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Технические характеристики на литий-ионные аккумуляторные батареи Flex’ion Gen2

Flex'ion™ Gen2 main benefits

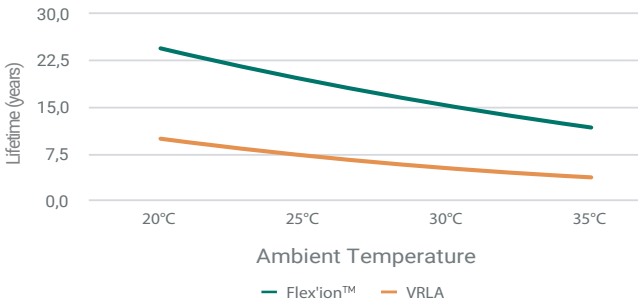
Main assets

- 40% MORE POWER — Up to 220 kW per cabinet
- HIGHEST SAFETY — UL 9540A UL 1973
- LOW ENVIRONMENTAL FOOTPRINT — Low cobalt < 1%
- OPERATES AT 35°C — Electricity and water saving

FLEX'ION™ (20+ YEARS) VS. VRLA LIFETIME

Ambient Temperature	Flex'ion™ lifetime (years)	VRLA lifetime (years)
20°C	24,5	10
25°C	19,1	7,0
30°C	12,0	5,0
35°C	10	3,8

FLEX'ION™ (20+ YEARS) VS. VRLA LIFETIME



From cell to module and system

LI-ION CELLS

FLEX'ION™ GEN2 BATTERY MODULE

FLEX'ION™ GEN2 SYSTEM

A wide range of modular configurations

Up to 4 MW
Up to 302 kWh
Up to 598 V_{DC}
Suitable for either 2-wire or 3-wire (midpoint) UPS designs.

Flex'ion™ Gen2 system

Cabinet

• IP 20, seismically tested & certified

• Door can be left or right hand hinged and has a maximum opening angle of 170°.

Battery module

• Stores electrical energy ready for use during mains failure

Battery Management Module (BMM)

• Manages safety functions at string level

• Allows string to discharge if charging is interrupted

• Manages internal system-level & external communications

7" HMI

Large touchscreen display providing system information

LED Button

Controlled system start/stop & battery status

Battery-stop Button

Opens the main breaker in each string to isolate the battery system

Door Handle

Lever design & lockable

Flex'ion™ Gen2 key differentiators

- The highest commitment to safety
- 20+ years calendar life
- Ability to operate at high temperatures
- Exclusive 5-year warranty
- A modular and scalable architecture
- 6x lighter than VRLA
- Advanced remote monitoring
- High reliability
- The cabinets can be transported with the modules already assembled.

Dedicated structure to support your market request

SHORT LEADTIME

European production

- Air freight capability
- Dedicated Flex'ion™ business line, from sales to production, from engineering to installation and commission
- Engineering support directly from the battery manufacturer, tailoring the battery solution to the customer needs
- Lower installation time, once the cabinet arrives in the field with the modules already assembled.

Modular & scalable battery configuration

2-WIRE & 3-WIRE UPS

Flexible architecture

- Optimized configuration based on each load profile
- Supporting 2 and 3 wires (neutral / midpoint) UPS architecture.
- Easily upgradable to support project expansion

Mission critical design for maximum availability

BLACK-START FUNCTION

Continuous monitoring

- Ability to discharge even when charging is interrupted
- Black-start function & continuous monitoring of the battery status thanks to self-powered system
- Fast recharge, right after a complete discharge, for highest system availability

Advanced technology

- High operating temperature allowing less HVAC requirements and consumption
- Saft's patented super iron phosphate chemistry (SLFP™)
- The optimum balance of safety, power density and calendar life

HIGH ENERGY EFFICIENCY

Sustainable & cost effective

Smart monitoring & user-friendly data access

- Data direct access via HMI touchscreen on the cabinet front door
- Remote access to battery information and troubleshooting ability
- State of charge (SoC), state of health (SoH), temperature, alarms, etc.
- Multiple protocols embedded (Modbus, CanOpen, TCP-IP) for communication with UPS and/or building management system

FRONT FACE HMI

Data direct access

Flex'ion™ Gen2 product range

4 sizes of cabinet answering your specific needs

CABINET TYPE	1	2	3	4*
Height (mm/in)	1300/51.2	1850/72.9	2050/80,7	2310/90.9
Width (mm/in)	610/24.1			
Depth (mm/in)	520/20.5			
Weight (kg/lb)	100/220	128/282	138/304	150/330
Nominal voltage (V_{DC})	Up to 230	Up to 414	Up to 506	Up to 598
Maximum number of modules	5	9	11	13

Cabinets are seismically tested and certified

Cabinets can be shipped with the modules already assembled

**Cabinets with height 2,300 mm may be configured for two strings of up to five modules each, suitable for either 2-wire or 3-wire (midpoint) UPS designs.*

COMPLIANCE TO STANDARDS	CE MARKING	*LVD directive 2014/35/EU* *EN 62477-1* *Including environmental bellow*			*EMC directive 2014/30/EU* *EN 61000-6-2* *EN 61000-6-4*	Dir.2011/65/EU
		IEC 600068-2-2	IEC 600068-2-78	IEC 60068-2-6		
	UL MARKING / CERTIFICATION	UL 1973	UL 9540A	UL 991	UL 94 V0	UL 1998
	ENVIRONMENTAL	REACH	RoHS			
	SEISMIC	BC 2018	CBC 2019	IEEE 693	Bellcore GR-63, zone 4	EC ISS AC 156
	SAFETY	IEC 61508	IEC 62619	FCC, Title 47, PART 15, sectionB	NFPA 855	IFC 2018
	PERFORMANCE	IEC 62620				
	TRANSPORTATION	UN 3480	MIL STD 810 rev. H			

Flex'ion™ Gen2 - technical data

			**HIGH POWER** FLEX'ION™ 46PFe-G2 46 VDC - 28 Ah
Module	GENERAL CHARACTERISTICS	Proprietary cell chemistry	Super Lithium Iron Phosphate
		Cell type	VL30PFe-G2
		Module type	Flex'ion™ 46PFe-G2
		Nominal (V)	46
		Capacity (Ah)	28
		Energy (Wh)	1294
	MECHANICAL CHARACTERISTICS	Width (mm/in)	445 / 17.5
		Height (mm/in)	131 / 5.2
		Depth (mm/in)	292 / 11.5
		Weight kg/lbs)	18.5 / 40.7
System	RECHARGE CHARACTERISTICS	Maximum recharge current (I) Intelligent charging	$4C_5Ah$
		Maximum recharge current (I) Conventional charging	$0.2C_5Ah$
	SHORT-CIRCUIT CURRENT (I)	Amperes (A)	5,400

Professionally engineered solutions

Please contact your local sales representative for your customized project sizing (load, backup time, temperature, voltage window, etc.)

is committed to protecting and preserving the environment. We are engaged in a sustained effort to use resources responsibly and to act in a way that clearly demonstrates our great respect for the planet.

As part of its environmental commitment, gives priority to recycled raw materials over virgin raw materials, reduces its plants'air and water releases year after year, minimizes water usage, reduces fossil energy consumption and associated CO_2 emissions, and ensures that its customers have recycling solutions for their spent batteries.

Regarding industrial batteries, has set up a network of Bring Back Points (BBPs) which receive end-of-life nickel-based batteries from end users free of charge. These batteries are then shipped by these BBPs to our recycling facility in Sweden or to fully permitted recycling companies, in compliance with the laws governing trans-boundary waste shipments.

The recycling efficiency of these recyclers exceeds 75% of the nickel-based battery weight (a level which exceeds the mandated recycling efficiency of 65% applicable to lead-acid batteries), and recycled materials are reused as secondary raw material for industry.

This network of Bring Back Points comprises over 30 entities and provides services in all of our major markets in Europe, North America, Asia and Africa. The list of BBPs and their contact details are available on the website.

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