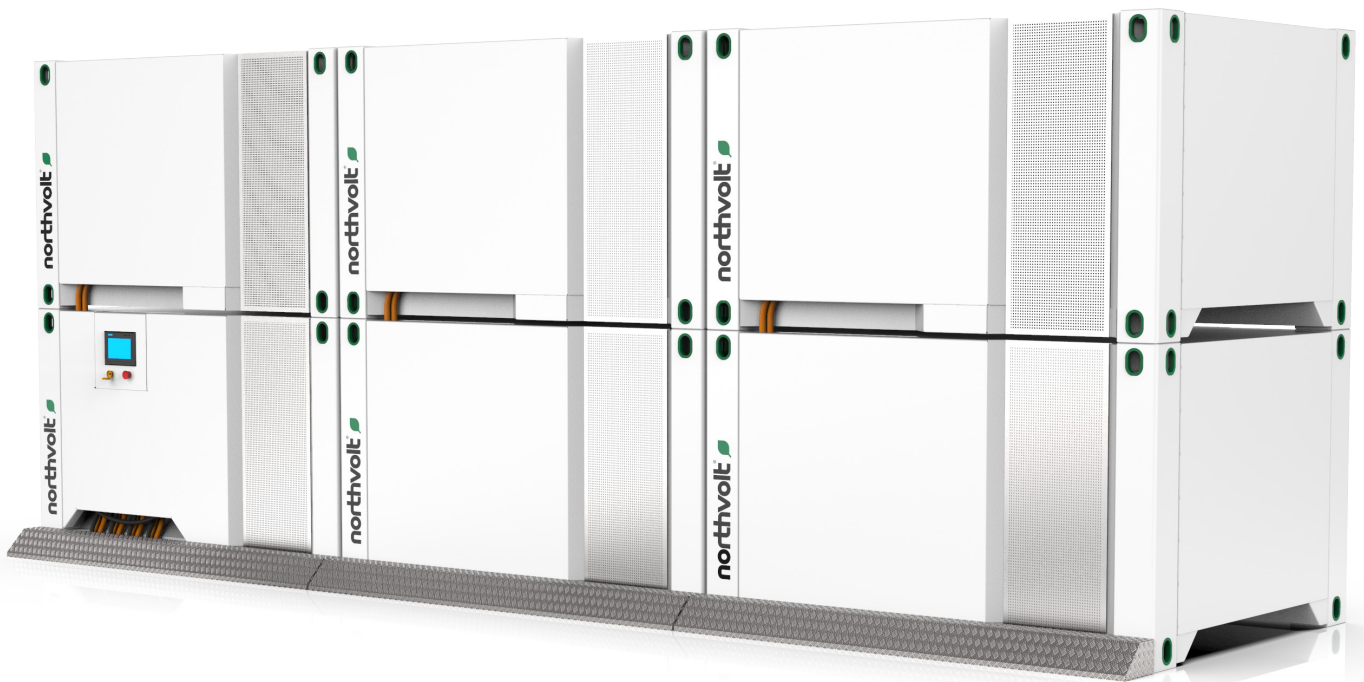


Voltpack Mobile System

northvolt

A mobile and scalable energy storage system delivering sustainable power. Designed for rapid deployment in any circumstance imaginable.



Event

Music festival
Electric motor sport
Movie production
Outdoor event

Construction site

Building & infrastructure construction
Renewable energy construction
Crane application
Industrial vehicle & machinery charging

EV charging

Mobile fast charging
Off-grid charging
Industrial vehicle & machinery charging
Temporary charging at events

Distribution grid

Limited grid connection
Ancillary grid services
Grid maintenance
Emergency power



Upsides of Voltpack Mobile System

✓ Scalable

From 281 kWh to 1.405 kWh to fit the needs of every deployment

✓ Zero emissions

No emissions at deployment site

✓ Connected

Full visibility and traceability through Northvolt provided cloud service

✓ Sustainable

Reducing carbon footprint of electricity supply

✓ Flexible

Designed for multiple applications

✓ Cost competitive

Comparable ownership costs to conventional power solutions

✓ Quiet

Quieter usage compared to conventional power solutions

✓ Plug & Play

Quick & simple setup

✓ Rugged

Built to operate in harsh conditions

Downsides of conventional power solutions:

Diesel Generator

Health burdens from pollutants and noise emissions

Carbon emissions from combustion of diesel fuel add to the CO₂-budget

Restrictions of diesel generator usage in urban areas are increasing due to high emissions (fine dust particles, NO_x, CO, CO₂)

Increasing and fluctuating fuel costs

Technical limitations with load steps and unbalanced loads

Partial loads cause inefficient diesel fuel combustion – high maintenance costs and increasing fuel need

Electricity Grid

Weak or no electricity grid connection in rural areas

Limited power grid connection specifically in urban areas

Long lead time until grid access

Expensive electricity grid expansion

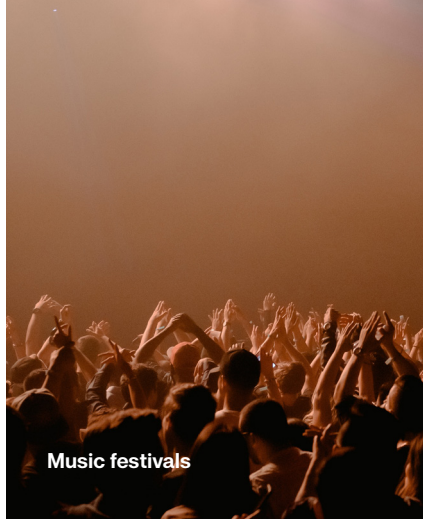
High demand charges in weak electricity grid areas (\$/kVA)





Voltpack Mobile System for your next event

Through its versatility, Voltpack Mobile System lights up any occasion – it can be scaled to meet any capacity and is flexible to meet any application at site.



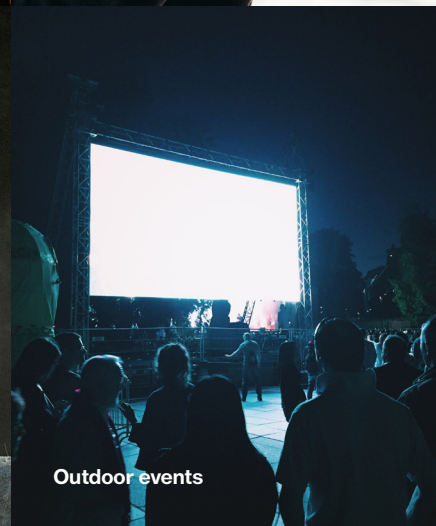
Music festivals



Movie production



Electric motor sport



Outdoor events

YOUR CHALLENGE

OUR SOLUTION

BENEFITS

No grid connection

Supply event with electricity from Voltpack Mobile System in island mode. Recharge batteries at nearest grid connection point.

- ☒ Zero emissions on site
- ☒ Lower noise levels

Limited grid connection

Boost grid connection with Voltpack Mobile System for peak power needs. Recharge during low demand periods.

- ☒ Lower energy costs
- ☒ Zero emissions on site
- ☒ Lower noise levels

Optimize diesel generator usage

Synchronize Voltpack Mobile System with fleet of diesel generators.

- ☒ Reduced fuel consumption
- ☒ Reduce diesel generators on site
- ☒ VMS-only usage at low loads (e.g. at night)

Temporary EV charging

Use Voltpack Mobile System as an energy source to charge electric vehicles. Easy set-up of Voltpack Mobile System with external charger.

- ☒ Cost competitive charging on site
- ☒ Potential to fully electrify event
- ☒ Zero emissions on site





Voltpack Mobile System for your construction site

Through its robustness, mobility, scalability and its versatility, the Voltpack Mobile System offers a unique opportunity to power your next construction and reduce emissions – all while achieving comparable ownership costs to conventional power solutions.



Building & infrastructure construction



Industrial vehicle & machinery charging



Crane application



Renewable energy construction

YOUR CHALLENGE

OUR SOLUTION

BENEFITS

No grid connection

Supply construction site with electricity from Voltpack Mobile System in island mode. Recharge batteries at nearest grid connection point.

- ✓ Cost benefits at applications with highly varying loads (e.g. crane usage)
- ✓ Zero emissions on site
- ✓ Lower noise levels

Limited grid connection

Boost grid connection with Voltpack Mobile System for peak power needs. Recharge during low demand periods.

- ✓ Lower energy cost
- ✓ Enables use of larger equipment
- ✓ Zero emissions on site
- ✓ Lower noise levels

Optimize diesel generator usage

Synchronize Voltpack Mobile System with fleet of diesel generators.

- ✓ Reduced fuel consumption
- ✓ Reduce diesel generators on site
- ✓ VMS-only usage at low loads (e.g. at night)

Temporary industrial vehicle charging

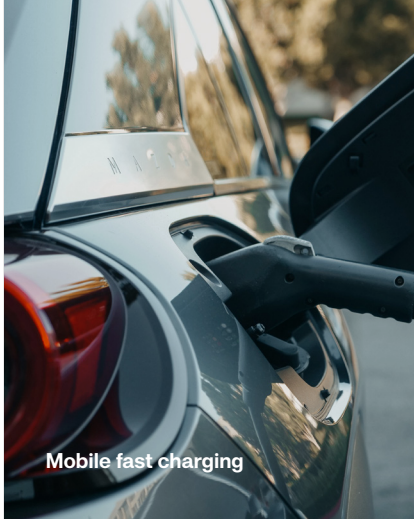
Use Voltpack Mobile System as a energy source to charge industrial vehicles. Easy set-up of Voltpack Mobile System with external charger.

- ✓ Cost competitive charging on site
- ✓ Enables longer work hours of equipment
- ✓ First step to fully electrified construction site



Voltpack Mobile System for electric vehicle **charging**

Through its multipurpose design, the Voltpack Mobile System enables immediate deployment of EV charging solutions – independent from the capability of the grid infrastructure.



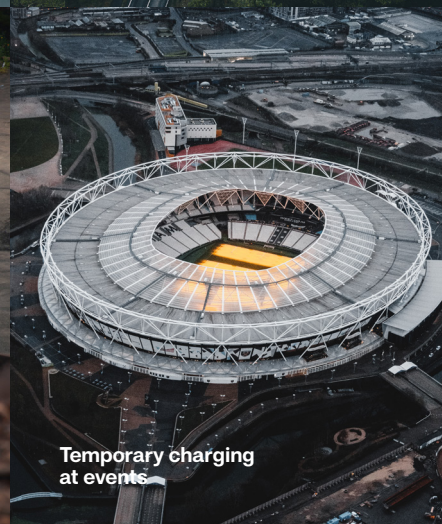
Mobile fast charging



Off-grid charging



Industrial vehicle & machinery charging



Temporary charging at events

YOUR CHALLENGE

OUR SOLUTION

BENEFITS

Off-grid charging

Voltpack Mobile System as power source for off-grid charging solution. Easy set-up of Voltpack Mobile System with external charger.

- ☒ Charging independently from grid infrastructure
- ☒ Enables use of electric equipment at off-site locations

Peak-shave grid connection

Reduce peak power demand from the grid with Voltpack Mobile System. Recharge Voltpack Mobile System during off-peak hours.

- ☒ High demand charge prevention
- ☒ Decrease dependency on grid infrastructure



Voltpack Mobile System for electricity distribution grids

Being robust, mobile, scalable and with a versatile range of functions, the Voltpack Mobile System offers the potential to reduce emissions of grid maintenance operations, increase flexibility of distribution networks and participate in the frequency service markets.



Ancillary grid services



Limited grid connection



Emergency power



Grid maintenance

YOUR CHALLENGE

OUR SOLUTION

BENEFITS

Limited grid connection

Boost grid connection with Voltpack Mobile System for peak power needs. Recharge during low demand periods.

- ✓ Cost competitive to diesel generators
- ✓ Reduced fuel consumption
- ✓ Reduced diesel generators on site
- ✓ Lower noise levels

Grid maintenance

Utilize Voltpack Mobile System to provide electricity during grid maintenance.

- ✓ Cost competitive to diesel generators
- ✓ Zero emissions on site
- ✓ Lower noise levels

Ancillary grid services

Connect your Voltpack Mobile System to the electricity grid to perform ancillary grid services.

- ✓ Additional revenue stream when Voltpack Mobile System is not in operation
- ✓ Flexible use in ancillary service markets

Emergency power

Easy set-up of Voltpack Mobile System as uninterruptible power source.

- ✓ Cost competitive to diesel generators
- ✓ Zero emissions on site
- ✓ Lower noise levels

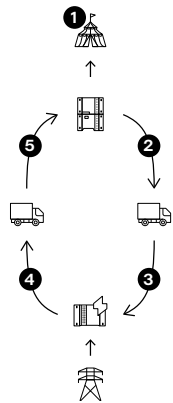
How **Voltpack Mobile System** (VMS) can solve your challenges

Island mode



RECOMMENDED USE

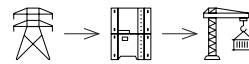
- Deploy where no grid connection is available
- Extend running time with solar or diesel power



HOW IT WORKS

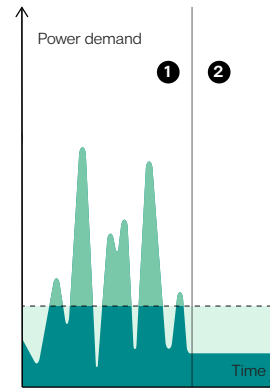
1. Discharge at event
2. Disconnect when discharged
3. Transport to be charged
4. When charged, transport back
5. Connect & swap Voltpacks

Rapid peak shave mode



RECOMMENDED USE

- Areas with limited grid power (e.g. urban areas)
- High power demand applications (e.g. EV charger, Crane)

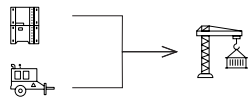


HOW IT WORKS

1. VMS supplies power when demand exceeds grid limit
2. Charge VMS during low demand periods

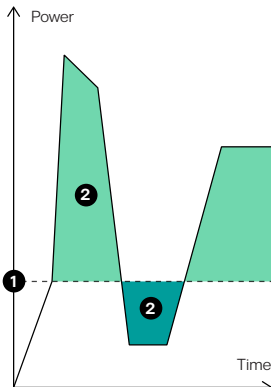
- Grid power output
- Peak power from VMS
- VMS charging
- Power supply from grid

Generator mode



RECOMMENDED USE

- Increasing fuel efficiency of diesel generator fleet
- Reducing need for idling generators

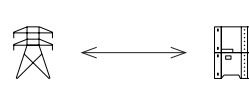


HOW IT WORKS

1. Diesel generator constantly running at highest efficiency level
2. VMS handling peak and low load fluctuations

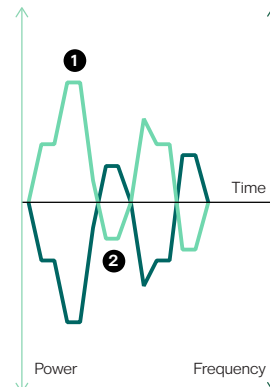
- Diesel generator power output
- Peak power from VMS
- VMS charging

Grid deployment mode



RECOMMENDED USE

- Operate VMS as a standard grid-connected energy storage
- Create additional revenue stream from frequency reserve markets



HOW IT WORKS

1. Grid frequency falls below 50/60 Hz: VMS feeds-in power to the grid
2. Grid frequency exceeds 50/60 Hz: VMS power withdrawal from the grid

- VMS power response
- Grid frequency deviations

Voltpack Mobile 281/700

Volthub Grid

INSTALLED CAPACITY

281 kWh

CONNECTION FREQUENCY

50 Hz

VOLTAGE

614-797 V (700V)

OPERATING VOLTAGE

360-440 VAC

C-RATE

up to 1C

MAX SUPPLY POWER

225 kVA

THERMAL MANAGEMENT

Integrated liquid cooling

MAX LOAD POWER

275 kW

IP RATING

IP55

DIMENSIONS

2000 x 1600 x 1200 mm

DIMENSIONS

2000 x 1600 x 1200 mm

WEIGHT

2300 kg

WEIGHT

3000 kg

Let's talk!

Reach out to
enquiries@falconpowergeneration.co.uk



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