GRIESSER

Assembly instructions
Pantograph shutters

Read these instructions, observe the contents and the warning notes prior to assembly. The information is very important for installation and correct use of the material.

The pantograph shutter is a product for which not only the dimensional and geometric tolerances, but also the straightness and parallel alignment of the running and guide elements, must be adhered to without fail at the time of installation in order to guarantee the trouble-free operation and performance of the product.

Only trained personnel may put the systems into operation.

Contents

1. Notes regarding these instructions

These instructions is meant for trained technicians with good skills in assembly technology. Only qualified technical personnel with the respective assembly experience may install pantograph shutters

1.1 Validity of this manual

The sliding shutters have been approved for export and use in Austria.

1.2 CE marking

Griesser AST GmbH hereby declare that the external pantograph shutters conform to the basic requirements and other relevant specifications contained in the EU standards.

This is documented by the CE marking.

1.3 Used symbols

L	Side, direction, design left
R	Side, direction, design right
	Outside
	Movement to be carried out
	Movement, direction
	Movement, direction
2x	Repeat step various times
	Manual operation
	Electric operation, motor
	Visual inspection
	Information

1.4 Abbreviations

hl	Opening height
bl	Opening width
hff	Finished sash height
bff	Finished sash width

2. Security

The safety and warning notes make a distinction between personal injury and damage to property. The signal word "Danger" is used to indicate the risk of personal injury, while the signal word "Caution" is used to indicate the risk of damage to property.

2.1 Safety and Warnings

Immediate danger to life and limb!

Immediate risk of product and environment!

Useful information and notes

- Observe the applicable accident prevention regulations.
- Make sure that any installed electrical connections are disconnected from the mains supply during the assembly.
- Close off a sufficient space around the assembly area.
- Check any available scaffolds and installations in terms of their safety.
- Observe the regulations applicable to dowel and fastening material.
- Always work with undamaged and suitable tools.
- Keep plastic films, packaging material as well as small parts away from children – risk of suffocation!

2.2 Intended use

Warranty claims are forfeited if damage is due to the non-compliance with the brochure or the attached document. GRIESSER AST GmbH does not accept liability for consequential damage.

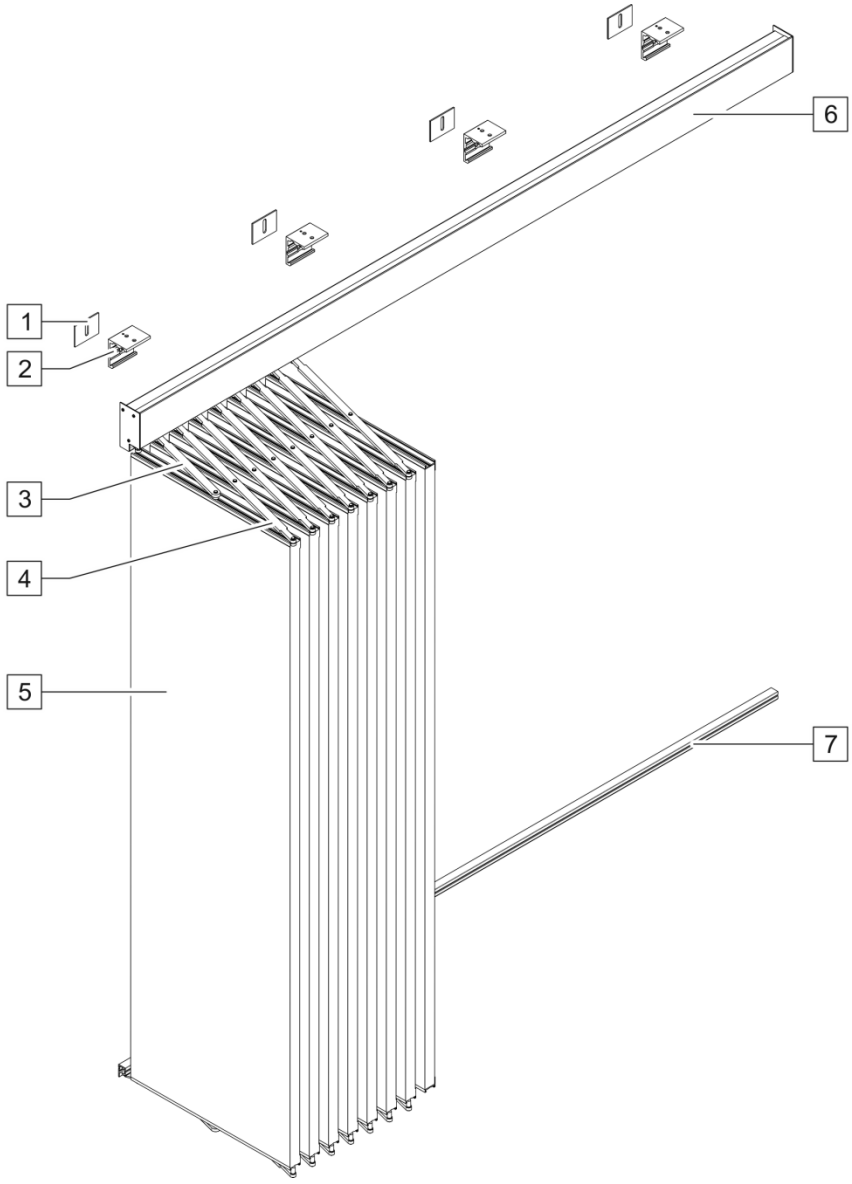
GRIESSER AST GmbH does not accept liability for damage caused by incorrect installation.

Except for the actions described in the operating manual and the assembly instructions, the product may not be altered in any way.

In winter, check products for formation of ice prior to operation; do not operate if ice has formed.

3. Product description

3.1 Exploded assembly drawing (external view)



3.2 Mounting accessories

No.	Designation
1	Rubber insert
2	Suspension angle
3	Scissors, short
4	Scissors, long
5	Sash
6	Runner rail with fitted carriages
7	Guide rails

3.3 Marking

Depending on the quantity, the components for the same pantograph shutter can be packed in several cartons.

4. Mounting

4.1 Preparation for mounting

- **Checking the installation dimensions**
  The main dimensions must be checked according to the dimension sheet prior to installation.
  The installation tolerances according to the Technical Datasheet must be adhered to.

- **Orientation at the installation site**
  Aids (table, crane, ladder, etc.)

- **Selection of tools and mountings**
  Electrical connection with motor connectors
  Check material

- **Distribute material (how and where)**
  Dimension sheets, manufacturing notes
  Assembly instructions

- **Study documents**
  Installation dimension check (width x height)
  Sketches, drawings

Attention **Assembly view from the outside**

4.2 Installation tolerances

Parallelism of the guides in all directions +/- 2 mm
Deviations from the perpendicular +/- 2 mm/m

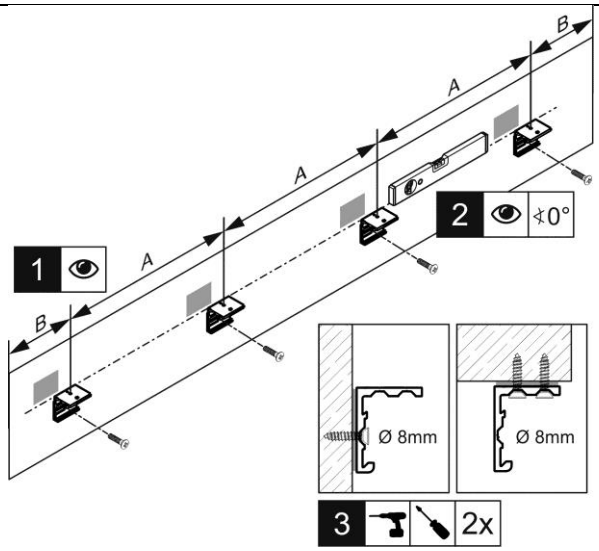
4.3 Installation in an elevated area

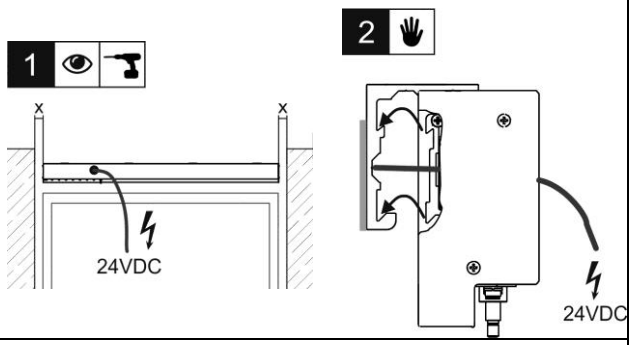
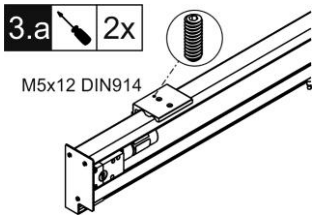
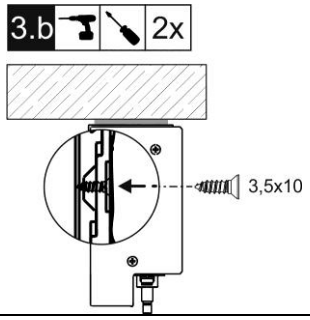
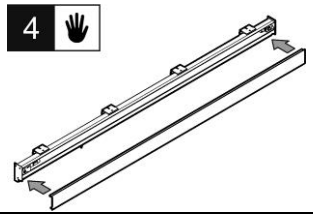
Fall protection
Workers run the risk of falling when working at elevated heights. Suitable anti-fall guards must be used.

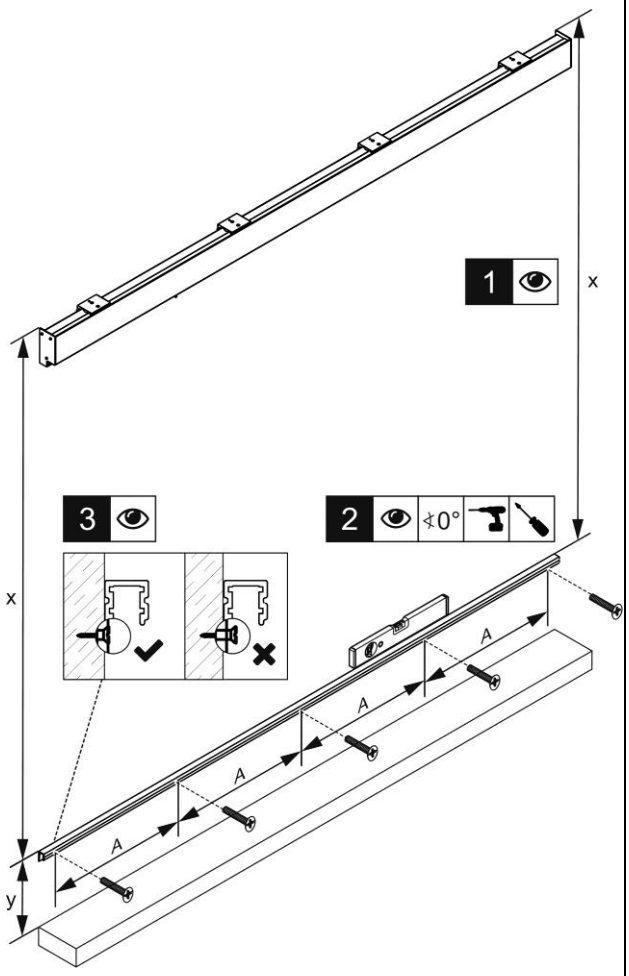
4.4 Fasteners

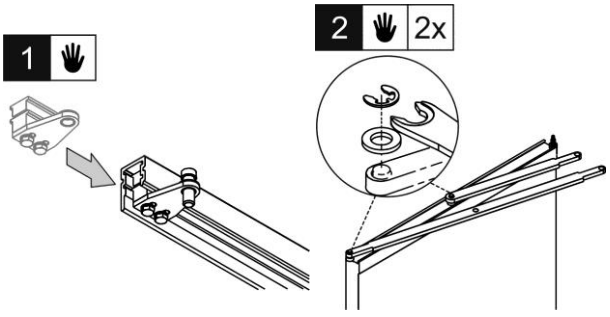
In the installed condition, the pantograph shutter only meets the requirements of the given wind class when

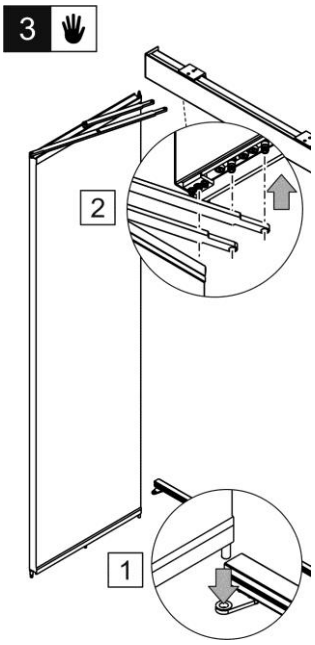
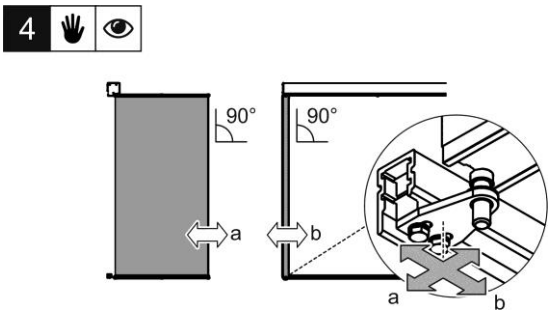
- the Runner rails, guide rails installed taking the permitted anchor plug extraction force into consideration.
- the processing guidelines of the used dowel pins were observed during assembly.

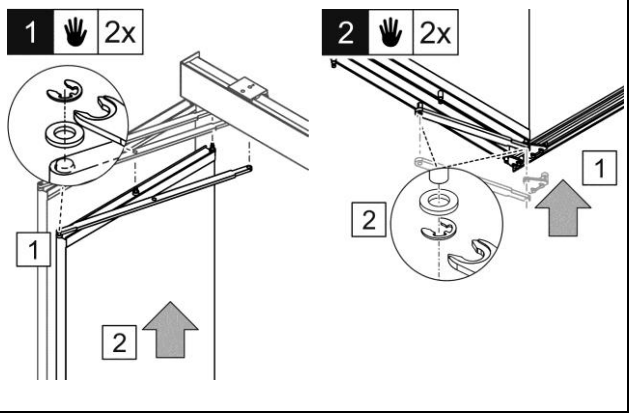
4.5	Fasten suspension angle	
1.	**Draw the position of the suspension angle in accordance with planning documents.** **Drill holes at the marked points.** **Use appropriate fastening means!** **Mount suspension angle with rubber insert for acoustic decoupling.** **Align and fasten suspension angle symmetrically.**	 **A Clearance between the angles: 500 – 800 mm** **B Beginning distance up to center of angle: ca. 150 mm**

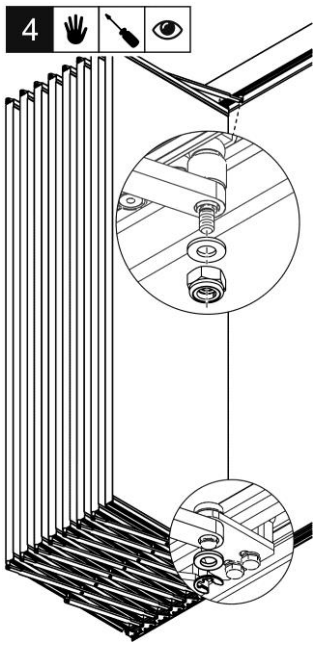
4.6	**Installation of the runner rail**	
1.	**Draw position of the supply line in the runner rail and drill hole.** **Avoid sharp edges and burrs!** **Guide the supply line through the hole and suspend the runner rail.** **Determine the lateral clearance of the runner rail (X).**	
2.	**Installation of the runner rail** **Connect electricity to the drive motor.** **Connect supply line and motor:** **Red cable: +24V** **Blue cable: Ground** **Lay cable between the drive belts.**	 
	Attention	
	The cable may not be up against moving parts!	
	Installation of the guide below see Pos. 4.7 **Installation of the sash see Pos. 4.8**	
3.	**Fasten the cover to the runner rail.**	

4.7	**Installation of the guide rail**	
1.	**Fasten and center the guide rail symmetrically to the runner rail.** **Use appropriate fastening means!** **A** ca. 300 – 400 mm Countersunk head screws Ø 4 – 5 mm **B** Clearance between wall and guide rail ca. 80 mm **X** Sash height + 126 mm **y** ca. 65 mm	

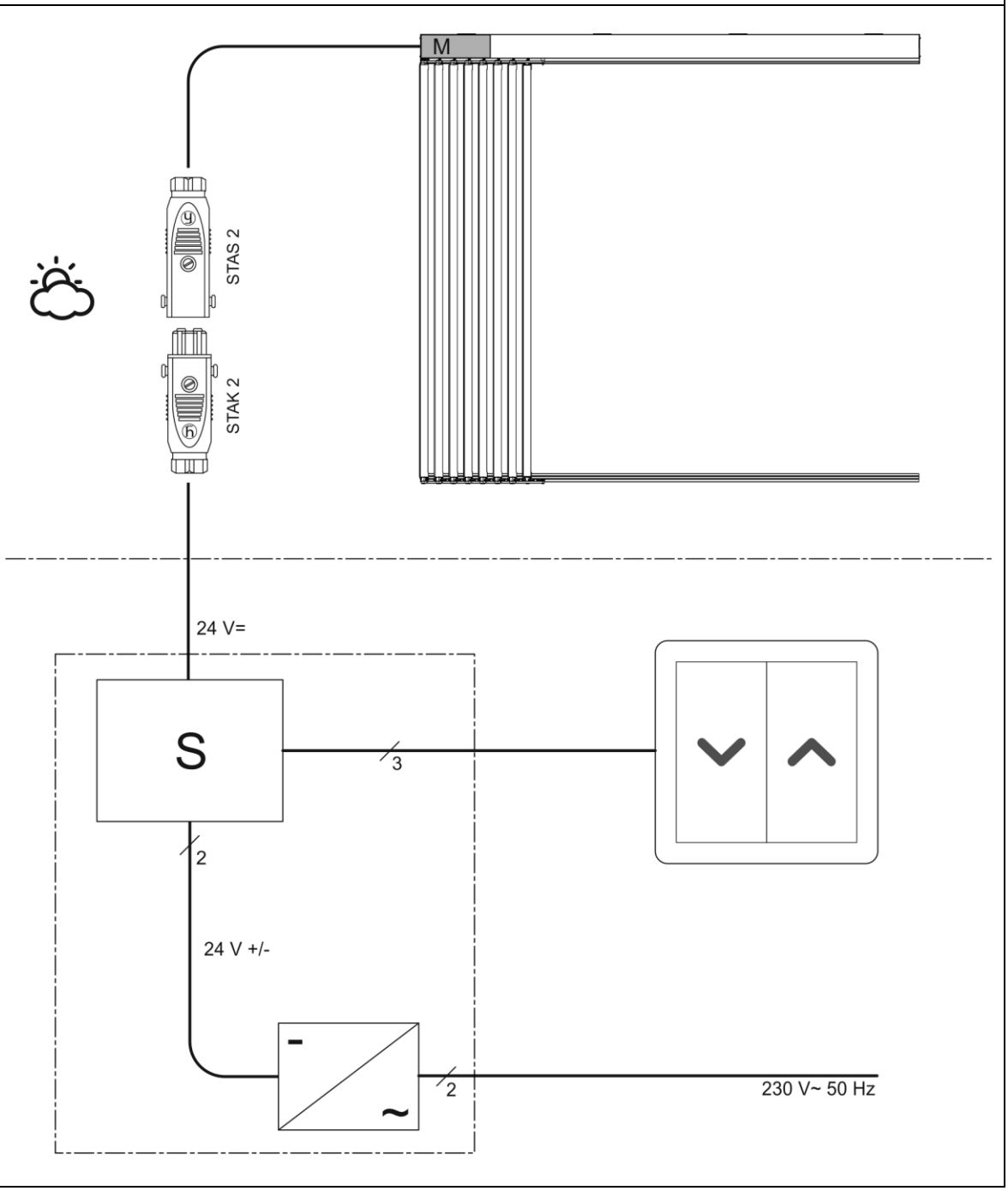
4.8	**Installation of the sash**	
	Mount first sash	
1.	**Slide fix clamp into guide rail on the drive side.** **Premount scissors on the sash: Insert scissors on bolt with socket facing downward.** **Use special wrench to clip spring lock washer into the bolt.**	

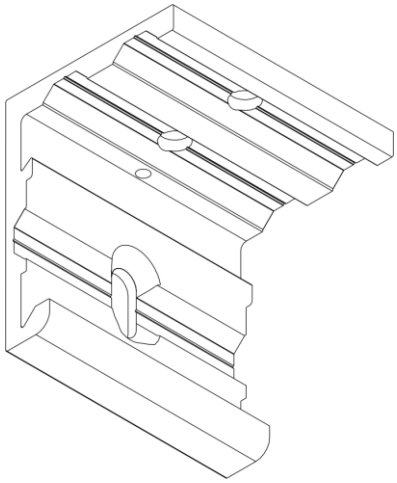
2.	**Guide sash into the plain bearing bush of the fix clamp.** **Pivot sash under the carriage.** **Align scissors under the carriage.** **Engage sash in the quick-release coupling:** **Raise sash and insert quick-coupling bolt in the fix clamp above.**	
	Attention	
	Check the completeness of the engagement of the bolt in the quick-release coupling!	
3.	**Undo the screws at the fix clamp slightly and align the sash vertically.** **Fix the screws in place at the fix clamp.**	

	Mount middle sash (2 – max. 7)	
1.	**Premount scissors on the sash: Insert scissors on bolt with socket facing downward.** **Slide fix clamp into guide rail on the drive side.** **Use special wrench to clip spring lock washer into the bolt.**	

	Mount end sash	
1.	**Secure scissors at top on last carriage with self-locking nut.** **Tighten nut slightly so that scissors can still move easily.**	

4.9	**Annex**
1.	**Schematic diagram of plug-type connection**



2.	**Suspension angle**	

5.	**Troubleshooting table**		
5.1	**Trouble-shooting**		
	Fault	**Cause**	**Correction**

6.	**Disposal**
	Pantograph shutters must be disposed of in an environmentally friendly manner at the end of the product's service life!

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