aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

GWO Water/oil cooler

Lightweight, compact and efficient for industrial and marine applications

Parker

ENGINEERING YOUR SUCCESS.

The Olaer Group is part of Parker Hannifin since July 1st, 2012. With manufacturing and sales in 14 countries in North America, Asia and Europe, the Olaer Group expands Parker's presence in geographic growth areas and offers expertise in hydraulic accumulator and cooling systems for target growth markets such as oil and gas, power generation and renewable energy.

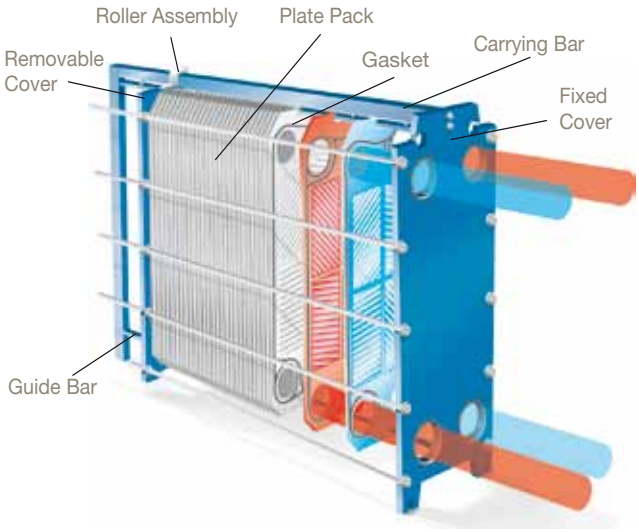
Gasketed water/oil coolers

The Parker GWO water/oil cooler is built on a modular concept 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 GWO cooler can easily be expanded or adapted by adding or replacing plates whenever conditions change.

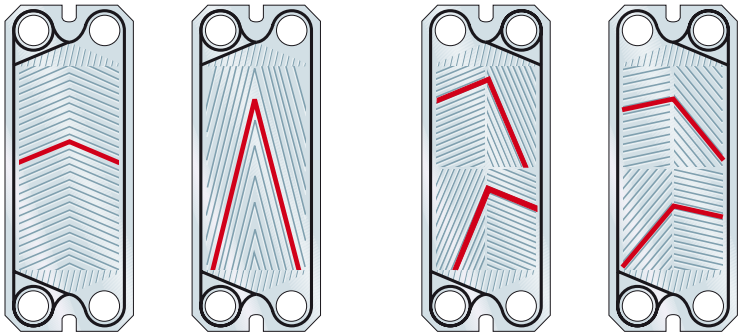
GWO water/oil coolers in short:

- **Light and compact**
- **Suitable for many applications**
- **Easy installation**
- **Cost-efficient and environmentally friendly**



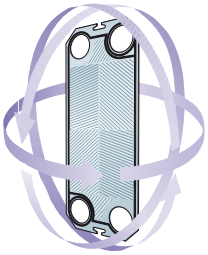
Flow ranges:	0 – 4600 m^3/h
Working pressure:	10 – 25 bar
Temperature range:	-30 °C – +180 °C
Connections:	DN25 – DN500 Welded neck, flange or threaded

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

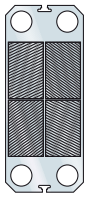


GC and GL Plates
Symmetrical plates for regular use. Different plate patterns allow for optimisation of thermal transfer or pressure drop.
An obtuse angle (high-theta plate) gives high resistance and an acute angle (low-theta plate) gives low pressure drop.

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.

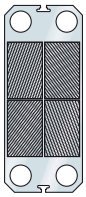


The Ultraflex design allows two plates to be turned and rotated, giving six combinations of high-, and low-theta plate pairs, matching the performance parameters of your application.

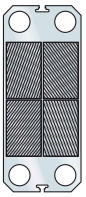


HS=
High-theta, same direction

HD=
High-theta, different directions

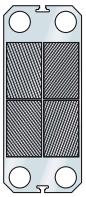


MS=
Medium-theta, same direction

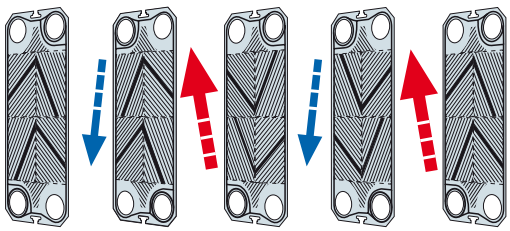


LS=
Low-theta, same direction

LD=
Low-theta, different directions



MD=
Medium-theta, different directions



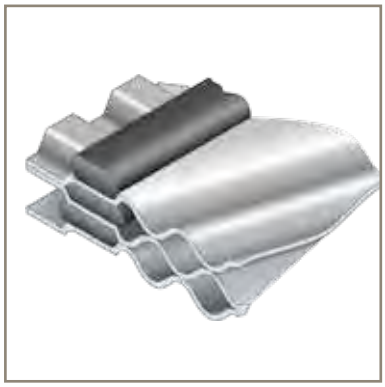
Ultraflex allows asymmetrical designs, with the primary and secondary circuits designed for heat transfer efficiency.

Gasket selection

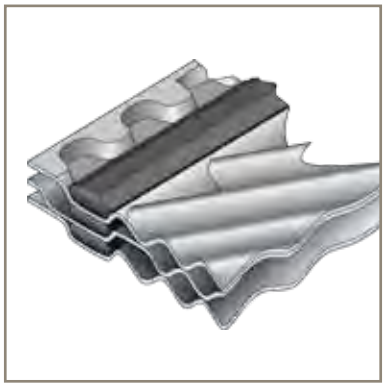
Glued Gaskets
Olaer plate gaskets are made from specially moulded elastomers to assure superior performance. Numerous gasket materials – NBR, FKM and others – are available to match your process conditions, up to operating temperatures of 180 °C.

Clip-On Gaskets
Consider the Clip-On glueless gasket system wherever regular cleaning is necessary, or where aggressive fluids shorten gasket life. The unique design allows for easy and fast clip-on installation for secure 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.



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



Gaskets on all other plates are located in tapered grooves.

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.

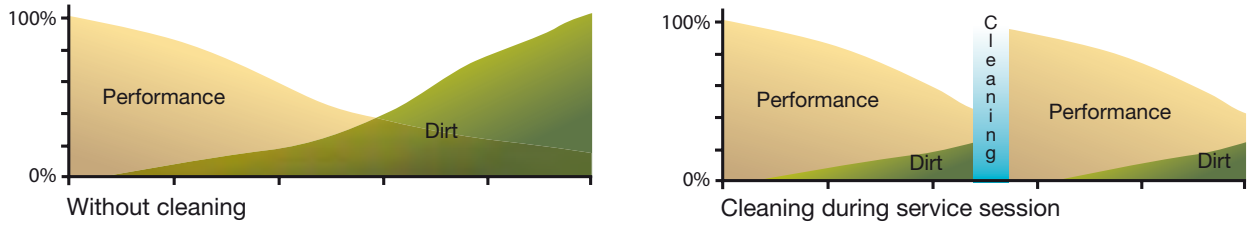
Dirt, scale and other deposits will reduce the efficiency of your GWO cooler. If contamination is ignored and persists, the plates can be damaged. This in turn could lead to leaks, faulty operation and reduced service life of the water/oil cooler. Clogged GWOs can cause damage to upstream and downstream 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.

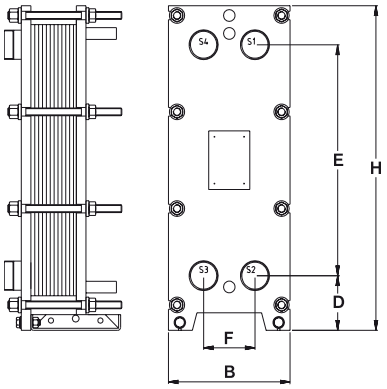
Limescale can block your water/oil cooler.

Performance curve depending on contamination level

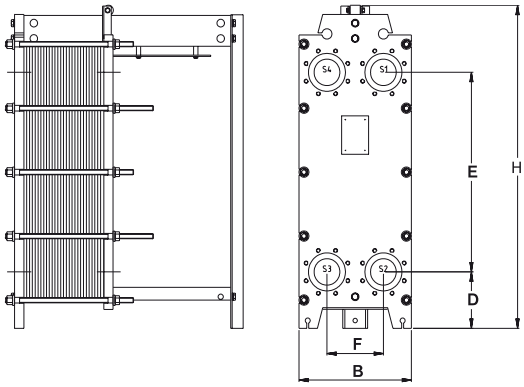


Service and Maintenance
With regular servicing and maintenance you keep control of your cooler's condition and maintain optimum performance. With a service programme you get a grip on things before they become a problem. Every programme is tailor-made to your specific requirements and can include anything from regular inspections to full annual overhauls. Before proposing a maintenance program, we inspect 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 Original Equipment Manufacture Guarantee.

Frame type NI and PI



Frame type N and P



GL-008
GX-007

GC-009
GD-009

GL-013
GC-016
GD-013

GX-026
GC-026
GD-026

GX-042
GC-044
GD-042

GX-051
GC-051
GC-054

Type	Connection DN	B mm	H mm	D mm	E mm	F mm
GX-007 PI GL-008 PI	25/32	180	774	72	640	60
GC-009 P , GC-009 PI 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

Ultraflex	= GX
Standard (neutral plane)	= GL
Standard (bottom plane)	= GC
Double wall	= GD

2. FLOW

Diagonal flow	= D
Parallel flow	= P

3. COOLER SIZE

(051 is approx. 0.51 m^2)

4. CHANNEL TYPE

High-theta plates	= H
Low-theta plates	= L
Mix of high- and low-theta plates	= M

5. PLATE THICKNESS

0.4 mm	= 4
0.5 mm	= 5
0.6 mm	= 6
0.7 mm	= 7

6. TYPE OF FRAME

10 bar	= N
16 bar	= P
25 bar	= S

7. NUMBER OF PLATES

Plate package consists of 159 plates	= 159

8. PLATE MATERIAL

Stainless steel (AISI304 / SS2333)	= 1.4301
Acid proof steel (AISI316 / SS2347)	= 1.4401
254SMO	= 1.4547
Titanium Gr. 1	= 3.7025

9. GASKET MATERIAL

NBR (P)
FKM

Plate materials:
- **AISI 304 / EN 1.4301**
- **AISI 316 / EN 1.4401**
- **Titanium Grade 1**
- **254 SMO**

Gaskets:
- **Nitrile**
- **FKM**

Max. working pressure:
- **NI/N 10 bar**
- **PI/P 16 bar**
- **S 25 bar**

Max working temp:
- **Nitrile 140 °C**
- **FKM 180 °C**

Approvals:
PED 97/23/EC

For other materials, please contact your Parker representative.

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Ed. 2013-01-30

Catalogue HY10-6009/UK, POD, 04/2013, ZZ

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