

**Flexible Design.
Speed of Delivery.
Optimised Energy.**



Specification Sheet

GridSolv Quantum

Wärtsilä's GridSolv Quantum is a fully-integrated modular and compact energy storage system (ESS) designed for ease of deployment and sustainable energy optimisation across project locations and market applications. Optimised for flexibility and functionality with several sub-systems, the product is compliant with North American and international standards.

Components

GridSolv Quantum consists of the following components:

- Enclosures with pre-installed liquid-cooled battery racks
- AC and DC outdoor rated cabinet, which connects battery strings with the inverter and provides an interface for auxiliary power and communications

GridSolv Quantum can be paired with leading inverter manufacturers' products, lending the flexibility to parallel several enclosures needed to configure an ESS to meet project needs and grid connection options.

Key Benefits

The enclosure is optimised to fulfil the following criteria:

- Lowest lifecycle cost
- Smallest system footprint given the selected system configuration
- Shortest overall deployment time (equipment + transport + installation + commissioning)
- Minimised scope and complexity of installation



Figure 1: Enclosures can be combined to form a complete system, with up to eight enclosures linked together

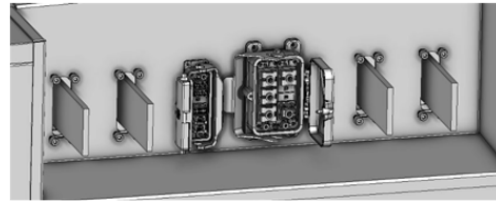


Figure 2: Side view of GridSolv Quantum; interconnection bus is recessed so connections can be made from top/front/back of the enclosure

Features

Flexible design, optimised for use

case: GridSolv Quantum can host up to four liquid-cooled racks per enclosure, which can be linked together to form a complete system. GridSolv Quantum can be installed as a single enclosure, or as a system of several parallel enclosures, enabling the most optimal configuration to meet project requirements.

Safety: GridSolv Quantum is designed with safety in the forefront. GridSolv Quantum is fitted with several safety features, such as lithium iron phosphate (LFP) batteries, a 60-minute wall fire rating (between units), NFPA 69 Active Ventilation, UL 9540A unit-level compliance, smoke and H2 detection and fire suppression. GridSolv Quantum is designed to meet international safety standards. *Please see Wäertsilä GridSolv Quantum Compliance Sheet for additional information.*

Rugged design and high

availability: GridSolv Quantum is designed with careful equipment selection and high seismic capabilities, catering for a long lifespan in all conditions with minimum service interventions. Features include the ability to withstand wind, a high ingress protection design, and a long duration surface treatment specification.

Speed of delivery: Units are delivered to the site fully tested and with batteries and a cooling system. GridSolv Quantum is also easy to handle during transportation and installation; strategically placed lifting lugs provide the installer with options to optimally plan the onsite installation.

Ease of deployment: GridSolv Quantum is made with pre-designed jumpers and cables, in addition to unit-to-unit DC connection and AC auxiliary distribution—as well as signals, and communication interconnection—which are provided as part of GridSolv Quantum scope of supply. GridSolv Quantum is designed to minimize the amount of field wiring, civil work and trenching needed to deploy an ESS. The enclosures can be anchored to the foundation by either bolting or welding.



Figure 3: Interconnected system of GridSolv Quantum units

Specification

Item	GridSolv Quantum
Nominal energy 0.25-0.5C	1490 kWh
Nominal energy 0.50-1.0C	1300 kWh
Formation 0.25-0.5C	0.25 – 0.5C 4P x 8 x 52S
Formation 0.50-1.0C	0.50 – 1.0C 4P x 7 x 52S
Voltage range 0.25-0.5C	1165 – 1500VDC
Voltage range 0.50-1.0C	1020 – 1313VDC
Nominal voltage 0.25-0.5C	1331 VDC
Nominal voltage 0.50-1.0C	1165 VDC
Nominal C-rate	0.25 – 1.0C
Auxiliary load voltage	208/400 V 60 Hz and 380 – 415 V 50 Hz 4-wire
Auxiliary peak load	9 kW
Weight	30865 / 14000 lbs/kg
Operating temperature	-30 – +50°C
Dimensions (w, d, h)	2.1 x 3.3 x 2.5 m
Coolant type	Water and glycol mix

Wäertsilä Services Available

- System design
- Site Commissioning
- GEMS Product Suite integration
- Rated design life of 20 years, with a standard product warranty of two years. Extended product warranties are available.
- See GEMS product specification sheets for additional details



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