



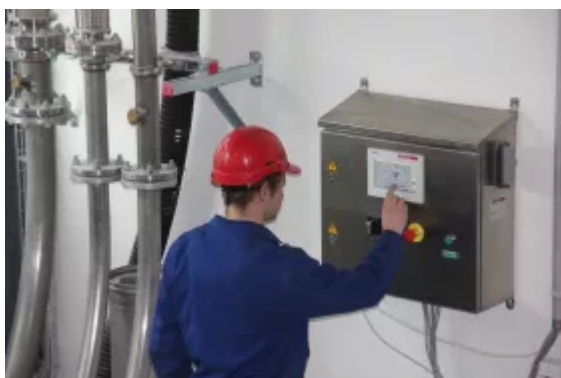
Product News

## **Gericke: Demixing free Conveying System for Ion Exchanger**

Edited by on 11. May 2023

*Regensdorf, Switzerland -*

Gericke has delivered a turnkey system including raw material handling. It includes feeding, mixing and conveying technologies required to produce water filters. One of the key requirements was to avoid demixing during the process. The correct selection and design of the pneumatic conveying system was essential to achieve this.



Pneumatic conveying trials in a Gericke test center (Picture: ©Gericke AG)

Water filter cartridges consist among others out of ion exchanger and activated carbon particles. To deliver the final mixed product to the filling lines of the filter cartridges several process steps must be passed. The system consisted out of

several Big Bag unloading stations for the raw materials, vacuum conveying systems to the gravimetric feeders, a continuous mixer and a dense phase pneumatic conveyor for the mixed product.

All involved powder processing technologies were initially tested in the Gericke test centre. Some of the products are humid and not free flowing. Successful trials reassured the customer among other insights that the continuous mixer Gericke GCM achieved the required mixing homogeneity and that the Gericke PulseFlow® PTA dense phase pneumatic conveying system conveyed the mixture without demixing.

With the Gericke PulseFlow® PTA dense phase pneumatic conveying system, a pressure vessel is used for transporting the powders as slowly moving product plugs powered by air velocities in the range of 4 - 12 m/s. This in contrast to lean phase pneumatic conveying systems which operate with air velocities usually much above 20 m/s.

In addition to the benefit of preventing demixing effects from transporting, the low velocity conveying system is also consuming only a minimal amount of pressurized gas which reduces the energy consumption and in addition prevents wear effects on the piping from the abrasive activated carbon particles.