



## APPLICATION

PCTI is a leader in designing, engineering, and manufacturing of Aircraft Mobile Carts since their inception back in 1991. PCTI's success in Mobile Carts comes from our reliable and rugged design. Our products are used by the US military in some of the harshest environments and conditions around the world.

PCTI's Ground Power Unit includes 115/200vac, 400hz, 28VDC and 270VDC allowing easy movement between the Hangar and the Ramp area. PCTI's AC/DC power conversion reduces operating and maintenance costs while reducing the equipment down time.

The following specifications are for an output of 115/200VAC at 400Hz is from 20kVA to 45kVA. As the rating goes higher, the weight and size of the unit will increase. In these cases, we recommended an optional tow bar to move the unit. For these larger rated unit, check out our towable units.

Please feel free to contact PCTI to discuss these products or Combo AC/DC GPUs.

## Standard Specifications

### Input

Service:	380V-480V <sub>AC</sub> $\pm$ 10%, 3 Phase, 4 Wire
Frequency:	50/60 Hz
Efficiency:	85% at full load
Power Factor:	0.8 to unity at full load and nominal input

### Output

Service:	115V/200VAC 3 phase, 4 wire, adjustable 90% to 110%
Frequency:	400Hz, $\pm$ 0.05%
Power:	20, 30, or 45kVA
Regulation:	1% independent phase regulation for combined no load to full load at rated input voltage change
Control Technology:	Digitally Synthesized Pulse Width Modulation (PWM)
Transient Response:	500 microseconds for a 90% load change on any phase or combination of phases
Wave Shape:	Sinewave
Crest Factor:	1.41 $\pm$ 0.1
THD:	less than 2% THD, 1% on any single frequency, and less than 4% for non-linear loads
Current Limit:	110% of load
Power Factor:	0.8 lead to 0.8 lag. Continuous zero lead to zero lag at full rated output without damage to the unit.
Overload Capacity:	110% for 1 hour (60 minutes) 125% for 10 minutes 150% for 2 minutes

### Front Panel Devices

- Power ON Indicator
- Run indicator
- Undervoltage indicator
- Overvoltage indicator
- Voltage trim adjust  $\pm$  10%
- Start pushbutton
- Stop/Reset pushbutton
- Fault indicator
- Analog Frequency Meter
- Analog Output Voltmeter w/3 Phase selector switch
- Analog Output Ammeter w/3 Phase selector switch
- Elapsed Time Meter (operating hours counter)

# 20kVA - 45kVA Mobile Carts for 400Hz Aircraft AC Ground Power Unit

## Protection

- Input Circuit Breaker
- Output Contactor
- Electrical door interlock with bypass
- E&F Interlock w/bypass feature
- Overvoltage
- Undervoltage
- Overcurrent/Overload – self protected. Will withstand output short circuit cleared by internal solid-state circuitry.
- Output under frequency
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- Isolation Transformer
- Overtemperature

## Mechanical/Environmental

- Temperature Range:
  - Ambient: -40°C to 55°C
  - Storage: -40°C to 65°C
- Altitude up to 1000 meters
- Humidity to 98% 40°C, noncondensing
- Enclosure, NEMA 3R, Outdoor, Suitable for hangar/ramp use
- Mounting: mobile with pneumatic tires.
- 18" Hazard Clearance
- Dimension and Weight based on unit Power Rating
- 45KVA: 45"Hx55"Lx27"D 1200 lbs. estimated

## Applicable Standards

- MIL-STD-704F (Aircraft Electrical Power Characteristics)
- ANSI
- NEC
- IEEE

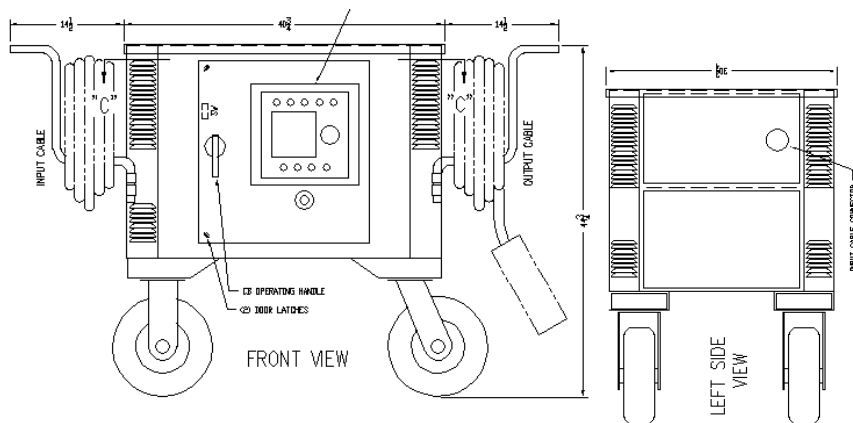
## Available Power Ratings

Power Rating	Model Number
20kVA	FC20-200-430-01
30kVA	FC30-200-430-01
45kVA	FC45-200-430-01

## Options and Accessories

- Alternate input voltage, 208-240 or 600vAC
- Input cable jacketed 3-conductor with ground, pigtailed and plug ready 60 ft.
- Output cable: 6 Pole cable assy. with 4 - 1/0 cables and 1 - 12/2 cable - with aircraft plug 60 ft.
- 28vDC or 270vDC output (considered a COMBO Unit at PCTI)
- Aircraft safety Interlock circuit disconnect

- Ethernet communication port with static IP web interface
- Digital or HMI displays
- Tow Bar
- Pneumatic or rubber tires
- Custom Paint and decals (base color, industrial gray)
- Certification options
  - UL1012
  - CSA certification
  - CE Mark certification



## Contact

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