

Liduro Power Port

LIEBHERR

Mobile energy storage
LPO 40 / 80 / 100 / 120 / 160



Charging machines with zero local emissions

- Mobile energy storage based on lithium-ion batteries
- Modular design for different performance classes (LPO 40 / 80 / 100 / 120 / 160)
- Quick and easy to transport
- Optionally available with chassis
- Flexible use for many different applications

Product overview

Liduro Power Port:	LPO 40 / 80 / 100 / 120 / 160
Energy:	40 – 160 kWh
Power:	55 - 110 kVA (continuous power)
Output slots LPO 40:	16 A (230 V)/CEE 16 A/32 A/63 A
Output slots LPO 80 – 160:	16 A (230 V)/CEE 16 A/32 A/63 A/125 A (400 V)
Input slots:	16 A (230 V)/CEE 16 A/32 A (400 V)
Medium:	Lithium-ion batteries

Monitoring

- Battery State of Charge (SOC) / Battery State of Health (SOH)
- SOC over continuously selectable time periods
- Power input and output
- Geolocation
- and other functions

**Efficient
Sustainable**

**Zero local
emissions**

User-friendly

Low2no maintenance

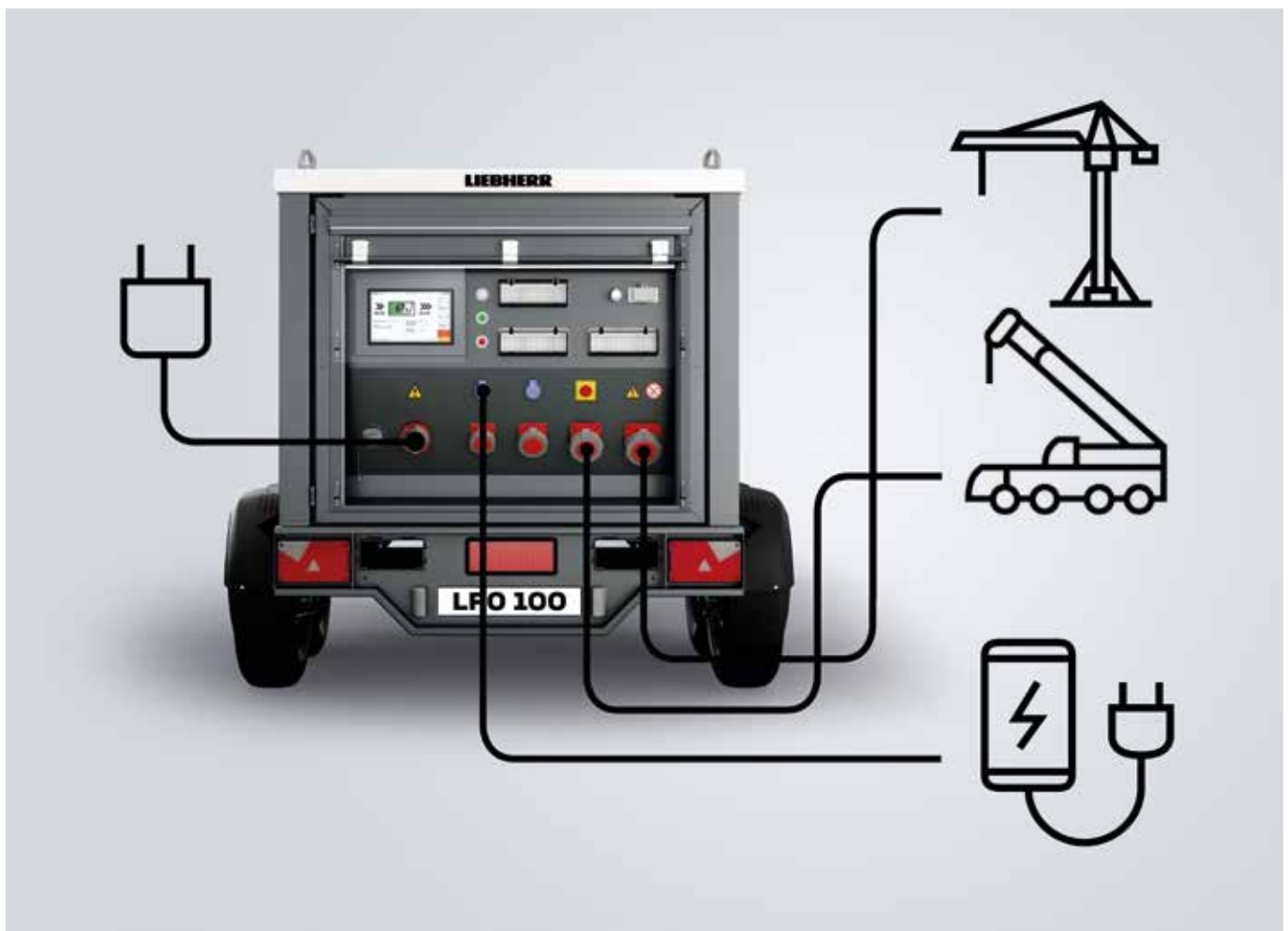


Benefits and advantages

- Fast and flexible provision of energy and power for various applications (cranes, lighting, auxiliary power units, etc.)
- Local CO₂ savings compared to diesel generators.
- Possibility of zero-emission indoor and outdoor operation (CO₂ and noise)
- Cost savings compared to diesel generators or limited mains connections (total life cycle consideration)
- Flexible number of different connections for operation of different devices
- High performance with long service life

Fields of application

- Construction sites (construction companies, building yards, public utilities)
- Daytime construction sites
- Storage as a supplement to grid connections
- Events
- Areas with temporary demand for "clean" energy



Technical data

Batteries	LPO 40*	LPO 80*	LPO 100	LPO 120*	LPO 160*
Gross energy content	39 kWh	78 kWh	94 kWh	117 kWh	156 kWh
Usable energy content	35 kWh	70 kWh	85 kWh	105 kWh	140 kWh
Technology	Lithium-ion battery (NMC)				
Availability LPO 100 from Q2 2024	*availability LPO 40 / 80 / 120 / 160 from Q1 2025; energy and performance data therefore only provisional				

Electrical power

Mains input	LPO 40 - 160				
Input powers	22 kW (three-phase)	with connection CEE 32 A; type 2 (optional)			
	11 kW (three-phase)	adapter to CEE 16 A required			
	2,3 kW (single-phase)	adapter to Schuko (10 A) required			
	The charging power is additionally adjustable via the control (according to charging port fuse).				
Input voltage	400 V +- 10 %	with three-phase connection			
	230 V +- 10 %	with single-phase connection			
Input connections	CEE 32 A				
	type 2	from standard charging pole (optional)			
Input network form	TN / IT				
Mains output	LPO 40*	LPO 80*	LPO 100	LPO 120*	LPO 160*
Output powers					
Peak power	62 kVA	110 kVA	110 kVA	110 kVA	145 kVA
Continuous power (S1)	55 kVA	55 kVA	55 kVA	55 kVA	110 kVA

	LPO 40 - 160		
Output voltage	400 V AC -5 %	three-phase	
	230 V AC -5 %	single-phase	
Output network form	IT	additional potential equalization	
Output frequency	50 Hz +/- 0,2 Hz		
Output connections	1 x CEE 125 A	only for LPO 80 / 100 / 120 / 160	
	1 x CEE 63 A		
	1 x CEE 32 A		
	1 x CEE 16 A		
	2 x 230 V	type F (standard)	optional: country-specific variants
	1 x 230 V	type F	in storage space

Dimensions and weight	LPO 40*	LPO 80*	LPO 100	LPO 120*	LPO 160*
Weight					
Without trailer	1,300 kg	1,560 kg	1,650 kg	1,830 kg	2,300 kg
With trailer	1,650 kg	1,880 kg	2,100 kg	2,280 kg	2,650 kg
Dimensions (L x W x H)					
LPO 40 - 160, without trailer	2,434 x 1,520 x 1,433 mm				
LPO 40 - 160, with trailer	3,903 x 2,031 x 1,899 mm				

Subject to technical changes

Trailer body

Chassis	two-axle trailer, braked
Speed	80 km/h maximum permissible speed
Legal notice	Country regulations for speeds and combinations of towing vehicle and trailer must be observed.

Equipment

Control of generators	available; further information in the manual
Operating interface	Liebherr display DC 5 with touch operation, 12"
Storage space	275 liters, lockable storage space with cable holders and additional socket (230 V, type F)
Control panel cover	lockable roller shutter (two steps)

Optional equipment

Trailer package	The LPO is supplied with trailer chassis, which further increases the mobility of the energy storage unit. Scope of delivery: trailer chassis, lighting, warning signs for transport
Public charging package	type 2 plug for charging at public AC charging stations and wallboxes with up to 22 kW
Country package	country-specific charging sockets instead of the standard type F Schuko sockets by default, all 230 V sockets are installed in type F design.
Special colors	foiling of the side parts with customer-specific color; specification in CMYK standard delivery is in Liebherr coloring (yellow)



Technical data

Environmental conditions

Operation

Temperature range for operation at maximum power	-20 °C to +40 °C	Below 15 °C, automatic preheating of the LPO to operating temperature takes place
Extended temperature range with reduced power	+40 °C to +50 °C	
Relative humidity	100 %	
Operating height	up to 2000 m über NN	
Protection class	IP 54	
Shock and vibration load	4 M 12	EN 60721-3-3
Corrosion protection	C 4 "Medium"	EN 12944

Storage

Storage temperature	-20 °C to +50 °C	
Relative humidity	100 %	
Other	The battery charge level must be ~50% and must be checked at regular intervals.	The LPO must not be stored fully charged.
Shock and vibration load	1 M 11	EN 60721-3-1

Transport

Transport temperature	-45 °C to +60 °C	
Relative humidity	100 %	
Shock and vibration load	2 M 5	EN 60721-3-2
Transportation	trailer, four lifting lugs and forklift lugs	

More information in the manual

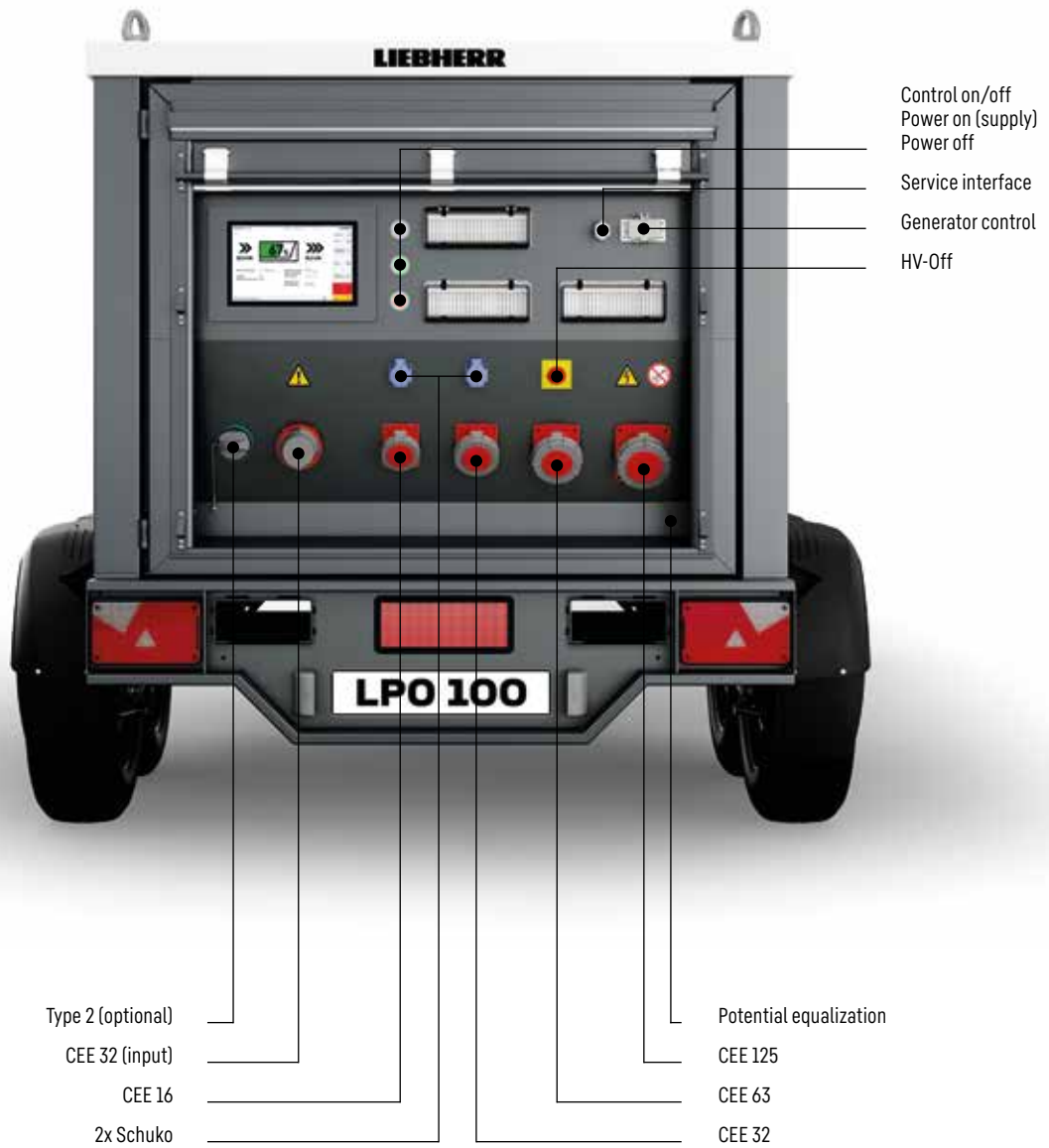
Safety

RCD	Each output has its own type B residual current circuit breaker.
Insulation monitoring	insulation fault detection at the outputs
Grounding	connection for potential equalisation earth spike not required; according to DGUV 203-032, 5.1.2.3 is fulfilled
Commissioning	commissioning possible without electrician according to DGUV 203-032
Water cooling	The water cooling ensures maximum performance at ambient temperatures up to 40 °C.
Water heating	The water heater provides an ideal operating temperature window even in cold temperatures.
Coolant	water-glycol mixture maximum 50/50

More information in the manual

Subject to technical changes

Inputs/outputs and switches



Side view with chassis



Front view with lockable storage space





**Typical areas of application for the Liduro Power Port:
Construction sites with limited or no mains connection**