

**STANDBY
PRIME**

**60-100 kW
54-90 kW**

60 Hz

Model	Standby kW (kVA)	Prime kW (kVA)
D60-4S	60 (60)	54 (54)
D75-4S	75 (75)	67.5 (67.5)
D80-4	80 (100)	72 (90)
D90-4S	90 (90)	82 (82)
D100-4	100 (125)	90 (112.5)
D100-4S	100 (100)	90 (90)

Tier II EPA Approved, Emissions Certified

FEATURES

GENERATOR SET

- Complete system designed and built at ISO 9001 certified facilities
- Factory tested to design specifications at full load conditions

ENGINE

- Governor, electronic
- Electrical system, 12 VDC
- Cartridge type filters
- Battery rack and cables
- Coolant and lube drains piped to edge of base

GENERATOR

- Insulation system, class H
- Drip proof generator air intake (NEMA 2, IP23)
- Electrical design in accordance with BS5000 Part 99, EN61000-6, IEC60034-1, NEMA MG-1.33

CONTROL SYSTEM

- EMCP 3.1 digital control panel
- Vibration isolated NEMA 1 enclosure with lockable hinged door
- DC and AC wiring harnesses

MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base with lifting points
- Anti-vibration pads to ensure vibration isolation
- Complete OSHA guarding
- Stub-up pipe ready for connection to silencer pipework
- Flexible fuel lines to base with NPT connections

COOLING SYSTEM

- Radiator and cooling fan complete with protective guards
- Standard ambient temperatures up to 50° C (122° F)

CIRCUIT BREAKER

- UL/CSA listed
- 3-pole with solid neutral
- NEMA 1 steel enclosure, vibration isolated
- Electrical stub-up area directly below circuit breaker

AUTOMATIC VOLTAGE REGULATOR

- Voltage within $\pm 0.5\%$ 3-phase and $\pm 1.0\%$ single phase at steady state from no load to full load
- Provides fast recovery from transient load changes

EQUIPMENT FINISH

- All electroplated hardware
- Anticorrosive paint protection
- High gloss polyurethane paint for durability and scuff resistance

QUALITY STANDARDS

- BS4999, BS5000, BS5514, EN61000-6, IEC60034, NEMA MG-1.33, NFPA 110 (with optional equipment)

DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

WARRANTY

- All equipment carries full manufacturer's warranty.

OPTIONAL EQUIPMENT*

ENCLOSURE

- B Series weather protective enclosure (includes internal silencer system)
 - Single point lift
 - Panel viewing window
 - External emergency stop pushbutton
- Sound attenuated enclosure (includes internal silencer system)

SILENCER SYSTEM – OPEN UNIT

- Level 1 silencer
- Level 2 silencer
- Level 3 silencer
- Mounting kit
- Through-wall installation kits

ENGINE

- Battery heater
- Lube oil drain pump
- High lube oil temperature shutdown
- Lube oil sump heater

CIRCUIT BREAKER

- Auxiliary voltfree contacts
- Shunt trip (100+ amp breakers)

GENERATOR

- Anti-condensation heater
- Permanent magnet generator
- AREP excitation system (D80-4, D100-4)
- Generator upgrade 1 size (D80-4, D100-4)

CONTROL SYSTEM

- No control system
- EMCP 3.2 digital control panel

MOUNTING ACCESSORIES

- Seismic (Zone 4) vibration isolators

FUEL SYSTEM

- Metal fuel tank
- UL listed closed top-diked skid-mounted fuel tank base (12/24-hour capacity) with fuel alarm (low level/leak detected)
- Critical high fuel alarm
- Critical low fuel level shutdown

COOLING SYSTEM

- Coolant heater
- Low coolant temperature alarm
- Low coolant level shutdown
- Radiator transition flange

REMOTE ANNUNCIATORS

- 16-channel remote annunciator panel (supplied loose)

MISCELLANEOUS ACCESSORIES

- Toolkit
- Additional operator's manual pack
- Special enclosure color
- UL listing
- CSA certification
- French or Spanish language labels

EXTENDED SERVICE CONTRACTS

- Extended Service Coverage available

TESTING

- Factory witness test (restricted to 6 hours – full load, 1.0 pf)

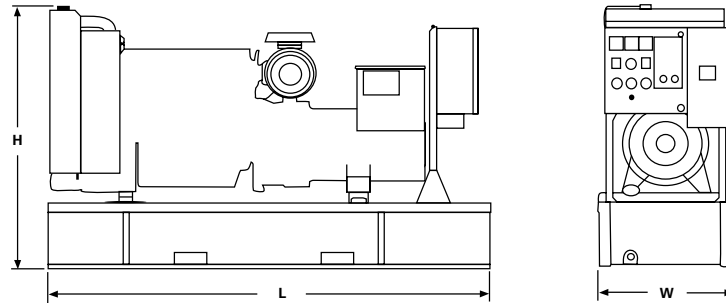
* Some options may not be available on all models.
Not all options are listed.

STANDBY
PRIME
60 Hz

60-100 kW
54-90 kW



GENERATOR SET DIMENSIONS AND WEIGHTS



Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight kg (lb)*
D60-4S	2347 (92.4)	1100 (43.3)	1321 (52.0)	1342 (2,959)
D75-4S	2347 (92.4)	1100 (43.3)	1321 (52.0)	1382 (3,047)
D80-4	2347 (92.4)	1100 (43.3)	1321 (52.0)	1432 (3,157)
D90-4S	2347 (92.4)	1100 (43.3)	1321 (52.0)	1432 (3,157)
D100-4	2347 (92.4)	1100 (43.3)	1321 (52.0)	1432 (3,157)
D100-4S	2347 (92.4)	1100 (43.3)	1321 (52.0)	1502 (3,311)

NOTE: General configuration not to be used for installation. See specific dimensional drawings for detail.

*Includes oil and coolant

SPECIFICATIONS



GENERATOR

Voltage regulation	± 0.5% 3-phase and ± 1.0% single phase at steady state from no load to full load
Frequency	± 0.25% for constant load, no load to full load
Waveform distortion	THD < 4%, at no load
Radio interference	Compliance with EN61000-6
Telephone interference	TIF < 50, THF < 2%
Overspeed limit	2250 rpm
Insulation	Class H
Temperature rise	Within Class H limits
Available voltages	1-phase – 120/240, 115/230, 110/220 3-phase – 277/480, 266/460, 120/240, 127/220, 120/208, 347/600
Deration	Consult factory for available outputs
Ratings	At 30° C (86° F), 152.4 m (500 ft), 60% humidity, 1.0 pf (1-phase), 0.8 pf (3-phase)



ENGINE

Manufacturer	Caterpillar
Type	4-cycle
Bore – mm (in)	105.0 (4.13)
Stroke – mm (in)	127.0 (5.00)
Governor Type	Electronic
Class	G2
Piston speed – m/sec (ft/sec)	7.62 (25.0)
Engine speed – rpm	1800
Air cleaner type	Dry, replaceable paper element type with restriction indicator

D80-4, D60-4S, D75-4S – C4.4

Aspiration	Turbocharged
Cylinder configuration	In-line 4
Displacement – L (cu in)	4.4 (269)
Compression ratio	19.3:1
Max power at rated rpm – kW (hp)	
Standby	94 (126)
Prime	85 (114.5)
BMEP – kPa (psi)	
Standby	1422 (206)
Prime	1292 (187)
Regenerative power – kW (hp)	13.8 (18.5)

D90-4S, D100-4, D100-4S – C4.4

Aspiration	Turbocharged
Cylinder configuration	In-line 4
Displacement – L (cu in)	4.4 (269)
Compression ratio	19.3:1
Max power at rated rpm – kW (hp)	
Standby	117.5 (157.5)
Prime	106.9 (143.2)
BMEP – kPa (psi)	
Standby	1778 (258)
Prime	1616 (234)
Regenerative power – kW (hp)	13.8 (18.5)



CONTROL PANEL

- Heavy duty sheet steel enclosure with lockable hinged door
- Vibration isolated from generating set
- LCD display
- AC metering
- DC metering
- Fail to start shutdown
- Low oil pressure shutdown
- High engine temperature
- Low/high battery voltage
- Underspeed/overspeed
- Loss of engine speed detection
- 2 spare fault channels
- 20 event fault log
- 2 LED status indicators
- Lockdown emergency stop push button

RATING DEFINITIONS AND CONDITIONS

Standby – Applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The generator is peak rated (as defined in ISO8528-3).

Prime – Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and the generator set can supply 10 percent overload power for 1 hour in 12 hours.

D80-4 (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz			Standby		Prime	
Power Rating	kW	kVA	80	100	72	90
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CG4/CH4 Total oil capacity Oil pan	L L	U.S. gal U.S. gal	7.9 6.4	1.4 1.2	7.9 6.4	1.4 1.2
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr L/hr L/hr	gal/hr gal/hr gal/hr	23.8 18.5 13.2	6.3 4.2 3.5	21.7 16.9 12.2	5.7 4.5 3.2
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps		65		65	
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L m H ₂ O L/hr °C °C kW kW kW	U.S. gal ft H ₂ O U.S. gal/hr °F °F Btu/min Btu/min hp	12.6 10.2 11 640 70 4.4 52.5 15.7 5.0	3.3 33.5 3,075 158 7.9 2,986 893 6.7	12.6 10.2 11 640 70 4.0 47.8 13.8 5.0	3.3 33.5 3,075 158 7.0 2,719 785 6.7
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min kPa m ³ /min m ³ /min kPa m ³ /min	cfm in H ₂ O cfm cfm in H ₂ O cfm	5.95 5 276 26.4 0.120 244	218 20 9,746 933 0.48 8,616	5.9 5 276 26.4 0.120 244	207 20 9,746 933 0.48 8,616
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa m ³ /min °C	in Hg cfm °F	15 13.47 544	4.5 565 1,011	15 14.5 495	4.5 514 919
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)		96		96	

Generator Technical Data		277/480V	266/460V	127/220V	120/240V 120/208V	347/600V		
Motor Starting Capability: (kVA) (30% voltage dip)	Self excited	206	191	177	160	N/A		
	PM excited**	271	252	233	211	271		
	AREP excited	271	252	233	211	271		
Full Load Efficiencies:	Standby	91.7	91.4	91.3	90.9	91.7		
	Prime	91.8	91.8	91.5	91.3	91.8		
Reactances (per unit): Reactances shown are applicable to the standby rating.	X _d	2.87	3.12	3.41	3.82	2.87		
	X' _d	0.11	0.12	0.13	0.15	0.11		
	X'' _d	0.067	0.073	0.079	0.089	0.067		
	X _q	1.72	1.87	2.05	2.29	1.72		
	X'' _q	0.083	0.090	0.099	0.110	0.083		
	X ₂	0.075	0.082	0.089	0.100	0.075		
	X ₀	0.004	0.004	0.005	0.005	0.004		
Time Constants:	t' _d	100 ms	t'' _d	10 ms	t' _{do}	2555 ms	t _a	15 ms

* dB(A) levels are for guidance only

** With PMG Excited Option AVR12

D60-4S (1-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz		Standby		Prime	
Power Rating (at 240V)	kW kVA	60	60	54	54
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CG-4/CH4 Total oil capacity Oil pan	L U.S. gal L U.S. gal	7.9 1.4 6.4 1.2		7.9 1.4 6.4 1.2	
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr gal/hr L/hr gal/hr L/hr gal/hr	19.1 5.0 14.8 3.9 10.8 2.9		17.5 4.6 13.6 3.6 10.0 2.6	
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps		65		65
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L U.S. gal m H ₂ O ft H ₂ O L/hr U.S. gal/hr °C °F °C °F kW Btu/min kW Btu/min kW hp	12.6 3.3 10.2 33.5 11 640 3,075 70 158 4.4 7.7 52.5 2,986 15.6 887 5.0 6.7		12.6 3.3 10.2 33.5 11 640 3,075 70 158 4.0 7.0 47.8 2,719 14.1 802 5.0 6.7	
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min cfm kPa in H ₂ O m ³ /min cfm m ³ /min cfm kPa in H ₂ O m ³ /min cfm	5.95 210 7.5 30.1 276 9,746 19.2 678 0.120 0.48 244 8,616		5.4 191 7.5 30.1 276 9,746 19.2 678 0.120 0.48 244 8,616	
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa in Hg m ³ /min cfm °C °F	15.0 4.5 16.0 565 544 1,011		15.0 4.5 14.5 514 495 919	
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)		96		96

Generator Technical Data		120/240V	115/230V	110/220V
Motor Starting Capability: (kVA) (30% voltage dip)	Self excited	128	119	101
	PM excited**	128	119	101
Full Load Efficiencies:	Standby	88.3	87.6	86.9
	Prime	88.3	87.6	86.9
Reactances (per unit): Reactances shown are applicable to the standby rating.	X _d	2.14	2.33	2.55
	X' _d	0.17	0.18	0.20
	X ^{''} _d	0.086	0.093	0.102
	X _q	1.29	1.41	1.54
	X ^{''} _q	0.105	0.115	0.125
Time Constants:	t' _d 80 ms	t'' _d 7 ms	t' _{do} 1354 ms	t _a 12 ms

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** With PMG Excited Option AVR12

D75-4S (1-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz			Standby		Prime	
Power Rating (at 240V)	kW	kVA	75	75	67.5	67.5
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CF-4 Total oil capacity Oil pan	L L	U.S. gal U.S. gal	7.9 6.4	1.4 1.2	7.9 6.4	1.4 1.2
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr L/hr L/hr	gal/hr gal/hr gal/hr	22.9 17.8 12.7	6.0 4.7 3.4	20.9 16.3 12.0	5.5 4.3 3.2
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps		65		65	
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L m H ₂ O L/hr °C °C kW kW kW	U.S. gal ft H ₂ O U.S. gal/hr °F °F Btu/min Btu/min hp	12.6 10.2 11 640 70 4.4 52.5 17.0 5.0	3.3 33.5 3,075 158 7.9 2,986 967 6.7	12.6 10.2 11 640 70 4.0 47.8 15.1 5.0	3.3 33.5 3,075 158 7.2 2,719 859 6.7
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min kPa m ³ /min m ³ /min kPa m ³ /min	cfm in H ₂ O cfm cfm in H ₂ O cfm	7.79 5.0 276 19.2 0.120 244	279 20 9,746 678 0.48 8,616	7.38 5.0 276 19.2 0.120 244	260 20 9,746 678 0.48 8,616
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa m ³ /min °C	in Hg cfm °F	15 22.5 580	4.5 794 1,076	15 20.0 540	4.5 705 1,004
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)		95		95	

Generator Technical Data		120/240V	115/230V	110/220V
Motor Starting Capability: (kVA) (30% voltage dip)	Self excited	170	160	150
	PM excited**	170	160	150
Full Load Efficiencies:	Standby	88.9	88.4	87.7
	Prime	89.3	88.8	88.2
Reactances (per unit):	X _d	2.02	2.20	2.40
	X' _d	0.15	0.16	0.18
	X'' _d	0.077	0.084	0.092
	X _q	1.21	1.32	1.44
	X'' _q	0.095	0.103	0.113
Time Constants:	t' _d	t'' _d	t' _{do}	t _a
	80 ms	7 ms	1431 ms	12 ms

* dB(A) levels are for guidance only

** With PMG Excited Option AVR12

D90-4S (1-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz		Standby		Prime	
Power Rating (at 240V)	kW kVA	90	90	82	82
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CG4/CH4 Total oil capacity Oil pan	L U.S. gal L U.S. gal	7.9 1.4 6.4 1.2		7.9 1.4 6.4 1.2	
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr gal/hr L/hr gal/hr L/hr gal/hr	27.3 7.2 20.9 5.5 14.7 3.9		24.9 6.6 19.0 5.0 14.0 3.7	
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps	65		65	
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L U.S. gal m H ₂ O ft H ₂ O L/hr U.S. gal/hr °C °F °C °F kW Btu/min kW Btu/min kW hp	12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.5 9.9 65.6 3,731 21.2 1,206 5.0 6.7		12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.0 9.0 59.7 3,396 18.8 1,069 5.0 6.7	
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min cfm kPa in H ₂ O m ³ /min cfm m ³ /min cfm kPa in H ₂ O m ³ /min cfm	7.79 279 5.0 20 276 9,746 26.4 933 0.120 0.48 244 8,616		7.38 260 5.0 20 276 9,746 26.4 933 0.120 0.48 244 8,616	
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa in Hg m ³ /min cfm °C °F	15 4.5 22.5 794 580 1,076		15 4.5 20.0 705 540 1,004	
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)	95		95	

Generator Technical Data		120/240V	115/230V	110/220V
Motor Starting Capability: (kVA) (30% voltage dip)	Self excited PM excited**	145 145	135 135	126 126
Full Load Efficiencies:	Standby Prime	88.6 89.1	88 88.5	87.8 87.8
Reactances (per unit):	X _d X' _d X'' _d X _q X'' _q	2.99 0.25 0.148 1.80 0.184	3.25 0.28 0.161 1.96 0.201	3.55 0.30 0.176 2.14 0.219
Time Constants:	t' _d t'' _d t' _{do} t _a	165 ms 13 ms	2555 ms	20 ms

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** With PMG Excited Option AVR12

D100-4 (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz		Standby		Prime	
Power Rating	kW kVA	100 125.0	90 112.5		
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CG4/CH4 Total oil capacity Oil pan	L U.S. gal L U.S. gal	8.0 2.1 5.5 1.4		8.0 2.1 5.5 1.4	
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr gal/hr L/hr gal/hr L/hr gal/hr	29.8 7.9 22.5 5.9 15.8 4.2		26.8 7.1 20.4 5.4 14.6 3.9	
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps	65		65	
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L U.S. gal m H ₂ O Ft H ₂ O L/hr U.S. gal/hr °C °F °C °F kW Btu/min kW Btu/min kW hp	12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.5 9.9 65.6 3,731 20.7 1,177 5.0 6.7		12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.0 9.0 59.7 3,396 18.3 1,041 5.0 6.7	
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min cfm kPa in H ₂ O m ³ /min cfm m ³ /min cfm kPa in H ₂ O m ³ /min cfm	78 276 8 32 276 9,746 26.4 933 0.120 0.48 244 8,616		7.75 274 8 32 276 9,746 26.4 933 0.120 0.48 244 8,616	
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa in Hg m ³ /min cfm °C °F	15 4.5 20.4 721 574 1,065		15 4.5 18.4 651 517 963	
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)	95		95	

Generator Technical Data	277/480V	266/460V	127/220V	120/240V 120/208V	347/600V
Motor Starting Capability: (kVA) (30% voltage dip) Self excited PM excited** AREP excited	206 271 271	191 252 252	177 233 233	160 211 211	N/A 271 271
Full Load Efficiencies: Standby Prime	91.0 91.4	90.9 91.0	90.5 90.9	90.0 90.4	91.0 91.4
Reactances (per unit): Reactances shown are applicable to the standby rating.	X _d X' _d X'' _d X _q X'' _q X ₂ X ₀	3.58 0.14 0.083 2.15 0.104 0.094 0.005	3.90 0.15 0.091 2.34 0.113 0.102 0.005	4.26 0.17 0.099 2.56 0.123 0.112 0.006	4.77 0.19 0.111 2.86 0.138 0.125 0.006
Time Constants:	t' _d 100 ms	t'' _d 10 ms	t' _{do} 2555 ms	t _a 15 ms	

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** With PMG Excited Option AVR12

D100-4S (1-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data – 1800 rpm/60 Hz		Standby		Prime	
Power Rating (at 240V)	kW kVA	100	100	90	90
Lubricating System Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CF-4 Total oil capacity Oil pan	L U.S. gal L U.S. gal	7.9 1.4 6.4 1.2		7.9 1.4 6.4 1.2	
Fuel System Generator set fuel consumption 100% load 75% load 50% load	L/hr gal/hr L/hr gal/hr L/hr gal/hr	29.6 7.8 22.4 5.9 15.9 4.2		26.8 7.1 20.4 5.4 15.0 4.0	
Engine Electrical System Voltage/ground: 12/negative Battery charging generator ampere rating	amps		65		65
Cooling System Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load	L U.S. gal m H ₂ O ft H ₂ O L/hr U.S. gal/hr °C °F °C °F kW Btu/min kW Btu/min kW hp	12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.5 9.9 65.6 3,731 21.2 1,206 5.0 6.7		12.6 3.3 10.2 33.5 11 640 3,075 70 158 5.0 9.0 59.7 3,396 18.8 1,069 5.0 6.7	
Air Requirements Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction	m ³ /min cfm kPa in H ₂ O m ³ /min cfm m ³ /min cfm kPa in H ₂ O m ³ /min cfm	7.79 279 5.0 20 276 9,746 26.4 933 0.120 0.48 244 8,616		7.38 260 5.0 20 276 9,746 26.4 933 0.120 0.48 244 8,616	
Exhaust System Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW – Dry exhaust	kPa in Hg m ³ /min cfm °C °F	15 4.5 22.5 794 580 1,076		15 4.5 20.0 705 540 1,004	
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)	dB(A)		95		95

Generator Technical Data		120/240V	115/230V	110/220V
Motor Starting Capability: (kVA) (30% voltage dip)	Self excited	188	174	162
	PM excited**	188	174	162
Full Load Efficiencies:	Standby	90.5	90.0	89.4
	Prime	90.5	90.0	89.4
Reactances (per unit): Reactances shown are applicable to the standby rating.	X _d	2.67	2.91	3.18
	X' _d	0.21	0.23	0.25
	X ^u _d	0.127	0.138	0.151
	X _q	1.60	1.74	1.90
	X ^u _q	0.151	0.164	0.180
Time Constants:	t' _d 165 ms	t'' _d 13 ms	t' _{do} 2734 ms	t _a 20 ms

* dB(A) levels are for guidance only
** With PMG Excited Option AVR12

STANDBY
PRIME
60 Hz

60 - 100 kW
54 - 90 kW



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STANDBY
PRIME
60 Hz

60 - 100 kW
54 - 90 kW

CATERPILLAR®

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