

Instructions for use of the Electric Pallet Stacker

(KLR10-A, KLR10-B
KLR15-A, KLR15-B, KLR15-C, KLR15-H
KLR20-A, KLR20-B, KLR20-C, KLR20-H
KLR25-C)

Jiangsu King-lift Equipment.,Ltd.

2023, the first edition

You must understand this manual and various warning labels on the car before use. Pictures are for reference only, and the product is subject to the physical object.

Preface

Welcome to use our company KLR-C type reach forklift, the car is made of special profile, compact design, durable, easy to operate. For your safety and correct operation, please understand the instructions and various warning labels on the car before use.

pay attention to:

All the parameters here are subject to the date of publication of this manual. We reserve the right to change our products without notice. If you want to know the latest product parameters, please contact us.

Explain

The forklift truck manufactured by our company is only found in the Special Equipment Safety Supervision Regulations"

The specified factory area, tourist attractions, amusement places and other specific areas shall be used

Field (factory) in the special vehicles.

Catalogue

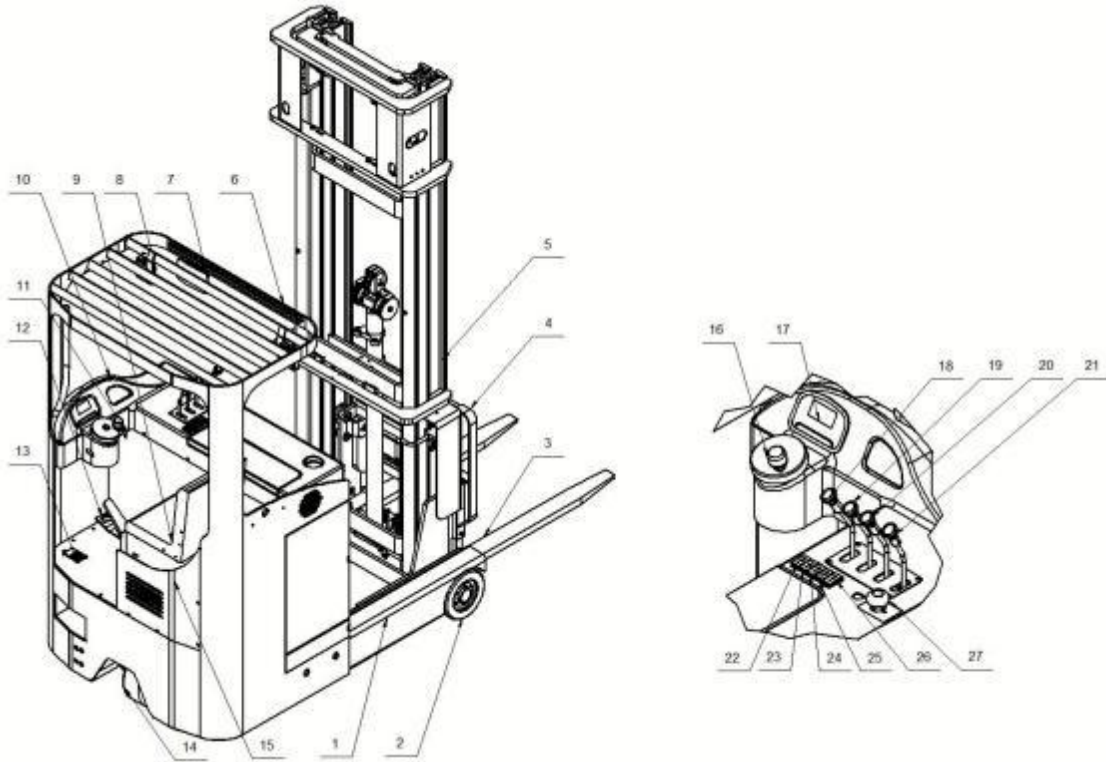
1. Range of application.....	1
2. Operating steps.....	1
3. Maintenance.....	6
4. Battery.....	6
5. Safe code.....	7
6. Maintenance.....	10
7. Common faults and troubleshooting methods.....	11
8. Electrical schematic diagram.....	12

1. Range of application

KLR-C reach forklift is a warehousing forklift specially designed for high altitude stacking and peaceful transportation.

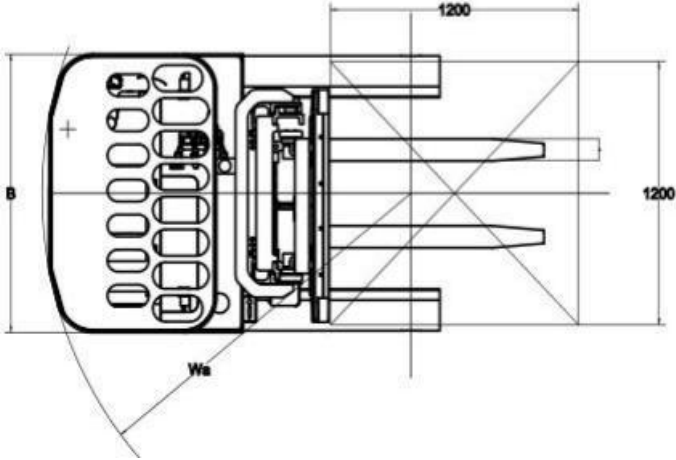
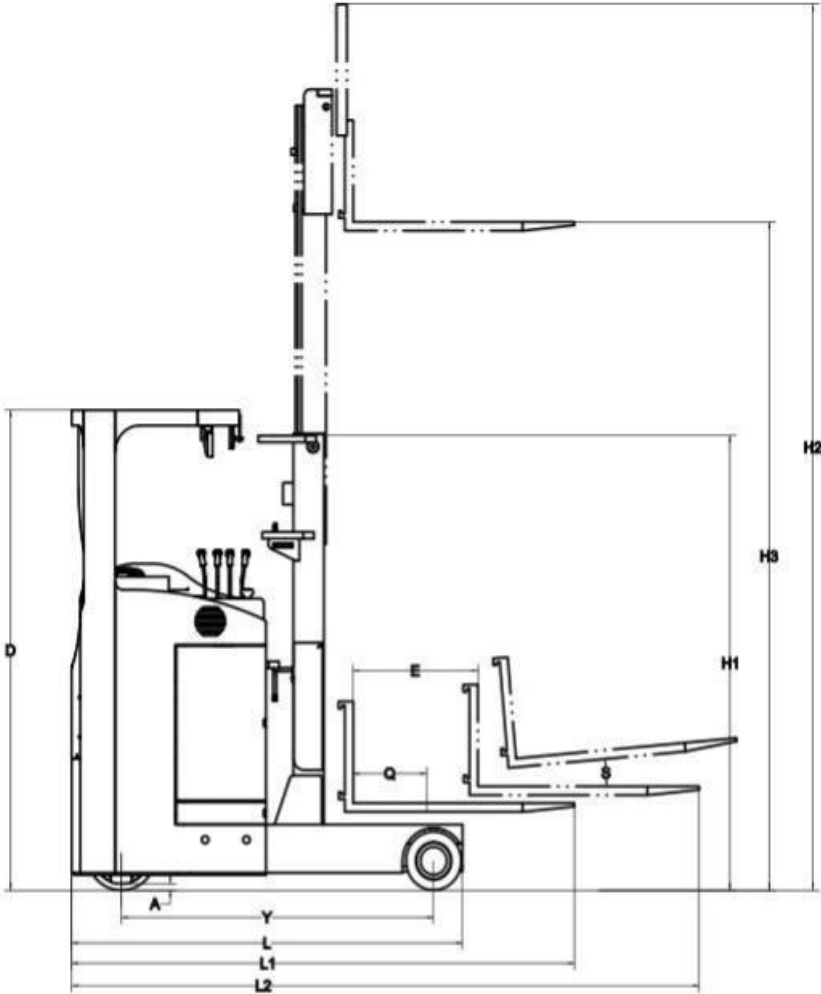
2. Vehicle brief

1. Brief description of the main parts and components



1	Frame assembly	10	Protegium	19	Mast moving forward and backward operating lever
2	Load wheel	11	Key switch	20	Tilt operating lever
3	Forge fork	12	Accelerator pedal	21	Side-shifter operating lever
4	Carriage	13	Switch pedal	22	Travel switch
5	Mast assembly	14	Drive assembly	23	Turn signal switch
6	Overhead guard	15	Drive bezel	24	Headlight switch
7	Rearview mirror	16	steering wheel	25	Heat dissipation fan switch
8	Headlight	17	display screen	26	Horn switch
9	Seat	18	Lift operating lever	27	Emergency stop switch

2. Main technical parameters

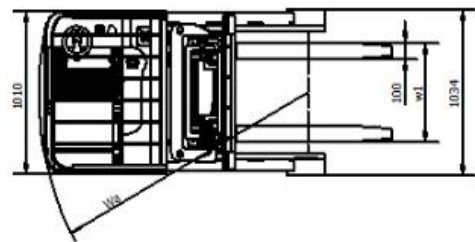
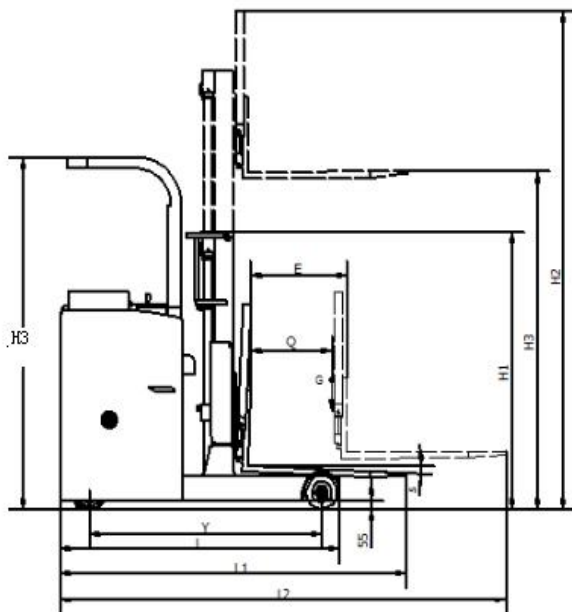


Electric Pallet Stacker

Model			KLR15C	KLR20C	KLR25C	
Function	Load capacity		kg	1500	2000	2500
	Load center	Q	mm	500	500	500
	Lifting height	H3	mm	3000	3000	3000
	Mast reach distance	E	mm	550	550	550
	Angle of tilting	deg	°	3/5	3/5	3/5
	Travel speed (without load)		km/h	8	8	8
	Travel speed (with load)		km/h	7	7	7
	Lifting speed(without load)		mm/s	244	244	244
	Lifting speed(with load)		mm/s	94	94	94
	Lowering speed(without load)		mm/s	224	224	224
	Lowering speed(with load)		mm/s	700	700	700
	Gradeability (without load)		%	15	15	15
	Gradeability (with load)		%	8	8	8
	Service weight (with battery)		kg	2430	3020	3050
Size	Overall length of frame excluding fork length & mast reach length	L	mm	1890	1890	1990
	Overall length of frame including fork length excluding mast reach length	G	mm	2479	2479	2579
	Overall length of frame including mast reach length	G1	mm	3029	3029	3129
	Overall width of frame	B	mm	1270	1270	1270
	Overall height when mast lowered to lowest	H1	mm	2084	2084	2084
	Overall height when mast lifted to highest	H4	mm	4045	4045	4045
	Wheel base	Y	mm	1510	1510	1610
	Fork size		mm	1070*35*100	1070*40*100	1070*40*120
	Adjustable range of fork outside width	R	mm	210-820	210-820	250-820
	Fork height when fork lowered to lowest	S	mm	60	65	65
	Minimum ground clearance		mm	30	30	30
	Theoretical width of minimum aisle for right-angle stacking(1200x1000)	Asts	mm	2673	2673	2772
	Minimum turning radius	Wa	mm	1783	1783	1882

	Overhead guard height		mm	2190	2190	2190
Type	Load wheel		mm	267*114	267*114	267*114
	Driving wheel		mm	340*130	340*130	340*130
	wheel type	polyurethane				
Electric component	Type of drive motor	AC series motor				
	Rated output		kw	5	5	5
	Type of hoist motor	DC series motor				
Type	Rated output		kw	6.3	6.3	6.3
Battery	voltage		V	48		
	capacity		AH	325	440	440
	weight		kg	600	740	740

Mast type	Maximum fork height	Mast Height when the mast lowered to lowest	Mast height when the mast lifted to highest	Free lift
Simplex or Duplex mast(2 stage)	2500	1834	3545	
	3000	2084	4045	
	3500	2334	4545	
	4000	2634	5045	
	4500	2884	5545	
Triplex mast (3 stage full free lift)	4000	2034	5071	1326
	4500	2184	5537	1492
	5000	2334	6011	1666
	5500	2534	6569	1824
	6000	2734	7045	2000

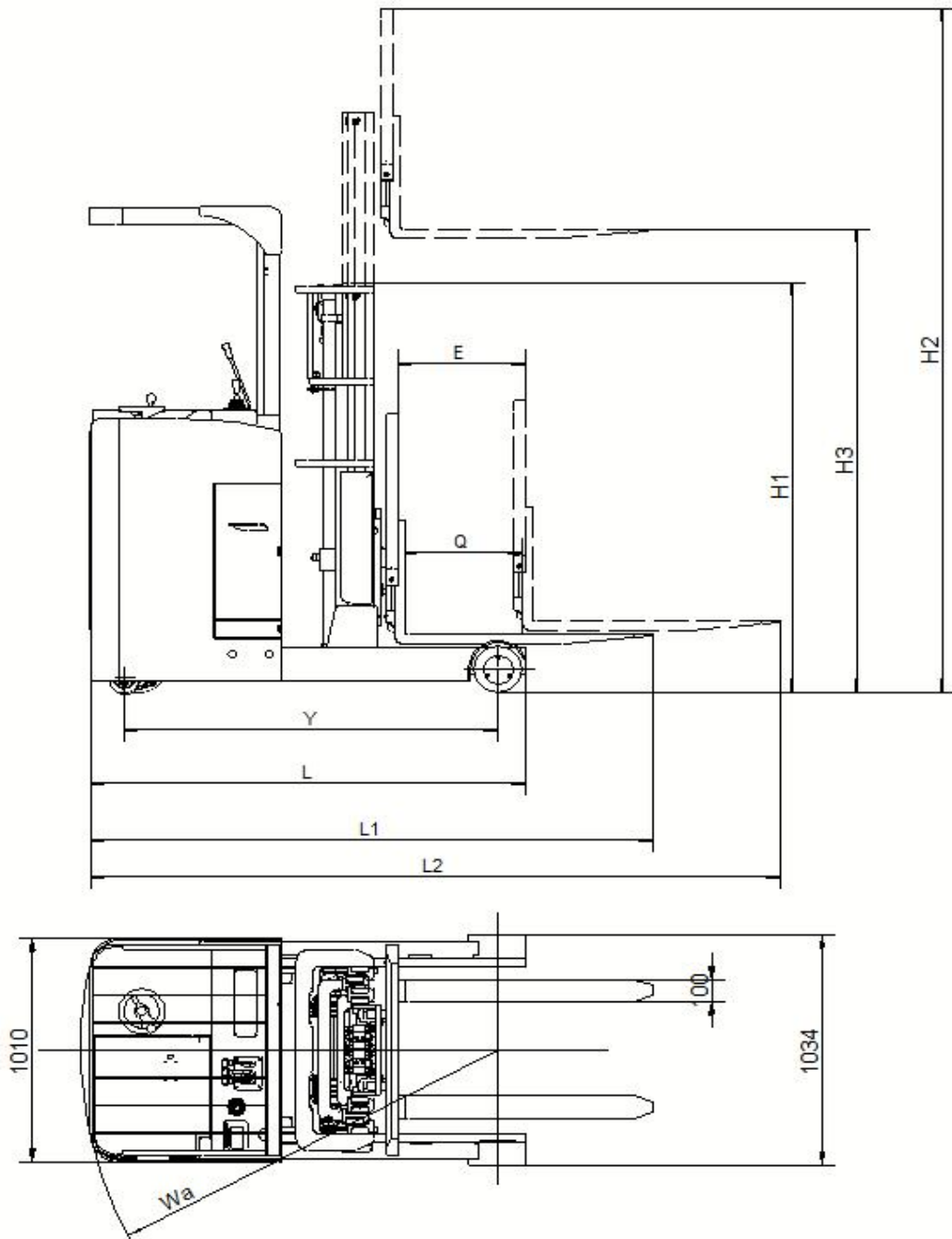


Electric Pallet Stacker

Model (型号)				KLR10 A	KLR15 A	KLR20 A
Performance (性能)	Maximum load capacity(负载能力)		kg	1000	1500	2000
	load center (载荷中心距)	Q	m	500	500	500
	Maximum lifting height (起升高度)	H 3	m	1666	1666	1666
	Reach length (前移距离)	E	m	570	570	570
	Tilting angle (up/down) (倾斜角度)	de g	°	3/5	3/5	3/5
	Travel speed (without load) (无负载行驶速度)		km /h	5.2	5.2	5.2
	Travel speed (with load) (负载行驶速度)		km /h	5.2	5.2	5.2
	Lifting speed (without load) (无负载起升速度)		m m/ s	115	115	115
	Lifting speed (with load)(负载起升速度)		m m/ s	92	92	92
	Lowering speed (without load)(无负载下降速度)		m m/ s	173	173	173
	Lowering speed (with load)(负载下降速度)		m m/ s	530	530	530
	Gradeability(without load) (无负载最大爬坡能力)		%	8	8	8
	Gradeability(with load)(负载最大爬坡能力)		%	5	5	5
	Service weight(with battery) (含电池重量)		kg	2135	2385	2385
Dimensions (尺寸)	Overall length of frame excluding fork length & mast reach length (整车长度) (门架没前移不含货叉)	L	m	1880	1880	1880
	Overall length including fork length excluding mast reach length (整车长度) (门架没前移含货叉)	G	m	2427	2427	2427
	Overall length including mast reach length (门架前移后整车长度)	G 1	m	2997	2997	2997
	Overall width of frame(整车宽度)	B	m	1034	1034	1034
	Overall height when mast lowered to lowest (门架降至最低整车高度)	H 1	m	2266	2266	2266
	Overall height when mast lifted to highest (门架上升至最高整车高度)	H 4	m	2636	2636	2636
	Wheelbase (轴距)	Y	m	1551	1551	1551
	Fork size (货叉尺寸)		m	1070*3	1070*3	1070*4

			m	5*100	5*100	0*100
	Adjustable range of fork outside width (货叉外侧宽度可调范围)	R	m m	210-700	210-700	210-700
	Fork height when fork lowered to lowest (货叉降至最低高度)	S	m m	60	60	65
	Min ground clearance (最小离地间隙)		m m	55	55	55
	Theoretical Width of minimum aisle for right-angle stacking (1200x1000) (直角堆垛通道最小理论宽度)	As ts	m m	2564	2564	2564
	Minimum turning radius (最小转弯半径)	W a	m m	1903	1903	1903
	Overhead guard height (护顶架高度)		m m	2185	2185	2185
Tire (轮胎)	Front wheel(承载轮)		m m	210*85	210*85	210*85
	Drive wheel(驱动轮)		m m	230*75	230*75	230*75
	Caster wheel (平衡轮)		m m	130*55	130*55	130*55
	Wheel material (车轮类型)	polyurethane (聚氨酯)				
Electric components (动力形式)	Drive motor type (驱动电机类型)	AC series motor(交流电机)				
	Rated output (功率)		kw	2.2	2.2	2.2
	Hoist motor type (起升电机类型)	DC series motor (直流电机)				
	Rated output (功率)		kw	3	3	3
Battery (电池)	Voltage (电压)		V	24		
	Capacity (容量)		AH	270	270	270
	Weight (重量)		kg	245	245	245

Mast type 门架类型	Max fork height (货叉最大高度)	Mast lowered (门架降低时高度)	Mast extended (门架延伸时高度)	Free Lift (自由行程)
Simplex or Duplex mast (2stage)2 级门架	2000	1475	3036	
	2500	1725	3536	
	3000	1925	4036	
	3500	2225	4536	
	4000	2475	5036	
Triplex mast (3stage full free lift) 3 级门架自由行程	4000	1848	5013	1361/1366
	4500	2015	5513	1527/1532
	5000	2238	6033	1701/1706
	5500	2398	6511	1859/1864
	6000	2577	7035	2035/2040

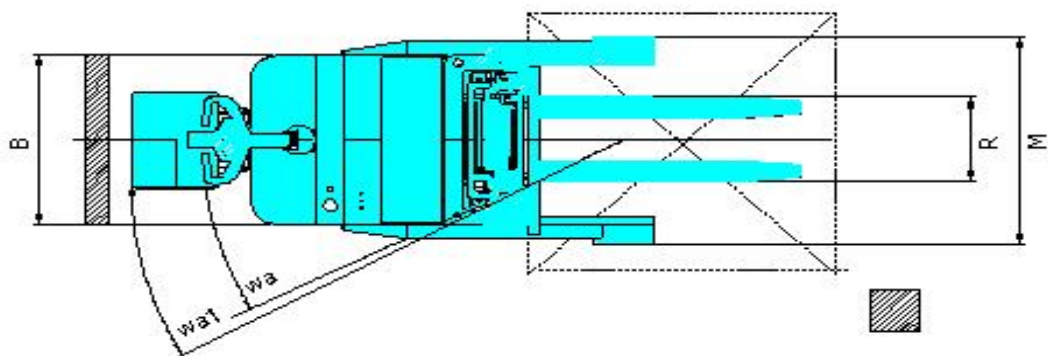
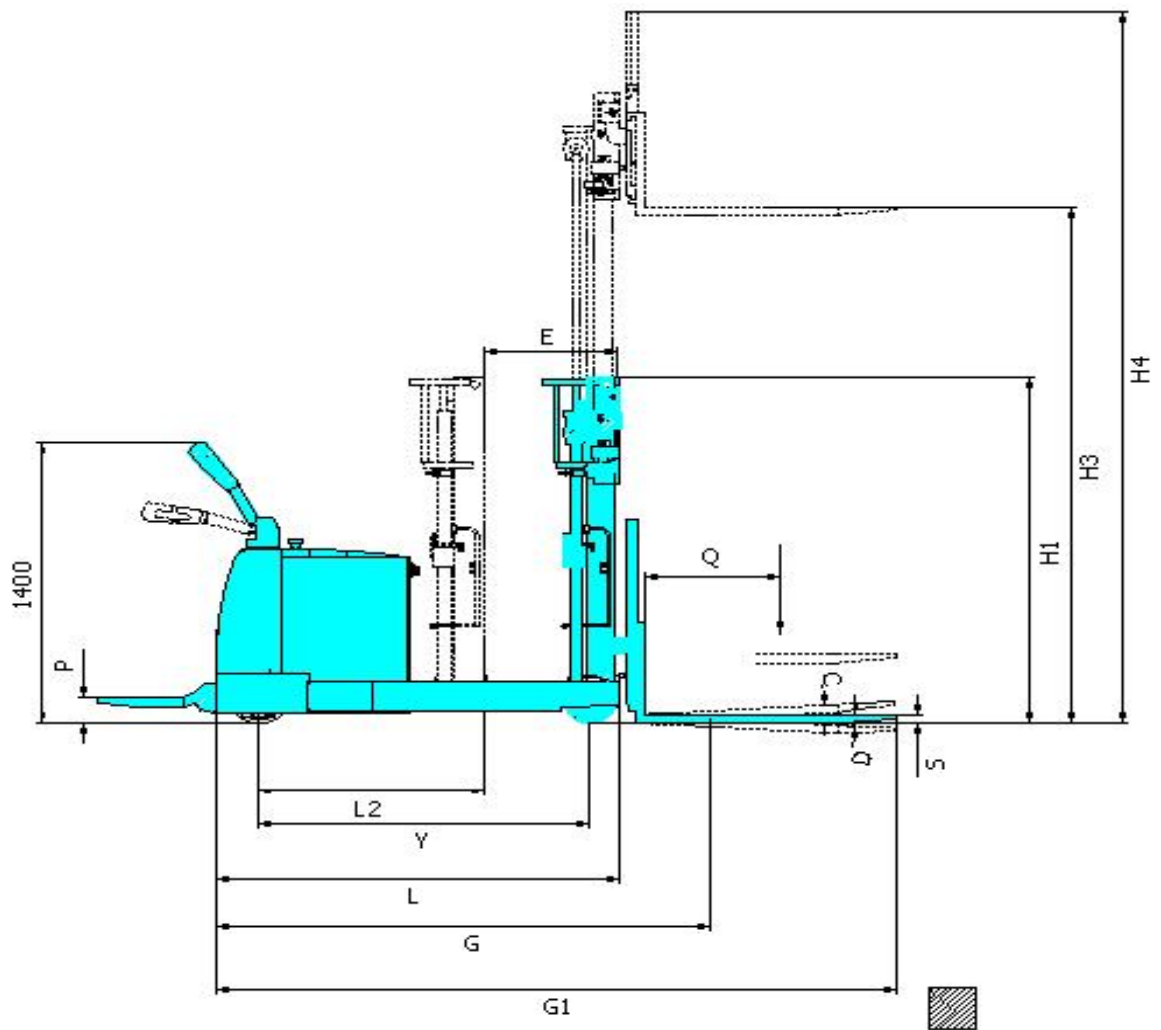


Electric Pallet Stacker

Model (型号)				KLR10 B	KLR15 B	KLR20 B
Performance (性能)	Maximum load capacity(负载能力)		kg	1000	1500	2000
	load center (载荷中心距)	Q	m	500	500	500
	Maximum lifting height (起升高度)	H 3	m	2500	1600	1600
	Reach length (前移距离)	E	m	470	570	570
	Tilting angle (up/down) (倾斜角度)	de g	°	3/5	3/5	3/5
	Travel speed (without load) (无负载行驶速度)		km /h	5.2	5.2	5.2
	Travel speed (with load) (负载行驶速度)		km /h	5.2	5.2	5.2
	Lifting speed (without load) (无负载起升速度)		m m/ s	115	115	115
	Lifting speed (with load)(负载起升速度)		m m/ s	92	92	92
	Lowering speed (without load)(无负载下降速度)		m m/ s	173	173	173
	Lowering speed (with load)(负载下降速度)		m m/ s	530	530	530
	Gradeability(without load) (无负载最大爬坡能力)		%	8	8	8
	Gradeability(with load)(负载最大爬坡能力)		%	5	5	5
	Service weight(with battery) (含电池重量)		kg	2295	2325	2325
Dimensions (尺寸)	Overall length of frame excluding fork length & mast reach length (整车长度) (门架没前移不含货叉)	L	m	1527	1880	1880
	Overall length including fork length excluding mast reach length (整车长度) (门架没前移含货叉)	G	m	2134	2394	2394
	Overall length including mast reach length (门架前移后整车长度)	G 1	m	2649	2999	2999
	Overall width of frame(整车宽度)	B	m	1034	1034	1034
	Overall height when mast lowered to lowest (门架降至最低整车高度)	H 1	m	1725	2266	2266
	Overall height when mast lifted to highest (门架上升至最高整车高度)	H 2	m	3500	2636	2636
	Wheelbase (轴距)	Y	m	1212	1551	1551
	Fork size (货叉尺寸)		m	1070*3 5*100	1070*3 5*100	1070*4 0*100

	Adjustable range of fork outside width (货叉外侧宽度可调范围)	R	m	210-700	210-700	210-700
	Fork height when fork lowered to lowest (货叉降至最低高度)	S	m	60	60	65
	Min ground clearance (最小离地间隙)		m	55	55	55
	Theoretical Width of minimum aisle for right-angle stacking (1200x1000) (直角堆垛通道最小理论宽度)	As	m	2298	2532	2532
	Minimum turning radius (最小转弯半径)	Wa	m	1566	1902	1902
	Overhead guard height (护顶架高度)		m	2185	2185	2185
Tire (轮胎)	Front wheel(承载轮)		m	210*85	210*85	210*85
	Drive wheel(驱动轮)		m	230*75	230*75	230*75
	Caster wheel (平衡轮)		m	130*55	130*55	130*55
	Wheel material (车轮类型)	polyurethane (聚氨酯)				
Electric al components (动力形式)	Drive motor type (驱动电机类型)	AC series motor(交流电机)				
	Rated output (功率)		kw	2.2	2.2	2.2
	Hoist motor type (起升电机类型)	DC series motor (直流电机)				
	Rated output (功率)		kw	3	3	3
Battery (电池)	Voltage (电压)		V	24		
	Capacity (容量)		AH	270	270	270
	Weight (重量)		kg	245	245	245

Mast type 门架类型	Max fork height (货叉最大高度)	Mast lowered (门架降低时高度)	Mast extended (门架延伸时高度)	Free Lift (自由行程)
Simplex or Duplex mast (2stage)2 级门架	2000	1475	3036	
	2500	1725	3536	
	3000	1925	4036	
	3500	2225	4536	
	4000	2475	5036	
Triplex mast (3stage full free lift) 3 级门架自由行程	4000	1848	5013	1361/1366
	4500	2015	5513	1527/1532
	5000	2238	6033	1701/1706
	5500	2398	6511	1859/1864
	6000	2577	7035	2035/2040



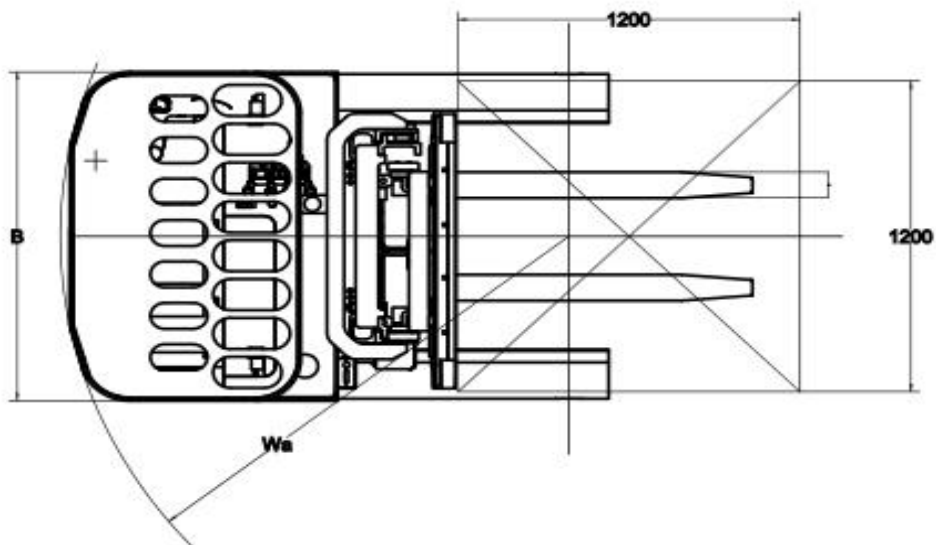
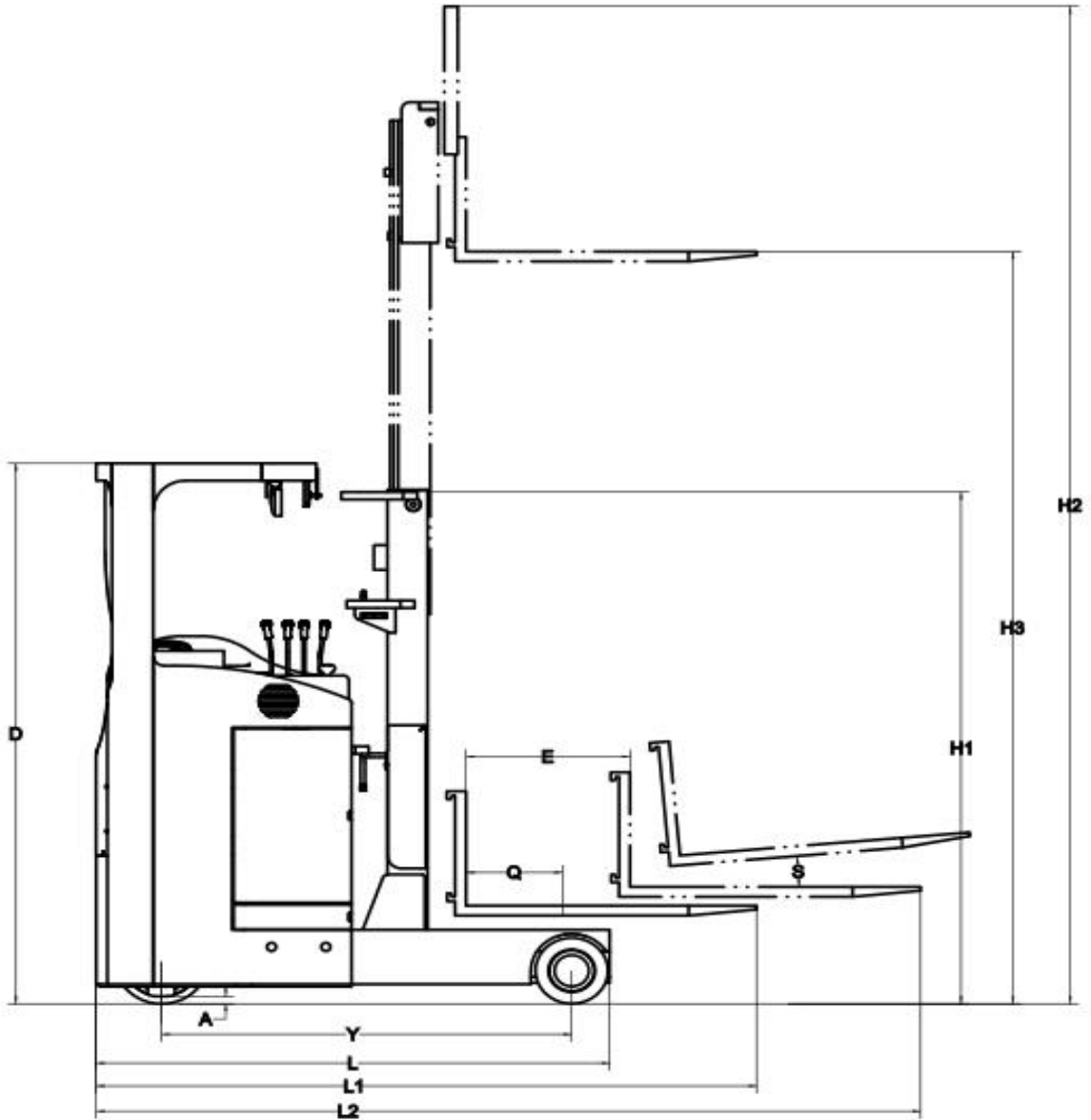
Electric Pallet Stacker

Model (型号)				KLR10 E	KLR15 E	KLR20 E
Performance (性能)	Maximum load capacity(负载能力)		kg	1000	1500	2000
	load center (载荷中心距)	Q	m	500	500	500
	Maximum lifting height (起升高度)	H3	m	1666	1666	1666
	Reach length (前移距离)	E	m	570	570	570

			m			
	Tilting angle (up/down) (倾斜角度)	deg	°	3/5	3/5	3/5
	Travel speed (without load) (无负载行驶速度)		km/h	5.2	5.2	5.2
	Travel speed (with load) (负载行驶速度)		km/h	5.2	5.2	5.2
	Lifting speed (without load) (无负载起升速度)		m/s	115	115	115
	Lifting speed (with load)(负载起升速度)		m/s	92	92	92
	Lowering speed (without load)(无负载下降速度)		m/s	173	173	173
	Lowering speed (with load)(负载下降速度)		m/s	530	530	530
	Gradeability(without load) (无负载最大爬坡能力)		%	8	8	8
	Gradeability(with load)(负载最大爬坡能力)		%	5	5	5
	Service weight(with battery) (含电池重量)		kg	2102	2102	2262
Dimensions (尺寸)	Overall length of frame excluding fork length & mast reach length (整车长度) (门架没前移不含货叉)	L	mm	1890	1890	1890
	Overall length of frame excluding fork length without mast reach with platform unfolded (整车长度) 门架没前移不含货叉踏板水平		mm	2307	2307	2307
	Overall length including fork length excluding mast reach length (整车长度) (门架没前移含货叉)	G	mm	2420	2420	2420
	Overall length including mast reach length (门架前移后整车长度)	G1	mm	2950	2950	2950
	Overall width of frame(整车宽度)	B	mm	1034	1034	1034
	Overall height when mast lowered to lowest (门架降至最低整车高度)	H1	mm	2266	2266	2266
	Overall height when mast lifted to highest (门架上升至最高整车高度)	H4	mm	2636	2636	2641
	Wheelbase (轴距)	Y	mm	1510	1510	1510
	Fork size (货叉尺寸)		mm	1070*35*100	1070*35*100	1070*40*100
	Adjustable range of fork outside width (货叉外侧宽度可调范围)	R	mm	210-700	210-700	210-700
	Fork height when fork lowered to lowest (货叉降至最低高度)	S	mm	60	60	65
	Min ground clearance (最小离地间隙)		mm	55	55	55

	Theoretical Width of minimum aisle for right-angle stacking (1200x1000) (直角堆垛通道最小理论宽度)	As ts	m m	2640	2640	2640
	Minimum turning radius (without platform) (不带踏板最小转弯半径)	W a	m m	1771	1771	1771
	Minimum turning radius (with platform) (带踏板最小转弯半径)	W a1	m m	2193	2193	2193
	Overhead guard height (护顶架高度)		m m	2215	2215	2215
Tire (轮胎)	Front wheel(承载轮)		m m	210*85	210*85	210*85
	Drive wheel(驱动轮)		m m	230*75	230*75	230*75
	Caster wheel (平衡轮)		m m	130*55	130*55	130*55
	Wheel material (车轮类型)	polyurethane (聚氨酯)				
Electric al components (动力形式)	Drive motor type (驱动电机类型)	AC series motor(交流电机)				
	Rated output (功率)		kw	1.5	1.5	1.5
	Hoist motor type (起升电机类型)	DC series motor (直流电机)				
	Rated output (功率)		kw	3	3	3
Battery (电池)	Voltage (电压)		V	24		
	Capacity (容量)		AH	240	240	240
	Weight (重量)		kg	195	195	222

Mast type 门架类型	Max fork height (货叉最大高度)	Mast lowered (门架降低时高度)	Mast extended (门架延伸时高度)	Free Lift (自由行程)
Simplex or Duplex mast (2stage)2 级门架	2000	1475	3036	
	2500	1725	3536	
	3000	1925	4036	
	3500	2225	4536	
	4000	2475	5036	
Triplex mast (3stage full free lift) 3 级门架自由行程	4000	1848	5013	1361/1366
	4500	2015	5513	1527/1532
	5000	2238	6033	1701/1706
	5500	2398	6511	1859/1864
	6000	2577	7035	2035/2040



Electric Pallet Stacker

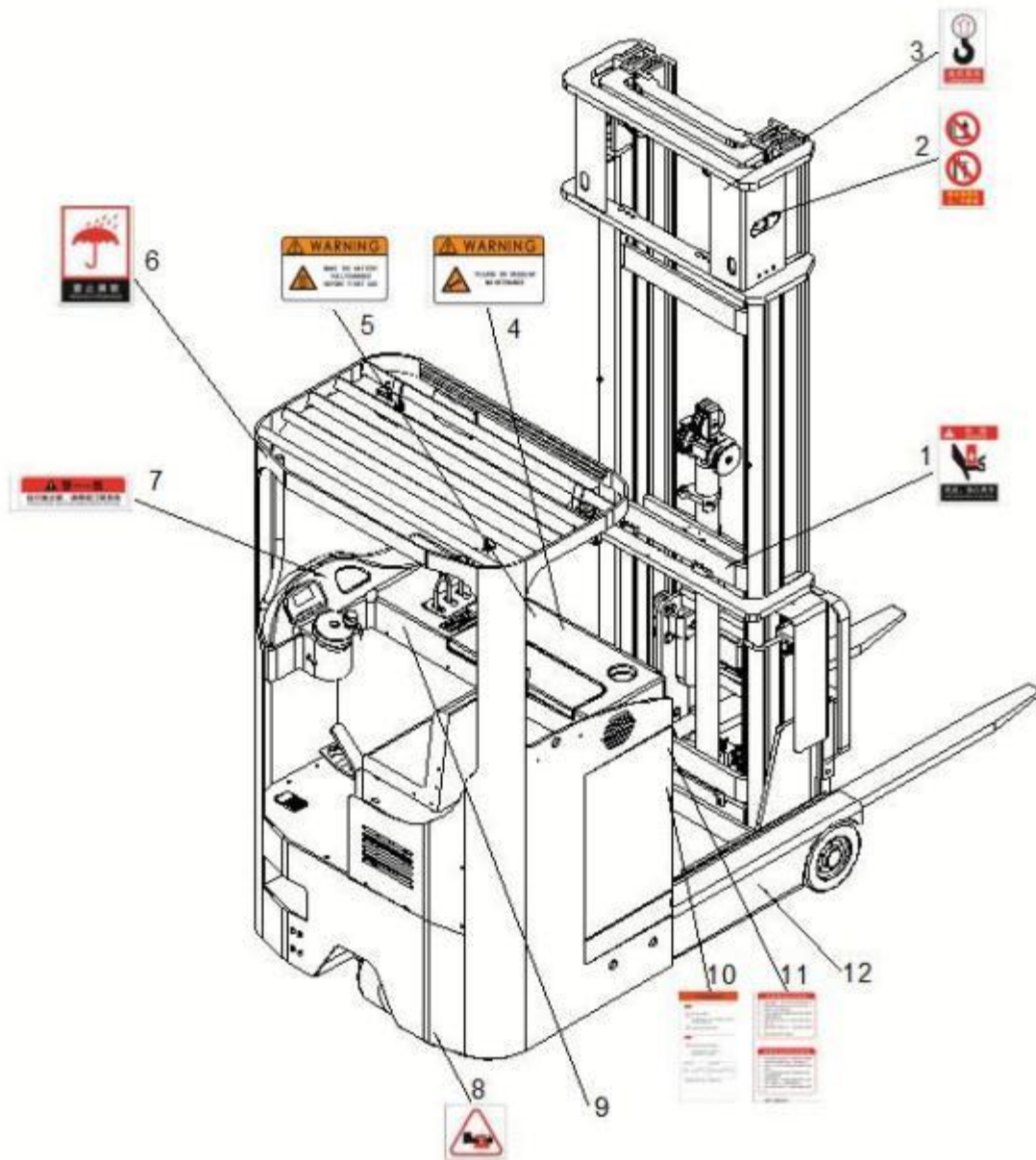
Model (型号)				KLR15H	KLR20H
Performance (性能)	Maximum load capacity(负载能力)		kg	1500	2000
	load center (载荷中心距)	Q	mm	500	500
	Maximum lifting height (起升高度)	H3	mm	3000	3000
	Reach length (前移距离)	E	mm	550	550
	Tilting angle (up/down) (倾斜角度)	deg	°	3/5	3/5
	Travel speed (without load) (无负载行驶速度)		km/h	8	8
	Travel speed (with load) (负载行驶速度)		km/h	7	7
	Lifting speed (without load) (无负载起升速度)		mm/s	244	244
	Lifting speed (with load)(负载起升速度)		mm/s	94	94
	Lowering speed (without load)(无负载下降速度)		mm/s	224	224
	Lowering speed (with load)(负载下降速度)		mm/s	700	700
	Gradeability(without load) (无负载最大爬坡能力)		%	15	15
	Gradeability(with load)(负载最大爬坡能力)		%	8	8
	Service weight(with battery) (含电池重量)		kg	2430	3020
Dimensions (尺寸)	Overall length of frame excluding fork length & mast reach length (整车长度) (门架没前移不含货叉)	L	mm	1890	1890
	Overall length including fork length excluding mast reach length (整车长度) (门架没前移含货叉)	G	mm	2479	2479
	Overall length including mast reach length (门架前移后整车长度)	G1	mm	3029	3029
	Overall width of frame(整车宽度)	B	mm	1270	1270
	Overall height when mast lowered to lowest (门架降至最低整车高度)	H1	mm	2084	2084
	Overall height when mast lifted to highest (门架上升至最高整车高度)	H4	mm	4045	4045
	Wheelbase (轴距)	Y	mm	1456	1456
	Fork size (货叉尺寸)		mm	1070*35*100	1070*40*100
	Adjustable range of fork outside width (货叉外侧宽度可调范围)	R	mm	210-820	210-820
	Fork height when fork lowered to lowest (货叉降至最低高度)	S	mm	60	65
	Min ground clearance (最小离地间隙)		mm	30	30
	Theoretical Width of minimum aisle for right-angle stacking (1200x1000) (直角堆垛通道最小理论宽度)	As ts	mm	2673	2673
	Minimum turning radius (最小转弯半径)	W a	mm	1783	1783
	Overhead guard height (护顶架高度)		mm	2190	2190

Tire (轮胎)	Front wheel(承载轮)		mm	267*114	267*114
	Drive wheel(驱动轮)		mm	340*130	340*130
	Wheel material (车轮类型)	polyurethane (聚氨酯)			
Electrical components (动力形式)	Drive motor type (驱动电机类型)	AC series motor(交流电机)			
	Rated output (功率)		kw	5	
	Hoist motor type (起升电机类型)	DC series motor (直流电机)			
	Rated output (功率)		kw	6.3	
Battery (电池)	Voltage (电压)		V	48	
	Capacity (容量)		AH	325	440
	Weight (重量)		kg	600	740

Mast type 门架类型	Max fork height (货叉最大高度)	Mast lowered (门架降低时高度)	Mast extended (门架延伸时高度)	Free Lift (自由行程)
Simplex or Duplex mast (2stage)2级门架	2500	1834	3545	
	3000	2084	4045	
	3500	2334	4545	
	4000	2634	5045	
	4500	2884	5545	
Triplex mast (3stage full free lift) 3级门架自由行程	4000	2034	5071	1326
	4500	2184	5537	1492
	5000	2334	6011	1666
	5500	2534	6569	1824
	6000	2734	7045	2000
	6500	2934	7515	2170
	7000	3084	8085	2340
7500	3284	8495	2500	

3. Description of safety devices and safety warning signs

(A) Location and description of the safety signs



1	Beware of pinched hands sign	5	New car charging sign before use	9	nameplate
2	Do not stay up and down the fork	6	No rain signs	10	Battery maintenance sign
3	Lifting sign	7	Warning	11	Charging machine identification
4	Regular maintenance sign	8	Beware of foot-pinch sign	12	VIN

(b) Safety device

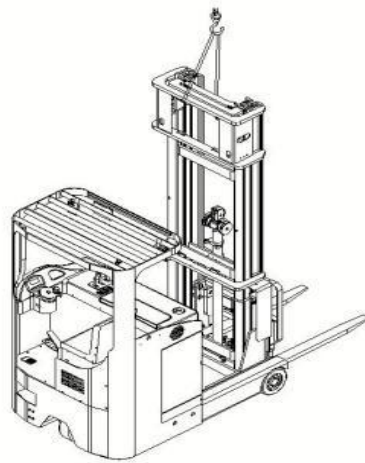
This stacker has a key switch (11) to stop all functions and fails electromagnetic braking. After checking the function of the controller, pull up the switch to operate the stacker.

If you do not operate this stacker, to prevent unauthorized use, press the emergency stop switch (27).

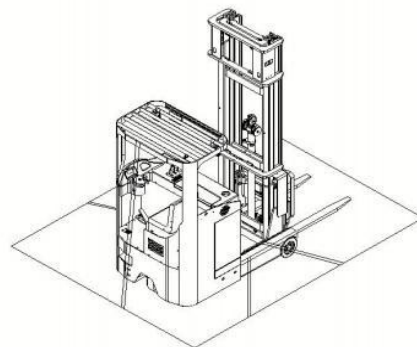
4. Storage and transportation

(a) Transport

Remove the goods during transportation, drop the fork to the lowest level and press the emergency stop switch and close the key switch. Use professional lifting equipment as shown in the figure Safe and fixed vehicle;



During the transportation process, the forklift truck should be firmly fixed in the transport vehicle;



(b) Storage

Remove the goods during storage, drop the fork to the lowest position, recover the mast, press the emergency stop switch, close the key switch and pull out. Note: For the first time after long-term storage, the vehicle performance must be checked and tested before use.

5. Description of the nameplate and the load curve

KINLIFT		ELECTRIC PALLET STACKER	
Model	<input type="text"/>	Configuration No.	<input type="text"/>
Rated capacity	<input type="text"/>	TotalWeight	<input type="text"/>
RatedVoltage/ Capacity(5h)	<input type="text"/>	Total Weigh (without attery)	<input type="text"/>
Rated Power	<input type="text"/>	Battery Weight (Max)	<input type="text"/>
Serial No.	<input type="text"/>	Battery weight (Min)	<input type="text"/>
		The Year of Construction	<input type="text"/>

JIANGSU KING-LIFT EQUIPMENT.,LTD.
 ADD:Jiexi Industrial park, Jiepai Town, Danyang City,
 Jiangsu Province, 212323, China

The configuration of each car may not be the same. Please be sure to check the nameplate to confirm its attributes before using it.

KLR-C Load Capacity Chart						
Lift Height (mm)	Load Center at 500mm(kg)			Load Center at 600mm(kg)		
	KLR15C	KLR20C	KLR25C	KLR15C	KLR20C	KLR25C
5000	1500	2000	2500	1300	1800	2300
5500	1300	1800	2300	1100	1600	2100
6000	1100	1600	2100	900	1400	1900
6500	900	1400	1900	700	1200	1700
7000		1200	1700		1000	1500
7500		1000	1500		800	1300
8000			1300			1100
8500			1100			900
9000			700			500
9500			500			300
10000			300			100

When the height of the lift increases, the load capacity of the vehicle decreases accordingly. The load plot represents the rated lifting weight for the different lifting heights.

(1) The configuration of the vehicle changes with the customer's order. Before using the vehicle, please check the load curve diagram to confirm the carrying capacity of the vehicle.

(2) The curve parameters on the load curve diagram shall correspond to the compact and uniform cargo, and shall not exceed the load limit. Otherwise, it will affect the stability of the vehicle and the strength of the relevant parts.

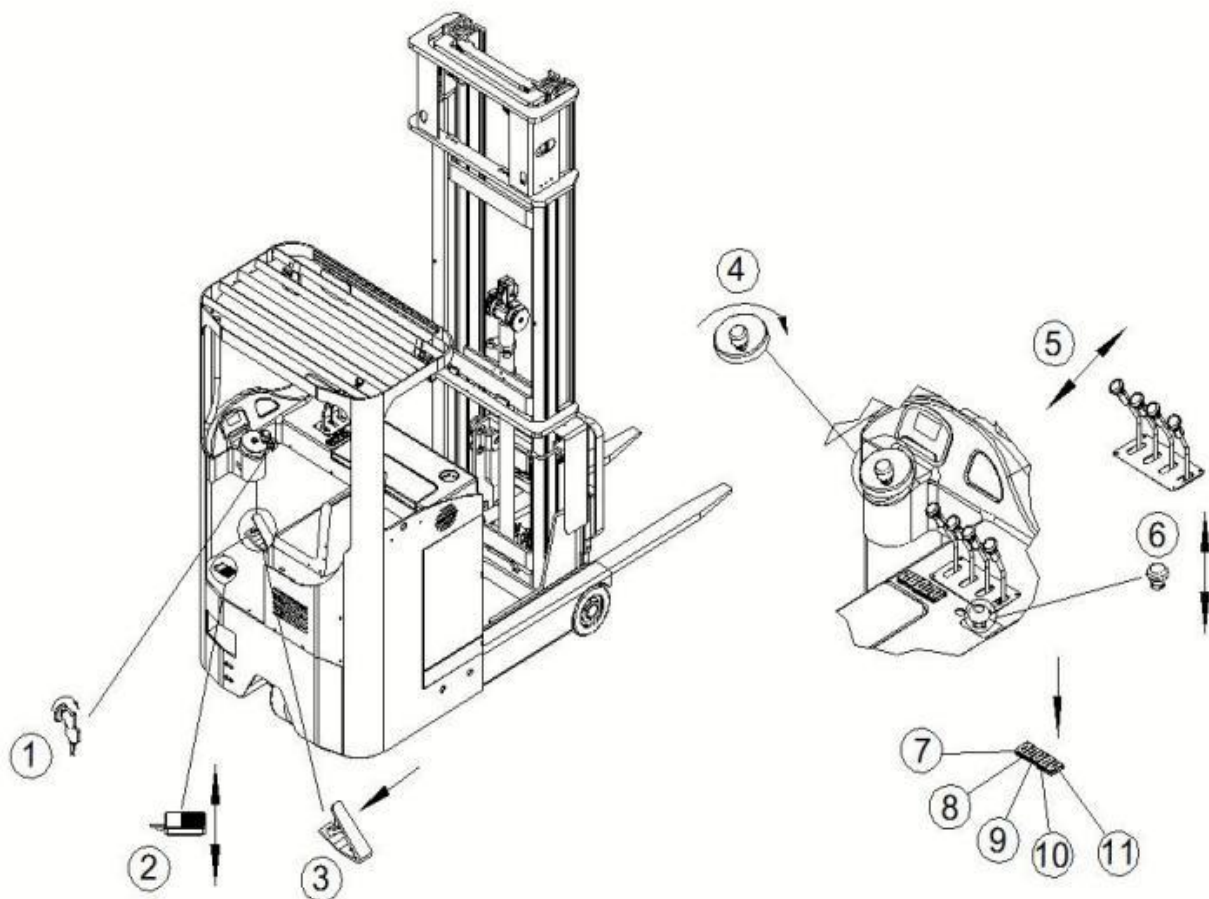
6. Operation instructions

1. If there is damage during transportation, do not continue to use it, please contact the dealer immediately.

2. Lube oil and hydraulic oil have been added and filled before delivery.

3. After the battery is charged, please check the height and density of the electrolyte.

4. The charger should be ready to prepare for the future charging.



Power is turned on or off

Rotate the key switch (1) to the right and start it; (1) to the left (power is off).

Note: The emergency stop switch must be pulled up to start the forklift truck
Emergency braking

When the emergency stop button (6) is pressed, the forklift is power off;

Pull up the emergency stop button (6) and power the forklift.

Travel

Forward gear: press the warping switch (7) forward, press the pedal accelerator (5) and the forklift forward;

Backward gear: press the warping switch (7) backward, press the pedal accelerator (5) and the forklift backward;

Stop: the warping switch (7) is in the initial state and the forklift cannot move.

Turn

Turn the steering wheel while driving (4) to achieve the forklift steering.

Stop a vehicle by applying thebrake

During driving, step on the foot switch (2) and brake the forklift.

Horn

Press the warping switch (11) and the horn calls; release the switch (11) and the horn stops calling.

Headlight

Forward button switch (9), the headlight on, press the button back (9), switch reset, the headlight off.

Turn signal

Press button switch (8) forward, left turn signal lights up; Press button switch (8) backward, right turn signal lights up; the button switch is reset, the signal lights goes out.

Cooling fan

Push button switch (10) forward to turn on the cooling fan; push button switch (10) backward, switch reset, cooling fan turned off.

Fork operating

Push lift operating lever forward to lower the fork; Push lift operating lever backward to lift the fork.

Push Mast moving forward and backward operating lever forward, the mast move forward; Push the lever backward, the mast move backward.

Push tilt operating lever forward, the fork will tilt forward; push it backward, the fork will tilt backward.

Push side-shifter lever forward, the fork will move to the left; push it backward, the fork will move to right.

Note: The operation lever (5) from left to right is lift operating lever, mast moving forward and backward lever, tilting operating lever, side-shifter lever.

7. Preparation work before driving

Before operation, the driver shall wear work clothes in strict accordance with the regulations, including shirtless, barefoot, wearing high-heeled shoes and sandals, including ceiling and surroundings affecting control and sight are all strictly forbidden, and perform technical inspection of the vehicle.

Operation and precautions in starting and driving

1. Before driving, the driver should first check and clean up the site and the aisle, to make them suitable for forklift operation and driving.
2. After the driver gets on the forklift, he should first fasten his seat belt, and then carry out other operations.
3. When starting, you should first twist the key, and then step on the foot switch with your foot.
4. When driving, it should gradually accelerate and do not allow low speed driving for a long time; when meeting or yielding to other forklift, the forklift without load should give the way to the forklift with load.
5. Avoid sudden start, rapid braking, sudden reversing, fast turn, which may cause roll forward or to both sides, driver should pay special attention to these.
6. To drive the forklift forward or backward, just use your foot to step on the foot switch, and push the control handle forward or backward.
7. To lift the goods, pull the lift operating lever backward.
8. When the fork move to a height of 2 meters, the body of the operator shall not go beyond the scope of the overhead guard.
9. When lowering the cargo, only need to push the lift operating lever forward.
10. Honk the horn when starting and turning. Slow down and pay attention to safety when turning, going downhill, on uneven roads or passing through narrow aisle.
11. when driving, pay attention to pedestrians, obstacles and potholes, and pay attention to the top clearance of the car. It is strictly prohibited to drive on soft ground, uneven ground and platforms and scaffolding with unknown safety carrying capacity. Do not pass through exposed cables, pipes and grooves above 5cm.
12. When the working voltage is lower than the minimum limit voltage of the vehicle, it should be stopped and charged in time.
13. If any abnormality is found in the driving, stop immediately and the fault should be rectified promptly; it's prohibit to carry people on the fork; it's strictly prohibited to drive with fault.

Work after parking

1. After the forklift is used, the whole forklift should be cleaned in time, and parked in the appropriate place, pay attention to anti-freezing, avoid the sun, rain.
2. The electric lock should be closed, press the emergency power off button, drop the fork to the ground, and shrink the piston rod into the oil cylinder.
3. Clean and check the battery, supplement distilled water, check and adjust the specific gravity of the electrolyte; check the battery voltage and charge timely; charge immediately when the **Battery voltage is less than the minimum limit voltage.**
4. Check the hydraulic system of the oil pipe, joint, oil cylinder, distribution valve, oil tank and other leakage phenomenon.
5. Do a good job of shift work, complete the maintenance project, especially to do a good job in the maintenance of the mechanical complete equipment, master its technical state.

3. Battery

Maintenance

Check the density of the electrolyte every week, and add the electrolyte in time after charging. Long-time charging will reduce the electrolyte. Keep the battery surface clean and dry. To prevent the electrolyte from eroding the battery box, causing leakage. Garbage and tap water can cause leaks and reduce battery performance.

Check up

Check the charging status of the battery, through the gravity meter, the density of the electrolyte shall not be less than 1.160 (90% charging capacity)

1.260~ 1.280	100%
1.230~ 1.250	75%
1.200~ 1.220	50%
1.170~ 1.190	25%
1.140~ 1.160	90%

Battery charging and replacement

1. The battery charging station must be set in the specified area. Charging stations must be equipped with equipment for flushing and neutralization of the overflow electrolyte, fire fighting facilities, measures to prevent vehicle damage to the charging devices, and appropriate ventilation facilities to disperse the gas discharged from the battery.
2. No smoking and a sign warning in the charging area.
3. Only trained and approved personnel are allowed to replace or charge the battery. Battery maintenance personnel must wear protective clothing.
4. All the battery replacement work must be carried out according to the manufacturer's instructions.
5. When reinstalling the battery, measures must be taken to make the battery correctly connected, positioned and fixed.
6. Do not place tools and other metal items on the top of the uncovered battery.

7. Without special approval (e. g., a vehicle manufacturer), electric vehicles shall not be replaced with batteries of different voltages, weights or sizes. Battery, as specified by the manufacturer, must be used.

8. Must have a safe battery replacement device. Insulated boom must be used when lifting batteries with lifting equipment.

9. If the use of the ring chain gourd, must be equipped with a chain box. If the hand gourd is used, the uncovered battery must be covered with a layer of rubber board or other nonconductive materials to prevent the short circuit of the connecting line or wiring terminal between the chain and the single compartment of the battery.

4. Safe code

Operating safety rules for users and drivers

Suitable for users

The so-called user refers to the owner of the vehicle or the individual or enterprise.

Passenger

Vehicles are not allowed to carry passengers except for the special passenger seat. Passengers are prohibited from boarding in lifting facilities or AIDS.

The use of vehicles

1. The vehicle shall not exceed the rated capacity specified by the manufacturer when used.
2. Without the approval of the manufacturer, no design modification shall be made, and no any object shall be added to the car, so as not to affect the ability and operation safety of the vehicle.
3. Any modification caused by the use of accessory devices shall not reduce the safety and comply with the requirements of this regulation. After the accessory, the vehicle's capacity, operation and maintenance signs, labels or patterns must be changed accordingly.
4. Users must ensure that all signs are in the specified position.

Stability

Factors that may affect stability are ground and floor conditions, slope, speed, load, battery weight, dynamic and static forces, and judgment training of the driver.

Aisle and the stacking site

1. The ground of the work site must have sufficient carrying capacity, and the maintenance must be strengthened so that it does not affect the safe operation of the vehicle.
2. The transport aisle of the vehicle must have a good vision and easy to turn, no slopes, steep slopes, narrow aisle and low roof. The outline or boundaries of the channel must be clear.
3. In the aisle that may encounter pedestrian vehicles, the width of the passageway must be adjusted accordingly.
4. It is recommended that the slope of the aisle should not exceed 8%, and the top of the slope and the bottom of the slope must be smooth transition to avoid load vibration or collision between the bottom of the vehicle and the road surface. A signage are recommended when the slope exceeds 8%.
5. If the load blocks the line of sight when the vehicle is in the operation (transport) state, the load must be located behind the running direction of the vehicle. For example, under certain conditions (stacking and climbing), when the load is required to be in front of the vehicle, and

the vehicle must be driven with extreme caution. It must be noted that ancillary (auxiliary) facilities or auxiliary personnel should be provided if required by operating conditions.

6. Aisle, roads, corridor, floor or ramp must be in good working condition to prevent damage to the vehicle or load.

7. The dangerous state, including the top obstacle danger, must be marked in the prominent position.

8. Fire access, upstairs passage and fire equipment configuration channel must be unblocked.

Suitable for drivers

The safe operation of motorized industrial vehicles largely depends on the way the driver controls the vehicle. The safety rules applicable to drivers have the following main aspects:

1. General rules

2. Handling load (lifting and stacking) rules

3. operation (driving) rules

4. The driver maintains the vehicle rules

5. Failure to follow these rules may lead to:

(A) Serious danger of harm to the driver or any other person.

(B) Damaged material.

general rule

1. Only those who have been trained and passed the assessment and obtained the operation certificate are allowed to drive motorized industrial vehicles.

2. Motor industrial vehicles are not allowed to carry passengers unless they are specially equipped with facilities for passengers.

3. The driver must pay special attention to the working environment, including other personnel nearby and fixed or moving objects, and must be wary of pedestrians at all times.

4. No matter whether the vehicle lifting parts are loaded or not, no one must be allowed to pass through or stand under the vehicle lifting parts.

5. Personnel, buildings, structures or equipment accidents must be immediately reported to the relevant personnel.

6. The driver shall not modify, add or remove the vehicle parts without approval, which will affect the performance of the vehicle.

7. The driver must use the vehicle within the scope of the vehicle. Vehicles with overhead guard and carriage must be used for high stacking operations and handling of high and multiple stacked unit goods.

8. When using pedestrian vehicles to carry out high stacking operations and to carry out high or multiple stacked unit goods, carriage must be used.

Load handling (lifting or stacking) rules

1. Load

Industrial vehicles or the association of industrial vehicles and equipment (when equipped with equipment) are only allowed to carry loads not greater than their rated lifting weight.

The lifting weight of the industrial vehicle with equipment may be less than the capacity indicated on the sign.

No means shall be used to increase the lifting weight of the vehicle, such as additional personnel or counterbalance weight.

At all times, especially when using the attachment, attention must be paid to the operation, positioning, fixation and transportation of the load. The vehicle equipped with the load should be used as a partial load when there is no load.

Only stable or safe loads must be handled, and extra care must be taken when handling ultra-long or ultra-high loads. Special care must be taken when handling the load with an uncertain center of gravity.

When picking the load with a fork:

- (a) The fork spacing must be suitable for the width of the transported load.
- (b) The fork must be inserted as deep as possible under the load. But note that the fork tip should not touch anything other than the load. The fork must then be raised to a sufficient height to pick up the load.
- (c) When handling high or multiple stacked units, a minimum backtilt (such as backward) must be used to stabilize the load and shall be taken with special care.
- (d) The descent must be careful when lowering the load. Minor (or limited) tilt forward must if possible to allow proper loading and pulling out forks.

2. Stacking

- (a) When stacking, the mast should be as backward as possible to ensure the load stability and slowly approach the cargo pile.

When the vehicle is near and facing the stack, the mast regulator must be integrated to a vertical position to lift the load to slightly above the stacking height, then the vehicle should move forward; or the forward forklift extends the fork and lowers the fork to lower the load.

- (b) The brake shall be operated when the vehicle has been lifted with great care and stability, whether the vehicle is empty or full. The loading must be secured.
- (c) After the stacking, withdraw the fork, and lower the fork to the running height, and remove the vehicle after confirming that the road is accessible. Vehicles with backward tilt must be used to stabilize the load.

3. Destacking

- (a) The vehicle slowly approaches the pile and stops when the fork tip is about 0.3 meters away from the pile.

The fork spacing must be adjusted to a width suitable for the load to be carried, and the weight of the load must be checked to ensure that the load is within the lifting weight range of the vehicle.

The fork must be raised vertically to locations where it can be inserted below the load.

- (b) Drive the vehicle with great care and stability, whether empty or full.
- (c) The fork must be inserted below the load as deep as possible, but note that the tip does not touch objects other than the load. The fork must then be raised to a high enough height to pick up the load. Further lift the fork to remove the load exactly from the cargo pile. If the mast can tilt backward, then the fork must be properly backward to stabilize the load.
- (d) Remove the load from the cargo stack after confirming that the road is clear.

Operating (driving) rules

1. General rules

- (a) The driver must drive the vehicle along the right side of the passage. The driver must be able to clearly see the running road, and pay attention to other vehicles, pedestrians and safety spacing.
- (b) The driver must obey all traffic rules, including the speed limit specified in the factory.
- (c) Must maintain a safe distance from the vehicle running in front.
- (d) The driver must always drive the vehicle in a serious and responsible manner. Sudden start, parking and high-speed turns are prohibited.
- (e) In addition to the operating condition requirements, it is recommended that the control lever should not be in the limit position when the vehicle starts. If starting at the extreme position is required, operate carefully.
- (f) The load or bearing device must be maintained at an operating height during the vehicle operation and, if possible, the vehicle shall be backward. No loading shall be lifted except for stacking operations. This provision does not apply to vehicles specifically designed to operate with lifting loads.
- (g) In the operational (i. e. transport) state, if the load hinders the line of sight, the load must be located behind the vehicle running direction when the vehicle is running.
- (h) At intersections and other places where sight is blocked, the speed must be reduced and audible signal.
- (i) When the vehicle is motorized running with the lifting load, the steering device and brakes must be operated slowly and smoothly.
- (j) At intersections, blocked sections or dangerous situations, it shall not exceed other vehicles running in the same direction.
- (k) The driver must avoid the vehicle passing through soft objects to avoid causing item damage or personnel injury.
- (l) Do not place arms, legs or heads between the gantry posts or other moving parts of the vehicle.
- (m) When the vehicle is running, the driver shall not push his body out of the outer outline line of the vehicle body.
- (n) When turning, a warning signal must be given if there is any other vehicle or pedestrian nearby.
- (o) All requirements for ground bearing capacity must be observed.
- (p) Special attention must be paid to the capacity of the slopes and passage leading to the elevator (lift).

2. Speed

The speed must be commensurate to the personnel activity, visibility, road or ground conditions and load in the vehicle area. Special care must be taken when vehicles operating on slippery roads.

In any case, the speed must be controlled within safe parking limits.

3. When running on the ramp, the following rules must be observed:

- (a) It must be slowly up and down.
- (b) Except for side loading and no lifting vehicles, it is best to face the downhill direction when the vehicle is running.
- (c) Vehicles shall not turn on the slope or run across the ramp.

(d) Drivers must drive the forklift carefully when approaching the edge of a ramp, high platform or platform and maintain a distance of at least one tire width between the vehicle and edge of the platform or platform.

(e) When the uphill or downhill slope exceeds 8%, if possible, the lifting vehicles and platform stacking vehicles (except side bearing forklifts, off-road forklifts, trams and platform trucks) must make the loads facing the uphill direction while traveling.

(f) When operating on various ramps, the load and bearing device must be tilted backward (if possible) and only raised enough to pass the road surface and local obstacles.

4. Pass the gap

Sufficient access clearance for vehicles, drivers, and loads must be ensured before passing through aisles and doorways.

5. Battery charging and replacement

(a) All battery charging and replacement must be performed by trained and designated personnel as per the instructions of the battery or vehicle manufacturer. A driver may usually be assigned.

(b) The vehicle must be properly positioned and braking before charging or replacing the battery.

When charging, the exhaust cap must be in the correct position to prevent electrolyte splashing and ensure that the vent is effective. Open the cover of the battery (or compartment) to release gas and dissipate heat.

(c) Measures must be taken in the battery charging area to prevent open flame, spark or arc. No smoking. Tools and other metal items must be removed from the top of the uncapped storage battery.

(d) The upper part of the battery should be kept dry, the wiring terminal should be kept clean, coated with a little vaseline and tightened correctly. Batteries of different voltage, weight or sizes shall not be used instead of batteries on the original electric vehicles without approval.

(e) When reinstalling the battery, the battery must be placed in the correct position of the vehicle. It is forbidden to check the electrolyte liquid level of the battery with an open fire.

(f) When taking the solution from the acid altar, the acid altar tilt device or siphon must be used. When using concentrated sulfuric acid for electrolyte preparation, only add concentrated sulfuric acid to water, but not to concentrated sulfuric acid.

5. Maintenance

In order to ensure the normal use of forklifts, routine inspection is necessary

1. Check the battery capacity.

2. Lift the fork to the highest, check the hydraulic oil capacity of the tank, and need to add specific hydraulic oil.

Week check

1. Check the lifting chain, clean it up and lubricate it with oil.

2. Ensure that all the nuts and screws have been fully fastened.

Replace hydraulic oil

1. Replace the hydraulic oil every month, generally to 200 hours as a cycle, if the use is not frequent, can be changed once a year.

2. The process is as follows: first put the low forklift, open the oil outlet at the bottom of the tank of the hydraulic power unit, release the used hydraulic oil, close the oil outlet, then put

the hydraulic hose into the tank, press the red button of the oil pump, add the specific hydraulic oil to the tank, and to the specified height.

3. If the temperature is relatively low, use no. 46 hydraulic oil to start and stop the vehicle several times in order to remove the air from the system until the forklift starts.

Maintenance project

(a) All motor industrial vehicles must be inspected, lubricating, maintained and repaired according to the schedule of the following items, especially the maintenance instructions provided by the manufacturer.

(b) Only professional maintenance personnel shall allow the inspection, maintenance, adjustment and repair of industrial vehicles.

Brake, steering mechanism, control mechanism, warning device, lights, regulator and lifting overload protection device must be kept in a safe operation state.

(c) All parts and components of the lifting mechanism must be checked regularly and kept in safe operation condition.

(d) Safety protective racks and safety devices must be checked regularly and kept in safe operation condition.

(e) All hydraulic systems must be checked and maintained regularly. The cylinders, valves, and other similar components must be inspected to ensure that the internal and external leaks do not develop to a hazardous level.

(f) Batteries, motors, controllers and contactors, limit switches, protectors, conductors and connectors must be checked and maintained to keep them in good condition. Pay special attention to the electrical insulation state.

Check up

(a) If the vehicle finds any defect, wear or damage that can be a safety hazard, effective measures must be taken to repair the vehicle to be put back into use.

(b) The vehicle shall be maintained, lubricated and inspected according to the schedule. The data required for record must be preserved.

6. Common faults and troubleshooting methods

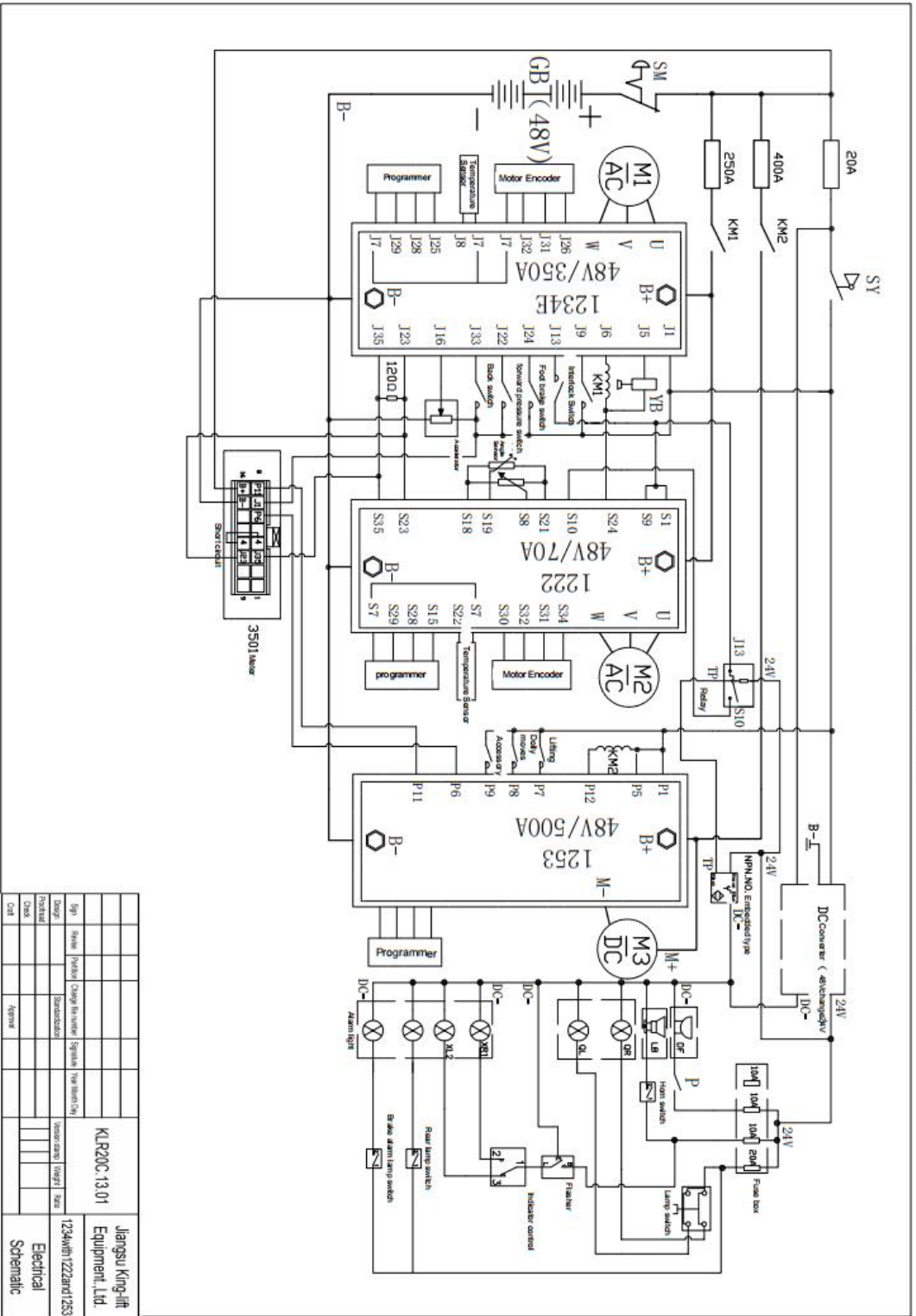
No	Faults	Cause	Eliminate method
1	Forklift not started (contactor not working)	① The control circuit fuse wire has been burned out	replace
		② The power switch is in bad contact or damaged	Repair or replace
		③ The main circuit fuse has been fused	replace
		④ The electrical lock switch is in bad contact or damaged	Repair or replace
		⑤ The battery connection is either loose or falling off	screw tight
	Forklift truck not started (contactor working)	① The brake does not engage, and the vehicle is in the braking state	Repair or replace
		② Walking motor excitation coil line break or poor line end	Repair or replace

		contact	
		③ Poor contact of the contactor contacts	Repair or replace
		④ MOSFET Tube circuit board has a fault	Repair or replace
2	Forklift can only forward (or backward)	① The contactor is in bad contact or burnt out	Repair or replace
		② The circuit board is faulty	Repair or replace
3	The forklift truck cannot stop while driving	① The contactor contact is damaged, and the moving contact is not reset	Emergency off the power and replace the contactor contacts
4	Brake failure	① The micro-switch installation bolt is loose or damaged	Adjust or tighten the bolts, or replace the micro-switch
		② Brake wiring is loose or the brake is damaged	Tighten the bolts or repair the brakes
		③ Brake brake disc wear	Replace the brake pad
5	Steering stuck	① Steering bearing damage	Replace the bearing
		② Lack of oil or excessive dust	Wash or replace the bearings
6	The drive wheel steering is heavy and noisy, and the motor is overloaded	① Gear and bearing have a foreign body stuck	Wash or change bearings
		② There is a gap in the bearing installation, or the ring falls off or the ring falls off	Reinstall it and adjust the clearance
		③ Damaged front wheel bearing	Replace the bearing
		① overload use	Reduce the load
		② The overflow valve pressure is too low	Turn up the pressure
		③ The lifting cylinder has an abnormal internal leak	Replace seals

7	The fork can't lift	④ The hydraulic oil is insufficient	Add a proper amount of filtered hydraulic oil
		⑤ Battery voltage is seriously insufficient	Battery charging
		⑥ The handle is not in the horizontal or vertical position, the oil pump motor is not energized	misoperation
		⑦ Oil pump motor is damaged	Repair or replace
		⑧ oil pump damaged	Repair or replace
		⑨ The lift button switch is damaged	Repair or replace
		⑩ The electric lock is not open or damaged	Repair or replace
8	The fork does not fall down after lifting	① Internal mast overload and deformation	Repair or replace
		② The outer mast is overloaded and deformed	Repair or replace
		③ The mast roller is stuck	Repair or adjust
		④ Mast guide rod is bent	Repair or straighten
		⑤ Back oil hole is blocked	Clean up
		⑥ The hydraulic station solenoid valve is out of control	Troubleshoot the solenoid valve
9	Battery end voltage reduction (after charging)	① Individual single-circuit batteries are damaged	Repair or replace
		② Low battery liquid level	Add electrolyte
		③ Impurities are present in the electrolyte	Change the electrolyte

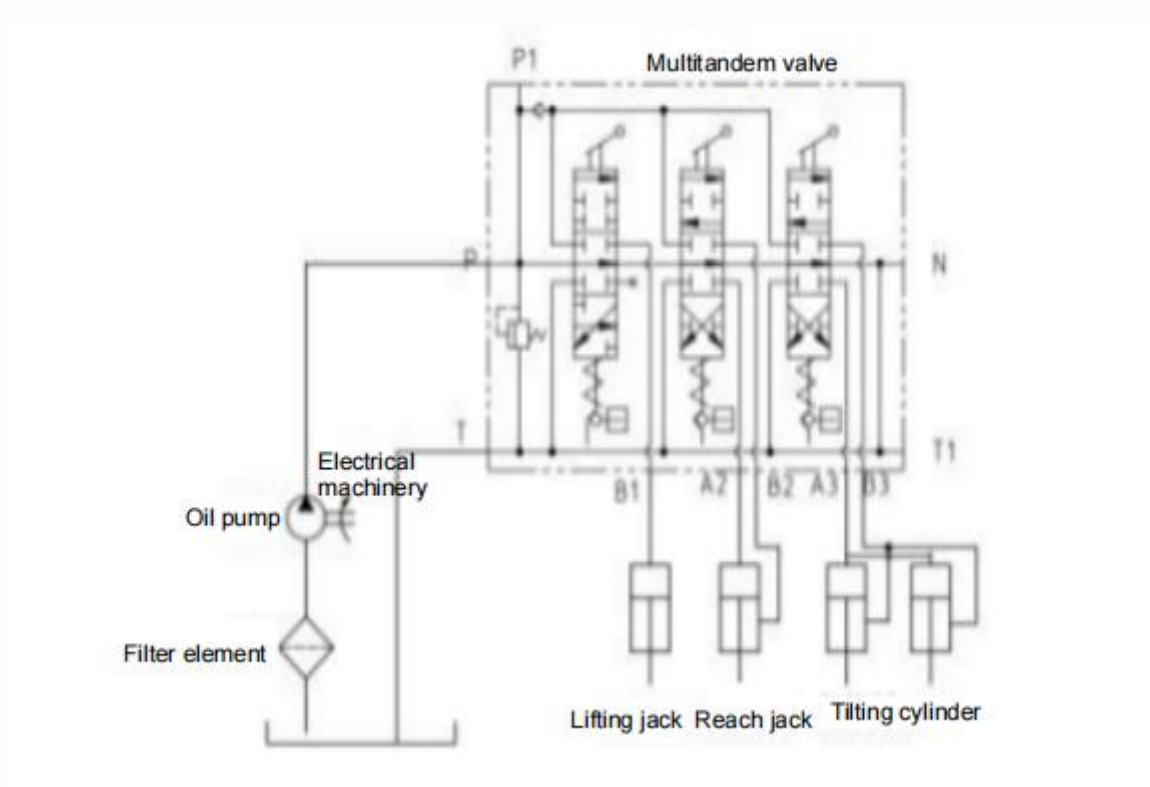
7.Schematic diagram

Electrical schematic diagram

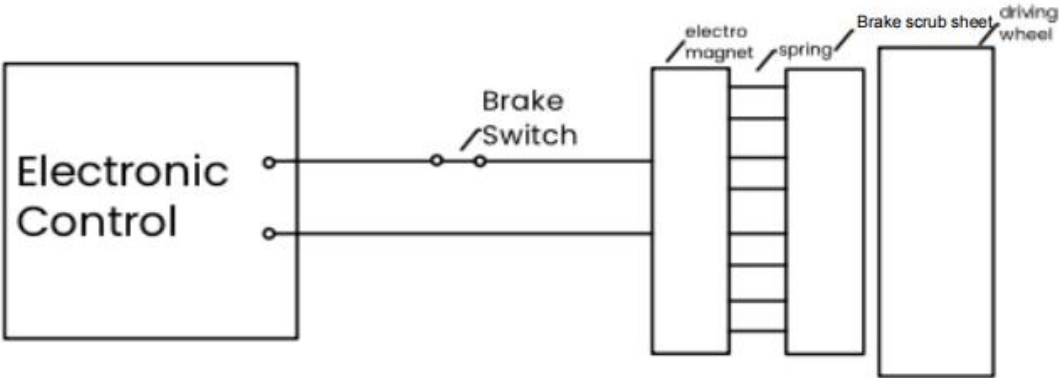


KLR200C-13.01							Jiangsu King-lift Equipment, Ltd.	
1234w/1222and 1253							Electrical Schematic	

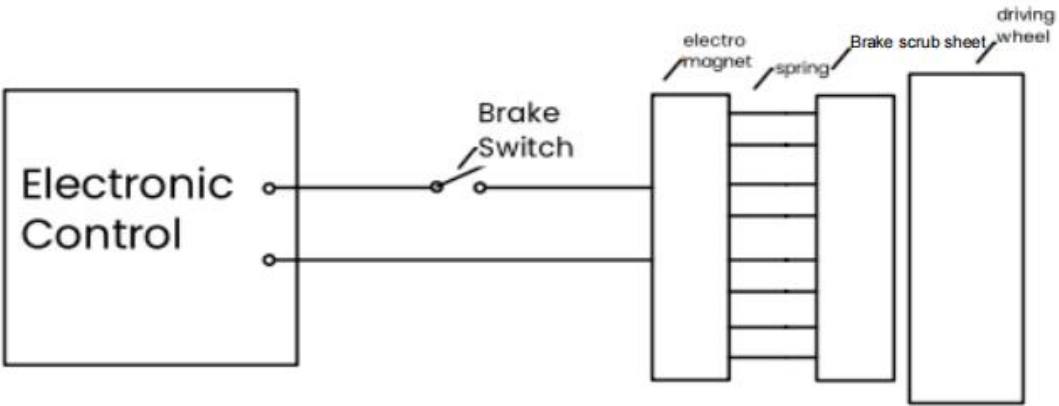
Hydraulic schematic diagram



Brake schematic diagram



Full vehicle condition



Parking brake condition