

# TRU-28

## 28V TRANSFORMER RECTIFIER UNIT

Powervamp's TRU-28 transformer rectifier unit will start and power all known 28V DC aircraft. Environmentally clean and easy to use, the unit offers users significant operating benefits.

Designed and built to the highest industry standards (MILSTD 704, ISO 6858), it produces the highest quality output signal with minimal AC ripple and is guaranteed to be accepted by all DC aircraft.

The 12 pulse rectification technology used ensures a low input total harmonic distortion at nominal loads, adding to the efficiency of the system.

The TRU-28 produces a regulated 28V DC output and can deliver a constant current of 600A with engine starting peaks of up to 2400A. The current limiting feature enables the user to limit the output current to the aircraft and can be accessed and set via the digital display. The user can access the line drop compensation feature via the display menu to increase/decrease the output voltage at the plug within the limits of ISO 6858.

The TRU-28 is a compact solid state module built to IP55 protection, designed for internal/external fixed or mobile use. With its weather-resistant, stainless steel case with large caster wheels, the unit can be easily moved by hand over uneven surfaces.



Towable trailer (option)

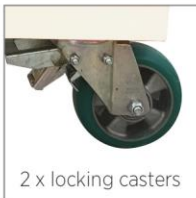
### Supplied as standard with



Input lead



Hard-wired Nato lead



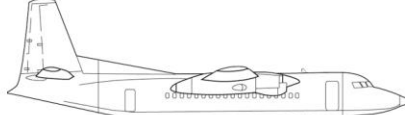
2 x locking casters



Cable horn

### Typical power plant:\*

PT6C-67, Makila, TFE 731, ALF 502, HTF7000, RR Tay, or power plants of a similar specification



FBOs, multiple heli-ops requiring heavy comp washes, training, civil and military.  
Ramp ops – large single shaft and 8–14 seat commuters, limited despatch or regional aircraft

# TRU-28

## Specifications

### INPUT

Voltage	208-240-400V-460VAC three-phase (field adjustable)
Frequency	50/60Hz
Rectification	12 pulse
Power factor	> 0.80 @ nominal load
Line current	26A – 62A @ nominal load (voltage dependent)

### OUTPUT

Voltage	28 V DC
Current	600 amps continuous
Engine start capacity	2400 A selectable
Ripple	Less than 1% at full load
Line drop compensation	up to 15%

### OVERLOAD RATINGS

2400 A	2 seconds
2100 A	10 seconds
1800 A	30 seconds
1200 A	40 seconds

### EFFICIENCY

Overall efficiency	Typically > 0.92 % @ nominal load
Stand by losses	250 W (Electronics)
No load losses	500 W (Output on)

### ENVIRONMENTAL

Acoustic noise	59 dB (A) @ 1 m
Temperature range	-40°C to +50°C (-40°F to +122°F)
Water ingress	IP55

### WEIGHT

Standard mobile unit	240kg (530lb)
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### DIMENSIONS

H 900mm (35in) W 837mm (33in) D 653mm (26in)
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## Features

- Low total input harmonic distortion
- Digital display
- System data logger
- Indoor/outdoor hangar use
- Line drop compensation
- External system control (option)
- Emergency power off
- Aircraft interlock/system interlock override
- Input frequency and voltage monitoring
- Output current limit feature
- Braking system
- Input and output cable storage

### PROTECTIONS

Over/under voltage at the output	
Over/under voltage at the input	
Reverse current at the output	
Reverse polarity at the output	
Phase sequence at the input	
Over temperature	
Internal PSU voltage monitoring	
Short circuit at the output	
Over/under voltage trip in the case that	U<20 VDC for more than 4 seconds U>32 VDC for more than 4 seconds U<40 VDC for more than 1 second

### STANDARDS

ISO 6858	Aircraft ground support electrical supplies
MIL-704E	Aircraft electric power characteristics
BS 2G 219	General requirements for ground support equipment
EN 62040-1-1 LVD	Safety standards
EN 61558-2-6 LVD	Safety standards
EN 61000-6-2 EMC	Immunity standard
EN 61000-6-4 EMC	Emission standards
BS 2G 219	General requirements for ground support equipment

## Other ground power units available from AERO Specialties



12/24V GA Pack



GPU 1700



GPU 2400



Coolspool 17



Coolspool 29



Coolspool 29 Twin



Coolspool 410



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