

AUBA ENERGY

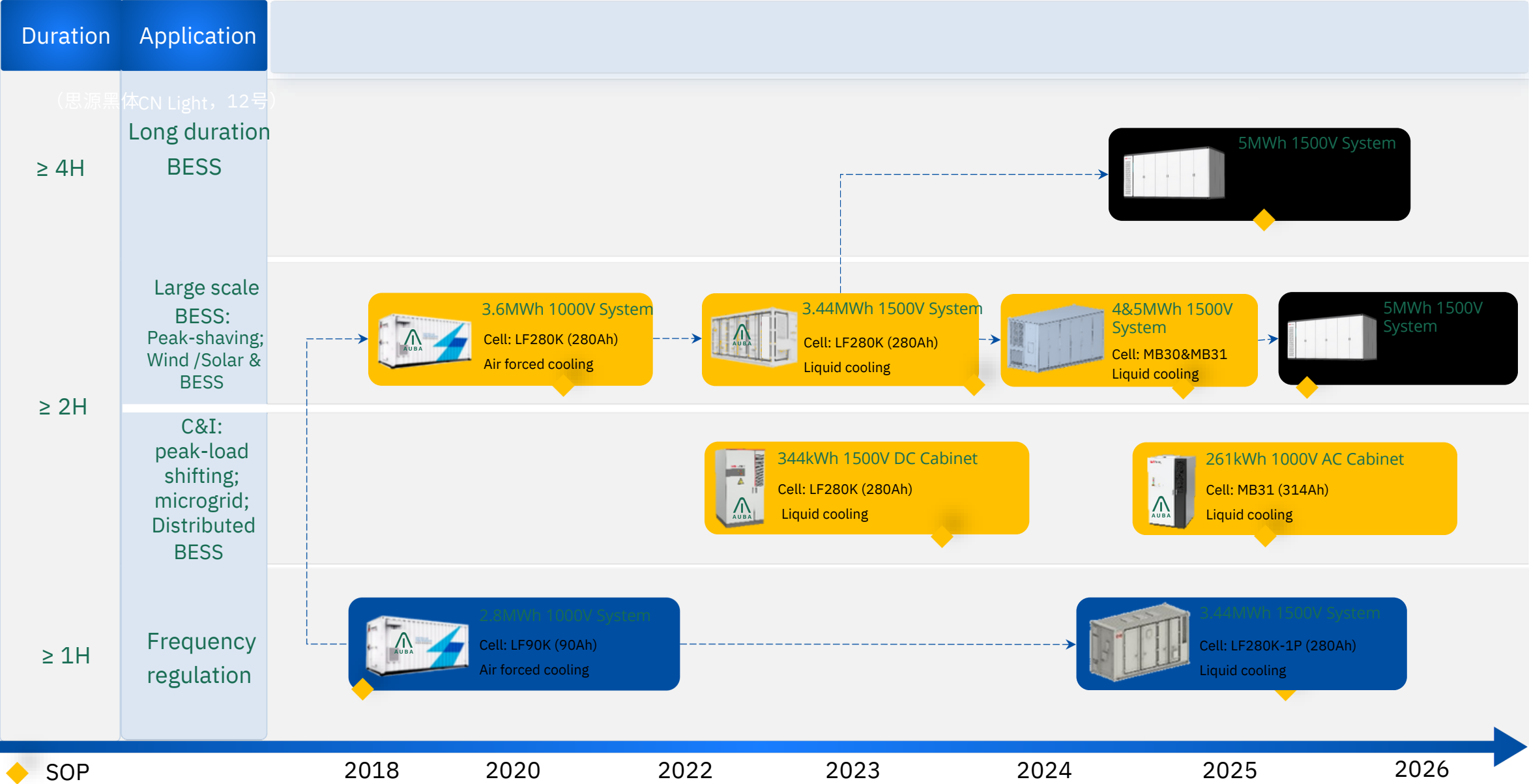
Product Introduction



2 Utility Battery Cell Overview

Product Name		LF90K	LF280K	MB30	MB31	MB56
1	Nominal capacity	90Ah	280Ah	306Ah	314Ah	628Ah
2	Nominal voltage	3.2V	3.2V	3.2V	3.2V	3.2V
3	Dimension/mm	36.35*130.3*200.5	71.7*173.7*207.2	71.7*173.7*207.2	71.7*173.7*207.2	71.7*352.3*207.2
4	Weight/g	1,994	5,490	5,600	5,600	11,500
5	Energy density/ Wh/kg	144	163	175	179	175
6	P rate	1P	0.5P	0.5P	0.5P	0.5P
7	Status	SOP	SOP	SOP	SOP	SOP
8	Certification	UL/CE/GB/UN	UL/CE/GB/UN	UL/CE/GB/UN	UL/CE/GB/UN	UL/CE/GB/UN
9	Picture					

2 Utility Battery System Roadmap





2 Utility Battery System Overview

Series		Outdoor Cabinet		20HC Container			
System type		BC-8-1228.8/280-L-D	BC-5-832/314-L	ESS-3440-2H-L	S328H101	S430H201	S556H201
1	Cell	280Ah (LF280K)	314Ah (MB31)	280Ah (LF280K)	280Ah (LF280K-1P)	306Ah (MB30)	628Ah (MB56)
2	Module	1P12S	1P13S	1P12S	1P12S	1P13S	1P13S
3	Pack	1P48S	1P52S	1P48S	1P48S	1P52S	1P52S
4	System	1P384S	1P260S	10P384S	10P384S	10P416S	6P416S
5	Capacity	344KWh	261KWh	3.44MWh	3.44MWh	4MWh	5MWh
6	Rated ratio	0.5P	0.5P	0.5P	1P	0.5P	0.5P
7	Status	SOP	SOP@Q2, 2025	SOP	SOP@Q2, 2025	SOP@Jan, 2025	SOP@Q1, 2025
8	Picture						

2.1 Outdoor Cabinet

Highly integrated and standardized design makes it more flexible and convenient for transportation and installation.

Flexible

- Combined for 1000V/1500V
- Max. 20pcs in parallel
- Energy range 215kWh -6.88MWh

Convenient

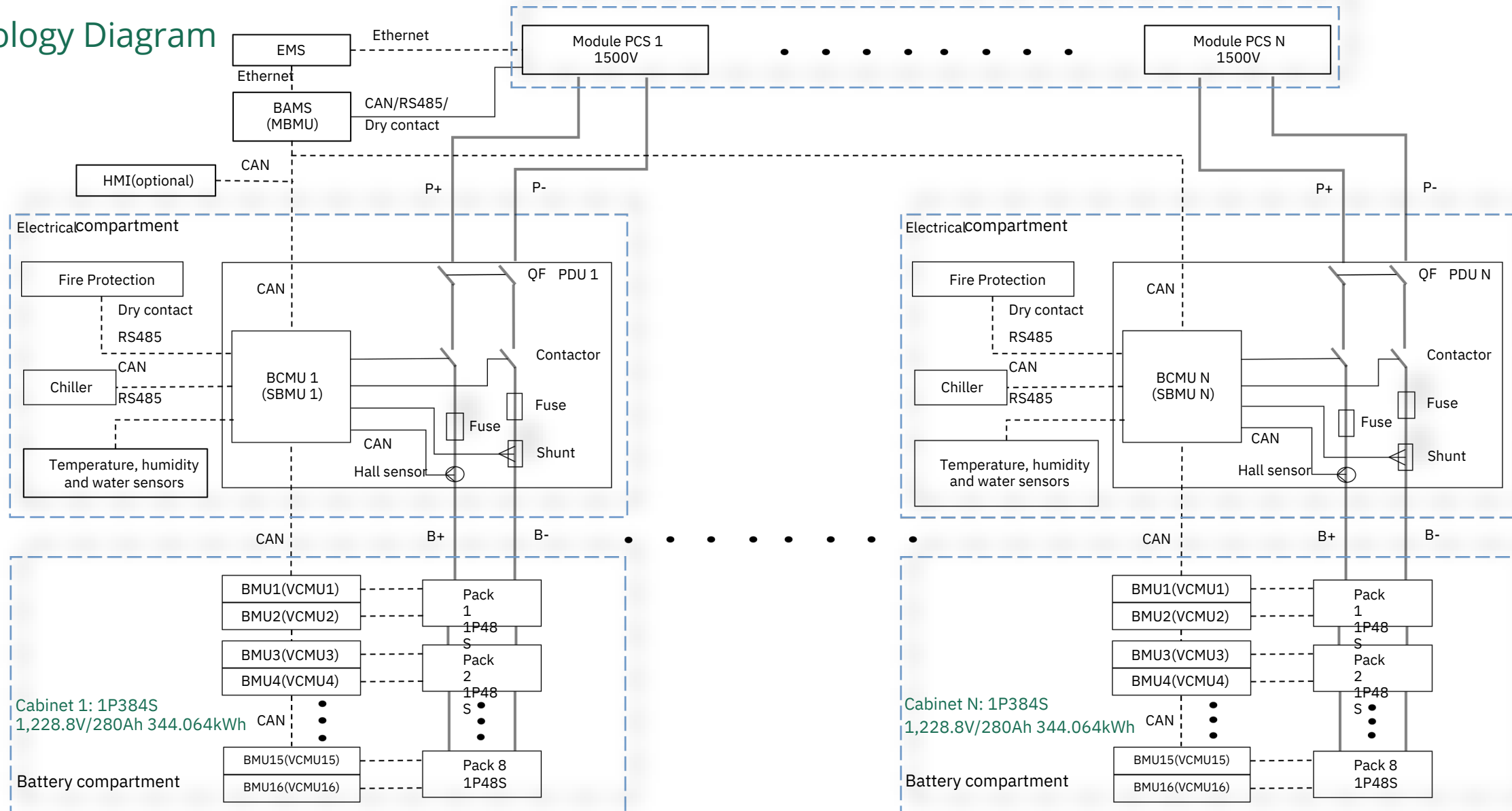
- Integrated transportation
- Integrated installation
- Easy project expansion

Reliable

- IP66 and C5H anti-corrosion level
- Aerosol fire suppression
- Pack and cabinet pressure release

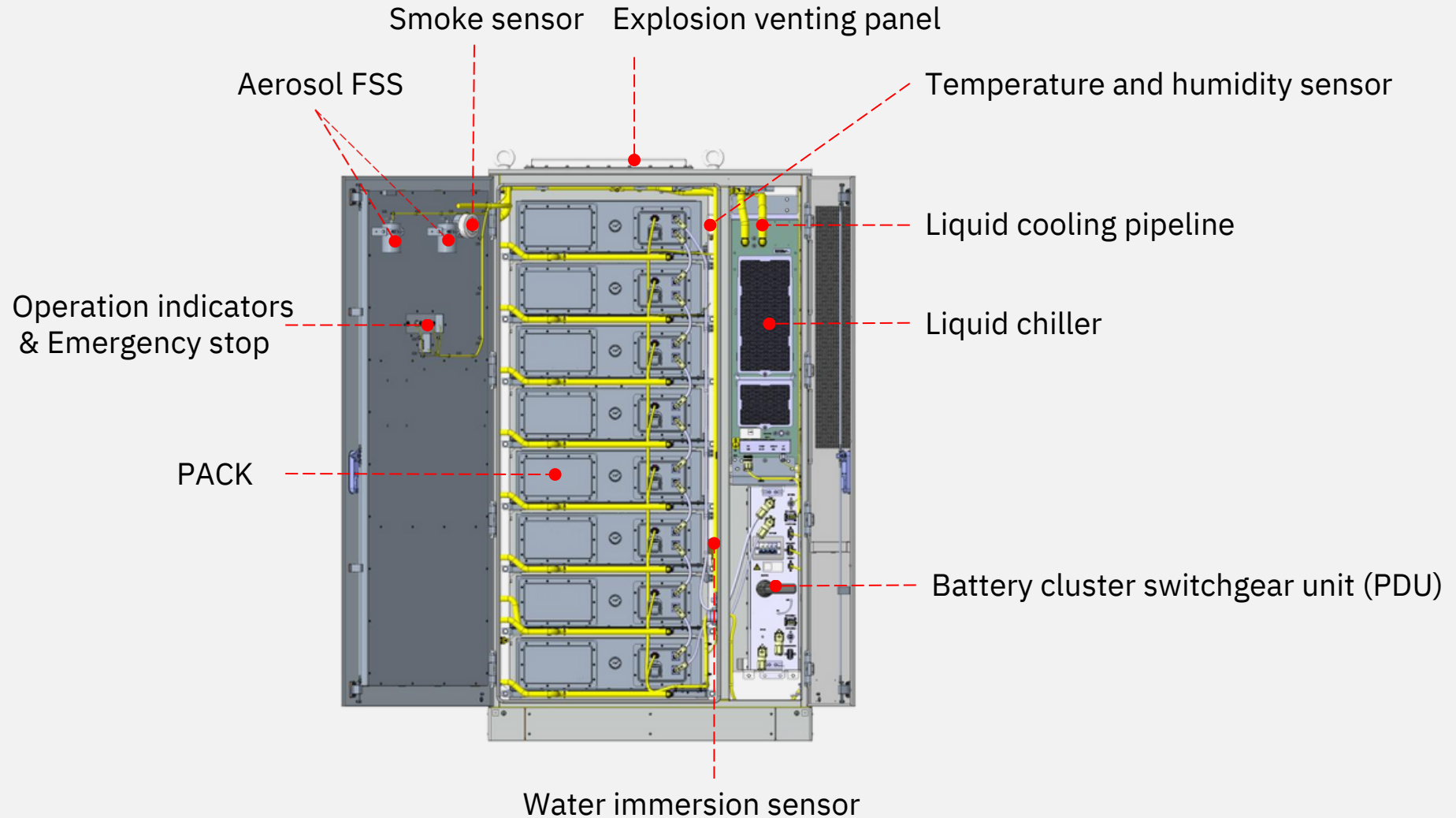
2.1 Outdoor Cabinet

Topology Diagram



2.1 Outdoor Cabinet

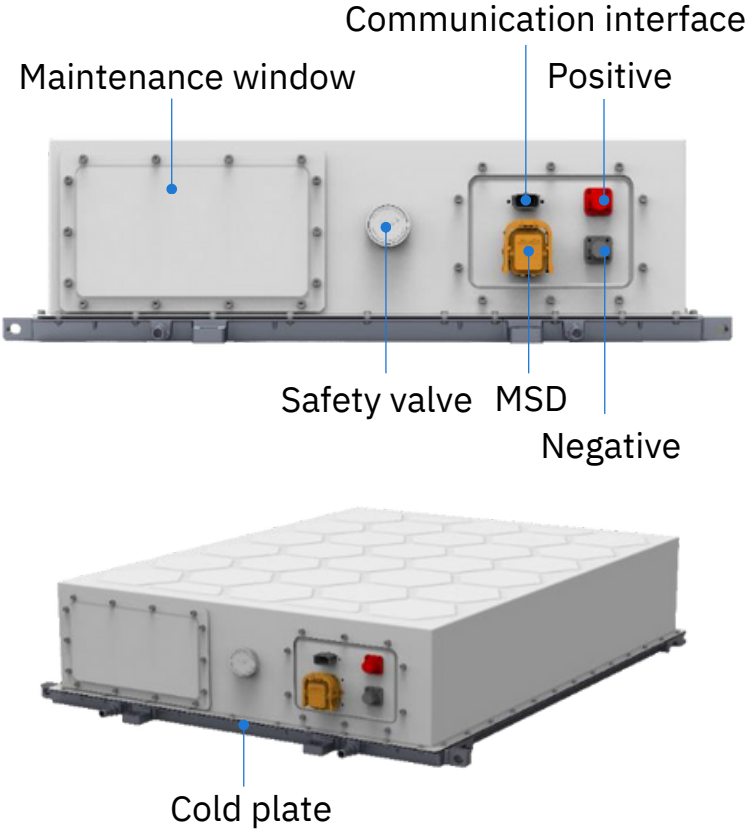
Integrate battery, liquid chiller and fire suppression system in one cabinet.



2.1 Outdoor Cabinet

Pack Specification

- Multi-protection: IP67+Fuse+MSD+Safety valve
- Cold plate by die-casting experienced structure used for car



Item		Specification
Pack type		BP-48-153.6/280-L
Battery cell		280Ah (LF280K)
Capacity/ Ah		280
Rated energy/ kWh		43.008
Configuration		1P48S
Nominal voltage/ V		153.6
Voltage range/ V		134.4 -172.8
Duration/ h		≥2
Operation temperature/ °C	Charge	0 -55
	Discharge	-20 -55
Dimension (W*D*H)/ mm		858*1,067*240
Weight/ kg		300
IP level		IP67
Thermal management		Liquid cooling
Certificates (All finished)		GB36276, UL9540A, UN38.3

2.1 Outdoor Cabinet

Chiller Specification

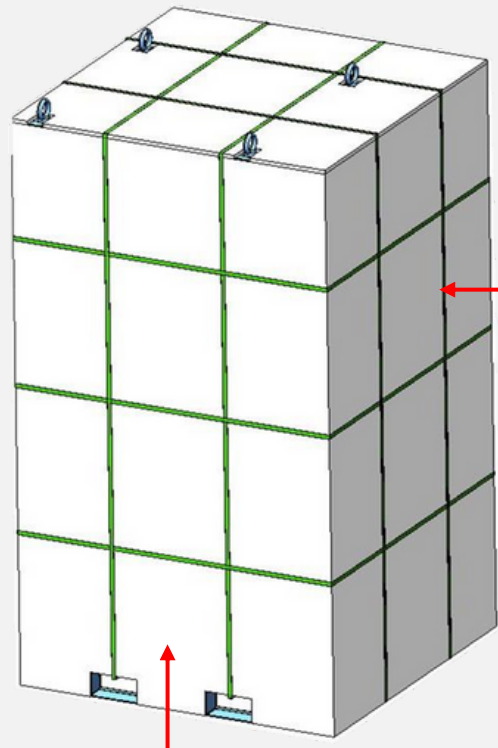
➤ Full life cycle cooling power considered



Item	Specification
Rated cooling capacity/ kW	8
Rated heating capacity/ kW	2.5
Coolant	50% water + 50% ethylene glycol
Coolant outlet temperature/ °C	20
Rated coolant flow/ (L/min)	50
Refrigerant	R134a
Rated power supply/ V	220±20% (176 ~264)
Max. auxiliary power consumption/ kW	4.5
Operating temperature/ °C	-30~60
Dimension (W*D*H)/ mm	1,200*272*1,039
Weight/ kg	≤90

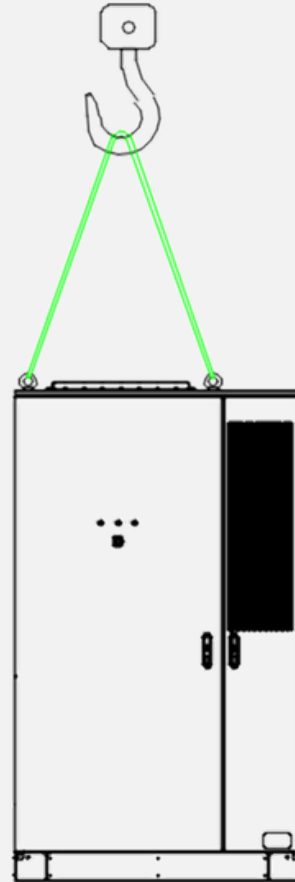
2.1 Outdoor Cabinet

- Easy to transport, supporting both lifting and forklift.

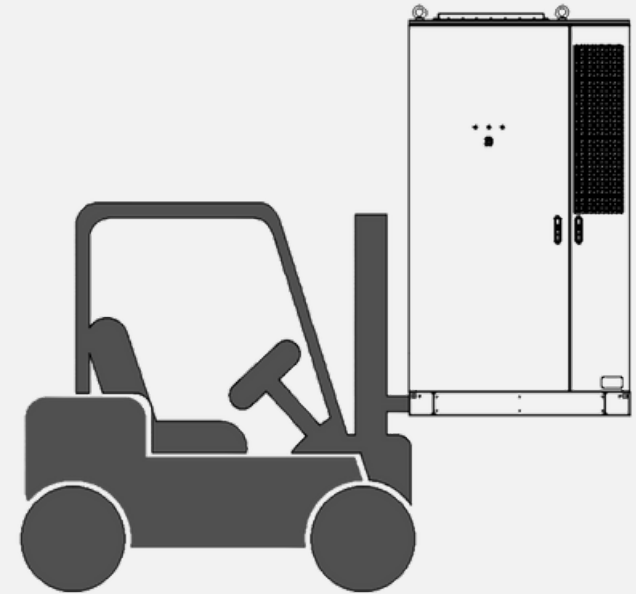


Front door

Left side



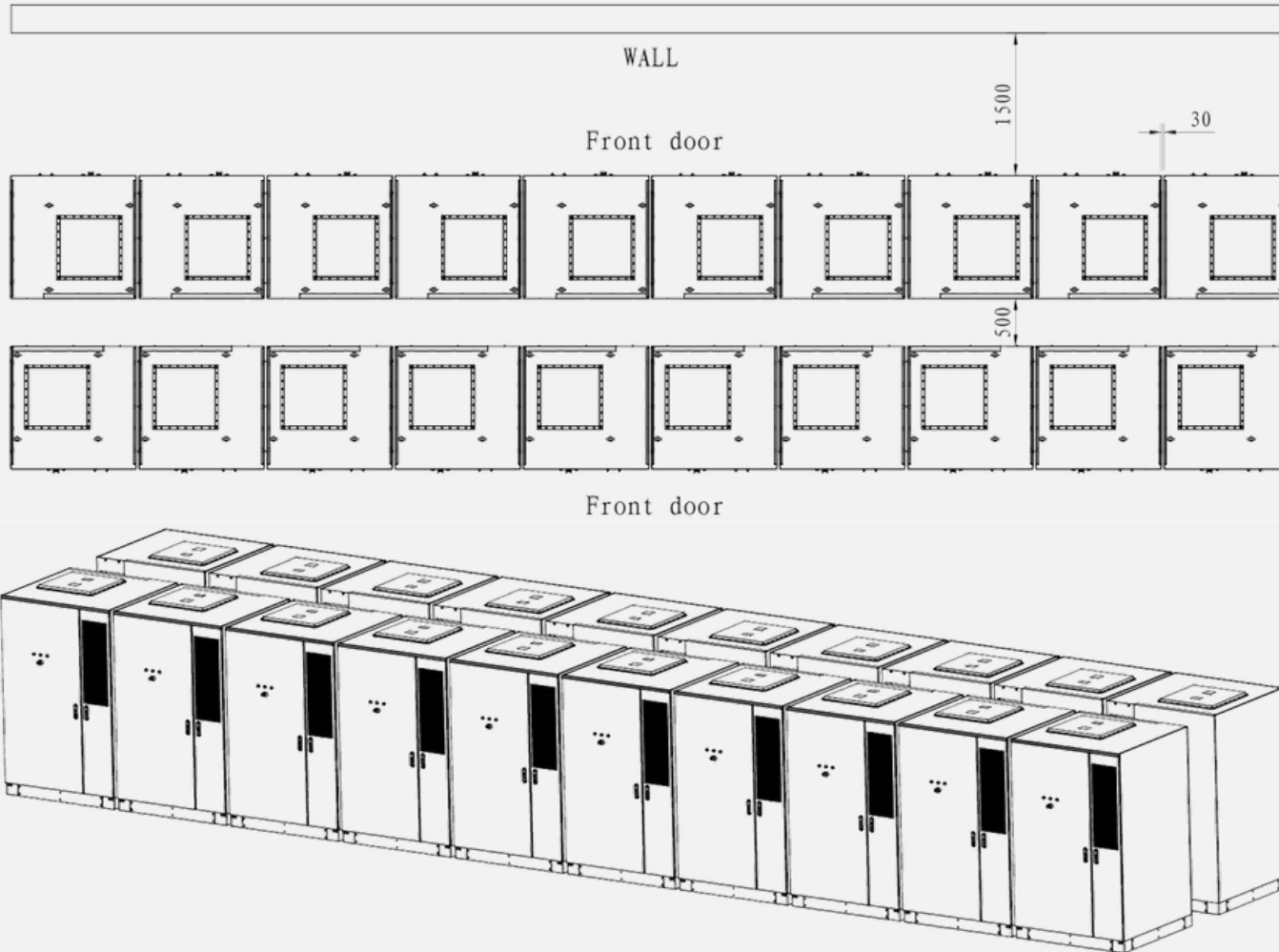
Rings on top for lifting



Holes on bottom for forklift

2.1 Outdoor Cabinet

Maximum 20 cabinets in parallel



Minimum Spacing

- Door to door: 1500mm
- Door to wall : 1500mm
- Back to back: 500mm
- Back to wall: 500mm
- Side by side: 30mm
- Side to wall: 500mm

2.1 Outdoor Cabinet

Certification

No.	Level	Standard
1	Liquid cooling pack BP-48-153.6/280-L	UN38.3
		UL9540A: 2019 (4thEdition)
		GB/T 36276-2018
2	Liquid cooling outdoor cabinet BC-8-1228.8/280-L-D	UN38.3
		UL1973: 2022 (3rdEdition)
		UL60730-1: 2021 (5thEdition, REV.2021)
		UL9540A: 2019 (4thEdition)
		UL9540: 2020 (2ndEdition)
		IEC61000-6-2/4: 2019
		IEC60730-1: 2020 (Edition 5.2)
		RoHS2.0/REACH
		IEC62619: 2022 (Edition 2.0)
		IEC62477-1: 2022 (Edition 2.0)
		NFPA855: 2023 *

* All certificates have been finished.



2.2 20HC Container: 4MWh

● Specification

- Highly integrated, safe and reliable
- Easy transportation, installation and commissioning



20HC container
(Liquid cooling)

Item	Specification
System type	S430H201
Battery cell	306Ah (MB30)
Configuration	10*1P416S
Rated energy/ kWh	4,073.472
Nominal voltage/ V	1,331.2
Voltage Range/ V	1,164.8 -1,497.6
Duration/ h	≥2
Thermal management	Liquid cooling
Dimension (W*D*H)/ mm	6,058*2,438*2,896
Weight/ T	~37
Operating temperature/ °C	-30 -55
IP level	IP55
Corrosion resistance level	C4H (C5 optional)
Noise level/ dB@1m	~ 85
Certification (Ongoing)	UN3536, UL9540, REGULATION (EU) 2023/1542, IEC61000, IEC62477, IEC62933, RoHS, REACH

2.2 20HC Container: 4MWh

Standardized design with long cycle life and high safety



1

Standardized

- Standard 20HC containerized BESS
- Easy transportation

2

Long cycle life

- MB30, 12,000 cycles @ 60% EOL
- S4, 20 years operation life @ 60% EOL

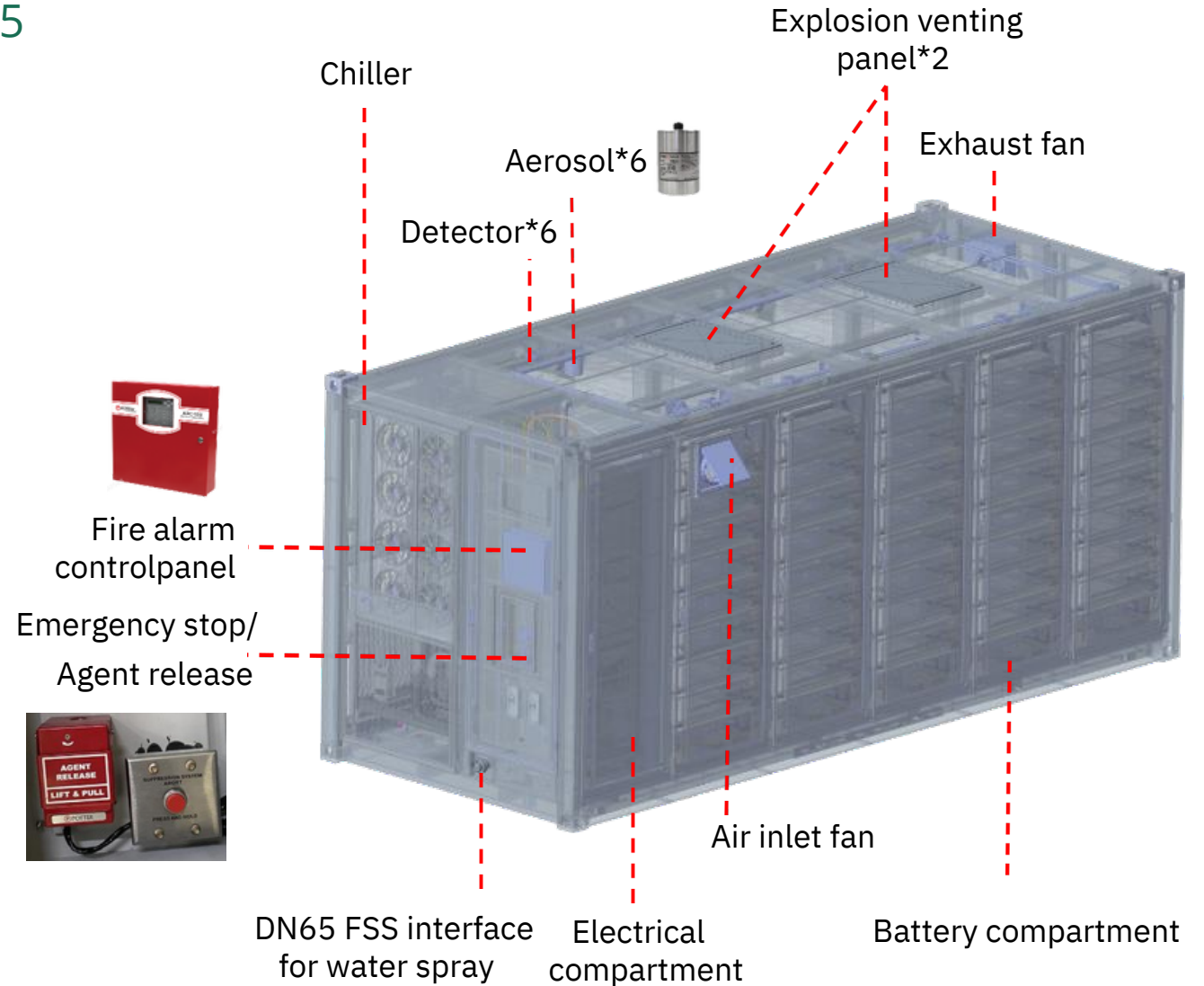
High safety

- Cell/Pack/Container multi-level protection
- NFPA 855 FSS design

2.2 20HC Container: 4MWh

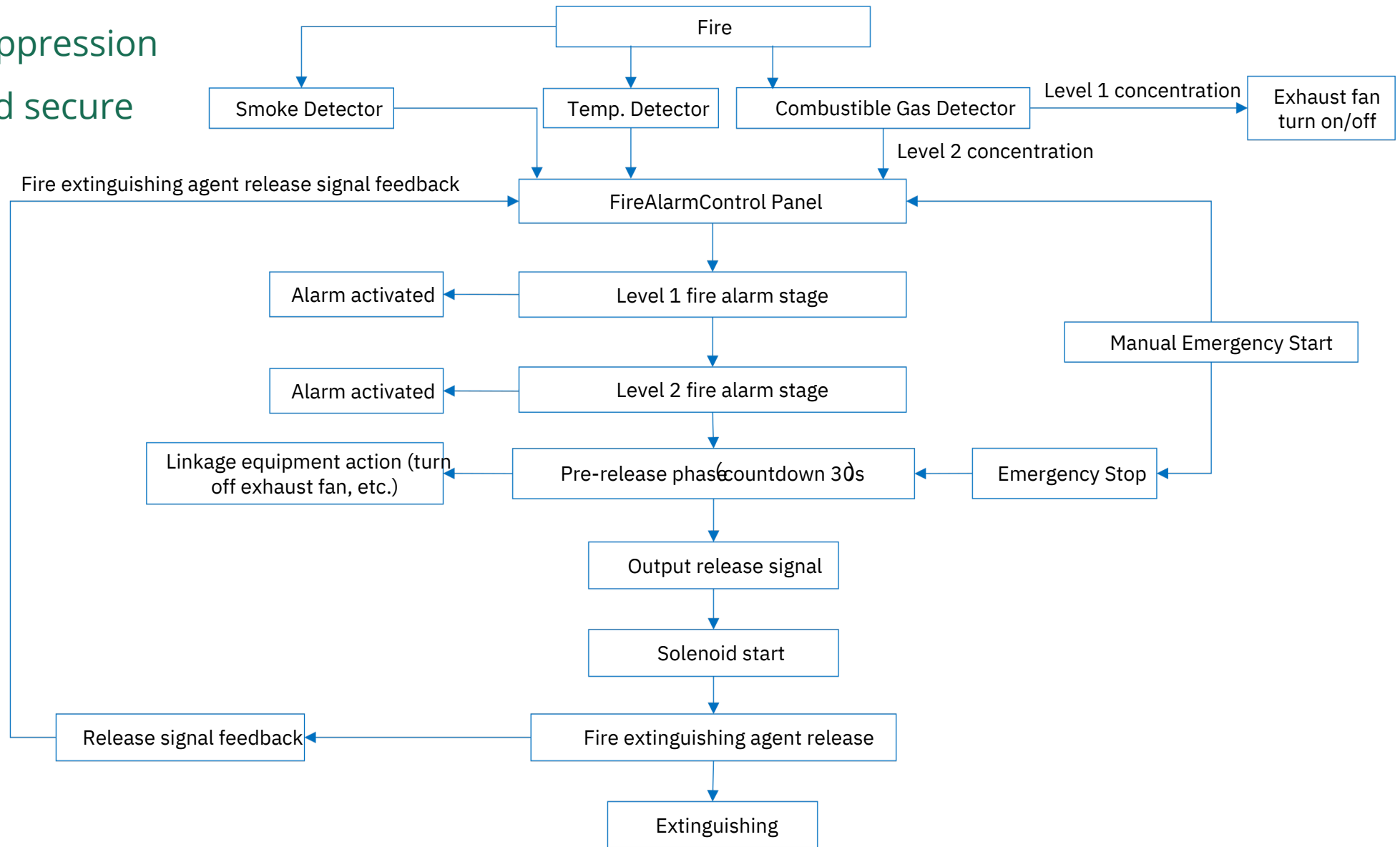
FSS design complying with NFPA 68/69/855

- Deflagration venting system
 - 2pcs 580*780 explosion venting panels on the top
 - Venting area calculation according to NFPA 68
- Explosion prevention system
 - 1pc air inlet fan and 1pc exhaust fan
 - Exhaust rate calculation according to NFPA 855/69
- Independent UPS
 - 2pcs 12V 7Ah Lead–acid battery
 - Integrated inside the firealarm controlpanel
 - 24h of standby power and 2h in alarm
 - Comply with NFPA 69



2.2 20HC Container: 4MWh

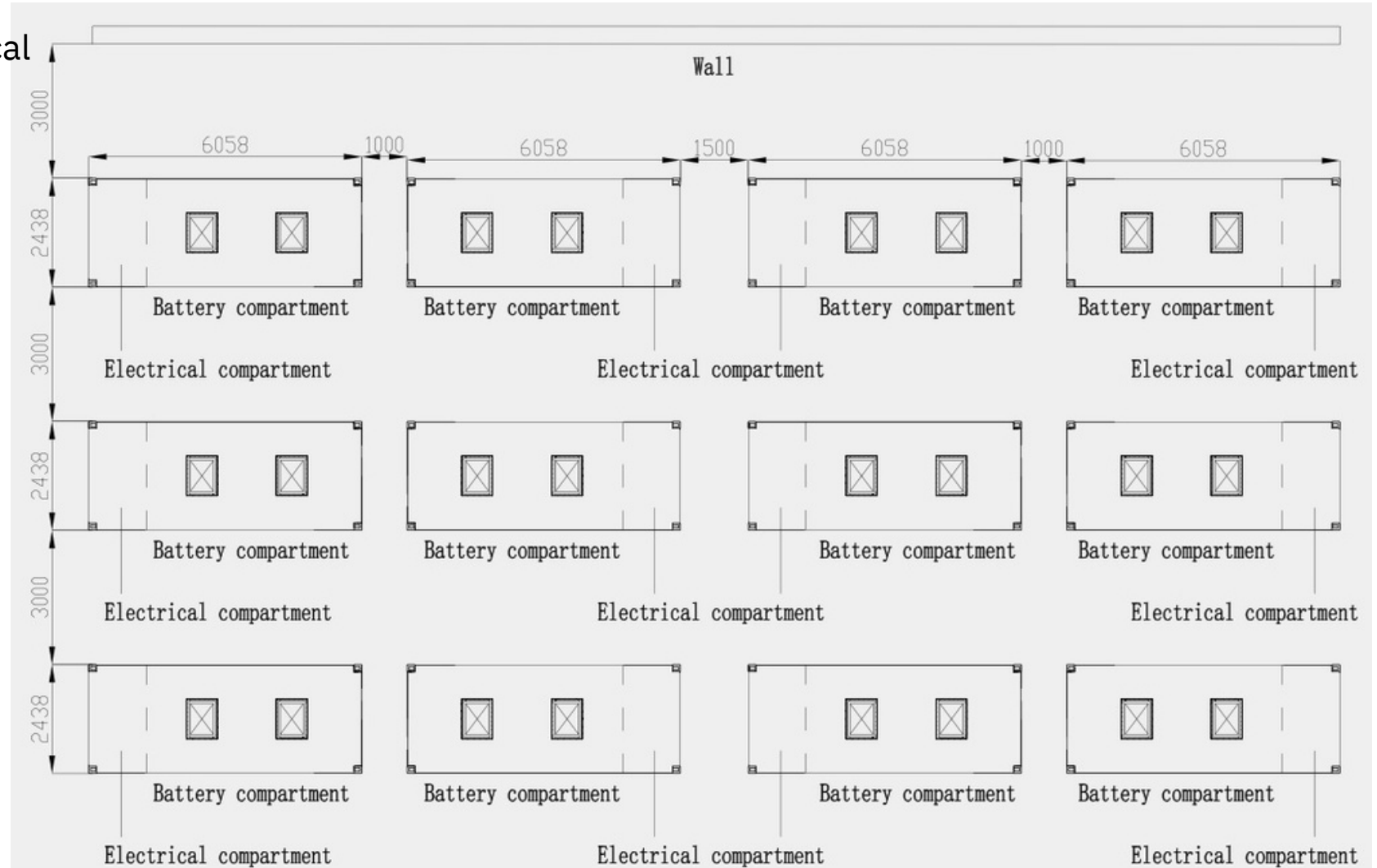
Multiple fire suppression
design, safe and secure



2.2 20HC Container: 4MWh

Recommended Spacing

- Electrical compartment to electrical compartment: min. 1,500mm
- Battery compartment to battery compartment: min. 1,000mm



2.2 20HC Container: 4MWh

● Certification Plan

No.	Level	Standard	Statu
1	MB30	UN38.3	
		UL1973/UL1642/UL9540A	Finishe
		IEC62619	d
		ROHS/REACH/Battery Directive	Finishe
2	Liquid cooling pack P530H201	UN38.3	d
		UL9540A: 2019 (4thEdition)	Finishe
3	Liquid cooling rack	UN38.3	d
		UL9540A: 2019 (4thEdition)	Finishe
		UL1973: 2022 (3rdEdition)	d
		IEC62619: 2022 (Edition 2.0)	Finishe
		IEC61000-6-2/4: 2019	d
4	Liquid cooling container S430H201	IEC61000-6-2/4: 2019	Finishe
		IEC62477-1: 2022 (Edition 2.0)	d
		IEC62933-5-2: 2020 (Edition 1.0)	Finishe
		RoHS2.0/REACH	d
		REGULATION (EU) 2023/1542	Finishe
		UN3536	d
		UL9540: 2023 (3rdEdition)	Finishe
			d
			Finishe
			d



2.3 Mr. Giant 5MWh System

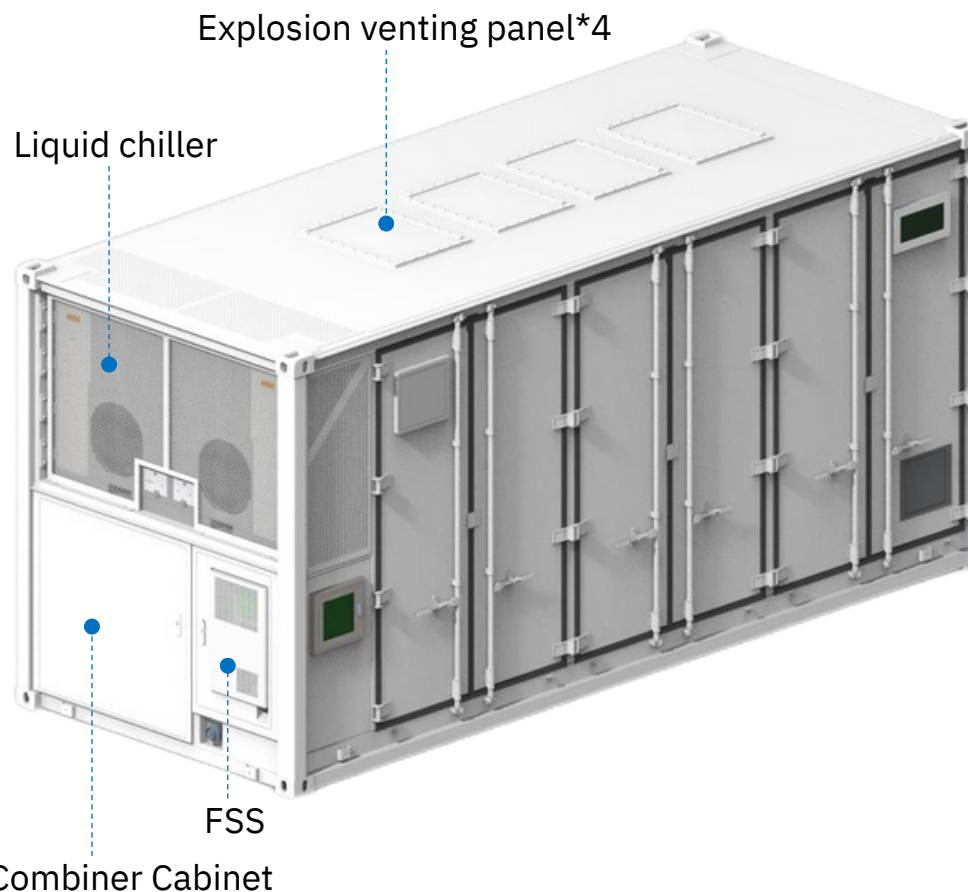
- Standard 20HC container adopting Mr. Big(628Ah) large battery cell with 1P52S through-type pack design.

Quantity of battery cells and components → 50%

Voltage: 1500V

Energy: 5MWh

Standard 20ft



Cell: MB56(628Ah)

Configuration: 6*1P416

RTE: 95%

Picture for reference only

2.3 Mr. Giant 5MWh System –Container

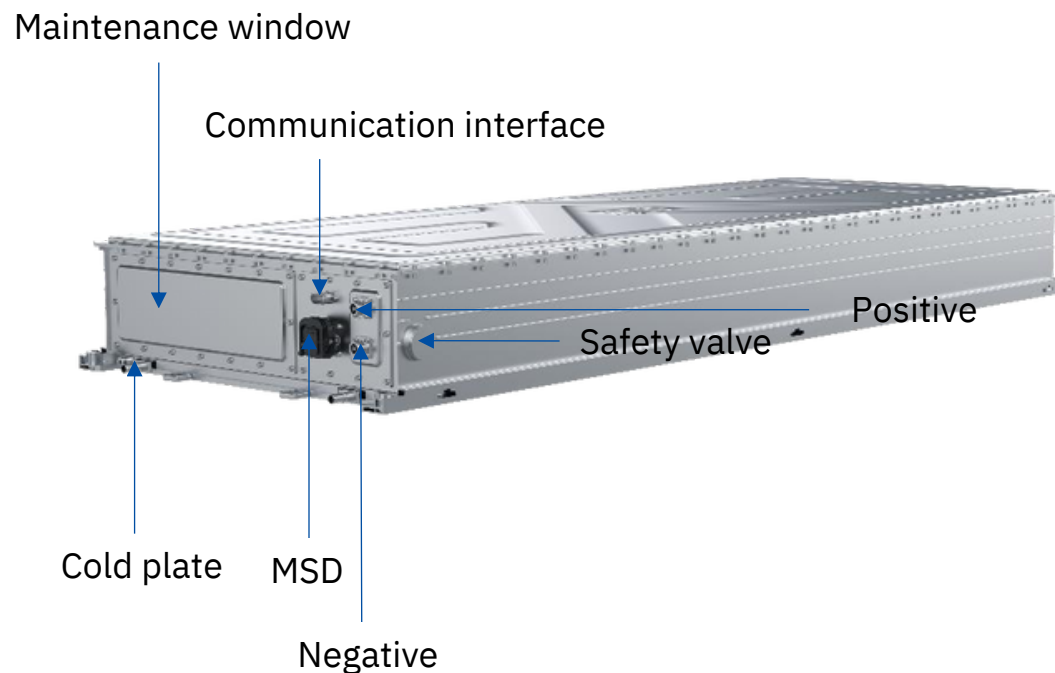
- Highly integrated, safe and reliable
- Single-door-open design, supporting back to back and side to side installation



Item	Specification
System type	S556H201 (0.5P)
Battery cell	MB56 (628Ah)
Configuration	6*1P416S
Rated energy/ kWh	5,015.961
Nominal voltage/ V	1,331.2
Voltage Range/ V	1,164.8 -1,497.6
Duration/ h	≥2
Thermal management	Liquid cooling
Dimension (W*D*H)/ mm	6,058*2,438*2,896
Weight/ T	≤45
Operation temperature/ °C	-30 -55
IP level	IP55
Corrosion resistance level	C4 (C5 optional)
Noise level/ dB@1m	≤75
Certification (Ongoing)	UN3536, UL9540, NFPA 68/69/855, IEC61000, IEC62477, IEC62933

2.3 Mr. Giant 5MWh System –Pack

- Multi-protection: IP67+Fuse+MSD+Safety valve
- Easy maintenance: Large maintenance window to replace BMS and fuse



Item		Specification
Pack type		P156H201 (0.5P)
Battery cell		MB56 (628Ah)
Capacity/ Ah		628
Rated energy/ kWh		104.499
Configuration		1P52S
Nominal voltage/ V		166.4
Voltage range/ V		145.6 –187.2
Duration/ h		≥2
Operation temperature/ °C	Charge	0 -55
	Discharge	-30 -55
Dimension (W*D*H)/ mm		777.5*2,209*240
Weight/ kg		~720
IP level		IP67
Thermal management		Liquid cooling
Certification (Ongoing)		GB36276, UL9540A, UN38.3