# Atmospheric Water Generation (AWG)

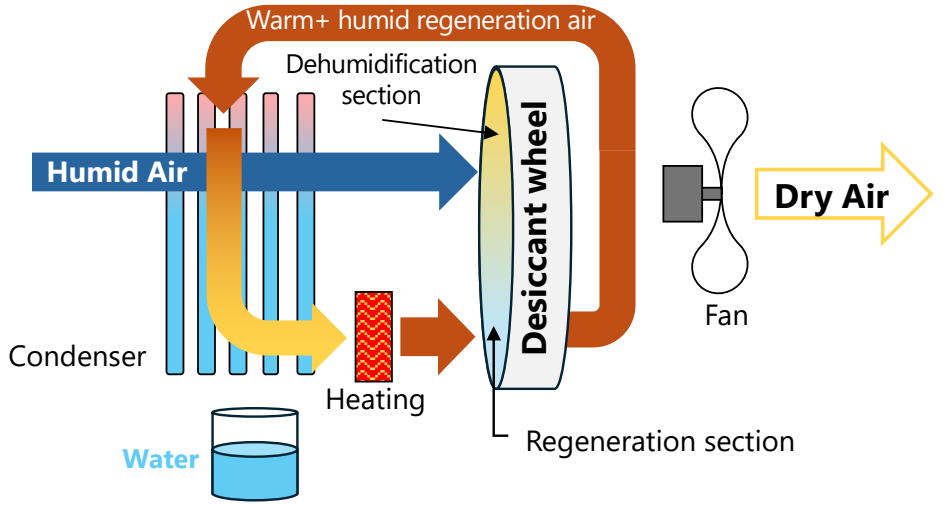
## Process Description

**AWG** refers to technologies that extract water directly from the moisture present in ambient air. The process is based on dehumidification, where water vapor is removed from air and condensed into liquid water.

AWG systems can produce high-quality water directly from atmospheric moisture without relying on surface water, groundwater, or seawater sources, making them suitable for decentralized, remote, and off-grid water supply applications. Air is typically prefiltered as needed to remove particulates and improve water quality and system performance. Two primary approaches are used for AWG:

- Desiccant-based using hygroscopic materials to adsorb water vapor from air, followed by regeneration through heating to release the captured moisture for condensation and collection.
- Refrigerant-based operating similarly to air conditioners, cooling incoming air below its dew point so that water vapor condenses on cold surfaces and is collected as liquid water.

### Process Schematic




For further information, please contact us at email: GWSC@conocophillips.com