



Installation - Manual

XH - Acoustic Housing

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1. General information

Solflex produces SonaSafe acoustic housing for a wide range of Heat Pump, Air Conditioning and Refrigeration systems. This manual applies to the following series:

XH* Serie

<https://solflex.eu/en/xhschalldaemmgehaeuse20db>

2. Technical Data



Stable self-supporting, insulated box housing with fully demountable structure without welding and riveting. All housing components are resistant to corrosion by the use of galvanized steel sheets and aluminium. Profile frame construction with mechanically loaded, all sides easily removable panels in sandwich construction. Inner surfaces are fully lined with sound-absorbing foam. Frame constructed of solid hollow profiles made of anodized aluminium and rounded at the outer edges. The extruded profiles are fitted and bolted at the corners by in accordance with its interior moulded connectors made of cast aluminium.

The box housing is pre-mounted on a stable base frame made of high-strength, galvanized steel profiles. In the base frame adjustable crossbeams made of galvanized steel profiles are integrated which allow optimum adaptation of the outdoor units built in. The base frame is designed with height-adjustable, sturdy feet with plastic plates and to be placed on a firm ground, a strip foundation or provided on concrete slabs.

Exact separation of the suction and discharge air flow provided by an air separator between the lamella-pack and the outdoor unit. This air separator is mounted on the lamella-pack already ex works. The other side of the air separator is attached from the installation company with Velcro fastener tape on the outer edge of the air conditioner.

Integrated special designed lamella-pack sets at the back side for large-scale and laminar air intake, as well as on the front side of the housing for air discharge with same integrated silencing baffles in V-shape.

Sound insulation made of high quality material combination for the absorption of airborne sound from PUR foam with heavy foil on the backside. Visible surface is resistant against dirt and water splash due to special foil. Fire behavior according to DIN4102 B3, Operating temperature range -40 °C to + 100 °C, thickness 52 mm.

The lamella-packs can easily be removed from the box housing for easy access for operation and maintenance of the outdoor units (condensers and fans) with the built-in quick-release fasteners.

In addition, the panels on the top and on left and right hand side can be dismantled by means of quick-release fasteners for optimal access and insertion of the unit.

The cables and pipes of the outdoor unit can be put through on 2 sides (front and back side) of the housing using the supplied cable glands and rubber gaskets.

As option a drain pan made of galvanized steel can be integrated in the base frame (version "W"), which is lined with a special damping rubber mat to avoid a drone effect and to reduce freezing of condensing water. In addition, the defrost water pan has a drain at the back for the derivation of the water.

Depending on requirements, it is recommended to heat the drain pan with a heater system consisting of a built-in heating cable, including connection box with sensors, control thermostat, on/off switch, earth leakage trips and operation lamp as option from factory (version H) or this is built in from the installation company separately. The complete construction is completely weatherproof and also optimized for the operation of heat pumps. For safe loading and positioning 4 stable crane lugs are mounted on the base frame.

Optionally, the acoustic housing can be produced with a colored foil on galvanized steel sheet. This foil increases the weather protection and gives the housing a softer appearance.

Solflex Type	Housing dimensions H x W x D [mm]	Weight [kg]	Max. dimensions for installation * H x W x D [mm]	Equipment
XHS100NA	1008 x 1350 x 1640	280	850 x 1200 x 500	1
XH100NA	1220 x 1350 x 1640	300	950 x 1200 x 500	1
XH200NA	1825 x 1350 x 1640	480	1550 x 1200 x 500	1
XH110NA	1220 x 2550 x 1640	600	950 x 1200 x 500	2
XH220NA	1825 x 2550 x 1640	960	1550 x 1200 x 500	2
XH111NA	1220 x 3750 x 1640	850	950 x 1200 x 500	3
XH222NA	1825 x 3750 x 1640	1440	1550 x 1200 x 500	3

Solflex Type	Housing dimensions H x W x D [mm]	Weight [kg]	Max. dimensions for installation * H x W x D [mm]	Equipment
XHX100NA	1390 x 1900 x 1740	450	1050 x 1700 x 600	1
XHX200NA	2065 x 1900 x 1740	630	1750 x 1700 x 600	1
XHX110NA	1390 x 3600 x 1740	900	1050 x 1700 x 600	2
XHX220NA	2065 x 3600 x 1740	1260	1750 x 1700 x 600	2
XHX111NA	1390 x 5300 x 1740	1300	1050 x 1700 x 600	3
XHX222NA	2065 x 5300 x 1740	1890	1750 x 1700 x 600	3

Solflex Type	Housing dimensions H x W x D [mm]	Weight [kg]	Max. dimensions for installation * H x W x D [mm]	Equipment
XHY100NA	1480 x 1450 x 1740	425	1200 x 1250 x 600	1
XHY200NA	2025 x 1450 x 1740	580	1750 x 1250 x 600	1
XHY110NA	1480 x 2750 x 1740	850	1200 x 1250 x 600	2
XHY220NA	2025 x 2750 x 1740	1160	1750 x 1250 x 600	2
XHY111NA	1480 x 4050 x 1740	1275	1200 x 1250 x 600	3
XHY222NA	2025 x 4050 x 1740	1740	1750 x 1250 x 600	3

3. Warranty

24 months from delivery.

4. Safety

In the event of improper operation or operation for a purpose other than the intended, there is however a risk of serious or even fatal injury to persons and a risk of damage to the unit and other property.

4.1. Intended use

The unit must only be used as acoustic housing for compatible Heat Pump, Air Conditioning and Refrigeration systems. Any other use is strictly prohibited.

4.2. Safety instructions

All work about the assembly, installation and commissioning of the unit must be carried out by specially trained technicians.

4.2.1. Risks during unloading and transportation



Risk of serious injury from dislodged loads.
Do not stand under suspended loads.

Risks from electric power



Risk of electric shock from electrostatic charge of housing:
Earth the device.

4.2.2. Risk of damage to property and the environment



Serious damage to property from dropping loads;
please observe the instructions in section "Delivery of product".

Serious damage to heat exchanger connections, panelling and other mounted components from force impact during moving of unit elements; **always move the unit elements by their base frame.**

Risk of damage to components from heavy impact, e.g. when attempting to dislodge a part with a hammer, etc.:
Components that rest on the foundation must only be moved by shifting.

4.3. Emergency procedures

4.3.1. Fire fighting

Strictly adhere to all statutory fire safety regulations.
The insulation foam has a fire behaviour according norm.

5. Product delivery

Upon delivery, inspect the product for damage caused during transport and ensure that the delivery is complete. Record any damage or missing parts on the transport documents. Complaints regarding obvious transport damage or incomplete deliveries cannot be considered if made too late.

On the construction site, protect the unit against dirt, impact and the elements.

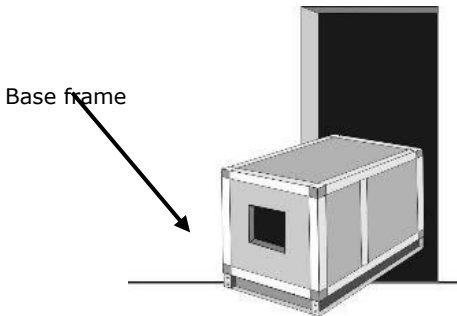
5.1. Unloading / transport to location of installation

This unit is shipped assembled. For unloading, lift the unit by the base frame.

Too short forks can damage the acoustic housing.



Risk of serious injury or damage to property from dropping loads. Observe the safety instructions of the transport equipment and lifting gear.

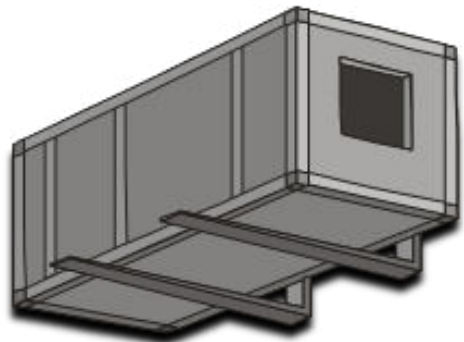


Risk of serious injury or damage to property from dropping loads. Observe the safety instructions of the transport equipment and lifting gear.

Do not climb onto the unit.

5.2. Unloading with a forklift or pallet truck

It is important to ensure that the products base frame rests completely on the forks of the lifting device and the center of gravity lies between the forks. When unloading, make sure that the profiles do not get damaged. If the forks are too short they can damage the drain pan.

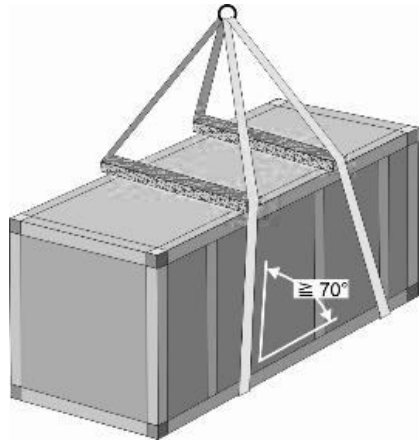


5.3. Unloading with a crane

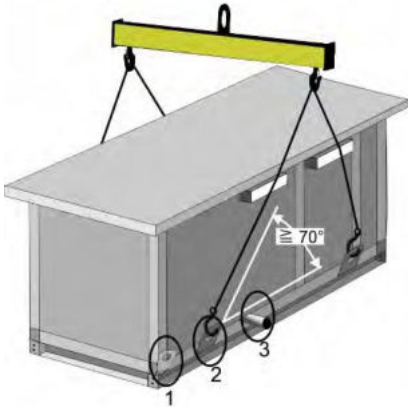
Only suitable and approved lifting accessories (ropes, lifting straps, ...) may be used. Use spacers to protect the acoustic housing from damage.



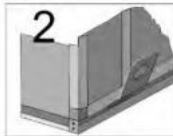
The specially provided crane lugs are to be used to transport the acoustic housing. These may not be mounted on the upper corner connections. Schematic figure, please note the description above!



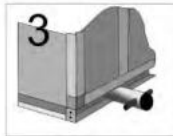
There are 3 different variations of lifting accessories:



Variation 1
Crane strap on the corner bracket



Variation 2:
Crane strap on the base frame



Variation 3:
Form tube through base frame

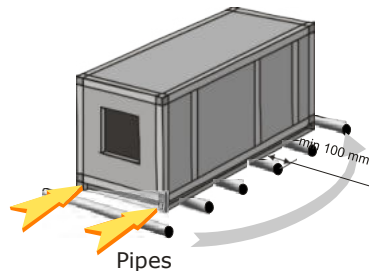
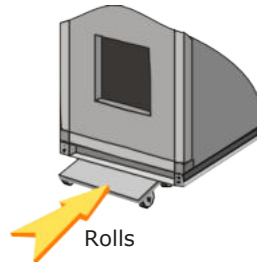
Larger acoustic housings are equipped with 8 lugs, please note the figure.



5.4 Manual positioning

When moving the acoustic housing, the force must not act on connections and panels. The force should always act on the base frame.

Never move the acoustic housing with blows from heavy equipment (e.g. hammer).



6. Installation of unit

NOTICE

At the place of installation, it must be possible to provide impeccable service and maintenance and the necessary air intake of the built-in air-conditioning, refrigeration and heat pump units.

When planning the installation site, the guide lines for minimum distances around the air-conditioning, refrigeration and heat pump manufacturer must be respected.

The transport wedges must be removed before the sound enclosure is fitted at the installation site.



Important NOTE:

CAUTION

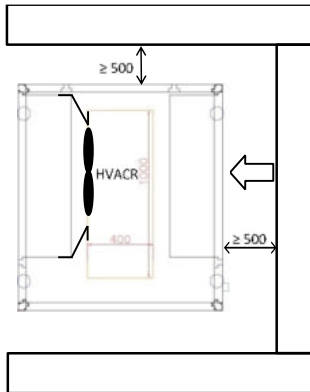
Please always use the required safety work gear during installation.

Due to the packaging materials and the production process, personal injury may occur, such as hand injuries.

If the soundproof housing is freely accessible, the necessary measures during assembly should be taken to local conditions to avoid personal injury.

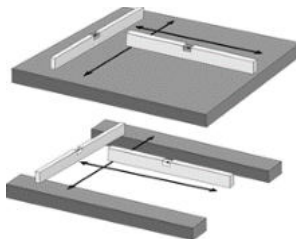
6.1. Installation site

The following minimum distances to walls must be observed:



6.2. Foundation

The foundation must meet the relevant static and sound propagation requirements and must feature a proper drain for water. It must be level and smooth. The resonance frequency of the support structure must be distinctly different from the excitation frequency of the rotating machine components (Heat Pump, Air Conditioning and Refrigeration system).



An uneven foundation might cause malfunction or jammed panels. Liability is excluded for damage caused by installation on an uneven surface.

6.3. Installation

All housings are fully assembled at the factory and can easily be set up on a foundation, such as a strip foundation or concrete slabs on a solid surface- A separate base frame is usually not necessary, unless it is a roof installation where a special load distribution is necessary.



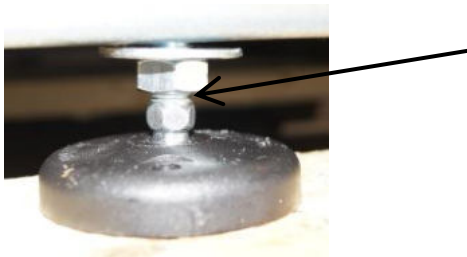
The base frame and the crane lugs are statically designed and dimensioned so that the air conditioning, cooling and heat pump devices can be pre-assembled in the acoustic housing and lifted together with the crane. No liability will be accepted for any errors or consequences resulting from the fixing and checking of the fixing of the cross member and the pre-assembly of the air conditioning, refrigeration or heat pump units.

6.4. Adjusting the feet

The acoustic housing can be aligned horizontally on the ground using adjustable feet on the base frame.



The lock nuts must be retightened on all feet on the construction site and checked for correct fit and firmness.



6.6. Installation of Heat Pump, Air Conditioning and Refrigeration outdoor unit



It is important that the alignment of the refrigeration, air conditioning or heat pump device is in the middle of the acoustic louvre.



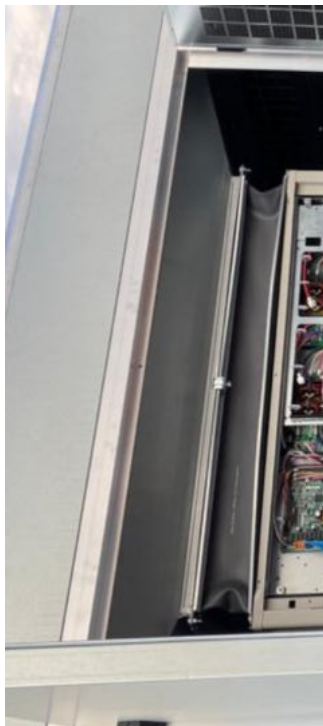
Appropriate pipe and cable bushings can then be drilled into the housing.

⚠️ WARNUNG

Other openings or large cut-outs in the soundproof housing are not permitted, as this change in the housing entails massive restrictions in terms of the achievable insertion loss and noise reduction, as well as stability and weather resistance.

The further connection and commissioning work on the air conditioning refrigeration device is identical to normal installation without a soundproof housing.

Exact separation of the suction and discharge air flow provided by a flexible, tailor-made, airtight air separator between the upper lamella-pack and the outdoor unit. The flexible air separator is fixed by the installation company on the outer edge of the outdoor unit with foam rubber band and tapping screws, included in the delivery.



7. Maintenance and Service

7.1. General

For maintenance and service work on the refrigeration, air-conditioning or heat pump unit, the necessary panels can be easily removed from the acoustic housing.

Cleaning and maintenance of the acoustic housing

- Remove other dirt with a damp cloth; if necessary, use grease- or oil-dissolving detergents (concentrated neutral detergent with pH between 8 and 9).
- Treat galvanized parts with preservation spray.
- Regularly lubricate moving parts such as panel locks with a lubrication spray.
- Regularly treat seals.
- Repair any damage to the coating, including areas that show signs of corrosion, with repair paint.
- Clean the unit thoroughly to remove all construction dust and other dirt.
- Prior to shipping, each unit is carefully inspected at our factory.

7.2. Silencers

The sound insulation material of the silencers should be checked for dust during major maintenance work and, if necessary, cleaned with a vacuum cleaner.

If necessary, the silencers must be checked for free passage, as this is necessary for perfect air circulation and the function of the installed refrigeration, air conditioning or heat pump unit.

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7.3. Air separation

The air separation should be fixed via the refrigeration, air conditioning or heat pump unit and must be checked annually for contamination and damage. Deposited leaves, paper, etc. must be removed.

7.4. Drain Pan

The condensate pan and the drain must be checked for dirt deposits and cleaned if necessary, in any case before the heating season.

⚠ ACHTUNG

A separate heating of the condensate pan is to be decided by the system manufacturer according to the specific requirements of the project and the installed devices.

7.9. Grounding

Depending on the local regulations and position, we recommend to carry out a grounding or lightning protection.

7.10. Test run

After working on the acoustic housing, the person responsible must ensure that no persons are in the acoustic housing before it is put into operation again.

7.11. Removal and disposal

Metal parts and plastic parts are to be recycled, per applicable regulations.

7.12. Wartungstabelle des Schalldämmgehäuses

Part	Component	Activity			Maintenance				
		control	cleaning	maintenance	wöchentlich	monatlich	quarterly	half-yearly	yearly
SonaSafe	lamellas / insulation	X	X					X	
	air separation	X	X						X
	Drain pan	X	X					X	
	housing	X	X						X
	door	X		X					

Do you have anymore questions?



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