

FE4P 16/20Q

Four wheel Electric Forklift

 **Ready for Lithium power**

ADVANTAGES

The design of the Q series is based on the original Noblift E series and N series with combination of the advantages to meet the light and medium applications with great comfort and efficiency. The truck is optional to be equipped with either Lead-acid battery or Li-ion battery. With lowered center of gravity and overhead guard, the truck is ideal to be used in limited spaces such as entering elevator.



Q series
Medium
Duty
Design



AC MAINTENANCE-FREE DRIVE MOTOR

Adopt maintenance-free and powerful AC drive motor. Compared with traditional DC motors, Noblilift's AC motors do not need to replace Carbon brushes. Equipped with speed sensor and temperature sensor, greatly improving the AC motor's reliability.

SIDE- EXTRACTION BATTERY

Battery can be replaced easily by using another forklift, meeting continuous application if necessary.

LOW CENTER OF GRAVITY

Transmission system uses a horizontal fan-shaped drive Axle arranged in parallel and has a large transmission ratio. The battery is installed at the bottom of the frame, vehicle height is 2080mm with easy entrance to limited doors and high stability.

QUIET LOW VIBRATION DESIGN

The hydraulic system uses a low-noise gear pump and full hydraulic power steering. Quiet and comfortable operation.

Shock absorbing steer axle to protect the vehicle system and prolong the service life of the forklift.

SAFER AND EASIER ELECTROMAGNETIC BRAKE

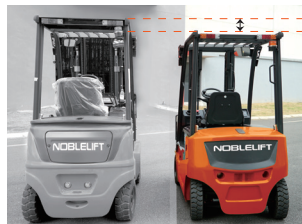
Adopts car control mode and electromagnetic braking to make the driver's operation more comfortable.



The vehicle hood and the left and right small side-panels are formed by steel plates at one time, which is simple and decent and more convenient to operate.



The forklift is equipped with standard LED lamps: head-lamps, front turn lamps, rear combination lamps, warning lamps. Bright light with low power consumption allows you to operate freely at night.



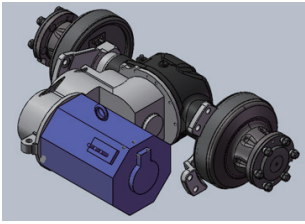
Compared with other N series 4-wheel Electric counter balance forklift, this model is smaller in size and more flexible, which is more suitable for working in confined areas.



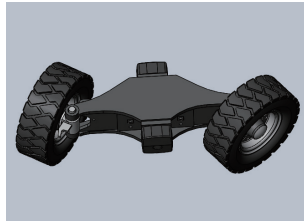
Intelligent buffering when descending to the ground, effectively protecting the ground and cargo from damage.



Product Features



Transmission system uses a horizontal fan-shaped drive axle arranged in parallel with a large transmission ratio. The battery is installed at the bottom of the frame. Traveling motor adopts AC maintenance-free motor.



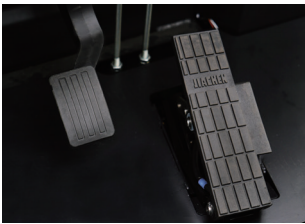
Steer axle shock absorption designed to protect the vehicle and prolong the service life of the truck.



Front multi-way valve operating device makes operation more comfortable.



Multi-function display screen with fault alarm, low battery reminder. High, medium and low speed modes.



Electromagnetic brake button cut off power at one time, making brake safer and easier.

Adopt car control mode:
Suspended driving brake system, stepless speed change.
Finding driving pleasure at work.

Ergonomic hydraulic controls for comfort operation with wide mast view and easy right-sided control levers and steering wheel with knob.



The trucks are equipped with **Curtis** controllers, **CAN-bus** technology makes the diagnostic and troubleshooting easier.

The use of proved and certified components helps to ensure the conformity to international safety standards with all the supporting documents available as required by law.



Optional Lithium Solution

Battery Status		Warning									
Battery Num	16	Single Volt Over	Normal	Charge Electric Over	Normal						
Battery Type	Lithium	Total Volt Over	Normal	Discharge Electric Over	Normal						
Voltage(V)	52.4Electric(A)	Single Volt Lack	Normal	Electric Over Badly	Normal						
Electric(A)	0.0	Total Volt Lack	Normal	SOC Lack	Normal						
SOC	63.9%	Discharge Temp High	Normal	Gathering Line Off	Normal						
Discharge	ON	Discharge Temp Low	Normal	Diff Volt Over	Normal						
Mean Volt(mV)	3281	Charge Temp High	Normal	Envi Temp High	Normal						
Diff Volt(mV)	2	Charge Temp Low	Normal	Envi Temp Low	Normal						
Mean Temp(C)	11.1										
Diff Temp(C)	0.7										
Envi Temp(C)	10.9										
Charge	OFF										
BMS Time	2020-12-12 10:36:14										
Max Volt No.(mV)	[1] 3281										
Min Volt No.(mV)	[5] 3280										
Max Temp No.(C)	[4] 11.7										
Min Temp No.(C)	[2] 11.0										

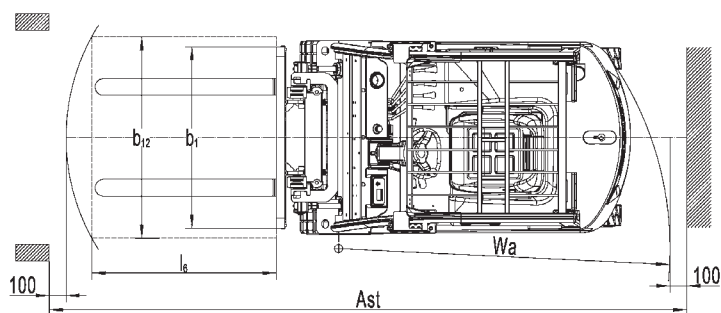
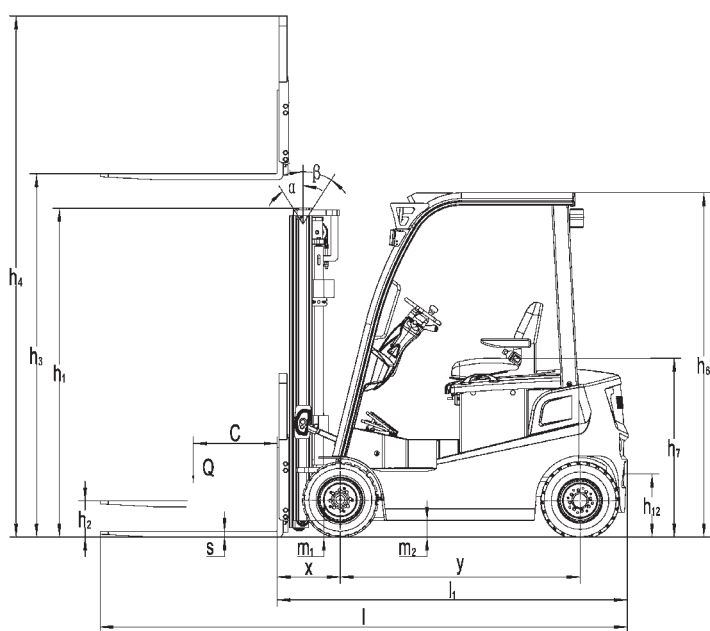
Single Temp	1	2	3	4	5	6	7	8
01—08	11.3 C	11.0 C	11.1 C	11.7 C	11.2 C	11.0 C	11.5 C	11.6 C
09—16	11.1 C	11.3 C	11.1 C	11.7 C	11.1 C	11.2 C	11.6 C	11.7 C

Single Volt	1	2	3	4	5	6	7	8
01—08	3.281V	3.282V	3.281V	3.281V	3.281V	3.281V	3.282V	3.280V
09—16	3.282V	3.281V	3.281V	3.281V	3.281V	3.282V	3.282V	3.280V

It is optional to equip the forklift with Lithium battery with the advantage of maintenance-free and fast charging, no headaches for end users esp. light-duty/occasional applications. Lead-acid and lithium batteries are perfectly interchangeable. Don't worry about which battery to choose now.

Each battery can be diagnosed via CAN connection with help of special software tool, the software can provide information about the battery condition such as balance of cells, amount of charging/discharging cycles, current, energy consumption, temperature, charging/discharging parameters, voltage of every cell, faults and alarms, settings of timing for automatic turn off.



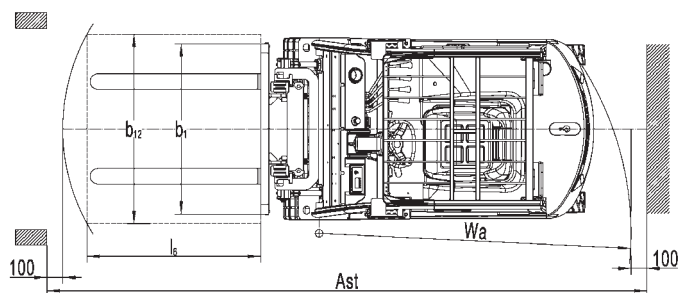
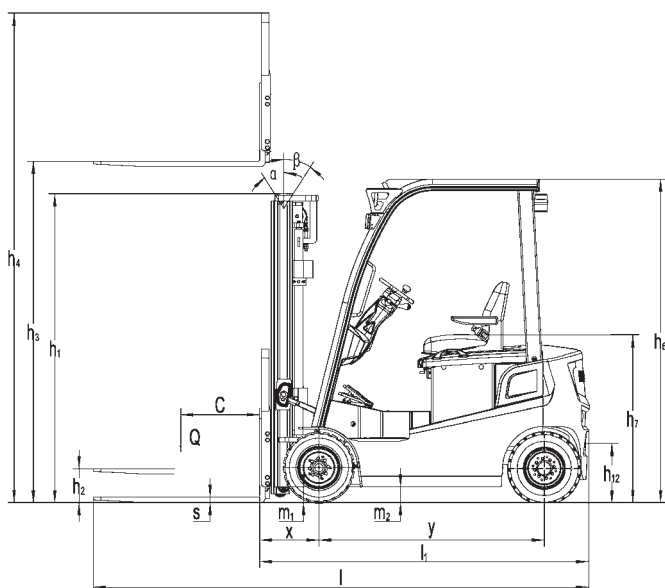


Mast Table FE4P16-20Q

Designation	Lift height	Free Lift	Closed mast height	Extended mast height	Tilt forward/backward	Capacity table(kg) C=500mm without sideshift, single tyres	
	h_3 (mm)	h_2 (mm)	h_1 (mm)	h_4 (mm)	$\alpha / \beta (^{\circ})$	FE4P16Q	FE4P20Q
Two-stage ZT	2500	110	1803	3482	6/10	1600	2000
	2700	110	1903	3682	6/10	1600	2000
	3000	110	2053	3982	6/10	1600	2000
	3300	110	2203	4282	6/10	1600	2000
	3500	110	2303	4482	6/10	1600	2000
	3700	110	2403	4682	6/10	1600	1900
	4000	110	2603	4982	6/6	1500	1800
	4300	110	2753	5282	6/6	1400	1600
	4500	110	2853	5482	6/6	1350	1500
	5000	110	3128	5982	6/6	900	1100
Two-stage ZZ	2500	853	1803	3482	6/10	1600	2000
	2700	953	1903	3682	6/10	1600	2000
	3000	1103	2053	3982	6/10	1600	2000
	3300	1253	2203	4282	6/10	1600	2000
	3500	1353	2303	4482	6/10	1600	2000
	3700	1453	2403	4682	6/10	1600	1900
	4000	1653	2603	4982	6/6	1500	1800
Three-stage DZ	4000	1033	1983	4982	6/6	1500	1800
	4300	1153	2103	5282	6/6	1400	1600
	4500	1203	2153	5482	6/6	1300	1500
	4800	1303	2253	5782	6/6	1000	1200
	5000	1403	2353	5982	6/6	900	1100
	5500	1553	2503	6482	3/6	800	900

Type sheet for industrial truck acc. to VDI 2198

Identification				
1.2	Manufacturer's type designation		FE4P16Q	FE4P20Q
1.3	Drive:electric(battery or mains),diesel,petrol gas>manual)		electric	electric
1.4	Type of operation(hand,pedestrian,standing,seated,order-picker)		seated	seated
1.5	Load capacity/rated load	Q(kg)	1600	2000
1.6	Load centre distance	C(mm)	500	500
1.8	Load distance,centre of drive axle to fork	x(mm)	381	386
Weights				
2.1	Service weight incl. battery(see line 6.5)	kg	2940	3180
2.2	Axle loading ,laden front/rear	kg	4078/462	4611/569
2.3	Axle loading,unladen front/rear	kg	1320/1620	1460/1720
Wheels- Chassis				
3.1	Type:solid rubber,superelastic,pneumatic,polyurethane		solid rubber/pneumatic	solid rubber/pneumatic
3.2	Tyres size,front		18X7-8	18X7-8
3.3	Tyres size,rear		5.00-8-10PR	5.00-8-10PR
3.5	Wheels,number front/rear(×=driven wheels)		2×/2	2×/2
3.6	Track width,front	b10(mm)	980	980
3.7	Track width,rear	b11(mm)	920	920
Basic Dimemsions				
4.1	Mast/fork carriage tilt forward/backward	$\alpha/\beta(^{\circ})$	6/10	6/10
4.2	lowered mast height	h1(mm)	2053	2053
4.3	Free lift	h2(mm)	130	130
4.4	Lift height	h3(mm)	3000	3000
4.5	Extended mast height	h4(mm)	3982	3982
4.7	Overhead load guardheight	h6(mm)	2075	2075
4.8	Seat height/standing height	h7(mm)	1065	1065
4.12	Coupling height	h10(mm)	530	530
4.19	Overall length	l1(mm)	3050	3050
4.20	Length to face of forks	l2(mm)	2130	2130
4.21	Overall width	b1(mm)	1150	1150
4.22	Fork dimensions	s/e/l(mm)	35/100/920	40/100/1070
4.24	Fork carriage width	b3(mm)	1040	1040
4.31	Ground clearance ,laden,under mast	m1(mm)	98	98
4.32	Ground clearance,centre of wheelbase	m2(mm)	100	100
4.33	Aisle width for pallets 1000×1200 crossways	Ast(mm)	3571	3576
4.34	Aisle width for pallets 800×1200 lengthways	Ast(mm)	3771	3776
4.35	Turning radius	Wa(mm)	1990	1990
Performance Data				
5.1	Travel speed,laden/unladen	km/h	12/13	11/13
5.2	Lift speed,laden/unladen	m/s	0.27/0.35	0.25/0.35
5.3	lowering speed,laden/unladen	m/s	0.52/0.42	0.52/0.42
5.7	Max.Gradient performance,laden/unladen S2 5 min	%	12/15	12/15
5.10	Service brake		electromagnetic brake	electromagnetic brake
E-Motor				
6.1	Drive motor rating S2 60 min	kW	7	7
6.2	Lift motor rating at S3 15%	kW	8.6	8.6
6.3	Battery standard		DIN	DIN
6.4	Battery voltage,nominal capacity K5	V/Ah	Pb-acid:48/360(48/400,48/460) Li:48/200(48/300)	Pb-acid:48/400(48/460) Li:48/200(48/300)
Other Details				
8.1	Type of drive control		AC	AC
8.2	Operating pressure for attachments	Mpa	14.5	14.5
8.3	Oil volume for attachments	l/min	30	30
8.4	Sound level at driver's ear according to EN 12 053	dB(A)	72	72



Mast Table FE4P16QC-20QC

Designation	Lift height	Free Lift	Closed mast height	Extended mast height	Tilt forward/backward	Capacity table(kg) C=500mm without sideshift, single tyres	
	h3 (mm)	h2 (mm)	h1 (mm)	h4 (mm)	$\alpha / \beta (^{\circ})$	FE4P16QC	FE4P20QC
Two-stage ZT	2500	110	1803	3482	6/10	1600	2000
	2700	110	1903	3682	6/10	1600	2000
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	3500	1353	2303	4482	6/10	1600	2000
	3700	1453	2403	4682	6/10	1600	1900
	4000	1653	2603	4982	6/6	1500	1800
Three-stage DZ	4000	1028	1978	4980	6/6	1500	1800
	4300	1153	2103	5280	6/6	1400	1600
	4500	1203	2153	5480	6/6	1300	1500
	4800	1303	2253	5780	6/6	1000	1200
	5000	1403	2353	5980	6/6	900	1100
	5500	1553	2503	6480	3/6	800	900
	6000	1753	2703	6980	3/6	700	800

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1.5	Load capacity/rated load	Q(kg)	1600	2000
1.6	Load centre distance	C(mm)	500	500
1.8	Load distance,centre of drive axle to fork	x(mm)	381	386
Weights				
2.1	Service weight incl. battery(see line 6.5)	kg	2940	3180
2.2	Axle loading ,laden front/rear	kg	4050/490	4670/510
2.3	Axle loading,unladen front/rear	kg	1170/1770	1270/1910
Wheels- Chassis				
3.1	Type:solid rubber,superelastic,pneumatic,polyurethane		pneumatic/pneumatic	pneumatic/pneumatic
3.2	Tyres size,front		6.50-10-10PR	6.50-10-10PR
3.3	Tyres size,rear		5.00-8-10PR	5.00-8-10PR
3.5	Wheels,number front/rear(×=driven wheels)		2×/2	2×/2
3.6	Track width,front	b10(mm)	980	980
3.7	Track width,rear	b11(mm)	920	920
Basic Dimemsions				
4.1	Mast/fork carriage tilt forward/backward	$\alpha/\beta(^{\circ})$	6/10	6/10
4.2	lowered mast height	h1(mm)	2053	2053
4.3	Free lift	h2(mm)	130	130
4.4	Lift height	h3(mm)	3000	3000
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4.34	Aisle width for pallets 800×1200 lengthways	Ast(mm)	3771	3776
4.35	Turning radius	Wa(mm)	1990	1990
Performance Data				
5.1	Travel speed,laden/unladen	km/h	12/13	11/13
5.2	Lift speed,laden/unladen	m/s	0.27/0.35	0.25/0.35
5.3	lowering speed,laden/unladen	m/s	0.52/0.42	0.52/0.42
5.7	Max.Gradient performance,laden/unladen S2 5 min	%	12/15	12/15
5.10	Service brake		Hydraulic	Hydraulic
E-Motor				
6.1	Drive motor rating S2 60 min	kW	6.8	6.8
6.2	Lift motor rating at S3 15%	kW	8.6	8.6
6.3	Battery standard		DIN	DIN
6.4	Battery voltage,nominal capacity K5	V/Ah	Pb-acid:48/360(48/400,48/460) Li:51.2/206(277/412)	Pb-acid:48/400(48/460) Li:51.2/206(277/412)
Other Details				
8.1	Type of drive control		AC	AC
8.2	Operating pressure for attachments	Mpa	14.5	14.5
8.3	Oil volume for attachments	l/min	30	30
8.4	Sound level at driver's ear according to EN 12 053	dB(A)	72	72