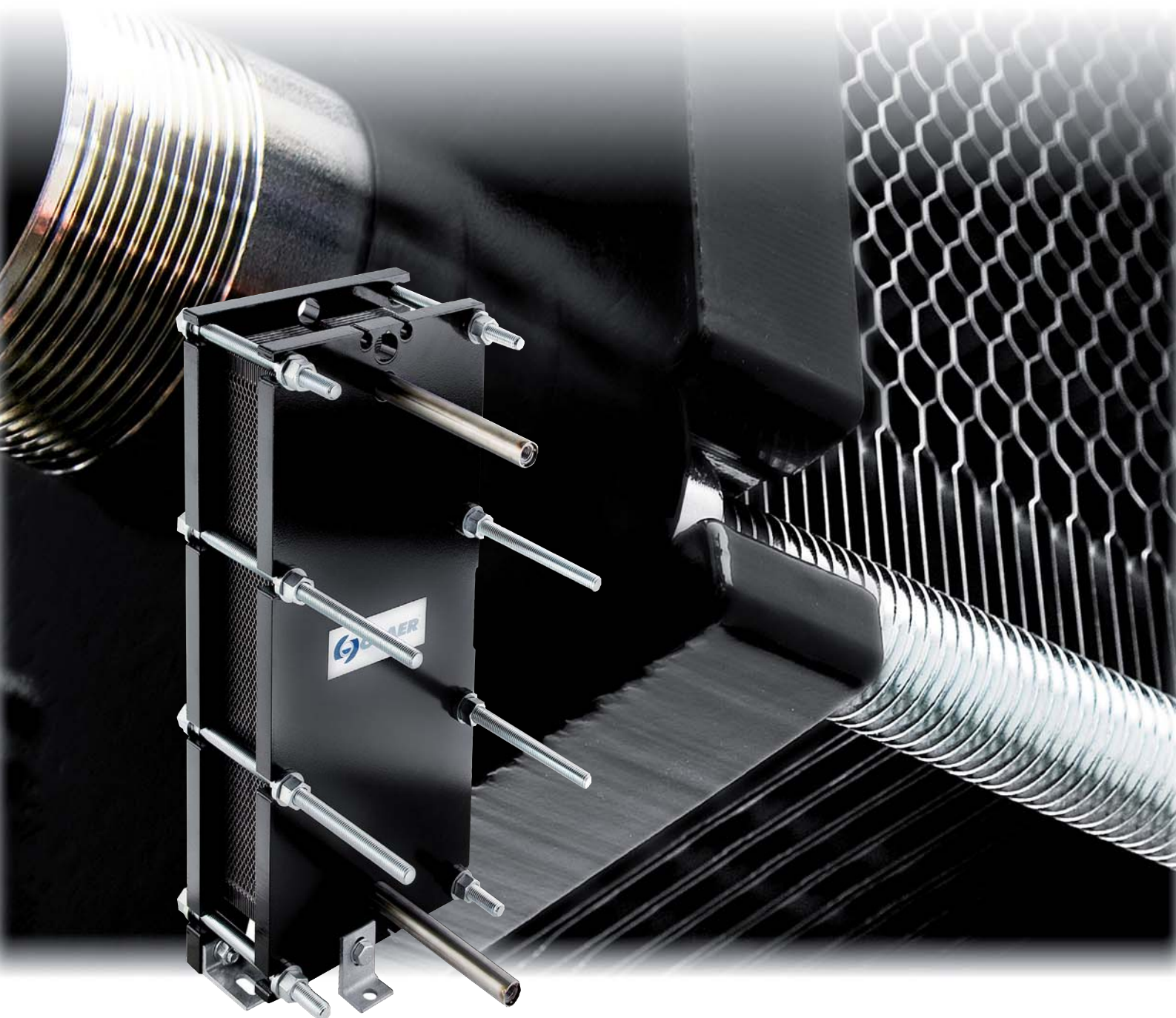




*The Professional Choice*

# **GWO**

*Water Oil Cooler*



OLAER GWO | Gasketed water oil cooler



Olaer is a global player specialising in innovative, efficient system solutions for temperature optimisation and energy storage.

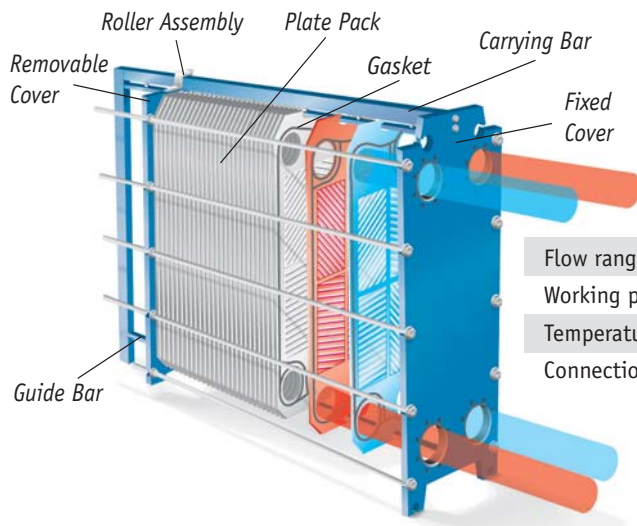
All over the world, our products are working in the most diverse environments and applications.

# Gasketed Water Oil Coolers



The GWO type of water oil cooler is built on a module-based concept and is designed to provide maximum efficiency in transferring heat from one liquid to another. Frames, plates and connections can be combined to form a number of different water oil coolers.

By using different types of plates, with different characteristics, the water oil coolers can be adapted to a wide variety of applications. The benefit of the GWO cooler is that it can easily be expanded or adapted, by adding or replacing plates when conditions change.



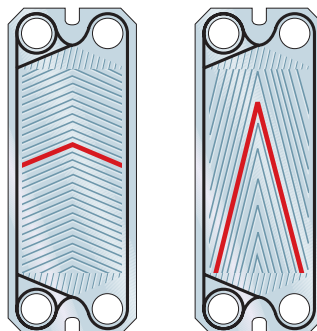
Flow ranges:	0 – 4600 m <sup>3</sup> /h
Working pressure:	10 – 25 bar
Temperature range:	-30°C – +180°C
Connections:	DN25 – DN500
	Welded neck, flange or threaded

*Specifications may be changed without prior notice.  
Please contact us for specific details.*

## GC and GL Plates

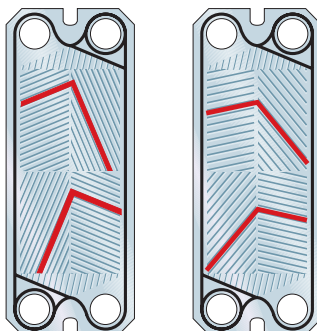
Symmetrical plates for regular use. Different plate patterns allow for optimisation of thermal transfer or pressure drop.

An obtuse angle (high-theta plate) gives high resistance and an acute angle (low-theta plate) gives low pressure drop.

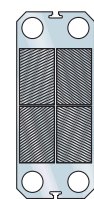
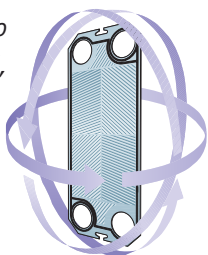


## GX Ultraflex Plates

The plates are available with a herringbone pattern and either an acute or obtuse angle, making it possible to achieve six channel combinations.



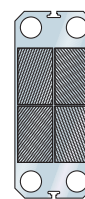
The Ultraflex design allows two plates to be turned and rotated, giving six combinations of high-, and low-theta plate pairs, matching the performance parameters of your application.



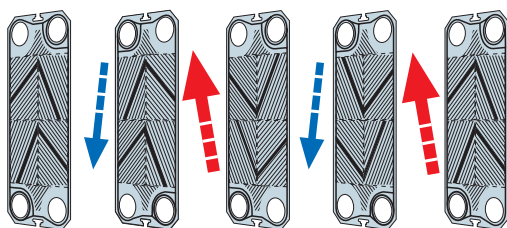
HS=  
High -theta,  
same direction



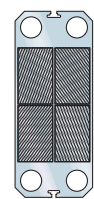
HD=  
High -theta,  
different directions



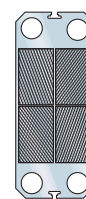
MS=  
Medium-theta,  
same direction



Ultraflex allows asymmetrical designs, with the primary and secondary circuits designed for heat transfer efficiency.



LS=  
Low -theta,  
same direction



LD=  
Low -theta,  
different directions



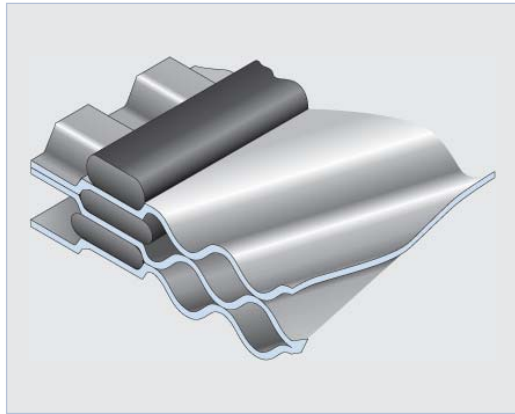
MD=  
Medium-theta,  
different directions

# Gasket Choice

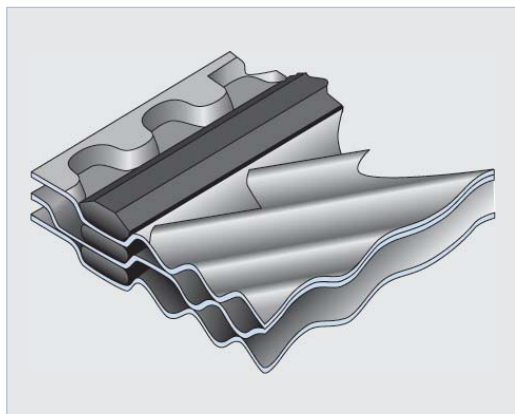
## Glued Gaskets

Olaer plate gaskets are specially moulded elastomers to assure superior performance.

Numerous gasket materials — NBR, FKM, and others — are available to match your process conditions, to maximum operating temperatures of 180°C.



*Gaskets on GX Series plates are located in the neutral axis.*



*Gaskets on all other plates are located in tapered grooves.*

## Clip-On Gaskets

Consider the Clip-On glueless gasket system wherever regular cleaning is necessary or aggressive fluids shorten gasket life. The unique design allows for easy and fast clip-on installation for sure sealing and simple removal.

The Clip-On is available in NBR. These precision gaskets are moulded under rigorous manufacturing controls and are peroxide-cured for long life and excellent compression set resistance.



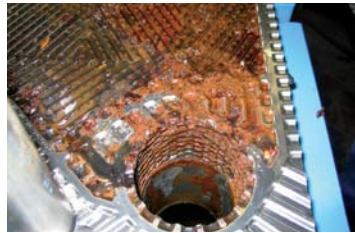
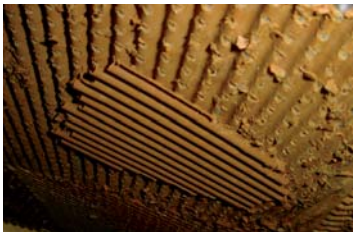
*Clip-On gaskets seat and lock-in without tools for trouble-free plate pack assembly and installation.*

# Keep Control

## *of your water oil coolers*

Efficient operation is the key to optimum return on investment. Malfunctions and changes in heat transfer can have severe consequences on operational costs and may affect product quality.

Dirt, scale and other deposits will reduce the efficiency of the GWO. If contamination is ignored and persists, the plates can be damaged. This in turn could lead to leaks, faulty operation and reduce the life of the plate water oil cooler. Clogged GWOs can cause damage to upstream and downstream equipment with expensive, unscheduled downtime for repairs.



*Pollution increases the pressure drop and your energy costs. It can also damage the plates or the gaskets.*



*Crystallisation of fluids when they get in contact with oxygen can deform and damage the plates.*

*Limescale can block your water oil cooler*

## Service and Maintenance Program

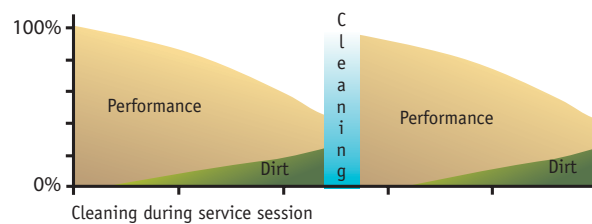
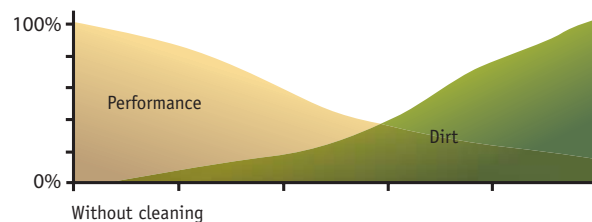
With regular service and maintenance you keep control of your cooler's condition in order to maintain optimum performance.

With a service program you get a grip on things before they become a problem. Every program is tailor-made to your specific requirements and can include anything from regular inspection to full annual overhaul.

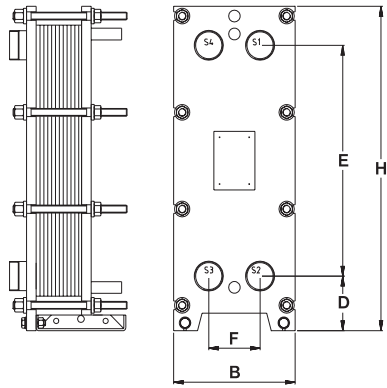
Before proposing a maintenance program, we start with an inspection of the plates, gaskets and connections to establish the condition and cooling capacity.

With our authorized service, you are guaranteed to get the most suitable gaskets and plates complete with our OEM Guarantee (Original Equipment Manufacture).

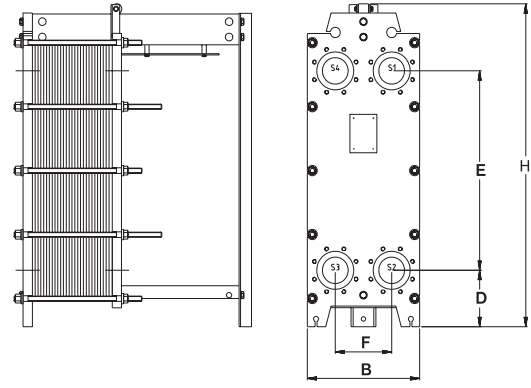
Performance curve depending on contamination level



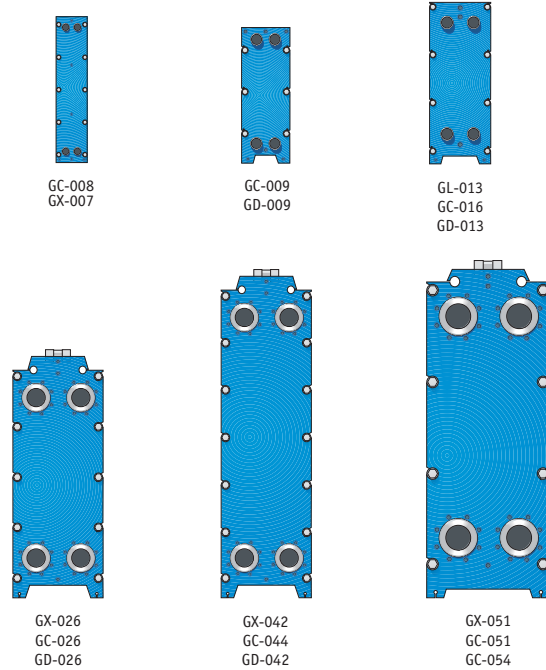
Frame type NI and PI



Frame type N and P



Type	Connection DN	B mm	H mm	D mm	E mm	F mm
GX-007 PI GC-008 PI	25/32	180	774	72	640	60
GC-009 PI GC-009 P GD-009 P GD-009 PI	40	250	725	90	555	100
GL-013 P GL-013 PI GL-013 N GL-013 NI GD-013 P GD-013 PI GC-016 P GC-016 PI GC-016 N GL-016 PI GD-016 P GD-016 PI	50/65	320	832	140	592	135
GX-026 N GC-026 N	100	450	1166	220	779	226
GX-026 P GC-026 P GD-026 P	100	450	1265	220	779	226
GX-042 N GC-044 N	100	450	1166	220	1189	226
GX-042 P GC-044 P GD-042 P	100	450	1675	220	1189	226
GX-051 N GC-051 N GC-054 N	150	585	1730	300	1143	300
GX-051 P GC-051 P GC-054 P	150	630	1730	300	1143	300



# Key for Gasketed Water Oil Coolers

## EXAMPLE:

**GWO GXD-051-H-5-P-159-1.4401-NBR (P)**

1 2 3 4 5 6 7 8 9

### 1. PLATE SYSTEM

GX = Ultraflex

GL = Standard (neutral plane)

GC = Standard (bottom plane)

GD = Double wall

### 2. FLOW

D = Diagonal flow

P = Parallel flow

### 3. COOLER SIZE

(051 is approx. 0.51 m<sup>2</sup>)

### 4. CHANNEL TYPE

H = High-theta plates

L = Low-theta plates

M = Mix of high-, and low-theta plates

### 5. PLATE THICKNESS

4 = 0,4 mm

5 = 0,5 mm

6 = 0,6 mm

7 = 0,7 mm

### 6. TYPE OF FRAME

N = 10 bar

P = 16 bar

S = 25 bar

### 7. NUMBER OF PLATES

159 = plate package consists of 159 plates

### 8. PLATE MATERIAL

1.4301 = Stainless steel (AISI304 / SS2333)

1.4401 = Acid proof steel (AISI316 / SS2347)

1.4547 = 254SMO

3.7025 = Titanium Gr. 1

### 9. GASKET MATERIAL

NBR (P)

FKM

<b>Plate materials:</b> <ul style="list-style-type: none"> <li>• AISI 304 / EN 1.4301</li> <li>• AISI 316 / EN 1.4401</li> <li>• Titanium Grade 1</li> <li>• 254 SMO</li> </ul>	<b>Max. working pressure:</b> <ul style="list-style-type: none"> <li>• NI/N 10 bar</li> <li>• PI/P 16 bar</li> <li>• S 25 bar</li> </ul>
<b>Gaskets:</b> <ul style="list-style-type: none"> <li>• Nitrile</li> <li>• FKM</li> </ul>	<b>Max working temp:</b> <ul style="list-style-type: none"> <li>• Nitrile 140°C</li> <li>• FKM 180°C</li> </ul>
	<b>Approvals:</b> PED 97/23/EC

For other materials, please contact Olaer.