

# T-REX

→ **TRansformer heat EXchangers**

Our **expertise** at your service

For sustainable exchanges ...

# → Transformer heat exchangers

Critical part of the electrical sub-station, the transformer oil cooler insures the integrity and increases the efficiency of the transformer unit. To meet these two requirements, Thermofin's design and construction is always conducted with the following key guidelines:

A highly specialized thermal design optimizing transformer oil cooling.

Irreproachable cleanliness of the cooler, to insure the integrity of the transformer is never at risk of being compromised.

Heavy duty construction for reliable extended life limiting maintenance and shut down requirements.

Efficiency

## → Thermofin's know-how

After many years of research and development and thanks to its great expertise in applied heat transfer, Thermofin has developed an aluminum extruded fin tube of great efficiency for transformer coolers. This tube not only has integral aluminum extruded fins on its external surface but also features, on its internal surface, integral turbulator.

This particular geometry enables Thermofin's special tube to break the negative effect of boundary layer created by laminar flow of the oil, therefore increasing the heat transfer of the air in contact with the external surface of the tube. This new technology removes the need for extra free moving parts such as turbulators inside the tubes, preventing the potential damages that may be caused by metallic particles formed by the friction or vibration of these moving parts.



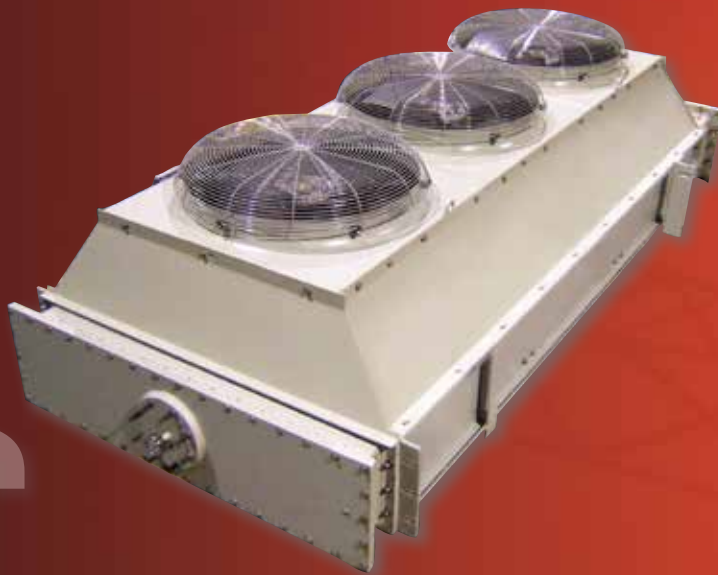
Aluminum extruded fin tubes with turbulators



Installation of a T-REX



## ➔ Different configurations



### OFAF type

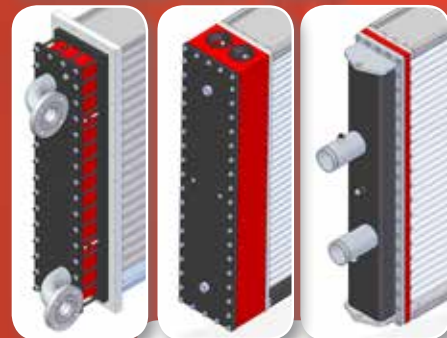
#### Oil Forced-Air Forced

This is the most commonly used type of heat exchanger. It offers all the advantages of Thermofin's famous removable cover plate line of heat exchangers, allowing easy internal access to the surface of the tubes. Industrial fans and electric motors for reliability make these units a durable part of your equipment.

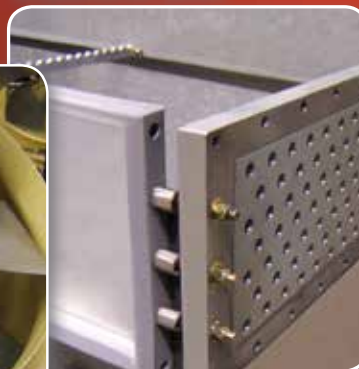
**Robust fan guards in conformance with OSHA standards**



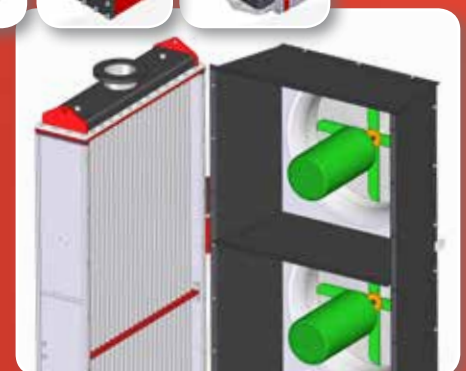
**Removable cover plates**



**Expansion joint**



**Industrial fan**



**Easy access to the fan (option)**

# OFWF type

## Oil Forced-Water Forced

More common on industrial units, this type of heat exchanger is constructed as a shell and tube unit. It permits the reduction in size of the active oil cooling part by using water as the cooling medium. Various waterbox (or head) designs are available allowing access to the tubes. Leak Detection options are also available.



# ONWF type

## Oil Natural-Water Forced

The use of natural convection heat exchangers requires greater heat transfer knowledge, and Thermofin's empirical approach, custom design, and manufacturing expertise has allowed for the development of highly efficient products for this application.



# Range



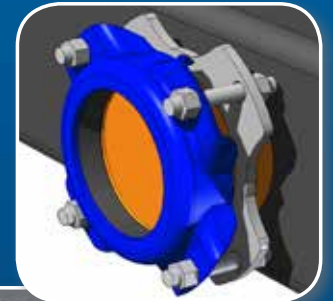


# Services and options

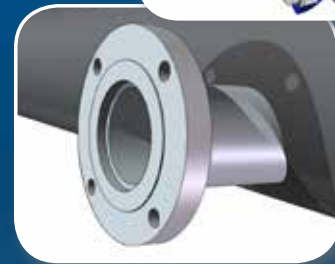
To facilitate the installation of Thermofin coolers on your transformers, Thermofin offers a wide range of services and options for your equipments :

## Other options

- Various types of connections: B16.5 flanges, "Dresser" couplings, NPT, Victaulic connections, ...
- Removable fans for easy access to electric motors and heat exchanger fin surfaces.
- Thermal overload protection for electric motors.
- Robust fan guards that are also in conformance with OSHA standards.
- Numerous material combinations are available to meet the needs of your application (copper fins, stainless steel tubeplates, ...).
- Various surface coatings may be applied depending on the site's environment and the specific process requirements :
  - External fin and unit protection by "Heresite" type immersion
  - Special painting system as per supplied specifications
  - Hot dip galvanization (ASTM 123 or other specified requirements)



"Dresser" coupling



B16.5 flange



"Heresite" type coating

## Other services

- Cleaning and remanufacturing with upgrades of existing coolers and heat exchanger units.
- Replacement of existing equipment with improved identical by reverse engineering.
- Increasing available cooling duty of transformers.
- Transformer pump reconditioning, refurbishing and remanufacturing.
- Transformer radiators available on demand.



Cleanlines



# The heat exchange specialist

# Thermofin



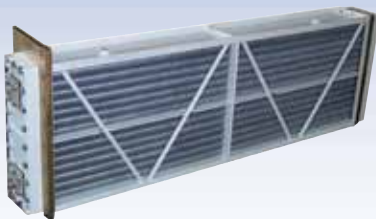
Since 1993, Thermofin has designed, manufactured and marketed a large range of high quality exchangers for industrial processes. Over the years, Thermofin has become one of North America's leading name in thermal exchange. Through its expertise and its dedicated workforce, Thermofin will always offer you the right exchanger: the one for sustainable exchanges ...



→ EOLIA :  
Industrial air cooler



→ ITEX :  
Gasketed plate heat exchangers



→ ELECTRA :  
Industrial heat exchanger



→ POWERFIN :  
Extruded aluminum finned tubes

47, Marie-Victorin Blvd. Candiac  
Quebec, Canada  
J5R 1B6  
Tel.: +1 450-444-4405  
Fax: +1 450-444-7745  
E-mail: [thermofin@thermofin.net](mailto:thermofin@thermofin.net)  
[www.thermofin.net](http://www.thermofin.net)



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