Condor

energy pod 401

Harvesting Clean Energy / Protecting Our Environment

Overview

Enhanced Design Features

Control Panel

The Condor Energy Pod 401 uses an advanced electrical controller, It is a DES7320 auto control parallel monitoring system. It can be used manually or automatically as it comes with auto fault alarm protection functions and standards.

Design Quality

The Condor Energy Pod 401 has been manufactured using the highest grade of manufacturing technology available insuring a robust and durable design.

Our Mission

We design products that harvest clean energy, minimising the impact on the environment.

In line with the UK and European governments commitments of realizing zero net carbon by 2050, we are focused on reducing carbon emissions throughout our business and supply chains by bringing the most innovative and advance products to market in line with progress to a circular economy.

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Intelligent Sustainable Power Supply

The Condor Energy Pod 401 significantly reduces CO_2 emissions and reduces on fuel costs. It has been designed to utilize energy from the sun and wind thus delivering sustainable power to remote sites where needed.

It comes complete with a backup generator that runs on HVO Hydro treated vegetable oil which automatically starts when the batteries become low ensuring constant and consistent clean power 24hrs per day.

The Condor Energy Pod Intelligently transfers wind and solar energy to charge the onboard Lithium Iron Phosphate batteries. This energy to power transition is managed by the smart control module ensuring the user only needs to position the units on site, open out the Solar PV panels and extend the wind turbine mast and press start.

The Condor Energy Pod 401 has a prime power rating of 42kVA and can be interconnected, delivering more power onsite where needed.

CLEAN SUSTAINABLE RESPONSIVE POWER SUPPLY :

The Condor Energy Pod 401 can be used in conjunction with further Solar PV panels. The Condor Energy Pods unique design allows the Solar PV panels to tilt and adjust insuring maximum absorbtion of the suns rays during daylight hours thus maximising the overall charging performance. Delivering more sustainable power. The battery storage capacity can also be increased upon request.

Reduced

Fuel
Noise
Emissions
Maintenance

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REDUCED FUEL HVO

REDUCED NOISE

REDUCED EMISSIONS CO_2

REDUCED MAINTENANCE

PLUG & PLAY

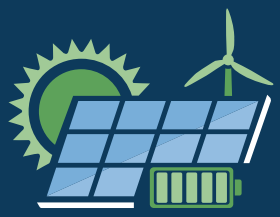
ECO SMART

BATTERY BANK

EXTERNAL POWER INPUT

GENERATOR BACKUP

Features

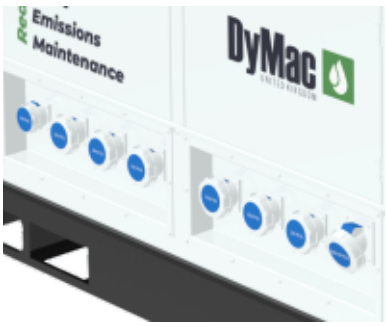


The Condor Energy Pod 401 is an integrated all in one Micro Power Grid design combining wind technology, extendable and slidable Solar PV panels, battery storage and the HVO fuelled integrated generator set.

The All in One unit is an intelligently designed economically sufficient power system that ensures the reduction of harmful CO_2 gases to the atmosphere.

It has been developed for prime power applications and has a quick and easy set up time. The unit is mainly used for delivering power to on site office cabins, drying rooms and wash room facilities where mains power is unavailable.

Superior Features



6 x 32Amp Sockets, 1 x 16Amp Socket, 1 x 63Amp Socket. All Sockets come complete with MCBs and RCBs.

The unique design allows the Solar PV panels to tilt and adjust insuring maximum absorbtion of the suns rays during daylight hours

2 x Extendable Wind turbines producing 400W each with a combined output power of 800W

SECTORS

CONSTRUCTION

SPECIAL EVENTS

OIL , GAS & MINING

HARD TO REACH AREAS

MILITARY

Condor Energy Pod 401

OUTPUT POWER	Prime Rating @ 25°C	200Amp / 42kVA / 34kW
	AC Output Voltage	50Hz, 230V
	Output Connections	6 x 32Amp Sockets, 1 x 16Amp Socket 1 x 63Amp Socket. All Sockets come complete with MCBs and RCBs
INPUT POWER	Solar panels (on board)	5kVA / 4kW
	Wind Turbines	Additional 400W per Wind Turbine x 2 = 800W
	Generator backup power	30kVA / 24kW
	Fuel Consumption	Fuel is only used when the generator is active. Generator is constantly in AUTO and only activates when required. Battery charging and/or high load spikes. 110% load - 9.3 Litres per hour 100% load - 8.3 Litres per hour 75% load - 6.2 Litres per hour 50% load - 4.9 Litres per hour
	Fuel tank capacity	200L
STORAGE	Type	Lithium Ion Phosphate Batteries
	Capacity @ 25°C	25.6kWH
	Charge Time (hours approx)	2.5
	Service life (years)	> 5
CONTROL	System Controls	• Low fuel level alarm & monitoring • Generator control, load management, optimised quiet hours and scheduled runs • Enhanced system management • Ability for users to program custom logic sequences & controlled by app
	Generator telemetry (optional)	Remote communication, monitoring & control.
ENVIRONMENT	Operating Temperature Range (°C)	-20°C to +55°C Humidity (non-condensing)· max 95%
	Solar panels - Max physical load	Wind· 4000 Pa, 408 kg/m² front & back Snow· 6000 Pa, 611 kg/m² front
	Solar panels - Impact Resistance	25 mm diameter hail at 23 m/s

Case Study

34kW Generator Running Site Offices 24/7

34kW Generator Only	Monthly	Notes
Monthly Generator Rental - Triple Shift	£ 2,201.00	Based on continuous duty - Generator running 24 hours per day
Monthly Preventive Maintenance Expense	£ 827.50	Maintenance based on running cost of £ 1.19/hr (3 PM/month)
Monthly Fuel Expense - Includes Cost For Delivery	£ 2,597.00	Basis - Average at 50% load of 3.7 litres/hour & cost of £ 1.04/litre
TOTAL MONTHLY EXPENSE	£ 5,626.00	Based - 2.62 Kg of Co_2 per Litre of diesel - TOTAL = 84,669 Kg/year
Monthly (28 day) Fuel Consumption	2486 Litres	
Monthly CO_2 Emissions - Kilos	6513 Kg	

34kW Condor Micro Power Grid Running Site Offices 24/7

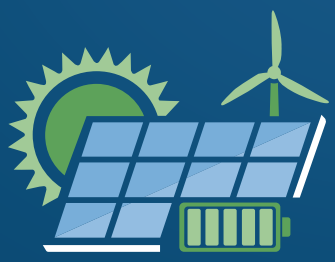
34kW Condor Micro Power Grid	Monthly	Monthly	Notes
Monthly Micro Power Grid Rental	£ 3,470.00	£ 1,268.50	Rental rate is based on a 2 year payback, 70% utilization & 50% ROI. Battery/Solar/Wind Operating for 12 hrs & Generator only 8 per day.
Monthly Preventive Maintenance Expense	£ 276.00	£ 551.00	Maintenance based on running cost of £ 1.19/hr (1 PM/2 months)
Monthly Fuel Expense - Includes Cost For Delivery	£ 866.00	£ 1,733.00	Basis - Average at 50% load of 3.7 litres/hour & cost of £ 1.04/litre
TOTAL MONTHLY EXPENSE	£ 4,613.00	£ 1015.00	Net Savings Includes Cost Of Renting The Condor = £13,195.00 Per Year
Monthly (28 day) Fuel Consumption	829 Litres	1,657 Litres	
Monthly Co_2 Emissions - Kilos	2,171.5 Kg	4341.5 Kg	Based - 2.62 Kg of Co per Litre of diesel - TOTAL = 28,229.5 Kg/year

equivalent to planting
426 Trees
to absorb this amount of CO_2 over a year

Silent running hours
4,380 (50%)
Power from Solar/ Batteries only

Carbon saving*
28.4 Tonnes

* per year analysis



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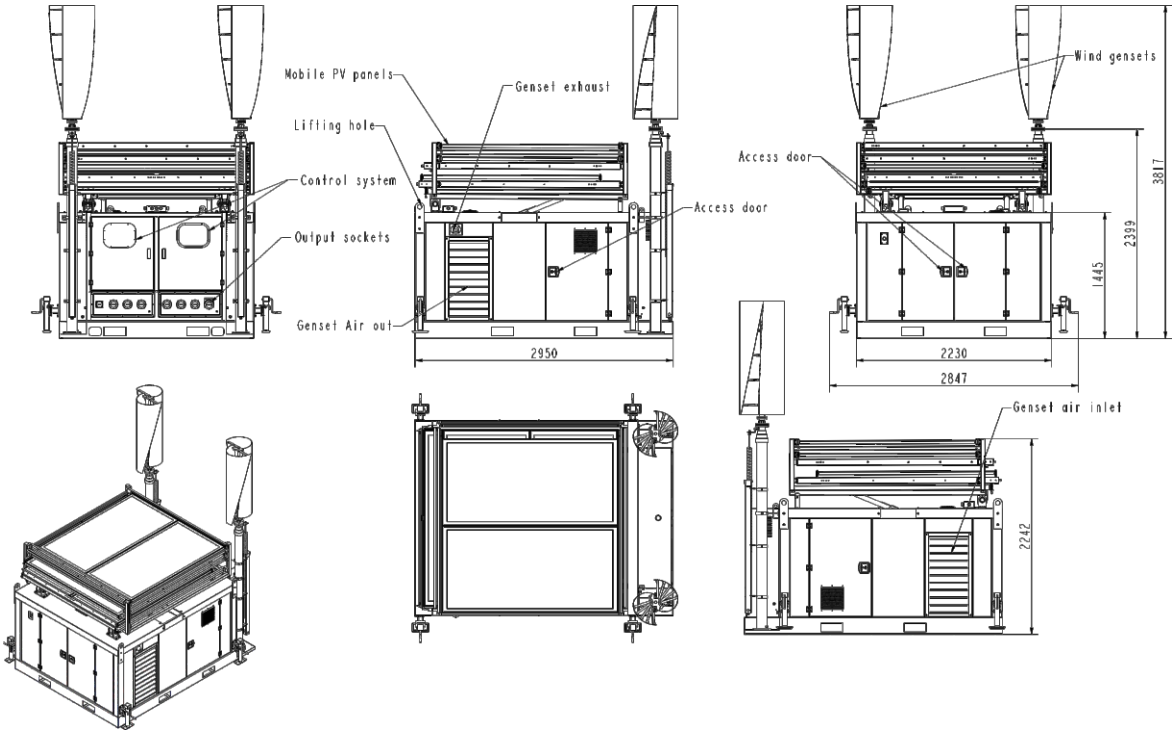
Model (CEP-401)

General Specification

Model	CEP-401
Rated System Voltage	DC48V
Max. Solar Power	4,150W
Daily Power Consumption	6.6kWH (Solar)
Storage Energy	25.6kWH (LFP)
Rated Genset Power	24kW
Rated Ac Voltage	AC 230V
Rated Dc Voltage	DC 48V
Max. Ac Load Power	10 kW
Ambient Operating Temperature	-5~60°C
Storage Temperature	-15~60°C



Dimensions

Length (L) (mm)	2950	Weight (Kg)	2850
Width (W) (mm)	2300	Loading capacity in 40 HQ (units)	4
Height (H) (mm)	2400		

Energy Storage Battery

Model	M-48100
Quantity	5pcs
Rated Capacity	100AH
Rated Voltage	51.2VDC
Maximum Charging Current	0.5C
Maximum Discharging Current	0.5C
Protection	BMS
Type	LFP

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Solar Charger

Model	MPPT 150/85
Quantity	1pcs
Max. PV Array Open Circuit	150V absolute maximum coldest conditions 145V start-up and operating maximum
Max. PV Array Power	4900 W@48V
Charge Voltage 'absorption'	Default Setting-14,4 / 28,8 / 43,2 / 57,6v
Charge Voltage 'float'	Default Setting-3,8 / 27,6 / 41,4 / 55,2v
Charge Voltage 'equalization'	Default Setting-16,2V / 32,4V / 48,6V / 64,8V (adj)
Charge Algorithm	Multi-Stage Adaptive
Max. Solar Charge Current	100 A
Data communication	VE.Can, VE.Direct and Bluetooth
Effificiency (Peak)	98%
Dimension	185 x 250 x 95 mm(H*W*D)

Wind-Power

Model	XTL-400 / 48Vac
Quantity	2 pcs
Max Power@ Air Speed 15m/s	460W
Rated Power/ Voltage	400W/ 48V AC
Leaf material	Reinforced glass fiber reinforced carbon fiber
Leaf height	1050mm
Rated Air Speed	12m/s
Wind Wheel Diameter	0.55m
Min. Start-up Air Speed	1.5m/s

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Standby Generator

Model	MPLS24-1S
Quantity	1pcs
Rated Power	24kW
Max. Power	26.4kW
Rate Voltage	AC230V
Phase / Power Factor	1P / 1.0
Speed	1500rpm
Engine Type	3-Cylinder, 4-Stroke, Air-cooled,Veritical
Controller	DSE7320
Start System	12V Electrical
Tank Capacity	200 L
Sound Level	≤65dBA@7m
Max System Charging Current	150A
System Discharging Current	250A
Dimension	520*272*220 mm (L*W*H)
Type	Special colloid battery for photovoltaic

Inverter

Model	Quattro 48/10000/140-100/100
Quantity	1 pcs
Rated Power	8000W
Rated Input Voltage	48VDC
Rated Output Voltage	230Vac±2%
Efficiency (Peak)	96%

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Solar Panel

Model	JAM72S10MR 415W
Quantity	10pcs
Maximum Power	415W
Maximum Power Voltage	42.18VDC
Maximum Power Current	10.51A
Extending Type	Sliding
Extending Area	22 m^2
Dimension	2015×996×40 mm(L*W*H)
Power Tolerance	0~+5W

Wind-Power Charging Controller

Model	MAX-I4-WSII-06-1
Quantity	2 pcs
Rated Current	15A
Rated Voltage	48VDC
Applicable Wind-Power	600W
Dimension	158*113*60mm(L*W*H)
Display Type	LED
Protection Function	Over Speed, Over Charging, Battery Reverse Polarity & Indirect Lightning Strike
Communication Port	RS 232 (Standard) ; RS 485(Optional)

Notes

DyMac
UNITED KINGDOM

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