EFOI-S250KW-B DG + ESS Solution

Reduces Energy Consumption and Enhances Diesel Generator Efficiency

Commercial &
Industrial Energy Storage System

Hybrid/Off -Grid Mode: Continuous Power Supply

Supports Heavy Loads: Up to 4 Sets in Parallel

Rapid Deployment For easy lifting and forklift transport

All-In-One Integrated Battery + SEMS + SPCS

APP&WEB Monitoring and Managing Remotely

Plug & Play No installation required

Saving Up To 30%

In Fuel Consumption

YOUR ENERGY SAVING EXPERT

EFOI-S250KW-B

DG + ESS Solution

- These systems meet the demands of high-load or high-impact industrial applications including construction, manufacturing, and mining. They are widely utilized for temporary power needs and emergency power supply.

All-In-One

Incorporated Battery + SEMS + SPCS

4 Sets Parallel

Up to 1 MW/614.4 kWh

250 kW

High Output

Saving 30%

Fuel Consumption

Crafted for Excellence. Trusted Durability.

All-In-One Modular Design

Combines a strong and efficient battery with SPCS and SEMS into a single unit.

Plug & Play

Guarantees simple setup, easy upkeep, and the option to expand up to 4 units.

Rapid Deployment

Supports frequent lifting and forklift transportation for rapid deployment.

Adapt to Various Environments

Waterproof and dustproof design to ensure stable performance in any weather.

Integrated Alert & Warning System

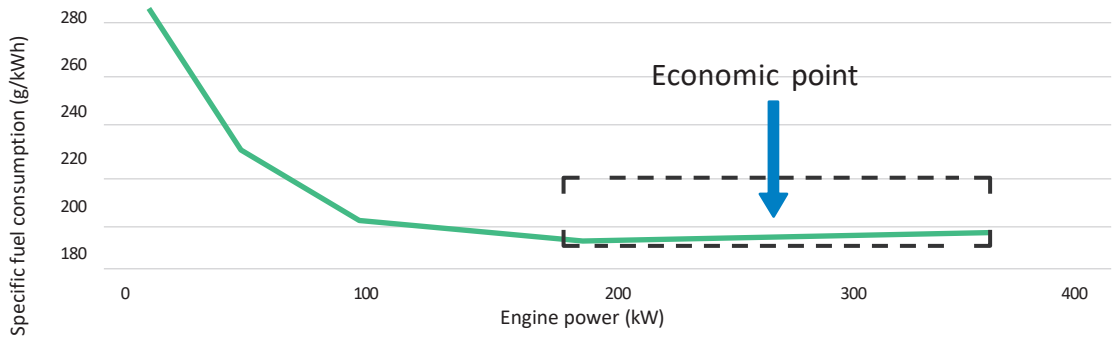
Comes with a complete safety package, including a fire extinguishing system, for timely warnings and peace of mind.

Up to 4 Sets Parallel

Can support up to 4 sets working together, reaching an energy capacity of 1 MW/614.4 kWh to handle heavy loads.

Saving Up To 30% In Fuel Consumption

EFOI-S250KW-B smartly controls the engine's power output between 50% to 70% of the DG's rated power, ensuring the lowest fuel usage and reducing overall fuel consumption.



Relationship between engine power and fuel consumption

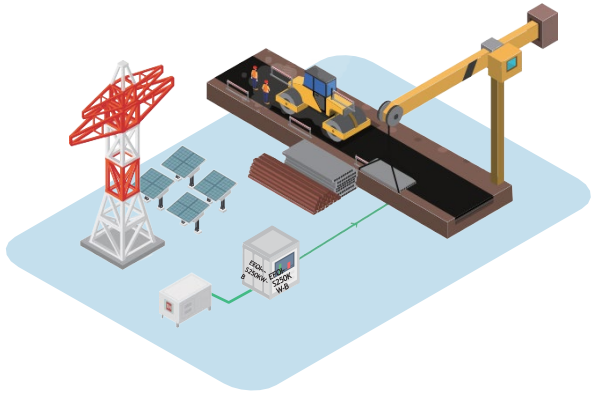
250 kW Output

EFOI-S250KW-B can provide 250 kW of continuous power for 30 seconds, tackling high motor startup currents and load impacts. This extends diesel generator lifespan, reduces failures, and lowers maintenance costs.

Two Working Modes

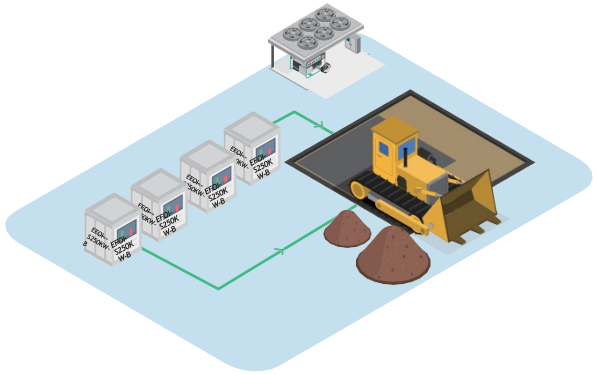
Hybrid Mode (EFOI-S250KW-B +DG)

EFOI-S250KW-B and the diesel generator set work together to power heavy loads, making them perfect for projects needing prolonged power supply.



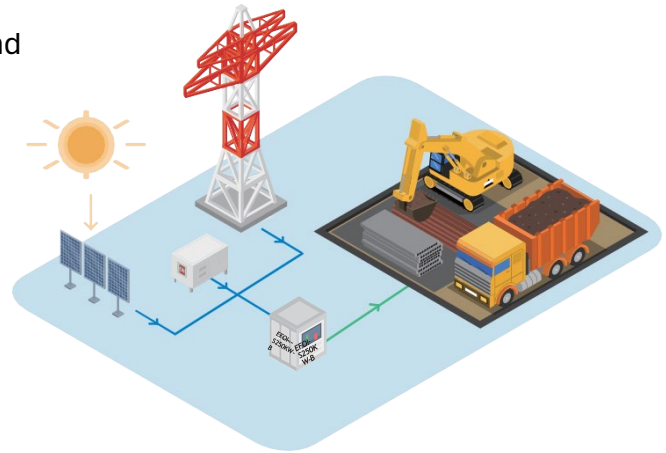
Off-Grid Mode

When the diesel generator fails, EFOI-S250KW-B keeps the power flowing to the loads without interruption, ensuring a steady and reliable power supply.



AC-Coupling

EFOI-S250KW-B can connect to solar panels, grid, or a diesel generator for charging and discharging power.



Special Power Conversion System (SPCS)

The SPCS manages how the battery pack charges and discharges. It can convert AC to DC when connected to the grid and can also supply power directly to AC loads when operating independently off the grid.

- Supports up to 4 sets of parallel use
- Equipped with multiple fault protection mechanisms
- Works with the diesel generator to power the loads

LiFePO4 Battery Energy Storage System (BESS)

The EFOI-S250KW-B system features advanced LiFePO4 BESS, which is safer, more stable, and more eco-friendly compared to other lithium types. It guarantees reliable power and energy for worksites.

- High-Power & High-Efficiency Output
- Built-in Battery Management System (BMS) for Smart Control and Protections
- Long Cycle Life & Design Life
- 5 Years Warranty

Smart Energy Management System (SEMS)

The SEMS brings together the battery pack, SPCS, BMS, and more into one system. It collects data, monitors, analyzes, and schedules energy to make sure it's used efficiently.

- Integrated Energy Scheduling Algorithms
- High Compatibility & Flexibility
- Improved System Reliability & Efficiency
- Intuitive Monitoring & Friendly Remote Control via Web and APP

How to choose a DG

Assumed load: **Peak Power: 530 kW, Rated power: 200 kW**

Traditional Proposal

If a Diesel Generator is used as the power source:

A high-power diesel generator needs to be **initially oversized** to handle the motors' maximum starting current.

Frequent motor starts and extended periods of low-power operation guarantee **high fuel usage.**

The traditional diesel generators **cannot be expanded in capacity.**

Frequent motor starts and high inrush current result in **increased maintenance costs.**

Inappropriate because of the load's high starting current.

EFOI Proposal

There's no need to acquire a high-capacity DG because of the shared power output from EFOI-S250KW-B.

Hybrid Solution

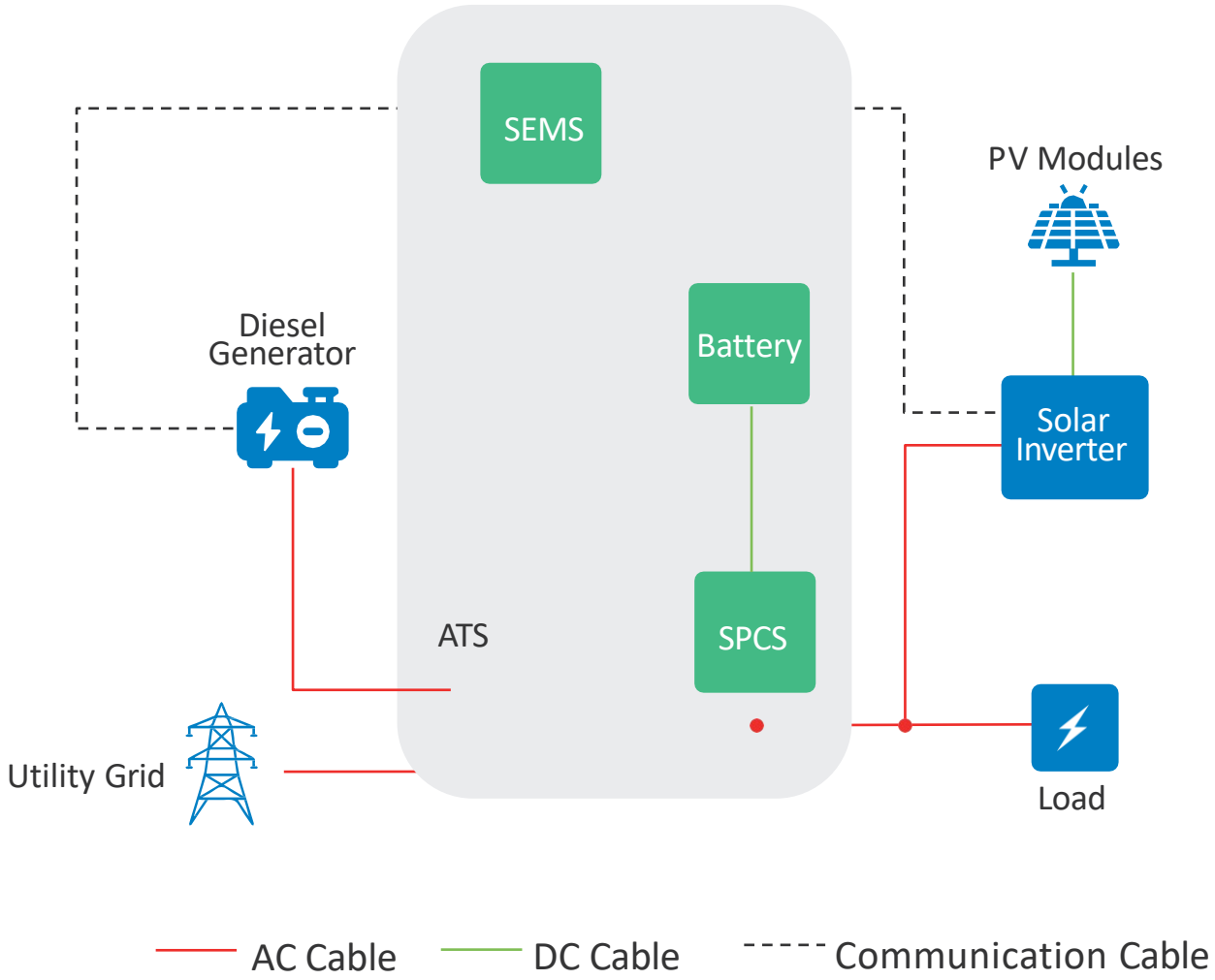
Lower initial investment for a low-power DG.

Lower fuel consumption.

Support multiple DGs working in parallel.

Lower maintenance costs.

System Topology



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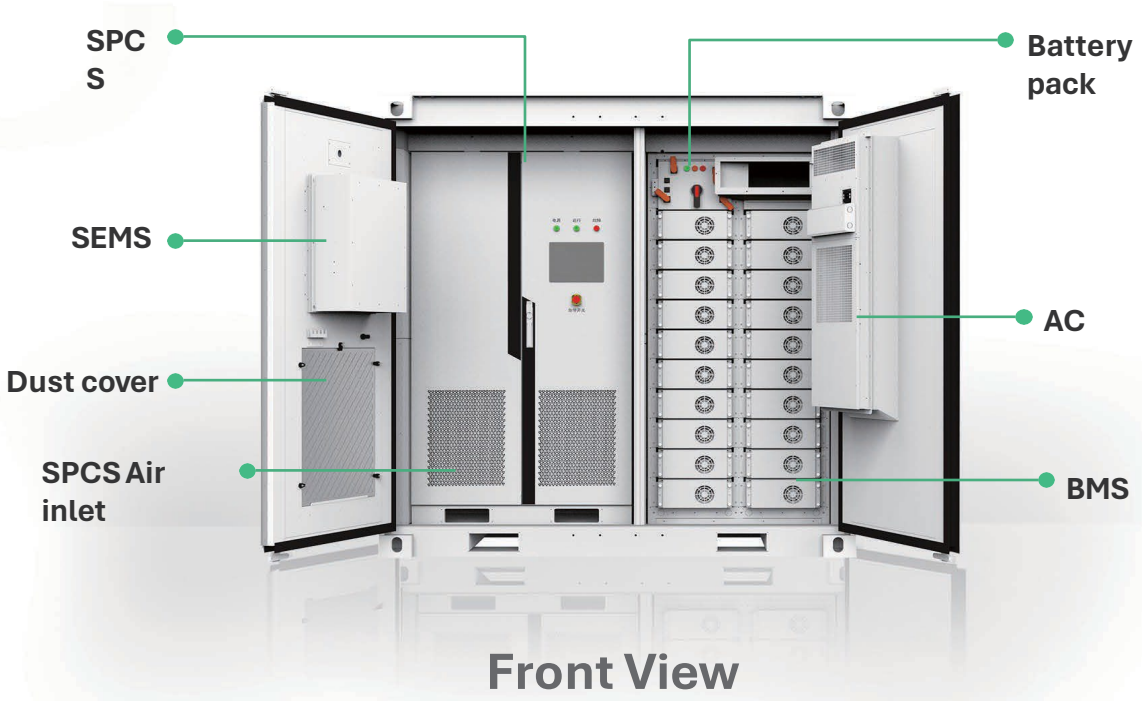
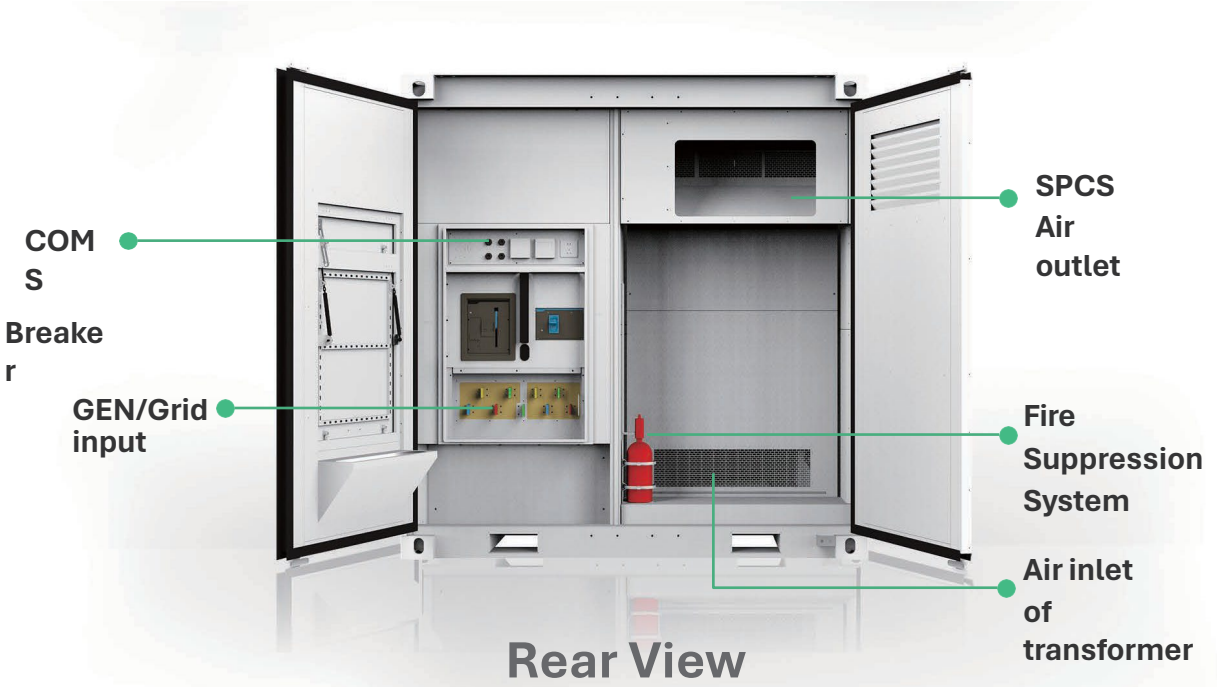


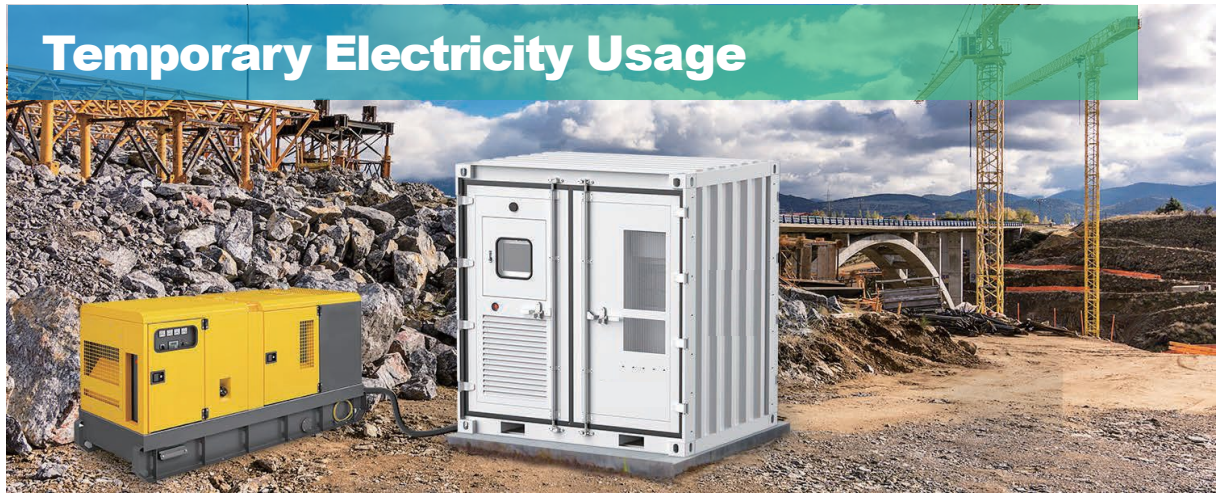


- High power motors are extensively utilized across various industries, including construction, mechanical manufacturing, mining, rail transit, and petrochemicals.






Temporary Electricity Usage



Micro-grid Power Supply

Emergency Power Supply

Technical Specifications

Model EFOI-S250KW-B -U/A

AC Output Data (On-grid Mode)	
Rated Power	150 kW
Max. Rated / Apparent Power	250 kW / 250 kVA [1]
Rated Voltage	480 V (±15%)
Rated Current	301 A
Grid Frequency	60 Hz
AC Connection	3 W + N
THDI	≤ 3%
Power Factor	-1 ~ +1

AC Output Data (Off-grid Mode)	
Rated Power	150 kW
Max. Rated / Apparent Power	250 kW / 250 kVA [1]
Rated Voltage / Frequency	480 V / 60 Hz
THDV (Linear Load)	≤3%

Battery Data	
Battery Chemistry	$LiFePO_4$
Nominal Energy	153.6 kWh
Working Voltage Range	600V ~ 876V
Nominal Charging Current	100 A
Nominal Discharging Current	200 A
Max. Discharging Current	300 A
DOD	90%

Rapid Deployment
Support lifting and forklift transportation

AC-Coupled Power System
Diesel GEN/PV System/Grid

Remote Monitoring & Management
via App and Web

Plug & Play
No installation required

Compatible Diesel Generator	
Rated Power	≤400 kVA
Rated Voltage	480 V
Rated Frequency	60 Hz

General	
Parallel Capable	Yes (Up to 4)
EMS	SEMS3000 12 inch LCD Touch Panel
Ingress Rating	IP54 / NEMA 3R
Topology	Transformer
Working Temperature	-4 ~ 131°F (-20 ~ 55℃)
Storage Temperature	-40 ~ 149°F (-40 ~ 65℃)
Relative Humidity	5 ~ 95% (No condensing)
System Noise	<65 dB
Cooling	Intelligent temperature control (Battery room) Air cooling (Inverter room)
Fire Suppression System	Included
Altitude	5,000 (>3,000 derating)
Certifications	UL1973 / UL1741 / UL9540A / FCC Part 15 Class B / CE / IEC62619 / UN38.3
Dimensions, LxWxH	90.55 x 68.90 x 94.49 inch (2,300 x 1,750 x 2,400 mm)
Weight	10,361.72 lbs (4,700 kg)

Technical Specifications

Model EFOI-S250KW-B -E/A

AC Output Data (On-grid Mode)	
Rated Power	150 kW
Max. Rated / Apparent Power	250 kW / 250 kVA [1]
Rated Voltage	400 V
Rated Current	361 A
Grid Frequency	50 Hz
AC Connection	3 W + N
THDI	≤ 3%
Power Factor	-1 ~ +1

AC Output Data (Off-grid Mode)	
Rated Power	150 kW
Max. Rated / Apparent Power	250 kW / 250 kVA [1]
Rated Voltage / Frequency	400 V / 50 Hz
THDV (Linear Load)	≤3%

Battery Data	
Battery Chemistry	$LiFePO_4$
Nominal Energy	153.6 kWh
Working Voltage Range	600 V ~ 876 V
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