



FLS  
FLT

ADVANCED HEAT EXCHANGERS

FLOODED EVAPORATORS

# FLS & FLT flooded evaporator



In the flooded evaporators, a pool of refrigerant in the shell is 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 control of the flooded evaporator to successfully track the varying load of a batch process.

More than 10 years of specific experience and continue laboratory tests are combined in the ONDA FLS and FLT flooded evaporators.

Now we are proud to declare that ONDA FLS and FLT evaporators are **the best choice present in the market.**

Designed for high efficiency water chillers in combination with oil-free compressors, FLS and FLT can guarantee an optimal performance even in presence of screw compressors.

## APPLICATION BENEFITS

- Low energy consumption in process cooling, air-conditioning and refrigeration applications.
- Minimal refrigerant charge.
- Maximum performance at minimum temperature approach.
- The minimum specific cost in terms of €/kW for medium and high power.

## FEATURES

- High efficiency exchanging tubes for refrigerant boiling performance.
- Optimal refrigerant distribution and tube geometry, avoiding preferential flow.
- Specific ONDA demister integrated in the vessel to guarantee the total absence of liquid droplets in compressor suction pipe.
- Water side low pressure drop.
- Accessibility to evaporator tubes for mechanical cleaning.
- Oil separator (vertical or horizontal) and oil jet pump in case of screw compressors.

The FLS and FLT series includes models up to 3000 kW (853 RT) of nominal cooling capacity in single or double refrigerant circuit version, 2 or 4 water side passes.

Higher capacity and special models are available on request.

The differences between FLS and FLT are in the type of exchanging tubes, and in the tubes lengths.

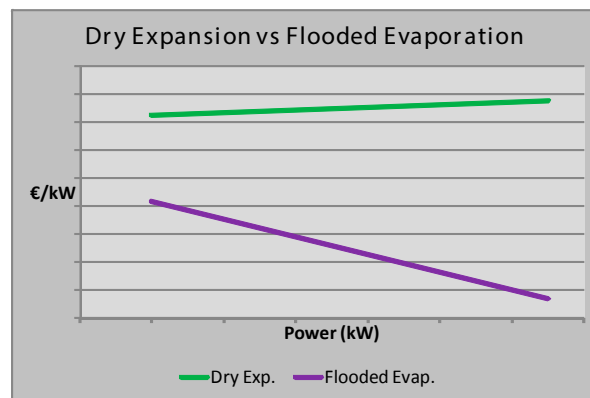
As general information, FLS are providing the best performance, but with an higher water pressure drop, while FLT are designed to keep a low level of water pressure drop.

From a constructive point of view, and for the supplied accessories, the two series are identical.

Through Onda's selection software and the support of the technical department, each customer can find the most accurate and economical solution for his requirements.

FLS and FLT are available both according to CE, and to ASME approval.

Approval	PS (bar)		TS (°C)	Tmin (°C)
	Tubes Side Water Side	Shell Side Refrigerant Side		
CE	10 (16)	20	90	-10
ASME	Ask ONDA Commercial Department			



## MATERIALS

Standard materials are:

- Copper for exchanging tubes
- Carbon steel for the other components

Copper-Nickel or carbon steel exchanging tubes are also available for special applications

## STANDARD EQUIPMENT

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

## ACCESSORIES ON REQUEST

- 19 mm (3/4") expanded reticular polyethylene foam for thermal insulation
- Additional connections for liquid level control
- Additional chamber (dome) for liquid level control
- Welded supports for compressors
- Square tube-sheets
- Flanged water connections
- Additional couplings and valves

## ONDA S.p.A.

onda@onda-it.com  
www.onda-it.com

### PLANT 1 Headquarters

Via Dante Alighieri, 27B  
36065 Mussolente (VI)  
Italy  
t. +39 0424 87633  
f. +39 0424 578667

### PLANT 2

Via L. Baden Powell, 11  
36045 Lonigo (VI)  
Italy  
t. +39 0444 720720  
f. +39 0444 720721

### PLANT 3

Via Vittoria, 158A  
36065 Mussolente (VI)  
Italy  
t. +39 0424 87506  
f. +39 0424 87744

### Onda France S.A.R.L.

320, Avenue Berthelot  
69008 Lyon France  
t. +33 472784606  
m. +33 608341000  
www.onda-fr.com  
onda@onda-fr.com

### Onda USA L.L.C.

600 London Rd  
Delaware, OH 43015  
t. +1 614 321 3342  
f. +1 614 279 3668  
www.onda-us.com  
onda@onda-us.com

### Onda RU

Mayakovskogo Street, 18a,  
Khimki,  
Moscow Region,  
Russia 141400  
t. +7 495 971 88 53  
m. +7 916 676 16 54  
www.onda-it.com  
info@onda-ru.com

### ONDA (Nanjing)

Heat Exchanger Trading Co., Ltd  
Nanjing Yuhuatai  
District Yulan Rd. N. 99  
Mingfa Commercial Plaza  
Bld. 1 Office  
2498 P.R.China  
t. +8617712884246  
onda@onda-cn.com