

PRODUCT SPECIFICATION DOCUMENT

HP1000 Module

High-capacity hybrid power for large-scale operations



The brains and brawn of hybrid energy.

The HP 1000 is a high-performance hybrid power system that combines battery storage, diesel generation and optional solar inputs to deliver up to 1000 kVA of intelligently managed site power. Engineered for large-scale operations with variable loads, the system automatically balances inputs to reduce fuel burn, extend generator life and ensure reliable energy around the clock.

Applications

- Large-scale infrastructure projects
- Mining camps and processing
- Remote industrial microgrids
- Backup and resilience for critical assets

Performance Highlights

- 1000 kVA peak power with integrated load management
- Intelligent balancing across battery, diesel and solar
- Up to 278 kVA input for high-speed recharge
- Built-in logic to optimise efficiency and fuel savings
- Plug-and-play grid, genset and PV compatibility
- Rugged and relocatable for remote deployment

Technical Overview

Storage	
Nominal rated power	188 kVA
Usable capacity	XXX kWh
Cell chemistry	LiFePO ₄
Battery management system	Automotive-grade BMS
Power	
Peak power	1000 kVA
Continuous output (hybrid dependent)	Configurable
Input power (battery recharge)	278 kVA
Round trip efficiency	Up to 94.5%
Integrated genset capacity	Manufacturer config.
Control & Monitoring	
Smart EMS for source prioritisation and fault detection	
Remote telemetry via Atlas Management System	
Seamless switching between power sources	
Environmental	
Liquid cooling and weather-rated enclosures	
Operating temperature range:	-20°C to +50°C
Supports emissions reductions via generator optimisation	
Mechanical	
Containerised format with forklift and crane access	
C5 marine-grade steel coating	
Serviceable panels and integrated safety systems	



Technical Specifications

General Technical Data	
Peak power(5s)	1000/800 kVA/kWe
Overload power(60s)	785/628 kVA/kWe
Standby power(1h)	710/568 kVA/kWe
Prime power(12h)	500/400 kVA/kWe
Continuous power	400/320 kVA/kWe
Step Load@PF1.0	550 kWe
Step Load@PF0.8	440 kWe
Rated voltage (3Phase 50Hz)	1443 VAC
Maximum peak current(10s)	400 A
Rated current	722 A
Interface	Ethernet (Modbus-TCP/RTU)
Sound power level	72@7m 75%load dB(A)
Operating temperature	-20-55°C (Derating over 50°C)
Humidity	0-95% (no condensation)
Maximum operating altitude	3000m
Generator Set	
Standby power	550/440 kVA/kWe
Prime power	500/400 kVA/kWe
Frequency	50 Hz
Rated voltage (50Hz)	400 VAC
Maximum current	794 A
Rated current	722 A
Power factor	0.8
Cooling method	Remote Radiator
Emission Compliance	Stage 3
Fuel consumption@100% ESP load	191 g/kWh
Fuel consumption@100% PRP load	191 g/kWh
Fuel consumption@75% PRP load	190 g/kWh
Fuel consumption@50% PRP load	193 g/kWh
Battery Energy Storage System	
Nominal rated power	188 kVA

Battery Energy Storage System	
Nominal overload power(60s)	235 kVA
Nominal peak power(10s)	564 kVA
Nominal energy storage capacity	188 KWh
Rated voltage (3Phase 50Hz)	400 VAC
Nominal rated AC current	271 A
Max AC current(10s)	814 A
Power factor range	0 ind.1... 0 cap
System round trip efficiency	up to 96.6%
Cell chemistry	LiFePO4
DoD% (depth of discharge)	90 %
Maximum charging power	78 kW
Lifespan (80% DoD)	7000 Cycles
Temperature control	Liquid cooling /PI heating film
Dimensions & Weight	
Dimensions (L x W x H) mm	6096*2438*2591
Weight	10,680 kg
Corrosion Protection	C3 (C5M)
Protection Class	IP43
PV Inverter System (Optional)	
Type of Inverter	String Type/AC Coupling
Nominal output power	30 kVA
Max. output power	33 kVA
Rated voltage (3Phase 50Hz)	400 VAC
Nominal rated AC current	43.2 A
Max. AC current	47.6 A
Max. efficiency	98.6%
Max.PV input voltage	1100 VDC
Starting voltage	180 VDC
MPPT voltage range	180~1000 VDC
No. of MPPTs	3
No. of Pv strings per MPPT	2

