

MAJ : 23/04/2021



### OPTICAL FIBER DETORSION AND PACKAGING

## 1 – Field of application

The purpose of this machine is to precisely wind a reel of optical fiber previously coated with glue from a mother reel.

The applications relate to the production of precision coils for Photonics and Defense.

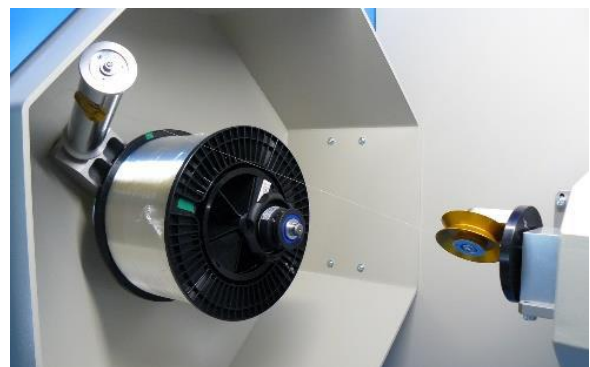
## 2 – Description

It's intended to produce several types of coils with many adjustable parameters:

- Offsets,
- Inversion angle,
- Starting position,
- Acceleration position
- Slowdown position

### Options:

- Fiber untwisting
- Winding control by camera and laser



### 3 – Technical specification

- Winding speed: 0 to 100 m / min
- Winding with straight or crossed turns
- 3 types of receiving coils
- Unwinding of the delivery spool so as not to generate any torsion in the fiber
- Optical fiber length measurement with greater than 1% accuracy
- Optical fiber diameter measurement with a 2-axis laser head, accuracy less than 1  $\mu\text{m}$
- Fiber tension per dancer: 25 to 250g
- Fiber tension measurement with an accuracy of 2g
- Fiber coating with regulation of the glue flow and extraction of solvent vapors
- Horizontal slicing with precision guide and linear motor (displacement precision: 2 $\mu\text{m}$ )
- Vertical slicing with linear guide and brushless motor for tracking the coil diameter
- Adjustable plating force of the coating head on the cross-cut coil
- Pendant HMI with 15 " screen
- SIMOTION automation programmed with SCOUT
- Alert on faults (fiber diameter, tension, low glue level)
- Printing of self-adhesive metallized polyester labels by thermal ribbon printer.

### 4 – Dimensions

