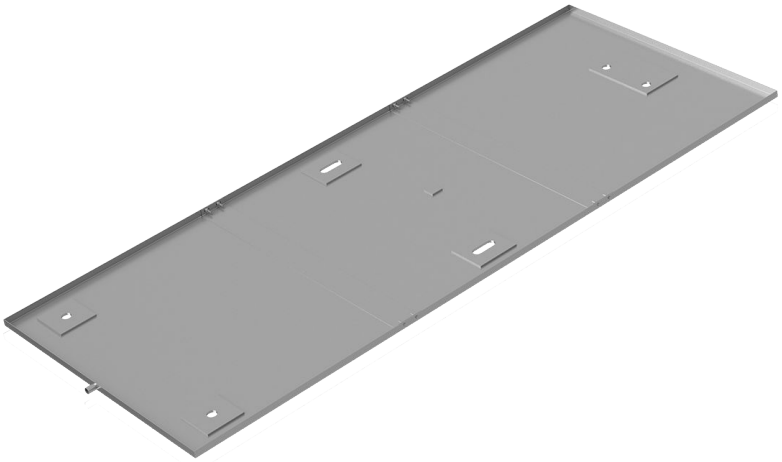
Drip tray for Gasketed Plate Heat Exchangers

Installation Manual



Lit. Code 200013209-1-EN-GB

Installation Manual

BRITISH ENGLISH

Published by
Alfa Laval Technologies AB
Box 74
SE–221 00 Lund, Sweden
Telephone switchboard: +46 46 36 65 00
info@alfalaval.com

The original instructions are in English

Contents

This page is intentionally left blank.

1 Introduction

This manual describes drip tray for gasketed plate heat exchangers.

There are two types of drip trays: insulated drip trays and non-insulated drip trays.

The table below lists all products with drip trays available as an option.

NOTE This manual shows only drip trays that adhere to a global standard design. Local variants can occur due to market conditions. The factory in Shonan (Japan) has a local design for drip trays. If your supplier is Shonan, please contact your Alfa Laval representative for further queries.

Product name (AQ-model)	Insulated drip tray	Non-insulated drip tray
TS6 (AQ2S)		X
T6 (AQ2T)	X	X
TL6 (AQ2L)	X	X
T8 (AQ3)		X
T10 (AQ4T)	X	X
TL10 (AQ4L)	X	
T15 (AQ6T)	X	X
TL15 (AQ6L)	X	
T21 (AQ8T)	X	X
T25 (AQ10T)	X	X
TS35 (AQ14S)		X
T35 (AQ14)		X
TS45 (AQ18S)		X
T45 (AQ18)		X
TS50 (AQ20S)		X
T50 (AQ20)		X

This page is intentionally left blank.

2 Safety

2.1 Safety considerations

The drip tray shall be used and maintained in accordance with Alfa Laval's instructions in this manual. Incorrect handling of the drip tray may result in serious consequences, including 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 drip tray shall be used in accordance with the specified configuration of materials, media types, temperatures, and pressure for the specific plate heat exchanger where the drip tray is used.

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.

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.

3 Description

3.1 General information

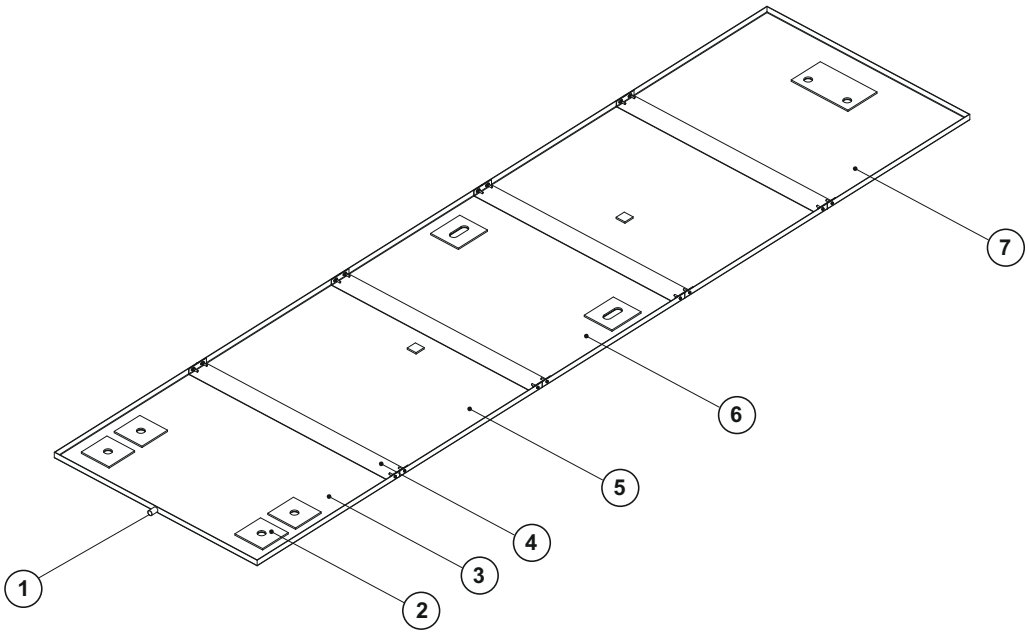
The drip tray is placed under the plate heat exchanger. The main purpose of the drip tray is to collect fluids dripping from the channel plates, for example when opening the plate heat exchanger for service. A drain pipe is located near the bottom of the drip tray to empty the collected fluids.

3.2 Drip tray components

The drip tray consists of one or several tray plates, depending on the length of the plate heat exchanger. The tray plates are placed side by side and attached with a connection plate, which is positioned over the joint between them.

Insulated drip trays are made of hot-dip galvanized steel, and non-insulated drip trays are made of Alloy 316.

The plate heat exchanger either stands on support plates or directly on the drip tray floor. The support plates are welded to the drip tray floor. Non-insulated drip trays have no support plates. The support plates and the drip tray floor have prepared holes for the foundation bolts.



1 = Drain pipe
2 = Support plate
3 = Tray below frame plate
4 = Connection plate
5 = Connection tray
6 = Tray below pressure plate
7 = Tray below supporting column

This page is intentionally left blank.

4 Limitations

The drip tray has the following limitations:

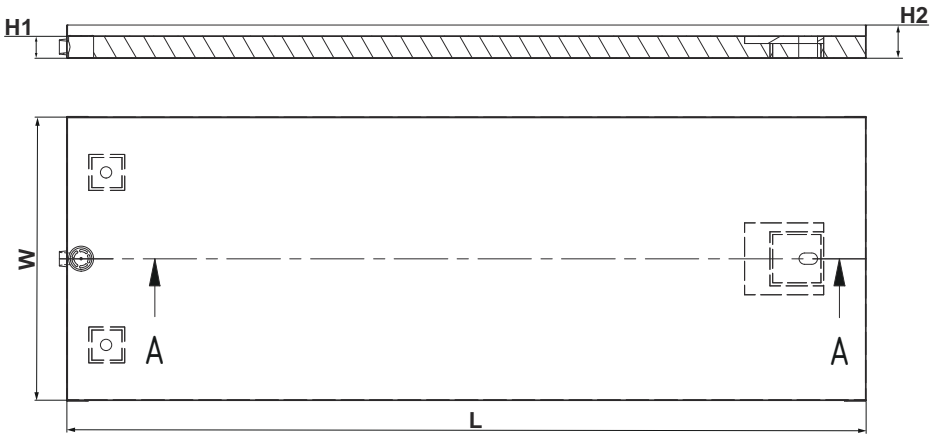
- The overall length of the drip tray is dependent of the total length of the plate heat exchanger.
- The drip tray must be supported by a flat surface underneath.
- Drip trays in combination with connectivity rings are only available as design-to-order. Please contact your Alfa Laval representative for further queries.
- Drip trays with external loads are only available as design-to-order. Please contact your Alfa Laval representative for further queries.

This page is intentionally left blank.

5 Dimensions

5.1 Drip tray

This section describes the dimensions of the drip tray referred to in this manual.



H1 = Height from the base to the drip tray floor

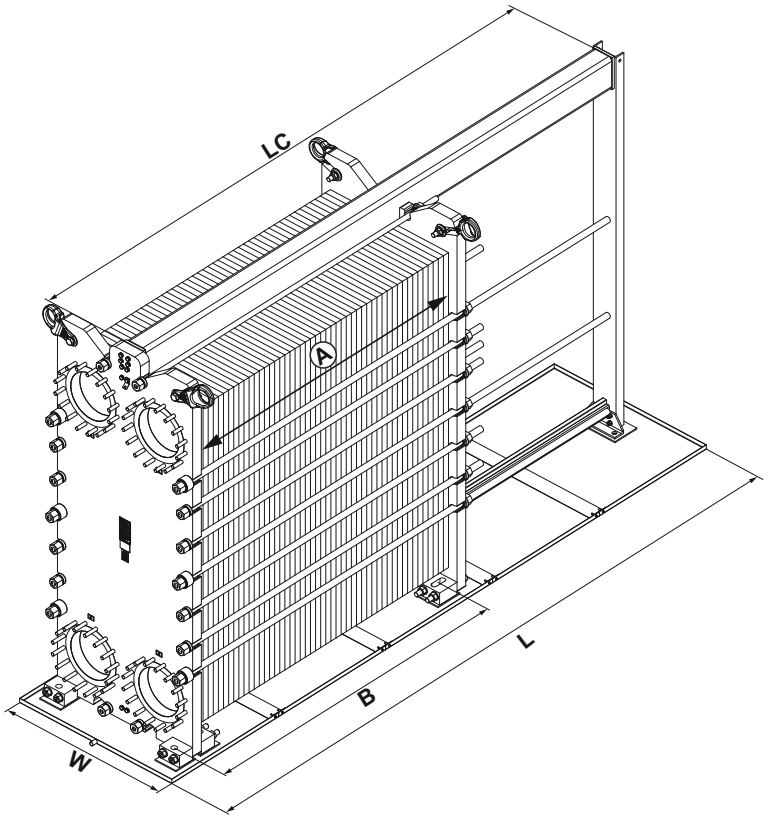
H2 = Height from the base to the drip tray edge

L = Length of the drip tray

W = Width of the drip tray

5.2 Gasketed Plate Heat Exchanger with drip tray

This section describes the dimensions of the drip tray and plate heat exchanger referred to in this manual.



A = Length of the plate pack
B = Length of the footprint
LC = Length of the carrying bar
L = Length of the drip tray
W = Width of the drip tray

6 Measurement

6.1 Information

The tables below show the measurements for the drip trays. The measurements are stated in mm **(inch)**.

6.2 Insulated drip trays

NOTE

Maximum length and width is stated for each product. The length can deviate by a maximum of 65 mm regardless of pressure or PV class. For specific measurements, use the sales configurator tool or contact your Alfa Laval representative.

Product (AQ-model)	Frame	Type	L mm (in)	W mm (in)	H1 mm (in)	H2 mm (in)
T6 (AQ2T)	FM , FG, FD	ALS, ASME, CE	B + 277 (B + 10.91)	480 (18.89)	62 (2.44)	93 (3.66)
TL6 (AQ2L)	FM, FG, FD	ALS, ASME, CE	B + 209 (B + 8.22)	530 (20.86)	62 (2.44)	93 (3.66)
T10 (AQ4T)	FM, FG, FD	ALS, ASME, CE	B + 330 (B + 7.87)	700 (23.22)	62 (2.44)	92 (3.62)
TL10 (AQ4L)	FM, FG, FD	ALS, ASME, CE	A + 740 (A + 29.13)	700 (27.55)	62 (2.44)	93 (3.66)
T15 (AQ6T)	FM, FG, FD, FS	ALS, ASME, CE	LC + 387 (LC + 15.23)	850 (33.46)	62 (2.44)	92 (3.62)
TL15 (AQ6L)	FM, FG, FD	ALS, ASME, CE	L + 300 (L + 11.81)	800 (31.49)	62 (2.44)	92 (3.62)
T21 (AQ8T)	FM, FG, FD	ALS, ASME, CE	LC + 490 (LC + 19.29)	960 (37.79)	62 (2.44)	92 (3.62)
T25 (AQ10T)	FM, FG, FD, FS	ALS, ASME, CE	LC + 490 (LC + 19.29)	1130 (44.48)	62 (2.44)	93 (3.66)
TL35 (AQ14L)	FM, FG, FD, FS	ASME, CE	L + 300 (L + 11.81)	1360 (53.54)	62 (2.44)	93 (3.66)

6.3 Non-insulated drip trays

NOTE

Maximum length and width is stated for each product. The length can deviate by a maximum of 40 mm regardless of pressure or PV class. For specific measurements, use the sales configurator tool or contact your Alfa Laval representative.

Product (AQ-model)	Frame	Type	L mm (in)	W mm (in)	H1 mm (in)	H2 mm (in)
TS6 (AQ2S)	FG, FD	ALS, CE	LC + 290 (LC + 11.41)	500 (19.68)	10 (0.39)	40 (1.57)
T6 (AQ2T)	FM , FG, FD	ALS, ASME, CE	LC + 277 (LC+10.91)	450 (17.71)	10 (0.39)	40 (1.57)
TL6 (AQ2L)	FM, FG, FD	ALS, ASME, CE	LC + 200 (LC+7.87)	430 (16.92)	10 (0.39)	40 (1.57)
T8 (AQ3)	FM, FG	ALS, ASME, CE	LC + 427 (LC + 16.811)	640 (25.19)	10 (0.39)	40 (1.57)
T10 (AQ4T)	FM, FG, FD	ALS, ASME, CE	LC + 200 (LC+7.87)	590 (23.22)	10 (0.39)	40 (1.57)
T15 (AQ6T)	FM, FG, FD	ALS, ASME, CE	LC + 355.5 (LC + 13.99)	800 (31.49)	10 (0.39)	43 (1.69)
T21 (AQ8T)	FM, FG, FD	ALS, ASME, CE	LC + 490 (LC + 19.29)	960 (37.79)	10 (0.39)	43 (1.69)
T25 (AQ10T)	FM, FG, FD	ALS, ASME, CE	LC + 490 (LC + 19.29)	1130 (44.48)	10 (0.39)	43 (1.69)
TS35/T35 (AQ14S)/(AQ14)	FM, FG, FD, FS	ALS, ASME, CE	**LC<=3000:** LC + 438.5 (LC + 17.26) **LC>3000:** LC + 293.5 (LC + 11.55)	1300 (51.18)	10 (0.39)	43 (1.69)
TS45 (AQ18S)	FM, FG, FD	ALS, ASME, CE	LC + 770 (LC + 30.31)	1610 (63.38)	10 (0.39)	43 (1.69)
T45 (AQ18)	FM, FG, FD	ALS, ASME, CE	LC + 447.5 (LC + 17.61)	1610 (63.38)	10 (0.39)	43 (1.69)
TS50/T50 (AQ20S)/(AQ20)	FM, FG, FD	ALS, ASME, CE	LC + 900 (LC + 35.43)	1610 (63.38)	10 (0.39)	43 (1.69)

7 Installation

This section describes the procedure for installing a drip tray.

CAUTION **Risk of personal injury.**

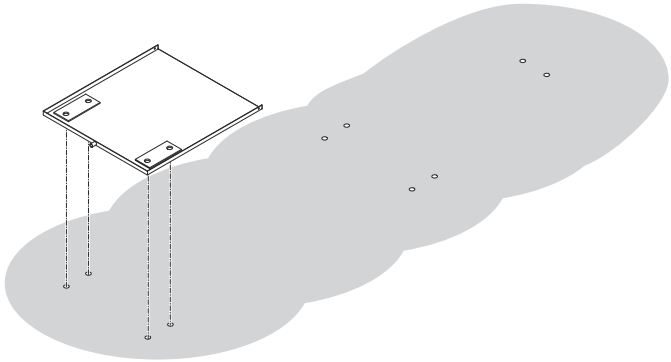
Wear personal protective equipment when handling the tray plates.

Lifting the tray plates should be done by more than one person if necessary.

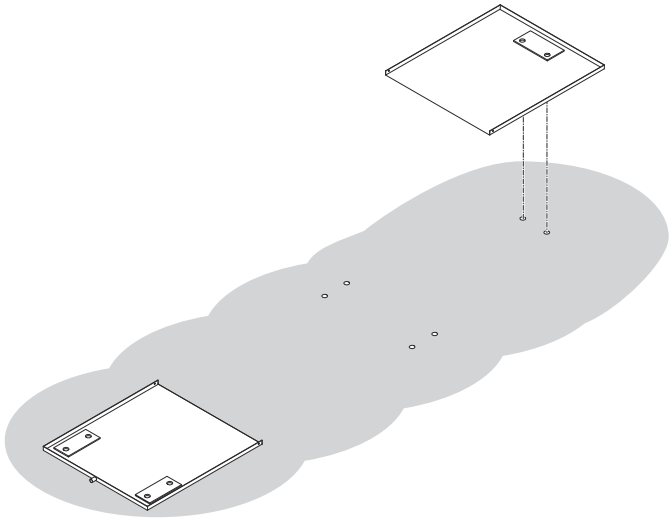
To consider before installation

- Ensure the foundation is prepared for the plate heat exchanger.
- Make sure a polyurethane structural adhesive is available for use.

1. Put the tray below frame plate in place. Align the support plate holes with the feet markings on the foundation.



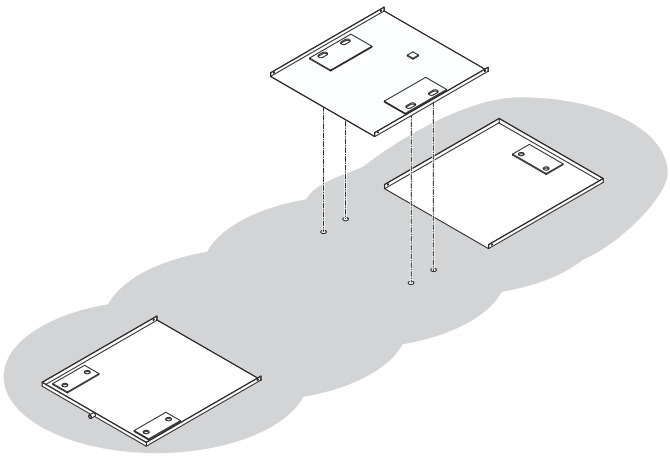
2. Put the tray below supporting column in place. Align the support plate holes with the feet markings on the foundation.



3 Put the tray below pressure plate in place. Align the support plate holes with the feet markings on the foundation.

NOTE

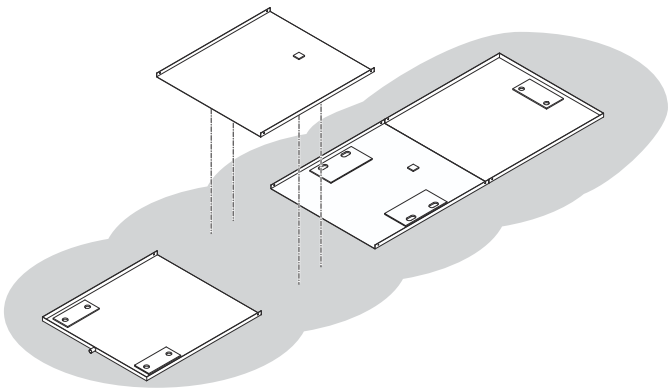
The type of tray components can vary or be excluded from the set, depending on the carrying bar length. If the tray below pressure plate is excluded from the set, ignore step 3 and continue directly to step 4.



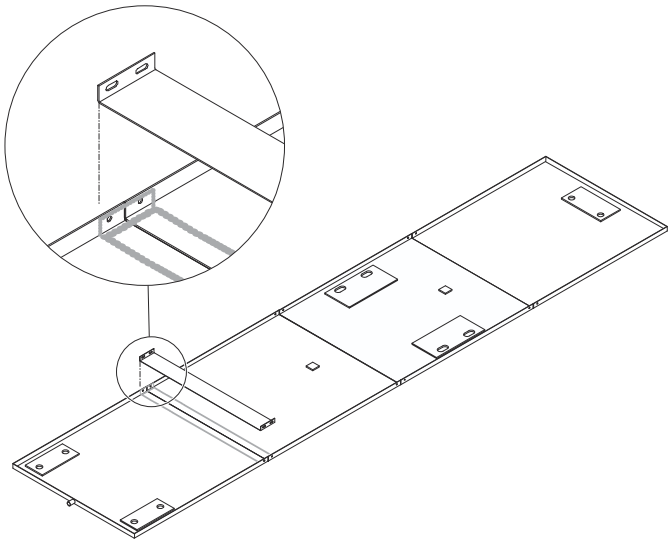
4 Put the connection tray in place. Fit the tray plates side by side.

NOTE

The number of connection trays can vary or be excluded from the set, depending on the carrying bar length. If the connection tray is excluded from the drip tray set, ignore step 4 and continue directly to step 5.

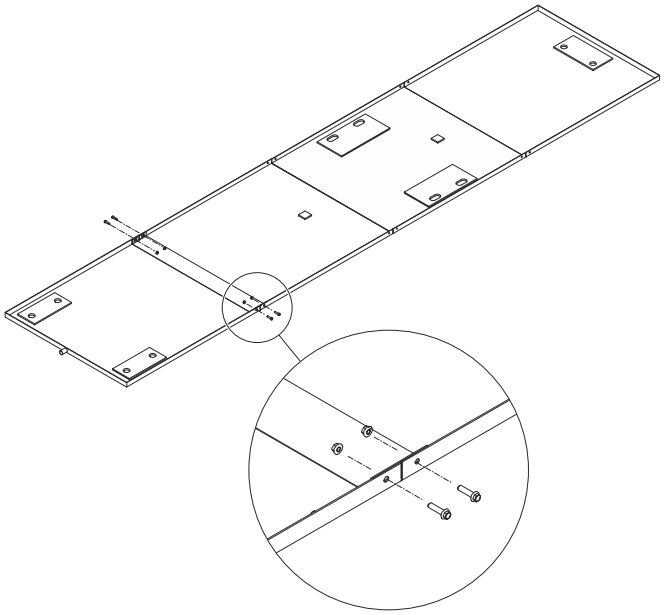


5 To prevent liquid leakage, apply polyurethane structural adhesive under the connection plate.

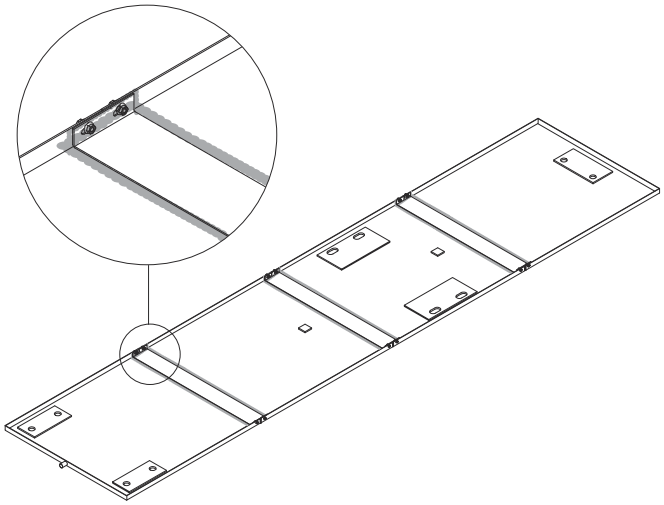


6 Put the connection plate in place. Fit it accordingly with the screw holes.

7 Tighten the screws on each connection plate.



8 To prevent liquid leakage, apply polyurethane structural adhesive around the edges of each connection plate.



9 Lift the plate heat exchanger onto the fully installed drip tray. Refer to the Installation manual, chapter *Lifting the equipment* to ensure safe lifting procedure.

10 Tighten the foundation bolts to the drip tray.