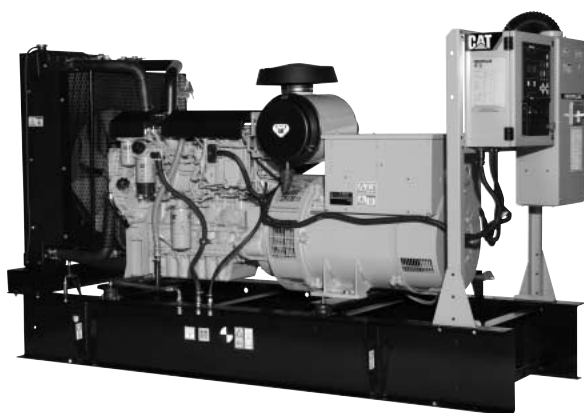




Picture shown may not reflect actual package

STANDBY **175 kW**
PRIME **157.5 kW**
60 Hz

Model	Standby kW (kVA)	Prime kW (kVA)
D175-2*	175 (218.8)	157.5 (196.9)

*Tier 3 EPA Approved, Emissions Certified

FEATURES

GENERATOR SET

- Complete system designed and built at ISO 9001:2000 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 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)
- Sound attenuated enclosure (includes internal silencer system)
 - Single point lift
 - Panel viewing window
 - External emergency stop pushbutton

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

GENERATOR

- Anti-condensation heater
- Permanent magnet generator
- AREP excitation system

CONTROL SYSTEM

- EMCP 3.2 digital control panel

MOUNTING ACCESSORIES

- Seismic (Zone 4) vibration isolators

FUEL SYSTEM

- 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

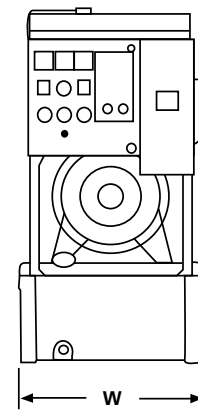
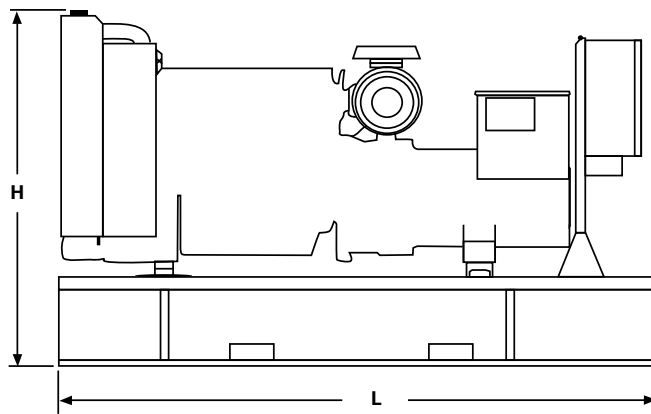
* Some options may not be available on all models.
Not all options are listed.

STANDBY
PRIME
60 Hz

175 kW
157.5 kW



GENERATOR SET DIMENSIONS AND WEIGHTS



Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight kg (lb)**
D175-2	2770 (109)	990 (39)	1628 (64)	1604 (3536)

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

**Includes oil and coolant

Materials and specifications are subject to change without notice.

SPECIFICATIONS



GENERATOR

Voltage Regulation.....	±0.5% 3-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	277/480, 266/460, 120/240, 127/220, 120/208, 347/600
Deration	Consult factory or Specsizer
Ratings	At 30° C (86° F), 152.4 m (500 ft), 60% humidity, 0.8 pf (3-Phase)



ENGINE

Manufacturer	Caterpillar
Type	4-Cycle
Bore — mm (in)	105.0 (4.13)
Stroke — mm (in)	127.0 (5.0)
Governor Type	Electronic
Class.....	G2
Piston Speed — m/secf (t/sec)	7.62 (25.0)
Engine speed — rpm.....	1800
Air Cleaner Type.....	Dry, replaceable paper element type with restriction indicator

D175.2 — C6.6 ACERT

Aspiration	ATAAC
Cylinder Configuration	In-line 6
Displacement — L(in³).....	6.6 (402.7)
Compression ratio	16.3:1
Maximum Power at rated rpm — kW (hp)	
Standby.....	204.3 (273.9)
Prime	185.7 (249.0)
BMEP — kPa (psi)	
Standby.....	2065 (299.5)
Prime	1877 (272.2)
Regenerative power — kW (hp).....	14.9 (19.9)



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

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.

D175-2 (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	175	218.8	157.5	196.9
Lubricating System Type: Full Pressure Oil Filter: Spin-On, Full Flow Oil Cooler: Watercooled Oil Type Required: API CH-14; API-C15 Total Oil Capacity Oil Pan	L L	U.S. gal U.S. gal	16.5 15.5	4.4 4.1	16.5 15.5	4.4 4.1
Fuel System Generator Set Fuel Consumption 100% Load 75% Load 50% Load	L/hr L/hr L/hr	G/hr G/hr G/hr	53.8 43.7 34.7	14.2 11.5 9.2	50.2 41.2 33.3	13.3 10.9 8.8
Engine Electrical System Voltage/Ground: 12V/Ground Battery Charging Generator Ampere Rating	Amps		100		101	
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	21.0 8.0 12 960 85 9 93.5 16.2 15	5.5 26.0 3,424 185 14.2 5,322 922 20.12	21.0 8.0 12 960 85 9 86.8 14.9 15	5.5 26.0 3,424 185 14.2 4,941 848 20.12
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	m³/min kPa m³/min m³/min kPa m³/min	cfm in H ₂ O cfm cfm in H ₂ O cfm	12.6 8 30 30.6 0.12 390	445 32 15,171 1,081 0.5 13,773	12.3 8 30 30.6 0.12 390	434.4 32 15,171 1,081 0.5 13,773
Exhaust System Maximum Allowable Backpressure Exhaust Flow at Rated kW Exhaust Temperature at Rated kW — Dry Exhaust	kPa m³/min °C	in Hg cfm °F	15.0 29.7 677	4.4 1,049 1251	15.0 28.6 666	4.4 1,010 1231
Generator Set Noise Rating** (Without Attenuation) at 1 m (3 ft)	dB(A)		100.6		100.6	

Generator Technical Data		277/480V	266/460V	127/220V	120/240V 120/208V	347/600V
Motor Starting Capability: (kVA)						
(30% voltage dip)						
Self excited		454	422	392	355	N/A
PM excited**		543	506	469	425	506
AREP excited		543	506	469	425	506
Full Load Efficiencies:						
Standby		93.0	93.0	92.9	92.6	93.0
Prime		93.1	93.2	93.1	92.8	93.0
Reactances (per unit):						
X_{d1}		2.74	2.99	3.26	3.65	2.99
X'_{d1}		0.13	0.15	0.16	0.18	0.15
Reactances shown are applicable to the standby rating.						
X''_{d1}		0.081	0.088	0.096	0.108	0.088
X_q		1.64	1.79	1.96	2.19	1.79
X''_q		0.100	0.109	0.119	0.133	0.109
X_2		0.090	0.098	0.107	0.120	0.098
X_0		0.005	0.005	0.005	0.006	0.005
Time Constants:		t'_{d1}	t''_{d1}	t'_{do}	t_a	
		100 ms	10 ms	2865 ms	15 ms	

*Three phase power rating

**dBA levels are for guidance only

**STANDBY
PRIME
60 Hz**

**175 kW
157.5 kW**



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