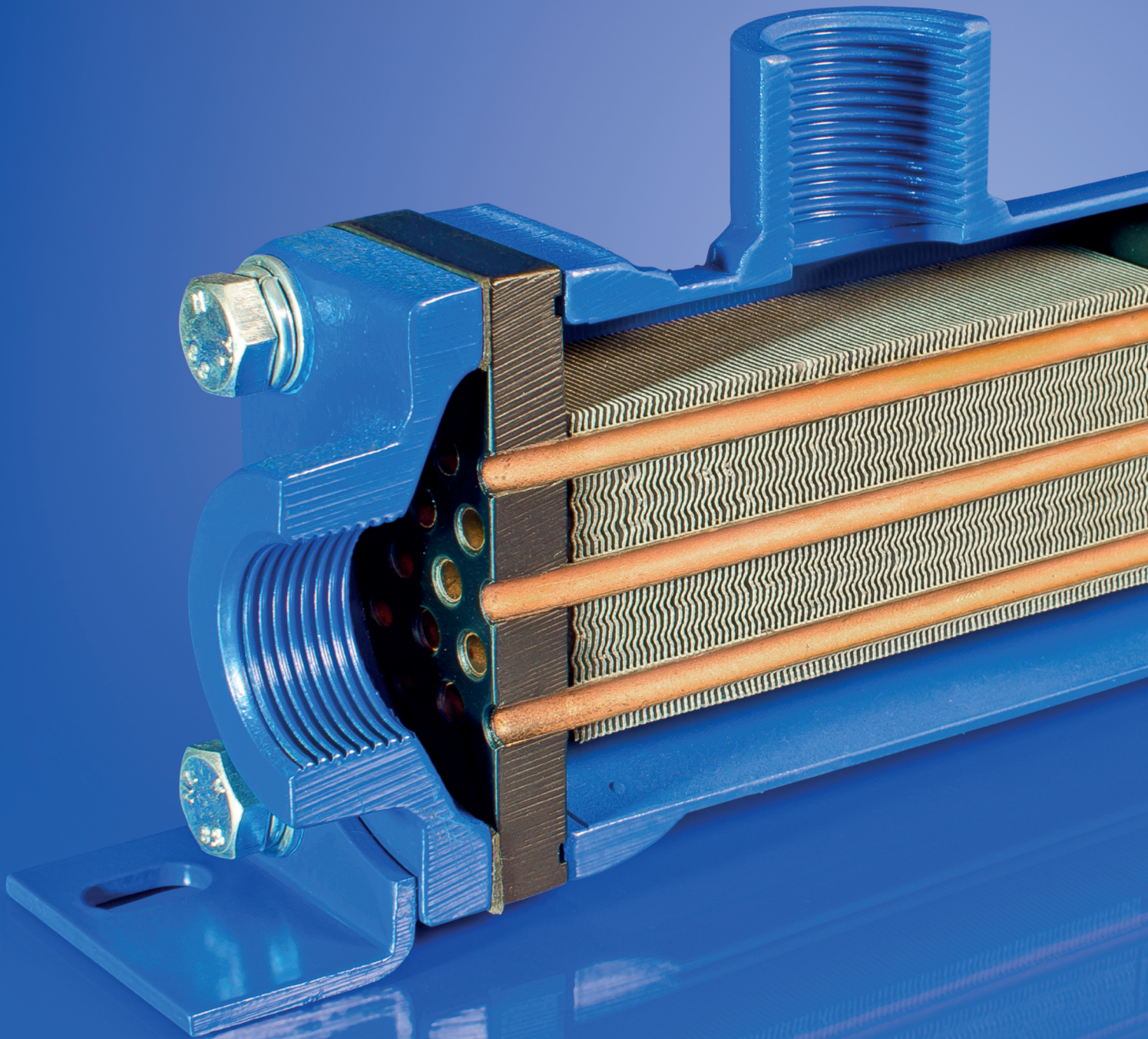


HYBRID COOLING



**UNIVERSAL[®]
HYDRAULIK** 
Your Partner for coolers and systems

Heat Exchanger

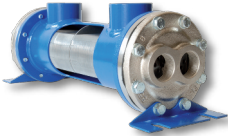
Hybrid-Design (with fins)

**HYBRID
COOLING**

Predictive Maintenance 4.0

**HYBRID
FAIL SAFE
COOLING**

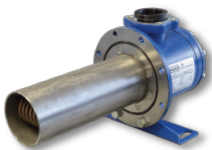
EKM/SKM, SCM



Straight or bent water tubes (U-tubes), fixed or removable, On-Tank or In-Tank version available.
8 different sizes with 2 - 5.000 kW Heat Load
3 tube diameter

- Optional:**
- Sea water with Marine-certificates (GL, DNV, etc.)
 - Compressed-air version
 - Stainless steel or titan version
 - Bypass-Valve integrated (100% opened)
 - Special design upon request

UKM - UKTM



SCM-FS



Fail Safe cooler

in Hybrid-Design. Much bigger cooling performance. Double-tube design with 100% electrical leakage control. 5 Unit sizes. Basis SCM-Series

Optional:

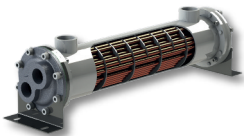
- Sea water with Marine-certificates
- Stainless steel or titan version
- Bypass-Valve integrated (100% opened)

Advantages Hybrid-Design:

- **Shell side (e.g. Oil):** High performance due to additional fins (plates). Similar performance and size as plate heat exchangers.
- **Water side:** Long life time due to plain tubes instead of formed plates. Easy to clean even with bad water quality.

Standard Shell & Tube Design (without fins)

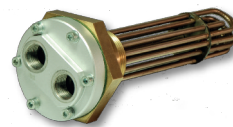
CKM



Straight- or U-tubes
8 sizes: 2. - 1.500 kW cooling capacity

- Optional:**
- different material combinations (e.g. Stainless steel)
 - Sea water (with marine certificates)
 - TÜV-approvals
 - Special designs by request possible

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 1/4", G 1 1/2" or G 2" cooling surface: 0,05 - 0,9 m²

Optional:

- Stainless steel version
- Seawater version

Fail safe cooler

Predictive Maintenance 4.0

**FAIL SAFE
COOLING**

CKM-FS



Fail safe cooler

double-tube design with 100% electrical leakage control,
6 sizes: Basis CKM-series

- Optional:**
- Sea water (with marine certificates)
 - Atex- or TÜV-approvals
 - Different material combinations (e.g. Stainless steel)

Electrical oil pre-heater

**ELECTRICAL
HEATING**

EDH



Electrical oil pre-heater

5 sizes 0 - 100 kW / no calculation software necessary. All relevant data on data sheet available.

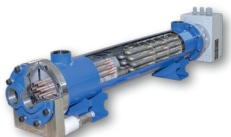
Optional:

- Indiv. electrical control solutions
- Insulation (different material)
- Surface load: 1W/cm²
- Water and water mixtures

Special designs

**ELECTRICAL
HEATING** **HYBRID
FAIL SAFE
COOLING**

COOLER-HEATER UNIT



Combination of a hybrid - failsafe cooler with an electrical oil pre-heater in only one unit !

- Other special designs:**
- High pressure (500bar)
 - High temperature
 - Compressed-air cooling
 - Etc.

ASME-CODE



ASME certification

Basis standard or hybrid coolers
Code: Section VIII, Division 1 with U-stamp

Optional:

- TEMA-C design
- API-614



Plate cooler

PWT



Brazed plates

in stainless steel, copper or nickel brazed variable in sizes and amount of plates

- Optional:**
- Different connections
 - Different brackets
 - Insulations (e.g. PU hard foam)

TL



Screwed-Plates

in stainless steel variable in sizes and amount of plates easy cleaning by modular systems

Optional:

- Sea water (titan)