

# Industrial Heat Exchangers

shell & tube exchangers



**Shell and Tube Heat Exchangers**  
Custom and Standard series-Funke design

***mdt***

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**SHELL and TUBE HEAT EXCHANGERS** - funke design

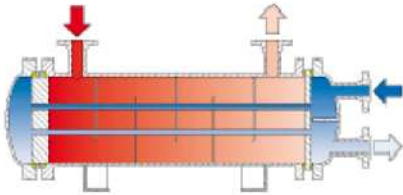
**CP (TEMA-Type: W)**

**Design feature:**

- Solid design, with removable bare or finned tube bundle, easy to inspect
- Sealing of the floating tube sheet by means of 2 gaskets and lantern ring with signal bore holes for leak detection

**Application:**

Globally used for liquid-to-liquid exchanger applications and for gas cooling. Good price performance ratio. Typical applications: Oil cooling in hydraulic systems, large motors and shipbuilding, for example as intercooler or after cooler for compressors or as condenser etc.



**A-100 (TEMA-Type: W)**

**Design feature:**

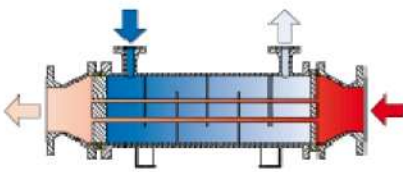
- Removable bare tube bundle - 1-pass design - with floating tubesheet
- Large range of standard sizes available

**Optional:**

- Can be equipped with centrifugal moisture separator

**Application:**

Cooling and drying of process gases or compressed air. Used as intercooler or aftercooler for compressors or, in case of gas tubeside, as pipeline cooler in pipe line systems.



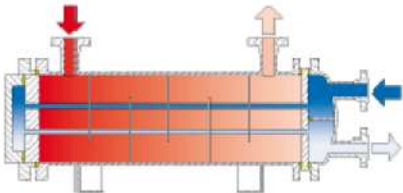
**C-100 (TEMA-Type: P)**

**Design feature:**

- The packed floating head, removable bundle design, allows for differential thermal expansion between shell and tubes
- The bundle can be removed without removing the floating head cover
- Available with 1, 2, 4 and 6-tube passes

**Application:**

C-100 heat exchangers particularly suited as inter- and aftercoolers for handling different media, air or gases.



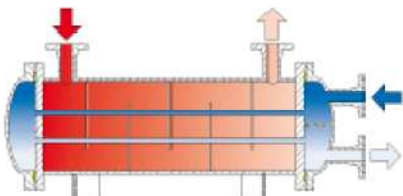
**C-200 (TEMA-Type: M)**

**Design feature:**

- Fixed tube bundle with or without shell expansion joint
- Providing maximum heat transfer by optimum shellside exchange surface
- Available with 1, 2, 4 and 6-tube passes

**Application:**

To cool and heat various media and for applications in various processes.



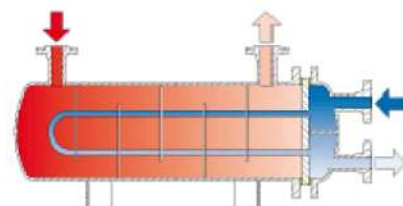
**C-300 (TEMA-Type: U)**

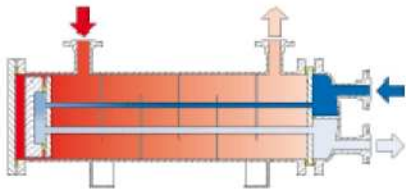
**Design feature:**

- U-tube removable bundle design allows larger differential expansion in length due to different thermal expansion between shell and tubes
- Available with 2, 4 and 6-tube passes

**Application:**

To cool and heat various high pressures media. To be used for example as steam producer and steam condenser, particularly suited to high temperature differentials.





### C-400 (TEMA-Type: T)

#### Design feature:

- Internal bolted floating head design with pull-through bundle
- Bundle can be taken from the shell without removing the floating head covers
- With large inlet port at bundle
- Available with 2, 4 and 6-tube passes

#### Application:

Widely used as chemical fluid heat exchanger, hydrocarbon fluid condenser and air or gas compressor inter- or aftercooler.

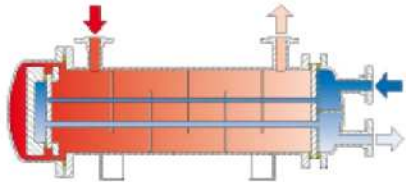
### C-500 (TEMA-Type: S)

#### Design feature:

- Internal clamp-ring head cover and removable bundle design
- Available with 1, 2, 4 and 6-tube passes
- Design allowing differential thermal expansions between shell and tubes
- Additional design advantage: higher surface compared with comparable shell sizes of other types

#### Application:

Satisfies highest demands (for example high temperature differences) in chemical industry and refineries. To be used for thermal treatment of liquids and also to cool gases or air and as steam condenser.



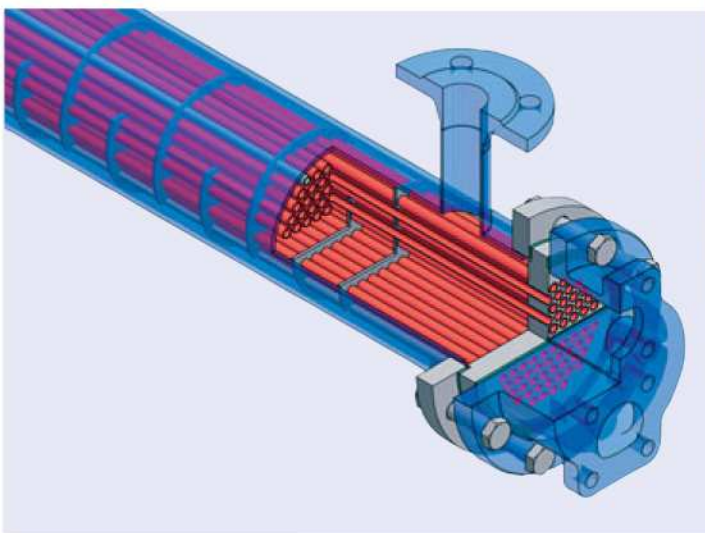
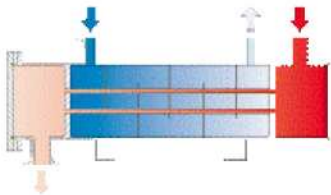
### WRA (TEMA-Type: M)

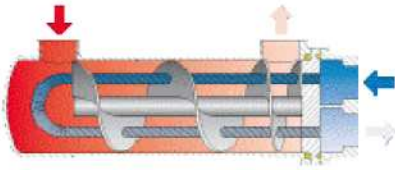
#### Design feature:

- Designed as exhaust gas heat exchanger with thermal shield at gas inlet of fixed tube bundle
- Max. inlet temperatures 600° C
- With 1 and 2 tube passes
- Removable cover allows for cleaning of the exhaust gas side

#### Application:

Heat recovery from exhaust gas of combustion engines such as gas-, diesel- or heavy fuel oil engines.

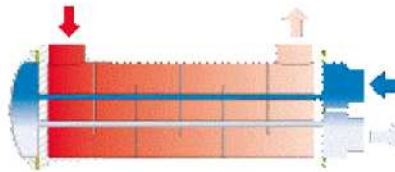


**SHELL and TUBE HEAT EXCHANGERS- funke design**
**TDW**

**Design feature:**

- High thermal efficiency utilising newly developed spiral oil flow baffles
- Standardised in 21 sizes and various types
- Removable U-tube bundle with finned tubes made from tinned Cu and other materials
- 4-pass coolant flow
- Low operating costs due to low water consumption

**Application:**

Especially suited for cooling of lube oil and hydraulic oil in engines, transmission. Also used in the plastic machinery industry.

**BCF/CCF**

**Design feature:**

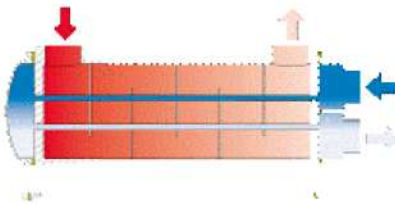
- Standardised and prefabricated in 212 sizes and various types
- Non-removable tube bundle available in a range of materials
- Removable cast iron bonnets available for 1, 2 or 4-pass design
- quick calculation - quick delivery

**Optional:**

- U-Version with U-tubes
- P-Version with removable bundle

**Application:**

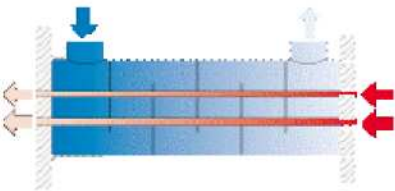
Cooling, heating and condensing of different media either by fluids or steam. Typically used in process engineering as well as in mechanical and plant engineering. Decades of proven reliability in cooling of lube oil and hydraulic oil, in the tool, plastic and compressor industry.

**SSCF**

**Design feature:**

- The standardised and pre-engineered counterpart of the BCF line, but made of stainless steel 1.4571(V4A).

**Application:**

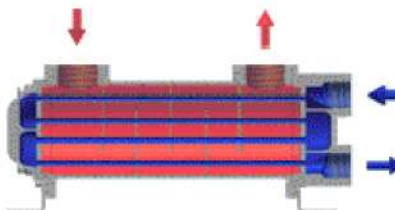
Ideally suited for the chemical, refining, pharmaceutical, and process industries where aggressive fluids are to be heated or cooled.

**CCFA**

**Design feature:**

- Non-removable tube bundle, 1-pass design
- Very high compressive strength
- Best price performance ratio

**Application:**

Especially suited to cool air and gas, especially very high pressures. To be used as intercooler or after cooler.

**UNIVEX-compact series  
(System Längerer & Reich)**

**Design feature:**

- High specific heat dissipation due to the compact tube bundle and 4-pass cooling water flow
- Removable tube bundle with tubes made of CuNi10Fe, bonnets bronze, seawater resistant
- Regular supply of mounting positions
- Short delivery times, attractive price performance ratio

**Application:**

Cooling of: hydraulic oils and lube oils, converter oils, cutting oils, cooling oils, hydraulic liquids, water/glycol. Low-cost coolants that can be used are: service water and seawater.