

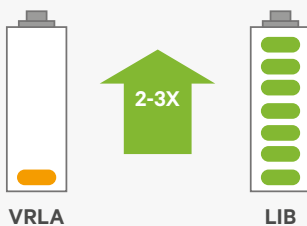
## BENEFITS

These batteries have higher energy density, leaving more space for servers.

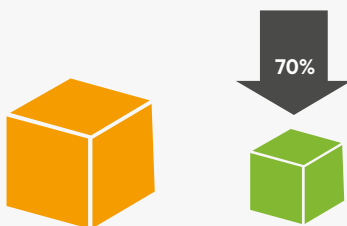
Lithium-ion batteries also have longer battery life and wider temperature range leading to a save on replacement and cooling costs respectively.

What's more, lithium-ion technology has a higher charge rate and a slower self-discharge rate, meaning it recharges faster and maintains a longer shelf life to alternative solutions.

### LONGER LIFE



### SAVES SPACE



### CHARGE

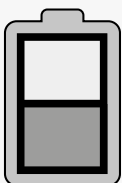


FAST

### DISCHARGE



HIGH



## Lithium-ion batteries bring modern advancements to data center applications.

FEATURES	VRLA	LI-ION
Expected Life (years)	Medium	Long (approx. 2-3X)
Decay vs. Temperature @30°C	>50%	<20%
Energy Density	Standard	High
Recharge	Moderate	Fast
Cooling required	Moderate	Low
Footprint 400kVA, 5 min	Large	Small (-70%)
Weight 400kVA, 5 min	High	Low (-70%)
BMS	Optional	Included

Note: Different types of Lithium-ion chemistries exist, each with varying behaviors. The above chart summarizes the traits.



UPS	CORE	NUMBER OF CABINETS (17 BLOCKS, 67 Ah)							
		1	2	3	4	5	6	7	8
Liebert® Trineergy™ Cube PF: 0.9	200 kVA	8.9	18.8	28.3	37.8	47.2	57.2	66.8	76.3
	400 kVA	N/A	8.9	14	18.8	23.6	28.3	33	37.7

UPS	CORE	NUMBER OF CABINETS (17 BLOCKS, 67 Ah)							
		1	2	3	4	5	6	7	8
Liebert® Trineergy™ Cube PF: 1	200 kVA	6.6	17	25.5	34	42.5	51	59.5	68.7
	400 kVA	N/A	6.6	12.6	17	21.2	25.5	29.7	34

UPS	POWER (KVA)	NUMBER OF CABINETS (17 BLOCKS, 67 Ah)							
		1	2	3	4	5	6	7	8
Liebert® EXL S1 PF: 0.9	100	18.8	37.7	57.2	76.3	95.4	114.5	135	154.3
	120	15.7	31.4	47.2	63.6	79.5	95.4	111.3	128.6
	160	11.6	23.6	35.4	47.2	59	71.6	83.5	95.4
	200	8.9	18.8	28.3	37.8	47.2	57.2	66.8	76.3
	300	N/A	12.4	18.8	25.1	31.4	37.7	44	50.3
	400	N/A	8.9	14	18.8	23.6	28.3	33	37.7
	500	N/A	N/A	11.2	14.9	18.8	22.6	26.4	30.2
	600	N/A	N/A	8.9	12.4	15.5	18.8	22	25.1
	800	N/A	N/A	N/A	8.9	11.6	14	16.3	18.8
	1000	N/A	N/A	N/A	N/A	8.9	11.2	13.9	14.9
1200	N/A	N/A	N/A	N/A	N/A	8.9	10.9	12.4	

UPS	POWER (KVA)	NUMBER OF CABINETS (17 BLOCKS, 67 Ah)							
		1	2	3	4	5	6	7	8
Liebert® EXL S1 PF: 1	100	17	34	51	68.7	85.9	103,1	121,5	138,8
	120	14	28.3	42.5	56.6	71.6	85.9	100.2	114.5
	160	10.5	21.2	31.8	42.5	53.1	64.4	75.1	85.9
	200	6.6	17	25.5	34	42.5	51	59.5	68.7
	300	N/A	11.2	17	18.1	28.3	34	39.6	45,3
	400	N/A	6.6	12.6	17	21.2	25.5	29.7	34
	500	N/A	N/A	10	13.4	17	20.4	23.8	27.2
	600	N/A	N/A	6.6	11.2	14	17	19,8	22.6
	800	N/A	N/A	N/A	6.6	10.5	12.6	14.7	17
	1000	N/A	N/A	N/A	N/A	6.6	10	11.7	13.4
1200	N/A	N/A	N/A	N/A	N/A	6.6	9.8	11.2	

Vertiv™ has significant experience with lithium-ion batteries.

- Testing since 2011
- Installation success
- Compatible with Liebert EXL S1 and Liebert Trineergy Cube UPS