



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0813

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Cummins Power Generation

Manufacturer's Technical Representative: Abishek Patil

Mailing Address: 1400 73rd Ave NE, Fridley, MN 55432

Telephone: (763) 571-5000

Email: abhishek.patil@cummins.com

Product Information

Product Name: Dragonfly QSK78

Product Model Number(s): C3000D6EB, C2750D6E

Product Category: Emergency and Standby Power Systems

Product Sub-Category: Generators

General Description: Diesel Generator sets without enclosures and without fuel tanks.

Mounting Description: Base Mounted Spring Vibration Isolated

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: john.giuliano@thevmcgroup.com

Title: President



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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

- GR-63-Core
- ICC-ES AC156
- IEEE 344
- IEEE 693
- NEBS 3
- Other (Please Specify): _____

Testing Laboratory

Company Name: U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER, CONSTRUCTION ENGINEERING RESEARCH LABORATORY (CERL)

Contact Person: James Wilcoski

Mailing Address: 2902 Newmark Dr., Champaign IL 61822-1076

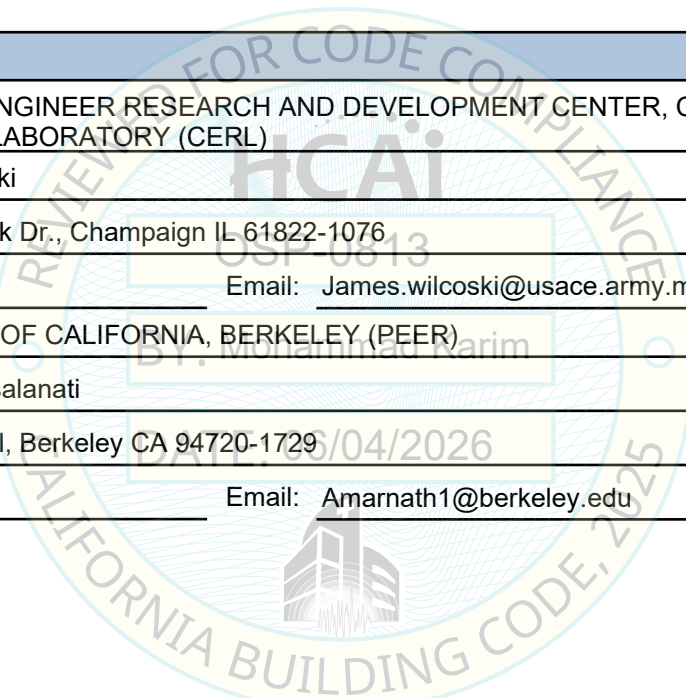
Telephone: (217) 373-4565 Email: James.wilcoski@usace.army.mil

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)

Contact Person: Amarnath Kasalanati

Mailing Address: 325 Davis Hall, Berkeley CA 94720-1729

Telephone: (510) 642-3437 Email: Amarnath1@berkeley.edu





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Seismic Parameters

Certified Response Spectral Acceleration Factors:(F_p/W_p)

Horizontal (A Flx-H), $g = \underline{3.04}$ (A Rig-H), $g = \underline{2.05}$
 Vertical (A Flx-V), $g = \underline{1.47}$ (A Rig-V), $g = \underline{0.59}$

SDS (Design spectral response acceleration at short period, g) = 1.9 (z/h=1), 2.2 (z/h=0)

Hf (Force amplification height factor) = 3.5 (z/h=1); 1.0 (z/h=0)

Ru (Structure ductility reduction factor) = 1.3 (z/h=1); 1.0 (z/h=0)

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

HCAI Approval (For Office Use Only) - Approval Expires on 06/04/2032

Date: 6/4/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable): OSP-0813

BY: Mohammad Karim

DATE: 06/04/2026

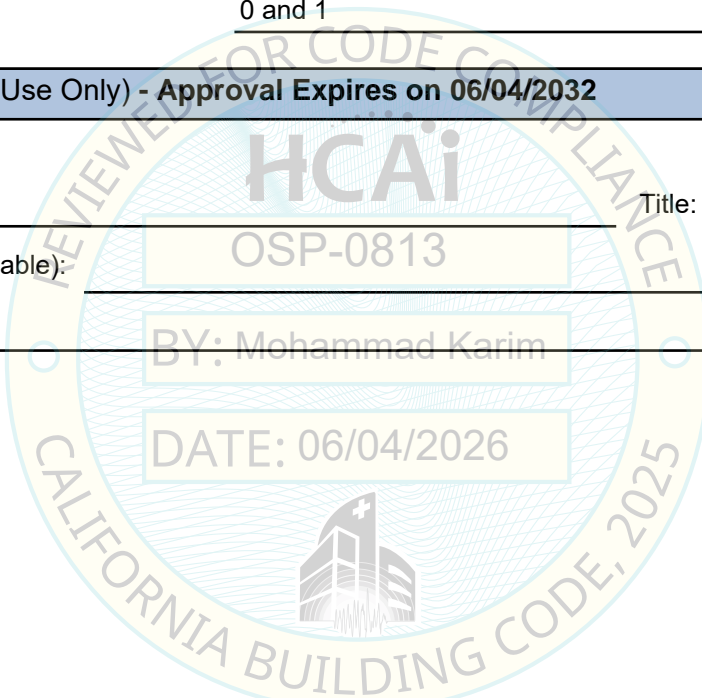


Table 1 - Certified Components: Open Generators

| Model | Frequency [Hz] | Max Rating [kW] | Manufacturer | Configuration | Max Dimensions [in] | | | Max Weight [lbs] | Installation Method | UUT |
|-----------|----------------|-------------------|--------------|---------------|-----------------------|-------|--------|--------------------|---------------------|-------|
| | | | | | Length | Width | Height | | | |
| C3000D6EB | 60 | 3000 | Cummins | Open | 283 | 118 | 137 | 55,000 | Isolated | UUT-3 |
| C3000D6EB | 60 | 3000 | | | 284 | 121 | 143 | 51,300 | Isolated | UUT-1 |
| C2750D6E | 60 | 2750 | | | 284 | 121 | 143 | 55,600 | Isolated | UUT-2 |

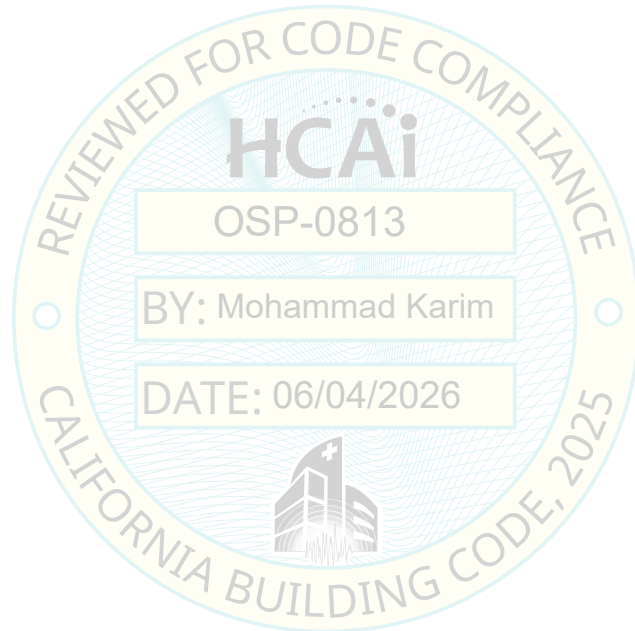


Table 2 - Certified Engines

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|-------|-----------|---------|--------------|----------------|-----------|---------------------|
| QSK78 | 2750-3000 | Cummins | A067C324 | 22,453 | Cast Iron | UUT-1, UUT-2, UUT-3 |

Table 3 - Certified Block Heaters

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|--------|-----------|----------|--------------|----------------|--------------|--------------------|
| Forced | 2750-3000 | HotStart | A067Z832 | 205 | Carbon Steel | UUT-1,UUT-2, UUT-3 |

Table 4 - Certified Air Filter/Cleaner Assemblies

| Type | kW | MFR | Model Number | Weight [lbs] | Material | UUT |
|------|-----------|---------|--------------|----------------|--------------|--------------------|
| ND | 2750-3000 | Cummins | A074A573/4 | 622.38 | Carbon Steel | UUT-1,UUT-2, UUT-3 |

Table 5 - Certified Alternators

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|------|-----------|--------|--------------|----------------|------------------------------------|--------------|
| HV | 2750-3000 | CGT | S9H1D-E4 | 13,970 | Steel Lamination & Copper Windings | Extrapolated |
| | | | S9H1D-F4 | 15,070 | | Extrapolated |
| | | | S9H1D-G4 | 16,500 | | Extrapolated |
| | | | S9H1D-H4 | 17,530 | | UUT-3 |
| MV | | | S9M1D-D4 | 12,456 | | UUT-1 |
| | | | S9M1D-E4 | 13,970 | | Interpolated |
| | | | S9M1D-F4 | 15,070 | | Interpolated |
| | | | S9M1D-G4 | 16,500 | | Interpolated |
| | | | S9M1D-H4 | 17,490 | | Interpolated |
| LV | | | S9L1D-D4 | 13,420 | | Interpolated |
| | | | S9L1D-E4 | 15,950 | | Interpolated |
| | | | S9L1D-F4 | 16,390 | | Interpolated |
| | S9L1D-G4 | 18,480 | UUT-2 | | | |

Table 6 - Certified Radiators

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|---------|-----------|--------|-------------------------------|----------------|-------------------------|-------------|
| 40C-50C | 2750-3000 | AKG | <u>A072A402</u> , A072A401 | 9,266 | Carbon Steel & Aluminum | UUT-1,UUT-2 |
| | | Modine | A077T569, <u>A078V064</u> | 7,604 | | UUT-3 |

Table 7 - Certified Skids / Chassis

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|------|-----------|-----|--------------|----------------|--------------|--------------------|
| 60Hz | 2750-3000 | BTD | A067Z301 | 3,599 | Carbon Steel | UUT-1,UUT-2, UUT-3 |

Table 8 - Certified Controllers

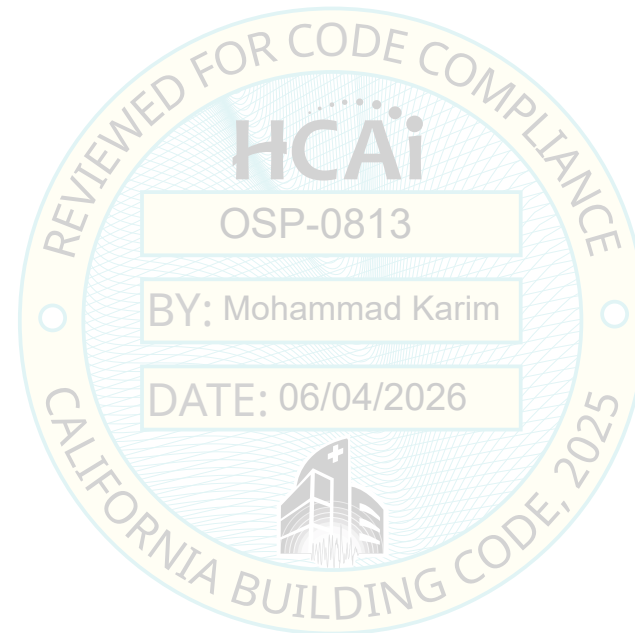
| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|-----------------|-----------|---------|--------------|----------------|--------------|--------------------|
| PCC 3300 - GLOW | 2750-3000 | Cummins | A068L192 | 238 | Carbon Steel | UUT-1,UUT-2, UUT-3 |

Table 9 - Certified Miscellaneous Components

| Type | kW Range | MFR | Model Number | Weight [lbs] | Material | UUT |
|----------|-----------|---------|--------------|----------------|--------------|--------------------|
| CCV | 2750-3000 | Cummins | A068B041 | 41 | Carbon Steel | UUT-1,UUT-2, UUT-3 |
| LV EB | 2750-3000 | Cummins | A068E002 | 550 | Carbon Steel | UUT-2 |
| MV/HV EB | 2750-3000 | Cummins | A065F713 | 616 | Carbon Steel | UUT-1, UUT-3 |

UUT Summary

| UUT | Model Number | Rating | Test Lab | Test Report Written by | Test Report Number | Test Date(s) | Mounting Configuration | Mounting Orientation | S _{DS} (g) z/h=1 | S _{DS} (g) z/h=0 |
|-----|--------------|---------|----------|------------------------|--------------------|-------------------|------------------------|----------------------|---------------------------|---------------------------|
| 1 | C3000D6EB | 3000 kW | CERL | DCL | 24045-2401 | 5/21/24 - 5/24/24 | Spring Isolated | Base Mounted | 1.90 | 2.20 |
| 2 | C2750D6E | 2750 kW | CERL | DCL | 24045-2401 | 5/21/24 - 5/24/24 | Spring Isolated | Base Mounted | 1.90 | 2.20 |
| 3 | C2750D6EB | 2750 kW | PEER | DCL | 27437-2501 | 3/12/2026 | Spring Isolated | Base Mounted | 1.90 | 2.20 |



UNIT UNDER TEST (UUT)

Summary Sheet

UUT-1

Test Report (TR): 24045-2401; Test Lab: CERL; Reporting: DCL; Test Dates: 5/21/24 - 5/24/24

| Model Line | Model Number | Manufacturer |
|------------|--------------|--------------|
| QSK78 | C3000D6EB | Cummins |

Product Construction Summary

Dragonfly Genset with AKG Radiator on Carbon Steel Skid

Options / Subcomponent Summary

Engine: QSK78, Cummins, Cast Iron; Forced Block Heater: A067Z832, HotStart, Carbon Steel; ND Air Filter: A074A573/4, Cummins, Carbon Steel; MV Alternator: S9M1D-D4, CGT, Steel Lamination & Copper Windings; Radiator: A072A402, AKG, Carbon Steel & Aluminum; Skid: A067Z301, BTD, Carbon Steel; Controller: PCC 3300-GLOW, Cummins, Carbon Steel; CCV: A068B041, Cummins, Carbon Steel; MV/HV Entrance Box: A065F713, Cummins, Carbon Steel

UUT Properties

| Weight [lbs] | Dimensions [in] | | | Lowest Nat. Freq. [Hz] | | | | | | |
|----------------|-------------------|--|--------|--------------------------|----------------|----------------|------------------------|------------------------|------------------------|------------------------|
| | Length | Width | Height | F-B | S-S | V | | | | |
| 51,300 | 284.0 | 121.0 | 143.0 | 4.5 | 3.0 | 9.0 | | | | |
| Building Code | Test Criteria | UUT Highest Passed Seismic Run Information | | | | | | | | |
| | | S _{DS} (g) | z/h | H _f | R _μ | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
| CBC 2025 | ICC-ES AC156-24 | 1.90 | 1.0 | 3.5 | 1.3 | 1.5 | 3.04 | 2.28 | - | - |
| | | 2.20 | 0.0 | 1.0 | 1.0 | 1.5 | - | - | 1.47 | 0.59 |

Test Mounting Details

UUT-1 was isolated using (18) VMC M2SSHX-1E-5150N spring isolators. The isolators were connected to the equipment using (1) 3/4 Grade 8 bolt each, and were connected to the shake table using (4) 7/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-2

Test Report (TR): 24045-2401; Test Lab: CERL; Reporting: DCL; Test Dates: 5/21/24 - 5/24/24

| Model Line | Model Number | Manufacturer |
|------------|--------------|--------------|
| QSK78 | C2750D6E | Cummins |

Product Construction Summary

Dragonfly Genset with AKG Radiator on Carbon Steel Skid

Options / Subcomponent Summary

Engine: QSK78, Cummins, Cast Iron; Forced Block Heater: A067Z832, HotStart, Carbon Steel; ND Air Filter: A074A573/4, Cummins, Carbon Steel; LV Alternator: S9L1D-G4, CGT, Steel Lamination & Copper Windings; Radiator: A072A402, AKG, Carbon Steel & Aluminum; Skid: A067Z301, BTD, Carbon Steel; Controller: PCC 3300-GLOW, Cummins, Carbon Steel; CCV: A068B041, Cummins, Carbon Steel; LV Entrance Box: A068E002, Cummins, Carbon Steel

UUT Properties

| Weight [lbs] | Dimensions [in] | | | Lowest Nat. Freq. [Hz] | | | | | | |
|----------------|-------------------|--|--------|--------------------------|----------------|----------------|------------------------|------------------------|------------------------|------------------------|
| | Length | Width | Height | F-B | S-S | V | | | | |
| 55,600 | 284.0 | 121.0 | 143.0 | 4.5 | 3.5 | 8.0 | | | | |
| Building Code | Test Criteria | UUT Highest Passed Seismic Run Information | | | | | | | | |
| | | S _{DS} (g) | z/h | H _f | R _μ | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
| CBC 2025 | ICC-ES | 1.90 | 1.0 | 3.5 | 1.3 | 1.5 | 3.04 | 2.28 | - | - |
| | AC156-24 | 2.20 | 0.0 | 1.0 | 1.0 | 1.5 | - | - | 1.47 | 0.59 |

Test Mounting Details

UUT-2 was isolated using (18) VMC M2SSHX-1E-5150N spring isolators. The isolators were connected to the equipment using (1) 3/4 Grade 8 bolt each, and were connected to the shake table using (4) 7/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-3

Test Report (TR): 27437-2501; Test Lab: PEER; Reporting: DCL; Test Dates: 3/12/2026

| Model Line | Model Number | Manufacturer |
|------------|--------------|--------------|
| QSK78 | C2750D6EB | Cummins |

Product Construction Summary

Dragonfly Genset with Modine Radiator on Carbon Steel Skid

Options / Subcomponent Summary

Engine: QSK78, Cummins, Cast Iron; Forced Block Heater: A067Z832, HotStart, Carbon Steel; ND Air Filter: A074A573/4, Cummins, Carbon Steel; HV Alternator: S9H1D-H4, CGT, Steel Lamination & Copper Windings; Radiator: A078V064, Modine, Carbon Steel & Aluminum; Skid: A067Z301, BTD, Carbon Steel; Controller: PCC 3300-GLOW, Cummins, Carbon Steel; CCV: A068B041, Cummins, Carbon Steel; MV/HV Entrance Box: A065F713, Cummins, Carbon Steel

UUT Properties

| Weight [lbs] | Dimensions [in] | | | Lowest Nat. Freq. [Hz] | | | | | | |
|----------------|-------------------|--|--------|--------------------------|----------------|----------------|------------------------|------------------------|------------------------|------------------------|
| | Length | Width | Height | F-B | S-S | V | | | | |
| 55,000 | 283.0 | 118.0 | 137.0 | 3.5 | 2.8 | 2.8 | | | | |
| Building Code | Test Criteria | UUT Highest Passed Seismic Run Information | | | | | | | | |
| | | S _{DS} (g) | z/h | H _f | R _μ | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
| CBC 2025 | ICC-ES AC156-24 | 1.90 | 1.0 | 3.5 | 1.3 | 1.5 | 3.04 | 2.05 | - | - |
| | | 2.20 | 0.0 | 1.0 | 1.0 | 1.5 | - | - | 1.47 | 0.59 |

Test Mounting Details

UUT-3 was isolated using (18) VMC M2SSHX-1E spring isolators. The isolators were connected to the equipment using (1) 3/4 Grade 8 bolt each, and were connected to the shake table using (4) 7/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.