COREPOWER® Regulated Power Conversion Unit (RPCU)

The COREPOWER® Regulated Power Conversion Unit performs the function of a traditional Transformer Rectifier Unit while leveraging solid-state technology to provide dramatic improvements in performance ultimately providing more power with significantly less weight. This unit takes variable frequency 3-phase 115VAC, converts it to regulated 28VDC, and is available in 250 Amp and 150 Amp output configurations.

Features
- Maintains tight output regulation over full AC voltage range and during AC power line transients
- High efficiency ~ 93%
- Low current distortion ~ 2% THD
- Near unity power factor at full load ~ 0.99
- Power line isolated
- Overload operation
  - 150% for 2 minutes
  - 200% for 5 seconds
- Cooling options:
  - Built-in cooling fan (1434-10)
  - Passive cooling (1434-20)
- Full performance from:
  - -55°C to +70°C (1434-10)
  - -40°C to +55°C (1434-20)
- ATR rack mount or mounting flange versions available
- BIT with output current and fault reporting
- High reliability MTBF of 50,000 to 65,000 hours (environment dependent)
- Circular connectors

Power
- **Input:** 115VAC, 324–800Hz, 3-phase
- **Output:** Regulated 28VDC ±0.3VDC
  - 250 Amps continuous (1434-10)
  - 150 Amps continuous (1434-20)

Safety
- Redundant over-voltage protections
- Over-temperature protection
- Over-current protection

KEY BENEFITS
- Significant weight savings over traditional Transformer Rectifier Units
- Regulated high power quality reduces wire size and weight
- High efficiency and low distortion means greater power yield versus conventional units
- Fan-less cooling (1434-20) provides silent operation

Qualification
- RTCA/DO-160G
- RTCA/DO-254 DAL B
**Size**

Fits within 3/4 ATR Short (if rack mounted)

- **1434-10**: 7.50 in W x 12.82 in L x 5.1 in H  
  (190.5 mm W x 325.5 mm L x 129.5 mm H)

- **1434-20**: 7.50 in W x 12.63 in L x 5.1 in H  
  (190.5 mm W x 320.5 mm L x 129.5 mm H)

**Weight**

- 1434-10: 16.55 lbs (7.5 kg)
- 1434-20: 15.51 lbs (7.0 kg)