

■ Process: Production/processing of sintered plastic parts



■ The Task

The process of producing plastic parts made of sintered thermoplastics involves melting polymer plastic granules in a sintering furnace. The drying process is followed by further processing of the sintered plastic formed parts in a processing booth which is enclosed on three sides (1) and is integrated in the production building. One side of the processing booth has to be open in order to allow for air circulation.

The fine plastic and cast resin particles generated during the milling and grinding stages of processing are extracted by standardized exhaust air extractor nozzles located at the various workstations.

The very large amounts of dust generated in the booth also require the installation of a central dust extractor unit (2) in order to keep the floor of the booth and the machining units free of dust and prevent the end product from getting contaminated.

The dust is channeled by these various extractor devices through precisely dimensioned ductwork outside the processing booth and into a dust collecting system (3) in the production building. For optimum air circulation the air flow in the processing booth has to be precisely defined. In order to achieve further savings on energy costs the clean air is partially recirculated to the processing booth.

■ The Solution

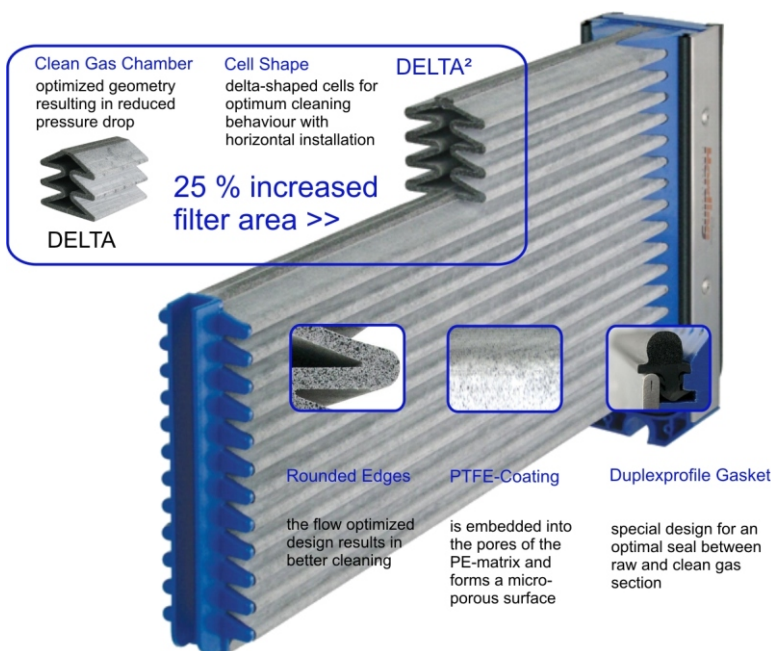
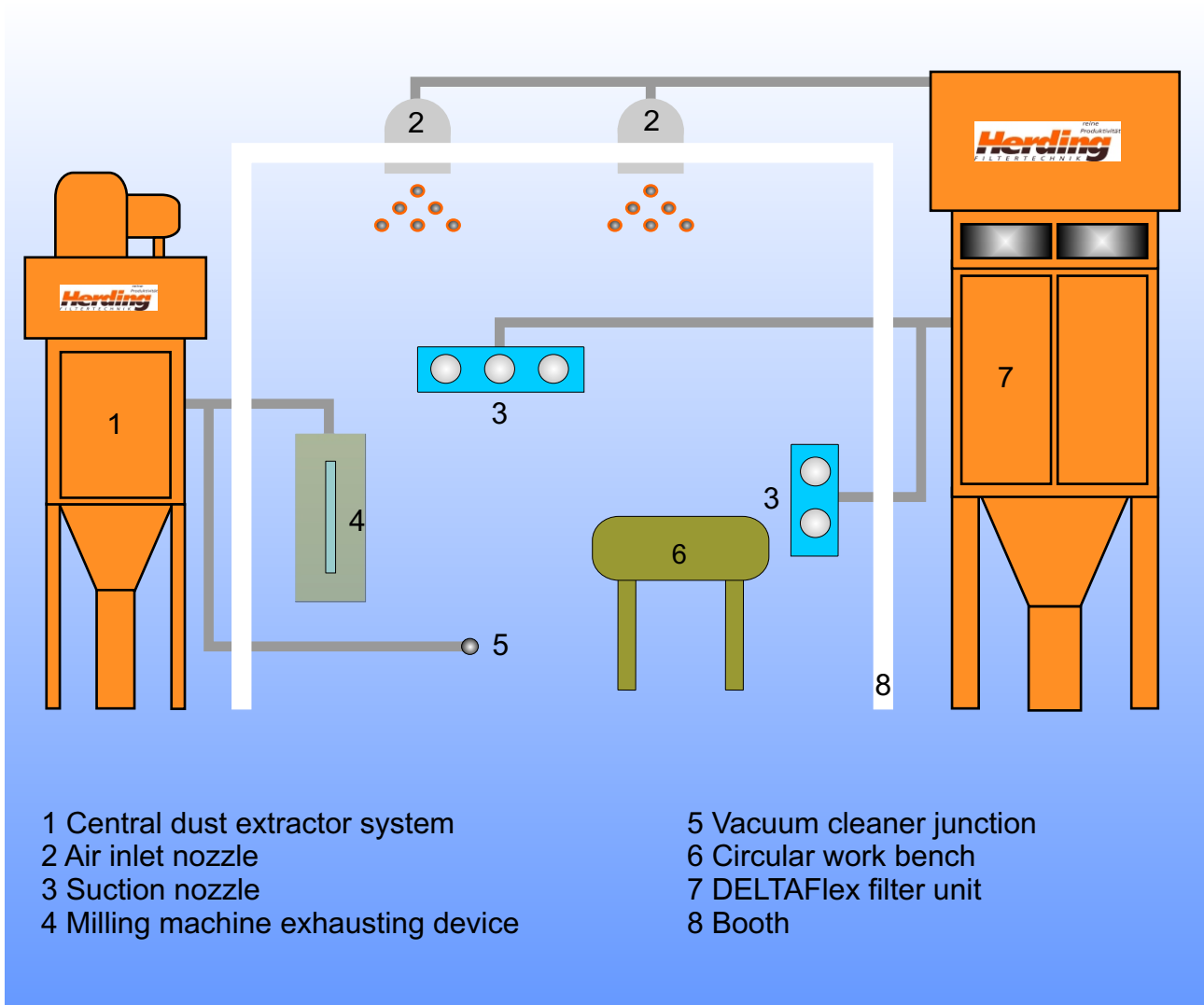
Herding® Filter Unit
DELTAflex 1500-28(32)/9 SB
(Air volume: 6,000 m³/h)

Herding® Central Dust Extractor System
DELTAComp 900-10/9 SB
(Air volume: 500 m³/h)

Advantages:

- ⇒ Reliable and cost-effective separation of fine dust with Herding® DELTA and DELTA² filter elements
- ⇒ Low extraction air volumes due to precisely dimensioned extractor nozzles for optimized dust trapping at the point of processing
- ⇒ Very long lasting filter medium as a result of consistent surface filtration
- ⇒ Consistent extraction air volume due to sequential cleaning of the Herding® DELTA and DELTA² filter elements during suction mode
- ⇒ Lower air volume requirements due to controlled air flow distribution and clean air recirculation
- ⇒ Controlled air distribution prevents dust from escaping from the booth

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Herding GmbH Filtertechnik
 August-Borsig-Str. 3
 92224 Amberg/Germany

Telefon: +49 (0) 9621 / 630-0
 Telefax: +49 (0) 9621 / 630-120
 info@herding.de
 www.herding.com