

UFC SERIES PwrKart™ 400Hz AND 28VDC 400 Hz GROUND POWER UNIT (120, 150 and 180kVA)



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
- 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
- Voltage, Current, & Frequency Monitoring
- Elapsed Time Meter
- Sleep Mode
- Front Panel Voltage Adjust
- Front Panel Summary Fault Indicators
- Output Current Limit Adjust from 150A to full rated current
- Input & Output Cable Racks
- Single Input Connection
- 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:	120.0kVA = 2,655lbs. (1,204kg.) 150.0kVA = 3,006lbs. (1,363kg.) 180.0kVA = 3,178lbs. (1,442kg.)
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 and 28VDC or 270VDC 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
- 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)
- DC Output Power Cable with Plug (Specify Required Length - Available in 20, 30, 40, or 60 foot standard lengths)
- Output Universal Aircraft Safety Interlock Circuit Disconnect (Single or Dual)
- External Communication Port - Ethernet
- Output Safety Disconnect
- 270VDC output
- Second 28VDC output
- 300% overload for 6 seconds
- 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
- TCP/IP/Ethernet interface (Modbus)
- No Break Power Transfer Compatible
- Individual Output Voltage Regulation / ALDC
- Alternate Mounting Configurations Available
- Custom Paint & Decals (Standard Color - White)
- CSA Certified
- CE Mark Certified
- Ground Fault Monitor
- Neutral Interrupt Protection
- Universal Safety Interlock

SPECIFICATIONS / STANDARDS (Meets or Exceeds):

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

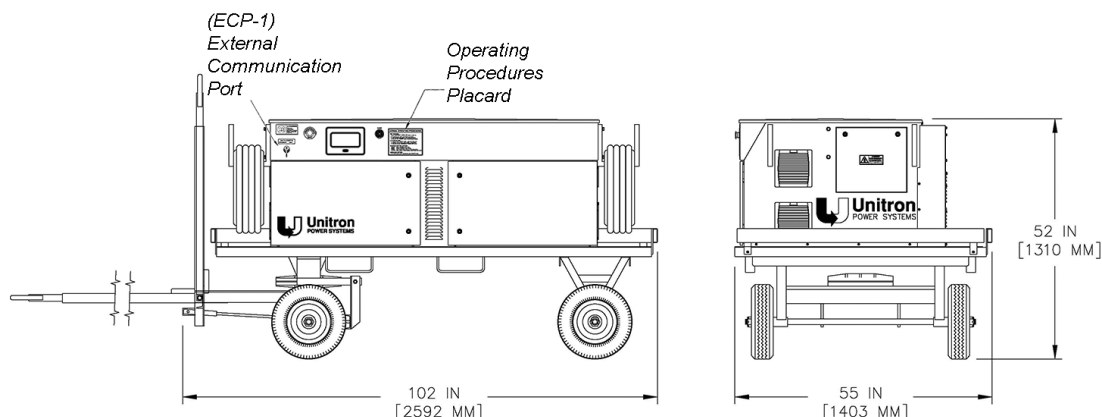
AC OUTPUT:

Power Rating	120, 150, or 180 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
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 condi- tions 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/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
Model 620	
Full Load Rating	600 amps continuous
Overload (10% duty cycle)	1000 amps for 1 minute
Model 420/620	
Engine Start Capacity (10% duty cycle)	Adjustable up to 1600 amps for 35 seconds or 2000 amps for 30 seconds
Voltage	28 VDC, 2 wire, grounded negative
Voltage Regulation	
▪ Continuous rated load and ±10% input voltage	± 0.5%
▪ No load to rated load with nominal input voltage	± 0.5%
▪ 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)	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

FIGURE 1



UFC SERIES PwrKart™ TOWABLE GROUND POWER UNIT (GPU)