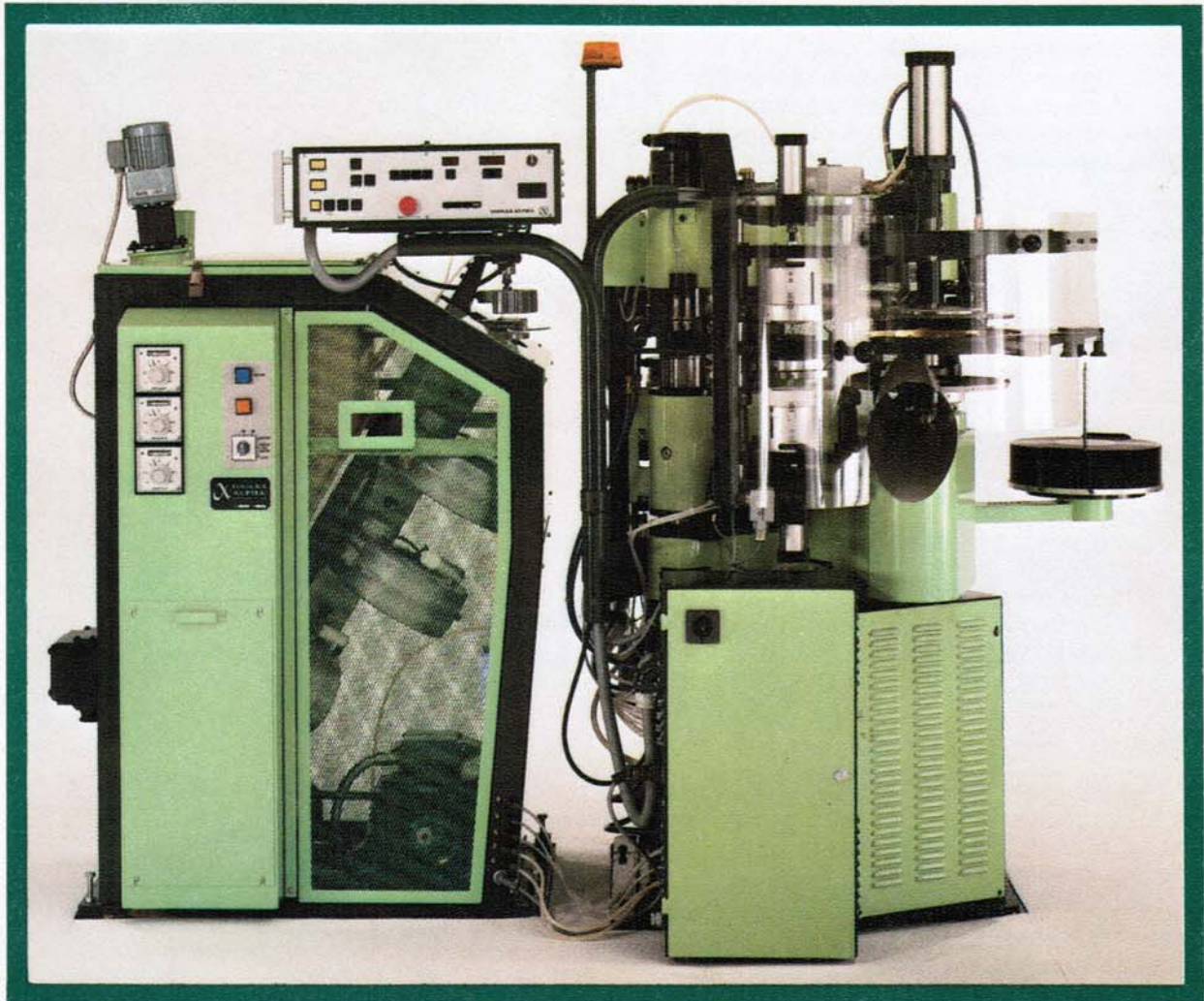


ALPHA DELTA

fully automatic
record press



ALPHA DELTA 12

- Unique 3-column design
- Simplicity of principle and construction
- Unique unloading system, allowing pressing of lightweight records
- Compact. Floor area 2.1 m² (23 sq ft)
- Fast and easy stamper changing
- High, reliable production

Complete product line for the record pressing industry

TOOLEX  ALPHA

GENERAL DESCRIPTION

The Alpha Delta press represents a fully new concept in the line of automatic record presses. Unlike most other presses of its kind, it is not merely a mechanisation of existing manually operated pressing equipment.

The Alpha Delta is a completely automatic pressing system, designed around the basic operations of pressing a record.

The design incorporates several original and unique ideas and inventions, solving the fundamental and critical problems of automatic record pressing, such as:

- Simplicity of operation
- Perfect centering
- Reliable labelling
- Safe unloading of records, even if they are lightweight
- Fast and easy stamper changing

The heart of the Alpha Delta press is a unique 3-column concept. The 3-column design was chosen for the following reasons:

- Maximum parallelity because of the three-point support.
- Evenly distributed deflection (resulting in a record with minimum thickness variation)
- Excellent accessibility
- Only the triangular location of the columns makes it possible to use swinging motions for the loading and unloading and also for the removal of the moulds for stamper changing, which in turn allows a small stroke.

It is a wellknown fact in engineering design that a swinging motion around a pivot point is superior to a sliding motion on guide ways.

The main advantages are:

- Higher precision - no centering problems.
- Less wear - less maintenance - longer life.
- Smaller masses to move.
- Higher speed possible.

A good comparison is a door on hinges versus a sliding door.

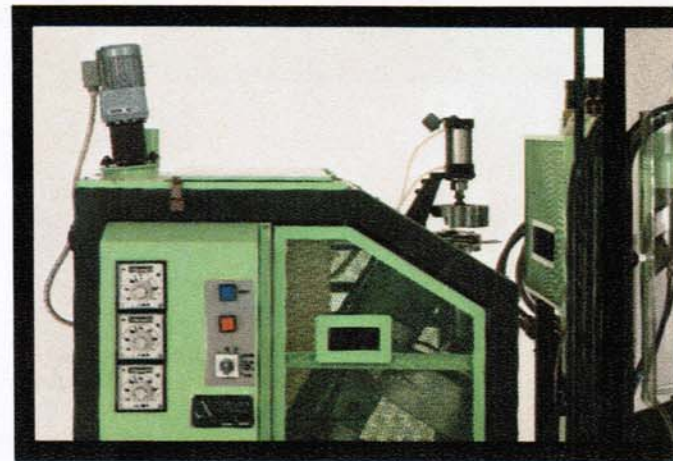
The Alpha Delta press is fully automatic and carries out the operations from loading the plastic material and labels to unloading the finished record. The system consists of 5 stations:

Preplasticizing
Labelling
Pressing
Trimming
Stacking or
sleeving (optional)

CONTROL UNIT

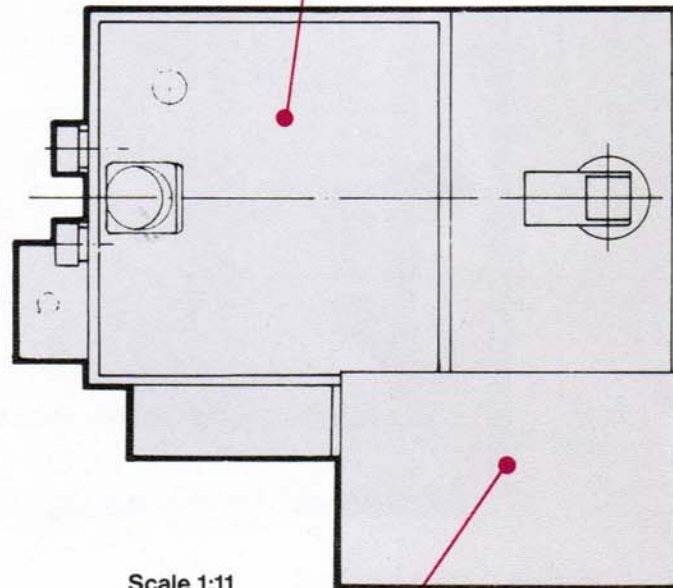
The system uses micro-processor technology which combines advanced capabilities with simplicity of operation. Built-in diagnostics show an alert code when something goes wrong in the press.

The panel is mounted on the press and can be positioned at most desirable angle when setting up and running.

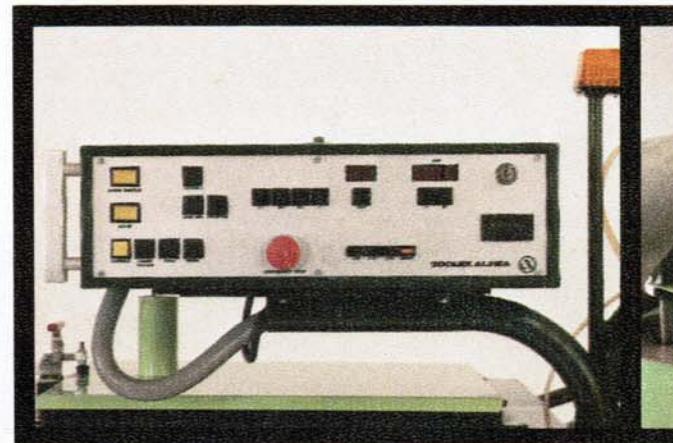


Preplasticizing

Label



Scale 1:11



Control unit

Trim

PREPLASTICIZING

An EXTROMAT 3 preplasticizing extruder extrudes the melted material into a cake making cup operated by air cylinders. When the cup is filled with material, the cup opens and the cake, which is now held by two "fingers" is carried into the center of the press by air cylinders.

LABELLING

The labelling unit, with its two label magazines and the label arm is located on the first column. The label arm, shaped like a fork, is holding the labels by vacuum and swings into the center of the press, placing one label on each side of the cake. The top and the bottom centre pins then penetrate the labels and partly the cake. The label arm and the cake arm can now return to their start positions.

PRESSING

The ram rises and the record is pressed between the upper and lower mould. The excess material flows into the record unloading ring, held by an arm, swinging around column number two. The unloading ring is provided with small eyelets into which the material flows. This way the record is held around its circumference, eliminating sagging and without any moving parts. When the press opens, the unloading arm carries the record to the

TRIMMING STATION

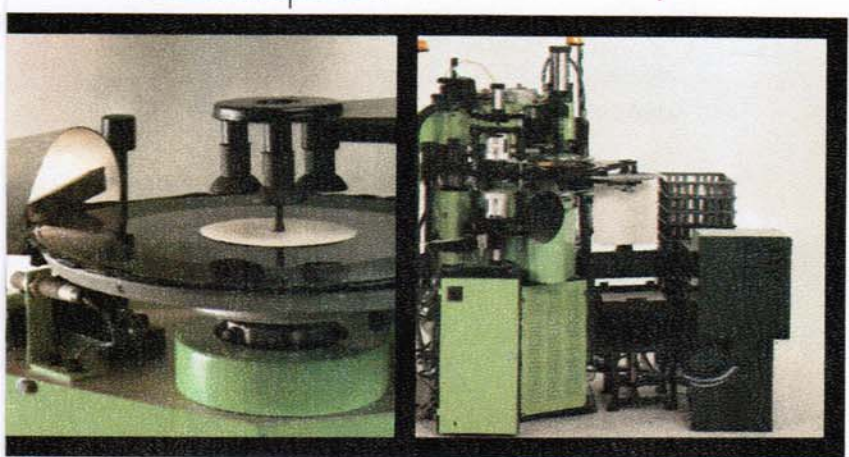
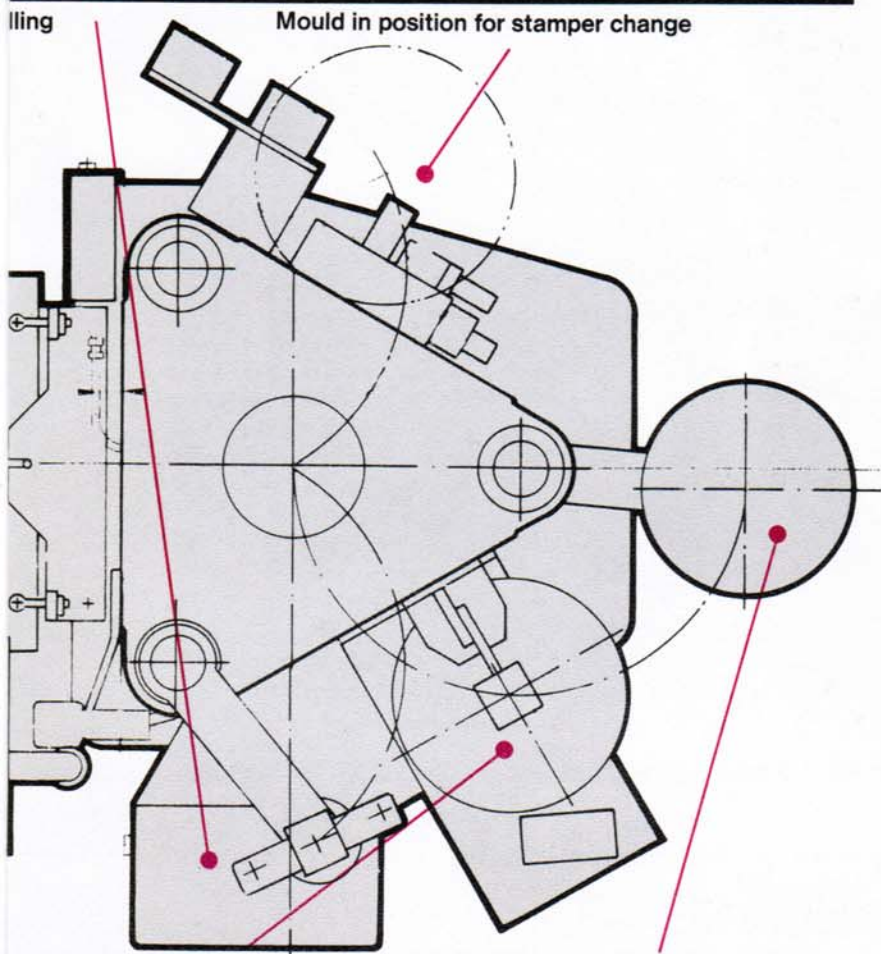
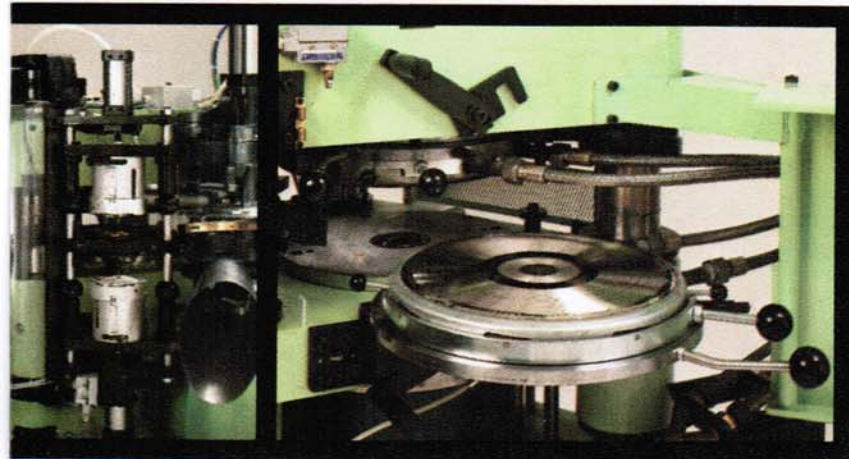
where the record is pushed from the unloading ring onto the trimmer table. The unloading arm then returns to the pressing station. After that the knife is engaged, the trimmer table and the record start turning and the excess material, the flash, is separated from the record. The trimmer table now lifts the record into contact with the vacuum cups on the transfer arm. When the press opens next time, the transfer arm carries the record to the

STACKING STATION

where the record is dropped on a spindle. The spindle is located on a spindle base and has a capacity of 125-150 records. Optionally the press can also be equipped with a

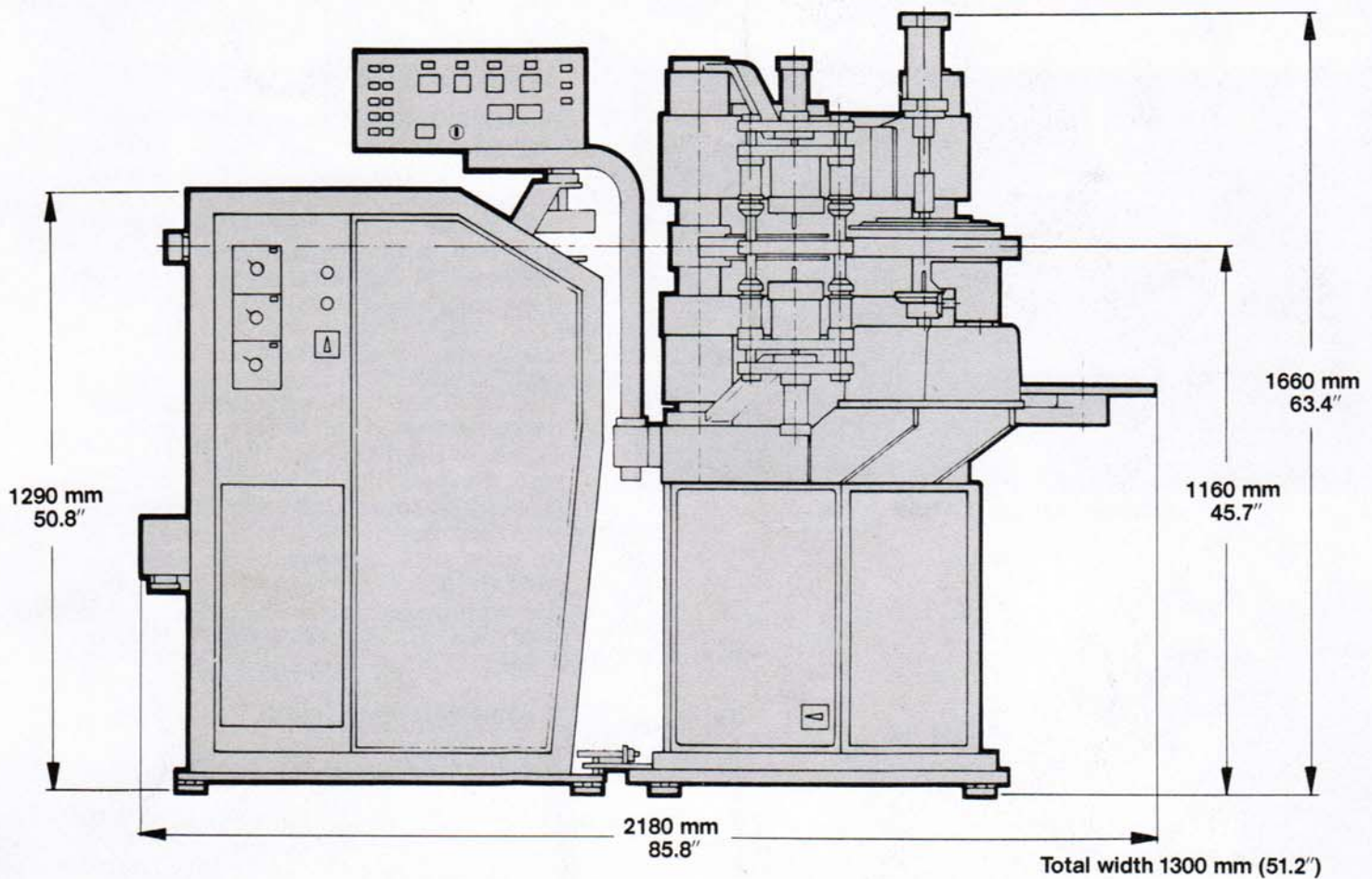
SLEEVING UNIT

for automatic sleeving and boxing of the records. Spacers are automatically stacked between the records and both empty and loaded boxes are automatically transferred.



trimming

Sleeving unit



TECHNICAL DATA

Nominal working pressure	200 kg/cm ²	2850 psi
Main piston diameter	270 mm	10 5/8"
Closing force	114 tons	
Opening force	6 tons	
Actual pressing force	108 tons	
Length of stroke	55 mm	2 5/32"
Daylight	167 mm	6 9/16"
Distance between centers of columns	562 mm	22 1/8"
Column diameter	90 mm	3 17/64"
Closing and opening speed	120 mm/sec	4 3/4"/sec
Pressing speed	adjustable	
Consumption per cycle:		
Hydraulic liquid	3.15 litres	0.8 gallon
Steam	1.2 kg	2.65 lbs
Cooling water	15 litres	3.2 gallons
Air	18 litres	0.6 ft ³
Total weight (complete press unit)	1850 kgs	4000 lbs

TOOLEX  **ALPHA**

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