

# WSA161i

## HEAVY-DUTY INITIAL LIFTING STACKER 1.6T

2000 kg
 5500 mm
 24 V Lead Acid/Li-ion



The WSA161i is tailored for warehouses, logistics centers, and distribution hubs requiring both stacking and double decking operations. Thanks to its initial lift, operators can move goods across docks or uneven surfaces with ease, while proportional lifting and lowering ensure precision and care for fragile loads. With travel speeds up to 5.5 km/h, compact 810 mm chassis width, and turning radius of 1826 mm, it delivers agility even in narrow aisles.

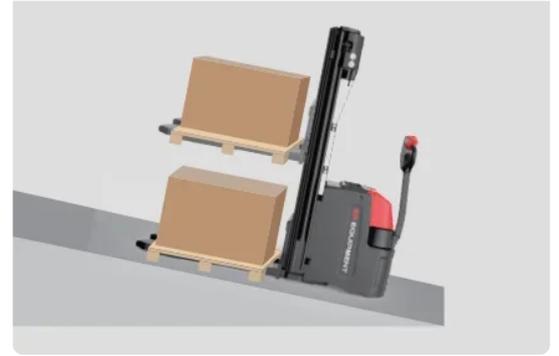
SPECIFICATION	REF	UNIT	VALUE
Battery type			Lead Acid/Li-ion
Battery nominal capacity		Ah	100
Battery voltage		V	24
Load capacity	Q	kg	2000
Load centre distance	c	mm	600
Service weight		kg	1120
Retracted mast height	$h_1$	mm	2015
Lift height	$h_3$	mm	2915
Height, mast extended	$h_4$	mm	3495
Overall length		mm	2028
Overall width	$b_1/b_2$	mm	810
Length to face of forks	l <sub>2</sub>	mm	878
Fork dimensions	s/e/l	mm	60×185×1150
Turning radius		Wa	1826
Operator type			Pedestrian
Load distance, centre of drive axle to fork		mm	906

# Features

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## Initial lift with double pallet handling

The WSA161i's initial lift raises support arms independently, providing higher ground clearance for ramps and allowing operators to transport two pallets at once, doubling efficiency.



## Fast stacking with proportional control

Equipped with high lifting and lowering speeds, plus proportional control, the WSA161i ensures precise and gentle handling of goods, even at heights up to 5.5 meters.

## Advanced Li-ion power system

The 24V/100Ah Li-ion battery with integrated 24V/30A charger supports fast opportunity charging, zero maintenance, and emission-free operation. Optional 205Ah or lead-acid batteries extend runtime.



## Operator-focused design

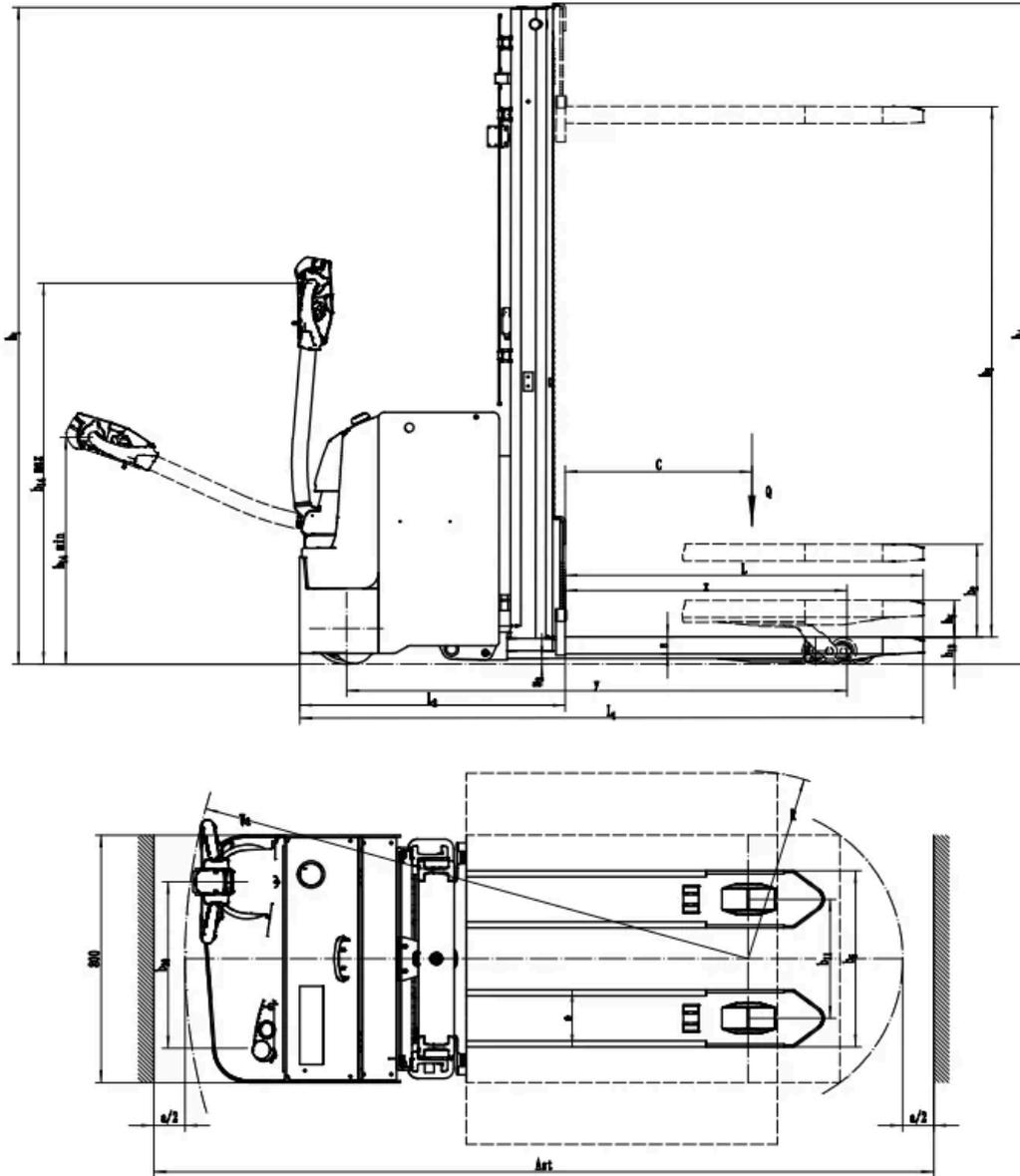
Practical features like integrated storage, a USB outlet for device charging, and an ergonomic tiller improve operator convenience, while the compact body and turtle speed mode ensure safe maneuverability in tight aisles.

# VDI Chart

	SPECIFICATION	REF	UNIT	VALUE
1.4	Operator type			Pedestrian
1.5	Load capacity	Q	kg	2000
1.6	Load centre distance	c	mm	600
1.8	Load distance, centre of drive axle to fork		mm	906
1.9	Wheelbase		mm	1608
2.1	Service weight		kg	1120
2.2	Axle loading, laden front/rear		kg	1090/2030
2.3	Axle loading, unladen front/rear		kg	780/340
3.1	Tyre type			Polyurethane
3.2	Tyre size, front			230×75
3.3	Tyre size, rear			85×70
3.5	Additional wheels (castor wheels)			130×55
3.5	Wheels, number front/rear (x=drive wheels)			1x,1/4
3.6	Tread width, front	b <sub>10</sub>	mm	538
3.7	Tread width, rear	b <sub>11</sub>	mm	385
4.10	Height of wheel arms		mm	\
4.15	Lowered height			92
4.19	Overall length		mm	2028
4.2	Retracted mast height	h <sub>1</sub>	mm	2015
4.20	Length to face of forks	l <sub>2</sub>	mm	878
4.21	Overall width	b <sub>1</sub> /b <sub>2</sub>	mm	810
4.22	Fork dimensions	s/e/l	mm	60×185×1150
4.24	Fork carriage width		mm	750
4.25	Distance between fork-arms			570
4.26	Distance between wheel arms/loading surfaces			\
4.3	Free lift		mm	\
4.31	Ground clearance, laden, below mast		mm	14
4.32	Ground clearance, centre of wheelbase		mm	14
4.34.1	Aisle width for pallets 1000×1200 crossways		Ast	2646
4.34.2	Aisle width for pallets 800×1200 lengthways		Ast	2560
4.35	Turning radius		Wa	1826
4.4	Lift height	h <sub>3</sub>	mm	2915

SPECIFICATION		REF	UNIT	VALUE
4.4.1	Max lift height		mm	5500
4.5	Height, mast extended	h <sub>4</sub>	mm	3495
4.6	Initial lift		mm	120
4.9	Height of tiller handle in drive position min./max.			715/1200
5.1	Travel speed, laden/unladen		km/h	5/5.5
5.10	Service brake			Electromagnetic
5.2	Lifting speed, laden/unladen		m/s	0.23/0.3
5.3	Lowering speed, laden/unladen		m/s	0.4/0.36
5.8	Max. gradeability, laden/unladen		%	8/16
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 nominal capacity		Ah	100
6.4	Battery voltage		V	24
6.4.1	Battery type			Lead Acid/Li-ion
6.5	Battery weight		kg	40
6.5	Charger output current		A	30
6.6	Energy consumption according to DIN EN 16796		kWh/h	0.23
6.7	Turnover output according to VDI 2198			Turnover output according to VDI 2198
6.8	Turnover efficiency according to VDI 2198			Turnover efficiency according to VDI 2198
8.1	Type of drive control			AC
10.5	Steering design			Mechanical
10.7	Sound pressure level at the drivers ear		dB(A)	74

# VDI Drawing



## RATED CAPACITIES GRAPH



## Mast Options

MAST TYPE	LIFT HEIGHT (H3, MM)	MAST LOWERED HEIGHT (H1, MM)	MAST EXTENDED HEIGHT, NO BACKREST (H4, MM)	FREE LIFT HEIGHT, NO BACKREST (H2, MM)
2-Wide Mast	2600	1815	3095	
2-Wide Mast	3000	2015	3495	
2-Wide Mast	3300	2185	3835	
2-Wide Mast	3600	2312	4089	
2-Wide Mast	3900	2462	4389	
2-Wide Mast	4150	2592	4649	
2-Free Mast	2650	1815	3118	1320
2-Free Mast	2950	1962	3412	1470
2-Free Mast	3250	2115	3718	1620
3-Free Mast	4000	1820	4445	1345
3-Free Mast	4500	2020	4945	1545

MAST TYPE	LIFT HEIGHT (H3, MM)	MAST LOWERED HEIGHT (H1, MM)	MAST EXTENDED HEIGHT, NO BACKREST (H4, MM)	FREE LIFT HEIGHT, NO BACKREST (H2, MM)
3-Free Mast	4800	2115	5245	1645
3-Free Mast	5000	2185	5445	1715
3-Free Mast	5500	2385	5945	1915

## Options

ITEM	OPTIONS (optional items marked in yellow)
Fork dimension	1150*570   1150*685
Fork lowered height	92
Fork carriage width option	750
Backrest height	388
Load wheel type	Double
Load wheel material	PU
Drive wheel material	PU   Trace PU   Rubber
Battery capacity	100Ah Li-ion   205Ah Li-ion   210Ah Lead Acid   240Ah Lead acid
Charger	24V-30A internal (Li-ion)   24V-100A external (Li-ion)   24V-30A external (Lead-acid)
Battery display indicator (BDI)	With time (bluetooth)
Area warning lamp	No   Yes and not customized
Rearview mirror	No   Yes and not customized
Buzzer	No   Yes and not customized
Turtle speed	Yes and not customized
Telematics	No   Yes and not customized
Charging interlock-UK standard	No   Yes and not customized
USB outlet	Yes and not customized
Castor wheels	Yes and not customized
Water auto-filling system	No   Yes and not customized
Warning lamp	No   Yes and not customized
Battery side pull function	No
Cold storage	No
Proportional lift system	Yes and not customized

**ITEM****OPTIONS (optional items marked in yellow)**

Keypad option

No | Yes and not customized

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