

TRUs and CONVERTERS

28V TRANSFORMER RECTIFIER UNITS

115V 400HZ AC SOLID STATE FREQUENCY CONVERTERS

SELECTING THE CORRECT TRU

Transformer rectifier units (TRUs) delivering 600 amps continuous power – with the ability to briefly produce up to 1800 amps for engine starting – require a mains input of at least 63 amps (44Kw @ 400V) to accommodate the overload without tripping the supply circuit breaker. If there is insufficient power, upgrading the mains supply to handle the inrush current can be prohibitively expensive.

For operators requiring a mains powered TRU, Powervamp offers two models: model TRU 600/2000 and model TRU 600/1800 Combi:

Option 1: TRU 600/2000

If sufficient power is available, Powervamp's conventional TRU 600/2000 delivers 600 amps continuous power and 2000 peak amps directly from the 3-phase mains.

Option 2: TRU 600/1800 Combi

In locations where insufficient mains power is available, Powervamp offers its TRU 600/1800 Combi (combination model). This high-efficiency unit utilises ultra-high-discharge batteries to deliver the peak amperage, with advanced switch-mode power supply modules ganged in parallel to provide the continuous amperage. The result is a lighter-weight, compact and highly efficient DC ground power unit suitable for daily ramp or hangar operations on the largest of DC aircraft.

Because batteries supply the peak amperage, with the 600/1800 Combi there is no need to overload the incoming supply and the 600/1800 Combi can be supplied from a more common 32A (22Kw @ 400V) supply. This combination of technology reduces power consumption with the added benefit of providing exceptionally stable DC power via the internal switch mode power supplies.

The 600/1800 Combi is a modular design allowing different power supplies to be installed. If the customer requires less continuous amps, the GPU can be supplied with a reduced continuous output thereby reducing the cost of the unit without affecting peak amp starting performance.

TRU 600/1800 Combi



TRU 600/2000



The Powervamp TRU600/2000 is an advanced transformer rectifier unit delivering 28.5V at 600A continuous and 2000A peak for engine starting. Regulation is achieved using additional thyristor control BEFORE the transformer, to achieve a clean output with less ripple than traditional TRUs. The TRU600/2000 is capable of worldwide operation as standard from the factory.

The TRU600/2000 is supplied in the same compact frame as the DC power carts, making the unit highly manoeuvrable. Controls are mounted at the rear of the unit, protected by a sturdy bumper. Side panels are replaceable and an optional top-mounted frame houses the output cable.

SPECIFICATION

	TRU 600/2000	TRU 600/1800 Combi		
INPUT: Voltage	3-phase 200–480V	3-phase 200-440V		
Frequency	50/60Hz	50/60Hz		
Rectification	6 pulse	Switch mode individual units		
Line current	30A @ 400V	30A		
Efficiency	90%	90%		
OUTPUT: Voltage	28.5V (adjustable)	28.5V		
Current	600A (2000A peak)	600A (1800A peak)		
Output voltage	21–31V	28–30V		
Voltage regulation	<0.5%	<0.5%		
Voltage ripple	<1%	<1%		
Case	Alloy panels, steel frame			
	Height	Length	Width	Weight
600/200	710mm (28in)	1060mm (42in)	720mm (28in)	220kg (485lbs)
600/1800 Combi	650mm (26in)	550mm (22in)	550mm (22in)	60kg (132lbs)
Output cable	4-metre (13ft) double-insulated 70mm sq			

FEATURES

- Output current regulation 1%
- Solid state design
- Powder baked wheeled cart with alloy panels
- 200mm (8in) dia. pneumatic tyres, spare wheel, cable stowage

- Ammeter, voltmeter, on/off AC and DC
- Indicator lights

OPTIONS

- Input cable 3-phase price per metre
- Cable stowage frame
- 600/2000 TRU can be supplied in a fixed case for internal/external plinth mounting