

**FESTEL CAPITAL**

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## Sea Water Desalination

### Summary

Mass exchanger unit for the desalination of sea water.

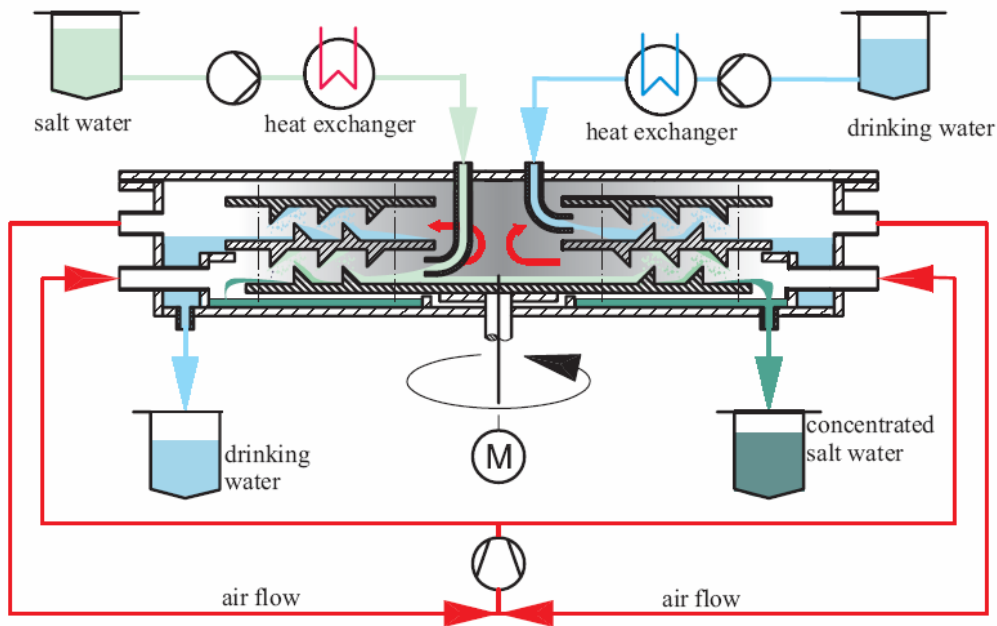
Industrial partners and financial investors are sought for various possible commercialisation options.

### Background

FESTEL CAPITAL is supporting a German university to commercialise an innovative sea water desalination technology.

### Description

One technology for sea water desalination is the application of a “mass exchanger machine”. The sea water that is to be processed is first preheated by passing a heat exchanger and then led on the lower disc of the “mass exchanger machine”. By rotation of the disc the heated salt water is transported outwards and at the circularly arranged steps it is dispersed several times. An air stream, which through contact with the counter flowing hot fluid, is heated and fills with water. The fresh water filled air stream on the upper disc of the machine flows outwards, parallel to the flow of the cooled fluid given off. The water contained in the air stream condensates at the phase interface of the cold fluid. The cold air stream leaves the upper part of the mass exchanger and is led into the lower part to again be charged with water from the hot salt water. Thus, the liquid (salt water at higher concentrations) which is enriched with drinking water and diluted accordingly is being collected in separate containers; if necessary the process can be repeated. The heat exchangers are operated in a closed housing to minimize their energy consumption.



Working principle of a "mass exchanger machine"

### Investment Opportunity

The aim of FESTEL CAPITAL is to commercialize this innovative (drinking) water processing technology. In the search for industrial partners and financial investors different commercialization options, such as founding a dedicated start-up company, out-licencing or a sale of all relevant intellectual property and know-how, are possible. Detailed information can be provided after the signing of a confidentiality agreement.

### Disclaimer

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### About FESTEL CAPITAL

FESTEL CAPITAL is an advisory and investment firm focusing on the commercialisation of technologies in the areas of energy, environment, health, materials and nutrition.

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