



A revolution in gas cooling

The new Alfa Laval portfolio of gas-to-liquid plate heat exchangers



A heat exchanger that can handle more

From exceptionally high temperatures to media with extremely disproportionate flow rates, Alfa Laval's revolutionary new gas-to-liquid portfolio can handle much more than other heat exchangers. The patented plate design offers efficient heat recovery with very low pressure drop, all within a shockingly compact footprint. Built with our proven copper-brazing technology, you can also be sure your gas-to-liquid heat exchanger will deliver the reliable performance you expect from Alfa Laval.

Compact, efficient performance

Brazed plate heat exchangers offer much greater thermal efficiency than tubular designs, meaning higher heat recovery potential. They also have a much smaller footprint. In fact, Alfa Laval's lightweight, compact gas-to-liquid units are typically 75% smaller than comparable shell-and-tubes, making them easy to integrate into existing systems with low transportation costs.

High gas temperatures

Where normal copper-brazed plate heat exchangers can often only handle temperatures up to 225°C, Alfa Laval's new gas-to-liquid design supports gas temperatures up to 750°C. For special applications, temperatures above 1400°C are possible.

Asymmetry: designed for gas applications

Our gas-to-liquid portfolio features a patented asymmetric "dimple" plate design, engineered to support much larger volumes on one side of the plate than the other. This allows the heat exchanger to provide high efficiency and low pressure drop in gas-to-liquid applications that other heat exchangers cannot support.

Superior condensing capacity

When a gas is cooled below its saturation point, the condensation that occurs results in a large energy transfer. Alfa Laval gas-to-liquid units have been carefully engineered to offer much higher condensing performance than traditional heat exchangers.



The gas-to-liquid portfolio

The Alfa Laval GL range

Our ultra-compact GL product line features a counter-current flow arrangement that ensures maximum heat transfer and efficiency in positions with disproportionate media flow rates. The special design delivers superior thermal fatigue resistance in high-temperature gas applications.

GL units have integrated condensate drain connections that make it easy to drain condensate, eliminating the need for an external separation vessel.

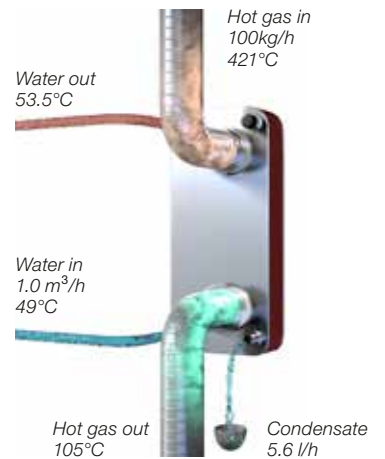
The Alfa Laval GLX range

The GLX product line features a cross-flow arrangement with large spacing between the plates to allow for very large flow volumes on the gas side. The gas side has completely open inlets and outlets along with a plate design that provides maximum volume flow with extremely low pressure drop.

Alfa Laval delivers GLX heat exchangers as modules. This offers increased flexibility, since the units can be assembled into larger systems to optimize performance for different applications and operating conditions.

Unmatched service and support

With Alfa Laval, the equipment is just the beginning. By choosing us, you are choosing a committed partner who will be there every step of the way. From sales to delivery, commissioning to service and spare parts, our global support network is always accessible with the expertise to help.



The products



Applications

Combined heat and power (CHP)

Alfa Laval is the market leader within micro-CHP exhaust gas heat exchangers. Our gas-to-liquid range offers strong performance with a high condensation rate in CHP machines up to 400 kWel. The efficient design enables over 90 % of the input energy be turned into either electricity or heat energy.

Compressors

In gas compression, most of the input energy to the compressor is lost as heat. The compressed gas must be cooled to make it suitable for its intended use, which offers a valuable opportunity for heat recovery. Alfa Laval gas-to-liquid technology combines high thermal performance with lower pressure drop, making it suitable for oil-free compressors, free standing aftercoolers, adsorption dryers and more.

Charge air coolers (CAC)

As a water-cooled CAC or turbocharge cooler, the Alfa Laval gas-to-liquid portfolio offers a compact design and high performance, with a lower requirement for cooling water compared to traditional CACs.

Heat recovery

When used in heat recovery, Alfa Laval heat exchangers provide a fast ROI as well as huge environmental benefits. For low-pressure applications the combination of high performance with low pressure drop often offers payback within one year.



Combined heat and power



Oil-free compressor

Product configurations

Product	Gas	Liquid	Condensate (gas side)
GL50, GL50N	DN 50	G ¾"	G ¼"
GL80	DN 80	G 1"	G ½"
GL100	DN 100	G 2.5"	G 1"
GL150	DN 150	G 2.5"	G 1"
GLX30, GLXN30	--	G 1"/G1¼"	--



GLX30

Technical data (GL, GLX)

Product	Number of plates	Certified pressure [bar(g)]	
		Side A (liq)	Side B (gas)
GL50	Max 80	15 @ 25°C, 11 @ 190°C	Static
GLN50 (Nickel)	Max 80	8.2 @ 25°C, 6 @ 190°C	Static
GL80	Max 80	25 @ 25°C, 19 @ 190°C	Static
GL100	Max 140	16 @ 25°C, 12 @ 190°C	Static
GL150	Max 140	16 @ 25°C, 12 @ 190°C	Static
GLX30	Max 140	11 @ 25°C, 8 @ 190°C	Static
GLXN30 (Nickel)	Max 140	8 @ 25°C, 6 @ 190°C	Static

Technical data (GLH)

Product	Number of plates	Certified pressure [bar(g)]	
		Side A (liq)	Side B (gas)
GLH50	Max 80	15 @ 25°C, 11 @ 190°C	12 @ 25°C, 8.5 @ 190°C
GLHN50 (Nickel)	Max 80	8.2 @ 25°C, 6 @ 190°C	6.2 @ 25°C, 4.5 @ 190°C
GLH80	Max 80	25 @ 25°C, 19 @ 190°C	17 @ 25°C, 12.6 @ 190
GLH100	Max 140	16 @ 25°C, 12 @ 190°C	16 @ 25°C, 12 @ 190°C
GLH150	Max 140	16 @ 25°C, 12 @ 190°C	7 @ 25°C, 5.2 @ 190°C



GL50

GL80

GL100

GL150

Alfa Laval in brief

Alfa Laval is a leading global provider of specialized products and engineered solutions.

Our equipment, systems and services are dedicated to helping customers to optimize the performance of their processes. Time and time again.

We help our customers to heat, cool, separate and transport products such as oil, water, chemicals, beverages, foodstuff, starch and pharmaceuticals.

Our worldwide organization works closely with customers in almost 100 countries to help them stay ahead.

How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit www.alfalaval.com to access the information direct.





Alfa Laval GL50 / GLH50

Gas-to-liquid plate heat exchanger

Introduction

The ultra-compact Alfa Laval GL product line ensures maximum heat transfer and efficiency in asymmetric gas applications.

Applications

- Exhaust gas heat recovery
- Compressed air cooling
- Charge air cooling
- Condenser

Benefits

- Compact
- Easy to install
- Low level of service and maintenance required
- All units are pressure and leak tested
- Integrated gas/condensate separation

Design

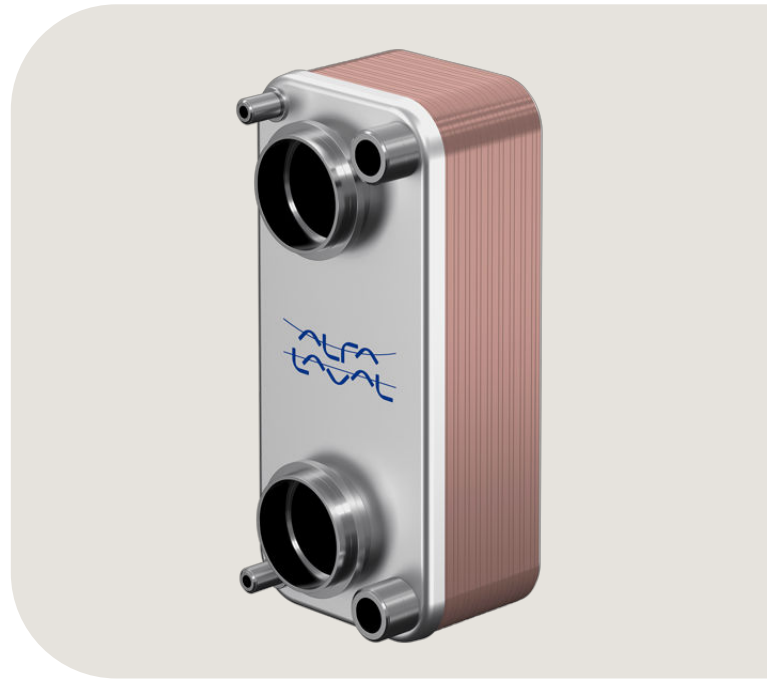
The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Different pressure ratings are available for different needs.

Asymmetric channels provide optimal efficiency in the most compact design. This results in very low pressure drop on the gas side.

Alfa Laval's unique brazed gas-to-liquid design enables much higher temperatures than traditional plate heat exchangers.

Our standard models handle gas temperatures up to 750 °C (1382 °F), with temperatures above 1400 °C (2552 °F) possible for special applications.



Technical Data

Standard materials

Cover plate	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight ¹

A measure (mm)	$4 + (4.05 * n)$
A measure (inches)	$0.16 + (0.16 * n)$
Weight (kg) ²	$1.07 + (0.11 * n)$
Weight (lb) ² s	$2.36 + (0.24 * n)$

¹ n = number of plates.

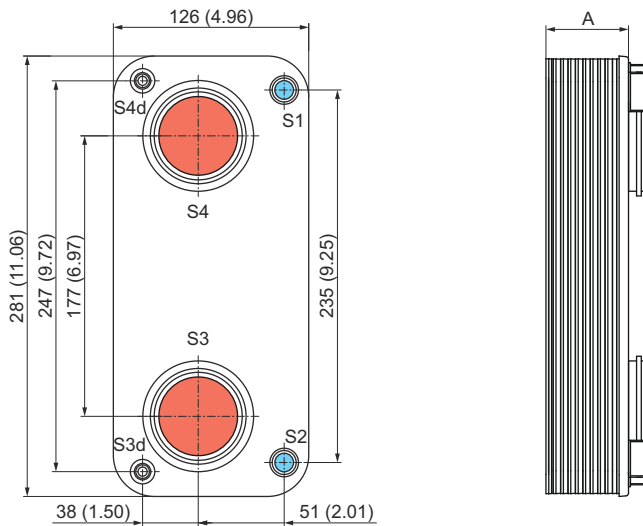
² Excluding connections.

Standard data

Volume per channel, litres (gal)	AM (S1-S2): 0.094 (0.0248)
	AM (S3-S4): 0.154 (0.0407)
Max. particle size, mm (inch)	1 (0.039)
Flow direction	Parallel
Min. number of plates	6
Max. number of plates	80

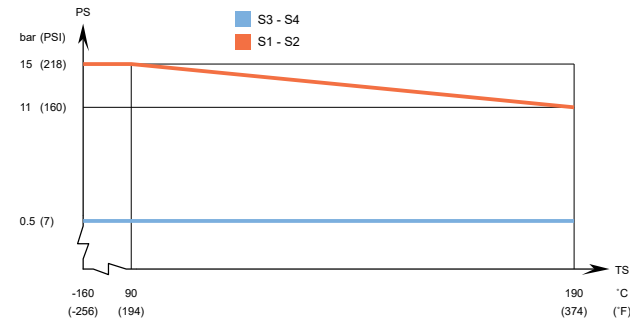
Dimensional drawing

Measurements in mm (inches).

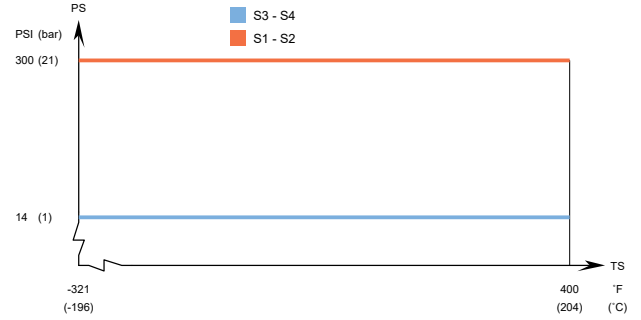


Design pressure and temperature

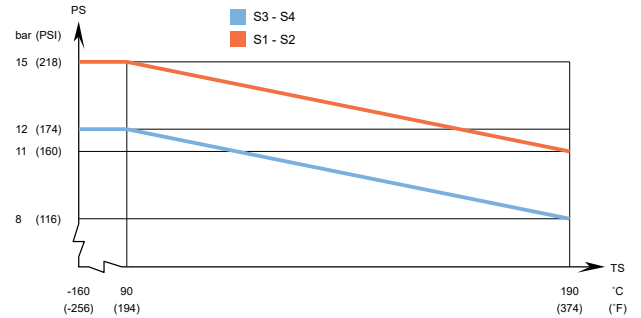
GL50 - PED approved pressure/temperature graph



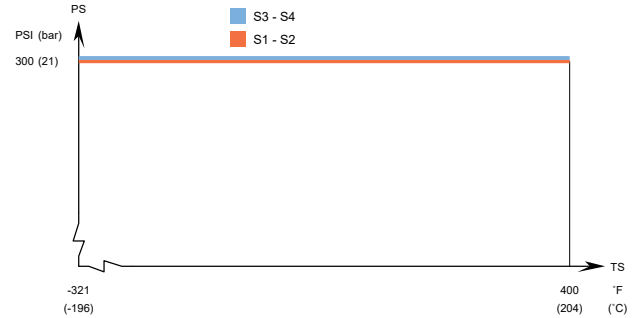
GL50 - UL approved pressure/temperature graph



GLH50 - PED approved pressure/temperature graph



GLH50 - UL approved pressure/temperature graph



Designed for full vacuum.

Max design temperature refers to the temperature of the plate material. Gas inlet temperatures can exceed the design temperature provided that there is sufficient coolant temperature and flow.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval AB (publ) or any of its affiliates (jointly "Alfa Laval"). No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

200001676-6-EN-GB

© Alfa Laval

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com



Alfa Laval GL80 / GLH80

Gas-to-liquid plate heat exchanger

Introduction

The ultra-compact Alfa Laval GL product line ensures maximum heat transfer and efficiency in asymmetric gas applications.

Applications

- Exhaust gas heat recovery
- Compressed air cooling
- Charge air cooling
- Condenser

Benefits

- Compact
- Easy to install
- Low level of service and maintenance required
- All units are pressure and leak tested
- Integrated gas/condensate separation

Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Different pressure ratings are available for different needs.

Asymmetric channels provide optimal efficiency in the most compact design. This results in very low pressure drop on the gas side.

Alfa Laval's unique brazed gas-to-liquid design enables much higher temperatures than traditional plate heat exchangers.

Our standard models handle gas temperatures up to 750 °C (1382 °F), with temperatures above 1400 °C (2552 °F) possible for special applications.



Technical Data

Standard materials

Cover plate	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight ¹

A measure (mm)	$6 + (4.02 * n)$
A measure (inches)	$0.24 + (0.16 * n)$
Weight (kg) ²	$3.58 + (0.23 * n)$
Weight (lb) ²	$7.89 + (0.51 * n)$

¹ n = number of plates.

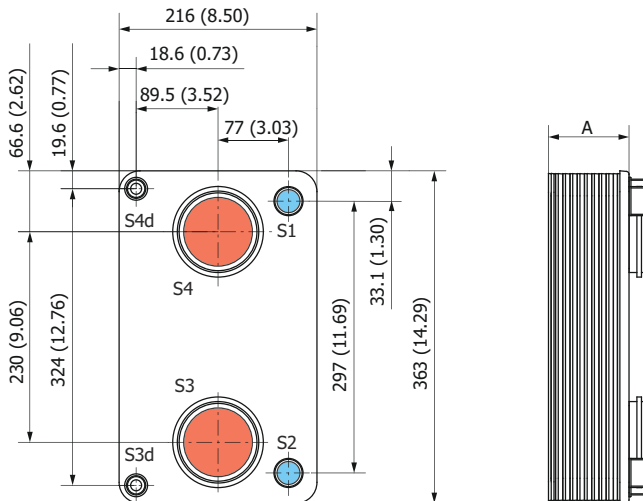
² Excluding connections.

Standard data

Volume per channel, litres (gal)	AM (S1-S2): 0.201 (0.0531) AM (S3-S4): 0.366 (0.0967)
Max. particle size, mm (inch)	1 (0.039)
Flow direction	Parallel
Min. number of plates	6
Max. number of plates	90

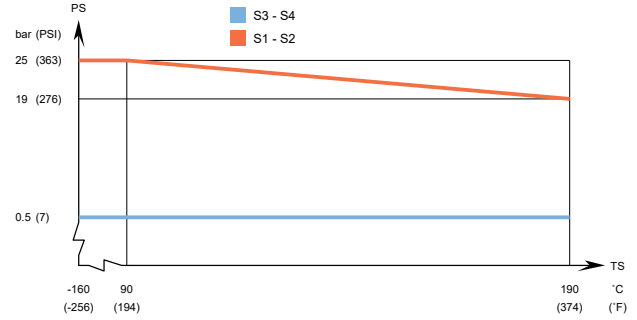
Dimensional drawing

Measurements in mm (inches).

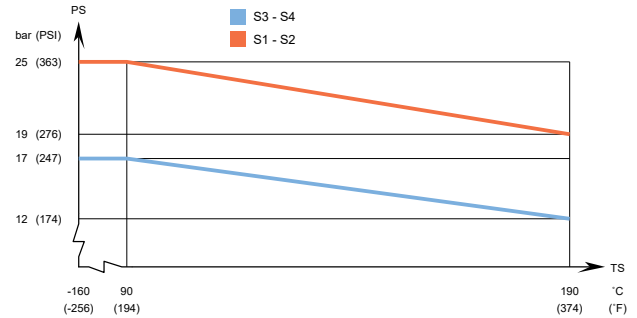


Design pressure and temperature

GL80 - PED approved pressure/temperature graph



GLH80 - PED approved pressure/temperature graph



Designed for full vacuum.

Max design temperature refers to the temperature of the plate material. Gas inlet temperatures can exceed the design temperature provided that there is sufficient coolant temperature and flow.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval Corporate AB. No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval Corporate AB's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com

Alfa Laval GLH100

Gas-to-liquid plate heat exchanger

Introduction

The ultra-compact Alfa Laval GL product line ensures maximum heat transfer and efficiency in asymmetric gas applications.

Applications

- Exhaust gas heat recovery
- Compressed air cooling
- Charge air cooling
- Condenser

Benefits

- Compact
- Easy to install
- Low level of service and maintenance required
- All units are pressure and leak tested
- Integrated gas/condensate separation

Design

The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Different pressure ratings are available for different needs.

Asymmetric channels provide optimal efficiency in the most compact design. This results in very low pressure drop on the gas side.

Alfa Laval's unique brazed gas-to-liquid design enables much higher temperatures than traditional plate heat exchangers.

Our standard models handle gas temperatures up to 750 °C (1382 °F), with temperatures above 1400 °C (2552 °F) possible for special applications.



Technical Data

Standard materials

Cover plate	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight ¹

A-measurement (mm)	$16 + (4.09 * n)$
A-measurement (inches)	$0.63 + (0.16 * n)$
Weight (kg) ²	$23.1 + (0.73 * n)$
Weight (lb) ² s	$50.93 + (1.61 * n)$

¹ n = number of plates.

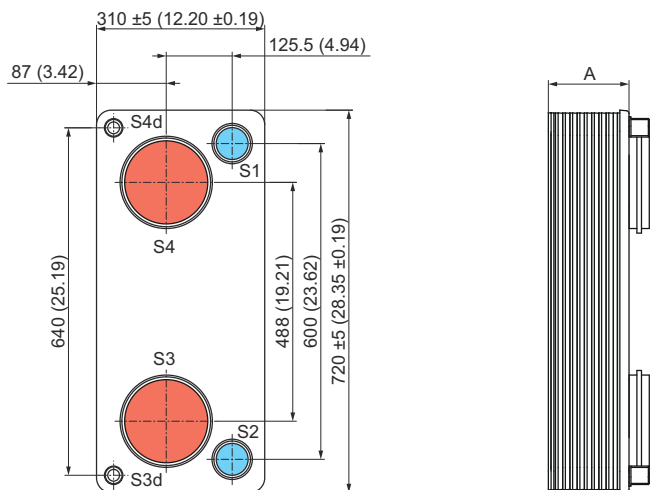
² Excluding connections.

Standard data

Volume per channel, litres (gal)	AM (S1-S2): 0.624 (0.1648) AM (S3-S4): 0.97 (0.2562)
Max. particle size, mm (inch)	1 (0.039)
Flow direction	Parallel
Min. number of plates	6
Max. number of plates	200

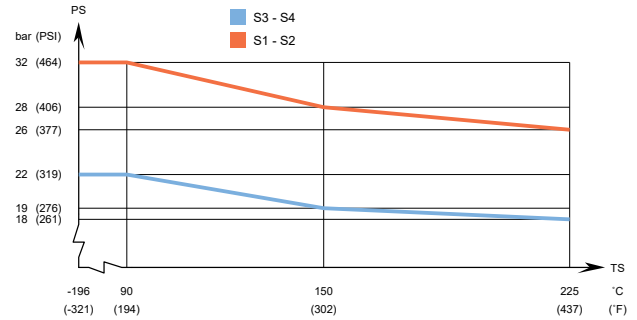
Dimensional drawing

Measurements in mm (inches).



Design pressure and temperature

GLM100 - PED approved pressure/temperature graph



Designed for full vacuum.

Max design temperature refers to the temperature of the plate material. Gas inlet temperatures can exceed the design temperature provided that there is sufficient coolant temperature and flow.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

Marine approvals

GLMH100 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, KR, LR, RINA, TL)

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval AB (publ) or any of its affiliates (jointly "Alfa Laval"). No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com



Alfa Laval GL150 / GLH150

Gas-to-liquid plate heat exchanger

Introduction

The ultra-compact Alfa Laval GL product line ensures maximum heat transfer and efficiency in asymmetric gas applications.

Applications

- Exhaust gas heat recovery
- Compressed air cooling
- Charge air cooling
- Condenser

Benefits

- Compact
- Easy to install
- Low level of service and maintenance required
- All units are pressure and leak tested
- Integrated gas/condensate separation

Design

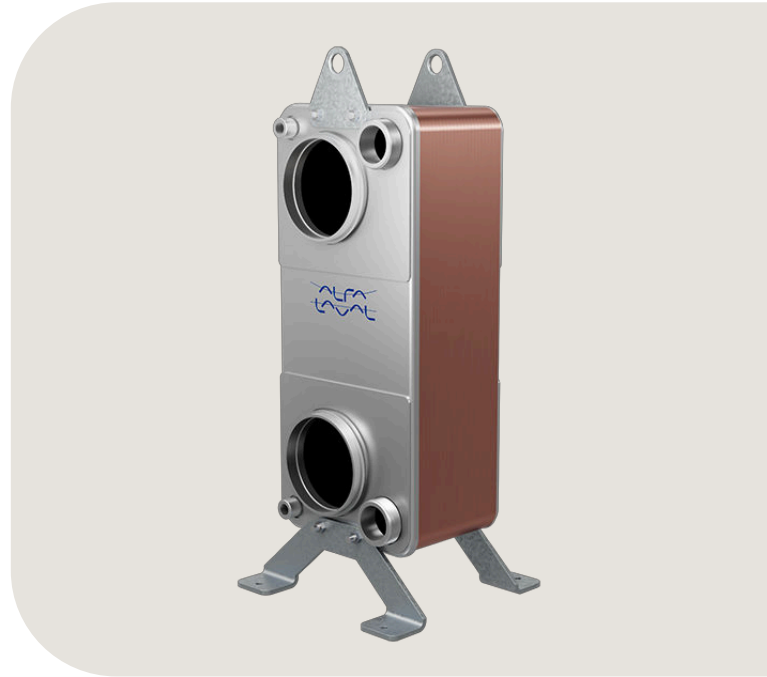
The brazing material seals and holds the plates together at the contact points ensuring optimal heat transfer efficiency and pressure resistance. Using advanced design technologies and extensive verification guarantees the highest performance and longest possible service life.

Different pressure ratings are available for different needs.

Asymmetric channels provide optimal efficiency in the most compact design. This results in very low pressure drop on the gas side.

Alfa Laval's unique brazed gas-to-liquid design enables much higher temperatures than traditional plate heat exchangers.

Our standard models handle gas temperatures up to 750 °C (1382 °F), with temperatures above 1400 °C (2552 °F) possible for special applications.



Technical Data

Standard materials

Cover plate	Stainless steel
Connections	Stainless steel
Plates	Stainless steel
Brazing filler	Copper

Dimensions and weight ¹

A-measurement (mm)	$8 + (4.09 * n)$
A-measurement (inches)	$0.31 + (0.16 * n)$
Weight (kg) ²	$13.4 + (0.67 * n)$
Weight (lb) ² s	$29.54 + (1.48 * n)$

¹ n = number of plates.

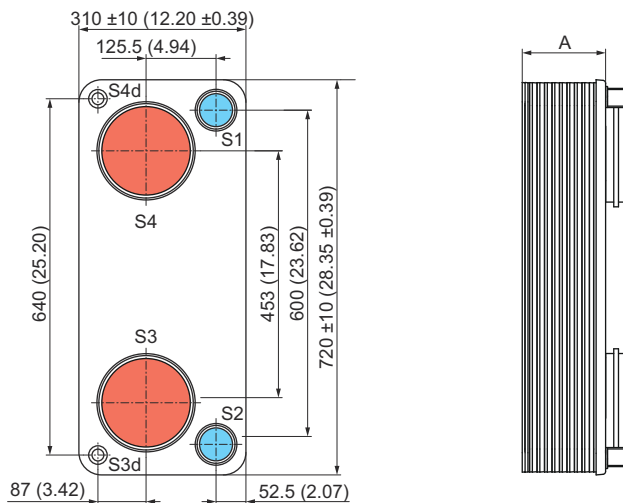
² Excluding connections.

Standard data

Volume per channel, litres (gal)	AM (S1-S2): 0.526 (0.1390) AM (S3-S4): 1.052 (0.2779)
Max. particle size, mm (inch)	1 (0.039)
Flow direction	Parallel
Min. number of plates	6
Max. number of plates	200

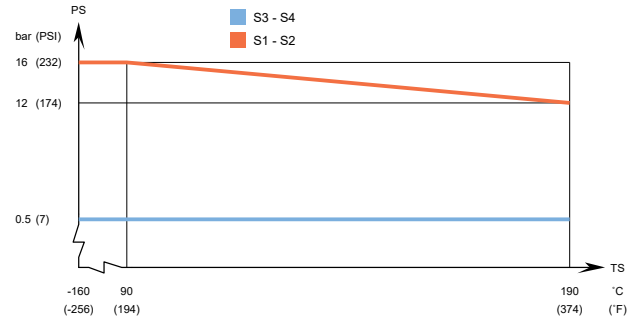
Dimensional drawing

Measurements in mm (inches).

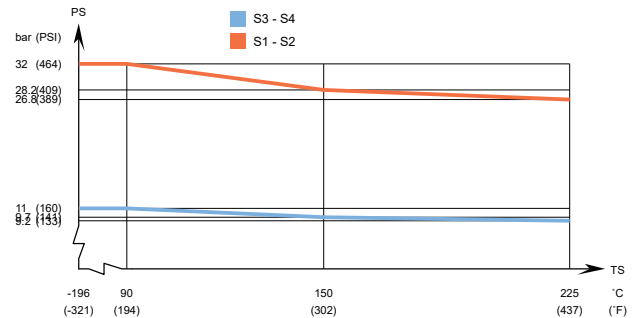


Design pressure and temperature

GL150 - PED approved pressure/temperature graph



GLH150 - PED approved pressure/temperature graph



Designed for full vacuum.

Max design temperature refers to the temperature of the plate material. Gas inlet temperatures can exceed the design temperature provided that there is sufficient coolant temperature and flow.

Alfa Laval plate heat exchangers are available with a wide range of pressure vessel approvals. Please contact your Alfa Laval representative for more information.

NOTE: Values above are to be used as an indication. For exact values, please use the drawing generated by the Alfa Laval configurator or contact your local Alfa Laval representative.

Marine approvals

GLMH150 can be delivered with marine classification certificate (ABS, BV, CCS, ClassNK, DNV, KR, LR, RINA, TL)

This document and its contents are subject to copyrights and other intellectual property rights owned by Alfa Laval AB (publ) or any of its affiliates (jointly "Alfa Laval"). No part of this document may be copied, re-produced or transmitted in any form or by any means, or for any purpose, without Alfa Laval's prior express written permission. Information and services provided in this document are made as a benefit and service to the user, and no representations or warranties are made about the accuracy or suitability of this information and these services for any purpose. All rights are reserved.

How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com