

Coolspool Hybrid 300

28V MINI DIESEL GPU

Powered by a 3-cylinder water-cooled Yanmar diesel engine, the Coolspool Hybrid 300 is the latest model of Powervamp's compact low cost diesel GPU, developed for regional DC aircraft operators and FBOs requiring continuous ripple free power in the hangar and remote power for line operations and turbine starting on the ramp. No other GPU delivers the versatility and convenience of Powervamp's Coolspool Hybrid 300.

Depending on specification, this compact and efficient diesel GPU provides continuous AC or DC power. Very high DC amperage from its ultra-high-discharge batteries is available instantly for turbine starts and short-term loads that may exceed the generator's continuous output

The Coolspool Hybrid 300 was originally developed in 1995 for the UK military as a low cost self-contained GPU designed to supply continuous DC power all day for pre-flight/avionics and random turbine starting.

The latest generation Coolspool hybrid 300 delivers up to 300A continuously at 28V, either from the diesel generator or by connecting the GPU to a 3-phase mains supply, thereby allowing it to be used in confined spaces.

A selector switch directs generator output to either the 28V DC or 110/230V single phase outlets (depending on specification), enabling the GPU to provide continuous mains AC power for multiple uses.

In enclosed spaces such as maintenance shops or hangars, with the diesel engine shut down and the unit connected to a mains supply, the Coolspool Hybrid 300 while providing 28V, will automatically recharge its integral batteries.

Available In various configurations and in series production over 17 years, with sales to several armed forces, the latest Coolspool Hybrid 300 is the civil version for FBOs, regional airlines, and operators requiring versatile remote power at a fraction of the cost of a conventional diesel GPU.



Supplied as standard with



4m x 70mm² hard-wired Nato lead



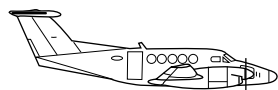
Spare wheel



Wheel brake system

Typical power plant:*

PT6C-67, ALF 502, TPE331, TFE 731, AE3007A, or power plants of a similar specification
(Assumes COOLSPPOOL HYBRID 300 batteries fully charged)



Pre-flights: All DC business jets, small commuters. Air-con: up to 300 amps continuous, peak to 1400 amps, short term 200-300 amps until voltage limit warning.
Turbine starting: All DC business jets

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Specifications

Rated power	8.4 kW
Continuous current	300A
Voltage	28V (other voltage available)
Output cable	4 x 70sqmm 4 meters long
Output connector	3-pin aviation connector

AC OUTPUT

Voltage	220/110V
Frequency	60/50Hz

ENGINE

Make	Yanmar
Number of cylinders	3
Fuel	Diesel; Jet A1
Cooling system	Liquid
Aspiration	Naturally aspirated
Rated speed	3000/3600 rpm

ALTERNATOR

Output	3 phases, 50/60Hz, 230/110/400/190V
Rated speed	3000/3600 rpm
Output power (Class H)	10 kVA @3000rpm, 12 kVA @3600rpm

POWER SUPPLIES

Number	3 in parallel – modular design
Output power	3 kW each
Output continuous current	100 amps each
Protections	Over voltage, over temperature, over load
Operating temperature	-20 – +70°C

BATTERIES

Peak amps**	4000A max short circuit current
MDA ††	1400A
Voltage	6V
Number	4 connected in series
Capacity	130 Ah

** Peak amps is a theoretical calculation of the instantaneous current from a momentary dead short across the battery terminals. It is not representative of the power delivered at the aircraft plug which is significantly less, due to cable losses and other factors. It is a figure of no useful value to the operator and is shown only for comparative purposes.

†† MDA: Maximum deliverable amps at 20C/68F. This figure is the actual peak current available at the aircraft plug based on Powervamp's load bank tests. It is UNIQUE to this Powervamp product. Powervamp can substantiate this figure with documented test results.

GPU

Tyres	Standard pneumatic 4.00-8
Suspension	Hot dip galvanised flexible rear arm with rubber suspension
Brake	Adjustable foot activated brake on front wheels
Fuel tank	Stainless steel tank 33 litres – all day operation Easy removable tank for air transportation
Forklift points	2 lifting points in both sides
Air transportation	Yes
Chassis	Hot dip galvanized steel
Panels	Powder-coated yellow aluminium with cam lock type fittings
Towable speed	10 mph (16 kph)
Tow eye dimension	50 mm (2in)
Dimensions mm	H 1244 (49in) L 1885 (74in) W 898 (35in)
Dry weight	535kg (1179lbs)

CONTROL PANEL

- Fuel level gauge
- Digital voltmeter and ammeter
- LED for output ON
- Illuminated control panel for night operation
- Engine control module with LCD information display
- Input plug and output socket
- Emergency Stop
- LED power output display
- Interlock override key switch
- Dual ON/OFF power push buttons
- Switchable power source (engine/mains)
- Internal error LCD display

STANDARDS

ISO 6858	Aircraft ground support electrical supplies – general requirements
ISO 461/1	Aircraft connectors for ground electrical supplies
ISO 461/2	Design, performance and test requirements, dimensions
STANAG 3632 AE (option)	Aircraft and ground support equipment electrical connections for static grounding
AEP-24 (option)	Aircraft electrical hazards on the flight line



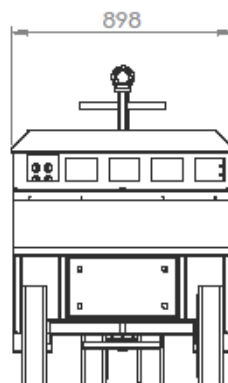
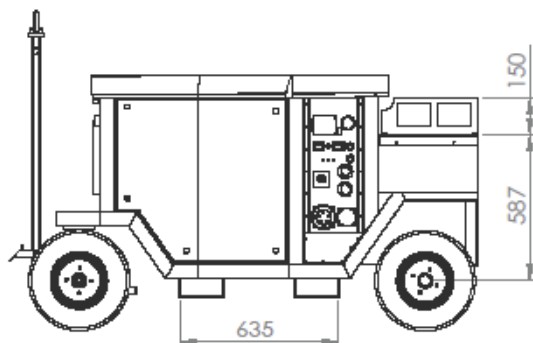
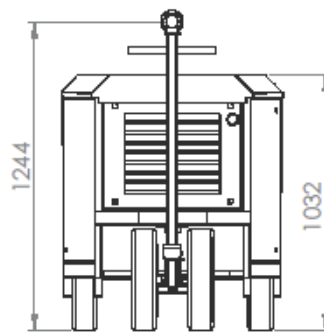
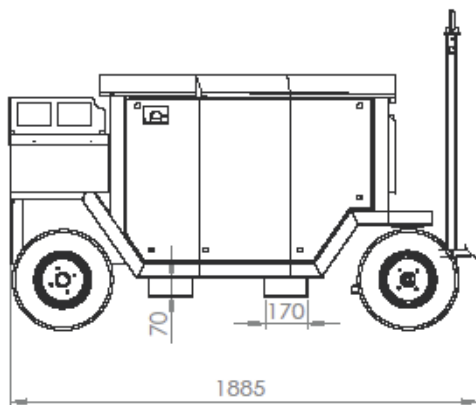
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Features

- Up to 1400 peak amps for starting
- Supports 24/26V and 28V systems
- Up to 300A continuous at 28V
- Additional 220-110V/60/50Hz power outlets for general ramp use
- Shore power capability for silent, clean aircraft maintenance supply within hangar
- Ability to recharge external ground power units via power output socket
- Easy to manoeuvre and transport between operational bases
- Simple to service and maintain
- Modular designs to suit operator requirements
- Reverse current protection
- Reverse polarity protection
- Complies with ISO 6858

Units supplied as standard with

- 130 amp/hr high discharge VRSLA batteries
- 4-metre (13ft) double insulated DC output cable with heavy-duty rubber nato plug
- Frame manufactured from hot dip galvanised steel channel and square hollow section. Alloy side panels finished in yellow powder coat paint with nonferrous/stainless steel fittings
- Stainless steel 33-litre (7 gallon) fuel tank with purge drain tap for air transportation
- Spare wheel
- Fire extinguisher (if despatched by road)



Coolspool Hybrid 300



Coolspool Hybrid 300: starting both turbines on the Augusta Westland AW139



Other GPUs and power supplies in the Powervamp range



PS300



Coolspool 260



Coolspool 410



TRU 2400

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