



HANGCHA Lithium-ion

Re-imagining POWER

X Series Lithium-ion Narrow Aisle Pantograph Reach Truck

with capacity of 3,000 to 4,500lbs



HANGCHA

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Making Material Handling Easier
SINCE 1956



EFFICIENT TRUCKS



The 3,000-4,500lb lithium-ion pantograph reach trucks are suitable for operations in narrow aisles and limited spaces. These trucks feature a high lift, large load capacity, pantograph, and a small turning radius. Using their advanced performance and technology, the reach trucks add to the efficiency of operations while maintaining reliability and a high level of safety. The X Series Lithium-ion Narrow Aisle Pantograph Reach Truck is the ideal tool for material handling in warehouses, supermarkets, and workshops.

Appearance

The X Series Lithium-ion Narrow Aisle Pantograph Reach Truck is designed to stack and retrieve goods efficiently in narrow warehouses and at high lift heights while still maintaining a lifting capacity of up to 4,500lbs. The exterior of this forklift is powder coated in a durable, easy to see, green finish that designates it as a lithium-ion model.

Stability

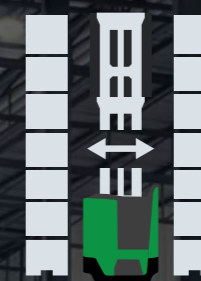
- The battery placed at the bottom of the chassis to create a low center of gravity. This allows the truck to have good stability.
- The four-pivot structure provides stability when the truck is being used to perform a high lift.



3000
~
4500
lbs Load Capacity



Reliable & Safe



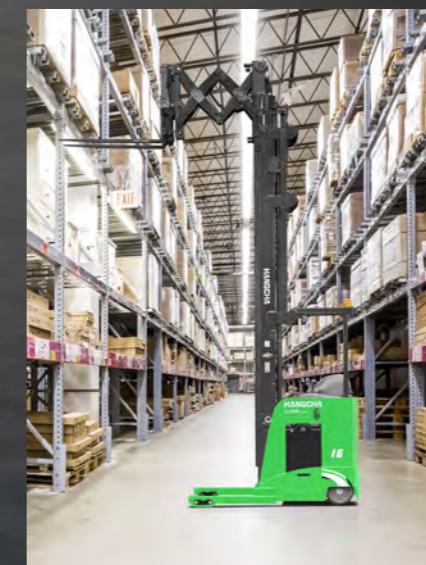
103.2"
Aisle Width



421"
Max. Lift Height

Highly Efficient

- The truck can operate in narrow aisles thanks to its small turning radius.
- Both a high-power pump motor and a silent gear pump (CONCENTRIC) are used to improve the lifting speed, lowering speed, and operating efficiency.
- With several power modes, the truck is able to adapt to different operating conditions.
- The regenerative braking system provides an increase in the truck's operating time.



Comfort

The hanging pedal alleviates operator fatigue when driving for a long period of time by being placed in a comfortable position for the operator.



The operator is able to get on and off the truck more comfortably thanks to the low step-on height of the reach truck's operator compartment.



The handle, backrest, instruments, and switches were designed with ergonomics in mind to make operations more comfortable and flexible.



The lifting system is optimized for the operator to have an excellent line of sight through the mast.



The lateral removal of the battery provides easier maintenance and allows for the battery to be swapped out when running in continuous operating conditions.



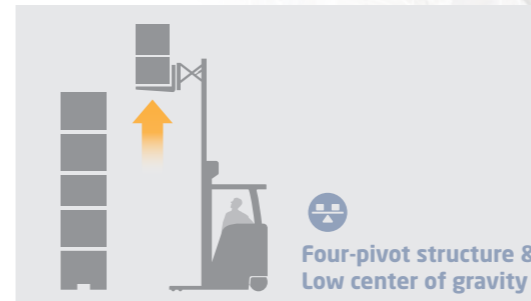
The control handle and backrest can be adjusted according to the operator's optimal driving position.

Reliability and Safety

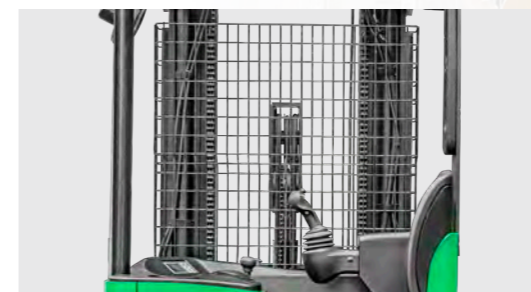
- The four-pivot structure, low center of gravity, and high strength of the main frame components are designed to withstand the maximum load capacity of the reach truck.
- The controller, connectors, battery plug, and cut-off switch are all parts from industry known suppliers to ensure reliability, performance, and ease of service.
- The ZF transmission, SCHABMULLER drive motor, and the efficient AC power system greatly improve the reliability and service life of the narrow aisle reach truck.
- The controller manipulates the truck's steering angle, lifting height, and traveling speed in unison to provide safer operations.



The newly designed, multi-function joystick has a unique shape and angled design helps to minimize hand movement and muscle fatigue.



With the pedal sensing system, the truck can be driven only if the driver stands on the pedal. If the operator takes their foot off the pedal, active braking is initiated to prevent an accident.



The Full Free Lift 3 Stage Mast provides great visibility for the operator and improves operations safety.



Maintenance

- The brushless AC motor is maintenance-free and significantly reduces the total cost of ownership.
- The maintenance hatch opens wide enough to enable easy repair, maintenance, and tuning of the equipment.
- The battery is maintenance-free meaning that the battery does not need to be watered or checked.
- The controller and electrical components are placed together in the chassis and are highly integrated.



The large-screen LCD display with fault self-diagnosis functions can accurately display information in harsh environments.

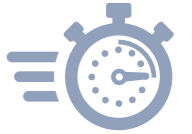


Advancement

- The electronic parking brake greatly improves the safety of the operator and the truck.
- The fast lifting and lowering speeds are highly efficient.
- The suspension system and hanging pedals improve operator comfort.
- The integrated mechanical, electrical, and hydraulic controls work in unison to regulate the speed of the truck when traveling and to move the forks more precisely and stably.
- The newly equipped AC control system supports longer working times by precisely managing and adjusting the performance of the truck.



High Efficiency

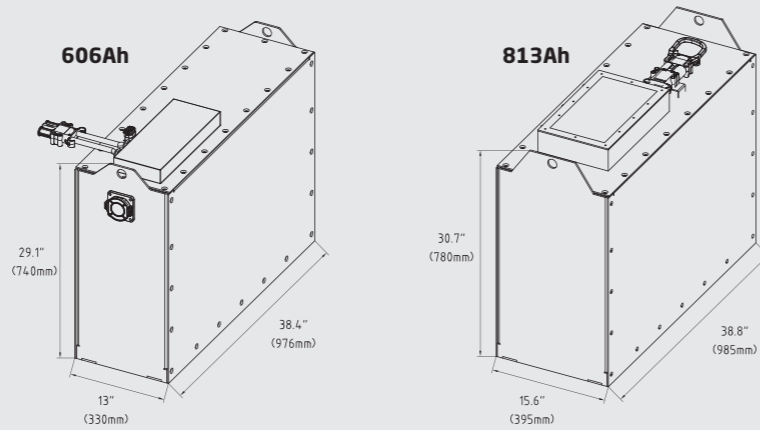


Standard Specification

- / AC Motor and Controller
- / Multi-Function Instrument Cluster
- / Electric Power Steering System
- / 198" (5.03m) Full Free-Lift Stage 3 Mast
- / Tilting Fork
- / Load Backrest
- / Overhead Guard
- / Soft Landing System
- / Safe Operating System
- / Automatically Decelerates when Cornering
- / Speed Automatic Limit when Mast High Lifting
- / Damper Pedal
- / Adjustable Backrest and Armrest
- / Battery Side Roll Out
- / Multi-Task Control Handle
- / Electro-Hydraulic Proportional Valve System
- / Polyurethane Tire
- / Headlights
- / Clipboard
- / Emergency Cut-Off Switch
- / Electric Horn
- / Static Strap
- / Electric Parking Brake
- / Strobe Light

CATL Lithium Iron Phosphate Battery Pack

- Integrated Battery Management System (BMS) continually monitors energy management and ensures reliable operation.
- HANGCHA provides these Lithium Iron Phosphate (LiFePO₄) battery packs with up to a 10 year or 20,000 hour warranty.
- See warranty certificate for specific warranty information on the Lithium Iron Phosphate battery packs.



Battery Capacity	Standard	Optional
Battery Capacity (V/Ah)	36V/606Ah	36V/813Ah
(kW·h)	21.82kW·h	29.27kW·h



Standard Charger (48V/200Ah)



Options

- / Charger
- / 813Ah Capacity Battery
- / Other Dimensions of Forks
- / Mast Shield
- / Widened or Heightened Load Backrest
- / Sideshifter
- / Blue Light
- / Rear Working Light
- / Cabin Ceiling Light
- / Overhead Fan
- / Camera System
- / 12V Power Plug
- / Freezer
- / Fire Extinguisher

Mast Specification

	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity at 24in/610mm			
			With Backrest	Without Backrest		SR14Li	SR16Li	SR18Li	SR20Li
			in(mm)	in(mm)		lb/kg	lb/kg	lb/kg	lb/kg
Full Free Lift 3 Stage Mast	198(5030)	92(2340)	239(6063)	239(6063)	50(1267)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	210(5330)	98(2490)	251(6363)	251(6363)	56(1417)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	240(6100)	107(2720)	281(7133)	281(7133)	65(1647)	3000(1361)	3500(1588)	4000(1814)	4000(1814)
	270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3500(1588)	3500(1588)	3500(1588)
	299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3000(1361)	3000(1361)	3000(1361)

With an integral sideshifter, subtract 220lb(100kg).

Mast Specification (HEAVY DUTY)

	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity at 24in/610mm			
			With Backrest	Without Backrest		SR14Li	SR16Li	SR18Li	SR20Li
			in(mm)	in(mm)		lb/kg	lb/kg	lb/kg	lb/kg
Full Free Lift 3 Stage Mast	270(6860)	119(3025)	311(7893)	311(7893)	77(1952)	3000(1361)	3500(1588)	4000(1814)	4500(2041)
	299(7600)	133(3380)	340(8633)	340(8633)	91(2307)	3000(1361)	3500(1588)	3835(1750)	4000(1814)
	321(8150)	140(3560)	362(9183)	362(9183)	98(2487)	3000(1361)	3500(1588)	3748(1700)	3835(1750)
	341(8660)	149(3785)	382(9693)	382(9693)	107(2712)	3000(1361)	3500(1588)	3527(1600)	3638(1650)
	366(9300)	160(4060)	407(10333)	407(10333)	118(2987)	3000(1361)	3307(1500)	3307(1500)	3417(1550)
	400(10160)	172(4365)	441(11193)	441(11193)	130(3292)	3000(1361)	3086(1400)	3086(1400)	3197(1450)
	421(10700)	179(4545)	462(11733)	462(11733)	137(3472)	2866(1300)	2866(1300)	2866(1300)	2976(1350)
	453(11500)	192.5(4890)	493.5(12533)	493.5(12533)	150(3817)	2425(1100)	2425(1100)	2425(1100)	2535(1150)

With an integral sideshifter, subtract 220lb(100kg).

X Series Lithium-ion Narrow Aisle Pantograph Single Reach Truck

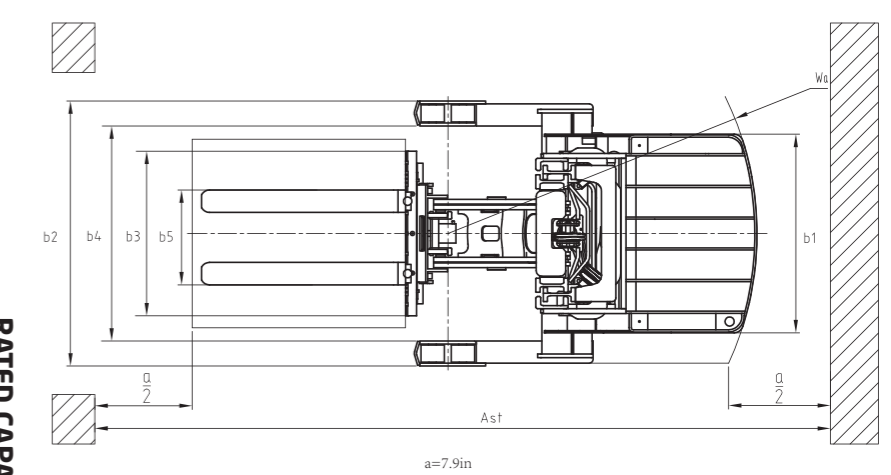
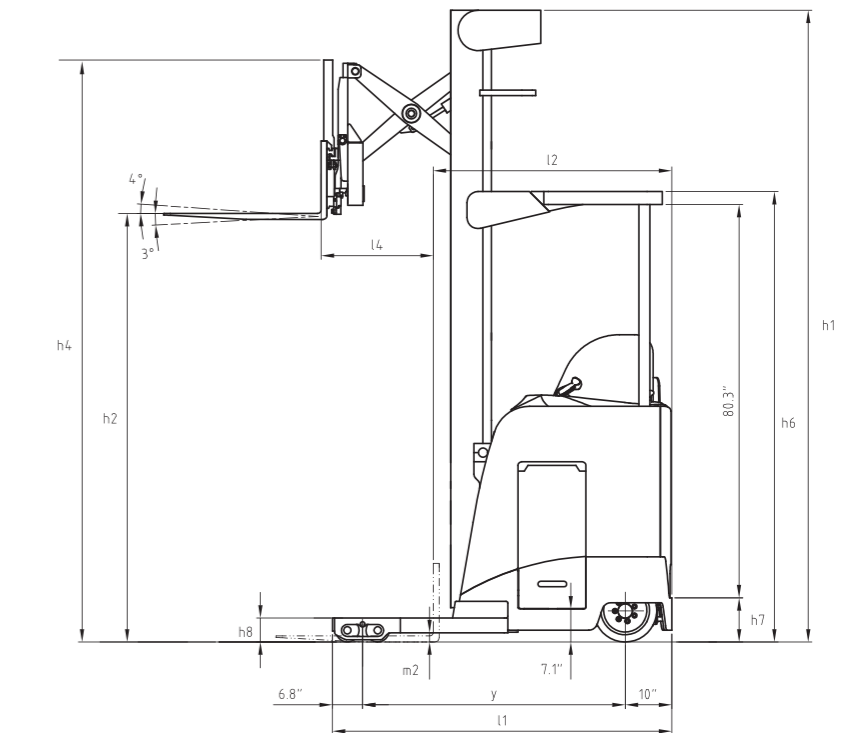
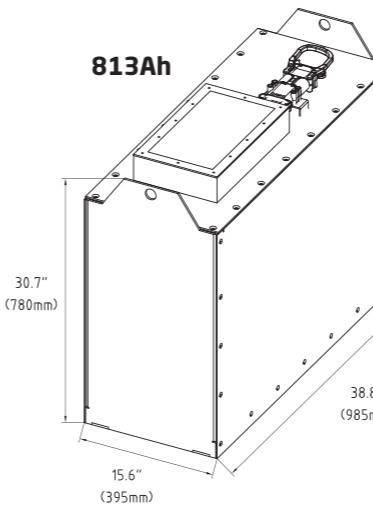
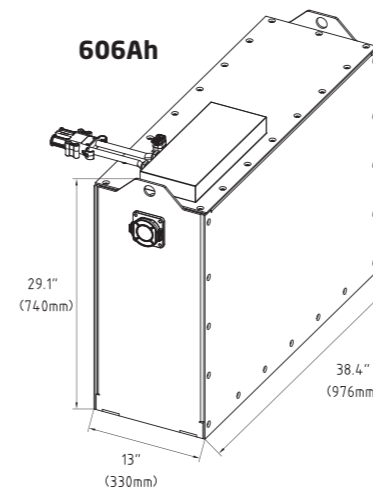
Distinguishing Parts	HANGCHA GROUP CO.,LTD.				
	Manufacturer	SR14Li	SR16Li	SR18Li	SR20Li
1.1	Manufacturer	HANGCHA GROUP CO.,LTD.			
	HCF Model	SR14Li	SR16Li	SR18Li	SR20Li
1.2	Manufacturer's Type Designation	CQD14-XD2-JI	CQD16-XD2-JI	CQD18-XD2-JI	CQD20-XD2-JI
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric			
1.4	Operator Type: hand, pedestrian, standing, seated, order-picker	Stand up			
1.5	Rated Capacity/Rated Load	Q (lb/kg)	3000 (1361)	3500 (1588)	4000 (1814)
1.6	Load Centre Distance	c (in/mm)	24 (600)		
1.8	Load Distance, centre of drive axle to fork	x (in/mm)	10.8 (274)		
1.9	Wheelbase	y (in/mm)	See See Table 1		
Weight	2.1	Service Weight, without battery	6725(3050)		7253 (3290)
	2.2	Axle Loading, laden front/rear with assemble retracted	6737(3056)/3580(1624) ¹⁾	7026(3187)/3732(1693) ¹⁾	7313(3317)/3887(1763) ¹⁾
	2.3	Axle Loading, unladen front/rear with assemble retracted	2826(1282)/4405(1998) ¹⁾		3034(1376)/4727(2144) ¹⁾
Tires & Chassis	3.1	Tires: solid rubber, superelastic, pneumatic, polyurethane	Polyurethane		
	3.2	Wheels Size, load	5x3.9(Ø127x99)		
	3.3	Wheels Size, drive	13.5x5.3(Ø343x135)		
	3.4	Wheels Size, caster	7.9x2.2(Ø200x56)		
Dimensions	4.1	Tilt of Mast/Fork Carriage Forward/Backward	α/β (°)		
	4.2	Height, mast lowered	h ₁ (in/mm)		
	4.3	Free Lift	h ₂ (in/mm)		
	4.4	Lift	h ₃ (in/mm)		
	4.5	Height, mast extended	h ₄ (in/mm)		
	4.7	Height of Overhead Guard	h ₅ (in/mm)		
	4.8	Stand Height	h ₇ (in/mm)		
	4.10	Height of Wheel Arms	h ₈ (in/mm)		
	4.19	Overall Length	l ₁ (in/mm)		
	4.20	Length to Face of Forks	l ₂ (in/mm)		
	4.21	Overall Width	b ₁ (in/mm)		
	4.22	Fork Dimensions, Std.	s/e/l (in/mm)		
	4.23	Fork Dimensions, Opt.	s/e/l (in/mm)		
	4.24	Fork-Carriage Width	b ₂ (in/mm)		
	4.25	Distance between Fork-Arms	b ₃ (in/mm)		
	4.26	Distance Between Wheel Arms/Loading Surfaces	b ₄ (in/mm)		
		Outer Distance Between Wheel Arms	b ₂ (in/mm)		
4.28	Reach Distance	l ₄ (in/mm)			
4.31	Ground Clearance, laden, below mast	m ₁ (in/mm)			
4.32	Ground Clearance, centre of wheelbase	m ₂ (in/mm)			
4.34	Aisle Width for Pallets (clearance 7.9")	Ast (in/mm)			
4.35	Turning Radius	Wa (in/mm)			
Performance Data	5.1	Travel Speed, laden/unladen	mph km/h		
	5.2	Lift Speed, laden/unladen	fpm mm/s		
	5.3	Lowering Speed, laden/unladen	fpm mm/s		
	5.4	Reach Speed, laden/unladen	fpm mm/s		
	5.7	Gradeability, laden/unladen	%		
	Parking Brake	Electromagnetic			
Electric Motor	6.1	Drive Motor Rating at S2 60 min	hp/kW		
	6.2	Lift Motor Rating at S3 15%	hp/kW		
	6.4	Battery Voltage, nominal capacity	V/Ah		
	6.5	Max. Battery Weight	lb (kg)		
		Min. Battery Weight	lb (kg)		
	Battery Compartment Size, l/b/h	in(mm)			
Additional Data	10.7	Sound Pressure Level at the Driver's Seat	dB (A)		

Note: 1) With min. battery 2) The inner value, b₄, is a fixed value and cannot be adjusted.

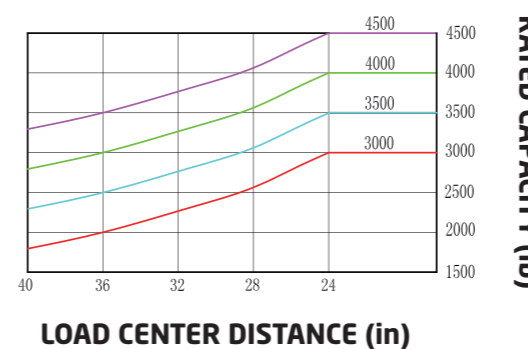
Table 1

Battery and Compartment Size			16.5"	18.5"
6.4	Battery Voltage	V	38.6	38.6
	Battery Capacity Maximum 5 Hr Rate	Ah	606	813
	Battery Compartment	"X" Max.	in(mm)	38.4(976)
"Y" Max.		in(mm)	13(330)	15.55(395)
"Z" Max.		in(mm)	29.1(740)	30.7(780)
6.5	Minimum Battery Weight	lb(kg)	507(230)	683(310)
	Maximum Battery Weight	lb(kg)	551(250)	727.5(330)
1.9	Wheelbase	y (in/mm)	57.8(1469)	59.8(1519)
4.19	Overall Length	l ₁ (in/mm)	74.7(1898)	76.7(1948)
4.20	Length to Face of Forks	l ₂ (in/mm)	57(1450)②	59(1500)②
4.35	Turning Radius	Wa (in/mm)	67.8(1722)	69.8(1772)
4.34	Ast 40"L(1026mm)x48"W(1220mm) Clearance 7.9"	Ast in(mm)	105.24(2673)②	107.24(2724)②
	Ast 48"L(1220mm)x40"W(1026mm) Clearance 7.9"	Ast in(mm)	112.87(2867)②	114.88(2918)②
	Ast 48"L(1220mm)x32"W(813mm) Clearance 7.9"	Ast in(mm)	112.87(2867)②	114.88(2918)②

Note: ②Add 1"(50mm) with sideshift



RATED CAPACITY AND LOAD DIAGRAM



RATED CAPACITY (lb)

LOAD CENTER DISTANCE (in)

X Series Lithium-ion Narrow Aisle Pantograph Double Reach Truck

Distinguishing Marks		HANGCHA GROUP CO.,LTD.			
		1.1 Manufacturer		DR14Li	DR16Li
1.2 Manufacturer's Type Designation		CDQ14-XD2-JDI	CDQ16-XD2-JDI		
1.3 Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric	Electric		
1.4 Operator Type: hand, pedestrian, standing, seated, order-picker		Standing	Standing		
1.5 Rated Capacity/Rated Load	Q (lb/kg)	3000(1361)	3500(1588)		
1.6 Load Centre Distance	c (in/mm)	24(600)	24(600)		
1.8 Load Distance, centre of drive axle to fork	x (in/mm)	14.2(360)	14.2(360)		
1.9 Wheelbase	y (in/mm)	See Table 2	See Table 2		
Weight		2.1 Service Weight, without battery	lb (kg)	7067(3205)	7363.5(3340)
		2.2 Axle Loading, laden front/rear with assemble retracted	lb (kg)	6590(2989)/4004(1816) ¹⁾	7374(3345)/4023(1825) ¹⁾
2.3 Axle Loading, unladen front/rear with assemble retracted	lb (kg)	2943(1335)/4564(2070) ¹⁾	3102(1407)/4769(2163) ¹⁾		
Tires & Chassis		3.1 Tires: solid rubber, superelastic, pneumatic, polyurethane		Polyurethane	Polyurethane
		3.2 Wheels Size, load	in(mm)	5×3.9(Ø127×99)	5×3.9(Ø127×99)
3.3 Wheels Size, drive	in(mm)	13.5×5.3(Ø343×135)	13.5×5.3(Ø343×135)		
3.4 Wheels Size, caster	in(mm)	7.9×2.2(Ø200×56)	7.9×2.2(Ø200×56)		
4.1 Tilt of Mast/Fork Carriage Forward/Backward	α/β (°)	3/4	3/4		
Dimensions		4.2 Height, mast lowered	h ₁ (in/mm)	92(2340)	92(2340)
		4.3 Free Lift	h ₂ (in/mm)	50(1267)	50(1267)
		4.4 Lift	h ₃ (in/mm)	198(5030)	198(5030)
		4.5 Height, mast extended	h ₄ (in/mm)	239(6063)	239(6063)
		4.7 Height of Overhead Guard	h ₅ (in/mm)	92.5(2350)	92.5(2350)
		4.8 Stand Height	h ₆ (in/mm)	9.5(240)	9.5(240)
		4.10 Height of Wheel Arms	h ₇ (in/mm)	5.1(130)	5.1(130)
		4.19 Overall Length	l ₁ (in/mm)	See Table 2	See Table 2
		4.20 Length to Face of Forks	l ₂ (in/mm)	See Table 2	See Table 2
		4.21 Overall Width	b ₁ (in/mm)	42.5(1080)	42.5(1080)
		4.22 Fork Dimensions, Std.	s/e ₁ (in/mm)	1.6×4.8×42(40×122×1070)	1.6×4.8×42(40×122×1070)
		Fork Dimensions, Opt.	s/e ₁ (in/mm)	1.8×4.8×L(45×122×L),L>2000	1.8×4.8×L(45×122×L),L>2000
		4.24 Fork-Carriage Width	b ₂ (in/mm)	37(942)	37(942)
		4.25 Distance between Fork-Arms	b ₃ (in/mm)	7.9-29.9(200-760)	7.9-29.9(200-760)
		4.26 Distance Between Wheel Arms/Loading Surfaces	b ₄ (in/mm)	46(1170) [Optional: 34-50(864-1270)(1" increments)] ²⁾	46(1170) [Optional: 34-50(864-1270)(1" increments)] ²⁾
Outer Distance Between Wheel Arms	b ₅ (in/mm)	56.7(1442) [Optional: b+10.7(272)]	56.7(1442) [Optional: b+10.7(272)]		
4.28 Reach Distance	l ₄ (in/mm)	42(1067)	42(1067)		
4.31 Ground Clearance, laden, below mast	m ₁ (in/mm)	2(50)	2(50)		
4.32 Ground Clearance, centre of wheelbase	m ₂ (in/mm)	2(50)	2(50)		
4.34 Aisle Width for Pallets (clearance 7.9")	Ast (in/mm)	See Table 2	See Table 2		
4.35 Turning Radius	Wa (in/mm)	See Table 2	See Table 2		
Performance Data		5.1 Travel Speed, laden/unladen	mph	6.5(10.5)	6.5(10.5)
			km/h	7.5(12)	7.5(12)
		5.2 Lift Speed, laden/unladen	fpm	78/105	72/105
			mm/s	395/535	365/535
		5.3 Lowering Speed, laden/unladen	fpm	105/105	105/105
	mm/s	535/535	535/535		
5.4 Reach Speed, laden/unladen	fpm	31/35	31/35		
	mm/s	160/180	160/180		
5.7 Gradeability, laden/unladen	%	10/12	10/12		
		Electromagnetic	Electromagnetic		
Electric Motor		6.1 Drive Motor Rating at S2 60 min	hp/kW	8.6(6.4)	8.6(6.4)
		6.2 Lift Motor Rating at S3 15%	hp/kW	17.4(13)	17.4(13)
		6.4 Battery Voltage, nominal capacity	V/Ah	38.6/606	38.6/606
			V/Ah	38.6/813	38.6/813
		6.5 Max. Battery Weight	lb (kg)	See Table 2	See Table 2
	lb (kg)	See Table 2	See Table 2		
Battery Compartment Size, l/b/h	in(mm)	See Table 2	See Table 2		
Additional Data		10.7 Sound Pressure Level at the Driver's Seat	dB (A)	62	62

Note: 1) With min. battery 2) The inner value, b₄, is a fixed value and cannot be adjusted.

Mast Specification

Full Free Lift 3 Stage Mast	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity at 42inch/1067mm	
			With Backrest	Without Backrest		DR14Li	DR16Li
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg
198(5030)	92(2340)	239(6063)	235(5974)	50(1267)	3000(1361)	3500(1588)	
210(5330)	98(2490)	251(6363)	247(6274)	57(1417)	3000(1361)	3330(1510)	
240(6100)	107(2720)	281(7133)	277(7044)	65(1647)	2888(1310)	3000(1361)	
270(6860)	119(3025)	311(7893)	307(7804)	77(1952)	2490(1130)	2600(1180)	
299(7600)	133(3380)	340(8633)	336(8544)	91(2307)	2116(960)	2227(1010)	

With an integral sideshifter, subtract 220lb(100kg).

Mast Specification (HEAVY DUTY)

Full Free Lift 3 Stage Mast	Lift	Height, Mast Lowered	Height, Mast Extended		Free Lift	Load Capacity at 42inch/1067mm	
			With Backrest	Without Backrest		DR14Li	DR16Li
	in(mm)	in(mm)	in(mm)	in(mm)	in(mm)	lb/kg	lb/kg
270(6860)	119(3025)	311(7893)	307(7804)	77(1952)	3000(1361)	3500(1588)	
299(7600)	133(3380)	340(8633)	336(8544)	91(2307)	3000(1361)	3417(1550)	
321(8150)	140(3560)	362(9183)	358(9094)	98(2487)	3000(1361)	3307(1500)	
341(8660)	149(3785)	382(9693)	378(9604)	107(2712)	3000(1361)	3197(1450)	
366(9300)	160(4060)	407(10333)	403(10244)	118(2987)	2866(1300)	2976(1350)	
400(10160)	172(4365)	441(11193)	437(11104)	130(3292)	2646(1200)	2756(1250)	
421(10700)	179(4545)	462(11733)	458.5(11644)	137(3472)	2315(1050)	2425(1100)	
453(11500)	192.5(4890)	493.5(12533)	490(12444)	150(3817)	1874(850)	2028(920)	

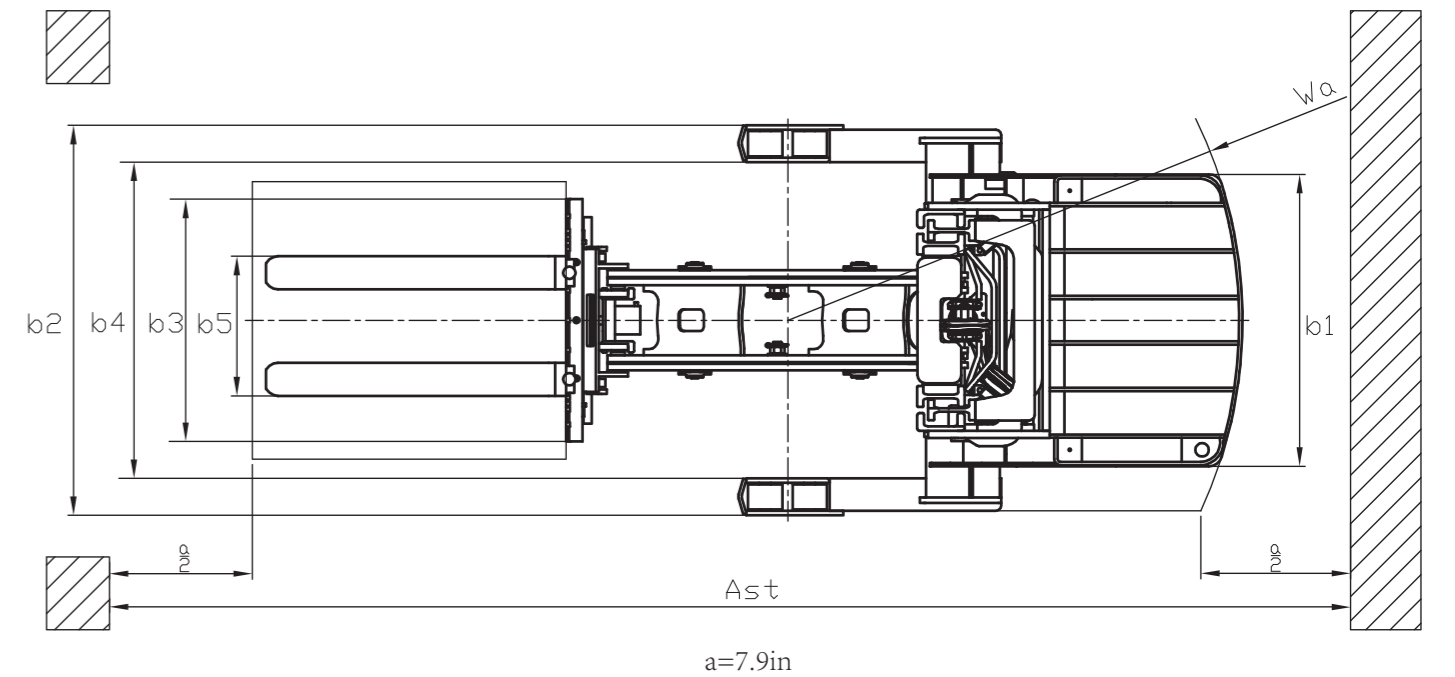
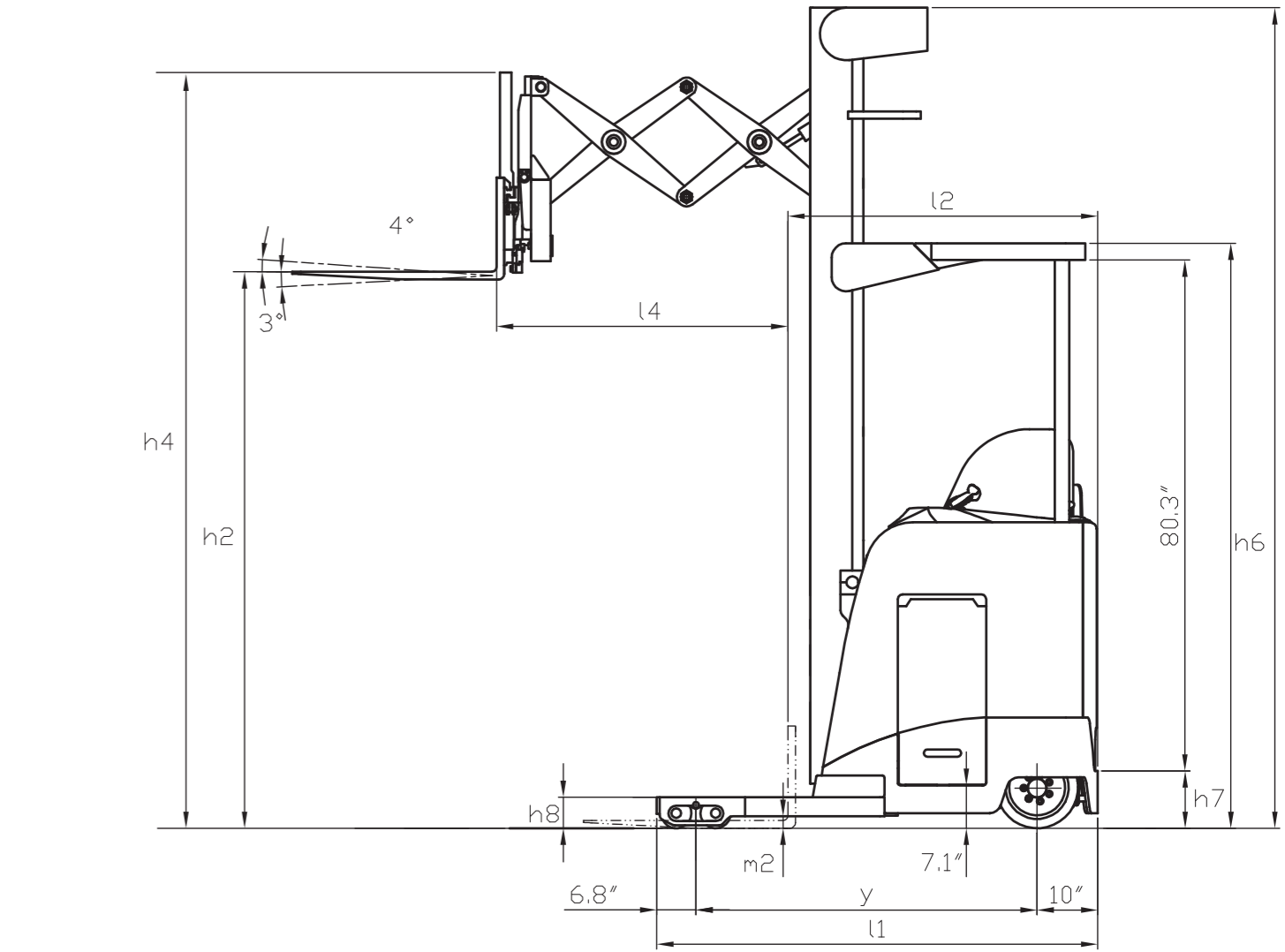
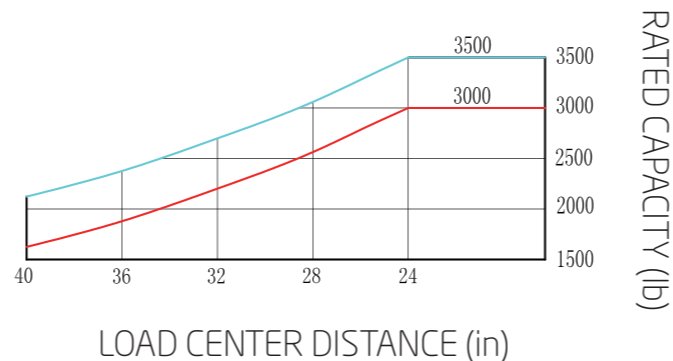
With an integral sideshifter, subtract 220lb(100kg).

Table 2

Battery and Compartment Size		16.5"		18.5"	
6.4	Battery Voltage	V		38.6	
	Battery Capacity Maximum 5 Hr Rate	Ah		606	
Battery Compartment	"X" Max.	in(mm)	38.4(976)	38.8(985)	
	"Y" Max.	in(mm)	13(330)	15.55(395)	
	"Z" Max.	in(mm)	29.1(740)	30.7(780)	
6.5	Minimum Battery Weight	lb(kg)	507(230)	683(310)	
	Maximum Battery Weight	lb(kg)	551(250)	727.5(330)	
1.9	Wheelbase	y (in/mm)	62.8(1596)	64.8(1646)	
4.19	Overall Length	l ₁ (in/mm)	79.7(2025)	81.7(2075)	
4.20	Length to Face of Forks	l ₂ (in/mm)	64.6(1641) ^②	66.6(1691) ^②	
4.35	Turning Radius	Wa (in/mm)	72.8(1849)	74.8(1899)	
4.34	Ast 40"L(1026mm)×48"W(1220mm) Clearance 7.9"	Ast in(mm)	106.81(2713) ^②	108.82(2764) ^②	
	Ast 48"L(1220mm)×40"W(1026mm) Clearance 7.9"	Ast in(mm)	114.45(2907) ^②	116.46(2958) ^②	
	Ast 48"L(1220mm)×32"W(813mm) Clearance 7.9"	Ast in(mm)	114.45(2907) ^②	116.46(2958) ^②	

Note: ②Add 1" (50mm) with sideshift

RATED CAPACITY AND LOAD DIAGRAM



a=7.9in