



Product News

Herding® BETA - The future-oriented Sinter-Plate Filter for higher temperatures

Edited by on 9. Aug. 2023

Amberg, Germany -

With a high level of expertise in innovative filter systems and as a globally active system supplier, Herding Filtrertechnik has always stood for safe and forward-looking solutions in industrial filtration technology and is inseparably linked with the Herding® Sinter-Plate Filter. With the focus on permanent further development, the premise has always been to meet all requirements for the safest filtration technology and to set new standards again and again.

Herding BETA - The Sinter-Plate Filter for higher Temperatures

The newly developed filter element Herding BETA has the unique and well-proven properties of the classic Sinter-Plate Filter and is especially designed for the use at higher operating temperatures.

Proven Surface Filtration up to 160 °C



The Sinter-Plate Filter Herding BETA (Pictures: ©Herding GmbH Filtertechnik)

By definition, the classic Herding Sinter-Plate Filters with PE-based matrix base materials can be used at operating temperatures of up to 70 °C and, as a thermostabilized version, up to 100 °C. There was a gap above these temperatures, which is now covered by the newly developed and patented Herding BETA. The medium-temperature filter medium, which was introduced to the market two years ago, is based on a sintered matrix made of PPS and allows the use of all known features and advantages of the classic Sinter-Plate Filter up to a continuous operating temperature of 160 °C.

The filter medium is extremely resistant to chemical attack and hydrolysis, as well as in terms of pH stability in the range of 1 to 10. Absolutely constant operating conditions are now also possible for high operating temperatures up to 160 °C. The filter medium allows clean gas dust concentrations below 0.5 mg/Am³ even with very fine dusts; downstream units (e.g., heat exchangers) are thus effectively and permanently protected.

In addition, the new filter medium can be operated with reduced pre-cleaning pressure; substantially lower operating costs thus significantly increase energy efficiency of the filter system. Like the classic Sinter-Plate Filter the filter medium is absolutely fiber-free and thus ideal for contamination-free material recovery.

Proven in the Field in shortest Time



Filter system with built-in the Sinter-Plate Filter elements Herding® BETA.

The official market launch in the mid of 2021 was preceded by numerous laboratory and technical R & D tests, pilot-plant testings and real installations at customers' sites. For example, the first production plant for the extraction of a spray dryer was already commissioned in October 2018, after a bypass pilot plant had previously been operated for six months.

In the meantime, Herding BETA Sinter-Plate Filters have been installed in more than 70 filter systems. In addition to filter systems for the extraction of biomass combustion plants, numerous Herding filter systems can be found in the battery industry, which separate the finest and abrasive products. It can be summarized that even after three years continuous operation of the oldest filter system no decrease of filtration efficiency can be detected.

Furthermore, product filters for rotary kilns, fluidized-bed dryers, paddle dryers and high-temperature mills haven been realized, partly with food-grade design.

Among the more sophisticated filter systems are two round filters supplied last year which separate carbon black from almost pure hydrogen gas at a higher operating temperature. In addition to the challenge of implementing a jet-pulse cleaning of filter elements with the process gas, it was also possible to meet the high requirements for gas tightness of the system.

The characteristics of this new rigid-body filter medium meet the wishes and demands of the markets for a continuously operating filter medium with maximum filtration efficiency. This is also reflected in the fact that the newly developed Sinter-Plate Filter Herding® BETA has been awarded the Best of Industry Award 2022 in the process engineering category.

Pure Surface Filtration ever since

The basis of the technology for many decades has been consistently pure surface filtration, achieved with rigid-body filter media. The central component of the online cleaned filter systems is the proven Herding® Sinter-Plate Filter. In the surface pores of the rigid-body filter media, a coating with a formulation tailored to the application is embedded homogeneously and firmly as a filter-active layer. This combination of an exceptionally robust sintered structure and the coating embedded in it makes the Sinter-Plate Filters so effective.

The particle spectrum to be separated accumulates on the filter surface during the filtration process, and there is no affinity for irreversible embedding of fine particles in the filter base body. Consequently, there is no tendency to clog the filter medium. Even abrasive substances are reliably separated without damaging the homogeneously embedded filter-active layer. The coating remains intact over the entire life cycle and, according to experience, undamaged.

Moreover, the rigid sintered matrix is not subject to the risk of permanent flexing of other filter media and thus does not exhibit any filtration-related wear and tear. This results in the very long service life of Herding® Sinter-Plate Filters, which experience has shown to be in excess of 15 years. Constant pressure losses and

thus constant operating conditions ensure the necessary workplace safety throughout the entire life cycle.