ESA121 Duplex

ELECTRIC PEDESTRIAN STACKER DUPLEX MAST 1.2T

1200 kg | 4113 mm | 24 V AGM

The ESA121 Duplex is designed for warehouses, retail, and distribution centers requiring medium stacking heights up to 4.1 m. Its compact chassis (826 mm width) and turning radius of 1480 mm make it suitable for use in narrow aisles. With creep speed mode and ergonomic tiller, operators can safely and precisely handle pallets in confined spaces. Its reinforced mast ensures strong residual capacity even at higher lift heights .

SPECIFICATION	REF	UNIT	VALUE
Manufacturer			EP
Model designation			ESA121 Duplex
Battery voltage		V	24
Rated capacity	Q	kg	1200
Load centre distance	c	mm	600
Service weight		kg	700
Height, mast lowered	h_1	mm	1995
Lift	h_3	mm	2930
Height, mast extended	h_4	mm	3460
Overall length	l_1	mm	1760
Overall width	b_1/b_2	mm	826
Length to face of forks	l_2	mm	610
Fork dimensions	s/e/l	mm	60/170/1150
Turning radius	Wa	mm	1480
Drive			Electric
Operator type			Pedestrian

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Features

Robust and stable duplex mast

The H-beam duplex mast with two side cylinders provides excellent visibility and high rigidity. This reduces frame torsion when lifting heavy loads and ensures stability, with residual capacity of 800 kg at 3.6 m.

Fast lifting and lowering performance

Equipped with a powerful 3.0 kW lift motor, the ESA121 Duplex offers faster lifting and lowering speeds compared to earlier models. This improves cycle times and increases overall warehouse productivity.

Flexible battery solutions

Available with both AGM and Li-ion batteries, the ESA121 Duplex meets different operational needs. The integrated charger simplifies daily charging, while maintenance-free technology reduces downtime and cost.

User-centered design

Featuring a redesigned cover with storage pockets for documents, objects, and even cups, plus an optional USB port, the ESA121 Duplex is built with operator convenience in mind. Ergonomic tiller and turtle speed mode ensure safe and comfortable operation.

VDI Chart

	SPECIFICATION	REF	UNIT	VALUE
1.1	Manufacturer			EP
1.2	Model designation			ESA121 Duplex
1.3	Drive			Electric
1.4	Operator type			Pedestrian
1.5	Rated capacity	Q	kg	1200

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	SPECIFICATION	REF	UNIT	VALUE
1.6	Load centre distance	c	mm	600
1.8	Load distance, centre of drive axle to fork	x	mm	808
1.9	Wheelbase	y	mm	1230
2.1	Service weight		kg	700
2.2	Axle loading, laden front/rear		kg	720/1180
2.3	Axle loading, unladen front/rear		kg	520/180
3.1	Tyres			Polyurethane
3.2	Tyre size, front		mm	Ø214×70
3.3	Tyre size, rear		mm	Ø80×61
3.4	Additional wheels (castor wheels)		mm	Ø130×55
3.5	Wheels, number front/rear (x=drive wheels)			1x , 1/4
3.6	Tread width, front	b_{10}	mm	543
3.7	Tread width, rear	b_{11}	mm	400
4.1	Tilt of mast/fork carriage forward/backward	α/β	°	unknown
4.2	Height, mast lowered	h_1	mm	1995
4.3	Free lift	h_2	mm	-
4.4	Lift	h_3	mm	2930
4.5	Height, mast extended	h_4	mm	3460
4.8	Seat height relating to SIP/stand height	h7	mm	unknown
4.9	Height drawbar in driving position min./max.	h_{14}	mm	760/1140
4.10	Height of wheel arms		mm	-
4.12	Coupling height	h10	mm	unknown
4.15	Height, lowered	h_{13}	mm	90
4.19	Overall length	l_1	mm	1760
4.20	Length to face of forks	l_2	mm	610
4.21	Overall width	b_1/b_2	mm	826
4.22	Fork dimensions	s/e/l	mm	60/170/1150
4.24	Fork carriage width		mm	680
4.26	Distance between wheel arms/loading surfaces			-
4.31	Ground clearance, laden, below mast		mm	-
4.32	Ground clearance, centre of wheelbase	m_2	mm	23
4.34.1	Aisle width for pallets 1000×1200 crossways	Ast	mm	2310
4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast	mm	2240
4.35	Turning radius	Wa	mm	1480

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	SPECIFICATION	REF	UNIT	VALUE
5.1	Travel speed, laden/unladen		km/h	4.0/4.5
5.2	Lift speed, laden/unladen		m/s	0.15/0.24
5.3	Lowering speed, laden/unladen		m/s	0.21/0.20
5.8	Max. gradeability, laden/unladen		%	3/10
5.10	Service brake			Electromagnetic
5.11	Parking brake			Electromagnetic
6.1	Drive motor rating S2 60 min		kW	0.65
6.2	Lift motor rating at S3 15%		kW	3.0
6.4.1	Battery voltage		V	24
6.4.2	Battery nominal capacity K5		Ah	105
6.4.3	Battery type			AGM
6.5	Battery weight		kg	61
6.6	Energy consumption according to DIN EN 16796		kWh/h	-
6.7	Turnover output according to VDI 2198			-
6.8	Turnover efficiency according to VDI 2198			-
8.1	Type of drive unit			DC
10.5	Steering design			Mechanical
10.7	Sound pressure level at the driver's seat		dB(A)	74
15.1	Charger output current		A	15

Subject to modification of specifications and designs without prior notice as part of continuous product improvement. Images and technical data shown may include optional features and are provided for reference only. All dimensions are subject to standard manufacturing tolerances.

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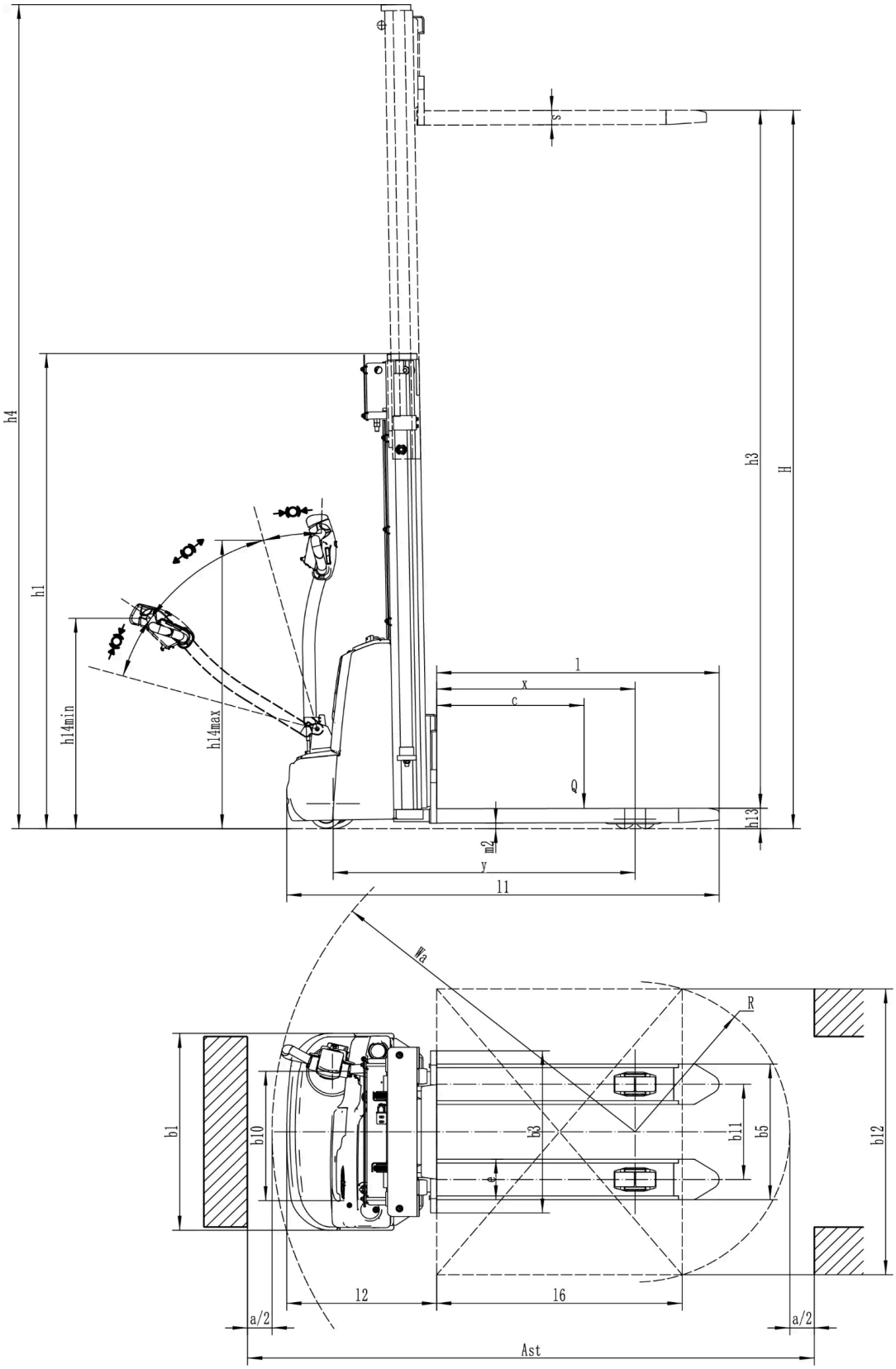
VDI Drawing



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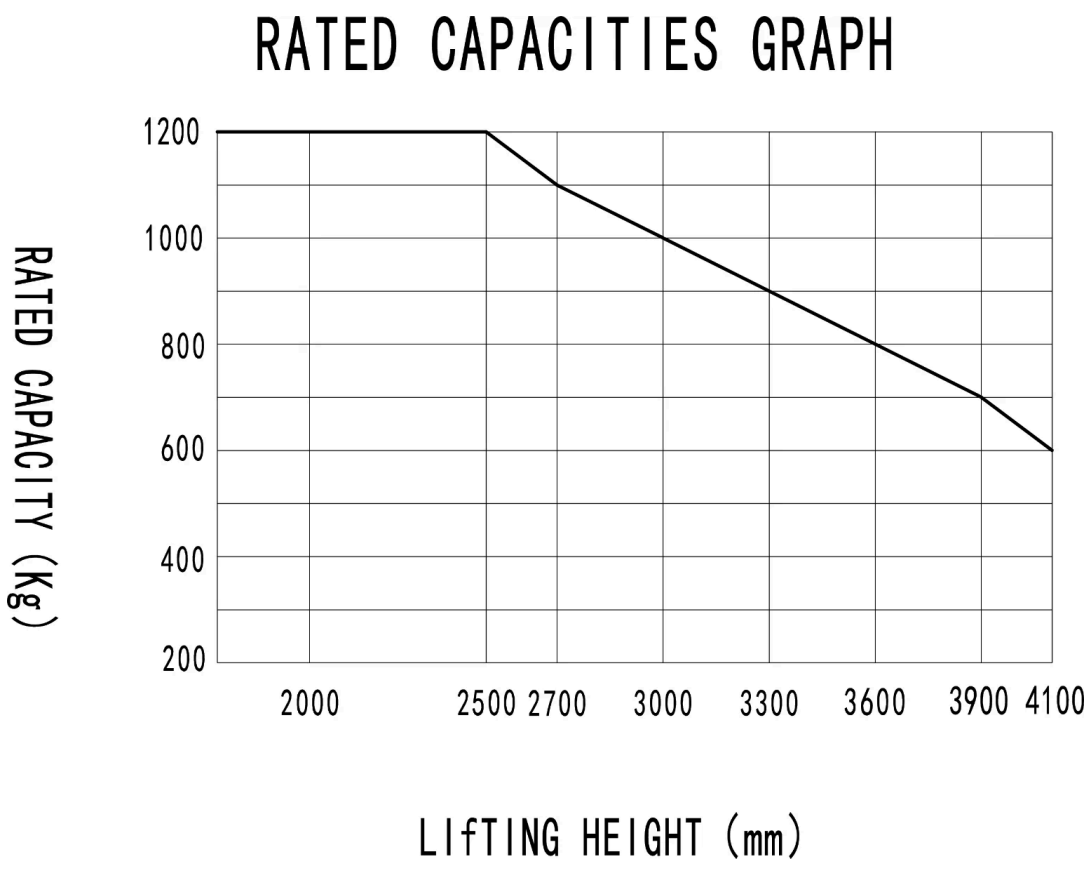

Mast Options

MAST TYPE	LIFT HEIGHT (H3, MM)	MAST LOWERED HEIGHT (H1, MM)	MAST EXTENDED HEIGHT, NO BACKREST (H4, MM)
2-Standard Mast	2513	1745	2960
2-Standard Mast	2713	1854	3160
2-Standard Mast	3013	1995	3460
2-Standard Mast	3313	2145	3760
2-Standard Mast	3613	2295	4060
2-Standard Mast	3813	2395	4260
2-Standard Mast	3913	2445	4360
2-Standard Mast	4113	2545	4560

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Options

ITEM	OPTIONS (optional items marked in yellow)
Fork dimension	570*1150 | 685*1150 | 570*1000 | 685*1000 | 570*1220 | 685*1220
Fork lowered height	90
Fork carriage width option	680mm | 770mm
Load wheel type	Double
Load wheel material	PU
Drive wheel material	PU
Battery capacity	105Ah(AGM) | 125Ah(AGM) | 100Ah(Li-ion)
Charger	24V-15A integrated (AGM) | 24V-30A integrated(Li-ion)
Battery indicator	With time
Handle head type	Hands big handle head
Castor wheels	Yes and not customized
Turtle speed	Yes and not customized
USB outlet	Yes and not customized | No

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