

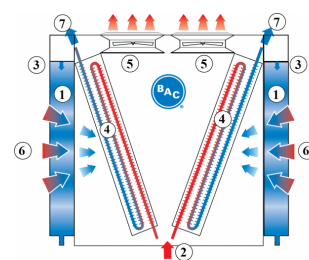
# Principle of Operation

## Adiabatic cooling

### Principle of Operation

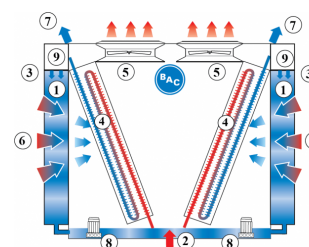
#### Once through

The TRF is a V-shaped TrilliumSeries adiabatic cooler equipped with **adiabatic pre-coolers (1)** that cool the warm **process fluid (2)** by sensible heat transfer. **Water flows (3)** evenly over evaporative cooling pads located in front of the **dry finned coil (4)**. At the same time **axial (5) fans** draw **air (6)** through the pads where a portion of the water evaporates and cools down the saturated air. This increases the cooling capacity of the incoming air for cooling the process **fluid (7)** inside the coil.



#### Recirculating

The TRF is a TrilliumSeries Adiabatic Cooler equipped with **adiabatic pre-coolers (1)** that cool the warm **process fluid (2)** by sensible heat transfer. **Water flows (3)** evenly over evaporative cooling pads located in front of the **dry finned coil (4)**. With the **make up (9)** situated on top of the pads, adiabatic precooling of the air can also be guaranteed when the pump is not in operation. **Axial (5) fans** draw **air (6)** through the pads where a portion of the water evaporates and cools down the saturated air. This increases the cooling capacity of the incoming air for cooling the process **fluid (7)** inside the coil. The **recirculation system (8)** can further reduce the total water consumption.



**Want to use the TrilliumSeries Adiabatic Cooler - Model TRF to cool your process fluid?** Contact your local [BAC representative](https://www.baltimoreaircoil.eu/en/products/trf-principle-operation) for more information.

