WeVolt

SYSTEM OVERVIEW
OCTOBER 2026

ENGINE-OFF COMFORT & TRUCK POWER

WeVolt Apex 24V eAPU Systems

FROM $3,980

ESSENTIAL SYSTEM



Complete lineup shown with the optional inverter and diesel heater.

8.04 kWh

24V 314Ah HOUSE BATTERY

200A JK BMS

Up to 15 hrs

ENGINE-OFF COOLING

10,000 BTU split A/C

50A / 100A

TWO-WAY DC-DC CHARGING

Forward / reverse maxima

A complete system. Built for truck life.

- **Proven truck A/C**
  Same OEM as PolarFox and Electric APU
- **Truck-ready battery**
  IP65, vibration resistance and self-heating
- **Automatic two-way charging**
  House charging + starter maintenance
- **Premium installation package**
  UL-quality cabling and matched protection

Starting price: Essential configuration. Runtime depends on conditions. Package contents are detailed on page 02.

INSTALLATION OVERVIEW

Where each component fits

An illustrated layout for a conventional sleeper truck.



Illustrative placement and connections; not a scale drawing or installation wiring guide.

COMPONENT	ILLUSTRATED LOCATION	ROLE
Truck starter battery	Existing chassis battery bay	Truck starting system
Bidirectional DC-DC	Chassis equipment space	12V / 24V two-way charging
WeVolt house battery	Chassis equipment space	Stores energy for cab loads
A/C indoor unit	Under the sleeper bunk	Delivers conditioned cab air
A/C outdoor unit	Outside, behind the sleeper	Rejects heat to outside air
Inverter (optional)	Inside cab equipment area	Provides 120V appliance power
Heater (optional)	Cab / under-bunk; not shown	Cab heat + engine preheat

Starter battery is existing truck equipment. Final mounting, clearances and heater routing depend on the truck model.

SYSTEM CONFIGURATION

Choose your configuration

See every component. Choose the package with the functions you need.

STANDARD COMPONENTS + OPTIONAL UPGRADES

STANDARD



LiFePO4 house battery

Included in every package

STANDARD



Split A/C

Included in every package

STANDARD



Bidirectional DC-DC

Included in every package

STANDARD



Premium accessories

Included in every package

OPTIONAL



3kW pure sine inverter

Apex Power / Apex Complete

OPTIONAL



5kW diesel heater

Apex Heat / Apex Complete

COMPONENT	Essential Engine-off A/C	Power A/C + 120V power	Heat A/C + diesel heat	Complete All functions
LiFePO4 house battery 24V 314Ah / 8.04 kWh	✓	✓	✓	✓
Split A/C 10,000 BTU cooling	✓	✓	✓	✓
Bidirectional DC-DC Up to 50A forward / 100A reverse	✓	✓	✓	✓
Premium accessories Cables, protection, hardware	✓	✓	✓	✓
3kW inverter (optional) 120V appliance power	–	✓	–	✓
5kW heater (optional) Cab heating + engine preheat	–	–	✓	✓

✓ Included in the selected package – Not included

ESSENTIAL FROM $3,980 Add inverter power, diesel heat, or both.

Inverter and heater availability depends on the selected package. Confirm the final truck-specific bill of materials in your quotation.

CHARGING & POWER FLOW

How the system works

Your 12V truck supports a separate 24V house power system.

AUTOMATIC TWO-WAY CHARGING

DRIVING / UP TO 50A FORWARD

TRUCK POWER SOURCE

12V truck

Starter battery

+ alternator

Existing truck equipment

Bidirectional DC-DC



Auto drive / park

12V / 24V charging

24V house battery



8.04 kWh / 314Ah

200A JK BMS

PARKED / UP TO 100A REVERSE

24V HOUSE POWER

Split A/C



Engine-off cooling

10,000 BTU cooling

5,500 BTU heating

3kW inverter

OPTIONAL



120V AC

Appliance power

Pure sine wave

5kW cab & engine heater

OPTIONAL



Cab heat + engine coolant preheat

Separate 12V electrical supply, fuel line and coolant connections.

01 DRIVING

The alternator recharges the house battery.

02 PARKED

Cab power + starter battery maintenance.

Conceptual flow only. Operating conditions affect performance; combined electrical loads must remain within the battery's 200A BMS rating.

COMPONENT HIGHLIGHTS

The parts behind the system

Key specifications and the practical benefit of each module.

STANDARD

LiFePO4 house battery



8.04 kWh

24V 314Ah

200A JK BMS

Energy for overnight A/C and everyday cab loads. IP65 protection, vibration resistance and self-heating.

STANDARD

Bidirectional DC-DC charger



Up to 50A forward

Up to 100A reverse

Auto drive / park

Charges the house battery while driving and helps maintain the starter battery while parked.

STANDARD

Variable-speed split A/C



Up to 15 hrs

10,000 BTU cooling

5,500 BTU heating

Engine-off sleeper comfort with an under-bunk indoor unit and quiet variable-speed operation.

STANDARD

Premium accessories



UL quality

Matched protection

Complete package

Power cables, fuses, busbars and mounting hardware for a complete, dependable installation.

OPTIONAL

Pure sine wave inverter



24V / 3kW

120V AC output

Vibration resistance

Powers cab appliances from the house battery. Included in Apex Power and Apex Complete.

OPTIONAL

Cab & engine diesel heater



12V / 5kW

Cab heating

+ engine preheat

Cab warmth and engine coolant preheat at the same time. Included in Apex Heat and Apex Complete.

24V system class; battery energy is based on 25.6V nominal x 314Ah = 8.04 kWh. Up-to ratings depend on operating conditions.

03 / ENERGY FOR THE NIGHT

Big energy.
Built for tight spaces.

One compact LiFePO4 house battery powers overnight A/C and everyday cab loads while keeping the truck's starting system separate.



24V 314Ah
House battery

8.04 kWh
Nominal energy

200A
JK BMS

IP65 steel housing
Protection for demanding truck use.

Vibration resistance
Built for the movement of life on the road.

Self-heating
Supports cold-weather recharging.

Low-temperature protection
Battery management for cold conditions.

24V system class. Battery nominal voltage: 25.6V. Nominal energy: 25.6V x 314Ah = 8.04kWh. Usable energy depends on operating limits and conditions.

04 / SLEEPER-CAB COMFORT

Sleep cool.
Wake refreshed.

Variable-speed split A/C delivers quiet cab cooling with the engine off. The indoor unit fits under the bunk; the outdoor unit mounts behind the sleeper.



OUTDOOR CONDENSER + UNDER-BUNK INDOOR UNIT

15 hrs*
Cooling, up to

10,000
BTU/h cooling

5,500
BTU/h heating

Cooling that adjusts to the cab

Variable speed matches output to cooling demand for efficient, quieter operation.

Direct 24V power

The house battery powers A/C directly. The 120V appliance inverter is a separate option.

*Up to 15 hours is an estimate on the 8.04kWh battery. Runtime varies with ambient temperature, thermostat setting, cab insulation, duty cycle and other loads. Heating runtime differs from cooling runtime.

05 / CHARGE BOTH WAYS

Your 12V truck. Our 24V system.

Charge the house battery while driving. Maintain the starter battery while parked. The bidirectional DC-DC charger manages both jobs.



50A
Forward, up to

100A
Reverse, up to

WHILE DRIVING

12V truck power recharges the 24V house battery.

Truck system → 12V starter + alternator
DC-DC charger → Forward: up to 50A
House battery → 24V system

WHILE PARKED

House-battery energy supports the starter battery when needed.

House battery → 24V system
DC-DC charger → Reverse: up to 100A
Starter battery → 12V truck system

5-6 hrs*

Estimated recharge from 20% to 100% while driving at 50A charging.

Automatic drive / park modes | IP65 protection | Smart sleep mode

*Charge time and current depend on alternator capacity, battery state, wiring and conditions. Current ratings refer to the respective output sides. Reverse charging is starter-battery maintenance, not emergency jump starting.

06 / ADD YOUR HOME COMFORTS

Power for daily life. Heat for winter routes.

3kW PURE SINE WAVE INVERTER

IN POWER + COMPLETE



3,000W

Continuous output

24V DC to 120V AC

Vibration resistance

Run a microwave, coffee maker, TV or laptop with the engine off. Pure sine wave output supports everyday cab appliances.

CAB + ENGINE DIESEL HEATER

IN HEAT + COMPLETE



5kW

Diesel heating output

Cab heat + engine preheat

12V electrical input*

One compact heater warms the sleeper cab and preheats engine coolant at the same time, bringing winter comfort and cold-start assistance.

*12V heater model shown, as specified in the supplied component sheet. Confirm heater supply and connections during fitment. Plan combined A/C, inverter and reverse-charging loads within battery limits.

07 / THE DETAILS ARE INCLUDED

A complete system. Down to the connections.

Premium accessories complete the path between the major components. Matched cables, protection and connection hardware simplify system planning.



PREMIUM ACCESSORIES / UL-QUALITY CABLING

Cables & terminations

Power cables, copper lugs and heat shrink.

Circuit protection

Class-T / MEGA fuses and holders.

Power distribution

Busbars and a main isolation switch.

Routing & mounting

Loom, clamps, ties and mounting hardware.

Configured for your truck. Cable lengths, wire sizes, fuse ratings and key accessories can be tailored after fitment review. Final contents follow your approved package and parts list.

WIRING, PROTECTION & CONNECTIONS

Premium installation accessories.

Quality connections. Organised installation. Options for your truck.

THE ACCESSORIES BEHIND YOUR INSTALLATION



Fuses & holders

High-current and MEGA fuse assemblies.



Main isolation switch

Convenient system isolation.



Power distribution busbars

Covered connection points.



UL

Copper cable lugs

Cable termination hardware.



UL

Power cables

Wiring between system devices.



UL

Heat shrink tubing

For finished cable terminations.



Protective cable loom

For organised cable routing.



P-clamps

Cable support and securing.



Cable ties & fasteners

Cable ties and mounting nuts.

UL wiring materials
Cables, lugs and heat shrink.

Matched connections
Protection, distribution and routing.

Truck-specific options
Tailored accessory selection.

Request your WeVolt accessory package.
Tell us your truck and project requirements.
wevoltapu.com

Photos are illustrative. UL labels identify the marked accessory categories. Final contents follow your confirmed package.