## Heat Exchanger

### Hybrid-Design (with fins)

**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**
- Screw-in Heat Exchanger for installation in hydraulic tanks, gear boxes or piping systems (e.g. install in existing threads instead of heating elements)
- 3 tube diameter
- Optional:
  - Sea water (with Marine-certificates)
  - Atex- or TÜ V-approvals
  - Different material combinations (e.g. Stainless steel)

**SCM-FS**
- Fail Safe cooler in Hybrid-Design.
- Much bigger cooling performance.
- Double-tube design with 100% electronical leakage control.
- 5 Unit sizes.
- Basis SCM-Series
- Optional:
  - Sea water with Marine-certificates
  - Stainless steel / titan version
  - Bypass-Valve integrated (100% opened)

### Standard Shell & Tube Design (without fins)

**CKM**
- Straight- or U-tubes
- 8 sizes: 2 – 1,500 kW cooling capacity
- Optional:
  - different material combinations
  - Sea water (with marine certificates)
  - TÜ V-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)
- Long life time due to plain tubes instead of formed plates.
- Easy to clean even with bad water quality.

### Fail safe cooler

**CKM-FS**
- Fail safe cooler: double-tube design with 100% electronical leakage control.
- 6 sizes: Basis CKM-series
- Optional:
  - Sea water (with marine certificates)
  - Atex- or TÜ V-approvals
  - Different material combinations (e.g. Stainless steel)

**Electrical oil pre-heater**

**EDH**
- 5 sizes 0 - 100 kW / no calculation software necessary. All relevant data on data sheet available.
- Optional:
  - indiv. electronical control solutions
  - Insulation (different material)
  - Surface load: 1W/cm²
  - Water and water mixtures

### Special designs

**eg. HIGH-PRESSURE**
- We develop many different special solutions for special markets by customer requests:
  - High pressure cooler (up to 500 bar)
  - Gas – cooler/ heater
  - Compressed-Air cooler
  - Gear box oil cooler – in-tank
  - Air Pre-heater
  - Slurry (mud water) oil-cooler

**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)

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