



Denyo® **Xtreme** Diesel Generators

Powered by

ISUZU
Kubota

Xtreme Reliability –

Denyo are renowned as a world leading manufacturer of diesel generators. Designed and engineered for use in rental, mining and construction.

Xtreme Back Up –

Denyo are renowned as one of the most reliable generators brands in the world. This, combine with the unparalleled support provided by Blue Diamond across Australia, means there is simply no better option available.

All units come with a 2 year, 1000 hour warranty

Xtreme Efficiency –

Using only the best premium Japanese engines such as Kubota and Isuzu.

Xtreme Mobility –

Exceptionally compact and lightweight.

Xtreme Performance –

Maintenance Free brushless Alternator and minimal soundwave distortion for sensitive equipment use.

Xtreme Protection –

All Weather construction to eliminate rain penetration of the machine.

Xtreme Environmental Awareness –

Extremely quiet and the among most fuel efficient generators available anywhere in the world



SPECIALISED POWER SOLUTIONS

Blue Diamond Machinery specialises in Power and works closely with our customers to ensure the right solution is provided.

We aim to build long lasting relationships with quality partners to ensure a good outcome on all projects we are involved with.

CORE CAPABILITIES:

- Supply, Installation and Support of Diesel Generators from 6KVA – 2000KVA anywhere in Australia
- Paralleling and Generator Synchronisation equipment installed to suit
- Fabrication and customisation of Fuel tanks, Canopies, Skids, Mine Site Requirements
- Mine Specification for Diesel Generators and Portable Diesel Compressors
- Tailored Generator and Compressor Service Plans including on site servicing
- Supply of Spare Parts for Denyo, Airman, Cummins, Kubota, Perkins, Atlas Copco and More
- Emergency Service or Repair anywhere in Australia



• Brad and Justin Pitts, Chris Simpson - owners Blue Diamond Machinery





DENYO POWER GENERATORS are partners of our civil life

Denyo power generators are capable of generating power in various situations where public power supply is not available. They contribute to build infrastructure projects around the world. In a variety of situations like civil engineering and construction works.

Denyo engine power generators are capable of providing power at various sites where power is required like civil work and construction sites. As well as emergency power source for critical equipment like in hospitals, industries where refrigeration is required, construction and mining operations.



Built Tough.
Mine Spec Ready.

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All units come with a 2 year, 1000 hour warranty



Ready to transport anytime, anywhere.



As the power source in the construction site.



Renowned reliability



PERFORMANCE FEATURES

HIGH-PERFORMANCE

The Denyo generating system guarantees the following levels of performance:

TEMPERATURE RISE: 100°C temperature rise at 40°C ambient (JEC2130).

INSULATION: ClassF (JEC2130).

VOLTAGE REGULATION: Within $\pm 0.5\%$ (except DCA-400SP)

FREQUENCY REGULATION: Within 5.0% through no-load to full-load.

VOLTAGE WAVEFORM: Deviation Factor of open-circuit terminal voltage does not exceed 0.06.
Telephone Influence Factor (TIF) is less than 50.

ELECTROMAGNETIC INTERFERENCE

LEVEL: Attenuated to meet most commercial requirements.

INSULATION RESISTANCE: Higher than 3 Mega-ohms, measured between armature windings and earth, field windings and earth, field control circuit and earth.

- The innovative excitation system* fitted on all models, in conjunction with the AVR and advanced brushless generator, provides fast voltage regulation in response to load variations, enabling use soon after start up. This system provides output stability during load variations.

*U.S. Patent No. 4268788

- Synchronous brushless alternator for minimal wear.
- Designed to function in all climatic conditions.

- Will safely power the most sensitive loads, such as thyristors, invertors and computer systems, without the risk of damage to these loads, thanks to the high level electrical characteristics of the generator's output.

ECONOMICAL PERFORMANCE

- Easy starting and quick response.
- Utilising highly reliable diesel engines with low fuel consumption, manufactured by Japan's leading engine manufacturers.

UNSURPASSED FLEXIBILITY

To meet today's varying needs successfully, your equipment must be as flexible as you are. The Denyo DCA Series generator range provides you with the flexibility to get the job done simply and economically, without any delays.

TRUE HEAVY-DUTY PERFORMANCE

For a particular job, you may need that extra power from your generator. With the DCA Series, the standby power rating (110% or 105% load except DCA- 610SPM) can be used continuously for 1 hour in every 8 hours of continuous operation. This extra power performance of Denyo generators means you can get the job done, without the inconvenience of using another generator.

PARALLEL OPERATION FEATURE

(except for DCA-100 and below)

From time to time, at a construction site, mine site or in other situations, a large temporary power supply is required for a particular job. To meet this requirement Denyo's DCA Series generators incorporate a built-in parallel operation drive system, allowing you to create a large capacity generating plant on-site, without the need to procure any other equipment.

DUAL VOLTAGE SYSTEM

(optional for DCA-25USI3, 45ESI, 45USI2, 60ESH, 60USH)

For companies that operate internationally or have motors that require power at different voltages, a different generator is usually required for each voltage setting. However, the DCA Series generators are equipped with a dual voltage system, so one generator can be used to power motors with different voltage settings. An extremely convenient feature.

ALL MODELS CAN RUN AT 50Hz/60Hz

Simply adjust the engine speed on the control panel to use a DCA Series generator at either 50 Hz or 60 Hz.

EXTREMELY QUIET OPERATION

In urban areas and at the worksite, there is an ever increasing demand for reduced noise pollution. In response to these concerns, Denyo has pioneered a soundproof and super soundproof range of generators. The DCA Series generators are extremely quiet when operating at full load, even though all soundproof models are compactly designed. Check the specifications for the sound level of each model.



DENYO GENERATORS: DESIGNED TO BE TOTALLY USER-FRIENDLY

MAINTENANCE MADE SIMPLER

- All daily maintenance requirements can be performed from one side of the machine. The large doors gives you full access to the engine.
- External drain plugs for oil, fuel and water are fitted for convenience in performing routine maintenance.
- Large fuel gauge is fitted for simple viewing.
- For major engine overhauls, the bonnet can be simply unbolted, which allows full access to the engine.



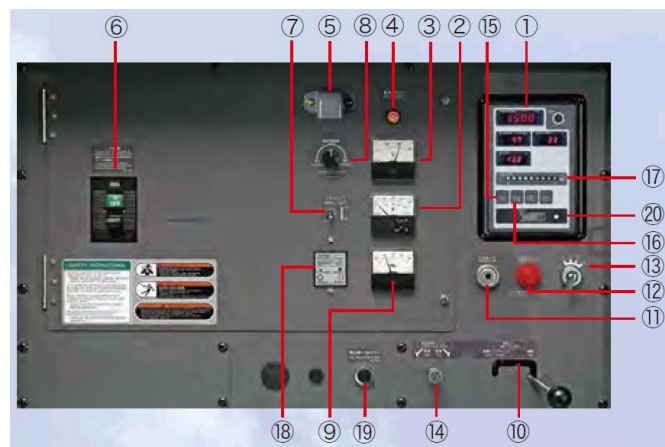
TRANSPORTABILITY

- The new designs of the DCA Series range have achieved significant size and weight reductions over previously produced models, through improvements in coupling techniques and alternator design.
- The sturdy weatherproof steel bonnet on a heavy-duty steel skid base allows easy handling by a forklift.
- The balance point lifting hook (lug) fitted on the roof of each machine facilitates easy transportation using a crane.
- All models are modular designed, so that generators can be stacked, thereby making the best use of your valuable storage area.



FULLY APPOINTED CONTROL PANELS FOR EASE OF USE AND MONITORING GENERATOR PERFORMANCE.

- | | |
|----------------------|------------------------------------|
| ① Indicator | ⑪ Preheat Lamp |
| ② AC Ammeter | ⑫ Emergency Stop Button |
| ③ Voltmeter | ⑬ Starter Switch |
| ④ Pilot Lamp | ⑭ Frequency Adjust Screw |
| ⑤ Panel Light | ⑮ Warning Lamp (Oil Pressure) |
| ⑥ Circuit Breaker | ⑯ Warning Lamp (Water Temperature) |
| ⑦ Panel Light Switch | ⑰ Fuel Level Indicator |
| ⑧ Voltage Regulator | ⑱ Earth Leakage Relay |
| ⑨ Frequency Meter | ⑲ Fuel Priming Pump Button |
| ⑩ Throttle Lever | ⑳ Hour Meter |



Provision of Various Protective Devices and Warning Lamps

- A circuit breaker is provided to protect the generator from shorting of the load circuit or an overload.
- An emergency stop device is provided to automatically detect an engine malfunction and shut down the unit, as well as a warning lamp.





SPECIFICATION TABLE (13kVA ~ 45kVA CLASS SOUNDPROOF TYPE)								
MODEL	DCA-13LSK	DCA-13LSY	DCA-15LSK	DCA-20LSK	DCA-25ESK	DCA-25ESI	DCA-35SPK	DCA-45ESI

ALTERNATOR

Frequency		Hz		50	60	50	60	50	60	50	60	50	60	50	60	50	60
Output Rating(kVA)	Continuous	10.5	13	10.5	13	12.5	15	17	20	20	25	20	25	30	35	37	45
	Standby	11	13.7	11.5	14	13.8	16.5	18.7	22	22	27.5	22	27.5	31.5	36.75	38.9	47.3
No.of Phases		3-Phase,4-Wire															
Rated Voltage*1	V	① or ③ Single Voltage								② Dual Voltage				① or ③ Single Voltage		② Dual Voltage	
Power Factor		0.8(Lagging)															
Voltage Regulation	%	Within ±0.5															
Excitation		Brushless,Rotating Exciter (With A.V.R)															
Insulation		Class F														Class H	

ENGINE

Maker & Model		Kubota DI403-K3A		Yanmar 3TNV84-G		Kubota DI703-K3A		Kubota V2203-K3A		Kubota V2203-KB		Isuzu AA-4LE2		Kubota V3300-EB		Isuzu BB-4JG1T	
Type		Inlined, Swirl Chambered		Inlined, Direct Injected		Inlined, Swirl Chambered						Inlined, Direct Injected		Inlined, Swirl Chambered		Inlined, Direct Injected, Turbocharged	
Output Rating	PS/rpm	13.7/1500	16.9/1800	15.3/1500	18.3/1800	16.9/1500	20/1800	23.1/1500	27/1800	25/1500	32.2/1800	26/1500	32/1800	38.5/1500	44.1/1800	46.5/1500	56/1800
	kW/rpm	10.2/1500	12.4/1800	11.3/1500	13.5/1800	12.4/1500	14.7/1800	17.0/1500	19.9/1800	18.4/1500	23.7/1800	19.1/1500	23.5/1800	28.3/1500	32.4/1800	34.2/1500	41.2/1800
No. of Cylinders-Bore×Stroke	mm	3-80×92.4		3-84×90		3-87×92.4		4-87×92.4		4-87×92.4		4-85×96		4-98×110		4-95.4×107	
Piston Displacement	L	1.393		1.496		1.647		2.197		2.197		2.179		3.318		3.059	
Fuel		ASTM No. 2 Diesel Fuel or Equivalent															
Fuel Consumption*2	L/h	2.4	2.9	2.1	2.6	2.8	3.4	3.6	4.3	3.9	4.9	3.3	4.2	5.8	6.9	6.8	8.6
Lube Oil Sump Capacity	L	5.6		6.7		5.6		7.6		7.6		8.5		13.2		10	
Coolant Capacity	L	6.4		3.9		6.4		7.9		7.9		6.6		10.5		10.9	
Battery×Quantity		80D26R×1												95D31R×1			
Fuel Tank Capacity	L	62										70		82		100	

UNIT

Dimensions	Length mm	1390	1390	1390	1540	1540	1540	1900	1900
	Width mm	650	650	650	650	650	680	860	880
	Height mm	900	900	900	900	900	900	990	1250
Dry Weight	kg	503	490	516	580	591	564	890	960

SOUND LEVEL

7m dB (A) 1500/1800 rpm (min ⁻¹)*3	58	61	61	62	60	63	61	64	62	64	60	64	60	63	60	62
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*1 Rated Voltage Classification

Frequency	50Hz	60Hz
①	190~220V	200~240V
②	190~220V 380~440V	190~240V 380~480V
③	380~440V	380~480V
④	190~220V (380~440V)	200~240V (380~480V)

() indicates options.

*2 Fuel consumption is based on operation at 75% load.

*3 Sound level reflects high-speed no-load operation and is calculated by averaging the measurements at four points, each 7 meters from the source.

*4 Depending on location and area, output voltage may differ from values listed in catalog.



DCA-13LSK



DCA-15LSK



DCA-25ESK



DCA-25ESI



DCA-35SPK



DCA-45ESI



SPECIFICATION TABLE (60kVA-150kVA CLASS SOUNDPROOF TYPE)						
MODEL	DCA-60ESH	DCA-60ESI2	DCA-75SPI	DCA-100ESI	DCA-125SPK3	DCA-150ESK

ALTERNATOR

Frequency	Hz	50	60	50	60	50	60	50	60	50	60	50	60
Output Rating(kVA)	Continuous	50	60	50	60	65	75	80	100	100	125	125	150
	Standby	55	66	55	66	68.3	78.8	88	110	110	138	138	165
No. of Phases		3-Phase, 4-Wire											
Rated Voltage*1	V	④ Single Voltage (Dual Voltage is an option) ② Dual Voltage											
Power Factor		0.8(Lagging)											
Voltage Regulation	%	Within ±0.5											
Excitation		Brushless, Rotating Exciter (With A.V.R)											
Insulation		Class F	Class H	Class F									

ENGINE

Maker & Model		Hino W04D-TG		Isuzu BB-4BG1T		Isuzu A-6BG1		Isuzu DD-6BG1T		Komatsu SA6D102E-1-A		Komatsu SAA6D102E-2-D	
Type		Inlined,Direct Injected, Turbocharged				Inlined,Direct Injected		Inlined,Direct Injected, Turbocharged		Inlined,Direct Injected Turbocharged, Aftercooled			
Output Rating	PS/rpm	66/1500	78/1800	65/1500	77/1800	80/1500	93/1800	100/1500	124/1800	133/1500	157/1800	153/1500	183/1800
	kW/rpm	48.5/1500	57.4/1800	47.9/1500	57/1800	58.8/1500	68.4/1800	73.6/1500	91.3/1800	97.8/1500	115.5/1800	113/1500	135/1800
No.of Cylinders-Bore×Stroke	mm	4-104×118		4-105×125		6-105×125		6-105×125		6-102×120		6-102×120	
Piston Displacement	L	4.009		4.329		6.494		6.494		5.880		5.880	
Fuel		ASTM No. 2 Diesel Fuel or Equivalent											
Fuel Consumption*2	L/h	8.8	10.6	8.7	11.0	10.8	12.5	13.5	17.4	15.5	20.1	20.6	25.0
Lube Oil Sump Capacity	L	16.5		13.2		19.3		22.4		22		22	
Coolant Capacity	L	12.2		15.4		22.9		22.0		23.9		28.4	
Battery×Quantity		80D26R×2		95D31R×1		95E41R×2		95D31R×2		95E41R×2			
Fuel Tank Capacity	L	125		125		155		225		250			

UNIT

Dimensions	Length mm	2050	2200	2630	2750	3000	3250
	Width mm	880	880	1000	1050	1080	1080
	Height mm	1250	1250	1300	1350	1500	1500
Dry Weight	kg	1240	1120	1590	1730	2120	2390

SOUND LEVEL

7m dB (A) 1500/1800 rpm (min ⁻¹)*3	61	64	61	64	61	63	59	61	63	66	62	65
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*1 Rated Voltage Classification

*4

	50Hz	60Hz
②	190~220V 380~440V	190~240V 380~480V
④	190~220V (380~440V)	200~240V (380~480V)

() indicates options.

*2 Fuel consumption is based on operation at 75% load.

*3 Sound level reflects high-speed no-load operation and is calculated by averaging the measurements at four points, each 7 meters from the source.

*4 Depending on location and area, output voltage may differ from values listed in catalog.



DCA-60ESI2



DCA-75SPI



DCA-100ESI



DCA-125SPK3



DCA-150ESK

SPECIFICATION TABLE		(220kVA-600kVA CLASS SOUNDPROOF TYPE)											
MODEL		DCA-220ESM	DCA-220SPK3	DCA-300SPK3	DCA-400SPK	DCA-500SPK	DCA-600SPV						

ALTERNATOR

Frequency		Hz	50	60	50	60	50	60	50	60	50	60	50	60
Output Rating(kVA)	Continuous		200	220	200	220	270	300	350	400	450	500	550	600
	Standby		220	242	220	242	297	330	385	440	495	550	605	660
No.of Phases			3-Phase,4-Wire											
Rated Voltage*1		V	②Dual Voltage											
Power Factor			0.8(Lagging)											
Voltage Regulation		%	Within ±0.5						Within ±1.0		Within ±0.5			
Excitation			Brushless,Rotating Exciter (With A.V.R)											
Insulation			Class F											

ENGINE

		Mitsubishi 6D24-TLE2B		Komatsu S6D125E-2-A		Komatsu SA6D125E-2-A		Komatsu SA6D140-A		Komatsu SA6D170-B		Volvo TAD1642GE	
Type		Inlined,Direct Injected, Turbocharged,Aftercooled		Inlined,Direct Injected, Turbocharged		Inlined,Direct Injected,Turbocharged,Aftercooled							
Output Rating	PS/rpm	246/1500	270/1800	242/1500	277/1800	316/1500	350/1800	421/1500	485/1800	520/1500	580/1800	659/1500	723/1800
	kW/rpm	181/1500	199/1800	178/1500	204/1800	232/1500	257/1800	310/1500	357/1800	382/1500	427/1800	485/1500	532/1800
No.of Cylinders-Bore×Stroke mm		6-130×150		6-125×150				6-140×165		6-170×170		6-144×165	
Piston Displacement L		11.940		11.040				15.240		23.150		16.120	
Fuel		ASTM No. 2 Diesel Fuel or Equivalent											
Fuel Consumption*2 L/h		33.7	38.1	31.5	35.7	43.6	50.0	52.1	60.8	69.5	83.1	81.2	91.7
Lube Oil Sump Capacity L		37		42		62		74		119		48	
Coolant Capacity L		42		36		35		68.4		92.5		93	
Battery×Quantity		145G51×2 or 155G51×2						190H52×2 or 210H52×2					
Fuel Tank Capacity L		380				490							

UNIT

Dimensions	Length mm	3700	3650	3750	4200	5480(5000)*3	5180(4700)*3
	Width mm	1300	1300	1400	1400	1650	1650
	Height mm	1750	1750	1800	2100	2400	2400
Dry Weight	kg	3630	3670	4160	5420	8540	7535

SOUND LEVEL

7m dB (A) 1500/1800 rpm (min ⁻¹)*4	61	63	63	65	68	71	67	68	68	71	72	75
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*1 Rated Voltage Classification

*2 Fuel consumption is based on operation at 75% load.

*3 Shown unit lengths are with visor. (without visor)

*4 Sound level reflects high-speed no-load operation and is calculated by averaging the measurements at four points, each 7 meters from the source.

*5 Depending on location and area,output voltage may differ from values listed in catalog.

Frequency	50Hz	60Hz
②	190 ~ 220V 380 ~ 440V	190 ~ 240V 380 ~ 480V



DCA-220ESM



DCA-220SPK3



DCA-400SPK



DCA-500SPK

TRAILER

Trailers can be fitted to generators to facilitate on-site movement.
(trailers for DCA-60 and below are two-wheel; those for DCA-75SP through 400 are four-wheel)
Bolt connectors make mounting and dismounting simple.



HOW TO SELECT A GENERATOR

Range of motor capacities that can be used with Denyo generators.
Choosing generator output according to motors and other loads is made simple by referring to the motor capacity range and generator output in this table.

Item \ Model		DCA-13		DCA-15		DCA-20		DCA-25		DCA-35		DCA-45		DCA-60	
Frequency(Hz)		50	60	50	60	50	60	50	60	50	60	50	60	50	60
EG capacity(kVA)		10.5	13	12.5	15	17	20	20	25	30	35	37	45	50	20.5
Motor capacity(kW)	Direct startup	3.4	4.1	4	5	5.4	6.3	6.3	7.6	9.4	11.6	12.3	14.9	16	30.8
	Y-Δ startup(1)	5.2	6.4	6	7.5	8.2	9.5	9.5	11.4	14.3	17.5	18.5	22.4	24	46
	Y-Δ startup(2)	8.3	10.2	9.6	11.9	13.1	15.7	15.7	19.5	23.1	27.7	28.2	34.3	38.4	

Item \ Model		DCA-75		DCA-100		DCA-125		DCA-150		DCA-220		DCA-300		DCA-400	
Frequency(Hz)		50	60	50	60	50	60	50	60	50	60	50	60	50	400
EG capacity(kVA)		65	75	80	100	100	125	125	150	200	220	270	300	340	136
Motor capacity(kW)	Direct startup	21.5	25	27.2	34.5	34.5	42.5	42.5	51	68	76	91	102	115	204
	Y-Δ startup(1)	32.3	37.5	40.8	51.8	51.8	63.8	63.8	76.5	102	114	136	153	173	308
	Y-Δ startup(2)	48.8	58	62	68	68	97	97	115	151	172	208	231	262	

Item \ Model		DCA-500		DCA-600/610		DCA-800		DCA-1100	
Frequency(Hz)		50	60	50	60	50	60	50	60
EG capacity(kVA)		450	500	550/554	600/610	700	800	1000	1100
Motor capacity(kW)	Direct startup	155	175	185	205	210	243	306	337
	Y-Δ startup(1)	233	263	278	308	315	365	459	505
	Y-Δ startup(2)	351	390	432	460	508	575	734	808

Notes

- Momentary voltage drop when a motor starts up is assumed to be within 30% of no-load voltage.
- Motor startup kVA is assumed to be 7kVA per 1kW.
- Motor efficiency is assumed to be 85%, and load factor about 90%.
- Values shown for Y-Δ startup(1) and Y-Δ startup(2) are open and closed, respectively; needed generator capacity differs depending on startup state. Not appropriate for determining the capacity of emergency generating equipment (especially disaster-prevention generating equipment)

Motor usage examples in the above table are benchmark values: generator capacity will differ according to the required momentary voltage drop, motor load factor, and size of startup capacity, as well as motor age and efficiency.

