



# EFFORTLESS POWER

**48 / 80 VOLT  
LITHIUM-ION BATTERY SYSTEM**



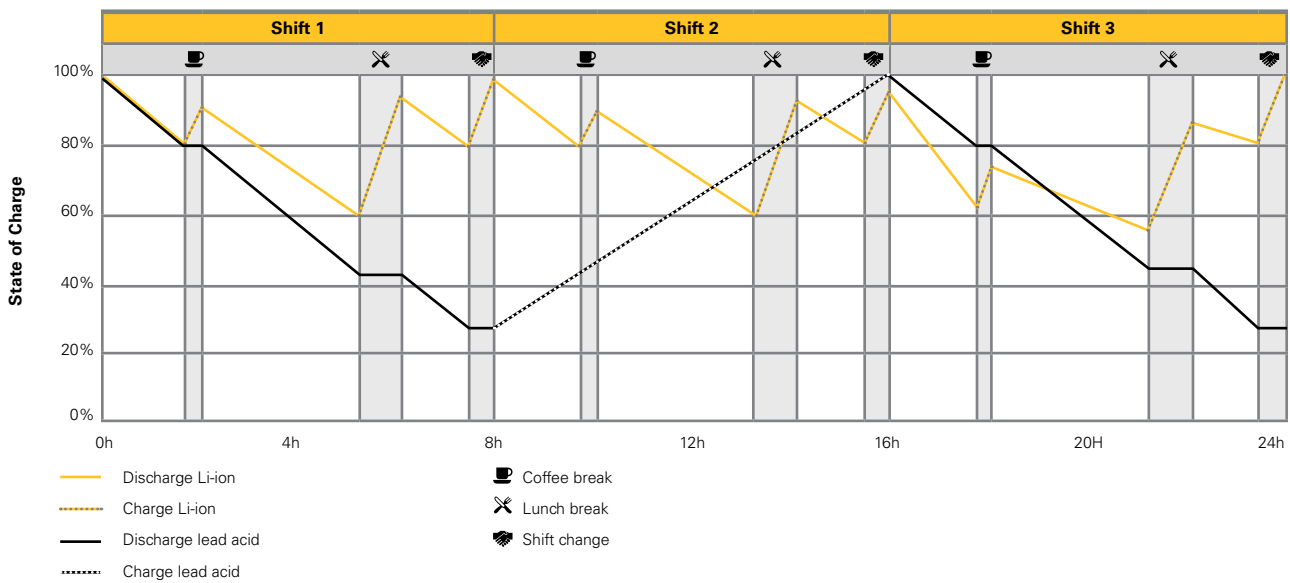
Specifications			48-V Lithium-ion Battery			80-V Lithium-ion Battery			
			Technical Data	Size SB	Size MB	Size LB	Size S	Size M	Size L
1	Nominal capacity	Ah	390 or 520	390 or 520	390 or 520	500	500	500	
2	Nominal energy content	Wh	19,968 or 26,624	19,968 or 26,624	19,968 or 26,624	43,200	43,200	43,200	
3	Nominal voltage of battery	V	51.2	51.2	51.2	86.4	86.4	86.4	
4	Nominal truck voltage	V	48	48	48	80	80	80	
5	Cell chemistry		Lithium Iron Phosphate (LFP)	Lithium Iron Phosphate (LFP)	Lithium Iron Phosphate (LFP)	Lithium Iron Phosphate (LFP)	Lithium Iron Phosphate (LFP)	Lithium Iron Phosphate (LFP)	
6	Operating temperature for unrestricted truck use	°F	32°F to 95°F	32°F to 95°F	32°F to 95°F	32°F to 95°F	32°F to 95°F	32°F to 95°F	
7	Operating temperature for charging <sup>1)</sup>	°F	32°F to 104°F	32°F to 104°F	32°F to 104°F	32°F to 104°F	32°F to 104°F	32°F to 104°F	
8	Protection rating		IP54	IP54	IP54	IP54	IP54	IP54	
Dimensions & Weight			Size SB	Size MB	Size LB				
9	Battery dimensions (in)	in	32.7 x 20.5 x 24.7	32.7 x 24.8 x 24.7	32.7 x 29 x 24.7	40.5 x 28 x 30.9	40.5 x 33.7 x 30.7	40.5 x 39.3 x 30.7	
10	Battery dimensions (mm)	mm	830 x 522 x 627	830 x 630 x 627	830 x 738 x 627	1,028 x 711 x 784	1,028 x 855 x 784	1,028 x 999 x 784	
11	Battery weight (including additional weight)	lb	1,560	1,887	2,233	3,434	4,107	4,790	
12	Battery weight (including additional weight)	kg	708	856	1,013	1,558	1,863	2,173	
Charging			Size SB	Size MB	Size LB				
13	Charge status indicator		On truck display, and when charging, on the charger.	On truck display, and when charging, on the charger.	On truck display, and when charging, on the charger.	On truck display, and when charging, on the charger.	On truck display, and when charging, on the charger.	On truck display, and when charging, on the charger.	
14	Charging time for 100% nominal capacity with external charger	48V/300A	min	90 or 115	90 or 115	90 or 115	—	—	—
		80V/290A	min	—	—	—	115	115	115
15	Opportunity charging with external charger	48V/300A	min	50% of nominal capacity after 40 or 50 min.	50% of nominal capacity after 40 or 50 min.	50% of nominal capacity after 40 or 50 min.	—	—	—
		80V/290A	min	—	—	—	50% of nominal capacity after 50 min.	50% of nominal capacity after 50 min.	50% of nominal capacity after 50 min.
16	Charging time for 100% nominal capacity with external charger	48V/150A	min	165 or 220	165 or 220	165 or 220	—	—	—
		80V/160A	min	—	—	—	200	200	200
17	Opportunity charging with external charger	48V/150A	min	50% of nominal capacity after 80 or 105 min.	50% of nominal capacity after 80 or 105 min.	50% of nominal capacity after 80 or 105 min.	—	—	—
		80V/160A	min	—	—	—	50% of nominal capacity for 80V/160A after 95 min.	50% of nominal capacity for 80V/160A after 95 min.	50% of nominal capacity for 80V/160A after 95 min.
Trucks			Size SB	Size MB	Size LB				
18	Available trucks		2ET2500	EPC3000 EPC3500 2ETC3000-C3500	2ET3000-4000 EP3000 EP3500 EP4000	2EPC5000 2EPC6000	2EP5000 2EP6000 2EP6500 2EPC7000 2EPC8000 2EPC9000	2EP8000 2EP8500 2EP9000 2EP10000 2EP11000	

<sup>1</sup> Different battery temperatures may affect battery performance

Type Of Charger		Input V	Dimensions (H x B x T) in.	Weight lb.	Input Current A
48V	150A	D480	16.3 x 16.9 x 14	82	12
	200A	D480	20.5 x 16.9 x 14	118	18.3
	250A	D480	28.9 x 16.9 x 14	131	24
	300A	D480	28.9 x 16.9 x 14	146	24
80V	160A	D480	28.9 x 16.9 x 14	131	24.9
	290A	D480	45.5 x 16.9 x 14	207	37.6

## Charging Times

Type Of Current (A)		260Ah		390Ah		500Ah		520Ah	
		50%	100%	50%	100%	50%	100%	50%	100%
48V	150A	50 min.	115 min.	80 min.	165 min.			105 min.	220 min.
	200A	40 min.	90 min.	60 min.	125 min.			80 min.	165 min.
	250A	30 min.	70 min.	45 min.	100 min.			60 min.	130 min.
	300A	30 min.	70 min.	40 min.	90 min.			50 min.	115 min.
80V	160A					95 min.	200 min.		
	290A					50 min.	115 min.		



## ADVANTAGES OF LITHIUM-ION TECHNOLOGY

### Out performs lead-acid batteries

- Constant voltage and more power than lead-acid batteries even on a low charge.
- Save up to 20% more energy with regenerative braking and an improved overall efficiency rating.
- Communication between the battery and the charger ensures efficient charging.

### No Battery Maintenance

Save time and money by eliminating routine battery maintenance:

- Lithium-ion batteries are maintenance-free and do not emit gas.
- Eliminate watering maintenance, battery servicing, or other infrastructure requirements.
- Changing out batteries for shift changes is no longer necessary.

### Long Operating Times

Lithium-ion batteries are great for multi-shift operations:

- With opportunity charging, lithium-ion batteries can run 24 hours a day, 7 days a week without changing batteries.

### Energy Efficient

- Lithium-ion batteries can last up to three times longer than traditional energy storage units.
- Extraordinary endurance and consistently higher efficiency rating secure your investment while saving on power costs.
- Each lithium-ion battery includes a 5 year warranty.



**Your Cat lift truck dealer** can provide additional options and features to specialize your lift truck for your unique application. Operator training and custom financing programs are also available to help find the right fit for your business.

Equipping any CAT models with an alternative power source (Lithium-ion, Hydrogen Fuel cell, etc.) that has not been previously approved by the factory is considered a modification. Per OSHA 1910.178 and ANSI/ITSDF B56.1, please consult with your factory representative prior to installing any non-OEM power source that has not been previously approved.

**1-800-CAT-LIFT | [www.mcfa.com/cat](http://www.mcfa.com/cat)**

© 2019 MCFA. All Rights Reserved. CAT, CATERPILLAR, their respective logos, "Caterpillar Yellow," the "Power Edge" trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission. All registered trademarks are the property of their respective owners.

Some products may be shown with optional equipment.

CECB0201

09/19

