OPERATION MANUAL

FOR HANDI-LIFT ML9

Original Version

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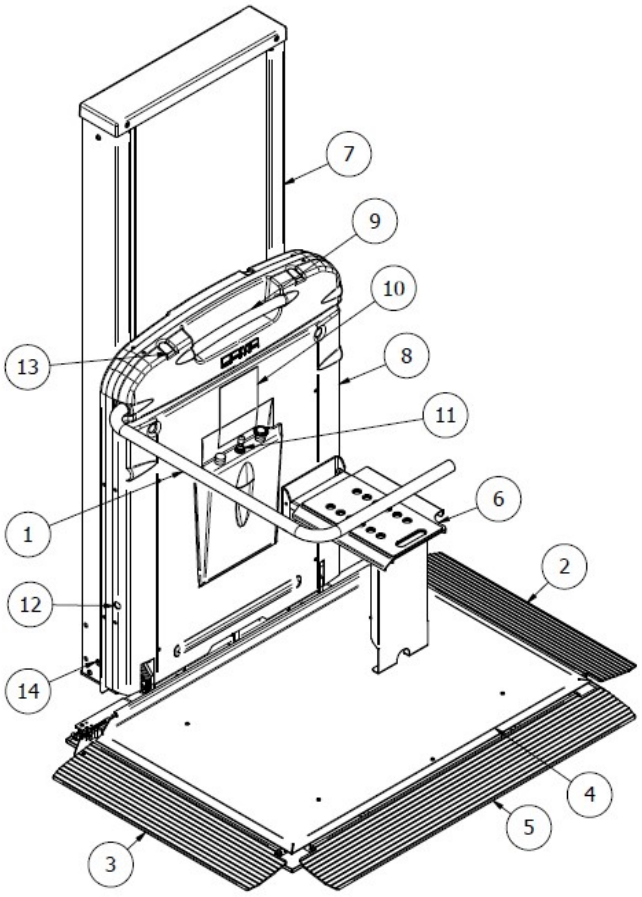
1 Introduction

1.1 Congratulations on your new CAMA Handi-Lift

Thank you for choosing a CAMA Handi-Lift. Please read these operating instructions carefully before you start to use the lift.

Your CAMA Handi-Lift has been constructed with careful attention to detail. For many years of trouble-free use of the lift, please follow the instructions paying special attention to the care and maintenance requirements. We recommend that you do not take on maintenance of the lift other than routine care and cleaning as described in this booklet.

1.2 Diagram of Handi-Lift ML9



1) Safety arm
2) Right flap
3) Left flap
4) Platform
5) *Side-access-ramp (not standard) /side edge (std)
6) *Folding seat (not standard)
7) Column tower
8) Cover
9) Handle
10) Name plate
11) Control panel
12) Emergency lowering of platform
13) *Emergency raising of safety arm
14) * Emergency lowering of lift

* Optional equipment

1.3 General information about the lift

Type ML9 is a fully automatic lift, where the user does not need to carry out any manual operation, all the operations are electrically controlled.

The Handi-Lift consists of a tower and a lift trolley with folding platform. The lift is equipped with safety arms and flaps on the front and rear of the platform. If the flaps, the plate under the platform or the safety plate under the lift trolley is touched, the lift stops automatically to prevent crushing.

The Handi-Lift is designed for one wheelchair user, or one person sitting (this requires that the lift is equipped with a folding seat). We do not recommend standing on the lift. The lift can be operated either by the user or by a helper (the helper must not be on the lift at the same time as the user). The lift is designed for vertical lifting and manufactured individually with regards to the lifting height. The lift is supplied for both interior and exterior use.

The Handi-Lift should not be used by severely disabled people without a helper, children or people affected by medications, alcohol, or other intoxicants. It should also not be used for building materials, furniture, removals, animals, food, cleaning equipment, chemicals, electrical appliances or similar, unless the lift is constructed for these purposes. The lift should never be used to lift loads heavier than the lift's weight limit. You must be aware that the lift is fitted with a load cell, which means that if the lift is used with excessive weight (overload) the control light will flash, and the lift will give a beep signal. The system is restored by minimizing the weight. (See also the section 'What to do if your lift is not working"). The standard lifting capacity of the Handi-Lift is 300 kg (See the name plate on the lift).

In case of fire, the lift must not be used.

When the lift is installed, a main power switch is fitted where the power to the lift can be turned off. The main power switch is only used during lift service. There must be sufficient light (at least 50 lux) where the lift is to be used and when the lift is being maintained. There must also be an electrical socket available near the lift installation.

1.4 Before you use the Handi-Lift

The lift is equipped with various safety measures which must be tested before using the lift. If the safety measures do not work, the lift must not be used, and you should contact your service centre.

Note that you must drive onto the lift with the front facing down. Remember to put the brake on the wheelchair.

As a user of the lift, you must note that the functions described below are working as they should, although it is the installer's job to check the functions during installation and during the regular servicing of the lift.

Check that the barrier arm (Nos. 1 on the drawing in section 1.2), move as it should. The lower barrier arm must not be opened at the top stop, as this will prevent the user from driving off the lift in that direction.

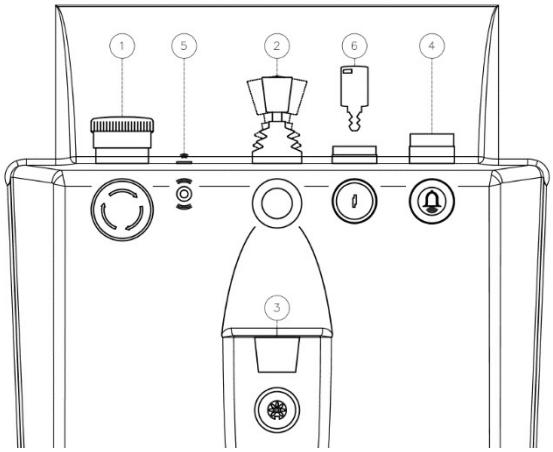
Check the upper and lower flaps and the platform (Nos. 2, 3 and 4 in the drawing in section 1.2).

By touching of the top flap while the lift is moving up and the lower flap when the lift is moving down you can force the lift to stop. Test that the lift will stop automatically when the flaps are touched, and it will only move again when the obstacle is removed.

Touching the platform's bottom plate when the lift is moving down the stairs will also stop the lift automatically, and the lift will only move again when the obstacle is removed.

2 Operating the Handi-Lift ML9

2.1 Operation from the lift's control panel



1) Emergency stop
2) Joystick
3) *Connection for remote control with spiral wire
4) Emergency call
5) Light diode
6) *Key lock

* Extra equipment (not standard on all lifts).

The Handi-Lift's control panel is positioned as shown in the drawing in section 1.2 No. 12

2.1.1 Emergency stop

If the red button is pressed down, the emergency stop will be activated, and a light will appear (No. 1 on the diagram above). The emergency stop turns off the power supply to the lift, and if the emergency stop is activated, it is not possible to travel on the lift. To release the emergency stop button, the red button is turned clockwise until the button comes back up again, and the lift can now move again. Please ensure that the emergency stop is always released.

2.1.2 Joystick

You use the joystick (No. 2 on the drawing in section 2.1) on the Handi-Lift by pushing the joystick in the desired direction. The Handi-Lift stops automatically when it reaches the top or bottom stop.

Note! If the joystick is released while travelling, the lift will stop, and it will take a few seconds before the joystick can start the lift again.

2.1.3 Connection for assisted operation

The connection for remote control with a spiral cable (No. 3 on the drawing in section 2.1) is not standard on all platforms; further details in section 2.3. If the lift was not initially purchased with a remote control with spiral cable, then this connection is not found on your lift.

2.1.4 Emergency call

The emergency call button (No. 4 on the drawing in section 2.1) is standard on all lifts. Activate the emergency call button by pressing the button and an alarm will start up as a signal that you need help.

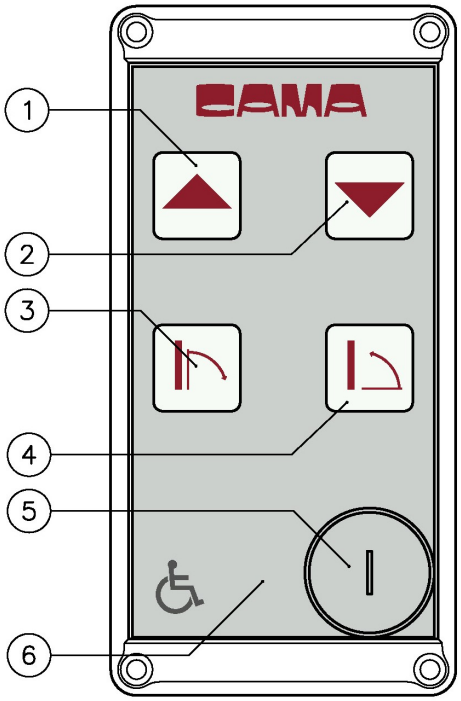
2.1.5 LED

The LED lights up green (No. 5 on the drawing in section 2.1) when there is power to the lift, and the emergency stop is deactivated. The lift can only be used when the green light is on. If the LED flashes, there is overload of the lift.

2.1.6 Key Lock

The key lock disconnects the power to the lift, so it cannot be used (no 6 on the drawing in section 2.1).

2.2 Operation from the control box on the wall or column



1) Up
2) Down
3) Open
4) Close
5) Key Lock
6) Green LED

The control boxes can vary in appearance, but the symbols for the functions are the same on all types of boxes.

The Handi-Lift is a fully automatic lift, where the user is not required to make any manual operation; all operations are electrically powered.

The control panel shown above is not necessarily standard, as the lift can be operated using a remote control (See section 2.4). The control panel can be used to move the lift to the desired position, either by the user or a helper. A helper can control the lift from the control box.

The control box is fitted at the top and bottom of the stairs, but in some cases may also be mounted in a control column. On **control boxes with battery supply**, the green light is only lit when one of the buttons is pressed. The key lock only locks the current controls. The control box uses 3 AA batteries, and these are replaced when the lift is maintained, or as needed.

2.2.1 Up

The Up button (No. 1 on the drawing in section 2.2) is used to move the lift up, the button must be pressed and held down to get the lift to move. If the button is released while travelling, you should wait a few seconds before the button will activate the lift again.

If you are at the top of the stairs and the lift is parked at the bottom, you can use the UP button to call the lift to the desired position.

2.2.2 Down

The Down button (No. 2 on the drawing in section 2.2) is used to move the lift down. The Down button works in the same way as the Up button, except that it moves the lift down.

2.2.3 Open

The Open button (No. 3 in the drawing in section 2.2) is used to move the platform down, so that you can drive onto the lift. Please note that you must drive onto the lift with the front facing down. Remember to put the brake on the wheelchair.

The Open button only works when the lift is parked at the lower stop.

WARNING! Never move the platform down if there is a person or an object under the platform.

2.2.4 Close

The Close button (No. 4 in the drawing in section 2.2) is used when you want to park the lift. Press the Close button down and the safety arm is lowered, and the platform will automatically close. Please note that the Close button only works when the lift is parked at the lower stop.

WARNING! Never try to close the platform, if there is a person or an object on the platform.

2.2.5 Key lock

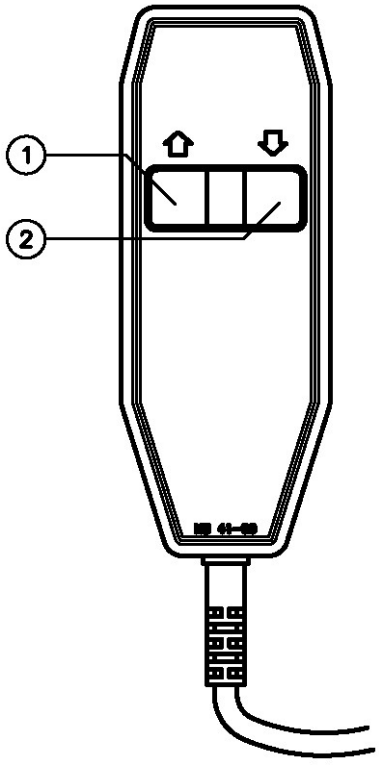
Operation w/battery supply

The key lock (No. 5 in the drawing in section 2.2) is used to lock the control box and only this control box. By turning the key lock, you turn on the power supply to the control box. The control box is turned on when the key is horizontal.

2.2.6 LED

The LED (No. 6 on the drawing in section 2.2) is lit when the control box is turned on.

2.3 Assisted operation



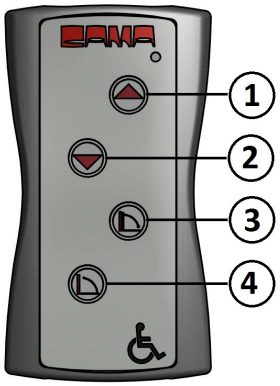
1) Up
2) Down

Assisted operation is optional and not standard on all platforms. Assisted operation can replace the joystick function and is most often used by a helper. The controls are connected to the control panel on the lift (No. 3 on the drawing in section 2.1): please ensure that the guide pins on the connector are aligned, when you plug it in.

2.3.1 Up
Press the Up button and hold it down (No. 1 on the drawing in section 2.3). This will make the lift go up.

2.3.2 Down
Press the Down button and hold it down (No. 2 on the drawing in section 2.3). This will make the lift go down.

2.4 Operation with wireless remote control



1) Up
2) Down
3) Open
4) Close

The wireless remote control shown in the diagram above is optional and is not standard on all platforms. The remote control can replace the control box (see section 2.2). The remote control can be used to call the lift to the desired position, either by the user or by an assistant. A helper can operate the lift with these controls. **NOTE When using the wireless remote control, the lift MUST be supervised.**

2.4.1 Up
The Up button (No. 1 in the drawing above) is used to move the lift up. The button must be pressed and held down to get the lift to move. If you release the button while travelling, wait a few seconds before the button can activate the lift again.

If you find yourself at the top of the stairs and the lift is parked at the bottom, you can use the Up button to call the lift to the desired position.

2.4.2 Down

The Down button (No. 2 in the drawing in section 2.4) is used to move the lift down. The Down button works in the same way as the Up button, except that it moves the lift down.

2.4.3 Open

The Open button (No. 3 in the drawing in section 2.4) is used to open the platform so that you can drive onto the lift. Please note that you must ride into the lift with the front facing down. Remember to put the brake on the wheelchair.

The Open button only works when the lift is parked on the lower stop.

Warning! Never move the platform down if there is a person or an object under the platform.

2.4.4 Close

The Close button (No. 4 in the drawing in section 2.4) is used when you want to park the lift. Press the Close button and the safety arm will lower, and the platform will close automatically. Please note that the Close button only works when the lift is parked at the lower stop.

Warning! Never try to close the lift if there is a person or an object on the platform.

3 Emergency lowering

Disconnect the power to the lift at the main power switch!

Find the 8mm Allen key that came with the lift.

3.1 Emergency raise of the barrier arms

EMERGENCY RAISING

Remove the rubber plug on the lifts front cover. *(pos. 13 on the drawing in section 1.2)*; put the Allen key in the hole for the barrier arm you which to raise. Turn the Allen key anti-clockwise to release the barrier arm. The barrier arm can now be opened.

Warning!	You must never raise the lower barrier arm if the lift is not

	parked at the bottom of the stairs. **Contact your dealer if you have emergency raised the barrier arm.**

3.2 Emergency raise of the platform

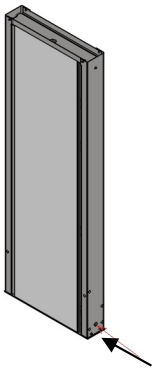
Remove the rubber plug in the left side of the lifts front cover *(pos. 12 on the drawing in section 1.2)*; Put the screwdriver in the hole and turn it clockwise to raise the platform (close the platform).

Warning!	Never try to raise the platform if a person or an object is on the platform

3.3 Emergency lowering of the lift

EMERGENCY LOWERING

To emergency lower the lift you need to drive the lift down *(pos. 14 on the drawing in section 1.2)*; the handle is turned anti-clockwise.



Warning

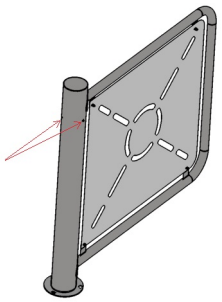
Never try to emergency lower the lift if there is an object beneath the platform.

We do not recommend that the emergency lowering of the lift is carried out by others than authorized technicians.

3.4 Emergency opening door

EMERGENCY OPENING

Losen the two indicated screws on the door column. After that the door will move freely.



4 Additional equipment

4.1 Folding seat

Mobility-impaired persons may use a folding seat *(No. 6 on the drawing in section 1.2)*. The folding seat is manually operated and is folded down by tilting the seat. Before you sit down, ensure that the support leg is completely folded out and firmly placed on the platform. Please note that if you do not fold up the folding seat after use, a spring will automatically fold up the seat when the platform is raised.

4.2 Alarm/ Emergency call

The alarm *(No. 4 on the drawing in section 2.1)* is only used if there is a specific request or requirement that an alarm will sound when the lift is moving. If the lift is in a publicly accessible place the alarm/emergency call is mandatory and not optional.

4.3 Flashing lights

Flashing lights are only used if there is a specific request or requirement that a light should flash when the lift is moving.

4.4 Rain cover

For exterior lifts a rain cover is available, which protects the lift from the sun, weather, and wind, as well as vandalism.

5 What to do if your lift is not working

If the scheme below does not solve the problem, please contact your maintenance company.

Problem	Cause	Solution
The lift will not start (no light in the control lights)	Turned off at the main safety switch	Turn on the safety switch
	Emergency stop on lift is activated	Emergency stop is released by turning it to the right in the direction of the arrow
	Fuses in the main power panel or RCCB relay	If necessary, change the fuses or activate the RCCB relay
The control light flashes and the lift sounds an alarm	Overload (see section 1.3 on the load cell)	Reduce the size of the load.
Lift will not move down	The safety switch at the lower ramp flap in the bottom side is activated	The flap is pushed down on the platform (limit switch is deactivated)
Lift will not move down	There is a foreign object under the lift	Move up the lift slightly and remove the obstruction under the lift platform. Call the service department if the obstruction is difficult to remove
Lift stops between floors	Fuses in the main power panel or RCCB relay	If necessary, change the fuses or activate the RCCB relay
	Top or bottom flap limit switch on the platform is activated	Release the flap limit switch or remove the blockage. Call the service department if it is not possible to do this

6 Warnings

NEVER allow more than one person on the lift. (See maximum load on the version plate on the lift).

ALWAYS keep the lift's driving path under observation.

NEVER allow children to play with the lift.

NEVER allow water to come in contact with the electrical components in the lift.

NEVER place objects under the lift where they could come in contact with the lift when it is in use.

ALWAYS remember to apply the brake on the wheelchair, so it does not move while lifting.

ALWAYS remember to drive onto the lift with the front facing down.

NEVER attempt to help the safety arms raise and lower.

Note! In winter, snow can prevent the lift from working. Remove all the snow from the landing place BEFORE the lift is put into service.

7 Service

The Handi-Lift is supplied fully installed and tested by specially trained personnel authorized by Cama. In Denmark the frequency of the mandatory inspections after installation will be determined by an independent person. However, Cama would recommend that the Handi-Lift is serviced at least once a year. Any faults found between the regular inspections must be immediately notified to the supplier or a person authorized by the supplier.

For safety reasons, it is recommended that original spare parts are used and that repairs are carried out by authorized personnel. If non-original spare parts are used or repairs are carried out by unauthorized personnel, the warranty will no longer be valid.

8 Cleaning

Before you start to clean your lift, please remember to turn the lift off. Remember to turn the lift on again after cleaning.

The Handi-Lift is made from materials that are easy to wipe clean. The painted metal and plastic parts should be wiped with a damp, not wet, cloth. Under no circumstances should you use abrasives, bleach, or solvents, as these will damage the surface. Be aware that excess water can cause problems if it comes in contact with the lift's electrical components.

9 DATA for Handi-Lift ML9

9.1 Serial Number

Your Handi-Lift has serial number: [ ]

9.2 Measurements of Handi-Lift ML9

(All dimensions are nominal)

Tower:	118x675mm
Width when parked:	335 mm
Width when open	1100 mm
Platform height:	40 mm
Standard platform:	1000x800mm
Load:	300kg

9.3 Technical specifications

Speed:	approx. 0,04 m/sec. depending on the load
Power supply:	230V AC
Noise:	approx. 70 dB, may vary depending on the surroundings
Environment temperature:	-10 ^{O}C to +40^{O}C

Name plate.

(No. 10 on the drawing in section 1.2)

9.4 Manufacturer

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We reserve the right to make changes to the product.