

TRANSFORMER COOLING SOLUTIONS



OFAF transformer coolers for extreme conditions

Our oil forced/air forced (OFAF) coolers help control the temperature of insulating oil. They are used in large transformers and other large, high voltage equipment across the power generation, transmission and distribution industries. We typically supply to transformer manufacturers and maintenance companies. Our OFAF coolers are customised to meet specific operating and environmental requirements.

Key benefits of OFAF coolers

Improved performance – Effective cooling helps transformers operate at peak efficiency. While ensuring long life and reliability, they also require less maintenance. Our highly efficient fin block and fan design ensures low sound levels and energy consumption.

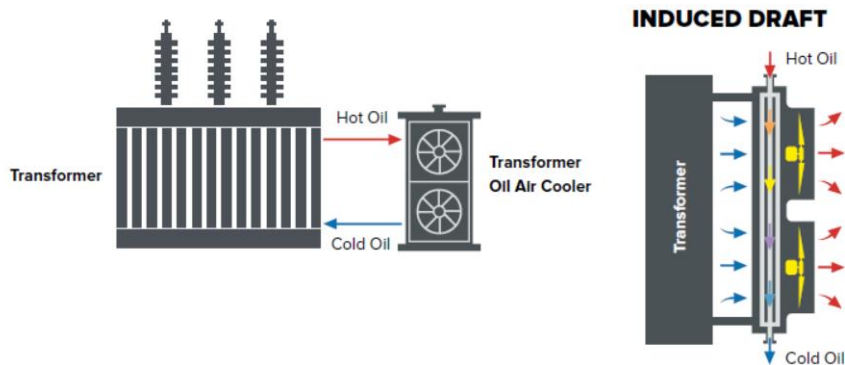


Rugged and robust – We design our OFAF transformer coolers to withstand vibration shock, seismic forces and thermal movement. Aluminium alloys are used as the standard for the tube, fin and tubeplate to minimise corrosion. We provide custom options as required. Components supporting the fans and cooler elements are protected to C3 as standard, increased to C5-M(H) when conditions dictate.

Flexible – The modular construction of our OFAF cooler range means the products fit all oil filled transformers. The highly configurable design can also meet all thermal requirements. Different materials, finishes and coatings are used to suit the most stringent operating conditions and to offer long service life.

What is OFAF?

OFAF stands for oil forced/air forced. It describes how an oil type transformer is cooled by forced movement of both air and oil to aid in heat dissipation. It's a compact, highly effective cooling method for a range of equipment.



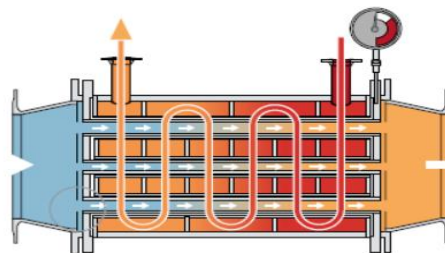
How oil forced/air forced coolers work

Our OFAF transformer coolers operate at ambient temperatures of $-40.$ to -25°C to $+40.$ to $+60^{\circ}\text{C}$. Orders are taken with optional -45°C and $+80^{\circ}\text{C}$ limits. Transformer oil coolers produced with ARES TRANSFORMER COOLING Technology are used to keep a huge power plant cool in desert conditions.

The cooling element is made of materials suitable for the local environment and is designed to provide a high level of heat transfer. It is housed in a robust, long-lasting frame for protection against vibration and thermal shock. We work with you to design an OFAF transformer cooler that fits your requirements.

The chillers can be custom designed and manufactured in lengths with 1 to 4 fan baffles. Typical configurations include 1, 3 or 5 pass arrangements 4 to 8 rows deep. A wide variety of fans and motors are available to meet local electrical requirements, specified noise levels and ingress protection.

The fan structure is an external motor rotor with better balanced, die-cast aluminum low noise blades to G6.3 standards or as required. The ingress protection is IP54, with optional IP66, and the bearing life is expected to be more than 30,000 hours.



Additional options and accessories include:

- Angled fans for efficient evacuation of hot air in confined spaces
- Hinged/lift-off fans for easy coil cleaning and replacement
- An inlet grid to prevent large particulates such as vegetation choking the element inlet face
- Oil circulation pumps
- Enhanced paint finishes
- Mating flanges and gaskets
- Customised packing for shipment
- According to the customer's request, the cooler is made using stainless or copper pipes.

