

# POWER SUPPLIES

## DC LIGHTWEIGHT PORTABLE POWER SUPPLIES 12V 28V



Electronic flight decks, once the sacred ground of the large corporate and wide body, are now common to every type and size of aircraft. Remaining ahead of the curve with the faster speeds of the VLJs requires private and corporate pilots to be proficient in the use of their EFIS. Practice and the need to update software are two reasons why all aircraft operators should own a reliable and compact power supply, able to be used for training, fault finding or software updates.

Powervamp's first 28 volt 40 amp power supply was produced in 1995 as a solution to the problem of training police observers on FLIR systems. Until then, training involved expensive helicopter flying hours or powering a FLIR system with battery GPUs with limited power duration.

Powervamp, with its range of power supplies from 30 to 600 amps, manufactures units for all types of aircraft from the Cessna 175 to the largest of DC aircraft such as the ATR, Embraer 145, Q400 and Saab 340.

Confirmation of Powervamp's quality and performance has been endorsed by some of the world's largest manufacturers of private, business and corporate jets who have selected Powervamp power supplies as their branded product supplied to customers for software updates and a source of DC power at remote locations. Other manufacturers too have selected Powervamp power supplies as the chosen unit for their service support teams. In every case, quality, reliability and product support are key.

### SELECTING THE CORRECT POWER SUPPLY

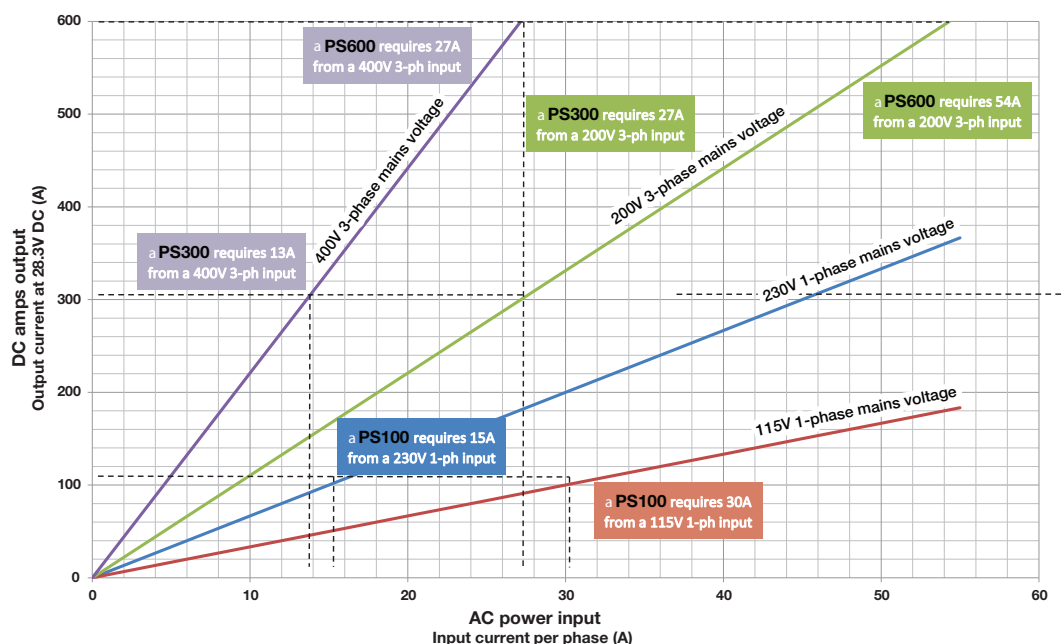
When deciding on the size of power supply, operators should consider the following.

While weight, size and cost are criteria for decision making, where aircraft loads may fluctuate, Powervamp strongly recommends a power supply with a digital voltmeter. Power demand fluctuating close to or above overload will trigger a progressive automatic voltage shutdown which can cause radio static and possible data loss. A digital voltmeter will visually alert the operator to the situation.

All Powervamp power supplies are fitted with accurate digital voltmeters. The larger units are fitted with digital ammeters to give pilots and engineers an instant reading of the load as each system is powered up.

The graph below shows the single-phase and 3-phase input amps at various voltages required for a specific DC output. Operators should be aware of possible power output limitations at 110 volts where the mains C/B rating may be insufficient to allow maximum DC output. In this situation, the anticipated output load will need to be checked against the input amperage, which must be less than the circuit breaker rating.

### MAINS POWER INPUT REQUIRED TO DELIVER MAXIMUM OUTPUT FOR EACH POWER SUPPLY



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# PS100 and PS100C



2 x PS100 in parallel delivering up to 200 amps

**PS100** Able to provide 100 amps of continuous power, Powervamp's standard PS100 is a 28V power supply designed to power flight decks of larger corporate/business aircraft using any AC single phase 110/230 volts 50/60 Hz input. It is supplied as the factory-approved product by one of the largest business aircraft manufacturers in the US.

**PS100C** The PS100C version has two pre-set voltages: 28.5V for lead acid battery charging and continuous avionics operation; and 31.5V for charging Coolspool GPU 17, 29, 58. Where only single-phase power is available it is also used to charge the larger Coolspool battery carts.

Delivering smooth, stabilised continuous DC power, the PS100 is compact and lightweight, allowing it to be stowed in any baggage hold.

Individual LEDs confirm DC output status and a digital ammeter and voltmeter accurately display output volts and amps so operators can monitor the current draw of avionics, pre-flight loads, invertors, cabin lighting and other systems. An on-off C/B is used to switch power.

Any PS100C or derivative can be paralleled to double or even triple the combined output and this design concept allows individual units to be easily handled, stowed and transported.

Each power supply is fitted with padded protective jacket and a 2-metre (6ft) 50mm (2in) double insulated output cable fitted with heavy-duty rubber Nato plug.

A single voltage unit (28.5V) PS100 is also available in this range.

## SPECIFICATION

**Designed to power large helicopters, full-size corporate jets and for ramp/hangar use, avionics shop and exhibition use**

Max output	100 amps		
Output volts (PS100C)	28.5, 31.7 (selectable)		
Output volts (PS100)	28.5		
Input volts	Auto. 120/240 single ph. 50/60 Hz		
Max input current	120V 36 amps; 240V 18 amps		
Input frequency range	45–400Hz		
Efficiency	90%		
Cooling	triple fan, forced air		
IP Rating	IP65 with protective cover		
Case	powder-coated alloy with neoprene anti-slip feet		
Height	Length	Width	Weight
300mm (15in)	400mm (16in)	135mm (5in)	12.5kgs (28lbs)

## FEATURES

- DC output voltage selector (PS100C only)
- Digital voltmeter
- Digital ammeter
- Mains on/off circuit breaker
- 2 x paralleled 50 amp micro-power supply modules for redundancy
- 2 x PCB output status LEDs
- Fuse protected 28V accessory socket
- Padded protective jacket
- 2-metre (6ft) detachable heavy-duty output cable with heavy-duty rubber Nato plug

## OPTIONS

- Bandolier option. With the larger business aircraft flying internationally, Powervamp offers PS100 and PS100C users its unique optional 'Universal connector bandolier'. This selection of international plugs, neatly housed in a webbing bandolier, allows the user to instantly select and connect the correct input plug without the need to obtain and wire local plugs.