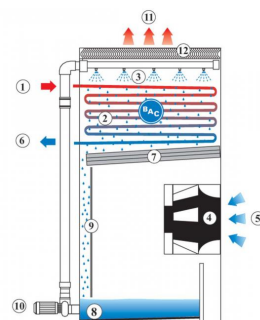


## Closed circuit cooling towers

### Principle of operation

**Warm process fluid (1)** circulates through an **heat exchanger coil (2)**, which is continuously wetted by the **spray system (3)** installed at the top of the closed circuit cooler. At the same time the **direct driven radial fans (4)**, located at the bottom of the unit, blow ambient **air (5)** upwards through the cooler.

During operation, heat is transferred from the process fluid to the spray water, and then to the atmosphere as a portion of the water that evaporates. The cooled process fluid then **exits the unit (6)**. The remaining spray water that falls on the **sloping channels (7)** continuously flows into the **sloping sump (8)**, where the water is collected. The **double blank-off wall (9)** guides the spray water into the collection basin, creating a turbulence flow. The **spray water pump (10)** recirculates the water up to the water spray system. The warm saturated **air (11)** leaves the cooler through the drift **eliminators (12)**, which remove water droplets from the air.



**Interested in the Polairis™ closed circuit cooler?** Contact your local [BAC representative](#) for more information.