


Fully Automatic Vinyl Press - the Original

In the 70s Toolex Alpha created the world's first fully automatic record press with microcomputer control - in a time when computers were to be found only in large metal cabinets or lunar landers! No wonder that our AD12 quickly became iconic. Now, with the same innovative mindset and many generations of the AD12 machine later, we are still the world leader offering you the market's most reliable, compact and efficient vinyl press.

Why settle for less?



Remote access and future-proof

FEATURES AD12

- Rigid unique 3-column design.
- Fully automatic press for production of vinyl records including safety cabinet.
- Standard version with one output loading spindle for finished records.
- The safety cabinet includes all necessary features and machine interlock circuits to comply with safety standards.
- The control system aligns with the latest standards, poised for Industry 4.0 integration, ensuring optimal performance for the future.

HYDRAULIC PUMP UNIT

- The hydraulic pump unit is dedicated for one AD12 press.

MOULDS

- 7" / 10" / 12" options available.

Output options

SPACE HANDLING UNIT

- Output spindle shifter version with two output loading spindles and automatic spacer handling.

SLEEVING UNIT

- Sleeving unit version with output station for automatic sleeve handling.

Superior design for vinyl pressing

The AD12 press embodies excellence in the world of automatic record presses. Its entire design is dedicated to the production of vinyl records.

This fully automated pressing system is carefully crafted around the fundamental processes of vinyl record production.

The design incorporates numerous original and ingenious ideas and inventions, effectively addressing critical challenges associated with automatic record pressing, including:

- Streamlined operation
- Precise centering
- Reliable labeling
- Secure unloading of records, even lightweight ones
- Swift and effortless stamper replacement.

Unique 3-column concept

At the core of the AD12 press lies a unique 3-column concept, selected for the following reasons:

- Maximum parallelism ensured by the three-point support
- Uniform deflection leading to minimal thickness variation in the records
- Exceptional accessibility
- Only the triangular positioning of the columns allows for the utilization of swinging motions during loading and unloading and also for the swiveling of the moulds to stamper changing position, which in turn allows a small stroke.

Advantageous swinging motion

In engineering design, it's widely acknowledged that a swinging motion around a pivot point offers distinct advantages over a sliding motion on guide ways. The primary benefits include:

- Greater precision – eliminating centering issues
- Reduced wear and maintenance – resulting in extended lifespan
- Lower moving masses – enabling higher speeds

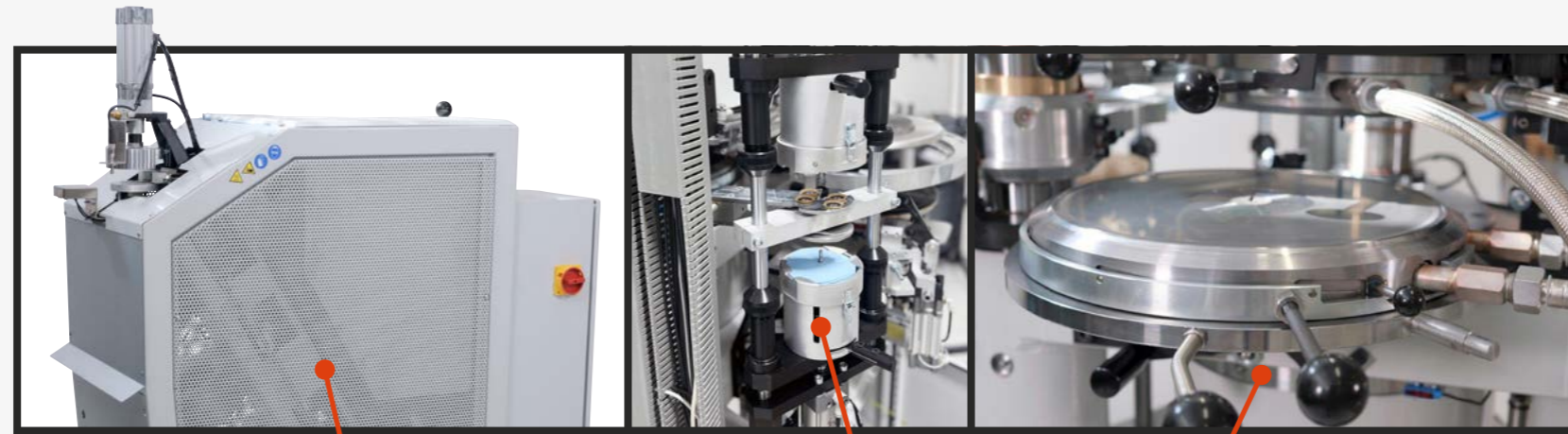
A practical comparison can be drawn between a hinged door and a sliding door.

Fully automatic operation

The AD12 press operates fully automatically, handling tasks from loading plastic material and labels to unloading finished records. The system consists of five stations: Preplasticizing, Labelling, Trimming, Stacking or Sleeving (optional).

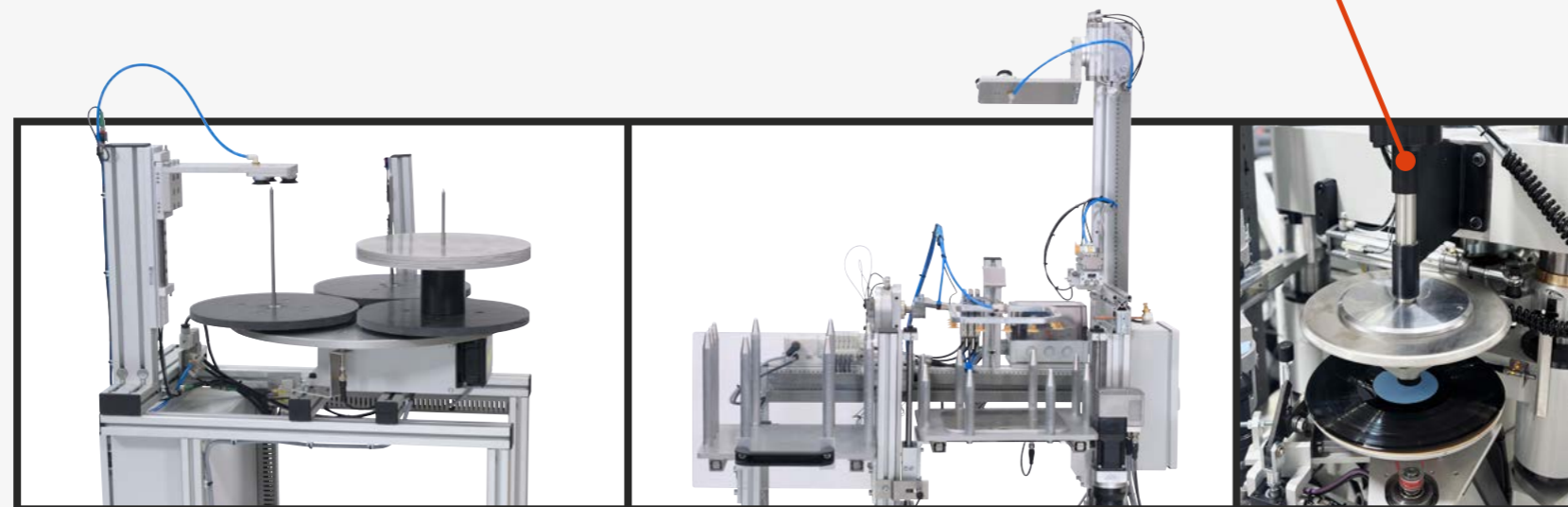
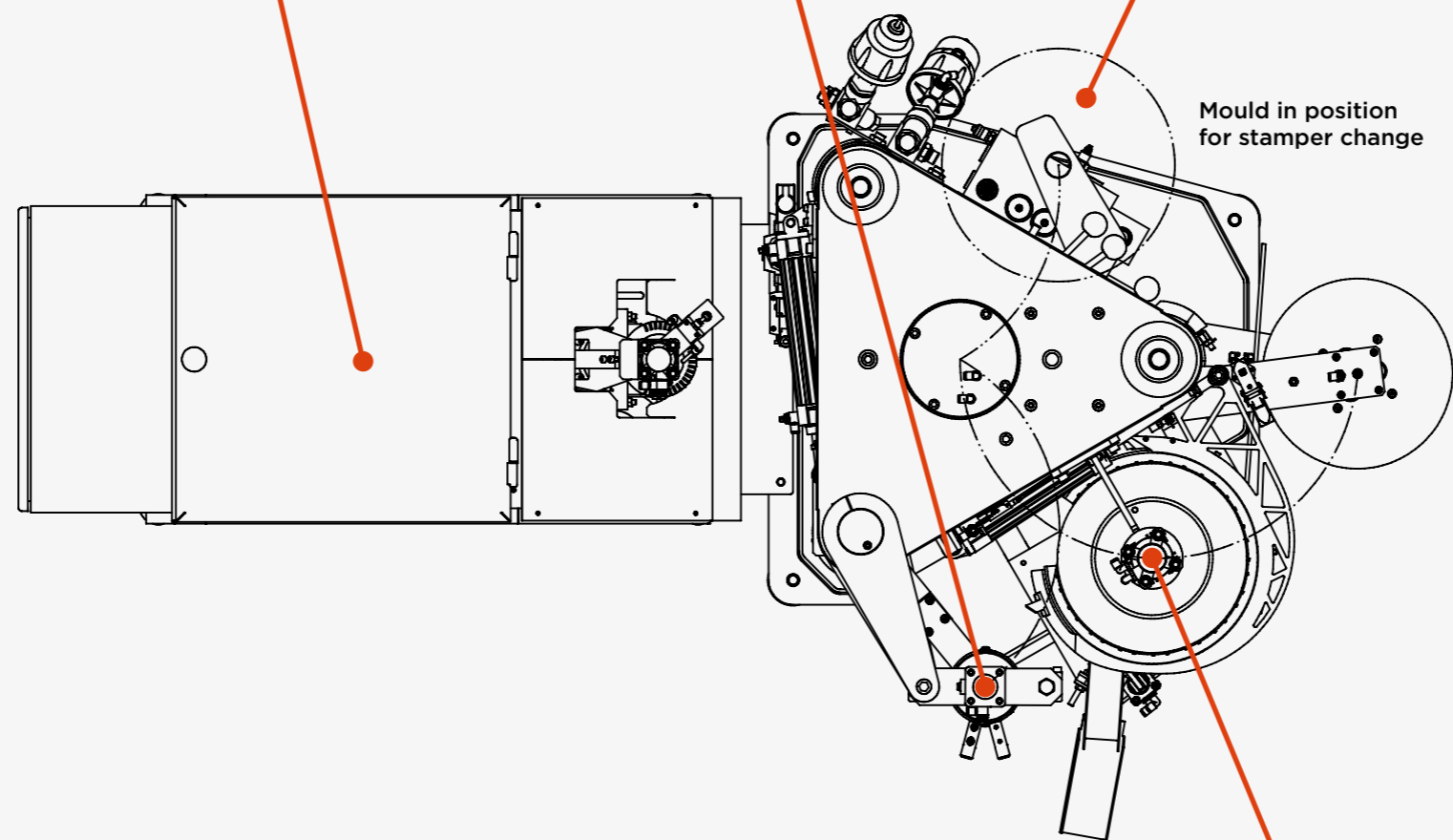
Cutting-edge control system

The system uses a state-of-the-art PLC controller featuring a user-friendly touch screen operator interface. The controller is equipped for seamless integration into Industry 4.0, ensuring future-proof performance with remote access capabilities.



Preplasticizing

Labelling



Space handling unit

Sleeving unit

Trimming

The machine's stations

Preplasticizing

A preplasticizing extruder melts the material, forming a cake within a cup controlled by air cylinders. Once filled, the cup opens, and air cylinders carry the cake, held by two "fingers," to the center of the press. Cake weight can be adjusted via the touch screen.

Labelling

Located on the first column, the labelling unit features two label magazines and a label arm. The fork-shaped label arm uses vacuum suction to position labels, placing one on each side of the cake. Top and bottom center pins then penetrate the labels and partially the cake. Afterward, the label and cake arms return to their original positions.

Pressing

The record unloader arm swings into the mold position, and then the presstable raises to press the record between upper and lower molds. Excess material flows into the record unloading ring in the arm. The excess material holds the record on the circumference eliminating sagging without moving parts. When the press opens, the unloading arm transports the record to the trimming station.

Trimming Station

In the outer position, the record is pushed from the unloading ring onto the trimmer table. The unloading arm then returns to the mold position. The knife engages, and the trimmer table and record start turning, separating the excess material (flash) from the record. The trimmer table lifts the record into contact with the vacuum cups on the transfer arm. When the press opens again, the transfer arm carries the record to the stacking station.

Stacking station

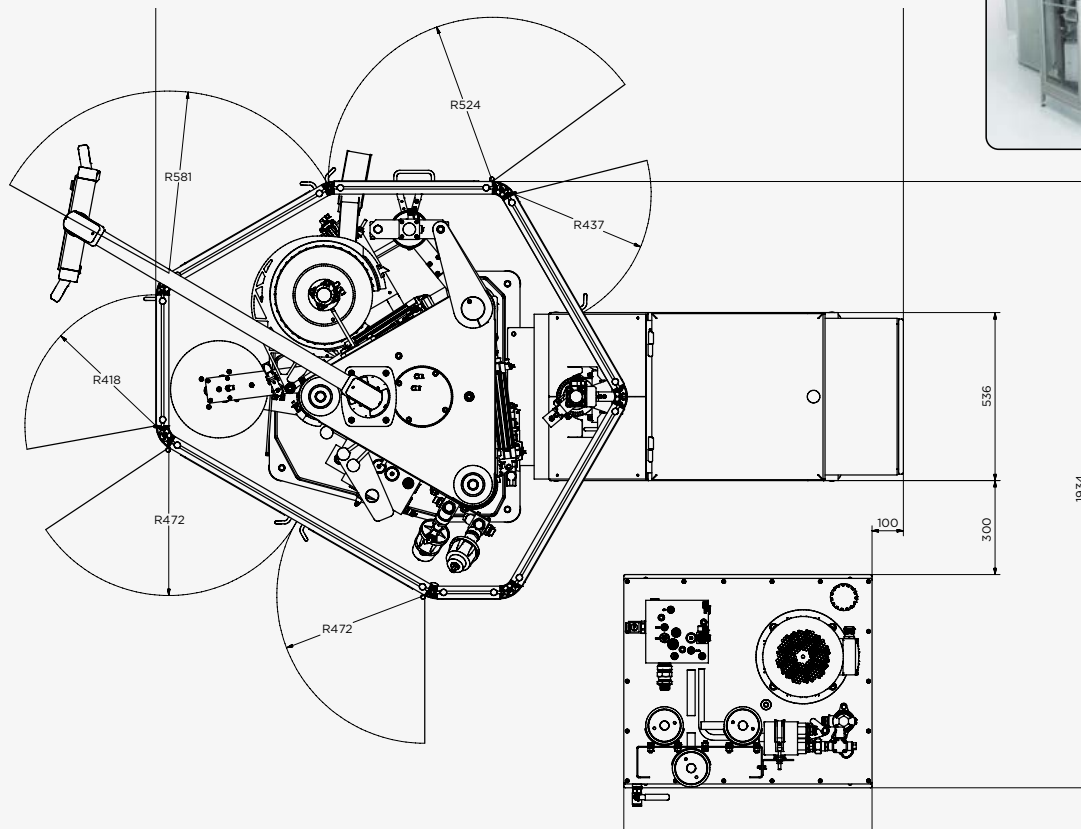
Here, the record is dropped onto a spindle located on a spindle base, with a capacity of 125-150 records. Optionally, the press can be equipped with a Sleeving Unit or a Spacer Handling Unit.

Sleeving unit

The sleeving unit has two positions: one for loading empty sleeves and another for stacking records inside sleeves. The sleeving unit control system is fully integrated with the main machine.

Space handling unit

The spindle shifter has three positions and a spacer-handling arm. Two positions are used for discs and one for spacers. The spindle shifter control system is fully integrated with the main machine.



MEDIA SUPPLY REQUIREMENTS FOR ONE AD12

ELECTRIC POWER

Voltage	3x400/3x480 V + PE, 50/60 Hz
Recommended fuse	40 A
Average power consumption	10 kW

COOLING WATER PRESS UNIT

Pressure at inlet	10-12 bar (with cooling valves closed)
Pressure drop at 80 liters/min	5 bar (with cooling valves open)
Back pressure outlet	max. 1 bar (recommended < 0,5 bar)
Peak flow	80 liters/min
Average flow	40 liters/min
Temp.	set point, 15°C-23°C
Temp. max fluctuation	± 1,5°C
Average required cooling capacity	90 kW

COOLING WATER HYDRAULIC PUMP UNIT

Pressure at inlet	5-12 bar
Back pressure outlet	max. 1 bar (recommended < 0,5 bar)
Average flow	5 liters/min
Temp.	10°C-25°C

STEAM

Pressure	11,5 bar
Pressure tolerance	± 0,5 bar
Average consumption	173 kg/h
Peak consumption	600 kg/h (during the first 3s of each cycle)

COMPRESSED AIR

Pressure	6-9 bar
Average flow Qn	200 l/min

VACUUM

Pressure	-75 kPa or lower
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Please contact
us with any
questions or to
request.

