

*advanced quality  
customized designs  
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**UNIVERSAL<sup>®</sup>  
HYDRAULIK**



Your Partner for coolers and systems

**Oil water coolers**

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customized designs  
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# Oil water coolers

## Hybrid design

### HYBRID COOLING

#### EKM/SKM, ECM



Straight tubes (3 diameter)  
**Greatly enlarged heat exchange surface (fins)**  
9 sizes: 2 - 2.000 kW cooling capacity  
Optional:  
- sea water with certifications  
- compressed air applications  
- special design upon request

#### UKM - UKTM



U-tubes (2 diameter)  
In-tank or on-tank solution  
**Greatly enlarged heat exchange surface (fins)**  
4 sizes: 2 - 500 kW cooling capacity  
Optional:  
- sea water with certifications  
- compressed air applications  
- special design upon request, e.g. only cooling cartridge (UKC) with end cap

**This heat exchanger combines the advantages of plate heat exchangers with the benefits of shell & tube heat exchangers.**

The design of this cooler is as compact as a plate exchanger as it has a greatly enlarged heat exchange surface on the oil side. This is achieved by fins (plates) which are routed over the water tubes, forming a metallic bond with these tubes.

It also retains the advantages of the shell & tube heat exchanger on the water side, as the large, smooth pipes keep it almost entirely clean, whereas the ribbed design of the plate heat exchanger tends to get clogged up easily on the water side.

Further advantages include its greater robustness and the unique opportunity to build in an internal bypass valve.

## Bare tube design

#### CM, AM



Straight- or U-tubes  
5 sizes: 2-500 kW cooling capacity  
Optional:  
- different material options  
- special design with **ASME, TEMA** or **API**-codes upon request  
- sea water

#### UKC-G

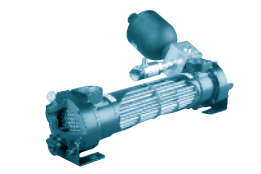


**Screw-in Heat Exchanger** for installation in hydraulic tanks, gear boxes or piping systems (e.g. install in existing threads instead of heating elements)  
Threadings: G 1 1/2" or G 2"  
cooling surface: 0,05 - 0,9 m<sup>2</sup>  
Optional: customized lengths

## Fail safe cooler

### FAIL SAFE COOLING

#### CM/FS



**Fail safe cooler** by double-tube design with overpressure protection and electronic control  
Basis AM/CM-Coolers  
Optional:  
- sea water  
- different material options

## Electrical oil pre-heater

### ELECTRICAL HEATING

#### EDH



**Electrical oil pre-heater** to control the heating of fluids  
3 sizes  
heat capacity: 0,5 - 12 kW (60 kW)  
surface load: 0,8 - 2 W/c m<sup>2</sup>  
Optional:  
- Thermostat, adjustable 0°-90°C  
- Limiter at 100°C

## Plate cooler

#### PWT



**Brazed plates** in stainless steel, copper or nickel brazed  
variable in sizes and amount of plates  
Optional:  
- brackets  
- insulations

#### TL



**Screwed-Plates** in stainless steel  
Different plate materials  
variable in sizes and amount of plates  
easy cleaning by modular system  
Optional:  
- sea water

IC-Fluid Power, Inc.

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## Oil air coolers

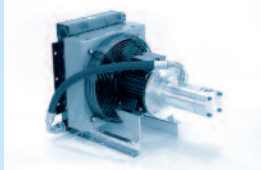
### Industry

#### LKI



**Drive: 400 V Motor**  
10 sizes: 2-150 kW cooling capacity  
Optional:  
- Off-Shore design  
- 40 bar Test pressure  
- special design upon request

#### TFS/A



**Bypass cooling**  
Installation beside the hydraulic system  
extremely silent  
Drive: 400 V Motor  
3 sizes: 8-20 kW cooling capacity  
Optional:  
- filter, thermostat, hoses, etc.  
- other mounting options

### Mobile

#### LKM



**Drive: 12 V-, 24 V- Motor**  
Basis LKI Series  
special design upon customer demands  
Optional:  
- 40 bar Test pressure  
- screw-in thermostat, etc.

#### LKM-special



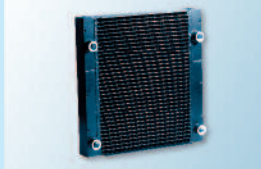
**Drive: 12 V-, 24 V- Motor**  
Basis LKM Series  
individual designs of sizes and drives  
Optional:  
- two or more drives  
- heat performance can be tested

#### LKI-HYD



**Drive: Hydraulic-Motor with collar bearing**  
Basis LKI Series  
special design upon request  
Optional:  
- without hydraulic motor  
- other motors upon request

#### LKK



**Special Design** without drive upon customer demands, e.g. multiple combined coolers (oil, charge air, water) in Side-by-Side design.  
Optional:  
- 40 bar Test pressure  
- housing, fan supplied separately

### Cooling solutions

#### COOLING SYSTEMS

#### Cooling systems



We mount several standard coolers together on a rack to increase the cooling performance (from 2 to 16 coolers).

#### COOLING SYSTEMS

#### Cooling-Filter systems



We can extend every standard cooler to a compact bypass-cooling filter unit for your hydraulic system.

#### Universal Hydraulik GmbH

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