



Model 1101-1



**Diesel Power Cart (DPC)
80 kW – 270 VDC, 270 VDC Aux, 380/440 VAC**

The 270 VDC Diesel Power Cart (DPC) is a four wheeled, manually propelled vehicle designed for flight deck conditions as well as land based theaters. The cart features an integrated power frequency converter allowing for three modes of operation: Diesel Input, Facility Input, and 50/60 Hz Output.

Standard Features:

- 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
- AC Output: 380/460 VAC, 50/60 Hz, 80 KW, Meets NATO STANAG 4135
- Engine: EPA Tier 3, EU STAGE III A, Low Emissions Compliant
- Smart Control User Interface
- Built-In Test Diagnostics (BIT) with Fault Recording
- Rugged Four-Wheeled Trailer, Hand Brake System, AS 8090, Type II, Group C



Aviation Ground Equipment Corp.



Specifications

Operating Modes

Diesel Input Mode (Aircraft Power)

The DPC converts engine/generator power to provide 270 VDC main, 270 VDC auxiliary and 28 VDC interlock electrical power

Facility Input Mode (Aircraft Power)

The DPC converts facility input power to provide 270 VDC main, 270 VDC auxiliary and 28 VDC interlock electrical power

Diesel Output Mode (380/460 VAC)

The DPC engine/generator provides 380/460 VAC, 50/60 Hz output to power a facility or support equipment

Engine

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

Generator

- Continuous rating: 80 kW, 460 VAC, 3 phase, 4 wire, 60 Hz
- Two bearing generator offers long life and reliability
- Class H insulation
- Premium insulation/impregnation system

Facility Input

- 440/460 VAC, 3-Phase, 60Hz or 380 VAC, 3-Phase, 50Hz
- Input Phase Rotation Insensitive
- 3 Wire Ungrounded Type 1 Power

270 VDC Main Output

- 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

270 VDC Output Auxiliary

- Output/connector meets or Exceeds F-35 (JSF) Specifications as recognized by LMCO
- Meets or Exceeds MIL-STD-704F
- Ratings: 4.05 KW (continuous)
- Overloads: 125% - 5 minutes
200% - 5 seconds

380/460 VAC Output

- Meets or Exceeds NATO STANAG 4135
- Ratings: 380 VAC, 50 Hz, 125 A
460 VAC, 60 Hz, 100 A
- Overloads: 125% - 5 minutes
150% - 30 seconds

Environmental

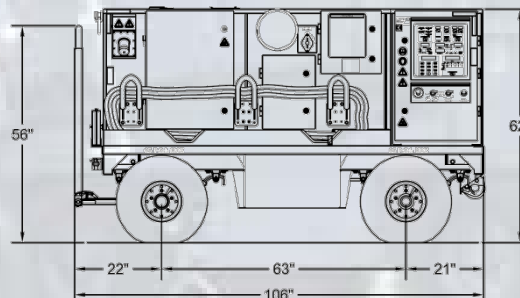
- Temperature, MIL-STD-810F Method 501.4, 502.4 Operating -40°F to +125°F (-40°C to +52°C); Non-Operating -60°F to +160°F (-51°C to +71°C)
- Humidity, MIL-STD-810F, Method 507.4
- Salt Fog, MIL-STD-810F, Method 509.3
- Blowing Rain, MIL-STD-810F, Method 506.4
- Blowing Sand, MIL-STD-810F, Method 510.4
- Wind, MIL-STD-810F, Method 506.10
- Vibration, MIL-STD-167-1
- Rail Impact, MIL-STD-810F 516.5
- Heavyweight Shock, MIL-S-901D Grade B
- Air Transportability
- Tie Down, MIL-T-81259B

Military & Commercial Standards

- MIL-STD-704F
- MIL-STD-461E
- MIL-STD-464A
- MIL-STD-167-1
- MIL-STD-810F
- MIL-STD-901D
- MIL-STD-209
- MIL-STD-889
- MIL-STD-1472
- SAE AS 50881
- **F-35 (JSF) LMCO (Approved)**

Dimensions & Weight

- Dimensions 62"H X 66"W X 106"L (Towbar Stowed)
- Weight 6585 lbs. (Empty Tank)
- Weight 7015 lbs. (Full Tank)



E3, Emissions & Susceptibility

- MIL-STD-461E
- Conducted Susceptibility, CS101, CS114, CS115 & CS116
- Radiated Susceptibility, RS101 & RS103
- Conductive Emissions, CE102
- Radiated Emissions, RE102
- EMV
- MIL-STD-464A, Table 1A
- MIL-HDBK-235-2B

Protection

- Engine: Air Cleaner Restriction, High Coolant Temp, Low Oil Pressure, Low Fuel Warning, Low Coolant
- Generator: Over/Under Frequency, Overload, Over/Under Voltage
- Input: Over/Under Voltage, Over/Under Frequency, Overload, Phase Loss
- AC Output: Over/Under Voltage, Over/Under Frequency, Overload
- DC Outputs(270 VDC Main and Auxiliary): Over/Under Voltage, Overload, Short Circuit
- Internal: Door Interlock, Contactors Stuck (Open/Closed), Internal Power Supply Voltage, Converter Fail

Maintenance

- Mean Time to Repair <120 minutes

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
 - Cable Interlock Status Indicators
 - Line Drop Comp, User Adjustable
 - Output Voltage, User Adjustable
 - Emergency Stop Switch
- Door Interlock Switch
- Elapsed Time Hour Meter

Specifications subject to change without notice

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