

MANUAL
MODE

SEMI-AUTO
MODE

**BTU
TECH**



**BTU
TECH**



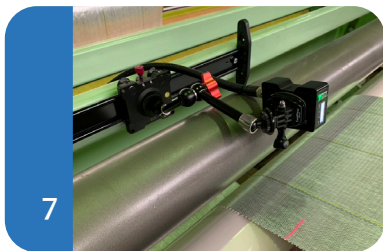
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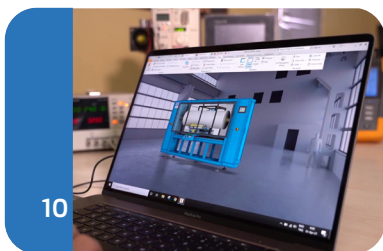
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ABOUT US

BTU-TECH was founded in 2020 as a start-up company for engineering, design and manufacturing of machines and technologies for variety of industries, such as textile and composites.

As the main shareholder and CEO of the company, Burçin Pak received investment for the company. In addition to his 20+ years in microelectronics, communication and machinery which includes many patents and awards for the developed technologies, together with its investors, the company has a total of 60 years of experience, covering industries such as heavy duty machinery & transport equipments, robotics, microelectronics, IOT, industrial textiles.

The company has a talented core team for analysis, engineering, design, quick prototyping and serial production. The inhouse capabilities and skills are 3D modelling, FEA, programming and industrial automation.

Based in Istanbul, Turkey, BTU-TECH is aiming to serve customers globally both by direct contact and via technical partners.



All-in-One Winder

BTU-TECH started as a winder developing company. The project was supported by TUBITAK (The Scientific and Technological Research Council of Turkey), and awarded as “The Best Industrial R&D Project” of 2020. The developed product which is called “ALL-IN-ONE” Winder, offers industry-first innovative features.

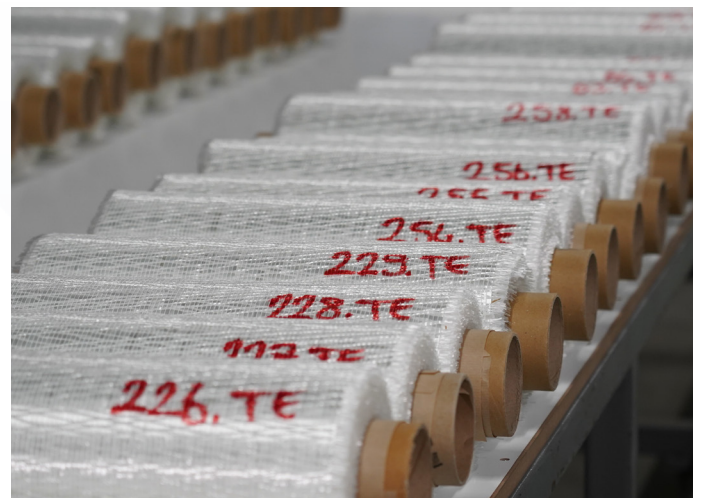
With the push of a button, it can operate in center, surface or combined winder modes with programmable lay-on roller pressure and pneumatic dancer and/or loadcell force feedback for accurate tension control.

Modular design allows to start with a surface only winder, and when needed, upgrade with a lay-on roller and a center winder to convert it to a combined winder. Besides the winding mechanism, also the width of the winder is upgradable from 50” to 100”, 130” or 150”.



Short Roll Winder

BTU-TECH developed a short roll winder by which jumbo rolls are wound into smaller rolls. Either fully or semi automated short roll winder offers tension control unwinding, edge tracking, fabric width adjustment, paper tube core loader, millimeter length accuracy winding with high speed and programmable tension control & lay-on roller, automatic doffing and rotary cross cutter. A production order which may include varying lengths of short rolls, can be loaded from an Excel file or any text based table.



Unwinders & Feeders



Unwinders

Unwinders are critical in operation where rolled fabrics are to be processed and rewinded again. Tension control, edge tracking, speed, loading times are the main design parameters. BTU-TECH has a wide range of unwinder solutions including torque or speed control, pneumatic dancer or loadcell tension control with accurate diameter and length measurement.



CNC Synchronized Conveyor Tables

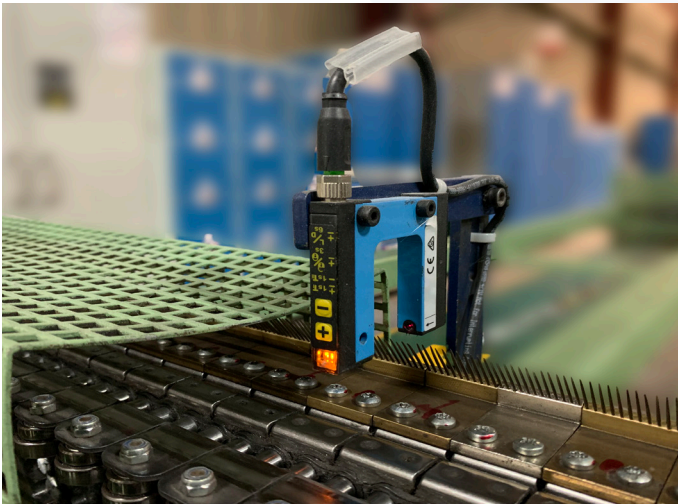
Hi-tech CNC cutters require precise tension controlled fabric feeding. Quick start/stop accelerations are a challenge for auto feeders. Loading/unloading times for the feeders, multiple layers of fabric feeding by cascading feeders are also critical. BTU-TECH, offers many solutions in this area according to the budget and operation.

CNC fabric cutters need an accurate speed synchronized conveyors for reliable fabric feeding. Often, speed control is achieved by an analog speed signal or a potentiometer which can not track sudden changes, such as fast acceleration and deceleration. This is when wrinkles and tension problems occur on the fabric, resulting in not fully cut fabric or broken CNC blade. BTU-TECH conveyor with servo motion control technology offers very precise speed tracking without a speed signal from the CNC software.



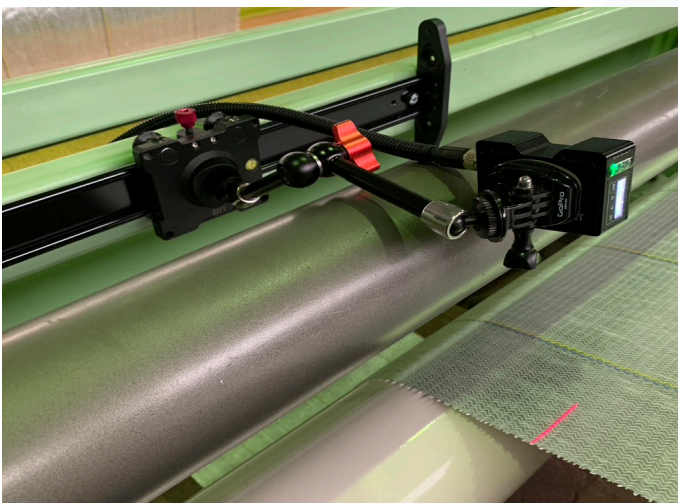
Roll Loader - Unloader

If safety chucks with air shaft are utilized, the loading/unloading times for the unwinders and feeders is a technical challenge for the industry. BTU-TECH developed an auto loader-unloader system which takes the air shaft and the roll, loads it to the safety chuck and unloads the empty shaft.



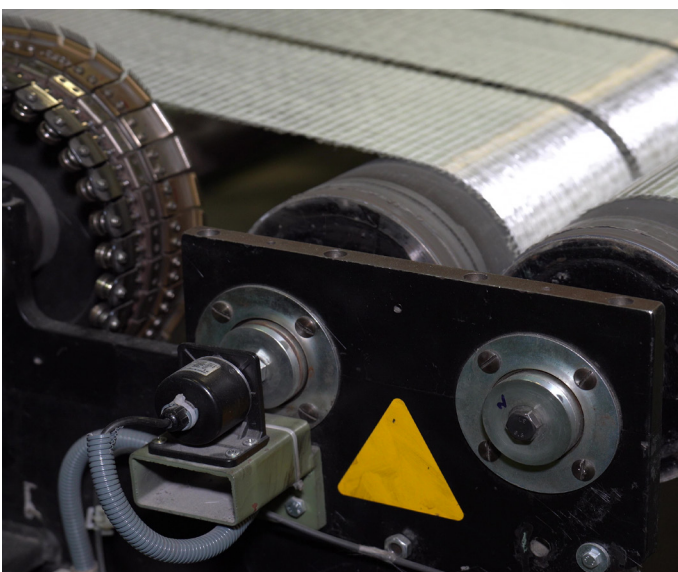
Conveyor Pin Sensor

The warp knitting machine conveyor (transport chain drive) pin breaks, if not detected, causes machine malfunction, fabric defects and loss of man-hours of work. BTU-TECH came up with a solution that is independent of pin spacing, size, material and conveyor speed.



Fabric Edge Sensors

BTU-TECH offers industrial IP68 laser or optical fabric edge sensors which can identify even glass (highly reflective) or carbon (highly emissive) fiber fabric edge and fringes with resolutions below millimeter and can easily operate with extreme fabric speeds.



Take-Up Systems

Take-up rollers adjust the fabric tension between the warp knitting machine and the batch device; the winder, thus ensuring the fabric and the roll quality. BTU-TECH take-up roller systems with synchronised operation to the warp knitting machine, offers adjustable tension control and precise start/stop acceleration profile.

Cutting & Slitting Systems



Online Slitting Systems

BTU-TECH manufactures knife rings in various sizes and diameters with reinforced materials.

BTU-TECH slitter shafts are fully automatic, synchronised to warp knitting machine with adjustable speed control and fabric edge tracking capability.



Roll Slitters

BTU-TECH offers fully automatic roll slitting (log cutting) system, designed for cutting fabric rolls into tapes of defined widths. BTU-TECH "Roll Slitter" allows a perfect cutting of the materials with programmable speed, tape size, width and material type, blade cooling & sharpening systems.





Cross Cutters

BTU-TECH "Cross Cutter" is a perfect add-on for various textile processes. Either integrated into an existing equipment or offered as a stand alone solution, the rotary blade can be placed after any fabric line and gets the job done. Adjustable travel and blade speed with a single motor, easily replacable blades and no fabric dust makes this type of blade the best solution for the task.



Chamfer Cutter

BTU-TECH "Chamfer Cutter" cut the fabric with an adjustable chamfer size. This style cut of reinforcement fabrics is critical for wind blade manufacturing. The chamfer cutter offers full automatic operation with blade travel, fabric hold lift, rotary blade and pneumatic tensioner.



Paper Core Tube Cutter

Paper cores are either 3" or 6" in diameter and length may go up to 4 meters. All suppliers offer solutions for different lengths and different diameters but not all. BTU-TECH "Paper Core Tube Cutter" is the solution for all these problems with a unique design, limitless in length and diameter.

PRODUCTS AND TECHNOLOGIES UNDER DEVELOPMENT

As along its customers' demands and challenges, BTU-TECH is working on a variety of projects which are soon expected to yield new products for BTU-TECH's product range. Those areas are:

Yarn breaks, yarn tensions, creel tensions, web-stitching lines, adhesive application lines, band-saws, pultrusion coilers.



BTU-TECH is not only a equipment and machine manufacturer but also, a custom solution partner for its customers. BTU-TECH offers services such as:



Software Automation

BTU-TECH has given automation support to many different industries, including technical and classical textile, wind blade manufacturing, heavy lifting cranes, IOT, drones and consumer marketing.

Hardware Upgrades

BTU-TECH supports its customers for hardware upgrades as well, including mechanical parts manufacturing, spare part replacement, electric panels, electronic upgrades, technology renovation.

R&D

All products delivered to the customer are a result of intensive R&D. In certain cases, BTU-TECH can catalyze an R&D program for the customer so that an access to national or international R&D fund can fasten the realization of a new product or process for the customer.

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