

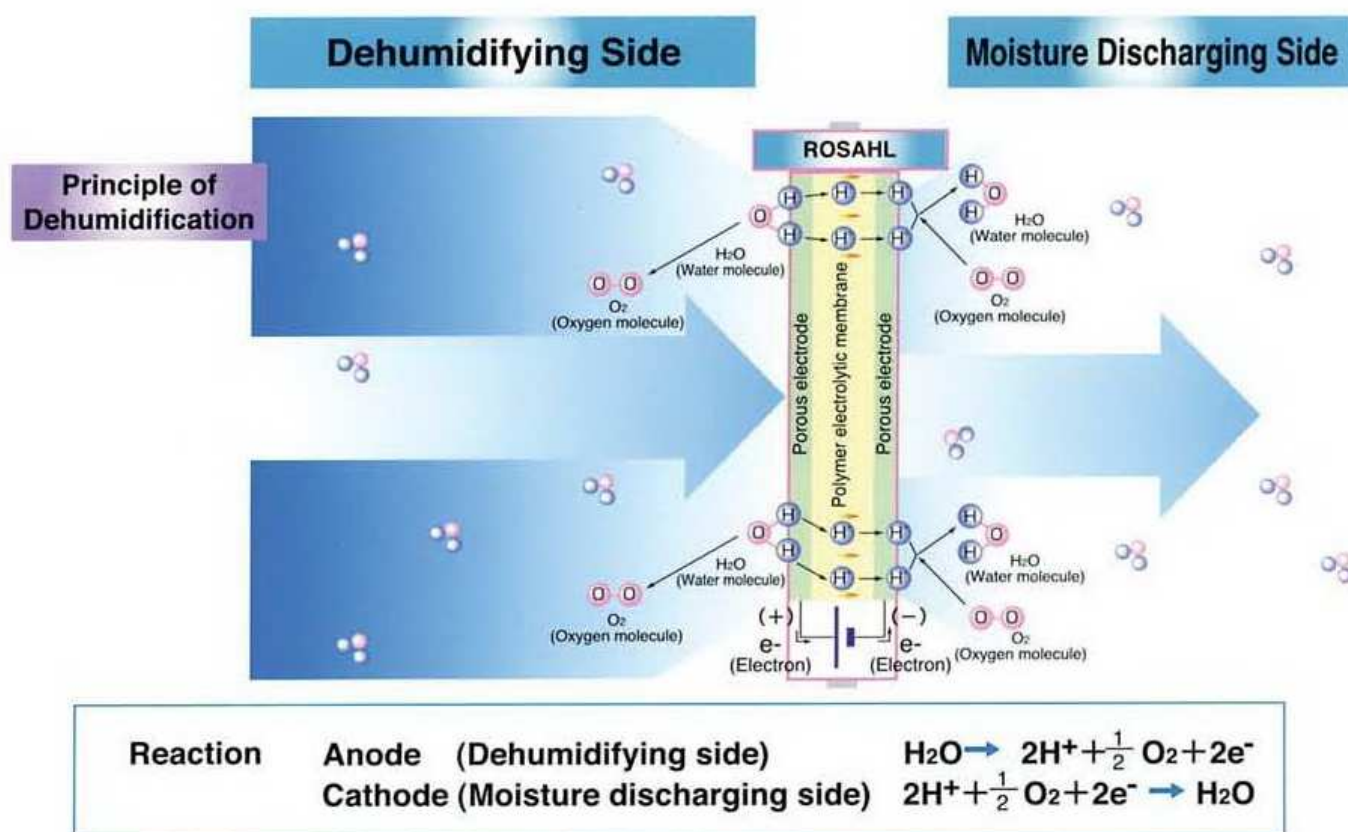
## How Rosahl works

ROSAHL is a unique dehumidifier that works using a solid state polymer ionic membrane (SPE) to remove moisture from the air in enclosures by electrolysis when a 3V dc voltage is applied. It provides clean moisture extraction and low cost, maintenance free performance.

Rosahl works by electrolysis. The SPE consists of a proton-conductive solid polymer electrolyte and porous electrodes with a catalytic layer composed of noble metal particles. When a 3 Volt D.C. voltage is applied to the porous electrode attached to the SPE the moisture on the anode side (dehumidifying side) dissociates into hydrogen ions (H<sup>+</sup>) and oxygen: the hydrogen ions migrate through the membrane to be discharged on the cathode (moisture discharging) side where they react with oxygen in the air, resulting in water vapour being discharged. Similarly, if the membrane is reversed a humidifying effect is achieved.

More on electrolysis of water [here](#)

### Diagram of how Rosahl works



Rosahl has no moving parts. This makes it economical to run, silent and vibration free in operation. Because no liquid water is involved in the process, it is maintenance free making it suitable for use in remote locations or where servicing is expensive. The membrane has a long operating life and has been tested to work from -10 to +50°C

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