ALABAMA PORT AUTHORITY
PORT OF MOBILE

Project Name **ITC Generator – Electrical Equipment**

Location **Mobile, AL**

Project # **11210 Task 4** **March 2024**

First Addendum

ITC Generator – Electrical Equipment

March 26, 2024

ALABAMA PORT AUTHORITY
PORT OF MOBILE

First Addendum

Project Name	**ITC Generator – Electrical Equipment**	
Location	**Mobile, AL**	
Project #	**11210 Task 4**	**March 2024**

1. Bid opening has been re-scheduled for Friday, April 5, 2024 at 10:00 A.M. in the Killian Room at the International Trade Center Building, 250 North Water Street, Mobile, AL.

   Sealed bid proposals will be received via courier to the Alabama State Port Authority, 1400 Alabama State Docks Blvd., Room 216, Administration Building, Mobile, AL 36602 by 9:00 A.M., on Friday April 5, 2024. Sealed bid proposals can also be hand delivered from 9:45 A.M. to 10:00 A.M., on Friday April 5, 2024 to the Alabama State Port Authority in the International Trade Center Building, 250 North Water Street, Killian Room, Mobile, AL. Faxed or electronic submitted bids will not be accepted.

2. The deadline for submitting questions is 3:00 P.M., on Friday March 29, 2024.

3. The Pre-Bid sign in sheet is attached and is hereby incorporated into the bid documents by this addendum.

4. Product data sheets for the Owner provided generator and enclosure are provided for contractor reference. The generator is Cummins model 400 DFCE with enclosure and 1470-gallon sub-base fuel tank.

PORT OF MOBILE
ALABAMA PORT AUTHORITY

ENGINEERING DEPARTMENT
P.O. BOX 1588 MOBILE, AL 36633

JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE 3/18/2024
SCALE _____

TASK 4 ITC GENERATOR (11210)

NAME	EMAIL	COMPANY
Brian Bryars	bbryars@moodyelectric.net	Moody Electric 251-379-7405
Tim Forget	Tim@billsmithelectric.com	Bill Smith Elec 251 348-5724
Jayson Morgan	Jayson@Harris Contracting Services	Harris Contracting Service 251 508-0017
Leroy Fuller	Leroy@BegRus.com	Bagby Russell 251 583-0594
Robbie Henriksen	rhenriksen@gulfelec.com	Gulf Electric 251-331-2778
Howard Hill	mhelectric@bellsouth.net	H-H Electric 2516752186
David Rhames	david.rhames@gawest.com	GA West 251-533-8261
Richard Pfuntner	rpfuntner@mecojax.com mecojax.com	Miller Elect. 850 867 6805
Kristian Roe	kristian.roe@gawest.com	G.A. West 2514215438
Chris Sharp	Chris.Sharp30@gmail.com	3 Phase Solutions 251 680-9683

Diesel Generator Set
Model DFCE 60 Hz

400 kW, 500 kVA Standby

Description

The Cummins Power Generation DF-series commercial generator set is a fully integrated power generation system providing optimum performance, reliability, and versatility for stationary standby or prime power applications.

A primary feature of the DF GenSet is strong motor-starting capability and fast recovery from transient load changes. The torque-matched system includes a heavy-duty Cummins 4-cycle diesel engine, an AC alternator with high motor-starting kVA capacity, and an electronic voltage regulator with three-phase sensing for precise regulation under steady-state or transient loads. The DF GenSet accepts 100% of the nameplate standby rating in one step, in compliance with NFPA 110 requirements.

The standard PowerCommand® digital electronic control is an integrated system that combines engine and alternator controls for high reliability and optimum GenSet performance.

Optional weather-protective enclosures and coolant heaters shield the generator set from extreme operating conditions. Environmental concerns are addressed by low exhaust emission engines, sound-attenuated enclosures, exhaust silencers, and dual-wall fuel tanks. A wide range of options, accessories, and services are available, allowing configuration to your specific power generation needs.

Every production unit is factory tested at rated load and power factor. This testing includes demonstration of rated power and single-step rated load pickup. Cummins Power Generation manufacturing facilities are registered to ISO9001 quality standards, emphasizing our commitment to high quality in the design, manufacture, and support of our products. The generator set is CSA certified and is available as UL2200 Listed. The PowerCommand control is UL508 Listed.

All Cummins Power Generation systems are backed by a comprehensive warranty program and supported by a worldwide network of 170 distributors and service branches to assist with warranty, service, parts, and planned maintenance support.

Features

UL Listed Generator Set - The complete generator set assembly is available Listed to UL 2200.

Cummins Heavy-Duty Engine - Rugged 4-cycle industrial diesel engine delivers reliable power, low emissions, and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor-starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads, fault-clearing short-circuit capability, and class H insulation. The alternator electrical insulation system is UL1446 Recognized.

Permanent Magnet Generator (PMG) - Offers enhanced motor starting and fault-clearing short circuit capability.

Control System - The PowerCommand electronic control is standard equipment and provides total genset system integration, including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection, and NFPA 110 compliance. PowerCommand control is Listed to UL508.

Cooling System - Provides reliable running at the rated power level, at up to 50°C ambient temperature.

Structural Steel Skid Base - Robust skid base supports the engine, alternator, and radiator.

E-Coat Finish - Dual electro-deposition paint system provides high resistance to scratching, corrosion, and fading.

Enclosures - Optional weather-protective and sound-attenuated enclosures are available.

Fuel Tanks - Dual wall sub-base fuel tanks are also offered.

Certifications - Generator sets are designed, manufactured, tested, and certified to relevant UL, NFPA, ISO, IEC, and CSA standards.

Warranty and Service - Backed by a comprehensive warranty and worldwide distributor network.

Generator Set

The general specifications provide representative configuration details. Consult the outline drawing for installation design.

Specifications – General

See outline drawing 500-3084 for installation design specifications.

Unit Width, in (mm)	50.0 (1270)
Unit Height, in (mm)	63.6 (1615)
Unit Length, in (mm)	142.0 (3607)
Unit Dry Weight, lb (kg)	7250 (3289)
Unit Wet Weight, lb (kg)	7480 (3393)
Rated Speed, rpm	1800
Voltage Regulation, No Load to Full Load	±0.5%
Random Voltage Variation	±0.5%
Frequency Regulation	Isochronous
Random Frequency Variation	±0.25%
Radio Frequency Interference	IEC 801.2, Level 4 Electrostatic Discharge IEC 801.3, Level 3 Radiated Susceptibility IEC 801.4, Level 4 Electrical Fast Transients IEC 801.5, Level 5 Voltage Surge Immunity MIL STD 461C, Part 9 Radiated Emissions (EMI)

Cooling	**Standby**	
Fan Load, HP (kW)	28.0 (20.9)	
Coolant Capacity with radiator, US Gal (L)	15.3 (57.9)	
Coolant Flow Rate, Gal/min (L/min)	130.0 (492.0)	
Heat Rejection To Coolant, Btu/min (MJ/min)	15125.0 (16.0)	
Heat Radiated To Room, Btu/min (MJ/min)	5580.0 (5.9)	
Maximum Coolant Friction Head, psi (kPa)	7.0 (48.3)	
Maximum Coolant Static Head, ft (m)	60.0 (18.3)	

Air		
Combustion Air, scfm (m^3/min)	1330.0 (37.6)	
Alternator Cooling Air, scfm (m^3/min)	2780.0 (78.7)	
Radiator Cooling Air, scfm (m^3/min)	19700.0 (557.5)	
Max. Static Restriction, in H_2O (Pa)	0.5 (124.5)	

Rating Definitions

Standby Rating based on: Applicable for supplying emergency power for the duration of normal power interruption. No sustained overload capability is available for this rating. (Equivalent to Fuel Stop Power in accordance with ISO3046, AS2789, DIN6271 and BS5514). Nominally rated.

Prime (Unlimited Running Time) Rating based on: Applicable for supplying power in lieu of commercially purchased power. Prime power is the maximum power available at a variable load for an unlimited number of hours. A 10% overload capability is available for limited time. (Equivalent to Prime Power in accordance with ISO8528 and Overload Power in accordance with ISO3046, AS2789, DIN6271, and BS5514). This rating is not applicable to all generator set models.

Base Load (Continuous) Rating based on: Applicable for supplying power continuously to a constant load up to the full output rating for unlimited hours. No sustained overload capability is available for this rating. Consult authorized distributor for rating. (Equivalent to Continuous Power in accordance with ISO8528, ISO3046, AS2789, DIN6271, and BS5514). This rating is not applicable to all generator set models.

Site Derating Factors

Rated power available up to 2500 ft (762 m) at ambient temperature up to 104°F (40°C). Above 2500 ft (762 m), derate at 4% per 1000 (300 m) and 1% per 10°F (2% per 11°C).

Engine

Cummins heavy duty diesel engines use advanced combustion technology for reliable and stable power, low emissions, and fast response to sudden load changes.

Electronic governing provides precise speed regulation, especially useful for applications requiring constant (isochronous) frequency regulation such as Uninterruptible Power Supply (UPS) systems, non-linear loads, or sensitive electronic loads. Optional coolant heaters are recommended for all emergency standby installations or for any application requiring fast load acceptance after start-up.

Specifications – Engine

Base Engine	Cummins Model NTA855-G5, Turbocharged and Aftercooled, diesel-fueled
Displacement in^3 (L)	855.0 (14.0)
Regenerative Power, kW	35.00
Cylinder Block Configuration	Cast iron with replaceable wet cylinder liners, In-line 6 cylinder
Battery Capacity	565 amps minimum at ambient temperature of 32°F (0°C)
Battery Charging Alternator	55 amps
Starting Voltage	24-volt, negative ground
Lube Oil Filter Types	Single spin-on, combination full flow/bypass
Standard Cooling System	122°F (50°C) ambient radiator

Power Output	**Standby**	
Gross Engine Power Output, bhp (kWm)	605.0 (451.3)	
BMEP at Rated Load, psi (kPa)	311.0 (2144.3)	
Bore, in. (mm)	5.50 (139.7)	
Stroke, in. (mm)	6.00 (152.4)	
Piston Speed, ft/min (m/s)	1800.0 (9.1)	
Compression Ratio	14.0:1	
Lube Oil Capacity, qt. (L)	40.0 (37.9)	
Fuel Flow		
Fuel Flow at Rated Load, US Gal/hr (L/hr)	56.3 (213.1)	
Maximum Inlet Restriction, in. Hg (mm Hg)	4.0 (101.6)	
Maximum Return Restriction, in. Hg (mm Hg)	6.0 (152.4)	
Air Cleaner		
Maximum Air Cleaner Restriction, in. H_2O (kPa)	25.0 (6.2)	
Exhaust		
Exhaust Flow at Rated Load, cfm (m^3/min)	3780.0 (107.0)	
Exhaust Temperature, °F (°C)	995.0 (535.0)	
Max Back Pressure, in. H_2O (kPa)	41.0 (10.2)	

Fuel System	Direct injection, number 2 diesel fuel; fuel filter; automatic electric fuel shutoff.

Fuel Consumption		**Standby**							
60 Hz Ratings, kW (kVA)		**400 (500)**							
	Load	1/4	1/2	3/4	Full				
	US Gal/hr	9.1	15.9	22.1	29.1				
	L/hr	34	60	84	110				

Alternator

Several alternators are available for application flexibility based on the required motor-starting kVA and other requirements. Larger alternator sizes have lower temperature rise for longer life of the alternator insulation system. In addition, larger alternator sizes can provide a cost-effective use of engine power in across-the-line motor-starting applications and can be used to minimize voltage waveform distortion caused by non-linear loads.

Single-bearing alternators couple directly to the engine flywheel with flexible discs for drivetrain reliability and durability. No gear reducers or speed changers are used. Two-thirds pitch windings eliminate third-order harmonic content of the AC voltage waveform and provide the standardization desired for paralleling of generator sets. The standard excitation system is a PMG excited system.

Alternator Application Notes

Separately Excited Permanent Magnet Generator (PMG) System - This standard system uses an integral PMG to supply power to the voltage regulator. A PMG system generally has better motor-starting performance, lower voltage dip upon load application, and better immunity from problems with harmonics in the main alternator output induced by non-linear loads. This system provides improved performance over self-excited regulators in applications that have large transient loads, sensitive electronic loads (especially UPS applications), harmonic content, or that require sustained short-circuit current (sustained 3-phase short circuit current at approximately 3 times rated for 10 seconds).

Alternator Sizes - On any given model, various alternator sizes are available to meet individual application needs. Alternator sizes are differentiated by maximum winding temperature rise, at the generator set standby or prime rating, when operated in a 40°C ambient environment. Available temperature rises range from 80°C to 150°C. Not all temperature rise selections are available on all models. Lower temperature rise is accomplished using larger alternators at lower current density. Lower temperature rise alternators have higher motor-starting kVA, lower voltage dip upon load application, and they are generally recommended to limit voltage distortion and heating due to harmonics induced by non-linear loads.

Alternator Space Heater - is recommended to inhibit condensation.

Available Output Voltages

Three Phase Reconnectable

[ ] 115/200

[ ] 120/208

[ ] 139/240

[ ] 120/240

[ ] 277/480

Three Phase Non-Reconnectable

[ ] 277/480

[ ] 347/600

Specifications – Alternator

Design	Brushless, 4 pole, drip proof revolving field
Stator	2/3 pitch
Rotor	Direct coupled by flexible disc
Insulation System	Class H per NEMA MG1-1.65
Standard Temperature Rise	125°C @ Standby
Exciter Type	Permanent Magnet Generator (PMG)
Phase Rotation	A (U), B (V), C (W)
Alternator Cooling	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor (TIF)	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF)	<3

Three Phase Table[1]		**105° C**	**105° C**	**125° C**	**125° C**	**125° C**	**125° C**						
Feature Code		B259	B301	B258	B252	B246	B300						
Alternator Data Sheet Number		306	305	306	305	305	305						
Voltage Ranges		110/190 Thru 139/240 220/380 Thru 277/480	347/600	110/190 Thru 139/240 220/380 Thru 277/480	120/208 Thru 139/240 240/416 Thru 277/480	277/480	347/600						
Surge kW		404	406	404	403	407	406						
Motor Starting kVA (at 90% sustained voltage)	PMG	1896	1749	1896	1749	1749	1749						

Full Load Current - Amps at Standby Rating	120/208	139/240	277/480	347/600
	1388	1203	601	481

Notes:

1. Single Phase Capability: Single phase power can be taken from a three phase generator set at up to 40% of the generator set nameplate kW rating at unity power factor.

Control System

PowerCommand Control with AmpSentry™ Protection

- The PowerCommand Control is an integrated generator set control system providing governing, voltage regulation, engine protection, and operator interface functions.
- PowerCommand Controls include integral AmpSentry protection. AmpSentry provides a full range of alternator protection functions that are matched to the alternator provided.
- Controls provided include Battery monitoring and testing features, and Smart-Starting control system.
- InPower PC-based service tool available for detailed diagnostics.
- Standard PCCNet interface. Available with Echelon LonWorks™ network interface.
- NEMA 3R enclosure.
- Suitable for operation in ambient temperatures from -40C to +70C, and altitudes to 13,000 feet (5000 meters).
- Prototype tested; UL, CSA, and CE compliant.

AmpSentry AC Protection	Engine Protection	Operator Interface
• Overcurrent and short circuit shutdown • Overcurrent warning • Single & 3-phase fault regulation • Over and under voltage shutdown • Over and under frequency shutdown • Overload warning with alarm contact • Reverse power and reverse Var shutdown • Excitation fault	• Overspeed shutdown • Low oil pressure warning and shutdown • High coolant temperature warning and shutdown • High oil temperature warning (optional) • Low coolant level warning or shutdown • Low coolant temperature warning • High and low battery voltage warning • Weak battery warning • Dead battery shutdown • Fail to start (overcrank) shutdown • Fail to crank shutdown • Redundant start disconnect • Cranking lockout • Sensor failure indication	• OFF/MANUAL/AUTO mode switch • MANUAL RUN/STOP switch • Panel lamp test switch • Emergency Stop switch • Alpha-numeric display with pushbutton access, for viewing engine and alternator data and providing setup, controls, and adjustments • LED lamps indicating genset running, not in auto, common warning, common shutdown • (5) configurable LED lamps • LED Bargraph AC data display (optional)
Alternator Data	**Engine Data**	**Other Data**
• Line-to-line and line-to-neutral AC volts • 3-phase AC current • Frequency • Total and individual phase kW and kVA	• DC voltage • Lube oil pressure • Coolant temperature • Lube oil temperature (optional)	• Genset model data • Start attempts, starts, running hours • KW hours (total and since reset) • Fault history • Load profile (hours less than 30% and hours more than 90% load) • System data display (optional with network and other PowerCommand gensets or transfer switches
Governing	**Voltage Regulation**	**Control Functions**
• Integrated digital electronic isochronous governor • Temperature dynamic governing • Smart idle speed mode • Glow plug control (some models)	• Integrated digital electronic voltage regulator • 3-phase line to neutral sensing • PMG (Optional) • Single and three phase fault regulation • Configurable torque matching	• Data logging on faults • Fault simulation (requires InPower) • Time delay start and cooldown • Cycle cranking • PCCNet Interface • (4) Configurable customer inputs • (4) Configurable customer outputs • (8) Configurable network inputs and (16) outputs (with optional network)

Options

[ ] Analog AC Meter Display [ ] Thermostatically Controlled Space Heater [ ] Key-type mode switch	[ ] Ground fault module [ ] Engine oil temperature [ ] Auxiliary Relays (3)	[ ] Echelon LonWorks interface [ ] Digital input and output module(s) (loose) [ ] Remote annunciator (loose)

Generator Set Options

Engine

[ ] 208/240/480 V thermostatically controlled coolant heater for ambient above 40°F (4.5°C)
[ ] 208/240/480 V thermostatically controlled coolant heater for ambient below 40°F (4.5°C)
[ ] Fuel/water separator
[ ] Heavy duty air cleaner with safety element

Fuel System

[ ] 300 Gal (1136 L) Sub-base tank
[ ] 400 Gal (1514 L) Sub-base tank
[ ] 500 Gal (1893 L) Sub-base tank
[ ] 600 Gal (2271 L) Sub-base tank
[ ] 660 Gal (2498 L) Sub-base tank
[ ] 720 Gal (2725 L) Sub-base tank
[ ] 1470 Gal (5565 L) Sub-base tank

Alternator

[ ] 105°C rise alternator
[ ] 120/240 V, 300 W anti-condensation heater

Exhaust System

[ ] Critical grade exhaust silencer
[ ] Exhaust packages
[ ] Industrial grade exhaust silencer
[ ] Residential grade exhaust silencer

Generator Set

[ ] AC entrance
[ ] Batteries
[ ] Battery charger
[ ] Export box packaging
[ ] Isolation pads
[ ] UL2200 Listed
[ ] Main line circuit breaker
[ ] PowerCommand (3100) Digital Parallel Control
[ ] PowerCommand Network
[ ] Remote annunciator panel
[ ] Sound-attenuated enclosure (2 levels) with internal silencers
[ ] Spring isolators
[ ] Weather-protective enclosure with internal silencer
[ ] 2 year standby warranty
[ ] 5 year basic power warranty
[ ] 10 year major components warranty

Available Products and Services

A wide range of products and services is available to match your power generation system requirements. Cummins Onan products and services include:

Diesel and Spark-Ignited Generator Sets

Transfer Switches

Bypass Switches

Parallel Load Transfer Equipment

Digital Paralleling Switchgear

PowerCommand Network and Software

Distributor Application Support

Planned Maintenance Agreements

Warranty

All components and subsystems are covered by an express limited one-year warranty. Other optional and extended factory warranties and local distributor maintenance agreements are available. Contact your distributor/dealer for more information.

Certifications

ISO9001 - This generator set was designed and manufactured in facilities certified to ISO9001.

CSA - This generator set is CSA certified to product class 4215-01.

PTS - The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Products bearing the PTS symbol have been subjected to demanding tests in accordance to NFPA 110 Level 1 to verify the design integrity and performance under both normal and abnormal operating conditions including short circuit, endurance, temperature rise, torsional vibration, and transient response, including full load pickup.

UL - The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage.

See your distributor for more information

Cummins Power Generation
1400 73rd Avenue N.E.
Minneapolis, MN 55432
763.574.5000
Fax: 763.574.5298
www.cumminspower.com

Important: Backfeed to a utility system can cause electrocution and/or property damage. Do not connect generator sets to any building electrical system except through an approved device or after building main switch is open.

Enclosures and tanks 230-500 kW

> Specification sheet

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Cummins® Power Generation

Enclosure features

- 14-gauge steel construction (panels)
- 12-gauge steel construction (posts)
- Stainless steel hardware
- Double E-coat green paint
- Package Listed to UL 2200
- Designed to satisfy all requirements of National Electrical Code installations
- Fuel and electrical stub-up area within enclosure perimeter
- Fixed louvers
- Cambered roof prevents water accumulation
- Three recessed, lockable doors per side
- Retainers hold doors open for easy access
- Enclosed exhaust silencer ensures safety and protects against rust
- Rain collar and rain cap
- Exterior oil and coolant drains with interior valves for ease of service
- Rodent barriers on inlet and outlet
- Non-hydroscopic sound attenuating material
- Side mounted controls and circuit breakers
- Easy access lifting points for spreader bars
- Dual vibration isolation system
- Enclosure mounts to fuel tank or lifting base
- Factory pre-assembled package
- Enclosures are designed for outdoor use only

Options

- Three levels of sound attenuation
- Motorized louvers
- Enclosed motorized louvers to protect from ice and snow accumulation (available on air inlet for all models and on air outlet on Level II enclosures only)
- Externally mounted emergency stop button for operator safety
- Horizontal air discharge (Level II only)
- Aluminum construction
- Wind rated to 150 mph (standard on aluminum enclosures, optional on steel)
- Neutral sandstone paint color
- Factory mounted battery charger
- External 120 VAC service outlet
- Rain hoods for air inlet
- Lifting base in lieu of a sub-base tank
- Pre-wired AC distribution package
  - 100 amp, 120/240 volt, single phase load center
  - Spare breaker positions and capacity for future upgrades
  - GFCI protected internal 120 volt AC service receptacle
  - GFCI protected weather proof external 120 volt service receptacle
  - All factory installed AC powered features pre-wired into load center

Fuel tank features

- UL 142 Listed
- NFPA 37 compliant
- Double walled, steel construction
- Emergency tank and basin vents
- Tank mounted mechanical fuel gauge
- Fuel supply and return tubes
- Top mounted leak detection float switch
- Low and high level fuel switches
- Mounting brackets for optional pump and control
- Integral lifting points
- Basin drain

Options

- Pre-wired fuel pump and control
- Fuel overfill alarm
- Overflow and tank fill plugs
- Five gallon spill fill box
- Fill pipe extender
- Local code approvals available

Dual wall sub-base tanks - Usable operating hours*

Genset model	Gal/hour at full load	300 Gal tank	400 Gal tank	500 Gal tank	600 Gal tank	660 Gal tank	720 Gal tank	850 Gal tank	1470 Gal tank	1700 Gal tank
230 DFAB	15.6	19	26	32	38	42	46	--	94	--
250 DFAC	16.8	18	24	30	36	39	43	--	88	--
250 DQAD	17.3	17	23	29	35	38	42	--	85	--
275 DQAE	19.4	15	21	26	31	34	37	--	76	--
300 DQAF	21.4	14	19	23	28	31	34	--	69	--
275 DFBF	20.4	15	20	25	29	32	35	--	72	--
300 DFCB	22.5	13	18	22	27	29	32	--	65	--
350 DFCC	24.4	12	16	20	25	27	30	--	60	--
400 DFCE	29.1	10	14	17	21	23	25	--	51	--
350 DFEG	24.6	12	16	20	24	27	--	35	--	69
400 DFEH	27.1	11	15	18	22	24	--	31	--	63
450 DFEJ	30.0	10	13	17	20	22	--	28	--	57
500 DFEK	34.8	9	11	14	17	19	--	24	--	49

* Operating hours are measured at 60 Hz, standby rating. When filled to comply with NFPA 30 90% fill alarm, operating capacity is reduced by 10%.

Enclosure package sound pressure levels @ 7 meters dB(A)

Genset model	Weather protective enclosure	Quiet Site® Level I sound attenuated enclosure	Quiet Site® Level II sound attenuated enclosure
230 DFAB	86	83	72
250 DFAC	86	82	72
250 DQAD	85	82	71
275 DQAE	85	83	72
300 DQAF	86	85	73
275 DFBF	86	83	70
300 DFCB	86	84	71
350 DFCC	87	85	72
400 DFCE	89	85	73
350 DFEG	85	83	72
400 DFEH	89	85	72
450 DFEJ	87	84	74
500 DFEK	88	85	73

- All data is 60 Hz, full load standby rating, steel enclosures only.
- Data is a measured average of 8 positions.

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www.cumminspower.com

Cummins Power Generation

Accessories

Feature	Part number	Description	Inst sheet
B183-2	0179-3341-01	Battery charger mounting kit	C654
C212-2	0179-3372-22	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 300 Gal tank	G609
C212-2	0179-3372-23	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 400 Gal tank	G609
C212-2	0179-3372-24	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 500 Gal tank	G609
C212-2	0179-3372-25	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 600 Gal tank	G609
C212-2	0179-3372-26	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 660 Gal tank	G609
C212-2	0179-3372-27	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 720 Gal tank	G609
C212-2	0179-3372-28	Fuel transfer pump/control kit-120 VAC - 2 Gal/min 850 Gal tank	G609
C213-2	0179-3372-32	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 300 Gal tank	G609
C213-2	0179-3372-33	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 400 Gal tank	G609
C213-2	0179-3372-34	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 500 Gal tank	G609
C213-2	0179-3372-35	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 600 Gal tank	G609
C213-2	0179-3372-36	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 660 Gal tank	G609
C213-2	0179-3372-37	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 720 Gal tank	G609
C213-2	0179-3372-38	Fuel transfer pump/control kit-120 VAC - 4 Gal/min 850 Gal tank	G609
C214-2	0179-3372-42	Fuel transfer pump/control kit-120 VAC - 7 Gal/min 1470 & 1700 Gal tank	G609
C231-2	0541-1066-03	Alarm kit-used w/spill fill box w/OFPV	C659
C232-2	0541-1066-04	Alarm kit-used w/spill fill box w/o OFPV	C659
C233-2	0541-1060-03	Spill fill box kit-5 Gal w/OFPV - DFAB/C, DQAD/E/F, DFBF, DFCB/C/E	G626
C233-2	0541-1061-03	Spill fill box kit-5 Gal w/OFPV - DFEG/H/J/K	G626
C233-2	0541-1105-03	Spill fill box kit-5 Gal w/OFPV - DFEB/C/D	G626
C234-2	0541-1060-04	Spill fill box kit-5 Gal w/o OFPV - DFAB/C, DQAD/E/F, DFBF, DFCB/C/E	G626
C234-2	0541-1061-04	Spill fill box kit-5 Gal w/o OFPV - DFEG/H/J/K	G626
C234-2	0541-1105-04	Spill fill box kit-5 Gal w/o OFPV - DFEB/C/D	G626
C235-2	0541-1054-01	Fuel tank vent kit-4" NPT - 300 & 400 Gal fuel tanks	G622
C243-2	0541-1054-02	Fuel tank vent kit-5" NPT - 500 thru 850 Gal fuel tanks	G622
NA	0541-1054-03	Fuel tank vent kit-6" NPT	G622
K102-2	0179-3441-03	Outlet receptacle kit	C653
KP74-2	0179-3342-03	Emergency stop button kit	C652

Note: These accessories were designed to be used with the Thor enclosure/tank packages (F200, F201, F202, F203, F204, F205, C201, C202, C203, C204, C205, C206, C207, C208, & C209). They were not intended to be used with the F183, F184 enclosures nor the 0159-1486 series sub-base tanks.

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Package dimensions of enclosure, exhaust system, and UL tank

Tank size (Gal)	Length (in)	Length (in) Level II package	Width (in)	Height (in)	Weight (lbs) weather protective enclosure package	Weight (lbs) Quiet Site Level I sound attenuated enclosure package	Weight (lbs) Quiet Site Level II sound attenuated enclosure package
Lifting base	188	222	82	100	4110	4535	5453
300	188	222	82	104	5235	5660	6578
400	188	222	82	106	5420	5845	6763
500	188	222	82	108	5522	5947	6865
600	188	222	82	111	5676	6101	7019
660	188	222	82	113	5753	6178	7096
720	188	222	82	114	5885	6310	7228
850	188	222	82	118	6065	6490	7408
1470	200	200	82	128	6891	7316	8234
1700	234	234	82	128	7466	7891	8809

Weight does not include the generator set. Consult your local Cummins Power Generation distributor or the appropriate generator specification sheet.

Width is 86 inches lifting eye to lifting eye.

Listed to UL 142, UL 2200.

NFPA 30, NFPA 37.

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Warning: Back feed to a utility system can cause electrocution and/or property damage. Do not connect generator sets to any building electrical system except through an approved device or after building main switch is open.

Warning: For professional use only. Must be installed by a qualified service technician. Improper installation presents hazards of electrical shock and improper operation, resulting in severe personal injury and/or property damage.

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