DUAL MAST MOBILE ELEVATING WORK PLATFORM

INSTRUCTION MANUAL

(For GTWY6-2000/ GTWY8-2000/GTWY10-2000/ GTWY12-2000)

WARNING

THE MANUFACTURER SHALL NOT BE HELD LIABLE IN CASE OF FAULTS OR ACCIDENTS DUE TO NEGLIGENCE, INCAPACITY, INSTALLATION BY UNQUALIFIED TECHNICIANS AND IMPROPER USE OF THE MACHINE

DO NOT OPERATE THIS MACHINE UNTIL YOU READ AND UNDERSTAND ALL THE DANGERS,WARNINGS AND CAUTIONS IN THIS MANUAL

Contents

Chapter 1 Preface

Read this manual carefully before the machine is taken into use to avoid errors. Correct operations and regular inspections are factors of vital importance for the operating economy and lifetime of the machine.

These important parts are described in the following related sections.

Alloy aluminum mast mobile elevating work platform is the most ideal equipment for aerial work. Dual mast mobile elevating work platform is intended to move one or two persons along with their necessary tools and materials to working position where they will carry out work on the work platform.

They are generally intended for use on plane and level floors. They are mainly used for business decoration, industrial facilities maintenance, lamps and lanterns replacement in halls, maintenance of street lamps, aerial photography and wall cleaning etc.

The dual mast mobile elevating work platform has the following characteristics:

1.1 Lift or fall steadily: The seamless transmission is used between the lifting masts, thus minimizing the amount of sway after lifting.

1.2 Safe and reliable: The four turning stabilizers of the unit connected to the four corners of the chassis support the MEWP during work. They are designed for leveling regulation and preventing inclination. They are composed of stand bars and turning legs. The stand bars are installed in the turning legs. Extending out the turning legs before operating the unit enlarges the area of supporting. Therefore, the steadiness of the whole platform is guaranteed.

1.3 Convenient: The whole work platform is light because the lifting masts are made of alloy aluminum. The structure is compact and the volume is small, so only one or two persons can move the equipment and carry it through a very narrow passage.

All the information contained in this booklet is based on the data available at the time of printing; the manufacturer reserves the right to modify its products at any time, without notice and without liability. It is therefore advisable to regularly check for any changes.

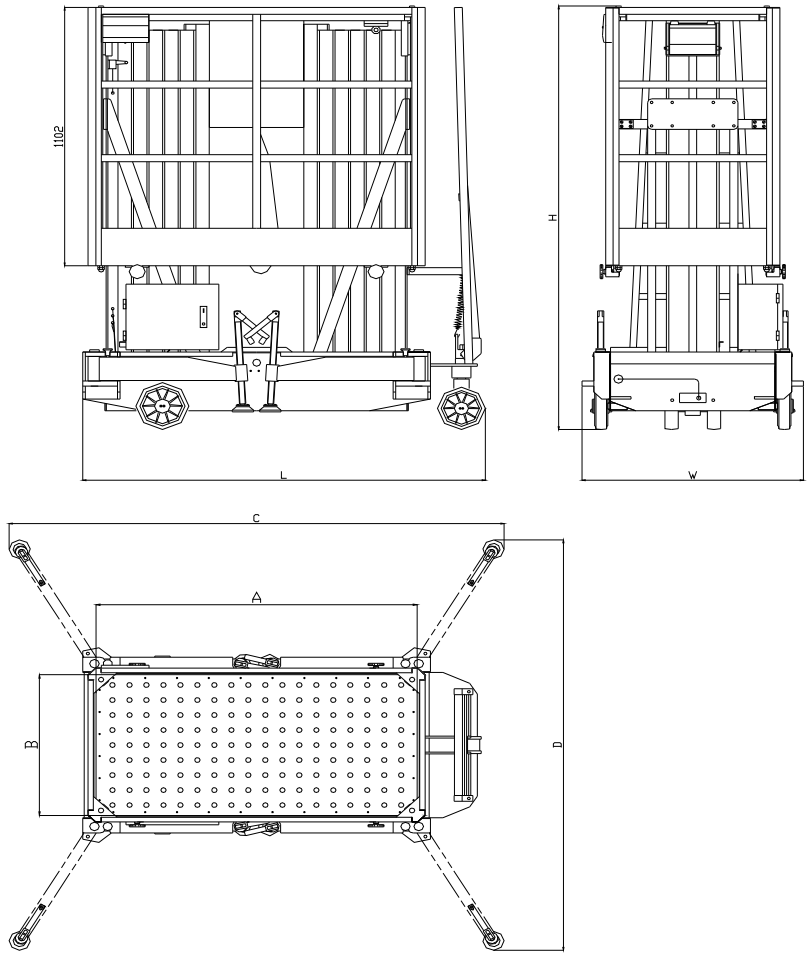
Chapter 2 Specifications

Technical specifications and major dimensions are shown in Table 1 and Figure 1, respectively.

Table 1

Model	Max. platform height	Max. working height	Rated load	The number of persons allowed on platform	Platform size A×B	Outrigger footprint C×D	Power rating		Stored dimension L×W×H	Machine weight
							AC	DC		
	mm	mm	kg	Person(s)	mm	mm	kw		mm	kg
GTWY6-2000	6000	7700	325	2	1090×600	1690×1650	0.75~1.5	1.5	1440×840×1800	500
GTWY8-2000	8000	9700	300	2	1210×600	1880×1770	0.75~1.5	1.5	1560×840×1920	570
GTWY10-2000	10000	11700	300	2	1450×600	2230×1960	0.75~1.5	1.5	1790×840×1920	728
GTWY12-2000	12000	13700	200	2	1450×600	2550×2570	0.75~1.5	1.5	1790×890×2140	825

Figure 1



Chapter 3 Safety information

Even if you are familiar with other types of mobile elevating work platforms, read the following matters needing attention for safe and effective operation:

3.1 Only the trained and qualified are permitted to operate this machine. Always use safety belt and helmet when aerially working.

3.2 If you are subject to dizziness or seizures, or are bothered by heights, you must not operate this type of machinery.

3.3 An operator must not use drugs or alcohol that can change his/her alertness or coordination. An operator on prescription or over-the-counter drugs needs medical advice on whether or not he/she can safely operate machines.

3.4 Make sure understand all the safety rules and instructions on plates and warning labels before operating the machine.

3.5 This machine is designed to use on flat and hard ground only. If the ground is uneven, you must adjust supporting bolts to make sure the chassis is on level. Don't work with force if the conditions for using the equipment are not met.

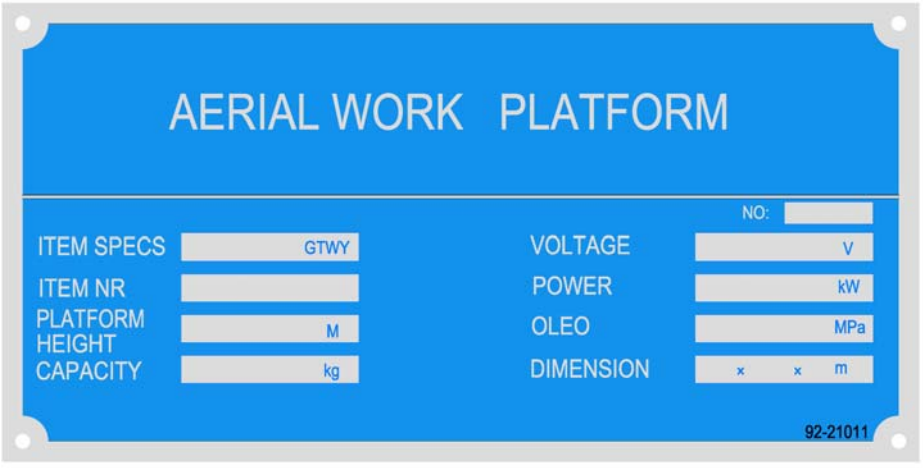
3.6 Forbid to park the mobile elevating work platform (MEWP) on a slope. When traveling on slope, make sure there are no personnel or obstructions in front of the moving direction. Move at a safety speed. Don't turn quick on a slope.

3.7 Ensure all stabilizers are engaged properly before elevating the platform.
3.8 In the course of lifting and falling or in lift situation, masts and platform must not collide with any obstacles or moving objects and you must not move it.
3.9 Do not move the whole unit with electricity.
3.10 It is prohibited of getting on and off the work platform when elevated.
3.11 Keep clear of live electric conductors.
3.12 Don't lift if it is overload. The machine can't be used as a crane.
3.13 The manual force on the work platform should not exceed 400N.
3.14 Operating this machine should conformance with local national regulations.
3.15 Any unsafe operation patterns on the platform are strictly forbidden.
3.16 Unless in an emergency, the personnel on the ground mustn't operate the lower control device if they do not receive orders from those are aerially working.
3.17 Don't allow people stand or pile up things under the raised platform.
3.18 when operating the machine in a dusty environment, you should take protective measures to prevent the graininess debar is stirred into the moving parts, which can causing damage ,thus extend the span of the machine life
3.19 Don't change, modify or abandon the safety devices in any way. If there is an uncertain problem, don't dismantle the machine, inform the dealer for help.
3.20 Don't set the devices increasing the work height arbitrarily.
3.21 Any additions that would increase the wind load on the machine, e.g. notice boards, are strictly forbidden.
3.22 Any special working methods or conditions beyond those specified by the manufacturer shall obtain the guidance and written approval of the manufacturer.
3.23 The optimal using period is within 5 years, reassess the performance of the machine then and contact the manufacturer for better advice.

Chapter 4 Plates and Warning Labels

Upon unpacking, check the plates and warning labels. Do not operate the machine on which the plates or labels are missing or illegible. Contact the dealer immediately.
The following plates and warning labels are visible on the machine.

● Nameplate



● Operating instructions

Brief Operating Instruction

●Leveling the whole equipment

1. **Pull up the aligning pin, extend outwards the turning leg, which is connected to one of the four corners of the chassis, until the aligning pin gets into the working aligning hole automatically.**
2. **Turn the handle clockwise until the supporting foundation contacts the ground for all the four bolts, go on turning to make the road wheel away from the ground.**
3. **Adjust the leveling by observing the spirit level on the chassis. The bubble should move to the center circle of the gauge when the chassis is set on an even plane.**
4. **To store the turning stabilizers of the unit, turn the handle counterclockwise until the supporting foundation away from the ground. Pull up the aligning pin, retract inwards the turning leg until the aligning pin gets into the storing aligning hole.**

●Installation and removal of the guardrail

1. **After connecting to the electrical supply, lift the platform about 1.2m. (Higher than the height of the guardrail)**
2. **Stretch out the two movable brackets mounted on the sides of the masts.**
3. **Intermittently press "DOWN" button. The guardrail will rest against the brackets but the platform will continue to descend to the lowest position.**
4. **Screw the four bolts on the lower basket of guardrail into the holes of the connecters for platform. Make sure the guardrail and platform were held together and finish its installation.**
5. **When finishing the work or going through low passageways, fall the guardrail and the removal course of the guardrail is the inverse course of its installation.**

●How to use the control buttons

1. **Before operating the machine, all circuit breakers and the leakage breaker must be in "ON" position on the electrical box panel.**
2. **The mobile elevating work platform uses two sets of upper and lower parallel control devices.**
3. **On either control panels, press "UP" button for lifting and press "DOWN" button for lowering the platform.**
4. **The platform rises or falls when the button is pressed. Upon loosening the buttons the platform stops.**
5. **A big mushroom-shaped button is the stopping button at emergency. Press it only if the platform can't stop effectively in the course of rising. Reset the button by turning the knob in the direction shown by the arrow. Do not pull the knob.**

●Emergency Operation

If two sets of the upper and the lower control devices can't make the platform fall because of sudden power failure or other causes, turn the valve counterclockwise and the platform will be lowered slowly. Once the platform falls down to the bottom, the valve for emergency should be closed.

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● Warning labels

WARNING

Make sure the chock is in place during maintenance

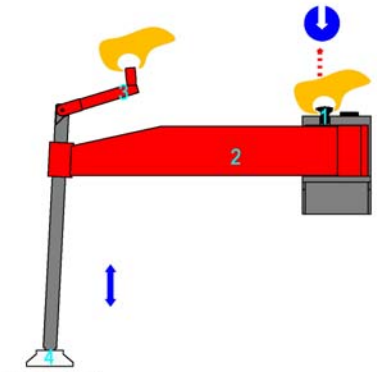
94-22021

WARNING

Shearing danger

Keep hands away

94-22023



93-21013

LEVELING AND JUSTMENT

1. Pull up the aligning pin 1 and extend outwards the turning leg 2 until the aligning pin comes into the working aligning hole automatically.
2. Turn the handle 3 clockwise until the supporting foundation 4 contacts the ground for all the four bolts, go on turning to make the road wheel away from the ground.
3. Adjust the liveling by observe the spirit level on the chassis. The bubble should moves to the center circle of the gauge when the chassis is set on an even plane.
4. To store the turning stabilizers of the unit, tum the handle 3 counter-clock wise until the supporting foundation 4 away from the guound. Pull up the aligning pin 1, retract inwards the turning leg until the aligning pin 1 comes into the storing aligning hole.

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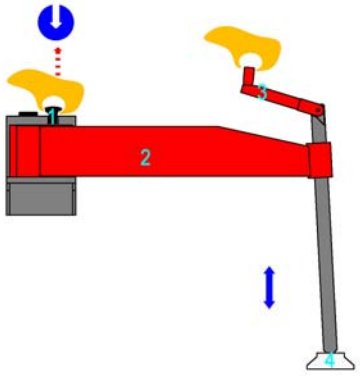
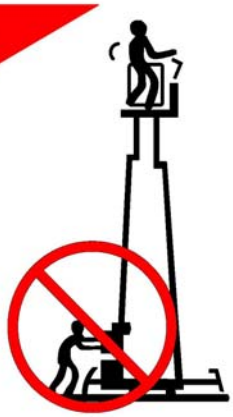


93-21015

DANGER

Collision Hazards
Check work area for overhead obstructions or other possible hazards.
Do ont lower the platform unless the area below is clear of personnel and obstructions.Be careful when transporting the machine on an incline.
Stay clearof descending platform.

DANGER



Tip-over hazard.
Attempting to move the machine with the platform raised will tip the machine over and cause death or serious injury.
Do ont move the machine while the platform is raised.

94-21017

WARNING

Make sure to position the stabilizers before operating

94-21021

MAX.LOAD ON EACH STABILIZER

4000N

94-21027

MAX.ALLOWED MANUAL FORCE

400N

94-23047

MAX.ALLOWED WIND SPEED

10.7m/s

94-23025

94-23027

WARNING

1

Keeping safe clearance with live electric conductors.

94-23029

CAUTION

2

The masts or the platform must not bump into any barrier or moving object during lifting or lowering.

WARNING

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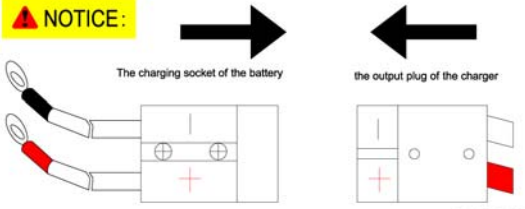
9443015

NOTICE:



9443017

NOTICE:

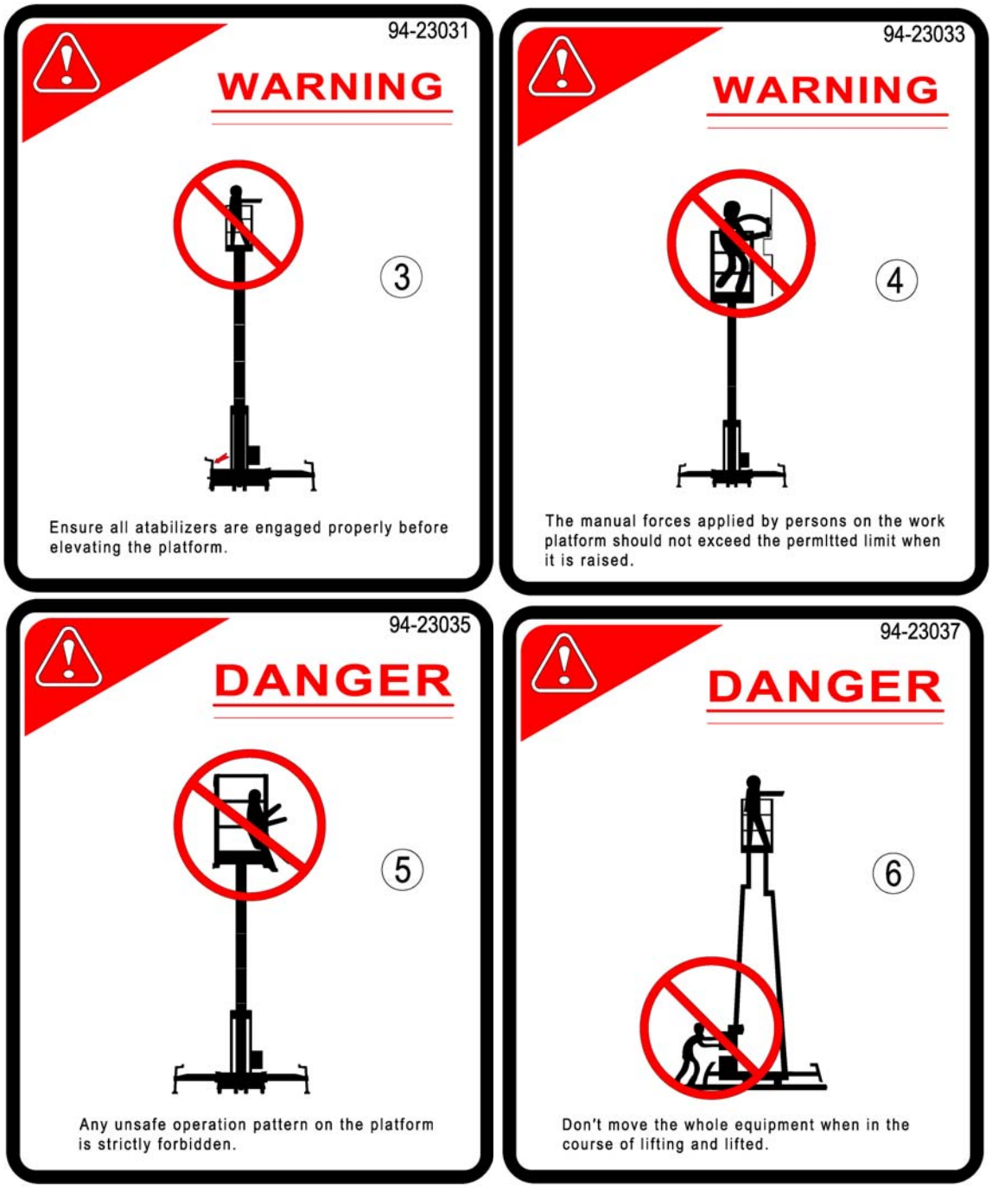
For the initial use or use after long periods of storage.Please charge the battery before use. Recharging lasts at least 12 hours.

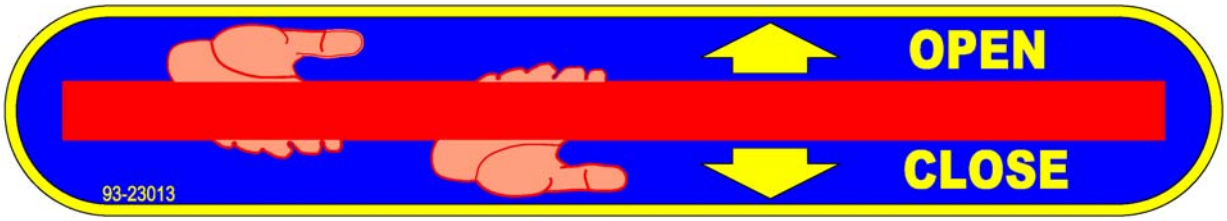
9443019

NOTICE:

FOR SAVING THE ELECTRICITY, PLEASE CUT OFF THE POWER AFTER OPERATING.

9443021


94-23031
WARNING
3
Ensure all atabilizers are engaged properly before elevating the platform.
94-23033
WARNING
4
The manual forces applied by persons on the work platform should not exceed the permltted limit when it is raised.
94-23035
DANGER
5
Any unsafe operation pattern on the platform is strictly forbidden.
94-23037
DANGER
6
Don't move the whole equipment when in the course of lifting and lifted.


OPEN
CLOSE
93-23013


CAPACITY:250kg
94-23043


CAPACITY:300kg
94-23045

94-23039

DANGER

7

The addition of any device, such as ladder, to increase the working height is strictly not allowed.

94-23041

DANGER

8

Don't park at the slope, pay attention to the obstacle when moving at the slope.

Emergency Operation

If two sets of the upper and lower control devices can't make the platform fall because of sudden power failure or other causes, turn the valve counter clock wise and the platform will be lowered slowly. Once the platform falls down to the bottom, the valve for emergency should be closed.

93-21011

Brief Operating Instruction

- **Leveling the whole equipment**

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2. Turn the handle clockwise until the suppotring foundation contacts the ground for all the four bolts, go on turning to make the road wheel away from the ground.
3. Adjust the leveling by observe the spirit level on the chassis. The bubble should moves to the center circle of the gauge when the chassis is set on an even plane.
4. To store the turning stabilizers of the unit, turn the handle counterclockwise until the supporting foundation away from the ground. Pull up the aligning pin, retract inwards the turning leg until the aligning pin comes into the storing aligning hole.

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1. After connecting to the electrical supply, lift the platform about 1.2m.(more than the height of the guardrail)
2. Stretch out two movable brackets mounted on the sides of the masts.
3. Intermittently press"DOWN"button.The guardrail will rest against the brackets but the platform continues to descend to the lowest position.
4. Screw the four bolts on the lower basket of guardrail into the holes of the connecters for platform. Make sure the guardrail and platform were held together and finish its installation.
5. When finishing the work or going through the passageway, fall the guardrail and the course of the removing the guardrail is the inverse course of its installation.

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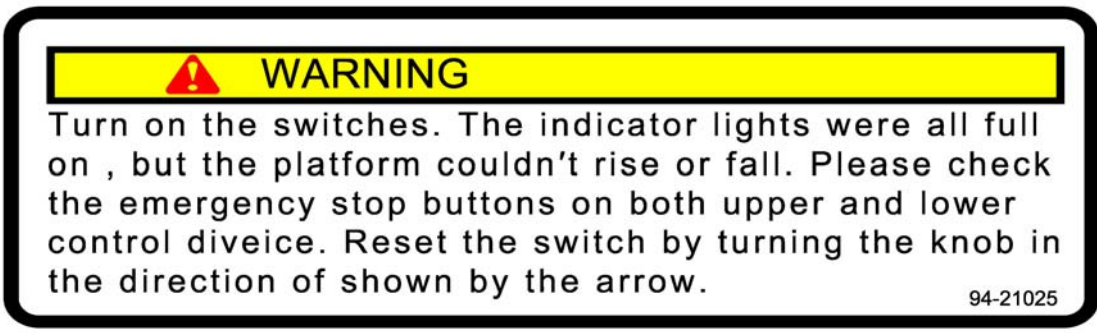
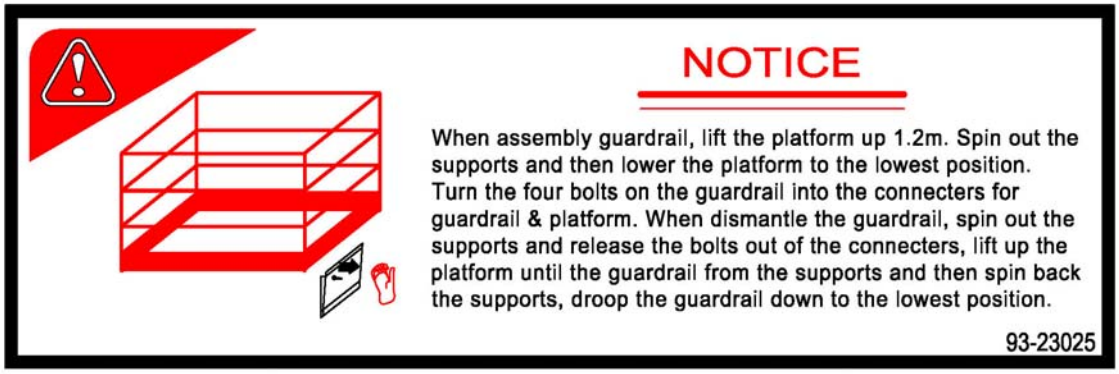
10. Abig mushroom-shaped button is the stopping button at emergency.Press it only if the platform can't stop effectively in the course of rising.Reset the button by turning the knob in the direction shown by the arrwo.Do ont pull the knob.

- **Emergency Operation**

If two sets of the upper and lower control devices can't make the platform fall because of sudden power failure or other causes, turn the valve counter clockwise and the platform will be lowered slowly. Once the platform falls down to the bottom, the valve for emergency should be closed.

93-23023


WARNING
Turn on the switches. The indicator lights were all full on , but the platform couldn't rise or fall. Please check the emergency stop buttons on both upper and lower control diveice. Reset the switch by turning the knob in the direction of shown by the arrow.
94-21025

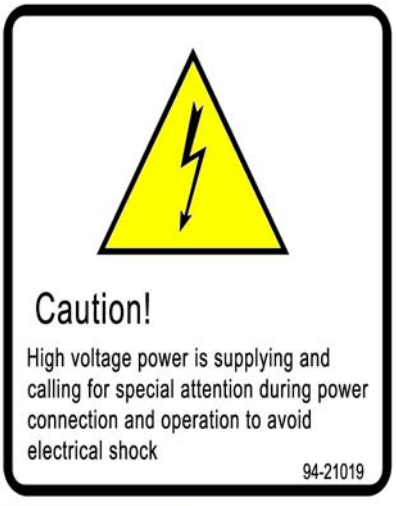

NOTICE
When assembly guardrail, lift the platform up 1.2m. Spin out the supports and then lower the platform to the lowest position. Turn the four bolts on the guardrail into the connecters for guardrail & platform. When dismantle the guardrail, spin out the supports and release the bolts out of the connecters, lift up the platform until the guardrail from the supports and then spin back the supports, droop the guardrail down to the lowest position.
93-23025


ALLOWED NUMBER OF PERSONS
TWO
9423021


DNV
9441011

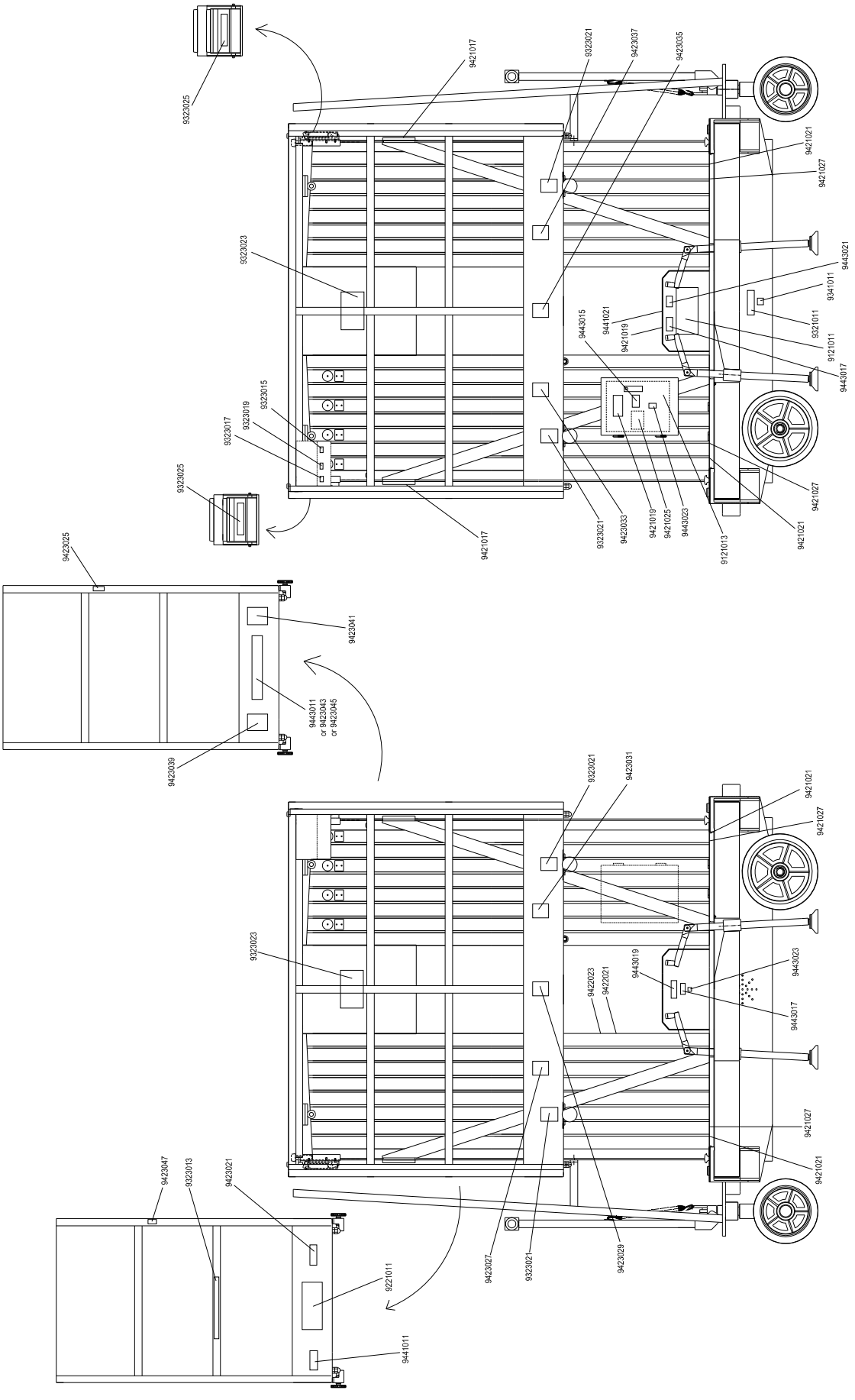

DANGER
Please don't stand
9441021


NOTICE
93-23021


Caution!
High voltage power is supplying and calling for special attention during power connection and operation to avoid electrical shock
94-21019


CAPACITY:200kg
9443011

GTWY SERIES DECAL INSPECTION(TWIN)



GTWY SERIES DECAL INSPECTION(TWIN)

Part No.	Description	QTY.
9121011	DC control panel	1
9121013	Control panel on electric box	1
9121015	Control panel on work platform	1
9221011	Machinery label	1
9321011	Emergency operation	1
9321013	Leveling and justment(lift)	2
9321015	Leveling and justment(right)	2
9323013	Gate of platform	1
9323015	Label--Down	1
9323017	Label--Stop	1
9323019	Label—Up	1
9323021	Notice—Screw	4
9323023	Brief operating instruction	2
9323025	Notice—Leveling the whole equipment	2
9341011	Label—Back-up	1
9421017	Danger—Collision hazards or Tip-over hazard	1
9421019	Caution—Electrocution hazard	1
9421021	Warning—Make sure to position the stabilizers before operating	4
9421025	Warning—Turn on the switches.(For AC)	1
9421027	Max. Load on each stabilizer—4000N	4
9422021	Warning—Make sure the chock is in place during maintenance	1
9422023	Warning—Shearing danger, keep hands away	1
9423021	Notice—Allowed number of persons: TWO	1
9423025	Max. Allowed wind speed—10.7m/s	1
9423027	Warning—Keeping safe clearance with live electric conductors	1
9423029	Caution—The masts or the platform must not bump into any barrier or moving object during lifting	1
9423031	Warning—Ensure all atabilizers are engaged properly before elevating the platform	1
9423033	Warning—The manual forces applied by persons on the work platform should not exceed the permltted limit when it is raised	1
9423035	Danger—Any unsafe operation pattern on the platform is strictly forbidden	1

Decal Inspection:

Use the pictures on the next page to verify that all decals are legible and in place.
Below is a numerical list with quantities and descriptions.

GTWY SERIES DECAL INSPECTION(TWIN)

Part No.	Description	QTY.
9423037	Danger—Don′t move the whole equipment when in the course of lifting and lifted	1
9423039	Danger—The addition of any device, such as ladder, to increase the working height is strictly not allowed.	1
9423041	Danger-- Don′t park at the slope, pay attention to the obstacle when moving at the slope.	1
9423043	Capacity—250kg(FOR 10 m)	1
9423045	Capacity—300kg(FOR 6、8 m)	1
9423047	Max. Allowed manual force—400N	1
9441011	CE label	1
9441021	Danger—Please don′t stand	1
9443011	Capacity—200kg(FOR12 m)	
9443015	Warning—Operating Instruction	1
9443017	Notice—The charging socket of the battery (For DC)	1
9443019	Notice—Recharging lasts at least 12 hours (For DC)	1
9443021	Notice—Please cut off the power after operating (For DC)	1
9443023	Label—Directional arrows	1

Decal Inspection:

Use the pictures on the next page to verify that all decals are legible and in place.
Below is a numerical list with quantities and descriptions.

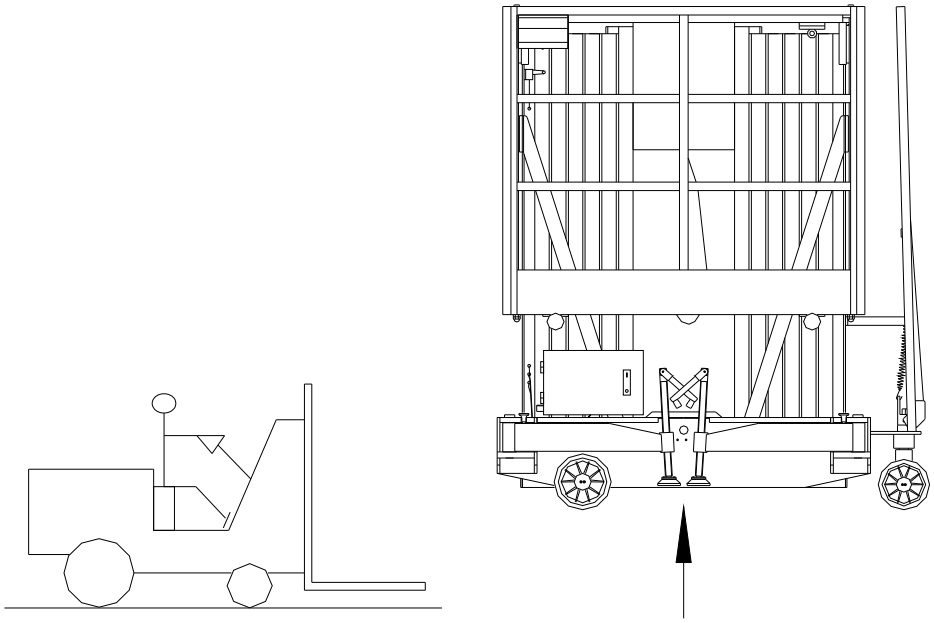
Chapter 5 Transport and set up

5.1 Transport and Storage

5.1.1 Moving the equipment

5.1.1.1The platform should fall down to the bottom when you are moving the equipment to other working places and then retract the turning stabilizers. The supporting foundations should be made away from the ground and then push the whole machine to the destination. If the equipment goes across the uneven ground, the supporting foundations should be away from the ground so far as to prevent the bolt from bending by the obstacles.

5.1.1.2 If the platform is carried in a long distance, other loading tools should be used for transportation. A forklift should be used for loading onto other vehicles. It should be lifted upward from the bottom. The sketch below shows the lifting points and method of loading.



Note: Pull the plug of the power supply out of the socket when you move the whole equipment, cut off the power supply to avoid any unnecessary accidents.

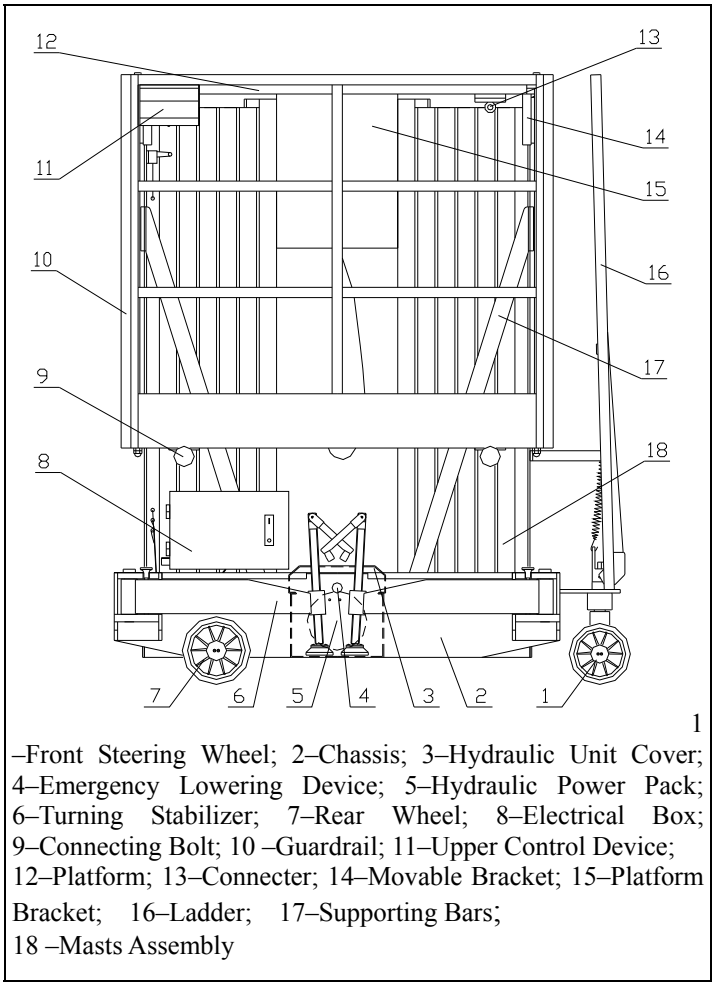
5.1.2 Storage of the equipment

If you plan to stop using the equipment for a long time, the unit should be cleaned and protected by a dustproof cover (supplied).

5.2 Set up

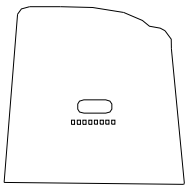
5.2.1 Inspection on Opening the Packaging

For the initial use, most users should remove the outer packing of wood box for equipment, shockproof and knock-preventing packing before using the equipment, Even if without outer packing, check the whole equipment and its accessories, and the equipment includes the following parts.

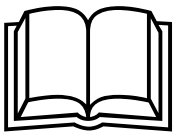


1 –Front Steering Wheel; 2–Chassis; 3–Hydraulic Unit Cover; 4–Emergency Lowering Device; 5–Hydraulic Power Pack; 6–Turning Stabilizer; 7–Rear Wheel; 8–Electrical Box; 9–Connecting Bolt; 10 –Guardrail; 11–Upper Control Device; 12–Platform; 13–Connecter; 14–Movable Bracket; 15–Platform Bracket; 16–Ladder; 17–Supporting Bars; 18 –Masts Assembly

Dustproof Cover



User's Manual



Certificate of Quality

Note: 1.If the unit has been damaged during transport, it must not be put into service, and you should immediately contact your dealer.

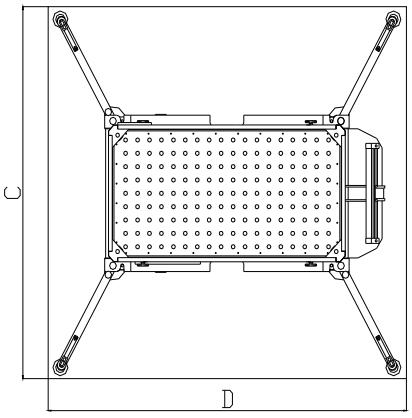
2. The equipment has been lubricated before delivery, and the hydraulic unit has been filled with hydraulic oil.

3. If a battery has been supplied with the machine, the battery is charged.

Check that the acid level is correct in each cell and that the specific gravity is in order (see "Battery").

5.2.2 Area Needed For Set up the Machine

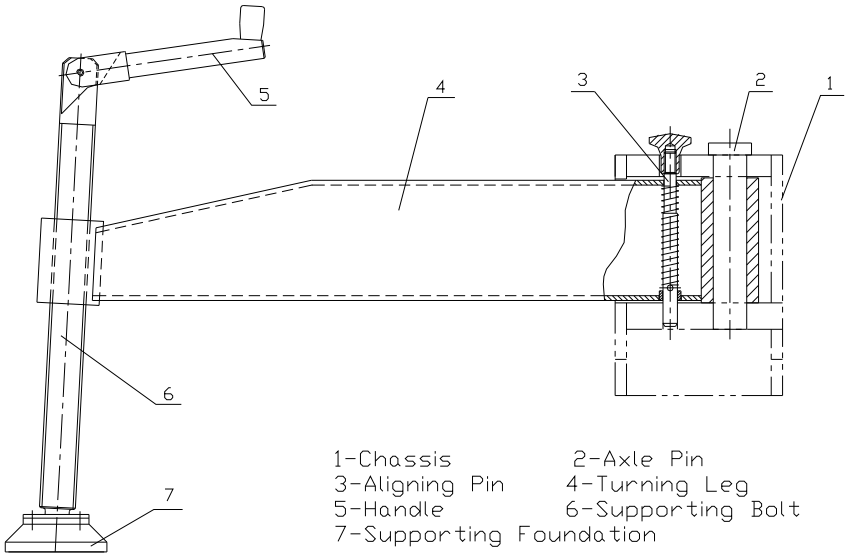
The area for machine stabilizer footprint shown as the sketch below:



Item	Model	C	D
		mm	mm
1	GTWY6-20000	1650	1690
2	GTWY8-20000	1770	1880
3	GTWY10-20000	1960	2230
4	GTWY12-20000	2570	2550

5.2.3 Supporting and Leveling the Unit

There are horizontal forces including operating force and outer wind force etc. on the platform. If excessive, render the platform unstable. Preventing inclination of the unit is achieved by extending the four turning stabilizers, which are connected to the four corners of the chassis. Supporting and leveling the unit is achieved by adjusting the support bolts of the four turning stabilizers. The sketch below shows the following parts:



The instructions for operation are as follows:

1.Pull up the aligning pin, extend outwards the turning leg, which is connected to one of the four corners of the chassis, until the aligning pin gets into the working aligning hole automatically.

2.Turn the handle clockwise until the supporting foundation contacts the ground for all the four bolts, go on turning to make the road wheel away from the ground.

3.Adjust the leveling by observing the spirit level on the chassis. The bubble should move to the center circle of the gauge when the chassis is set on an even plane.

4.To store the turning stabilizers of the unit, turn the handle counterclockwise until the supporting foundation gets away from the ground. Pull up the aligning pin, retract inwards the turning leg until the aligning pin gets into the storing aligning hole.

Warning! You must observe the spirit level on the chassis. The bubble should be within the center circle of the gauge.

Warning! Once you doubt leveling is incorrect, just base on mast and use rectangle level gauge to verify it.

Warning! Forbid any operation without extending out all the turning stabilizers.

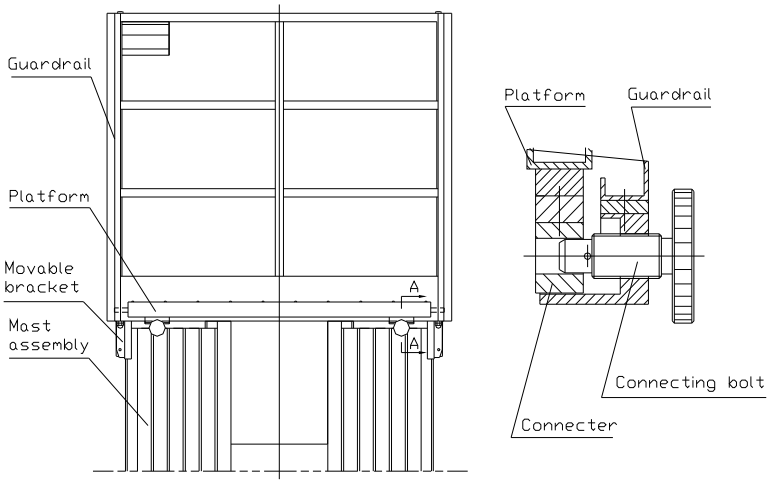
5.2.4 Installation and removal of the guardrail

The guardrail of platform is movable. During transportation or passing narrow passages, make the whole guardrail fall till it doesn't take up the height space.

The following figure shows the guardrail and its installation.

5.2.4.1 Steps of installation

1.After connecting to the power supply, lift the platform and guardrail up together about 1.2 m. (higher than guardrail height).



2. Stretch outwards the two movable brackets mounted on the sides of the masts.

3. Intermittently press the DOWN button. The guardrail will rest against the movable brackets but the platform continues to fall down to the bottom. The guardrail is in the working position now.

4.Turn the four connecting bolts on the lower basket of the guardrail into the connecters of the platform. Make sure the guardrail and the platform were held together and finish its installation.

5.2.4.2 Removing the guardrail

When finishing the work or going through a low passageway, the guardrail should be removed from the platform. The course of removing the guardrail is the inverse course of its installation.

Chapter 6 Operation Guide

6.1 The relevant conditions of using the equipment

6.1.1 The surface of work ground should be flat and hard with no obstacles in air and the safety distance between the equipment and high-tension line is adequate.

6.1.2 The environment temperature should be within -10℃~38℃; Height above sea level ≤1000 m.

6.1.3 The environment humidity≤90%.

6.1.4 Electrical power: AC 230V±10%, 50Hz.

6.1.5 The wind power is not more than Beaufort Scale 5 (the speed of wind is 10.7 m/s).

6.1.6 The noise grade of this machine is 72~74 dB while operation.

Notes:

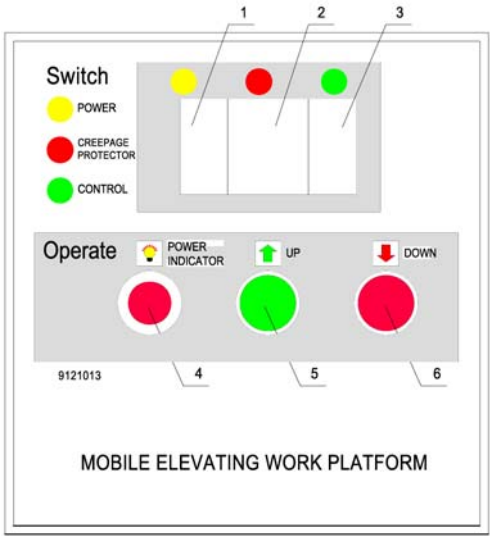
1)Prevent the sunlight from directly shining onto the hydraulic and electrical units of the equipment if the environment temperature is above 32℃.

2) If the conditions mentioned above are not met, please contact with your supplier and take the relevant guarantee measures for using the equipment.

6.2 Control Panel function and Description

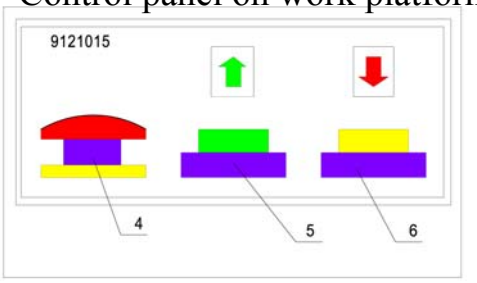
6.2.1 AC Control Panel

Control panel on electric box

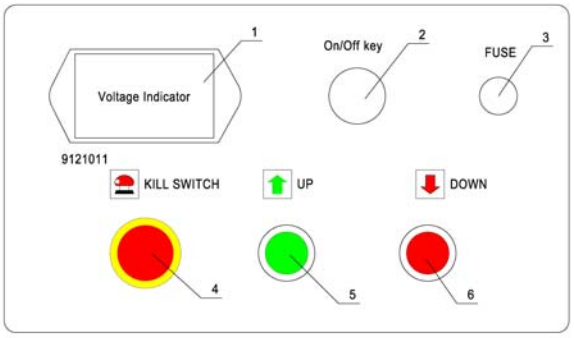


1. Circuit breaker
2. Leakage breaker
3. Control circuit breaker
4. Power indicator
5. Up button
6. Down button

Control panel on work platform



6.2.2 DC Control Panel



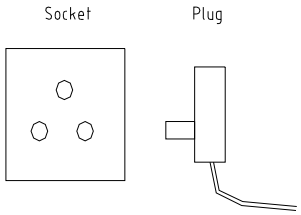
1. Voltage indicator
2. On/Off key
3. Fuse
4. Emergency stop switch
5. Up button
6. Down button

6.3 Installation of Power Plug

Put the power plug into the power socket at the job site in accordance with the rated requirement.

Note:

Prior to installation, the rating of the power source must be confirmed.



6.4 How to use the control buttons

6.4.1 Before operating the machine, all circuit breakers and the leakage breaker must be in “ON” position on the electrical box panel

6.4.2 The mobile elevating work platform has two sets of controls. one at the base of the unit and the other on the work platform itself

6.4.3 On either control panels, press “Up” button for lifting and press “Down” button for lowering the platform.

6.4.4 The platform will be raised or lowered so long as the appropriate button is depressed. The platform will stop in position as soon as the button is released.

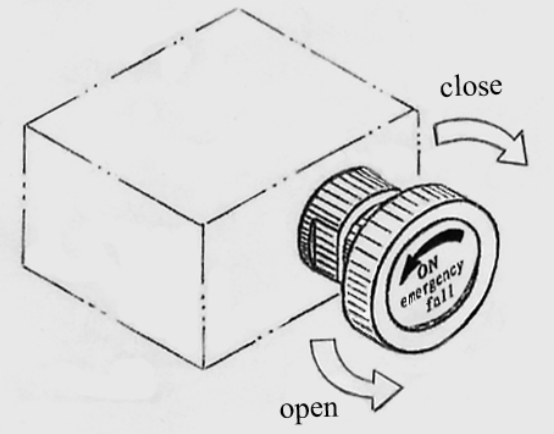
6.4.5 Emergency stop: A big mushroom-shaped button is provided at each control panel for emergency stop. This should be used only when other means to

stop the platform moving fails. Reset the button by turning the knob in the direction shown by the arrow. Do not pull the knob.

Note: The lower controls is installed on the electrical box, control its key. The key should be taken away if it is not in use so as to prevent unauthorized personnel from using it.

6.5 Emergency Operation

In the event of power cut-off or other reasons and the platform fails to descend using both the upper and lower controls, an emergency device consisting of a release valve located at the side of the chassis is used to lower the platform. Turn the valve counterclockwise and the platform will be lowered slowly. Once the platform has descended to its lowest position, the valve should then be closed securely.



Note: The above shows the diagram of the emergency release valve.

Chapter 7 Maintenance Guide

7.1 Control check

For the initial use or use after long periods of storage or changes in environmental conditions. Check should be made on power supply, hydraulic oil, and lubricants to confirm that they are all in well condition.

Caution!

Special attention should be paid to check all safety devices of this machine before using it:

1.Emergency stop switches

There are two emergency stop switches on the machine. Please check the function of these two emergency stop switches. Stop to use this machine and inform the manufacturer/agent immediately if they cannot work normally.

2.Emergency release valve

There is an emergency release valve on this machine to lower the platform in the event of power cut-off or other reasons and the platform fails to descend using both the upper and lower controls.

Please check the function of the emergency release valve. Stop to use this machine and inform the manufacturer/agent immediately if it cannot work normally.

7.2 Check before operation

Before you begin your workday, you must inspect your machine and report all deficiencies. Do not operate the machine until deficiencies are corrected and all systems are in good operational condition.

1. Check for missing, damaged or unreadable safety signs.
2. Check for broken, missing, damaged or loose parts, especially the screws and nuts on both sides of the masts.

3. Check pivot pins for damaged or missing retaining devices.
4. Check oil level in the tank.
5. Check hydraulic system for leakage and damage.
6. Check for cracked welds and other evidence of structural damage.
7. Check if the supporting foundations rotate freely around the supporting bolts, lubricate if necessary.
8. Lubricate positions as mentioned in 7.5 if necessary.
9. Check if there is an abnormal noise or tremble when starting the machine.
10. Secure connection of power or battery plug.
11. Perform necessary maintenance procedure outlined by the manufacture.

7.3 Periodical examinations and tests

This MEWP should be examined and tested according to the following items every 3 months.

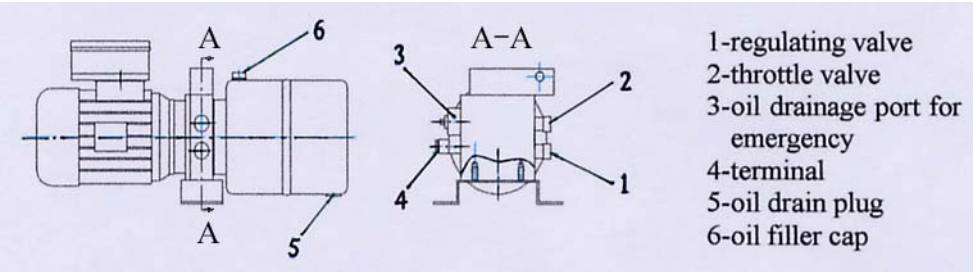
1. Lubricate the lifting chain. Check the chain for wear.
2. Check and tighten possible loose screws and nuts.
3. Check brush wear in the pump motor, and replace those worn so that a good contact is maintained.
4. Visual examination of the structure with special attention to corrosion and other damage of load-bearing parts and welds.
5. Examination of the mechanical, hydraulic, and electrical systems with special attention to safety devices as mentioned in clause 7.1.

Note: The frequency and extent of periodical examinations and tests may also depend on national regulations.

7.4 Maintenance

7.4.1 Adjusting the maximum rising force

The proper pressure of hydraulic system has been preset at the factory, however, the regulating value has been changed because of using the product for a long term.



Notes:

1) When you find the rising force not reach the rated value, open the hydraulic unit cover. Please refer to the above sketch, turn the regulating valve 1 of the hydraulic control device clockwise till the rising rated value.

2) If necessary, a pressure gauge (supplied as an optional attachment) could be connected to the emergency lowering valve block for hydraulic system pressure checking.

7.4.2 Adjusting the speed of falling

The speed of falling of the platform can also be adjusted.

Note: Please refer to above sketch. The speed is reduced when you turn the adjusting screw 2 of "throttle valve "clockwise, otherwise, the speed is increased.

7.4.3 Fluid level checking

A separate fluid level indicator is provided as an attachment (optional) for both the permissible maximum fluid level and the necessary minimum level when the machine is in transports.

7.4.4 Replacing the hydraulic oil

The hydraulic oil of the equipment should be replaced once after the equipment has been used for half a year to clear off the pollution caused by wearing of the system in the first term. Determine the term of the replacement according to the polluted circumstances of the hydraulic oil later (suggest replacing the hydraulic oil once every one and half one years).

Note:

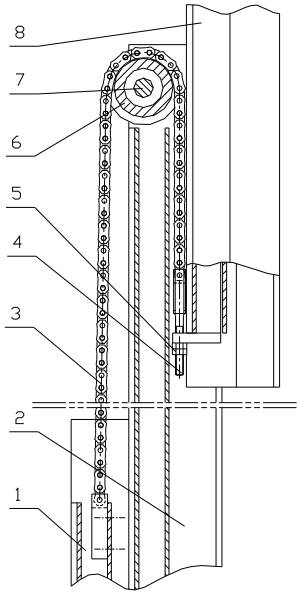
1) Selecting of the hydraulic oil depends directly on influence of the temperature for using. For non-paramo region, the common hydraulic oil of kinematic viscosity (40) 46mm^2/s (the nominal value) is recommended for use.

2) When replacing the hydraulic oil, first place a basin for containing waste oil under the oil box. Open the oil filler cap 6 at the top of the oil box and then remove the oil drain plug 5 at the bottom. After draining off the waste oil, fill a little clean hydraulic oil into the oil box through the oil filler hole and wash it. Tighten the drain plug 5 after all the oil has been drained. Then fill up with clean hydraulic oil and allow for a slight overflow to displace any air.

7.4.5 Regulating the transmission chain

The direct result of wearing the transmission chain is to stretch the total length of the chain. Measure the stretching rate of the used transmission chain by eye every three months. The mast connected to the elongated chain would be lower in position so that the top of each mast is obviously uneven in 'stored' position. It may lead to damage on guide roller if the problem is serious.

Note: Every link of the transmission chain is associated with three links of the masts. The following sketch shows the connection of the masts and the transmission chain.



1-next link of the mast;
2-the middle link of the mast;
3-the transmission chain;
4-adjusting bolt;
5-adjusting lock nut;
6-chainwheel;
7-chainwheel shaft;
8-the last link of the mast

1) When regulating the length of the chain, please select the mast that needs increasing its height. As shown in the sketch, regulating the nut 5 tightly makes the last link of the mast 8 move upwards. The dual nuts 5 should be connected with each other tightly after regulating the length of the chain.
2) The same link of the mast is pulled by two chains and endures the raised weight loads at the same time. If one of the chains loses efficacy, the other will play an important safety role, therefore, try to make both chains as loose or tight as consistent each other when regulating the length of the chain. The methods of judge at site are as follows: Press the two chains by hands to compare their tautness under lifting status.

Warning! Not enter the space beneath a raised work platform and extending structure during maintenance unless the chock is in place.

Note: When the work platform of a MEWP needs to be raised for routine servicing purposes, a captive chock shall be used to enable the extending structure to be held in the required position to prevent work platform from falling down unexpectedly.

7.5 Lubricating the equipment

Add lubricating oil to the rubbed parts of the running components constantly.
7.5.1 Ball bearings are adopted between the chain wheel and chain wheel shaft; wool brushes should be used to lubricate them with Albany grease under lifting status.
7.5.2 Add mechanical oil to “chain - chain wheel” for wearing with the oil gun.
7.5.3 Applying some Albany grease on “guiding rails between the masts” with wool brushes under lifting status.
7.5.4 Between the wheel and axle adopted ball bearings, they should be lubricated by the wool brush with Albany grease.

Chapter 8 Battery

8.1 Battery charging

8.1.1 Turn the key and switch on, when the display indicated voltage is below 11 volt, please charge up the battery.

8.1.2 The rated specification of the battery charger supplied:

Input: 220V AC50/60Hz

Output: 12V DC 15A

8.1.3 When start charging, insert the output plug of the charger to the charging socket of the chassis first, then the input plug of the charger to the socket of AC power supply. Turn on the charger switch; battery charging is started with indicator (red lamp) lights up. Normal recharging lasts about 10 hours. When charging is terminated check that all cells have reached a density between 1.260~1.280kg/l at 30℃.

When charge is finished, the AC supply should be cut off.

8.1.4 Battery charging should be done in a well-ventilated place and there are no naked flames, no sparks and no heat radiation sources nearby.

8.1.5 Make sure the level of the electrolyte is above the lower line. If the elements are not covered, top up with distilled water. Under normal conditions topping up can be generally done once a month.

8.2 Battery maintenance

The acid level must be checked at least once a week.

Refilling must not take place until charging has been finished, as the acid expands during charging.

Only distilled water can be used for refilling.

The battery surface must be kept clean and dry, as dirt and wet will cause leakage of current and consequently reduced battery capacity, Acid spill can be neutralized with soda solution or diluted ammonia, which is to be washed off with water.

The terminal connections must be firmly tightened and greased with acid-free grease, which prevents sulphate formations.

Sulphate coating reduces the contact surface, resulting in a considerable voltage

Cautions

1) Before charging, don't open plugs
2) Charge the battery in a well-ventilated place, lifting off the cover or removing the battery from the machine.
3) Never expose the battery to naked flames. Fires may occur from the formation of explosive gas.
4) Terminal points must be well tightened and free of scale. Cable insulation must be in good condition
5) Keep the battery clean, dry and free dust using an antistatic cloth
6) Never place tools or other metal objects on the battery
7) During recharging, check the temperature of the electrolyte, which must not exceed 45℃

8) Avoid contact between skin and acid. If skin or clothes come into contact with this acid wash with abundant soap and water.

Chapter 9 Trouble shooting

Most of the problems you meet with are easy to solve when you are operating on the mobile elevating work platform. Please find out your problems in this part and solve it according to the recommended steps. If you can't still solve it according to the instructions here, please contact with your suppliers or the experienced service personnel for help.

9.1 Problem 1 –The indicator light of the power supply is off and the platform doesn't rise or fall.

9.1.1 Check whether the electrical wire is connected with the socket of the electricity supply correctly or not.

9.1.2 Check the circuit breaker to make sure it's in 'ON' position.

9.1.3 Check the leakage breaker to make sure it's in 'ON' position.

9.2 Problem 2 – The power indication light is on, but there is a 'ticking" sound in the electric box when the 'UP' button is pressed and the platform can't lift or it can only rise up to a limited height.

9.2.1 Check the electrical cable to see if it is too long or too thin. The diameter of cable wire should be minimum 1.0 mm when the wire length is less than 25 meters, and minimum 1.5 mm when the wire length is above 25 meters and less than 50 meters. You can try to plug the equipment cord directly in the fixed socket, instead of to an extension cord.

9.2.2 Check power voltage to make sure it is within allowable limits.

9.3 Problem 3 – Excessive noise from hydraulic power unit during 'lifting' operation.

9.3.1 Check oil box to make sure there is sufficient hydraulic oil in the tank.

9.3.2 Check whether the oil filler cap is excessively sealed to make the oil pump difficult to absorb the oil or not.

9.3.3 Check the mounting screws of the electric motor and cover etc. to see if they have become loose.

9.3.4 Check whether the environment humidity is in accordance with the stipulated conditions or not.

9.4 Problem 4 –Leakage of the hydraulic oil

9.4.1 Check all piping connections for their tightness, and tighten up if necessary.

9.4.2 Check whether the viscosity of the used hydraulic oil is too low or not.

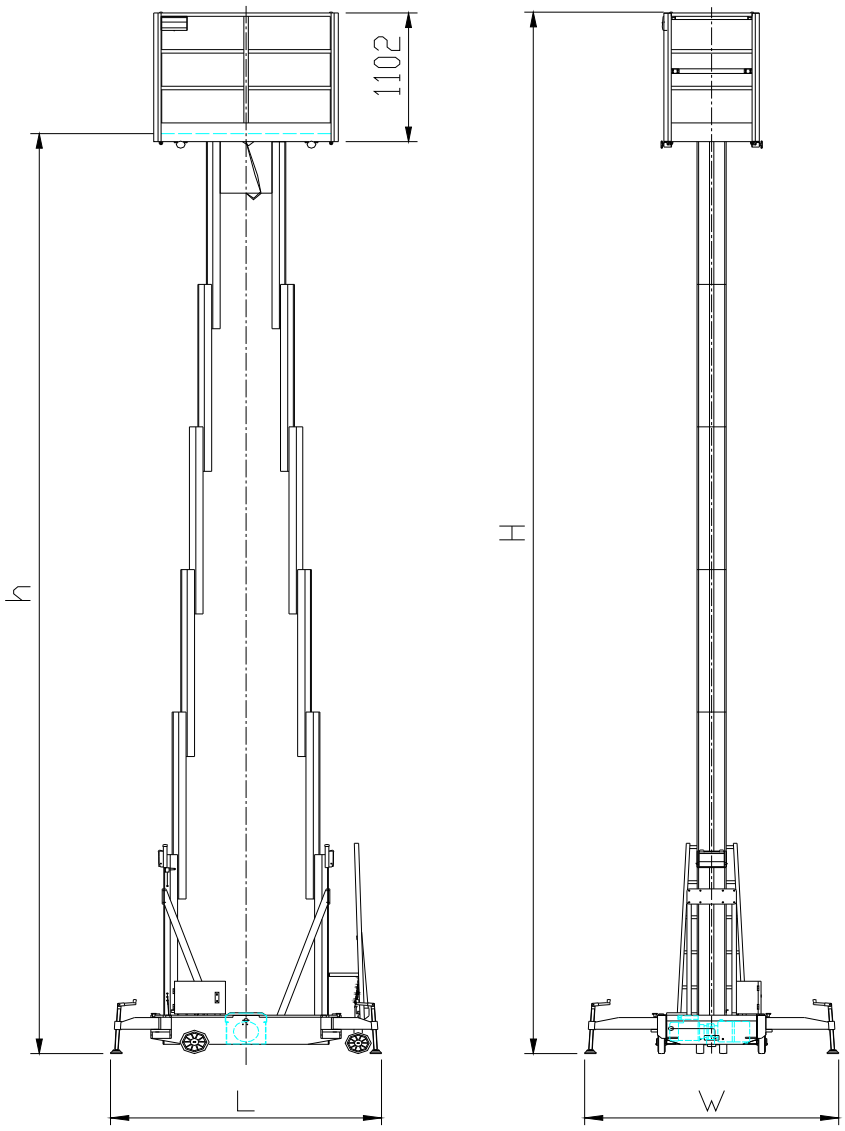
9.5 Problem 5–All the indicator lights are on, but the platform couldn't rise or fall.

Check the Emergency stop switches on both upper and lower control device.
Reset the switch by turning the knob in the direction shown by the arrow.

Chapter 10 Construction Drawing, Electric Schematic and Hydraulic Diagram

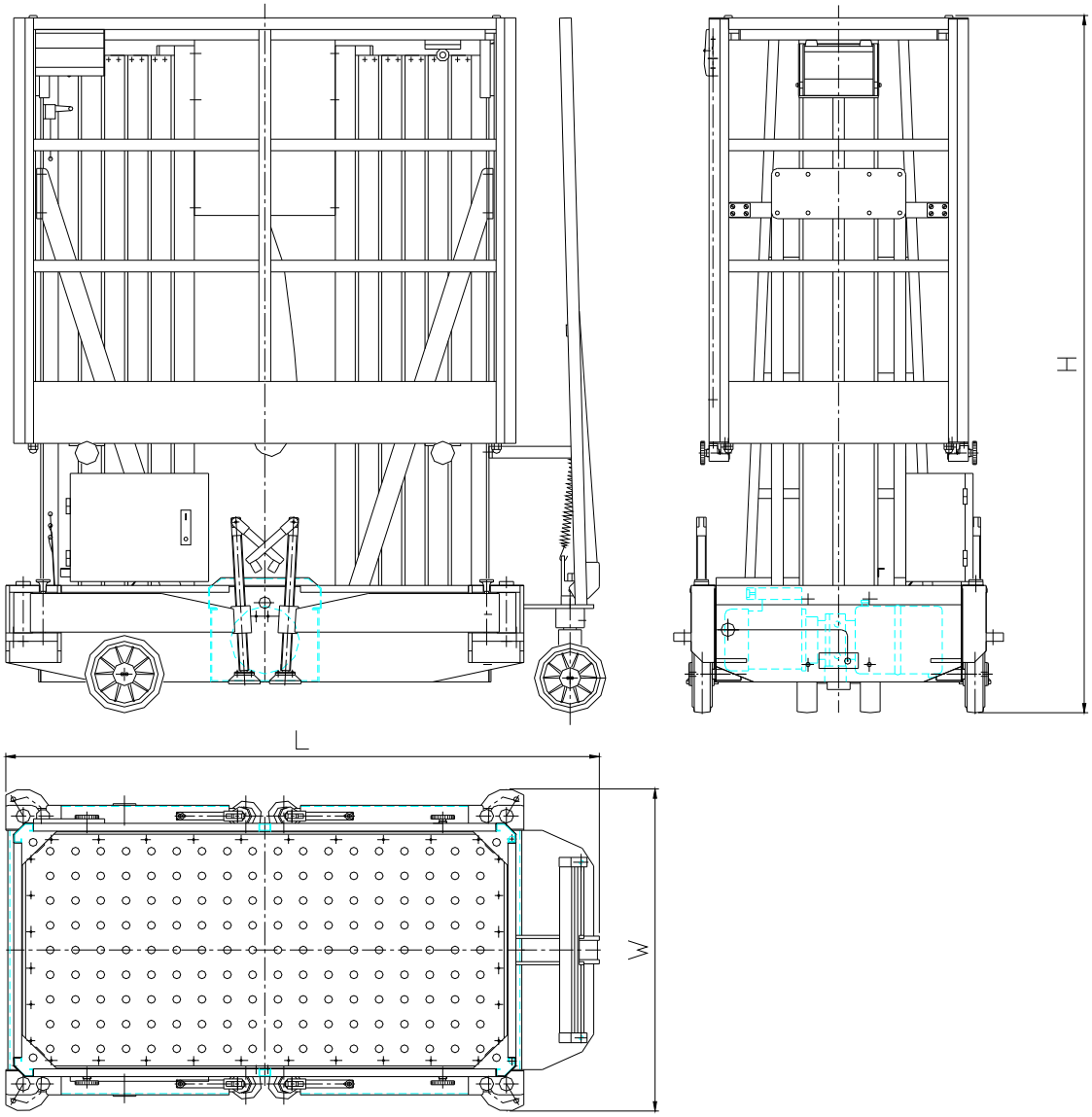
10.1 Construction drawing

10.1.1 Dual mast in lifting state



Model	L (mm)	W (mm)	h (mm)	H (mm)
GTWY6-2000	1690	1650	6170	7210
GTWY8-2000	1880	1770	7980	9020
GTWY10-2000	2230	1960	10016	11056
GTWY12-2000	2550	2570	12000	13040

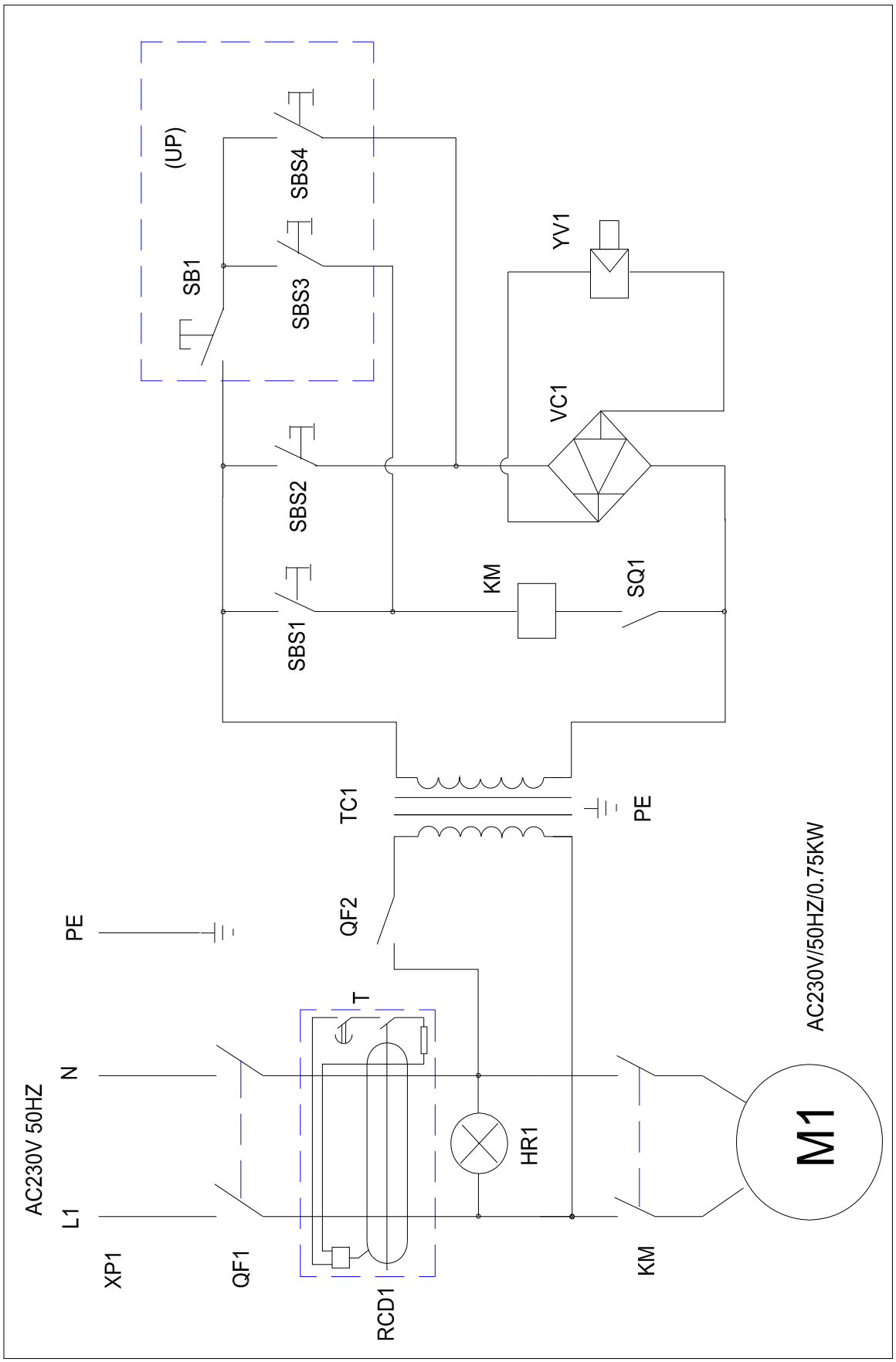
10.1.2 Dual mast in transportation state



Model	L (mm)	W (mm)	H (mm)
GTWY6-2000	1440	840	1800
GTWY8-2000	1560	840	1920
GTWY10-2000	1790	840	1920
GTWY12-2000	1790	890	2140

10.2 Electrical Schematic

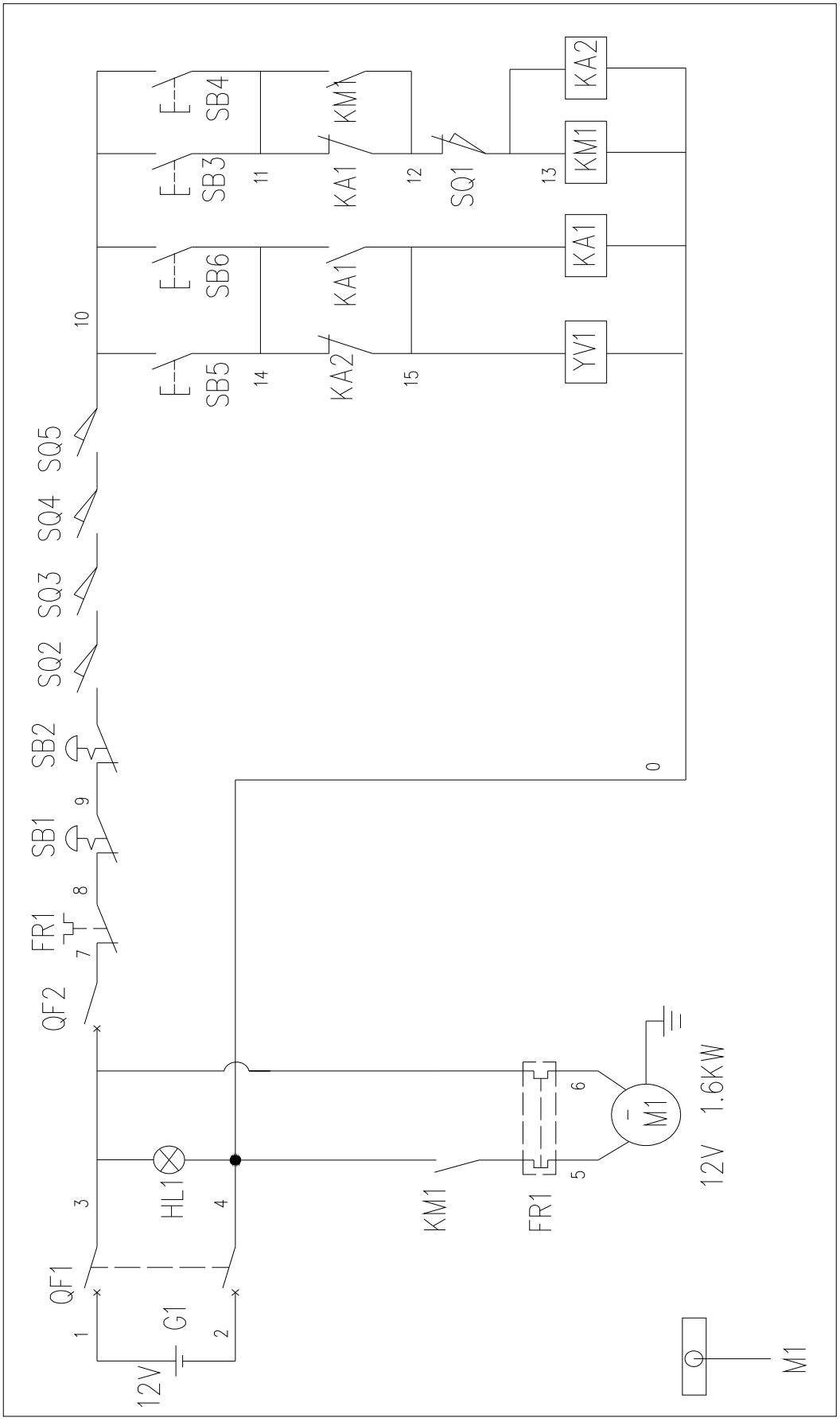
10.2.1 Electrical Schematic of AC power supply



AC ELECTRICAL COMPONENTS

No.	Sign	Name	Manufacturer	Type	Parameter	Standard	Attestation
1	XP1	Battery pin	Ningbo Yunhuan Ele.Group Corporation	YDP3	10/16A	H05VV-F	VDE
2	QF1	Breaker	ABB	GS252S-K/16	16A	IEC947-2	CE
3	RCD1	Creepage switch	ABB	Type ECE	Acting current 30mA	IEC947-2	CE
4	KM	AC contactor	Schneidey	LC1-0910	AC 24V	EN 60947-1	CE
5	HR1	Battery indicator	Schneidey	XB2-BVM5c	230V	EN 60947-5-1	CE
6	M1	Motor	Hydr-app	M80.4H	AC 230V 0.75KW	EN 60034-1 EN 60034-5	CE
7	QF2	Breaker	ABB	GS252S-K/6	6A	IEC947-2	CE
8	TC1	transformer	JUCHE ELE PRODUCTS	JBK5-63	50VA	IEC204-1	CE
9	SB1	Emergency stop	Schneidey	ZB2-BE102c	Φ22	EN 60947-5-1	CE
10	SQ1	Stoke switch	SCHMERSAL	2V1H 236-112	Φ22	EN 60947-5-1 Annex K	CE
11	SBS1	Button switch	Schneidey	ZB2-BE101c	Φ22	EN 60947-5-1	CE
12	SBS2	Button switch	Schneidey	ZB2-BE101c	Φ22	EN 60947-5-1	CE
13	SBS3	Button switch	Schneidey	ABC-M	Φ16	EN 60947-5-1	CE
14	SBS4	Button switch	Schneidey	ABC-M	Φ16	EN 60947-5-1	CE
15	VC1	Rectifier	Shanghai Huajin Rectifier Factory	KBU808G	5A	—	—
16	YV1	Solenoid coil	Hydr-app	—	DC 24V	—	CE

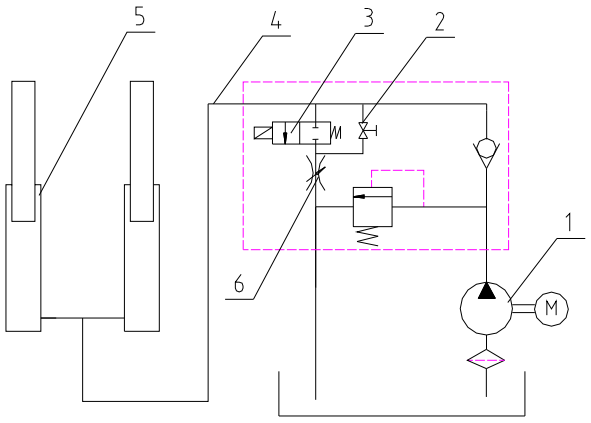
10.2.2 Electrical Schematic of DC power suppl



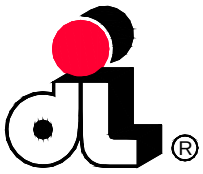
DC electrical components

S/N	Symbol	Description/function	Model	Specification	Standard	Approval
1	QF1	Circuit breaker	DZ47-100	DC 12V 100A	EN 60947-2	CE
2	QF2	Circuit breaker	DZ47-6	DC 12V, 6A	EN 60947-2	CE
3	HL1	Power indicator	Y090	DC12V	EN 60947-5-1	CE
4	FR1	Overload relay		DC12V 100A	EN 60947-4-1	CE
5	SB1	Emergency Stop Button	XB2-BS542	Φ 22	EN 60947-5-1	CE
6	SB2	Emergency Stop Button	LA39-11Z/R	Φ 16	EN 60947-5-1	CE
7	SB3	Push Button	XB2-BA61	Φ 22	EN 60947-5-1	CE
8	SB4	Push Button	XB2-BA11	Φ 22	EN 60947-5-1	CE
9	SB5	Push Button	LA39-12F/B	Φ 16	EN 60947-5-1	CE
10	SB6	Push Button	LA39-11F/W	Φ 16	EN 60947-5-1	CE
11	KA1	Relay amplifier	MY2J DC 12V	DC 12V	IEC 255	CE
12	KM1	DC contactor	DK139	DC12V, 100A	EN 60947-4-1	CE
13	Yv1	Solenoid		DC 12V	—	CE
14	SQ1	Limit switch	ZV1H 236-11z	4A/230V AC	EN 60947-5-1 Annex K	CE
15	M1	Motor	24009500	DC12V 1.6	EN 60034-1 EN 60034-5	CE
16	G1	Battery	CB122000	DC12V 200AH	—	CE
17	SQ2~SQ5	Limit switch	AZ17/170-B1	4A/230V AC	EN 60947-5-1 Annex K	CE

10.3 Hydraulic Diagram



1—Hydraulic Power Pack 2—Emergency Lowering Valve
3—Solenoid Valve 4—Piping
5—Hydraulic Cylinder 6—Throttle Valve



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