RODEXIT

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How to Rodent Proof
Swing Doors and Other Horizontally Opening Doors
With the All-In-One seal (the AIO)

July 2025

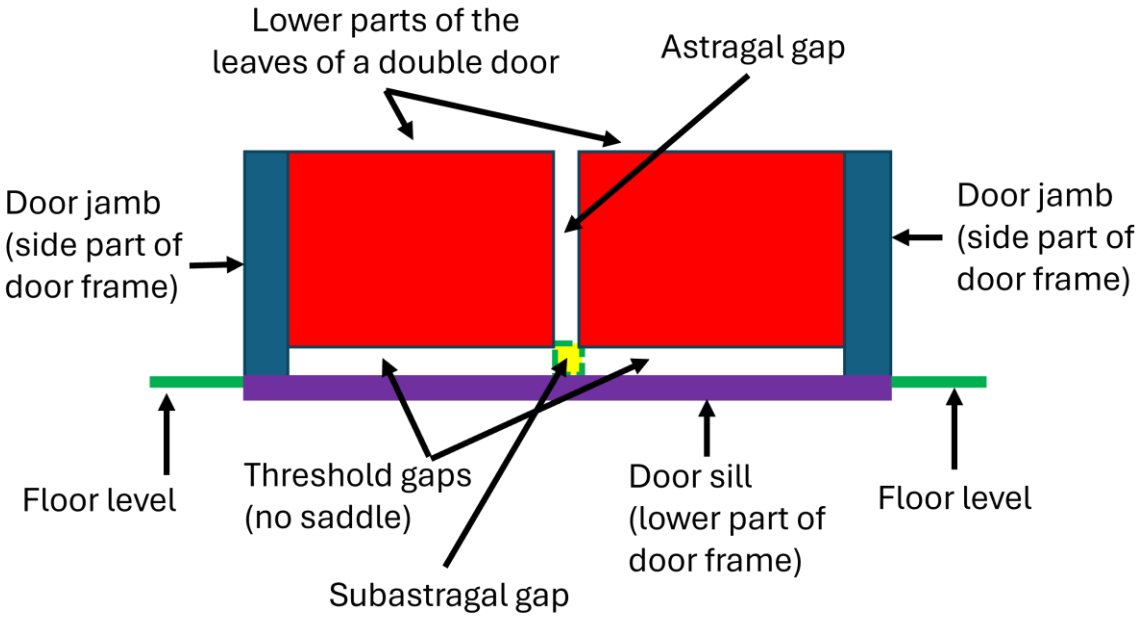
1 BASIC DOOR TERMS AND GAP WIDTHS

The "threshold gap" of a single door is the horizontal gap between the door leaf and the underlying threshold. There's a threshold gap under each of the door leaves of a double door.

The "astragal gap" of a double door is the vertical gap between the 2 door leaves. The astragal gap of a double swing door is covered by a vertical strip called an "astragal" on at least one side of the door, unless it is a saloon type door.

The "subastragal gap" of a double swing door is the small gap right under the astragal gap and between the 2 threshold gaps.

The door sill is the horizontal lower part of the door frame. The door saddle (if any) is placed on top of the door sill and serves to close the threshold gap. Quite often a door is equipped with a combined door sill and door saddle. Typically there is no door saddle in a door, through which there is rolling traffic e.g. pallet truck traffic. Consequently rodents can easily enter if the threshold gap isn't blocked with a rodent proof door sweep.



On the pull side of a normal swing door there are side gaps between the door leaf and the door jambs. There are no similar side gaps on the push side, because the push side of the door leaf is in full contact with the door jambs. That makes rodent proofing on the push side more effective than on the pull side.

With a single layer AIO you can rodent proof up to 1.4 in (35 mm) wide gaps. With a double layer you can rodent proof up to 2 in (5 cm) wide gaps.

2 SINGLE SWING DOORS

2.1 Tools and Materials

You will need these tools and materials:

1) A roll of the AIO.
2) A tape measure or another measuring device.
    - A telescopic measuring stick is extremely practical especially when the AIO is to be installed on the push side of the door and you have to measure the distance between the 2 side jambs.
3) Straight tin snips for trimming the AIO.
4) Suitable flatheaded screws.
    - 1 inch (25 mm) long No. 10 (4.8 mm) screws are suitable for most doors. It is generally a good idea to use hex head self-drilling sheet metal screws for sheet metal doors.
5) Washers.
6) A screw bit.
7) A cordless screwdriver.
8) Possibly: A drill bit for drilling pilot holes.

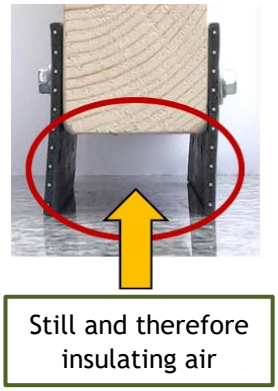
It is handy also to have some around 1 lb (½ kg) heavy objects that can hold the AIO in place during the installation process:

2.2 The AIO may be Installed on Either Side

You can install the AIO on the push side, on the pull side or on both sides.

Installation on both sides is always worth considering because:

- It will increase the protection against rodents and other pests.
- It will considerably improve the insulation properties of the door.
- The extra cost will usually be more than compensated by saved heating and/or cooling costs.



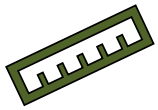
2.3 How to Proof a Single Swing Door

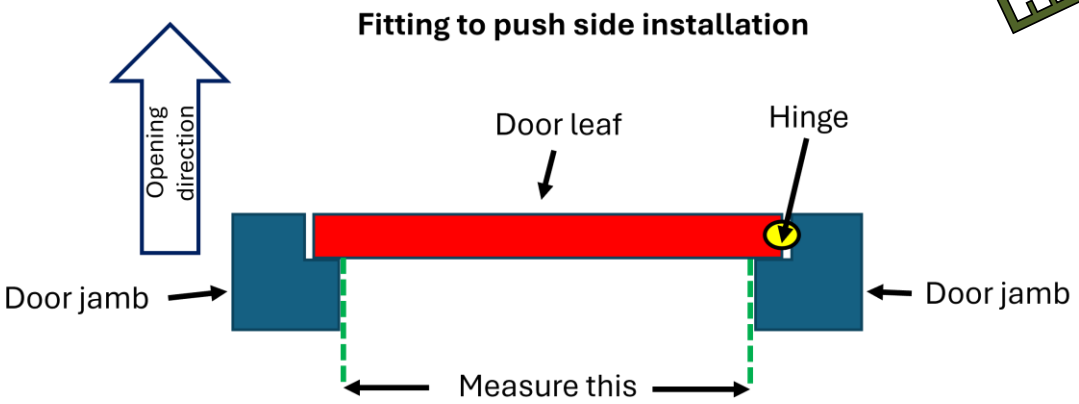
Follow these steps:

1) Close and lock the door. 

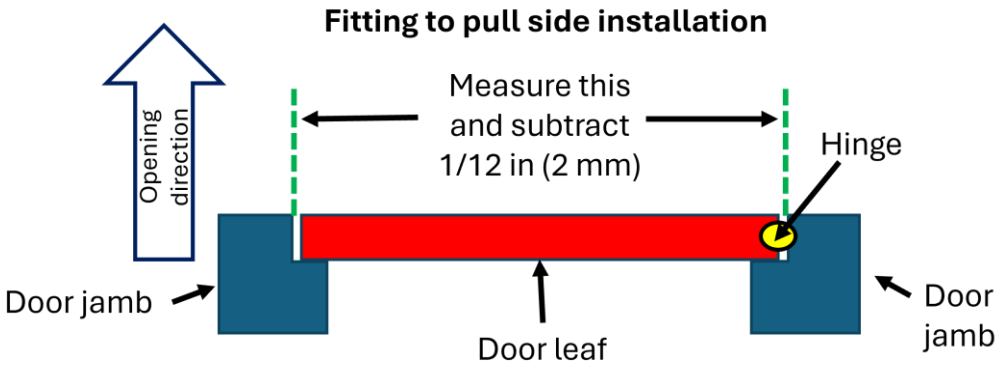
2) If there is a door holder in the way, dismount it. Remount it after proofing the door. If remounting isn't possible, replace the old door holder with a new and compatible one.

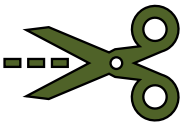
3) Take the relevant measure:
   - If you install the AIO on the <u>push side</u>, measure the width of the <u>door opening on the push side</u>:





   - If you install the AIO on the <u>pull side</u>, measure the width of the <u>door opening on the pull side</u> and <u>subtract 1/12 in (2 mm)</u>:



4) Cut off a corresponding piece of the AIO. 

5) Place the AIO on the ground. To get both hands free use a couple of heavy objects for holding the AIO in place.

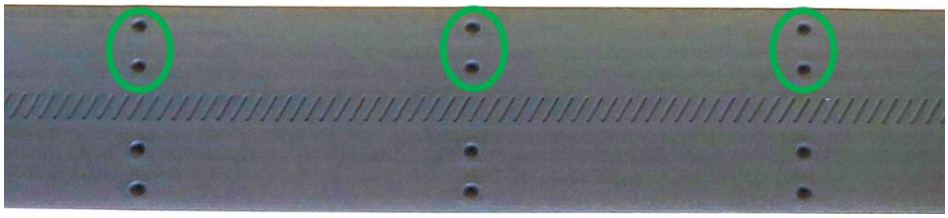
6) Do not to press the AIO hard downwards. It should make only featherlight contact with the ground:

7) If you install the AIO on the pull side, and the AIO touches the hinge-side jamb, the AIO will rub against the jamb and thereby upset the operation of the door. Therefore, don't let the AIO touch the hinge-side jamb on the pull side. The width of the gap between the AIO and the hinge-side jamb should not exceed 0.1 in (2½ mm).

Too close to the hinge jamb on the pull side

A gap of 0.1 in (2½ mm) is OK

8) Use some of the upper screw hole markings when driving in the screws and washers:

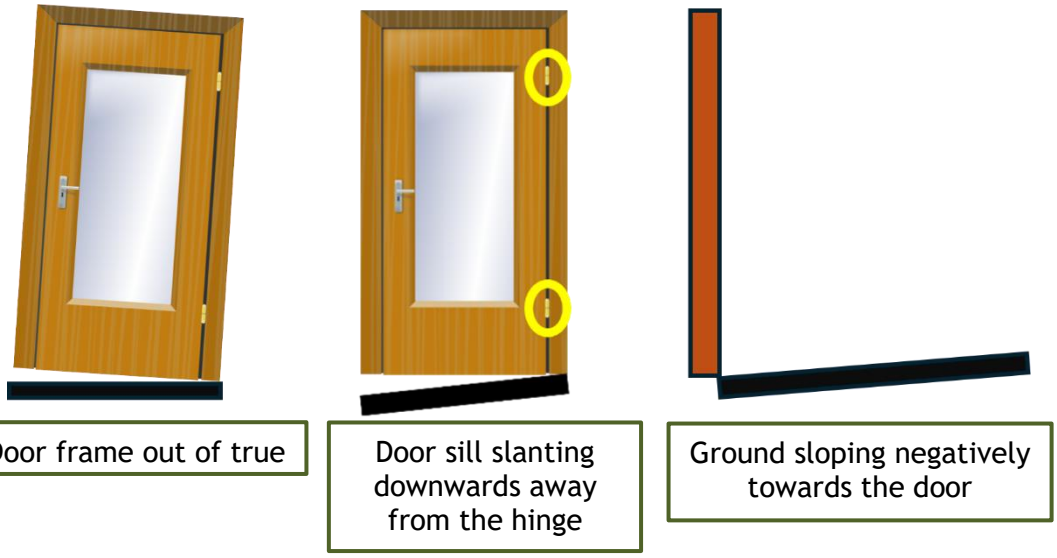


Make sure that there is a screw about 1 inch (2½ cm) or closer to each end.

If the door leaf is equipped with a flush bolt, take care not to hit it with a screw:

9) Open and close the door to check if it operates satisfactorily. If the door moves freely everything is perfect. If you experience friction between the AIO and the ground, there is something wrong with the door. The elasticity of the AIO can compensate for most door problems, and moderate friction isn't a serious problem.

However, if it is very difficult to open and close the door, there is something seriously wrong with the door. The door frame may be out of true, the door sill may slant downward away from the hinge jamb, or the ground may be sloping negatively towards the door:



If it is very difficult to open and close the door, the best solution is to have the root cause eliminated. If that isn't an option, you can try to compensate for the problem in the following way:

Install the AIO with the door in an open position and supplement it with a brush door sweep that is installed with the door in a closed position. The brush door sweep may be installed on the other side of the door or on the same side, cf. section 8.7.

3 DOUBLE SWING DOORS

3.1 Threshold Gaps and Subastragal Gaps of Double Doors

You proof threshold gaps and subastragal gaps of double swing doors in much the same way as you proof threshold gaps of single swing doors.

The only differences are:

1) that you use 2 seals instead of 1 and
2) that there is a subastragal gap.

The way you proof subastragal gaps depends on whether there is an astragal or not on the mounting side of the door. In section 3.1.1 it is described how to do it when there isn't an astragal on the mounting side. In section 3.1.2 it is described how to do it when there is.

3.1.1 When There Isn't an Astragal on the Mounting Side

You proof the double door in the same way as a single door except for this:

1) Trim the 2 seals, so they can adjoin in the middle of the astragal gap:

2) Do not make them overlap.

3.1.2 When There Is an Astragal on the Mounting Side

You proof the double door in the same way as a single door except for this:

1) Trim the 2 seals, so they can adjoin at the free edge of the astragal:

   Do not make them overlap.
2) Loosen the lowermost part of the astragal.
   - e.g. unscrew the lowermost 2 screws.
3) Tuck one of the 2 seals behind the loosened astragal and align the end of the AIO with the free edge of the astragal:
4) Screw the 2 seals onto the 2 door leaves.
5) Retighten the astragal.

3.2 Astragal Gaps of Double Doors

If there isn't an astragal on the mounting side, you should consider rodent proofing at least the lowermost 20 in (50 cm) of the astragal gap on that side of the door.

You should also consider proofing the entire astragal gap because:

1) It will improve the protection against pests such as climbing and flying insects including cockroaches.
2) It will considerably improve the insulating properties of the door.
3) The extra cost will usually be more than compensated by saved heating and/or cooling costs.

The AIO shall be mounted:

- On the active door leaf (the one that opens first), when you mount it on the pull side.
- On the passive door leaf (the other door leaf) when you mount it on the push side.

3.2.1 Tools and Materials

You will need:

1) The same tools and materials that you need when proofing the threshold gap of single doors (see section 2.1).
2) Possibly a Stanley knife.

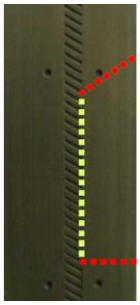
3.2.2 How to Install the AIO

Follow these steps:

1) Close and lock the door.

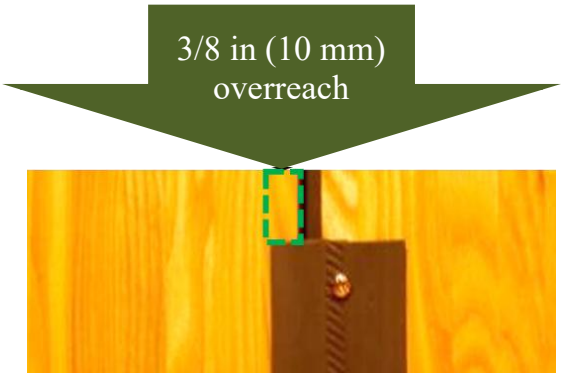
2) Cut off a suitable piece of the AIO.

3) If there is a door handle and/or a door lock in the way, trim the AIO to accommodate the handle and/or the lock. Crosswise cuts (red dotted lines) can be made with tin snips while lengthwise cuts (yellow dotted line) are best made with a Stanley knife:



4) Screw the AIO onto the door.

   The AIO shall be mounted, so it overreaches the astragal gap by at least 3/8 inch (10 mm):



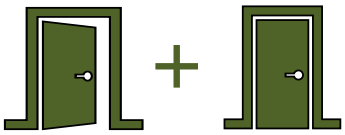
The screws should as a main rule be placed in the middle of the AIO and not as indicated by the screw hole markings:

Fasten the uppermost screw first. Thereafter, continue downwards placing a screw for each around 4 inches (10 cm).

Take care not to place any screws in the lock box and/or the flush bolt if any:

There should be a screw about 1 inch (2½ cm) from each end.

5) Open and close the door to check if it operates satisfactorily.



4 OTHER HORIZONTALLY OPENING DOORS

You proof other horizontally opening doors including saloon doors, sliding doors, folding doors, and carousel doors in much the same way as you proof swing doors. However, other horizontally opening doors vary a lot in construction and design, so you may occasionally have to be creative and tailor your own solutions.

When proofing the astragal gap of a saloon door, the AIO should obviously not reach beyond the astragal gap as that would prevent the 2 door leaves from passing each other.

5 MOTORIZED DOORS

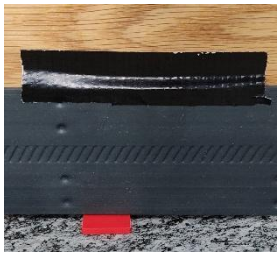
When installed on a motorized door with a safety sensor, the AIO should not rub against the ground during the opening and closing of the door as the friction may trigger the safety sensor, so the operation of the door will be compromised.

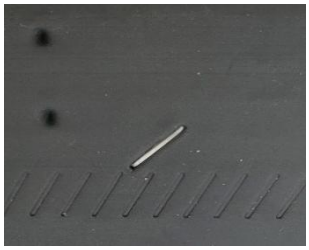
Especially when the door is a motorized sliding door, it may be difficult to avoid the problem.

Problems with too much friction can sometimes be solved simply by adjusting the sensor.

Another way of tackling such friction problems is A) by means of small spacers placed under the AIO to install the AIO slightly elevated from the ground and B) to supplement the AIO with a brush door sweep that covers the tiny space between the AIO and the ground. It can be done in this way:

1) Place the spacers under the AIO and secure the AIO temporarily to the door leaf by means of easily removable gaffer tape (not duct tape that tends to leave residue when removed) applied to the uppermost part of the AIO. If the door is a wooden door, you can alternatively use staples affixed with a powerful staple gun:





2) Remove the spacers and use the brush door sweep as mounting strip:

3) Remove the tape if any:

6 PIMPING UP THE LOOKS BY MEANS OF MOUNTING STRIPS

6.1 The Endless Possibilities

If you want to pimp up the looks to something flashier, the possibilities are endless. Here are some examples:

matching wood

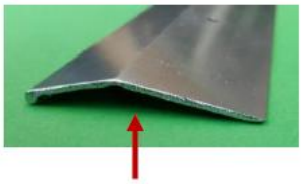
painted wood

aluminum carpet trim

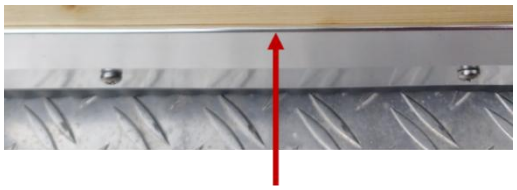
kickplate

6.2 Recommended Mounting Strips

RodeXit recommends angled aluminum carpet trims, because they are inexpensive and can cover the upper edge of the AIO:



Angled aluminum carpet trim



Upper edge of an installed angled aluminum carpet

RodeXit specifically recommends these carpet trims from MD Building Products:

Recommended for	Height	Width	Length	Surface	Universal Product Code (UPC #)
Single layer installations	0.2 in (5 mm)	2 in (51 mm)	36-72 in (91-183 cm)	Fluted	e.g. 43374438581
Double layer installations	0.5 in (13 mm)	2 in (51 mm)	36-72 in (91-183 cm)	Smooth	e.g. 43374660845

Both recommended carpet trims can be trimmed by means of tin snips.

The carpet trims from MD Building Products come in different colors and lengths with different UPC numbers. The above stated UPC numbers are for the “silver” colored and 36 in (91 cm) long versions.

Double layer installations are used A) when the gap is more than 1.4 in (35 mm) and B) when a very high degree of protection is required – for example when the rodent pressure is very high.

Double layer installation with a 2 in (51 mm) wide carpet trim

6.3 Tools and Materials

You will need the tools and materials listed in section 2.1 and on top of that:

1) A sufficiently long mounting strip.

2) OPTIONAL

   Widgets for temporarily attaching the AIO to the door e.g.

   - if the door is a wooden door a staple gun with suitable staples, or
   - if the door is a metal door blobs of sticky power tack.

3) OPTIONAL

   A couple of around 2 pounds (1 kg) heavy objects for holding the mounting strip in place during the installation.

4) Possibly a drill bit for drilling extra holes in the mounting strip.

6.4 Mounting with Mounting Strips on Swing Doors

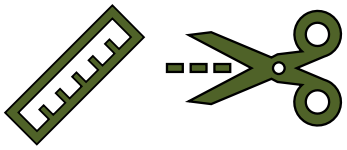
In the following it is assumed that you use one of the recommended aluminum carpet trims with predrilled holes from MD Building Products (hereinafter called: a “Mounting Strip”). What is stated about the use of that will apply mutatis mutandis to the use of most other mounting strips.

A. Mounting on Single Swing Doors

The AIO is installed on a single swing door by means of a Mounting Strip in the same way as by means of screws and washers - except for the following:

1) With tin snips trim the length of the Mounting Strip so it matches the shorter of:

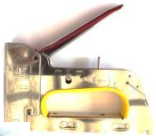
   - the length of the AIO and
   - the width of the door blade.



2) If the first predrilled hole in the cut end of the strip is too far from the end, drill an extra hole around 1 in (2½ cm) from the end.

3) OPTIONAL

   If the door is a wooden door, attach the AIO to the door blade by means of staples.



   If the door is a metal door, attach the AIO to the door blade e.g. by means of tiny blobs of sticky power tack.

4) Use a couple of around 2 pounds (1 kg) heavy objects for holding the Mounting Strip in place.

5) Screw the Mounting Strip onto the door (if necessary, after drilling pilot holes in the door).

Use suitable screws – usually NOT the ones that come with the mounting strip if any as they tend to be of poor quality. It is no problem if the screws are slightly thicker than the predrilled holes of the aluminum strip. Slightly thicker screws will automatically widen the holes when driven in.

Don't use too much force. You risk denting the Mounting Strip. You can reduce the risk by using washers.

B. Mounting on Double Swing Doors

When proofing double swing doors you use Mounting Strips in much the same way as when proofing single swing doors.

The only differences are:

- You need 2 pieces of Mounting Strip.
- <u>If there is no astragal on the mounting side</u> of the door, the adjoining ends of the 2 horizontal Mounting Strips shall be aligned with the edges the door blades:

- If there is no astragal on the mounting side of the door, and <u>the astragal gap is proofed with a RodeXit seal</u>, a vertical Mounting Strip may be placed like this:

- If there is an astragal on the mounting side, the ends of the 2 Mounting Strips shall be aligned with the edges of the astragal:

6.5 Mounting with Mounting Strips on Other Horizontally Opening Doors

You use mounting strips when proofing other horizontally opening doors - such as saloon doors, sliding doors, folding doors, and carousel doors - in much the same way as when proofing swing doors. However, other horizontally opening doors vary a lot in construction and design, so you may occasionally have to be creative and tailor your own solutions.

7 MOUNTING BY MEANS OF DOUBLE-SIDED TAPE

Using double-sided tape may be relevant:

- If screw holes are undesirable – e.g. if the AIO is to be mounted on a very fine wooden door.
- If it is impossible to secure the AIO by means of screws – e.g. if the AIO is to be mounted on a glass door.
- If you are about to rodent proof a motorized door, and the there is a risk that screws will damage the electronic safety mechanism of the door when they are driven in.

The AIO seal is mounted by means of double sided tape in much the same way as when it is mounted by means of screws and washers.

On www.rodexit.com you can download a PDF mounting guide to the use of double-sided tape for installing the AIO.

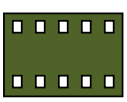
8 TIPS & TRICKS

8.1 Monitoring and Maintenance

All rodent-proofed doors should at regular intervals be monitored for maintenance needs. The rodent proofing devices should be fixed or replaced if they are seriously compromised – for example due to severe rodent attacks.

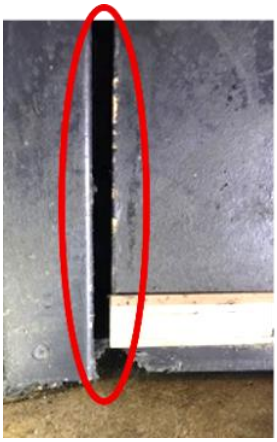
8.2 Further Instructional Materials

On www.rodexit.com you can watch instructional videos and download other PDF guides and PowerPoint presentations.



8.3 Installation on the Push Side of a Swing Door is Recommended

There are no side gaps on the push side of a swing door. Therefore, the proofing of the door will be most efficient if you install the AIO on the push side.



Side gap on the pull side

No side gap on the push side

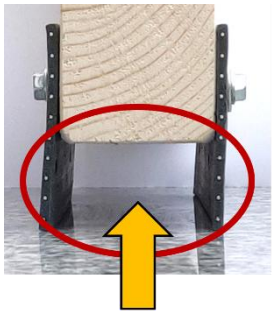
8.4 If a Very High Degree of Protection is Required

Under normal circumstances it is sufficient to install a single layer. If a particularly high degree of protection is required – e.g. because of a very high rodent pressure – you should install

- a double layer on one side of the door and/or
- seals on both sides of the door:

A double layer is installed in the same way as a single layer.

A layer on both sides of the door has the added advantage of significantly improving the insulation properties of the door and thereby reducing the cost associated with heating or cooling the room behind the door:



Trapped and therefore insulating air

Highly improved insulation

↓

Significantly lower heating and/or cooling costs

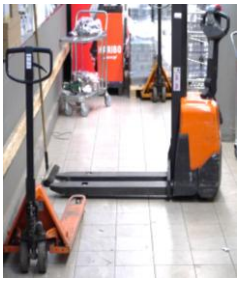
The cost reduction will more than pay for the installation.

8.5 What if there is a Kickplate on the Door?

It is no problem if there is a Kickplate on the Door. You simply use it as a mounting strip:

1) Unscrew the lowermost screws that hold the kickplate.
2) Tuck up the AIO between the kick-plate and the door leaf.
3) Remount the screws.

8.6 Protection Against Colliding Pallet Trucks



Pallet truck drivers often drive their pallet trucks into the push side of swing doors in order to force them open. That may damage the door and any rodent proofing seal mounted on that side of the door.

If there is pallet truck traffic through the door and you install a seal on the push side, you should therefore consider protecting the door and the AIO with a kick-plate. You can use the kickplate as mounting strip when installing the AIO.

8.7 How to Handle Very Uneven Thresholds

If the threshold is so uneven or rough that there will be substantial gaps under the AIO, the threshold should be repaired before installing the AIO, so insects cannot pass through the gaps.

Though it is not the optimal solution, you can instead supplement the AIO with a brush door sweep that will conform better to the uneven or rough surface and thereby keep out small insects.

Such a brush door sweep may be installed on one side of the door while the RodeXit seal is installed on the other side.

The brush door sweep may also be installed on the same side as the RodeXit seal. In that case the brush door sweep may be used as mounting strip when securing the RodeXit seal to the door.

Opposite sides installation

Same side installation

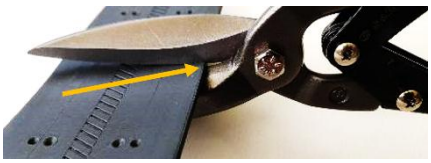
8.8 Tin Snips and the Use Thereof

The quality of tin snips varies a lot. Some are useless. RodeXit recommends these straight tin snips:

- Stanley Fatmax 14-566 with long blades
- Stanley Fatmax FMHT 73756
- Stanley Fatmax 14-563
- DEWALT DWHT 14675
- DEWALT DWHT 14694 with short blades

Tin snips with long blades have the advantage that it is easy to make straight cuts with them – especially if you have strong hands.

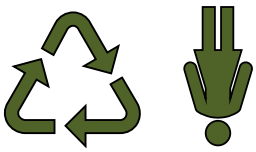
It is not rocket science, but it makes a lot of difference. You should open the gap of the tin snips completely and firmly drag the AIO / the aluminum mounting strip as far as possible in between the 2 blades of the tin snips before cutting:



If the blades are forced apart when you try to cut, it may be because you do not hold the AIO at a right angle to the blades of the tin snips. It may also be because the main screw of the tin snips isn't sufficiently tight.

8.9 Repair by Reuse

Because the AIO is symmetrical, it can be reused if the lower part has been worn or otherwise damaged. You simply dismount the AIO, turn it upside-down and remount it.



This is especially beneficial when the AIO is mounted by means of a mounting strip, because the damaged part of the AIO can be hidden behind the mounting strip.