



AV90 ▪ AV115 ▪ THERMO ▪ SV ▪ S



Instruction manual





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2 INTRODUCTION

Thank you for choosing the Svalson Sliding Window.

The automatic Svalson Sliding Window reduces dramatically the risk of wear injuries to the shoulders and joints of users such as receptionists and cashiers.

When you ordered the Svalson Sliding Window, you assured yourself of the reliable engineering which is the hallmark of all Svalson AB products. Svalson AB has been making the Svalson Sliding Window since 1980, and is now Europe's largest manufacturers of automatic reception windows.

2.1 Where Should I Start If I Am ...

2.1.1 ... The User (Operator)?

Being the user of the Svalson Sliding Window, you should become well acquainted with the contents of this instruction manual. Read the whole of the instruction manual.

- Read Section 4 (Operation) and Section 7 (Functional checks).
- Run a functional check as described in Section 7.
- Read Section 8 (Care and maintenance) so that you will know the measures that you may have to take.
- Check that the installer has filled in the log sheet (Appendix 4).
- Carefully read the remainder of the instruction manual so that you will become acquainted with it and will be able to find quickly any information you may need. The type designation and serial

number are specified both on the machine and at the end of this manual.

2.1.2 ... An Installer?

The quickest way of getting started is to do everything correctly right from the start. If you allow yourself 15 minutes to read this instruction manual, it may save you hours later on.

- Read Section 4 (Operation), 5 (Installation) and 7 (Functional checks).
- Read A Section 8 (Care and maintenance) and Section 9 (Fault tracing and repairs). This section may be of great assistance if you encounter problems during the course of the installation work.
- Carefully follow the instructions during the installation work. Bear in mind that incorrect installation may restrict the terms of the guarantee as described in Appendix 2 (Guarantee).
- Fill in the log sheet (Appendix 4) after completing the installation work.

2.1.3 ... A Repair Technician?

The quickest way of getting started is to do everything correctly right from the start. If you allow yourself 15 minutes to read this instruction manual, it may save you hours later on.

- Read Sections 4 (Operation), 7 (Functional checks), 8 (Care and maintenance) and 9 (Fault tracing and repairs).
- Carefully read Section 5 (Installation) and Appendix 2 (Guarantee).

- Fill in the log sheet (Appendix 4) after completing the repair work.

3 DESCRIPTION

Svalson Sliding Window is designed for use both indoors and outdoors where there is a need for very wide openings, e.g. in receptions or restaurants.

Note: This instruction manual describes Svalson Sliding Windows of type AV90, AV115, and Thermo. The manual also describes some Svalson Sliding Windows of type SV and S, that is similar in construction to these types.

The frame sections of the Svalson Sliding Window can be provided with a variety of surface finishes. It can also be fitted with a wide variety of glass types.

The Svalson Sliding Window can be manufactured in both automatic and manual performance. Automatic windows are very simple to operate by means of a control box, and are automatically locked by an intermediate locking

mechanism which locks the movable window both in the closed position and in intervals along the entire opening height.

Both automatic and manual Svalson Sliding Windows can be equipped with key locks (e.g. ASSA) which locks the movable window in the closed position.

All Svalson Sliding Windows are matched to the customer's specific requirements. The dimensions are entirely optional, and several different versions are available, e.g. built-in side sections.

Some Svalson Sliding Windows are provided with an alarm relay. The alarm relay automatically closes the Svalson Sliding Window after activation by, for example, a fire alarm or an assault alarm.

4 OPERATION

Automatic Svalson Sliding Windows are normally operated by means of a control box and/or a pedal. To make this instruction manual easier to read, the term 'control box' will be used here to denote both the control box and the pedal. The Sliding window can be opened or closed by pressing the appropriate button on the control box. The drive motor for the Sliding window will keep running as long as the button is depressed, and will stop when the button is released. Don't keep the button depressed unnecessarily long after the movable window has reached the end of its travel, since this would cause unnecessary wear of the motor.



All Sliding windows are equipped with some form of unloading system which


will come into operation if anything should prevent the window from moving freely. However, children and sensitive people may sometimes experience discomfort if struck by the movable window. So don't move the Sliding window to the closed position until you have checked that there are no persons or objects in the window opening. Always be particularly observant when there are children in the vicinity.

The Sliding window can also be equipped with other types of control devices. Instructions for such devices are delivered separately.

Manual Svalson Sliding Windows are normally equipped with a handle which makes operation of the window simple.

5 INSTALLATION

IMPORTANT NOTE. Read carefully the whole of the installation instructions before starting the installation work.

 The movable window is suspended by a cord. If the cord should fail, an emergency brake will prevent the movable window from dropping down. Incorrect installation may render the emergency brake inoperative and may thus lead to injury if the cord should break.


For the Sliding window to operate smoothly, it must be correctly installed in accordance with the manufacturer's instructions. Under no circumstances may holes be drilled in the frame sections of the Sliding window, since electrical parts and moving parts are contained inside the frame sections. Modifications and alterations to the Sliding window, and also incorrect installation will restrict the terms of the guarantee.

See Appendix 1 for installation instructions.

6 DISMANTLING AND RECYCLING

Proceed in the reverse order to that described in Section 5 (Installation).

Materials recovery has been taken into account in the production of the Sliding window. Most of the material included in the Sliding window can be recovered. For instructions, please get in touch with the manufacturer or the importer/dealer.

 **WARNING!** The side posts of the Sliding window contains counterweights to balance the movable window. On some Sliding windows these counterweights are made out of lead (Pb). Lead is a substance that is very dangerous for the environment and it must be taken care of. Always use protective gloves when handling lead.

7 FUNCTIONAL CHECKS

Run the Sliding window up and down a few times and check that it runs smoothly, without any scraping sounds.

If a gap should appear between the support surface and the movable window, this indicates that the Sliding window has been incorrectly installed.

Most automatic Sliding windows are equipped with a latch which automatically locks the movable section. To check that the lock performs as intended, run the Sliding window to the closed position and check that it is locked.

Many Sliding windows are equipped with key locks (e.g. ASSA). Check that they are functional.


8 CARE AND MAINTENANCE

The Sliding window needs no lubrication or periodic maintenance. However, to make sure that the Sliding window will perform well, all dust and dirt must be excluded from bearing tracks and sliding surfaces.

If a Sliding window that had been running freely becomes stiff to operate, this is usually due to settlement of the building. In such cases, the Sliding window mounting must receive attention.

9 FAULT TRACING AND REPAIRS

Maloperation may be caused by electrical and mechanical faults. To investigate electrical faults, an electrical measuring instrument, such as a universal meter, may often be necessary. Certain electrical and mechanical faults can generally be detected after certain functional checks.

 **THE MOST COMMON REASON FOR THE SLIDING WINDOW NOT OPERATING IS THAT THE POWER SUPPLY CABLE HAS BEEN DISCONNECTED FROM THE WALL SOCKET.** So always start the fault tracing by making sure that the power supply cable is plugged into the socket and that all other cables are securely connected.

9.1 Motor

Most Sliding windows of this type have two motors. The motors are mounted in the top frame section. A motor can be removed from the Sliding window as follows:

Remove the bar secured to the top frame section and release the hose clip nearest to the motor.

There is a rubber strip taped on the bottom side of the top frame section. Loosen about 300 mm of the end of the rubber strip. Remove the screws that holds the motor cover and remove the motor cover and the motor.

Make a note of the cables that are connected to one another on the motor, and then disconnect them.

Since the motor shaft is not centrally located on the motor, check the direction in which the motor shaft faces, and then remove the motor.

To refit the motor, proceed in the reverse order.

Replace the motor and the motor cover. Turn the motor shaft in the same direction as it was originally. Tighten the hose clip and connect the cables to the motor.

Fasten the motor cover with the screws.

Test the Sliding window and make sure that the movable window travels in the right direction. If not, transpose the supply cables to the motor.

9.2 The motor fails to run even though the button is depressed

Check that the wall socket is live.

Check with a universal meter:

- that the voltage on the secondary side of the transformer (or the back-up battery) agrees with the rated voltage.

- the voltage (reversible DC) at the connector from the control box to the Sliding window. Note that you must press the open or close button before there is a voltage across the connector.

- the voltage (reversible DC) at the cable connections at the motor (see Section 9.1). Note that you must press the open or close button for the supply to be live across the connections.

The part that does not conduct current is faulty and must be changed.

If there is a DC voltage at the connection to the motor but the motor still fails to run, the motor is presumably faulty and must be changed.

9.3 The motor buzzes when the button is depressed, but the movable window remains stationary

When the open or close button is depressed, the electromagnets should release the latches and the motors should start and drive the cords via the bearing blocks. One end of the cords are connected to the counterweights and the other is secured to the movable window.

Press the close button and check that the latches perform satisfactorily. A clear clicking sound should then be heard when the electromagnet operates the latch. Check that the clicking sound can be heard from both locks. Then press the open button.

If the Sliding window operates after the buttons have been depressed as described above, the fault was due to the fact that the movable window had stopped hard up against a latch so that the latch could not be lifted because it was wedged against the movable window. This will

occur if someone should try to open the Sliding window by hand when it is locked.

If the Sliding window still fails to operate in spite of the clicking sound being heard, the fault is not in the electromagnets. The fault is then presumably in the drive (see Section 9.3.1).

If no clicking sound is heard, the fault is presumably due to the electromagnets being faulty or the supply voltage to it being too low.

Remove the bars secured to the pillars containing the latches.

Check that the voltage (DC) up to the electromagnets are correct when the open or close button is depressed. If the voltage to the electromagnets is correct but the electromagnets do not react, this indicates that they are defective and the entire latch (including the electromagnet) must be changed.

9.3.1 Drive mechanism is faulty

Press the open or close button and check that the rubber hose rotates.

If not, check that the hose clips have not worked loose and that the hose is not damaged. If the hose is damaged, it must be changed.

If the hose is not damaged, the fault is in the gearbox and the entire motor unit must be changed.

9.4 The sliding window fails to lock or fails to open from the closed position

Check that the Sliding window has been installed at right angles. If the angle is incorrect, the latch may not be in the right position on the movable window.

Also check that the distance between the pillars is the same at a number of different heights (a difference may cause the latches to be in the incorrect place on the movable window).

If any dimension is incorrect, the installation of the Sliding window must be corrected so that these dimensions agree.

9.5 The sliding window moves in only one direction

The control box is faulty and must be changed.

10 TECHNICAL SPECIFICATIONS

The following specifications apply as standard for automatic Sliding windows. See separate instructions if the Sliding window is delivered with non-standard equipment.

Power supply	12-24 V AC or DC transformer or battery backup
Motor	Reversible DC motor with gearbox

Drive	Line
Sound level	The equivalent continuous A-weighted sound pressure level will not exceed 70 dB(A) on normal operation (25%)

APPENDIX 1

Installation instructions

IMPORTANT NOTE. Read carefully the whole of the installation instructions before starting the installation work.



The movable window is suspended by a cord. If the cord should fail, an emergency brake will prevent the movable window from dropping down. Incorrect installation may render the emergency brake inoperative and may thus lead to injury if the cord should break.

For the Sliding window to operate smoothly, it must be correctly installed in accordance with the manufacturer's instructions. Under no circumstances may holes be drilled in the frame sections of the Sliding window, since electrical parts and moving parts are contained inside the frame sections. Modifications and alterations to the Sliding window, and also incorrect installation will restrict the terms of the guarantee.

If the Sliding window is installed, for instance, in a wall opening or between other sections, it is important for its outside dimensions to be somewhat smaller than the dimensions of the opening. Under no circumstances should the Sliding window be forced into an opening which is too small, since the sections will then be distorted or compressed.

1 Various Performances of Svalson Sliding Windows

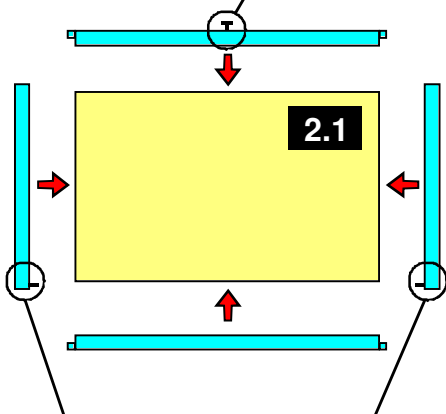
This type of Sliding window can be delivered both as fully assembled windows, and as assembly kits. There are four different alternatives:

- 1 - Manual assembly kit without possibility to upgrade with electrical operation.
- 2 - Electrically operated assembly kit.
- 3 - Manual fully assembled Sliding window without possibility to upgrade with electrical operation.
- 4 - Electrically operated fully assembled Sliding window.

If this Sliding window is fully assembled, please proceed to section 3 (installation).

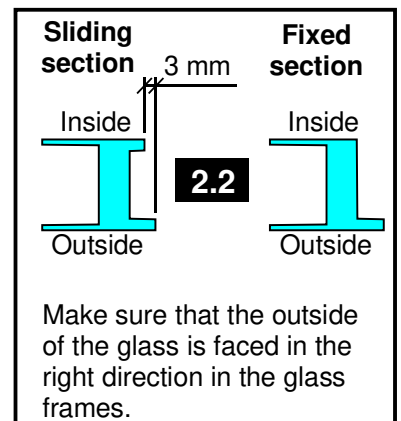
2 Assembling

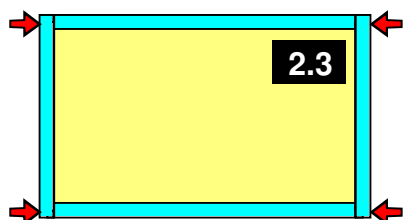
On wide windows (>1660 mm), the top glass frame on the **fixed** section should have a screw. The screw is used to fasten the fixed section to the top profile of the frame.



Glaze the fixed and the sliding section. Since the sliding section is balanced with counterweights, it is very important that the glass that is being used have exactly the same technical specifications (weight and measurements) that was specified when the order was made.

The vertical glass frames of the **sliding** section are provided with a Ø6 mm peg. The pegs shall be faced downward.

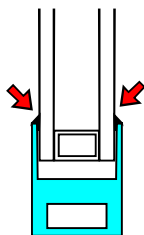




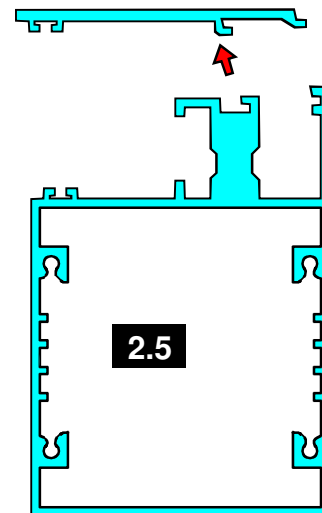
Fasten the glass frames with the enclosed screws (stainless steel B6 x 25).

2.4

Seal the glass with silicone, both on the inside and on the outside.



Besides that the silicone will make the window tight, it will also fix the glass inside the glass frames of the sliding section. This will prevent the glass from moving inside the glass frames when the window is being operated. That is the reason why it is important to seal with silicone, even for indoor installations.

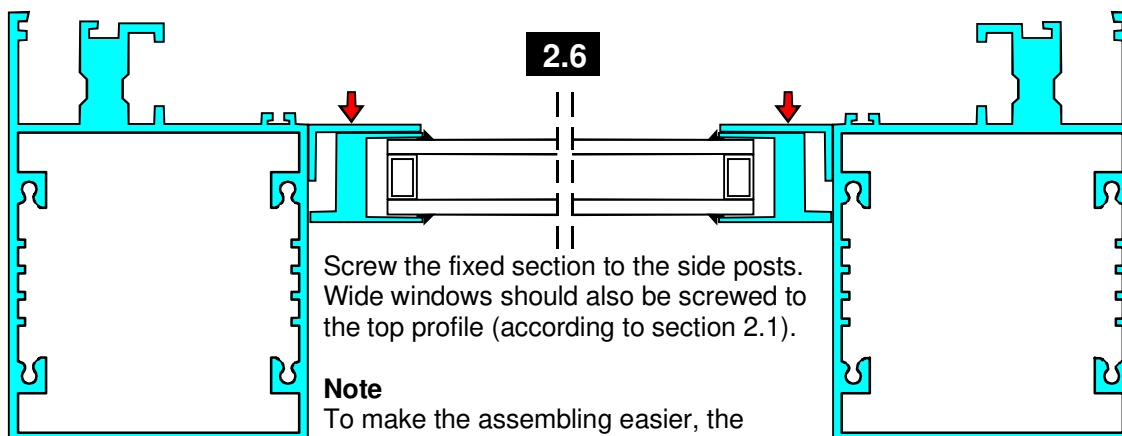


2.5

Remove the flat profile from the side posts, the top profile and the bottom profile.

Note

A large number of windows are manufactured without the bottom profile.



2.6

Screw the fixed section to the side posts. Wide windows should also be screwed to the top profile (according to section 2.1).

Note

To make the assembling easier, the window should be lying down, with the inside facing upward.

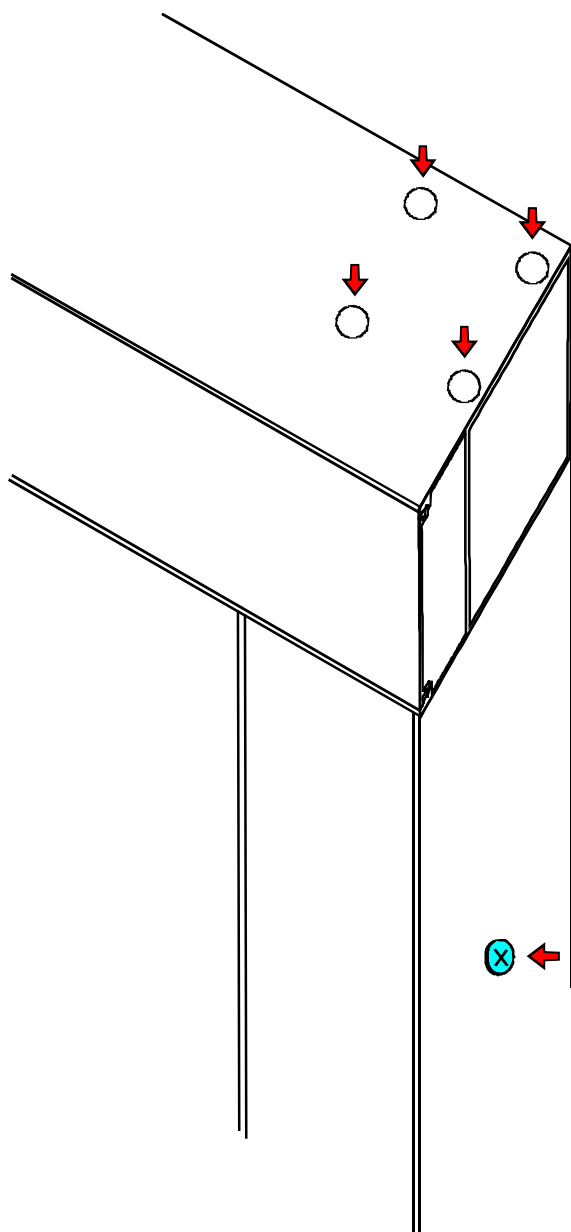
2.7

Electrically operated windows

The motors are screwed to the top profile with three screws per motor. Unscrew the screws and remove the motors and the bearing blocks from the top profile.

Manually operated windows

Remove the bearing blocks from the top profile.



2.8

Fasten the side posts to the top profile and to the bottom profile with the accompanying screws.

On wide windows (>1660 mm), the fixed glass section shall be fastened with a screw to the top profile.

2.9

Electrically operated windows

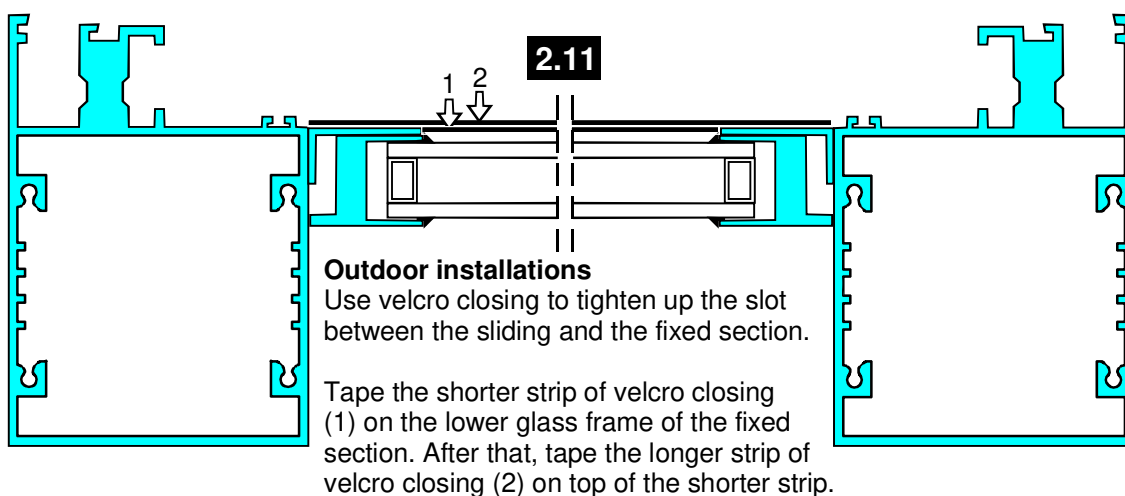
Replace the motors and the bearing blocks into the top profile. Fasten the motors with the screws again.

Manually operated windows

Replace the bearing blocks into the top profile.

2.10

The counterweights are secured with transport locks in the form of screws in side posts. Remove those screws.

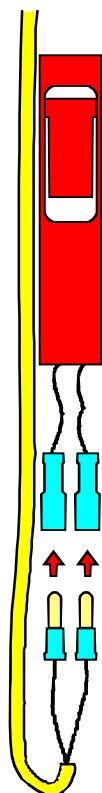


2.11

Outdoor installations

Use velcro closing to tighten up the slot between the sliding and the fixed section.

Tape the shorter strip of velcro closing (1) on the lower glass frame of the fixed section. After that, tape the longer strip of velcro closing (2) on top of the shorter strip.

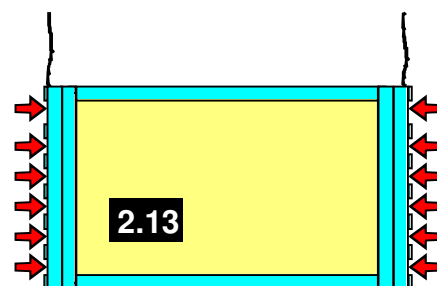


2.12

Electrically operated windows

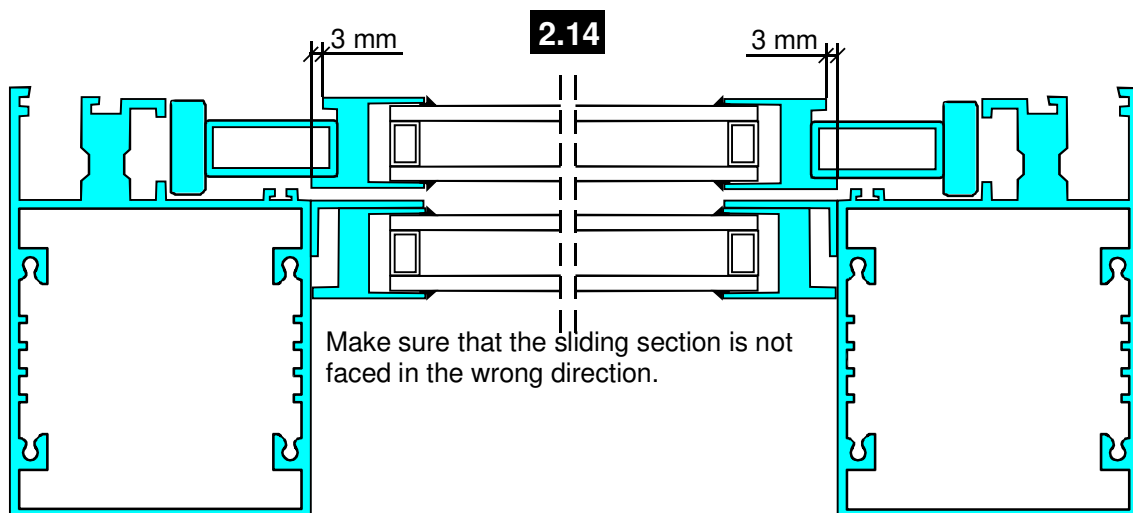
Connect the cables, that are coming out of the top profile, with the locks in the side posts.

It does not matter how the cables are connected. It is not possible to connect them incorrectly.



2.13

Fasten the sliding section to the runners. Section 2.14 shows in what direction the sliding section shall face.

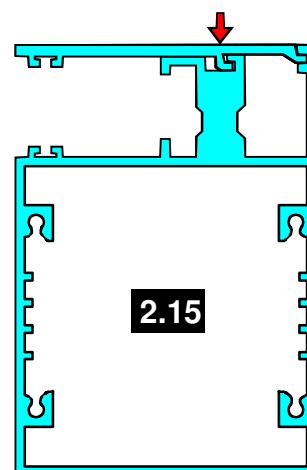


2.14

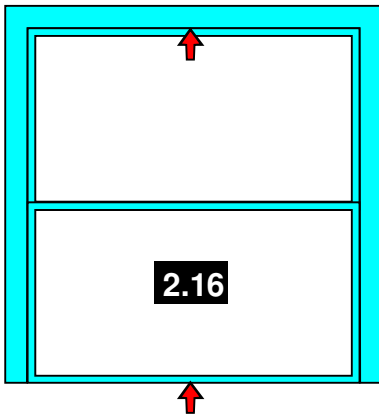
Make sure that the sliding section is not faced in the wrong direction.

Replace the flat profiles to the side posts, the top profile and the bottom profile.

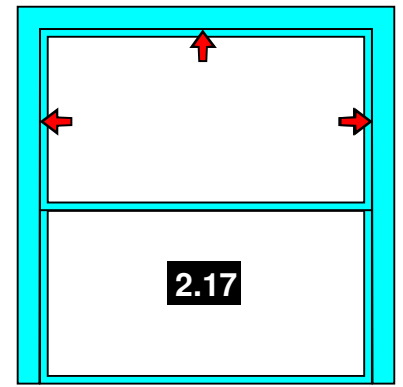
Fasten the flat profiles on the side posts with screws.



2.15



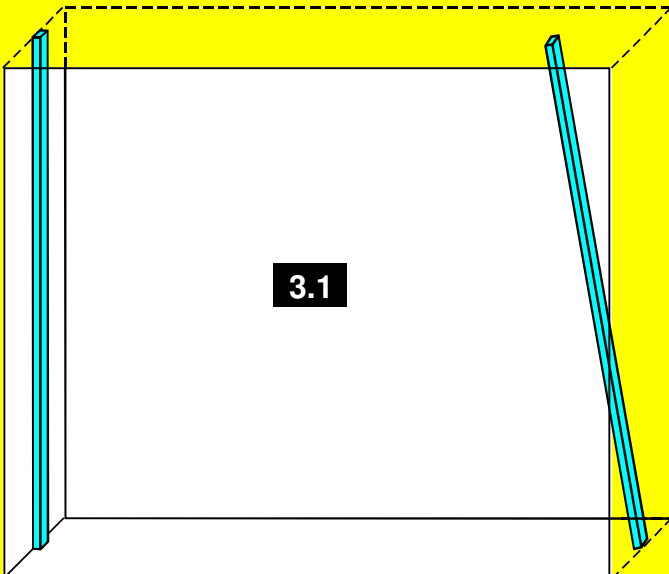
Tape the rubber strips on the top profile and beneath the sliding section. The rubber strips shall go along the whole width.



Outdoor installations


Seal with silicone on the **outside** of the window. The seal shall be made between the fixed section and the side posts/top profile.

3 Installation




3.1

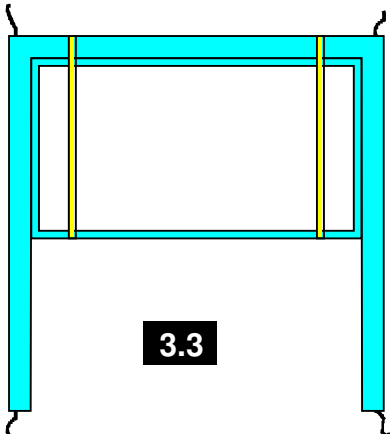
Fit the outer mounting strips (the mounting strips are not included in the delivery of the Sliding window).

 The mounting of the Sliding window should be designed so that there is no risk of the Sliding window falling out of its mounting if a load is applied to it. Pay attention to possible wind pressure.

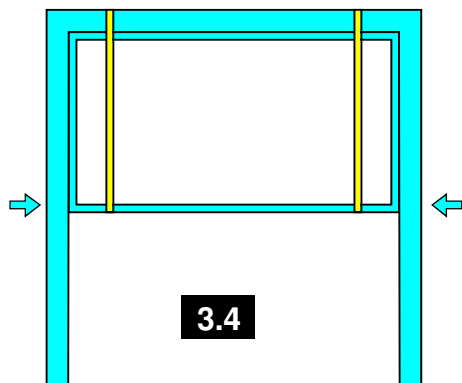
Installation shall be carried out so that the Sliding window will be easily accessible for service. It must be possible to remove the entire window.

If the Sliding window is installed in unattended premises, avoid securing it with screws which are accessible from the outside, since these could then be removed by unauthorized persons. It is important to bear in mind any security requirements (e.g. protection against assault, burglary or fire) when securing the Sliding window.

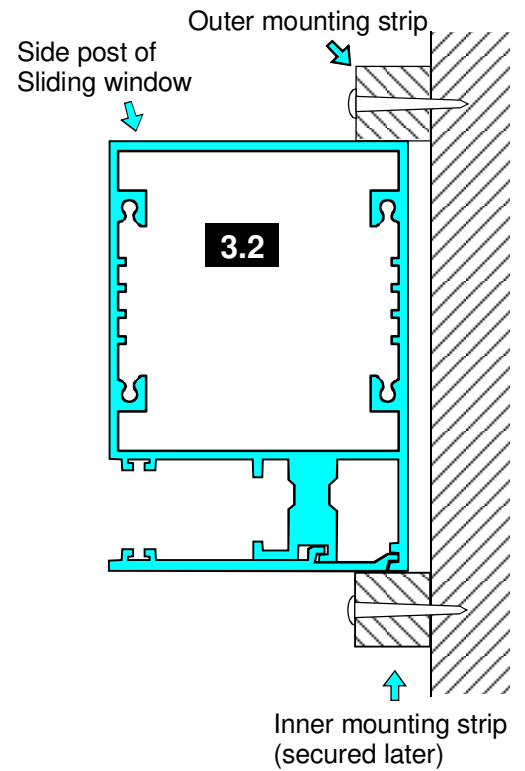
 Other examples of methods of securing the Sliding window are given in section 5.

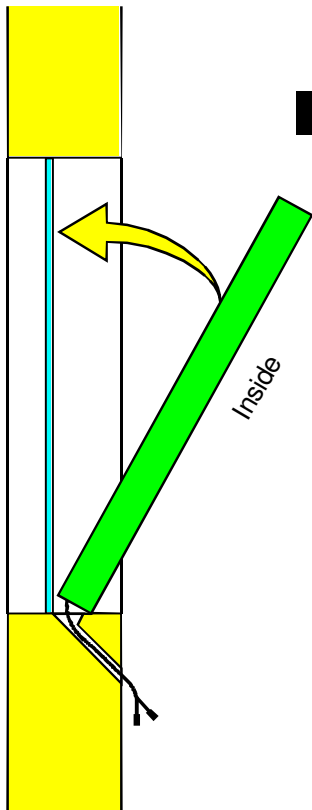


Electrically operated windows
Check where on the window the motor cable is, then drill a suitable hole in the wall, for the cable.



Windows assembled by the manufacturer
The window are equipped with transport locks in the form of screws in the side walls of the pillars. Remove those screws.





3.5

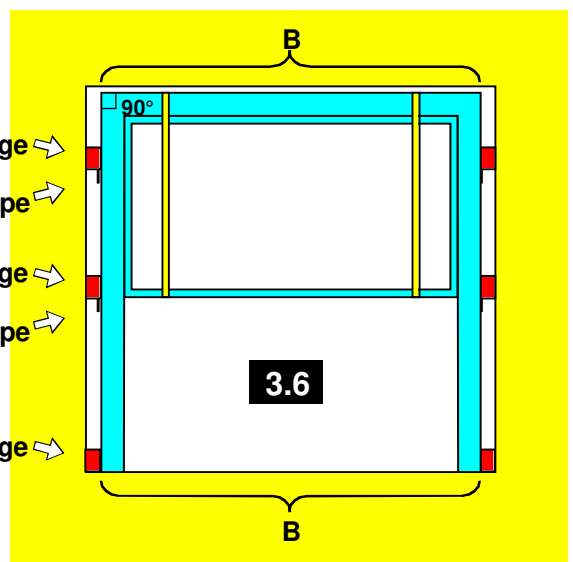
Place the Sliding window in the opening and lean it against the outer mounting strips.



Use lifting straps to lift larger windows into place. The lifting straps shall be placed around the fixed and the movable section. Do not use suction cups since the glass may break of the combined weight of the glass itself and the weight of the Sliding window.

Electrically operated windows

Withdraw the motor cable before the window is placed in the opening. Make sure that the motor cable is not nipped, since it could sustain damage.



Wedge →
Tape →
Wedge →
Tape →
Wedge →

3.6

Wedge the Sliding window in position so that it will be at right angles. To make sure that the wedges will not drop down, place them above the pieces of tape on the side pillars.

It is very important to ensure that the bottom wedges do not force the side pillars towards one another. Check the widths at the top and bottom to make sure that they are the same. Measure the diagonals to make sure that they are the same.

Remove the transport strap (applies to windows that are assembled by the manufacturer)

Electrically operated windows

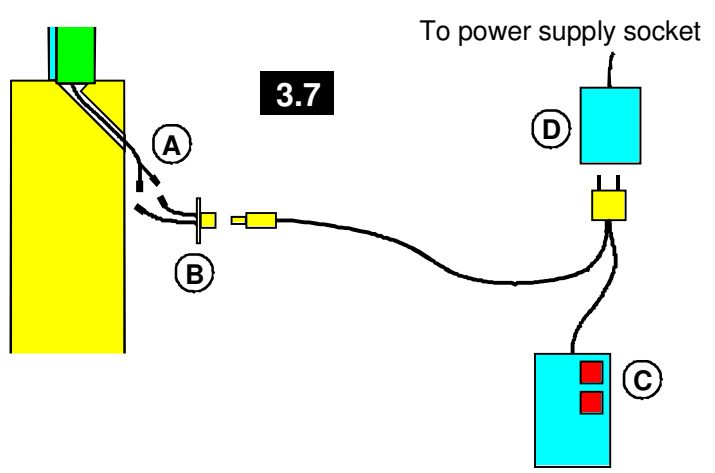
- A - Motor cable (from the window)
- B - Connecting cable terminal
- C - Control box
- D - Transformer/Battery back-up

Connect the connecting cable terminal to the motor cable, and use screws to secure the connecting cable terminal over the hole.

Suspend the transformer/battery back-up on the wall and connect the control box both to the transformer/battery back-up and to the connecting cable terminal.

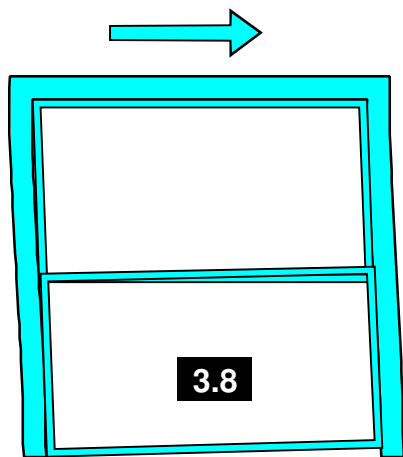
Connect the transformer/battery back-up to the power supply socket.

If the Sliding window is delivered with extra equipment, see separate instructions.



3.7

To power supply socket



Test the Sliding window and check that it performs well.

If there is a gap between the support surface and the movable section, the Sliding window has not been installed square. Push the top part towards the side on which the gap has occurred and refit the wedges.

Secure the mounting strips and test the Sliding window again.

4 Functional Checks

Run the Sliding window up and down a few times and check that it runs smoothly, without any scraping sounds.

If a gap should appear between the support surface and the movable window, this indicates that the Sliding window has been incorrectly installed.

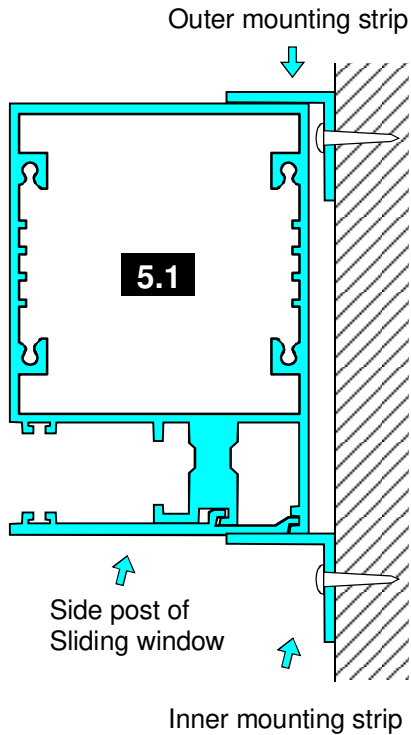
Many Sliding windows are equipped with key locks (e.g. ASSA) which locks the sliding section in the closed position. Check that they are functional.

Electrically operated windows

Most electrically operated windows are equipped with a latch which automatically locks the movable section both in the closed position and in intervals along the entire opening height. To check that the lock performs as intended, run the Sliding window to a few different positions and check that it is locked.

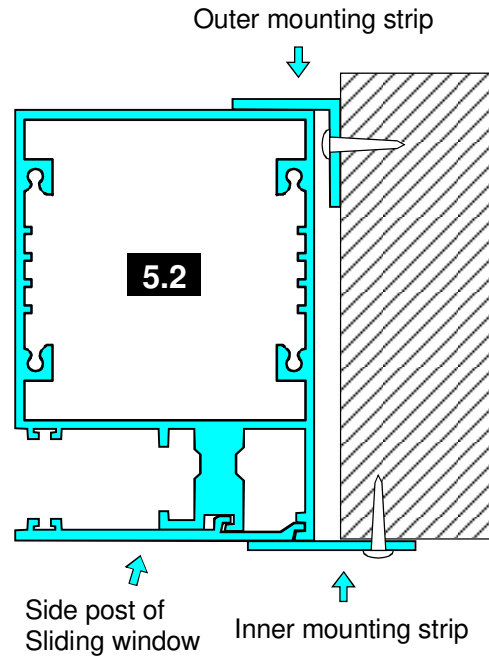
5 Examples of Alternative Methods of Mounting

Example of mounting with angle strips and without screws on the outside.

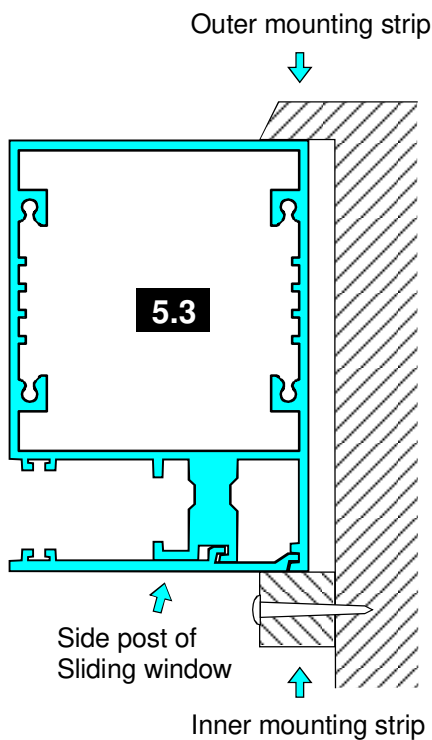


Example of mounting with angle strips and without screws on the outside.

This variant is suitable for installation in thin walls/sections.

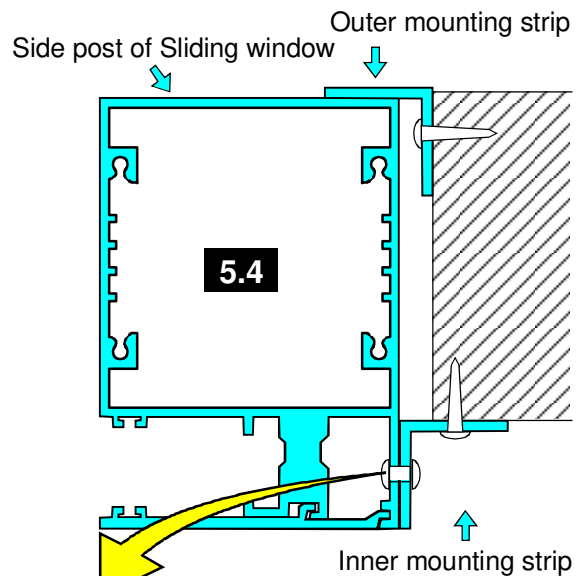


Example of mounting in a wall/section with fixed flange.



Example of mounting with angle strips and without screws on the outside.

This variant is suitable for installation in thin walls/sections.



Note that no holes may be drilled in the Sliding window since electrical parts and moving parts are mounted in these sections. The angle strip must therefore be secured to the Sliding window by the manufacturer.

APPENDIX 2

Guarantee 50-00001

In order for the guarantee to be valid, conditions A–C must be satisfied:

A) In connection with a guarantee claim, the Vendor is to be contacted for an assessment of the claim in relation to the guarantee. The Vendor must confirm that the nature of the fault is such that it is covered by the guarantee.

Any interference with or measure involving the window which does not go through Svalson's claims department will invalidate the guarantee and is entirely the responsibility of the person who carries out or orders the work.

B) In connection with a guarantee claim, the serial number of the window is to be given.

C) In the event of replacement of parts, the parts replaced are to be returned without fail to the Vendor. They must be returned within fourteen days from the date of delivery of a part by the Vendor, unless otherwise agreed. Failing this, the customer forfeits his right to compensation under the guarantee.

The guarantee does not cover:

Faults arising from defective assembly (installation) of the window.

Removal of the lining, e.g. strips, in order to gain access to the window, and replacement of the lining on completion of work.

Other guarantee provisions:

1. In accordance with the provisions of items 2–13, the Vendor is obliged to rectify by means of replacement or repair all faults in the product that are due to shortcomings of design, materials or manufacture.

2. The Vendor's liability relates only to faults which become apparent **within two years** of the date of delivery of the product. Should the product be used more intensively than agreed or could have been foreseen at the time the agreement was entered into, the period of liability will be reduced correspondingly.

3. In the case of parts that have been replaced or repaired in accordance with item 1, the Vendor is liable for two years following the date of their delivery.

4. The Purchaser must make a written claim regarding a fault to the Vendor without unreasonable delay after the fault has become apparent, and in any event not later than two weeks after the expiry of the liability period agreed in item 2 and in item 3. The claim must contain a description of what form the fault takes. Should there be cause to assume that the fault may entail a risk of damage or injury, a claim must be made immediately.

If the Purchaser does not make a written claim regarding the fault within the time limits specified in this item, he will lose the right to make a claim based on the fault.

5. After the Vendor has received a written claim according to item 4, he will rectify the fault with the degree of promptness called for by the circumstances. The Vendor will bear the costs of rectification in accordance with the rules in items 1–13. Rectification will be carried out on the premises of the Purchaser, unless the Vendor judges it to be advisable for the defective part or the product to be sent to him so that he can repair or replace it on his own premises. If dismantling and assembly of the part requires special technical knowledge, the Vendor is obliged to carry out such dismantling and assembly. If no such specialist knowledge is required, the Vendor will have fulfilled what is required of him by reason of the fault when he delivers to the Purchaser a duly repaired or replaced part.

6. If the Purchaser makes a claim according to item 4 and there turns out to be no fault for which the Vendor is liable, the Vendor will be entitled to compensation for the work and the costs he has incurred as a result of the claim.

7. If dismantling and assembly involve interference with something other than the product, the Purchaser will be liable for any work and costs thereby caused.

8. The Purchaser will bear the additional costs of rectifying a fault that are incurred by the Vendor as a result of the product being other than in the location specified in the agreement or – where no such location has been specified – the place of delivery.

9. Faulty parts which are replaced in accordance with item 1 are to be made available to the Vendor and will become his property.

10. The Vendor's liability does not include faults caused by materials supplied by the Purchaser or by a design prescribed or specified by the Purchaser.

11. The Vendor's liability covers only faults which arise in the working conditions envisaged in the agreement and in connection with the correct use of the product.

This liability does not cover faults caused by circumstances which arise after the risk for the product has passed to the Purchaser. It does not cover, for example, faults due to defective maintenance or incorrect assembly by the Purchaser, modifications made with the written consent of the Vendor or repairs incorrectly carried out by the Purchaser. Finally, it does not cover normal wear and tear or deterioration.

12. Notwithstanding what is laid down in items 1–11, the Vendor is not liable for faults in any part of the product for more than two years from the start of the liability period stated in item 2.

13. The Vendor is not liable for faults over and beyond what is laid down in items 1–12. This applies to any loss that the fault may cause, such as production shortage, loss of profit or other financial consequential loss.

APPENDIX 3

Declaration of Conformity

- [1] Svalson AB
Box 584
S-943 28 Öjebyn
Sweden
- [2] AV90(9018), AV115(NJORD), SV, S

[3] EN 61000-6-3, EN 61000-6-2

[4] 2014/30/EU, 2006/42/EC

We [1] declare under our sole responsibility that the product [2] to which this declaration relates is in conformity with the following standard(s) or other normative document(s) [3] following the provisions of Directive [4].

APPENDIX 4

Log sheet

Date	Name / Company / Telephone	Service work / Repair

