150	
Frequency(Hz)		50	60	50	60	50	60	50	60	50	60	50	60	50	60
Generator(kVA)		10.5	13	20	25	37	45	50	60	80	100	100	125	125	150
Motor capacity	Direct start Simultaneously(kW)	3.4	3.9	5.6	6.5	10.3	12.0	14.6	16.3	22.4	27.5	30.1	37.0	37.0	43.9
	Direct start By turns(kW)	6.5	7.7	13.0	16.2	24.0	29.2	32.4	39.0	51.9	64.9	64.9	81.2	81.2	97.2
	λ-Δ start(open)(kW)	5.2	5.8	8.4	9.7	15.5	18.1	19.4	24.5	33.5	41.3	45.2	55.5	55.5	65.8
	λ-Δ start(closed)(kW)	6.5	7.7	13.0	16.2	24.0	30.1	32.4	39.0	51.9	64.9	64.9	81.1	81.1	97.2

Model		SDG220		SDG300		SDG400		SDG500		SDG610		SDG800	
Frequency(Hz)		50	60	50	60	50	60	50	60	50	60	50	60
Generator(kVA)		200	220	270	300	350	400	450	500	555	610	700	800
Motor capacity	Direct start Simultaneously(kW)	58	65	78	88	112	125	138	156	155	163	219	250
	Direct start By turns(kW)	126	143	162	194	228	260	292	324	357	390	454	518
	λ-Δ start(open)(kW)	88	98	118	132	168	187	206	234	232	245	326	372
	λ-Δ start(closed)(kW)	126	143	162	194	227	260	292	324	357	390	454	518

∗ The motor capacities in the above table are only for reference purpose. The generator capacities vary upon instantaneous voltage drop, motor start class, efficiency, old and new type machine.

● The instantaneous voltage drop when motor starts shall be within 30% of no load voltage.

● Motor starting kVA shall be 7 kVA per one (1) kW.

● Motor efficiency shall be 85% and load 90%.

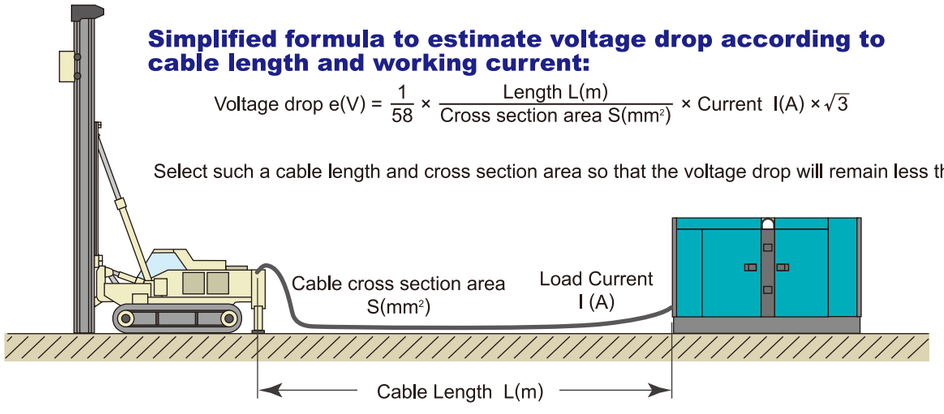
● When operating many motor loads (starting by turns one by one) and total capacity of the loads within the values in the above table, it can operate as many loads as expected. But the total capacity of the motors which are operated first shall be within the capacity at direct start instantaneous start.

● The engine load of the engine complete with turbo-charger sometimes may be influenced by engine net average efficient pressure.

Simplified formula to estimate voltage drop according to cable length and working current:

$$\text{Voltage drop } e(V) = \frac{1}{58} \times \frac{\text{Length } L(m)}{\text{Cross section area } S(mm^2)} \times \text{Current } I(A) \times \sqrt{3}$$

Select such a cable length and cross section area so that the voltage drop will remain less than 5%.



List of current values at a glance

Unit: ampere (A)

Model		SDG13	SDG25	SDG45	SDG60	SDG100	SDG125	SDG150	SDG220	SDG300	SDG400	SDG500	SDG610	SDG800
50Hz	200V	30.3	57.7	107	144	231	289	361	577	779	1,010	1,299	1,602	2,021
	380V	16.0	30.4	56.2	76.0	122	152	190	296	410	532	684	843	1,063
	400V	15.2	28.9	53.4	72.2	115	144	180	289	390	505	650	801	1,010
60Hz	220V	34.1	65.6	118	157	262	328	394	577	787	1,050	1,312	1,600	2,100
	440V	17.1	32.8	59.0	78.7	131	164	197	289	394	525	656	800	1,050

List of Neutral Point (N(O) terminal) Allowable Power

Model	SDG13		SDG25		SDG45		SDG60		SDG100		SDG125		SDG150	
Frequency(Hz)	50	60	50	60	50	60	50	60	50	60	50	60	50	60
● 200/220V														
Voltage(V)	115	127	115	127	115	127	115	127	115	127	115	127	115	127
Allowable ampere 3 phase average(A) ∗1	24.2	27.3	46.2	52.5	85.6	94.4	115	126	185	210	231	262	289	315
Output ratio	80 ∗2													
Allowable ampere Single phase(A)	30.3	34.1	57.7	65.6	107	118	144	157	231	262	289	328	361	394
Output ratio	100 ∗2													
● 400(380)/440V														
Voltage(V)	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254
Allowable ampere 3 phase average(A) ∗1	12.2 (12.8)	13.7	23.1 (24.3)	26.2	42.7 (45.0)	47.2	57.8 (60.8)	63.0	92.0 (96.8)	105	115 (122)	131	144 (151)	158
Output ratio	80 ∗2													
Allowable ampere Single phase(A)	15.2 (16.0)	17.1	28.9 (30.4)	32.8	53.4 (56.2)	59.0	72.2 (76.0)	78.7	115 (121)	131	144 (152)	164	180 (189)	197
Output ratio	100 ∗2													

Model	SDG220		SDG300		SDG400		SDG500		SDG610		SDG800	
Frequency(Hz)	50	60	50	60	50	60	50	60	50	60	50	60
● 200/220V												
Voltage(V)	115	127	115	127	115	127	115	127	115	127	115	127
Allowable ampere 3 phase average(A) ∗1	462	462	390	394	505	525	650	656	801	800	1,010	1,050
Output ratio	80 ∗4		50 ∗3									
Allowable ampere Single phase(A)	577	577	390	394	505	525	650	656	801	800	1,010	1,050
Output ratio	100 ∗2		50 ∗3									
● 400(380)/440V												
Voltage(V)	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254	231 (219)	254
Allowable ampere 3 phase average(A) ∗1	231 (243)	231	312 (328)	315	404 (426)	420	520 (547)	525	641 (674)	640	808 (851)	840
Output ratio	80 ∗4											
Allowable ampere Single phase(A)	289 (304)	289	390 (410)	394	505 (532)	525	650 (684)	656	801 (843)	800	1,010 (1,064)	1,050
Output ratio	100 ∗2											

∗1 When you use single phase with N(O) terminal at the same time for each phase from Model SDG13S/25S/AS to SDG150S/AS,the unbalance of current value for each phase should be kept within 50%.When the current values exceed the limit, please note that the output voltages for each phase may be unbalanced.

∗2 Output ratio shows an allowable output figure of the rated current. (Rated output 100% = it is allowable to use the rated current value until 100%.)

∗3 Output ratio shows an allowable output figure of the rated current. (Rated output 50% = it is allowable to use the rated current value until 50%.)

∗4 Output ratio shows an allowable output figure of the rated current. (Rated output 80% = it is allowable to use the rated current value until 80%.)

Leakage Protection Device and Grounding Method

Leakage Protection Device

This machine is equipped with a leakage relay which detects leakage caused by a defective insulation of working load to prevent an accident such as an electric shock by shutting down the circuit. However, for additional safety, install ground fault circuit interrupter (GFCI) for each load equipment close to the load equipment. The sensitivity current of the leakage relay is 30mA.

Grounding Method

<Procedure>

Connect a lead wire fitted with a ground rod to the leakage relay grounding terminal (E) of the three-phase output terminal board.

1.Connect the generator machine ground terminal of the package to ground.

2.Be sure to ground the package of the load equipment as well.

3.These grounding must be carried out in accordance with local regulations.