



Natural and  
Synthetic Fibers.

**Thermal  
processing  
technologies.**

# Thermal Processing for Fibers.

## **Gentle, efficient drying for highest quality.**



### **Through-air conveyor dryers**

For fiber and web applications that require gentle through-flow processing, Bühler's AeroDry conveyor dryer is the industry choice. It accommodates all products that require extended dwell time, in-line temperature profiles for heat setting thermal bonding and cooling. Conveyor bed perforations sized to optimize dryer performance for staple and tow.

For coated and nonpermeable (nanofiber based) webs, high velocity impingement air increases the heat and mass transfer rate to optimize drying and finishing efficiency. Impingement air jets across the entire internal area so that air delivery is consistently applied to the full web. A variety of nozzle types are available to suit product characteristics.



## Smart Engineering For Product Consistency.

Bühler's precision diffuser plates use a custom engineered gradient perforation, which distributes air evenly across the length and width of the entire conveyor, and this means better product consistency. Diffuser plates are also manufactured from catch-free stainless steel, and are easily removable for cleaning, to ensure hygienic drying conditions.



## Dryer Access for Clean, Safe Operation.

Full height perimeter access doors simplify cleaning, reducing downtime and risk of cross-contamination. Continuously welded insulated door panels prevent moisture from entering the panel while interior surfaces are sloped and smooth to allow product to flow without snagging or hold-up.



## Pre-Assembled Modules, Ready for Shipping.

Bühler conveyor dryers are designed for modular assembly, providing the benefit of reduced installation cost and start-up time. These units are fully assembled and tested at the factory prior to shipping. This allows the fastest possible installation with reduced field connection points.



## Multiple Tow Processing Line.

A multiple tow processing line increases overall plant capacity for continuous drying, cooling and conditioning. Bühler's designs accommodate precise lay down of 2-6 tow bands, for uniform processing.



## Global Presence, Local Support.

Twenty-four hour support draws from the expertise of more than 1,200 field engineers around the world. Bühler conducts field evaluations for drying processes, mechanical performance, and energy optimization. Parts, retrofits, and expansion support are also offered regardless of the dryer make or model.



## Processing Education and Training.

Bühler knows the drying step like no other. Specialized seminars help processors learn the theory of drying and how to apply it, to ensure product yield and profit margins. Attendees frequently discover opportunities to improve processing operations and maximize uptime and productivity.



## Product Development and Testing.

Bühler provides comprehensive testing capabilities to assist in new product development. Lab units provide pilot scale product testing in several configurations including dual impingement and through-air. In addition to testing at the Bühler drying lab, equipment can be leased and shipped for remote use.

Bühler engineering experts assist customers with staple, tow and web forms, for products like acetate, acrylic, cellulose, nylon, rayon, bleached cotton, polyester, polypropylene and pulpwood fiber.

# Built in sustainability for new and existing dryers.

## Products and services that support your sustainability initiatives.

As the world's leading provider of thermal process technologies, we believe we have a responsibility – and an opportunity – to impact our customers' sustainability initiatives. Drying is resource-intensive, but it allows us to develop tailored solutions to reduce CO<sub>2</sub>e emissions, greenhouse gases, energy costs, and waste. Knowing each process is unique, we use proven technologies to fit your specific application. To improve your organization's ecological footprint, we offer services to determine the best solutions and monitor your efforts to ensure your investments perform as expected and hit your targets. Your success is our goal.

### Heat recovery

Installing a heat recovery system enables the use of air to air and fluid loop heat exchangers on our conveyor dryers, a proven energy saving technology resulting in **20% energy use reduction**.

### Electrification and alternative fuels

Replacing burners or fluid-heated coils with electric heaters enables **full decarbonization**, as well as increased safety and hygiene.

### Heat pumps

Using a heat pump and coil loop to preheat make up air, along with pulling waste heat from the dryer exhaust, can provide **energy savings of up 30%**, and increase decarbonization by reducing dependency on other fuels.

### Analysis/ROI/Option Matrix

Provides you with an analysis of your needs and data around Capex, Opex, ROI and CO<sub>2</sub>e quantification based on your specific conditions, local energy costs, and availability of alternative energy sources.

### Digital Services

Bühler Insights is our central platform for connected products and services, optimizing your plant's efficiency by reducing energy consumption and waste.

### Energy and CO<sub>2</sub>e audits, and dryer evaluations

An audit of your dryer's current energy usage and recommendations for optimization or heat conversions. A process evaluation will ensure optimal parameters are used and identify opportunities for upgrades or improvements.



## **Bühler**

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