

Cat® C32

Diesel Generator Sets



Image shown may not reflect actual configuration

Bore – mm (in)	145 (5.7)
Stroke – mm (in)	162 (6.4)
Displacement – L (in³)	32.1 (1959)
Compression Ratio	15.0:1
Aspiration	TA
Fuel System	EUI
Governor Type	ADEM™ A4

Standby 50 Hz kVA (ekW)	Mission Critical 50 Hz kVA (ekW)	Prime 50 Hz kVA (ekW)	Continuous 50 Hz kVA (ekW)	Emissions Performance
1100 (880)	1100 (880)	1000 (800)	910 (728)	Optimized for Low Fuel Consumption or Low Emissions
1250 (1000)	1250 (1000)	1100 (880)	—	Optimized for Low Fuel Consumption

Standard Features

Cat® Diesel Engine

- Designed and optimized for low emissions or low fuel consumption
- Reliable and consistent performance proven in thousands of applications worldwide

Generator Set Package

- Accepts 100% block load in one step and meets the NFPA 110 loading requirements
- Conforms to ISO 8528-5 G3 load acceptance requirements.
- Reliability is verified through prototype testing, which includes torsional vibration, fuel consumption, oil consumption, transient performance, and endurance testing

Alternators

- Superior motor starting capability minimizes the need for oversizing the generator
- Designed to match the performance and output characteristics of Cat diesel engines

Cooling System

- Cooling systems available to operate in ambient temperatures up to 50°C (122°F)
- Tested to ensure proper generator set cooling

EMCP 4 Control Panels

- User-friendly interface and navigation
- Scalable system to meet a wide range of installation requirements
- Expansion modules and site specific programming for specific customer requirements

Warranty

- 24 months/1000-hour warranty for standby and mission critical ratings
- 12 months/unlimited hour warranty for prime and continuous ratings
- Extended service protection is available to provide extended coverage options

Worldwide Product Support

- Cat dealers have over 1,800 dealer branch stores operating in 200 countries
- Your local Cat dealer provides extensive post-sale support, including maintenance and repair agreements

Financing

- Caterpillar offers an array of financial products to help you succeed through financial service excellence
- Options include loans, finance lease, operating lease, working capital, and revolving line of credit
- Contact your local Cat dealer for availability in your region

Optional Equipment

Engine

Air Cleaner

- ☐ Single element
- ☐ Dual element
- ☐ Heavy duty

Muffler

- ☐ Industrial grade (15 dB)

Starting

- ☐ Standard batteries
- ☐ Oversized batteries
- ☐ Standard electric starter
- ☐ Dual electric starter
- ☐ Jacket water heater

Alternator

Output voltage

- ☐ 400V ☐ 3300V
- ☐ 415V

Temperature Rise (over 40°C ambient)

- ☐ 150°C
- ☐ 125°C/130°C
- ☐ 105°C
- ☐ 80°C

Winding type

- ☐ Random wound
- ☐ Form wound

Excitation

- ☐ Self excited
- ☐ Internal excitation (IE)
- ☐ Permanent magnet (PM)

Attachments

- ☐ Anti-condensation heater
- ☐ Stator and bearing temperature monitoring and protection

Power Termination

Type

- ☐ Bus bar
- ☐ Circuit breaker
- ☐ 400A ☐ 800A
- ☐ 1200A ☐ 1600A
- ☐ 2000A ☐ 2500A
- ☐ 3000A ☐ 3200A
- ☐ UL ☐ IEC
- ☐ 3-pole ☐ 4-pole
- ☐ Manually operated
- ☐ Electrically operated

Trip Unit

- ☐ LSI ☐ LSI-G
- ☐ LSI-G-P

Factory Enclosure

- ☐ Weather protective
- ☐ Sound attenuated

Attachments

- ☐ Cold weather bundle
- ☐ DC lighting package
- ☐ AC lighting package
- ☐ Motorized louvers

Fuel Tank

- ☐ Sub-base
- ☐ 1000 gal (3875 L)
- ☐ 2000 gal (7570 L)
- ☐ 3600 gal (13627 L)

Control System

Controller

- ☐ EMCP 4.2B
- ☐ EMCP 4.3
- ☐ EMCP 4.4

Attachments

- ☐ Local annunciator module
- ☐ Remote annunciator module
- ☐ Expansion I/O module
- ☐ Remote monitoring software

Charging

- ☐ Battery charger – 10A

Vibration Isolators

- ☐ Rubber
- ☐ Spring
- ☐ Seismic rated

Cat Connect

Connectivity

- ☐ Ethernet
- ☐ Cellular
- ☐ Satellite

Extended Service Options

Terms

- ☐ 2 year (prime)
- ☐ 3 year
- ☐ 5 year
- ☐ 10 year

Coverage

- ☐ Silver
- ☐ Gold
- ☐ Platinum
- ☐ Platinum Plus

Ancillary Equipment

- ☐ Automatic transfer switch (ATS)
- ☐ Uninterruptible power supply (UPS)
- ☐ Paralleling switchgear
- ☐ Paralleling controls

Certifications

- ☐ IBC seismic certification
- ☐ OSHPD pre-approval
- ☐ EU Certification of Conformance (CE)
- ☐ EEC Declaration of Conformity

Note: Some options may not be available on all models. Certifications may not be available with all model configurations. Consult factory for availability.

Package Performance

1250 kVA Low Fuel Consumption

Performance	Standby		Mission Critical		Prime	
Frequency	50 Hz		50 Hz		50 Hz	
Gen set power rating with fan	1000 ekW		1000 ekW		880 ekW	
Gen set power rating with fan @ 0.8 power factor	1250 kVA		1250 kVA		1100 kVA	
Fueling strategy	Low Fuel		Low Fuel		Low Fuel	
Performance number	EM0679-00		EM0777-01		EM0745-01	
Fuel Consumption						
100% load with fan – L/hr (gal/hr)	252.3	(66.7)	252.3	(66.7)	220.7	(58.3)
75% load with fan – L/hr (gal/hr)	185.5	(49.0)	185.5	(49.0)	164.8	(43.5)
50% load with fan – L/hr (gal/hr)	128.4	(33.9)	128.4	(33.9)	116.1	(30.7)
25% load with fan – L/hr (gal/hr)	75.0	(19.8)	75.0	(19.8)	68.7	(18.1)
Cooling System						
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	1143	(40364)	1143	(40364)	1143	(40364)
Engine coolant capacity – L (gal)	55	(14.5)	55	(14.5)	55	(14.5)
Radiator coolant capacity – L (gal)	36	(9.0)	36	(9.0)	36	(9.0)
Total coolant capacity – L (gal)	91	(23.5)	91	(23.5)	91	(23.5)
Inlet Air						
Combustion air inlet flow rate – m³/min (cfm)	74.2	(2619.0)	74.2	(2619.0)	67.9	(2397.4)
Exhaust System						
Exhaust stack gas temperature – °C (°F)	464.6	(868.3)	464.6	(868.3)	440.6	(825.2)
Exhaust gas flow rate – m³/min (cfm)	192.9	(6812.8)	192.9	(6812.8)	170.3	(6012.6)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection						
Heat rejection to jacket water – kW (Btu/min)	340	(19353)	340	(19353)	308	(17537)
Heat rejection to exhaust (total) – kW (Btu/min)	871	(49555)	871	(49555)	752	(42748)
Heat rejection to aftercooler – kW (Btu/min)	241	(13691)	241	(13691)	196	(11173)
Heat rejection to atmosphere from engine – kW (Btu/min)	139	(7891)	139	(7891)	124	(7058)
Heat rejection from alternator – kW (Btu/min)	52	(2960)	52	(2960)	43	(2448)
Emissions (Nominal)						
NOx mg/Nm³ (g/hp-h)	2928.1	(5.80)	2928.1	(5.80)	3185.5	(6.15)
CO mg/Nm³ (g/hp-h)	229.6	(0.46)	229.6	(0.46)	209.4	(0.42)
HC mg/Nm³ (g/hp-h)	5.7	(0.01)	5.7	(0.01)	5.6	(0.01)
PM mg/Nm³ (g/hp-h)	11.9	(0.03)	11.9	(0.03)	11.3	(0.03)
Emissions (Potential Site Variation)						
NOx mg/Nm³ (g/hp-h)	3543.0	(7.02)	3543.0	(7.02)	3854.5	(7.45)
CO mg/Nm³ (g/hp-h)	429.3	(0.86)	429.3	(0.86)	391.6	(0.75)
HC mg/Nm³ (g/hp-h)	10.7	(0.02)	10.7	(0.02)	10.5	(0.02)
PM mg/Nm³ (g/hp-h)	23.2	(0.05)	23.2	(0.05)	22.1	(0.05)

Package Performance

1100 kVA Low Fuel Consumption

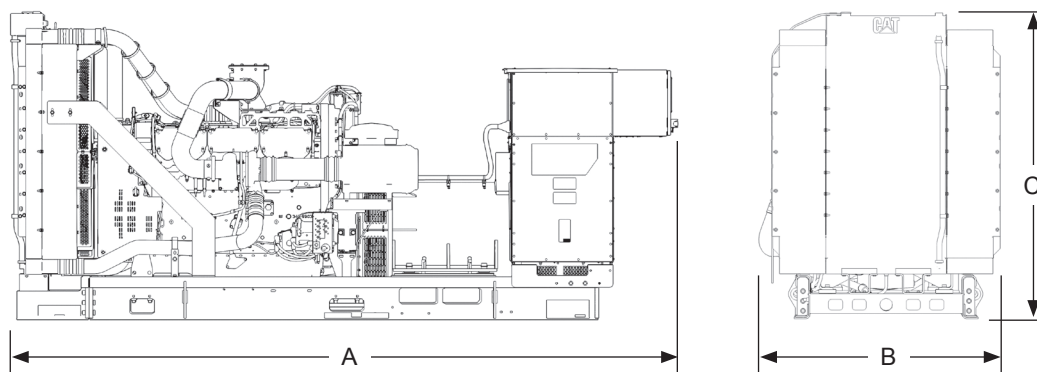
Performance	Standby		Mission Critical		Prime		Continuous	
Frequency	50 Hz		50 Hz		50 Hz		60 Hz	
Gen set power rating with fan	880 ekW		880 ekW		800 ekW		728 ekW	
Gen set power rating with fan @ 0.8 power factor	1100 KVA		1100 kVA		1000 kVA		910 kVA	
Fueling strategy	Low Fuel		Low Fuel		Low Fuel		Low Fuel	
Performance number	DM9951-02		EM0447-01		DM9952-05		DM9953-01	
Fuel Consumption								
100% load with fan – L/hr (gal/hr)	226.4	(59.8)	226.4	(59.8)	206.7	(54.6)	189.5	(50.1)
75% load with fan – L/hr (gal/hr)	170.3	(45.0)	170.3	(45.0)	155.5	(41.1)	142.8	(37.7)
50% load with fan – L/hr (gal/hr)	117.4	(31.0)	117.4	(31.0)	108.5	(28.7)	100.4	(26.5)
25% load with fan – L/hr (gal/hr)	69.1	(18.3)	69.1	(18.3)	65.2	(17.2)	60.8	(16.1)
Cooling System								
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	1143	(40364)	1143	(40364)	1143	(40364)	1143	(40364)
Engine coolant capacity – L (gal)	55	(14.5)	55	(14.5)	55	(14.5)	55	(14.5)
Radiator coolant capacity – L (gal)	36	(9.0)	36	(9.0)	36	(9.0)	36	(9.0)
Total coolant capacity – L (gal)	91	(23.5)	91	(23.5)	91	(23.5)	91	(23.5)
Inlet Air								
Combustion air inlet flow rate – m³/min (cfm)	66.0	(2332.0)	66.0	(2332.0)	60.3	(2128.2)	55.9	(1974.0)
Exhaust System								
Exhaust stack gas temperature – °C (°F)	508.7	(947.7)	508.7	(947.7)	509.3	(948.7)	503.4	(938.0)
Exhaust gas flow rate – m³/min (cfm)	180.1	(6359.7)	180.1	(6359.7)	165.0	(5824.8)	152.0	(5368.7)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection								
Heat rejection to jacket water – kW (Btu/min)	319	(18167)	319	(18167)	300	(17054)	281	(15996)
Heat rejection to exhaust (total) – kW (Btu/min)	818	(46518)	818	(46518)	757	(43047)	698	(39684)
Heat rejection to aftercooler – kW (Btu/min)	181	(10283)	181	(10283)	148	(8412)	125	(7133)
Heat rejection to atmosphere from engine – kW (Btu/min)	120	(6797)	120	(6797)	108	(6150)	102	(5819)
Heat rejection from alternator – kW (Btu/min)	49	(2789)	49	(2789)	43	(2448)	38	(2163)
Emissions (Nominal)								
NOx mg/Nm³ (g/hp-h)	2966.9	(5.84)	2966.9	(5.84)	2967.7	(5.84)	2914.2	(5.76)
CO mg/Nm³ (g/hp-h)	308.9	(0.61)	308.9	(0.61)	316.8	(0.62)	315.2	(0.63)
HC mg/Nm³ (g/hp-h)	4.0	(0.01)	4.0	(0.01)	7.5	(0.02)	10.9	(0.03)
PM mg/Nm³ (g/hp-h)	14.1	(0.03)	14.1	(0.03)	17.0	(0.04)	18.3	(0.04)
Emissions (Potential Site Variation)								
NOx mg/Nm³ (g/hp-h)	3589.9	(7.07)	3589.9	(7.07)	3590.9	(7.07)	3526.2	(6.97)
CO mg/Nm³ (g/hp-h)	577.6	(1.14)	577.6	(1.14)	592.4	(1.17)	589.4	(1.17)
HC mg/Nm³ (g/hp-h)	7.5	(0.02)	7.5	(0.02)	14.1	(0.03)	20.5	(0.05)
PM mg/Nm³ (g/hp-h)	27.5	(0.07)	27.5	(0.07)	33.1	(0.08)	35.6	(0.09)

Package Performance

1100 kVA Low Emissions

Performance	Standby		Mission Critical		Prime		Continuous	
Frequency	50 Hz		50 Hz		50 Hz		60 Hz	
Gen set power rating with fan	880 ekW		880 ekW		800 ekW		728 ekW	
Gen set power rating with fan @ 0.8 power factor	1100 kVA		1100 kVA		1000 kVA		910 kVA	
Fueling strategy	Low Emissions		Low Emissions		Low Emissions		Low Emissions	
Performance number	DM9945-04		EM0448-00		DM9946-04		DM9947-03	
Fuel Consumption								
100% load with fan – L/hr (gal/hr)	243.2	(64.2)	243.2	(64.2)	224.2	(59.2)	203.0	(53.6)
75% load with fan – L/hr (gal/hr)	184.1	(48.6)	184.1	(48.6)	168.1	(44.4)	154.9	(40.9)
50% load with fan – L/hr (gal/hr)	1260	(33.3)	1260	(33.3)	115.2	(30.4)	106.1	(28.0)
25% load with fan – L/hr (gal/hr)	70.9	(18.7)	70.9	(18.7)	65.9	(17.4)	61.5	(16.2)
Cooling System								
Radiator air flow restriction (system) – kPa (in. water)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)	0.12	(0.48)
Radiator air flow – m³/min (cfm)	1143	(40364)	1143	(40364)	1143	(40364)	1143	(40364)
Engine coolant capacity – L (gal)	55	(14.5)	55	(14.5)	55	(14.5)	55	(14.5)
Radiator coolant capacity – L (gal)	36	(9.0)	36	(9.0)	36	(9.0)	36	(9.0)
Total coolant capacity – L (gal)	91	(23.5)	91	(23.5)	91	(23.5)	91	(23.5)
Inlet Air								
Combustion air inlet flow rate – m³/min (cfm)	76.0	(2684.6)	76.0	(2684.6)	72.0	(2541.4)	65.4	(2311.0)
Exhaust System								
Exhaust stack gas temperature – °C (°F)	509.2	(948.6)	509.2	(948.6)	501.1	(934.0)	500.2	(932.4)
Exhaust gas flow rate – m³/min (cfm)	207.0	(7310.2)	207.0	(7310.2)	193.7	(6839.9)	176.6	(6236.9)
Exhaust system backpressure (maximum allowable) – kPa (in. water)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)	6.7	(27.0)
Heat Rejection								
Heat rejection to jacket water – kW (Btu/min)	312	(17723)	312	(17723)	288	(16392)	266	(15109)
Heat rejection to exhaust (total) – kW (Btu/min)	951	(54087)	951	(54087)	881	(50080)	801	(45572)
Heat rejection to aftercooler – kW (Btu/min)	253	(14386)	253	(14386)	223	(12680)	179	(10154)
Heat rejection to atmosphere from engine – kW (Btu/min)	107	(6077)	107	(6077)	107	(6081)	104	(5913)
Heat rejection from alternator – kW (Btu/min)	49	(2789)	49	(2789)	43	(2448)	38	(2163)
Emissions (Nominal)								
NOx mg/Nm³ (g/hp-h)	1937.6	(4.11)	1937.6	(4.11)	1850.7	(3.95)	1861.1	(3.95)
CO mg/Nm³ (g/hp-h)	100.5	(0.22)	100.5	(0.22)	77.2	(0.17)	100.0	(0.21)
HC mg/Nm³ (g/hp-h)	11.4	(0.03)	11.4	(0.03)	15.1	(0.04)	16.8	(0.04)
PM mg/Nm³ (g/hp-h)	11.6	(0.03)	11.6	(0.03)	9.8	(0.03)	10.6	(0.03)
Emissions (Potential Site Variation)								
NOx mg/Nm³ (g/hp-h)	2344.4	(4.98)	2344.4	(4.98)	2239.3	(4.78)	2252.0	(4.78)
CO mg/Nm³ (g/hp-h)	188.0	(0.41)	188.0	(0.41)	144.3	(0.31)	187.0	(0.40)
HC mg/Nm³ (g/hp-h)	21.5	(0.05)	21.5	(0.05)	28.5	(0.07)	31.7	(0.08)
PM mg/Nm³ (g/hp-h)	22.5	(0.06)	22.5	(0.06)	19.0	(0.05)	20.7	(0.05)

Weights and Dimensions



Standby 50 Hz kVA (ekW)	Mission Critical 50 Hz kVA (ekW)	Prime 50 Hz kVA (ekW)	Continuous 50 Hz kVA (ekW)	Dim "A" mm (in)	Dim "B" mm (in)	Dim "C" mm (in)	Dry Weight kg (lb)
1100 (880)	1100 (880)	1000 (800)	910 (728)	4639 (182.6)	1684 (66.3)	2162 (85.1)	6668 (14,700)
1250 (1000)	1250 (1000)	1100 (880)	—	4639 (182.6)	1684 (66.3)	2162 (85.1)	6985 (15,400)

Note: For reference only. Do not use for installation design. Contact your local Cat dealer for precise weights and dimensions.

Ratings Definitions

Standby

Output available with varying load for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Mission Critical

Output available with varying load for the duration of the interruption of the normal source power. Average power output is 85% of the mission critical power rating. Typical peak demand up to 100% of rated power for up to 5% of the operating time. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Prime

Output available with varying load for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated kW with 10% overload capability for emergency use for a maximum of 1 hour in 12. Overload operation cannot exceed 25 hours per year.

Continuous

Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rated kW for 100% of the operating hours.

Applicable Codes and Standards

AS1359, CSA C22.2 No100-04, UL142, UL489, UL869, UL2200, NFPA37, NFPA70, NFPA99, NFPA110, IBC, IEC60034-1, ISO3046, ISO8528, NEMA MG1-22, NEMA MG1-33, 2014/35/EU, 2006/42/EC, 2014/30/EU.

Note: Codes may not be available in all model configurations. Please consult your local Cat dealer for availability.

Data Center Applications

Tier III/Tier IV compliant per Uptime Institute requirements. ANSI/TIA-942 compliant for Rated-1 through Rated-4 data centers.

Fuel Rates

Fuel rates are based on fuel oil of 35° API [16°C (60°F)] gravity having an LHV of 42,780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F) and weighing 838.9 g/liter (7.001 lbs/U.S. gal.)

www.cat.com/electricpower

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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

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Image shown may not reflect actual configuration.

C27 – C32 GC Enclosures NA

Sound Attenuated Enclosures for C27 and C32 GC Generator Sets

These sound attenuated, factory installed enclosures are designed for safety and aesthetic value. Rugged construction provides weather protection and the ability to withstand exposure to the elements.

FEATURES

Robust/Highly Corrosion-Resistant Construction

- Environmentally friendly, polyester powder-baked paint in Caterpillar White
- Zinc Plated and Stainless Steel Fasteners
- 14-Gauge Steel Construction
- Flat Roof with protection for water ingress from Rain
- Critical Grade internally mounted muffler/exhaust system
- Soft mounted isolators
- 75 dbA @ 7m (Target value) for Sound attenuated enclosures

Excellent Access

- Control panel mounted on RH side with an optional auxiliary box on the LH side of the package
- Large cable entry area for the ease of installation
- Left-hand or Right-hand bottom entry access to power cable bus or circuit breaker.
- Multiple doors on both sides allow easy access to service points
- Hinged doors allow 180° opening rotation
- Lube Oil and coolant drains piped to exterior of enclosure and terminated drain valves
- Radiator fill cover

Options

- Weather Proof Enclosure available with same footprint
- Interior DC lighting systems
- Caterpillar White Paint (Default)
- 2100 (Factory installed), 3000 and 4200 (shipped loose) gallon fuel tanks
- 100 mph wind loading

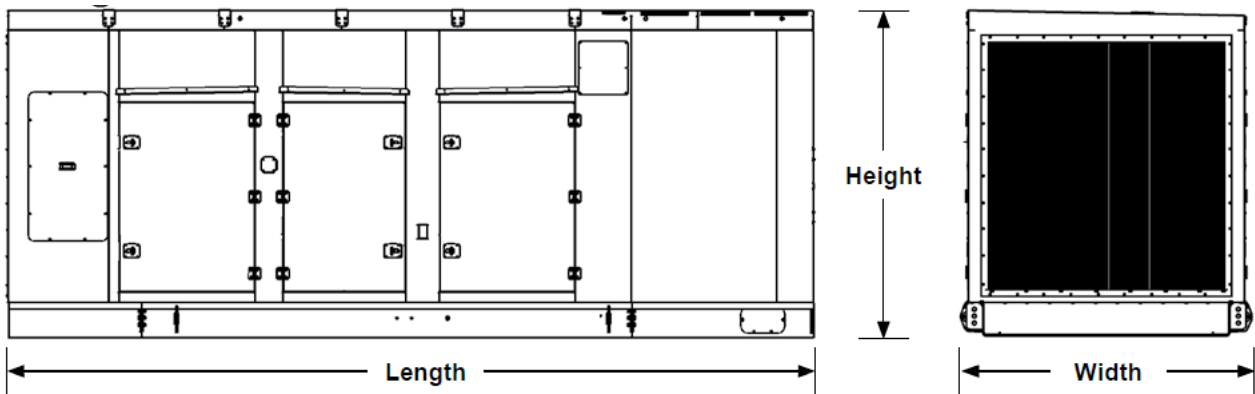
Security and Safety

- Lockable access doors with standard key use
- Cooling fan and battery charging alternator fully guarded
- Oil fill and battery can only be reached via lockable access
- External fuel connections
- Externally mounted emergency stop buttons
- Designed for spreader bar lifting to ensure safety

Certifications

- UL 2200 listed & cUL
- Seismic certification per applicable building codes: IBC 2021
- Tested and analysed in accordance with: ASCE 7-98, ASCE 7-02, ASCE 7-05, ICC-ES AC-156

Enclosure Weights and Dimensions



Note: For reference only – do not use for installation design. Please contact your dealer for exact weights and dimensions.

Enclosure Base Options*				
	Weight kgs (lbs)	Length mm (in)	Width mm (in)	Height mm (in)
With Lifting Base	2672 (5891)	6610 (260)	2342 (92.2)	2350 (92.5)
With 2100 gal integral tank base	4891 (10783)	7620 (300)	2350 (92.5)	3265 (128.5)
With 3000 gal tank with lifting base	5638 (12429)	7646 (301)	2471 (97)	3565 (140)
With 4200 gal tank with lifting base	6563 (14468)	7646 (301)	2471 (97)	3870 (152)

*Weight does not include package generator set weight.

Generator Set Weights

Generator Set Weights**	Weight kgs (lbs)
C27 Open Generator Set	5813 (12815)
C32 Open Generator Set	6798 (14987)

**Dry Weight of heaviest configuration and without base rail weight (Does not include exhaust system weights)

LET’S DO THE WORK.™

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