UFC PwrKart™ SERIES 400 Hz AND 28 VDC GROUND POWER UNIT (45, 60, 75 and 90 kVA)

MOBILE CONFIGURATION
(Shown with optional touchscreen & custom paint)

STANDARD FEATURES:

- CE Mark certified
- 3 Phase, 50 - 60 Hz, 380-480 VAC Input
- Indoor/Outdoor (Hangar/Ramp) Use
- ≤ 5% Input Current Distortion
- Automatic Input Line Monitoring
- Advanced Integrated Display (AID™) Console
- 8000 Event Log / Diagnostics
- USB, ETHERNET, RS 485, and Serial Port
- JBus/Modbus Protocol
- 15% Automatic Line Drop Compensation (ALDC)
- Emergency Power "OFF" Switch (EPO)
- 18-Inch Hazard Area Clearance
- No Break Power Transfer (NBPT) Compatible
- I/O Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Summary Fault Indicators
- Input & Output Cable Racks
- Pneumatic Ramp Tires
- Input High Voltage Transient Protection (Lightning Strikes) with Front Panel Preventative Maintenance annunciation
- Multi Language Display (English, French, German, Italian, Russian and Spanish)

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 115/200 VAC, 400 Hz, 28 VDC, 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. Because a single unit can do the work of two, Unitron's AC/DC PwrKart reduces operating and maintenance costs, and eases ramp congestion.

In addition to mobile GPUs, Unitron offers 400 Hz, 28 VDC and combination AC/DC units in towable, fixed and bridge-mounted configurations.

OPTIONS:

- Alternate input voltage range 3 Phase, 208 or 575 VAC input
- 50 or 100 Foot Input Power Cable (Pigtail, Specify Required Length)
- AC Output Power Cable with Plug (available in 30 or 60 foot standard lengths), specify required length
- DC Output Power Cable with Plug (available in 20, 30, 40, or 60 foot standard lengths), specify required length
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Output Safety Disconnect (without interlock)
- Front Panel AC and DC Voltage Adjust (± 15%)
- 270VDC Output
- 300% Overload for 6 sec. (AC output only)
- Indoor Touch Screen Panel
- External Communication Ports (ECP)
- Custom Paint & Decals (Standard Color - White)
- Ground Fault Monitor
- Cockpit Control
- Lockable Front Door
- Alternate Mounting Configurations Available

MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	45.0 kVA = 755 lbs. (342 kg.)
	60.0 kVA = 871 lbs. (395 kg.)
	75.0 kVA = 1043 lbs. (473 kg.)
	90.0 kVA = 1135 lbs. (515 kg.)
Construction:	Indoor/Outdoor
Cooling:	Forced Convection

SPECIFICATIONS / STANDARDS:

EN 61000-6-2*	Electromagnetic compatibility Immunity standard for industrial environments
EN 61000-6-4*	Electromagnetic compatibility Emission standard for industrial environments
2006/95/EC*	Low Voltage Directive
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

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Unitron

GENERAL SPECIFICATIONS

AC INPUT:

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 to 480 volts, +10%, -15%, 3Ø, 3 wire plus ground (Alternate voltages - specify)
Frequency	50 - 60 Hz ± 10%
Phase Rotation	Any
Protection	Over/undervoltage, loss of phase, overcurrent, short circuit. Voltage transient protection IAW IEEE C62.41.Location Cat. B/C
Inrush Current	No greater than 100% of full load current

AC OUTPUT:

Power Rating	45, 60, 75, or 90 kVA (specify)
Overload	150% for 5 min., 200% for 20 sec.
Crest Factor	1.414 ± 3%
Voltage	115/200 volts, 3Ø, 4 wire, grounded neutral
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%, typical 1.5%
Protection	Overload, short circuit, over/under voltage and safety disconnect
Automatic Line Drop	15%, internal adjustment Compensation (ALDC)

DC OUTPUT:

Full Rated Load	600 amps continuous
Engine Start Capacity	Adjustable up to 2000 amps for 20 seconds at 10% duty cycle
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	
▪ 100% continuous rated load and ±10% input voltage	± 0.05%
▪ No load to rated load with nominal input voltage	IAW ISO 6858
▪ Overload with nominal input voltage	See start mode curves
Voltage Adjust	28 VDC ± 10%
Current Limit Adjust	150A to full rated current
Protection	Overload, short circuit, over voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%, internal adjustment

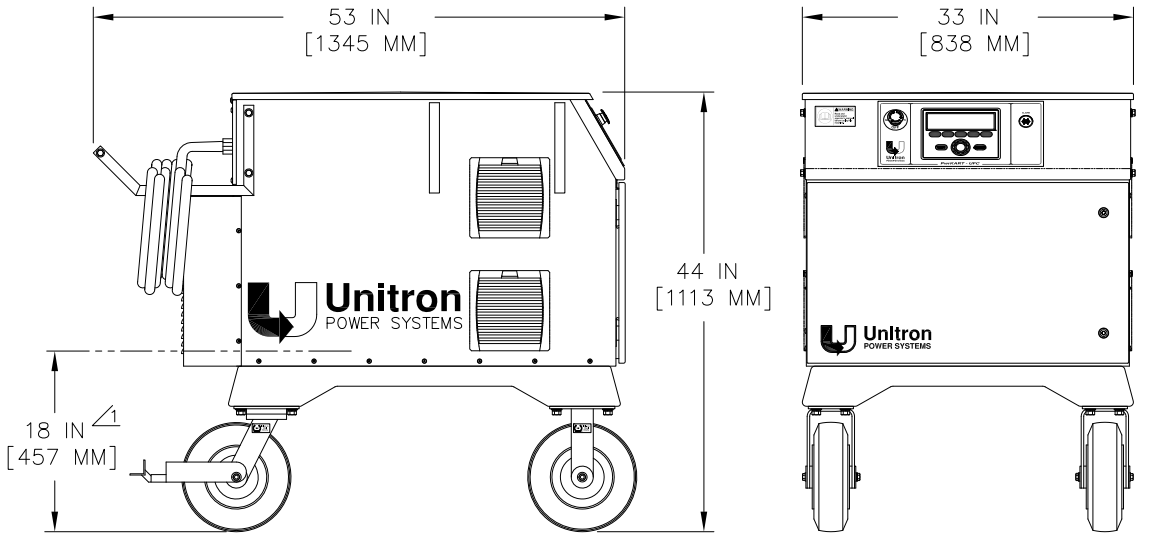
ENVIRONMENTAL:

Acoustical Noise	< 65 dBA at 5 feet (1.5m) (60 dBA typical)
Temperature Range	-40°C to +55°C
Relative Humidity	10 - 95%
Enclosure(s)	NEMA 3R, IP24 (optional IP54 or IP55; contact factory)

ENERGY FACTORS:

Efficiency	95% typical at full load, 93% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical

FIGURE 1



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

UFC PwrKart™ SERIES
MOBILE GROUND POWER UNIT (GPU)

REV. B