



TECHNOMATIC
CONCEPT



W+D 102 fully rebuilt and upgraded by Technomatic with 16 servo-motors



- 4. Introduction
- 5. About Technomatic

Productivity:

- 6. Increasing the speed of production.
- 12. Reducing the number of production stops.
- 19. Reducing change-over times.
- 22. Reducing machine cleaning time.
- 25. Streamlining the manufacturing process.

26. Quality envelopes:

Servomotor information.
Paper web tension control.

30. Save paper and window materials:

Easy to reduce 1 millimeter paper by envelope.
No window waste.

32. Safety:

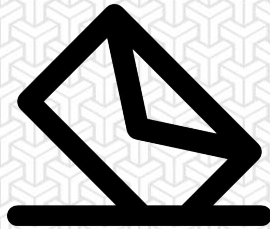
Safety guards.
Designing the program.

35. Maintenance:

Reduced maintenance costs.

Program:

- 37. Easy and functional.
- 39. Installation and training
- 39. Delivery time and warranty



Introduction

The electronic transmission of documents has significantly affected the number of envelopes manufactured worldwide. With this, envelope manufacturers are no longer committing to purchasing new production lines and are closing down factories. Nevertheless, German company Winkler + Dünnebier is celebrating its one hundredth anniversary, and envelopes in their original form will remain an important method of transmitting information, documents or ads for many years to come.

Due to this decrease in production, hundreds of machines are being released onto the market. One of the most popular is the W & D 102. At present, there is no demand for new machines, but there is a demand for production lines on the second hand market.

The second hand production line is able to produce envelopes at a rate of 800 E/min, however after a certain time due to wear and tear productivity drops to 500 E / min. One of the reasons for this, among others, is that the function of the vacuum cylinders slowly deteriorates, not allowing for the same level of performance. In addition, wear and tear on the transmission system can cause irregularities in the target product. Winkler + Dünnebier utilized cardan shafts and gear and manifold drives, which previously proved to be a very popular solution, but these posed a lot of operational problems and costly repairs.



About Technomatic

At TECHNOMATIC, we have a team of qualified engineers, with over twenty years of experience in the envelope and paper industry. We specialize in the comprehensive renovation and modernization of production lines. We also undertake the relocation of equipment, from the dismantling of the production line and its transportation to the new location, to the rebuilding of the machine and the start-up of operations with trained operators.

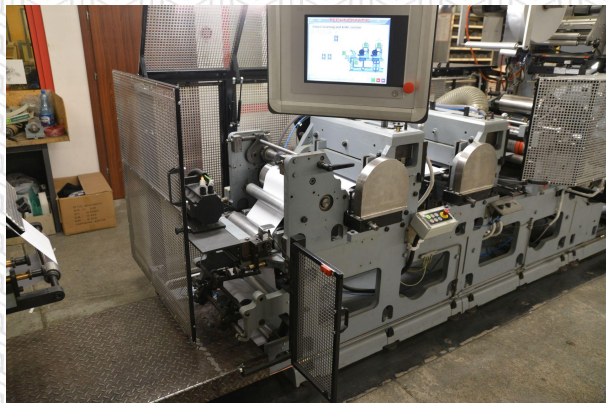
TECHNOMATIC is also involved in the construction of prototype solutions. At the customer's request, we can develop and present construction equipment and machinery concepts. We can also rebuild old drive systems by adding functionality and the reliability of modern solutions.



Increasing the speed of production

Improvement:

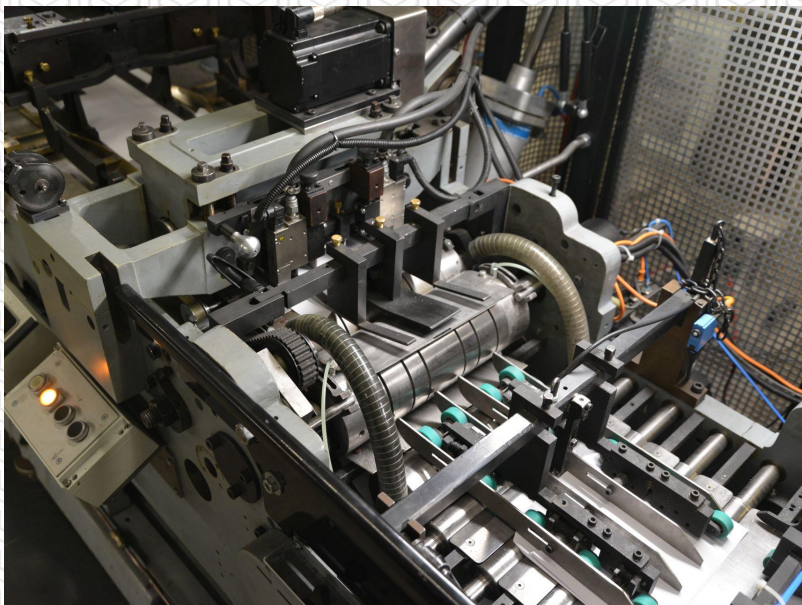
Remove the tower cross scoring section.
The machine is flat, easy to control production.



Increasing the speed of production

Improvement:

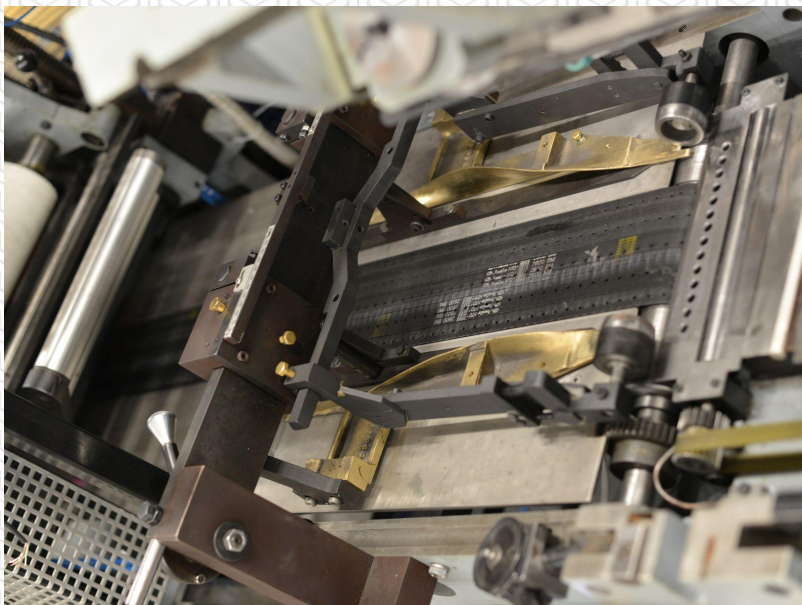
Change position cross scoring section. We changed the cross score enabling greater pressure to be applied.



Increasing the speed of production

Improvement:

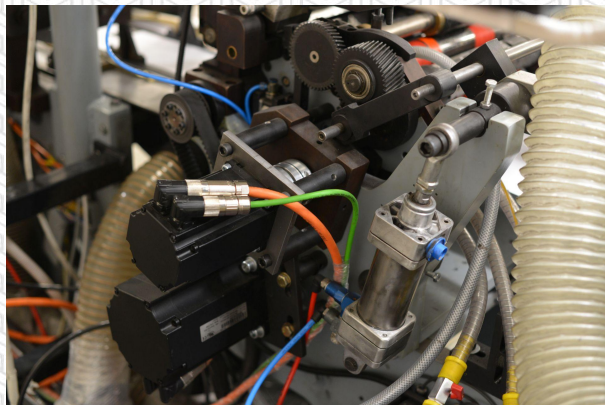
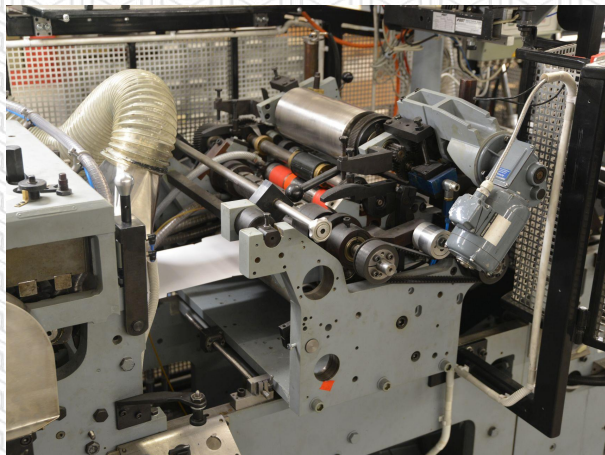
Installing a second suction cylinder within the bottom flap folding section. The folding is more stable and accurate.



Increasing the speed of production

Improvement:

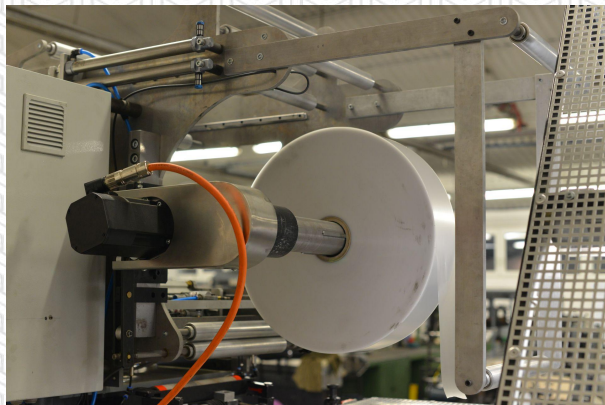
Tension of the paper web is achieved with suction Belts.



Increasing the speed of production

Improvement:

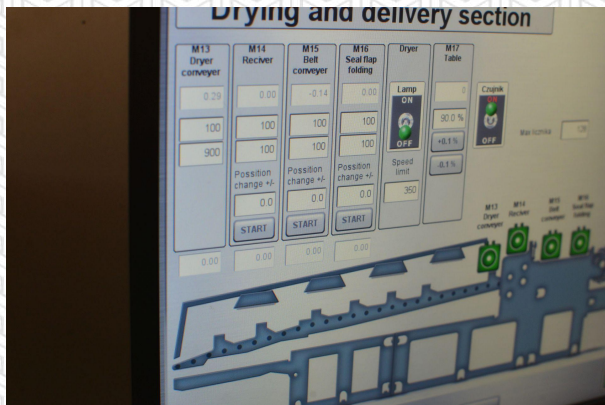
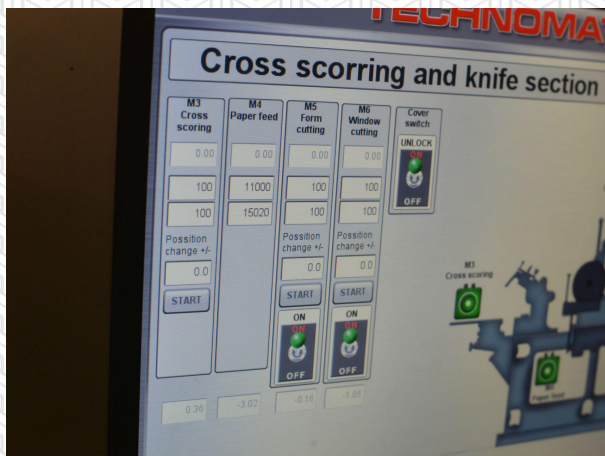
Adaptation of the window section from a 202 machine. With two servo more.



Increasing the speed of production

Improvement:

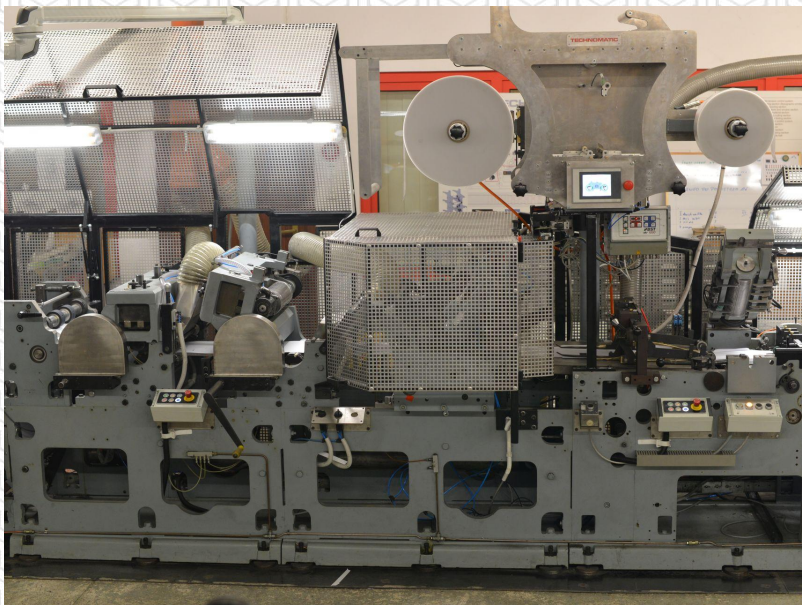
Automatic reel splicer for window material with web aligning system.
Servo and monitor for controls and information.



Reducing the number of production stops

Improvement:

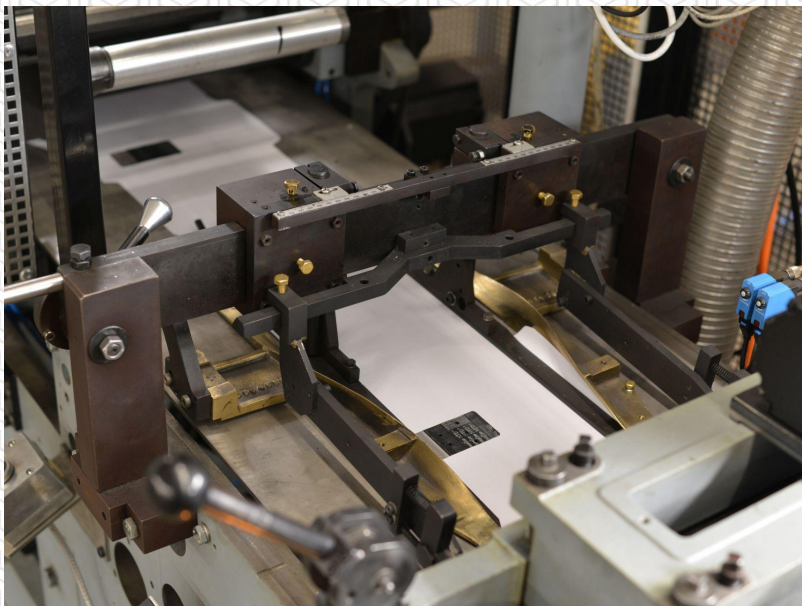
All of the cylinders are adjustable when the machine is running. Push button adjustment with an accuracy of 0.1 mm on 360°



Reducing the number of production stops

Improvement:

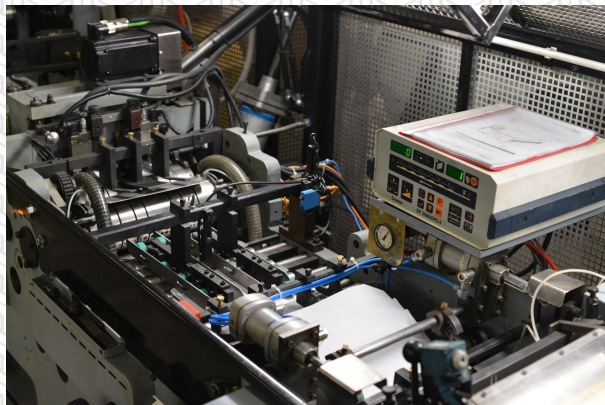
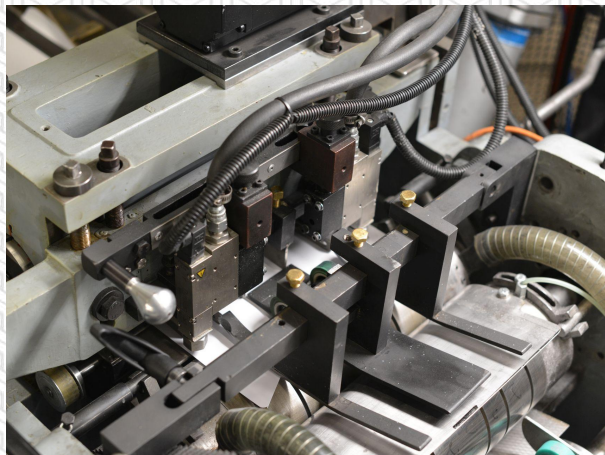
Reducing problems with the window knife.
Position of the knife changed to precede the format knife.



Reducing the number of production stops

Improvement:

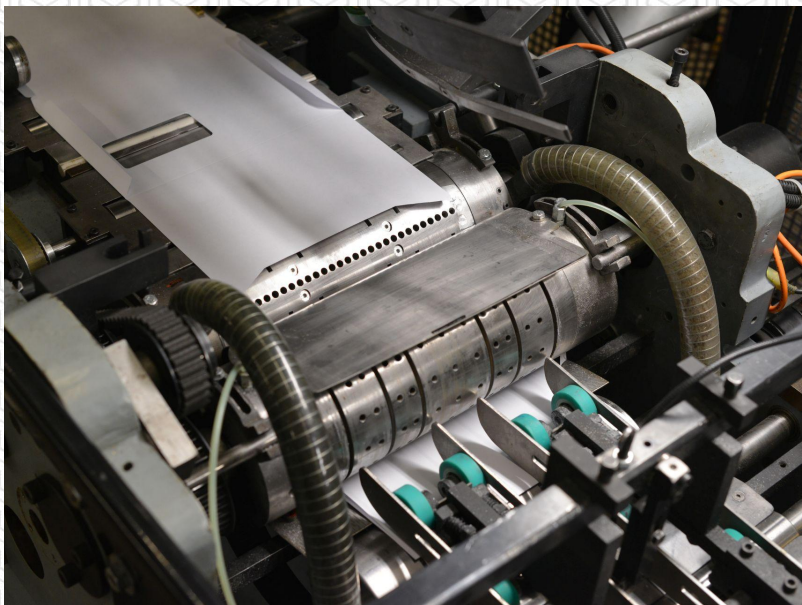
Reducing detachment problems of the window material due to the suction of the belt which maintains the position and adhesion of the window patching on paper web.



Reducing the number of production stops

Improvement:

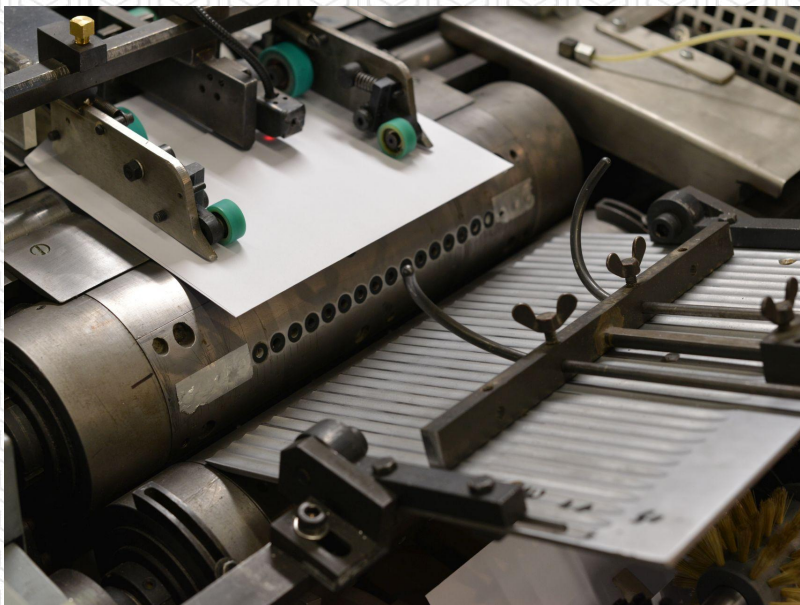
Reduced downtimes caused by the side flap glue under the separating knife, the guns are positioned after the knife, and just before the folding.
Reduced projections of glue along the machine bed.



Reducing the number of production stops

Improvement:

Reduction of problems associated with folding of the bottom flap through the modification of the suction system to include two cylinders.



Reducing the number of production stops

Improvement:

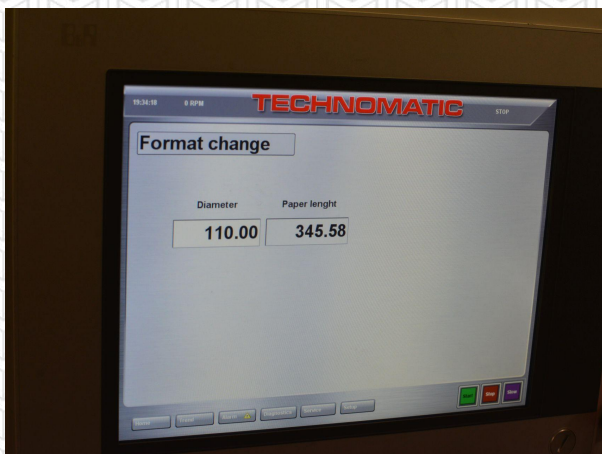
Changing the seal flap folding cylinders. The valves have been modified in order to give more vacuum where it is needed.

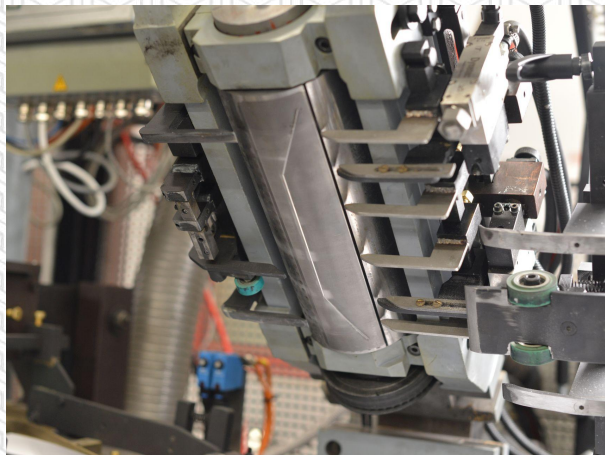


Reducing change-over times

Improvement:

The change of format is achieved quickly and easily with the 16 servos. You take control of your machine.





Reducing change-over times

Improvement:

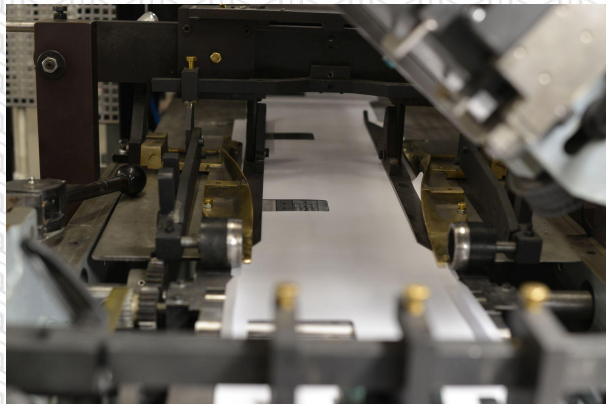
Possibility to change format with magnetic cylinders. Diameter 110 can be used with magnetic foils in order to change the shape and form to achieve the desired format through the smaller diameters (anamorphic cylinder).



Reducing change-over times

Improvement:

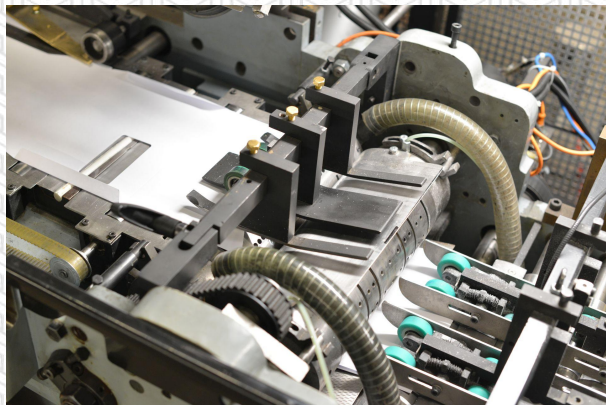
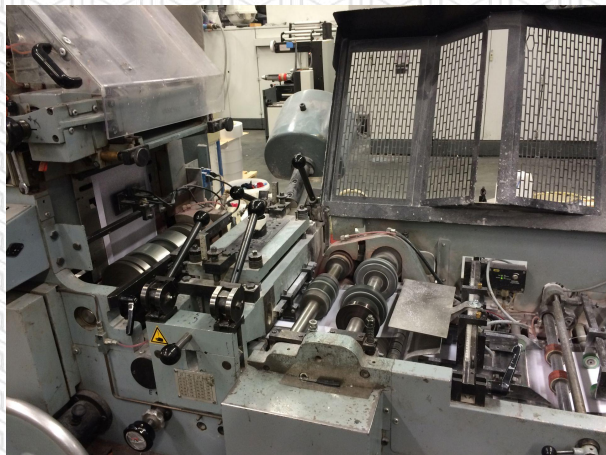
We have developed a flexible system for quick attachment to solve the problem of cross score cylinder. Printing section remains a problem.



Reducing Machine cleaning time

Improvement:

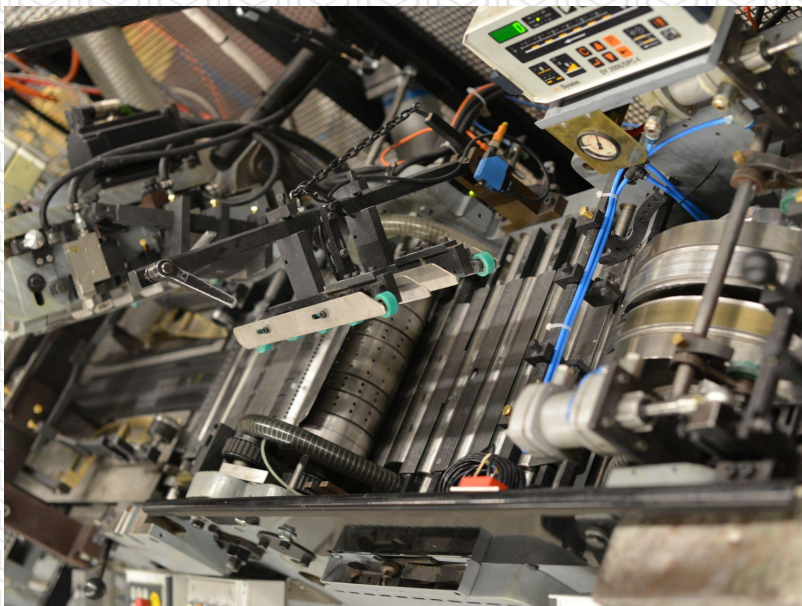
Removal of traction rollers, replaced by the suction belts.



Reducing Machine cleaning time

Improvement:

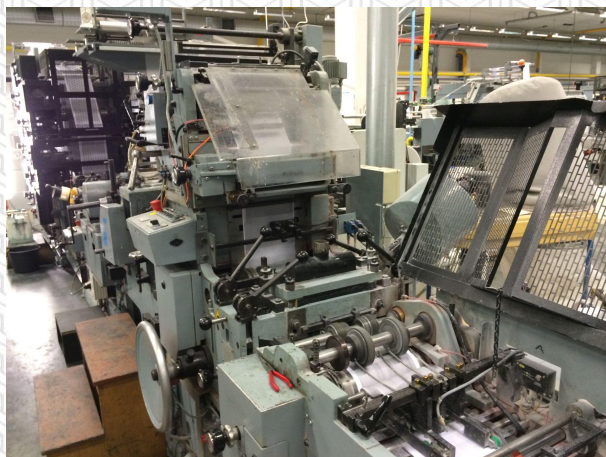
Removing separation rollers.



Reducing Machine cleaning time

Improvement:

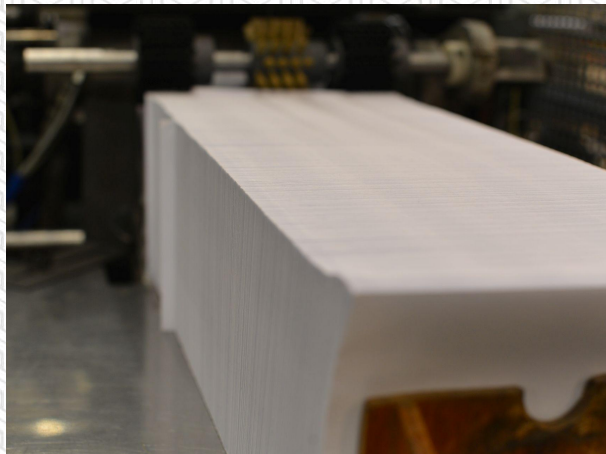
All guides and transport wheels are mobile for easy clean.



Streamlining the manufacturing progress

Improvement:

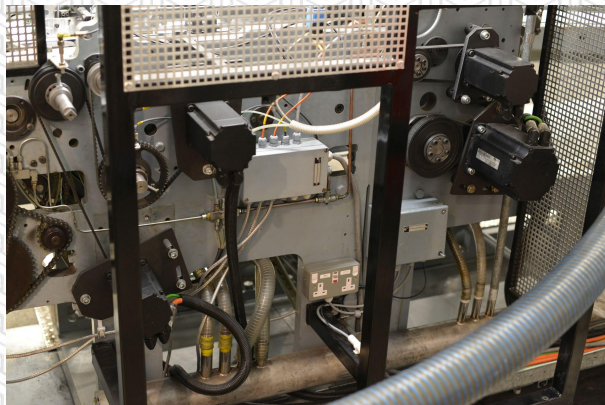
The distance between the knives and the folding of the bottom is considerably shortened and simplified.



Quality envelopes

Improvement:

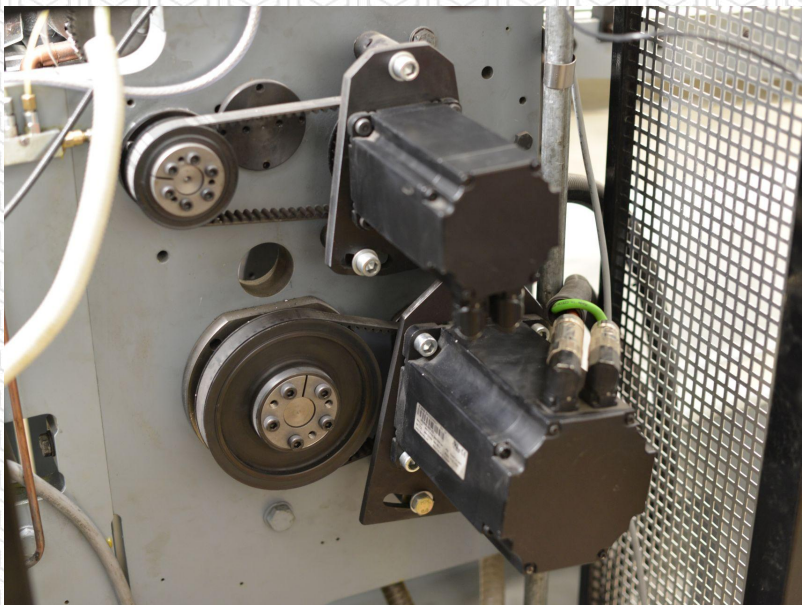
The quality of the envelopes is perfect, obtained by the precision of the servo, the mastery of the web tension and changing the cross score cylinder.



Quality envelopes

Improvement:

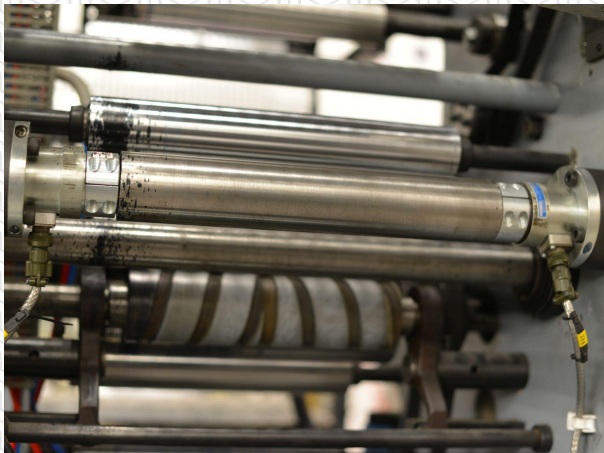
The precision of the servo. The 16 servo synchronization program is driven by a 17th which acts as the virtual zero on the machine with an accuracy of 4000 pulses per rotation, for a control of 0.09 degree per pulse.



Quality envelopes

Improvement:

To take advantage of the precision of the servo we reduce mechanical play by positioning the servos directly on axis with serrated belts.



Quality envelopes

Improvement:

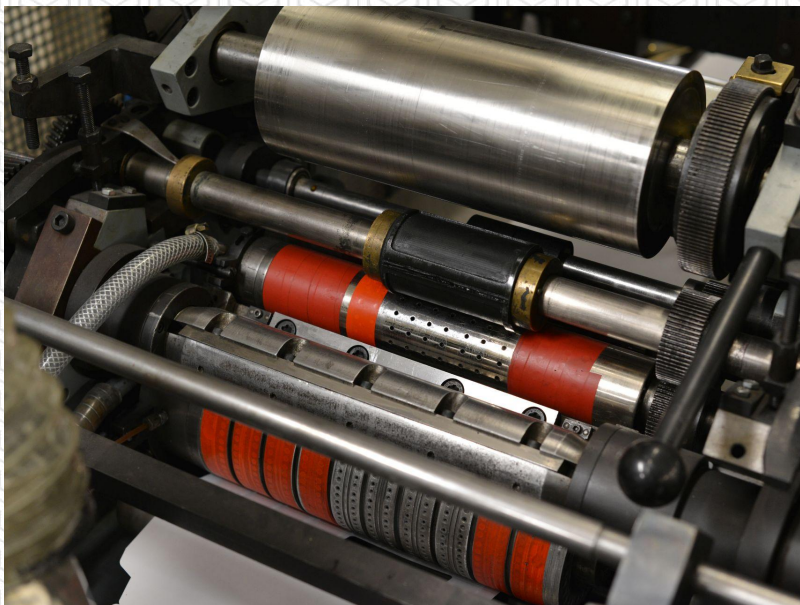
The control of web tension is achieved by three servos. A central reference synchronizes with the cross score knife. The second in the printing tower and the last which drives the vacuum belts. They are automatically control by tension sensors. Possibility of making pre-printed envelopes



Save paper and window materials

Improvement:

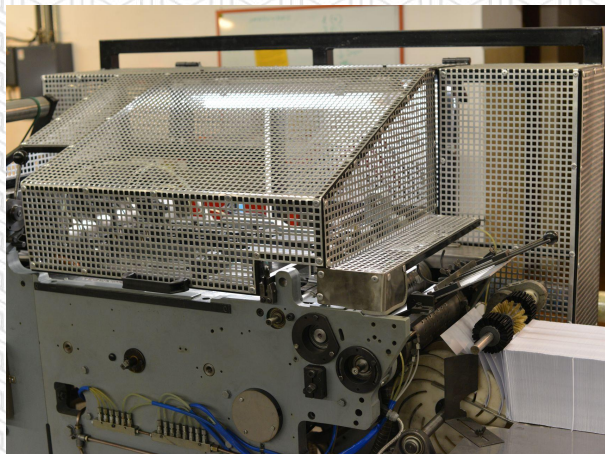
Easy to reduce 1 millimeter paper per envelope with the computer.



Save paper and window materials

Improvement:

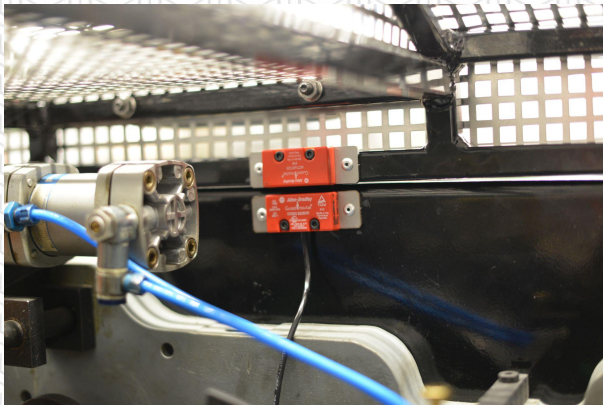
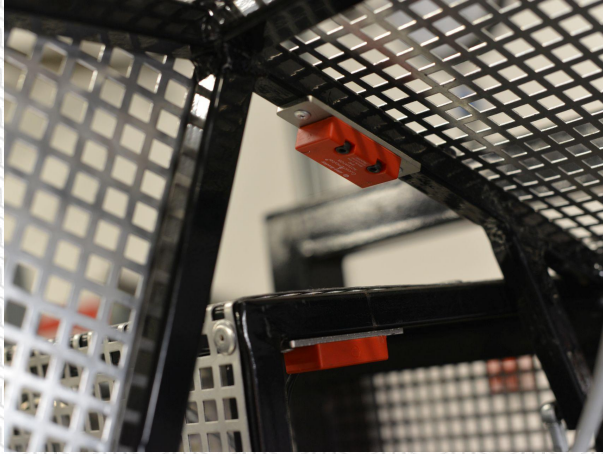
When you start the machine, the servo that controls the window patching section does not function. No loss of window material - when you press the button the servo synchronises automatically.



Safety

Improvement:

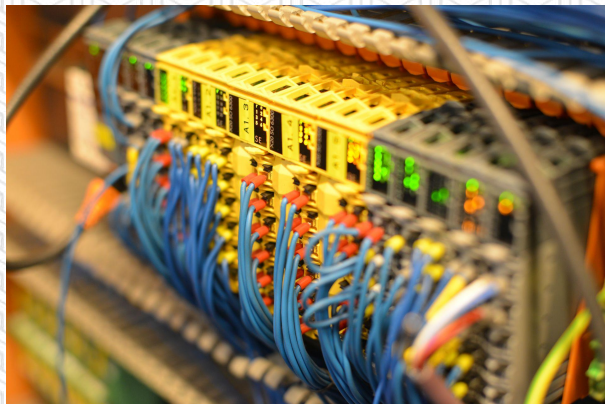
We make safety guards that protect the operators but also to enable efficient production. It's very complicated task to achieve!



Safety

Improvement:

The machine complies with European standards. The safety guards are equipped with magnetic sensor code.

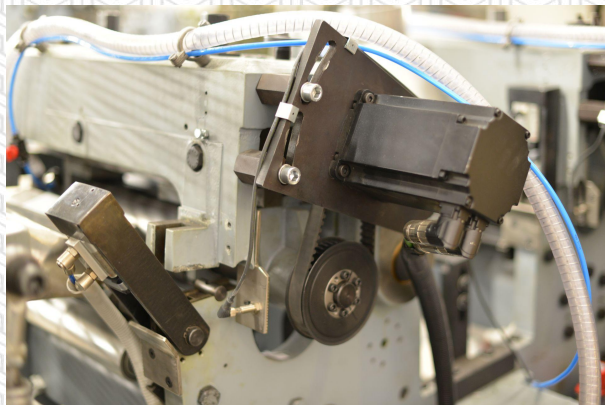
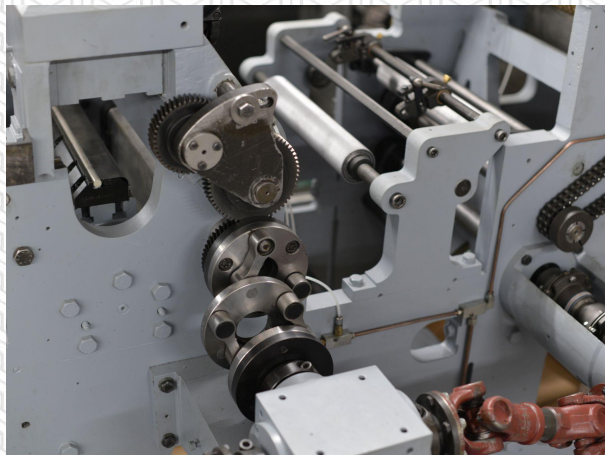


Safety

Improvement:

The program is the electronics (digital module Safety) and permits the power off of all electrical motors in the event of pressure on an emergency stop or the opening of a safety guards when the machine is running.

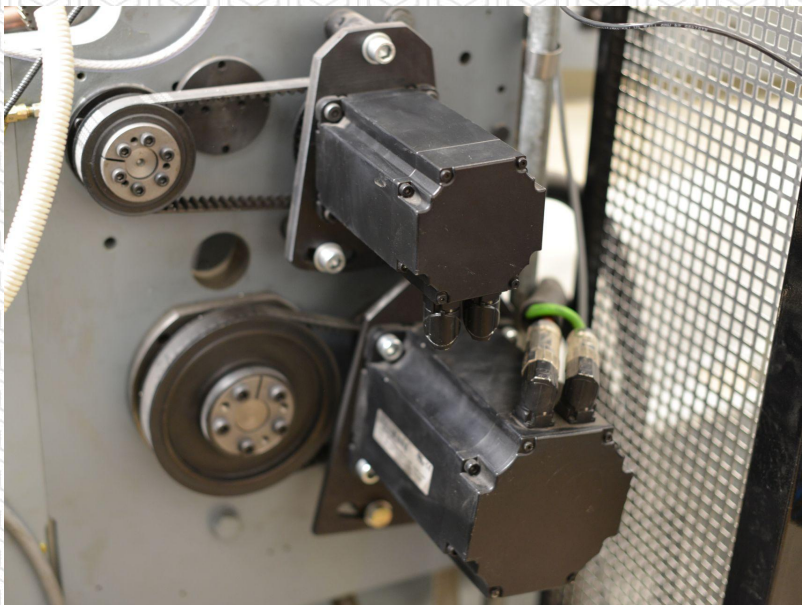




Maintenance

Improvement:

Reducing maintenance costs is achieved simply by removing the clutch system, engine brake, universal joints, gearboxes and 90 gears.



Maintenance

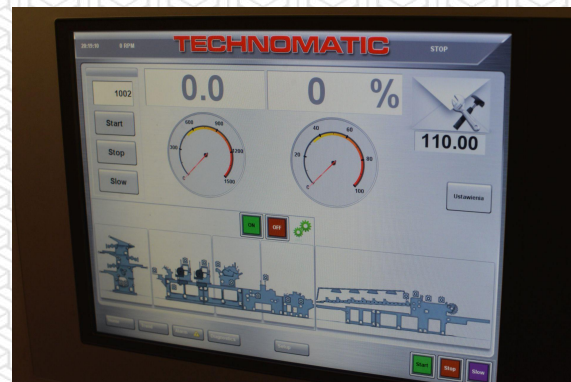
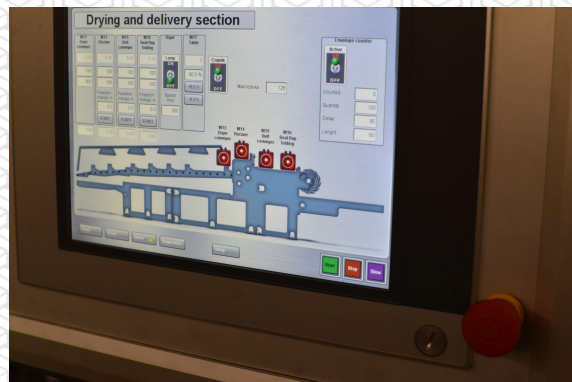
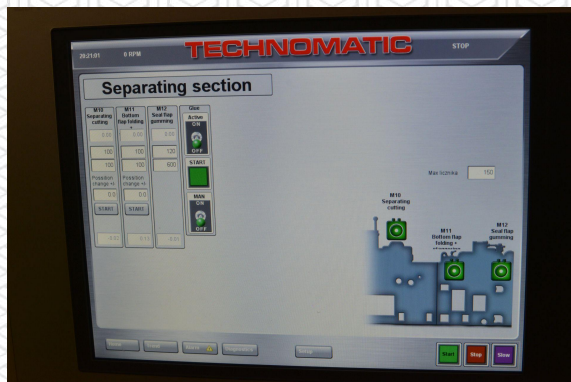
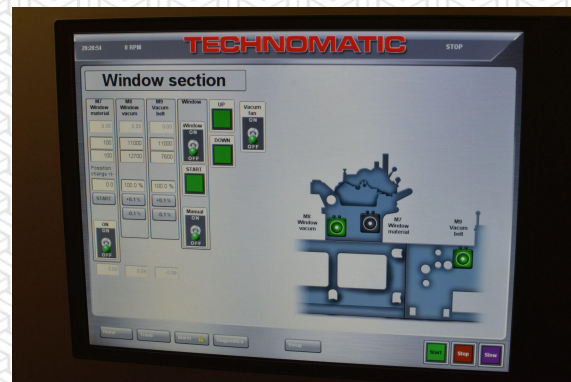
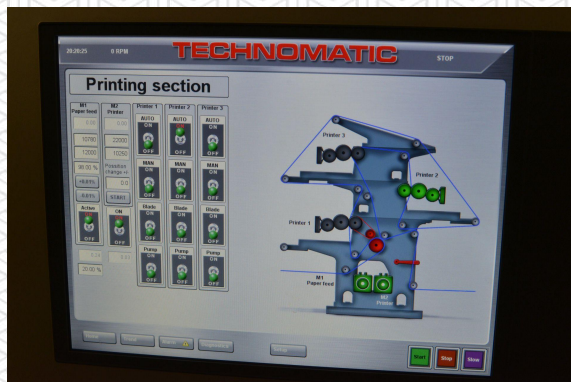
Improvement:

Reducing cost of spares holding. The machine is equipped with only two types of servo motors, the pulleys and serrated belts are standard configuration



Program

Improvement:
Easy and functional





Conditions:

Order will only accepted when covered by a bank warranty.
The mentioned prices are without taxes and VAT.
Transport machine costs are not included.

Payment conditions:

50% by order in written covered by Technomatic with a bank guaranty.
30% before shipping.
20% after installation and put into production.

The costs for unloading and internal movements are excluded in this proposal and must be arranged by the customer, at his own costs.

Installation and training

Directly after installation of the machine, we will train your operators. We expect to have the operators and the installation, including test paper, available for training. After this training the operators will be able to operate the machine independently.

Delivery time and guarantee

The duration of the guarantee is limited to 12 months on the B&R product and 12 months on the Technomatic products after installation.

Guarantee is only valid if the installation is used by trained operators.



TECHNOMATIC
CONCEPT

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