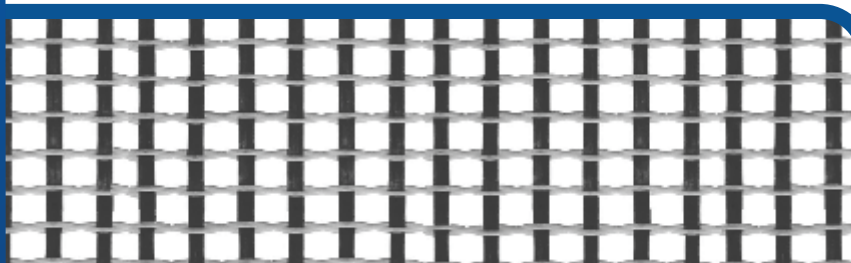


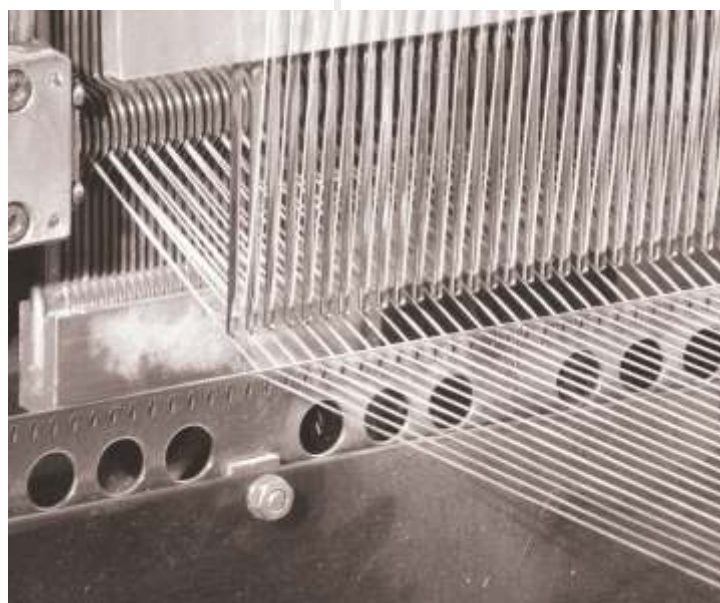


**WE CREATE  
YOUR MACHINES**



# CAM EL

**AIR-JET WEAVING MACHINE  
FOR THE PRODUCTION  
OF LENO FABRICS**



# CAM EL the best solution for the production of leno fabrics

The production of technical fabrics in full-width leno weave has become one of significantly and dynamically developing segments of the technical fabric production. However, it has its specific features. The leno weave fabrics can be produced on conventional weaving machines that are only adapted for the leno weave fabrics. VUTS offers a comprehensive solution to this problem and demonstrates a sophisticated and efficient single-purpose weaving machine for the production of the leno weave fabrics.

The air-jet weaving machine CAM EL for production of leno weave fabrics with the maximum width of 220 cm offers an „electronic cam“ concept that gave the name to the complete machine.



## FIRST HEALD-LESS SYSTEM FOR LENO WEAVING

Heald systems limit the speed of weaving to 200 – 250 picks per minute, which is far below the capabilities of current weaving machines. Another disadvantage is limited durability of heald systems.

This heald-less system for leno fabric weaving was the first one that allowed to overcome all the deficiencies of existing heald systems and to increase the speed of weaving machine more than twice.

## SLAY

The slay is made from C/E composite material and its weight has been extremely reduced. CAM EL introduces a principally new configuration of beat-up mechanism with a rectilinear, reciprocating motion of the weaving reed.

Traditional slay mounting on the machine frame by means of bearings has been substituted by an original system of leaf springs. The results of this solution are a significant reduction in slay stroke, lower energy consumption and reduced noise level and vibrations of the machine.





## ELECTRONIC CAM

A standard induction motor is not used in the CAM EL drive, but the machine is equipped with a direct drive using the synchronous servomotor with electronic control. An electronic cam is placed at the beginning of the drive and a crank mechanism is located on its shaft.

The combination of electronic cam, composite slay and force effect of leaf springs represents an effective and comprehensive solution for the air-jet weaving machine.

## QUALITY OF FABRIC

CAM EL offers an original solution not only for the machine drive, but also for leno fabric weaving the leno weave.

An original concept of two systems of warp threads that do not cross in the area between the half-shaft and back rest brings new qualitative viewpoints into the production of leno fabrics.

- Vertical movement - the shed is created by the movement of the first system of warp threads guided in the eyes of heald half-shaft.
- Horizontal movement – the second system of warp threads is guided into the needles and it creates the leno weave by interlacing. The needle bar is mounted just like the slay by leaf springs and its movement is derived from another electronic cam.



## TECHNICAL SPECIFICATION

### Machine drive

- Individual synchronous servomotors with an electronic control of angular speed in the mode of electronic cam;
- Automatic stopping in exact positions;
- Without brakes, clutch and change-gear unit

### Weft picking

- Metering devices ROJ Super Elf G2 HD 3 mm
- Automatic braking system (ABS) of weft
- Tandem nozzles
- Main nozzles
- Electronic weft cutting L, with diamond blades
- Profiled reed
- Relay nozzles
- Stretch nozzle
- Opto-electric weft stop motion
- Passive weft cutting R, or electronic weft cutting R, with diamond blades
- Automatic air pressure control
- Automatic timing of relay nozzles
- Automatic filling reipair

### Warp let-off motion

- Electronic warp let-off motions
- Diameter of bottom warp beam flanges 1000mm
- Alternatively – upper warp beam with diameter of flanges 700mm

### Back rest

- Stationary back rest
- Compensation of warp tension
- Strain gauge sensor of warp tension

### Warp stop motion

- Double-row, electrical

### Cloth take-up motion

- Electronic cloth take-up motion

### Shedding mechanism and beat-up

- Direct drive by synchronous servomotor with electronic control
- Composite heald shaft with eyes
- Needle bar
- Special beat-up mechanism
- Composite profile of batten with energy recuperation

### Machine control

- Control of machine drives
- Control of fabric weaving technology system
- Control panel equipped with LCD colour touch screen
- Communication via Ethernet or RS 485
- Prevention of weft barriness under all modes of machine running
- Variable machine speed depending on weft flying range
- Display of cause of machine stopping

### Reed width

- Nominal width 220 cm
- Minimum width 170 cm
- Minimum width – upon request – 140 cm

### Range of yarns

- Glass fibers 34 – 450 tex
- PAD, PES, PP, Basalt, etc.

### Warp sett

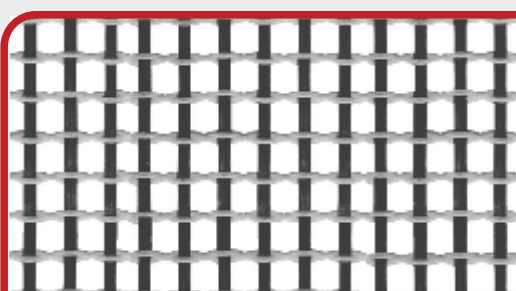
- 10x2 – 40x2 / 10 cm

### Number of colours in weft

- Two colours

### Flanges of warp beams

- 1000 mm
- 700 mm



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