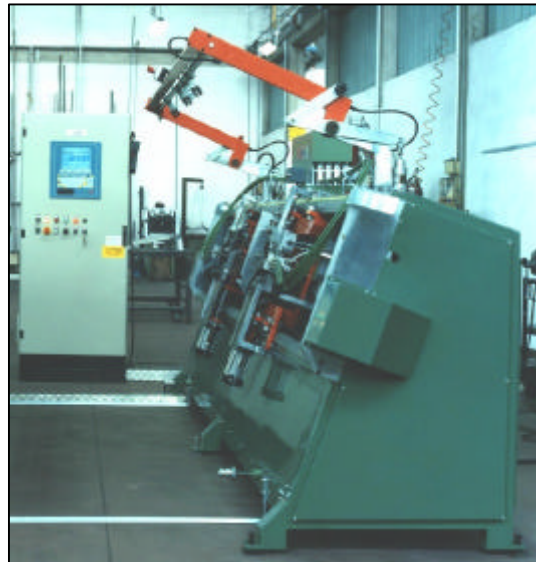


**NUMERICAL CONTROL BENDING MACHINE WITH TWO
TRANSLATING UNITS**



NUMERICAL CONTROL BENDING MACHINE WITH TWO TRANSLATING UNITS

This is an automatic machine with numerical control, studied and developed for bending electric armoured resistances on the plane and used in the small and medium series because easily programmable and interchangeable from one model to another.

It consists of two bending units facing one another, sliding bilaterally on steel runners and operated by two D.C. current motors on screws with ball recirculation.

The shifting of their axes to various programmable positions is controlled by an electronic 6-axis N.C.

Description of the axes by the machine:

Axis no. 1: checking the longitudinal position of the unit on the bending axis.

Axis no. 2: checking the angular rotary position of the bending operation (angles).

Axis no. 3: checking the trasversal position of the unit that determines the direction of bending (clockwise or counterclockwise)

The machine has the possibility to bend up to 4 resistances at a time with diameter m/m 6,5 and 2 resistances at a time with diameter m/m 8,5. Automatic unloading upon cycle termination.

This its mechanical composition:

1- Carrying structure in tubular sections of welded steel and saddle guides made of hardened steel. Openable sheet fairings of appropriate wall thickness.

1- Prearrangement for inserting the resistances with manual, pneumatic operation.

1- Electropneumatic truing device for two or four resistances with diameter 8 or 6,25.

2- Saddles mounted on sliding blocks with ball recirculation for the longitudinal shifting of the two bending units.

2- Bending unit with hydraulic control for clockwise and counterclockwise rotation.

Knockout from the bending axis and positioning of the head to the top or to the bottom.

1- Controlunit for lubricating the ball screws.

1- Automatic unloading system for ready pieces.

1- Pneumatic systems for shifting and transfer operations.

The N.C. electronic part of the axes and cycle sequence of the bending machine enables to select a programme among the available ones on minifloppy disks or other systems, thus rendering the equipment extremely effective and flexible also when employed for small production quantities, by changing rapidly the programme and therefore the workpiece manufactured.

The creation of new programmes is made very easy and fast thanks to the menu on the 11" monitor and to the alphanumeric keyboard.

Prearrangement for automatic feeder of straightened pieces.

Prearrangement for rotary vice by $\pm 90^\circ$ for bending a resistance at a time on different planes.



MAIN TECHNICAL CHARACTERISTICS:

No. of resistances per cycle	pcs.	4 diam. 6-6,5
		2 diam.8-8,5
Shifting speed	mt./min	10
Speed of initial repositioning at the end of cycle	mt./min	20
Bending speed during rotation	sec.	2,5x90°
Bending speed during rotation	sec.	3,5x180°
Resistance max. length	mm	3050
Max. wattage installed	kW	4,5
Power supply	Volt	3x220/400
Automatic and manual loading operation	sec.	2-3
Min. distance side between the two units in the centre of the machine:		
- with average bend radius 10 m/m	mm	105
- with average bend radius 20 m/m	mm	125
- with average bend radius 30 m/m	mm	135
Max. average bend radius allowed	mm	36
Max. no. of effectable bends		24
Head rotation in both directions up to a max. of	degree	210
Machine weight	kg.	1200
Machine dimensions	mm	4500x1200x1700H

