

As the first company worldwide Spiraltec GmbH developed and manufactures spiral membrane modules in tube design for diffusion dialysis.

Optimized technology for the separation of metal salts from free acids.

How does diffusion dialysis work?

Diffusion dialysis as a membrane separation process is mainly used for recovery of acids and bases. Two counter-current flowing fluids are separated by a semipermeable membrane. In general mass transfer takes place from concentrated to diluted fluids reaching an equilibrium. By utilizing a membrane with selecting properties only specific components with relative low resistance can diffuse through the membrane into diluted solution while the resistance gradient to the remaining components increases.

The spiral membrane module

The spiral membrane module locks e.g. metal salts from used treatment baths out and regenerates free acid. As the first manufacturer, Spiraltec opted for the hollow fiber geometry and thus against the previous flat geometry. The customer benefits from this innovation economically and ecologically.

Benefits for bath care

Strong performance: Depending on the volumetric flow ratio, 90 to 95 percent of the free acid and more than 95 percent of the metal salts can be discharged in an anodizing process. (At corresponding volume flow ratio).

Simple operation: Diffusion dialysis is a continuous and stationary process. Due to the design a flexible configuration is possible.

Compact: Due to the high packing density, the module is particularly efficient. One module can regenerate up to 15 liters of bath solution per hour with a total volume of <20 liters.

Low investment & operating costs: The patented design allows us to secure noticeable cost advantages for our customers. The operating costs are reduced by saving wastewater and fresh acid.

Environmental benefits: Extremely high acid recovery. Significant reduction of waste water. The amount of waste water is 70 percent lower than other common processes.

How are the modules too acquire?

Single spiral membrane modules: Plant manufactures and end customers can use the spiral membrane module individually and install them independently in a system or, in the case of smaller baths, use them directly for bath cleaning.

Module of 10: For larger application fields, the module can be equipped individually. It contains the complete interconnection between the single spiral membrane modules.

Introducing Spiraltec

Spiraltec GmbH was founded in 2015 in Sachsenheim by the former CFO of Porsche AG, Holger P. Härter. The company has not only developed a new process technology for environmentally friendly diffusion dialysis, but can also offer it to customers in the form of a compact and efficient system technology. Spiraltec receives the latest generation of flat membrane films from its exclusive partner Fumatech BWT GmbH, Bietigheim-Bissingen. Spiraltec GmbH is a wholly owned subsidiary of HPH Beteiligungsgesellschaft, Sachsenheim.