

WSA Series

Heavy-duty Li-ion Stacker 1200-1600kg

EP
Let's grow together



- Heavy duty stacker designed around Li-ion battery
- High efficiency thanks to the fast lifting and lowering speeds
- Great stacking precision with the proportional lifting control system
- Compact size to maneuver in confined space
- Fast and flexible charging thanks to the integrated charger
- Improved cover with storage space and USB outlet for daily convenience



| Manufacturer | | | EP | EP |
|----------------------------------|-------|------|-------------|-------------|
| Model designation | | | WSA121 | WSA161 |
| Drive | | | Electric | Electric |
| Load capacity | Q | kg | 1200 | 1600 |
| Load center distance | c | mm | 600 | 600 |
| Service weight | | kg | 955 | 1070 |
| Retracted mast height | h1 | mm | 1970 | 2015 |
| Lift height | h3 | mm | 2915 | 2915 |
| Length to face of forks | l2 | mm | 714 | 774 |
| Overall width | b1/b2 | mm | 810 | 810 |
| Fork dimensions | s/e/l | mm | 65/170/1150 | 65/170/1150 |
| Turning radius | Wa | mm | 1446 | 1506 |
| Max. gradeability, laden/unladen | | % | 8/16 | 8/16 |
| Travel speed, laden/unladen | | km/h | 5/5.5 | 5/5.5 |
| Lifting speed, laden/unladen | | m/s | 0.23/0.3 | 0.23/0.3 |
| Lowering speed, laden/unladen | | m/s | 0.4/0.36 | 0.4/0.36 |
| Battery voltage/nominal capacity | | V/Ah | 24/100 | 24/100 |

EP EQUIPMENT CO.,LTD
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FEATURE

Fast stacking speeds and great precision

The WSA series features significantly improved lifting and lowering speeds and can lift forks to 4.5m in 15 seconds. This contributes to fast stacking and maximized turnover efficiency in warehouses. Besides, this truck 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.



Improved design combined with practical features

The WSA Series introduces a modern and strong design that will be the new brand identity for the EP equipment warehouse products. Design with users in mind, the strong cover provides storage space and USB outlet. The operator can take documents and stuff in the dedicated pocket, and charge the electronic device on the go without extra fuss.



Agility and visibility for better operation experience

The WSA series demonstrates a compact size with shorter L2 than the ES-WA series and naturally brings a smaller turning radius. This makes it particularly suitable for moving loads in confined spaces. The WSA161 adopts two side cylinders as standard and offer better visibility.



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.



Heavy-duty stacker 1.2/1.6T

WSA121/161

| | | | | | | |
|---------------------|------------------|---|-------------------------------------|-------|-----------------|-----------------|
| Distinguishing mark | 1.1 | Manufacturer | | | EP | EP |
| | 1.2 | Model designation | | | WSA121 | WSA161 |
| | 1.3 | Drive | | | Electric | Electric |
| | 1.4 | Operator type | | | Pedestrian | Pedestrian |
| | 1.5 | Load capacity | Q | kg | 1200 | 1600 |
| | 1.6 | Load center distance | c | mm | 600 | 600 |
| | 1.8 | Load distance, centre of drive axle to fork | x | mm | 690 | 690 |
| | 1.9 | Wheelbase | y | mm | 1196 | 1261 |
| | Service weight | 2.1 | Service weight | | kg | 955 |
| 2.2 | | Axle loading, laden front/rear | | kg | 715/1440 | 780/1890 |
| 2.3 | | Axle loading, unladen front/rear | | kg | 645/310 | 730/340 |
| Tyres/chassis | 3.1 | Tyre type | | | Polyurethane | Polyurethane |
| | 3.2.1 | Tyre size, front | | mm | Φ230×75 | Φ230×75 |
| | 3.3.1 | Tyre size, rear | | mm | Φ85×70 | Φ85×70 |
| | 3.4 | Additional wheels (caster wheels) | | mm | Φ130×55 | Φ130×55 |
| | 3.5 | Wheels, number front/rear (x=drive wheels) | | mm | 1x +1/4 | 1x +1/4 |
| | 3.6.1 | Tread width, front | b10 | mm | 538 | 538 |
| | 3.7.1 | Tread width, rear | b11 | mm | 406 | 406 |
| Dimensions | 4.0 | Max. Lift Height | H | mm | 3000 | 3000 |
| | 4.2 | Retracted mast height | h1 | mm | 1970 | 2015 |
| | 4.3 | Free lift | h2 | mm | \ | \ |
| | 4.4 | Lift height | h3 | mm | 2915 | 2915 |
| | 4.5 | Height, mast extended | h4 | mm | 3425 | 3495 |
| | 4.6 | Initial lift | h5 | mm | \ | \ |
| | 4.9 | Height of tiller handle in drive position min./max. | h14 | mm | 715/1200 | 715/1200 |
| | 4.10 | Height of wheel arms | h8 | mm | \ | \ |
| | 4.15 | Lowered height | h13 | mm | 90 | 90 |
| | 4.19 | Overall length | l1 | mm | 1864 | 1924 |
| | 4.20 | Length to face of forks | l2 | mm | 714 | 774 |
| | 4.21 | Overall width | b1/b2 | mm | 810 | 810 |
| | 4.22 | Fork dimensions | s/e/l | mm | 65×170×1150 | 65×170×1150 |
| | 4.24 | Fork carriage width | b3 | mm | 750 | 750 |
| | 4.25 | Distance between fork-arms | b5 | mm | 570 | 570 |
| | 4.26 | Distance between wheel arms/loading surfaces | b4 | mm | \ | \ |
| | Performance data | 4.31 | Ground clearance, laden, below mast | m1 | mm | 25 |
| 4.32 | | Ground clearance, center of wheelbase | m2 | mm | 25 | 25 |
| 4.34.1 | | Aisle width for pallets 1000×1200 crossways | Ast | mm | 2323 | 2383 |
| 4.34.2 | | Aisle width for pallets 800×1200 lengthways | Ast | mm | 2296 | 2356 |
| 4.35 | | Turning radius | Wa | mm | 1446 | 1506 |
| 5.1 | | Travel speed, laden/unladen | | km/h | 5/5.5 | 5/5.5 |
| 5.2 | | Lifting speed, laden/unladen | | m/s | 0.23/0.3 | 0.23/0.3 |
| 5.3 | | Lowering speed, laden/unladen | | m/s | 0.4/0.36 | 0.4/0.36 |
| 5.8 | | Max. gradeability, laden/unladen | | % | 8/16 | 8/16 |
| 5.10 | | Service brake | | | Electromagnetic | Electromagnetic |
| Electric-engine | 6.1 | Drive motor rating S2 60 min | | kW | 1.6 | 1.6 |
| | 6.2 | Lift motor rating at S3 15% | | kW | 4.5 | 4.5 |
| | 6.4 | Battery voltage/nominal capacity | | V/Ah | 24V/100AH | 24V/100AH |
| | 6.5 | Battery weight | | kg | 40 | 40 |
| | Addition data | 8.1 | Type of drive control | | | AC |
| 10.5 | | Steering design | | | Mechanical | Mechanical |
| 10.7 | | Sound pressure level at the driver's ear | | dB(A) | 74 | 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

WSA121

| 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 |
| 2-Free Mast | 2650 | 1815 | 1320 | 3118 |
| | 2950 | 1962 | 1470 | 3412 |
| | 3250 | 2115 | 1620 | 3718 |
| 3-Free Mast | 4000 | 1820 | 1345 | 4445 |
| | 4500 | 2020 | 1545 | 4945 |
| | 4800 | 2115 | 1645 | 5245 |

WSA161

| Mast types | Lift height h3+h13 (mm) | Height, mast lowered h1 (mm) | Free lift h2 (mm) | Height, mast extended h4 (mm) |
|-------------|----------------------------|---------------------------------|----------------------|----------------------------------|
| 2-Wide Mast | 2600 | 1815 | \ | 3095 |
| | 3000 | 2015 | \ | 3495 |
| | 3300 | 2185 | \ | 3835 |
| | 3600 | 2312 | \ | 4089 |
| | 3900 | 2462 | \ | 4389 |
| | 4150 | 2592 | \ | 4649 |
| 2-Free Mast | 2650 | 1815 | 1320 | 3118 |
| | 2950 | 1962 | 1470 | 3412 |
| | 3250 | 2115 | 1620 | 3718 |
| 3-Free Mast | 4000 | 1820 | 1345 | 4445 |
| | 4500 | 2020 | 1545 | 4945 |
| | 4800 | 2115 | 1645 | 5245 |
| | 5000 | 2185 | 1715 | 5445 |
| | 5500 | 2385 | 1915 | 5945 |

Option

| No. | Optional items | WSA121 |
|------|---|----------------------------|
| 1.1 | Fork dimension | ●1150*570○1150*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○ Trace PU○ Rubber |
| 2.7 | Battery capacity | ●100Ah Li-ion |
| 2.8 | Charger | ●24V-30A internal (Li-ion) |
| 2.9 | Battery indicator | ●With time(bluetooth) |
| 3.3 | Castor wheels | ●Yes and not customized |
| 3.4 | Water auto-filling system | ●No |
| 3.7 | Warning lamp | ●No○Yes and not customized |
| 3.9 | Blue lamp | ●No○Yes and not customized |
| 3.10 | Area warning lamp | ●No○Yes and not customized |
| 3.11 | Rearview mirror | ●No○Yes and not customized |
| 3.12 | Buzzer | ●No○Yes and not customized |
| 3.16 | Turtle speed | ●Yes and not customized |
| 3.23 | Telematics | ●No○Yes and not customized |
| 3.26 | The British standard cannot walk when charged | ●No○Yes and not customized |
| 3.27 | USB outlet | ●Yes and not customized |
| 4.1 | Battery side pull function | ●No |
| 4.2 | Cold storage | ●No |
| 4.5 | Proportional lift system | ●Yes and not customized |
| 5.3 | Keypad option | ●No○Yes and not customized |

Note: ●Standard ○ Optional - Inconformity

| No. | Optional items | WSA161 |
|------|---|--|
| 1.1 | Fork dimension | ●1150*570○1150*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○ Trace PU○ Rubber |
| 2.7 | Battery capacity | ●100Ah Li-ion○205AH Li-ion○210AH Lead-acid○240AH Lead-acid |
| 2.8 | Charger | ●24V-30A internal (Li-ion) ○24V-100A external (Li-ion)○24V-30A external (Lead-acid) |
| 2.9 | Battery indicator | ●With time(bluetooth) |
| 3.3 | Castor wheels | ●Yes and not customized |
| 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 |
| 3.9 | Blue lamp | ●No○Yes and not customized |
| 3.10 | Area warning lamp | ●No○Yes and not customized |
| 3.11 | Rearview mirror | ●No○Yes and not customized |
| 3.12 | Buzzer | ●No○Yes and not customized |
| 3.16 | Turtle speed | ●Yes and not customized |
| 3.23 | Telematics | ●No○Yes and not customized |
| 3.26 | The British standard cannot walk when charged | ●No○Yes and not customized |
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| 4.1 | Battery side pull function | ●No |
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| 4.5 | Proportional lift system | ●Yes and not customized |
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Note: ●Standard ○ Optional - Inconformity