

Collaboration for Impact.



V-TAC
Meaningful Innovation.



WHO ARE WE?

V-TAC is a global company that offers high-quality lighting, electrical, digital, and energy products to consumers and spaces worldwide.

Founded in 2009, V-TAC has expanded its market to 70+ countries throughout Europe, Asia Pacific, Africa, the Middle East, and the USA. As a result of our relentless pursuit of excellence, we have been listed in the London Stock Exchange Group's 1000 Companies to Inspire Europe.

Boasting a portfolio of over 3800+ lighting products, V-TAC has utilized its brand value and R&D efforts into innovating beyond lighting solutions into categories like smart home solutions and wireless speakers.

Presence in

70+

Countries

5500+

Products

45+

Categories

GROWTH JOURNEY SO FAR



• since
2009

V-TAC was founded with the vision of providing energy-efficient lighting solutions worldwide.

• 2011 

Began our EU expansion by opening the first V-TAC warehouse and office in Sofia, Bulgaria.

• 2012 

Manufacturing Joint Venture with MEKA Lighting.

• 2013 

Started building our distribution network in the UK from our office in Southall, London.

• 2015 

Launched our in-house product testing lab in Sofia, Bulgaria.

• 2016 

Achieved \$100M Annual Turnover- Manufacturing Joint Venture with DASHER Lighting for decorative lighting.

• 2017 

In-branding Partnership with Samsung and launched the V-TAC PRO Series.

• 2018 

Partnership with Tuya and launched new Smart Series. Unveiled the new V-TAC Showroom in Slough, UK.

• 2019 

Launched a new 2500 square meter showroom in Bulgaria.

• 2020 

Expanded Bulgaria Warehouse. Launched an online ordering platform for (trade only). Sourced and helped with supplies during COVID.

• 2021 

Developed and converted all Products with New ERP 2.0

• 2022 

Launched a new 1200 square meter distribution center Oxford UK

2023



Launched V-TAC Solar & Energy Storage Solutions. Started developing sustainable products.



Celebrated 10 years in the UK office with the introduction of new verticals



WHY DO WE EXIST?
OUR PURPOSE

TO MAKE THE WORLD A BRIGHTER PLACE THROUGH MEANINGFUL INNOVATION.

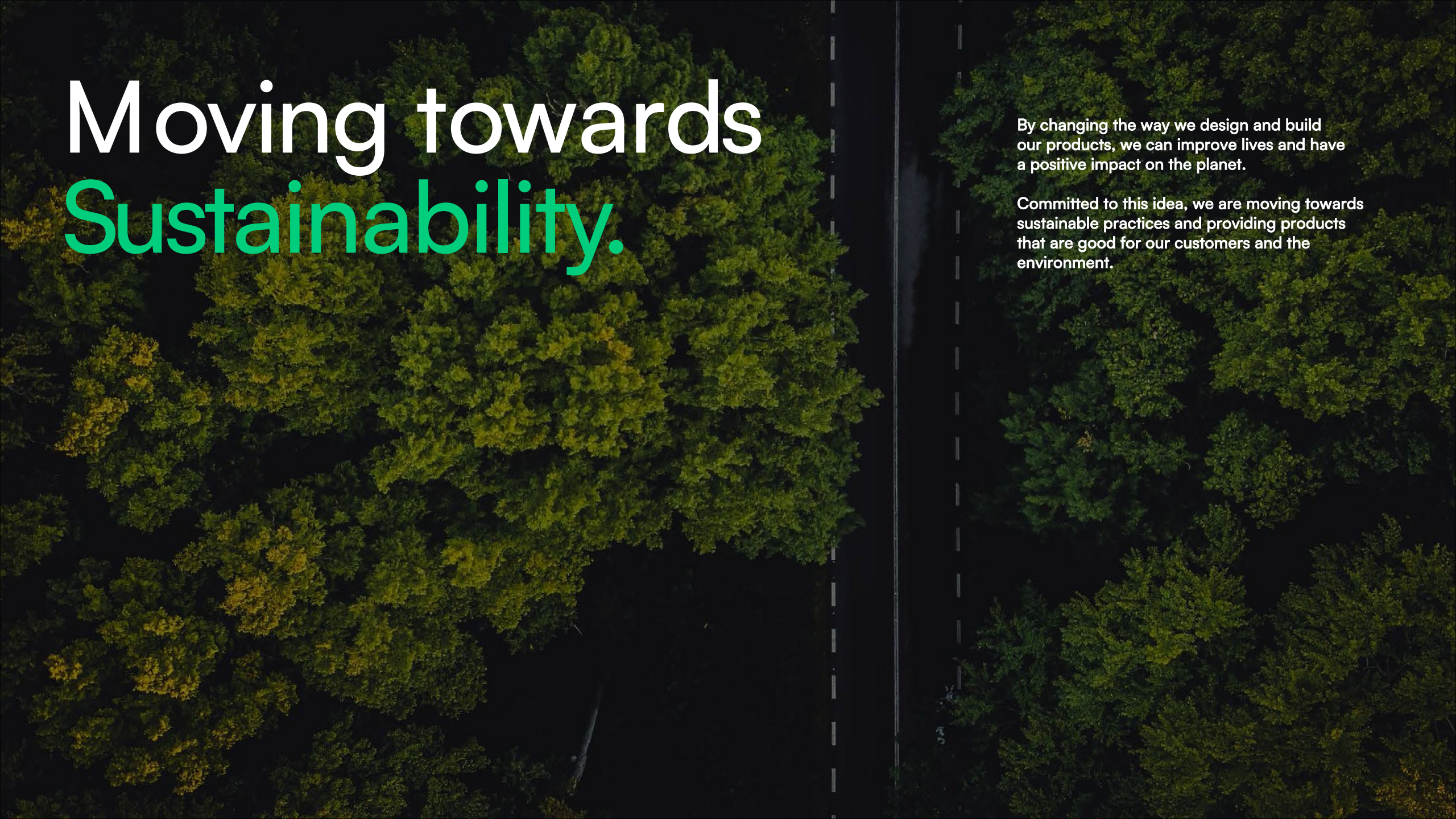
Everything we do is strengthened by our purpose to make this world a brighter place, by providing high-quality, efficient, and sustainable products to our customers.

Our idea of a brighter world is where we enable people to make their lives more comfortable and safe while building a sustainable future.

Collaboration with different companies

VTAC has proudly collaborated with several major corporations, including some Fortune 500 companies. These partnerships have significantly elevated our reach, enhanced our technical capabilities, and enabled us to provide exceptional support to a growing number of customers



An aerial photograph of a two-lane road with white dashed lines, cutting through a dense forest. The trees are mostly green, with some showing yellow and orange hues, suggesting an autumn setting. The road is straight and runs vertically through the center of the image.

Moving towards Sustainability.

By changing the way we design and build our products, we can improve lives and have a positive impact on the planet.

Committed to this idea, we are moving towards sustainable practices and providing products that are good for our customers and the environment.

VALUE PROPOSITION



Innovation



Service and Expertise



Delivery



Affordability

📍 BULGARIA

42,200+ sq. m.

- Centralized Logistics center in Bulgaria
- Testing Lab and showroom

📍 SLOUGH, UK

2,000+ sq. m.

Logistics center in the UK

📍 OXFORD, UK

1,200+ sq. m.

Logistics center in the UK

📍 POZNAN, POLAND

6,000+ sq. m.

Infrastructure



Project References



- Location: Atacama Desert in South America
- Capacity: 485MWh. 168x20ft BESS Containers
- Largest integrated project in South America
- Trouble-Free operation for over 900 days
- Certification: UL9540A



- Christmas & Labor Day Project in South Carolina, USA
- Capacity: 100MWh
- Power grid side peak shaving



- Aquarius Project in California, USA
- Capacity: 200MWh
- New energy allocation and storage

- 2020: entry into the US Market
- Location: Texas, USA.
- Capacity: 90MW / 98.54MWh
- Trouble-Free operation for over 900 days
- Application: Powertrading



V-TAC Turbo - E



Product

Turbo-E 233

Turbo-E 418

AC side		
Nominal AC voltage	400 V	690 V
Nominal voltage range	400 V $\pm$ 15 % AC	690 V $\pm$ 7 % AC
Dimensions (D*W*H)	1080*1470*2537 mm	1350*1330*2350 mm
Weight	3000 kg	4300 kg
Power factor	(-1, 1)	
Nominal frequency	50 Hz	
Overload capacity	110 % Pn Long-term	
Current distortion rate	< 3 %	
THD	< 3% @rated current	
DC component	< 0.5 %	
Off-grid output voltage	400 V	690 V
Cell type	LFP 3.2 V/280 Ah	LFP 3.2 V/314 Ah
Nominal capacity	233 kWh	418 kWh
System configuration	1P 260S	1P 416S
DC side		
Nominal power	105 kW	200 kW
Nominal DC voltage	832 V	1331.2 V
DC voltage range	689-949 V	1185.6-1476.8 V
Rated charge and discharge rate	0.5 CP	

V-TAC Turbo-C1 and C2



Excellent Safety

- Real time monitoring
- Enhance safety system design
- IEEE693 high-level seismic design

Excellent Performance

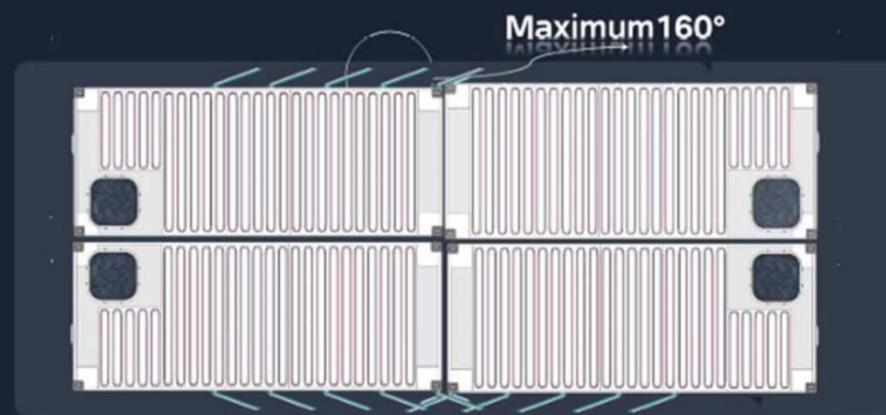
- High energy density

Product name	Turbo-C1		Turbo-C2
Container model	20 ft		
Nominal capacity	3.727 MWh	4.073 MWh	4.18 MWh
Cell type	LFP 3.2V / 280 Ah	LFP 3.2V / 306 Ah	LFP 3.2V / 314 Ah
Max. charge/discharge power	1863 kW	2037 kW	2446 kW
Nominal DC voltage	1331 V		
DC Voltage (Full power)	1164 V-1500 V		
Dimensions (W*D*H)	6058 mm*2438 mm*2896 mm		
Lifetime	20 years		
Weight	≤ 38 t		
Auxiliary power supply	480 Vac, 60 Hz / 400 Vac, 50 Hz		
SOC calculation accuracy	± 3 %		
SOH (End of Life)	60 %	70 %	
Operation temperature	-30 to 50 °C	-30 to 50 °C (Optional -35 °C)	
Maximum Operation Altitude	≤ 2000 m		
Environmental humidity	0 - 100 % RH		
Degree of protection	IP55 or NEMA Type 3		
Anti-corrosion degree	C4 (EN ISO 12944)		
Noise	< 75 dB (A)	< 70 dB (A)	

V-TAC Turbo - C2

Excellent Performance

Point 1: Site-level Energy Density



- Long module design
- One-side battery door opening

- Back-to-back
- Side by side array

+40%

Footprint Energy Storage Density
Compared to Aqua-C1

V-TAC Turbo - C2

Excellent Performance

Point 2: Life Cycle

Lifecycle **+25%**

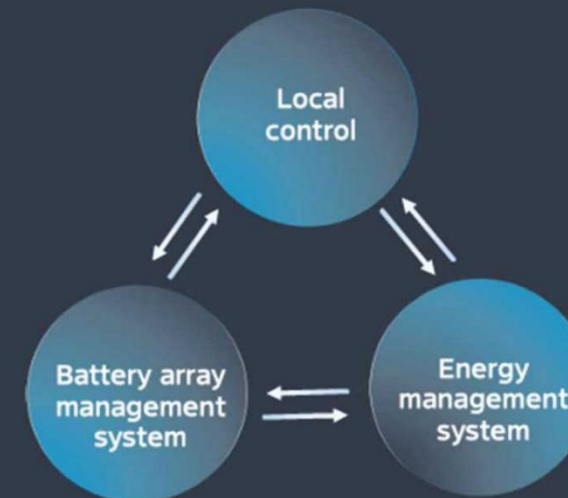
10000+ cycles
(next generation cells and enhanced BMSs)

Lifetime usable energy **+35%**

- Smart Dynamic EMS charge & discharge strategy
- Active Balancing System at rack and Array level



3 Level Balance



V-TAC Turbo - C2

Excellent Performance

Point 3: Auxiliary Consumption



-15%

Less than 1% based on nameplate capacity
(Compared with Aqua-C1)

- 35KWh @0.25CP during discharge period
- 40KWh @0.5CP during discharge period

V-TAC Turbo - C2

Excellent Performance

Point 4: Site-level Availability



Power electronic
(vs Aqua-C1 control box)



≥ 98%

Site-level Availability

Plug & Play cluster-level management

- Seamless cut-in and cut-out
- Support single or multiple racks independent operation
- Maximize true useable capacity by enabling high efficiency **rack** balance and maintenance cycles

Power Electronics with String Power Cache Function

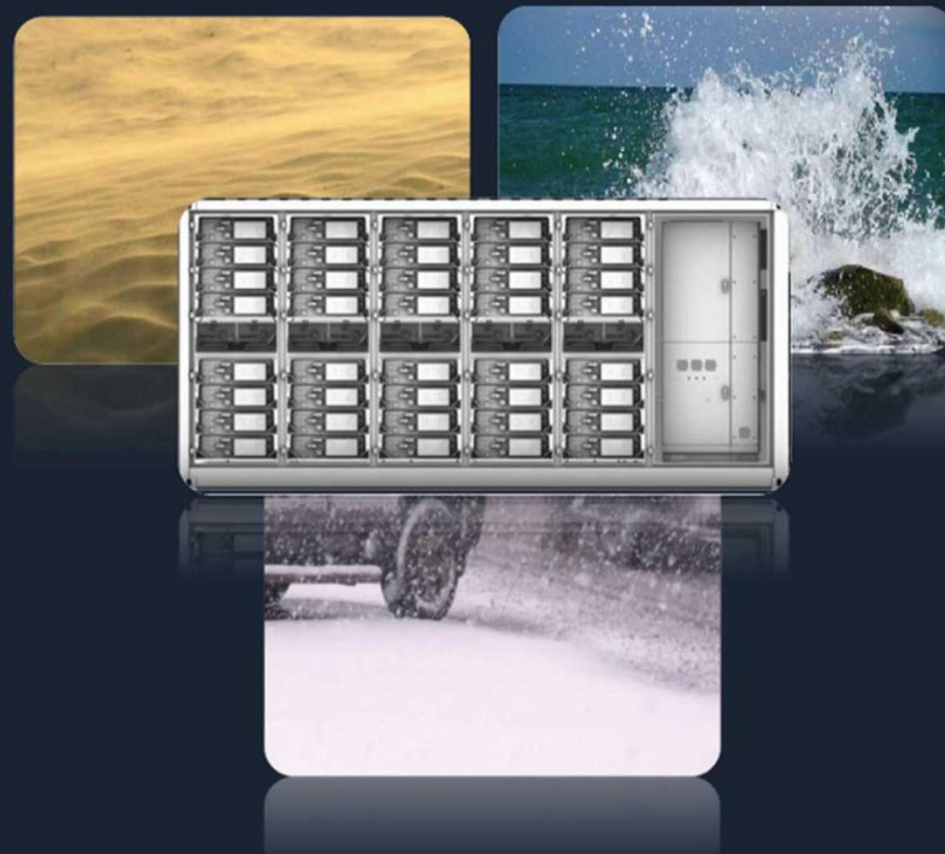
- Minimize the impact of rack failures
- Maintain rated power output with 5 offline rack @0.25CP
- Maintain rated power output with 3 offline rack @0.5CP

V-TAC Turbo - C2

Excellent Performance

Point 5: Environment Tolerance

- **-30 to +50°C** ambient operation without derating (optional kit -35 °C)
- NEMA type **3R/IP54** support
- **C5** corrosion-level supported



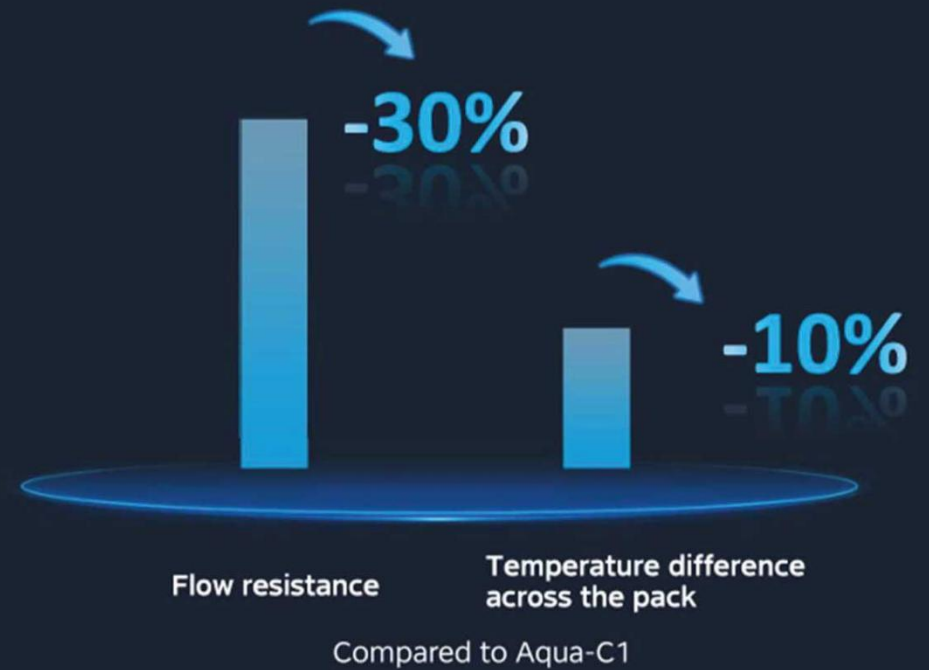
V-TAC Turbo - C2



Excellent Safety: Liquid-Cooled Heat Dissipation Technology

Liquid cooling plate design improvement

<2°C
Max Temperature difference
between battery cells in a pack



V-TAC Turbo - C2



Excellent Safety: Overcurrent Protection Design

Multi-level Fuse Protection Method and fast DCDC converter reaction

Battery Modules

DCDC Converter

CC Panel



*Three levels of overlapping protection

Global Compliance



IEC 62477-1	UL 1973
IEC 62619	UL 9540
IEC 63056	UL 9540A
IEC 61000-6-2	NFPA855
IEC 61000-6-4	IEEE 693

V-TAC Turbo - C2

 **Excellent Safety: Integrated Independent control of the DC-DC converter**



Circulating current suppression

- Eliminate the impact of weak cells
- Enable cluster level increased capacity



Short-circuit current fast suppression

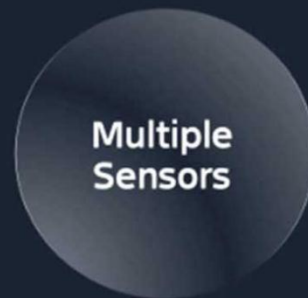
- Drastically reduce rack short circuit current
- Realize fault tolerance while protecting equipment

V-TAC Turbo - C2



Excellent Safety: Fire Suppression Systems

Actively suppresses fires in three dimensions



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- Temperature sensor
- Smoke sensor



- NFPA 855 and NFPA 69 compliant design
- CO sensor linked with FACP, active exhaust system, and fresh air intake
- External gas port for sampling



- Active Aerosol suppression system
- Additional Water dry-pipe
- UL9540A tests at different level (cell, pack, rack)

Customer Support

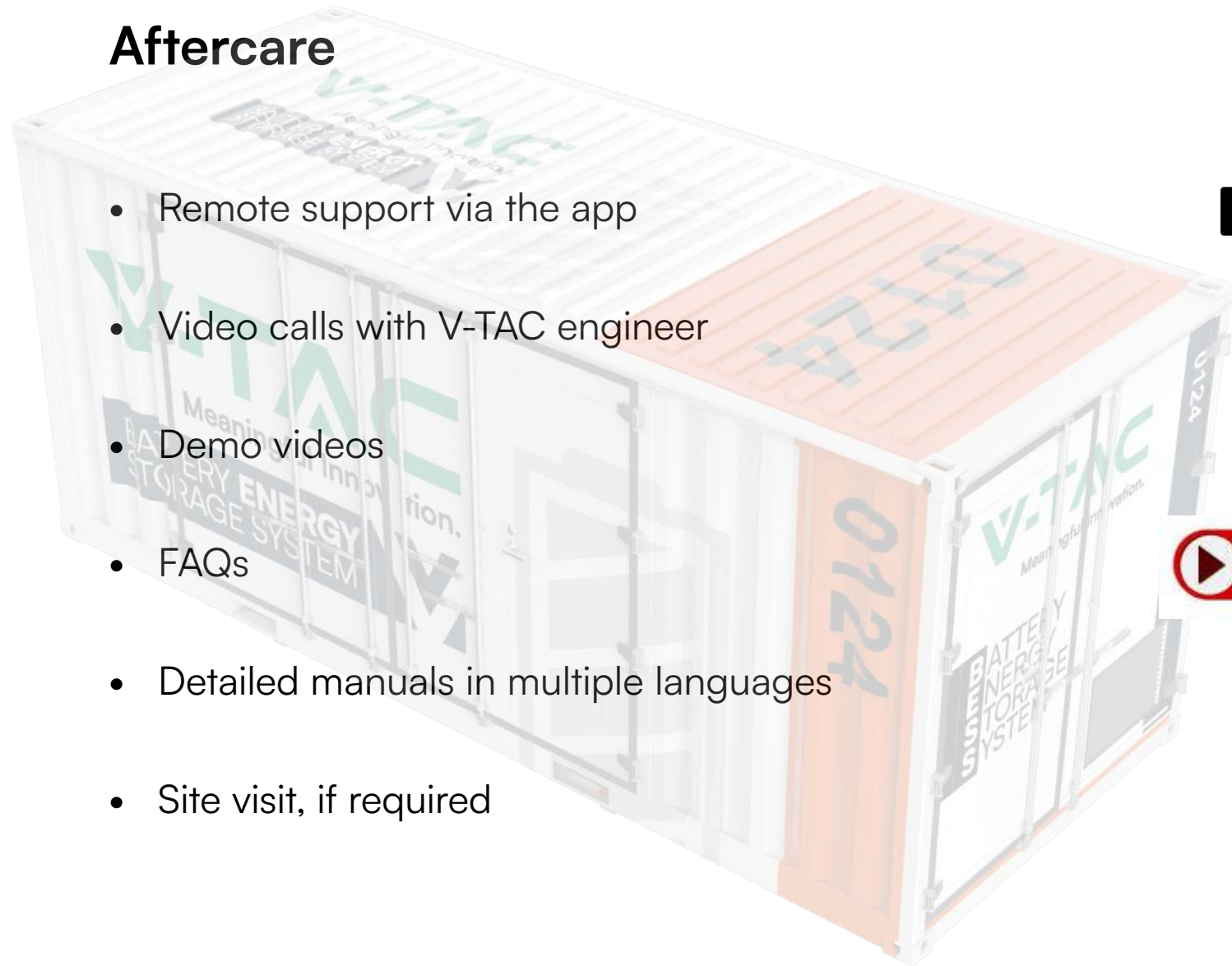
- Spec sheets
- Instruction Manuals with FAQs



Customer Support

Aftercare

- Remote support via the app
- Video calls with V-TAC engineer
- Demo videos
- FAQs
- Detailed manuals in multiple languages
- Site visit, if required





SCAN ME:



www.vtacexports.com

Contact Us:

V-TAC West Europe

Ground Floor, 71 Lower Baggot Street,
Dublin 02, Ireland D02 P593

UK Office

V-TAC House, Kelpatrick Road,
Slough, Berkshire, SL1 6BW, UK.

www.v-tac.co.uk
info@v-tac.co.uk

Middle East Office

Unit# 407/8/9 Jumeirah Bay
Towers, Plot# X3, JLT,P.O. Box
45244, Dubai

Sofia Office

V-TAC Europe Ltd 41, bul. Rozhen 1271
Sofia Bulgaria

www.v-tac.eu
office@v-tac.eu

Poland Office

V-TAC POLAND sp. z o.o.
ul. Obornicka 330,
60-689 Poznań



Thank You