

# POWER STATION

Versatile, sustainable power solution for diverse industries in any environment.

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PRODUCT BROCHURE



**SUNSTONE**  
SYSTEMS



# POWER STATION

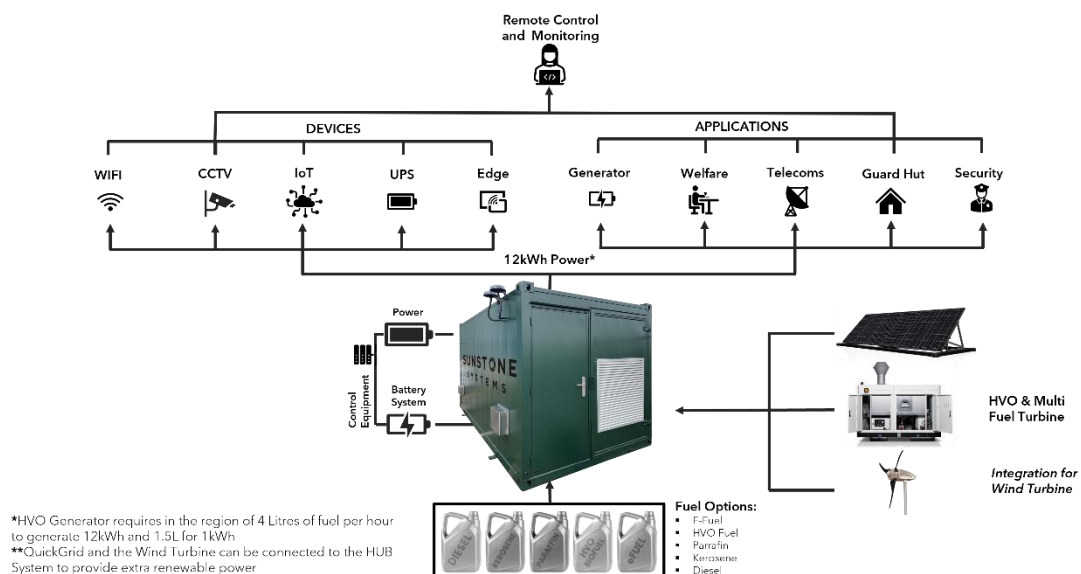
**Power Station, a cutting-edge power platform designed to meet the diverse and demanding needs of industries across the spectrum. Engineered for both temporary and permanent power applications, the Power Station embodies reliability, sustainability, and rapid deployability, ensuring you have access to a consistent and clean power source when and where you need it most. Whether you require power for security operations, remote sites, extreme weather conditions, or disaster relief efforts, the Power Station is the rapid deployment, robust, and eco-friendly solution that bridges the gap in power and connectivity.**

## WHAT DOES IT DO?

The Power Station is a versatile and sustainable power solution that harnesses renewable energy sources to generate clean and reliable electricity. It combines a solar array with an integrated HVO generator and battery system, ensuring uninterrupted power supply in remote locations and challenging environments. Designed to meet the demands of various industries, the Power Station can deliver clean power, reducing carbon emissions while providing a cost-effective alternative to traditional power sources.

## STANDARD FEATURES

- **Integrated Solar and HVO Hybrid System:** The Power Station seamlessly integrates a solar array with an advanced HVO (Hydrotreated Vegetable Oil) generator and battery system. This hybrid setup combines the clean energy benefits of solar with the added power resilience of the HVO turbine.
- **Onboard Energy Storage:** With a robust 1000L HVO onboard fuel storage tank and an advanced battery bank, the Power Station ensures uninterrupted power, even in remote locations and during emergencies.
- **Scalable Renewable Power:** The system can integrate additional solar panels and wind turbines to enhance its renewable power capacity, making it an eco-friendly choice for clean energy generation.
- **Built to High Engineering Standards:** Manufactured to UK Engineering Standards and incorporating components from expert partners, the Power Station is a durable, reliable, and safe power solution for challenging environments.
- **Rapid Deployment:** Designed for quick deployment, the Power Station is ideal for emergency response, disaster relief, military operations, events, festivals, construction sites, and more.



# BENEFITS

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The Power Station delivers a multitude of benefits that extend across diverse industries. This innovative power solution combines the reliability of a robust HVO generator with the sustainability of solar energy, ensuring uninterrupted and eco-friendly power supply. With rapid deployment capabilities, it caters to both temporary and permanent applications, from construction sites to remote rail stations.

Its scalability, anti-theft features, and resistance to extreme weather conditions make it adaptable to various settings, while its reduced carbon footprint and cost-effectiveness provide an environmentally conscious alternative to conventional power sources. The Power Station is a game-changer, revolutionising power generation while addressing the unique needs of modern industries.

- **Reduced Carbon Footprint:** The Power Station can save thousands of kilograms of CO2 emissions annually, making it an eco-conscious choice for power generation.
- **24/7 HD CCTV Surveillance:** Power your security operations round-the-clock with HD CCTV, entirely powered by renewable energy.
- **Flexibility and Modularity:** The Power Station's offers flexibility in developing sites and meeting evolving operational requirements.
- **Tailored Solutions:** Each installation includes a site survey to ensure a bespoke solution that precisely meets your power and communication requirements.
- **Corrosion-Resistant Design:** With a steel construction and powder-coated finish, the Power Station is designed to prevent corrosion, ensuring long-lasting performance and optimum ROI.
- **Anti-Theft and Vandalism Measures:** Equipped with anti-theft features like built-in GPS, concealed hinges, ruggedized cabinets, and an IP66 rating for added security.
- **Advanced Power Technologies:** Utilise the latest solar panel technologies, control equipment and an advanced battery system for efficient power management.
- **Versatile Power Source:** The Power Station can power tool charging, manned guarding facilities, lighting, surveillance, and telecommunications, offering a comprehensive solution.



# APPLICATIONS

**Power Station from Sunstone Systems is a versatile and adaptable power solution, revolutionising diverse industries by bridging the gap in power and connectivity, all while reducing carbon emissions and reliance on traditional power sources. Its ability to provide clean, sustainable energy in remote and demanding environments makes it an indispensable asset for modern operations across these sectors.**



**RAIL** In the rail industry, the Power Station proves its mettle by providing reliable and sustainable power solutions for remote rail stations, signalling systems, and maintenance depots. Its rapid deployment capabilities make it ideal for temporary power needs during rail maintenance or construction projects.



**SECURITY** For security applications, the Power Station offers a 24/7 power source for CCTV surveillance, monitoring centres, and access control systems. Its anti-theft and vandalism measures, including GPS tracking and ruggedised cabinets, enhance the security infrastructure while reducing operational costs by running entirely on renewable energy.



**TELECOMMUNICATIONS** The Power Station can support off-grid and remote telecommunication sites, ensuring uninterrupted connectivity in remote areas. It can power wireless or satellite communication centres, enhancing network coverage and reliability. Its scalability allows it to adapt to the increasing power demands of modern telecommunication infrastructure.



**HIGHWAYS** On highways and road construction sites, the Power Station serves as a versatile power hub, providing energy for variable message signs, traffic lights, surveillance cameras, and communication systems. Its ability to withstand extreme temperatures and harsh conditions ensures that critical highway infrastructure remains operational at all times.



**CONSTRUCTION** Sites often operate in remote locations without access to a stable power grid. The Power Station becomes a lifeline, powering on-site offices, lighting, welfare, and tool charging stations. Its quick deployment ensures uninterrupted operations, while its eco-friendly approach reduces the carbon footprint of construction projects.



**DISASTER RELIEF** the Power Station can play a pivotal role in providing immediate and sustainable power for emergency response teams, medical facilities, and communication systems. Its onboard energy storage and rapid deployment capabilities ensure that critical services can continue functioning, even in the most challenging conditions.



# DATASHEET



## PLANT ROOM

- **Dimensions:** 6 x 2.4 x 2.4m (other dimensions available)
- **Material:** Painted steel and fully welded construction (316L Inlets/Outlets)
- **Weight:** 6 Tonnes
- **400/230V Installation or ELV**
- **Battery System:** 30-90kW
- **Fuel Bowser:** 1000-3000L

## BLADON MICRO TURBINE GENSET

- 1 No. Micro Turbine Genset, (Hydrotreated Vegetable Oil Fuelled), 12kW, 230V AC 50Hz, Single Phase, Dimensions, 222 x 112 x 157 = 993kg
- 1 No. DSE7320 MK11 Controller
- High Temperature Ducting

## SOLAR ARRAY OPTIONS

### QuickGrid System (East West)

- **Dimensions:** 6 x 2.4m
- **Material:** Galvanized steel and modular construction
- **Solar Panels:** 6 x 425w high efficiency monocrystalline solar panels
- **Ballast Platform:** Optional steel mesh integrated platform to install concrete blocks or ballast bags
- **Wind Resistance:** Anti-Wind Loading design



### QuickGrid System (South)

- **Dimensions:** 6 x 2.4m
- **Material:** Galvanized steel and modular construction
- **Solar Panels:** 6 x 425w (and up to 3kWh) high efficiency monocrystalline solar panels, pitched at the optimum solar irradiance angle for the location
- **Ballast Platform:** Optional steel mesh integrated platform to install concrete blocks or ballast bags
- **Wind Resistance:** Anti-Wind Loading design



### Security

- CCTV Surveillance
- Smart Analytics
- Perimeter Detection
- Remote Monitoring



### Telecoms

- Temporary Event WIFI
- Mobile Hotspot
- Point to Point Networks



### Oil & Gas

- Site Security
- Wellhead Telecoms
- Gas Detection



### Rail

- Trackside Monitoring
- Set down Yard Security
- Passenger Surveillance & Monitoring



### Construction

- Site Security
- Health & Safety
- 24/7 Hotspot & WIFI



### Highways

- Traffic Monitoring
- Average Speed Detection (TASCAR)
- Air Quality Monitoring

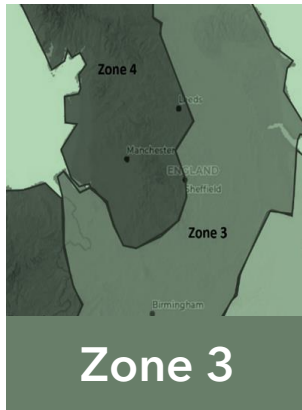
# POWER PERFORMANCE



Power Load (24 hr Constant)	1 x QuickGrid System (2.4kW)	2 x QuickGrid System (4.8kW)	3 x QuickGrid System (7.2kW)	4 x QuickGrid System (9.6kW)
250w	3 MW Solar Yield and uses 285L HVO	6 MW Solar Yield and uses 0L HVO	9 MW Solar Yield and uses 0L HVO	12 MW Solar Yield and uses 0L HVO
500w	3 MW Solar Yield and uses 2,000L HVO	6 MW Solar Yield and uses 550L HVO	9 MW Solar Yield and uses 60L HVO	12 MW Solar Yield and uses 0L HVO
750w	3 MW Solar Yield and uses 5,500L HVO	6 MW Solar Yield and uses 2,000L HVO	9 MW Solar Yield and uses 900L HVO	12 MW Solar Yield and uses 450L HVO
1000w	3 MW Solar Yield and uses 8,600L HVO	6 MW Solar Yield and uses 4,000L HVO	9 MW Solar Yield and uses 2,100L HVO	12 MW Solar Yield and uses 1,400L HVO
1500w	3 MW Solar Yield and uses 15,000L HVO	6 MW Solar Yield and uses 10,600L HVO	9 MW Solar Yield and uses 6,000L HVO	12 MW Solar Yield and uses 4,500L HVO



Power Load (24 hr Constant)	1 x QuickGrid System (2.4kW)	2 x QuickGrid System (4.8kW)	3 x QuickGrid System (7.2kW)	4 x QuickGrid System (9.6kW)
250w	2.7 MW Solar Yield and uses 350L HVO	5.4 MW Solar Yield and uses 0L HVO	8.2 MW Solar Yield and uses 0L HVO	10.9 MW Solar Yield and uses 0L HVO
500w	2.7 MW Solar Yield and uses 2,450L HVO	5.4 MW Solar Yield and uses 750L HVO	8.2 MW Solar Yield and uses 180L HVO	10.9 MW Solar Yield and uses 0L HVO
750w	2.7 MW Solar Yield and uses 5,700L HVO	5.4 MW Solar Yield and uses 2,200L HVO	8.2 MW Solar Yield and uses 1000L HVO	10.9 MW Solar Yield and uses 450L HVO
1000w	2.7 MW Solar Yield and uses 9,000L HVO	5.4 MW Solar Yield and uses 4,900L HVO	8.2 MW Solar Yield and uses 2,400L HVO	10.9 MW Solar Yield and uses 1,400L HVO
1500w	2.7 MW Solar Yield and uses 15,000L HVO	5.4 MW Solar Yield and uses 11,000L HVO	8.2 MW Solar Yield and uses 7,300L HVO	10.9 MW Solar Yield and uses 4,500L HVO



Power Load (24 hr Constant)	1 x QuickGrid System (2.4kW)	2 x QuickGrid System (4.8kW)	3 x QuickGrid System (7.2kW)	4 x QuickGrid System (9.6kW)
250w	2.6 MW Solar Yield and uses 385L HVO	5.2 MW Solar Yield and uses 0L HVO	7.9 MW Solar Yield and uses 0L HVO	10.5 MW Solar Yield and uses 0L HVO
500w	2.6 MW Solar Yield and uses 2,500L HVO	5.2 MW Solar Yield and uses 750L HVO	7.9 MW Solar Yield and uses 200L HVO	10.5 MW Solar Yield and uses 0L HVO
750w	2.6 MW Solar Yield and uses 6,000L HVO	5.2 MW Solar Yield and uses 2,300L HVO	7.9 MW Solar Yield and uses 1200L HVO	10.5 MW Solar Yield and uses 550L HVO
1000w	2.6 MW Solar Yield and uses 9,100L HVO	5.2 MW Solar Yield and uses 5,000L HVO	7.9 MW Solar Yield and uses 2,500L HVO	10.5 MW Solar Yield and uses 1,500L HVO
1500w	2.6 MW Solar Yield and uses 15,000L HVO	5.2 MW Solar Yield and uses 11,700L HVO	7.9 MW Solar Yield and uses 7,700L HVO	10.5 MW Solar Yield and uses 4,600L HVO



Power Load (24 hr Constant)	1 x QuickGrid System (2.4kW)	2 x QuickGrid System (4.8kW)	3 x QuickGrid System (7.2kW)	4 x QuickGrid System (9.6kW)
250w	2.3 MW Solar Yield and uses 580L HVO	4.7 MW Solar Yield and uses 130L HVO	7.1 MW Solar Yield and uses 0L HVO	9.5 MW Solar Yield and uses 0L HVO
500w	2.3 MW Solar Yield and uses 3,000L HVO	4.7 MW Solar Yield and uses 1100L HVO	7.1 MW Solar Yield and uses 550L HVO	9.5 MW Solar Yield and uses 265L HVO
750w	2.3 MW Solar Yield and uses 6,000L HVO	4.7 MW Solar Yield and uses 3,000L HVO	7.1 MW Solar Yield and uses 1700L HVO	9.5 MW Solar Yield and uses 1000L HVO
1000w	2.3 MW Solar Yield and uses 9,500L HVO	4.7 MW Solar Yield and uses 5,900L HVO	7.1 MW Solar Yield and uses 3,400L HVO	9.5 MW Solar Yield and uses 2,300L HVO
1500w	2.3 MW Solar Yield and uses 16,000L HVO	4.7 MW Solar Yield and uses 12,500L HVO	7.1 MW Solar Yield and uses 8,900L HVO	9.5 MW Solar Yield and uses 5,900L HVO

\*Calculations based on South Facing Array, unshaded at 60 degrees with 5% System Losses



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