

DILO GROUP
ENGINEERING FOR NONWOVENS

2022

Best wishes for a successful new year



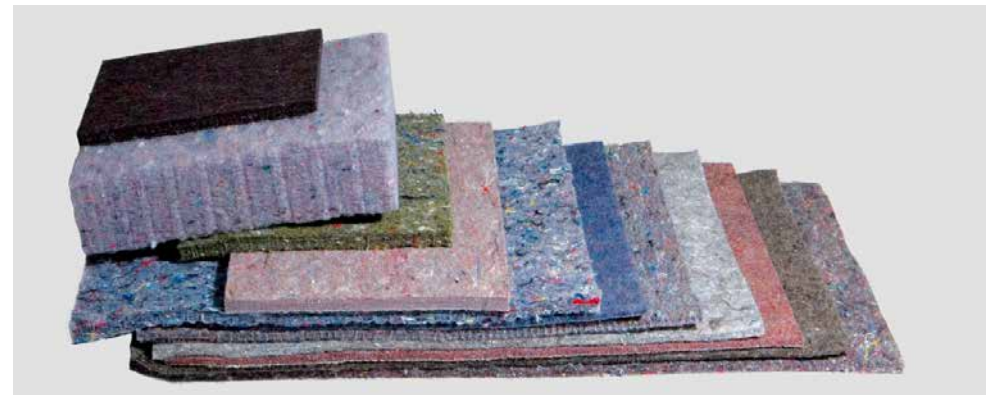
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Ladies and Gentlemen,

Almost unaffected by the pandemic and its consequences the economic situation of machine builders for the nonwovens industry recovered last year, starting in the 4th quarter of 2020 and leading to high incoming orders in late 2020 and during 2021. There are still adverse effects concerning travel and material supply with a strong rise in prices for metal, electronics and other components. DiloGroup has countered this development with a flexible response by looking for new ways of supply and suppliers. A lot has been achieved and on time deliveries have been made possible. However, due to missing components, there have also been delivery delays for some projects. The high workload as well as the difficult supply situation have led to longer delivery times. Despite these direct pandemic consequences of commodity availability and cash flow to the international economy, political topics for the reduction of CO₂ emissions and material consumption have gained importance. It is now essential not only to actively deal with energy savings, but also with the reduction of fibre material consumption in the textile industry and business.

Recycling and Circular Economy

The needlefelt industry has its origins in the processing of natural fibres, animal hairs and recycled textile fibres from reprocessed material and therefore has had a special understanding of this branch for decades. Typical fields of application are carpet underlays, upholstery in furniture, mattress and bedding industry as well as products for acoustic and heat insulation which are characterized by large volume and thickness at low fibre mass density. The so-called “grey wadding” made from torn textile residues is the typical product for insulation material and upholstery applications.

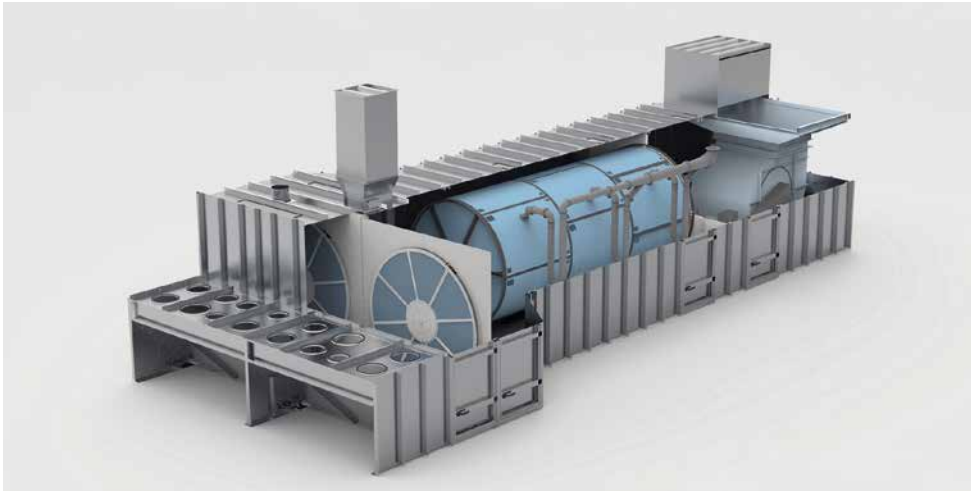


Carpet underlays, upholstery, mattress felts



Insulation material

A specially adapted machine design for fibre preparation, webforming and consolidation has laid the foundations for efficient production by using elaborate sealings, suction and blowing-out systems and is engineered by “AirSystems Engineering” of the DiloGroup.



DiloTemafa Suction and Filter Plant TFS



DiloSpinnbau MultiCard with special suction system



DiloMachines needleloom with suction system

The missing purity of fibres is one disadvantage in this kind of needlefelt production using torn textile residues. Another is the shortening of the fibre length due to the tearing process which leads to a “downcycling” and “downgrading” in fibre and product quality of the needlefelt. In discussion of recycling in the textile industry, it is important to distinguish between fibre retrieval from plastic residues which is highly developed in the processing of polyester fibres for geotextiles, and the recycling of residues from used clothes or from the production process.

The goal in the production of apparel fabrics should be to reach a purity of fibres to be processed in specially separated recycling plants or – if not reasonable or possible – to use natural fibres or viscose (as it is intended for hygiene textiles) to achieve compostability.

Controlled Tearing

Considering the loss of fibre length and quality during tearing, there is a demand for “controlled” tearing which means a tearing process conserving the staple length, for yarn spinning and the nonwovens industry. Longer fibres and blends of long and short staple fibres can easily be carded and cross-lapped, needled and/or fixed by thermofusion. The short fibre range is more suitable for aerodynamic webforming, also followed by needling or thermofusion or impregnation.

Complete nonwoven production lines for processing recycled fibres

In 2022 DiloGroup as general contractor will offer complete production lines in cooperation with specialists as partners for gentle tearing and aerodynamic webforming. The mechanical webforming by card/crosslapper installations is completed by aerodynamic webformers including all consolidation technologies like needling, thermobonding and impregnating. The end-of-line components are suitable for roll goods but also for stacking thick mats. In this global concept, complete systems designed by our AirSystems Engineering can be integrated for suction and dedusting the individual process stages.

We will keep you informed about these amendments to our portfolio and wish you for 2022 good health, fortune and success with your plans. I look forward to our continuing cooperation.



Johann Philipp Dilo

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