

# Installation guidelines on Sonorex® Fire and noise insulation panels

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## Contact details

Insulation Solutions  
Minosstraat 40  
NL-5048 CK Tilburg

Post box 5003  
NL-5004 EA Tilburg

T +31 (0)13 - 578 48 87  
F +31 (0)13 - 572 07 03

[www.insulationsolutions.nl](http://www.insulationsolutions.nl)

## Contact persons

**Sales Director**  
Jacques de Kort  
[jacques.de.kort@insulationsolutions.nl](mailto:jacques.de.kort@insulationsolutions.nl)

**Account Manager**  
Jaap Konings  
[jaap.konings@insulationsolutions.nl](mailto:jaap.konings@insulationsolutions.nl)

**Sales department**  
Bas van den Aker  
[bas.vandenaker@insulationsolutions.nl](mailto:bas.vandenaker@insulationsolutions.nl)

Conny van Dijk  
[conny.vandijk@insulationsolutions.nl](mailto:conny.vandijk@insulationsolutions.nl)

Ivo Vugts  
[ivo.vugts@insulationsolutions.nl](mailto:ivo.vugts@insulationsolutions.nl)

## 1. Introduction

These Sonorex® installation guidelines describe the assembly steps that we recommend for installing Sonorex® barriers. In view of the wide variety of Sonorex® barriers available, we have made a distinction between the following versions:

1. Sonorex® noise-insulating barriers
2. Sonorex® noise-insulating barriers reinforced with Easy Mass mass film
3. Sonorex® fire-resistant and noise-insulating barriers
4. Sonorex® fire-resistant and noise-insulating barriers reinforced with Easy Mass foil
5. Finishing of fire-resistant leadthroughs

These installation guidelines are based on a number of standards, fire tests and an expert assessment. The standards lay down that certain dimensions and versions may only be used provided specific values are not exceeded. For example, the height of the barrier and the wall. If the deviation of the total structure (wall + barrier) during the fire test does not exceed 100mm, the total wall structure will have to be increased from 3 to 4 metres. The barrier may then be proportionally (33%) increased. Thus it is important to check the total wall height (wall + barrier) and the barrier height in advance, and the specifications laid down in the fire resistance requirements. This information is mentioned in our product leaflets for Sonorex® fire-resistant and noise-insulating barriers. In case of any doubts or if you have any questions concerning the scope of application, dimensions and joining, please contact our specialists.

## 2. Required materials, tools and accessories

It is necessary to use the following products in order to carry out work as described in these installation guidelines:

- Sonorex® Barrier
- Sonorex® Tape
- Sonorex® Easy Mass Foil
- Sonorex® Darning wool
- Sonorex® Screw and/or Locking pin
- Fire-resistant adhesive (Supplier: Insulation Solutions)
- Metal hangers as props (support)

The following tools may be used for installing these Sonorex® products:

- Stripping blade
- Handsaw
- Jigsaw
- Measuring tools
- Glue gun

### 3. Recommendations for fitting Sonorex® Noise insulation panels 22dB - 23dB - 27dB - 31dB - 33dB

#### Application:

1. Measure the Sonorex® Noise insulation panels with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the Sonorex® Noise insulation panels to the required size if so desired.
3. Place the bottom of the insulation panel in the bandraaster or on the T-profile and tilt the insulation panel into position.
4. The insulation panel must fit tightly on the superstructure without any gaps. Gaps if any should be filled with Sonorex® darning wool.
5. Place the next insulation panel in the same manner and ensure that the insulation panels are securely interconnected. Gaps if any should be filled with Sonorex® darning wool. The suspended structures such as adjustable or metal hangers must be covered with the Sonorex® insulation panel.
6. After installing the Sonorex® insulation panels and filling the gaps, the joints with the architectural structure and the mutual joints must be finished with Sonorex® tape on one side.

#### Leadthroughs

To start with, avoid leadthroughs in the Sonorex® Noise insulation panels to the extent possible, since these can lead to undesirable noise leaks in the structure. The noise insulation detailed in the product leaflets assumes direct noise insulation without leadthroughs. The specified noise insulation values of the Sonorex® barriers may not be obtained if recesses are made in the noise insulation panel.

Please proceed as follows for finishing leadthroughs through the Sonorex® noise insulation panels.

1. Cut the leadthroughs in the insulation panel to the required size using a stripping blade. Edges and gaps around channels, pipes and gutters must be prevented.
2. If the gap is 1 cm or less, it should be fully filled with Sonorex® darning wool.
3. If a gap exceeds 1 cm, install a new insulation panel.
4. Then finish the joint with Sonorex® tape.

Cable ducts that pass through Sonorex® Noise insulation panels must be sealed after installation. After installing the cabling, the remaining space between the cable duct and the Sonorex® insulation panel must be completely filled up with Sonorex® darning wool and then finished with Sonorex® tape.

Sonorex® products are tested according to the standards and guidelines mentioned in the product leaflet. If you have any questions about the scope of application, dimensions, customisation (recesses), leadthroughs and connections, please contact us.

4. Recommendations for fitting Sonorex® Noise insulation panels with Easy Mass foil  
38dB - 40dB Light - 41dB - 43dB Light - 45dB - 47dB

Application:

1. Measure the Sonorex® Noise insulation panels with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the Sonorex® Noise insulation panels to the required size if so desired.
3. Place the bottom of the insulation panel in the bandraaster or on the T-profile and tilt the insulation panel into position.
4. The insulation panel must fit tightly on the superstructure without any gaps. Gaps if any should be filled with Sonorex® darning wool.
5. Place the next insulation panel in the same manner and ensure that the insulation panels are securely interconnected. Gaps if any should be filled with Sonorex® darning wool. The suspended structures such as adjustable or metal hangers must be covered with the Sonorex® insulation panel.
6. You are then required to measure the height between the top edge of the bandraaster and the bottom side of the architectural structure. This is the height for the Sonorex® Easy Mass foil.
7. Cut the Sonorex® Easy Mass foil to the required size and remove the protective foil.
8. Apply the Sonorex® Easy Mass foil at the top of the bandraaster and fit it evenly towards the top. Prevent air entrapment between the foil and the barrier.
9. After fitting the Sonorex® Easy Mass foil, finish the joint with the architectural structure and the mutual joints on one side with Sonorex® tape.
10. The Sonorex® Easy Mass Foil is self-adhesive. We however recommend that the foil should be secured in place in order to ensure the quality of noise insulation panels in the long term. The Sonorex® Screw and/or Locking Pin to attach the mass foil will not adversely affect the noise insulation properties of the relevant Sonorex noise insulation panel. For details of the location and distances of the Sonorex® Screw and/or locking pin, please see Figure 1. The locking pin should be fully inserted through the insulation panel and locked in place with a locking plate on the other side. See Figure 2.

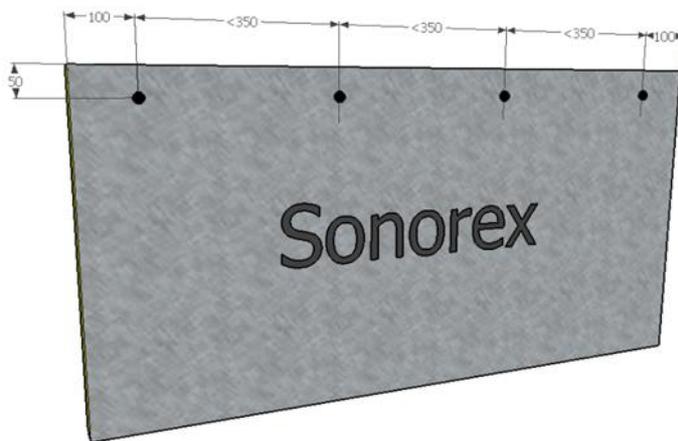


Figure 1, Location of Sonorex® Screw and/or Locking Pin

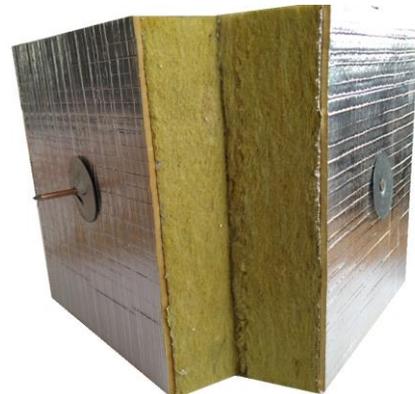


Figure 2, Locking pin and plate

### Acoustic leadthroughs

To start with, avoid leadthroughs in the Sonorex® Noise insulation panels to the extent possible, since these can lead to undesirable noise leaks in the structure. The noise insulation detailed in the product leaflets assumes direct noise insulation without leadthroughs. The specified noise insulation values of the Sonorex® barriers may not be obtained if recesses are made in the noise insulation panel.

To finish leadthroughs made through the Sonorex® noise insulation panels, we recommend the following procedure.

1. Cut the leadthroughs in the insulation panel and the mass foil to the required size, using a stripping blade. Edges and gaps around channels, pipes and gutters must be prevented.
2. If the gap is 1 cm or less, it should be fully filled with Sonorex® darning wool.
3. If a gap exceeds 1 cm, install a new insulation panel.
4. Then finish the joint with Sonorex® tape.

Cable ducts that pass through Sonorex® Noise insulation panels must be sealed after installation. After installing the cabling, the remaining space between the cable duct and the Sonorex® insulation panel must be completely filled up with Sonorex® darning wool and then finished with Sonorex® tape.

Sonorex® products are tested according to the standards and guidelines mentioned in the product leaflet. If you have any questions about the scope of application, dimensions, customisation (recesses), leadthroughs and connections, please contact us.

5. **Recommendations for fitting Sonorex® Fire and Noise insulation panels**  
23/30 - 33/45 - 33/60

Application:

1. Measure the Sonorex® Fire and Noise insulation panels with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the Sonorex® insulation panels to the required size if so desired.
3. If the adjoining ceiling is specified as Fire Class C or better, and is locally resistant to high temperatures, there is no need to install a plaster strip inside the bandraaster. If the ceiling has a lower Fire Class than C, one strip of fire-resistant plasterboard (RF) with a thickness of 15 mm and a width of 60 mm must be installed in the bandraaster.
4. Place the bottom of the insulation panel in the bandraaster and tilt the insulation panel into position.
5. The insulation panel must fit tightly on the superstructure without any gaps. Gaps if any should be filled with Sonorex® darning wool.
6. Place the next insulation panel in the same manner and ensure that the insulation panels are securely interconnected.
7. After installing the Sonorex® insulation panels, the insulation panels must be glued to each other with fire-resistant adhesive (supplier: Insulation Solutions) at the point where it is joined to the structure
8. Gaps if any should be filled with Sonorex® darning wool. The suspended structures such as adjustable or metal hangers must be covered with the Sonorex® insulation panel.
9. After installing the Sonorex® insulation panels, applying the fire-resistant adhesive and filling up the gaps, finish the joints with the architectural structure and the mutual joints, and with the bandraaster, with Sonorex® tape on both sides.
10. For structures with a barrier height of 600 mm and above, and a total wall height exceeding 3000 mm, the bandraaster must be supported with a metal hanger up to the architectural structure. The core-to-core distance from the support must not exceed 2400mm.

Fire-resistant leadthroughs:

For finishing leadthroughs (cables and cable ducts) in the fire partitions, we recommend you to use the Promat fire-resistant leadthroughs in combination with the PROMASTOP®-CB insulation panel. When doing this, you should however check whether these Promat fire-resistant leadthroughs have been tested in combination with the PROMASTOP®-CB insulation panel. The maximum height of the PROMASTOP®-CB insulation panel is 800mm in this application. The installation of several PROMASTOP®-CB insulation panels next to each other is not permitted.

1. Measure the Sonorex® barrier with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the PROMASTOP®-CB insulations panels to the required size if so desired.
3. Coat the end faces of the PROMASTOP®-CB plate with fire-resistant paint (PROMASTOP®-CSP).
4. Place the bottom of the PROMASTOP®-CB insulation panel in the bandraaster and tilt the insulation panel into its final position.
5. The PROMASTOP®-CB insulation panel must join tightly with the superstructure, without gaps. Gaps if any should be filled with Sonorex® darning wool.
6. Thereafter place the Sonorex® barrier (according to the fitting instructions given above) against the Promastop®-CB insulation panel. The end faces of the Sonorex® barrier must be coated with the fire-resistant paint (PROMASTOP®-CSP), provided along with the system, at the place where it joins the PROMASTOP®-CB insulation panel, the bandraaster, and the architectural structure.
7. After installing the Sonorex® barrier, apply PROMASTOP®-CSP fire-resistant paint to the Sonorex® barrier, at the place where it joins the PROMASTOP®-CB insulation panel, over a width of 100mm (from the place where it joins the PROMASTOP®-CB insulation panel). The aluminium foil must not be removed. This shall also apply to the joint with the architectural structure.
8. Please refer to the PROMAT manual for instructions for the fire-resistant installation of the leadthroughs in the PROMASTOP®-CB plate.

6. **Recommendations for fitting Sonorex® Fire and Noise insulation panels**  
31/20

**Application:**

1. Measure the Sonorex® Fire and Noise insulation panels with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the Sonorex® insulation panels to the required size if so desired.
3. Place the bottom of the insulation panel in the bandraaster and tilt the insulation panel into position.
4. The insulation panel must be joined to the superstructure without any gaps. Gaps if any should be filled with Sonorex® darning wool.
5. Place the next insulation panel in the same manner and ensure that the insulation panels are securely interconnected.
6. Gaps if any should be filled with Sonorex® darning wool. The suspended structures such as adjustable or metal hangers must be covered with the Sonorex® insulation panel.
7. After installing the Sonorex® insulation panels and filling the gaps, finish the joint with the architectural structure and the mutual joints with Sonorex® tape on both sides.

**Fire-resistant leadthroughs:**

For finishing leadthroughs (cables and cable ducts) in the fire partitions, we recommend you to use the Promat fire-resistant leadthroughs in combination with the PROMASTOP®-CB insulation panel. When doing this, you should however check whether these Promat fire-resistant leadthroughs have been tested in combination with the PROMASTOP®-CB insulation panel. The maximum height of the PROMASTOP®-CB insulation panel is 800mm in this application. The installation of several PROMASTOP®-CB insulation panels next to each other is not permitted.

1. Measure the Sonorex® barrier with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the PROMASTOP®-CB insulations panels to the required size if so desired.
3. Coat the end faces of the PROMASTOP®-CB plate with fire-resistant paint (PROMASTOP®-CSP).
4. Place the bottom of the PROMASTOP®-CB insulation panel in the bandraaster and tilt the insulation panel into its final position.
5. The PROMASTOP®-CB insulation panel must join tightly with the superstructure, without gaps. Gaps if any should be filled with Sonorex® darning wool.
6. Thereafter place the Sonorex® barrier (according to the fitting instructions given above) against the Promastop®-CB insulation panel. The end faces of the Sonorex® barrier must be coated with the fire-resistant paint (PROMASTOP®-CSP), provided along with the system, at the place where it joins the PROMASTOP®-CB insulation panel, the bandraaster, and the architectural structure.
7. After installing the Sonorex® barrier, apply PROMASTOP®-CSP fire-resistant paint to the Sonorex® barrier, at the place where it joins the PROMASTOP®-CB insulation panel, over a width of 100mm (from the place where it joins the PROMASTOP®-CB insulation panel). The aluminium foil must not be removed. This shall also apply to the joint with the architectural structure.
8. Please refer to the PROMAT manual for instructions for the fire-resistant installation of the leadthroughs in the PROMASTOP®-CB plate.

7. Recommendations for fitting Sonorex® Fireproof insulation panels reinforced with Easy Mass foil  
40dB Light - 41dB - 43dB Light - 47dB

Application:

1. Measure the Sonorex® Fire and Noise insulation panels with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the Sonorex® insulation panels to the required size if so desired.
3. If the adjoining ceiling is specified as Fire Class C or better, and is locally resistant to high temperatures, there is no need to install a plaster strip inside the bandraaster. If the ceiling has a lower Fire Class than C, one strip of fire-resistant plasterboard (RF) with a thickness of 15 mm and a width of 60 mm must be installed in the bandraaster.
4. Place the bottom of the insulation panel in the bandraaster and tilt the insulation panel into position.
5. The insulation panel must fit tightly on the superstructure without any gaps. Gaps if any should be filled with Sonorex® darning wool.
6. Place the next insulation panel in the same manner and ensure that the insulation panels are securely interconnected.
7. After installing the Sonorex® insulation panels, the insulation panels must be glued to each other with fire-resistant adhesive (supplier: Insulation Solutions) at the point where it is joined to the structure.
8. Gaps if any should be filled with Sonorex® darning wool. The suspended structures such as adjustable or metal hangers must be covered with the Sonorex® insulation panel.
9. You are then required to measure the height between the top edge of the bandraaster and the bottom side of the architectural structure. This is the height for the Sonorex® Easy Mass foil.
10. Cut the Sonorex® Easy Mass foil to the required size and remove the protective foil.
11. Apply the Sonorex® Easy Mass foil at the top of the bandraaster and fit it evenly towards the top. Prevent air entrapment between the foil and the barrier.
12. After applying the Sonorex® Easy Mass foil, finish the joint with the architectural structure, the mutual joints and the connection to the bandraaster with Sonorex® tape on both sides.
13. For structures with a barrier height of 600 mm and above, and a total wall height exceeding 3000 mm, the bandraaster must be supported with a metal hanger up to the architectural structure. The core-to-core distance from the support must not exceed 2400mm.
14. The Sonorex® Easy Mass Foil is self-adhesive. We however recommend that the foil should be secured in place in order to ensure the quality of noise insulation panels in the long term. The Sonorex® Screw and/or Locking Pin to attach the mass foil will not adversely affect the noise insulation properties of the relevant Sonorex noise insulation panel. For details of the location and distances of the Sonorex® Screw and/or locking pin, please see Figure 1. The locking pin should be fully inserted through the insulation panel and locked in place with a locking plate on the other side. See Figure 2.

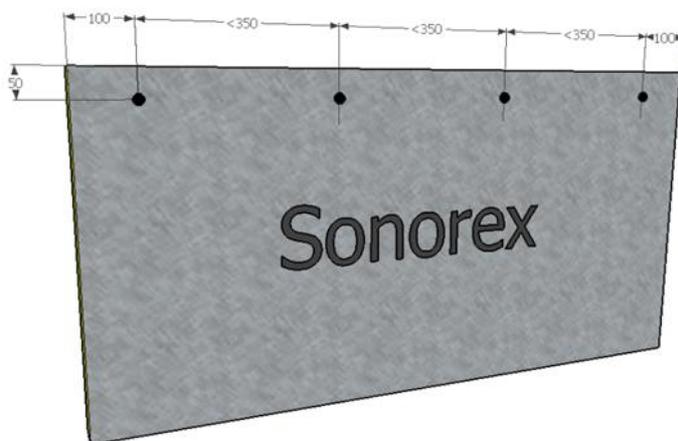


Figure 1, Location of Sonorex® Screw and/or Locking Pin

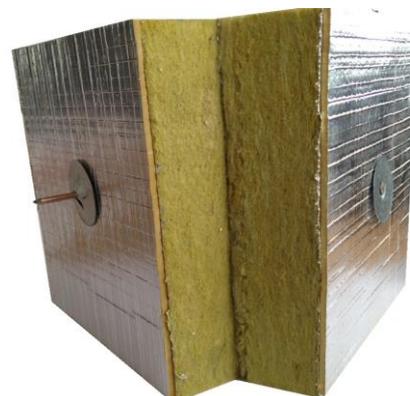


Figure 2, Locking pin and plate

### Fire-resistant leadthroughs:

For finishing leadthroughs (cables and cable ducts) in the fire partitions, we recommend you to use the Promat fire-resistant leadthroughs in combination with the PROMASTOP®-CB insulation panel. When doing this, you should however check whether these Promat fire-resistant leadthroughs have been tested in combination with the PROMASTOP®-CB insulation panel. The maximum height of the PROMASTOP®-CB insulation panel is 800mm in this application. The installation of several PROMASTOP®-CB insulation panels next to each other is not permitted.

1. Measure the Sonorex® barrier with allowances, so that these can be tightly fitted between the bandraaster and the superstructure.
2. Cut the PROMASTOP®-CB insulations panels to the required size if so desired.
3. Coat the end faces of the PROMASTOP®-CB plate with fire-resistant paint (PROMASTOP®-CSP).
4. Place the bottom of the PROMASTOP®-CB insulation panel in the bandraaster and tilt the insulation panel into its final position.
5. The PROMASTOP®-CB insulation panel must join tightly with the superstructure, without gaps. Gaps if any should be filled with Sonorex® darning wool.
6. Then install the Sonorex® barrier (according to the fitting instructions given above) against the Promastop®-CB insulation panel. The end faces of the Sonorex® barrier must be coated with the fire-resistant paint (PROMASTOP®-CSP), provided along with the system, at the place where it joins the PROMASTOP®-CB insulation panel, the bandraaster, and the architectural structure.
7. After installing the Sonorex® barrier, apply PROMASTOP®-CSP fire-resistant paint to the Sonorex® barrier, at the place where it joins the PROMASTOP®-CB insulation panel, over a width of 100mm (from the place where it joins the PROMASTOP®-CB insulation panel). The aluminium foil must not be removed. This shall also apply to the joint with the architectural structure.
8. Please refer to the PROMAT manual for instructions for the fire-resistant installation of the leadthroughs in the PROMASTOP®-CB plate.

Sonorex® products are tested according to the standards and guidelines mentioned in the product leaflet. If you have any questions about the scope of application, dimensions, customisation (recesses), leadthroughs and connections, please contact us.

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