



## Industrialized modules for MED Desalination with polymer surfaces

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### ABSTRACT

This work presents a novel membrane distillation process developed and produced by memsys in Germany. memsys invented a Membrane Distillation device based on a multi effect desalination process under vacuum which leads to the technical name V-MEMD (vacuum-multi-effect-membrane-distillation). For the V-MEMD process a new type of plate and frame module has been designed, built and tested. An industrial production process for an integrated and highly automated module production has been developed. Serial production of the module is possible since early 2010. This results in the first modular thermal separation process which can be produced highly automated and therefore meets market requirements regarding quality and price.

*Keywords:* Desalination; Distillation; memsys; Thermal separation; Membrane distillation; Multiple effect; Energy recovery; Waste energy use; Polymer surface; Vacuum

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