

## MULTIAXIAL/EL-32

electronic double needle bed knitting machine for the production of articles for technical uses and multi-axial fabrics



## **TECHNICAL SPECIFICATIONS**

Gauge	10
Number of needle grooves on needle bed	320
Working width	32 inch
Number of guide bars	up to 8 with electronic control
Number of sinker bars	2
Distance between needle beds	1 - 20 mm
Needle type	latch needles
Stitch density on both needle beds	1-40 stitches/cm
Electrical supply mains	200 - 240 / 380 - 440 V, AC, 3-phase + neutral + earth
Main motor power	4 kW
Installed power	6,575 kVA
Noise emission	>70 dB (A)
Machine net weight	ca. 2400 kg



## **GENERAL FEATURES OF MULTIAXIAL/EL-32**

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COMEZ design 32-inch bed width machine with the following features:

- easy handling, while maintaining the solidity typical of all COMEZ machine models;
- narrower needle bed width allows for reduced article change times, providing cost savings that satisfy current market and production demands – which require fairly frequent article changes compared to production based on large numbers until a few years ago;
- especially compact design;
- motorized motion allows for exceptionally fluid movement;
- equipped with photoelectric barriers to protect operators from possible accidents;

In multi-axial fabrics, the fibers are arranged parallel to overlapping layers, oriented in various directions and then sewn with thin filaments (warp) to hold them together.

Multi-axial fabrics are often used in a product's inner layers to provide thickness, while distributing the load over the two dimensions of the biaxial, and keeping weight to a minimum. One great advantage derived from this construction is the fact that multi-axial fibers are aligned and uniformly tensioned between them, so they are ready to support the applied loads immediately coming under tension. The absence of major changes in the fiber path (generated by crossing the weft in the fabrics) improves fatigue behaviour, since the load is distributed over the fiber's entire length, without concentrating on the critical points at the nodes.

Types of usable fibers: Carbon, Glass and Aramid fiber. Electronically controlled yarn feeders and finished product draft allow for different stitch density (stitches/cm) with different weft and warp thread feeding.

**MULTIAXIAL/EL-32** is equipped with the DATA CON-TROL CONTROLLER, driving the new-generation actuators that provide excellent dynamic performance and high positioning accuracy. The CONTROLLER allows operators to manage all necessary functions, checking production data and carrying out long pattern repetitions, up to an almost unlimited number of lines for each pattern.

Pattern design and programming can be performed on the exclusive COMEZ DRAW 3 textile software or SYSTEM.WIN for Personal Computer. The pattern's data is transferred from PC to the DATA CONTROL CONTROLLER on the machine via a USB memory stick.



Image by Sächsisches Textilforschungsinstitut e.V. (STFI)



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