

TECHNICAL DATA

Туре	Plug & Play Energy Storage Container	UET´s ReFlex TM	Power Container and Flexible Energy Tanks	UniSystem [™] with increased Energy Density
Peak Power	90kW	120kW	750kW	600kW
Max. Capacity	120kWh	450 kWh	2 MWh	2.2MWh
AC-AC roundtrip Efficiency	~ 65%	~ 70%	~65%	~ 70%
Cycle Lifetime	>10,000 cycles	>10,000 cycles	>10,000 cycles	>10,000 cycles
Calendar Lifetime	20 years	20 years	20 years	20 years
Dimension	6.1m×2.4m×2.6m	6.1m×2.4m×2.6m	13.6m×6.9m×4.1m	6.1m×12.5m×2.9m
	(1×20' ISO-Container)	(1×20' ISO-Container)		(5×20' ISO-Container)
System Image	Valuadis Power GmbH		VB. History	FI B B B B B B B B B B B B B B B B B B B

Additional configurations can be built according to customer requirements.

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VANADIUM REDOX FLOW BATTERY – WORKING PRINCIPLE

The Vanadium Flow Battery is an electrochemical battery that uses one active chemical material "Vanadium" in a flowing electrolyte that stores energy in external electrolyte tanks. Electrolyte is pumped from storage tanks through reaction stacks, where electrons transfer between different ionic forms of the vanadium by electrochemical reaction. Thus chemical energy is converted into electrical energy (discharge) or electrical energy is converted to chemical energy (charge).

Catholyte Tank Pump Source/Load

ADVANTAGES

- Unlimited number of charge/discharge cycles within lifetime
- Long lifetime of 20 years
- Power and energy can be scaled independently from each other
- No fire risk unlike other battery technologies

ABOUT VANADIS POWER

Vanadis Power GmbH, founded in 2013 and based in Nuremberg, Germany, offers Advanced Vanadium Redox Flow Batteries to the European market. These batteries are designed for the whole range of short- and long term storage applications including the integration of renewables. Vanadis has delivered one of the largest battery storage systems in Germany (0.3MW/1MWh) for optimization of a wind park.

Funded by long term private equity Vanadis has strong strategic partnerships with Rongke Power (RKP), Bolong New Materials (BNM) and UniEnergy Technologies (UET).

RKP (www.rongkepower.com) is one of the world leading manufacturers of advanced vanadium flow battery stacks and systems with 30MW annual production capacity. In the last 10 years RKP has deployed numerous systems with a size of up to 5MW/10MWh.

BNM (www.bnm-bolong.com) produces its proprietary electrolyte and has 300MWh annual electrolyte production capacity. It is one of the world's largest suppliers of electrolyte for Vanadium Flow Batteries.

UET (www.uetechnologies.com) is manufacturing its breakthrough compact vanadium battery and has delivered North America's largest Flow Battery (1MW/4MWh).



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