



**Factory Automation Line**



FELISARI & C. s.r.l.

## **RFA Micro Ringing**

**2021 New sheath grooving machine  
for small mineral insulated cables**



### **Technology:**

stationary cable grooved by CNC controlled high precision rotating blade

## **Machine design:**

Almost 25 years experience in machines for MgO temperature sensors production factories around the world, some hundred machines working everywhere, we devise the necessity to design a machine able to work with almost all the kinds of MgO cables employing a modern CNC high precision stationary cable and orbital grooving wheel process with a fully programmable parameters together with a remarkable easing of use and maintenance.

To reach the high deepness precision goal we devise to block the stripping end of the cable (by means of a high precision magnetically operated collet) and grooving this cable section by a orbitating sharpened wheel with settable radial progression.

Extensive R & D for performing the best grooving wheel material and design lead to a new cutting wheel with superior durability and cleanliness of groove.

The settability of all parameters and the total automated process allow the traditional grooving operation by a not skilled operator together a completely automated transfer operation.

## Process Features:

- **Stationary cable** with grooving by **rotating blade wheel**
- **Fast** cable machining: about 4÷8 seconds
- Very **simple** to setup and operate.
- Cable **stopper** to correctly insert the cable on the position to be machined
- CNC system by means of **two linked microprocessor** controllers
- Automatic **start** system when the cable reaches its insertion stopper
- Automated **clamping** system by electromagnetic actuator
- Auto-select the **groove depth** based on the **detected cable** and settings
- Led **lighted inspection window** for manufacturing process control.
- Automatic **motors standby** when the machine is not in use

## Setting Features:

- Readable **LCD display** showing **current status and configuration**
- Display of the **status step by step when machining** and the **detected cable**
- Ease of changing the **depth setting** by turning the knob after unlocking it
- The grooving **depth is expressed as a percentage** of the cable diameter
- Adjustable **rotation speed** by means of a special knob to be unlocked
- Access to **process parameters** with a buttons-**password** sequence
- Easiness of **change blocking collet** in about 1 minute

## Quality Features:

- **Precise collets** for clamping cables
- Absence of any **dust** contamination and any **sign** of blocking on the cable.
- **Accurate** and **repeatable** results
- **Solid** design with full **metal** and **titanium** parts.

## Maintenance Features:

- **Electro-Mechanical Safety interlock system** for maintenance access
- Easiness of **replacing the grooving wheel** in about 1 minute
- Total **access to functional parts**: grooving tool, lever and deepness actuator
- No need to remove **machining chips**: the machine does not remove material

## Processing sequence:

- Insert the cable until it touches the indexed stopper which will automatically start the process or start by pressing left button
- The process start by tightening the cable and quickly checking the home position
- The machine find cable diameter to assess the relative grooving depth to be made
- The rotating blade will touch the cable and groove it as set.
- At the end or if you press the red button, the blade return to home position and the cable is released



## Workable cable range:

- Cable Ranging from 0.25mm up to 6.0mm
- Cable hold collet sizes: 0.5 1.0 1.5 3.0 diameter (other on request)
- Minimum length: 80-90 mm
- Maximum length: no limit
- Sheath Material: Stainless Steel / Hastelloy / High melting point alloys

## Machine specifications:

- CE safety rules compliant
- Power supply: 230V single phase 50/60Hz, 100W
- Dimensions: (LxWxH) 200x250x250mm
- Weight: 15Kg



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