

UFC SERIES PwrKart™ 400Hz AND 28VDC GROUND POWER UNIT (20, 30, and 45kVA)



MOBILE CONFIGURATION
(Shown with standard touch screen panel)

STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 50 - 60Hz, 380-480VAC Input
- ≤ 5% Input Current Distortion at max load
- 15% Automatic Line Drop Compensation
- 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 - RS485 (Modbus), and RS232
- External Communication Port – USB
- Emergency Power “OFF” Switch
- 18-Inch Hazard Area Clearance
- Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Output Current Limit Adjust from 150A to full rated current
- Input & Output Cable Racks
- Input High Voltage Transient Protection
- Multi Language Display - Arabic, Asian, English, French, German, Italian, Portuguese, Russian and Spanish, Others - Specify

MECHANICAL SPECIFICATIONS:

Size:	See Figure 1
Weight:	20.0kVA = 683 lbs (310 kg) 30.0kVA = 740 lbs (336 kg) 45.0kVA = 827 lbs (375 kg)
Enclosure:	NEMA 250 - Type 3SX
Cooling:	Forced Convection

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 GPU** provides simultaneous AC and either 425 or 600 amps continuous DC power from a single unit. Kilowatt power for the complete unit is limited to the nominal rating of the 400Hz output of the unit. 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 3 Phase, 208-240 or 600VAC input
- Various Convenience Outlets (Specify Voltage and Frequency)
- 50 or 100 Foot Input Power Cable (Pigtail, Specify Required Length)
- AC and/or DC Output Power Cable with Plug (Specify Required Length)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- Internal or External Communication Port - RJ45 (Ethernet)
- Output Safety Disconnect
- Bench Top Voltage Adjust
- No Break Power Transfer Compatible
- 270VDC Output
- Second 28VDC output
- Custom Paint & Decals (Standard Color - White)
- CSA Certified
- CE Mark Certified
- Ground Fault Monitor
- Lockable Front Door
- Pneumatic Ramp Tires
- Alternate Mounting Configurations Available
- Neutral Interrupt Protection
- Universal Safety Interlock

SPECIFICATIONS / STANDARDS (Meets or Exceeds):

NFPA 70 (NEC 500)	SAE ARP 5015
ISO 461-1/2	DFS-400
ISO 1540	UFGS 26 35 43
ISO 6858	MIL-STD-1472
EN 60079-10	MIL-STD-704F
EN 61000-6-2 and -4**	2006/95/EC**

**Defined Basis of CE Mark Certification



This product was manufactured in a plant
whose quality management system is
registered to ISO 9001:2015.

GENERAL SPECIFICATIONS

AC INPUT:

Voltage*	380 - 480V, $\pm 10\%$, 3 \emptyset , 3 wire plus ground (Alternative Voltages Available)
Frequency	50 - 60 Hz $\pm 10\%$
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

AC 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)
Crest Factor	1.414 $\pm 3\%$
Voltage***	115/200 volts, 3 \emptyset , 4 wire, grounded neutral
Voltage Adjust***	$\pm 15\%$
Voltage Regulation	$\pm 1.0\%$ under all conditions of line, balanced loads and temperature
Voltage Transients	IAW MIL-STD-704F
Frequency Regulation	400 Hz $\pm 0.01\%$ under all condi- tions of line, load and temperature
Frequency Transients	None
Phase Angle Regulation	$\pm 1^\circ$ for balanced loads; $\pm 2^\circ$ for unbalanced loads
Harmonic Distortion	2.0% maximum
Protection	Overload, short circuit, over/under voltage and safety disconnect
Automatic Line Drop Compensation (ALDC)	15%

DC OUTPUT:

Model 420

Full Load Rating	425 amps continuous
Overload (10% duty cycle)	600 amps for 1 hour 1000 amps for 1 minute
Engine Start Capacity (10% duty cycle)	Adjustable up to 1600A for 30 sec or 2000A for 10 sec

Model 620

Full Load Rating	600 amps continuous
Overload (10% duty cycle)	1000 amps for 1 minute
Engine Start Capacity (10% duty cycle)	Adjustable up to 2000A for 30 sec
Voltage	28 VDC, 2 wire, grounded negative

Voltage Regulation

- Continuous rated load and $\pm 10\%$ input voltage $\pm 0.5V$
- No load to rated load with nominal input voltage $\pm 0.5V$

Voltage Adjust 28 VDC $\pm 10\%$

Current Limit Adjust 150A to full rated current

Protection Overload, short circuit, over
voltage and safety disconnect

Automatic Line Drop
Compensation (ALDC) 10%

ENVIRONMENTAL:

Acoustical Noise < 65 dBA maximum at
5 feet (1.5m)

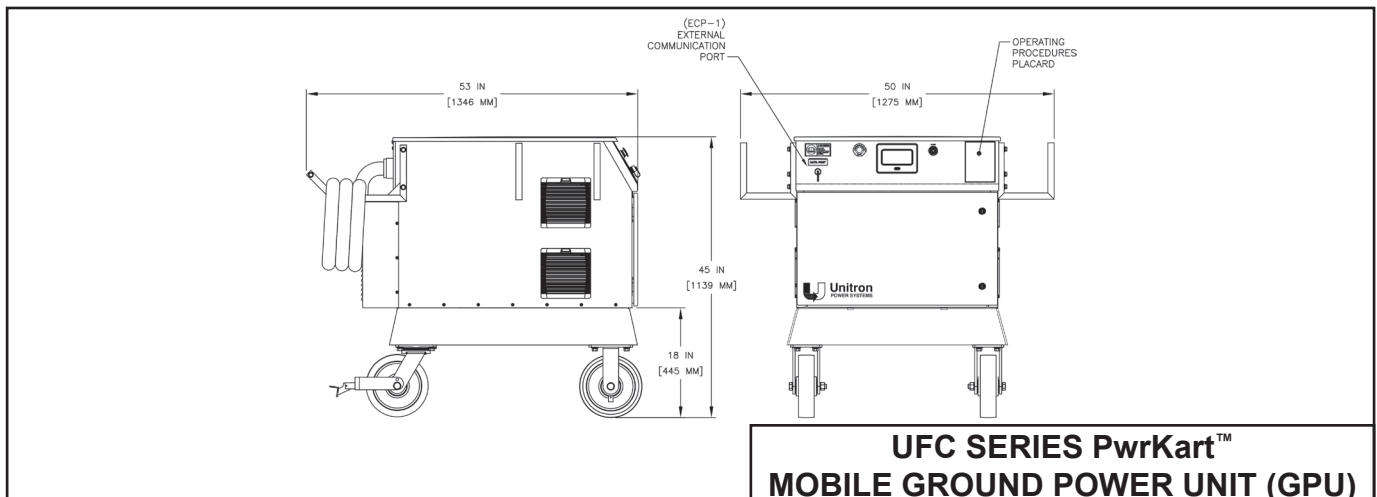
Temperature Range -40°C to +55°C

Relative Humidity 10 - 95%, Non-Condensing

Ingress of Water Type 3SX, IP55

*For CE Mark Applications Specify Option I-5.
**Use 28VDC output only during engine start mode
***Also available 120/208 VAC, adjustable $\pm 10\%$

FIGURE 1



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