



# Aluminium folding sliding shutters

## FSL-light



## Installation instructions

INSTALLATION BY  
SPECIALIST PERSONNEL  
Valid from 03.2016

E 632.3

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## Notes

These installation instructions describe the installation and commissioning of FSL-light folding sliding shutters.

These installation instructions are a component part of the product and are therefore always to be retained until the product is disposed of.

These installation instructions are to be passed along in the event of the sale of this product.

These instructions are addressed to qualified specialist personnel. Qualified specialist personnel are persons who are familiar with the transport, set-up, installation, commissioning and operation of the product and who have appropriate qualifications for their work.

Specialist personnel must know and observe the relevant standards and/or guidelines.

This product complies with the general rules of technology. Safety-conscious behaviour is necessary for commissioning the product safely. For this reason, observe the following notes.

Carefully read through these instructions prior to commissioning. Observe the specified process steps and take into account the notes and recommendations given. Knowledge of and technically impeccable implementation of the given safety notes and warnings are prerequisites for safe and proper operation of the folding sliding shutters. Insufficient knowledge at the time of commissioning and utilisation lead to the loss of any liability claims against EHRET GmbH.

Should any of the information in these installation instructions not be absolutely clear, it is essential that you contact the specialist personnel at EHRET GmbH, 77972 Mahlberg (Germany).

Bore hole sizes and fastening material are recommendations only and may vary depending on the substrate!


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# Contents


Notes . . . . .	2
Explanation of signs and symbols . . . . .	4
Safety notes . . . . .	4
<b>CE</b> EC Declaration of Conformity . . . . .	6
Installation FAQs. . . . .	7
<b>1 Product description</b>	
Scope of delivery . . . . .	8
<b>2 Installation instructions</b>	
Preparation. . . . .	10
Pre-drilling the guide rail. . . . .	10
Mounting the guide rail . . . . .	11
Installing the hinges on the sashes . . . . .	12
Installing the accessories on the hinge sash . . . . .	13
Installing the accessories on the access sash . . . . .	14
Installing the hinge sash. . . . .	16
Setting the locking plate. . . . .	18
Installing the guide. . . . .	19

## Explanation of signs and symbols

### Warning notes

 <b>DANGER</b>
▶ Designates an imminent danger that could lead to death or severe injuries if the respective precautionary measures are not implemented.


 <b>WARNING</b>
▶ Means that death, severe bodily injury or major property damage could occur if the respective precautionary measures are not implemented.


 <b>CAUTION</b>
▶ Means a possible danger that could lead to minor injuries or property damage if it is not avoided.

- ▶ Directives for action

## Safety notes

- ▶ Only qualified specialist personnel may carry out installation and commissioning!

 <b>WARNING</b>
<b>Incorrect installation could lead to severe injuries and/or damage to property.</b>
▶ Follow all installation instructions.

 <b>WARNING</b>
▶ Take into account the following notes and warnings in order to avoid dangers and to protect the product.

- ▶ Observe the accident prevention regulations of the Accident Prevention & Insurance Association.
- ▶ Observe the rules of the road during transport.
- ▶ Make sure that the load is well-secured on the means of transport.
- ▶ Cordon off a generously large area around the installation site.
- ▶ Observe without limitation the regulations of the manufacturers of dowel and fitting materials.
- ▶ The mounting bases of the installation site are to be checked for load-bearing capacity prior to installation.
- ▶ In the event of uncertainties about the mounting bases, contact your responsible building experts.
- ▶ Check the product for damage prior to installation. Products requiring repair may not be used.

- ▶ No personnel or obstacles are permitted to be within the range of pivoting and/or travelling shutters while they are moving. Keep personnel and objects away until the shutters have reached their final position.
- ▶ Do not reach into moving parts or closing areas while shutters are opening or closing.
- ▶ Make sure that no articles of clothing or body parts are able to be caught by moving parts in the system.
- ▶ Ice could form on the product in the event of snowfall, sleet or icy rain. Do not operate equipment until the ice is no longer present.
- ▶ Make sure that the shutters are locked before any wind load occurs.
- ▶ The shutters may not be operated at wind speeds from 62 km/h (stormy wind).
- ▶ No additional loads such as persons or objects are permitted to have an effect on the shutters.
- ▶ Shutters are not intended to protect individuals from falls.

**WARNING****Danger of injury from the weight of the product!**

- ▶ Due to the weight of the products, transport and installation must be carried out by at least two individuals.
- ▶ Transport the product carefully in order to avoid damage.
  - ▶ Take care to ensure that the product is not damaged when the packaging material is removed.

**WARNING****Danger of suffocation from packaging foil.**

- ▶ The packaging foil must be kept out of reach of children.
  - ▶ Store the foil carefully until you turn it in for recycling.
- ▶ Turn the packaging materials in for recycling.

## CE EC Declaration of Conformity

(Original EC Declaration of Conformity)

In accordance with the Construction Products Directive 89/106/EEC

**The manufacturer:** EHRET GmbH  
Aluminium shutters  
Bahnhofstrasse 14–18  
77972 Mahlberg, Germany

declares that the product: **FSL-light folding sliding shutters**  
Description of function: Sun/glare protection and screen

to which this guideline refers, meets the requirements of the EC Directives specified above

The following harmonised standards have been applied in full:


**EN 13659: 2015-05** Shutters and external venetian blinds –  
Performance requirements including safety

—

Name and address of the individual who is authorised to assemble the technical documentation:

Ralf Gielen  
Head of Technology

Location: 77972 Mahlberg, Germany  
Date: 01.03.2015



EHRET GmbH  
Andreas Schnaase  
Head of Sales



EHRET GmbH  
Eberhard Schopferer  
Management

## Installation FAQs

### Which parts have been delivered?

- Guide rail, cut to measure
- Guides left and right
- Sash packets, each containing two folding sliding sashes
- Hinges pre-installed on the sash
- Hinges, locking mechanisms and accessory fittings included loose

### Which means of attachment are being used?

- The fitting materials are not included in the scope of delivery!
- The selection of the fitting materials is based on the mounting bases on hand, the load-bearing capacities of which are to be checked before the installation. Observe without limitation the regulations of the manufacturers of dowel and fitting materials.

#### WARNING

##### **Danger of injury/property damage caused by unsuitable fitting materials**

- ▶ The fitting materials are to be selected in accordance with the load-bearing capacity of the mounting bases.

### What must be observed during on-site performance?

#### WARNING

##### **Danger of injury/property damage caused by falling folding sliding sashes**

Missing or incorrectly set locking parts may result in fitting parts breaking and therefore in the folding sliding sashes falling.

- ▶ Secure the sash packets using the locking parts.

- If there is an odd number of sashes, the side-hung sash must be fastened in its open position using an additional locking part.

#### WARNING

##### **Danger of injury / property damage caused by failure to use wind bracing**

- ▶ Secure free-standing side-hung sashes in their open position using additional locking parts.

### What is to be taken into account with the function check?

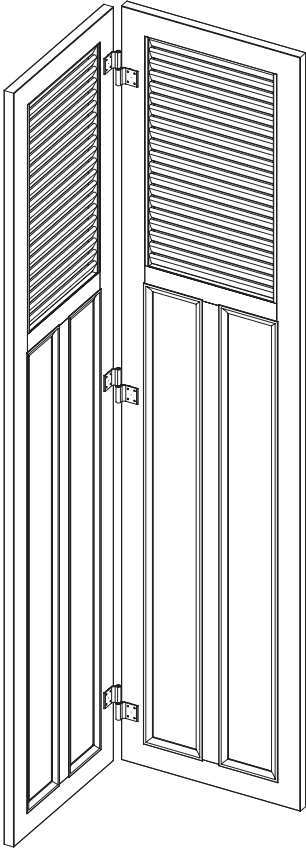
- Can the folding sliding sashes be moved easily?
- Are the folding sliding sashes aligned parallel to one another?
- Are the sashes parallel to the façade when closed?

## Scope of delivery

### FSL-light folding sliding shutters

#### Sashes

Hinges pre-installed



### Contained in the scope of delivery

#### Guide

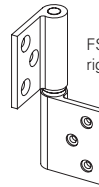


Guide rail

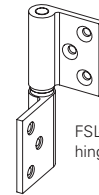


Guide can  
can be used left/  
right

#### Hinges



FSL-light hinge,  
right

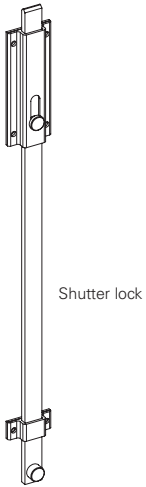


FSL-light  
hinge, left

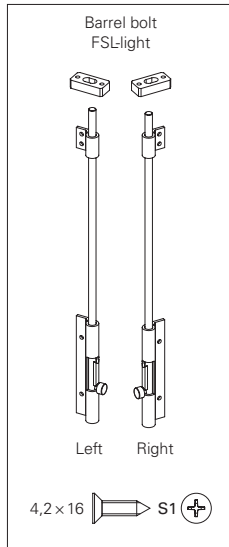
#### Accessories

Ø4 mm  N1

## Locking

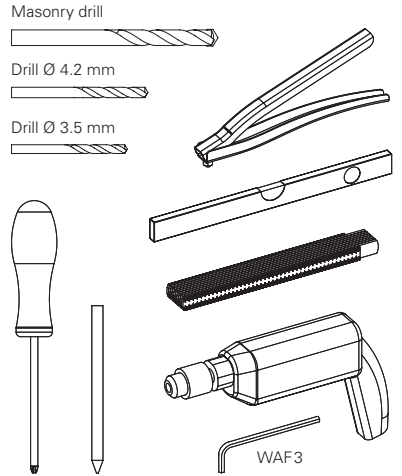


### Variant 1



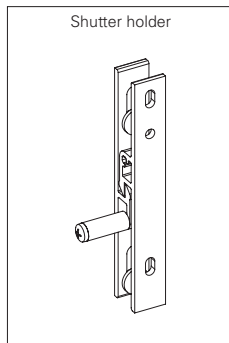
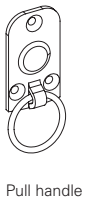
## Tools required\*

\*not included in the scope of delivery



**INFO** Fitting material to be provided by the customer!

### Variant 2



## 2 Installation instructions

### Preparation

#### **⚠ WARNING**

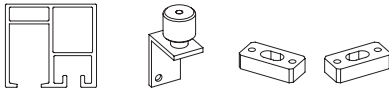
Danger of injury and property damage caused by unsuitable fitting materials

- ▶ Select the fastening material in accordance with the load capacity of the installation substrates!

#### NOTES

- The selection of the fastening method is dependent on the base and is therefore exclusively your own responsibility.
- The installation material is not included in the scope of delivery.

- ▶ Check the scope of delivery for completeness prior to installation.
- ▶ Keep the guide rail, guides and barrel bolt locking plates which will be required next on hand.



### Pre-drilling the guide rail

#### **⚠ WARNING**

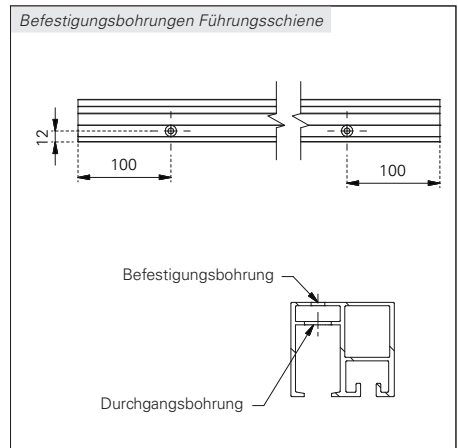
Danger of injury and property damage caused by falling folding sliding sashes

Fastening the guide rail inadequately can cause the folding sliding sashes to fall.

- ▶ Observe the maximum distances for the mounting holes.

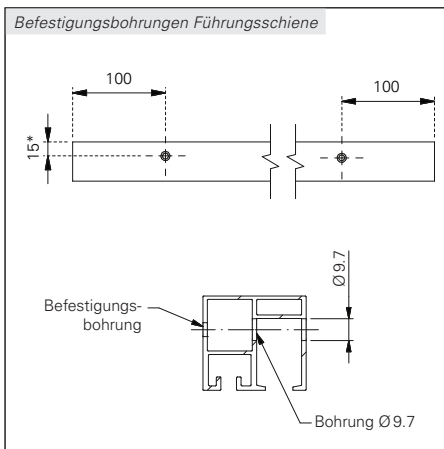
*The distance between two mounting holes must not exceed 400 mm!*

### CEILING INSTALLATION



## WALL INSTALLATION

**Important:** If the drilling dimension for the first two chambers is to be larger than  $\varnothing 9.7$  mm, the vertical dimension (15 mm) must be adapted accordingly!



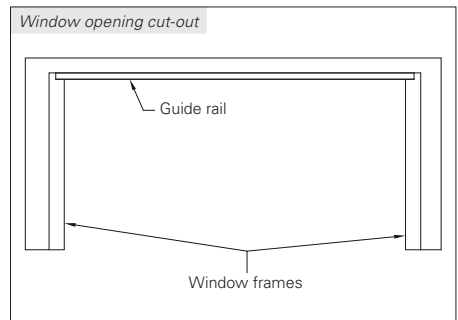
## Mounting the guide rail

## NOTES

The guide bracket can also be installed on the outside.

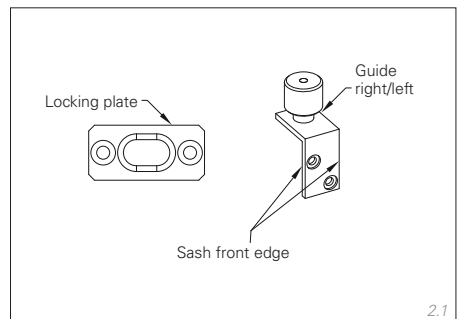
- ▶ Check whether the bracket can be installed on the inside before installation.

- ▶ Measure the guide rail.



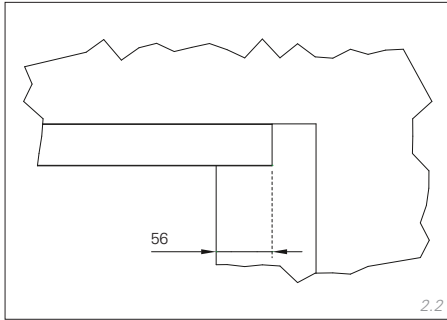
View from outside

- ▶ Insert the left/right guide and the barrel bolt locking plate into the guide rail.

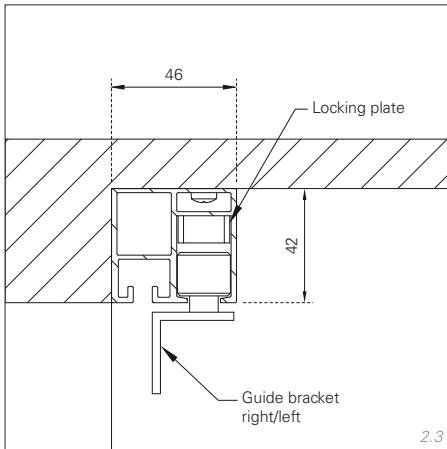


## Installing the hinges on the sashes

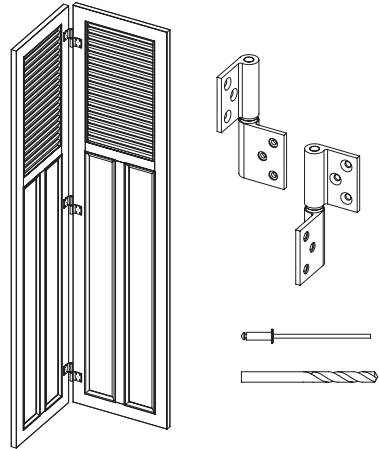
- ▶ Keep a side projection of 56 mm on the hinge side.



- ▶ Align and fasten the guide rail.

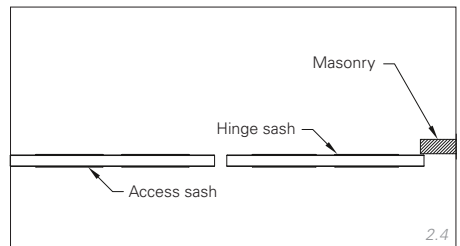


- ▶ Keep the sashes, hinges, N1 RIVETS and Ø4.2 mm drill on hand.

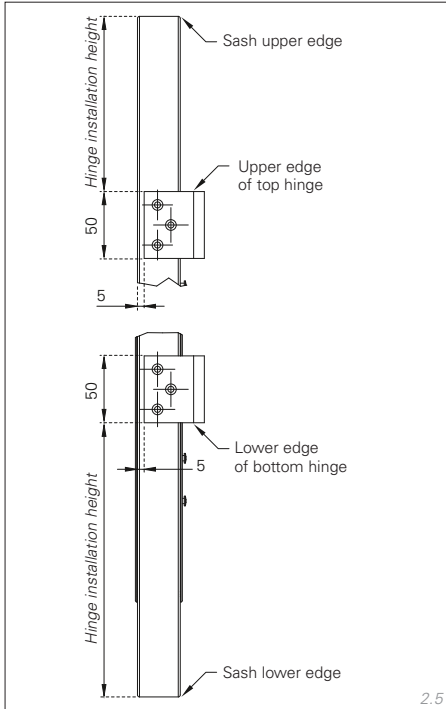


- ▶ Position the access sash and the hinge sash.

*The hinge sash is 20 mm wider than the access sash!*

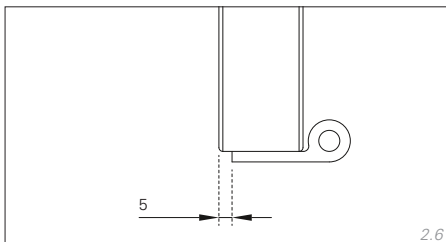


- Determine the installation heights of the hinges.



*Installation height: From the upper edge of the sash to the upper edge of the hinge and from the lower edge of the sash to the lower edge of the hinge*

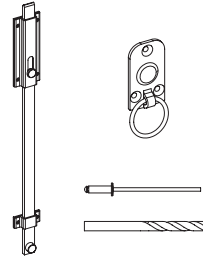
- Position the hinges and fasten using N1 RIV-ETS.



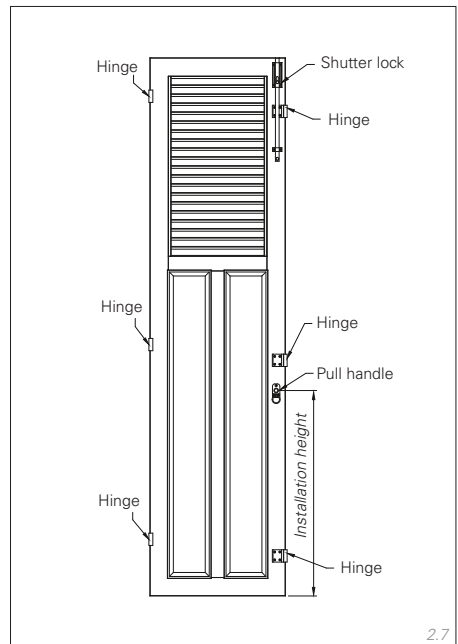
## Installing the accessories on the hinge sash

### VARIANT 1+2

- Keep the shutter lock, pull handle, N1 RIV-ETS and Ø4.2 mm drill on hand.



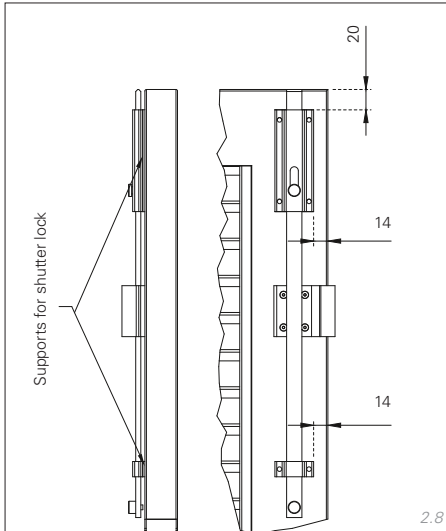
- Determine the installation height of the pull handle.



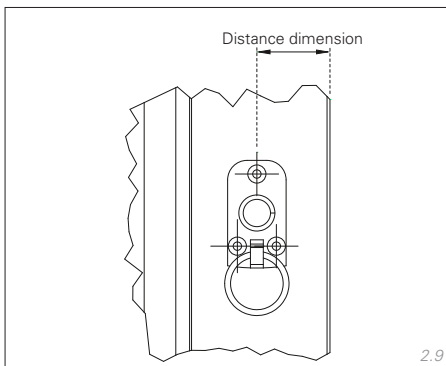
*Installation height: Lower edge of sash to centre of pull handle*

- ▶ Position the shutter lock and fasten using N1 RIVETS.

*Do not forget the supports for the shutter lock!*



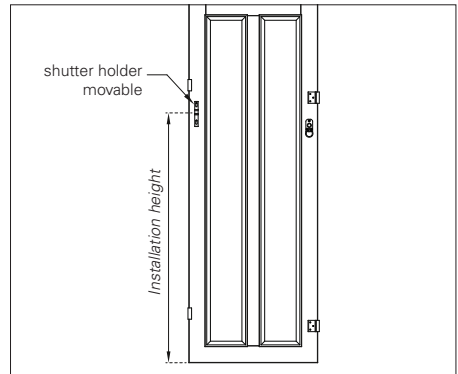
- ▶ Position the pull handle and fasten using N1 RIVETS.



*Distance dimension from the centre of the pull handle to the outer edge of the frame:  
37.5 mm (for frame R75) / 24 mm (for frame R48);  
or in the axis of the shutter lock*

### VARIANT 2

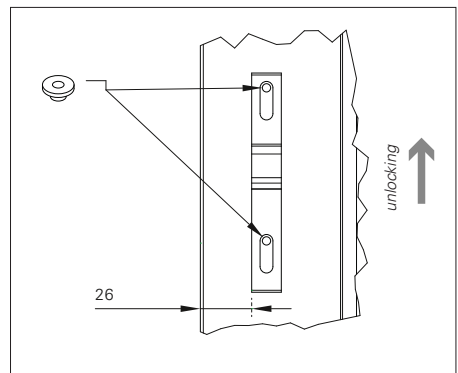
- ▶ Determine the installation height of the shutter holder



*Installation height: Lower edge of sash to centre of shutter holder*

- ▶ Position the shutter holder
- ▶ Fasten the shutter holder with N1 rivets and sleeves

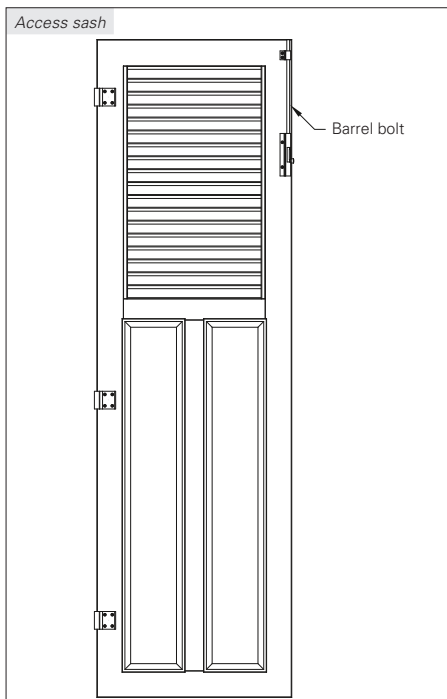
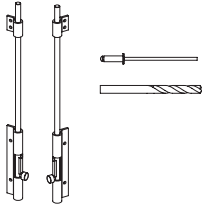
*The shutter holder is unlocked by means of a lifting motion.*



## Installing the accessories on the access sash

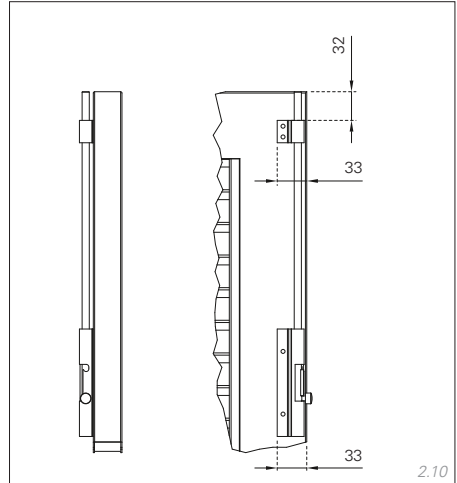
### VARIANT 1

- ▶ Keep the barrel bolt, N1 RIVETS and  $\varnothing 4.2$  mm drill on hand.

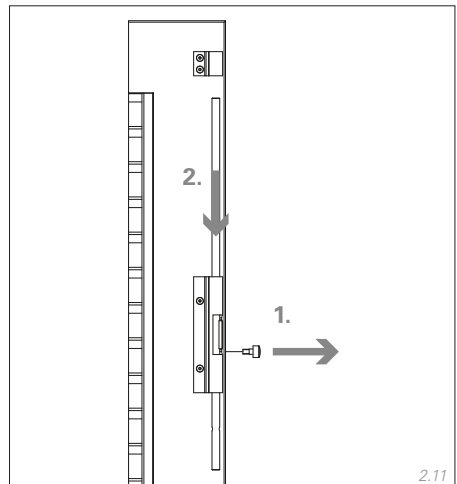


View from inside

- ▶ Position the barrel bolt and fasten using N1 RIVETS.

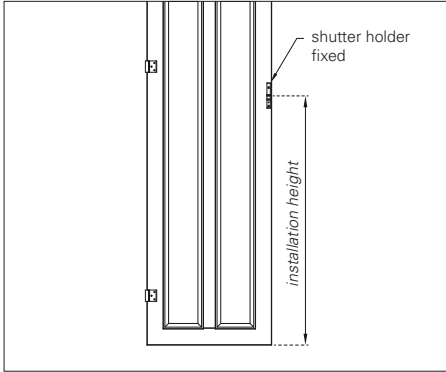


- ▶ Remove the bolt knob.
- ▶ Pull the locking rod out of the guide.



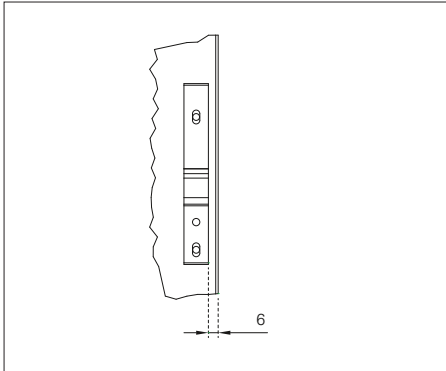
VARIANT 2

- ▶ Determine the installation height of the shutter holder



*Installation height: Lower edge of sash to centre of shutter holder*

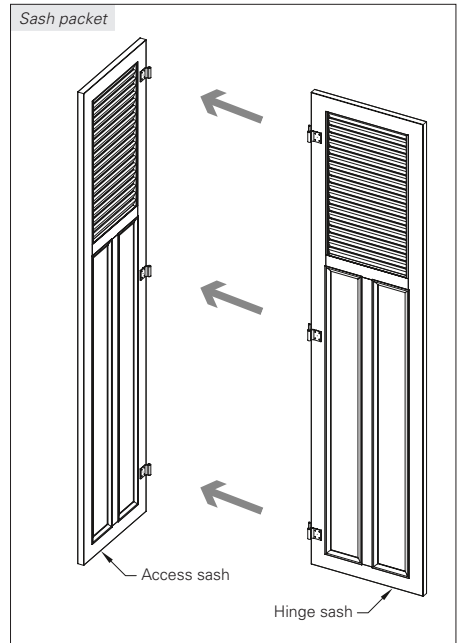
- ▶ Position the shutter holder
- ▶ Fasten the shutter holder with N1 rivets



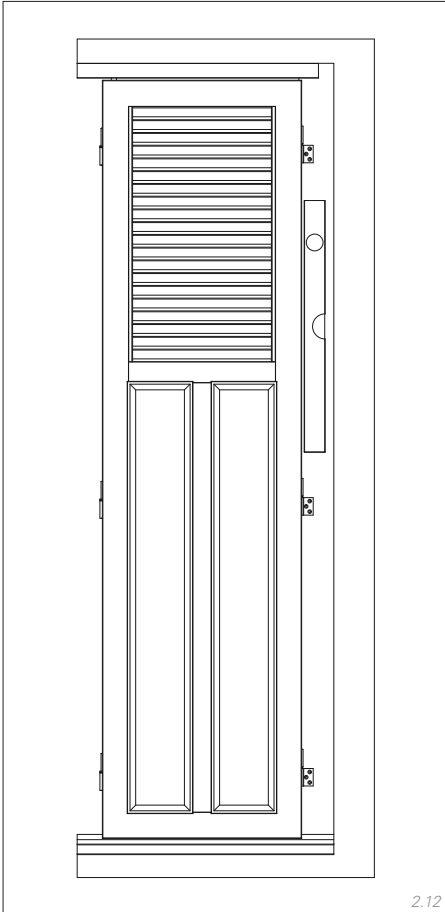
## Installing the hinge sash

### NOTES

- The selection of the fastening method is dependent on the base and is therefore exclusively your own responsibility.
- The installation material is not included in the scope of delivery.
- The increased total weight of the pre-installed sash packets can make the alignment of sashes difficult during installation, depending on the model and size.
- ▶ Where appropriate, release the access sash from the hinge sash.



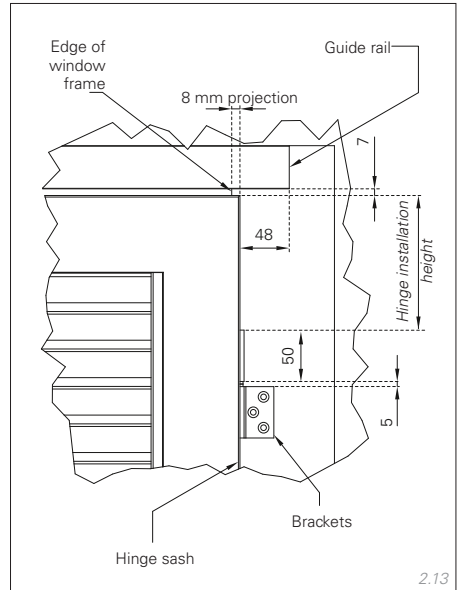
- ▶ Position the hinge sash under the guide rail and align it using a spirit level.



2.12

View from outside

- ▶ Check the gap (7 mm) between the hinge sash and the guide rail.
- ▶ Hang the brackets on the hinge and screw onto the base.



2.13

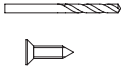
- ▶ Check the sash again using a spirit level.
- ▶ Fasten the lower hinge.
- ▶ Hang the access sash and carry out a shutting test.

**Shutting test:** Both sashes must be parallel to the façade when closed!

## Setting the locking plate

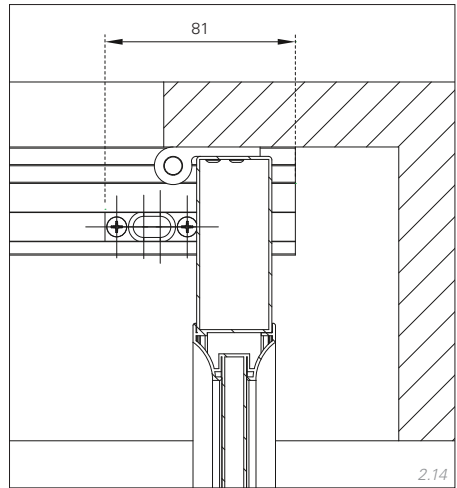
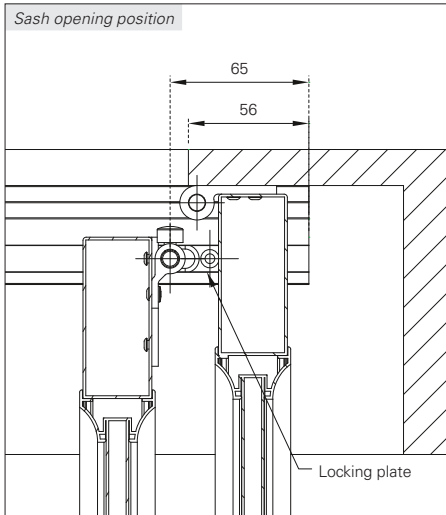
### VARIANTE 1

- ▶ Keep S1 SCREWS and  $\varnothing$  3.5 mm drill on hand.

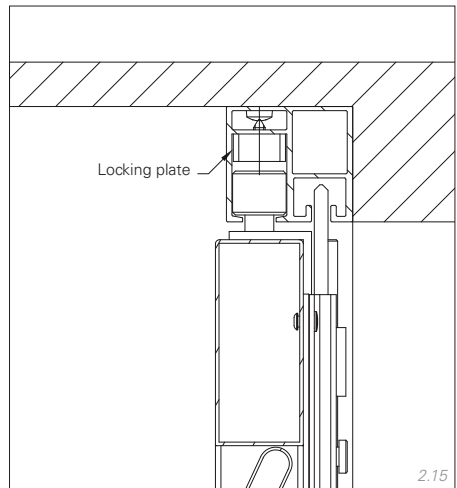


- ▶ Place the sash packet in the desired opening position.
- ▶ Mark the locking plate.

*The marked distance dimension of 65 mm relates to an edge clearance of 56 mm and applies exclusively to this measurement!*



- ▶ Drill the locking plate.
- ▶ Screw the locking plate in place using S1 SCREWS.



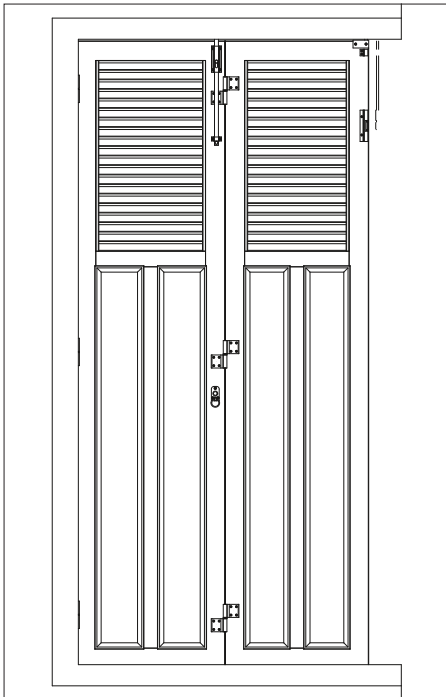
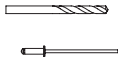
## Installing the guide

### NOTES

The guide bracket can also be installed on the outside.

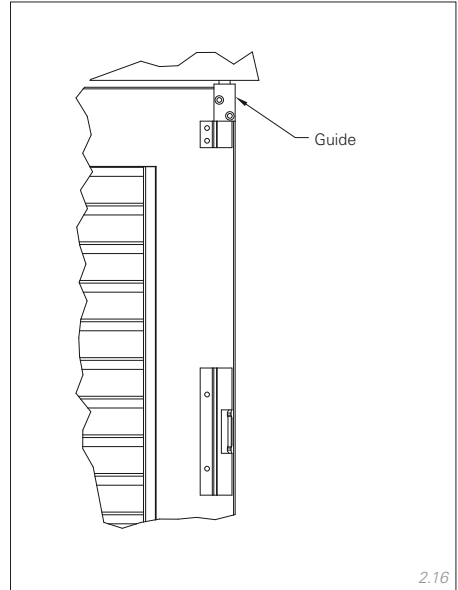
► Check whether the bracket can be installed on the inside before installation.

► Keep N1 RIVETS and  $\varnothing$  4.2 mm drill on hand.

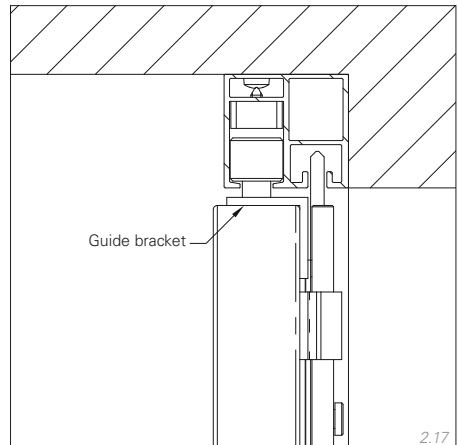


*View from inside*

► Position the guide bracket on the corner of the frame and fasten using N1 RIVETS.



► Install the locking rod of the barrel bolt again.



## **EHRET GmbH**

Aluminium shutters

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