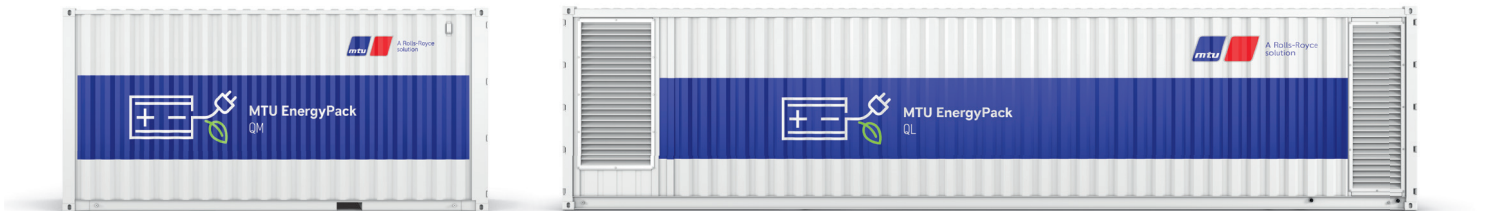




Battery Energy Storage System

MTU ENERGYPACK QM / QL



Optional equipment shown. Standard equipment may vary.

Product highlights

Benefits

- Factory tested plug-and-play design
- Optimized system integration ability
- Highest power density
- Complete system within 20ft/40ft HC container
- High safety & reliability
 - Floodable with extinguishing water
 - Aeration in case of gas detection
- Black start capability
- Grid-supporting & grid-forming mode
- Controlled switching between modes
- Supervision of the point of common coupling
 - Control of the external mains switch
 - Detection of power outages
 - Re-synchronization after grid recovery
- Various applications in combination with MTU Microgrid Controller
- Easy integration into Rolls-Royce Microgrid Solutions

Support

- Global product support offered

Standards

- Battery storage is designed and manufactured in facilities certified to standards ISO 2008:9001 and ISO 2004:14001
- AS/NSZ on request

System configurations

- Power and capacity can be widely adjusted according to customer and project needs. Please see graph below and consult your local distributor for your individual configuration.

Options

- 50°C ambient temperature*
- Fire suppression system
- 50% overload capacity*
- Redundant cooling*
- Silent version*
- Internal* or external transformer
- Customer branding
- ...and many more

* for selected configurations

Certifications

- CE conformity certification
- UL on request

Battery energy storage systems

MTU - a Rolls-Royce solution - offers a wide portfolio of battery energy storage systems starting from 40 kVA up to 2,000 kVA and capacities up to 2,600 kWh. As integral part of flexible energy systems, energy from various distributed electricity sources can be stored in our battery energy storage systems. The MTU EnergyPacks are designed to improve reliability, quality and profitability of your individual energy system.

Technical data - MTU EnergyPack QM / QL ^{1, 2}

Sections	Value	Sign	Unit	MTU EnergyPack QM / QL
Battery	Cell chemistry			NCM
	Nominal capacity QM / QL		kWh	up to 1,000 / up to 2,600
Cooling	Max. ambient temperature	T_{max}	°C	40 (50° C)
	Min. ambient temperature	T_{min}	°C	-20
Electrical	Nominal apparent power QM / QL	S_{nom}	kVA	up to 800 / up to 2,000
	AC short circuit capability		kA	50
	Grid frequency	f	Hz	50 (60)
	Max apparent power (1 min)	S_{peak}	%	110% (150%) of S_{nom}
	Nominal voltage	U_{nom}	V	515 V (400 V with internal transformer) ³
	Power factor range	$\cos \phi$		0 ind. ...1 ... 0 cap
	Black start capability			yes
Housing	Corrosion protection			C3 (C5M)
	Height	H	mm	2,896
	Length QM / QL	L	mm	6,058 / 12,192
	Width	W	mm	2,438
	Protection class battery room			IP56
Interface	Supported communication protocol			Modbus-IP (Modbus-RTU, IEC 60870-5-104, IEC 61850, DNP3)
	Supported communication channels			3G / 4G 100MB/s CAT 5
System	Humidity	ϕ_{rel}	%	100% condensing
	Max. operation altitude	H_{max}	m	2,000
	Nominal round trip efficiency ⁴ (w/o HVAC)			up to 90%
	Weight	m	kg	up to 38,000

1) Weights and dimensions are estimates only. Please consult the factory for accurate weights and dimensions for your specific battery storage container.

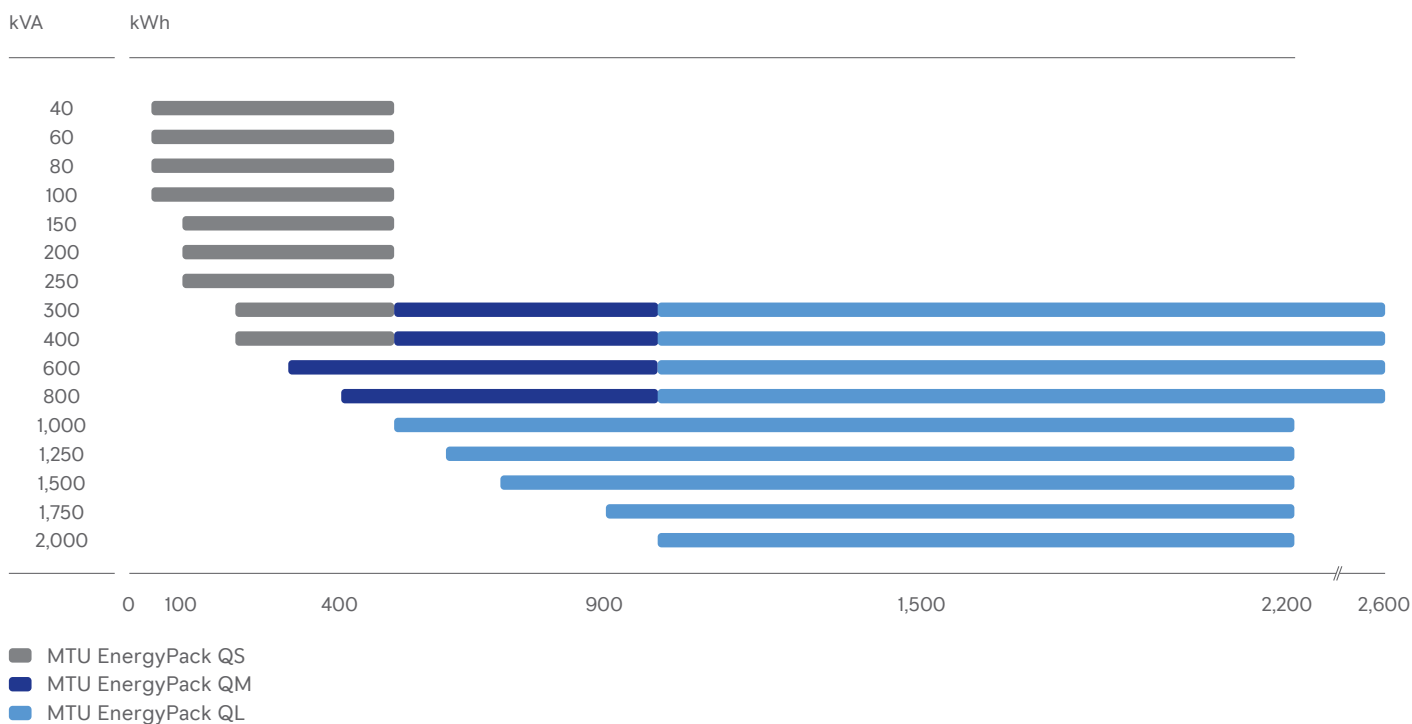
2) Product options in brackets

3) Other voltage levels available on request

4) At nominal power, excluding losses of transformer and external cabling. Depending on configuration and C-Rate.

Battery energy storage systems

Actual capacities and sizes may vary due to battery type and system configuration.



Sound data

— Consult your local distributor for sound data.

Warranty and performance guarantee

— Consult your local distributor for information about warranty and performance guarantee.

Materials and specifications are subject to change without notice. Please consult your local distributor for further product information.