



# INSTALLATION MANUAL FOR HANDI-LIFT EA9

Original Version

---

## **Table of contents**

<b>1</b>	<b>Introduction.....</b>	<b>3</b>
1.1	<i>Check the part and drawing .....</i>	<i>3</i>
1.2	<i>Electrical installation .....</i>	<i>3</i>
<b>2</b>	<b>Forces on the building.....</b>	<b>4</b>
<b>3</b>	<b>Install the rails .....</b>	<b>5</b>
3.1	<i>Column installation .....</i>	<i>5</i>
3.2	<i>Upper and lower installation.....</i>	<i>5</i>
<b>4</b>	<b>Installing the lift unit.....</b>	<b>11</b>
4.1	<i>Place the lift unit on the rail .....</i>	<i>11</i>
4.2	<i>Connect the electrical.....</i>	<i>19</i>
4.2.1	<i>Load cell adjustment .....</i>	<i>20</i>
4.3	<i>Handicap symbol .....</i>	<i>20</i>
<b>5</b>	<b>Raise/lower unit .....</b>	<b>21</b>
<b>6</b>	<b>Installation Test Certificate .....</b>	<b>23</b>
<b>7</b>	<b>Appendix 1 – installation on brackets .....</b>	<b>25</b>

## 1 Introduction

### 1.1 Check the part and drawing

Before you start installing, please read this installation manual.

Check the received parts for transport damage.

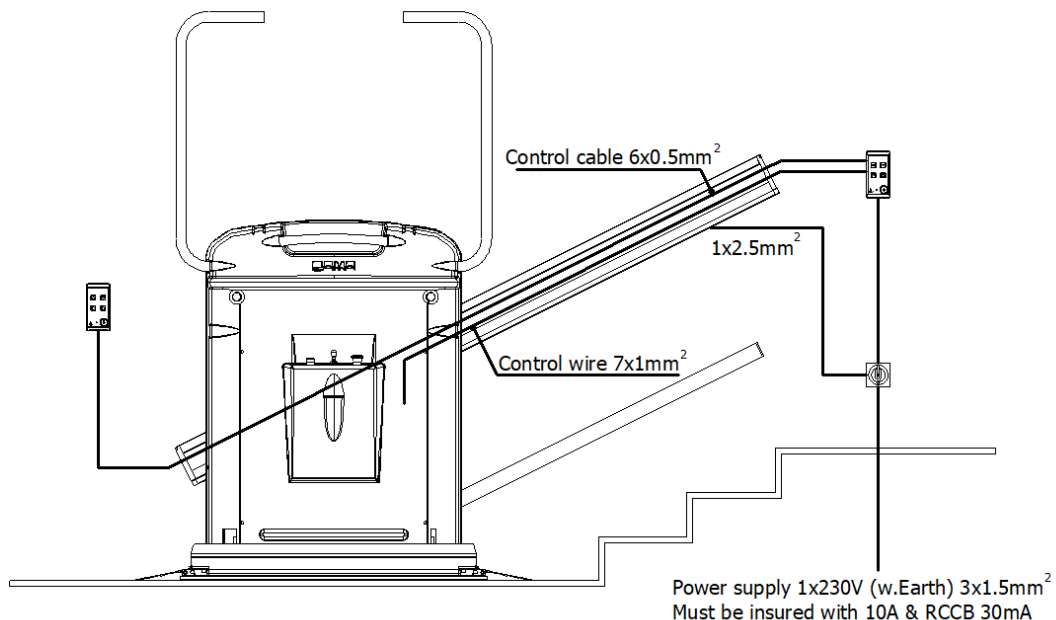
Next, study carefully the installation drawing that comes with the lift to ensure that all angles and dimensions are correct, and all dimensions are there.

### 1.2 Electrical installation

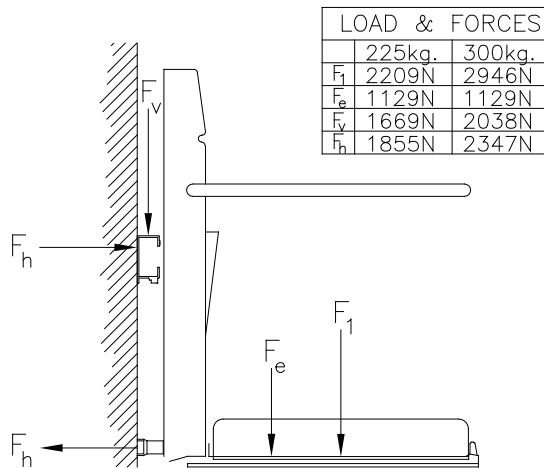
If the drawing does not show where to install the Control boxes, please sort out where they all go. And make sure that the electrical supply and electrical wiring for the Handi-Lift are there before installing the rail or columns.

You need 1x230V + earth protected by a 10 Amp fuse.

We recommend that you make a measurement of the earth connection.



## 2 Forces on the building



### Wall Mounted Rail

1. For 300 kg lifts the top (Main) rail fixings are M10x90mm (Class 4.6) coach screws + plugs, 2 pieces in each end, and the rest is glue bolts M10x90 (Class 8.8)  
If the lift is 225 kg all rail fixings are M10x90mm (Class 4.6) coach screws + plugs.
2. The Lower (Supporting) rail fixings are 6,0x60 Chipboard screw

There are 300mm between the fixing bolts in the rail.  
The bending strength in the rail will spread the force to 3 bolts and  $F_h$  is therefore worst case

### Stanchion Mounted Rail

1. Support stanchions must be fixed to concrete landing and treads, concrete strength assumed to be 30N/mm<sup>2</sup>
2. Fixings used are M10 glue bolts.
3. Pull out force is 3.3kn and push in force is 4.2kn

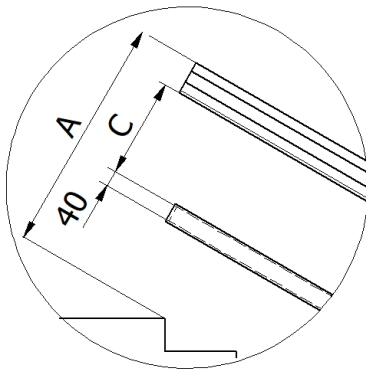
### 3 Install the rails

#### 3.1 Column installation

If the Handi-Lift is installed on columns, you need to start with them. Place the columns after the measurements on the drawing they are usually numbered with the lowest number at the foot of the stairs. When installing the columns be accurate that the columns are plum.

#### 3.2 Upper and lower installation

The rail system contains two types of rails: one for the lower rail and one for the upper rail. If the upper rail is divided start to assemble the rail by using the assembly fittings for rail. The lower rail does not need to be assembled before it is installed.



Mark measurement A from the first and last raise parallel with the staircase.  
(See fig 1 on next page).

**Note!**  
Some lifts have a different angel than the staircase.

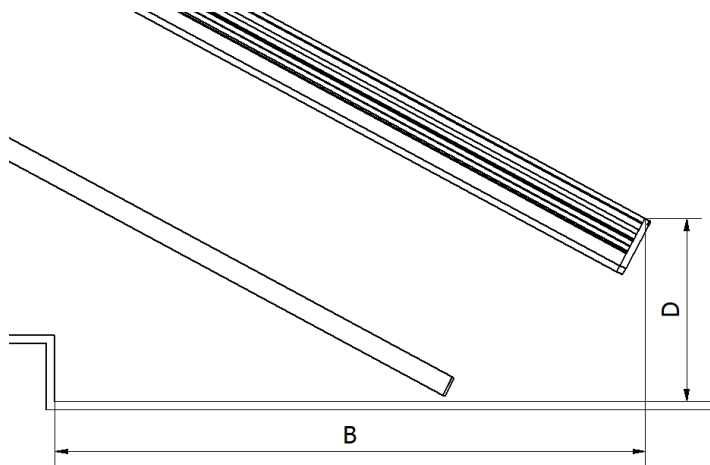




fig. 1

Note! Measurement C is the upper edge of the inner profile.

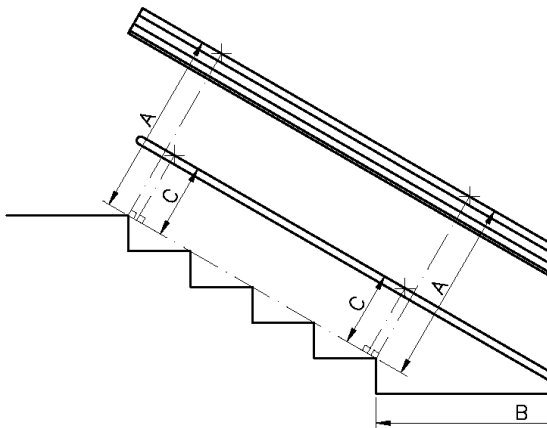
Make a line through mark A-A and D.  
And make a line through mark C-C.



fig. 1



fig. 2



Place the upper rail on the wall or columns and fasten it in each end, on a wall installation drill  $\text{Ø}12$  mm holes in the wall for glue bolts. Minimum 90mm into the wall.

On an installation on columns drill  $\text{Ø}8,5$ mm holes and make a M10 threads.

Be careful not to hit the rail.

Do the same with the support rail for the lower rail. Using a  $\text{Ø}8$ mm drill bit for  $\text{Ø}8$  raw plugs or alternatively use 6 mm thread. The support rail needs to be installed 25 mm above the floor.

Note! For wall installation we recommend that you use M10 glue bolts for the upper rail when mounted on a wall with the threaded rod minimum 90mm into the wall. And for the lower rail, we minimum recommend  $\text{Ø}8$  raw plugs with M6x60mm screws.

For installation on columns, we recommend that you fasten the rail with M10x25 8.8 bolts with a nut on the inside of the column or alternatively use a 8.5 drill for 10 mm thread.



fig. 3



fig. 4



Fasten the rail with 2 coach screws at top and bottom, while you drill and glue the rest, see fig 6.

Make sure that the holes are nice and clean.

Make sure that all measurements are correct.

fig. 5



Fill the holes with glue and insert the M10 threaded rod in the hole.

fig. 6



Cleaning tip: Put a box underneath the rail end

fig. 7





In order to protect the floor, it is an advantage to put cardboard underneath the rail.

fig. 10



First you will have to remove the screws and then you can remove the limit switch, so you are able to drive the lift on the rail at the bottom

fig. 11





Remove the aluminum cover from the support rail

fig. 12



Install and tighten the steel part of the support rail

fig. 13



Tape can be added to protect the rail when sliding it into the lift

fig. 14

## 4 Installing the lift unit

### 4.1 Place the lift unit on the rail

You are now ready to start installing the lift on the rail.



fig. 15



fig. 16



fig. 16

Open the platform manually (fig. 15) so you can install the temporary power (fig. 16).



Insert the Installers remote control

fig. 17



Close the platform again manually

fig. 18



Reinstall the aluminum cover on the support rail

fig. 19



Slide the rail into the lift

fig. 20

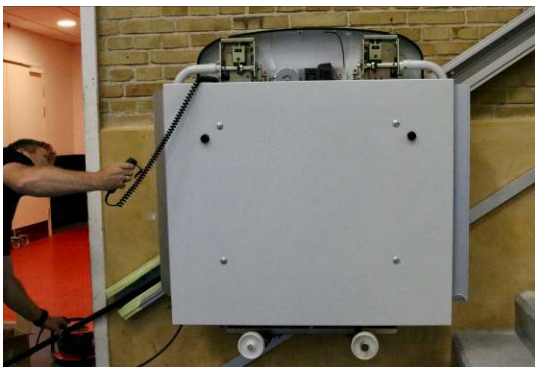


fig 20



Fasten the rail above the lift

fig. 21



Use installers remote to drive the lift up the rail, so you can fasten the lower part of the rail. Guide the chain into the rail

fig. 22



Now install the screws you took out earlier. Install the limit switch again

fig. 23



fig. 24



fig. 25

Install the cable cover so you can slide the 7x1 main cable into the rail all the way to the top and vice versa if the power is at the bottom.



fig. 26



fig. 27



fig. 27



fig. 27

Mark up where the holder for the energy chain needs to be installed. Install it.





fig. 28



fig. 28

Make sure the platform is in level at the top landing

Adjust the platform if not in level

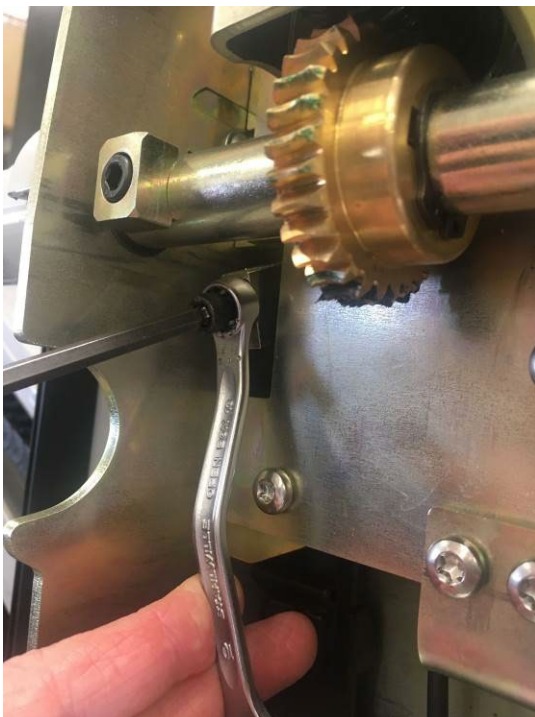


fig. 29



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

fig. 30



Adjust the barrier arms in horizontal position. Make sure both arms are adjusted, so they are both horizontal and parallel.

Put the cover back on and test the lift!

fig. 31

## 4.2 Connect the electrical

Now it is time to install the control boxes. Please note whether your lift comes with wired controls or battery controls.

### Battery controls:

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

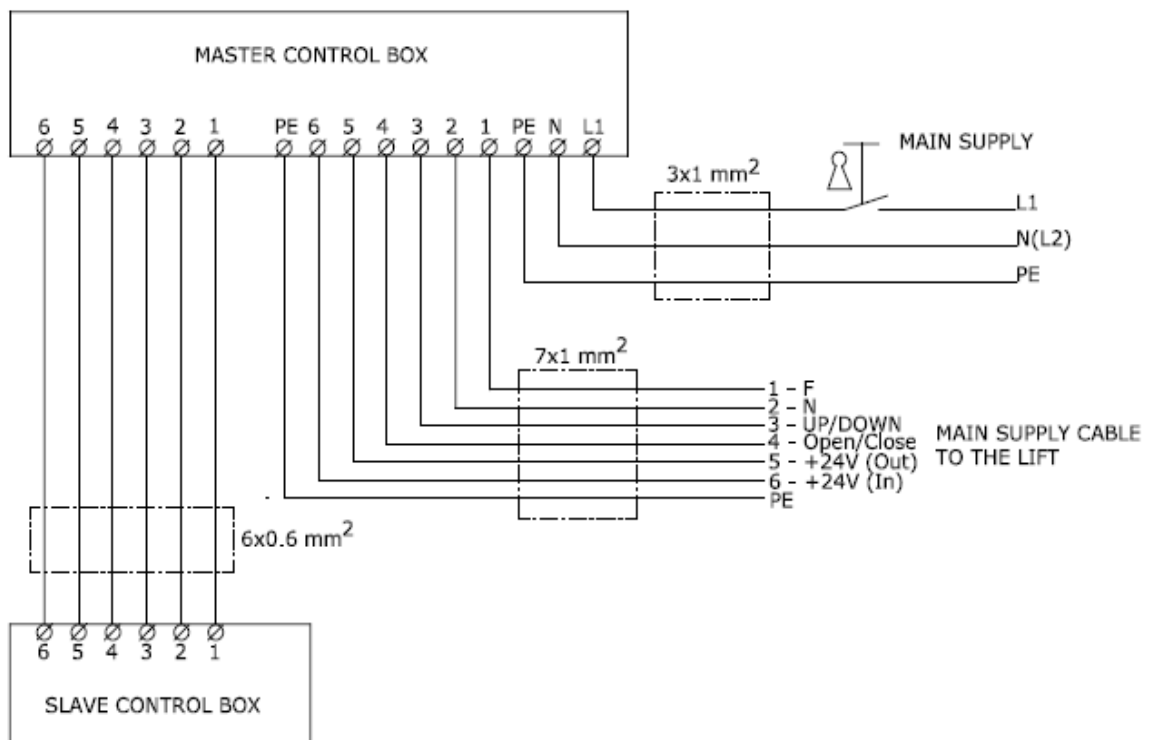
L1 is connected to terminal 2

N is connected to terminal 4

Earth is connected to the earth terminal

### Wired controls:

Connect the wires 1-6 + Earth to the master control box, see below wiring diagram:



#### 4.2.1 Load cell adjustment

Test the lift with maximum load (e.g. 225kg.) + 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.



#### 4.3 Handicap symbol

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





The completed installation

fig. 32

## 5 Raise/lower unit



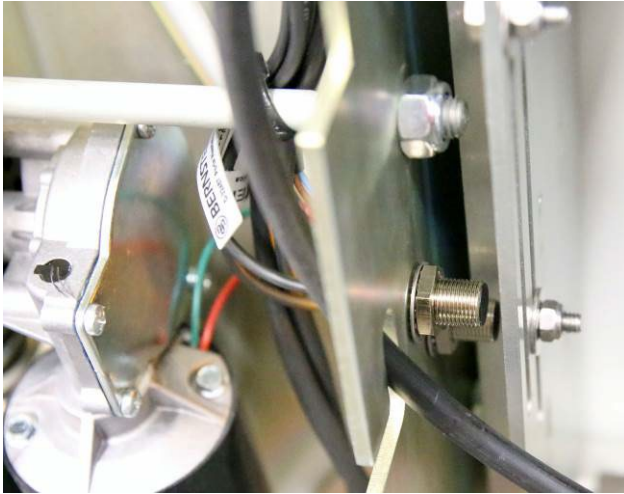
The raise/lower unit is adjusted from the factory, if adjustment is needed then you can do as follows:

The bolt is moved up/down as needed. Make sure there is 1½-2 mm space between the bolt and the inductive sensor.

Top bolt is the upper stop

Bottom bolt is the lower stop

fig. 33 - bottom



Adjust the raise/lower unit at the top as described for the bottom

fig. 34 - top

## 6 Installation Test Certificate

### **Description of installation**

Location:

\_\_\_\_\_

Rated load: \_\_\_\_\_ kg      Stairlift serial no: \_\_\_\_\_

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

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**



a. All control devices function correctly	
b. All barriers, ramps, locks, hinged platforms and similar devices operate correctly	
c. Stopping distance of the stairlift is within specified limits	
d. All electrical safety devices function correctly	
e. The suspension elements and their attachments are in order	
f. The correct clearance dimensions and from the surrounding structure are maintained throughout the full travel of the stairlift	
g. The stairlift shall be subjected to insulation tests	
h. Verify that the polarity of the mains supply connection is correct	
i. Test to verify the functional operation of the overspeed detection device and safety gear	

j. Verify that the mechanism for emergency/manual operates correctly	
k. The alarm device when activated operates correctly	
l. All notices, etc. are correctly displayed	
m. Undergo without failure a dynamic test to check the forces imposed by the maximum working load	
n. Undergo the testing of the overload detection device for wheelchair platforms only	

**Declaration A**

I/We certify that on \_\_\_\_/\_\_\_\_/\_\_\_\_ this stairlift 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 EN 81-40 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 stairlift (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: \_\_\_\_\_



## 7 Appendix 1 – installation on brackets

In cases where the wall is uneven or if there is an obstacle, you can use wall brackets to solve the problem. Below you will find a guide on how to install the wall brackets and the rail:



Mark up the holes for the bracket

fig. 35



Drill the holes

fig. 36



Clean the holes for dust and debris

fig. 37



Fill the holes with glue

fig. 38



Insert the bracket

fig. 39



Hang the rail on the brackets and fasten it temporarily  
Drill 5 mm holes through both rail and brackets

fig. 40



Take down the rail and drill 10,5 mm holes in the rail

fig. 41



Drill holes or thread in the brackets

fig. 42



Make sure the distance to the main rail is correct

fig. 43



Hang the support rail on the brackets

fig. 44