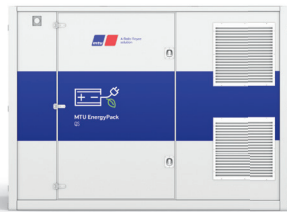




## Battery Energy Storage System

# MTU ENERGYPACK QS



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 vandalism proof outdoor enclosure
- High safety & reliability
- 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\*
- Corrosion protection
- Touchscreen HMI display
- 50% overload capacity\*
- 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. For more information and solution consulting please contact your local distributor.

### Technical data - MTU EnergyPack QS <sup>1,2</sup>

Sections	Value	Sign	Unit	MTU EnergyPack QS
Battery	Cell chemistry			NCM
	Nominal capacity		kWh	up to 550
Cooling	Max. ambient temperature	$T_{max}$	°C	40 (50°C)
	Min. ambient temperature	$T_{min}$	°C	-20
Electrical	Nominal apparent power	$S_{nom}$	kVA	up to 400
	AC short circuit capability		kA	17
	Grid frequency	f	Hz	50 (60)
	Max apparent power (1 min)	$S_{peak}$	%	110% (150%) of $S_{nom}$
	Nominal voltage	$U_{nom}$	V	400 V <sup>3</sup>
	Power factor range	$\cos \phi$		0 ind. ...1 ... 0 cap.
	Black start capability			yes
Housing	Corrosion protection			C3 (C5M)
	Height	H	mm	2,400
	Length QS2 / QS6	L	mm	2,100 / 3,300
	Width QS2 / QS6	W	mm	1,700 / 2,200
	Protection class battery room			IP55
Interface	Supported communication protocol			Modbus-IP (Modbus-RTU, IEC 60870-5-104, IEC 61850, DNP3)
	Supported communication channels			3G / 4G 100MB/s CAT5
System	Humidity	$\phi_{rel}$	%	100% condensing
	Max. operation elevation	$H_{max}$	m	2,000
	Nominal round trip efficiency <sup>4</sup> (w/o HVAC)	$\eta_{nom}$	%	up to 88%
	Weight	m	kg	up to 8,900

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

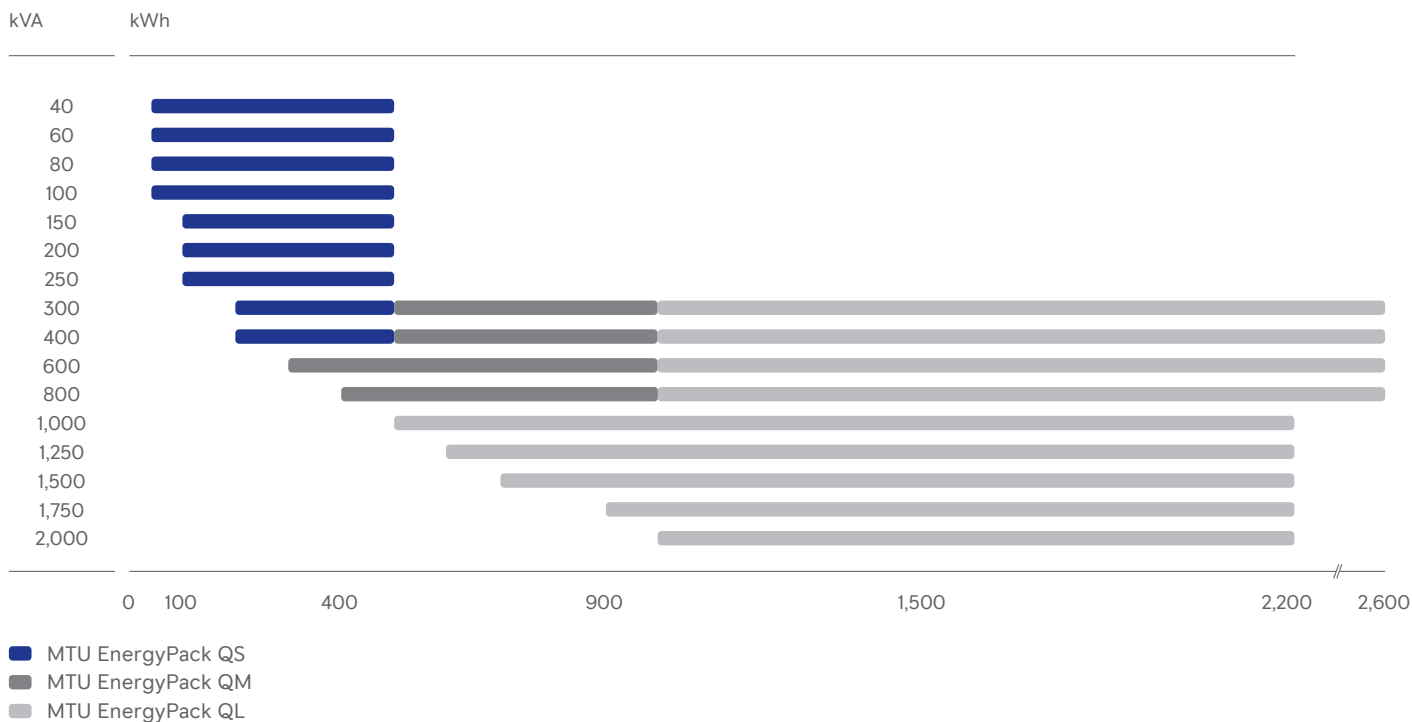
2) Product options in brackets

3) Other voltage levels available on request

4) At nominal power, excluding losses of 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.