

# FE4P25Q-35Q

## Four wheel Li-iron Electric Forklift

### Professional Lithium-iron Forklift

#### ADVANTAGES

- The FE4P25Q-35Q is a cost-effective electric forklift with combination of the traditional Internal Combustion forklift and lithium-iron powered electric forklift, it has the characteristics of large driving space and comfortable operation. The standard configuration is lithium iron phosphate (LFP) battery with efficient fast charging. Optional different battery capacities: the standard configuration is 80V200Ah, optional 80V300Ah and 400Ah.
- Standard full AC control system and optional fleet management system. Standard REMA/Anderson connection for charging, optional automotive type intelligent plug-in high frequency charging technology.
- The truck adopt similar design of the Internal Combustion forklift with spacious operation space and comfort. The mast system, front and rear axles as well as the durability of chassis is similar to traditional Internal Combustion forklift. The truck combined the durability of Internal Combustion forklift with layout advantage of Li-iron electric forklift, so that the truck's weight is light and gravity center is optimized, therefore the overall energy consumption is effectively improved.



#### Easy Operation, Excellent View



The truck adopts long tiller ratchet parking brake design for easy operation.



Ratchet-type parking brake allows the truck stay at the slope of 15% without safety concern.



Combination switch as automotive, the seat can be adjusted back and forth so that the operator can choose the ideal driving position.



U design of steering wheel, front-located multi-way valve operating device makes the operation effortless and comfortable.

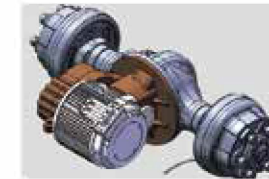


Electric Forklift



Wide view through the optimized mast and hydraulic design, the forks with intelligent buffer, protect the ground and goods from damage from hitting the ground.

#### Excellent Design and Performance



Drive system uses a horizontal fan-shaped drive axle arranged in parallel with a large transmission ratio. The battery is located at the bottom of chassis, the truck has good stability. Drive motor uses AC maintenance-free motor. Long wheelbase (1700mm) design, better stability.



Integrally forged integrated steering axle, with shock mitigation system with excellent driving comfort and prolongs the service life.



Lifting Motor located in high position so the truck can work in applications where there are water on the ground.



Ergonomically designed LED display with large screen and great visibility for easy control and operation with all around truck status information.



Big diameter tyres with better performance for outdoor applications, and comfortable driving experience, optional to have solid tyres.

#### Simplified structure for easy maintenance



Simplified structure without compromising on the strength, makes the truck looks stronger.



Controller assembly located on higher position for easy ventilation and maintenance.





## Standard Lithium power, high efficiency

Q Series Forklift Lithium battery option (LFP)		
Model	Standard	Optional
FE4P25—28Q	200Ah	300/400Ah
FE4P30Q	200Ah	300/400Ah
FE4P35Q	300Ah	400Ah



All lithium-iron batteries are equipped built-in battery management system(BMS) that manages all important data during charging and discharging. The management of the battery by BMS can ensure the safety of the battery throughout its life cycle. **Lithium-iron batteries have been certified for safe transportation (by air and sea) and operating standards.** BMS communicates with the truck management system through CAN. CAN protocol CAN monitor the battery and diagnose and repair the battery through specific software.



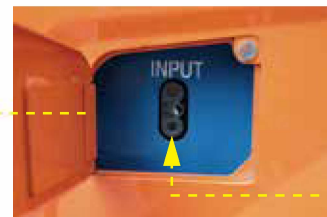
Fast charging with battery fully charged in 2-3 hours. The intelligent high frequency charger with automobile charging technology has a working efficiency of more than 95%, which is much higher than the 80% working efficiency of traditional low frequency charger.



Optional: automotive type intelligent plug-in charging gun with high frequency charging technology. **Note: press the "stop" button of the charger before pulling the gun.**



Standard: REMA/Anderson plug-in.



FE4P25Q—35Q	
Workable for Models	Standard
Nominal Battery Capacity	200/300/400Ah
Voltage	80V
Cell Chemistry	Lithium/Iron Phosphate
Operating Temperatue	-20 °C ~ + 55 °C
Optional Charger	80V /65A(80V/100A/150A/200A)
Charging time	2-3H
Operating Temperature for charger	0°C~55°C -20°C~55°C (With auxiliary heating function)

## ENVIRONMENT-FRIENDLY

### High cost performance

- The Lithium battery is more environment-friendly. There is no acid evaporation, odor and pollution during the charging process. The operation of Li-ion powered trucks are relatively quiet and zero carbon dioxide emissions. Therefore, Li-ion powered trucks is an ideal plan for the industry that has environment concern, such as food processing, chemical and pharmaceutical industry.
- Each lithium truck requires only one battery attributing to its fast charging feature no matter how many work shifts. Life time of lithium battery is three times that of lead acid battery. The maintenance-free feature of lithium battery gives much higher cost performance than lead-acid battery.

## FAST CHARGING

Charge your battery whenever and wherever you need

- The unique fast-charging feature of lithium battery makes it an ideal choice for multi-shift work. Comparing with traditional lead-acid battery, it is no longer needed to change batteries among shifts, or prepare stand-by battery and special charging area for Li-ion powered trucks. Fast charging allows charging at interval from operations which extends greatly the working time of truck. In addition, lithium battery has no memory of charging cycles which will not affect the life time at all. The lithium charger is no longer required to be placed in a specified area due to the environment-friendly feature of lithium battery, which brings much higher flexibility.

## SAFETY

Efficient, Maintenance-free

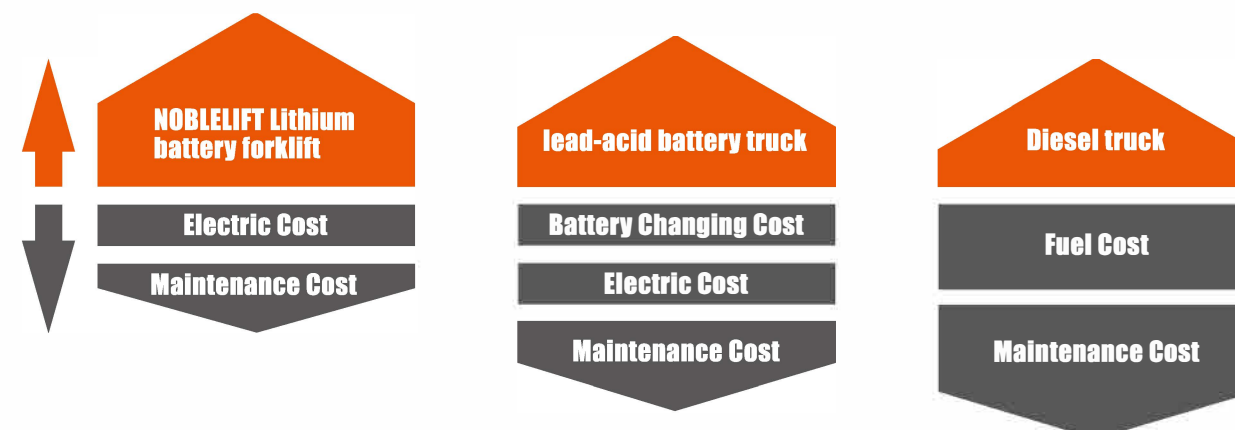
- Lithium battery reduces 35% energy consumption, requires no specified charging area and exempts from cost for battery maintenance. It saves space, requires no device to be taken out of truck as well as additional ventilation and liquid filling device.
- The power lithium battery system is composed of high-safety high-density lithium iron phosphate battery, intelligent battery management system (BMS), thermal management system, and automotive-grade DC high-voltage control system. BMS enables the communication network between the power lithium battery and controller, the truck itself, the charger and the remote management platform, real-time detection of the status of the lithium battery, the operating state of the truck and the charging state, so as to maximize the safety and reliability of lithium batteries.



Electric Forklift

## 1. Lithium battery

- 2. Lead acid battery in productivity
- 3. Lead acid battery in life cycle
- 4. Lead acid battery in total value





### Mast Table FE4P25—28Q

Designation	Lift height h3 (mm)		Free Lift h2 (mm)		Closed mast height h1 (mm)		Extended mast height h4 (mm)		Tilt forward/backward $\alpha / \beta(^{\circ})$		Capacity table(kg) C=500mm without sideshift, single pneumatic tyres	
	FE4P25Q	FE4P28Q	FE4P25Q	FE4P28Q	FE4P25Q	FE4P28Q	FE4P25Q	FE4P28Q	FE4P25Q	FE4P28Q	FE4P25Q	FE4P28Q
Two-stage ZT	2000	2000	135	135	1570	1570	2974	3079	6/10	6/10	2500	2800
	2500	2500	135	135	1820	1820	3474	3579	6/10	6/10	2500	2800
	3000	3000	135	135	2070	2070	3974	4079	6/10	6/10	2500	2800
	3300	3300	135	135	2220	2220	4274	4379	6/10	6/10	2500	2800
	3500	3500	135	135	2320	2320	4474	4579	6/10	6/10	2500	2700
	3600	3600	135	135	2370	2370	4574	4679	6/10	6/10	2500	2700
	3700	3700	135	135	2420	2420	4674	4779	6/10	6/10	2500	2700
	4000	4000	135	135	2620	2620	4974	5079	6/6	6/6	2450	2650
	4300	4300	135	135	2770	2770	5274	5379	6/6	6/6	2100	2500
	4500	4500	135	135	2870	2870	5474	5579	6/6	6/6	2000	2250
5000	5000	135	135	3120	3120	5974	6079	6/6	6/6	1600	2050	
Two-stage ZZ	2000	2000	631	491	1570	1570	2968	3079	6/10	6/10	2500	2800
	2500	2500	881	741	1820	1820	3468	3579	6/10	6/10	2500	2800
	3000	3000	1131	991	2070	2070	3968	4079	6/10	6/10	2500	2800
	3300	3300	1281	1141	2220	2220	4268	4379	6/10	6/10	2500	2800
	3500	3500	1381	1241	2320	2320	4468	4579	6/10	6/10	2500	2700
	3600	3600	1431	1291	2370	2370	4568	4679	6/10	6/10	2500	2700
	3700	3700	1481	1341	2420	2420	4668	4779	6/6	6/6	2500	2700
4000	4000	1681	1541	2620	2620	4968	5079	6/6	6/6	2400	2600	
Three-stage DZ	4000	4000	1056	916	1995	1995	4978	5079	6/6	6/6	2300	2550
	4350	4300	1181	1041	2120	2120	5328	5379	6/6	6/6	2000	2400
	4500	4500	1231	1091	2170	2170	5476	5579	6/6	6/6	1900	2200
	4800	4800	1331	1191	2275	2275	5776	5879	6/6	6/6	1600	2100
	5000	5000	1474	1334	2413	2413	5976	6079	6/6	6/6	1500	2000
	5500	5500	1708	1568	2647	2647	6476	6579	3/6	3/6	1150	1500
	6000	6000	1941	1801	2880	2880	6976	7079	3/6	3/6	800	1100
	6500	6500	2174	2034	3113	3113	7476	7579	3/3	3/3	500	750

Free lift height (no load-backrest) +425mm

### Mast Table FE4P30—35Q

Designation	Lift height h3 (mm)		Free Lift h2 (mm)		Closed mast height h1 (mm)		Extended mast height h4 (mm)		Tilt forward/backward $\alpha / \beta(^{\circ})$		Capacity table(kg) C=500mm without sideshift, single pneumatic tyres	
	FE4P30Q	FE4P35Q	FE4P30Q	FE4P35Q	FE4P30Q	FE4P35Q	FE4P30Q	FE4P35Q	FE4P30Q	FE4P35Q	FE4P30Q	FE4P35Q
Two-stage ZT	2000	2000	135	140	1570	1680	3079	3079	6/10	6/10	3000	3500
	2500	2500	135	140	1820	1930	3579	3579	6/10	6/10	3000	3500
	3000	3000	135	140	2070	2180	4079	4079	6/10	6/10	3000	3500
	3300	3300	135	140	2220	2330	4379	4379	6/10	6/10	3000	3500
	3500	3500	135	140	2320	2430	4579	4579	6/10	6/10	3000	3500
	3600	3600	135	140	2370	2480	4679	4679	6/10	6/10	3000	3500
	3700	3700	135	140	2420	2530	4779	4779	6/10	6/10	2950	3250
	4000	4000	135	140	2620	2730	5079	5079	6/6	6/6	2850	3000
	4300	4300	135	140	2770	2880	5379	5379	6/6	6/6	2700	2800
	4500	4500	135	140	2870	2980	5579	5579	6/6	6/6	2500	2600
5000	5000	135	140	3120	3230	6079	6079	6/6	6/6	2100	2200	
Two-stage ZZ	2000	2000	563	491	1545	1570	3079	3079	6/10	6/10	3000	3500
	2500	2500	813	741	1795	1820	3579	3579	6/10	6/10	3000	3500
	3000	3000	1063	991	2045	2070	4079	4079	6/10	6/10	3000	3500
	3300	3300	1213	1141	2195	2220	4379	4379	6/10	6/10	3000	3500
	3500	3500	1313	1241	2295	2320	4579	4579	6/10	6/10	3000	3500
	3600	3600	1363	1291	2345	2370	4679	4679	6/10	6/10	3000	3500
	3700	3700	1413	1341	2395	2420	4779	4779	6/6	6/6	3000	3500
4000	4000	1613	1541	2595	2620	5079	5079	6/6	6/6	2850	3200	
Three-stage DZ	4000	4000	988	916	1970	1970	5079	5079	6/6	6/6	2750	3200
	4350	4300	1113	1041	2095	2095	5379	5379	6/6	6/6	2600	3000
	4500	4500	1163	1091	2145	2145	5579	5579	6/6	6/6	2400	3000
	4800	4800	1263	1191	2245	2245	5879	5879	6/6	6/6	2200	2500
	5000	5000	1406	1334	2388	2388	6079	6079	6/6	6/6	2000	2400
	5500	5500	1640	1568	2622	2622	6579	6579	3/6	3/6	1500	1750
	6000	6000	1873	1801	2855	2855	7079	7079	3/6	3/6	1200	1250
	6500	6500	2107	2034	3088	3088	7579	7579	3/3	3/3	800	900

Free lift height (no load-backrest) +425mm

### Type sheet for industrial truck acc. to VDI 2198

1KG=2.2LB 1INCH=25.4MM

Identification		FE4P25Q	FE4P28Q	FE4P30Q	FE4P35Q
1.2	Manufacturer's type designation	FE4P25Q	FE4P28Q	FE4P30Q	FE4P35Q
1.3	Drive:electric (battery or mains),diesel,petrol gas,manual	electric	electric	electric	electric
1.4	Type of operation(hand,pedestrian,standing,seated,order-picker)	seated	seated	seated	seated
1.5	Load capacity/rated load	Q(kg) 2500	2800	3000	3500
1.6	Load centre distance	c(mm) 500	500	500	500
1.8	Load distance,centre of drive axle to fork	x(mm) 478	483	478	483
1.9	wheelbase	y(mm) 1620	1700	1800	1800
Weights					
2.1	Service weight incl. battery	kg 3600	3860	4070	4480
2.2	Axle loading ,laden front/rear	kg 5500/600	6010/650	6390/680	7140/840
2.3	Axle loading,unladen front/rear	kg 1540/2060	1680/2180	1750/2320	1960/2520
Wheels- Chassis					
3.1	Type:solid rubber,superelastic,pneumatic,polyurethane	pneumatic	pneumatic	pneumatic	pneumatic
3.2	Tyres size,front	7.00-12-12PR	7.00-12-16PR	28×9-15-14PR	28×9-15-14PR
3.3	Tyres size,rear	6.00-9-10PR	6.00-9-12PR	6.50-10-10PR	6.50-10-10PR
3.5	Wheels,number front/rear(x=driven wheels)	2×/2	2×/2	2×/2	2×/2
3.6	Track width,front	b10(mm) 973	973	1004	1004
3.7	Track width,rear	b11(mm) 982	982	982	982
Basic Dimensions					
4.1	Mast/fork carriage tilt forward/backward	$\alpha/\beta(^{\circ})$ 6/10	6/10	6/10	6/10
4.2	lowered mast height	h1(mm) 2070	2070	2070	2185
4.3	Free lift	h2(mm) 135	140	140	145
4.4	Lift height	h3(mm) 3000	3000	3000	3000
4.5	Extended mast height	h4(mm) 3974	4079	4079	4079
4.7	Overhead load guardheight	h6(mm) 2150	2150	2150	2150
4.8	Seat height/standing height	h7(mm) 1130	1130	1130	1130
4.12	Coupling height	h10(mm) 580	580	580	580
4.19	Overall length	l1(mm) 3568	3663	3773	3818
4.20	Length to face of forks	l2(mm) 2498	2593	2703	2748
4.21	Overall width	b1 (mm) 1150	1150	1226	1226
4.22	Fork dimensions	s/e/l(mm) 40/120/1070	45/125/1070	45/125/1070	50/125/1070
4.24	Fork carriage width	b3(mm) 1040	1100	1100	1100
4.31	Ground clearance ,laden,under mast	m1 (mm) 135	135	135	135
4.32	Ground clearance,centre of wheelbase	m2(mm) 150	150	150	150
4.33	Aisle width for pallets 1000×1200 crossways	Ast(mm) 3849	3949	4078	4123
4.34	Aisle width for pallets 800×1200 lengthways	Ast(mm) 3997	4097	4278	4323
4.35	Turning radius	Wa(mm) 2230	2350	2400	2440
Performance Data					
5.1	Travel speed,laden/unladen	km/h 12/13	12/13	12/13	11/12
5.2	Lift speed,laden/unladen	m/s 0.26/ 0.34	0.26/ 0.34	0.26/ 0.34	0.25/0.33
5.3	lowering speed,laden/unladen	m/s <0.6	<0.6	<0.6	<0.6
5.5	Drawbar pull,laden/unladen S2 60 min	N 3100/2100	3600/2600	3500/2500	3800/2800
5.7	Max.Gradient performance,laden/unladen S2 5 min	% 15/15	15/15	15/15	13/15
5.10	Service brake	hydraulic	hydraulic	hydraulic	hydraulic
E-Motor					
6.1	Drive motor rating S2 60 min	kW 10	10	11	11
6.2	Lift motor rating at S3 15%	kW 12	12	12	12
6.3	Battery standard	Lion	Lion	Lion	Lion
6.4	Battery voltage,nominal capacity K5	V/Ah 80/200 option:80/300/400	80/200 option:80/300/400	80/200 option:80/300/400	80/300 option:80/400
	Battery weight	kg 200	200	215	280
6.4	Battery dimensions l/w/h	mm 770/600/680	770/600/680	770/650/680	770/650/680
Other Details					
8.1	Type of drive control	AC	AC	AC	AC
8.2	Operating pressure for attachments	Mpa 17.5	17.5	17.5	17.5
8.3	Oil volume for attachments	l/min 36	36	36	36
8.4	Sound level at driver's ear according to EN 12 053	dB(A) 74	75	74	75