Features

Fruck	Standard	Options
48V permanent magnet synchronous drive motor	•	
Hydraulic power unit	•	
PU drive wheel	•	
L150mm fork length	•	
570mm outside fork width	•	
ifting height limit: 1.8m	•	
Soft landing (only available for duplex mast)	•	
48V/80Ah lithium battery(EVE)	•	
Balance wheels	•	
Double load wheels	•	
Fork lift & lower adopts stepless speed regulating	•	
Different length of forks		0
Different width of outside fork		0
Different mast lifting heights		0
48V/105Ah lithium battery (EVE)		0
48V/125Ah lithium battery (CATL)		0
_oad backrest		0
Controls and instruments		
nteractive meter	•	
Multi-function tiller	•	
PIN code access	•	
JSB power supply	•	
(ey switch		0
Electric steering(stand-on type)	•	
Systech controller	•	
Safety		
Emergency disconnect switch	•	
Furning deceleration(stand-on type)	•	
Mast protection		0
Horn	•_	
Other		
48V3OA charger		0
48V5OA charger		0



HANGCHA GROUP CO., LTD.

Factory site: 666 Xiangfu Road, Hangzhou, Zhejiang, China (311305)

Tel: +86-571-88926735 88926755 Fax: +86-571-88926789 88132890

sales@hcforklift.com www.hcforklift.com

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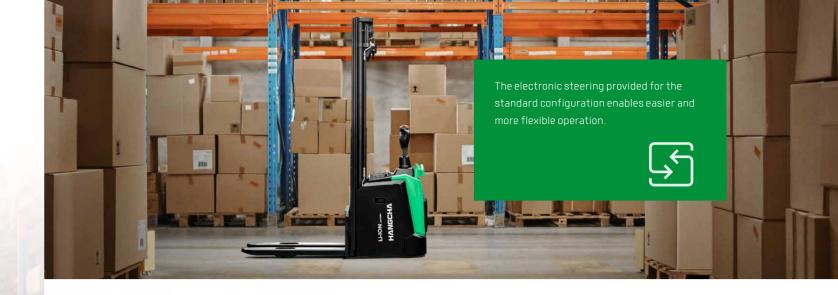


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X SERIES HI-RANGE **ELECTRIC STACKER**

X series Hi-Range Electric stackers are a new generation of products newly developed by Hangcha for warehousing and logistics applications. Using the advanced permanent magnet brushless drive technology and equipped with a new 48V system, the products have advanced performance, comfortable, safe and reliable operations and low use and maintenance costs, and are ideal tools for loading, unloading and handling palletized goods in







HIGH PERFORMANCE

- With high power drive motor, provides fast travel speed and good gradeability.
- The permanent magnet synchronous drive system has excellent performance and low energy consumption. The 48V power supply system has less heat generated.
- With the VCU control, the vehicle can be controlled accurately, stably and more efficiently.













210 % Gradeability (laden)(1.6t)



RUGGED ON THE OUTSIDE.

The X series Hi-Range Electric stackers adopts a professional industrial design of exterior and a series family design. The vehicle has a smooth vivid profile and a fully ergonomic design, following the latest exterior design trend.

Made of high-strength steel plates that are molded by stamping, the vehicle exterior is robust, durable and high-grade, and meets environmental protection requirements.





SIMPLE OPERATION

The proportional descending speed regulation system provided for the standard configuration enables more stable and accurate operation.

System Stepless lifting and descending speed regulation is provided for the standard configuration, to and spillage more precise fork control and more stable goods lifting and descending



ENJOY YOUR WORK.

- Optimized designing structure to offer a good visibility and easy entrance of the pallet.
- The compact body and big rounded design provide an ideal operation in limited space, and the wedge designed chassis greatly increases the passing ability.





The standing driving pedal with shock-absorbing design significantly improves standing driving comfort and reduces long-time driving fatigue.



Customer can choose different width of outside fork and length of forks to fit variable pallet.

NEW TILLER

With the novelly developed compact and stylish tiller, all operations can be completed with one hand.



PIN code access

Displayed turtle speed function applied to move slowly and helps to stack goods in narrow spaces.



MAINTENANCE

- Maintenance-free permanent magnet synchronous motor.
- The fault information can be checked directly via the interactive instruments instead of the manual.
- Rear cover can be completely open, operator can see all the components, so the maintenance is very convenient.
- All shafts installed lubricated shaft sleeve and oil cup, provide convenientmaintenance and long service life





20



MORE PROTECT

- With the four-point low center of gravity design and a high-strength steel frame structure, the vehicle frame has a large residual load capacity and a long service life.
- Using non-contact proximity switch, it can provides long life and reliable operation .
- H-type mast profile section to provide more stable and rigid
- The battery is reliably fixed and the battery cover is Support by soft materials, so that the vibration and noise generated during the operation of the vehicle are reduced.



Pedestrian type use the new design drive system, the drive motor will not accompany the tiller rotation, it can keep all the cable connect to the drive motor avoid being bent.



With a low noise and low vibration hydraulic power unit to enable stable and reliable lifting and descending.



The power plug is fixed on the truck body to avoid damage from battery installment.



Punch-formed forks to provide more strength and tip guide to provide higher effcient operation.



Water-proof plugs and connectors applied to provide a reliable protection to electric system.



ADVANCED SAFETY FEATURES









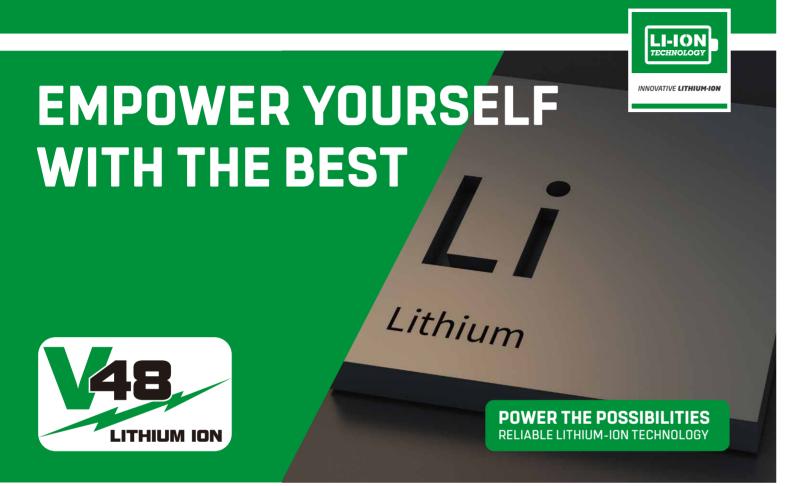


- Travel speed will be automatically reduced after fork lifting 500mm.
- Turning speed is automatically reduced when steering only for stand-on.
- A lifting soft landing is provided for the standard configuration so as to ensure the safety of the vehicle when the fork is lifted to the top.

 (only available for duplex mast)
- It has an intelligent soft landing that automatically slows down the lowering speed when the fork is less than 100mm above the ground, effectively protecting cargo safety. (only available for duplex mast)
- For the standard configuration, a function of stopping lifting when the lifting height reaches the limit of 1.8m and resuming the lifting after the guardrails are retracted is provided to facilitate personnel to escape when high-position goods fall.



LITHIUM POWERED



LITHIUM BATTERY ADVANTAGES



Long service life

4000 full charging cycles with at least 80% residual capacity.



Return on investment

Add flexibility to your operation, cost-saving in the long term, increased efficiencies.



Maintenance free

No topping up of water or checking acid levels.



The high energy density of the Li-lon battery ensures long



Cold area application

Li-lon batteries maintain high performance at temperatures



High safety and reliability

Intelligent battery management monitoring every important function, no emission of battery gasses.



Opportunity charging

Full performance during several shifts thanks to effective interim charging.

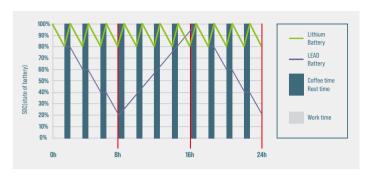


High energy density

working times and increases the high availability.

Efficiency

By quick opportunity charging any downtime, such as a lunch break, can be efficiently used and the battery is recharged in a very short period of time. Interim charging does not affect the battery service life.

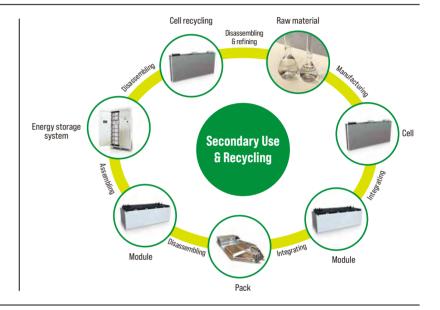


Safety

/ Intelligent battery management monitoring every important function.

/ Higher user safety, thanks to acid-free use. / User friendly due to avoided battery change.

/ No emission of battery gasses.





Q: What are the characteristics of lithium batteries, especially when used in high and low temperature environments?

0°C -65°C Charging temperature Discharge temperature -30°C -65°C -30°C -60°C

After the truck key switch is closed, the instrument battery condition needs to be checked:

- 1. Confirm that there is no battery system alarm message on the instrument panel 2. Please check the remaining power before use. It is recommended to use the SOC
- between 50% and 100%. 3. If the SOC is lower than 20% it is not recommended to continue using it Please charge it as soon as possible.



Q: What is the charging time and usage time calculation of forklift lithium battery?

- 1. Available power of lithium battery (kWh) = rated voltage × rated power × 90% To avoid over-discharge damaging the battery, the forklift is equipped with low power protection (less than 10%)).
- 2. Charging time (h) = rated capacity of lithium battery (Ah) × 90% ÷ charger output current (A).
- 3. The power consumed for charging (kWh) = the available power of the lithium battery + 93% (the charging efficiency of the charger is calculated as 93%). 4. Usage time (h) = available power of lithium battery + energy consumption data. For specific energy consumption values, please refer to the technical table on the sharing platform.



FEATURES & BENEFITS

THE HANGCHA DIFFERENCE

Q: How does Hangcha BMS work to ensure the safety of the lithium battery?

HANGCHA BMS (battery management system) can monitors the cells at all time. As a result, hangcha lithium power is the reliable solution



Battery Safety Management

Overcharge/over discharge protection Overcurrent/over-temperature/low-temperature protection Multi-level fault diagnosis protection Double fault monitoring



Battery Parameter Detection:

Battery voltage detection and analysis Battery current detection and analysis Battery temperature detection and analysis



Equilibrium Management:

Equalization based on voltage mode Equalization based on time mode Equalization based on battery cell SOC Active/passive equalization optional



Other Features:

Low cost, low power consumption Historical data record CRC data validation

1.2t Mast Specification

	Max. lifting	Ground clearance, fork	Lowered height	Extended height	Free lift	Load Capacity at 600mm
Туре	height h₃	(h3 +h13)	h1	h4		1.2t
	mm	mm	mm	mm	mm	kg
, >	2100	2190	1540	2590	90	1200
dei	2500	2590	1740	2990	90	1200
i e	2700	2790	1840	3190	90	1200
Double cylinder duplex wide view	3000	3090	1990	3490	90	1200
E S	3200	3290	2090	3690	90	1200
흡유	3400	3490	2190	3890	90	1170
<u> </u>	3600	3690	2290	4090	90	1100
O)	2100	2190	1540	2590	1070	1200
. Le	2500	2590	1740	2990	1270	1200
i je	2700	2790	1840	3190	1370	1200
e fe	3000	3090	1990	3490	1520	1200
vic ole	3200	3290	2090	3690	1620	1200
Duplex full-free wide view	3400	3490	2190	3890	1720	1170
	3600	3690	2290	4090	1820	1100
9	3600	3690	1660	4080	1195	1100
÷- ¥	3900	3990	1760	4380	1295	990
Ž š	4100	4190	1830	4580	1360	920
ex ide	4300	4390	1890	4780	1425	850
Triplex full-free wide view	4500	4590	1960	4980	1495	760
Ĕ	4700	4790	2030	5180	1560	700

1.4-1.6t Mast Specification

	Max. lifting	Ground clearance, fork	Lowered height	Extended height	Free lift	Load Capacity at 600mm		
Туре	height h3 (h3 +h13) h1 h4	rieeiiit	1.4t	1.6t				
	mm	mm	mm	mm	mm	kg	kg	
	2000	2090	1540	2540	90	1400	1600	
	2400	2490	1740	2940	90	1400	1600	
<u>,</u> ≥	2700	2790	1890	3240	90	1400	1600	
Double cylinder duplex wide view	2900	2990	1990	3440	90	1400	1600	
<u>≒</u> #	3000	3090	2040	3540	90	1400	1600	
Ş. <u>×</u>	3300	3390	2190	3840	90	1250	1350	
el X	3500	3590	2290	4040	90	1150	1220	
	3800	3890	2440	4340	90	1030	1080	
교육	4000	4090	2540	4540	90	950	1000	
	4200	4290	2640	4740	90	890	940	
	4500	4590	2790	5040	90	760	810	
	2000	2090	1540	2540	1020	1400	1600	
¥ @ ≷	2400	2490	1740	2940	1220	1400	1600	
Duplex full-free wide view	2700	2790	1890	3240	1370	1400	1600	
그 등 유	3000	3090	2040	3540	1520	1400	1600	
_ 4.≥	3300	3390	2190	3840	1670	1250	1350	
	3500	3590	2290	4040	1770	1150	1220	
	3500	3590	1660	4020	1160	1150	1220	
	3800	3890	1760	4320	1260	1030	1080	
g,	4000	4090	1830	4520	1330	950	1000	
Fre ≥	4200	4290	1890	4720	1390	890	940	
i je	4500	4590	2030	5020	1490	760	810	
e f	4700	4790	2060	5220	1560	700	750	
Triplex full-free wide view	4800	4890	2090	5320	1590	680	730	
- 5	5000	5090	2160	5520	1660	650	700	
F	5200	5290	2230	5720	1730	600	650	
	5500	5590	2330	6020	1830	550	600	
	6000	6090	2500	6520	2000	450	500	

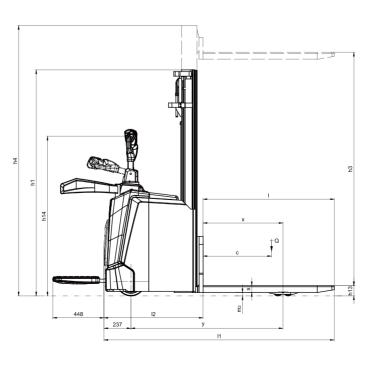
2.0t Mast Specification

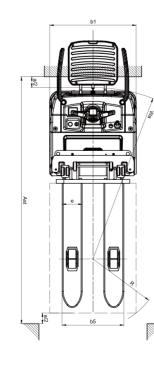
	Max. lifting	Ground clearance,	Lowered height	Extended height	F 1164	Load Capacity at 600mm
Туре	height ha	fork (h3 + h13)	h ₁	h ₄	Free lift	2.0t
	mm	mm	mm	mm	mm	kg
	2050	2140	1660	2690	90	2000
	2250	2340	1760	2890	90	2000
<u></u> ≥	2400	2490	1830	3030	90	2000
s is	2700	2790	1990	3340	90	1800
	3000	3090	2140	3640	90	1600
Double cylinder duplex wide view	3200	3290	2240	3840	90	1470
음 ố	3400	3490	2340	4040	90	1340
喜黃	3600	3690	2440	4240	90	1200
후 음	3800	3890	2540	4440	90	1130
	4000	4090	2640	4640	90	1050
	4300	4390	2850	5000	90	950
	4500	4590	2950	5200	90	860
	2050	2140	1660	2690	1020	2000
	2250	2340	1760	2890	1120	2000
_ a, ≥	2400	2490	1830	3030	1200	2000
Duplex full-free wide view	2700	2790	1990	3340	1350	1800
글 늘 뭐	3000	3090	2140	3640	1500	1600
	3200	3290	2240	3840	1300	1470
	3400	3490	2340	4040	1700	1340
	3600	3690	2440	4240	1800	1200
	3500	3590	1800	4150	1165	1270
e.	3800	3890	1900	4450	1260	1130
∓ ≥	4000	4090	1965	4650	1300	1050
i je	4200	4290	2030	4850	1395	990
Triplex full-free wide view	4500	4590	2130	5150	1495	860
ê ë	4800	4890	2230	5450	1595	780
<u> </u>	5000	5090	2330	5650	1660	750
-	5500	5590	2465	6150	1830	650
	6000	6090	2640	6650	2000	550

Technical data

	11	Manufacturer (abbreviation) HANGCHA GROUP CO.,LTD.						
Distinguishing mark	1.1	Manufacturer (abbreviation)						
	1.2	Manufacturer's type designition		CDD12-XT1S-SI	CDD14-XT1S-SI	CDD16-XT1S-SI	CDD20-XT1S-SI	
	1.3	Drive: electric (battery type, mains,), diesel, petrol, fuel gas		Electric	Electric	Electric	Electric	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Standing	Standing	Standing	Standing	
E E	1.5	Rated capacity/rated load	kg	1200	1400	1600	2000	
Dis	1.6	Load centre distance	c (mm)	600	600	600	600	
	1.8	Load distance, centre of drive axle to fork	x (mm)	700	700	700	700	
	1.9	Wheelbase	y (mm)	1296	1331	1331	1331	
差	2.1	Service weight	kg	1200	1220	1230	1260	
Weight	2.2	Axle loading, laden front/rear	kg	876/1524	956/1664	1033/1797	1190/2070	
	2.3	Axle loading, unladen front/rear	kg	840/360	854/366	861/369	882/378	
	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		PU	PU	PU	PU	
<u>.s.</u>	3.2	Tyre size, front		Ø250×80	Ø250×80	Ø250×80	Ø250×80	
ass	3.3	Tyre size, rear		Ø83×80	Ø83×80	Ø83×80	Ø83×80	
Tyres, chassis	3.4	Additional wheels (dimensions)		Ø140×55	Ø140×55	Ø140×55	Ø140×55	
yre	3.5	Wheels, number front/rear (x = driven wheels)		1x+1/4	1x +1/4	1x +1/4	1x +1/4	
-	3.6	Tread, front	b10 (mm)	516	516	516	516	
	3.7	Tread, rear	b11 (mm)	385	385	385	385	
	4.2	Height, mast lowered	h1 (mm)	1840	1890	1890	1990	
	4.3	Free lift	h2 (mm)	90	90	90	90	
	4.4	Lift	h3 (mm)	2700	2700	2700	2700	
	4.5	Height, mast extended	h4 (mm)	3190	3240	3240	3340	
	4.9	Height drawbar in driving position min./max.	h14 (mm)	1170/1400	1170/1400	1170/1400	1170/1400	
	4.15	Height, lowered	h13 (mm)	90	90	90	90	
Dimensions	4.19	Overall length	I1 (mm)	19873	2019 ³⁾	2019 ³⁾	2019 ³⁾	
sua	4.20	Length to face of forks	12 (mm)	8343	8693)	869 ³⁾	869 ³⁾	
ii.	4.21	Overall width	b1/b2 (mm)	800	800	800	800	
	4.22	Fork dimensions DIN ISO 2331	s/e/I(mm)	60/185/1150	60/185/1150	60/185/1150	65/185/1150	
	4.25	Fork spread	b5 (mm)	570	570	570	570	
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	25	25	25	25	
	4.34.1	Aisle width for pallets 1000 × 1200 crossways	Ast (mm)	2201(2632)1 3	2236(2667)1 3	2236(2667)1 3	2236(2667)1 3	
	4.34.2	Aisle width for pallets 800 × 1200 lengthways	Ast (mm)	2251(2682) ^{2 3)}	2286(2717) ^{2 3)}	2286(2717)2(3)	2286(2717) ^{2 3}	
	4.35	Turning radius	Wa (mm)	1551(1982)	1586(2017)	1586(2017)	1586(2017)	
	5.1	Travel speed, laden/unladen	km/h	9/11	9/11	9/11	8/10	
auc	5.2	Lift speed, laden/unladen	m/s	0.225/0.47	0.195/0.4	0.18/0.4	0.16/0.34	
orm data	5.3	Lowering speed, lade / unladen	m/s	0.45/0.4	0.45/0.4	0.45/0.4	0.5/0.4	
Performance data	5.8	Max. gradeability, laden/unladen	%	10/16	10/16	8/16	8/16	
	5.10	Service brake		Regenerative	Regenerative	Regenerative	Regenerative	
	6.1	Drive motor rating S2 60 min	kW	2.2	2.2	2.2	2.2	
ine ine	6.2	Lift motor rating at S3 15 %	kW	4.2	4.2	4.2	4.2	
Electric- engine	6.4	Battery voltage/nominal capacity	V/Ah	48/80	48/80	48/80	48/80	
	6.5	Battery weight	kg	60	60	60	60	

 $Note: 1] \ According to \ VDI2198 \ standard + 220 mm. \ 2] According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 12 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 12 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 12 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 12 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 12 mm. \ According to \ Acco$





Technical data

	1.1	Manufacturer (abbreviation)			HANGCHA GF	ROUP CO.,LTD.	
	1.2	Manufacturer's type designition		CDD12-XT1-SI	CDD14-XT1-SI	CDD16-XT1-SI	CDD20-XT1-SI
Distinguishing mark	1.3	Drive: electric (battery type, mains,), diesel, petrol, fuel gas		Electric	Electric	Electric	Electric
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Standing	Standing	Standing	Standing
	1.5	Rated capacity/rated load	kg	1200	1400	1600	2000
Jisti	1.6	Load centre distance	c (mm)	600	600	600	600
	1.8	Load distance, centre of drive axle to fork	x (mm)	700	700	700	700
	1.9	Wheelbase	y (mm)	1318	1318	1318	1318
- e	2.1	Service weight	kg	1020	1040	1040	1080
Weight	2.2	Axle loading, laden front/rear	kg	625/1595	685/1755	740/1900	865/2215
>	2.3	Axle loading, unladen front/rear	kg	685/335	700/340	700/340	725/355
	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		PU	PU	PU	PU
ဟ	3.2	Tyre size, front		Ø250×80	Ø250×80	Ø250×80	Ø250×80
Tyres, chassis	3.3	Tyre size, rear		Ø83×80	Ø83×80	Ø83×80	Ø83×80
بو	3.4	Additional wheels (dimensions)		Ø140×55	Ø140×55	Ø140×55	Ø140×55
yres	3.5	Wheels, number front/rear (* = driven wheels)		1x+1/4	1x+1/4	1x +1/4	1x +1/4
Ε.	3.6	Tread, front	b10 (mm)	510	510	510	510
	3.7	Tread, rear	b11 (mm)	385	385	385	385
	4.2	Height, mast lowered	h1 (mm)	1840	1890	1890	1990
	4.3	Free lift	h2 (mm)	90	90	90	90
	4.4	Lift	h3 (mm)	2700	2700	2700	2700
	4.5	Height, mast extended	h4 (mm)	3190	3240	3240	3340
	4.9	Height drawbar in driving position min./max.	h14 (mm)	790/1205	790/1205	790/1205	790/1205
	4.15	Height, lowered	h13 (mm)	90	90	90	90
ions	4.19	Overall length	I1 (mm)	1934 ³⁾	19343	1934 ³	19343)
Dimensions	4.20	Length to face of forks	12 (mm)	784 ³⁾	7843	784 ³⁾	7843
Ë	4.21	Overall width	b1/b2 (mm)	800	800	800	800
	4.22	Fork dimensions DIN ISO 2331	s/e/I(mm)	60/185/1150	60/185/1150	60/185/1150	65/185/1150
	4.25	Fork spread	b5 (mm)	570	570	570	570
	4.32	Ground clearance, centre of wheelbase	m2 (mm)	25	25	25	25
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	22001 3	22001 3	22001 3	22001 3
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	22502 3	22502 3	22502 3	2250 ^{2 3}
	4.35	Turning radius	Wa (mm)	1550	1550	1550	1550
a.	5.1	Travel speed, laden/unladen	km/h	6/6	6/6	6/6	6/6
Performance data	5.2	Lift speed, laden/unladen	m/s	0.225/0.47	0.195/0.4	0.18/0.4	0.16/0.34
orm	5.3	Lowering speed, lade/unladen	m/s	0.45/0.4	0.45/0.4	0.45/0.4	0.5/0.4
oerf.	5.8	Max. gradeability, laden/unladen	%	8/16	8/16	6/16	5/16
	5.10	Service brake		Regenerative	Regenerative	Regenerative	Regenerative
	6.1	Drive motor rating S2 60 min	kW	2.2	2.2	2.2	2.2
Electric- engine	6.2	Lift motor rating at S3 15 %	kW	4.2	4.2	4.2	4.2
Elec	6.4	Battery voltage/nominal capacity	V/Ah	48/80	48/80	48/80	48/80
	6.5	Battery weight	kg	60	60	60	60

 $Note: 1] \ According to \ VDI2198 \ standard + 220 mm. \ 2] According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 21 mm. \ According to \ VDI2198 \ standard + 140 mm. \ 3] Triplex \ full-free + 140 mm. \ According to \ VDI2198 \ standard + 140 mm. \ According$

