



# Installation manual

For Handi-Lift ML9

Original Version

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## 1 Introduction

### 1.1 Check the parts and drawing

Before you start installing please read this installation manual.

Check the received parts for transport damage.

Next, study carefully the installation drawing that comes with the lift to ensure that all dimensions are correct and corresponds to the installation site.

### 1.2 Electrical installation

If the drawing does not show where to install the Control boxes, please sort out where they all go. Make sure that the electrical supply and electrical wiring for the Handi-Lift are there before installing the tower and lift.

You need 1x230V with earth, 3x1,5 mm<sup>2</sup>. The installation must be protected by a 10 Amp fuse and RCCB 30 mA. We recommend that you make a measurement of the earth connection.

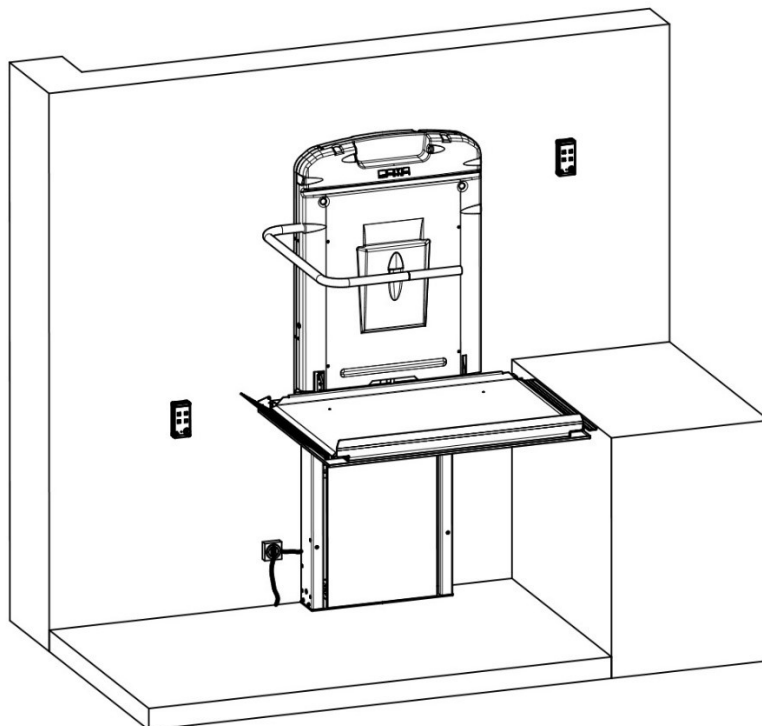
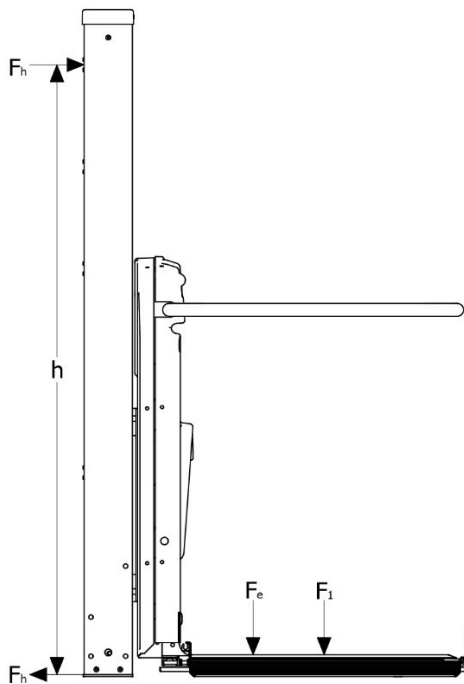


Fig. 1

## 2 Forces on the building



LOAD & FORCES		
$F_1$	2946N	
$F_e$	1129N	
$F_h$	$h$	
	2300mm.	770N
	2000mm.	870N
	1800mm.	960N
	1700mm.	1050N
	1500mm.	1120N
	1450mm.	1190N

Fig. 2

The tower is fixed to the floor and to the wall with M10x90mm (Class 8.8) Glue bolts. Two bolts in the wall and two in the floor.

The given load forces applies for the total force when two bolts are used both places.

Please make sure the wall and floor materials can withstand the given loads.

## 3 Install the tower

### 3.1 Tower positioning

The tower is the first component to install. Dependent on the quality and straightness of the wall- and ground material, the tower placement may need corrections.

Place the tower on the floor against the wall.

Adjust the tower to be perpendicular to the wall of the landing. (see fig. 3)

The distance between the centre of the tower and the landing wall is given on the installation drawing. You will also find the distance labelled on the bottom face of the tower.

The centre of the tower is clearly marked with a "V" in the baseplate next to the label (see fig. 3).



Fig. 3

Make sure the tower is in level (see fig. 4).



Fig. 4a



Fig. 4b

Finally, adjust the tower to be vertical in both directions before fixing it to the wall and the floor, so the landing fits.

Mount the bolts in the wall with glue as described on the glue package.

Fasten the nuts.



Fig. 5a



Fig. 5b

## 4 Installing the lift unit

### 4.1 Attach the back frame to the tower

Place the back frame of the lift on the floor in front of the tower.



Fig. 6

Connectors and cables are put through the hole on both sides.

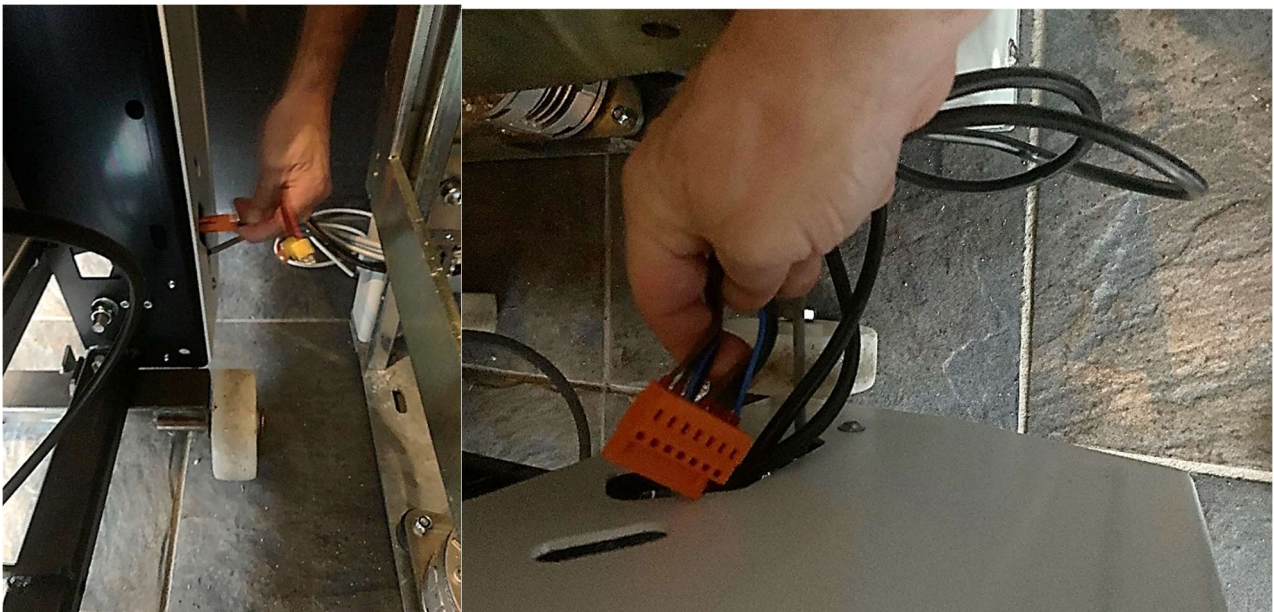


Fig. 7

Position the back frame to the mounting holes of the carriage.

Fasten the back frame using the four screws and washers.



Fig. 8

## 4.2 Connect the electrical

Leave the lift carriage and back frame in the lower position of the tower. Place the platform on the floor in front of the back frame.

Pull the cables and mount the connectors as shown below.

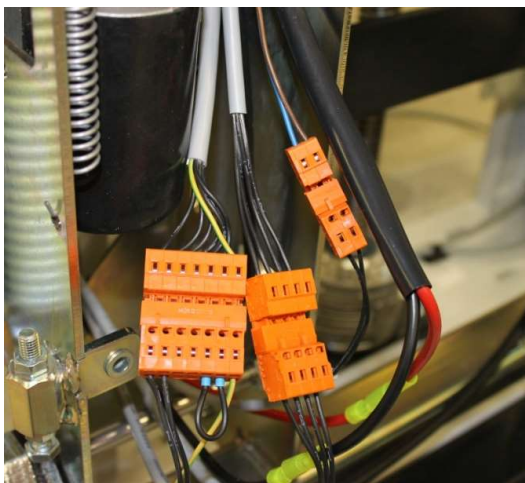


Fig. 9 left

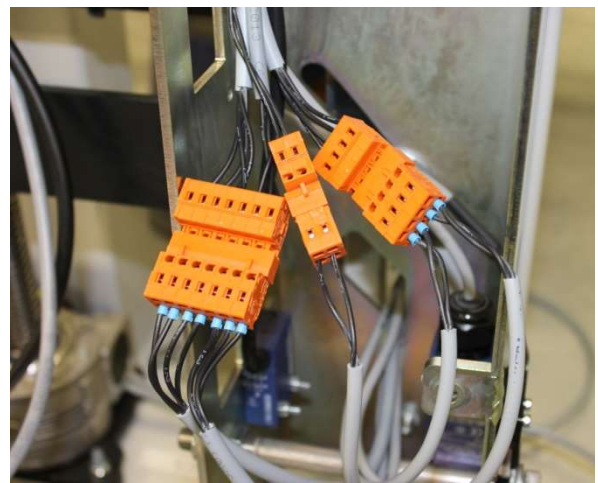


Fig. 9 right

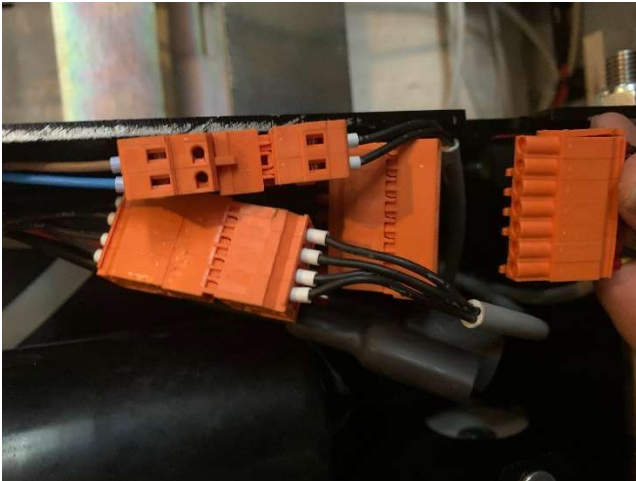


Fig. 10a

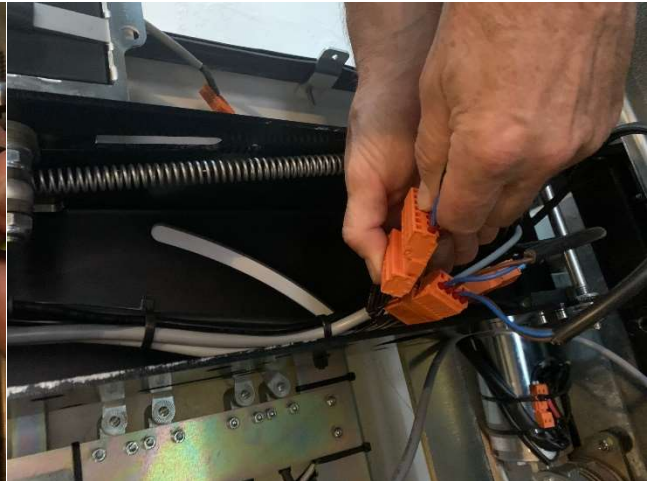


Fig. 10b

### 4.3 Connect the platform to the back frame

Mount the platform to the back frame using the two screws and nuts (M12x160/M12x180).

If necessary, adjust the lower position of the platform using the set screws.



Fig. 11

### 4.4 Connect the power

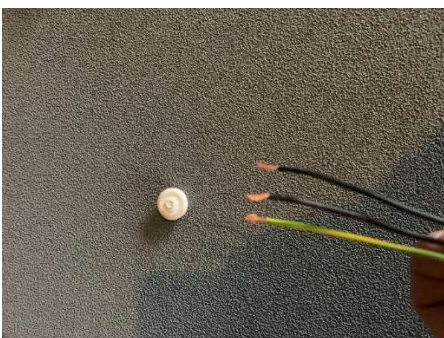


Fig. 12

The wires are connected to the safety cut-out as follows:

L1 is connected to terminal 2

N is connected to terminal 4

Earth is connected to the earth terminal

Plug the remote lead into the control board. Turn on power to start up the system.

Now install the control boxes

Adjust the limit switches, as shown in the photo:



Fig. 13

#### **4.5 Load cell adjustment**

Test the lift with max. load (Ex. 300 kg.) + 50kg. The load cell is adjusted from the factory, however if it is necessary to adjust it, it is done by turning the load cell sensor. This is installed at the upper cross bar on the platform, right next to where the wiring from the platform comes up.



Fig. 14



fig. 15

Adjust the barrier arm at both bottom and top position. Make sure the arm is adjusted, so it is vertical and parallel. The photo shows the bottom position.

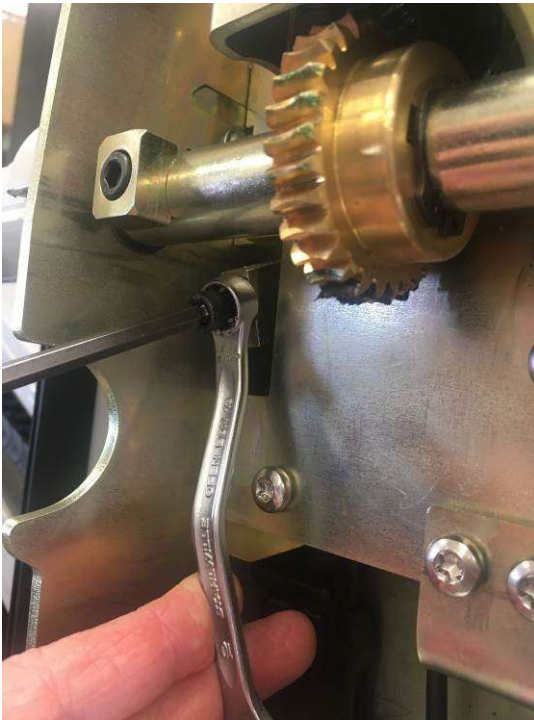


fig. 16

Adjust the barrier arm in horizontal position. Make sure the arm is adjusted, so it is both horizontal and parallel.

Put the cover back on and test the lift!

#### 4.6 Handicap symbol

In public places, you need to install the international Handicap Symbol (ISO 7000) with a minimum size of 50 mm next to each control box. See picture below:



## 5 Filling oil

It is important that you fill oil on the unit, however be careful not to overfill it. Remember to pump the sponge.



Fig. 17

## 6 Final touch

Install the front cover, if there is a gate, you need to install it before the front cover, see chapter 7:



Fig. 18

Example of an installation:



## 7 Install the gate

Important: you need to install the gate in the closed position and lift in the upper landing. The gate is always packed in the closed position from the factory. On the installation drawing you can see where to place it, please make sure it is in level.



Fig. 19

Mark up where to drill using the holes in the foot plate:



Fig. 20

The gate can be connected to the lift in two different ways:

Hole in the floor:

No hole – use slot in foot plate



Fig. 21a

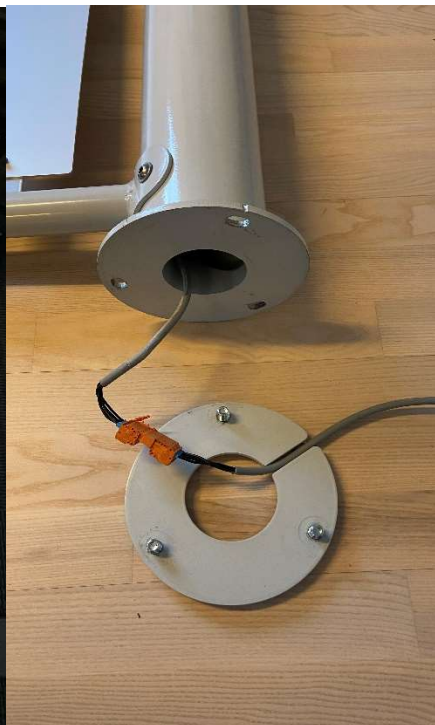


Fig. 21b

Connect the plug from the lift with the plug from the gate.

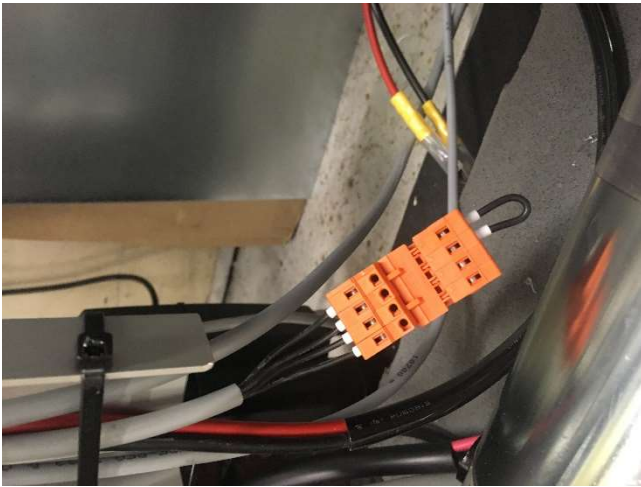


Fig. 22

Make sure the gate is flush with the edge of the floor and then glue and tighten the M10x90 glue bolts.



Fig. 23

Now you are ready to test the gate. Make sure it can open and close properly.

Please note that the gate is set to close automatically after 1 minute, however this can be altered to 2 or 3 minutes on Dip Switch 3, see electrical diagram (top view).

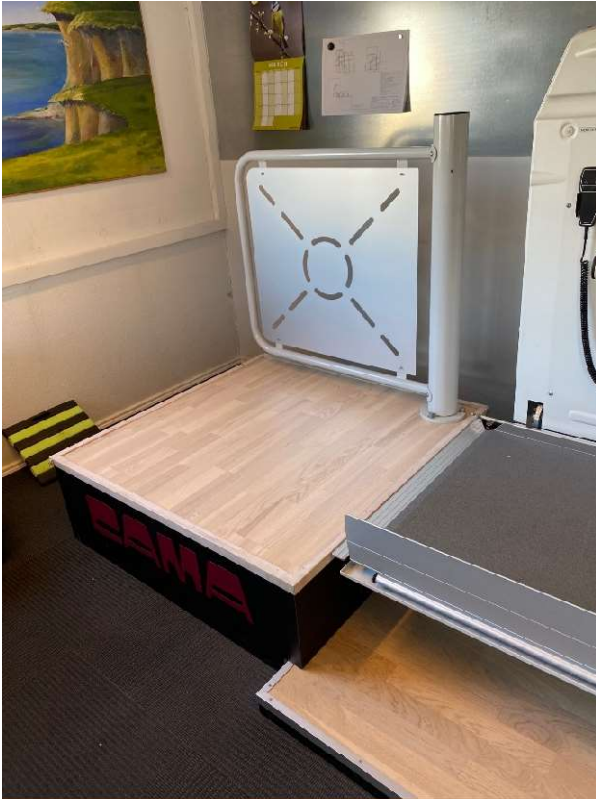


Fig. 24a

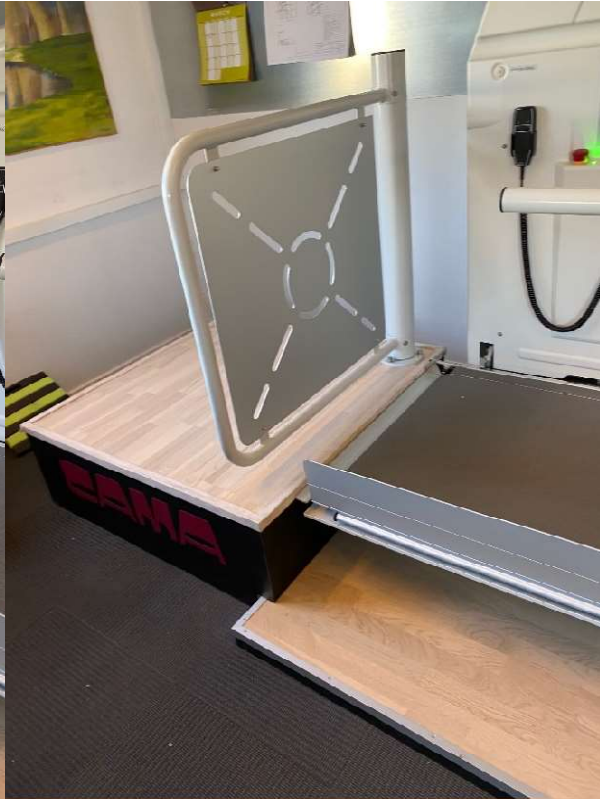


Fig. 24b

## 8 Installation test certificate

Description of installation

Location:

\_\_\_\_\_

Rated load: \_\_\_\_\_ kg      Handi-lift serial no: \_\_\_\_\_

Rated speed: \_\_\_\_\_ m/s      Type and year of  
manufacture: \_\_\_\_\_

Manufacturer: CAMA Lift ApS, Ellehammervej 6, DK 9900 Frederikshavn

Contract electrical supply:

\_\_\_\_\_ V      \_\_\_\_\_ Phase      \_\_\_\_\_ Hz

Mains supply fuse rating: \_\_\_\_\_ A

Verification test on each machine before first use

	✓
All control devices function correctly	
All barriers, ramps, locks, hinged platforms, guard-rails and similar devices operate correctly	
Stopping positions of Handi-Lift is within specified limits	
All electrical safety devices function correctly	
The suspension elements and their attachments are in order	

The correct clearance dimensions and from the surrounding structure are maintained throughout the full travel of the Handi-Lift	
The Handi-Lift shall be subjected to insulation tests	
Verify that the polarity of the mains supply connection is correct	
Test to verify the functional operation of the overspeed detection device and safety gear	
Verify that the mechanism for emergency/manual operates correctly	
The alarm device when activated operates correctly	
All notices, etc. are correctly displayed	
Undergo without failure a dynamic test to check the forces imposed by the maximum working load	
Undergo the testing of the overload detection device for wheelchair platforms only	

## 9 Declaration A

I/We certify that on \_\_\_\_/\_\_\_\_/\_\_\_\_ this Handi-Lift was installed to the latest installation instructions and thoroughly examined and found to be free from obvious defects and to comply with the requirements of and that the foregoing is a correct report of the examination.

Signed: \_\_\_\_\_ Qualifications: Authorised Installer

Address: \_\_\_\_\_ Date: \_\_\_\_\_

### **Certificate of acceptance by purchaser/user**

I/We being the purchaser/user of the Handi-Lift (serial no. \_\_\_\_\_) have received and fully understood, verbal and written instructions, in association with a demonstration, from \_\_\_\_\_ on its correct and safe use.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_