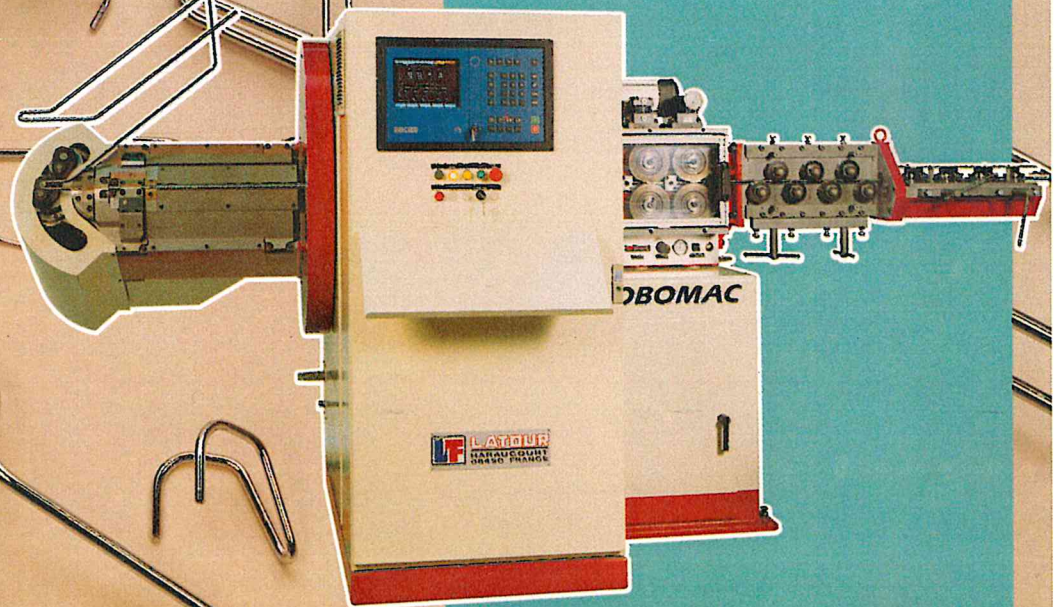
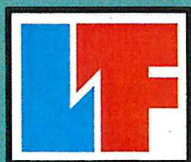


ROBOMAC CNC

**PRODUCTION
OF ALL WIRE FORMS
BY PROGRAMMING
THEIR SHAPES
AND DIMENSIONS**

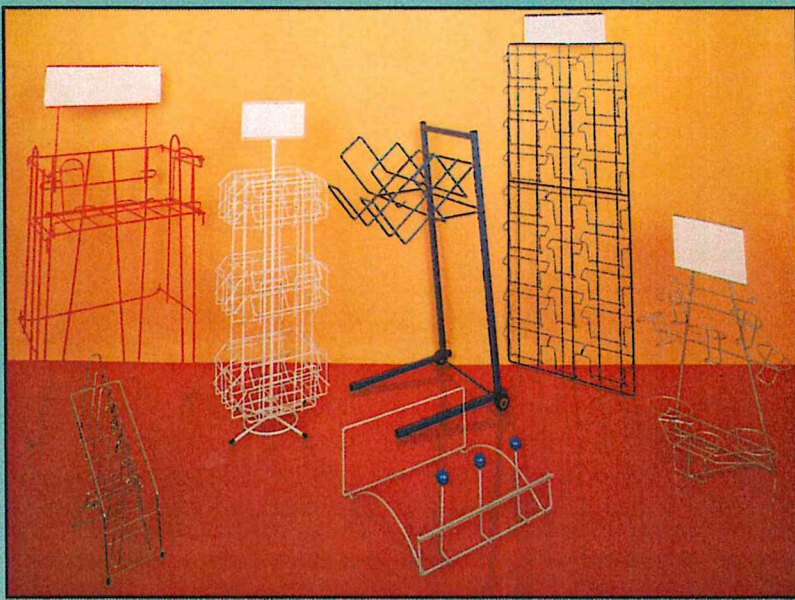


206 310 212 214 216



LATOUR

LEADING TECHNOLOGY IN THE FORMING OF WIRE AND STRIP



The ROBOMAC Wire Forming Machines are the perfect answer to **PROTOTYPE, SHORT and MEDIUM RUN REQUIREMENTS.**

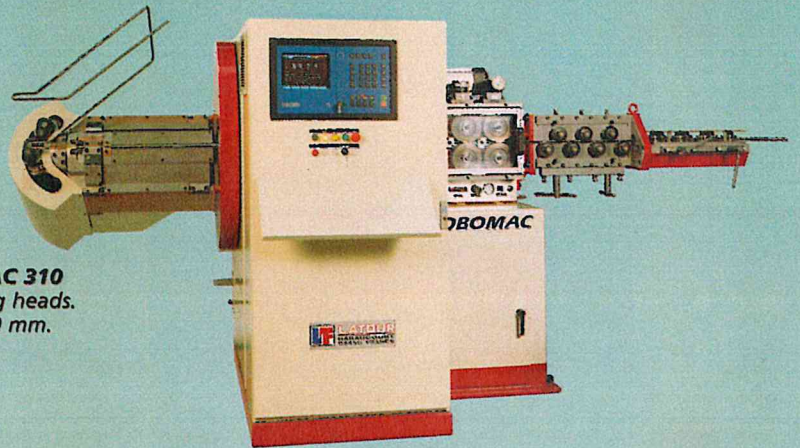
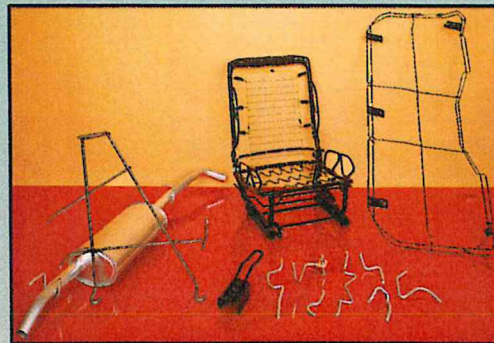
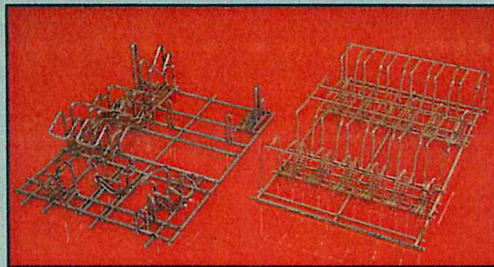
They are characterised by having extraordinary flexibility yet using low-cost standard tools. They are capable of meeting the demands of Just-in-Time production.

The machines offer the versatility to meet everchanging product requirements and designs. They are capable of shaping successive different products or similar parts in small batches.

With a suitable handling operation, the produced parts can also be fed to an assembly station. This allowing these machines to be perfectly integrated into a complete production line.

The design of the ROBOMAC guarantees minimal maintenance and space.

PRODUCTION OF ALL WIRE FORMS BY PROGRAMMING THEIR SHAPES AND DIMENSIONS

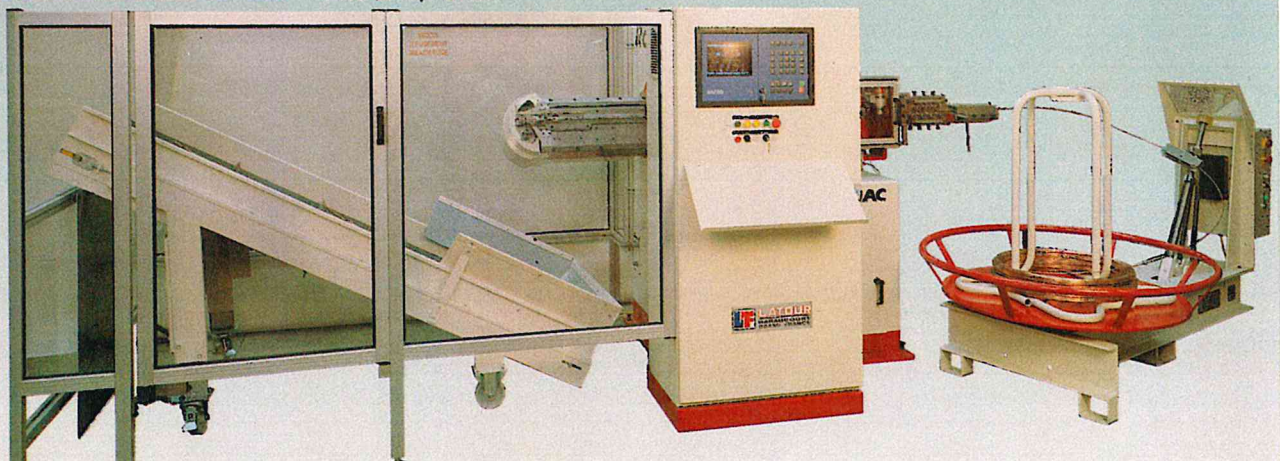


ROBOMAC 310
3 bending heads.
wire Ø 10 mm.



ROBOMAC 212
Equipped with a chamfering unit, a revolving straightener holder and a motorised wire introducer.
2 bending heads.
wire Ø 12,7 mm.

ROBOMAC 206
Equipped with a conveyor belt.
2 bending heads.
wire Ø 6 mm.



FUNCTIONING

Forming principle :

Directly from wire coil. The wire is fed and formed progressively in three dimensions until the complete part has been achieved.

Means of forming:

4 or 5 axes operated by brushless motors and controlled by a top-of-the-range CNC system.

Electrically actuated cut-off and clamping functions.

Further functions available to control optional attachments, such as chamfering unit, threading unit, press, etc. ...

EASY PROGRAMMING

The software of the ROBOMAC includes an original feature that allows the operator to program by entering only the essential values to the Numerical Control.

Programming during production is possible.

Programming is done in simple step-by-step method from the chosen first end. The operator will program on the screen the wire diameter, the forward and backward wire feed, the forming head selection in relation to the required bending radius and the value of the bending angles. Finally he enters the signal for wire cutoff. For three-dimensional products, he has additionally to enter the position of the rotary arm. Before starting production of the first wire form, the operator is able to visualise the programmed part on the colour display for control purposes.

Once the part has been checked, bending angle corrections can be carried out, either individually per bend or as a general correction on all bends. Feed and bending speeds can be adjusted.

The programs will be identified and memorised in the internal memory (onto a large capacity hard disk) or onto a 3.5" floppy disk for off-line transfer.

The total length of wire used, the production rate and the residual production time will be displayed by the Numerical Controller.

Should a programming error or a fault on the machine occur, the auto diagnostic features will pinpoint the cause.

Detection of tool breakage and machine stop when operating without surveillance.

AXIS IDENTIFICATION

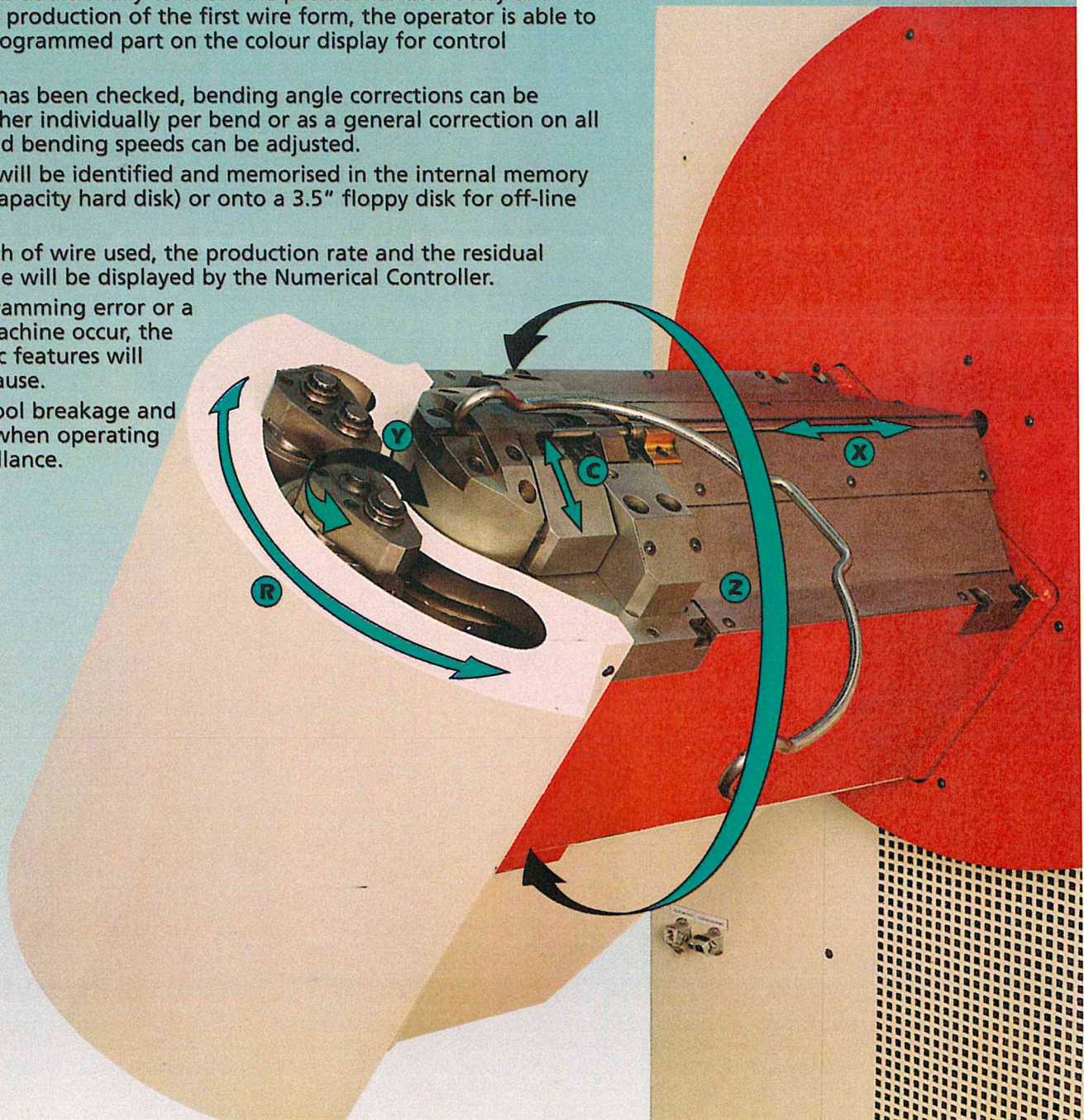
X Wire feed through 4 motorised wheels.

Y Bending by means of rotary heads.

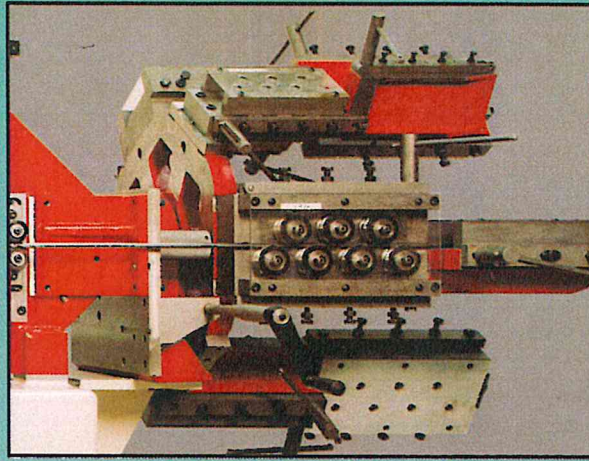
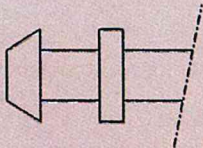
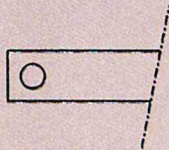
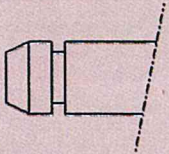
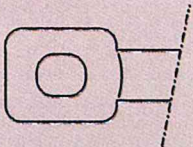
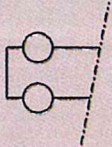
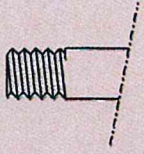
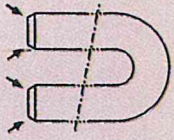
R Rotation of the turret holding the retractable forming heads.

Z Rotation of the arm around the wire axis.

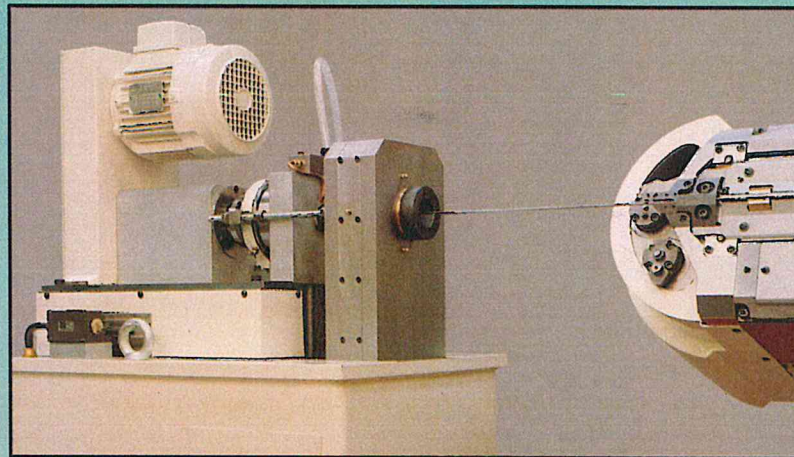
C Cut-off + clamping.



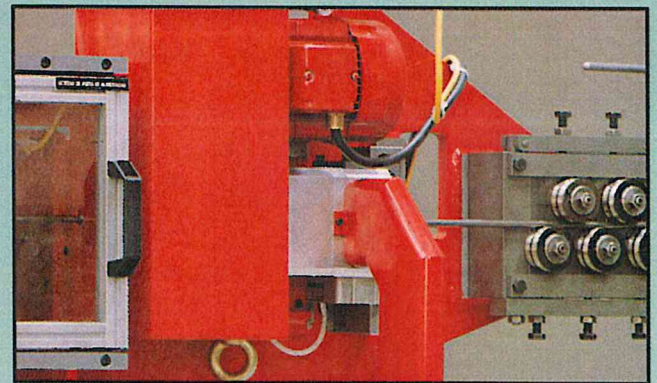
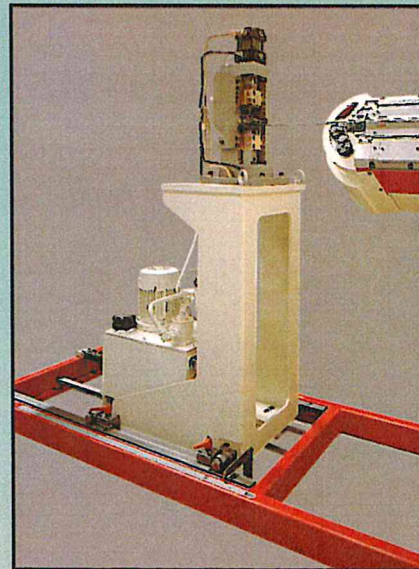
OPTIONAL ACCESSORIES



Revolving straightener holder for quick changeover of wire size.



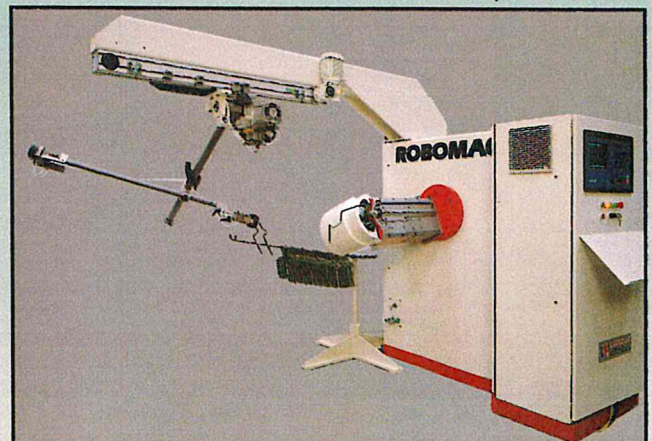
Threading / chamfering at one extremity.



Chamfering in "V" for chamfers at both ends of a part.

Hydraulic station for wire end presswork.

Pick-and-place robot.

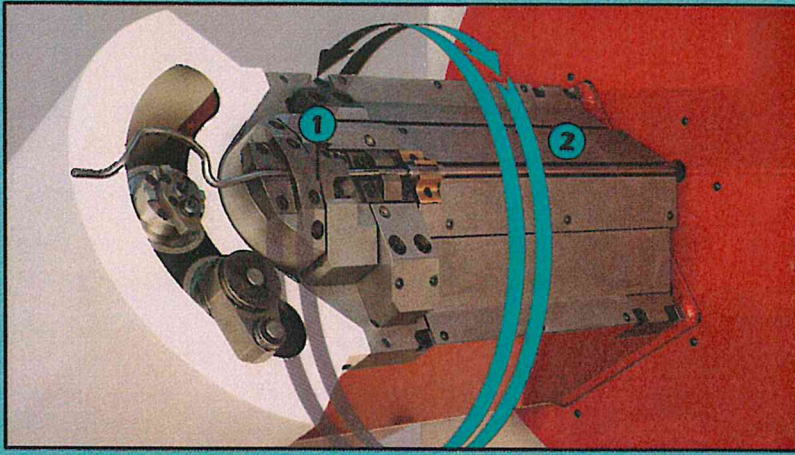


LATOUR

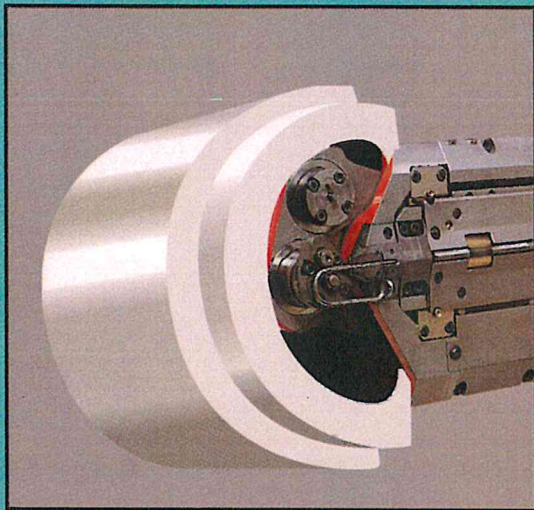
- Know-how and assistance based on years of experience.
- Training facilities for the use of CNC LATOUR machines.
- A quick and personalised service for spare parts.

IN EXISTENCE FOR OVER 100 YEARS
A WORLDWIDE CLIENTELE.

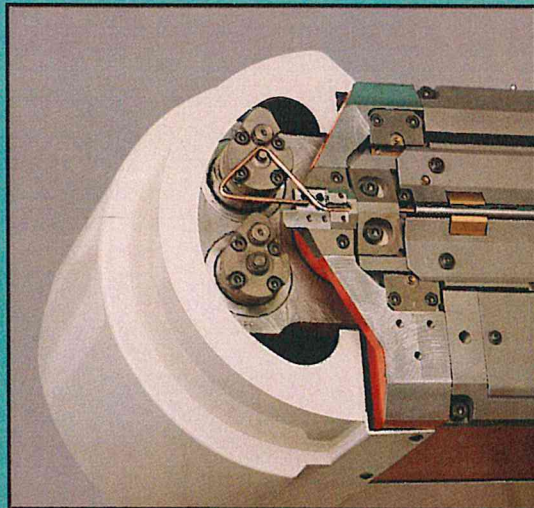
IMPORTANT FEATURES



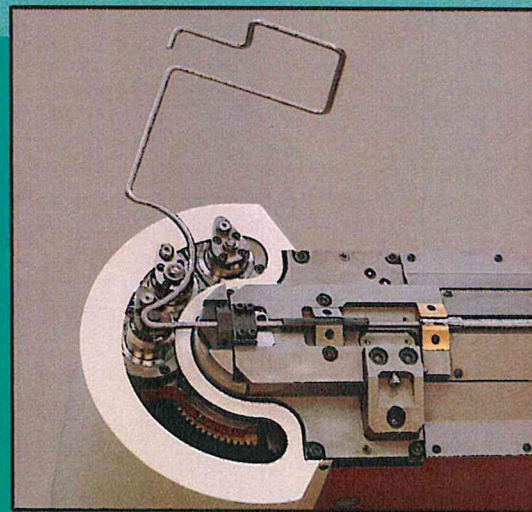
- 1 - Straight, perpendicular and clean cut.
- 2 - Unlimited rotation of the arm around the wire to allow more freedom of movement in the forming of parts.



2 or 3 bending heads, i.e. minimum 2 or 3 different and independent bending radii. For the large bending radii, the bends are "generated".



Possibilities to offset the position of bending off the normal wire line, for the production of specific parts.



Multihead bending system allowing on a single part, the simultaneous use of different tools, perfectly suited to the different bending techniques (around a central mandrel, at sharp angle, in generating mode, ..).

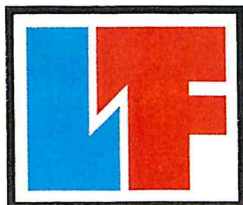
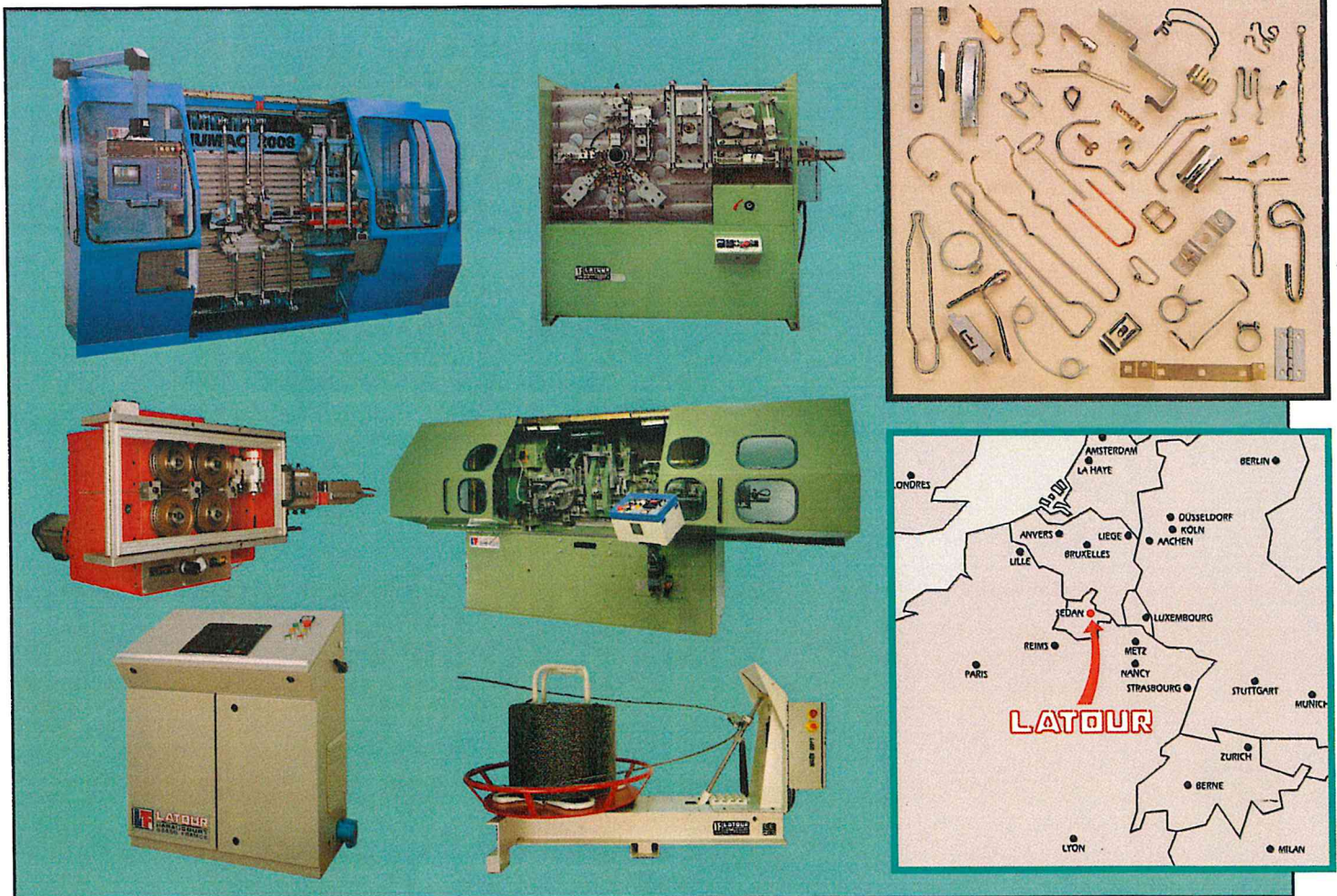


- Easy programming either in real lengths and angles (mm or inches), or directly from cartesian coordinates on a CAD drawing. Without even having to interrupt production!
- Several languages available.
- Automatic programming based on a CAD drawing (format .DXF) and print-out of a drawing in .DXF format from a part programme.
- Optional link with a measuring machine (ROMER or SUPRATECH) for production of a sample part and automatic correction.

	ROBOMAC 206	ROBOMAC 310	ROBOMAC 212	ROBOMAC 214	ROBOMAC 216
Wire diameter at 600 N/mm ² (83,6 kpsi) tensile strength	2 to 6 mm / 0,08 to 0,25 in.	3 to 10 mm / 0,118 to 0,393 in.	4 to 12,7 mm / 0,156 to 0,5 in.	5 to 14 mm / 0,187 to 0,551 in.	6 to 16 mm / 0,25 to 0,63 in.
Feed length - Feed precision	unlimited ± 0,05 mm / 0,002 in.	unlimited ± 0,05 mm / 0,002 in.	unlimited ± 0,05 mm / 0,002 in.	unlimited ± 0,05 mm / 0,002 in.	unlimited ± 0,05 mm / 0,002 in.
Rotary arm - Positioning precision	± 0,02°	± 0,02°	± 0,02°	± 0,02°	± 0,02°
- Clockwise or anticlockwise rotation	± unlimited	± unlimited	± unlimited	± unlimited	± unlimited
- Length of the arm	600 mm / 23,6 in.	800 mm / 31,5 in.	850 mm / 33,4 in.	850 mm / 33,4 in.	1000 mm / 39,37 in.
Forming Heads - Number	2	3	2	2	2
- Bending radii on mandrel	1 to 15 mm / 0,04 to 0,60 in.	2 to 25 mm / 0,08 to 0,98 in.	2 to 35 mm / 0,08 to 1,38 in.	2 to 35 mm / 0,08 to 1,38 in.	2 to 35 mm / 0,08 to 1,38 in.
- Bending radii by generating	15 mm / 0,60 in. to infinity	25 mm / 0,98 in. to infinity	35 mm / 1,38 in. to infinity	35 mm / 1,38 in. to infinity	35 mm / 1,38 in. to infinity
- Positioning precision	± 0,02°	± 0,02°	± 0,02°	± 0,02°	± 0,02°
- Clockwise or anticlockwise rotation	± 360°	± 360°	± 360°	± 360°	± 360°
Programming time	5 to 15 min.	5 to 15 min.	5 to 15 min.	5 to 15 min.	5 to 15 min.
Setup Time - Same wire size	0 min.	0 min.	0 min.	0 min.	0 min.
- Wire size change	30 min approx.	30 min approx.	30 min approx.	30 min approx.	30 min approx.
Installed Power	6,3 kVA	10 kVA	10 kVA	10 kVA	10 kVA
Dimensions - Without safety gate	2,60 x 2,00 x 1,72 m. 103 x 79 x 68 in. approx.	3,02 x 2,00 x 1,72 m. 119 x 79 x 68 in. approx.	3,42 x 2,00 x 1,72 m. 135 x 79 x 68 in. approx.	3,82 x 2,00 x 1,72 m. 150 x 79 x 68 in. approx.	4,00 x 2,00 x 1,72 m. 157 x 79 x 68 in. approx.
- With safety gate	4,50 x 2,00 x 1,72 m. 178 x 79 x 68 in. approx.	4,63 x 2,00 x 1,72 m. 183 x 79 x 68 in. approx.	4,93 x 2,00 x 1,72 m. 194 x 79 x 68 in. approx.	5,33 x 2,00 x 1,72 m. 210 x 79 x 68 in. approx.	5,33 x 2,00 x 1,72 m. 210 x 79 x 68 in. approx.
Net Weight	2.250 kg. / 2,25 Tons approx.	3.500 kg. / 3,50 Tons approx.	3.750 kg. / 3,75 Tons approx.	4.150 kg. / 4,15 Tons approx.	4.500 kg. / 4,50 Tons approx.

The minimum wire diameter depends also on the geometry of the part

LATOUR IS ALSO...



LATOUR

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www.latour.fr