

V O L V O

PU2000

Battery Energy Storage System - Commercial & Industrial



Ref: No 2025002_PU2000 / English / 2025.06 / VEG / Volvo Energy

Safety first design

Comprehensive safety solutions ensure compliance with the latest safety standards in the EU and North America e.g. smoke detection, dividing wall, thermal management with liquid cooling and deflagration panels.

The PU2000 features a novel direct injection system, which uses a PFAS free fire extinguishing agent to prevent fires and thermal runaway.

Secure & accessible

Adhering to stringent cyber security standards, control, monitoring and over-the-air updates can be done remotely. App and web-portal interfaces includes functionality for easy BESS scheduling and monitoring.

Turnkey & superior integration

An all-in-one design and factory testing complemented by turnkey services, enable quick deployment at site. The in-house developed Volvo Cloud EMS offers superior integration to charging solutions, as well as interoperability with a range of local grid markets (energy, flexibility and ancillary).

Use case flexibility

Future-proof the operation and development of your site or facility by the ability to stack a wide range of use cases. These include peak shaving, load shifting, energy cost optimization, grid market revenue generation, EV charging integration, and island mode operation.

In numbers

Energy	2000 kWh
Power	1000 kW / 1000 kVA
Modularity	Up to 10 units in parallel
Dimensions	~6.1x2.5 x2.6 m, 20 ft ISO
Weight	19 500 kg

Genuine Volvo

The PU2000 is designed to fulfil the expectations of a genuine Volvo product; safety, environmental care, quality, trust and qualified support over time.

Volvo Energy

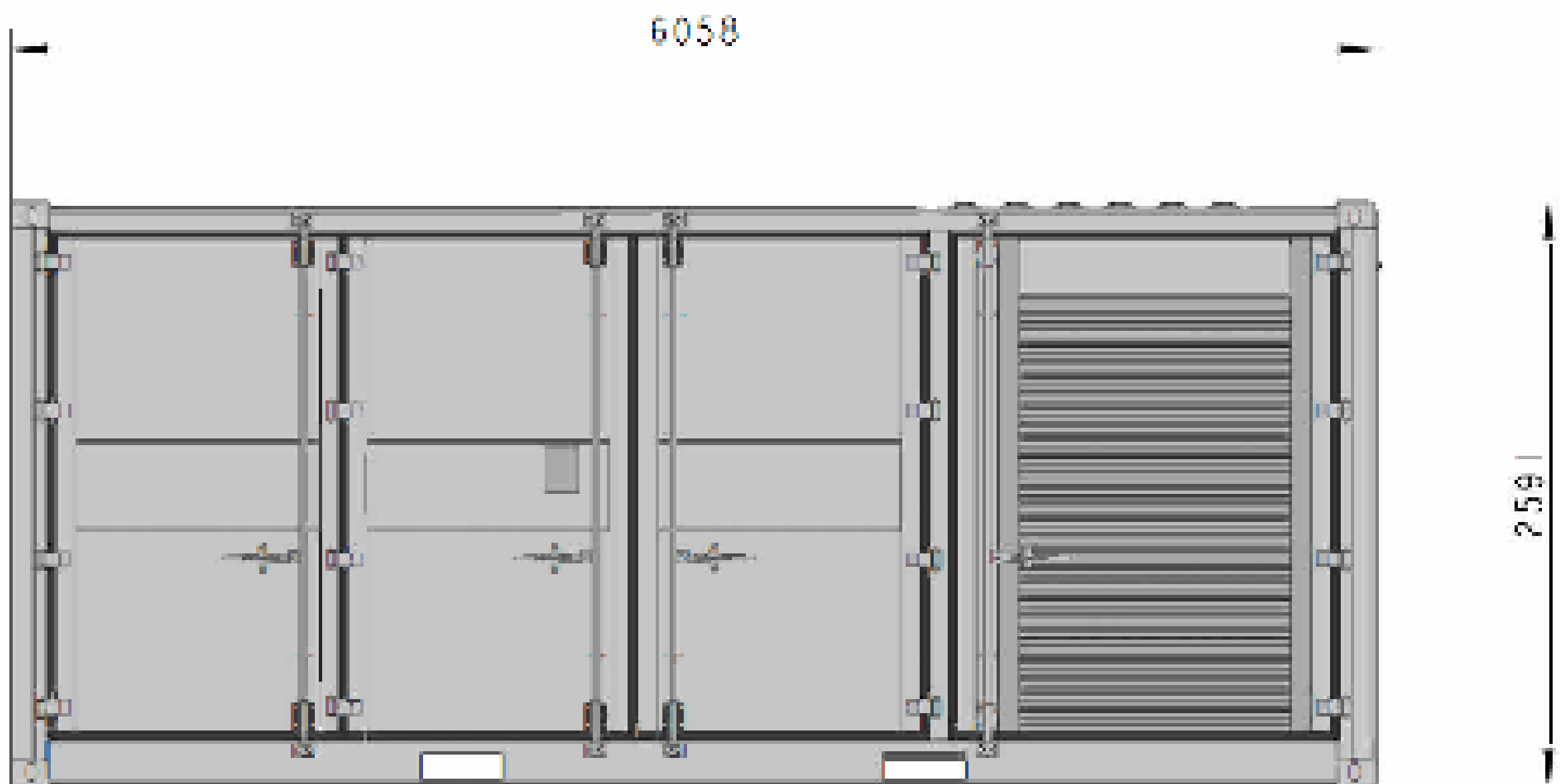
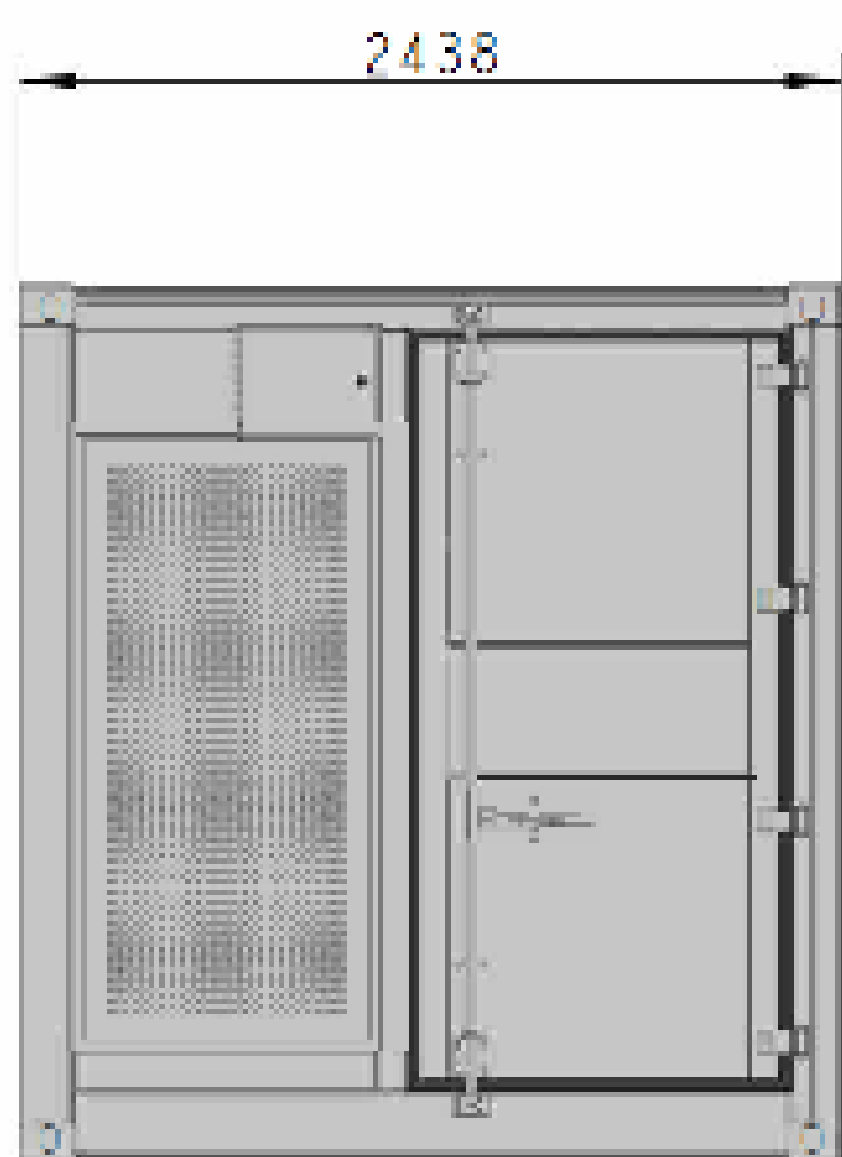


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Technical data

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PU2000-1000-2048-A-EU	
Electrical input/output	
Inverter power	1000 kW / 1000 kVA
Power factor range	4 Quadrant operation, 0 to 1
Reactive power	Ability to request both active and reactive power
Grid connection	400V, 50 Hz, AC 3ph+N+PE
Round trip efficiency (AC-AC)	>90%
Battery	
Nominal energy	2048 kWh
Max C Rate	0.5 (2-hour)
Cell chemistry	Li-ion, NCA
Expected lifetime	>6000 cycles (for up to two cycles per day, 94% DoD)
Certification level	UN 38.3, EUBR, UL1973, UL9540A
Cooling	Liquid cooled
General	
Configuration	All-in-one, power conversion, site controller, metering, switchgear
Grid modes	Grid connected, island
Enclosure	20 ft ISO container, adapted
Operating temperature range	-20°C to +40°C (-30°C to +50°C derating, automatic shut-off)
Altitude	< 2000 m
Humidity	5-95 %
Enclosure protection rating	IP55, corrosion resistance class C4, vandalism class IK11++
Safety solutions, container level	Smoke detection, active fire suppression system, deflagration panels
Compliance	IEC 62619, RED, EN50549-1, CE, UN 3536
Digital	
Connectivity	4G SIM CARD
Communication Protocol	Modbus TCP/IP, REST API
Remote	Monitoring, scheduling & control via web & mobile app



This document includes a brief overview of the relevant Volvo Energy Power Unit (PU) and its specifications. Any details are provided for general information purposes. Nothing contained herein should be deemed a warranty, representation or undertaking by Volvo Energy. The performance of the PU is subject to various factors, including ambient temperature, cycling frequency, energy throughput and state of charge. Actual performance may vary from the details specified herein. Volvo Energy will from time to time make changes to the design and functionality of the PU. The information contained herein is subject to change without notice. Please ensure that you are referring to the latest version by contacting Volvo Energy.

