Green power - Green world

FUJI LITHIUM BATTERY



FUJI LITHIUM BATTERY SYSTEM 24V(25.6V)

BATTERY AND CHARGER



SAFETY

Beyond safety functions on cell- and battery level, the batteries are permanently observed by the integrated Battery Management System.

RELIABILITY

The Frey Lithium system is CE conform. One major part to get the aligned CEconformity is theBatteryManagement System, which serves as reliable connector unit and regulates the charging currents to prevent cell-overcharging. Meet CE, UN38.3, MSDS, ect certifications.

PERFORMANCE

The whole system consisting of battery, vehicle and charger is coordinated among each other. It leads to an unique application customized system performance.

PRODUCTIVITY

Using the Lithium technology of Frey, operators can improve their productivity effectively. Due to easy charging solutions, idle times of the vehicles can be used effectively by charging intermediately.

FEATURES

INTERMEDIATE CHARGING

- Multi-shift availability
- No place-specific charging
- No charging room needed

FAST CHARGING

- Shorter charging times
- “ Charge & Use “ at any time
- Economic use of each break



LONGER BATTERY LIFE-TIME

- 3000 full charging cycles with at least 80 % DOD residual capacity
- Afterwards: Several thousand full charging cycles still possible
- Combined with higher battery efficiency and higher usable battery capacity

SAFE BATTERY TECHNOLOGY

- Self-monitoring by autonomous battery management system
- Safety functions on cell- and battery level
- Safe control of the vehicle in any battery status

HIGHER EFFICIENCY COMPARED TO LEAD ACID

- Up to 20 % higher electrical efficiency
- Less energy losses
- Less development inside battery



EMISSION - FREE BATTERY

- No evolving battery gases (hydrogen) and acid
- No need of extraction unit
- Does not contain toxic substanceslike Cd,Pb or Hg



NO BATTERY CHANGE NECESSARY FOR MOST 2-SHIFT APPLICATIONS

- No second battery necessary
- Higher vehicle availability
- Cost & time savings
- No need for battery changeand charging room



NO BATTERY-MAINTENANCE NEEDED

- No water - refilling, battery cleanup etc.
- No battery control necessary
- No need of electrolyte circulation

TECHNICAL DATA LITHIUM BATTERY SYSTEM 24V (25.6V)

	24V/210 AH	24V/220 AH	24V/230 AH	24V/300 AH
Nominal voltage (V)	25.6	25.6	25.6	25.6
Nominal capacity (Ah)	210	220	230	300
Electric quantity (kWh)	5.37	5.63	5.88	7.68
Dimensions	customized on demand			
Weight (Kg)	75	80	80	105
Operating voltage (V)	22~29.2	22~29.2	22~29.2	22~29.2
Charging voltage (V)	29.2	29.2	29.2	29.2
Recommended charge current (A)	≤105	≤110	≤115	≤150
Rated operating current (A)	105	110	115	150
Max operating current (A)	210	220	230	300
Charging temperature (℃)	0~55			
Discharging temperature (℃)	-20~55			
Storage temperature (℃)	0~45			
Chemical system	Lithium-Ferro Phosphate (LiFePO4)			
Warranty	warranty for 5 years or 10,000 hours of service			
Available trucks	All forklift brands			

Note: Other specifications can be customized according to customer needs.

Standard functions: Leakage detection,remote monitoring;

Optional functions: recharge shot, fire extinguishing system, heating system.

Lithium battery counterweights can be customized according to customer needs.





Management thermal system lithium battery apply for forklift in Cold storage

CHARGER PARAMETER 24V (25.6V)

	24V Charger
Input mode	single-phase three-wire system
Output rated voltage	24 V
Output current	100A - 200A
Rated input voltage	220 VAC
Rated input frequency	50-60 Hz
Output voltage range	18-30 VDC
Input voltage range	90-260 V
Communication	CAN

Note: The rated input voltage can be adjusted and customized according to the standards of each country.

COOPERATIVE PARTNER











FUJI LITHIUM BATTERY SYSTEM 48V (51.2V)

BATTERY AND CHARGER



SAFETY

Beyond safety functions on cell- and battery level, the batteries are permanently observed by the integrated Battery Management System.

RELIABILITY

The Frey Lithium system is CE conform. One major part to get the aligned CEconformity is theBatteryManagement System, which serves as reliable connector unit and regulates the charging currents to prevent cell-overcharging. Meet CE, UN38.3, MSDS, ect certifications.

PERFORMANCE

The whole system consisting of battery, vehicle and charger is coordinated among each other. It leads to an unique application customized system performance.

PRODUCTIVITY

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FEATURES

INTERMEDIATE CHARGING

- Multi-shift availability
- No place-specific charging
- No charging room needed

FAST CHARGING

- Shorter charging times
- “ Charge & Use “ at any time
- Economic use of each break



LONGER BATTERY LIFE-TIME

- 3000 full charging cycles with at least 80 % DOD residual capacity
- Afterwards: Several thousand full charging cycles still possible
- Combined with higher battery efficiency and higher usable battery capacity

SAFE BATTERY TECHNOLOGY

- Self-monitoring by autonomous battery management system
- Safety functions on cell- and battery level
- Safe control of the vehicle in any battery status

HIGHER EFFICIENCY COMPARED TO LEAD ACID

- Up to 20 % higher electrical efficiency
- Less energy losses
- Less development inside battery



EMISSION - FREE BATTERY

- No evolving battery gases (hydrogen) and acid
- No need of extraction unit
- Does not contain toxic substanceslike Cd,Pb or Hg



NO BATTERY CHANGE NECESSARY FOR MOST 2-SHIFT APPLICATIONS

- No second battery necessary
- Higher vehicle availability
- Cost & time savings
- No need for battery changeand charging room



NO BATTERY-MAINTENANCE NEEDED

- No water - refilling, battery cleanup etc.
- No battery control necessary
- No need of electrolyte circulation

TECHNICAL DATA LITHIUM BATTERY SYSTEM 48V (51.2V)

	48V / 315 AH	48V / 420 AH	48V / 525 AH	48V / 630 AH
Nominal voltage (V)	51.2	51.2	51.2	51.2
Nominal capacity (Ah)	315	420	525	630
Electric quantity (kWh)	16.1	21.5	26.8	32.2
Dimensions	customized on demand			
Weight (Kg)	260	350	450	500
Operating voltage (V)	44~58.4	44~58.4	44~58.4	44~58.4
Charging voltage (V)	58.4	58.4	58.4	58.4
Recommended charge current (A)	≤150	≤200	≤200	≤200
Rated operating current (A)	150	200	200	200
Max operating current (A)	315	420	525	630
Charging temperature (℃)	0~55			
Discharging temperature (℃)	-20~55			
Storage temperature (℃)	0~45			
Chemical system	Lithium-Ferro Phosphate (LiFePO4)			
Warranty	warranty for 5 years or 10,000 hours of service			
Available trucks	All forklift brands			



Note: Other specifications can be customized according to customer needs.

Standard functions: Leakage detection,remote monitoring;

Optional functions: recharge shot, fire extinguishing system, heating system.

Lithium battery counterweights can be customized according to customer needs.





Management thermal system lithium battery apply for forklift in Cold storage

CHARGER PARAMETER 48V (51.2V)

	48V Charger
Input mode	three-phase four-wire system
Output rated voltage	48 V
Output current	100A - 250A
Rated input voltage	380 VAC
Rated input frequency	50-60 Hz
Output voltage range	30-60 VDC
Input voltage range	260-520 VAC
Communication	CAN

Note: The rated input voltage can be adjusted and customized according to the standards of each country.

COOPERATIVE PARTNER





FUJI LITHIUM BATTERY SYSTEM 72V(76.8V)

BATTERY AND CHARGER



SAFETY

Beyond safety functions on cell- and battery level, the batteries are permanently observed by the integrated Battery Management System.

RELIABILITY

The Frey Lithium system is CE conform. One major part to get the aligned CEconformity is theBatteryManagement System, which serves as reliable connector unit and regulates the charging currents to prevent cell-overcharging. Meet CE, UN38.3, MSDS, ect certifications.

PERFORMANCE

The whole system consisting of battery, vehicle and charger is coordinated among each other. It leads to an unique application customized system performance.

PRODUCTIVITY

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FEATURES

INTERMEDIATE CHARGING

- Multi-shift availability
- No place-specific charging
- No charging room needed

FAST CHARGING

- Shorter charging times
- “ Charge & Use “ at any time
- Economic use of each break





LONGER BATTERY LIFE-TIME

- 3000 full charging cycles with at least 80 % DOD residual capacity
- Afterwards: Several thousand full charging cycles still possible
- Combined with higher battery efficiency and higher usable battery capacity

SAFE BATTERY TECHNOLOGY

- Self-monitoring by autonomous battery management system
- Safety functions on cell- and battery level
- Safe control of the vehicle in any battery status

HIGHER EFFICIENCY COMPARED TO LEAD ACID

- Up to 20 % higher electrical efficiency
- Less energy losses
- Less development inside battery



EMISSION - FREE BATTERY

- No evolving battery gases (hydrogen) and acid
- No need of extraction unit
- Does not contain toxic substanceslike Cd,Pb or Hg



NO BATTERY CHANGE NECESSARY FOR MOST 2-SHIFT APPLICATIONS

- No second battery necessary
- Higher vehicle availability
- Cost & time savings
- No need for battery changeand charging room



NO BATTERY-MAINTENANCE NEEDED

- No water - refilling, battery cleanup etc.
- No battery control necessary
- No need of electrolyte circulation

TECHNICAL DATA LITHIUM BATTERY SYSTEM 72V (76.8V)

	80V / 420 AH	80V / 525 AH	80V / 630 AH
Nominal voltage (V)	76.8	76.8	76.8
Nominal capacity (Ah)	420	525	630
Electric quantity (kWh)	34.9	43.7	52.4
Dimensions		customized on demand	
Weight (Kg)	500	550	680
Operating voltage (V)	71.5~94.9	71.5~94.9	71.5~94.9
Charging voltage (V)	94.9	94.9	94.9
Recommended charge current (A)	≤200	≤200	≤200
Rated operating current (A)	200	200	200
Max operating current (A)	400	500	500
Charging temperature (℃)		0~55	
Discharging temperature (℃)		-20~55	
Storage temperature (℃)		0~45	
Chemical system		Lithium-Ferro Phosphate (LiFePO4)	
Warranty		warranty for 5 years or 10,000 hours of service	
Available trucks		All forklift brands	

Note: Other specifications can be customized according to customer needs.

Standard functions: Leakage detection,remote monitoring;

Optional functions: recharge shot, fire extinguishing system, heating system.

Lithium battery counterweights can be customized according to customer needs.



Management thermal system lithium battery apply for forklift in Cold storage



FUJI LITHIUM BATTERY SYSTEM 80V(83.2V)

BATTERY AND CHARGER



SAFETY

Beyond safety functions on cell- and battery level, the batteries are permanently observed by the integrated Battery Management System.

RELIABILITY

The Frey Lithium system is CE conform. One major part to get the aligned CEconformity is theBatteryManagement System, which serves as reliable connector unit and regulates the charging currents to prevent cell-overcharging. Meet CE, UN38.3, MSDS, ect certifications.

PERFORMANCE

The whole system consisting of battery, vehicle and charger is coordinated among each other. It leads to an unique application customized system performance.

PRODUCTIVITY

Using the Lithium technology of Frey, operators can improve their productivity effectively. Due to easy charging solutions, idle times of the vehicles can be used effectively by charging intermediately.

FEATURES



INTERMEDIATE CHARGING

- Multi-shift availability
- No place-specific charging
- No charging room needed

FAST CHARGING

- Shorter charging times
- " Charge & Use " at any time
- Economic use of each break

LONGER BATTERY LIFE-TIME

- 3000 full charging cycles with at least 80 % DOD residual capacity
- Afterwards: Several thousand full charging cycles still possible
- Combined with higher battery efficiency and higher usable battery capacity

SAFE BATTERY TECHNOLOGY

- Self-monitoring by autonomous battery management system
- Safety functions on cell- and battery level
- Safe control of the vehicle in any battery status

HIGHER EFFICIENCY COMPARED TO LEAD ACID

- Up to 20 % higher electrical efficiency
- Less energy losses
- Less development inside battery



EMISSION - FREE BATTERY

- No evolving battery gases (hydrogen) and acid
- No need of extraction unit
- Does not contain toxic substanceslike Cd,Pb or Hg



NO BATTERY CHANGE NECESSARY FOR MOST 2-SHIFT APPLICATIONS

- No second battery necessary
- Higher vehicle availability
- Cost & time savings
- No need for battery changeand charging room



NO BATTERY-MAINTENANCE NEEDED

- No water - refilling, battery cleanup etc.
- No battery control necessary
- No need of electrolyte circulation

TECHNICAL DATA LITHIUM BATTERY SYSTEM 80V (83.2V)

	80V / 420 AH	80V / 525 AH	80V / 630 AH
Nominal voltage (V)	83.2	83.2	83.2
Nominal capacity (Ah)	420	525	630
Electric quantity (kWh)	34.9	43.7	52.4
Dimensions		customized on demand	
Weight (Kg)	500	550	680
Operating voltage (V)	71.5~94.9	71.5~94.9	71.5~94.9
Charging voltage (V)	94.9	94.9	94.9
Recommended charge current (A)	≤200	≤200	≤200
Rated operating current (A)	200	200	200
Max operating current (A)	400	500	500
Charging temperature (℃)	0~55		
Discharging temperature (℃)	-20~55		
Storage temperature (℃)	0~45		
Chemical system	Lithium-Ferro Phosphate (LiFePO4)		
Warranty	warranty for 5 years or 10,000 hours of service		
Available trucks	All forklift brands		

Note: Other specifications can be customized according to customer needs.

Standard functions: Leakage detection,remote monitoring;

Optional functions: recharge shot, fire extinguishing system, heating system.

Lithium battery counterweights can be customized according to customer needs.



Management thermal system lithium battery apply for forklift in Cold storage



CHARGER PARAMETER 80V (83.2V)

	80V Charger
Input mode	three-phase four-wire system
Output rated voltage	80 V
Output current	100A - 250A
Rated input voltage	380 VAC
Rated input frequency	50-60 Hz
Output voltage range	40-100 VDC
Input voltage range	260-520 VAC
Communication	CAN

Note: The rated input voltage can be adjusted and customized according to the standards of each country.

COOPERATIVE PARTNER





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