



Hi Range

ELECTRIC STACKER

CDD12/14/16/20-AC1

CDD12/14/16/20-AZ3

CDD12/14/16/20-AC1-I

CDD12/14/16/20-AZ3-I

CDD12/14/16/20-AC1S

CDD12/14/16/20-AZ3S

CDD12/14/16/20-AC1S-I

CDD12/14/16/20-AZ3S-I

CDD12/14/16/20-AC2

CDD12/14/16/20-AC2-I

CDD12/14/16/20-AC2S

CDD12/14/16/20-AC2S-I

CTD12/14/16/20-AC1

CTD12/14/16/20-AZ3

CTD12/14/16/20-AC1S

CTD12/14/16/20-AZ3S

CTD12/14/16/20-AC1S-I

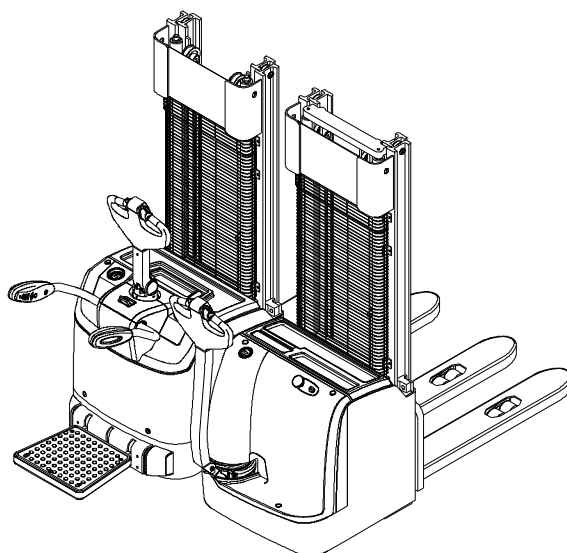
CTD12/14/16/20-AZ3S-I

CTD12/14/16/20-AC2

CTD12/14/16/20-AC2S

CTD12/14/16/20-AC2S-I

OPERATION AND MAINTENANCE MANUAL



Original Instruction

HANGCHA GROUP CO., LTD.

11/2022

FOREWORD

Thank you very much for purchasing the A series hi range electric stacker of Hangcha Group .

A series hi range electric stacker is a newly developed product for warehouse logistic, it owns characteristics as advanced performance, comfort operation, safety and security, low maintenance cost, and is an ideal tool for handling goods in warehouse, supermarket and workshop.

Part one of this manual is about the brief introduction and correct operation of the hi range electric stacker, which will tell you how to operate safely and maintain preventively; part two will tell you the structure, working principle and maintenance of the hi range electric stacker. In order to guarantee safety and utilize the truck performance to the best, relevant operator and maintainer must read this manual.

Because of the update and improvements of our products, there may be some differences between this operation manual contents and your forklift truck.

If you have any questions, please contact HANGCHA GROUP CO., LTD. sales company or the agent.

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Part I : Operation and maintenance

1 Truck Introduction

1.1 General

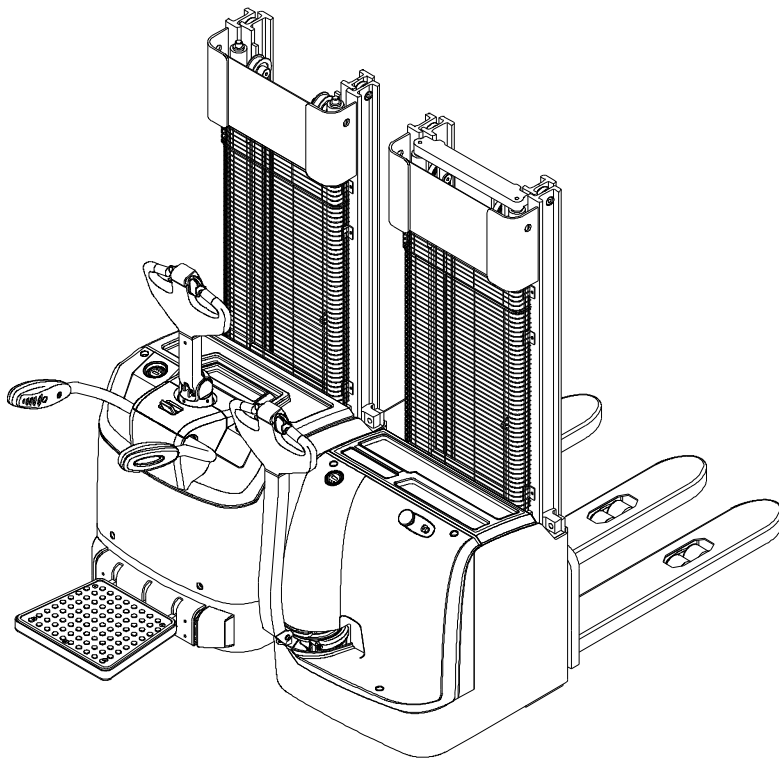
This manual introduces A series hi range electric stacker.

According to different operation way, it has two types as pedestrian-type and Stand-on type.

Users can get relevant information as rated load from the product model. Model CDD20-AC1S as an example:

CDD20-ABC1SN-I	Mode
CDD	Electric stacker
20	Rated load capacity×100kg
A	Product serial number
C1, Z3,C2	Controller type
S	Stand-on type
I	Lithium battery

Rated capacity usually does not equal the allowable lifting capacity. Please refer to the load curve chart on the truck for approved lifting capacity.



Truck body system

- Beautiful and compact outline, concise and fluent line.
- Chassis welded by high-performance steel plate guarantees enough load capacity.
- Chassis adopts 4-wheel structure, including one drive wheel, one auxiliary wheel as stabilizing and two load wheels, thus guarantee the good stability and safe travelling.
- Hang-on foldable damping pedal as optional

Driving system

- Adopted suspension design guarantees well wheel and ground contact, light turn and convenient operation.
- Divide into manual steering and electric steering.

Braking system

- It owns three emergency braking functions as release brake, reverse brake and electromagnetic brake to ensure travelling safety.
- It owns slope anti-slide function to ensure safety.

Operation steering system

- New ergonomics designed control handle owns acceleration, reversing, horn, braking, lifting/lowering, emergency reverse functions, thus makes operation easier.
- Emergency reversing button on the control handle head can prevent driver from hurt when encountering emergency in backward driving.
- Low speed travel function can move the truck slowly. It can stack goods even in very narrow place.
- Newly designed floatable suspension system makes steering more convenient.
- Steering angle $\pm 90^\circ$.

Hydraulic system

- Modularization hydraulic power unit owns low noise, low vibration, stable and reliable lifting and lowering.

Mast

- Good mast vision, easy installation and maintenance.
- Mast lifting height is optional.

Electric system

- 24V Electric system
- CURTIS or ZAPI AC control system
- Multi-function instrument owns electric quantity display, time and fault diagnosis function.
- Emergency stop switch
- Own electric lift limited and controller intelligent limited function

- Electric wiring adopts waterproof connector.

1.2 Use occasion and condition

Truck in this manual is only for lifting and transporting loads.

It must be used, operated and maintained according to the information in this manual. Any other uses are outside the design envelope and can lead to injury to persons or damage to equipment or property.

Only used in specified place and condition:

- Use in specified rated load.
- Used in specified area as factory, tourist attraction and recreation place.
- Used on the flat ground, that is fixed and owns enough carrying capacity.
- It is prohibited to pass the bulge or cavity as the small wheel diameter may cause truck tipping over.
- Used on the road with good vision and equipment use license.
- Max. uphill grade when driving is 6%.
- It is prohibited to travel crosswise or obliquely. When go uphill with loads, keep the loads in front; when go downhill, keep people in front.

For truck operation, the following normal climatic conditions apply:

- Average ambient temperature for continuous duty: +25°C;
- Maximum ambient temperature, short term (up to 1h): +40°C;
- Lowest ambient temperature for trucks intended for use in normal indoor conditions: +5°C;
- Lowest ambient temperature for trucks intended for use in normal outdoor conditions: -20°C;
- Altitude: up to 2000m.

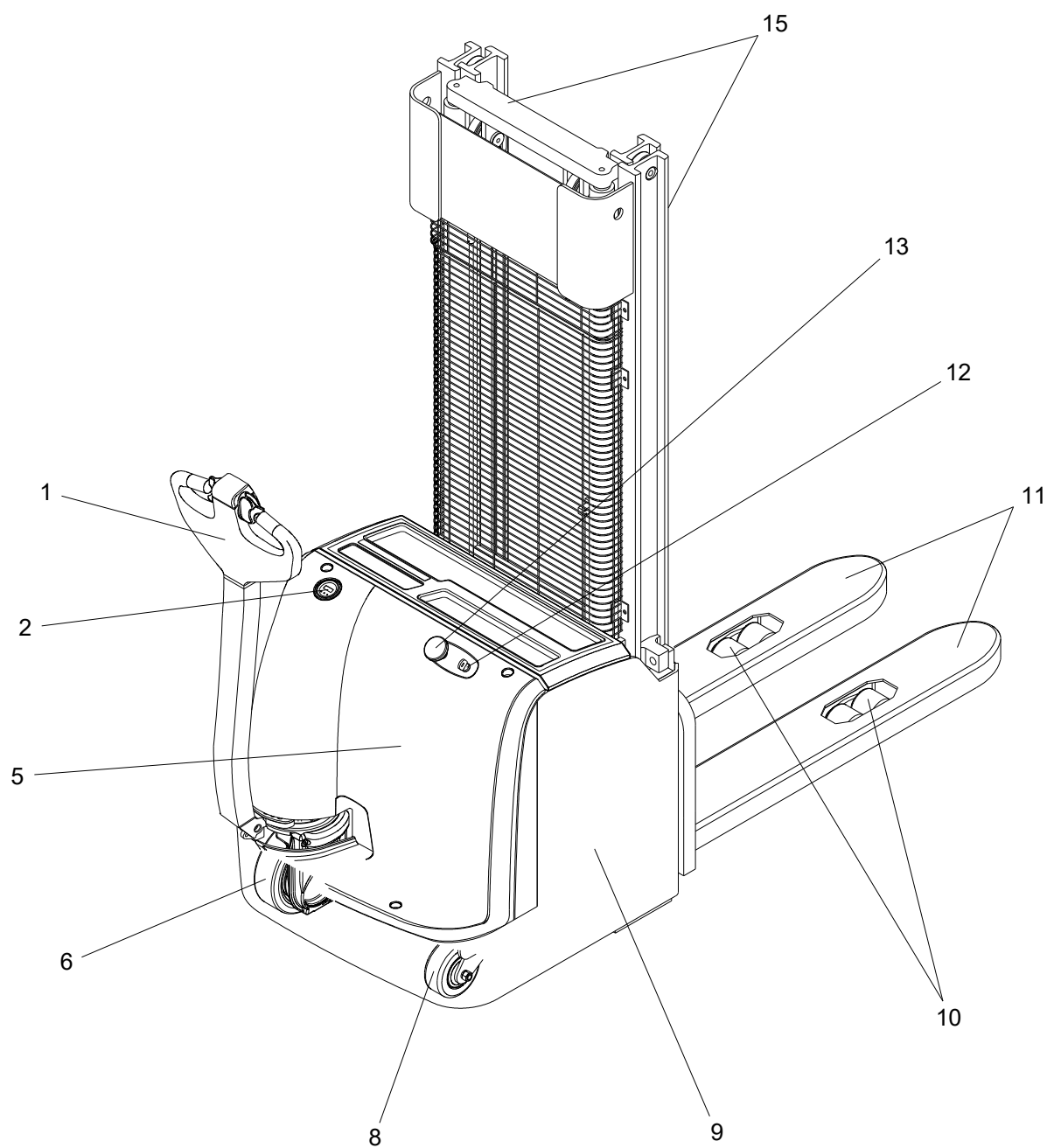
Please read other safety rules in this manual, it is important to your personal safety, working staff and goods safety.



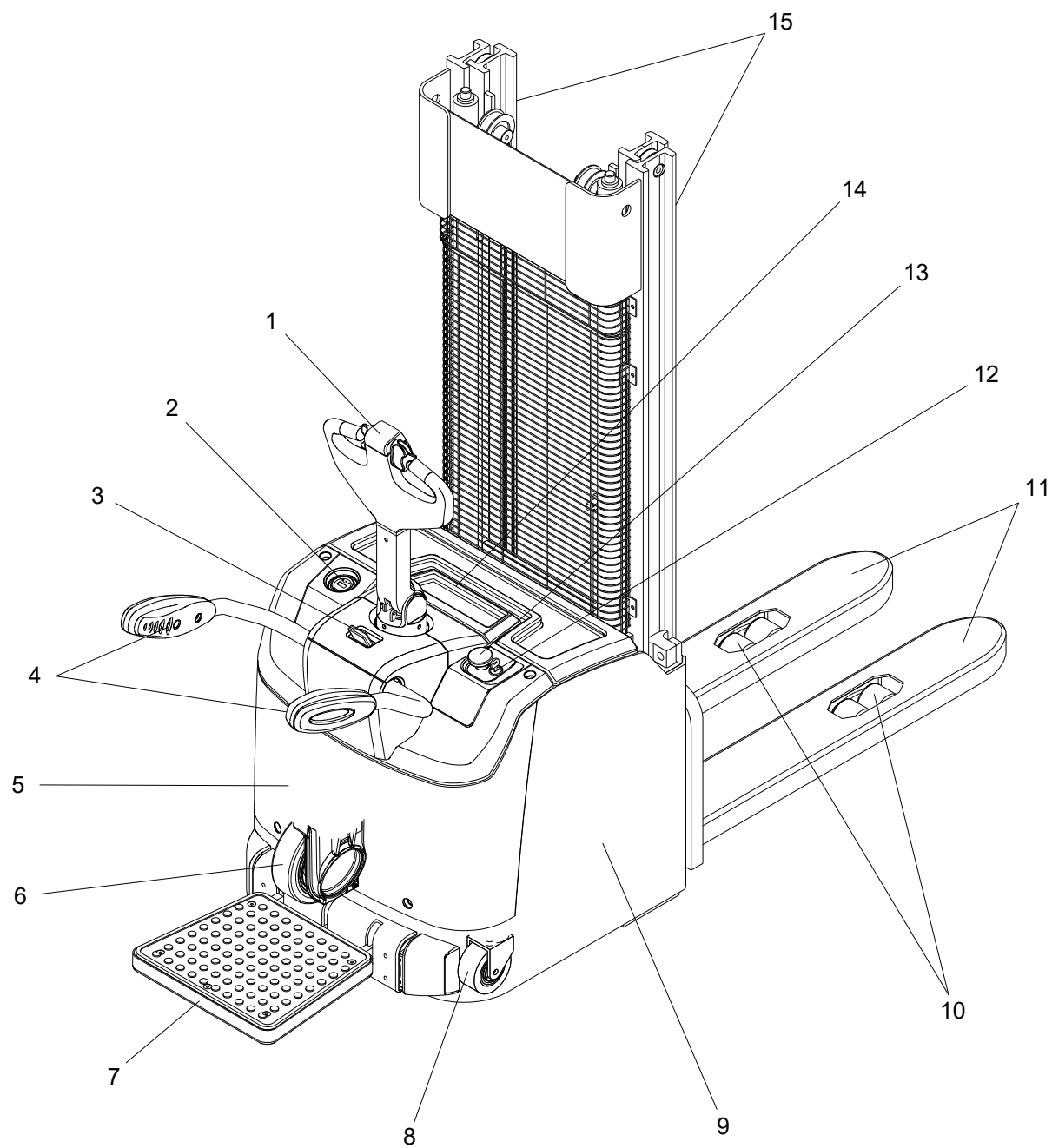
WARNING

- Do not carry people.
- Do not over load.
- Do not push and pull loads.

1.3 Main part name



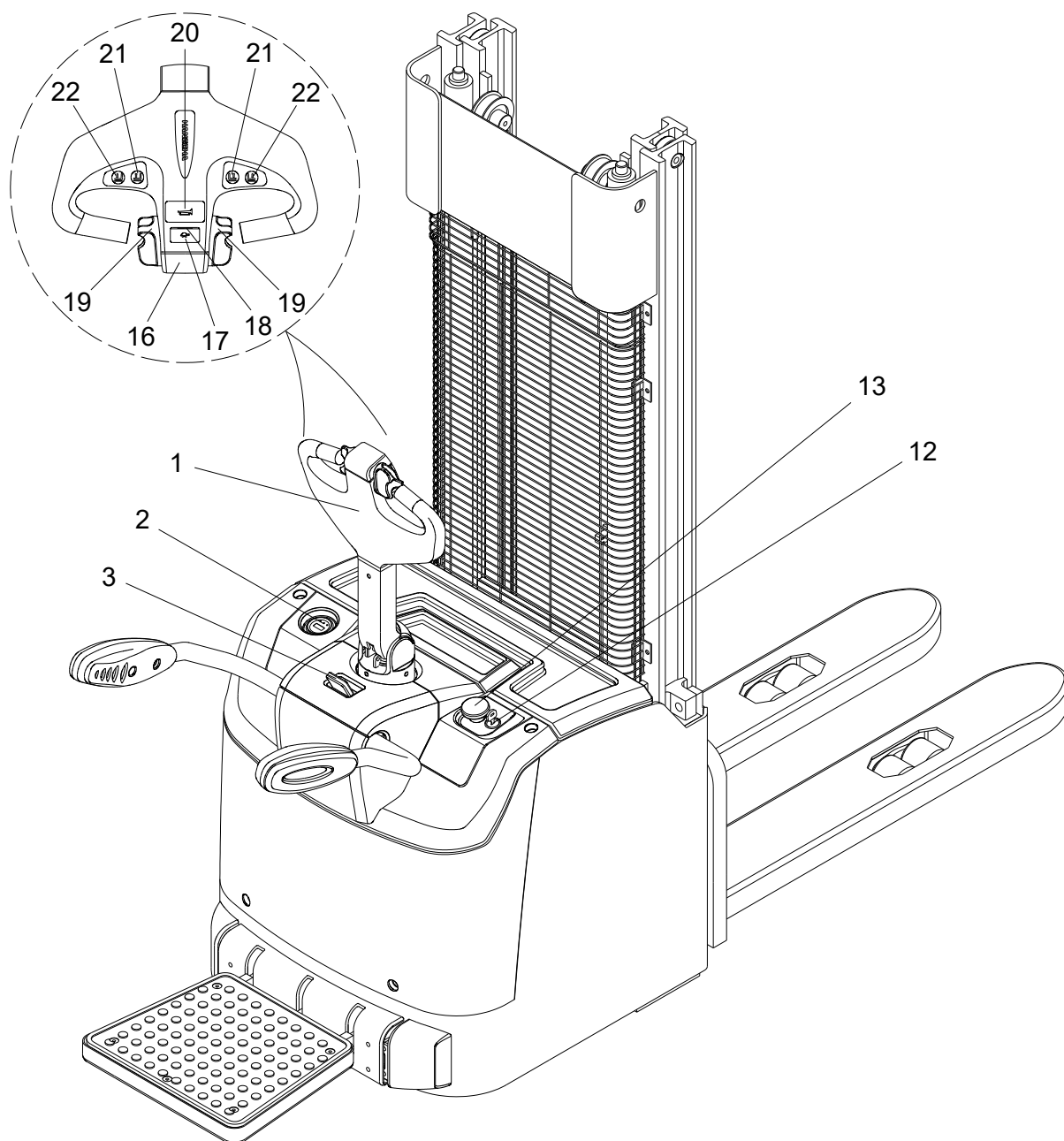
Pedestrian-type: CDD12/14/16/20-AC1, CDD12/14/16/20-AZ3, CDD12/14/16/20-AC2
CDD12/14/16/20-AC1-I, CDD12/14/16/20-AC2-I



Stand-on type: CDD12/14/16/20-AC1S, CDD12/14/16/20-AZ3S,
CDD12/14/16/20-AC2S, CDD12/14/16/20-AC2S-I

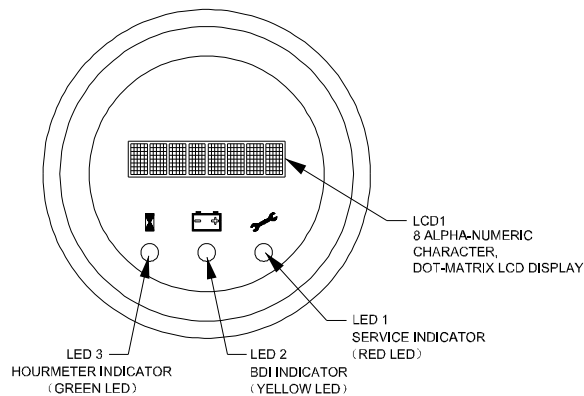
Item	Description	Item	Description
1	Control handle	9	Frame
2	Instrument	10	Load wheel
3	Arm guard lock switch	11	Fork
4	Arm guard	12	Key switch
5	Rear hood assy	13	Emergency stop switch
6	Driving wheel	14	Battery cover
7	Pedal	15	Mast
8	Auxiliary wheel		

1.4 Display and control

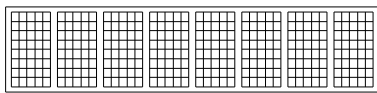


1.4.1 Display

Curtis 840 Instrument [2]



Dot-matrix LCD display



The display screen is 8 alphanumeric characters, dot-matrix LCD liquid crystal display, can display vehicles fault code, battery soc and total running time.

Vehicles when the normal operation of the display shows the battery remaining power.

Service indicator(red LED)

When the controller to detect fault information, the red LED indicator light flashing, at the same time LCD display shows two digits of the fault code. When there are multiple fault fault code alternates between interval of 2 seconds. Fault code corresponding fault information to view in this paper, the fault code table.

BDI indicator(yellow LED)

When battery remaining power less than 20%, the yellow LED indicator lights flashing, warned "depleted", at the same time LCD display shows "20%" for 1 seconds after into "Low BDI".

When the yellow LED indicator lights flashing, vehicle lifting by automatic locking function, running speed is reduced. At this time should be immediately available for vehicles

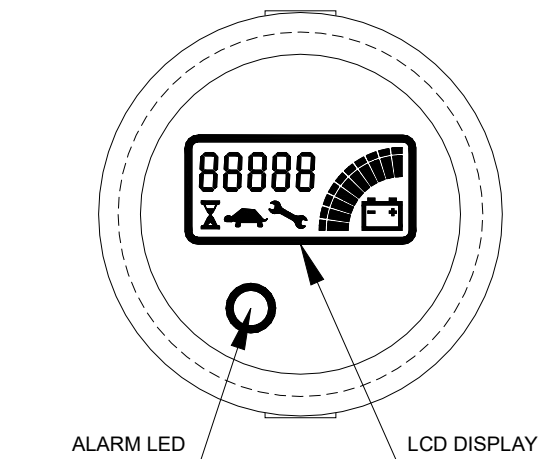
recharged.

Hourmeter indicator(green LED)

Said when the green LED light is normally on the timer is timing, the smallest unit of time for 0.1 hours.

Every time when starting the vehicle LCD screen will display the vehicle's total run time, this time is for regular maintenance on the basis of the vehicle.

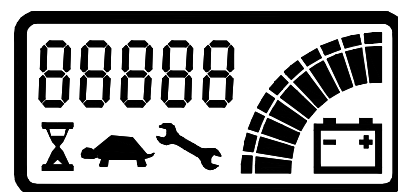
Zapi MDI-CAN Instrument [2]



LED function

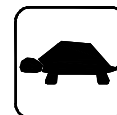
The MDI-CAN has only a LED. This LED is red and lights and blinks when an alarm is present.

Display function



Three symbols inform the operator as follows:

Turtle Symbol:



It is normally off; when it appears (fixed) it shows activation of the "soft" mode of the truck, in which maximum speed and acceleration are reduced;

Monkey Wrench Symbol:



It is normally off; when it appears (fixed) it shows the request of programmed maintenance or the Alarm state. In this case the relative code will be displayed. The information supplied by the MDI-CAN can be extremely useful. Failures can be quickly identified by the Operator or Service Technician thereby finding the fastest solution to the problem.

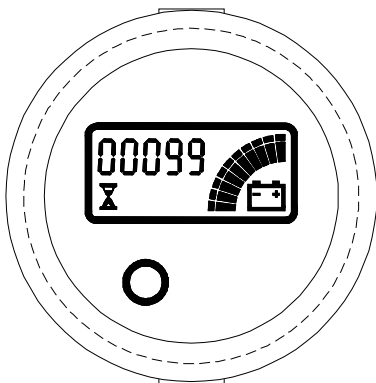
Hourglass Symbol:



It is normally off; it blinks when the Hour Meter is working.

Hour meter

An alpha-numeric liquid crystal display is fitted in the centre of the unit that shows the Hours Worked. The display is backlight (the backlight is normally lighted).

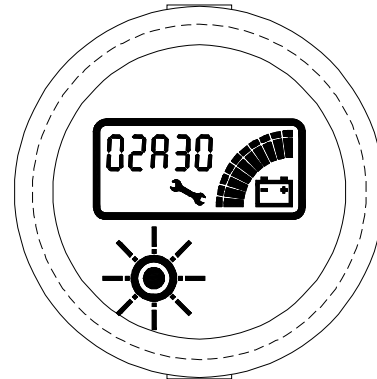


Alarms

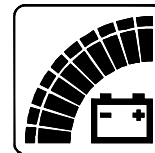
The same display can also indicate the Alarm state, showing a Code corresponding to the type of Alarm. To attract attention, the Red LED will start blinking when an Alarm is generated.

When an Alarm is generated, the Red LED blinks to attract the attention of the operator. The symbol of Monkey Wrench also

appears. The string shown on the display is XXAYY, where XX and AYY represent respectively the alarmed node and the alarm code. The alarm code meaning must be present in the controller user manual.



Battery State of charge



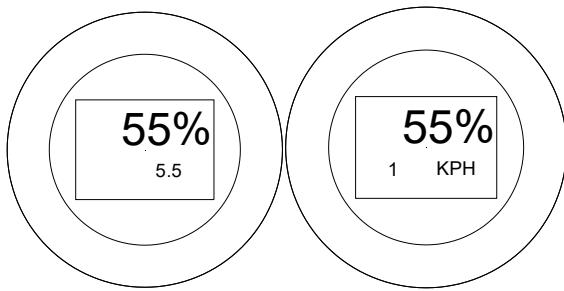
The battery's State of Charge indication is integrated in the LCD display; it is shown by ten notches. Each notch represent the 10% of the battery charge. As the battery becomes discharged, the notches turn off progressively, one after the other, in proportion to the value of the residual battery charge. This value, sent to the MDI-CAN by the controller via CANUS, is displayed in the Tester Menu of the Zapi Console connected to the controller. When BATTERY LOW alarm appears on the controller, the battery symbol which is under the notches blinks.

Low speed indicator [18]



When this light is on, the truck is in low speed mode.

C2 controller meter



The upper part of the instrument used by C2 controller shows the remaining battery power; the lower part shows the operating time of the forklift when the forklift is stationary, in unit h; the driving speed is displayed when the vehicle is moving, in unit KPH.

D13L Display characteristics:

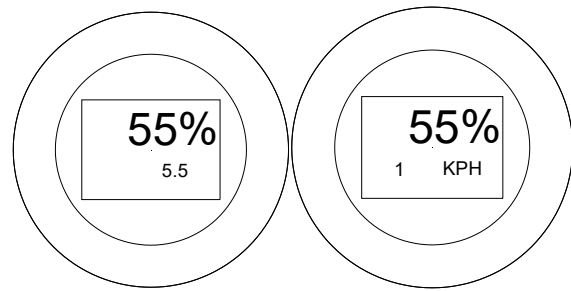
- Wide voltage input range: 9V~60V;
- Built-in anti-reverse circuit;
- Beautiful appearance and unique alarm indication design;
- Implement time-limited vehicle speed, power, hour meter, and fault;
- Positive IP65 protection level, able to adapt to a variety of complex environments;

Instrument graphic



No.	Paramter name	Description
1	Hour meter	The number shows the current accumulated working hours of the vehicles, with a maximum of 5 digits; unit: h
2	Speed display	Display current vehicle speed in km/h
3	Battery level display	Display current battery level;
4	Fault code	Display the current fault code, and display cyclically when multiple faults occur;

C2 controller meter



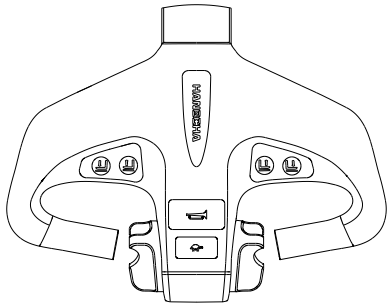
The upper part of the instrument used by C2 controller shows the remaining battery power; the lower part shows the operating time of the forklift when the forklift is stationary, in unit h; the driving speed is displayed when the vehicle is moving, in unit KPH

Note

- 1) Speed display accuracy and unit: the controller software supports speed unit switching and decimal point measuring function, D13L can realize corresponding display;
- 2) When the battery level is lower than 20%, the battery icon flashes;
- 3) When the hour meter is in the main interface, it is always displayed;
- 4) Some models are not used, so the speed is displayed as 0;
- 5) It is panel screen printing color around the meter;
- 6) When there is a fault in one of the controllers of the vehicle, the red exclamation mark of the instrument flashes, and the current fault code is displayed on the interface. See the corresponding part of the manual for the specific fault code.

1.4.2 Control

Control handle [1]



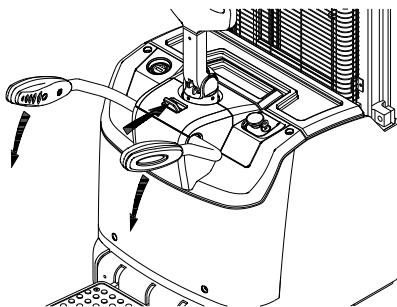
Control truck steering and braking.

When turn the control handle right and left, it can realize the truck right and left turn. The max turning angle of this handle is about 175°. When press the handle to horizontal position or push up to vertical position, it can realize the truck brake. These two positions are set by brake inching switch. Normal is open circuit, working status is closed, brake inching switch is normally at horizontal or vertical position is.

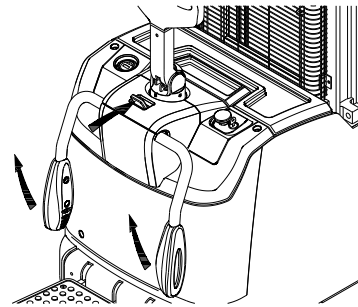
Arm guard lock switch [3]

Open or fold the arm guard, then release the lock condition.

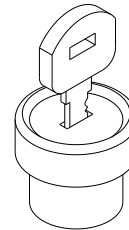
When fold the arm guard, push the arm guard lock switch with one hand and the other hand press the arm guard until it rotates to certain angle, release arm guard lock switch and press the arm guard to lock position.



When open the arm guard, push the arm guard lock switch with one hand and the other hand lift up the arm guard until it rotates to certain angle, release arm guard lock switch and lift the arm guard to lock position.

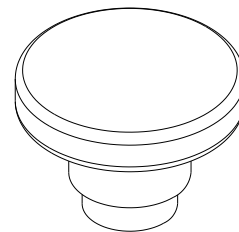


Key switch [12]



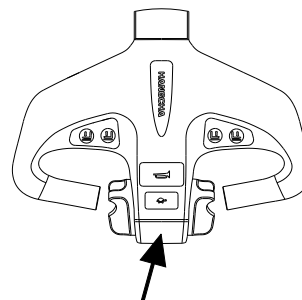
Turn on the key switch, and the power is on. Turn off the switch, and the power is off. Turn off the key switch before charging.

Emergency stop switch [13]



Press this switch, power is off. Press it when emergency or no use. If re-start needed, pull upward.

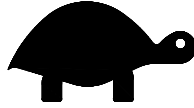
Emergency reverse button [16]



This switch is at the head of control lever, once touch this button, the truck moves forward. It is used to protect people from being clamped by the control handle.

This switch is also called belly switch.

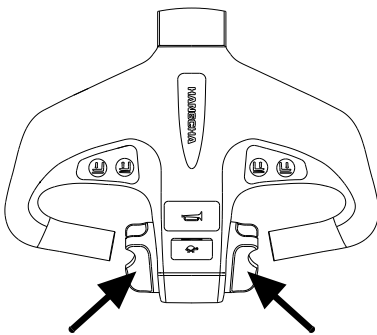
Low speed switch button [17]



Press this button and indicator light[19] is on, it means the truck changes to low speed travel mode. When in low speed mode, the truck will travel in low speed, 40% of max. travelling speed.

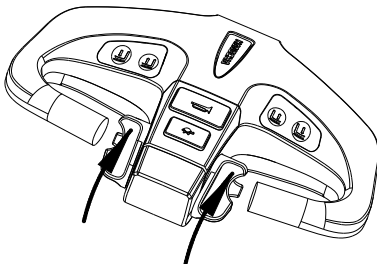
Press this button and indicator light[19] is off, it means the truck changes to normal travelling mode.

Direction and speed control button [19]



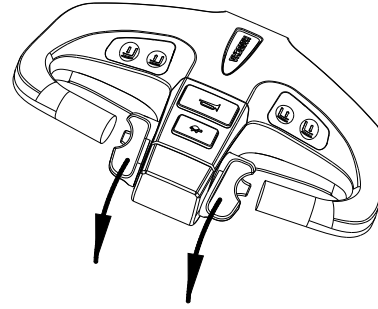
This button is at both sides of control lever head, one linkage per left and right. It is to control travelling direction and travelling speed.

Truck travels to the fork side



- Press this control handle downwards.
- Turn this button from the side of body to outside gradually with thumb.
- Truck travels to the fork side.

Truck travels to the handle side(or pedal)



- Press this control handle downwards. Turn this button towards the side of body gradually with thumb.
- Truck travels to the handle side(or pedal).



CAUTION

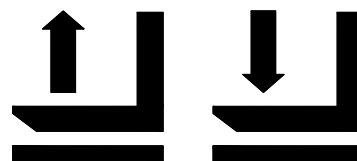
After the finger is released, the direction and speed button will reset itself and the truck will stop by brake. So do not loosen the knob when the truck is requested to continue driving.

Horn button [20]



The button is located on the front of the control handle upper surface. Press down the button, and the horn sounds.

Lifting button [21], lowering button [22]

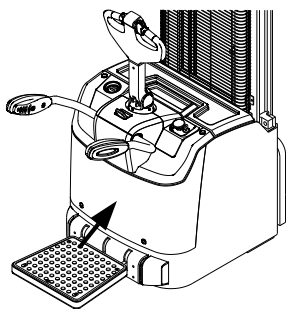


The lifting button and the lowering button are located on both side surface of the middle control handle. Press the lifting button, and the forks move up; press the lowering button, the forks move down.

When the capacity of batteries is consumed up to 80%, the lifting function will be locked.

1.4.3 Others

Rear hood assembly [5]



There install main parts as hydraulic unit, main drive unit and electric system etc. under the hood. When check or maintain, please open the rear hood.

Fork [11]

Forks can be lifted or lowered to fetch goods. Because of fourar mechanism, forks assembly will move horizontally a distance when forks lift or lower.



CAUTION

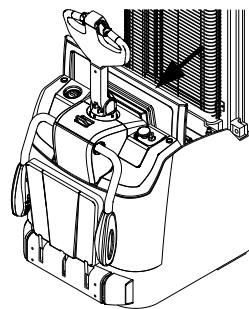
- It is forbidden to put hands, feet or any part of the body between lift assy and truck frame when lifting or lowering.

Load wheel [10]

There is one load wheel under each front outrigger to ensure longitudinal stability.

Check the load wheel to find if there is disrepair or abnormal wear according to necessity. If there is disrepair on the load wheel or its inner bearing, suspend the truck off the ground or jack the front outrigger off the ground, replace the worn load wheel or the worn bearing, and renew sufficient multi-purpose grease on the bearing.

Battery cover [14]



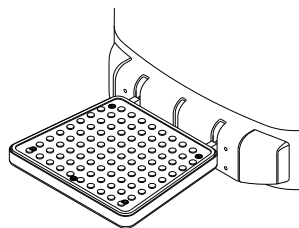
When check battery, take out the plug, charge or replace the battery, you can easily open the battery cover.



CAUTION

- When closing the battery cover, protect your fingers from being clamped.

Pedal (Only for stand-on type) [7]



This pedal can be folded so that you can put down the pedal and stand on it when operating the truck for a long distance. When transporting at a narrow space, folding the pedal, stand on ground to operate the truck.

1.5 Standard technical data

The following technical data are all standard data. Our company reserves the right of alteration and extension.

Characteristics	Model		CDD12-AC1 CDD12-AC2	CDD14-AC1 CDD14-AC2	CDD16-AC1 CDD16-AC2	CDD20-AC1 CDD20-AC2
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1177	1182	1215	1258
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length	L1(mm)	2025 ¹⁾	2025 ¹⁾	2045 ¹⁾	2045 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2512 ¹⁾	2512 ¹⁾	2532 ¹⁾	2532 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2481 ¹⁾	2481 ¹⁾	2501 ¹⁾	2501 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	516
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/240	24/240	24/280	24/280
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340	24/340	24/340
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AC1-I CDD12-AC2-I	CDD14-AC1-I CDD14-AC2-I	CDD16-AC1-I CDD16-AC2-I	CDD20-AC1-I CDD20-AC2-I
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1177	1182	1215	1258
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length	L1(mm)	2025 ¹⁾	2025 ¹⁾	2045 ¹⁾	2045 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2512 ¹⁾	2512 ¹⁾	2532 ¹⁾	2532 ¹⁾
	Min, right angle stacking aisle width 800×1200 across forks	Ast(mm)	2481 ¹⁾	2481 ¹⁾	2501 ¹⁾	2501 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	516
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

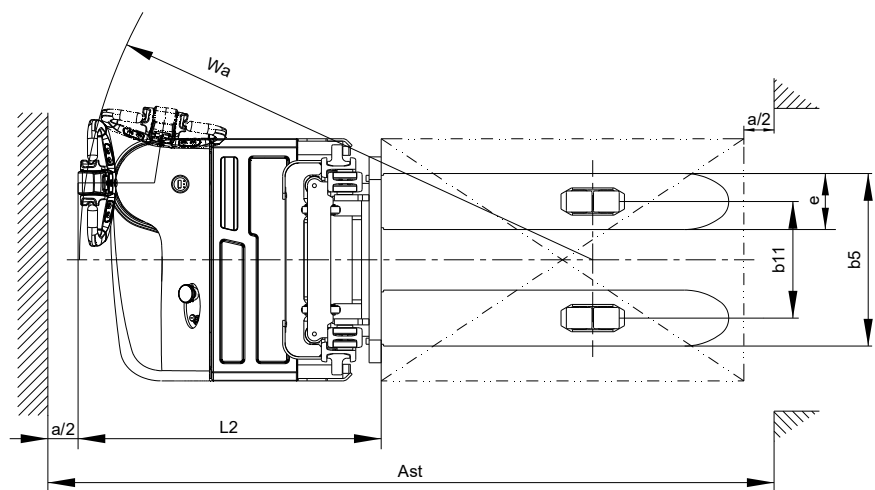
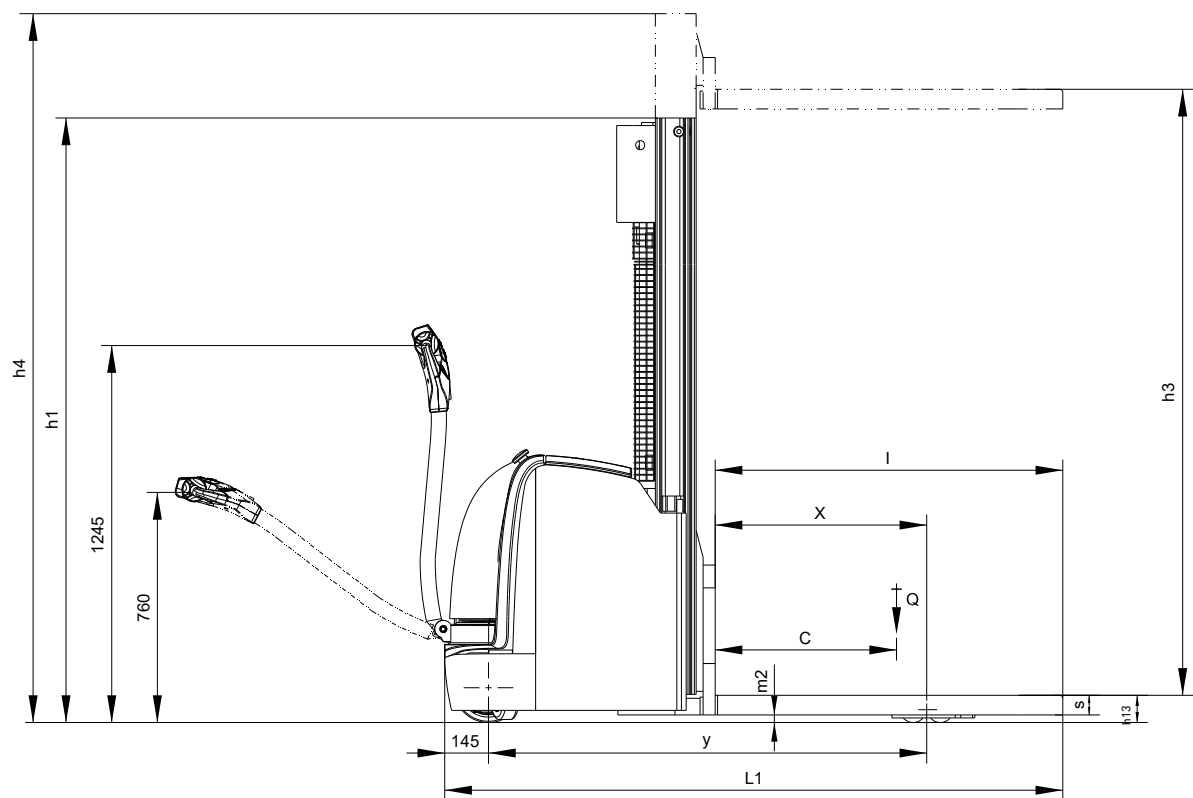
Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AZ3	CDD14-AZ3	CDD16-AZ3	CDD20-AZ3
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1177	1182	1215	1258
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length	L1(mm)	2025 ¹⁾	2025 ¹⁾	2045 ¹⁾	2045 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2512 ¹⁾	2512 ¹⁾	2532 ¹⁾	2532 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2481 ¹⁾	2481 ¹⁾	2501 ¹⁾	2501 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	5/16
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/240	24/240	24/280	24/280
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340	24/340	24/340
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AZ3-I	CDD14-AZ3-I	CDD16-AZ3-I	CDD20-AZ3-I
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1177	1182	1215	1258
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length	L1(mm)	2025 ¹⁾	2025 ¹⁾	2045 ¹⁾	2045 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2512 ¹⁾	2512 ¹⁾	2532 ¹⁾	2532 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2481 ¹⁾	2481 ¹⁾	2501 ¹⁾	2501 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	5/16
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.



Characteristics	Model		CDD12-AC1S CDD12-AC2S	CDD14-AC1S CDD14-AC2S	CDD16-AC1S CDD16-AC2S	CDD20-AC1S CDD20-AC2S
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1310	1315	1362	1405
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length(fold the pedal)	L1(mm)	2075 ¹⁾	2075 ¹⁾	2095 ¹⁾	2095 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2507 ¹⁾	2507 ¹⁾	2527 ¹⁾	2527 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2513 ¹⁾	2513 ¹⁾	2533 ¹⁾	2533 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2482 ¹⁾	2482 ¹⁾	2502 ¹⁾	2502 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/280	24/280	24/340	24/340
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340		
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AZ3S	CDD14-AZ3S	CDD16-AZ3S	CDD20-AZ3S
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1310	1315	1362	1405
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity, operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity, load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length(fold the pedal)	L1(mm)	2075 ¹⁾	2075 ¹⁾	2095 ¹⁾	2095 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2507 ¹⁾	2507 ¹⁾	2527 ¹⁾	2527 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2513 ¹⁾	2513 ¹⁾	2533 ¹⁾	2533 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2482 ¹⁾	2482 ¹⁾	2502 ¹⁾	2502 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/280	24/280	24/340	24/340
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340		
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

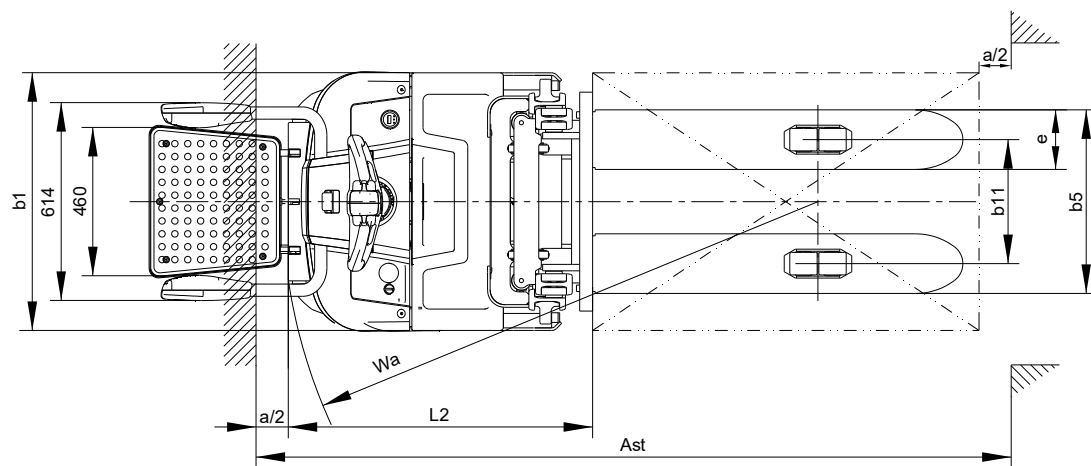
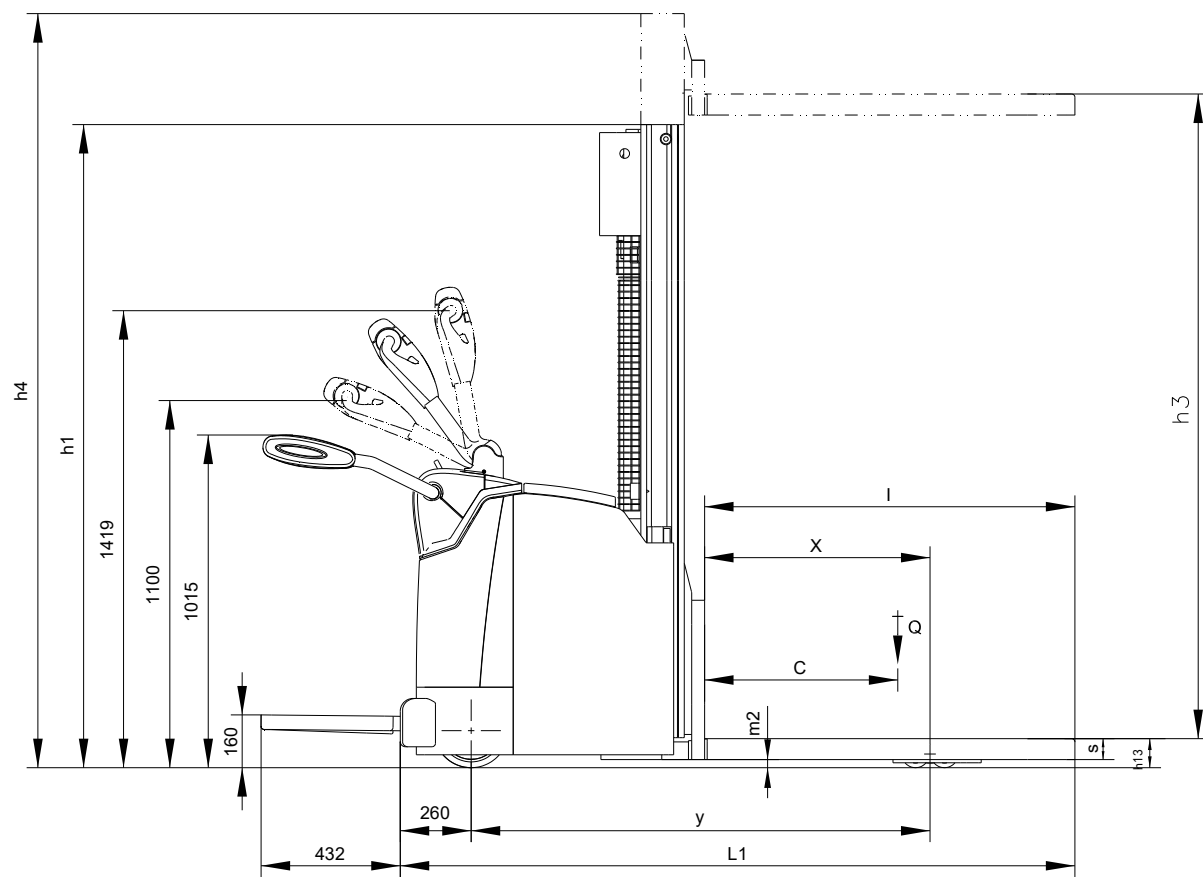
Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AC1S-I CDD12-AC2S-I	CDD14-AC1S-I CDD14-AC2S-I	CDD16-AC1S-I CDD16-AC2S-I	CDD20-AC1S-I CDD20-AC2S-I
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1310	1315	1362	1405
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length(fold the pedal)	L1(mm)	2075 ¹⁾	2075 ¹⁾	2095 ¹⁾	2095 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2507 ¹⁾	2507 ¹⁾	2527 ¹⁾	2527 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2513 ¹⁾	2513 ¹⁾	2533 ¹⁾	2533 ¹⁾
	Min, right angle stacking aisle width 800×1200 across forks	Ast(mm)	2482 ¹⁾	2482 ¹⁾	2502 ¹⁾	2502 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CDD12-AZ3S-I	CDD14-AZ3S-I	CDD16-AZ3S-I	CDD20-AZ3S-I
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1310	1315	1362	1405
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	385	385	385	385
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	90	90	90	90
	Overall length(fold the pedal)	L1(mm)	2075 ¹⁾	2075 ¹⁾	2095 ¹⁾	2095 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2507 ¹⁾	2507 ¹⁾	2527 ¹⁾	2527 ¹⁾
	Overall width	b1(mm)	800	800	800	800
	Fork size	s/e/L(mm)	65×185×1150	65×185×1150	65×185×1150	65×185×1150
	Outside fork width	b5(mm)	570/680	570/680	570/680	570/680
	Ground clearance, center of wheelbase, min	m2(mm)	30	30	30	25
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2513 ¹⁾	2513 ¹⁾	2533 ¹⁾	2533 ¹⁾
	Min, right angle stacking aisle width 800×1200 across forks	Ast(mm)	2482 ¹⁾	2482 ¹⁾	2502 ¹⁾	2502 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.

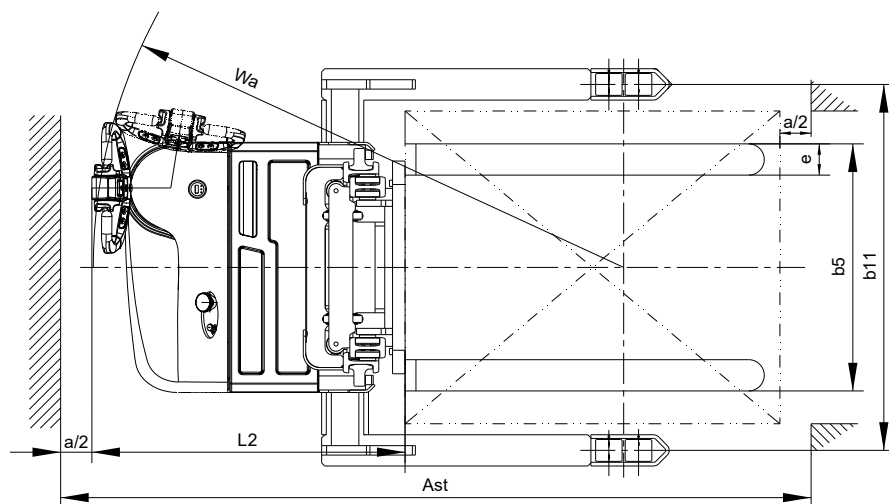
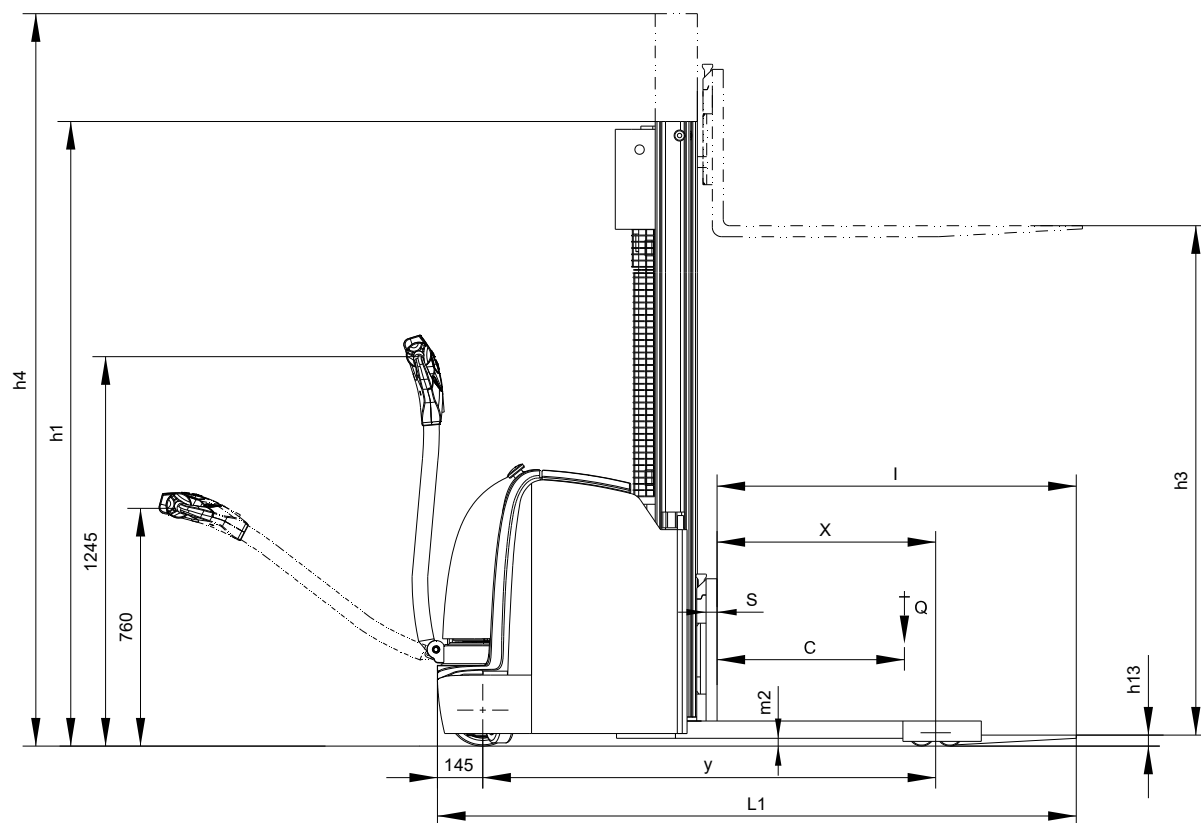


Characteristics	Model		CTD12-AC1 CTD12-AC2	CTD14-AC1 CTD14-AC2	CTD16-AC1 CTD16-AC2	CTD20-AC1 CTD20-AC2
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1247	1252	1285	1328
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1000/1170/1370	1000/1170/1370	1000/1170/1370	1000/1170/1370
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length	L1(mm)	1980 ¹⁾	1980 ¹⁾	2000 ¹⁾	2000 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2547 ¹⁾	2547 ¹⁾	2567 ¹⁾	2567 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2516 ¹⁾	2516 ¹⁾	2536 ¹⁾	2536 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	5/16
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/240	24/240	24/280	24/280
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340	24/340	24/340
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CTD12-AZ3	CTD14-AZ3	CTD16-AZ3	CTD20-AZ3
	Operator type		Pedestrian	Pedestrian	Pedestrian	Pedestrian
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1247	1252	1285	1328
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1000/1170/1370	1000/1170/1370	1000/1170/1370	1000/1170/1370
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length	L1(mm)	1980 ¹⁾	1980 ¹⁾	2000 ¹⁾	2000 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2547 ¹⁾	2547 ¹⁾	2567 ¹⁾	2567 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2516 ¹⁾	2516 ¹⁾	2536 ¹⁾	2536 ¹⁾
	Outer turning radius, min	Wa(mm)	1643	1643	1663	1663
Performance	Travel speed, laden/unladen	km/h	6.0/6.0	6.0/6.0	5.0/6.0	5.0/6.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	8/16	8/16	5/16	5/16
Motor & Battery	Drive motor power	kW	1.5	1.5	1.5	1.5
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Battery voltage, rated capacity	V/Ah	24/240	24/240	24/280	24/280
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340	24/340	24/340
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.



Characteristics	Model		CTD12-AC1S CTD12-AC2S	CTD14-AC1S CTD14-AC2S	CTD16-AC1S CTD16-AC2S	CTD20-AC1S CTD20-AC2S
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1380	1385	1432	1475
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length(fold the pedal)	L1(mm)	2030 ¹⁾	2030 ¹⁾	2050 ¹⁾	2050 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2462 ¹⁾	2462 ¹⁾	2482 ¹⁾	2482 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2546 ¹⁾	2546 ¹⁾	2566 ¹⁾	2566 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2515 ¹⁾	2515 ¹⁾	2535 ¹⁾	2535 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/280	24/280	24/340	24/340
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340		
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CTD12-AZ3S	CTD14-AZ3S	CTD16-AZ3S	CTD20-AZ3S
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1380	1385	1432	1475
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length(fold the pedal)	L1(mm)	2030 ¹⁾	2030 ¹⁾	2050 ¹⁾	2050 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2462 ¹⁾	2462 ¹⁾	2482 ¹⁾	2482 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2546 ¹⁾	2546 ¹⁾	2566 ¹⁾	2566 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2515 ¹⁾	2515 ¹⁾	2535 ¹⁾	2535 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/280	24/280	24/340	24/340
	Optional battery voltage, rated capacity	V/Ah	24/340	24/340		
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CTD12-AC1S-I CTD12-AC2S-I	CTD14-AC1S-I CTD14-AC2S-I	CTD16-AC1S-I CTD16-AC2S-I	CTD20-AC1S-I CTD20-AC2S-I
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1380	1385	1432	1475
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length(fold the pedal)	L1(mm)	2030 ¹⁾	2030 ¹⁾	2050 ¹⁾	2050 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2462 ¹⁾	2462 ¹⁾	2482 ¹⁾	2482 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2546 ¹⁾	2546 ¹⁾	2566 ¹⁾	2566 ¹⁾
	Min, right angle stacking aisle width 800×1200 across forks	Ast(mm)	2515 ¹⁾	2515 ¹⁾	2535 ¹⁾	2535 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		Curtis AC	Curtis AC	Curtis AC	Curtis AC

Note: 1) Triplex Mast +21mm.

Characteristics	Model		CTD12-AZ3S-I	CTD14-AZ3S-I	CTD16-AZ3S-I	CTD20-AZ3S-I
	Operator type		Stand-on	Stand-on	Stand-on	Stand-on
	Load capacity	Q (kg)	1200	1400	1600	2000
	Load center	c(mm)	600	600	600	600
	Wheelbase	y(mm)	1405	1405	1425	1425
Weight	Service weight with battery	kg	1380	1385	1432	1475
Wheels & Tyres	Tyre type		PU	PU	PU	PU
	Tyre size/Quantity,operator side	mm	Φ230×75/1	Φ230×75/1	Φ230×75/1	Φ230×75/1
	Tyre size/Quantity,load side	mm	Φ85×70/4	Φ85×70/4	Φ85×70/4	Φ85×70/4
	Auxiliary wheel size/Quantity	mm	Φ140×55/1	Φ140×55/1	Φ140×55/1	Φ140×55/1
	Tread, operator side	b10(mm)	525	525	525	525
	Tread, load side	b11(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
Dimensions	Lift height	h3(mm)	2700	2700	2700	2700
	Fork height, lowered	h13(mm)	50	50	50	50
	Overall length(fold the pedal)	L1(mm)	2030 ¹⁾	2030 ¹⁾	2050 ¹⁾	2050 ¹⁾
	Overall length(unfold the pedal)	L1(mm)	2462 ¹⁾	2462 ¹⁾	2482 ¹⁾	2482 ¹⁾
	Overall width	b1(mm)	1100/1270/1470	1100/1270/1470	1100/1270/1470	1100/1270/1470
	Fork size	s/e/L(mm)	35×100×1070	35×100×1070	35×100×1070	40×122×1070
	Outside fork width	b5(mm)	210~790	210~790	210~790	210~790
	Ground clearance, center of wheelbase, min	m2(mm)	40	40	40	40
	Min, right angle stacking aisle width1000×1200 across forks	Ast(mm)	2546 ¹⁾	2546 ¹⁾	2566 ¹⁾	2566 ¹⁾
	Min, ringht angle stacking aisle width 800×1200 across forks	Ast(mm)	2515 ¹⁾	2515 ¹⁾	2535 ¹⁾	2535 ¹⁾
	Outer turning radius, min	Wa(mm)	1642	1642	1662	1662
Performance	Travel speed, laden/unladen	km/h	7.0/7.0	7.0/7.0	7.0/7.0	7.0/7.0
	Lift speed, laden/unladen	mm/s	87/133	129/198	108/160	98/160
	Lowering speed, laden/unladen	mm/s	155/158	213/200	185/155	195/155
	Max Gradeability, laden/unladen	%	10/16	10/16	8/16	8/16
Motor & Battery	Drive motor power	kW	2.2	2.2	2.2	2.2
	Lift motor power	kW	2.2	3.0	3.0	3.0
	Steering motor power	kW	0.2	0.2	0.2	0.2
	Battery voltage, rated capacity	V/Ah	24/120	24/120	24/120	24/120
	Optional battery voltage, rated capacity	V/Ah				
	Controller mode		ZAPI AC	ZAPI AC	ZAPI AC	ZAPI AC

Note: 1) Triplex Mast +21mm.