

## UFC SERIES PwrKart™ 400Hz GROUND POWER UNIT 45-90kVA



TOWABLE CONFIGURATION  
(Shown with standard touch screen panel)

### STANDARD FEATURES:

- IP55
- Certified to UL 1012
- 3 Phase, 380-480VAC input
- Indoor/Outdoor (Hangar/Ramp) Use
- ≤ 5% Input Current Distortion at max load
- 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 Port – USB
- 15% Automatic Line Drop Compensation
- Emergency Power “OFF” Switch
- 18-Inch Hazard Area Clearance
- I/O Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Input & Output Cable Racks
- Pneumatic Ramp Tires
- Single Input Connector
- 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:	45.0kVA = 1,484lbs. (673kg.) 60.0kVA = 1,570lbs. (712kg.) 75.0kVA = 1,647lbs. (747kg.) 90.0kVA = 1,735lbs. (787kg.)
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 115/200VAC, 400Hz, 28VDC, and 270VDC converters designed to provide aircraft ground power in support of hangar and ramp aircraft maintenance activities, and on flight lines when aircraft engines are secured. The **400Hz towable PwrKart** provides up to 180kVA output power and is designed to service the largest commercial and military aircraft on the market today. The dual outputs provided can be single source controlled, be individually voltage regulated and line drop compensated, and configured for partial redundancy.

These **400Hz** Ground Power Units (GPUs) range from 20kVA to 180kVA. Dependent upon rating, these units are available in mobile, towable, fixed and bridge-mounted configurations.

### OPTIONS:

- Alternate 3-phase, Input Voltages of 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)
- External Communication Port - Ethernet
- Output Safety Disconnect
- Second 28VDC output
- 300% overload for 6 seconds or 425% overload for 1 second\* (Specify)
- Alternate third or fourth outputs - 28VDC each at 600 Amps continuous with Individual Safety Disconnect from aircraft
- Alternately Selectable 400Hz or 270VDC at same kW ratings, either output
- No Break Power Transfer Compatible
- Bench Top Voltage Adjust
- Individual Output Voltage Regulation / ALDC
- Alternate Mounting Configurations Available
- Custom Paint & Decals (Standard Color - White)
- CSA Certified
- CE Mark Certified
- Ground Fault Monitor
- Lockable Front Door
- Neutral Interrupt Protection
- Universal Safety Interlock

\*IAW MIL-STD-704F and ISO 6858: 2017

### SPECIFICATIONS / STANDARDS (Meets or Exceeds):

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

**INPUT:**

Input Current Distortion	≤ 5%, typically 3%
Voltage	380 - 480 volts, +10%, -15%, 3Ø, 3 or 4 wire plus ground (Alternate Voltages Available)
Frequency	45 - 65 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 3SX, IP55

**ENERGY FACTORS:**

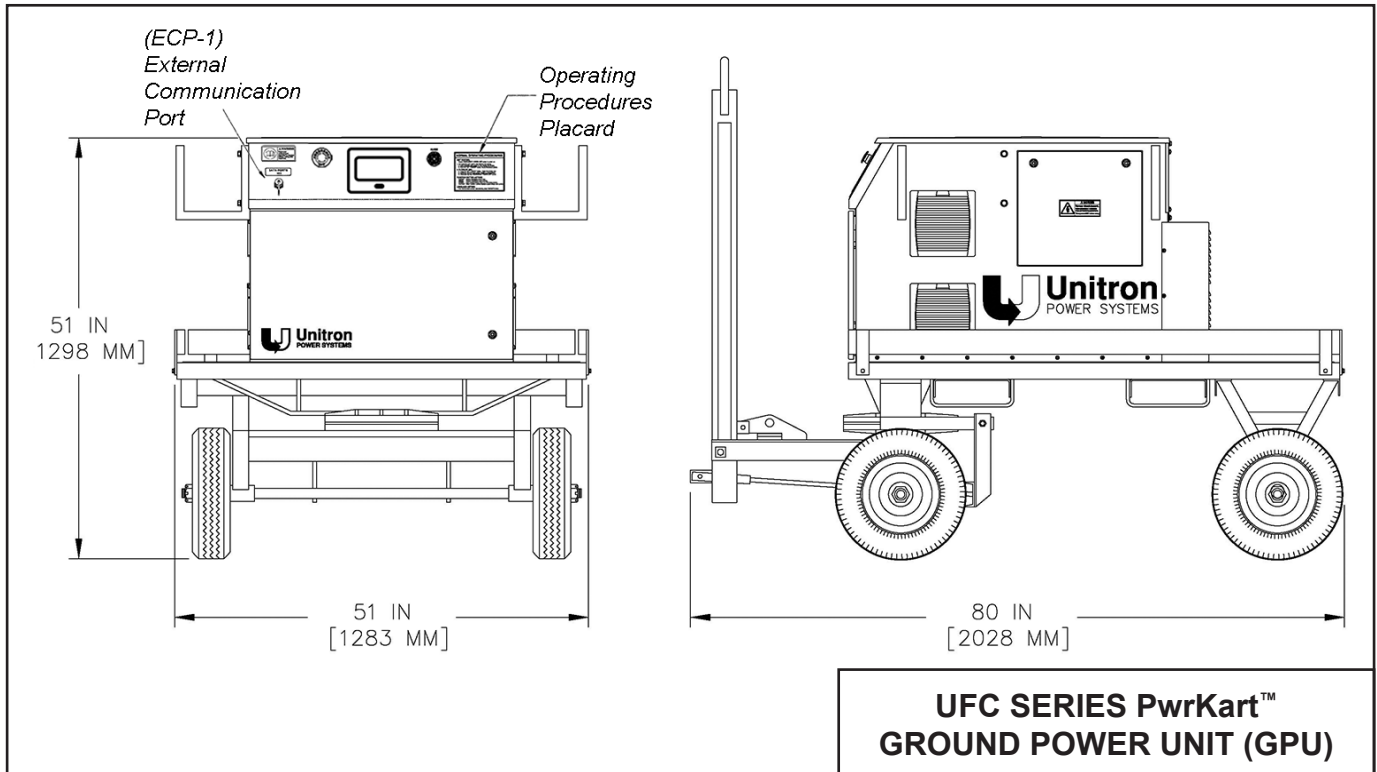
Efficiency	94% typical at full load; 92% typical at half load; varies depending on configuration
Energy Efficiency Ratio	20.0 typical

**OUTPUT:**

Power Rating	45, 60, 75 or 90 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
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)	15%

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

FIGURE 1



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