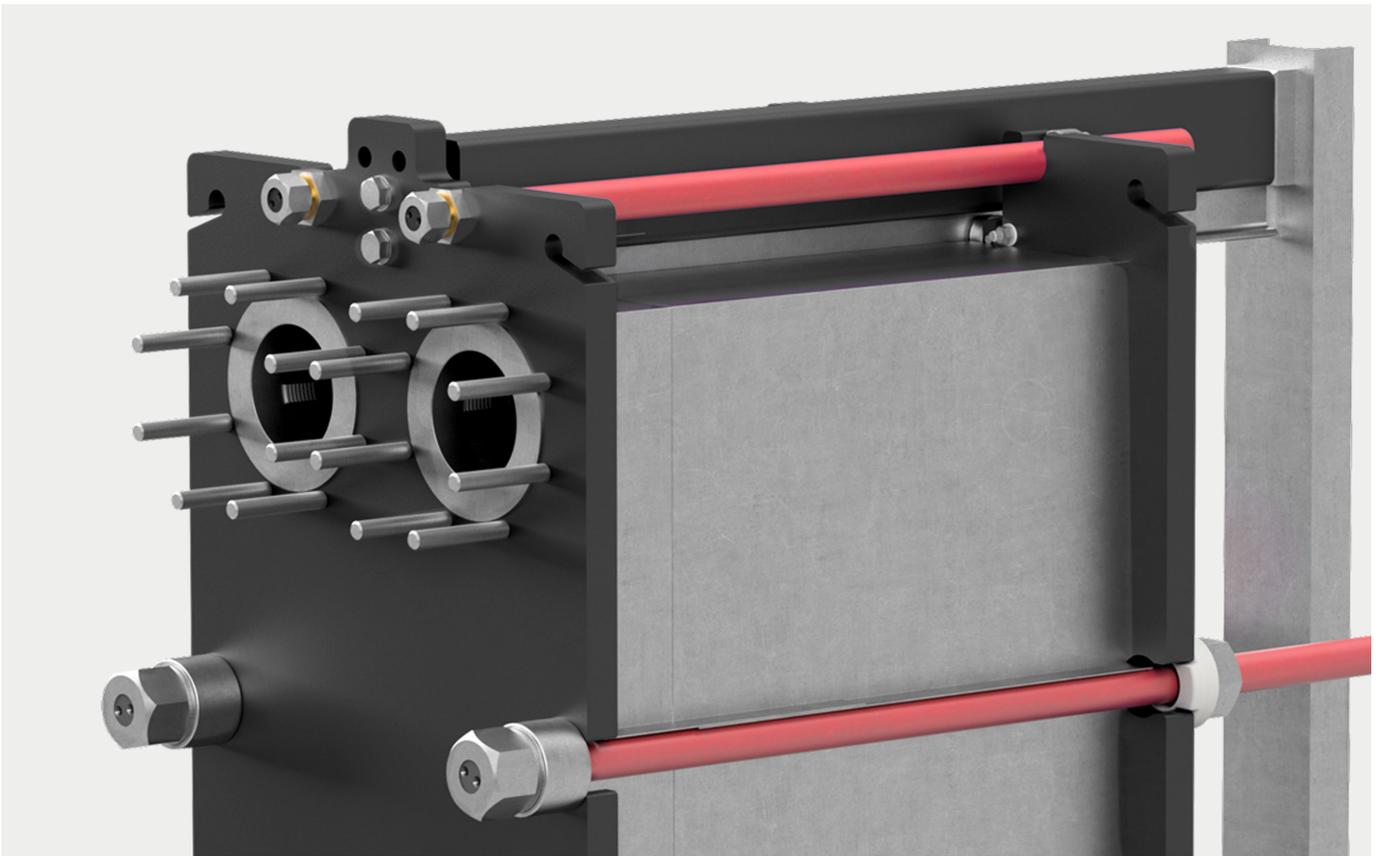


Protection sheets

Installation Manual for protection sheets



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The original instructions are in English

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1 Introduction

This manual provides information needed to handle and install protection sheets on your plate heat exchanger.

1.1 Intended use

The intended use of this equipment is to be assembled on a plate heat exchanger to protect personnel from media leakage.

All other use is prohibited. Alfa Laval will not be held responsible for injury or damage if the equipment is used for any other purpose than the intended use described above.

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2 Safety

2.1 Safety considerations

The plate heat exchanger shall be used and maintained in accordance with Alfa Laval's instructions in this manual. Incorrect handling of the plate heat exchanger may result in serious consequences with injuries to persons and/or property damage. Alfa Laval will not accept responsibility for any damage or injury resulting from not following the instructions in this manual.

The plate heat exchanger should be used in accordance with the specified configuration of material, media types, temperatures and pressure for the specific plate heat exchanger.

2.2 Definitions of expressions



WARNING Type of hazard

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION Type of hazard

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



NOTE

NOTE indicates a potentially hazardous situation which, if not avoided, may result in property damage.



2.3 Personal protective equipment

Protective shoes

Shoes with reinforced toe cap. Minimize foot injuries caused by dropped articles.



Protective helmet

Helmet designed to protect the head from accidental injury.



Protective goggles

Tight-fitting eyeglasses worn to protect the eyes from hazards.



Protective gloves

Gloves that protect the hands from hazards.



Safety

2.4 Working at height

**WARNING****Risk of falling.**

For any kind of work at height, always ensure that safe means of access are available and used. Follow local regulations and guidelines for work at height. Use scaffolds or a mobile work platform and a safety harness. Create a safety perimeter around the working area and secure tools or other objects from falling.

If the installation requires working at a height of two meters or higher, safety arrangements must be taken in consideration.



2.5 Safety signs



WARNING Damaged or missing safety signs.

Safety signs are used to indicate safety hazards. If the signs are missing or damaged, they can not fulfil this function. Replace all missing or damaged safety signs immediately.

Safety signs are attached to the equipment. The table below lists all the signs that are used, and illustrations show their locations on the equipment. Each position number refers to two standards of a safety sign in the table, but only one is used on the equipment.

- Make sure that each safety sign is legible and in its correct position after installation and maintenance.
- Replace all missing or damaged safety signs immediately.

ISO standard



General warning.

Take notice of the supplementary safety signs.

Do not touch.



Dangerous surface.

Do not touch.



Hot surface.

Do not touch.

Safety

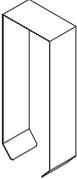
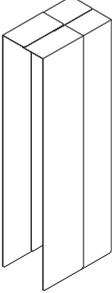
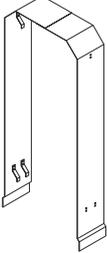
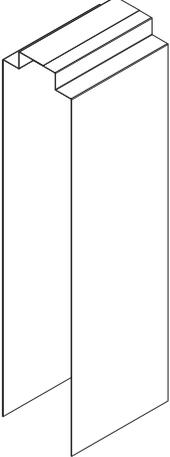
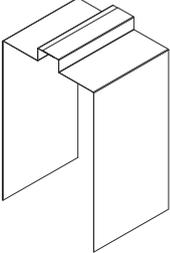
3 Description

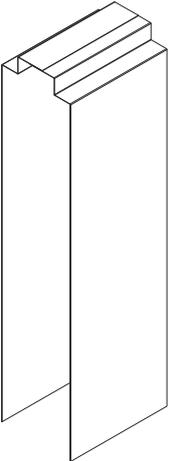
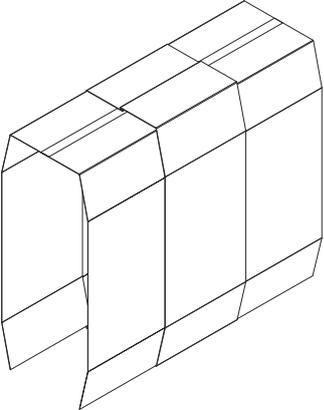
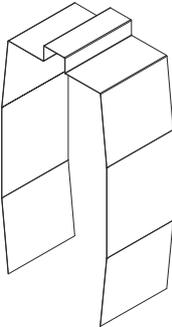
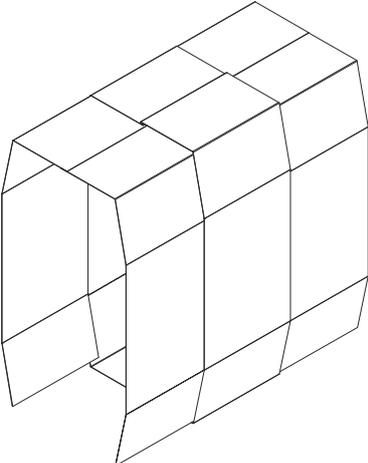
3.1 Design

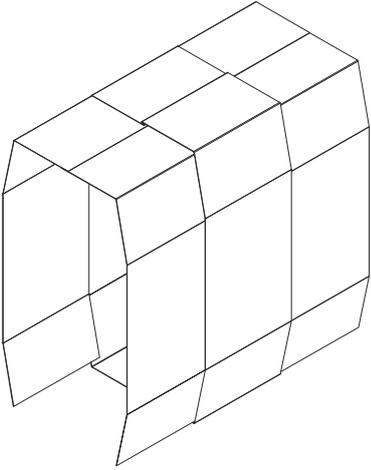
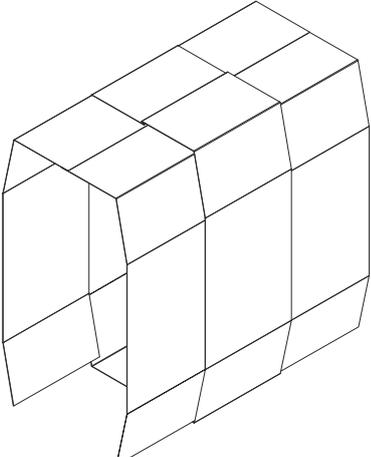
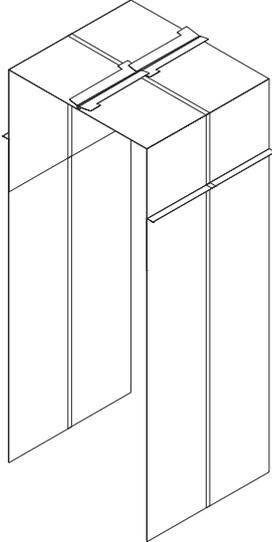
There are different designs of the protection sheets depending on both product size and product family. Protection sheets are available for both industrial plate heat exchangers and for hygienic plate heat exchangers.

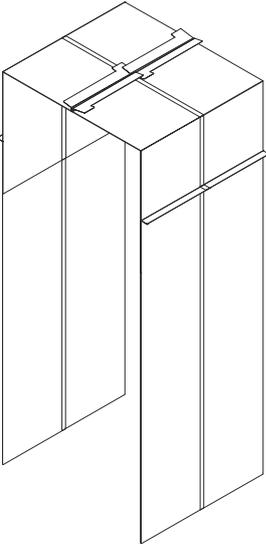
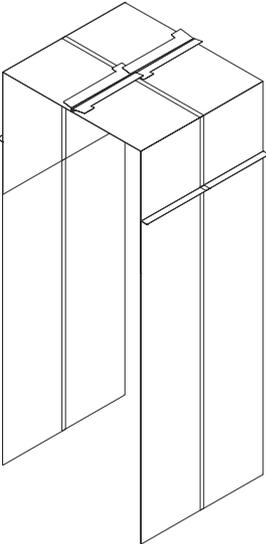
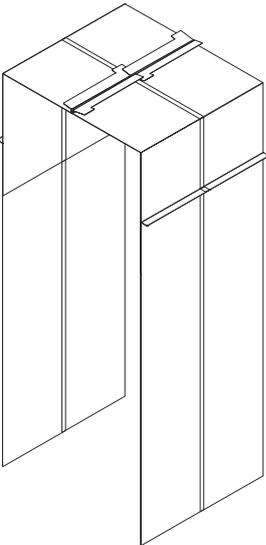
This manual only applies for Alfa Laval standard design of protection sheets. There can be local deviations of the design, if you do not find your design among the instructions, please contact Alfa Laval or your local supplier.

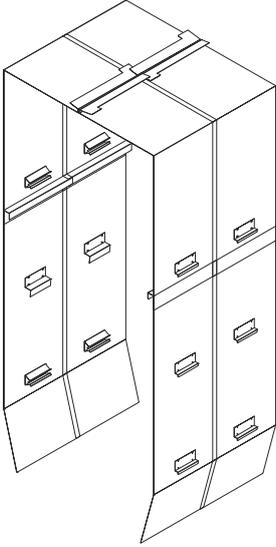
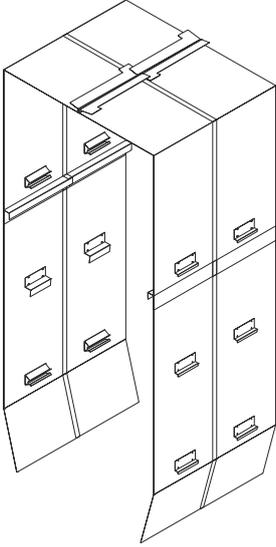
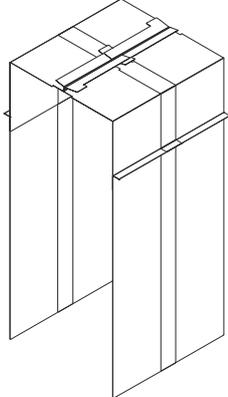
3.1.1 Industrial plate heat exchangers

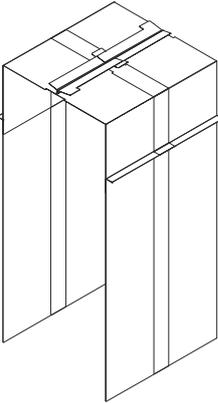
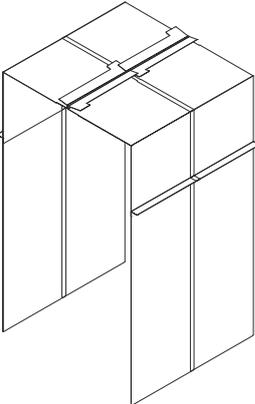
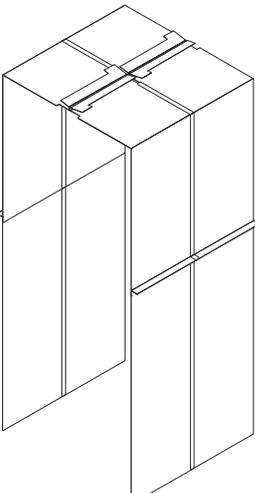
Product	Protection sheet design	Installation instruction
M3 (AQ1)		<p><i>M3 and T8 – Installation</i></p>
TL3 (AQ1L)		<p><i>TL3 – Installation</i></p>
T5 (AQ2A)		<p><i>T5 – Installation</i></p>
TL6 (AQ2L)		<p><i>TL6, TS6 and M6-MW – Installation</i></p>
TS6 (AQ2S)		<p><i>TL6, TS6 and M6-MW – Installation</i></p>

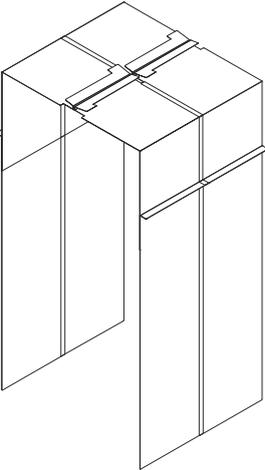
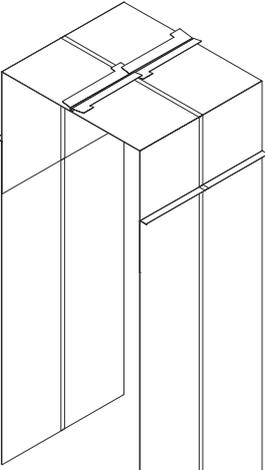
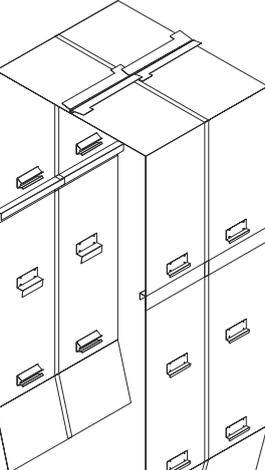
Product	Protection sheet design	Installation instruction
M6-MW		<p><i>TL6, TS6 and M6-MW — Installation</i></p>
T6 (AQ2T)		<p><i>T6, T10, T10-EW and M10-BW — Installation</i></p>
T8 (AQ3)		<p><i>M3 and T8 — Installation</i></p>
T10 (AQ4T)		<p><i>T6, T10, T10-EW and M10-BW — Installation</i></p>

Product	Protection sheet design	Installation instruction
M10-BW		<i>T6, T10, T10-EW and M10-BW — Installation</i>
T10-EW		<i>T6, T10, T10-EW and M10-BW — Installation</i>
T15 (AQ6T)		<i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i>

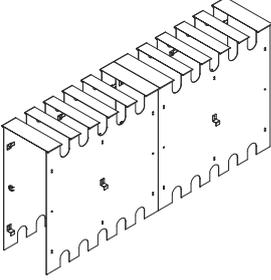
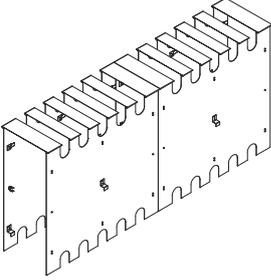
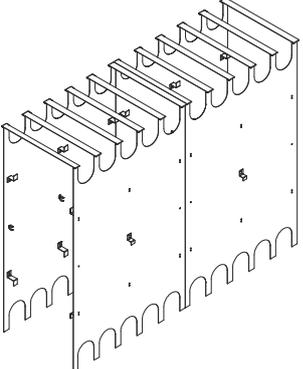
Product	Protection sheet design	Installation instruction
<p>MK15</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
<p>TK20</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
<p>T21 (AQ8T): T21-FM, T21-FG, T21-FD (except ASME), and T21-FX</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15, TK20, and T21 — Installation</i></p>

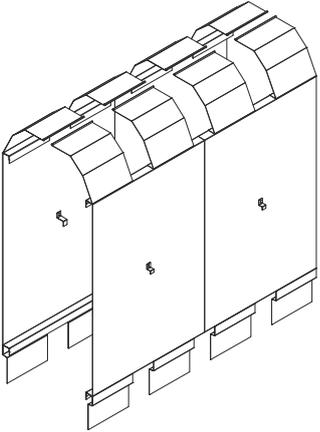
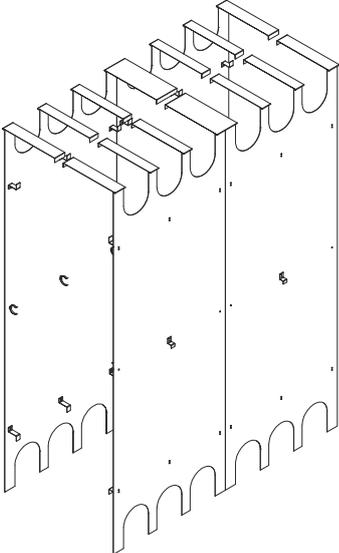
Product	Protection sheet design	Installation instruction
<p>T21 (AQ8T): T21-FD ASME, T21-FS, and T21-FT</p>		<p><i>T21, T25, and T50 — Installation</i></p>
<p>T25 (AQ10T)</p>		<p><i>T21, T25, and T50 — Installation</i></p>
<p>MA30-W</p>	<p>N/A</p>	<p>Protection sheets according to the new global design will be available when the plate heat exchanger is updated.</p>
<p>T35 (AQ14)</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>

Product	Protection sheet design	Installation instruction
<p>TS35 (AQ14S)</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
<p>TS45 (AQ18S)</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
<p>T45 (AQ18)</p>		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>

Product	Protection sheet design	Installation instruction
TS50 (AQ20S)		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
T50 (AQ20): T50-FM		<p><i>T15, T35, TS35, TS45, T45, TS50, T50, MK15 and TK20 — Installation</i></p>
T50 (AQ20): T50-FD and T50-FG		<p><i>T21, T25, and T50 — Installation</i></p>

3.1.2 Hygienic plate heat exchangers

Product	Protection sheet design	Installation instruction
H4		<p><i>H4, H5 and H8 - Installation</i></p>
H5		<p><i>H4, H5 and H8 - Installation</i></p>
H8		<p><i>H4, H5 and H8 - Installation</i></p>

Product	Protection sheet design	Installation instruction
HL8		HL8 and HL12 - Installation
HL12		HL8 and HL12 - Installation

4 Installation

There are different designs of the protection sheets. Follow the instruction corresponding to the actual plate heat exchanger.

There can be local deviations of the design, if you do not find your design among the instructions, please contact Alfa Laval or your local supplier.

4.1 Industrial plate heat exchangers

4.1.1 M3 and T8 — Installation

⚠ WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

⚠ WARNING Risk of damage to equipment.

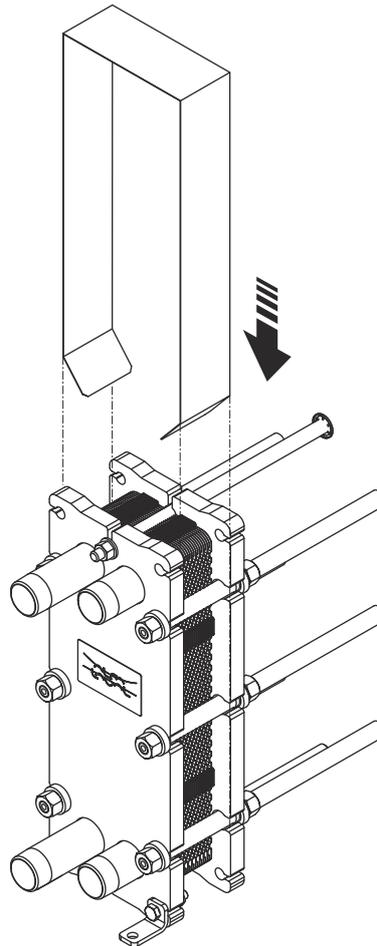
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a M3. A T8 protection sheet should be installed in the same way but rest on top of the carrying bar.

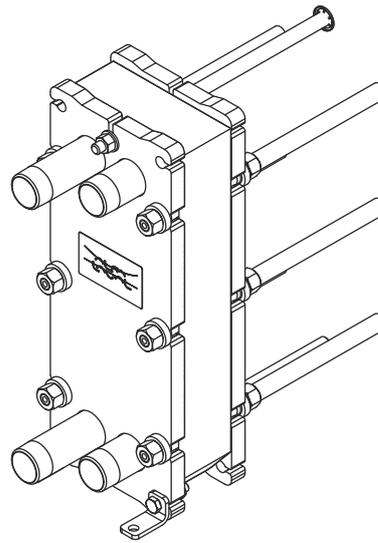
The protection sheet should be fitted on the outside of the tightening bolts.

If the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

- 1 Slide the sides of the protection sheet down on each side of the plate package.



- 2 The protection sheet is in place when it rests on top of the plate heat exchanger.



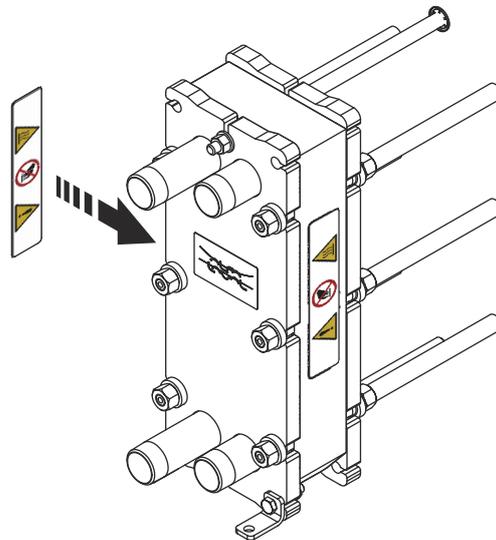
- 3

NOTE

Risk of label falling off

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.2 TL3 — Installation

**WARNING****Risk of personal injury.**

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

**WARNING****Risk of damage to equipment.**

To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a TL3.

If the A-measurement is below 600 mm there will be one protection sheet on each side of the plate heat exchanger. Skip the steps regarding several protection sheets on each side of the plate heat exchanger.

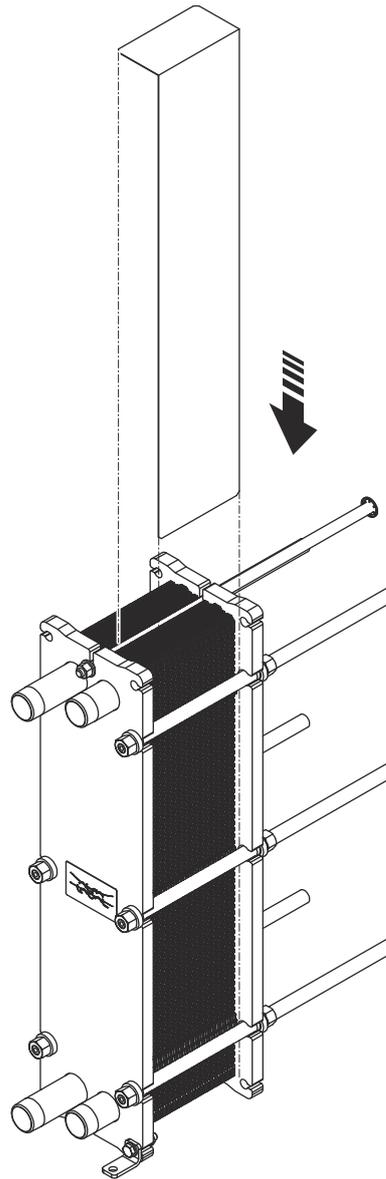
If the A-measurement is 600 mm or higher there will be two or more protection sheets on each side of the plate heat exchanger. In this instruction there are four protection sheets. If there are more protection sheets for the actual plate heat exchanger, proceed in the same way as described in this instruction by putting all protection sheets on one side of the plate heat exchanger before continuing on the other side.

The protection sheets are symmetrical, it is possible to start with any of them.

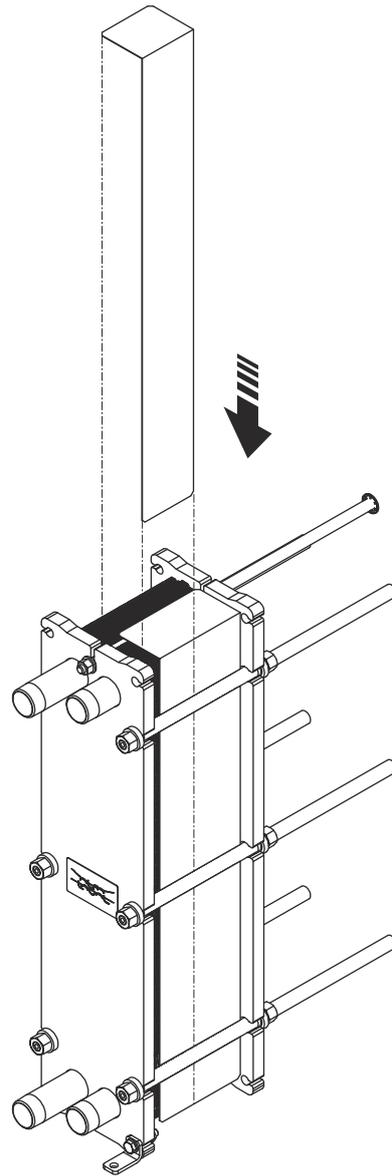
The protection sheets should be fitted on the inside of the tightening bolts.

If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

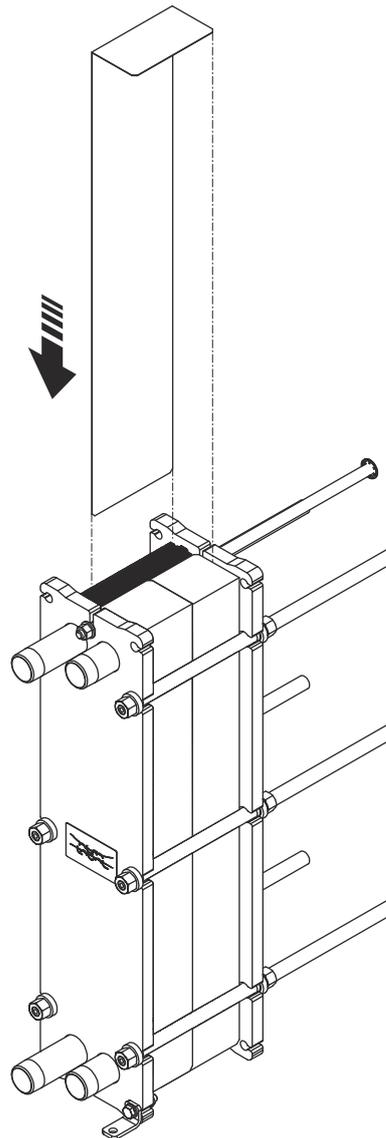
-
- 1 Install the first protection sheet.



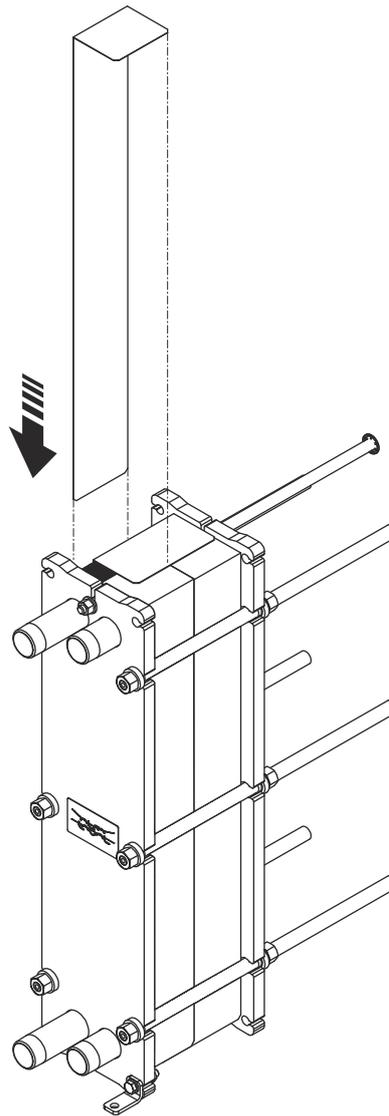
-
- 2 Install the second protection sheet.



3 Install the third protection sheet.



- 4 Install the fourth protection sheet.

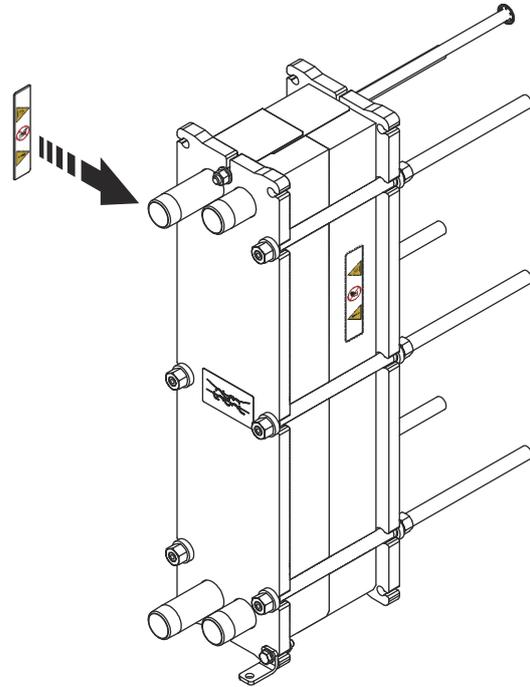


5

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.3 T5 — Installation

WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section *Personal protective equipment* in Chapter *Safety*.

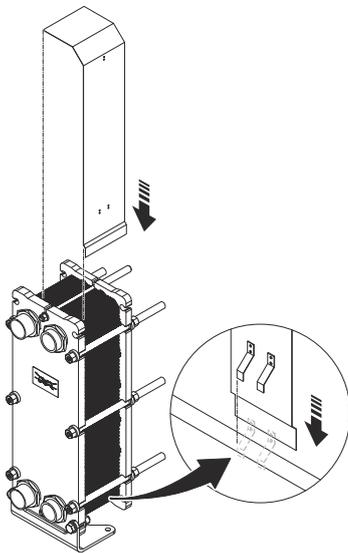
WARNING Risk of damage to equipment.

To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T5.

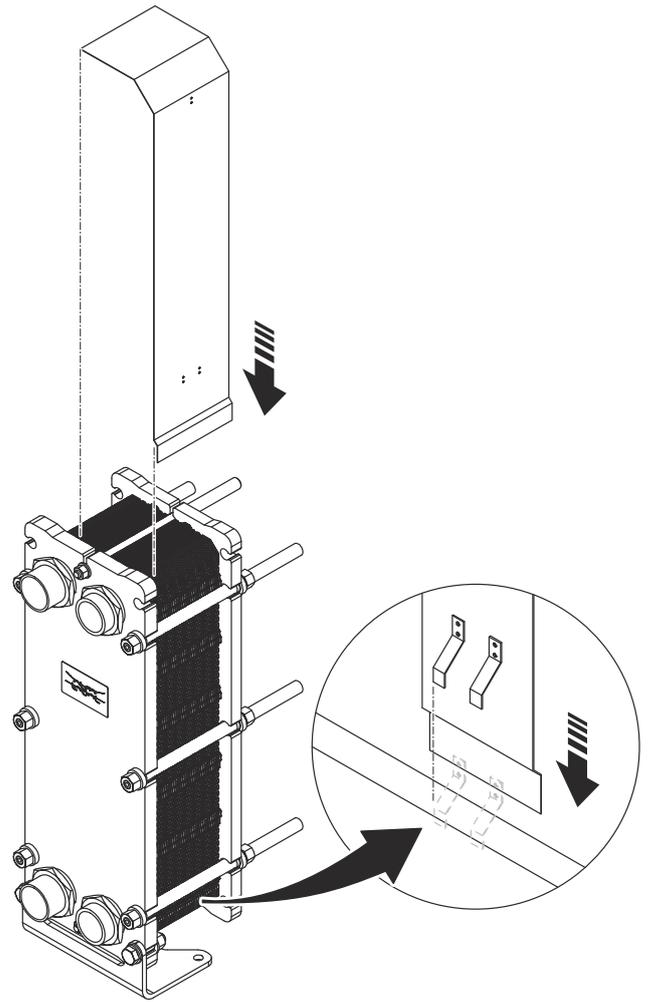
The protection sheet should be fitted on the outside of the tightening bolts.

The protection sheet inside brackets should be fitted on the upper and the lower tightening bolt.

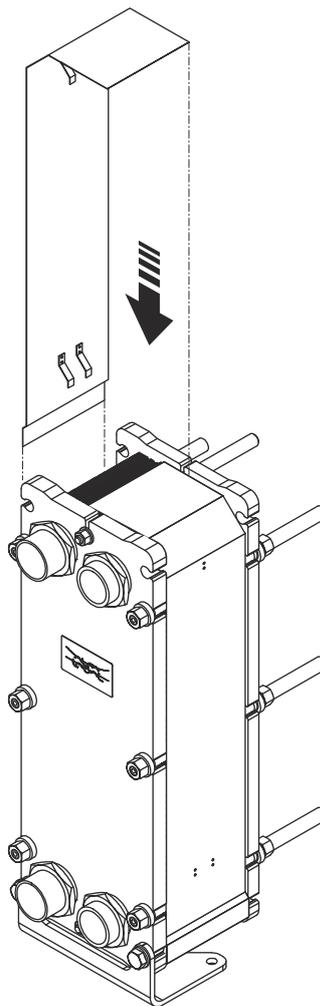


If any of the protection sheets gets stuck, use a putty knife carefully to facilitate the installation.

- 1 Install the first protection sheet.



-
- 2 Install the second protection sheet.

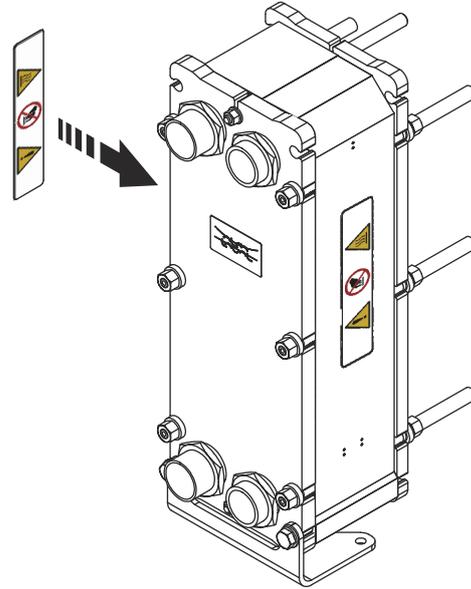


3

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.4 TL6, TS6 and M6–MW Installation

**WARNING****Risk of personal injury.**

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

**WARNING****Risk of damage to equipment.**

To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a TS6.

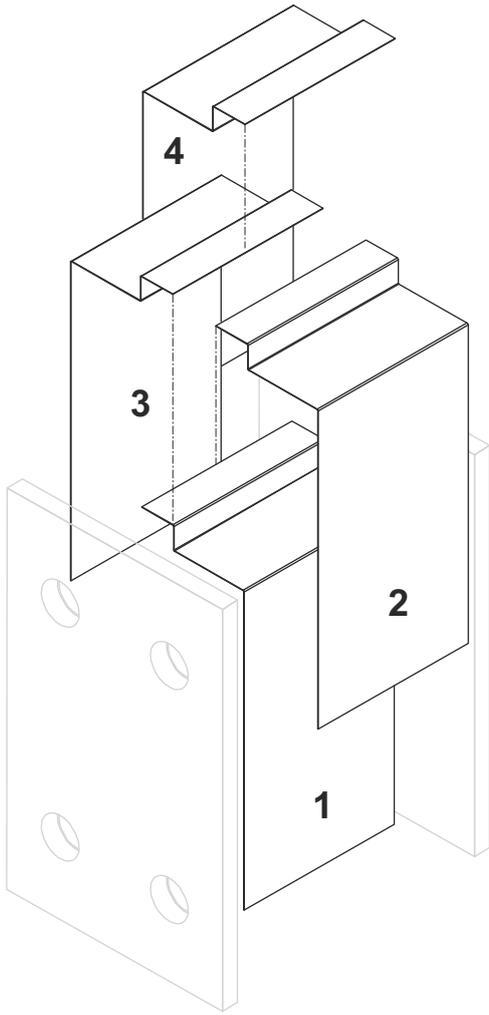
If the A-measurement is below 600 mm there will be one protection sheet on each side of the plate heat exchanger.

If the A-measurement is 600 mm or higher there will be two or more protection sheets on each side of the plate heat exchanger. In this instruction there are two protection sheets. If there are more protection sheets for the actual plate heat exchanger, proceed in the same way as described in this instruction by putting all protection sheets on one side of the plate heat exchanger before continuing on the other side.

The protection sheet should be fitted on the inside of the tightening bolts.

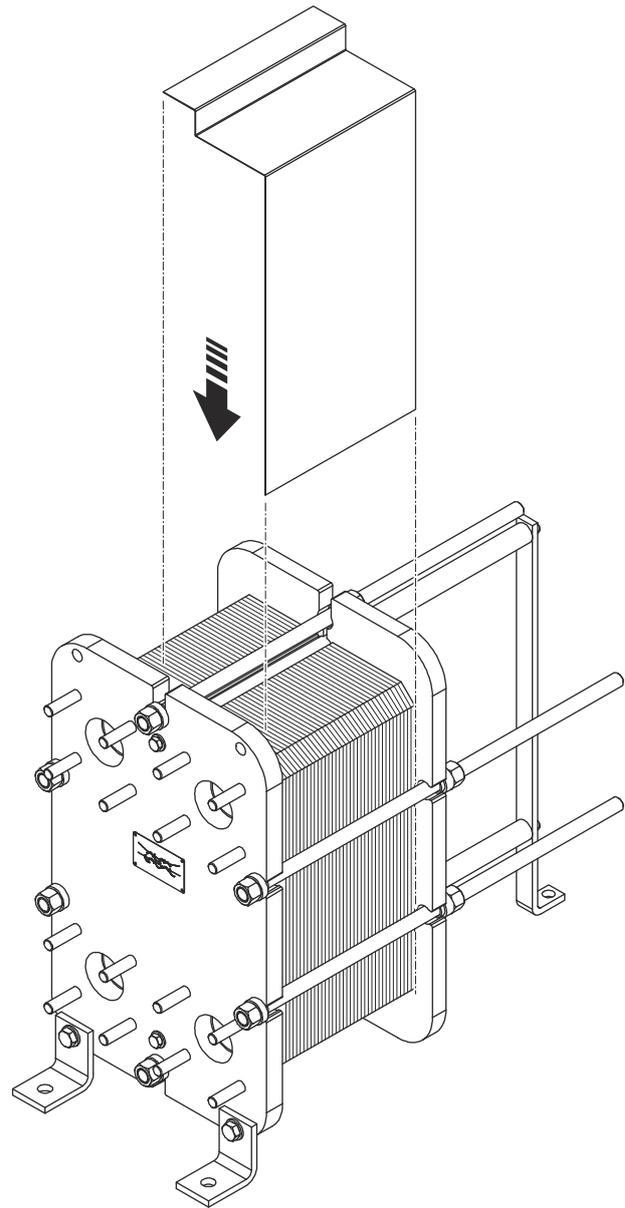
If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

The protection sheets are symmetrical, and you can start with any of them. It is recommended to start on the right hand side of the plate heat exchanger and with the protection sheet closest to the frame plate. The picture shows the order for assemble of the protection sheets.

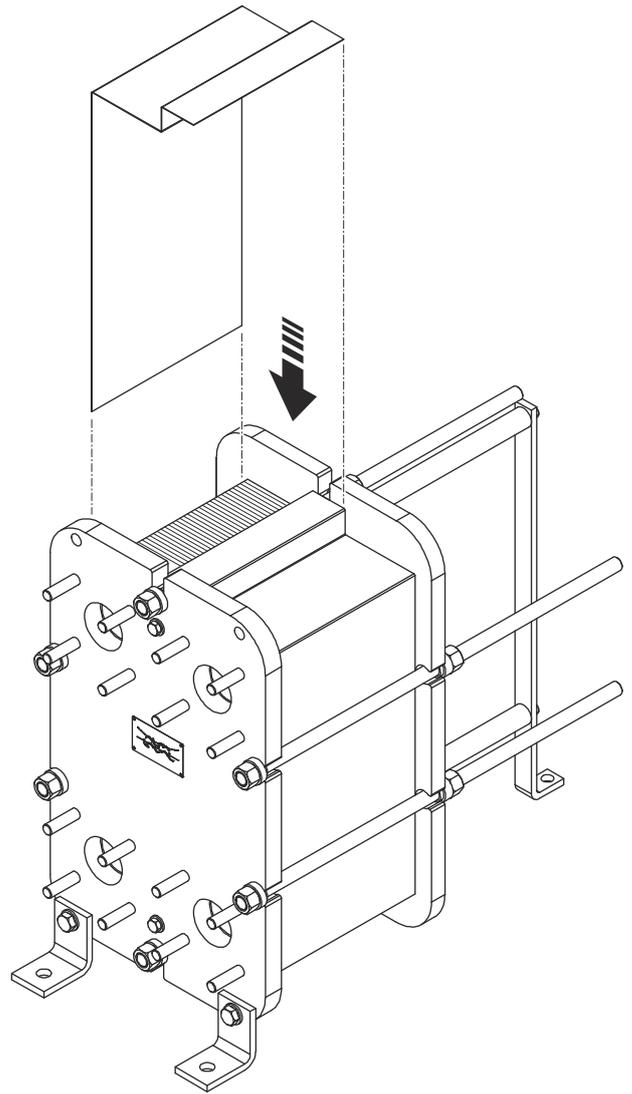


If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

- 1 Install the first protection sheet.



-
- 2 Install the second protection sheet.

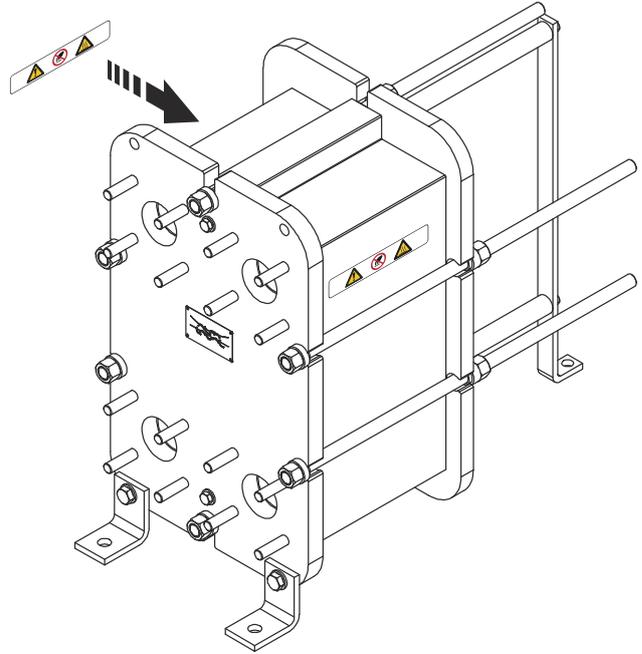


3

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.5 T6, T10, T10-EW and M10–BW — Installation

The pictures show a T6.

Depending on the A-measurement there will be two, four, or six protection sheets for the plate heat exchanger. The protection sheets should be installed in the order given in the illustrations below. Follow the one corresponding to the amount of protection sheets for the actual plate heat exchanger.

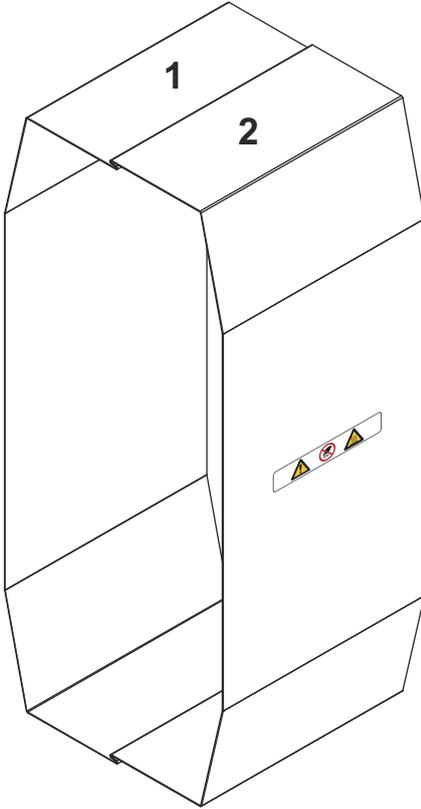


Figure 1: Installation order with two protection sheets

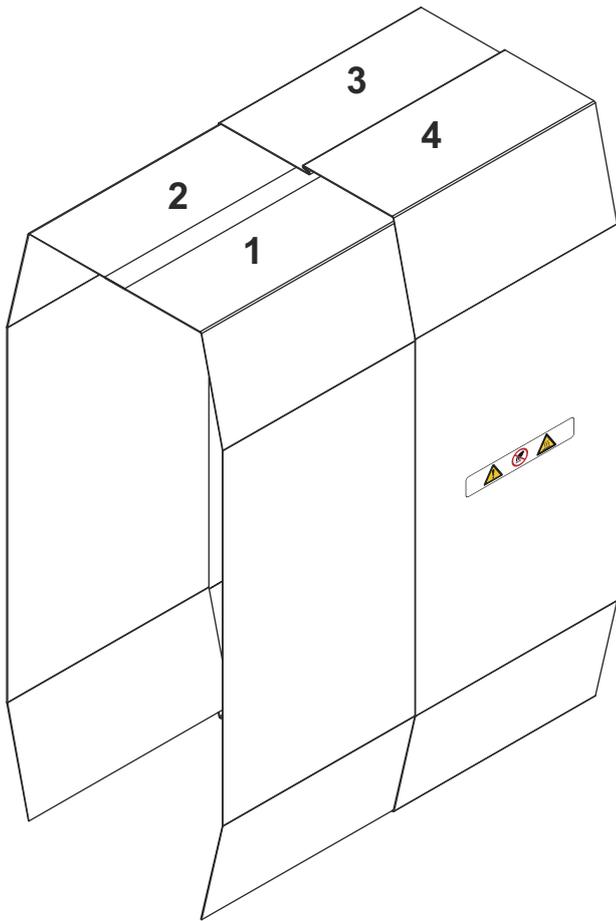


Figure 2: Installation order with four protection sheets

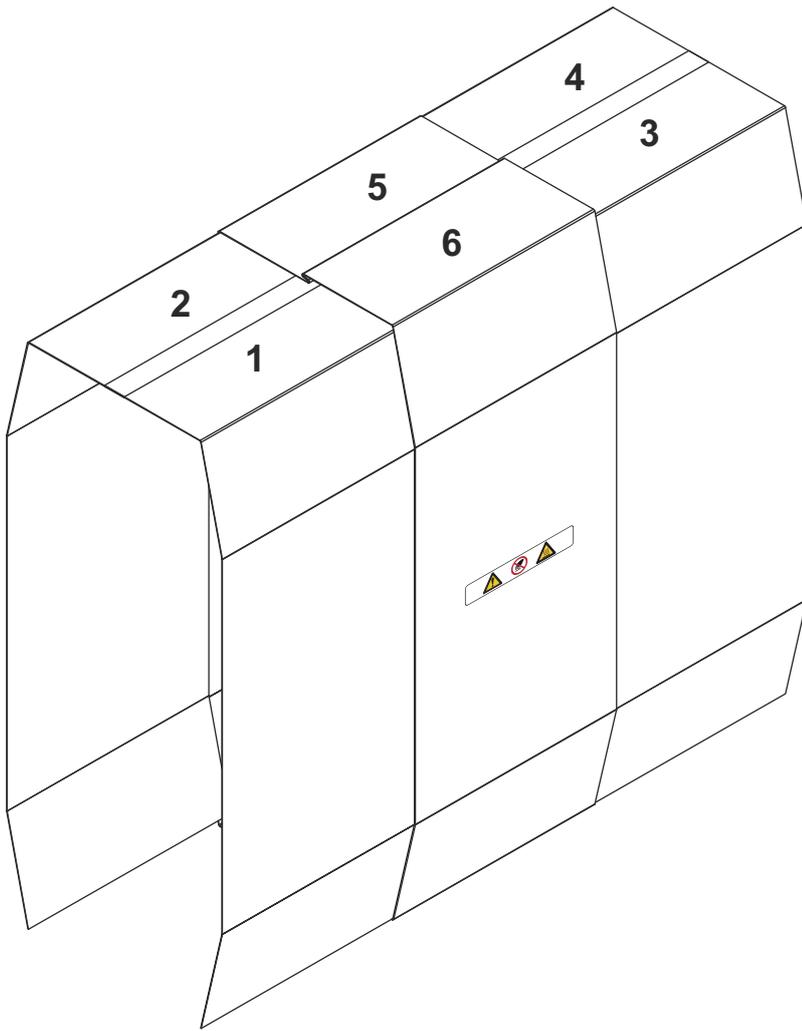


Figure 3: Installation order with six protection sheets

4.1.5.1 T6, T10, T10-EW and M10–BW — Installation with 2 protection sheets

⚠ WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

⚠ WARNING Risk of damage to equipment.

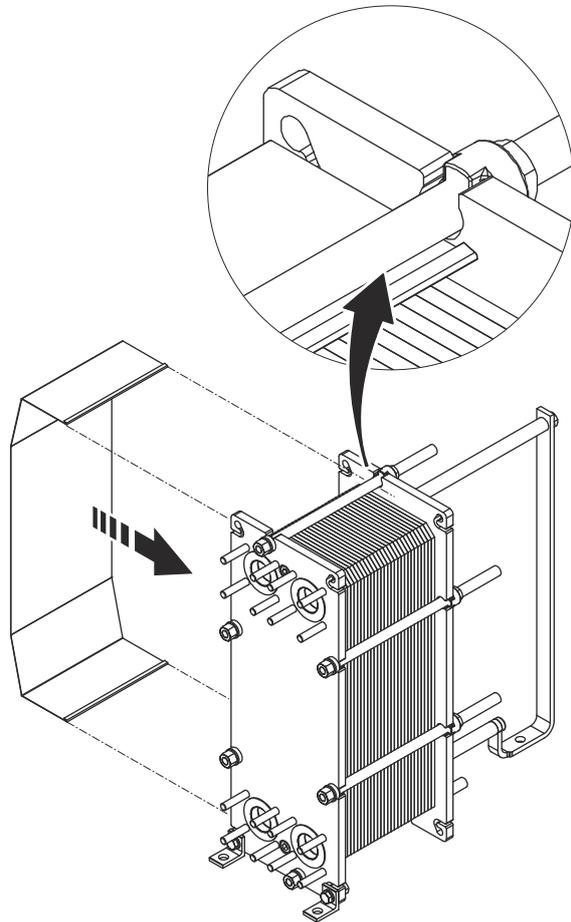
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T6.

The protection sheets should be fitted under the top locking bolt.

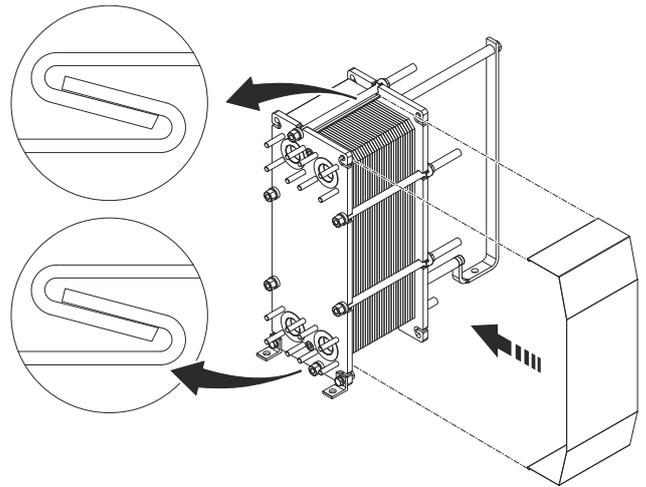
If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

- 1 Install the left hand side protection sheet.



- 2 Install the right hand side protection sheet.

- 3 Assemble the folded top and bottom edges of both the protection sheets.



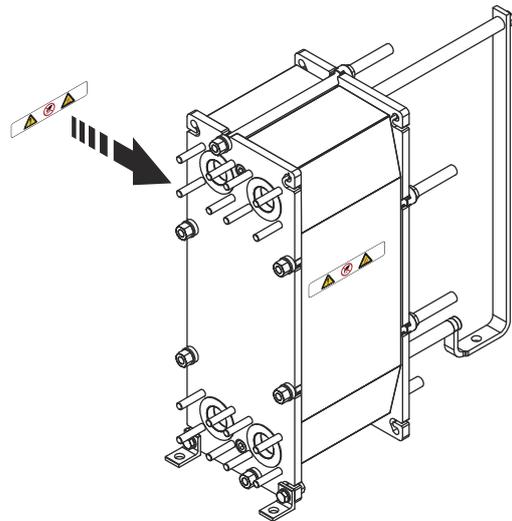
- 4

NOTE

Risk of label falling off

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.5.2 T6, T10, T10-EW and M10-BW — Installation with 4 protection sheets

⚠ WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

⚠ WARNING Risk of damage to equipment.

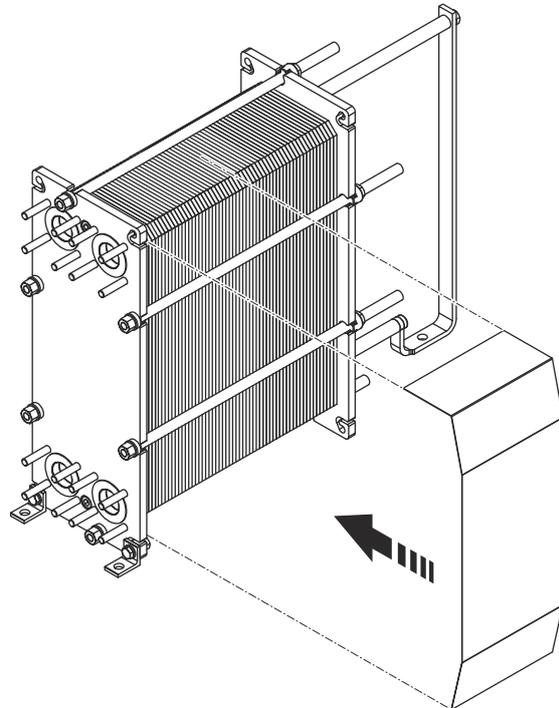
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T6.

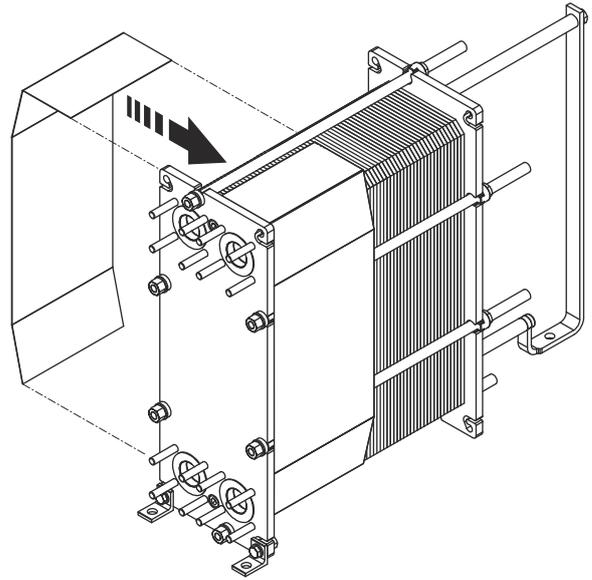
The protection sheets should be fitted under the top locking bolt.

If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

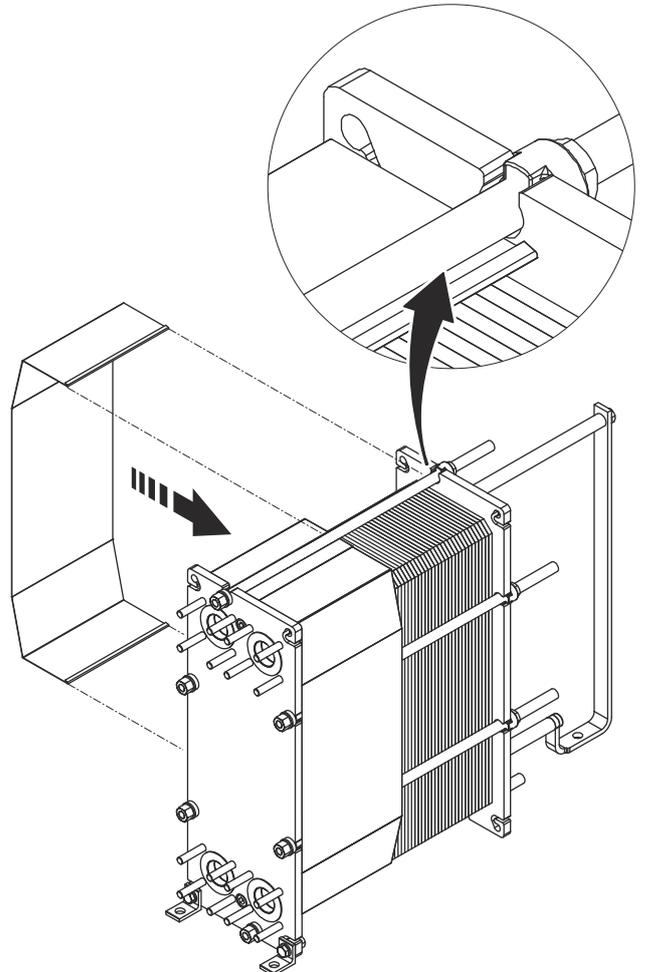
- 1 Install the first right hand side protection sheet.



-
- 2 Install the first left hand side protection sheet.

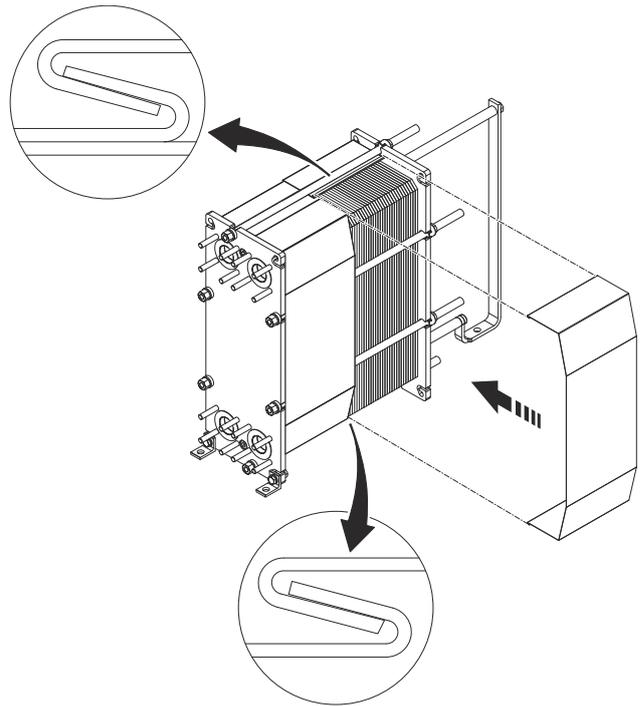


-
- 3 Install the second left hand side protection sheet.



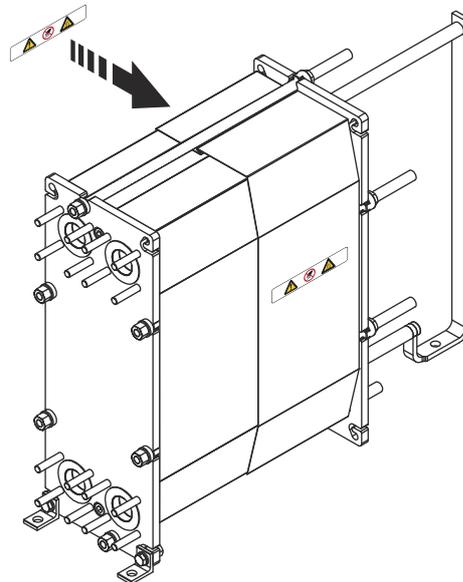
-
- 4 Install the second right hand side protection sheet.

- 5 Assemble the folded top and bottom edges of both the protection sheets.



- 6
- NOTE**
- Risk of label falling off**
- Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.5.3 T6, T10, T10-EW and M10–BW — Installation with 6 protection sheets

⚠ WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section *Personal protective equipment* in Chapter *Safety*.

⚠ WARNING Risk of damage to equipment.

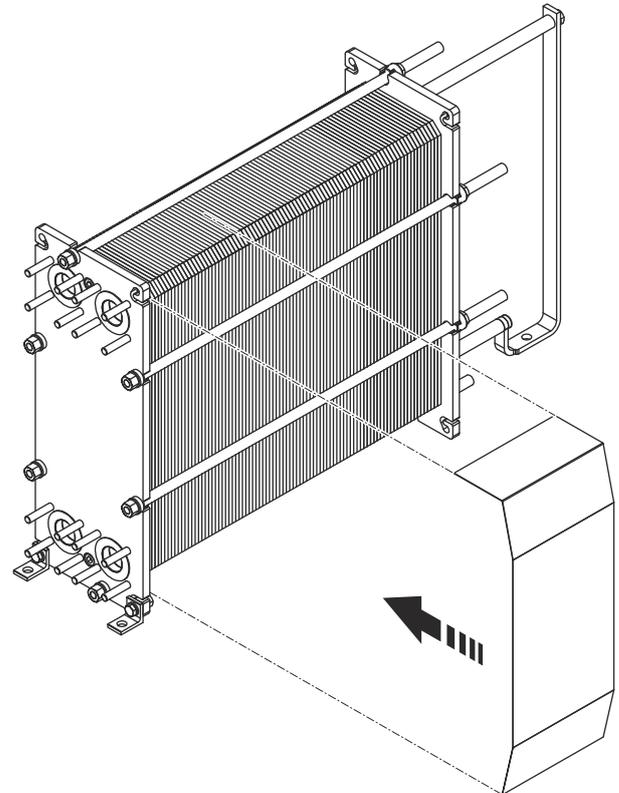
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T6.

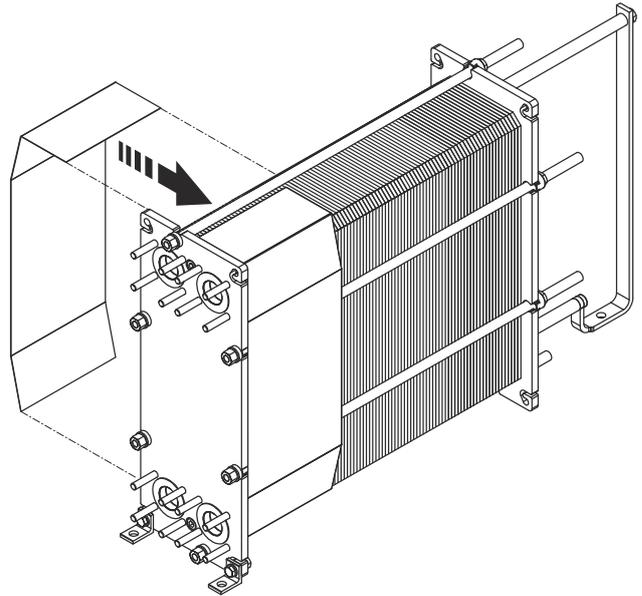
The protection sheets should be fitted under the top locking bolt.

If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

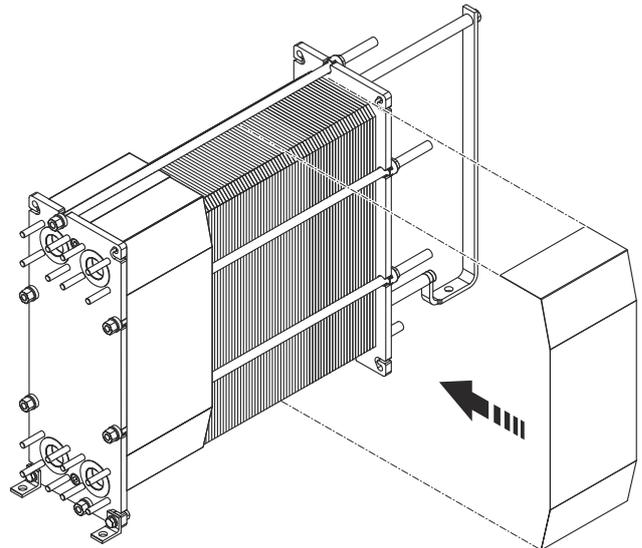
- 1 Install the first right hand side protection sheet.



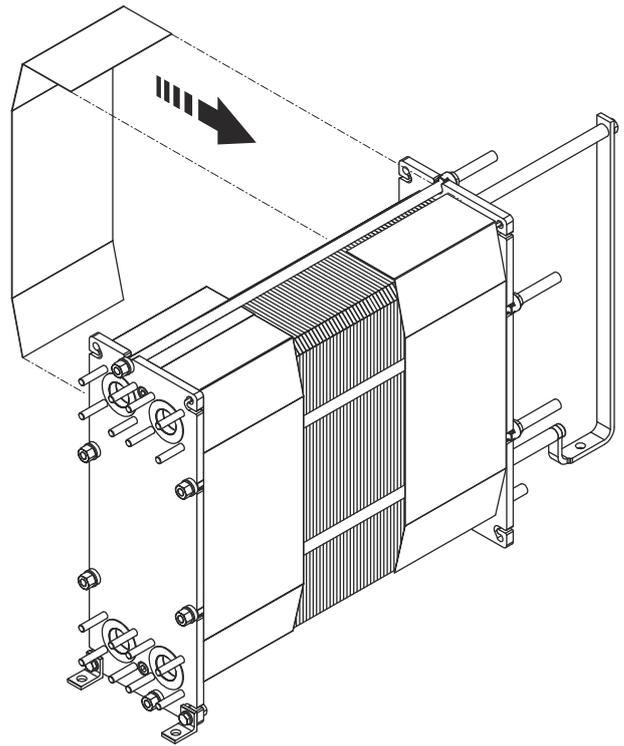
- 2 Install the first left hand side protection sheet.



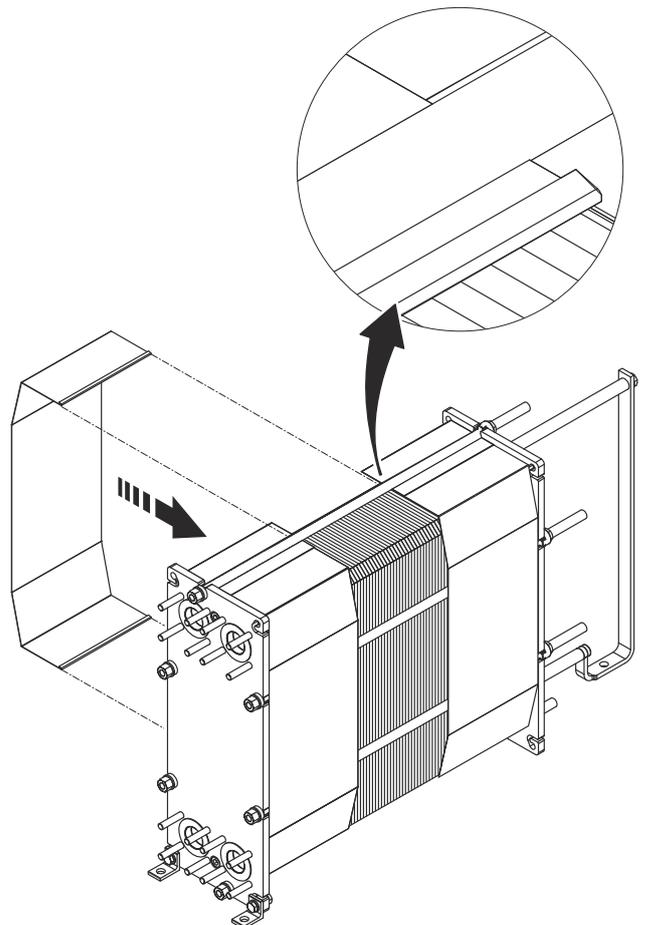
- 3 Install the second right hand side protection sheet.



- 4 Install the second left hand side protection sheet.

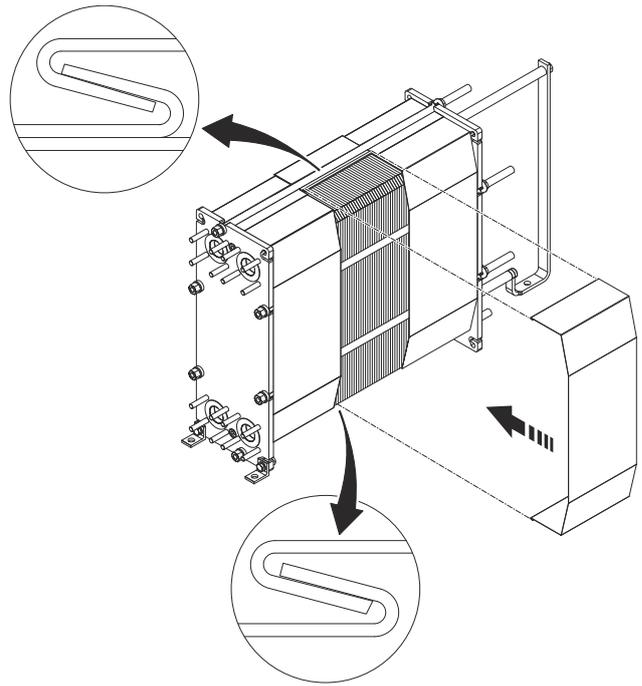


- 5 Install the third left hand side protection sheet.



- 6 Install the third right hand side protection sheet.

- 7 Assemble the folded top and bottom edges of both the protection sheets.



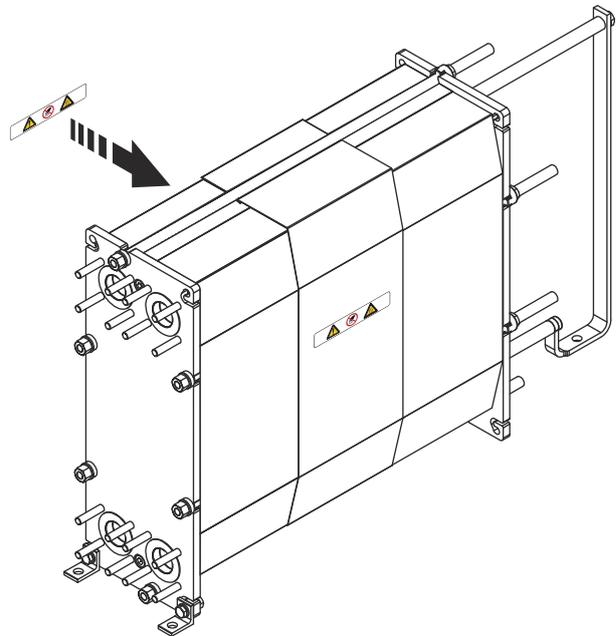
8

NOTE

Risk of label falling off

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.6 T15, T35, TS35, TS45, T45, TS50, T50, MK15, TK20, and T21 — Installation

NOTE Regarding T21

This instruction is only valid for T21-FM, T21-FG, T21-FD except ASME, and T21-FX. For other T21 frames, see [T21, T25, and T50 — Installation](#) on page 59.

NOTE Regarding T50

This instruction is only valid for T50-FM. For other T50 frames, see [T21, T25, and T50 — Installation](#) on page 59.

WARNING Risk of personal injury.

The protection sheet has sharp edges.

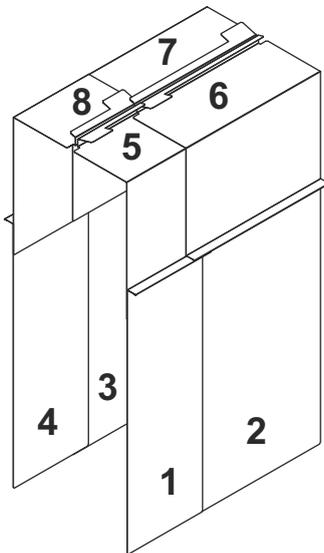
Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

WARNING Risk of damage to equipment.

To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T15.

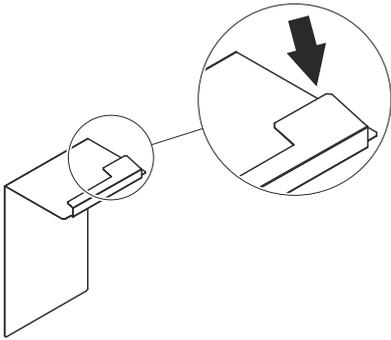
The amount of protection sheets is depending on the A-measurement of the plate heat exchanger. In this instruction there are 8 protection sheets. Install all the bottom protection sheets first and then proceed with the top protection sheets. Start from the plate heat exchanger right hand side by the frame plate and install counterclockwise according to the illustration.



The bottom protection sheets should be fitted on the inside of the tightening bolts. When installed the edge should rest on the tightening bolts.

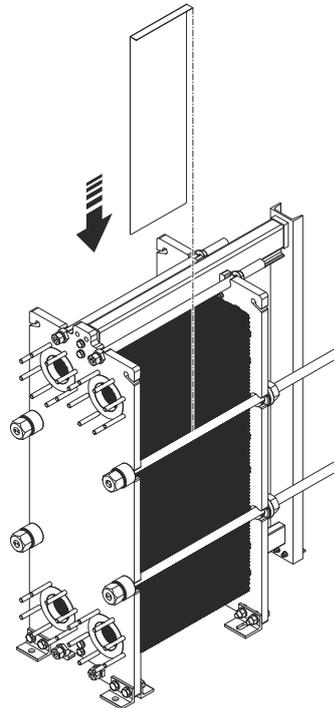
If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

The top protection sheets have a grip area (arrow) to make installation or removal easier. Use the grip area to push the edge of the protection sheet under the carrying bar.

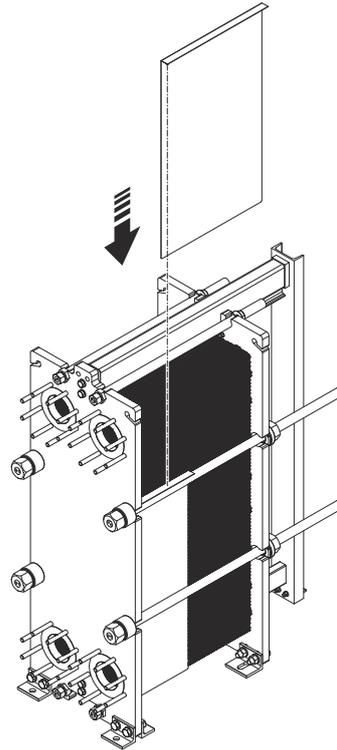


The top protection sheets should be fitted under the carrying bar and rest on the edge of the bottom protection sheets.

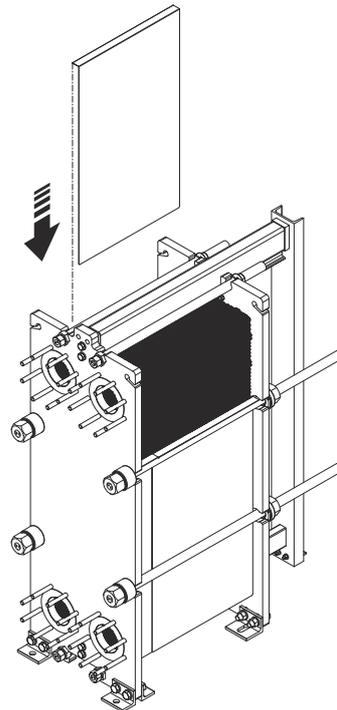
- 1 Start on the right hand side of the plate heat exchanger. Install the first bottom protection sheet.



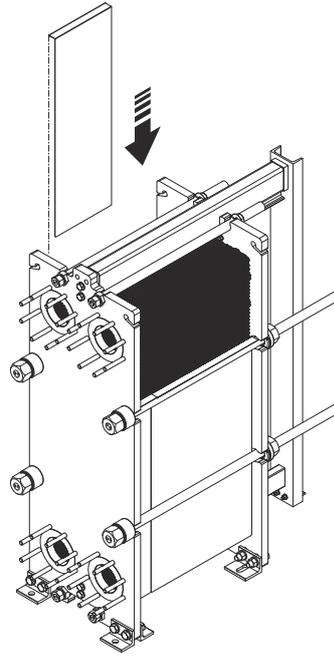
-
- 2 Install the second bottom protection sheet.



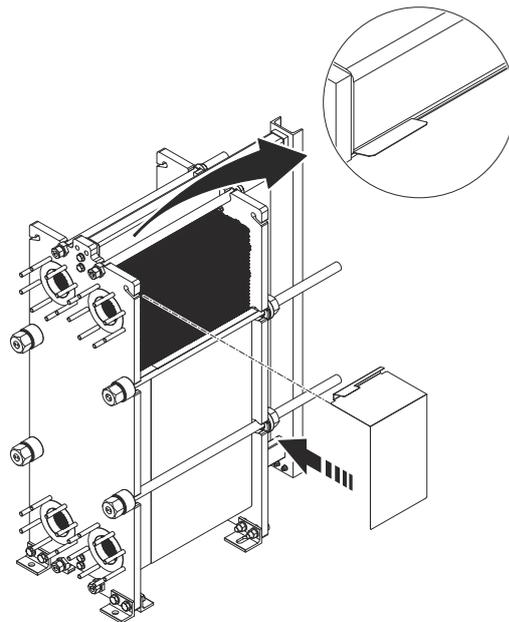
-
- 3 On the left hand side of the plate heat exchanger, install the third bottom protection sheet.



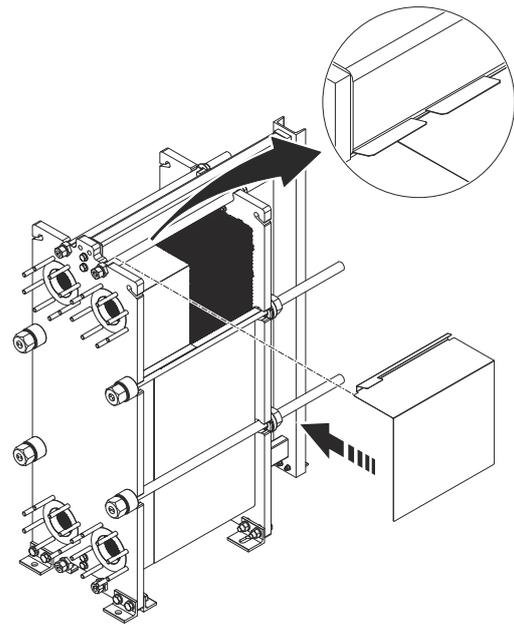
-
- 4 Install the fourth bottom protection sheet.



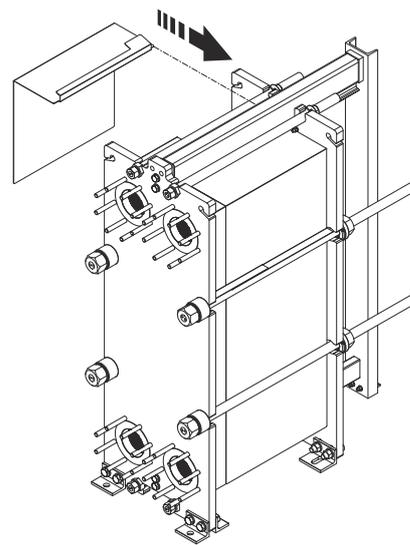
-
- 5 On the right hand side of the plate heat exchanger, install the first top protection sheet.



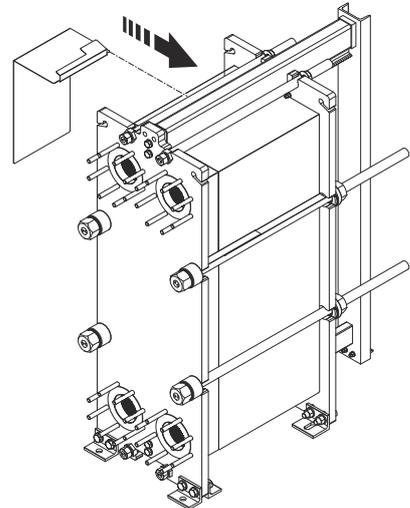
- 6 Install the second top protection sheet.



- 7 On the left hand side of the plate heat exchanger, install the third top protection sheet.



- 8 Install the fourth top protection sheet.

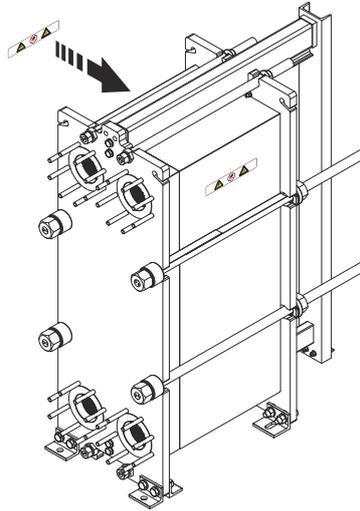


9

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.1.7 T21, T25, and T50 — Installation

NOTE Regarding T21

This instruction is only valid for T21-FD ASME, T21-FS, and T21-FT. For other T21 frames, see [T15](#), [T35](#), [TS35](#), [TS45](#), [T45](#), [TS50](#), [T50](#), [MK15](#), [TK20](#), and [T21 — Installation](#) on page 53.

NOTE Regarding T50

This instruction is only valid for T50-FD and T50-FG. For other T50 frames, see [T15](#), [T35](#), [TS35](#), [TS45](#), [T45](#), [TS50](#), [T50](#), [MK15](#), [TK20](#), and [T21 — Installation](#) on page 53.

WARNING Risk of personal injury.

The protection sheet has sharp edges.

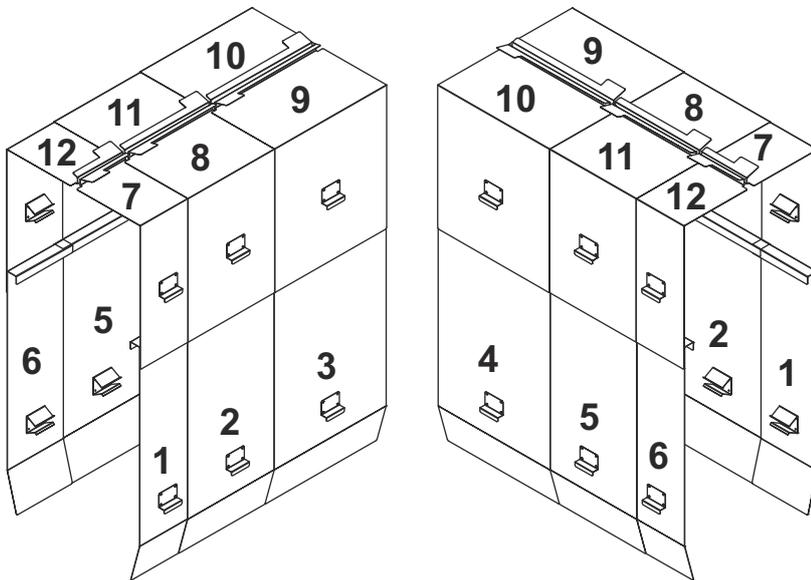
Wear personal protective equipment when handling the protection sheets. See Section [Personal protective equipment](#) in Chapter [Safety](#).

WARNING Risk of damage to equipment.

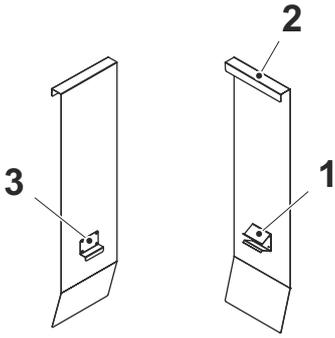
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a T21.

The amount of protection sheets is depending on the A-measurement of the plate heat exchanger. In this instruction there are 12 protection sheets. Install all the bottom protection sheets first and then proceed with the top protection sheets. Start from the plate heat exchanger right hand side by the frame plate and install counterclockwise according to the illustration.

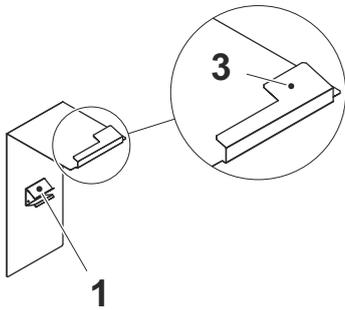


The bottom protection sheets should be fitted on the outside of the tightening bolts. Fit each bottom protection sheet on two of the tightening bolts using the lower clamp (1) and the upper edge (2). Use the grip area (3) when handling the bottom protection sheet.



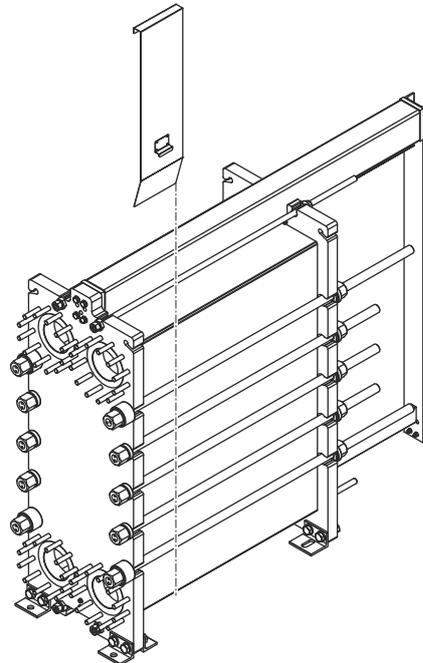
If any of the protection sheet gets stuck, use a putty knife carefully to facilitate the installation.

The top protection sheets have a grip area (3) to make installation or removal easier. Use the grip area to push the edge under the carrying bar. Fit each top protection sheet on a tightening bolt using the clamp (1).

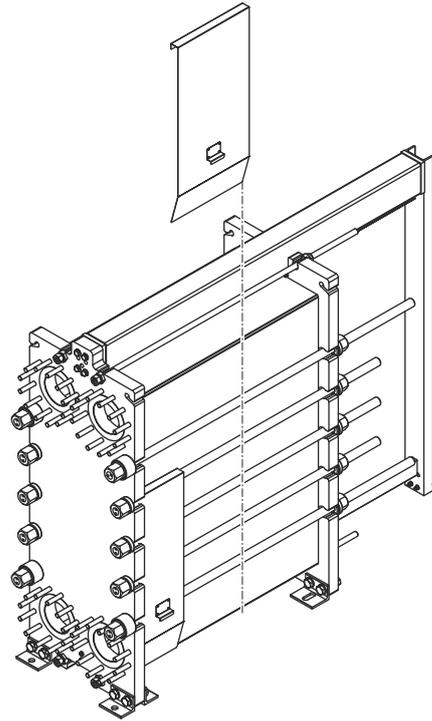


The top protection sheets should be fitted under the carrying bar and rest on the edge of the bottom protection sheets.

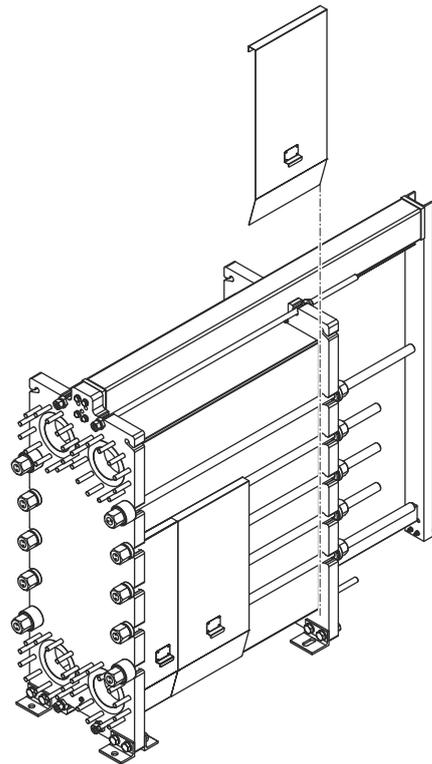
- 1 Start on the right hand side of the plate heat exchanger. Install the first bottom protection sheet.



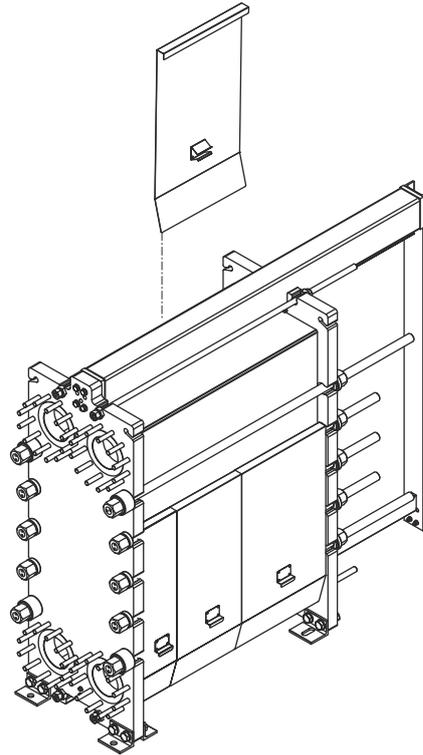
-
- 2 Install the second bottom protection sheet.



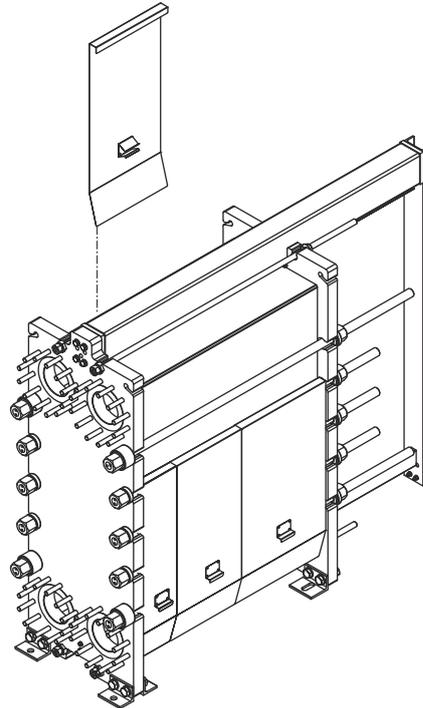
-
- 3 Install the third bottom protection sheet.



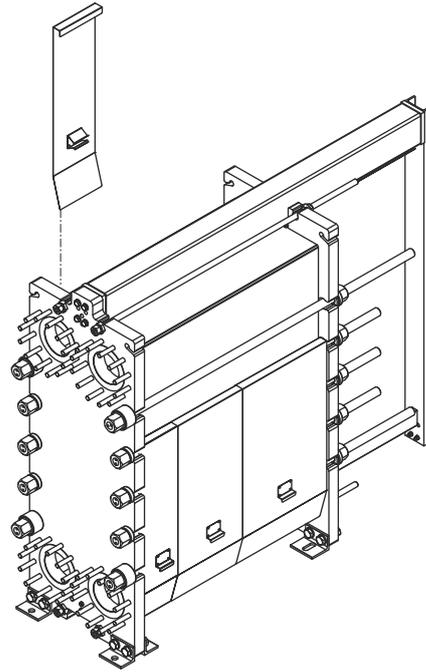
-
- 4 On the left hand side of the plate heat exchanger, install the fourth bottom protection sheet.



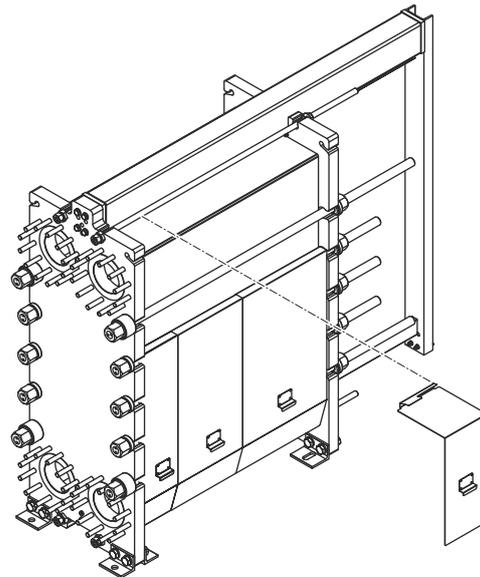
-
- 5 Install the fifth bottom protection sheet.



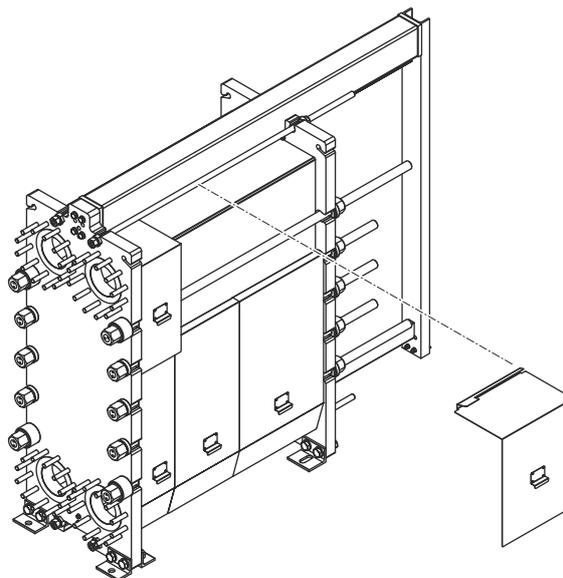
-
- 6 Install the sixth bottom protection sheet.



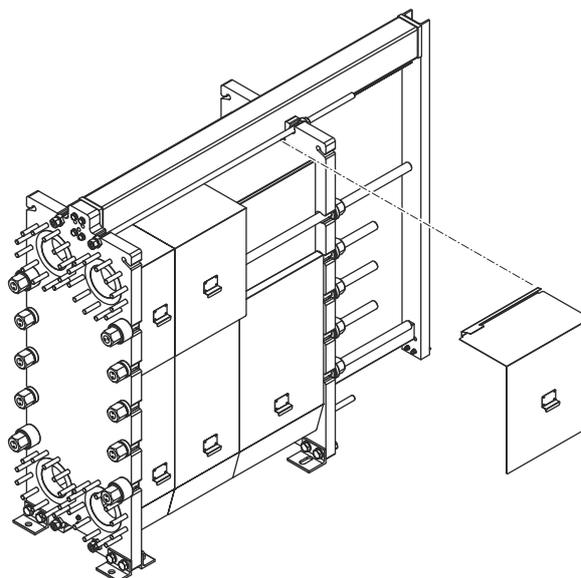
-
- 7 Start on the right hand side of the plate heat exchanger. Install the first top protection sheet.



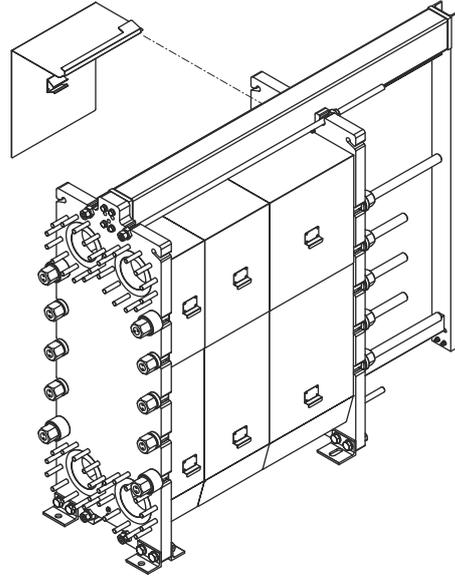
-
- 8 Install the second top protection sheet.



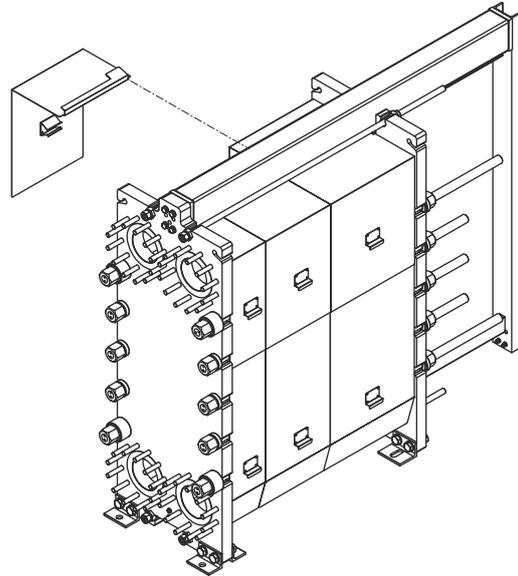
-
- 9 Install the third top protection sheet.



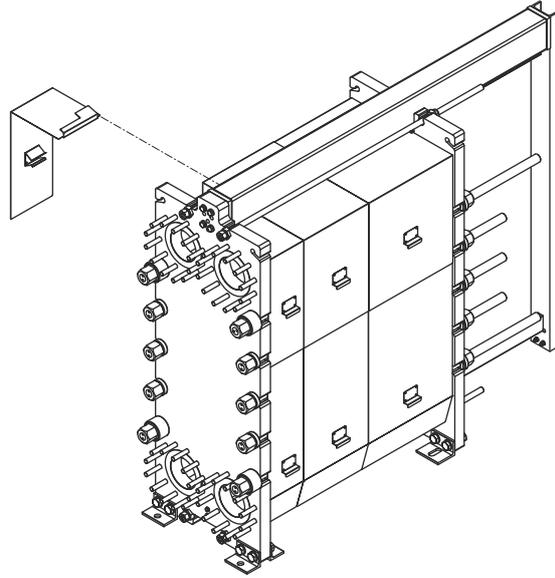
- 10** On the left hand side of the plate heat exchanger, install the fourth top protection sheet.



- 11** Install the fifth top protection sheet.



- 12 Install the sixth top protection sheet.

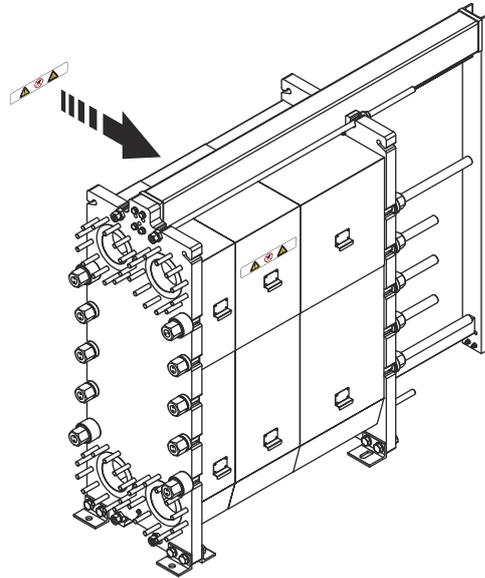


13

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.2 Hygienic plate heat exchangers

4.2.1 H4, H5 and H8 — Installation

WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section *Personal protective equipment* in Chapter *Safety*.

WARNING Risk of damage to equipment.

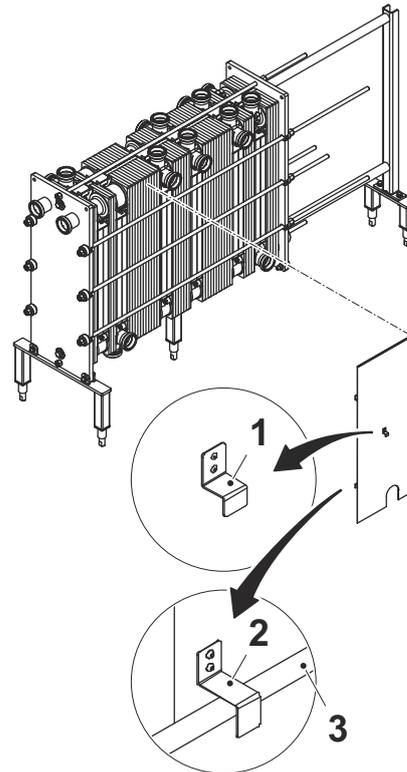
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a H8.

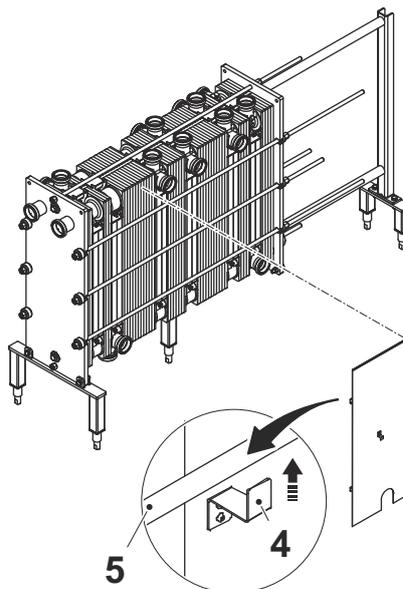
The width of the protection sheets is adapted after the A-measurement of each plate package section. Locate the correct protection sheet for each plate package section before beginning the assembly.

Start on the plate heat exchanger right hand side. Put all the side plates in place first and then continue with the top plates.

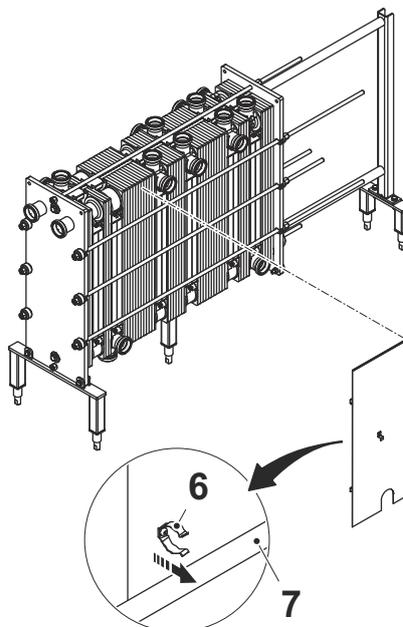
- 1 Hold the handle (1) and lift the protection sheet into place so that the lower hook (2) rests on the lower locking bolt (3).



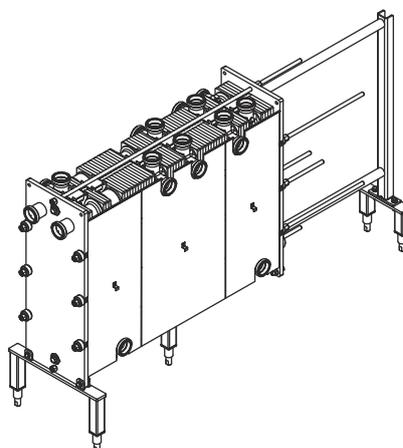
-
- 2 Carefully bend the top of the protection sheet and slide the upper hook (4) under the top locking bolt (5).



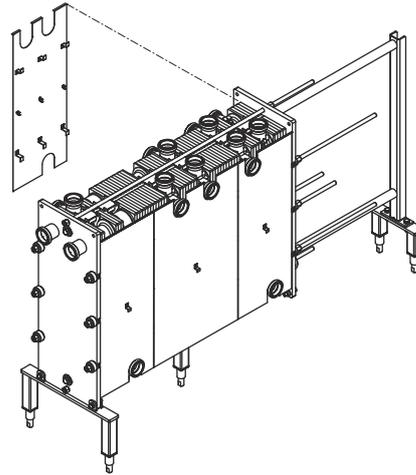
-
- 3 Push the protection plate in place so that the clamp (6) snatches in place over the middle tightening bolt (7).



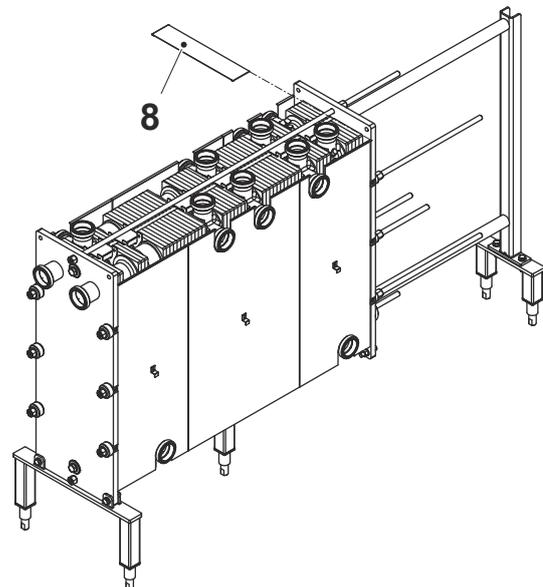
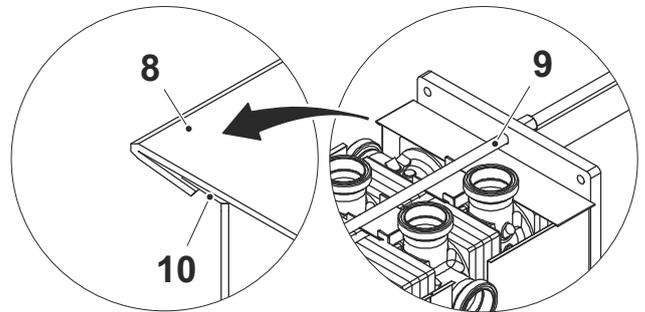
-
- 4 Continue with the rest of the plate heat exchanger right hand side protection sheets.



- 5 Continue with the protection sheets on the plate heat exchanger left hand side in the same manner.



- 6 Slide one of the end top protection sheets (8) in place under the top tightening bolt (9) and fit the folded edge of the top protection sheet on the left hand side protection sheet (10).

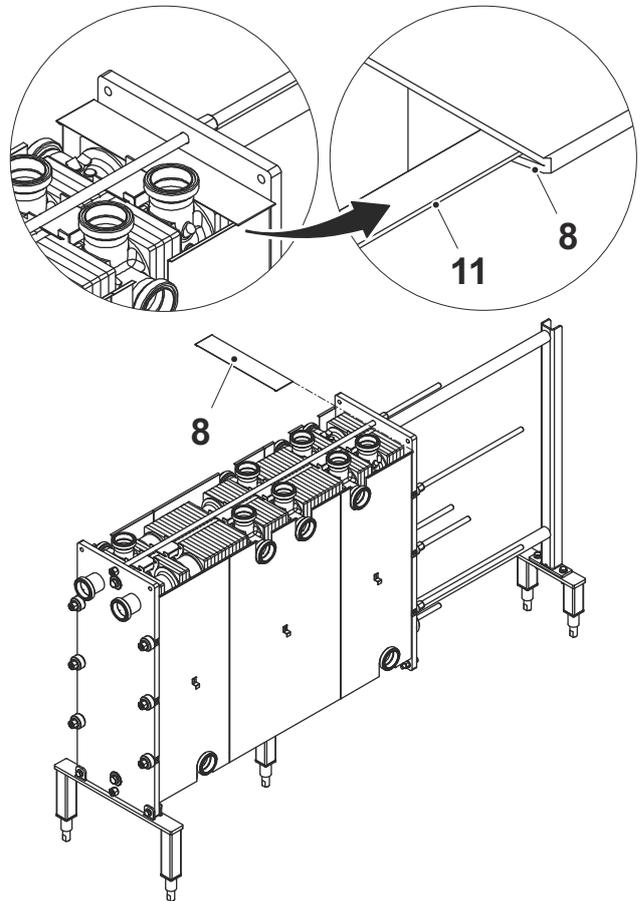


7

NOTE

The side sheets are intended to be slightly bent after this step.

Gently push the top of the right hand side protection sheet so that the folded edge of the top protection sheet (8) fits on the edge of the right hand side protection sheet (11).

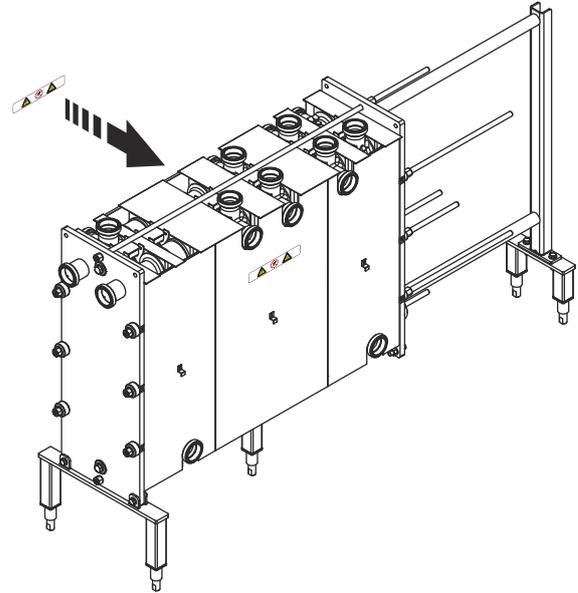


8

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.



4.2.2 HL8 and HL12 — Installation

⚠ WARNING Risk of personal injury.

The protection sheet has sharp edges.

Wear personal protective equipment when handling the protection sheets. See Section *Personal protective equipment* in Chapter *Safety*.

⚠ WARNING Risk of damage to equipment.

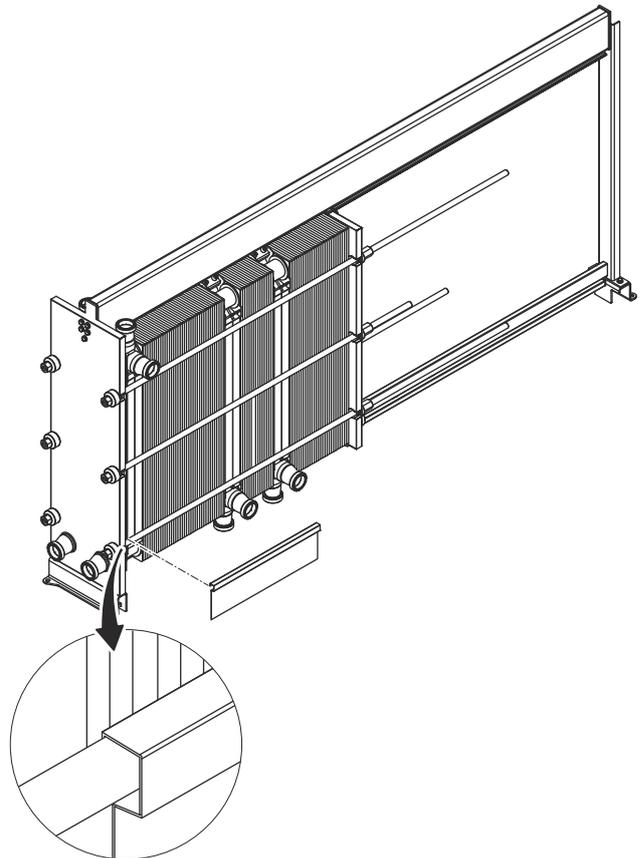
To avoid damage of the gaskets, carefully slide down the protection sheet.

The pictures show a HL12.

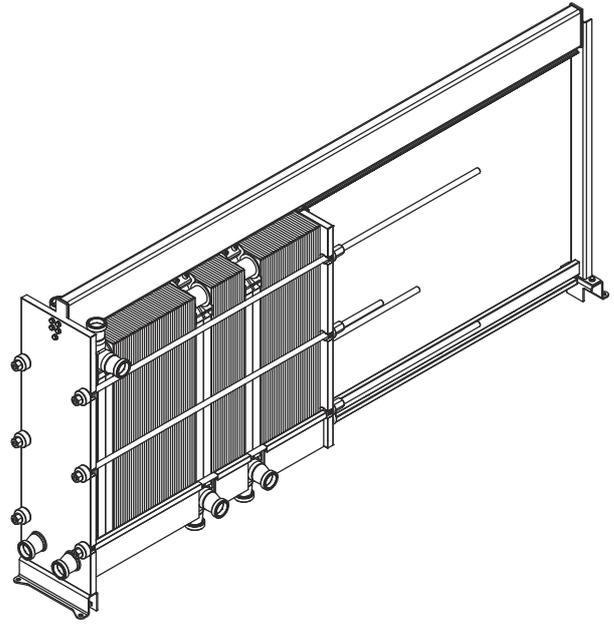
The width of the protection sheets is adapted after the A-measurement of each plate package section. Locate the correct protection sheet for each plate package section before beginning the assembly.

Start on the plate heat exchanger right hand side. Put all the bottom plates in place first, then continue with the side plates and finally assemble the top plates.

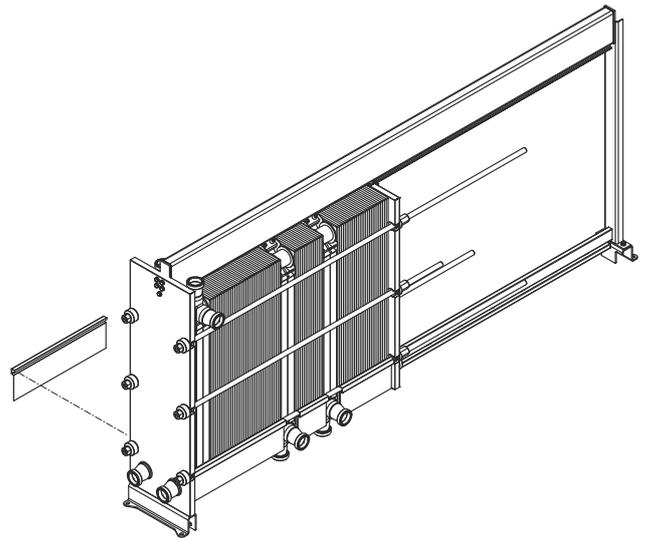
- 1 Fit the first bottom plate on the lower tightening bolt.



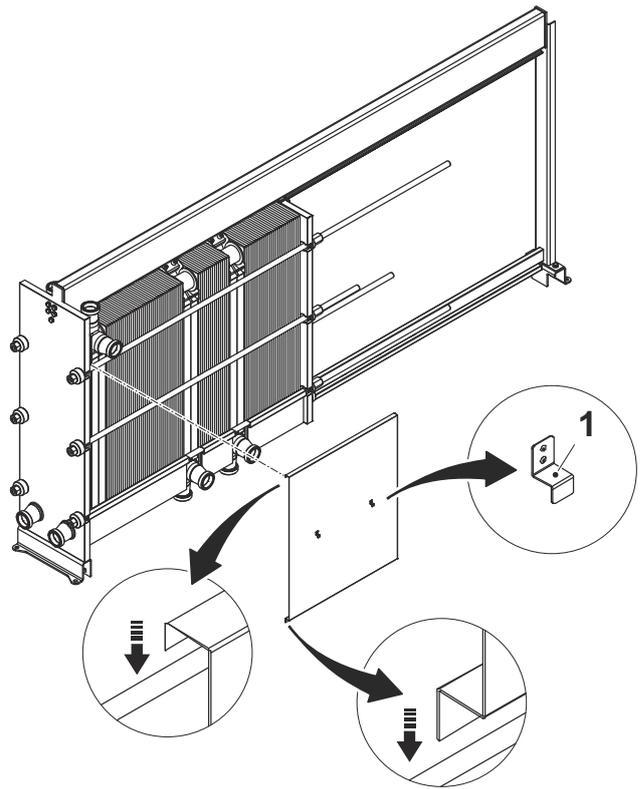
-
- 2 Continue with the rest of the plate heat exchanger right hand side bottom protection sheets.



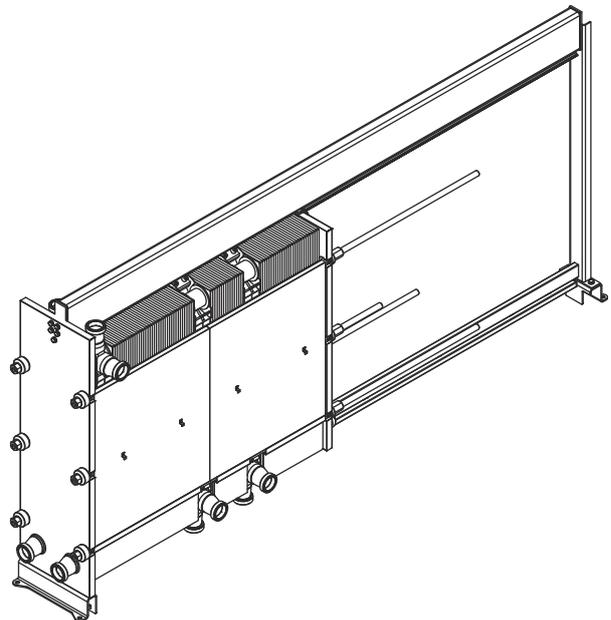
-
- 3 Continue with the bottom protection sheets on the plate heat exchanger left hand side in the same manner.



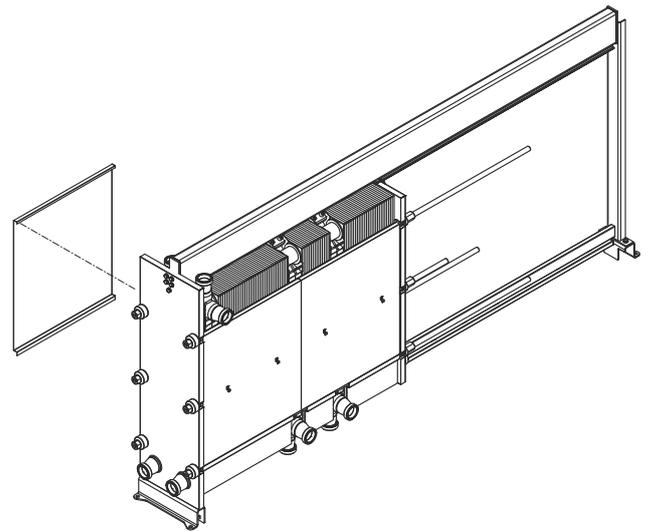
- 4 Hold the handle (1) and lift the first side protection sheet into place so that the lower edge rests on the lower locking bolt and the upper edge rests on the top locking bolt.



- 5 Continue with the rest of the plate heat exchanger right hand side protection sheets.



- 6 Continue with the side protection sheets on the plate heat exchanger left hand side in the same manner.

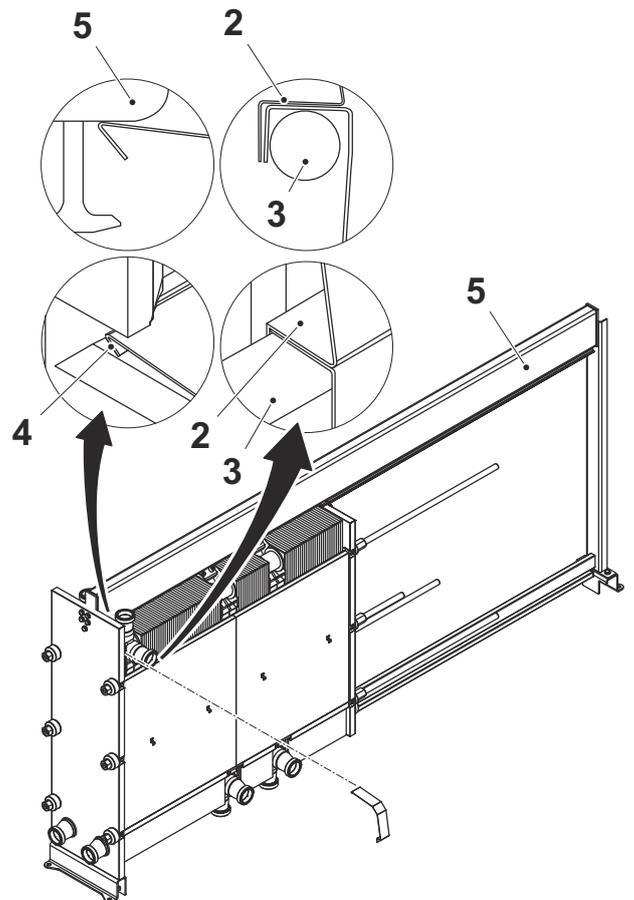


7

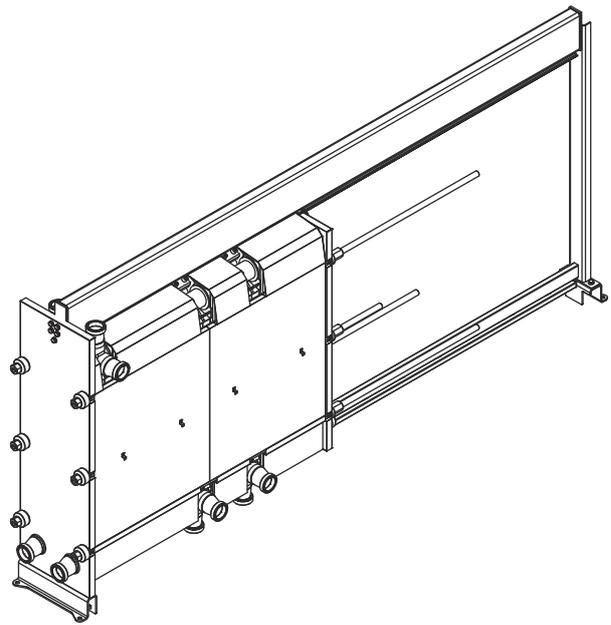
NOTE

The top sheets are intended to be slightly bent after this step.

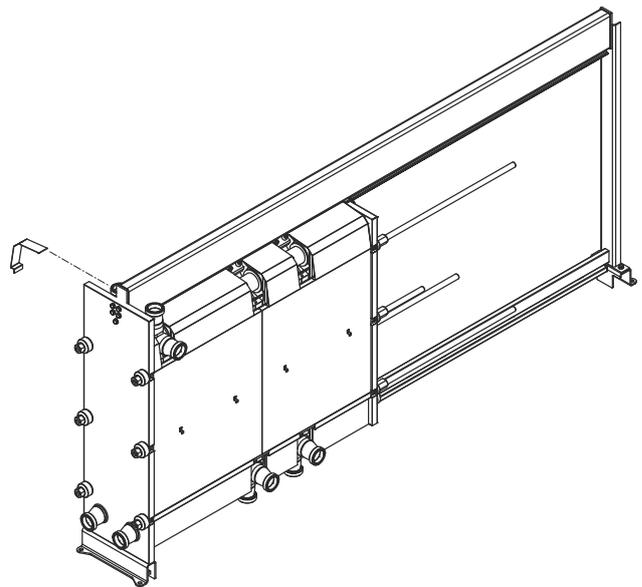
Fit the first top protection sheet by putting the bottom edge (2) on the top tightening bolt (3). The edge should rest on top of the top edge of the side protection sheet. Carefully bend the top plate and fit the top edge (4) under the carrying bar (5).



-
- 8 Continue with the rest of the plate heat exchanger right hand side top protection sheets.



-
- 9 Continue with the top protection sheets on the plate heat exchanger left hand side in the same manner.



10

NOTE**Risk of label falling off**

Do not put the safety label over a joint between two protection sheets.

Put the safety label in place on both sides of the plate heat exchanger. If it cannot be put horizontally, put it vertically.

