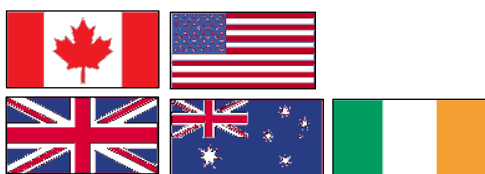




4507 ▪ AH50 ▪ 6018 ▪ SH ▪ S



Instruction manual



Read this manual entirely prior to performing any work on the Svalson Sliding Window.



All persons who will operate the Sliding Window should be educated about proper operation of the Sliding Window in accordance with section 2, Operation. Keep this manual or a copy of it available to the operator.



This manual by itself does not completely document the Sliding Window. Additional manuals such as a manual for the control system must be complied with (when applicable) in order to safely install, operate and dismantle the Sliding Window.



Never drill holes into the frame of the Sliding Window. Drilling a hole of any size or depth into the frame will likely cause the Sliding Window to malfunction and limit the terms of the guarantee.

This manual primarily uses the metric system when specifying measurements and uses a comma “,” as the decimal separator. Measurements are also shown in U.S. customary units in parentheses and use a period “.” as the decimal separator.

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1 Description

This instruction manual describes Svalson Sliding Windows of type 4507, 6018, and SH. The manual also describes some Svalson Sliding Windows of type S, when applicable.

The Svalson Sliding Windows are manufactured with either automatic or manual operation. Automatic windows are operated by means of a control switch. Many Svalson Sliding Windows are equipped with a mechanical lock, which automatically locks the movable window in closed position. Some windows are also provided with an intermediate locking mechanism which also locks the movable window in intervals along the opening width.

Both automatic and manual Svalson Sliding Windows can be equipped with key locks which lock the movable window in the closed position.

All Svalson Sliding Windows are manufactured to the customer's specific requirements. The dimensions vary, they types and thicknesses of glass varies, and the number of moving sections varies.

2 Operation

Automatic Svalson Sliding Windows are normally operated by means of a control switch. The term 'control switch' will be used here to denote both control boxes and control pedals. The Sliding window can be opened or closed by pressing the appropriate button on the control switch.

Models equipped with traditional electromechanical control system:

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.

Models equipped with S3 Control System:

Refer to the S3 Control System instruction manual for a description of the operation.

All Sliding Windows are equipped with a force limiting system which engages when the window's motion is inhibited. However, the kinetic energy from a moving window can still be significant and can cause injuries or object damage.



Never close the Sliding window when persons or objects are near the window opening.

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. Operate the sliding window by pulling the window in the opening or closing direction.

3 Installation

3.1 Installation notices



Never drill holes into the frame of the Sliding Window. Drilling a hole of any size or depth into the frame will likely cause the Sliding Window to malfunction and limit the terms of the guarantee.



Never force the Sliding Window into an opening which is smaller than the Sliding Window. Doing so will deform the window and likely cause the Sliding Window to malfunction.



Do not remove the transport straps from the Sliding Window until the window is securely positioned within the opening.

3.2 Opening preparation

Most windows are delivered with a sill. A recess can be made so that the upper sill surface is flush with the adjacent surfaces. The depth and width of the recess will vary according to the type of window ordered.

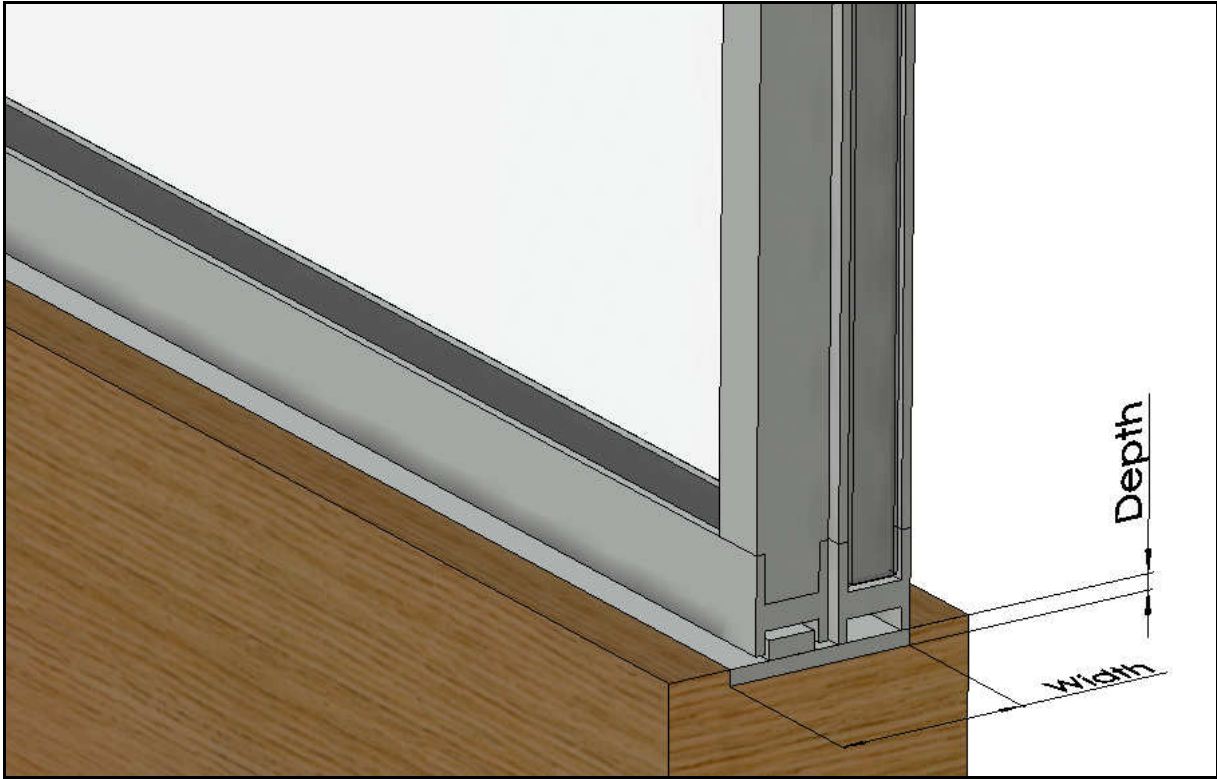


Figure 1

Window Type	Sill Depth	Sill Width
4507	3 mm (1/8")	45 mm (1.77")
6018	5 mm (3/16")	60 mm (2.36")
SH	According to shop drawing	According to shop drawing
S	According to shop drawing	According to shop drawing

Figure 2

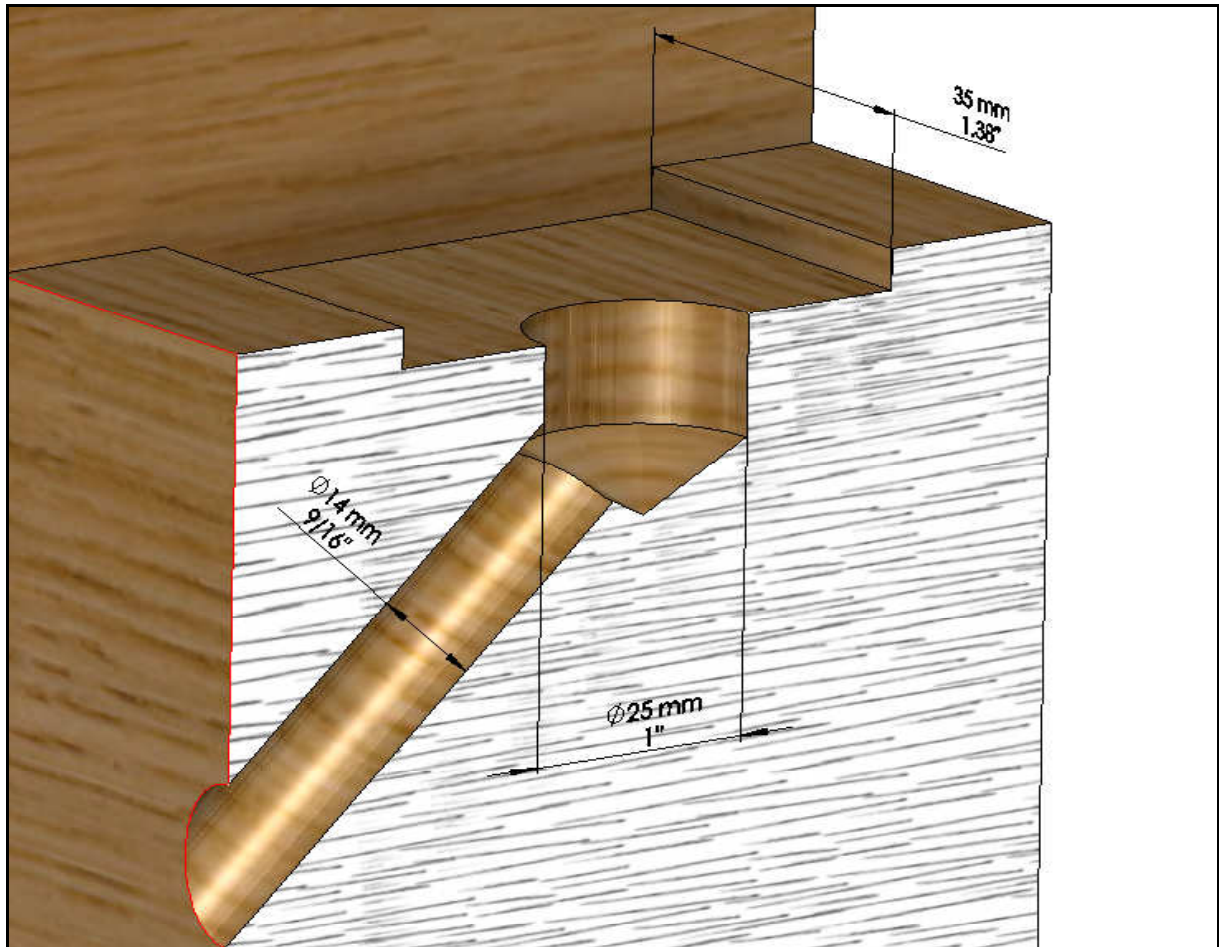


Figure 3

Prepare the installation for electrical cable routing. Cable routes may need to be prepared for the left side, right side, or both sides, depending on the Sliding Window type. A 25 mm (1") hole should be drilled directly under the cable exit under the window post. The cable exit is usually 35 mm (1.38") from the window edge. A 14 mm (9/16") diameter channel is required for routing the cable from the 25 mm (1") hole. The cable routing solution will vary depending on the window type and installation details. One example is shown in Figure 3.

Fasten the outer mounting strips (not included in the Sliding Window delivery) to the side of the opening. An example installation showing a cross section of the post and mounting strips is shown in Figure 4. Several other installation examples are shown in section 3.6.

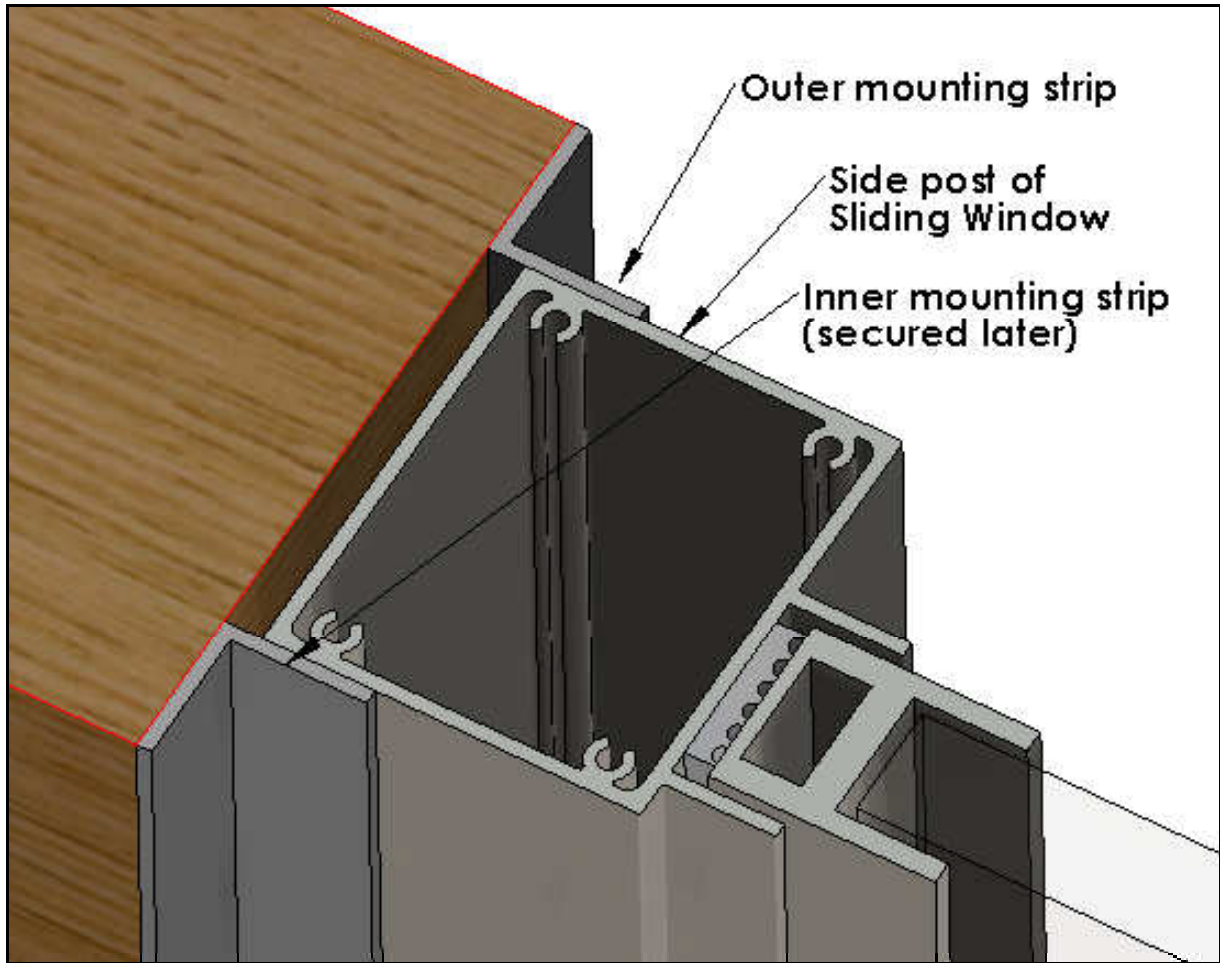


Figure 4



WARNING

The mounting strips must be designed and dimensioned to withstand applicable loads. The architect or engineer responsible for the Sliding Window installation should specify the mounting strip details. Failure to properly design and dimension the mounting strips can result in the window falling out of the opening.

NOTICE

The internal machinery of the Sliding Window needs to be accessible for routine service and maintenance. Do not permanently cover side posts or top frame beam, especially on the inside side of the frame.

NOTICE

The mounting strip fasteners (especially on the outside) should be specified according to security requirements for the Sliding Window installation. Screws which are accessible and have a common type of screw recess (Phillips, etc.) are not recommended when security requirements are high.

3.3 Lifting and positioning

Before lifting, make sure that the transport straps are still in place. They should not be removed until the window is securely in place.

To lift the Sliding Window into position, use suction cups. Suction cups should be rated for the weight of the window. Suction cups should be spaced no more than 1,5 m (59") apart. Lift the Sliding Window close to its final position from the inside of the opening. Before placing the Sliding Window down, route the power cables through the holes. Lower the window into the sill recess and rotate it so that it butts up against the outside mounting strips. Monitor the power cables during the entire lifting and lowering operation so that they do not get pinched and damaged.



Figure 5

3.4 Securing and adjusting

Screw the sill into place. Drill through the guide bar and sill and then screw into the underlying material.

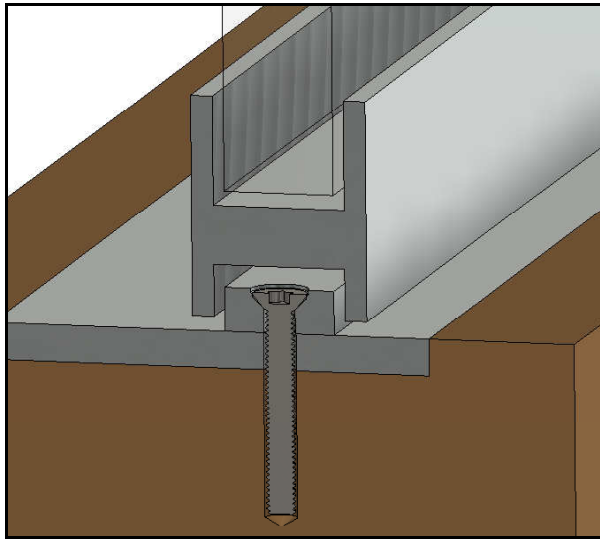


Figure 6

Check that the window is installed square. If the window is not square, use wedges between the opening and window to displace the window into a square shape.

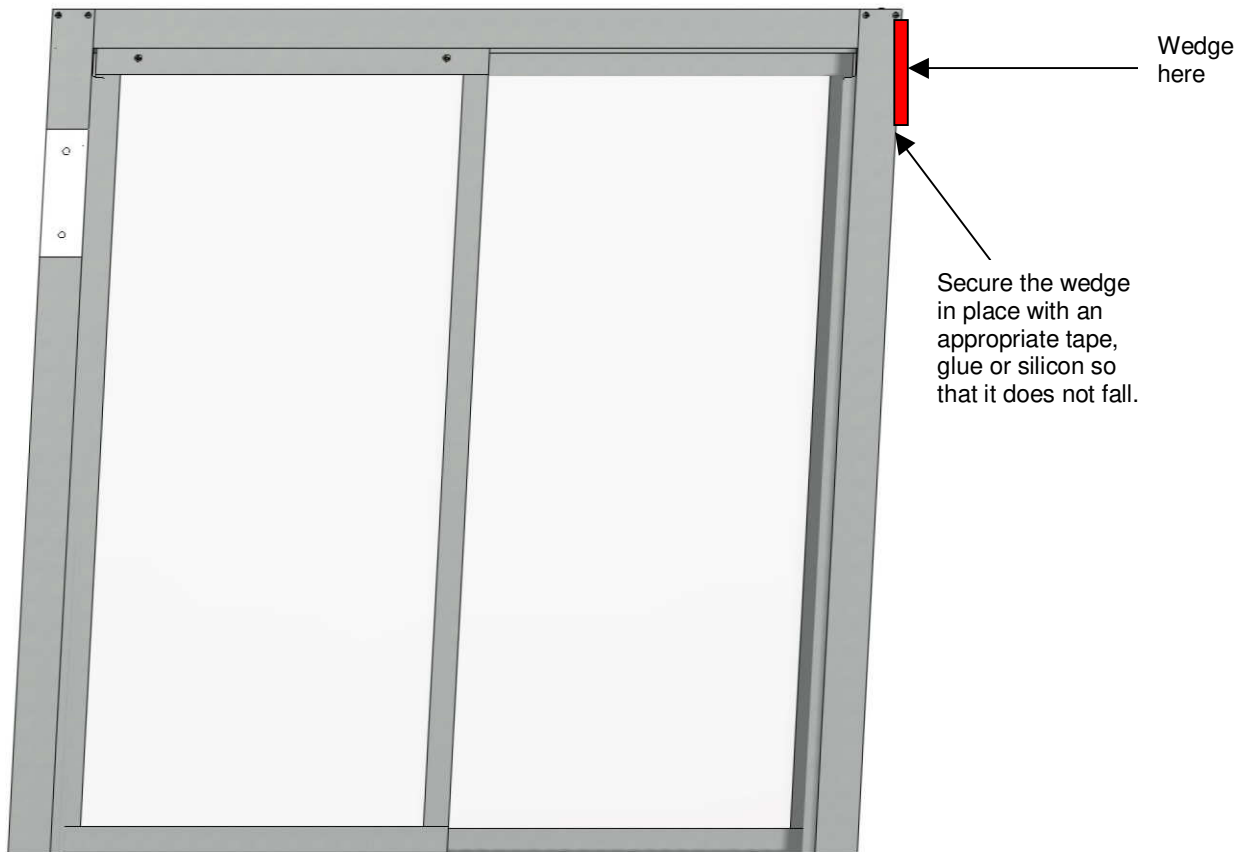


Figure 7

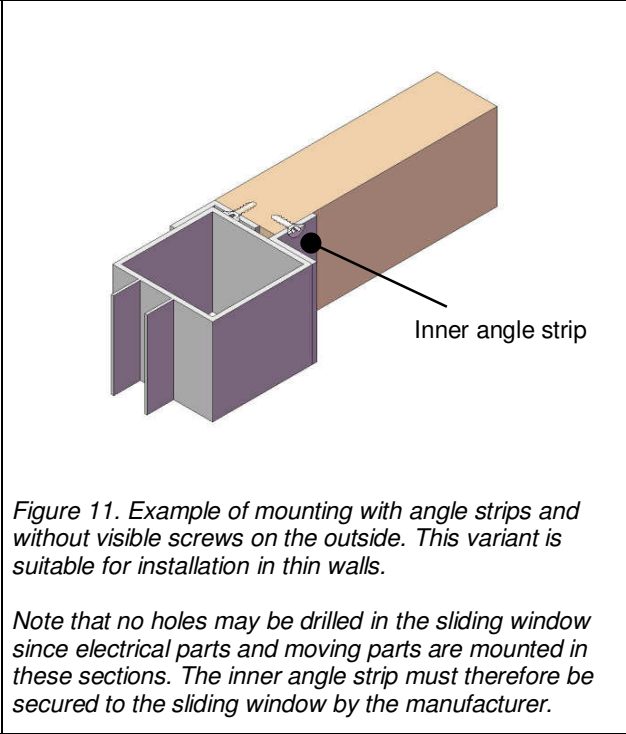
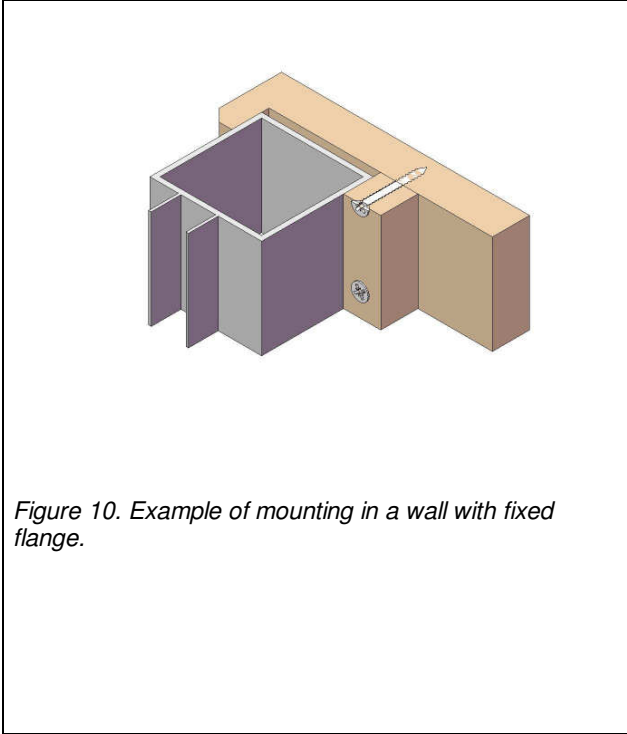
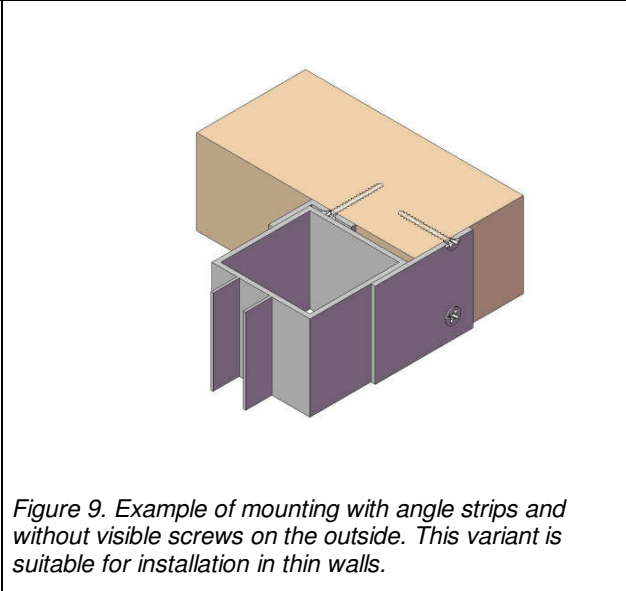
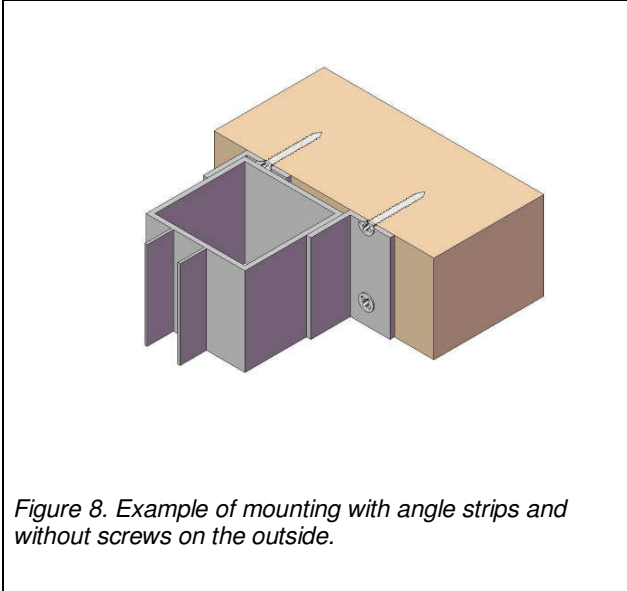
Wide Sliding Windows may have a tendency to bow downwards due to their own weight over a wide span. These windows are manufactured with screw holes in the top profile of the frame. Use these screw holes to screw into the upper surface of the opening so that the top profile can be levelled. Wedge material may be needed between the opening and window to ensure that the top profile does not bow upwards instead after the screws are placed.

Mount and secure the inner mounting strips.

3.5 Electrical Connections

Most Svalson Sliding Windows are electrically driven with a motor. Refer to the accompanying control system manual for electrical installation instruction.

3.6 Examples of Alternative Methods of Mounting



4 Dismantling and Recycling

Proceed in the reverse order to that described in section 3 (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.

5 Post-Installation Control

Operate the Sliding window to the limit of its travel. If the movable section comes into contact with a side post, check that it travels right in against the damper in the side post, without striking the guide flanges of the side post. If it strikes the guide flange, the installation has been incorrectly done. The most likely cause is a non-level/plumb installation.

Operate the Sliding Window back and forth a few times and check that it runs smoothly, without any scraping sounds. Check that the support surface is flat and that the movable section is not in contact with the support surface.

If the Sliding Window is equipped with a lock which automatically locks the movable section in the closed position, check that the lock performs as intended. Operate the Sliding Window to the closed position and check that it is locked by manually trying to open the Sliding Window.

Many Sliding windows are equipped with key locks. Check that they are functional.

Refer to the accompanying electrical control system manual for additional post-installation control.

6 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 operating freely becomes difficult to operate, this is usually due to settlement of the building. In such cases, the Sliding window mounting must receive attention.

After a period of operation, the drive belt and slipping clutch may have to be adjusted. See Sections 6.1 and 6.2.

6.1 Drive Belt

6.1.1 Description of Bolt and Latch

Figure 12 shows the components located within the top frame section for the type 6018 Window. The components within the type 4507, SH, and S, are very similar; this figure may be used to familiarize yourself with all of the window types.

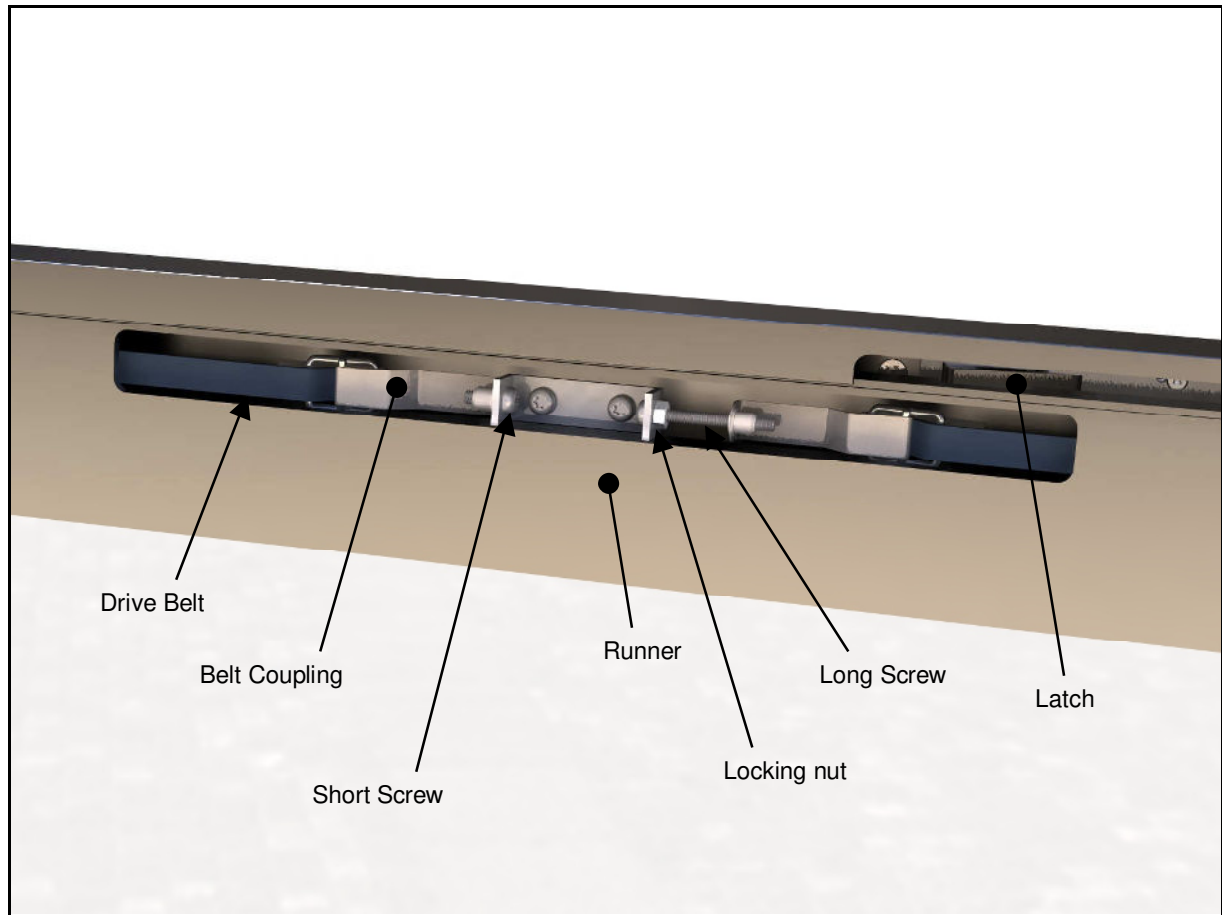


Figure 12

6.1.1.1 Svalson Sliding Window Type 4507

The bolt, latch and drive belt are located inside the top section of the sliding window frame. To gain access to these, remove the angle section cover on the top frame section.

When the Sliding window is opened, the bolt is moved about 15 mm (5/8") and lifts the latch as shown in the lower drawing. The movable window will then begin to move.

Depending on the direction of opening, the actual arrangement may be the mirror image of the one shown in Figure 12.

6.1.1.2 Svalson Sliding Window Type 6018

The bolt, latch and drive belt are located inside the top section of the Sliding window frame. Remove the bar cover on the top frame section in order to gain access to these components.

Depending on the direction of opening, the actual arrangement may be the mirror image of the one shown in Figure 12.

6.1.1.3 Svalson Sliding Window Type SH and Type S

The design of the bolt and the latch on Svalson Sliding Window type SH and type S varies somewhat. In most cases however, the design will be in accordance with either type 4507 or type 6018. See sections 6.1.1.1 and 6.1.1.2

6.1.2 To Adjust the Drive Belt

Remove from the top frame section the bar which covers the drive mechanism.

Back off the locknut on the long screw on the bolt. Use the long screw to adjust the belt tension and lock the screw with the locknut.

The belt tension must be such that the belt will be unable to jump over the teeth of the cog wheel on the motor, but not much higher than this. An adequately tensioned belt may thus be fairly slack. The belt must not be tensioned hard, since it would then apply abnormally high loads to the motor bearings. Make sure that the belt does not inadvertently end up over the flanges of the cog wheel or idler wheel when adjustments are being done.

Run the sliding window a few times before refitting the bar cover.

6.1.3 To Change the Drive Belt

The following diagram shows how the drive belt is threaded into the belt coupling. Use this diagram as the basis for disconnecting and connecting the drive belt to the belt coupling.

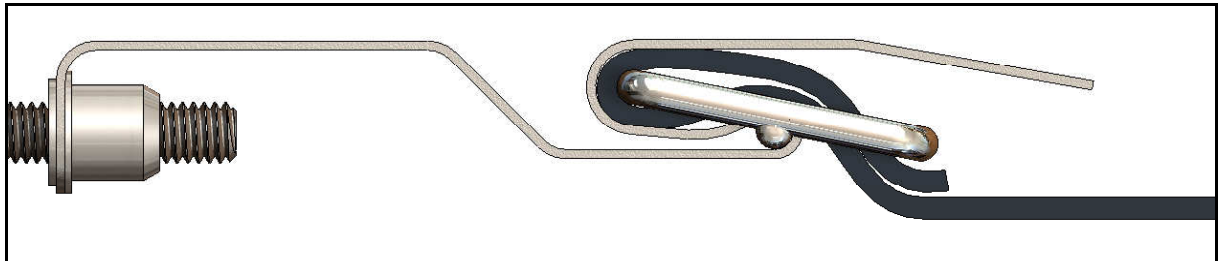


Figure 13

If the belt must be changed, proceed as follows:

Remove from the top frame section the bar which covers the drive mechanism.

Release the short screw retaining the belt coupling on the bolt. Release the belt from the belt coupling, secure the new belt to the old belt with tape, and pull out the old belt while the new belt is threaded onto the motor pulley and return wheel.

Secure the new belt to the free belt coupling. Examine on the remaining coupling how the belt should be secured. Secure the coupling with the new belt to the bolt.

Release the other coupling, remove the old belt and fit the new belt. Secure the coupling, adjust the belt tension as described in Section 6.1.2, and lock the screw with the locknut.

Run the window a few times before refitting the bar cover. The new belt will probably have to be re-adjusted after about a month.

6.2 To Adjust the Slipping Clutch

The motor is located near the top of the side pillar and can be removed from the Sliding window as follows:

Remove the bar cover from the top frame section and remove the short screw (see Section 6.1.1) which retains the belt coupling on the bolt, so that the belt is loose at one end.

Remove the motor cover from the side pillar. Make a note of how the cables are connected to one another on the motor, and then disconnect them.

The slipping clutch is mounted on the output shaft of the motor gearbox, and must be capable of transmitting a certain torque. The torque can be adjusted by rotating a nut, shown in the image below. To adjust the nut, turn a 13 mm spanner wrench while holding the cog wheel stationary (with a pliers or by hand). The motor shaft is easier to hold stationary if the electrical leads are shorted (touching each other). Do a preliminary check of the output torque: the motor should barely manage to rotate when the cogwheel is held stationary.

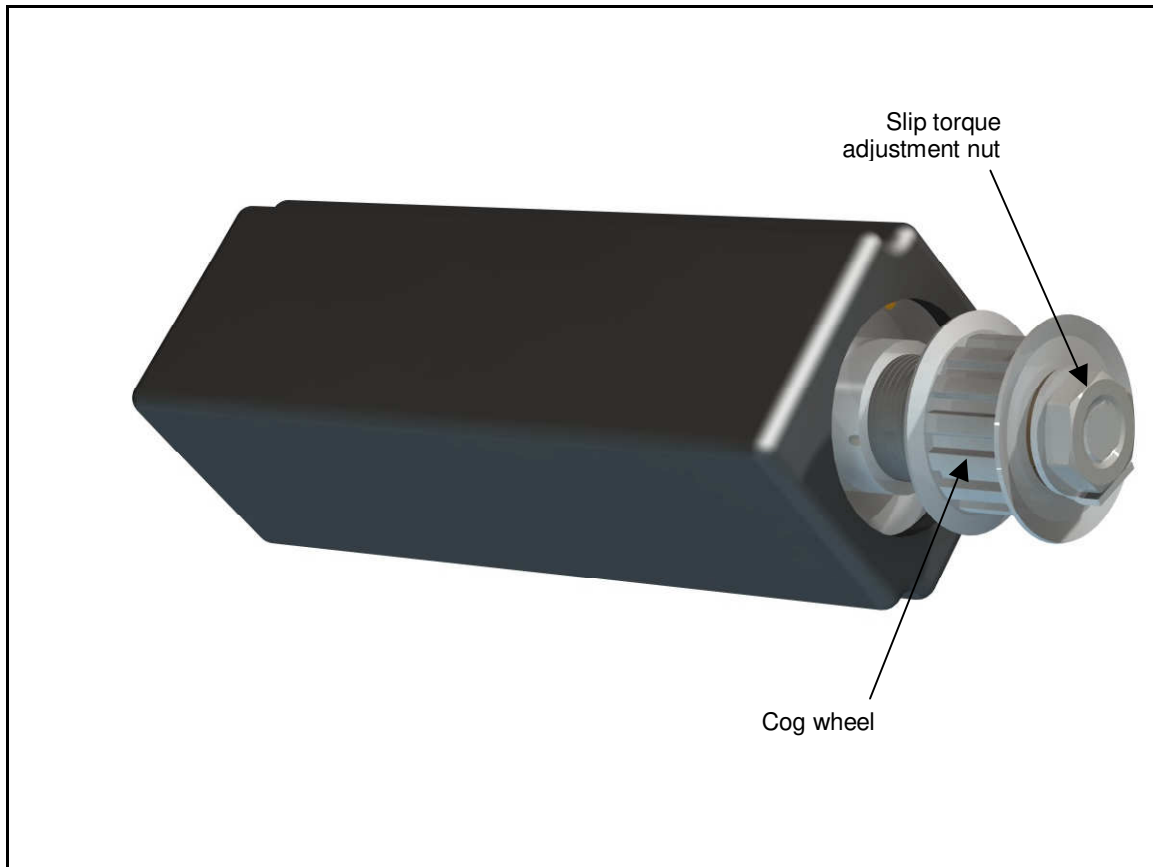


Figure 14

Replace the motor and fit the drive belt over the cog wheel. Connect the electrical leads and replace the motor cover.

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

Check that the slipping clutch is properly adjusted. When the window is in the open position, hold it in place and press the close button. The window should be able to be held in place with only moderate force. If the force required to hold the window in place is high, then the slipping clutch needs to be readjusted. Furthermore, the motor should not slip when the open or close button is depressed. Check that the sliding window responds without hesitation when starting from a stopped position.



Failure to properly adjust and check the slipping clutch force can increase the risk of serious pinching injuries when the window closes.

After checking that everything performs as it should, refit the motor cover and fit the bar cover back to the top frame section.

7 Troubleshooting and Repairs

The most common reason for the Sliding Window not operating is that the supply cable has been disconnected from the wall outlet. 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.

Guidelines for troubleshooting and repairs are provided in separate instructions. Please contact the manufacturer or reseller for more information.

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

9 Declaration of Conformity

- [1] Svalson AB
Box 584
SE-943 28 Öjebyn
Sweden
- [2] Svalson sliding window type 4507, 6018, SH and S
- [3] EN 61000-6-3, EN 61000-6-2
- [4] 2004/108/EG, 98/37/EG

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].



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