

Think Hire High Power Hybrid Systems

A greener alternative to diesel

The Think Hire mobile batteries (or High Power Hybrid Systems) provide a flexible and sustainable solution for your energy needs. The powerful lithium-ion battery systems store 281 – 562 kWh of capacity from wind and solar sources, supplemented with energy from the grid or if needed a generator. The containers are designed to be durable, safe and easy to transport, making them ideal for your temporary energy demand.



Powerful battery systems

Think Hire has a varied fleet of lithium-ion batteries, overall around 25 MWh of capacity. The batteries offer a power ranging from 225 kVA up to 318 kVA, and a peak load output of 500 kVA. The capacity of the batteries vary from 281 kWh to 562 kWh, so our batteries can always supply sufficient energy for your project.



Avoid or reduce CO2 and NOx emissions

With the help of Think Hire mobile batteries, an optimal and energy-efficient set-up can be chosen to reduce or fully avoid the use of diesel. This reduces not only pollution, but also the number of engine hours for any diesel generators, therefore fuel costs can be saved.



Modular and plug and play set-up as an on and off-grid solution

The systems are developed to deliver clean and quiet energy whenever, wherever; by the push of a button releasing 281-318 kVA of power. They can be used as stand-alone source of power or be combined with other energy assets to create the ideal energy set-up.



Easy to install

Our mobile batteries can be installed quickly and easily. They secure the energy supply fast since they can charge and discharge within one hour. Seamless integration with the existing infrastructure, such as grid connection, diesel generators, solar panels and wind turbines, is possible.



Real-time access to energy data

Think energy Panorama Energy Management System guards, monitors and controls all batteries and additional energy assets locally and remotely. You have 24/7 access to your energy data while receiving reliable, efficient, and clean energy for your projects.

Applications



Peakshaving

Supercharge your existing electrical infrastructure with this battery. Ideal for fast-charging electrical equipment and powering lifts and cranes.



Grid reinforcement

High costs and long waiting times for upscaling your mains connection are a thing of the past.



Diesel hybrid

Adding a battery to a traditional diesel generator set-up can reduce engine running hours and cut down diesel consumption.



Part of a smart grid

The batteries can be used to supply temporary power for humanitarian aid or disaster relief in combination with mobile renewables or generators.



Grid congestion

Residential solar and electric cars can cause frequent overload on energy substations. The battery can be used as a buffer at these locations when power is surging.



Grid maintenance and takeover

The batteries are able to perform synchronous gridtake overs, when maintenance on energy substations is needed.



Renewables

The batteries can store surplus energy at large local renewable assets. Furthermore, they can be used for load balancing and portfolio optimisation. turbines, is possible.



Frequency Containment Reserve FCR (R1) & Energy trading aFRR (R2)

Contributing to a stable national grid by supplying or consuming power on demand.

Technical specifications

336 kWh – 318 kVA

Our 336 kWh / 318 kVA systems are an all-in-one solution, packed in a 10-foot container. For more energy or power the batteries could be placed serially or parallel.

Technical specifications

Battery system	10 ft. reefer, 8100 kg
Power	318 kVA Danfoss Energy Storage Inverter
Capacity	336 kWh BMW High Voltage System se09
Applications	Mobile energy, Peak shaving, Back-up/ UPS, Trading (FCR/ aFRR)
Grid voltage	3-phase 230/400 Vac, connection via PowerSyntax (power lock) 400 amp connectors (1x input, 2x output) and 1x 63 amp CEE output
Grid frequency	50 Hz (60Hz possible)
Operating temp.	-20C - +40C
Climate control	Liquid cooled automotive batteries, container actively ventilated
Safety	Battery packs actively cooled and monitored on cell level and individually controlled in case of emergency. (Temperature) monitoring on all power electronics, fire and smoke detection with direct pass through to Alfen and Think Hire back-office.
Transport	Transport under ADR class 9, UN 3536, UN 3481
Warranty	Batteries 10 years via BMW/ Samsung, battery container 2 years by Alfen
Standards	NEN3140, NEN3840, Low Voltage Directive 2014/35/EU, EMC directive 2014/30/EU, Batteries directive 2006/66/EU, HD IEC 60364: 2005, NEN 1010: 2015, IEC 61439-2: 2011, EN 61000-6-2:2005, EN 61000-6-4:2007+A1:2011, IEC 62619: 2017, IEC 60947, IEC 61439, IEC 62271-100, IEC 62271-102, IEC 62271-103, IEC 62271-200. Road and sea transport ADR class 9, UN 3536, UN 3481 (Lithium-Ion Batteries in equipment)



Technical specifications

442 kWh – 318 kVA

Our 442 kWh / 318 kVA batteries have extra capacity installed, but still packed in a clean 10-foot container. These batteries are ideal for many applications, ranging from events to industry.

Technical specifications

Battery system	10 ft. reefer, 8700 kg
Power	318 kVA Danfoss Energy Storage Inverter
Capacity	442 kWh BMW High Voltage System se09
Applications	Mobile energy, Peak shaving, Back-up/ UPS, Trading (FCR/ aFRR)
Grid voltage	3-phase 230/400 Vac, connection via PowerSyntax (power lock) 400 amp connectors (1x input, 2x output) and 1x 63 amp CEE output
Grid frequency	50 Hz (60Hz possible)
Operating temp.	-20C - +40C
Climate control	Liquid cooled automotive batteries, container actively ventilated
Safety	Battery packs actively cooled and monitored on cell level and individually controlled in case of emergency. (Temperature) monitoring on all power electronics, fire and smoke detection with direct pass through to Alfen and Think Hire back-office.
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Technical specifications

281/562kWh – 225 kVA (1)

Our newest mobile batteries are modular and lighter. Power (AC) and energy (DC) come from different systems and therefore several configurations are possible.

Technical data for DC storage system

Dimensions [L x W x H] (mm)	1981x1600x114
Mass (kg)	3000
IP rating	IP55
Temperature rating (°C)	-20 to +45
HV DC system operation voltage (VDC)	620 - 785
Auxiliary power system nominal voltage (VDC)	24
Nominal energy (kWh)	281
Rated Energy (kWh)	240
Minimum charge rate (C)	0.5 (Thermal derating with extended cycling)
Maximum charge rate (C)	0.8 (Thermal derating with extended cycling)
Number of HV connections	1
Maximum operation altitude (m)	2000



Technical specifications

281/562kWh – 225 kVA (2)

Our newest mobile batteries are modular and lighter. Power (AC) and energy (DC) come from different systems and therefore several configurations are possible.

Technical data for converter

Dimensions [L x W x H] (mm)	1981x1600x1164
Mass (kg)	2280
RPS grid connection type	CEE 125 A connector
AC output connection type (A)	Powerlock 400 threaded post M12
Inverter Output Voltage (VAC)	400
Inverter Output Frequency (Hz)	50
Grid connection allowed voltage (VAC)	360-440 (depending on grid code)
Grid Connection allowed frequency (Hz)	49.8 – 50.2
Maximum supply power (kVA)	225
Maximum load power (kVA)	275 (requires supply connection)
Maximum load power (kVA)	225 (only from battery)
Overvoltage category	III
Short-circuit current rating (kA)	55 (RPS grid) 85 (AC output)
Residual current detection (mA)	Yes (300 – AC output)
Galvanic Isolation	Yes (isolation transformer)
Maximum operation altitude (m)	2000
Isolation Monitoring	Yes – DC bus (IT system)