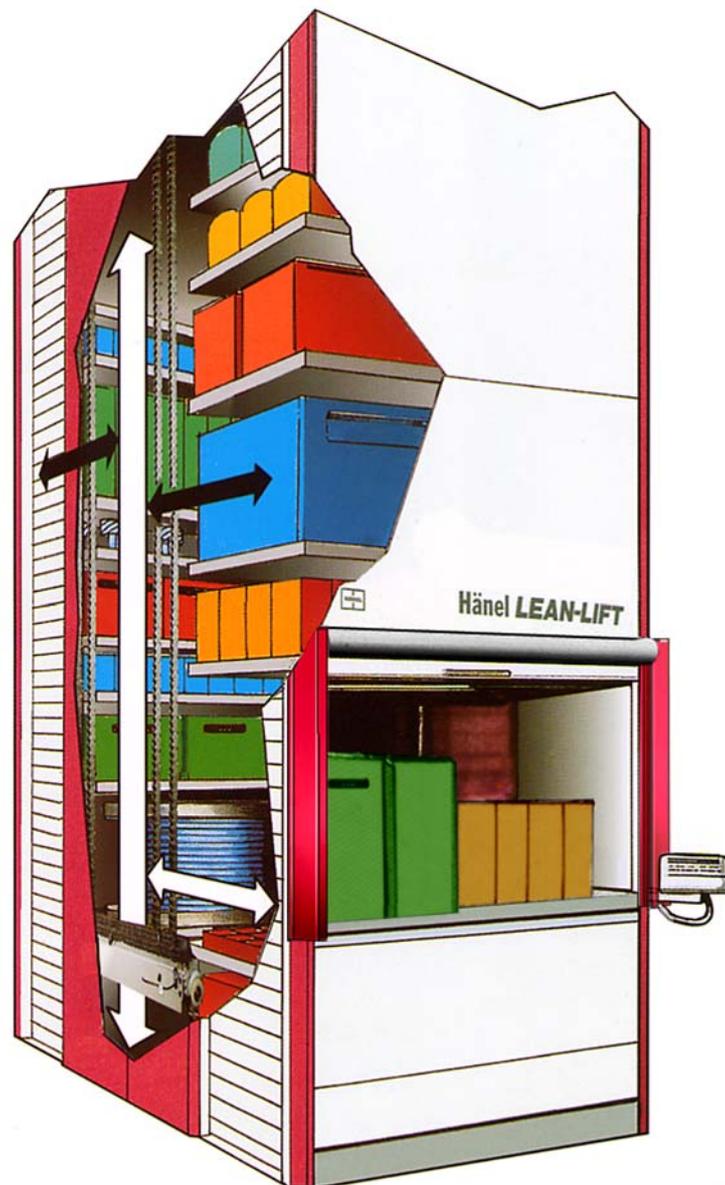




## Installation Instructions

### Hänel Lean-Lift

Installation with raised working platform





# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### Contents

**Note:**

A separate table of contents is provided at the beginning of each chapter containing multiple subchapters.

Chapter	Subject	Page
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1.	Basic information	7
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3.	Safety instructions	13
4.	Preparing for installation	19
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# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 0. Guide

##### Contents

This section contains basic information about this manual. Follow the instructions in order to prevent errors when installing the Hänel Lean-Lift. It is particularly important that you note the meaning of the symbols for the safety instructions and follow the corresponding instructions exactly. By doing so, you prevent possible accidents and the associated risk of injuries and property damage.

##### Target group of these Installation Instructions

These Installation Instructions are intended for trained technicians employed by the Hänel factory or by Hänel representatives.

##### Table of contents

In addition to the main table of contents, any chapter containing multiple subchapters has a separate table of contents located at its beginning.

##### Classification of the signal words and colours used

The signal words and colours used have the following meanings:

Signal word and colour	Meaning
(Warning sign)  <b>DANGER</b>	<b>High risk of danger</b> Safety alert symbol with the keyword "DANGER". High risk, warning of fatal injuries in the event that instructions/requirements are not observed. White text on red background. A specific symbol to explain the danger appears in the box to the left.
(Warning sign)  <b>WARNING</b>	<b>Moderate risk of danger</b> Safety alert symbol with the keyword "WARNING". Moderate risk, warning of possible severe to fatal injuries in the event that instructions/requirements are not observed. Black text on orange background. A specific symbol to explain the danger appears in the box to the left.
(Warning sign)  <b>CAUTION</b>	<b>Low risk of danger</b> Safety alert symbol with the keyword "CAUTION". Moderate risk, warning of possible minor to moderate injuries in the event that instructions/requirements are not observed. Black text on yellow background. A specific symbol to explain the danger appears in the box to the left.
(Mandatory instruction sign) <b>SAFETY INSTRUCTION</b>	<b>Safety instruction</b> Keyword "SAFETY INSTRUCTION". Instruction for safe work. White text on green background. A specific mandatory instruction symbol may appear which explains the specific safety measure.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 0. Guide (continued)

##### Symbols and signal words used

Symbol	Meaning
	<b>Danger!</b> Notes with this symbol and the keyword "Danger!" warn you of possible severe injuries of a general nature, possibly including fatal injuries.
	<b>Danger!</b> Notes with this symbol and the keyword "Danger!" warn you of a hazard caused by falling.
	<b>Danger!</b> Notes with this symbol and the keyword "Danger!" warn you of a hazard caused by suspended loads, particularly falling of the extractor.
	<b>Danger!</b> Notes with this symbol and the keyword "Danger!" warn you of a hazard caused by electrical current.
	<b>Danger!</b> This symbol informs you of the following: <ul style="list-style-type: none"><li>• Entering the lift via the access point.</li><li>• Sitting or standing inside the access point or underneath the extractor.</li><li>• Riding on the extractor.</li></ul>
	<b>Secure the main switch(es)!</b> This symbol informs you that, before beginning a task, you must switch off the main switch and secure it from being switched on again using a padlock.
	<b>Secure the actuator latch!</b> This symbol informs you that, before beginning a task, you must lock a padlock onto the actuator latch of the open service door to keep it from closing.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 0. Guide (continued)

##### Symbols and signal words used (continued)

Symbol	Meaning
	<b>Wear fall protection equipment!</b> This symbol informs you that, before beginning a task at great heights, you must put on fall protection equipment as personal safety equipment (PSE).
	<b>Wear a safety helmet!</b> This symbol informs you that when hazards from falling parts exist, you must wear a helmet as personal safety equipment.
	<b>Disposal</b> This symbol indicates that applicable national laws and regulations for the disposal of recyclable materials must be followed.
	<b>Information symbol</b> This symbol indicates particularly important information for installation intended to help you avoid making errors or causing damage; this information may include tips to help make the installation easier.  Signal words are "Important!", "Instruction", "Information" or "Tip"; of these, instructions given under the signal word "Important!" must be followed especially carefully.



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 1. Basic information

##### Contents

This chapter provides basic information about the Hänel Lean-Lift.

##### Manufacturer

Hänel Büro- und Lagersysteme

Postfach 11 61

74173 Bad Friedrichshall

Phone: +49 (0) 7136 27725

Fax: +49 (0) 7136 27741

Internet: [www.haenel.de](http://www.haenel.de)

##### Scope of validity of the Installation Instructions

These Installation Instructions are valid for lifts of the following series:

Type: Hänel Lean-Lift

Drives: 2

Number of access points: unlimited

These data must match the data that appear on the type plate. If they do not, these Installation Instructions do not belong to your lift. You will find the type plate at the access point.

##### Date of issue of the Installation Instructions

June 2008

##### Important notes before beginning work

Before the installation begins, the requirements of the pertinent "Installation Requirements for the Owner/Operator" document must be fulfilled. This must be verified; refer particularly to the instructions in Chapter 4, "Preparing for installation".

##### Keep in an accessible place as a complete document

- These Installation Instructions are a part of the lift and must be stored in an accessible location at all times, even after the installation work is completed.
- Pages may never be removed from these Installation Instructions. If the Installation Instructions or any of its pages are lost or missing, particularly the section entitled "Safety instructions", they must be replaced immediately.

##### Copyright

This documentation contains information that is protected by copyright. It may not, in whole or in part, be photocopied, duplicated, translated or stored to any electronic medium without prior consent.

All other rights reserved.

##### Change service

This documentation is not subject to the change service of the manufacturer. Changes to this documentation may be made without further notification.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 1. Basic information (continued)

##### A Supporting documents

The following individual documents are included in the documentation of the Hänel Lean-Lift:

Title of the manual or document	Target group of the manual/document
Hänel Lean-Lift Operating Manual	Supervisors and technicians
Hänel Lean-Lift User Guide	Supervisors and operating personnel
Hänel Lean-Lift Installation Requirements	Installation personnel employed by the owner/operator
Hänel Lean-Lift Installation Instructions	Specially trained and authorised technicians employed by the manufacturer or authorised representatives
User Guide for the Microprocessor Control System MP Lean-Lift	Supervisors and operating personnel
Technical Description of the Microprocessor Control System MP Lean-Lift and Multi-Space	Technicians
Operating Manual "Remote-controlled Lift Operation with MP"	Supervisors and operating personnel
Operating Manual "Remote-controlled Lift Operation with MP and Automatic Container Extractor"	Supervisors and operating personnel
<b>Additional documents</b>	<b>File name</b>
Installation Requirements (for Factory Installers)	INST-MEC
Safety Memorandum for Technical Field Staff	SICHA-_ 
Operating Manual for the Locking Device	MANL-LL-LOCK
List of the Most Frequent Installation Mistakes	MONTF-LL
Checklist for Safety Signs	SiSchi-LL
Safety Inspection Log	F-SICHB3._ 
<b>Documents in the Annex of the Installation Instructions (depending on the lift version)</b>	<b>File name</b>
Screw list	-
For units with antistatic earthing only: Instructions for Antistatic Earthing	ESTATIC1
Installation/Setting Instructions According to Overview List	LL_ALLEB

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 1. Basic information (continued)

##### B Informational notes

A number of structural components have tags or white notes attached that contain important information. It is absolutely essential that you read and follow these notes, as they help you to avoid common installation mistakes. Remove the notes before the installation.



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

## 2. Personnel requirements

### Contents

Overview of the qualifications required of the installation personnel.

### Installation personnel

The installation personnel must meet the following requirements:

- The installation personnel must have completed a qualifying examination, or comparable examination in the country of use, in the field of mechanical or electrical engineering.
- They must follow the installation instructions.
- They must have sufficient knowledge of the language of the country of use.
- They must be adequately suited to the tasks described here, and trained in the use and handling of the respective devices.
- They must be able to provide evidence of having received adequate training in all matters related to technical support of the lift and its safe handling, as well as regular annual follow-up training, from the manufacturer.



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 3. Safety instructions

##### Contents

This chapter provides important instructions intended to protect the installation personnel, the Lean-Lift itself, and (where applicable) third parties from injury or damage.

##### Important notes before beginning work

Before the installation begins, the requirements of the pertinent "Installation Requirements for the Owner/Operator" document must be fulfilled. This must be verified; refer particularly to the instructions in Chapter 4, "Preparing for installation".



**DANGER**

These safety instructions, and those in the "Safety" chapter of the Hänel Lean-Lift operating manual, must be observed and followed at all times to prevent hazards to your health.

Chapter	Subject	Page
3.1	Safety during installation	13
3.2	Safety of the installation area	14
3.3	Working inside the lift – general safety instructions	15
3.4	Working inside the lift – lifts in multi-unit networks	16

#### 3.1 Safety during installation

##### Selecting permitted fall protection equipment

For all work carried out at a fall height of 1 m (39.37 in) or more, the following fall protection equipment must be used:

- The safety harness must conform to EN 361. A safety belt in accordance with EN 358 is not suitable as fall arrest equipment!
- The safety harness must have a fastener in accordance with EN 354 / EN 566 including carabiner in accordance with EN 362.
- In addition, an attachment belt in accordance with EN 795 B can be used to secure the fall arrest equipment.

Outside Europe, the corresponding laws, standards and accident prevention regulations for fall protection apply.



##### SAFETY INSTRUCTION

##### Wear fall protection equipment

All lifts with a height > 4 m (157.5 in) have devices for drawing in a safety rope. The corresponding feed line is located to the right of the service door inside the lift.



**DANGER**

Substantial risk of injury

- The feed line is not suitable for use as a safety rope, nor it is permitted to be used for that purpose. Its sole purpose is for pulling in the safety rope.
- Only trained technicians from the Hänel factory and Hänel representatives may use the equipment.

# Installation Instructions

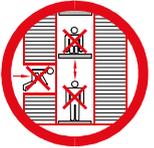
## Hänel Lean-Lift

### Installation with raised working platform

#### 3.2 Safety of the installation area

The installation area must be sufficiently cordoned off to prevent risk of accident and access by third parties.

Parts lifted using lifting gear must always be secured against falling down or falling over.



#### DANGER

Risk of fatal injury from being crushed or from falling objects

- Never climb into the lift through the access point.
- It is forbidden to ride on the extractor at any time.

#### SAFETY INSTRUCTION

##### Fire protection

In accordance with locally applicable building codes, necessary fire protection measures must be clarified with the respective regional fire protection authority.

##### Modification of the Lean-Lift

Modifications are permitted only after a specialised safety concept is created and approved by the Hänel factory. This applies both to modifications carried out by companies associated with Hänel and to those carried out by independent representatives or other companies.

Unauthorised modifications shall have the following consequences:

- All safety warranties and certifications shall be rendered null and void.
- Hänel shall no longer be deemed the manufacturer of the unit, and all warranty claims against Hänel shall be rendered null and void.
- In accordance with 98/37/EC, a new safety assessment process and safety concept for conformity assessment may have to be created in all parts.

This would then have to take place under the sole responsibility and at the sole risk of the company carrying out the modification, and without detailed knowledge of the manufacturer.



#### DANGER

Unauthorised modifications of the lift cause substantial risk of injury, including fatal injury.

- Any modification without the proper approval is prohibited.



#### CAUTION

Hazard from overload of the lift

The load of the containers and the lift is not monitored automatically. Overloaded containers can cause one-sided loads or overloads of the lift or falling of stored articles.

- After loading a container, check to make sure that the total weight of the stored articles does not exceed the permitted maximum.
- The owner/operator is responsible for monitoring the correct load.
- Refer to the type plate for the permitted load per container and for the entire lift.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 3.3 Working inside the lift – general safety instructions

##### Who is authorised to work inside the lift?

Only authorised personnel may carry out all this work. Authorised personnel are those who have proof of sufficient qualification and training for these tasks.

In particular, for safety reasons, work on the drives may only be carried out by trained and authorised personnel (such as Hänel after-sales service).

##### Accident prevention regulations

For all work, the legal accident prevention regulations applicable to the respective country of use always have overriding authority. Furthermore, the owner/operator may have additional special regulations that also have to be taken into consideration.

##### Required padlocks

You need at least two padlocks for all service and maintenance tasks. For multi-unit networks, you need a corresponding number of additional locks. For security reasons, use individual locks to which only you have the keys.

##### General safety measures for all work inside the lift

Various tasks in the inside of the lift are associated with a substantial risk of accident. This primarily involves the danger of falling for persons, stored articles or the extractor.

Therefore, the following steps are always required whenever you work inside the lift:

- Before beginning work, move the container out of the extractor.
- Wear personal safety equipment (PSE) as described under 3.1.
- Before the work begins, lower the extractor all the way to the ground if possible, as otherwise it can fall. Service work or repairs to the extractor, and work on the drives, may be carried out only after the extractor has been removed. If it is not possible to lower the extractor to the ground, secure it as described in Chapter 5.3.10 and Chapter 1.4 of the Hänel Lean-Lift Operating Manual.



##### SAFETY INSTRUCTION

##### Switch off the main switches!

Turn all main switches to the "0" position and secure them from being switched on again using a padlock.



##### SAFETY INSTRUCTION

##### Secure the actuator latch!

Lock a padlock onto the actuator latch of the safety switch so that it is impossible to close the door.

##### Note:

- Do not operate the lift if any structural components or their housings are open or damaged. If opening is necessary to replace electrical components (e.g. frequency converter U1 or evaluation unit B1 of the height detection system), you first have to switch off the main switch and observe the safety instructions.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 3.4 Working inside the lift – lifts in multi-unit networks

##### Contents

Workplace safety regulations to be observed for lifts in a multi-unit network.



#### **DANGER**

For lifts in multi-unit networks, hazardous voltage is still present at the following components even when the main switches are switched off:

- Main switches
- Terminal strip X1 and/or X2 in the electrical drawer (see circuit diagram)
- Safety switch of the service door
- Protective motor switch with undervoltage trip

- Therefore, before service and maintenance work, completely disconnect the lifts in the multi-unit network from the mains power connection before beginning work on these electrical components!



#### **SAFETY INSTRUCTION**

##### **Switch off the main switches!**

After the service door is opened, the main switches on the individual lifts switch off automatically.

If this malfunctions, it may be repaired by trained and authorised personnel (such as Hänel after-sales service) only.

Always follow any applicable national laws and regulations!

- Before entering the inside of the lift, check that all the main switches have switched off automatically and cannot be switched on again. All the lifts that persons are working on or are inside of must be secured against being switched on again using a padlock. All the other lifts must also be checked, and their main switches secured against being switched on again using a padlock. Alternatively, you can also disconnect these lifts from the mains power connection.



#### **SAFETY INSTRUCTION**

##### **Secure the actuator latch!**

When the service door is opened, all the lifts come to a halt.

- Secure the actuator of the safety switch with a padlock if you have opened the service door. In this way, none of the lifts can be put into operation.

For a multi-unit network with 2 service doors, you must secure each service door using a padlock.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 3.4 Working inside the lift – lifts in multi-unit networks (continued)

##### Service access door for all lifts

All lifts have a shared service access door. The service door on the outermost lift provides shared access to all the lifts. Optionally, a multi-unit network is also available with 2 service doors.

The individual lifts are interconnected via inside passages.

#### SAFETY INSTRUCTION

##### Securing the extractor

During work on an inside lift, every extractor under which you work or move must be either lowered all the way to ground level or secured against falling. When doing so, start with the extractor at the service door.

For information on how to secure the extractors, refer to 5.3.10 of this document or Chapter 1.4 of the Hänel Lean-Lift Operating Manual.

##### After completing the service work

Check each individual lift to ensure that the motor protection switches have switched off automatically.

If this malfunctions, it may be repaired by trained and authorised personnel (such as Hänel after-sales service) only.

Then, switch the protective motor switches of the individual lifts back on.

The main switches must be in the "0" position.

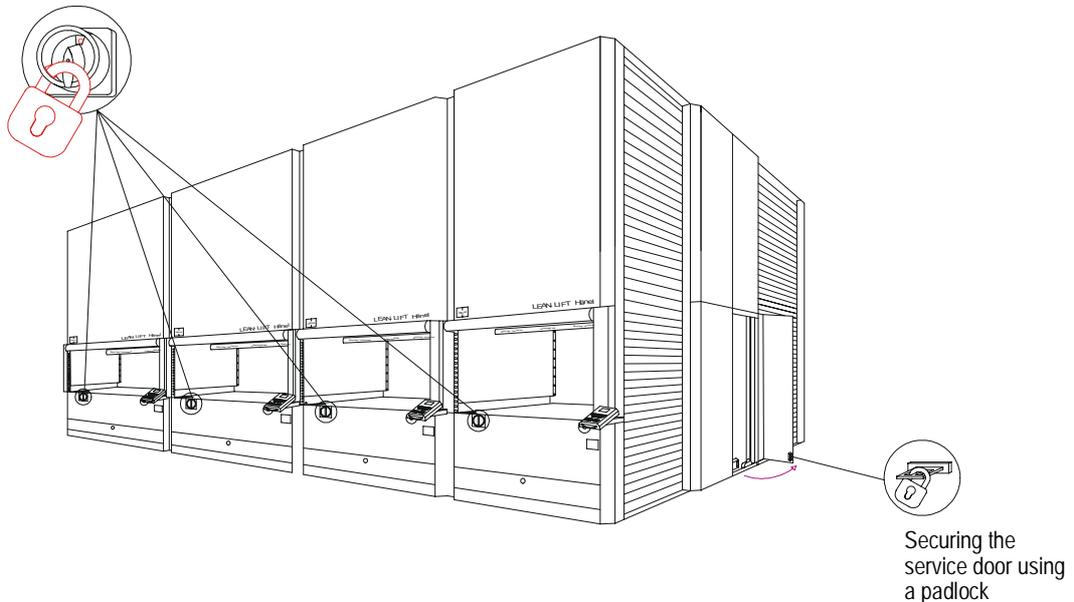


Fig. 1: Lifts in multi-unit networks



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 4. Preparing for installation

##### Contents

This chapter describes the process of preparing the installation location and verifying whether the owner/operator has properly carried out the necessary preparation tasks.

Chapter	Subject	Page
4.1	Checking the erection location	19
4.2	Safety	19
4.3	Completeness of the documentation	19

#### 4.1 Checking the erection location

##### Checking the substrate

Before beginning installation work, check the erection location. The substrate must be solid, flat, rigid and level. The unevenness of the floor may not exceed 20 mm (0.79 in) (in accordance with EN 18202, Table 3 "Level tolerances", Row 1, distance between measuring points 4 m (157.5 in). The support points must be supported by wide, immovable shims.



**DANGER**

Poor quality substrates cause a substantial risk of injury, including fatal injury.

Erection of the lift is not permitted under the following conditions:

- On floating or cast plaster floor (due to its insufficient load carrying capacity)
- On magnesium oxychloride cement (due to corrosion of the housing)
- If the level tolerances of the floor are exceeded.

##### Remedial work

If it becomes evident that the substrate does not meet the standards, the owner/operator shall be responsible for its remediation.

Likewise, if other deficiencies in the preparation tasks of the owner/operator are found (see Installation Requirements for the Owner/Operator), they must remedy the deficiencies before you may begin installation.



##### Important

Have the customer reconfirm the correct position and location of the lift.

#### 4.2 Safety

You must follow any applicable special regulations of your country during installation.

Before beginning work, the installer must obtain information from the customer or owner/operator about the special operating and safety instructions, as well as new or revised regulations.

#### 4.3 Completeness of the documentation

Ensure that all of the supporting documents (see Chapter 1) are present and complete, as you will need them for installation. In particular, observe these documents: "Installation Requirements for Factory Installers", "Installation Requirements for the Owner/Operator", "Operating Manual for the Locking Device" and the "List of the Most Frequent Installation Mistakes".



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5. Installation

##### Contents

This chapter describes the installation of the Lean-Lift. The following instructions must be followed exactly to ensure safe and correct installation.

Chapter	Subject	Page
5.1	Scope of delivery	21
5.2	Tools and auxiliary equipment	21
5.3	Carrying out installation	22
5.3.1	Installing the bottom frame	22
5.3.2	Removing the vertical shaft	23
5.3.3	Erecting the side parts	24
5.3.4	Installing the headpiece	29
5.3.5	Installing the vertical chains	31
5.3.6	Installing the equipment for drawing in a safety rope	32
5.3.7	Installing the rear panels and slotted mounting brackets for position sensors	34
5.3.8	Installing the cross brackets and side brackets	35
5.3.9	Installing the front panels and sliding door	37
5.3.10	Installing the access point	40
5.3.11	Installing the extractor	45
5.3.12	Installing the electrical system	49
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5.3.17	Starting up the lift	69
5.3.18	Checking the extractor holding position	70
5.3.19	Remeasuring the earth wire connection	71

#### 5.1 Scope of delivery

Observe the checklist for setup and the order confirmation of the lift. These documents provide information on the scope of delivery etc. For the screw list, refer to the documentation in the Annex of the Installation Instructions.

**Screw packages:** The screws used in the installation instructions are detailed in the "Screw list" and either already included in the individual parts or grouped into screw packages. To avoid confusion, the screw list and screw packages are specified in the Installation Instructions. This abbreviation is used:

SP = Screw package

#### 5.2 Tools and auxiliary equipment

Refer to the documents "Installation Requirements for the Owner/Operator" and the "Installation Requirements for Factory Installers".

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3 Carrying out installation

##### Have the requirements been verified?

Make sure to conduct a thorough review to verify that the installation requirements have been fulfilled (see Chapter 4) and follow the safety instructions.



**DANGER**

There is a risk of fatal injury if the installation requirements are not fulfilled.

- If safety during installation cannot be guaranteed, installation must stop and these

#### 5.3.1 Installing the bottom frame

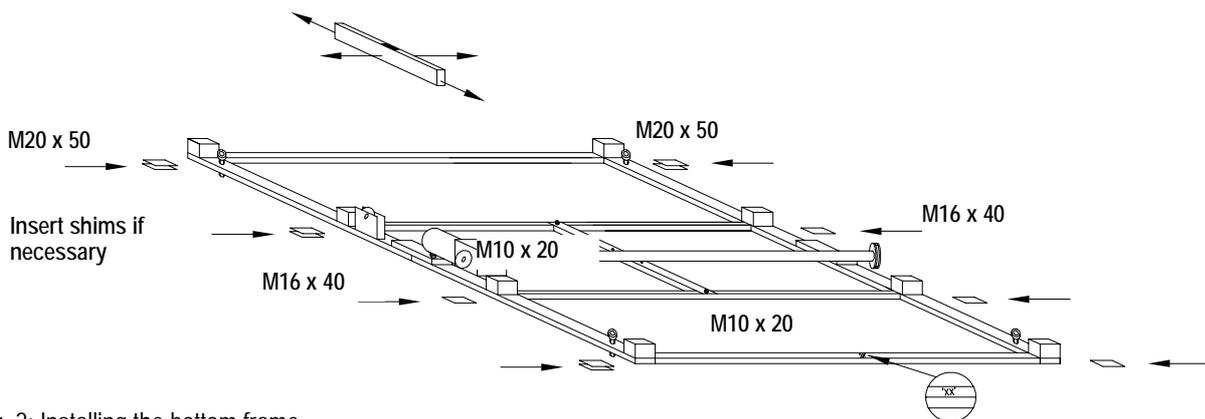


Fig. 2: Installing the bottom frame

Step	Task	Important note/illustration
1	Place the bottom frame exactly at the location where you will erect the lift. The unit number stamped into the front side of the lift ("xx", see Fig. 2) must be pointing in the direction of the access point.	<b>Important</b> Have the customer reconfirm the correct position and location of the lift.
2	Using a spirit level and the adjusting screws DIN 912/ISO 4762 M20 x 50, level the entire frame construction; in doing so, start at the highest point of the floor which is covered by the frame.	<b>Information</b> For larger lifts or as a special version, the bottom frame is in two pieces. In this case, you have to fit the two drive chains provided on the pulleys and screw them together using 2 socket head cap screws DIN 912/ISO 4762 M16 x 40 and spring washers. Anchor the longitudinal brace in the middle (see Fig. 2) using 2 socket head cap screws DIN 912/ISO 4762 M10 x 20 and washers DIN 125/ISO 7090 -10.
3	If necessary, the rectangular tubes must be shimmed using shims of a corresponding strength (see SP 5) as shown in Fig. 2 until they are immovable and all 8 rectangular tubes lie flat against the floor. Size of the shims: 70 mm x 100 mm (2.8 x 3.9 in). If necessary, stack multiple shims.	 <b>Important!</b> If shims are missing or incorrect, the side parts will settle after being loaded. This causes the extractor to tilt thus leading to positioning errors. Therefore, careful installation of the shims and levelling are fundamental to the entire construction and the proper function of the Lean-Lift.
4	Be certain to loosen the M20 x 50 adjusting screws after levelling.	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.2 Removing the vertical shaft

If the vertical shaft is factory-installed on the bottom frame, it must be removed.

- There is no installation space at the side of the lift for auxiliary equipment.
- Auxiliary equipment is not suitable for installation from the side.
- It is necessary to drive a raised working platform into the lift from the front.

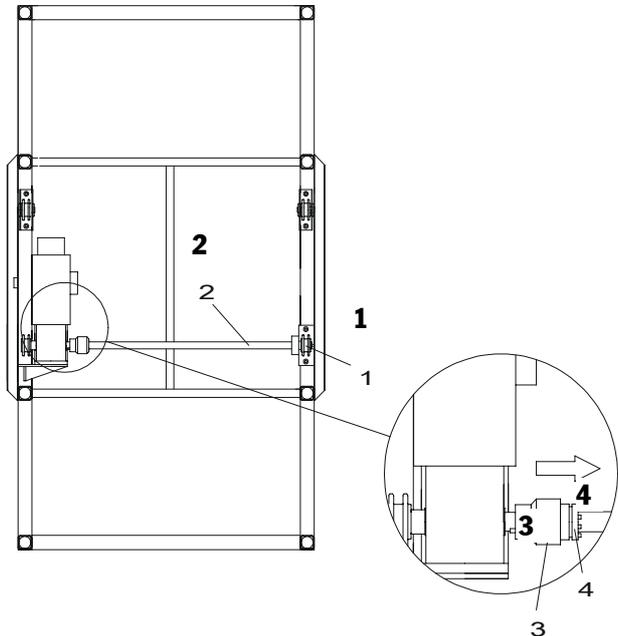
Step	Task	Important note/illustration
1	Unscrew and remove the 2 socket head cap screws DIN 912/ISO 4762 M16 x 30 and washers DIN 125/ISO 7090 -16 of the bearing block (1). Also remove the drive chain on this side.	
2	On the motor side, place a squared timber under the drive shaft (2) so that it does not fall over and fall down.	
3	Release all tensioning screws DIN 912/ISO 4762 M6 x 25 12.9 of the shaft clamping set (4) and screw the screws into the forcing thread of the shaft clamping set.	
4	Then, remove the screws from the forcing threads.	
5	Pull the shaft clamping set (4) onto the vertical shaft (2) and place the vertical shaft on the squared timber.	
6	You can now remove the vertical shaft (2) by pulling it upwards.	
7	The shaft must be reinstalled by following the reverse order of steps no later than the time at which the extractor is installed; see Chapter 5.3.10. Using a torque wrench, tighten the screws of the shaft clamping set in diagonally opposite sequence. The tightening torque of the tensioning screws is 17 Nm (12.5 ftlb).	

Fig. 3: Removing the vertical shaft

#### Note

Disassembling the shaft clamping set in case of repair:  
To release the shaft clamping set, secure the extractor using a mounting bracket or adequately dimensioned wooden beam (refer also to Chapter 5.3.11). Unscrew the screws and screw them into the forcing thread of the shaft clamping set until the shaft clamping set is released.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.3 Erecting the side parts

To make identifying the four side parts easier, each has stamped numbers at the bottom on the step side. Identification X.Y, where the first digit is the number of the respective side part (1 to 4) and the second digit is the respective rectangular tube on the side part (1 or 2).

Fig. 4 illustrates the system for identifying the side parts.



#### Tip

You can install the hook bracket for the safety rope and the mounting bracket with safety rope and mounted turnbuckle (see Chapter 5.3.6) before erecting the side parts.

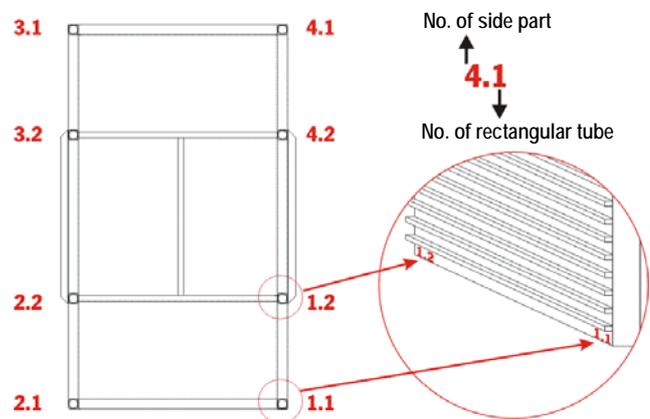


Fig. 4: Stamped numbers for side panel installation

If you use a cable to erect the side parts, follow the instructions for fastening, with one cable securing device on each side of the side parts. Cable securing devices are available from Hänel.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.3 Erecting the side parts (continued)



#### Note

For two-piece side parts, connect the two parts using the flat joint, the galvanised socket head cap screw DIN 912/ ISO 4762 M12 x 30 and washer DIN 125/ ISO 7090-12 (see SP 3). In doing so, note that the running surfaces of the extractor rollers must be flush at the joints.



#### Tip

Before erecting the side parts, screw in the screws for the rear and side parts by a few revolutions. To make screwing them in easier, you can use a distance gauge.

#### Securing the cable:

Step	Task	Important note/illustration
------	------	-----------------------------

- |   |   |  |
|---|---|--|
| 1 | Loop the cable (1) as shown around the side part at a height equal to $\frac{2}{3}$ the height of the side part and tighten the cable so that it cannot slide down. |  |
|---|---|--|

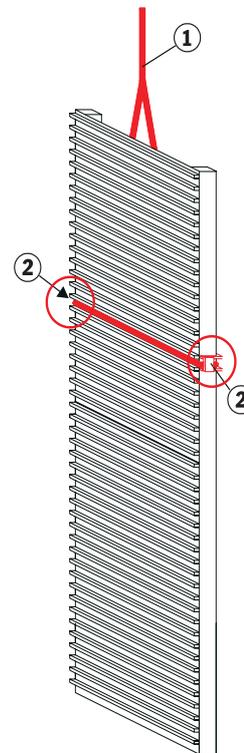


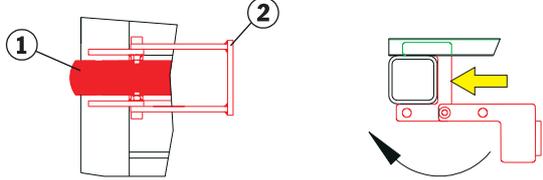
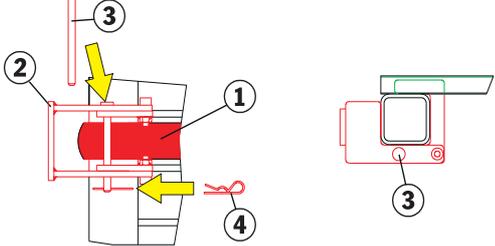
Fig. 5: Wrapping the cable around the side part

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.3 Erecting the side parts (continued)

Step	Task	Important note/illustration
2	Attach the cable securing device (2): slide the U-profiles on the backward-facing part of the side part into the steps above and below the cable (1) on the vertical rectangular tube (see Figs. 6 and 7).	
3	Securing the cable: insert the bolt (3) as shown and secure it using the spring cotter (4).	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.3 Erecting the side parts (continued)

When erecting the side parts, side supports may be needed to secure them from falling over, for example if enough helpers are not available to hold them. To do so, side part supports can be attached (available from Hänel).

The side part supports are fastened to the side parts using a cable securing device (see Chapter 5.3.3).

#### Attaching the side part supports

Step	Task	Important note/illustration
------	------	-----------------------------

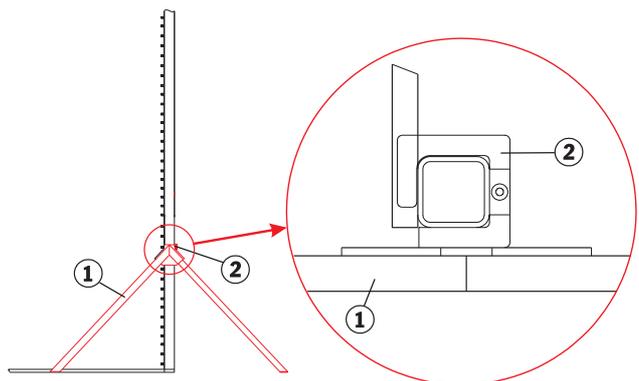
- |   |   |  |
|---|---|--|
| 1 | Attach the cable securing device (2) to the side part to be supported. Follow the same procedure described in the previous section under "Securing the cable" and follow the illustration on the right. |  |
| 2 | Secure the support by screwing the plug part onto the cable securing device.  |  |

Fig. 8: Side part supports



#### Diagram for installing the side parts

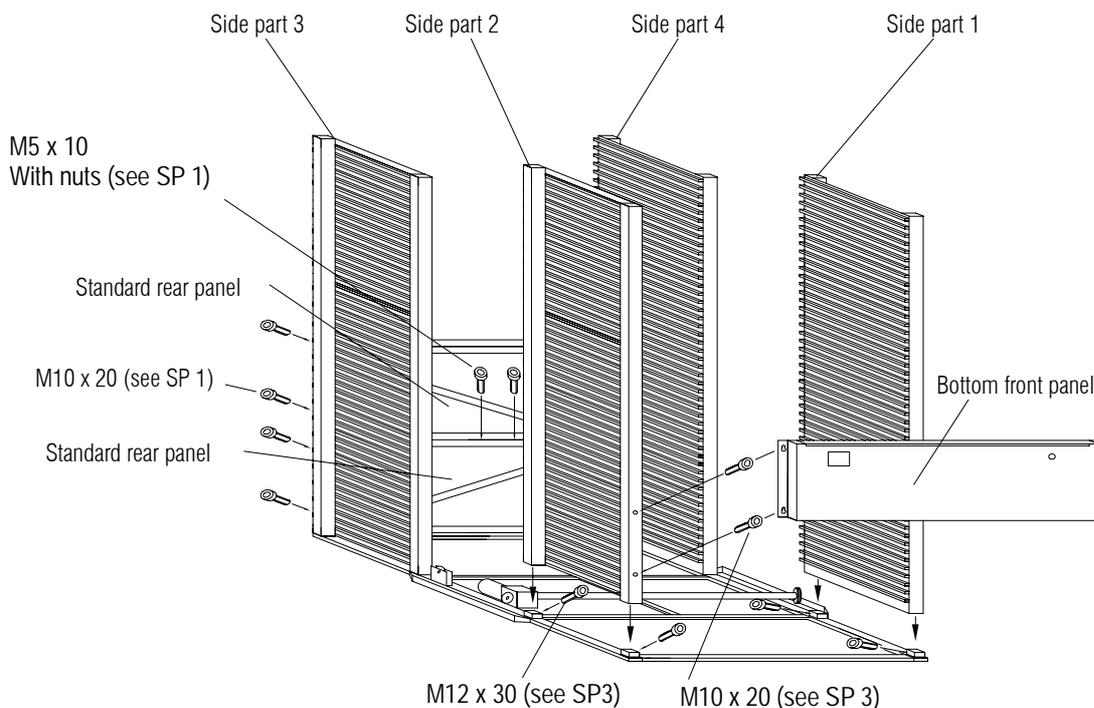


Fig. 9: Diagram for installing the side parts

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.3 Erecting the side parts (continued)

Step	Task	Important note/illustration
1	Erect the side part marked number 4 at the right rear, insert it into the plugs on the bottom frame and screw the rectangular tubes to the plugs at the bottom using 2 galvanised socket head cap screws DIN 912/ISO 4762 M12 x 30 - 8.8 (see SP 3).	 <b>DANGER</b> There is a substantial risk of injury, including fatal injury, from falling of the side parts. Secure the side parts from overturning (side part supports or helpers).
2	Install the side part marked number 3 on the frame at the left rear. Follow the same procedure as for side part 4.	<b>Tip</b> If they are available, install the bottom cross brackets immediately after erecting the opposite side part; this provides greater stability.
3	Inserting the rear panel sections: If not already carried out prior to erecting the parts: Turning them a few revolutions, screw 8 socket head cap screws DIN 912/ISO 4762 M10 x 20 (see SP 1) at the bottom rear into rectangular tubes 3.1 and 4.1 of side parts 3 and 4 (see the numbers or Fig. 4: "Stamped numbers"). Set the lowest standard rear panel on the side part, hook it into the screws and push it down all the way. Screw on the standard rear panel from the inside. Similarly, install the next standard rear panel above it.	 <b>Important</b> When installing the rear panels, ensure that the diagonal reinforcements of the individual rear panels are arranged in alternation.
4	Interconnect the two standard rear panels, making two connections using cross recessed pan head machine screws DIN 7985/ISO 7045 M5 x 10 and nuts DIN 934/ISO 4032 M5 (see SP 1); for lift widths > 2460, make three connections.	
5	Install side parts 1 and 2 on the front of the frame in the same way as for side parts 3 and 4 (see Fig. 9).	<b>SAFETY INSTRUCTION</b> Planned position of the access point: For tall units, a corresponding amount of additional rear panels or cross brackets with stiffening plates (see Section 5.3.8) must be installed.
6	Inserting the bottom front panel: If not already carried out prior to erecting the parts: Screw 4 socket head cap screws DIN 912/ISO 4762 M10 x 20 (see SP 3) into side parts 1 and 2 and hook the front panel into the screws. Then push the front panel all the way down and tighten the screws.	<b>SAFETY INSTRUCTION</b> For taller units, a correspondingly larger number of rear or front panels must be installed for stabilisation.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.4 Installing the headpiece

For lift depths 635 and 825, the headpiece is supplied in 5 pieces; for lift depths 1047 and 1270, the headpiece is delivered in 6 pieces. For older versions, the headpieces can be one-piece or two-piece. They are installed in the same logical manner as described below.



#### **DANGER**

There is a substantial risk of injury, including fatal injury, from falling of the headpiece.

- The headpiece must be secured from falling during transport (for example, using a safety catch or safety cables between the chain wheels and lifting gear).



#### **SAFETY INSTRUCTION**

#### **Wear a safety helmet!**

Headpiece (all variants):

A safety helmet must be worn for all transport and installation work!

#### Installing the five-piece or six-piece headpiece

Step	Task	Important note/illustration
1	Plug the side sections into the rectangular tubes of the side parts as shown in Fig. 10.	
2	Screw them into place using galvanised socket head cap screws DIN 912/ISO 4762 M12 x 30 - 8.8 (see SP 3).	

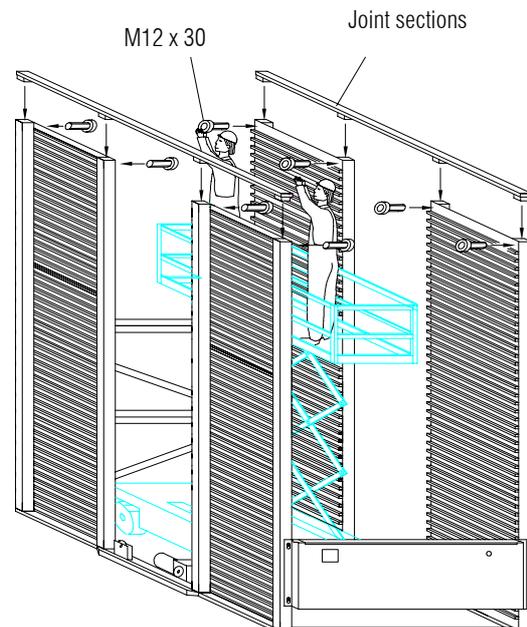


Fig. 10: Installing the headpiece: joint sections

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.4 Installing the headpiece (continued)

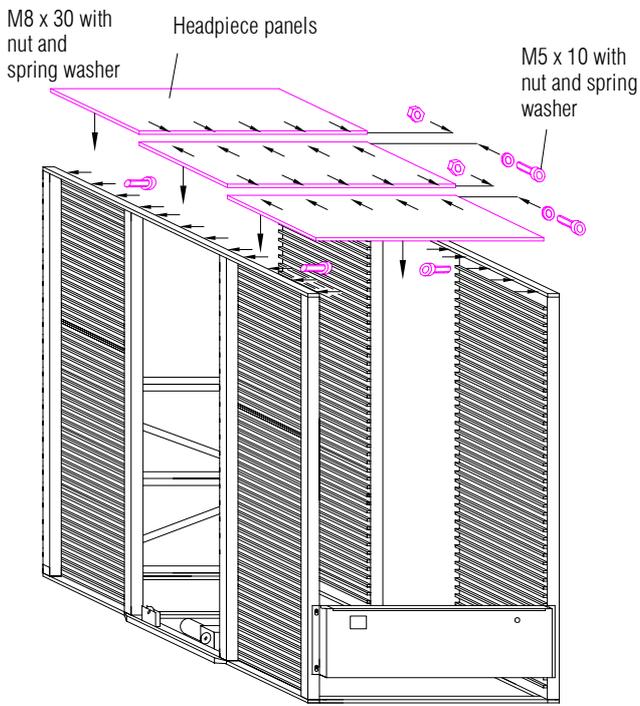
Step	Task	Important note/illustration
3	<p>Insert the three or four headpiece panels of the headpiece and screw them to the side sections using socket head cap screws DIN 912/ISO 4762 M8 x 30 and spring washers DIN 127 - A8 (see SP 6).</p> <p>Then, also screw the headpiece panels to each other using the cross recessed pan head machine screws DIN 7985/ISO 7045 M5 x 10, spring washers DIN 127-A5 and nuts DIN 934/ISO 4032 M5 (see SP 6).</p>	

Fig. 11: Example: Installing the five-piece headpiece

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.5 Installing the vertical chains

##### Installing the vertical chains

Step	Task	Important note/illustration
1	Pull all 4 vertical chains onto the top chain wheels, then wrap the open chain ends together at the bottom using a cable and secure them from slipping through.	

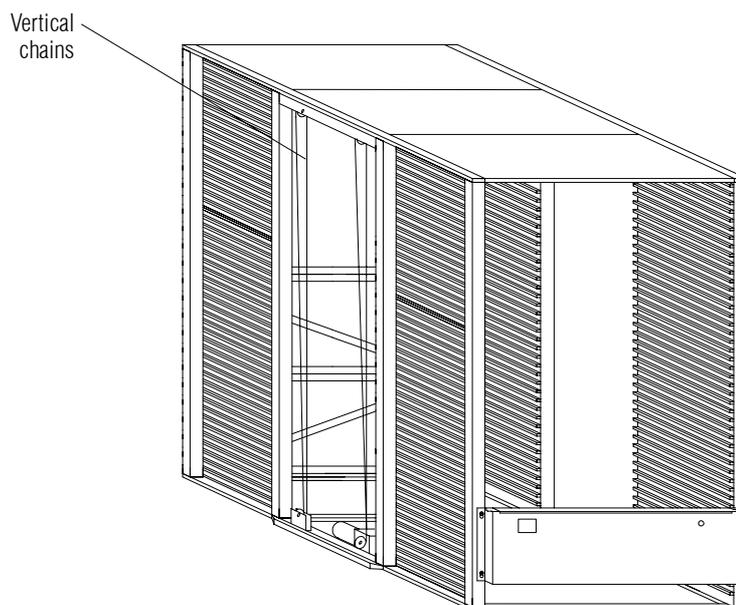


Fig. 12: Installing the vertical chains

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.6 Installing the equipment for drawing in a safety rope

This equipment makes it possible to draw in a safety rope (see LL-rope2.dwg).

The safety rope serves as fall protection equipment when working at great heights.

#### Installing the hook bracket for the safety rope and mounting bracket with safety rope and mounted turnbuckle

Step	Task	Important note/illustration
1	With the raised working platform, approach the lift on the service door side.	
2	Screw the hook bracket for the safety rope at the top onto the right rectangular tube (2.2 or 4.2). To do so, use two socket head cap screws DIN 912/ ISO 4762 M12 x 100 - 12.9 and hex nuts DIN 982/ ISO 7040 M 12 - 8. For more information, refer to the top enlarged section in Fig. 14.	 <b>Important!</b> When doing so, note that the location hole for the carabiner must be on the left, at the hook bracket for the safety rope.
3	Install the mounting bracket, with the safety rope and mounted turnbuckle, below the bottom side hook on the rectangular tube to which the hook bracket for the safety rope is located. To do so, use two socket head cap screws DIN 912/ ISO 4762 M8 x 16 - 8.8 (see SP 3).	

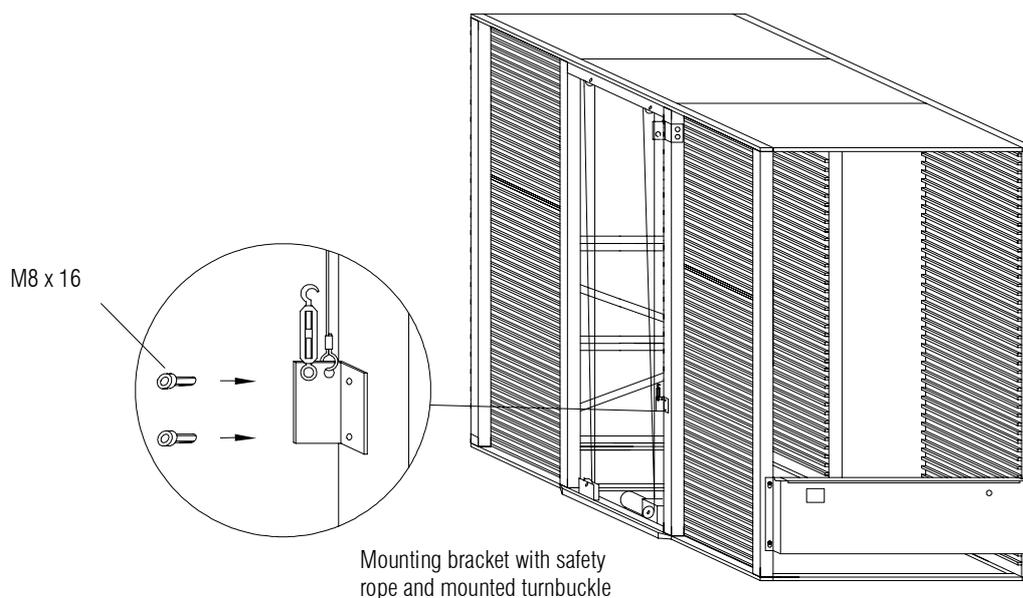


Fig. 13: Installing the hook bracket for the safety rope and mounting bracket with safety rope and mounted turnbuckle

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.6 Installing the equipment for drawing in a safety rope (continued)

##### Pulling in the steel cable

Step	Task	Important note/illustration
1	See Fig. 14: Pull the steel cable attached to the mounting bracket, along with the safety rope and mounted turnbuckle, upwards through the carabiner and then downwards again. Hook the free end of the steel cable into the hook of the turnbuckle and tighten the cable until finger-tight.	 <div style="background-color: red; color: white; padding: 5px; display: inline-block;"><b>! DANGER</b></div> <p>There is a substantial risk of injury, including fatal injury, if the steel wire is not installed correctly.</p> <ul style="list-style-type: none"><li>The steel cable must be routed inside of the side brackets.</li></ul> <p>Substantial damage to the extractor if steel cable is not taut</p> <ul style="list-style-type: none"><li>It is absolutely necessary for the steel cable to be taut to prevent it from colliding with the extractor.</li></ul>

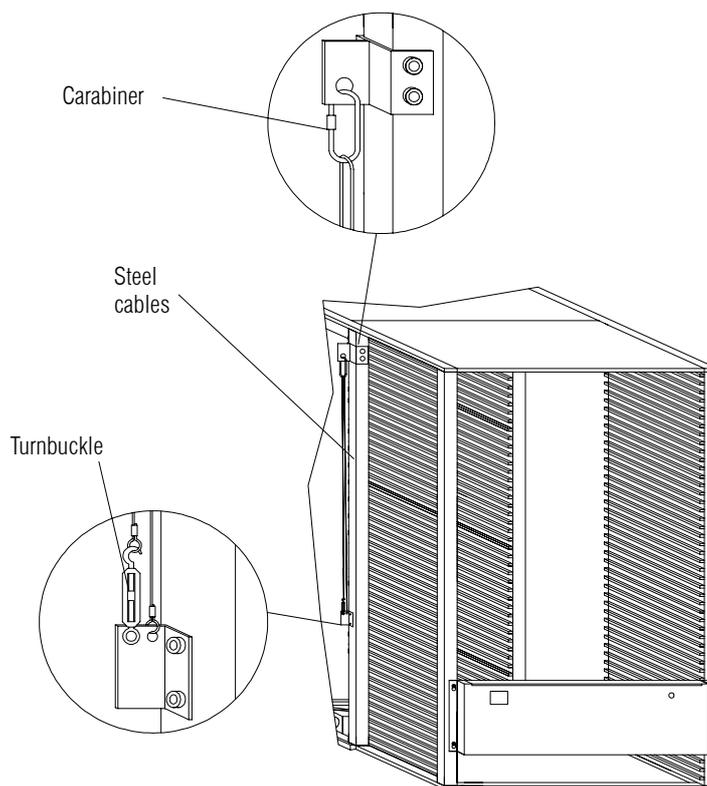


Fig. 14: Pulling in the steel cable

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.7 Installing the rear panels and slotted mounting brackets for position sensors

##### Installing the rear panels



##### Note

Special versions, e.g. for tight installation spaces:

- The front panels can have a design identical to rear panels. They are installed from the inside, as described for the rear panels.
- The rear panels can have cover strips, in a design identical to the front panels. They are installed from the outside, as described for the front panels and cover strips.

If two or more lifts are directly adjacent, additional panelling covers each joint at the front or rear.



##### Important!

For two-piece lift side parts and multiple adjacent lifts: at the front and rear of the lift, screw one additional connecting brace to each flat joint using the flat joint screws. Before installing the front panels, rear panels and the panelling of the joint above the flat joint, first install all other lifts so that the connecting brace between each pair of lifts can be screwed on later.

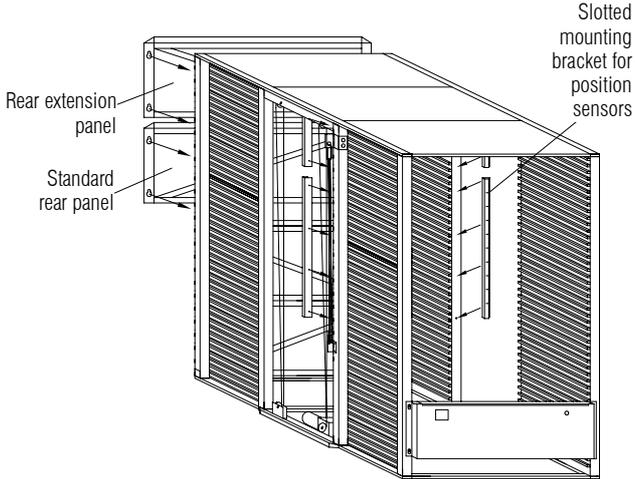
For adjacent lifts, the front and rear panelling sections must be installed along with the panels (as they are positioned between the rectangular tubes and panels); for more information, refer to Section 5.3.16.



##### Note

To make it possible to drive the raised working platform inside the lift, you can remove the bottom front panel for the duration of this work. Afterwards, you must reinstall it.

##### Installing the rear panels and slotted mounting brackets for position sensors

Step	Task	Important note/illustration
1	<p>According to Section 5.3.3, "Inserting the rear panel sections":</p> <p>If not already carried out prior to erecting the parts, screw the rest of the socket head cap screws DIN 912/ISO 4762 M10 x 20 - 8.8 (see SP 1) a few revolutions into the rear side of rectangular tubes 3.1 and 4.1 of side parts 3 and 4.</p> <p>Install the rest of the standard rear panel sections and the rear extension panel at the top as shown.</p> <p>Screw each pair of rear panel sections together using cross recessed pan head machine screws DIN 7985/ISO 7045 M5 x 10 and nuts DIN 934/ISO 4032 M5 (see SP 1).</p>	 <p>The diagram shows a cross-section of the lift's rear structure. It labels the 'Rear extension panel' at the top, the 'Standard rear panel' below it, and the 'Slotted mounting bracket for position sensors' on the right side. The diagram illustrates how these components are assembled onto the lift's frame.</p>
2	<p>Preparation: since the lowest slotted mounting bracket for position sensors is not yet installed at this point due to the installation of the extractor, you have to start by installing the second mounting bracket from the bottom (see Fig. 15). Determine the correct height of the second mounting bracket by marking the position of the lowest one.</p> <p>Mount the brackets for the position sensors on the rectangular tubes 2.2 and 4.2 to the pilot-drilled threads using countersunk screws DIN 965/ISO 7046 M 5x16-4.8 (see SP 1).</p>	<p>Fig. 15: Installing the rear panels/slotted mounting brackets for position sensors</p>

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.8 Installing the cross brackets and side brackets

##### Cross brackets

Depending on the height and maximum permitted load of the lift, cross brackets must be installed on the side parts for static strength. The maximum permitted load is specified on the type plate on the bottom front panel.

The number and distribution of the cross brackets is specified for each lift version in the installation instructions in the annex of the general installation instructions for the lift (see LL-Quer).

##### Installing the cross-brackets

Step	Task	Important note/illustration
1	Top and bottom cross brackets: screw them on between rectangular tubes 3.2 and 4.2, and between 1.2 and 2.2, using socket head cap screws DIN 912/ISO 4762 M12 x 50 - 8.8 and washers DIN 125/ISO 7090 -12 (see SP 1).	See Fig. 16
2	Centre cross brackets: insert the stiffening plates into the carrier behind the cross brackets. Fasten the centre cross brackets as in step 1. Screw the stiffening plate to the cross brackets using socket head cap screws DIN 912/ ISO 4762 M8 x 16 - 8.8 and washers DIN 125/ ISO 7090 -8 (see SP 1).	See Fig. 16
3	Check the bottom frame once again using a spirit level; level it if necessary (also refer to Chapter 5.3.3).	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.8 Installing the cross brackets and side brackets (continued)

##### Installing the side brackets

Step	Task	Important note/illustration
1	Using socket head cap screws DIN 912/ISO 4762 M8 x 16 - 8.8, screw the left and right side brackets to rectangular tubes 3.2 and 2.2 or 4.2 and 1.2.	 <b>DANGER</b> There is a substantial risk of injury, including fatal injury, if the steel wire is not installed correctly. <ul style="list-style-type: none"><li>The side brackets must be installed such that the steel cable runs inside them; see Chapter 5.3.6, Fig. 14.</li></ul>

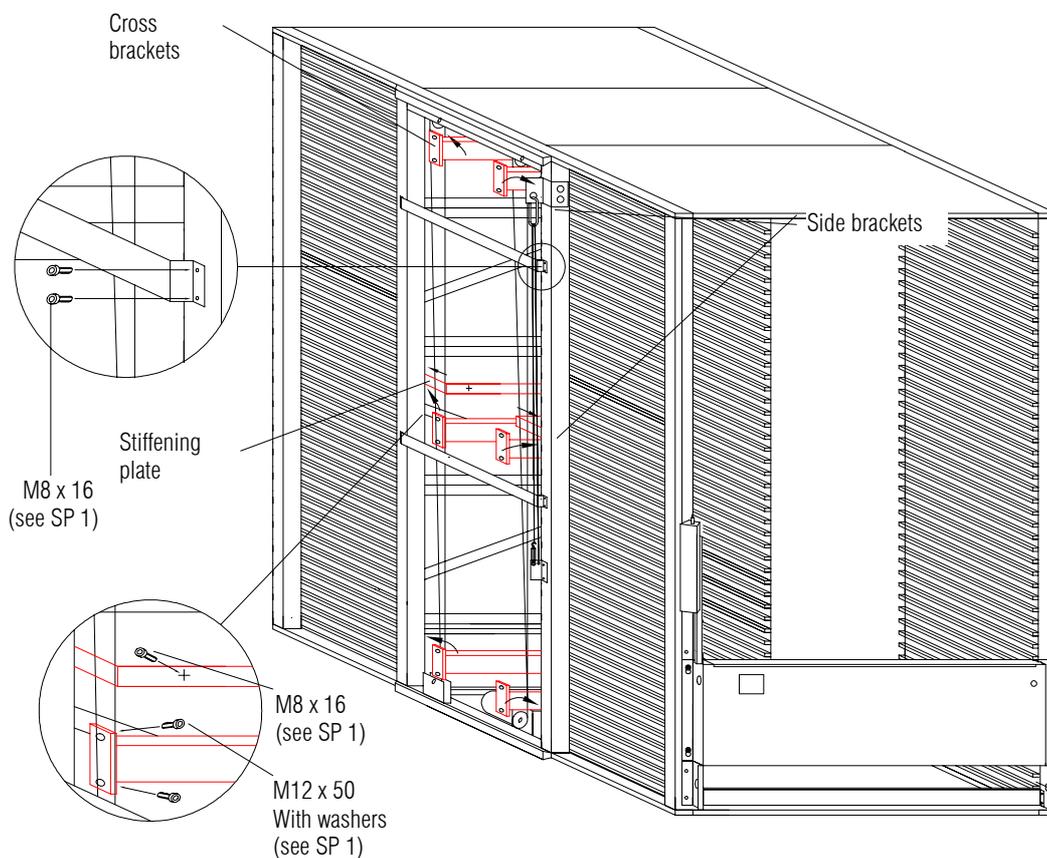


Fig. 16: Installing the cross brackets and side brackets

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.9 Installing the front panels and sliding door

##### Installing the bottom front panels and sliding door

If two or more lifts are directly adjacent, additional panelling covers each joint at the front or rear.

For adjacent lifts, the front and rear panelling sections must be installed along with the panels (as they are positioned between the rectangular tubes and panels); for more information, refer to Section 5.3.16.



#### Important!

When screwing on the bottom front panels of the adjacent lift, a 0.6 mm (0.024) washer must be used on the panelling side; also refer to the instructions in Section 5.3.16.

Step	Task	Important note/illustration
1	Install the base terminal strip below the bottom front panel using socket head cap screws DIN 7984 M6 x 16 - 8.8 (see SP 2). Fasten the base panelling to the base terminal strip using 4 sheet-metal screws DIN 7981/ISO 7049 St4.8 x 13 (see SP 2), note the instruction at the right.	 <b>Important!</b> <ul style="list-style-type: none"><li>The top and bottom edges of the base panelling must point towards the inside of the lift, and the cut-out for interfaces must be on the right side. Refer also to the installation instructions for "Interfaces for Peripheral Devices" PERIPHER.</li><li>Install the safety light curtain according to the "Installation Instructions for WERAC Safety Light Curtain Directly in Front of the Access Point (LVS)" LICHTSCB-WERAC.</li></ul>
2	Screw on the left sliding door guide above the bottom front panel using the bottom 3 socket head cap screws DIN 7984 M6 x 16 - 8.8 (see SP 2). Along with the sliding door guide, you also have to install the mounts of the safety light curtain.	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.9 Installing the front panels and sliding door (continued)

Step	Task	Important note/illustration
3	Insert the sliding door into the left sliding door guide and set it down on the front panel. Insert the right sliding door guide into the sliding door and screw it on using the bottom 3 socket head cap screws. Screw the sliding door panel to the sliding door guide and rectangular tubes using the DIN 7984 M6 x 16 - 8.8 screws (see SP 2).	 <b>Important!</b> <ul style="list-style-type: none"><li>For lifts with special access opening height or multiple access points, the arrangement of the sliding door panel, sliding door guide, bottom front panel below the access point, and the sliding door at each access point is identical to that of the standard access point.</li></ul>

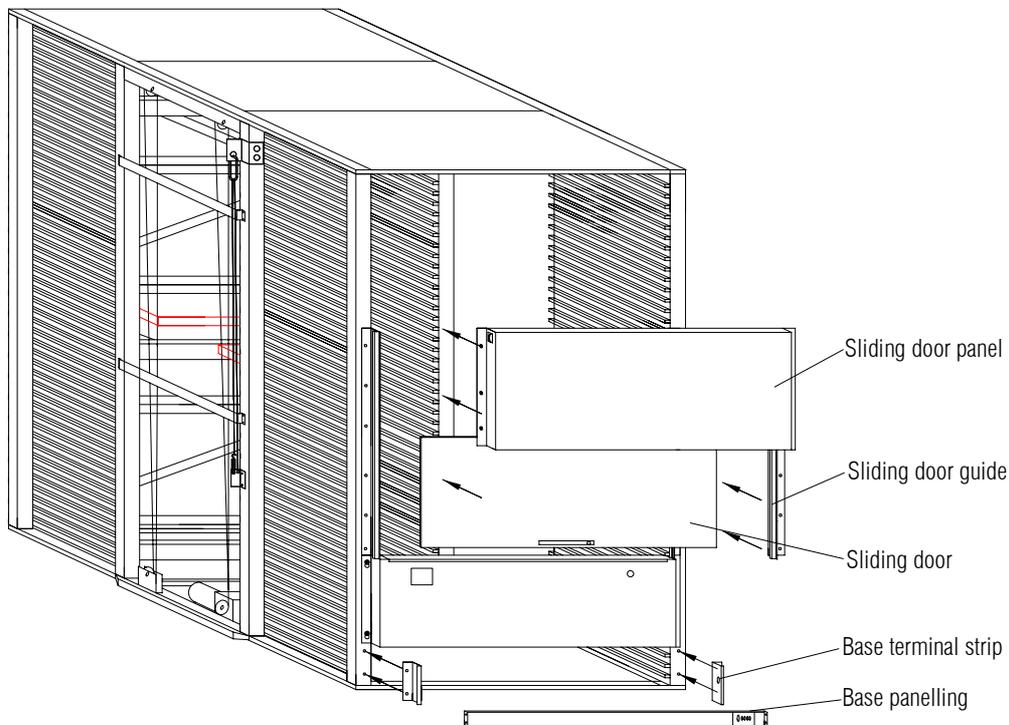


Fig. 17 Installing the front panels and sliding door

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.9 Installing the front panels and sliding door (continued)

##### Installing the sliding door cables, top front panels and limit stop of the container

Step	Task	Important note/illustration
1	Feed in the two door cables on the top of the sliding door all the way to the longitudinal nipple. Then, guide the cable ends to the outside through the left and right pulleys in the sliding door panel.	
2	Fasten them while checking the cable length: <ul style="list-style-type: none"> <li>Closed door: The fastener of the door counterweight is adjacent to the pulley.</li> <li>Open door (for version with safety light barriers only): The door counterweights must have a clearance of at least 15 mm (0.59 in) from the cables and housings of the safety light barriers.</li> </ul>	 <p><b>Important!</b> Wrap the sliding door cable directly around the screw at each clamp of the door counterweight. Secure the free cable ends using additional cable clamps (see Fig. 18).</p>
3	If not already carried out prior to erecting the parts, screw the socket head cap screws DIN 912/ISO 4762 M10 x 20 - 8.8 (see SP 1) a few revolutions at the front into the rectangular tubes of the side parts. Hook the standard front panels and the top front extension panel (see Fig. 19) into the screws on the side parts. Then push the panels all the way down and screw them in place. Then, screw the panels to each other and to the sliding door panel using two (for lift widths > 2460, three cross recessed pan head machine screws DIN 7985/ISO 7045 M5 x 10 and nuts DIN 934/ ISO 4032 M5 (see SP 1).	 <p><b>Note</b> For container widths &gt; 2460 or pallet containers or type 2460 with 1000 kg (2205 lbs) load capacity, an additional second limit stop must be installed on the other side.</p>
4	Install the limit stop of the container at the front left, above the container ejector slot on the front rectangular tube of the side part. To do so, use two socket head cap screws DIN 912/ISO 4762 M5 x 16 - 8.8 (see small parts box).	

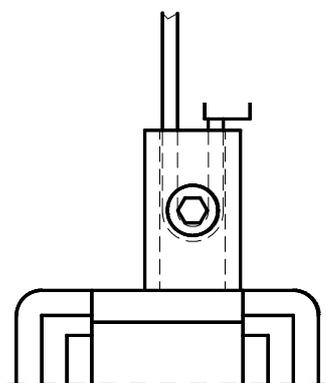


Fig. 18: Cable guide

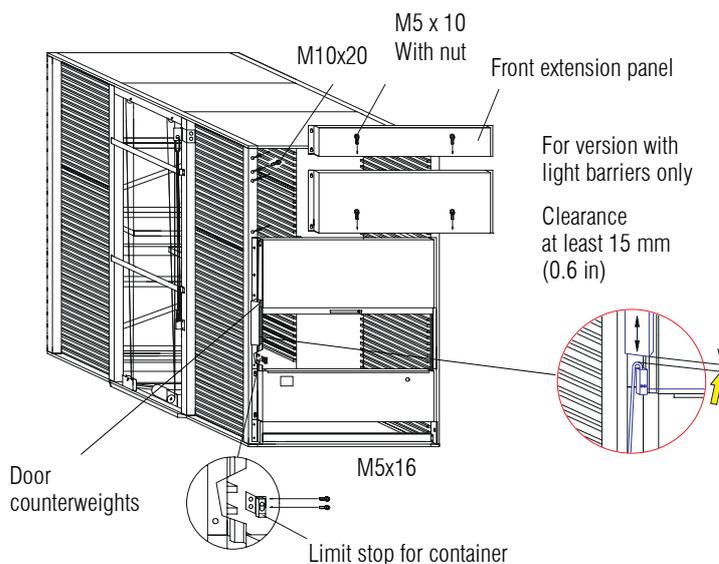


Fig. 19: Installing the sliding door cable, top front panels and container limit stop

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.10 Installing the access point

##### Installing the main switch and emergency stop button and routing the cables

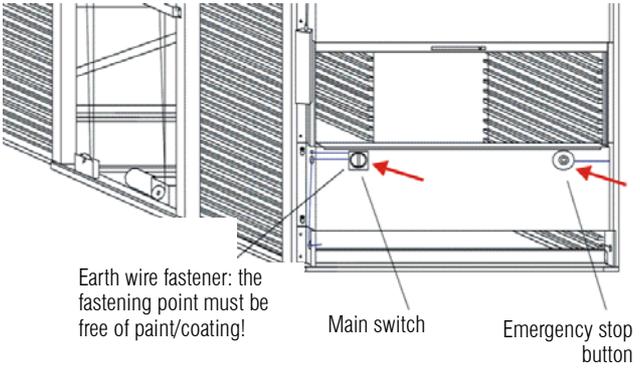
Step	Task	Important note/illustration
1	Install the main switch (Q 2) according to the installation instructions for "Siemens Main Switch in Bottom Front Panel" LL-MSW and the emergency stop button (S 4) in the bottom front panel.	 <b>Note</b> When there are multiple access points, only one main switch is installed, on the first access point (on the bottom front panel).  For lifts in multi-unit networks, the cable routing is shown in special cable routing diagrams.
2	Route the cable behind the bottom front panel below each access point, then guide it sideways out of the left or right cable bushing and downwards to the terminal strips at the base. There, guide it to the inside of the lift through the side cable bushings.	
3	Check that the fastening point of the protective earth cable of the main switch (on the bottom front panel, above the left cable bushing) is bare; remove paint/coating if necessary.	
	 <div style="background-color: red; color: white; padding: 5px; display: inline-block;"><b>⚠ DANGER</b></div> Risk of fatal injury from electric current! Paint/coating residue can impair the function of the earth wire or even defeat it completely. <ul style="list-style-type: none"> <li>• Thoroughly remove all paint/coating residue!</li> </ul>	
	Screw on the protective earth cable using a brass Philips head screw DIN 84/ISO 1207 M4 x 12, brass hex nut DIN 934/ISO 4032 - A4 and spring washer DIN 127 - A4 (see SP 5).	

Fig. 20: Installing the main switch and emergency stop button

 The V2A steel cover must be clamped onto the top of the bottom front panel below each access point.

##### Installing the safety light barriers/safety light curtain

Step	Task	Important note/illustration
1	<b>For version with safety light barriers:</b> Screw the safety light barriers (B 01 to B 06) onto the left and right side panels according to the "Installation Instructions for Safety Light Barriers for Lean-Lift", LICHTSC5.  Screw the bottom safety light barriers (B 07 and B 08) to the sliding door guide according to the "Installation Instructions for Safety Light Barriers for Lean-Lift", LICHTSC5.	<b>For version with safety light curtain:</b> Install the safety light curtain according to the "Installation Instructions for WERAC Safety Light Curtain Directly in Front of the Access Point" LICHTSCB-WERAC.
2	Screw the receiver array of the rear height detection light barrier to the supporting tube (old: side panel) on the right and the transmitter array at the rear (old: side panel) on the left using socket head cap screws DIN 912/ ISO 4762 M8x16 (old: DIN 965/ISO 7046 M 4 x 8) (see SP 2) to the existing drill holes.	<div style="background-color: green; color: white; padding: 10px; text-align: center;"><b>SAFETY INSTRUCTION</b></div> Attach the safety light barriers / safety light curtain to the side panels and the front vertical rectangular tubes in a straight position, without any incline. Only then is the correct function guaranteed, without the need for time-consuming readjustment.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.10 Installing the access point (continued)

##### Installing the access point panelling

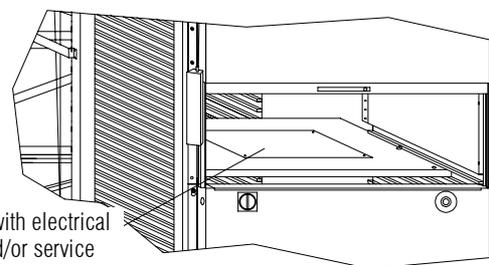


##### Note

Covers with attached electrical tray and/or service opening are used in the following cases:

- For lifts with multiple access points (beginning at the second access point)
- If the access point is located at a special height, but the wiring cabinet is at the standard height
- For access points with high-speed door
- For access point with weighing device

See cable routing diagrams CABLELLx.



Cover with electrical tray and/or service opening

Fig. 21: Special access point: electrical tray and/or service opening

Step	Task	Important note/illustration
------	------	-----------------------------

- |   |  |  |
|---|--|--|
| 1 | Insert the top access point cover into the top carrier from the outside (standard height 1713.5 mm / 67.5 in). Fasten the side panel on the left to the step above the access point level. Screw the side panel into place using 4 countersunk sheet-metal screws DIN 7982/ISO 7050 2.9 x 13 (see SP 2). In the same way, fasten the right side panel to the step on the right. Screw the top access point cover to the side panels using sheet-metal screws DIN 7981/ISO 7049 3.9 x 9.5 (see SP 2). |  |
|---|--|--|

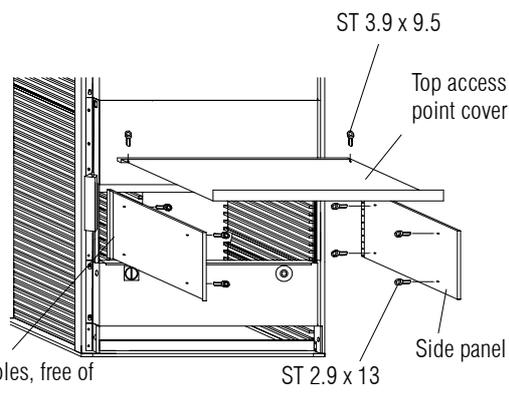


Fig. 22: Installing the side panels: top access point cover and side panels

- |   |   |  |
|---|---|--|
| 2 | From the inside of the lift, insert the access point cover into the carrier so that it is flush with the front panel below the access point. Screw on the cover to both the left and right steps using cross recessed pan head tapping screws DIN 7981/ISO 7049 St 4.8 x 13 (see SP 2). |  |
|---|---|--|

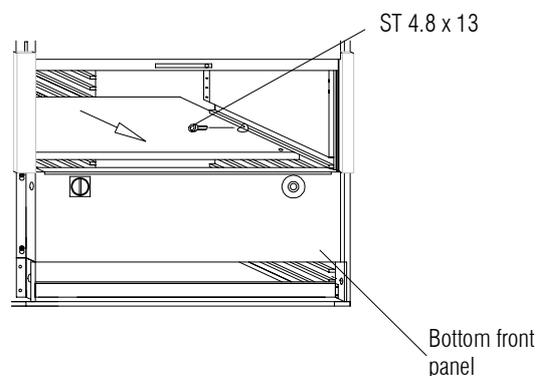


Fig. 23: Installing the sides: access point cover

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.10 Installing the access point (continued)

##### Routing the cables of the safety light barriers / safety light curtain / height detection



#### Important!

Incorrectly routed cables can cause faulty switching.

- Follow the information in the supporting documents.  
(See document height detection HEIGHT 100, safety light curtain LICHTSCB-WERAC, safety light barrier LICHTSC5)

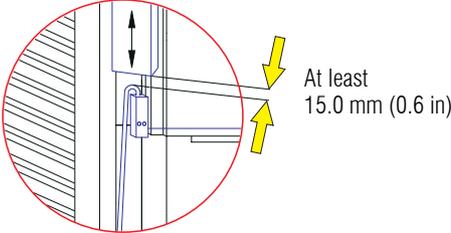
Step	Task	Important note/illustration
1	Route the safety light barrier cables / safety light curtain through the cable guide to the front panel below the access point. From there, route the cable down to the cable bushings of the base mounting bracket. Now route it to the inside of the lift through the cable bushing (see View Y-Y, Fig. 25).	<b>Note</b> For special access opening heights: route the cable through the cable bushing in the front panel below the access point to the electrical tray at the cover of the access point (see cable routing diagram CABLELL2).
2	For version with safety light barriers: After completing installation of safety light barrier cables: Check that the length of the sliding door cable is correct by closing and opening the sliding door:  The clearance between the door counterweights and the bottom safety light barrier cables and housings must be at least 15 mm (0.60 in) so that they do not touch, even if the cable stretches.	 At least 15.0 mm (0.6 in)
3	As shown in View X-X (see Fig. 25), screw on the cable duct for the cables of the height detection light barriers to rectangular tube 1.2 using 4 countersunk screws DIN 965/ISO 7046 M5 x 16 (see SP 2). Route the cables of the transmitter array through the top access point cover to the receiver array, and route both cables through the cable duct (see View X-X) on rectangular tube 1.2 all the way down to the bottom frame.	<b>Note</b> For special access opening heights, the cables are routed through a short cable duct, through the cable bushing of the access point plate to the front panel, then to the electrical tray at the cover of the access point (see cable routing diagram CABLELL2 and View X-X in Fig. 25).

Fig. 24: Clearance of the door counterweights

# Installation Instructions

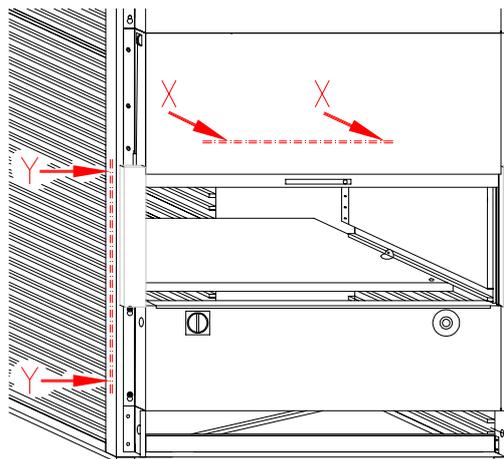
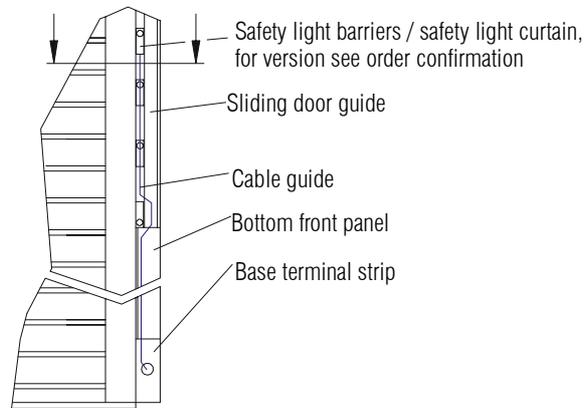
## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.10 Installing the access point (continued)

#### Routing the cables of the safety light barriers / safety light curtain (continued)

Y - Y



X - X

Top access point cover

Transmitter light barrier for height detection

Cables

Receiver light barrier for height detection

Special access point: cable duct 15 x 15 x 800 mm  
(0.6 x 0.6 x 5.9 in)

Standard access point: cable duct 15 x 15 x 1700 mm  
(0.6 x 0.6 x 39.4 in)

Bottom access point cover

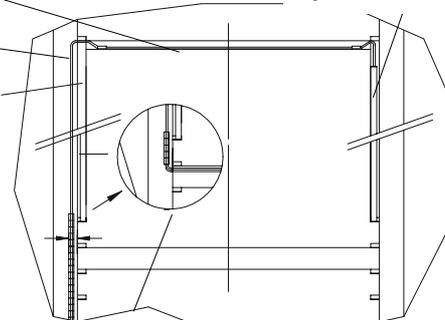


Fig. 25: Routing the safety light barrier / safety light curtain cable

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.10 Installing the access point (continued)

##### Installing the keyboard, lighting and cable



##### Important!

Incorrectly routed cables can cause faulty switching.

- Follow the information in the supporting documents.

Step	Task	Important note/illustration
1	Screw the terminal box to side part 3 at the bottom step using cross recessed pan head sheet-metal screws DIN 7981/ ISO 7049 - St 4.8 x 13 (see SP 4; see Fig. 26).	
2	Install the keyboard mounting arm at the left or right directly below the access point, on the rectangular tube of the corresponding side part. Use galvanised countersunk screws DIN 965/ISO 7046 M8 x 20 - 8.8, microencapsulated (see SP 3). Install the keyboard housing on the mounting arm according to the document "mounting arm, key panel" TAST.	 <b>DANGER</b> Risk of fatal injury from electric current! <ul style="list-style-type: none"><li>• Check the fastening point of the protective earth cable of the lighting panel (toward the right of the panel, close to the switch) to ensure that it is free of paint/coating. Also follow the installation instructions "BELEUCHT".</li></ul>
3	Attach the lighting panel to the sliding door panel, route the cable through the sliding door panel, through the side sliding door guide downwards and towards the right to the base terminal strip through the cable bushings to the inside of the lift.	 <b>Notes</b> For multiple access points: follow the cable routing diagram CABLELL2. For the version with lighting in the access point, observe the installation instructions "BELEUCHT".
4	After checking the substrate to ensure that it is free of dust and grease, install the proximity switch cable using adhesive clips on the bottom front panel, and from there sideways out of the bottom front panel and inside the lift through the cable bushings.	 <b>Important!</b> For special access opening heights: after checking the substrate to ensure that it is free of dust and grease, route the cable directly into the electrical tray of the access point using the adhesive clips. To do so, observe the cable routing diagram CABLELL2.

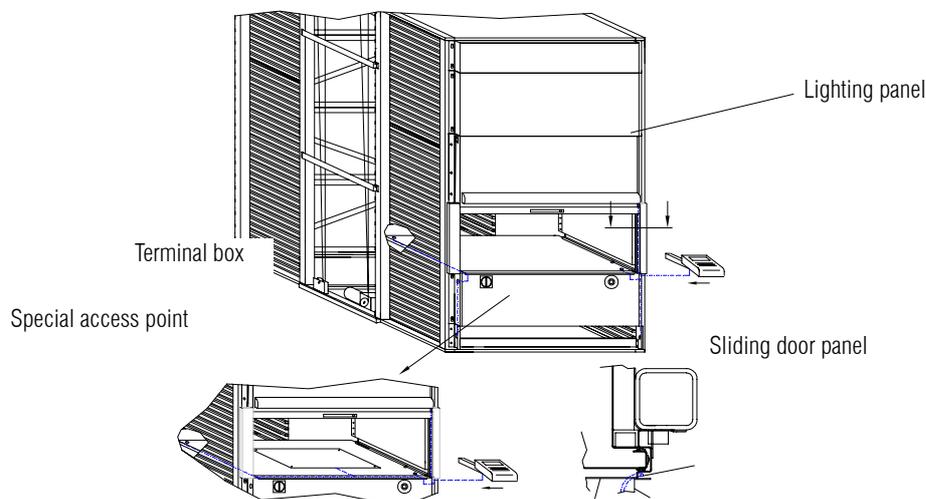


Fig. 26: Installing the terminal box, keyboard mounting arm and lighting panel

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.11 Installing the extractor



#### **DANGER**

Danger from falling of the extractor

- When lifting the extractor and when working underneath it, the extractor must be secured from falling or crashing down. For more information, also refer to the detailed information in the operating manual.
- Install the mounting brackets on all 4 rectangular tubes below the extractor.



#### **Note**

If the vertical shaft has been removed earlier in the installation process, reinstall it now by following the reverse order of steps described in Section 5.3.2.

#### Installing the mounting brackets, installing and adjusting the extractor

Step	Task	Important note/illustration
1	From the inside of the lift, attach 1 mounting bracket for the extractor on each of the 4 rectangular tubes at the access opening height, and secure each using a locking screw (see Fig. 28).	<b>SAFETY INSTRUCTION</b> If no mounting brackets are available, fasten adequately sized wooden beams to the supports between the bearing units and secure them using screw clamps.

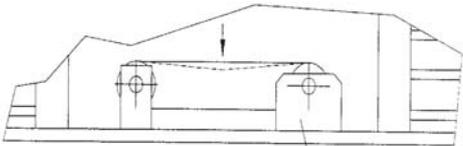
# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.11 Installing the extractor (continued)

##### Installing the mounting brackets, installing and adjusting the extractor (continued)

Step	Task	Important note/illustration
2	<p>Check the tension of the drive chains on the bottom frame:</p> <p>Push the middle of the chain with your hand.</p> <p>The deflection must be approx. 5 mm (0.2 in).</p>	 <p><b>WARNING</b></p> <p>Settling of the bottom frame under load can cause the chains to become excessively taut. Therefore, check the chain tension again after the lift is loaded and correct it if necessary.</p>
3	<p>Correcting the chain tension if necessary:</p> <p>Loosen the fastening screws of the bottom bearing blocks until the blocks can be moved.</p> <p>Vary the position of the bearing blocks until the required tension is reached.</p> <p>Re-tighten the screws.</p>	 <p>Moving the bearing block</p> <p>Fig. 27: Correcting the chain tension</p>
4	<p>With the help of auxiliary personnel, pivot the extractor into the shaft and rest it on the mounting brackets.</p>	 <p><b>Tip</b></p> <p>To make it easier to swing the extractor into position, one drive chain can be removed. To do so, the corresponding bearing block must be detached and moved; see item 3.</p>  <p><b>Important!</b></p> <p>Make sure to install the extractor in the correct direction. The outer proximity switches (B 10, B 11) must be facing towards the service door.</p>

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.11 Installing the extractor (continued)

#### Installing the mounting brackets, installing and adjusting the extractor (continued)

Step	Task	Important note/illustration
5	Align the extractor with the carriers evenly on all sides using the adjusting screws of the 4 mounting brackets (see Fig. 28). The clearance between the extractor and the carriers must be equal at all 4 corners.	<b>SAFETY INSTRUCTION</b> The max. tolerance may not exceed $\pm 0.5$ mm (0.02 in)!

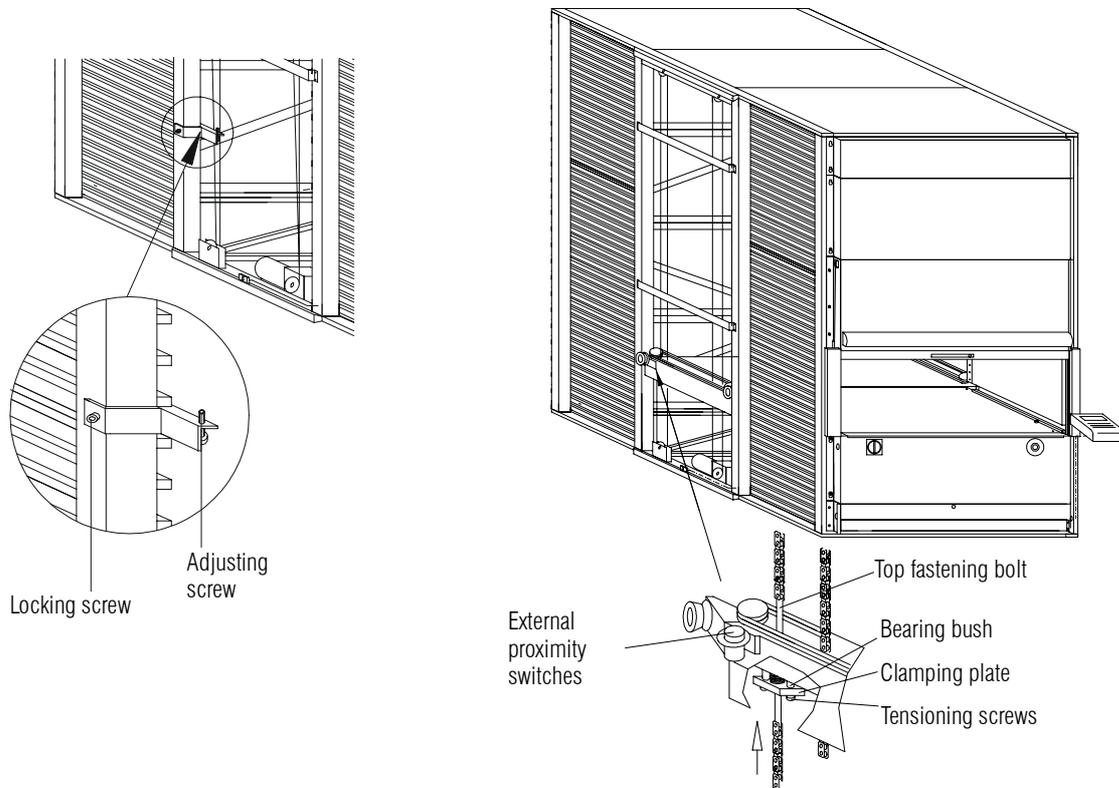


Fig. 28: Installing the mounting brackets and extractor

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.11 Installing the extractor (continued)

##### Installing the mounting brackets, installing and adjusting the extractor (continued)

Step	Task	Important note/illustration
6	<p>Unscrew the 2 tensioning screws DIN 912/ISO 4762 of the chain tensioner:</p> <ul style="list-style-type: none"><li>Type 250 kg (551 lbs): M8 x 50 - 12.9</li><li>Types 500 kg (1103 lbs) to 1000 kg (2205 lbs): M10 x 60 - 12.9</li></ul> <p>Fasten the 4 vertical chains to the top fastening bolts on the extractor using a chain joint.</p>	<p> <b>Important!</b> Follow the instructions in "Chain joint installation", document "99900004.dwg".</p> <p> <b>Tip</b> If necessary, use auxiliary screws with a longer length for positioning on alternating sides until the original screws can be used.</p>
7	<p>Feed each carrying chain through the chain guide on the extractor to the corresponding bottom chain wheel. Pull the chains down manually and wrap each around the chain wheel.</p>	<p><b>SAFETY INSTRUCTION</b></p> <p>While doing so, ensure that the 4 vertical chains are properly tensioned before wrapping them around the bottom chain wheel so that they are not wrapped around the chain wheel one tooth away from each other.</p>
8	<p>Using a chain joint, fasten each chain end to the bottom fastening bolt of the extractor. Tighten the tensioning screws DIN 912/ISO 4762 of the chain tensioner until the clamping plate is tightly seated on the bushings (for type designations, see step 6).</p>	
9	<p>Turn back the adjusting screws of the mounting brackets and check the clearance of the extractor to the carriers; see Step 5.</p> <p>If the clearance from left to right is not equal: release the shaft clamping set (see Chapter 5.3.2) and adjust the clearance until correct by rotating the drive shaft. Afterwards, you must secure the shaft clamping set back in place.</p>	

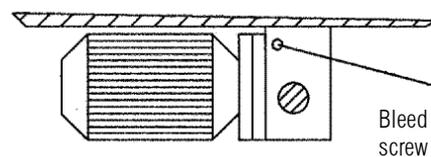
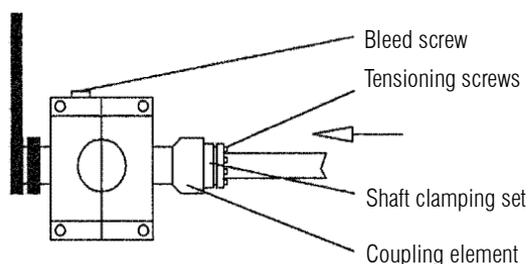


Fig. 29: Vertical and horizontal drive

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system

##### Installing the electrical drawer and panel (for models produced during week 46 / 2006 or later)

Step	Task	Important note/illustration
1	<p><b>Container widths up to 1300 mm (51.2")</b> Insert the panel for the electrical drawer into the stamped rail of the drawer and screw it in at the sides using countersunk screws DIN 965/ ISO 7046 M5 x 16, nuts Screw DIN 934/ ISO 4032 M5 and washers DIN 125/ ISO 7090-5 (see SP 5).</p> <p><b>Container widths over 1300 mm (51.2")</b> Add an angle bracket to the right-hand side of the drawer to achieve the required width. Attach this angle bracket to the electrical drawer using 3 socket head cap screws DIN 912/ ISO 4762 M6 x 16, washers DIN 125/ISO 7090 6 and nuts DIN 934/ ISO 4032 M6 (see SP 5).</p> <p>Insert the panel for the electrical drawer into the stamped rail of the drawer and screw it to the angle bracket. Screw the angle bracket to the electrical drawer DIN 965/ ISO 7046 M5 x 16, nuts DIN 934/ ISO 4032 M5 and washers DIN 125 / ISO 7090-5 (see SP 5).</p>	<p>From week 11 / 2005 to week 45 / 2006, the telescoping units were screwed on.</p>

2 Hook the telescoping units into the wiring cabinet/angle bracket according to the attached stickers for "L (= left)" and "R (= right)".

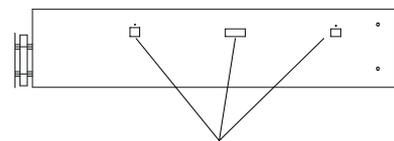


Fig. 30: Electrical drawer Cut-outs for hooking in the telescoping units

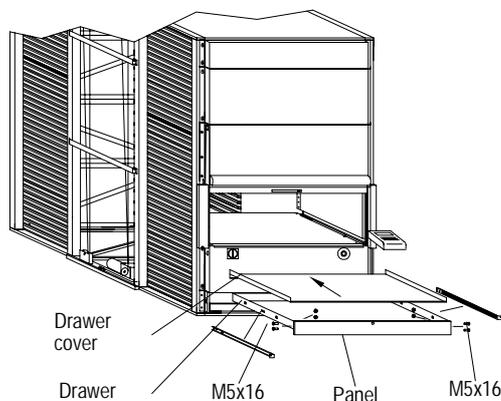
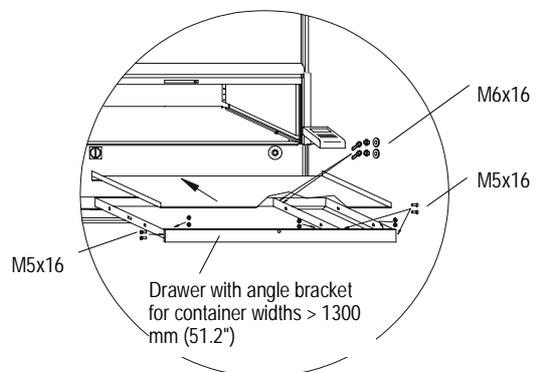


Fig. 31: Installing the electrical drawer



# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

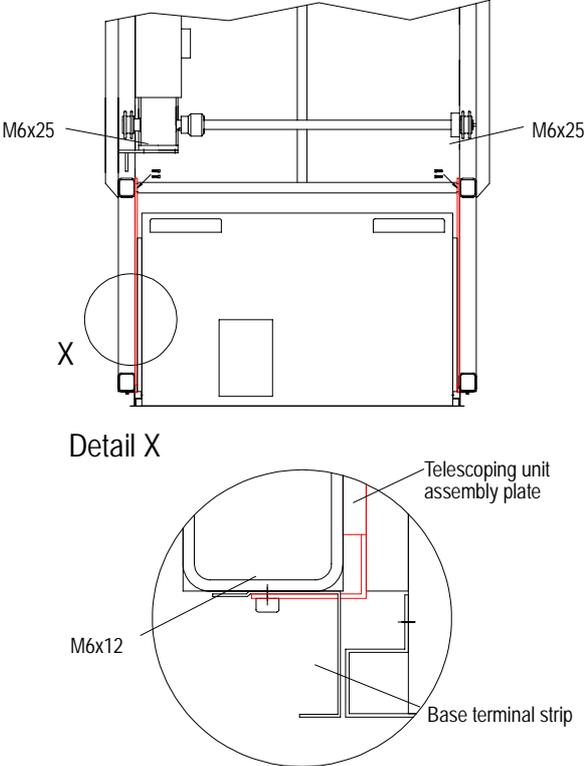
Step	Task	Important note/illustration
3	<p><b>Hooking the telescoping units on the side part</b></p> <p>Fasten the sheet that is hooked into the telescoping panels to the side parts using socket head cap screws DIN 912/ ISO 4762 M6 x 25 and washers DIN 125/ ISO 7090-6 (see SP 5). Use one screw on each side for depth 635; use two screws on each side for depths 825 to 1270.</p> <p>At the front of the lift, the telescoping unit assembly plate is screwed to the base terminal strip using socket head cap screws DIN 7984 M6 x 16 (see SP 2).</p>	 <p>The illustration consists of two parts. The top part is a side-view technical drawing of the lift's side structure. It shows a horizontal beam supported by vertical posts. Two M6x25 screws are shown passing through the beam into the side panels. A red vertical line on each side indicates the location of the telescoping unit assembly. A circle labeled 'X' highlights a specific detail. The bottom part is a circular detail view labeled 'Detail X'. It shows a cross-section of the telescoping unit assembly plate being secured to a base terminal strip. An M6x12 screw is shown passing through the assembly plate into the terminal strip.</p>

Fig. 32: Fastening the telescoping units

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Installing the electrical drawer and panel (for models produced before week 10 / 2005)

Step	Task	Important note/illustration
1	<p><b>Container widths up to 1300 mm (51.2")</b></p> <p>Insert the panel for the electrical drawer into the stamped rail of the drawer and screw it into place on the side using countersunk screws DIN 965/ ISO 7046 M5 x 10, nuts DIN 934/ISO 4032 M5 and washers DIN 125/ ISO 7090-5 (see SP 5).</p> <p><b>Container widths over 1300 mm (51.2")</b></p> <p>Expand the drawer on the right side by adding one angle bracket in order to achieve the required width.</p> <p>Screw this angle bracket to the panel for the electrical drawer using countersunk screws DIN 965/ ISO 7046 M5 x 16, nuts DIN 934/ISO 4032 M5 and socket head cap screws DIN 912/ISO 4762 M6 x 12 (see SP 5).</p>	
2	<p>Mount the guide rails on the sides of the drawer according to the pattern of the steps.</p> <p>On each side, use 3 socket head cap screws DIN 912/ISO 4762 M6 x 12 and nuts DIN 934/ISO 4032 M6 (see SP 5).</p>	
3	<p>Mount the tilt protection devices under each rail using 2 socket head cap screws DIN 912/ISO 4762 M6 x 12 and nuts DIN 934/ISO 4032 M6 (see SP 5).</p>	

Drawer without angle bracket for container widths  $\leq$  1300 (51.2 in)

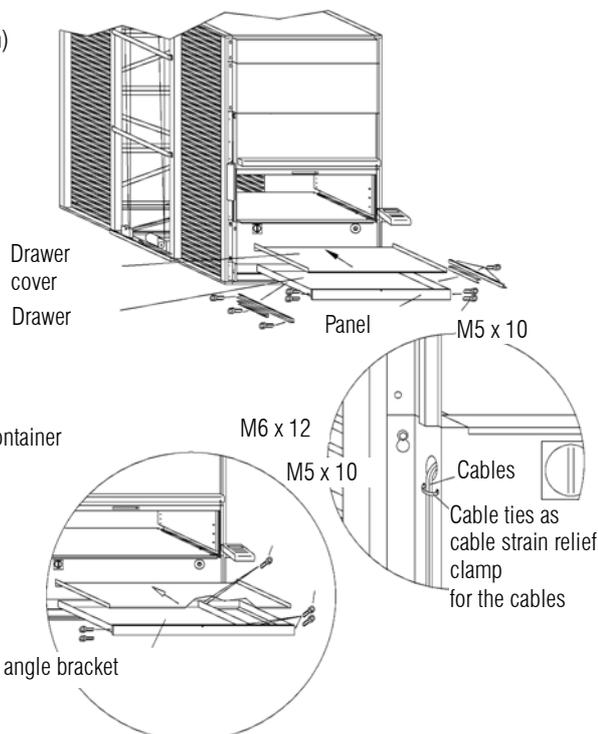


Fig. 33: Installing the electrical drawer

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Routing and connecting the cables

Step	Task	Important note/illustration
1	<p>Route the cables and install the cable ducts on the bottom frame of the lift as shown in Figure 34.</p> <p>When doing so, ensure the following:</p> <ul style="list-style-type: none"><li>• The cables are correctly stripped before you fasten them to the contacts, and that each screw connection has full contact with the stripped conductor.</li><li>• The earth wires are connected to the bolts (M 4) in the wiring cabinet.</li><li>• All power cables (mains power line, horizontal and vertical motor power lines) located in the base area of the extractor shaft are routed in the protective tube.</li></ul> <p>Alternatively, the protective tube for the mains power line can also be routed below or to the right of the vertical motor.</p>	<p>Cable duct, mounted using double-sided adhesive tape (Caution! The substrate must be free of dust and grease.)</p>

Fig. 34: Routing the cables and cable ducts

##### Important



Before the lift is connected to the mains power supply by the owner/operator, you must ensure the following:

- The mains supply voltage provided by the owner/operator matches the data on the type plate
- The impedance of the energy supply, including the customer-side mains power line to the mains terminal strip X1 of the lift does not exceed 500 mOhms.
- That the main switch is switched off.

- 2 After installing the keyboard: measure the resistance of the earth wire connection to the lift housing. The resistance may not exceed 0.1 ohms.
- 3 Attach the shielding of the keyboard cable to the switchboard as shown in Fig. 35, making sure to check that the fastening point is free of paint/coating.



##### **! DANGER**

Risk of fatal injury from electric current! Paint/coating residue can impair the function of the earth wire or even defeat it completely.

- Thoroughly remove all paint/coating residue!

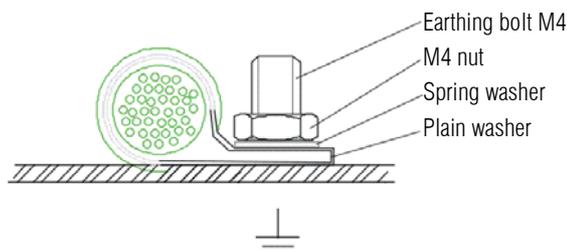


Fig. 35: Shielding of the keyboard cable

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Routing and connecting the cables (continued)

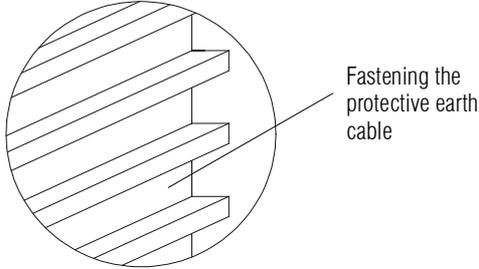
Step	Task	Important note/illustration
4	After you have finished routing the cables and making the electrical connections: insert the electrical drawer below the bottom front panel.	
5	Insert the cover of the electrical drawer above the drawer on the shaft side and hook it into the bottom front panel.	 <b>Note</b> For special access opening heights, you have to push in the additional cover on the bottom, below the electrical drawer on the shaft side (side without protruding clamping noses at front). When pushed in all the way, this cover locks itself in place automatically by means of the top facing clamping noses.
6	<p>Before screwing on the protective earth cables, check the fastening point to ensure that it is free of paint/coating.</p> <p>Screw the protective ground cable of the earth wire terminal strip using a brass socket head cap screw DIN 84 / ISO 1207 M 6 x 12 and a spring washer DIN 127 A6 (see Screw Package 4) to side part 2 at the rear above the 3rd step from the bottom (for slot increment 90 mm (3.54"), above the 2nd step, for slot increment 125 mm (4.92"), above the 1st step).</p> <p>(See Fig. 36)</p>	

Fig. 36: Fastening point of the protective earth cable

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Installing the lower limit switch and position sensors

Step	Task	Important note/illustration
1	As shown in Fig. 37, screw the lower limit switch (S 2) at the bottom left to rectangular tube 2.2. on the step side at a height of approx. 300 mm (11.8 in) using socket head cap screws DIN 912/ISO 4762 M6 x 16 - 8.8 (see SP 4).	<div style="background-color: #00FF00; text-align: center; padding: 5px;"><b>SAFETY INSTRUCTION</b></div> <p>The limit switch (S 2) must be set such that it is actuated whenever the extractor drives past it. For lift type 635, lifts in HS version and lifts with a container load capacity of 1000 kg (2205 lbs), the limit switch is located at the bottom rear on side part 4 (see Fig. 38 and Chapter 5.3.3).</p>

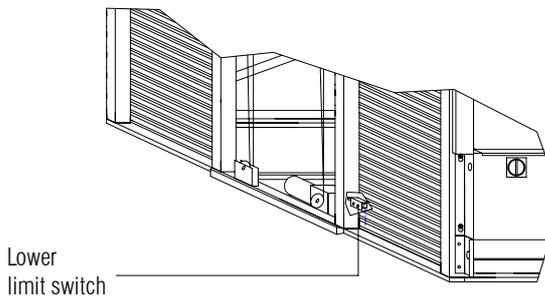


Fig. 37: Lower limit switch

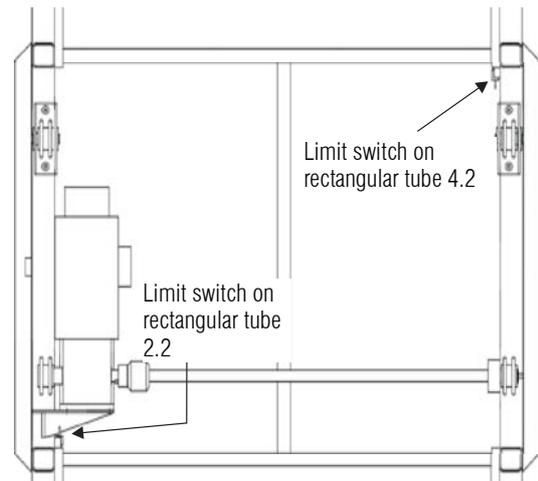


Fig. 38: Limit switch on side part 4

- 2 Screw the lowest slotted mounting bracket for position sensors onto rectangular tubes 2.2 and 4.2 (see Section 5.3.7).



#### Important!

- There may be no offset at the joints of the slotted mounting brackets for position sensors.
- The slotted mounting brackets may not have any bent ridges or any dirt in the cut-outs.
- All fastening screws must be securely tightened.

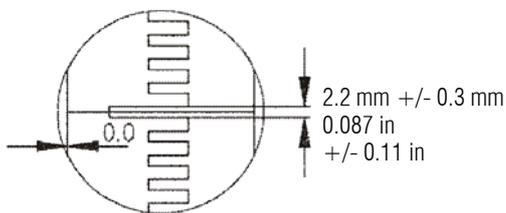


Fig. 39: Max. tolerances of the joints

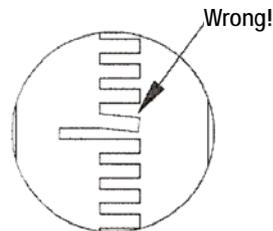


Fig. 40: Slotted mounting bracket for position sensor: checking the ridges

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Installing the lower limit switch and two position sensors (continued)

Step	Task	Important note/illustration
3	Install the position sensors (S 9) on the extractor following the exact procedure described in the "Installation Instructions for Lean-Lift Position Sensor" in the document POSIEINS.	 <b>Important!</b> <ul style="list-style-type: none"><li>• The position sensors must be installed at right angles on all sides, and the fastening screws must be securely tightened.</li><li>• The position sensors must be adjusted to the centre of the positioning rail, and the alignment marks on the housing must be on the inside of the short slots.</li></ul>

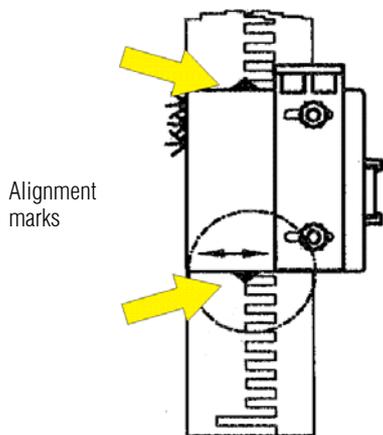


Fig. 41: Alignment marks of the position sensor

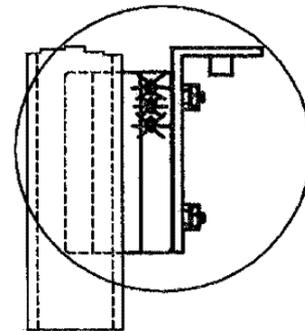


Fig. 42: Mount the position sensor at a right angle.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.12 Installing the electrical system (continued)

##### Installing the proximity switches and upper limit switch

Step	Task	Important note/illustration
1	Install the protection zone proximity switches (B 18, B 19) on the extractor as specified in the "Setting Instructions for Lean-Lift Proximity Switches in the Access Point and Extractor" NSEINS and NSEINS2.	 <b>Note</b> The proximity switches (B 18, B 19) are preset on their mounts at the factory.
2	Check that the proximity switches on the extractor are set correctly according to the documents listed in Step 1.	
3	Install the upper limit stop limit switch (S 1) on the extractor according to the "Installation Instructions for Limit Switch S 1 Upper Limit Stop Limit Switch" (document "S1ein.dwg").	 <b>Tip</b> Fastening limit switch (S1): For Lean-Lift types 250 kg (551.3 lbs) and 500 kg (1102.5 lbs) HS with a depth of 825, 1047 and 1270, a long bracket (165 mm / 6.5 in) is used. For all other Lean-Lift types, the short bracket (105 mm / 4.1 in).

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.13 Installing the power supply lines and cable guard

##### Installing the power supply lines

The power supply lines are installed according to the lift version or version of the extractor power supply lines.

Step	Task	Important note/illustration
------	------	-----------------------------



#### Important!

The cables must be suspended free of twists to prevent knots from forming.

#### A Lift version with two spiral cables

A-1 Screw the cables onto the longitudinal brace of the bottom frame using the clamp. Refer also the installation instructions "LL-SPIRA".

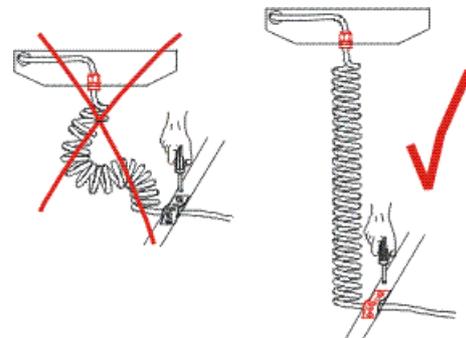


Fig. 43: Screwing the cable onto the longitudinal brace

#### B Lift version with ribbon cables

B-1 Mount the ribbon cable on the clamping brackets between the side parts at one-half the height of the lift. Refer also to the installation instructions "LL-SCHLE" and Fig. 44.

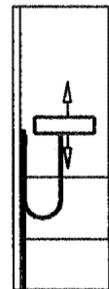


Fig. 44: Power supply line of an individual lift



#### Important!

The ribbon cable may not be installed twisted.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.13 Installing the power supply lines and cable guard (continued)

##### Installing the power supply lines (continued)

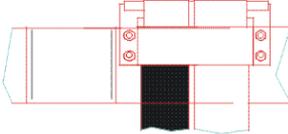
Step	Task	Important note/illustration
	<p>The design is shown in Fig. 45: motor and control cable routed through the cable guard and clamped to the bracket using a clamping plate.</p> <p>1 = Standard lifts with depth: 825 - 1270 HS lifts with depth = 1047 and 1270.</p> <p>2 = Standard lifts with depth: 635 HS lifts with depth = 635 and 825.</p>	<p>1 </p> <p>2 </p> <p>Thread forming screws with hexagon socket DIN 7500 - M5 x 10 and washer DIN 125 / ISO 7090-5 (see SP 5)</p> <p>Lean-Lift type 635 or HS version</p>

Fig. 45: Mounting the ribbon cable

B-2 Install multiple power supply lines for multiple adjacent lifts as follows:

- Install the power supply lines of the outer lifts on the opposite outermost sides.
- For more than two lifts, the power supply lines of the middle lifts must be installed such that each faces the direction of the service door (see Fig. 46).

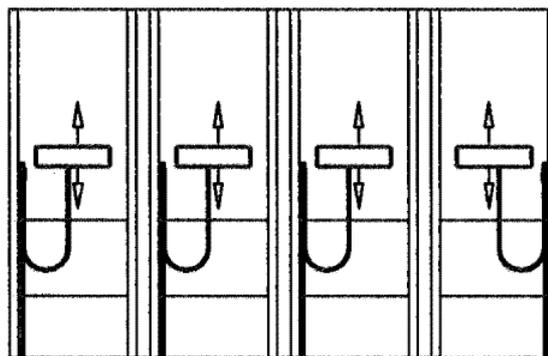


Fig. 46: Example: Power supply schematic for multiple lifts

- On each of these middle lifts, mount an additional side panel up to half the lift height (see Fig. 46). The bottom passage up to a height of 1875 mm (73.8 in) remains free.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.13 Installing the power supply lines and cable guard (continued)

##### Installing the cable guard and shaft guard

Step	Task	Important note/illustration
------	------	-----------------------------

**A** For lift version with spiral cables as extractor power supply line

If not factory-installed: push the shaft guard (used for spiral cables as extractor power supply line) over the drive shaft and the cross-member of the bottom frame and screw it to the centre crosspiece of the bottom frame of the using a cross recessed pan head sheet-metal screw DIN 7981/ISO 7049 4.8 x 13.

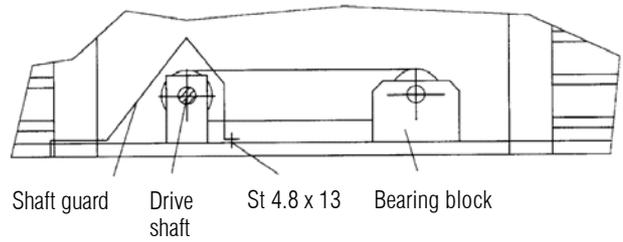


Fig. 47: Shaft guard

**B** For lift version with ribbon cables as extractor power supply line

The cable guide rod on the extractor is factory installed.

If not factory-installed: the cable guard above the drive must be secured using 2 socket head cap screws DIN 912/ISO 4762 M10 x 20.

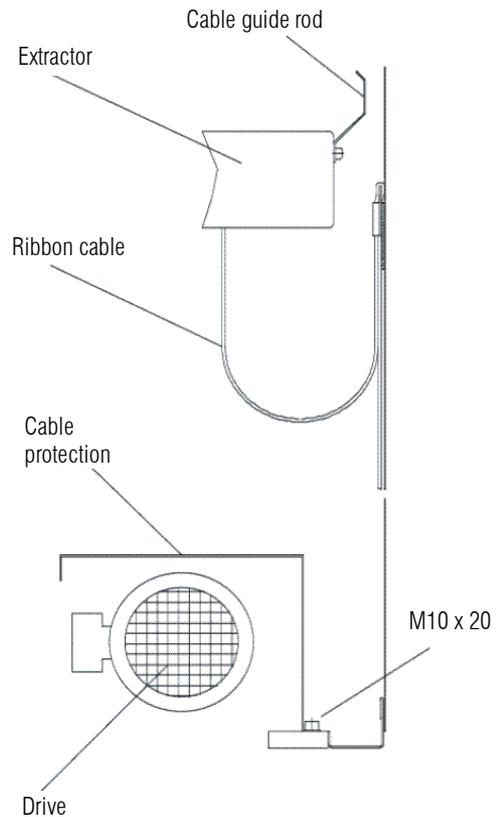


Fig. 48: Cable guard

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.13 Installing the power supply lines and cable guard (continued)

##### Shielding in the wiring cabinet and on the extractor



**DANGER**

Risk of fatal injury from electric current! Paint/coating residue can impair the function of the earth wire or even defeat it completely.

- Thoroughly remove all paint/coating residue!

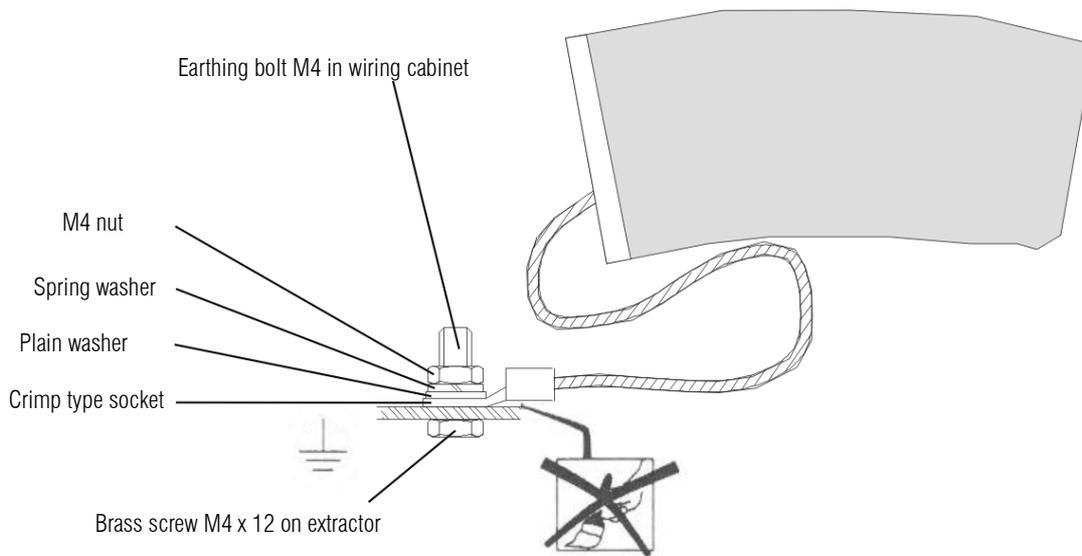


Fig. 49: Shielding in wiring cabinet and on extractor for ribbon cable

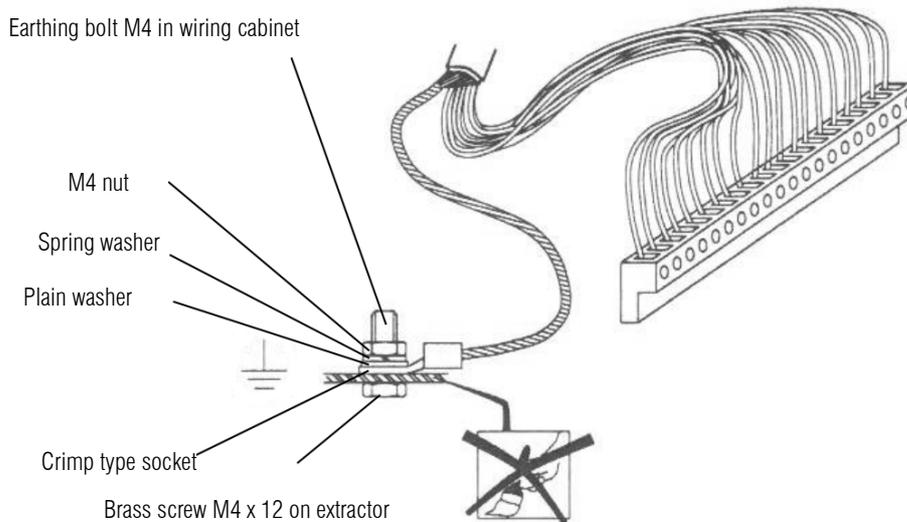


Fig. 50: Shielding in wiring cabinet and on extractor for spiral cable

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.14 Installing the side panels

Install the side panels from top to bottom. Begin on the service door side, with the side part that is installed directly above the planned installation location of the door (see Fig. 51).



#### Note

If two or more lifts are directly side-by-side, the lifts are delivered without side panels on the adjacent lift sides. This joint is covered on the outside using an additional panel (see Sections 5.3.9 and 5.3.16). For safeguarding of multiple adjacent lifts, refer to the installation instructions "LL-NEBEN2 and NEBEN3".

Step	Task	Important note/illustration
1	Push the top strip of the side panel directly above the installation location for the service door into the upper bracket until the bottom strip of the side panel can be inserted into the lower bracket.	
2	Push the side panel down into the lower bracket as far as it will go.	
3	Follow the same procedure to insert the side panel above it.  Mount the top side panel to the headpiece using 2 two-hole pan-head sheet-metal screws ST 4.8 x 13 (see SP 3). To do so, you need to use the bit for two-hole screws (see SP 3; if the bit is missing, it must be requested from the factory).	
4	Screw the service door onto the rectangular tubes at the left and right using hinges and cross recessed pan head machine screws DIN 7985/ISO 7045 M5 x 10 (see SP 3) and align the service door. Tighten the fastening screws.	
5	Using one-way security screws M4 x 8 (see SP 4), mount the contact element for the service door switch on the bottom of the right service door wing (see Fig. 51).	
6	Install the service door switch on the left service door wing using fastening screws DIN 912/ISO 4762 M5 x 16, nuts DIN 934 / ISO 4032-M5 and washers DIN 125/ISO 7090-5 (see SP 4) A5.	 <b>Important!</b> Adjust it such that actuator latch fits into the service door switch without striking it.
7	Ensure that the sash locks for locking the service doors open and close correctly by checking the function of each lock using a screwdriver.	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.14 Installing the side panels (continued)

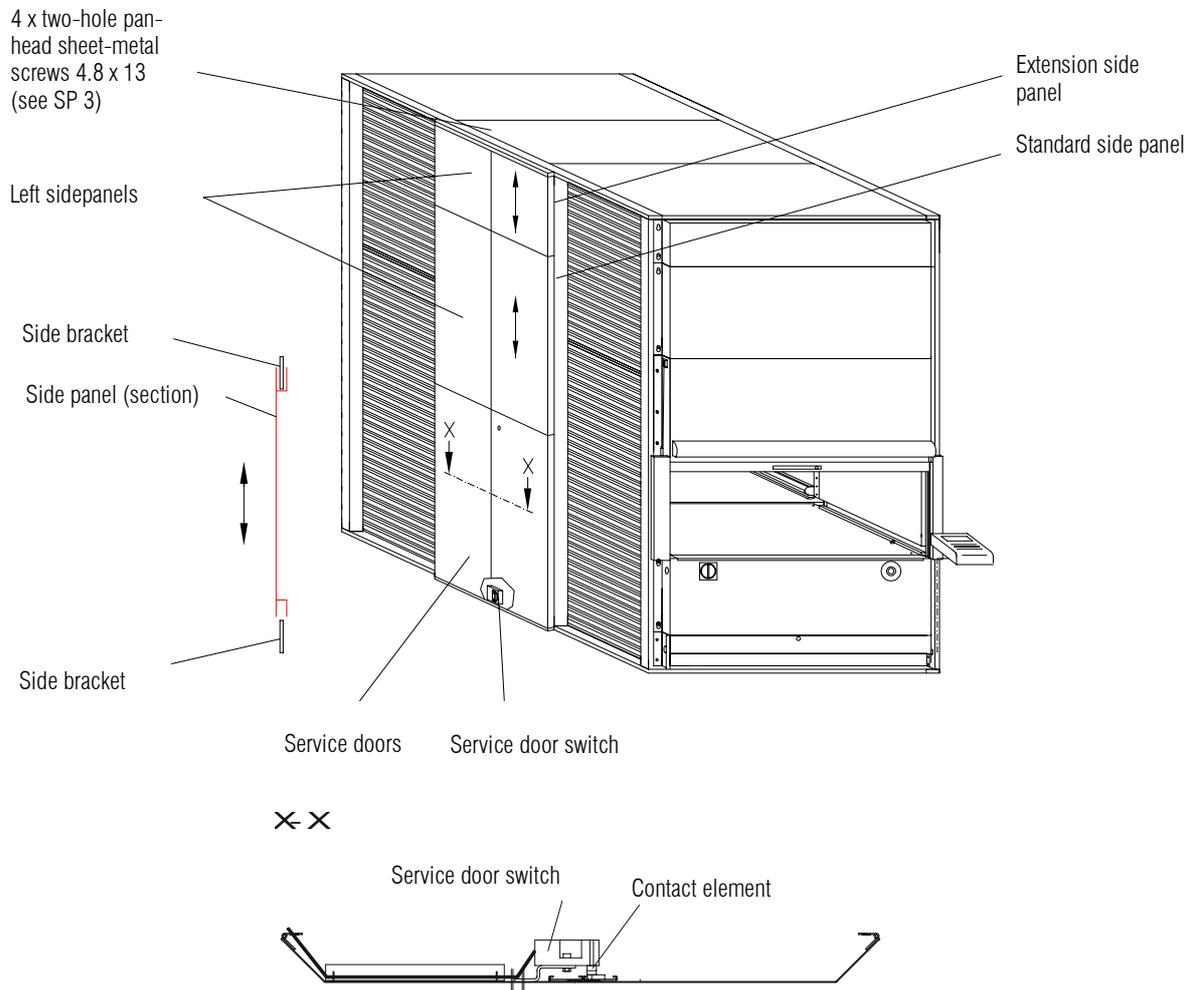


Fig. 51: Installing the side panels and service door

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.15 Installing the cover strips and attachments

##### Installing the cover strips

Step	Task	Important note/illustration
1	Attach the side cover strips to the front on the left and right (see Fig. 52) and screw them to the front panels using countersunk sheet-metal screws DIN 7982/ISO 7050 St2.9 x 13 (see SP 1).	 <b>Important!</b> Install the (plastic) cable bushing for the keyboard cable into the bottom cover strip (see Fig. 52).

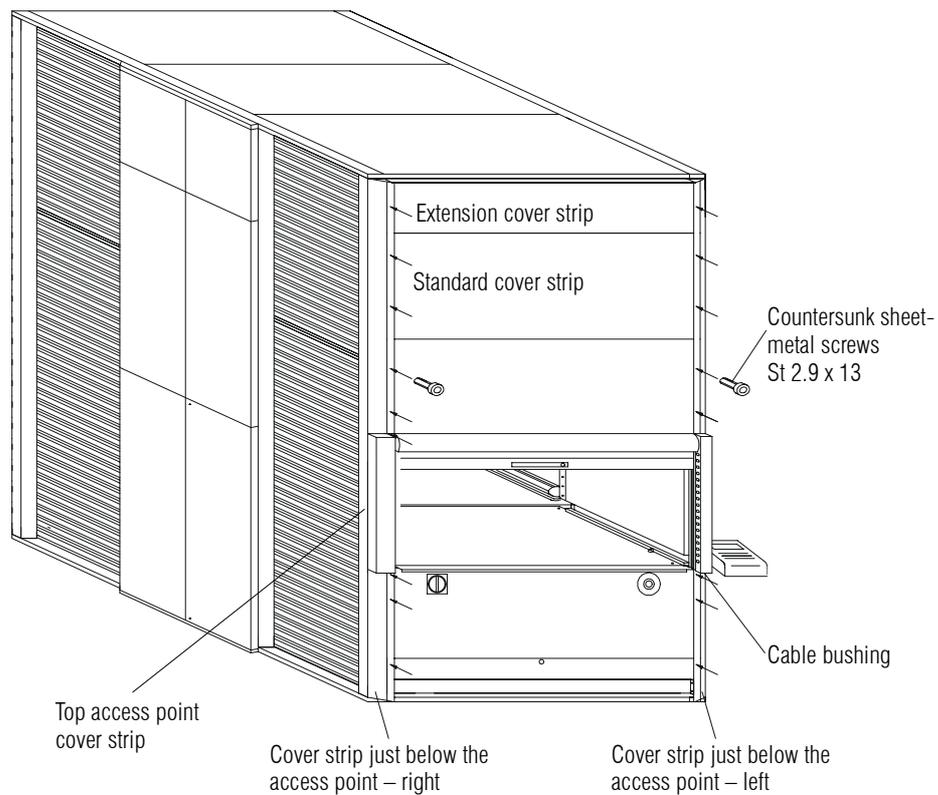


Fig. 52: Installing the cover strips

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.15 Installing the cover strips and attachments (continued)

##### Installing the attachments

The installation of the attachments depends on the version of the Lean-Lift and the access point.

##### Version A: rollers in the access point cover

Step	Task	Important note/illustration
1	<p>Select the roller pairs according to the maximum container load (see type plate on the bottom front panel).</p> <p><b>Up to 300 kg (661.5 lbs):</b></p> <ul style="list-style-type: none"><li>All roller pairs with sliding bearings</li></ul> <p><b>Up to 700 kg (1543.5 lbs):</b></p> <ul style="list-style-type: none"><li>Roller pair on the inside of the shaft with sliding bearings</li><li>All other roller pairs with ball bearings</li></ul> <p><b>Up to 1000 kg (2205 lbs):</b></p> <ul style="list-style-type: none"><li>All roller pairs with double ball bearings</li></ul>	<p> <b>Note</b></p> <ul style="list-style-type: none"><li>Electrostatically conductive rollers are grey (standard: light beige)</li><li>For the number and arrangement, refer to the document "ESTATIC".</li></ul>
2	<p>Install each roller in the cages of the access point cover, following the instructions in step 1.</p>	

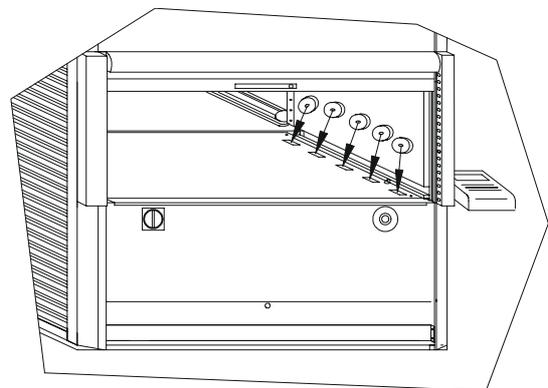


Fig. 53: Rollers in the access point cover

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.15 Installing the cover strips and attachments (continued)

##### Version B: access point with guide rails

Step	Task	Important note/illustration
1	<p>Screw the left and right guide rails into the mounting holes in the bottom front panel below the access point. For each upper guide rail fastener, use 2 socket head cap screws DIN 912/ISO 4762 M12 x 30 - 8.8, washers DIN 125/ ISO 7090 - 12 and spring washers DIN127 A12; for each lower fastener, use one socket head cap screw DIN 912/ISO 4762 M10 x 30 - 8.8, washer DIN 125/ISO 7090 - 10 and spring washer DIN 127 A10 (see SP 22).</p>	 <p><b>Important!</b></p> <p>Check the angle accuracy of the guide rails using a container, and correct it if necessary by shimming the mounting plate.</p> <p>For guide rails for lifts with a 1000 kg (2205 lbs) load capacity, observe the installation instructions LL-AUFLAGE.</p> <p>For guide rails for lifts with 1000 kg (2205 lbs) or lifts with a depth of 1047 or 1270, each rail has a support on the base unit.</p>

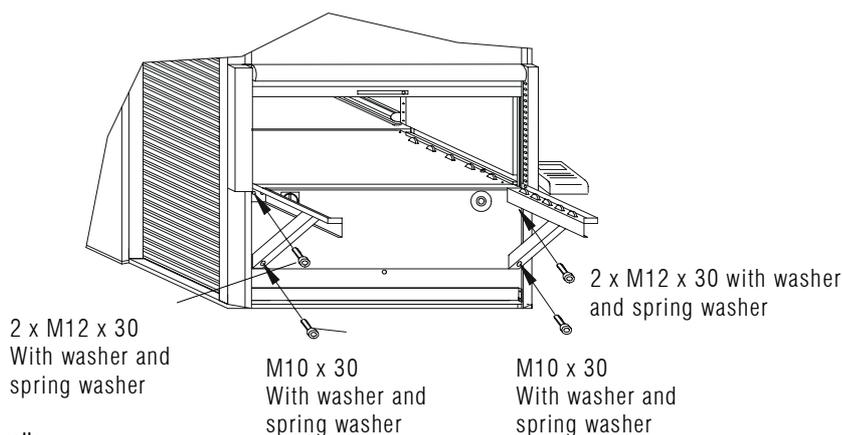


Fig. 54: Example of guide rails

2	<p>Select the roller pairs according to the maximum container load (see type plate on the bottom front panel).</p> <p><b>Up to 300 kg (661.5 lbs):</b></p> <ul style="list-style-type: none"><li>All roller pairs with sliding bearings</li></ul> <p><b>Up to 700 kg (1543.5 lbs):</b></p> <ul style="list-style-type: none"><li>All roller pairs with ball bearings</li></ul> <p><b>Up to 1000 kg (2205 lbs):</b></p> <ul style="list-style-type: none"><li>All roller pairs with double ball bearings</li></ul>	 <p><b>Notes</b></p> <ul style="list-style-type: none"><li>Electrostatically conductive rollers are grey (standard: light beige)</li><li>For the number and arrangement, refer to the document "ESTATIC1".</li><li>For Lean-Lifts with a 1000 kg (2205 lbs) container load capacity, observe the installation instructions LL-AUFLAGE.</li></ul>
3	<p>Install each roller in the cages of the guide rails, following the instructions in step 2.</p>	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.15 Installing the cover strips and attachments (continued)

##### Version C: access point with fold-down guide rails

Step	Task	Important note/illustration
------	------	-----------------------------

- 1 Screw the left and right guide rails into the mounting holes in the bottom front panel below the access point. For each top guide rail fastener, use 2 socket head cap screws DIN 912/ISO 4762 M12 x 30 - 8.8, washers DIN 125/ ISO 7090 - 12 and spring washer DIN 127 A12 (see SP 22).



#### Important!

Check the angle accuracy of the guide rails using a container, and correct it if necessary by shimming the mounting plate.

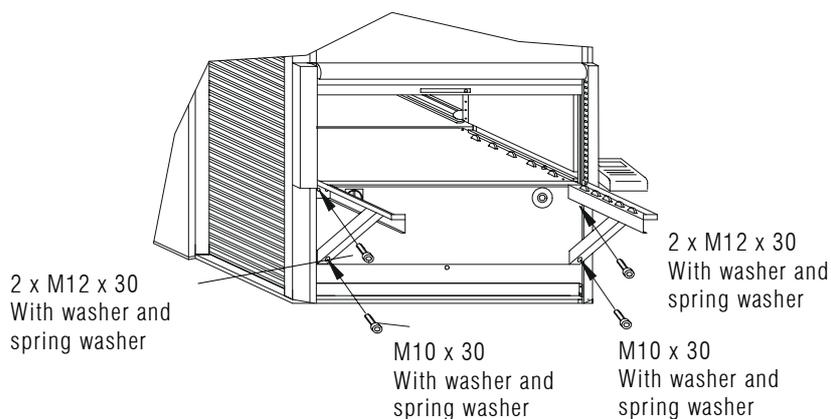


Fig. 55: Fold-down guide rails

- 2 Fasten each supporting wedge using 2 socket head cap screws DIN 912/ISO 4762 M10 x 30 - 8.8, washers DIN 125 - 10/ISO 7090 -10 and spring washers DIN 127 A10 (see SP 22), while adjusting the incline of the guide rail attachment (see the note to the right).



#### Important!

The supporting wedges can be moved using the long holes, thus allowing the incline of the guide rail attachment to be changed.

- 3 Using a spirit level, check that the guide rail is horizontally level. Readjust it if necessary.

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.15 Installing the cover strips and attachments (continued)

##### Version D: access point with transporter

Step	Task	Important note/illustration
1	Screw the transporter centring mandrel to the bottom front panel from the inside using socket head cap screws DIN 912/ISO 4762 M12 x 50 - 8.8 (see SP 23) and secure it against turning using spring pins DIN 1481 5 x 24.	

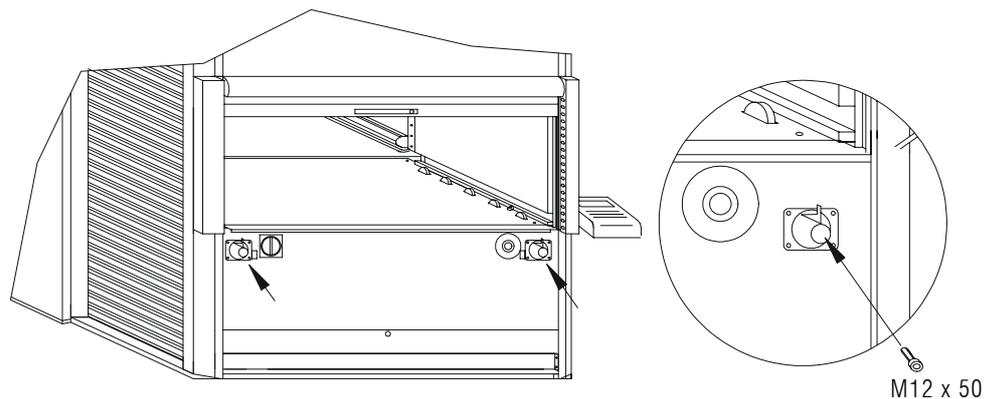


Fig. 56: Centring mandrel of the transporter

- |   |  |  |
|---|--|--|
| 2 | Align the transporter: bring it to the correct level by adjusting the height of the rolling rollers and centre it on the transporter centring mandrel. Latch the locking mechanism to the front panel. |  |
|---|--|--|

#### Optional: other attachments

For other attachments, please refer to the following documents (for a complete list, refer to Chapter 1, "Supporting documents"):

- Installation Instructions for Automatic High-speed Door on Extractor Shaft
- Installation instructions for second safety circuit
- Installation instructions for shelf weighing device
- Installation instructions for door locking
- Installation instructions for automatic ejector
- Installation instructions for containers with power sockets
- Installation instructions for automatic sliding door

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.16 Installing the panelling

If two or more lifts are directly adjacent, the joints are covered by additional panelling on the outside.

Step	Task	Important note/illustration
1	On each first lift, install the front and rear panelling on the front and rear panels on the screws of the side parts (DIN 912/ ISO 4762 M10 x 20, see SP 1) in the same way as the panels were mounted (see Section 5.3.7 or 5.3.9).	
2	For each adjacent lift, the panelling is then fitted in below the front or rear panel. See Section 5.3.7 or 5.3.9.	
3	Optional: Headpiece panelling Place one piece of panelling on the headpiece of each lift as a cover plate.	

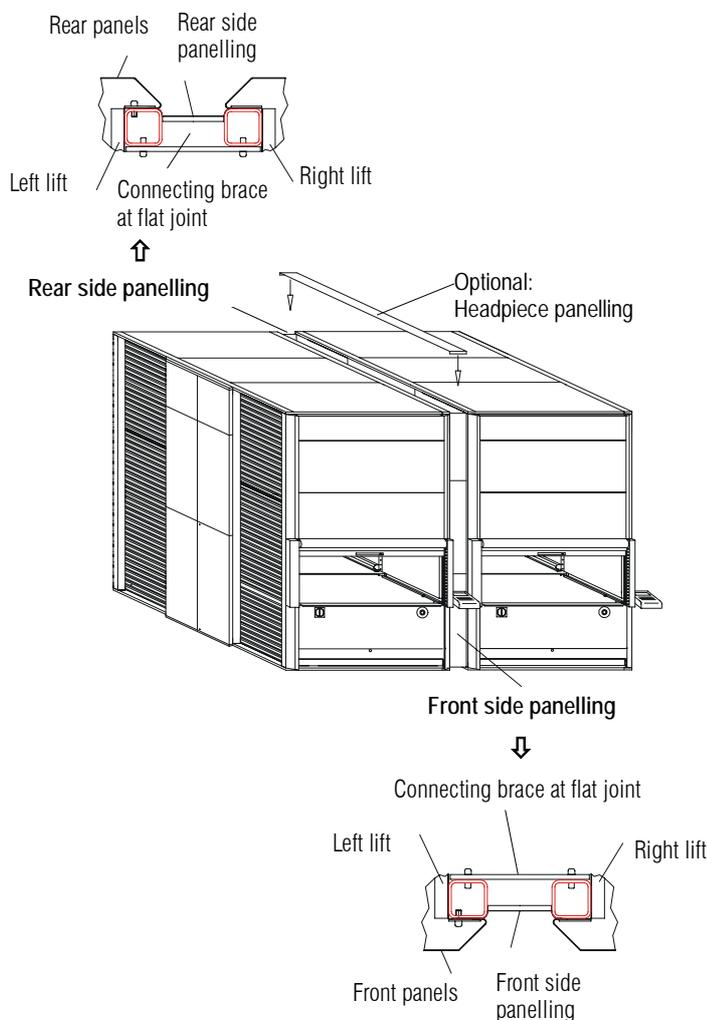


Fig. 57: Mounting the panelling, step: rectangular tubes/side parts of adjacent lifts

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.17 Starting up the lift

Step	Task	Important note/illustration
1	Remove the 4 mounting brackets for extractor installation on the rectangular tubes (refer to Chapter 5.3.11).	
2	For lifts in multi-unit networks, check that the main switch of the individual lifts cannot be switched on if a service door is open!	
3	Close the service doors(s) and switch on the fuse / ground fault breaker F19.	
4	Switch on all fuses, protective motor switches in the wiring cabinet and main switches.	
5	Carry out a measurement to check the secondary-side control voltage 24 V AC of transformer T1 and the corresponding voltage of all optional supplementary features, including the lighting on terminal strip X3 or the power socket or the Vario-Arm on terminal strip X4.	
6	Initialise the lift control system according to the technical description of the microprocessor control system.	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.18 Checking the extractor holding position

After completing the installation, you must check the extractor holding position.

#### SAFETY INSTRUCTION

Inaccuracies can cause malfunction or damage to the Lean-Lift.

- Be careful and thorough when checking.

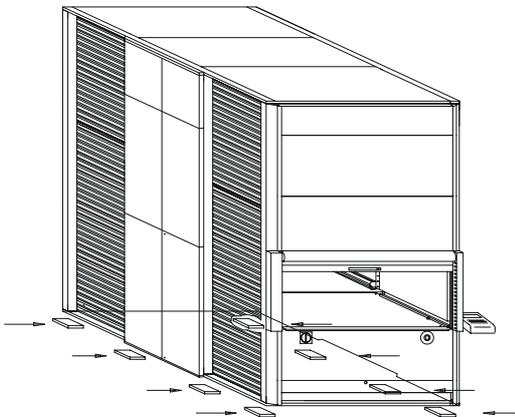
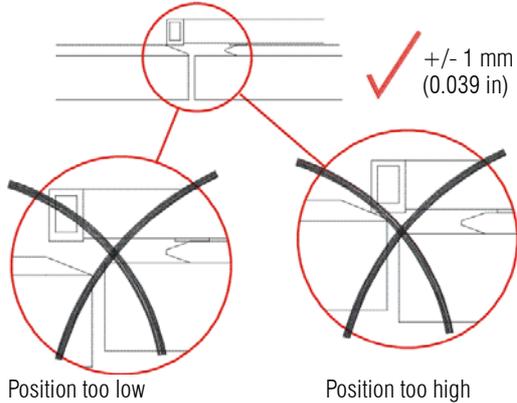
Step	Task	Important note/illustration
1	Check the alignment of the bottom frame using a spirit level: the bottom frame must be absolutely level.	
2	Check the rectangular tubes: the frame must be resting completely on the ground below all 8 vertical rectangular tubes. Any shims present must be immovable.	
3	Check the tolerance of the vertical extractor holding position on the access point(s) at the height of the carrier level of the step: it may not exceed +/- 1 mm (0.039 in).	
4	If you have found inaccuracies in steps 1 to 3, these must be corrected by realignment so that proper extractor positioning is guaranteed.	

Fig. 58: Checking the alignment of the bottom frame

Fig. 59: Tolerance of the vertical extractor holding position

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 5.3.19 Remeasuring the earth wire connection

Step	Task	Important note/illustration
	  Risk of fatal injury from electric current! <ul style="list-style-type: none"><li>The reliable function of the earth wire must be guaranteed at all times.</li></ul>	
1	Check the correct function of the earth wire as shown in the measuring instructions (see Fig. 60).	
2	Measure the earth wire function from terminal strip x1 in the electrical drawer to the following measuring points: <ul style="list-style-type: none"><li>Key panel</li><li>Bottom front panel (near the main switch)</li><li>At the earthing bolt of the lighting or, for lighting in the access point, on the fastening screw</li><li>Side parts</li><li>Drives</li></ul>	 <b>Note</b> The central earthing point is the top-hat rail of terminal strip x1 in the electrical drawer.

For additional measuring points, refer to the final acceptance safety inspection: checklist "F-SICHB3".

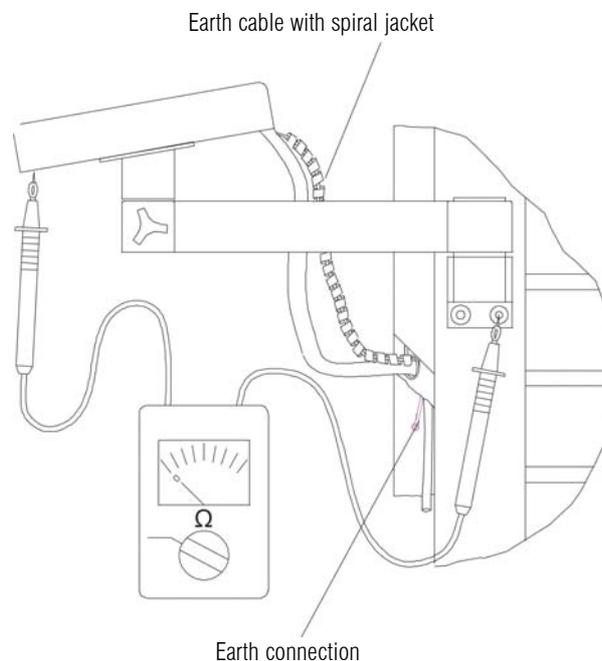


Fig. 60: Checking the function of the earth wire



# Installation Instructions

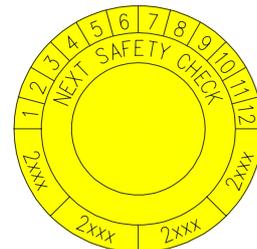
## Hänel Lean-Lift

### Installation with raised working platform

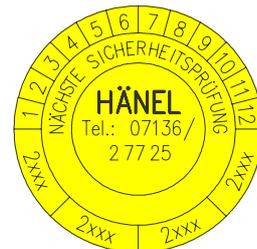
#### 6. Acceptance of the Lean-Lift: carrying out the safety inspection

Step	Task	Important note/illustration
1	As part of the acceptance of the completely assembled LeanLift, carry out a safety check using the checklist in the document "F-SICHB3".	
2	Check the safety signs using the "Checklist for Safety Signs" in the document "SISCHILD". Return the completed document to the installation supervisors.	
3	Fill the lift with the supplied containers through an access point.	
4	Provide the customer with an introduction to operating the lift based on the operating manual and user guide and point out to them the necessary safety regulations and technical operating instructions.	
5	Glue the inspection sticker for the respective country of use, with the next test date noted, on the right side of the access point below the short operating instructions (for multiple access points, on the first access point only).	

Fig. 61: Examples  
Inspection sticker (worldwide)



Inspection sticker (Germany)





# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 7. Disposal instructions

##### Disposing of the packaging material



Dispose of the packaging material in an environmentally responsible manner. Our units require effective packaging to protect them during transport. However, we use only as much as absolutely necessary.

The packaging material is composed of the following recyclable materials:

- Wood (untreated)
- Corrugated cardboard/cardboard/paper
- Polyethylene film (transparent)
- Tightening straps: Polypropylene (black), metal (bare)

When disposing of the unit, follow the locally applicable laws and regulations of the country of use.

In Germany, the packaging can be given to your local recycling centre.

You can obtain their addresses from your local government.

##### Disposing of the decommissioned lift

Before removal, the decommissioned lift must be unloaded completely. Afterwards, you have to remove all containers and move the extractor to floor level. The owner/operator can now disconnect the lift from the mains power supply! The decommissioned lift must be disassembled in the reverse logical order to that described in these Installation Instructions.



**! DANGER**

The safety instructions of these Installation Instructions and the Lean-Lift operating manual must be followed at all times!



When disposing of the unit, follow the locally applicable laws and regulations of the country of use. In Germany, you can give the used parts to a recycling centre or vehicle or scrap recycling facility. You can obtain their addresses from your local government. If you have specific questions about the proper disposal of the parts, please contact your local environmental officer or the Hänel factory.

Note the list of materials (see the following page).

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

#### 7. Disposal instructions (continued)

##### Materials

Material	Use	Note
Steel	<ul style="list-style-type: none"><li>• Frame, headpiece, cross brackets etc.</li><li>• Screws</li><li>• Various connecting elements</li><li>• Chains</li></ul>	
Sheet steel	<ul style="list-style-type: none"><li>• Housing</li><li>• Panelling</li></ul>	
Copper	<ul style="list-style-type: none"><li>• Cables</li></ul>	
Plastic, rubber, PVC	<ul style="list-style-type: none"><li>• Cables</li><li>• Seals</li><li>• Rollers</li></ul>	
Batteries, NiCd/Li batteries	<ul style="list-style-type: none"><li>• Control system</li></ul>	
LCD displays	<ul style="list-style-type: none"><li>• Control system</li><li>• Indicator</li></ul>	 <p><b>WARNING</b> Danger from toxic substances!</p> <ul style="list-style-type: none"><li>• LCD displays contain highly toxic fluids.</li></ul>
Electronic scrap	<ul style="list-style-type: none"><li>• Electrical supply</li><li>• Control units</li><li>• Boards with electronic components</li><li>• Safety light barriers/safety light curtain</li><li>• Article height detection</li></ul>	

# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

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Checking the substrate	19	Keyboard	44
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# Installation Instructions

## Hänel Lean-Lift

### Installation with raised working platform

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