



**OPTIONAL**  
3-Free Mast



**STANDARD**  
2-Stage Mast

**EP**  
*Let's grow together*

# WSA161

## Li-ion pedestrian stacker 1.6T

- Fast lifting and lowering speeds to maximize efficiency
- Proportional lifting system for utmost precision
- Compact design offering maneuverability
- Lithium technology with integrated charger

**LI-ION**  
TECHNOLOGY

 **tramag**  
intern transport

**CE**

## FEATURE

### ■ Fast lifting and lowering speeds to maximize efficiency

Compared to the ES-WA series, the WSA161 doubles up the lifting and lowering speeds. This contributes to fast stacking and maximized turnover efficiency in warehouses.



LIFT TO  
**4.5M**  
IN 15s

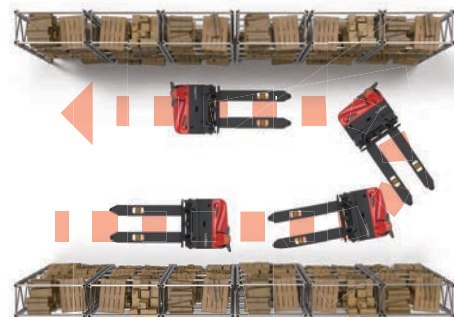
### ■ Proportional lifting system for utmost precision

The WSA161 comes with the proportional lifting system as standard and enables the operator to stack and retrieve pallets more precisely and gently in multi-level racking.



### ■ Compact design offering maneuverability

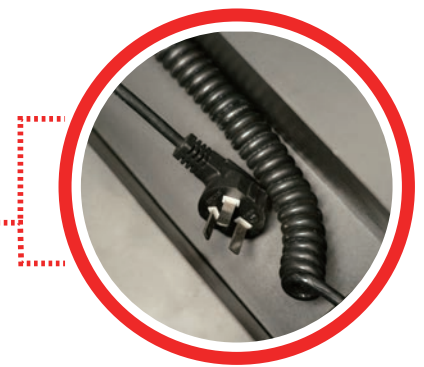
The WSA161 demonstrates a compact design with 85mm reduction in mast thickness than the ES-WA series and naturally brings a smaller turning radius 1507mm. This makes it particularly suitable for moving loads in narrow spaces.



Turning radius  
**1507mm**

### ■ Lithium technology with integrated charger

The WSA161 is fully designed around the advantages of lithium technology, with 24V/100Ah Li-ion battery and an integrated charger, which allows for flexible and rapid charging and zero maintenance. 24V/205Ah Li-ion battery is optionally available for long operating period.

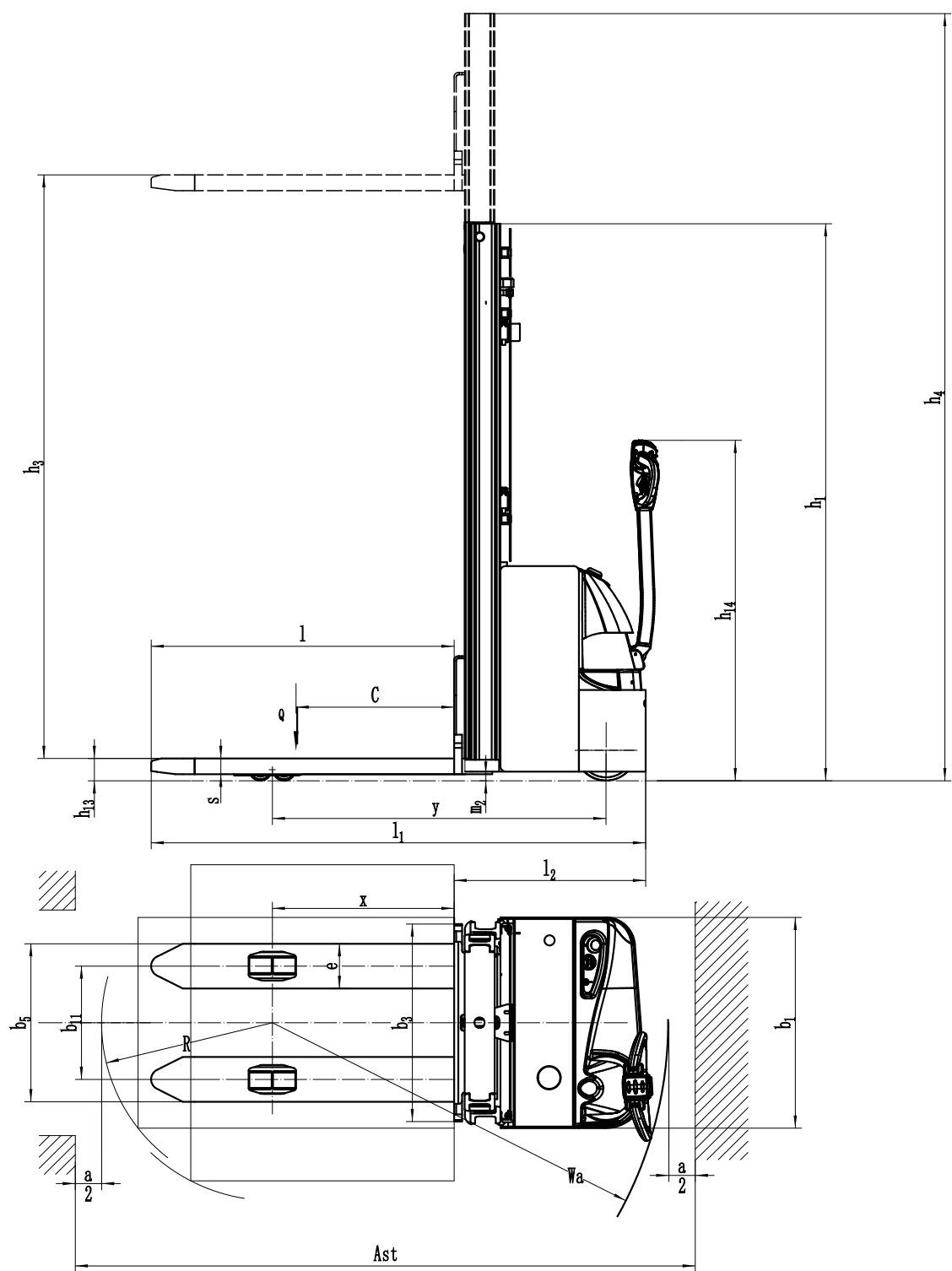


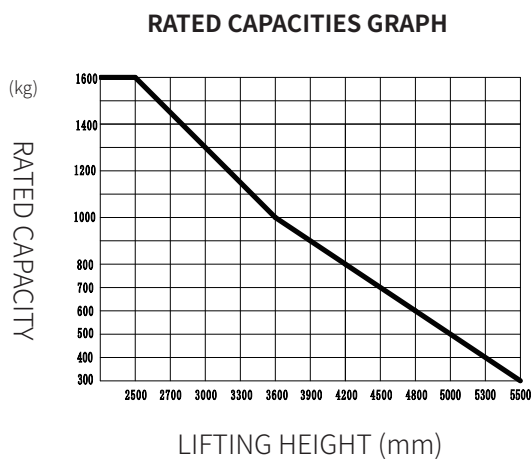
# Li-ion pedestrian stacker 1.6T

## WSA161

Distinguishing mark	1.1	Manufacturer			EP
	1.2	Model designation			WSA161
	1.3	Drive			Electric
	1.4	Operator type			Pedestrian
	1.5	Load capacity	Q	kg	1600
	1.6	Load center distance	c	mm	600
	1.8	Load distance, centre of drive axle to fork	x	mm	690
	1.9	Wheelbase	y	mm	1272
Service weight	2.1	Service weight		kg	725
	2.2	Axle loading, laden front/rear		kg	—
	2.3	Axle loading, unladen front/rear		kg	—
Tyres/chassis	3.1	Tyre type			Polyurethane
	3.2.1	Tyre size, front		mm	Φ230x75
	3.3.1	Tyre size, rear		mm	Φ85x70
	3.4	Additional wheels (castor wheels)		mm	Φ130x55
	3.5	Wheels, number front/rear (x=drive wheels)		mm	1x +1/4
	3.6.1	Tread width, front	b10	mm	538
	3.7.1	Tread width, rear	b11	mm	406
Dimensions	4.0	Max. Lift Height	H	mm	3000
	4.2	Retracted mast height	h1	mm	1970
	4.3	Free lift	h2	mm	—
	4.4	Lift height	h3	mm	2915
	4.5	Height, mast extended	h4	mm	3425
	4.6	Initial lift	h5	mm	—
	4.9	Height of tiller handle in drive position min./max.	h14	mm	715/1200
	4.10	Height of wheel arms	h8	mm	—
	4.15	Lowered height	h13	mm	85
	4.19	Overall length	l1	mm	1881
	4.20	Length to face of forks	l2	mm	731
	4.21	Overall width	b1/b2	mm	800
	4.22	Fork dimensions	s/e/l	mm	60x170x1150
	4.24	Fork carriage width	b3	mm	750
	4.25	Distance between fork-arms	b5	mm	570
	4.26	Distance between wheel arms/loading surfaces	b4	mm	—
	4.31	Ground clearance, laden, below mast	m1	mm	—
	4.32	Ground clearance, center of wheelbase	m2	mm	25
	4.34.1	Aisle width for pallets 1000x1200 crossways	Ast	mm	2383
	4.34.2	Aisle width for pallets 800x1200 lengthways	Ast	mm	2355
	4.35	Turning radius	Wa	mm	1507
Performance data	5.1	Travel speed, laden/unladen		km/h	5/5.5
	5.2	Lifting speed, laden/unladen		m/s	0.15/0.26
	5.3	Lowering speed, laden/unladen		m/s	0.4/0.3
	5.8	Max. gradeability, laden/unladen		%	8/16
	5.10	Service brake			Electromagnetic
Electric-engine	6.1	Drive motor rating S2 60 min		kW	1.6
	6.2	Lift motor rating at S3 15%		kW	4.5
	6.4	Battery voltage/nominal capacity		V/Ah	24V/100AH
	6.5	Battery weight		kg	40
Addition data	8.1	Type of drive control			AC
	10.5	Steering design			Electronic
	10.7	Sound pressure level at the driver's ear		dB(A)	74

If there are improvements of technical parameters or configurations, no further notice will be given.  
The diagram shown may contain non-standard configurations.





## Mast Option

Mast types	Lift height h3+h13 (mm)	Height, mast lowered h1 (mm)	Free lift h2 (mm)	Height, mast extended h4 (mm)
2-Stage Single Cylinder Mast	2500	1720	—	2935
	2700	1820	—	3135
	3000	1970	—	3435
	3300	2120	—	3735
	3600	2270	—	4035
	3900	2420	—	4335
3-Free Mast	4000	1820	1430	4445
	4500	2020	1630	4945
	4800	2115	1730	5245
	5000	2185	1800	5445
	5500	2385	2000	5945

## Option

No.	Optional items	WSA161
1.1	Fork dimension	●1150*570○1150*685○1220*570○1220*685
1.3	Fork lowered height	●≤90
1.4	Fork carriage width	●750
1.5	backrest height	●388
2.1	Load wheel type	●Double
2.2	Load wheel material	●PU
2.3	Drive wheel material	●PU
2.7	Battery capacity	●100Ah Li-ion○205AH Li-ion ○210AH Lead-acid○240AH Lead-acid○270AH Lead-acid
2.8	Charger	●24V-30A internal (100AH Li-ion) ○24V-100A external (205AH Li-ion) ○24V-30A external (Lead-acid)
2.9	Battery indicator	●With time( bluetooth)
2.16	handle head type	●Proportional lifting switch on both sides, with turtle speed
3.3	Castor wheels	●Yes
3.4	Water auto-filling system	●No○Yes and not customized (only for Lead-acid battery)
3.7	Warning lamp	●No○Yes and not customized
3.11	Rearview mirror	●No○Yes and not customized
3.12	Hummer	●No○Yes and not customized
3.16	Vertical handler working	●Yes
4.5	Proportional lift system	●Yes

Note: ●Standard ○ Optional - Inconformity



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