The recent textile market evolution is characterized by the use of more and more sophisticated raw materials whose costs push organizations to adopt control systems able to guarantee a high product quality by minimizing the yarn used in the textile process.

BTSR Yarn Feeding Line represents an innovative package of unique solutions on the market, in terms of functionality and performance, capable of controlling and adjusting with extreme accuracy the tension of yarn fed in the course of production processes.

BTSR Constant Tension Feeders represent the best guarantee for your quality and production efficiency goals.

BTSR is proud to introduce new generation Solutions, which represent a radical innovative step in yarn feeding processes evolution. Based on the new Full Digital Core & Motor Technology, BTSR Feeders feature no-limit performance dynamics, with an excellent motor control precision and a drastic reduction of energy consumption.

New innovative operational modes provide the possibility of feeding at both constant speed and constant tension; further enlarge the application possibilities in automated yarn processes.

BTSR Yarn Feeding Solutions represent a revolutionary step in Yarn Feeding concept.

BTSR Feeding Solutions are provided with unique advanced functions, covered by international Patents in order to protect BTSR Intellectual Property:

- Self-learning LFA Function
- Automatic Regulation of Stitches “Cammes”
- Reverse Function for Constant Tension Recovery
- Constant LFA Pre-Tension Function
- Automatic Identification Function
- AUTO OFFSET Function for automatic calibration of the feeder tension sensor
Features and Benefits
• Possibility to work with any type of yarn (including bare cotton, elastomers, technical), as well as mixed yarns (nylon/cotton, wool/cotton,....).
• High resolution and absolute detection accuracy (BTSR Patent).
• Absolute fl exibility - possibility of quickly changing the feeders’ parameters, even for single feeders.
• Easy and quick device identification (up to 200 feeders).
• Free from yarn torsion influence.
• ‘High Torque at Zero Speed’ feature - utmost control precision even at very low speed.
• Possibility to work with any type of yarn types (including bare cotton, elastomers, nylon, cotton, technical fibers, for manufacturing of traditional and technical articles (e.g. medical socks, body, etc.).

Advanced Production Analysis, Programming and Control
For an efficient centralized operation control of the machines, BTSR offers a SMART MATRIX FEEDER On-board Terminal for the most demanding ‘integrated control’ yarn feeding mode in a wide range of applications and technologies. Designed for knitting machines, it allows the programming of the feeding tension ranges, depending on the reference application process.

IN YARN FEEDING CONTROL
YARN FEEDING CONTROL LINE
• Constant yarn tension both when the machine speed changes and when feeding yarns at very high tension even at very low speed.
• Possibility to work with any type of yarns (including bare cotton, elastomers, nylon, cotton, technical fibers, for manufacturing of traditional and technical articles (e.g. medical socks, body, etc.).
• Possibility to ‘auto-learn’ and subsequently use of the installed feeders.
• Smart terminal also allows you to set up any number of independent feeding systems (e.g. 10 feeders with 10 different yarn types).
• Possibility of the programmem of ‘start/stop’ phases for a group of feders as masters and a group as slaves (constant tension/constant LFA) - possibility to select "MASTER-SLAVE" Double Modality Working System.
• Highly qualified and trained knitting operators will get beneficial support during the production process. (Smart Programming Function).

Main Advanced Functions
• Ultrafast medium and slow down control (up to 2500 mt/min) with full machine stop.
• Advanced Programming, Features - program the desired speed, acceleration and deceleration dynamics, very high resolution measurement capability (0.1 mm).
• Nutation display - single feeder working status, graphs, status bar, five different color indications, during the production process.
• Data collection and storage of any monitored data by each single feeder.
• SmartFeeder, possibility of directly adapting feeders’ parameters, without affecting the rest of the control system.

Features and Benefits
• The highest precision, reliability.
• The integration of an advanced control unit on every new and/or remanufactured yarn machinery (e.g. PDF, Yarn Preparing Processes).
• NEW ‘APPLICATIONS’ Function - possibility to view and directly select the desired application and setting parameters.
• NEW ‘TARGET FUNCTION’ - possibility to manually setup the relevant parameters.
• INC/DEC Function - possibility to either INCrease or DECrease gradually the yarn tension with predefined Delta values.
• METER COUNTER Function - Yarn waste reduction and breakage prevention.
• TOP Product Quality - Excellent package density and homogeneity/soft winding low tension capability.
• High Productivity - Yarn feeding speed up to 2500 mt/min.
• Derulé Yarn Reeling-Off System - yarn ‘twisting effect’ elimination (flat section yarns).
• Self-Adaptive Technology - run at constant tension yarn feeding (during ‘start/stop’ phases or strong yarn pattern formation).

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