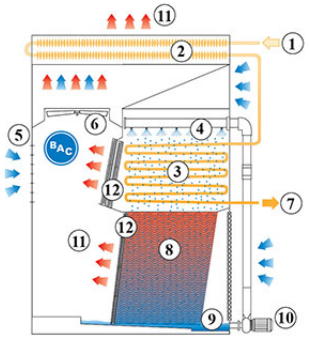
# Principle of operation

## Refrigerant condensers

## Principle of operation

### Operation 1




The **vapour (1)** passes first through the **dry finned coil (2)** and then enters the **prime surface coil (3)**, which is wetted by a **spray system (4)**. When the **dampers (5)** are **closed** an **axial fan (6)** draws air over the prime surface coil in parallel with the water spray flow. The evaporation process condenses the vapour into **liquid (7)**. The spray water falls onto a **fill pack (8)** where it is cooled before falling into the sloping **water basin (9)** or sump. The **spray pump (10)** recirculates the cooled water to the spray system. The **warm saturated air (11)** leaves the tower through the **drift eliminators (12)** over the dry finned coil where it picks up additional sensible heat.

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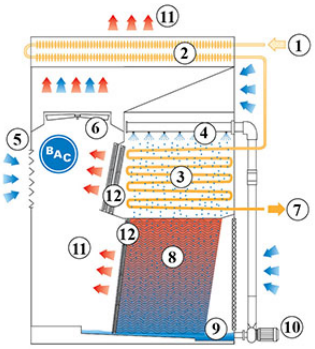
For more up to date information, visit: https://www.baltimoreaircoil.eu/en/products/HXC-principle-of-operation

## Operation 2




If the ambient temperature is below the condensing temperature, the **dampers** will modulate **open**. The air flow increases and air distribution shifts, so that less air is drawn over the prime surface coil and fill pack. This enhances the sensible heat transfer and further reduces the water consumption.

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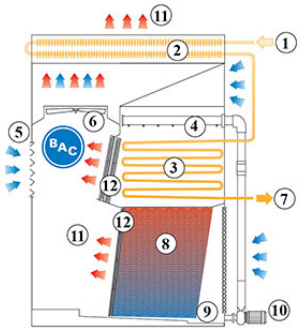
## Operation 3




Complete **dry operation** is possible when **switching off the spray pump**.

**Want to use the HXC condenser?** Contact your local BAC representative for more information.

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