

## UFC SERIES PwrKart™ 400Hz GROUND POWER UNIT 20kVA - 45kVA



MOBILE CONFIGURATION  
(Shown with standard digital panel)

### STANDARD FEATURES:

- IP55
- Certified to UL 1012
- Indoor/Outdoor (Hangar/Ramp) Use
- Automatic Input Line Monitoring
- Advanced Integrated Display (AID™) Console
- 8000 Event Log / Diagnostics
- TCP/IP/Ethernet interface (Modbus)
- Internal Communication Ports - USB, RJ45 (ETHERNET), RS485 (Modbus), & RS232
- External Communication Ports – RJ45 (ETHERNET) & USB
- 10% Automatic Line Drop Compensation
- Emergency Power “OFF” Switch
- 18-Inch Hazard Area Clearance
- Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Input & Output Cable Racks
- Input High Voltage Transient Protection
- Multi Language (Romanization) Display - English, French, German, Italian, Portuguese, Russian and Spanish, Others - Specify

### MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	20.0kVA = 453lbs. (205kg.) 30.0kVA = 510lbs. (231kg.) 45.0kVA = 597lbs. (271kg.)
Enclosure:	NEMA 3RX Corrosion Resistant
Cooling:	Forced Convection

This product was manufactured in a plant whose quality management system is registered to ISO 9001:2008.



### APPLICATION:

Since its beginning in 1960, Unitron has specialized in the design and development of reliable solid-state power systems. Through an innovative design, advanced self-diagnostic systems (BITE) and modular construction, Unitron products assure maximum power availability and minimal repair time.

The PwrKart Series includes lightweight 115/200VAC, 400Hz, 28VDC, and 270VDC mobile converters for aircraft ground power applications in the hangar or ramp area. The dual output AC/DC PwrKart provides simultaneous AC and DC power from a single GPU. Kilowatt power for the complete unit is limited to the nominal rating of the 400Hz output of the unit. Because a single unit can do the work of two, Unitron's AC/DC PwrKart reduces operating and maintenance costs, and eases ramp congestion.

Output power ratings for the 115/200VAC, 400Hz mobile PwrKart range from 20kVA to 90kVA. Larger power ratings are available in towable, fixed and bridge-mounted configurations. In addition, Unitron offers a combination AC/DC GPU, which provides simultaneous 115/200VAC, 400Hz or 270VDC at 72kW, with 28VDC power from a single unit.

### OPTIONS:

- Alternate input voltage range 3Ø, 208-240 or 600VAC input
- Various Convenience Outlets (Specify Voltage and Frequency)
- 50 or 100 Foot Input Power Cable (Pigtail, Specify Required Length)
- AC Output Power Cable with Plug (Specify Required Length - Available in 30 or 60 foot standard lengths)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect
- Bench Top Voltage Adjust
- 28VDC or 270VDC Output
- Up to 675% Overload for 6 sec, Dependent on Rating
- No Break Power Transfer Compatible
- Indoor Touch Screen Panel
- ≤5% Input Current Distortion at Max Load
- Alternate Mounting Configurations Available
- Pneumatic Ramp Tires
- Custom Paint & Decals (Standard Color - White)
- CSA Certified
- CE Mark Certified
- Input Auto Ranging
- Ground Fault Monitor
- Lockable Front Door
- Neutral Interrupt Protection
- Universal Safety Interlock
- 15% Automatic Line Drop Compensation

### SPECIFICATIONS / STANDARDS:

EN 61000-6-2 and -4*	Electromagnetic Compatibility Immunity and Emission Standards for Industrial Environments
2006/95/EC*	Low Voltage Directive
ISO 461-1/2	Aircraft - Connectors for Ground Electrical Supplies
ISO 1540	Characteristics of aircraft electrical system
ISO 6858	Aircraft ground support electrical supplies
SAE ARP 5015	Ground equipment 400Hz ground power performance requirement
MIL-STD-704F	Aircraft electric power characteristics
MIL-STD-1472	Human Engineering Design Criteria
DFS-400	Specification for 400Hz aircraft power supply

\*Defined Basis of CE Mark Certification

**GENERAL SPECIFICATIONS**

**INPUT:**

Voltage	380 - 480V, ± 10%, 3Ø, 3 wire plus ground (Alternative Voltages Available)
Frequency	50 - 60 Hz ± 10%
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.1, Location Cat. B/C
Inrush Current	No greater than 100% of full load current

**ENVIRONMENTAL:**

Acoustical Noise	< 65 dBA maximum at 5 feet (1.5m)
Temperature Range	-40°C to +55°C
Relative Humidity	10 - 95%, Non-Condensing
Ingress of Water	Type 3RX, IP55

**ENERGY FACTORS:**

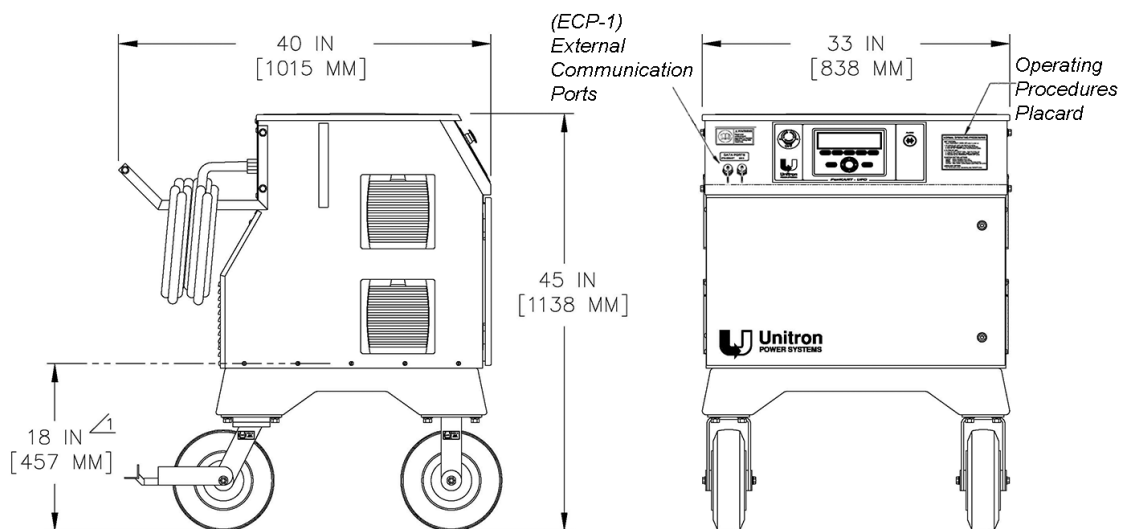
Efficiency	93% typical at full load; 90% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical

**OUTPUT:**

Power Rating	20, 30, or 45 kVA (Specify)
Power Factor Range	0.5 lagging to 0.8 leading
Overload	100% continuous 110% for 60 min 125% for 10 min 150% for 2 min 200% for 20 sec (45kVA) 300% for 20 sec (30kVA) 450% for 20 sec (20kVA)
Voltage*	115/200 volts, 3Ø, 4 wire, grounded neutral
Voltage Adjust*	± 15%
Crest Factor	1.414 ± 3%
Voltage Regulation	± 1.0% under all conditions of line, balanced loads and temperature
Voltage Transients	IAW MIL-STD-704F
Frequency Regulation	400 Hz ± 0.01% under all conditions of line, load and temperature
Frequency Transients	None
Phase Angle Regulation	± 1° for balanced loads; ± 2° for unbalanced loads
Harmonic Distortion	2.0% maximum
Protection	Overload, short circuit, over/undervoltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	10%

\*Also available 120/208 VAC, adjustable ±10%

FIGURE 1



1 Safety clearance IAW Article 513-10(a) of the National Electrical Code (NEC)—Reference NFPA 70-1996, and EN60079-10

**UFC SERIES PwrKart™  
MOBILE GROUND POWER UNIT (GPU)**