



Aviation Ground Equipment Corp.

6000 Series Diesel



120 kVA – 400 Hz (28 VDC & 270 VDC)* Diesel Power Cart

The AGECE 120kVA Diesel Power Cart allows for up to 3 modes of operation, 400 Hz., 28 VDC, & 270 VDC. The Diesel Power Cart (DPC) is a four wheeled, manually propelled vehicle designed for flight deck conditions as well as land based theaters. Options include a JSF approved 270 VDC output for use with F-22 and F-35.

Features / Options:

- AC Outputs: 115/200 VAC, 400 Hz, 90 kVA @0.8 PF (100 kW Max), Meets MIL-STD-704F
- AC Output: 230/400 VAC, 400 Hz, 90 kVA @0.8 PF (72 kW), Meets MIL-STD-704F*
- DC Output: 28 VDC, 600 A Continuous, 2000 A Peak, Meets MIL-STD-704F*
- DC Output: 270 VDC Main, 72 kW, Meets LMCO F-35 Requirements*
- DC Output: 270 VDC Auxiliary, 4.05 KW, Meets LMCO F-35 Requirements*
- Auxiliary Output: 115 VAC, 400 Hz, Three Phase, 260 Amp, Receptacle*
- Convenience Output: 115 VAC, 400 Hz, Single Phase, 30 Amp, Receptacle *
- Convenience Output: 230 VAC, 400 Hz, Three Phase, 10 Amp, Receptacle*
- Convenience Outlet: 115V AC 60Hz 15 AMP*
- Smart Control User Interface
- Built-In Test Diagnostics (BIT) with Fault Recording
- Rugged Four-Wheeled Trailer, Hand Brake System, SAE AS 8090, Type II, Group C

*Denotes Optional Specification



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Specifications

Engine

- Cummins QSB 6.7, Turbocharged 4-stroke, inline 6 cylinder common rail fuel system
- Full Cummins application approval
- 24 VDC battery system
- ECM Electronic governor system
- Lubricity Filter allows engine to operate on aviation fuels
- Intake manifold pre-heater (grid heater)
- Cold weather starting: battery blankets, fuel filter warmer, block heater, and sump heater*

Generator

- Continuous rating: 120kVA (100 kW), 115/200 VAC, 3 phase, 4 wire, 400 Hz
- Two bearing generator offers long life and reliability
- Class H insulation
- Premium insulation/impregnation system

115/200 VAC 400 Hz. Output

- Meets or Exceeds MIL-STD-704F
- Dual 400 Hz outputs
- Ratings: 90 kVA individual outputs
120 kVA total unit output
- Overloads: 125% - 5 minutes
- Meets all Military and Commercial Requirements for No-Brake Power Transfer (NBPT)
- Voltage Regulation: $\pm 1\%$ up to rated load
- THD (Total Harmonic Distortion): $< 3\%$
- IHD (Individual Harmonic Content): $< 2\%$
- Transient Performance Meets and Exceeds MIL-STD-704F
- Output Voltage Adjustment Range: $\pm 15\%$
- Phase Voltage Displacement with Balanced Load: $< 2\%$
- Phase Voltage Balance (with 10% Unbalanced Load on a Single Phase): < 3 volts
- Line Drop Compensation: automatic up to 8% (user adjustable)

28 VDC Output (OPTIONAL)

- Meets or Exceeds MIL-STD-704F
- 28.5 VDC Transformer-Rectifier
- Ratings: 600 amps continuous
2000 amps starting current
- Overloads: 125% - 5 minutes
150% - 5 seconds
- Fully Adjustable Current Limiting
- Voltage Regulation: $< \pm 1\%$ up to rated load

270 VDC Main Output (OPTIONAL)

- Meets or Exceeds F-35 (JSF) Specifications as recognized by LMCO
- Meets or Exceeds MIL-STD-704F
- Ratings: 72 kW (continuous)
- Overloads: 125% - 5 minutes
200% - 5 seconds
- Fully Adjustable Current Limiting
- Integrated Unit-Cable Interlock

Environmental

- Temperature, MIL-STD-810F Method 501.4, 502.4 Operating -40°F to $+125^{\circ}\text{F}$ (-40°C to $+52^{\circ}\text{C}$); Non-Operating -60°F to $+160^{\circ}\text{F}$ (-51°C to $+71^{\circ}\text{C}$)
- Humidity, MIL-STD-810F, Method 507.4
- Salt Fog, MIL-STD-810F, Method 509.3
- Blowing Rain, MIL-STD-810F, Method 506.4
- Blowing Sand, MIL-STD-810F, Method 510.4
- Wind, MIL-STD-810F, Method 506.10
- Vibration, MIL-STD-167-1
- Rail Impact, MIL-STD-810F 516.5
- Air Transportability
- Tie Down, MIL-T-81259B

Military & Commercial Standards

- MIL-STD-704F
- MIL-STD-167-1
- MIL-STD-810F
- MIL-STD-209
- MIL-STD-889
- MIL-STD-1472
- SAE AS 50881
- **F-35 (JSF) LMCO (Approved)**

Dimensions & Weight

- Dimensions 48"H X 64"W X 120"L (Towbar Stowed)
- Weight 7500 lbs. (Empty Tank)
- Weight 8300 lbs. (Full Tank)

Maintenance

- Mean Time to Repair < 120 minutes

Protection

- Engine: Air Cleaner Restriction, High Coolant Temp, Low Oil Pressure, Low Fuel Warning, Low Coolant
- Generator: Over/Under Frequency, Overload, Over/Under Voltage
- AC Output: Over/Under Voltage, Over/Under Frequency, Overload
- DC Outputs: Over/Under Voltage, Overload, Short Circuit
- Internal: Door Interlock, Contactors Stuck (Open/Closed), Internal Power Supply Voltage, Converter Fail

Controls / Indicators

- Smart Control User Interface
- Sealed, tactile feedback membrane panel
- Integrated Built-In Test (BIT)
- Front Control Panel
 - Fault Code Display with Indicators
 - Adjustable Brightness Indicator Lamps with ON/OFF
 - LED Display Input/Output
 - Voltage
 - Amperage
 - Frequency
 - Cable Interlock Status Indicators
 - Line Drop Comp, User Adjustable
 - Output Voltage, User Adjustable
 - Emergency Stop Switch
- Door Interlock Switch
- Elapsed Time Hour Meter

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