

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.

PS30C and PS50C

Powervamp's PS30C and PS50C miniature power supplies are lightweight combination charger/power supplies able to deliver 30 or 50 amps depending on model, at a pre-set voltage between 28.4 and 31.5 volts (for 28 volt Coolspool charging) as selected by the operator. Power supplies can be connected directly to the aircraft's external ground power receptacle or to any of Powervamp's portable battery GPUs.

The PS30C/PS50C are designed for operators of smaller helicopters and VLJs needing to download data or programme avionics in any location where size and weight are important.

The automatic 120/240 volt 50/60Hz input allows international use. A solid state voltmeter displays the output voltage selected by the mode switch. Coloured LEDs confirm mode selection. A green and red LED indicates amperage below or above current limit protection.

Unique to the PS30C/PS50C are two pre-set voltages enabling the power supplies to charge both 24 and 28 volt portable GPUs or operate in parallel with them. Specification includes forced ventilated with thermal protection and current overload/short circuit and reverse polarity protection.

A quick-release polarised 50 amp continuously rated connector allows instant connect/disconnect of the 2-metre (6ft) special double insulated 16mm (1/2in) section output cable fitted with Lexan Nato plug.

The PS30C / PS50C design allows units to be ganged in parallel to a second power supply to double output or to operate in parallel with any Coolspool 17, 29 or 58 GPU as a continuous power source or charger.

A single voltage unit (28.5V) is also available in this range (PS30/PS50).



SPECIFICATIONS

Use: Designed for the smaller helicopter, VLJ or use with CoolSpool 17, 29, and 58 GPUs or as a DC power source

Max output	30 amps (PS30C); 50 amps (PS50C)		
Output volts	28.5, 31.7 (selectable)		
Input volts	Auto. 120/240 single-ph. 50/60Hz		
Max input current	120V 9 amps; 240V 4.4 amps		
Input frequency range	45–400Hz		
Efficiency	90%		
Cooling	Single fan, forced air		
IP Rating	IP54		

	Height	Length	Width	Weight
PS30C	150mm (6in)	325mm (13in)	95mm (4in)	3kgs (7lbs)
PS50C	155mm (6in)	350mm (14in)	140mm (5in)	6kgs (13lbs)



FEATURES

- Mains input voltage selector
- Digital voltmeter
- Mains on/off switch
- Current limit LED
- Power output status LED
- Padded protective jacket
- 2-metre (6ft) detachable output cable with fitted Lexan Nato plug