

**Diesel Engine Generator
With Built-in Inverter System
V-Pump series**

AIRMAN®

■Specification

Model		V-Pump15 (SDG25LXV-5B1)				V-Pump30 (SDG45LXV-5B2)				V-Pump37 (SDG60LXV-5B1)				
Item		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	
3 phase 4 wires	Output	kVA	20	25	20	25	37	45	37	45	50	60	50	60
	Voltage	V	200	220	400	440	200	220	400	440	200	220	400	440
	Ampere	A	57.7	65.6	28.9	32.8	107	118	53.4	59.0	144	157	72.2	78.7
Single Phase 3 wires	Output	kVA	11.5	14.4	-	-	21.4	26.0	-	-	30.0	36.0	-	-
	Voltage	V	100/200	110/220	-	-	100/200	110/220	-	-	100/200	110/220	-	-
	Ampere	A	57.7×2/57.7	65.6×2/65.6	-	-	107×2/107	118×2/118	-	-	150×2/150	164×2/164	-	-
Single-phase auxiliary output	Voltage	V	100	110	-	-	100	110	-	-	100	110	-	-
	Outlets	kVA	1.5×6	1.65×6	-	-	1.5×6	1.65×6	-	-	1.5×2	1.65×2	-	-
Power factor	P	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 V3800-T-K3A				ISUZU BJ-4JJ1X				
System		Swirl Chamber				Swirl Chamber, Turbo-Charged				Direct-Injection, Turbo-Charged, Intercooled				
Total displacement	L	2,434				3,62				2,999				
Rated output	kW[PS]	19.1[26.0]	23.7[32.2]	19.1[26.0]	23.7[32.2]	35.0[47.6]	42.5[57.8]	35.0[47.6]	42.5[57.8]	51.6[70.2]	61.0[82.9]	51.6[70.2]	61.0[82.9]	
Rated 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	
Fuel tank capacity	L	180				355				420				
Fuel consumption	At 50% load	L/hr	3.0	3.8	3.0	3.8	4.9	6.1	4.9	6.1	5.7	7.1	5.7	7.1
	At 75% load	L/hr	4.0	5.0	4.0	5.0	6.9	8.4	6.9	8.4	8.1	10.2	8.1	10.2
Engine oil Volume	L	9.5				13.2				15.0				
Coolant Volume	L	7				11				13.2				
Battery × unit		80D26R×1				80D26R×1				95D31R×1				
●Dimension & Weight														
Length × Width × Height	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, etc.														
Sound power level LwA	dB	90				89				89				
Sound pressure level*	dB(A)	60	63	60	63	57	60	57	60	60	63	60	63	
Emissions control		JPN Stage 3												

* Sound power level is measured at 60Hz, no load and rated speed of revolution.
* Sound pressure level is measured at 7m in 4 directions average.

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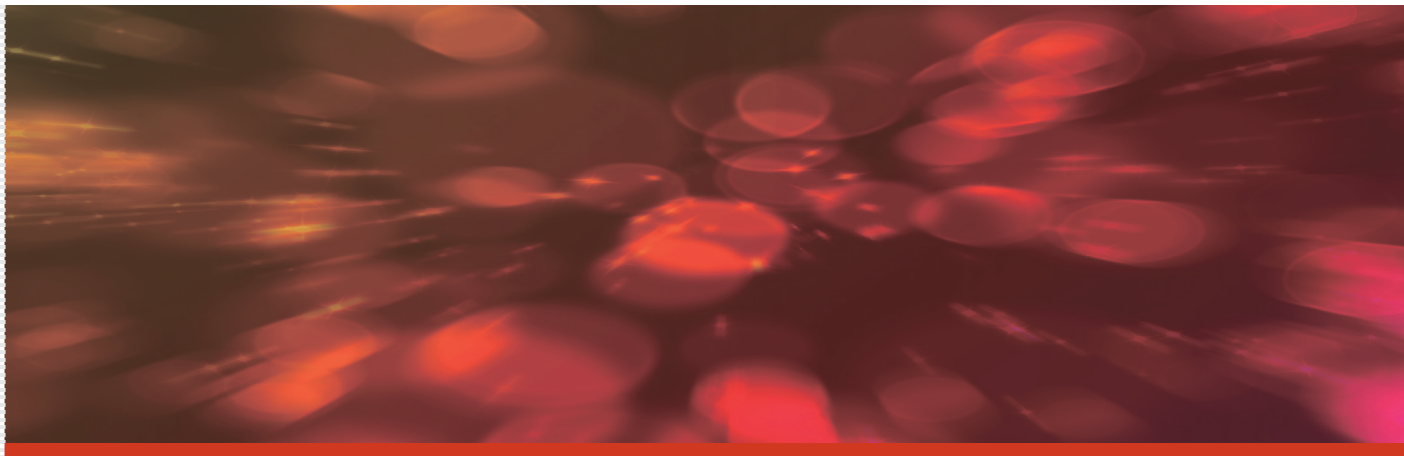
OUT HEAD OFFICE AND PLANT ARE CERTIFIED
TO BOTH ISO 9001 AND ISO 14001.



Nigata plant:
Shimo Aozu,
Tsubame-city,
Niigata-prefecture,
Japan

SAFETY

- Operate safely in accordance with proper operation manual.
- To prevent trouble and accidents, perform daily and preventive maintenance checks without fail.



V-Pump15



V-Pump37

HOKUETSU INDUSTRIES CO., LTD.

New Power Generation Solution !!

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

But Now

Generator Capacity = Motor Starting Load

Featuring a built-in inverter, this model is perfect for submersible pumps!!

The built-in inverter controls generator output boosts motor starting performance. Additionally, the inverter improves fuel economy by regulating the system more efficiently.

Patented in Japan

Built-in Inverter

Leak Guard

Large Capacity Fuel Tank



VPump 15
INVERTER

VPump 30
INVERTER

NEW VPump 37
INVERTER

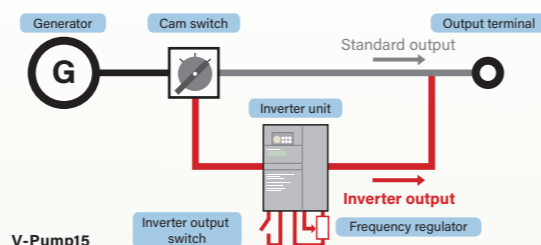
V - Pump 30

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



V-Pump

The V-Pump is an engine generator combined with an internal inverter unit. AC power supplied by the alternator is converted to DC and then supplied to load as AC via the inverter.



Leak-guard

The environmentally friendly leak-guard system is a full fluid containment system for all engine fluids.

Extended Operation

An over-sized fuel tank allows for extremely long run times, even without an external fuel tank.

* Not guarantee all oil leaks.

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

Benefits and features

Starting Current Regulation

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

Normally, a motor load would require a generator capacity 3 times larger because of increased the starting load. By gradually increasing from a low frequency to rated speed, the V-Pump reduces starting current and improves motor starting capabilities.

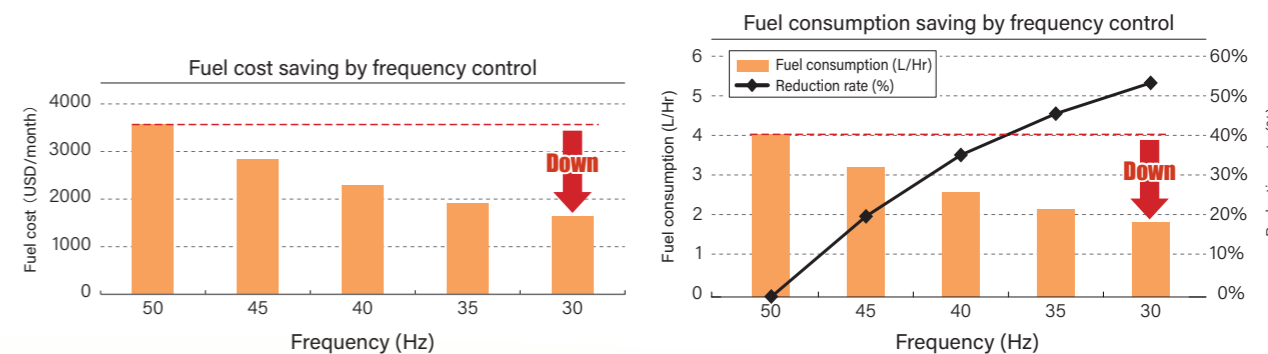
Submersible pump	3 inch 3.7kW	4 inch 7.5kW	6 inch 11kW	8 inch 15kW	6 inch×2 22kW	6 inch×2+4 inch 29.5kW	6 inch×2+8 inch 37kW
Standard	SDG13S	SDG25S	SDG45S	SDG60S	SDG100S	SDG125S	SDG150S
V-Pump	V-Pump15		V-Pump30		V-Pump37		

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 (X_d') 0.2, voltage drop rate (ΔV) 30%.

Frequency Control

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.

[In Japan's case]
● Model: V-Pump15 ● Load: 15kW(8 inch) submersible pumps (For 50Hz motor)
● Diesel oil cost: 1.2USD/L ● Operating time: 24hr/day, 30days/month



Compact Size

The compact V-Pump series provides **the same performance at half the size** of a traditional generator.

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.



Cam Switch