



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



# Industrial Cooling Systems

Dedicated Products and Solutions



ENGINEERING YOUR SUCCESS.

# Efficient cooling for industrial applications

Adding service life – subtracting cost

## Overheating – an expensive problem

An under-sized cooling capacity produces a too high temperature balance. The consequences are poor lubrication, internal leakage, higher risk of cavitation, damaged components, etc. All in all, overheating leads to a significant drop in cost efficiency and environmental consideration.

## Temperature optimisation for cost-efficient operation

Temperature balance in a hydraulic system occurs when

the cooler can cool the energy input that the system does not consume – the system's lost energy:

$$(P_{\text{loss}} = P_{\text{cool}} = P_{\text{in}} - P_{\text{used}})$$

Temperature optimisation means that temperature balance occurs at the system's ideal working temperature – the temperature at which the oil's viscosity and the air content comply with recommended values.

From Parker Hannifin, you can get everything you need to keep cool.



AIR/OIL COOLERS

## LAC – AC motor

- Cooling capacity up to 300 kW
- Single-phase or three-phase AC motor
- Compact and light weight
- Quiet fan and motor
- Low pressure drop
- High cooling capacity
- Service-friendly, easy to retrofit
- LAC-X for ATEX requirements
- LAC-M for marine environments

For Power Units • Lubrication Systems  
• Marine Cranes • Presses • Wind Power

## Benefits of a correct working temperature:

- Extended system service life
- Extended oil service life
- Increased system availability – more operating time and fewer shutdowns
- Reduced service and repair costs
- Maintained efficiency in continuous operation – system efficiency falls if the ideal working temperature is exceeded



SUITABLE PUMPS

## QPM Gerotor

- Flow from 10 to 80 l/min
- With or without by-pass
- Compact design
- Low noise level
- Working pressure 10 bar

## GR Screw pump

- Viscosity range 4–2000 mm<sup>2</sup>/s
- Free from pulsations
- Can be installed directly on the electrical motor
- Easy installation
- Low noise level
- Working pressure 40 or 80 bar
- Large range of models

## Take the next step – with the right accessories

Selecting the right accessories can further improve your cooling system. We offer a wide range to fit your unique applications and conditions – contact us for guidance!



Integrated pressure-controlled bypass valve



Integrated temperature-controlled bypass valve



External temperature-controlled 3-way valve



### LHC – hydraulic motor

- Cooling capacity up to 300 kW
- Hydraulic motor up to 25.2 cm<sup>3</sup>/rev
- Compact and light weight
- Quiet fan and motor
- Low pressure drop
- High cooling capacity
- Service-friendly and easy to retrofit
- LHC-X for ATEX requirements
- LHC-M for marine environments

For Forestry Machines • Mining Machines  
Crushing Machines • Marine Cranes

### LOC – circulation pump

- Cooling capacity up to 45 kW
- Integrated circulation pump
- Compact and light weight
- Quiet fan and motor
- Low pressure drop
- High cooling capacity
- Service-friendly, easy to retrofit

For Power Units • Lubrication Systems  
Marine Winches • Presses • Wind Power

### LDC – DC motor

- 12V or 24V DC motor
- Maximal cooling capacity 30 kW
- Can be fitted with Smart DC Drive
- Compact and light weight
- Quiet fan and motor
- Low pressure drop
- High cooling capacity
- Service-friendly, easy to retrofit

For Truck cranes • Body builders  
• Mining Applications



### PWO – Brazed

- Working pressure 15 bar @ +155 °C
- Maximum working temperature +225 °C
- Cooling capacity up to 500 kW
- Flow range up to 1600 l/min
- Light and compact
- Easy to install
- Cost efficient and environmentally friendly
- Wide range for many applications

For Power Units • Lubrication Systems  
• Marine Cranes • Presses • Wind Power

### GWO – Gasketed

- Working pressure from 0-25 bar
- Working temperature from -30 °C to +180 °C
- Flow ranges from 0 to 4600 m<sup>3</sup>/h
- Efficient and compact
- Openable for mechanical cleaning
- Expandable for future capacity increases
- The gaskets limits the working temperature and does not suit all fluids

For Power Units • Lubrication Systems  
• Marine Cranes • Presses • Wind Power

### SWO – Shell & Tube

- Working pressure standard 15 bar
- Working temperature up to +95 °C
- Flow range up to 900 l/min
- Cleaning without opening the hydraulic circuit
- Wide range
- Marine & Industrial series available
- The gaskets limits the working temperature and does not suit all fluids

For Power Units • Lubrication Systems  
• Marine Cranes • Presses • Wind Power

## WATER/OIL COOLERS



Temperature-sensing valve



Thermo contact



Lifting eyes



Stone and dust guard



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### US Product Information Centre

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Your local authorized Parker distributor

