



ONDA

Advanced  
Heat Transfer  
Solutions

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# FLT flooded evaporators

**AIR** HEAT EXCHANGERS **BRAZED PLATE** HEAT EXCHANGERS **SHELL & TUBE** HEAT EXCHANGERS



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# FLT FLOODED EVAPORATOR



With a flooded evaporator, a pool of refrigerant is maintained in the shell, submerging the tubes to a set level. As the refrigeration load varies, a refrigerant-level control acts to maintain the liquid level in the shell. The refrigerant pool in the shell behaves as a flywheel, allowing the controls of the flooded evaporator to successfully track the varying load of a batch process.

More than 7 years of specific experience and continue laboratory tests are combined in the new ONDA FLT flooded evaporators, specifically design for high efficiency water chillers where oil-free compressors are used.

## Reached targets are:

- minimized the energy consumption in process cooling, air-conditioning and refrigeration applications
- minimized size and reduced refrigerant charge
- maximized performance in terms of approach (difference between water leaving temperature and evaporation temperature); it can be really reduced up to 1.0 K, reducing the compressor size.

## FLT design characteristics:

- High efficiency exchange tubes for refrigerant boiling performance
- Optimal refrigerant distribution and tube geometry, in order to avoid preferential flows
- Optimal separation system included in the vessel, ensuring that just vapour refrigerant is reaching the compressors
- Water-side low pressure drop
- Accessibility to evaporator tubes for mechanical cleaning on a scheduled maintenance program or as required
- Full optional range

The FLT serie includes 26 evaporator models from 160 kW (45 TR) to 1330 kW (380 TR) nominal cooling capacity in the single or double refrigerant circuit version.

Higher capacity and special models are available on request.

Design pressure (refrigerant - shell side): 18 bar (261 psi)

Design pressure (water - tube side): 10 bar (145 psi)

Pressure vessel approval available: CE (P.E.D.), ASME, GOST

## Standard materials:

Exchanger tubes: copper

All other components: carbon steel

The possibility (options) of copper-nickel, carbon steels, stainless steels and titanium allows the cooling of many process fluids types.

## FLT standard equipment:

- Refrigerant sight glass (each circuit)
- Flexible joint water connections

## FLT optional accessories:

- 19 mm (3/4") expanded reticular polyethylene foam for thermal insulation
- Additional connection for liquid level management system
- Welded feet and supports for compressor(s)
- Flanged water connections