



FD 432 Envelope Sealer

OPERATOR, MAINTENANCE,
& PARTS MANUAL

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2 Safety Instructions

2.1 Symbols and Reference Key

Symbols: Assembly by qualified personnel in accordance with instructions.

Please note the following symbols and references. They are divided up into safety steps and are classified under ISO 3864-2.

DANGER



This means there is an immediate threatening danger.

When instructions have not been followed, death or serious injury can be caused.

WARNING



This means there is a potentially dangerous situation.

When the instructions have not been followed, death or serious injury can be caused.

CAUTION



This means there is a potentially dangerous situation. When the instructions have not been followed, damage to objects as well as little or minor harm to the body can be caused.

INFORMATION



This means general advice: useful operator tips and operating recommendations which do not affect the safety and health of personnel.

2.2 Basic Safety Precautions



Before use :

Please read this instruction booklet thoroughly.

Important advice regarding the use, safety and the warranty of the machine is given. The machine is radio-screened and complies with technical specifications.

This instruction booklet allows the user to set up and operate this Envelope Sealing Machine safely. The instructions and especially the safety precautions should be respected by all who use this Envelope Sealing Machine.

The operating instructions must always be kept near the Envelope Sealer .



Should the Envelope Sealing Machine be used for any other purpose than the one for which it was intended, used incorrectly or subjected to bad repair or maintenance, no liability for any damages can be guaranteed!

2.3 Safety Advice



Caution when on standby

—> **The machine should be turned off when :**

- ♦ placing the water reservoir on the moistening arm
- ♦ setting the guide plate and pile angle for size
- ♦ replacing worn parts with new ones
- ♦ the machine is jammed (such as an envelope or belt track jam)



WARNING

The Envelope Sealing Machine must not be used:

- ♦ in wet or damp areas.
- ♦ in temperatures below 10°C or over 50°C
- ♦ in areas containing highly flammable material
- ♦ in areas with explosive material
- ♦ in very dirty or dusty environments
- ♦ in corrosive environments (e.g. where the air has a high salt content)



Safety instructions when the machine is on or in use:

- ♦ do not carry out any manipulations
- ♦ do not touch the conveyor belt
- ♦ do not put your hands on the transport system and the sealer table
- ♦ Keep hands, long hair or dangling jewellery etc. away from the feed and moving parts .

3 Description of the Envelope Sealing Machine

3.1 General Information

The fully automated FD 432 Envelope Sealer seals all standard envelopes up to 9.75" W x 15" L with flaps on the long or short side quickly and accurately.

This machine allows for swift handling of your outgoing mail, thanks to the outstanding closing mechanism. It is easy to install and use even in the smallest spaces. The automatic function requires no manual opening of the flaps.

3.2 Description of Functions

A large water reservoir with a controlled water level and automatic level regulator make sure there is a steady supply of water to the moistening tank. The moistening roller is self-cleaning and the moisture level is variable.

The speed is adjustable from 0-100% using the knob.

4 Set up

4.1 Transportation / Moving

When moving the Envelope Sealing Machine first you must remove the water reservoir and empty it of water with the suction rubber bulb.

Remove the format slide from the machine.

Place the basin at the front between the underside and conveyor belt with bubble wrap or something similar.



If possible use the original packaging when moving or transporting.

4.2 Using the Envelope Sealing Machine

1. The Envelope Sealing Machine must be placed on a level and solid base.
2. The Envelope Sealing Machine must be connected to a grounded outlet (2-pin plus ground) 115VAC.



When setting up, the machine must always be turned off (the warning light must not be blinking!)

3. The machine can be centered by adjusting the two rear machine feet using circular bubble level on the basin arm (see page 15).
4. Check whether the circular bubble level has moved. If necessary, adjust the machine feet again.
5. The water reservoir bottle must be filled with tap water. If the bottle were to tip over quickly the valve closes off the water.



In hard water areas add 4 to 5 drops of cleaning fluid. This way you will have a equally smooth and spot-free liquid!

6. The moistening basin arm should be topped up to the limit and the water reservoir bottle (neck down) inserted into this position inside the ring of the moistening basin arm until the neck completely rests inside.
7. The water must now reach the far end of the moistening roller. Check for the optimal wetness manually when turning the moistening roller.



The correct amount of water will now automatically be supplied to the moistening roller from the transparent water reservoir bottle via vacuum effect.



The suction rubber bulb is used to check the water level and to empty the moisture basin.

8. Insert the infeed tray support pins in both guides and secure it by the two thumbscrews into the desired position.

When carrying out maintenance or moving the machine, the water basin arm and reservoir bottle must be completely emptied:

1. The moisture basin arm must be topped up and the water reservoir taken out of the ring-shaped holder .
2. The rest of the water in the moistening tank can be removed out via the rubber bulb through the ring-shaped hole and the moisture basin. Water level will slowly go down.



In this way the water compartment is shut off and the machine parts connected to electric power cannot come into contact.

4.3 Power supply

The operating voltage required is as specified below:

115VAC, 50/60Hz, 150W



No switching of the main voltage necessary!

5. Instructions for use

5.1 Standard use

- ◆ Switch on with the main toggle switch next to the power cord input.
- ◆ Turn the rotary control switch to approx. 70% (position 7).
- ◆ Set the five transport rollers by moving the axis of its lever arms in the areas along the back side as close as possible to the envelope flap.



The flaps may under no circumstances pass under the feed rollers!

In this way both narrow and wider envelopes with long flaps can be transported and closed effortlessly.

- ◆ Place all the envelopes of the same width together, place the flaps all on the same side.
- ◆ The infeed tray support should be positioned with an additional 2mm space around the edge of the envelope and for longer formats they should open to the left.
- ◆ Place the pile angles in the receiving tray according to the envelope size set.
- ◆ With the left hand take a stack of envelopes, all with the same side facing up and the envelopes staggered up towards the back.



Only place the letter stack on when the conveyor belt is running so that the lowest envelope is always taken first!

- ◆ Take the sealed envelopes out of the stack and press the top flap lightly.
- ◆ More stacks of letters can be added during running.
- ◆ When idle, adjust the speed control using the rotary knob to position "0" and if necessary, turn the machine off completely.

5.2 Setting up and regulating the basin

The correct water level for the moistening rollers is controlled by circular levels on the moisture basin by raising or lowering the two rear machine feet.

Once the water reservoir bottle has been filled, it must be inserted into the ring of moisture basin so that the water reaches the top of the moisture roller, adjustable by turning the rollers.

See also Paragraph 4.2, points 3...8

The water level in the moistening rollers is properly regulated, when it does not reach the basin edge. By slow aspiration with the suction rubber bulb from the top of the moistening roller a correct continued flow of water from the reservoir is controlled. The moistening roller top must always be in the water.

If the water level in the moistening rollers is too high, the mechanism must be placed deeper and if the water level is too low, the mechanism must be positioned higher, again by adjusting the two rear machine feet.

When the correct water level is set - also, for example, when replacing the moisture tank - the circular level is recorded by means of its three fixing screws and therefore the right water level is retained.

Despite correct regulation of the water level in moisture basin, the water may overflow when the moistening rollers are in use.

This may be due to a leaking water reservoir bottle (no longer airtight, e.g. as a result of a crack). Thus, the required vacuum in the plastic container is no longer present, and hence the water flows constantly into the moisture tank and over-flows at the moistening rollers.

In this case the water reservoir bottle has to be replaced!

5.3 Regulating the moistening of the envelope flap

Depending on the quality of the paper, the shape of the flap and the flap adhesive, a lighter or stronger moistening of the flap may be required for sealing.

To regulate the moistening, the black knurled nut must be turned laterally on the moistening line.

A quarter turn clockwise results in a lighter wetting, a quarter turn counterclockwise results in a stronger wetting.

The ideal processing speed can be adjusted with the rotary knob adjustment from 0 ... 100% (range 0 ... 10).

Depending on the size and contents of the envelopes, the speed should be selected so that the envelopes can be properly ejected and stacked.

5.4 Tuning and adjusting the conveyor belt

The lateral end of the conveyor belt on both rubber rollers is adjustable by means of two screws on the rear panel. By turning the screws during use to the right, the belt runs forward. By turning the screws during use to the left, the belt runs backwards.

The conveyor belt is properly controlled during the operation, provided that its leading edge matches the front edges of the two belt rollers.

5.5 Piling feature

The FD 432 seals both normally stacked envelopes (see picture 1, page 14) as well as nested envelopes (see picture 2, page 14)!

CAUTION !



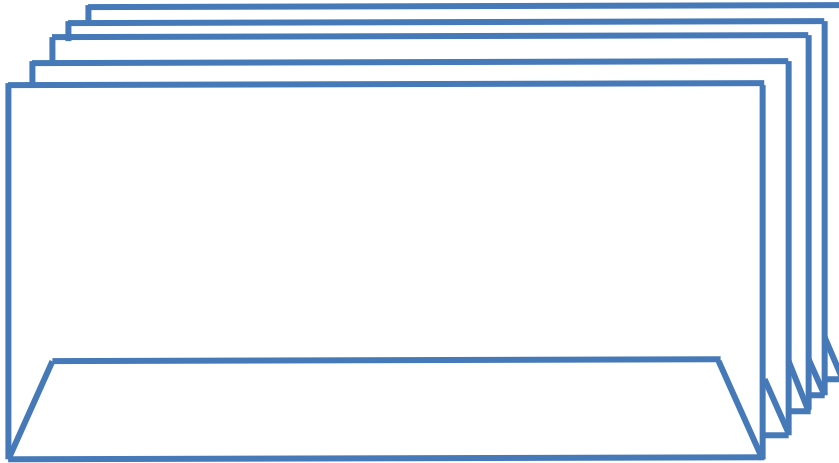
Do not touch once the conveyor belt is running! Do not rest your hands on the machine! Take care with long hair or dangling jewellery when near the conveyor belt system!



The format slide must not be placed perpendicular, this way the interleaved envelopes can be processed properly.

Normally stacked envelopes:

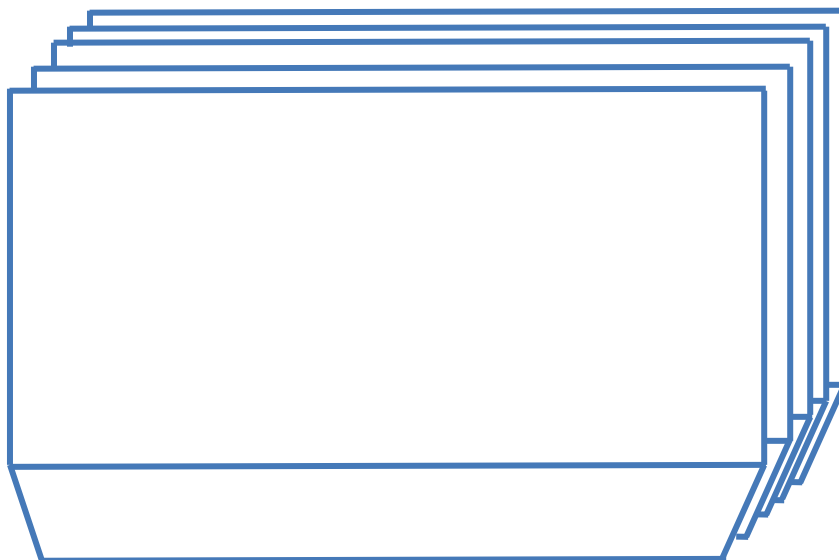
>>>>>>>>>>>>> direction of processing



Picture 1

Nested envelopes:

>>>>>>>>>>>>> direction of processing



Picture 2

Adjusting & Leveling Moistening Basin Support Arm



Fig. 1

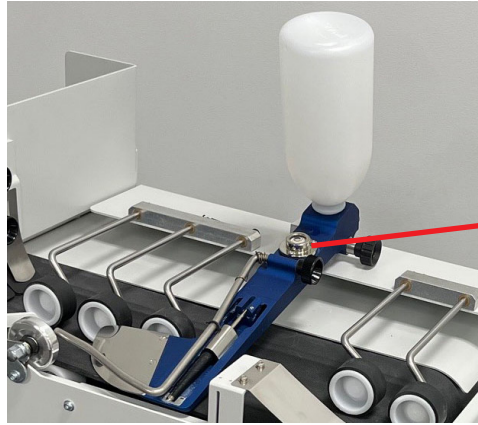


Fig. 2

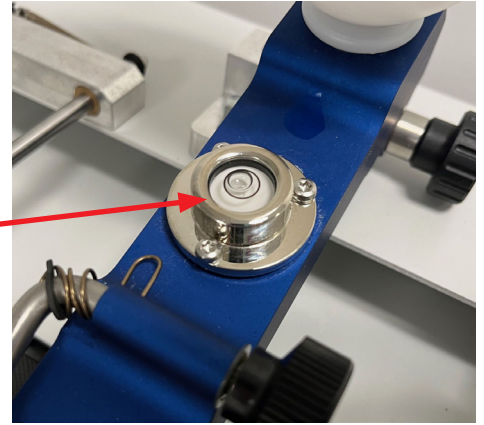


Fig. 3

To ensure the moistening basin support arm functions properly, you must level the machine. Adjust both leveling feet on the back side, loosening the ring to adjust. (fig. 1).

Check the bubble level on the basin support arm to see when the unit is level (fig. 2 and 3). Tighten rings on feet.

Adjusting Envelope Separator Plate



Fig. 4

To adjust the envelope separator plate, loosen either of the knobs slightly and shift the separator plate unit up or down (fig. 4). Adjust the position based on envelope thickness until it feeds a single envelope at a time.

6. Servicing and Maintenance



The machine should be covered after use with the protective cover so that the rubber parts are not damaged by external light, sun and heat sources!



First, unplug the power cord from the wall.

Then:

- ♦ *Open or unscrew the electronic converging for maintenance work.*
- ♦ *Replace the fine-wire fuse in the main rocker switch (miniature fuse 5 x 20 mm).*
- ♦ *Cleaning and maintenance work*
- ♦ *Damage to the power cable (to be replaced immediately)*
- ♦ *Short circuit or other electrical faults (consult your Formax authorized technician)*



Only original spare parts must be used. For maintenance and repair, contact your Formax dealer. Not properly carrying out repairs or maintenance may lead to the user putting himself in considerable danger!

6.1 Cleaning

The **conveyor belt** should be cleaned externally from time to time with a roller cleaning agent, (as for all printers) and a lint-free cloth.



In this way a good adhesion and continual letter transportation is guaranteed.

The **moisture tank** must be unscrewed with the axis from the star grip for cleaning and rinsed under running water.



It is important to make sure that the moisture tank is not deformed. It should rotate on its axis freely!

6.2 Replacing the conveyor belt

1. Remove the first format slide (left), loosen the front left thumb screw M5x18.
2. Remove the second receiving tray box (right) at the rear 2xM6 with a knurled nut, remove 2xM6 spring washers and 2x M6 body discs.
3. Remove basin (loosen large star grip M10 to the right)
4. At the separating wall, loosen and remove the spring pressure plate with separating rubbers and belt.
5. On the front wall to the left loosen M5x20 screw and U disc M5 (approximately 6-8 mm).
6. On the front panel loosen first the 2 M6x16 screws on the left and right (left: through hole in top side panel, right at receiving tray).
7. Tilt the front panel slightly forward, remove the left side cover, or in IR plate tilt to the left (hanging with IR sensor on the cable).
8. Remove body screws plus body discs completely M6x16 from the front panel and pull the front panel forward.
9. Pull off the cogged belt right over pulley clockwise with a little effort.
10. Remove conveyor belt on both sides pulling forward over the drive rollers.
11. First place new conveyor belt right over the drive roller 5 cm, then left place over roll, drive both back until the belt at the edge of the belt rolls. Now with light pressure push right behind the drive pulley conveyor rollers (leave space for cogged belt)
12. Insert cogged belt on the pulley to the right (rotate counterclockwise in the pulley-groove)
13. Replace front panel (support rollers under the belt)
14. Replace 2 M6x16 fixing screws, on the left with 3 body discs and on the right with 1 body disc, do not tighten fully! yet
15. Tilt the front panel slightly forward, hook left side panel on
16. Fix the front panel to the left and right well with M6x16 screws.
17. On the dividing panel (left) fix with M5x20 screws and M5 discs.



Make sure that the front wall is in line with the main body and the side cover is level with the front!

18. Assemble belt, separating rubbers and spring pressure plate on the panel, tighten with a knurled nut M5 and fix firmly with disc M5.
19. Replace the basin in the stand, tighten star grip M10 (fully).
20. Slide format slide into place on the left and secure with M5x18 screw.
21. Replace receiving tray with one body disc M6, a M6 spring disc and knurled nut M6 on the back.

6.3 Replacing the conveyor roller rubber rings

Depending on the degree of wear, these rubber rings of the conveyor rollers should be replaced regularly. Always replace all 5 rubber rings at the same time!

These rubber rings can be easily removed by hand by raising the conveyor rollers.

6.4 Replacing the separating rubbers

Depending on the degree of wear, the separating rubbers should be changed regularly. Always replace together with the transparent plastic belt!

The separating rubber is removed by unscrewing the knurled nut on the side panel.



When inserting, make sure that the transparent plastic belt is put in first.

6.5 Replacing the moistening rubber

Depending on the degree of wear, moistening rubbers should be replaced. This should always be completed by replacing the axel and square top.



When inserting, make sure that the square top touches the inner square of the axis so that the axis can not rotate!

6.6 Replacing the switching unit

The new (grid) toggle switch is in two parts; toggle lever and the plugged switching unit with connectors (250V/10A).

To disassemble and replace the switching unit, first the blade receptacles must be removed. Then push the switching unit from inside out and remove. The new switching unit need only be pressed on until it snaps into place and the connections plugged in.

6.7 Maintenance of the motor drive system

The motor drive system is basically maintenance free! The drive has automatic belt tension and a safety clutch.

If the mechanism is defective, the motor or the timing belt needs to be replaced!



Consult a technician or authorised representative!

6.8 Replacing of the fuse

The fuse is located in the main rocker switch. Can be opened with a small screw driver. Remove the blown fuse and insert the new fuse according to the marked specification (miniature fuse 5x20mm, 230VAC / 1.6A).

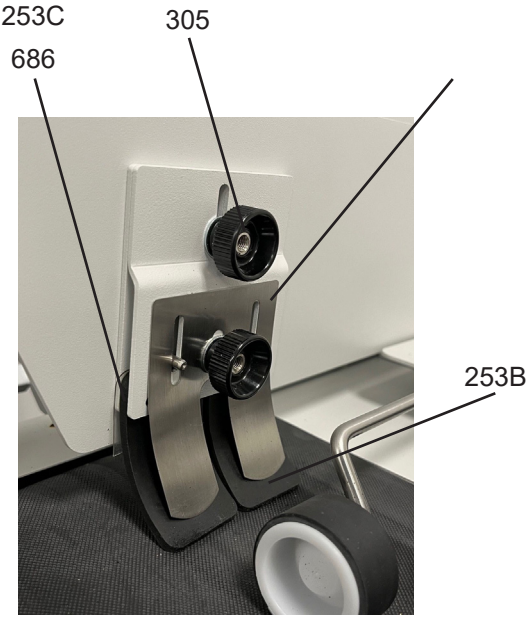
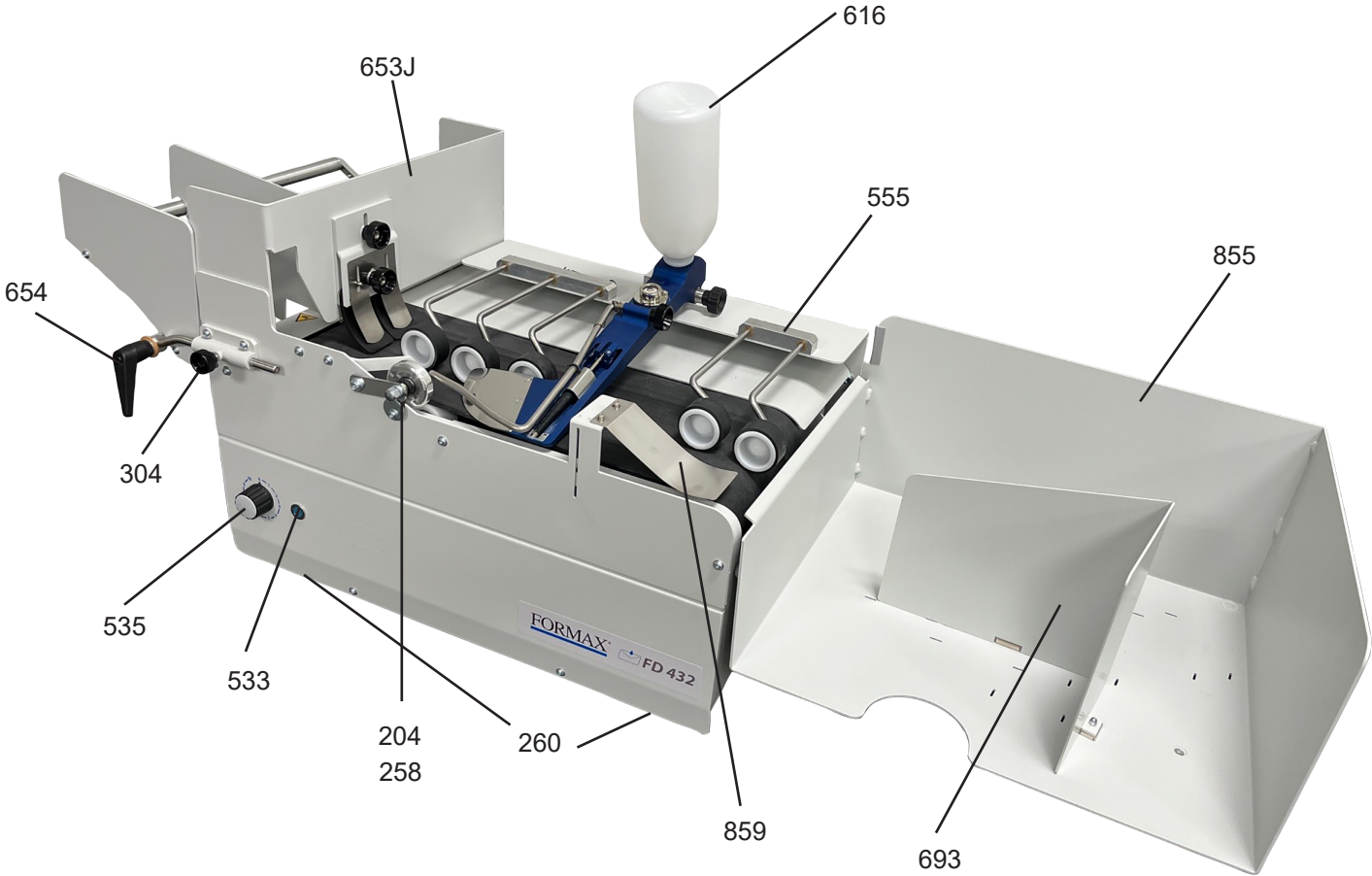


On delivery a spare fuse is located on the back of the machine body next to the type plate!

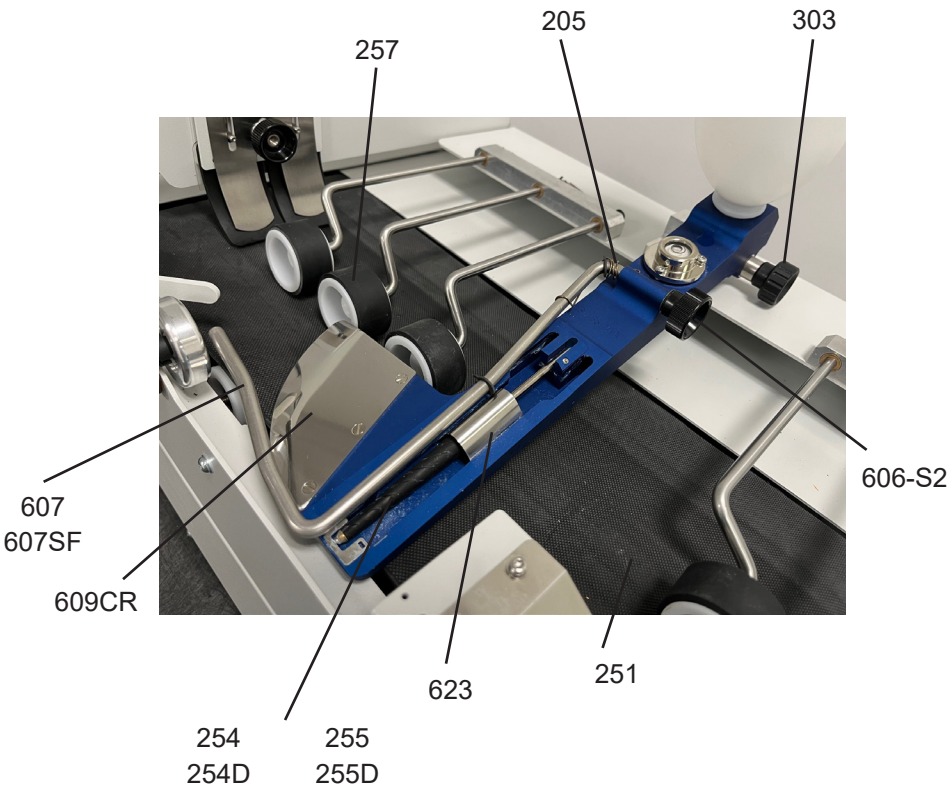
7. Disposal

An Envelope Sealing Machine that is no longer usable should not be disposed of as a single part, rather in different sections depending on the material and then dismantled and recycled. Non recyclable parts should be disposed of correctly.

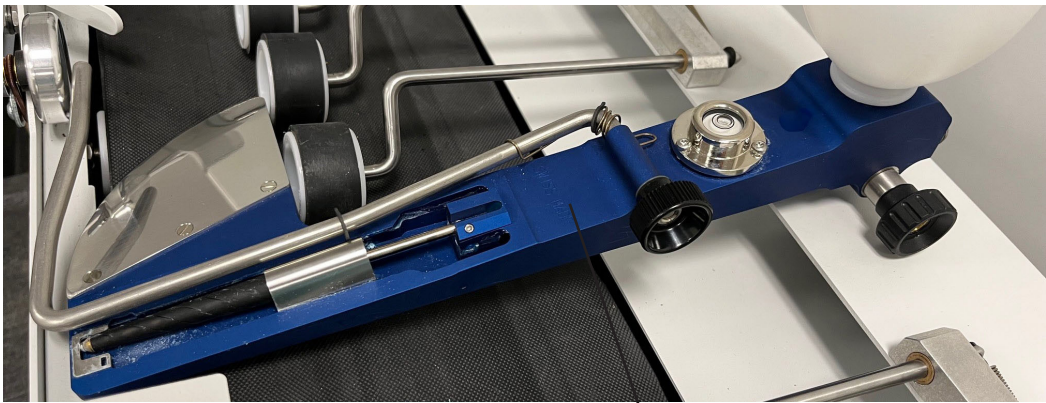
PARTS



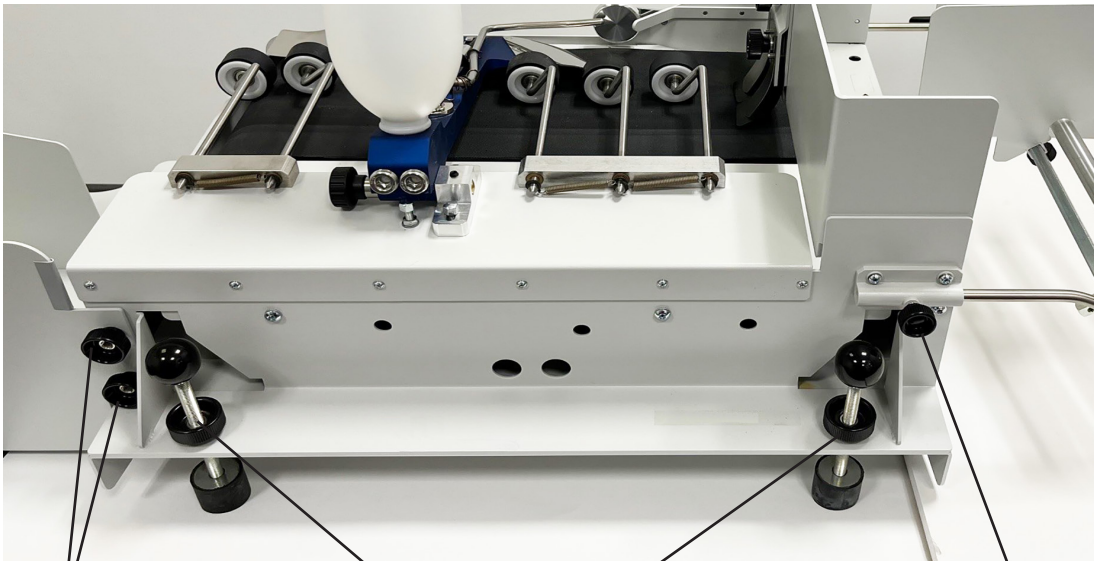
252 Assembly



PARTS



FD 430-10



306

325

304



272



Also Included: Power Cable

PARTS

PART NO.	DESCRIPTION
204	Tension spring 0.70mm stainless for flaps feeding roller
205	Torsion spring d=0.90mm stainless for flaps feeding bar on moistening basin arm
251	Rubber conveyor belt
252	Envelope separator, rubber with slide plastic sheet (253B)
253B	Slide plastic sheet, black
253C	Slide plastic sheet, transparent
254	Moistening roller - short, with long extension
255	Mostening double roller 120mm, with shaft and short extension
254D	Extension to moistening roller, part #254
255D	Extension to moistening roller, part #255
256	V-ribbed motor belt
257	Rubber ring, wide, for flaps feeding roller, 30x37mm, D=19.5mm, 0.8mm stark
258	Rubber ring, narrow, for flaps feeding roller
260	Equipment foot, front
272	Rubber suction bulb
304	Knurled head nut M5x10mm for infeed slider
305	Knurled head screw M5 for envelope pressure plate/rubber separator
306	Knurled head nut M6 for catch tray, diameter 24mm
325	Knurled head nut M8 for leveling foot screws
606-S2	Axis with star knob for basin arm
523	Permanent DC motor 24VDC/40W, 3500 RPM, single worm gear, 7:1, w/o pulley
531	Motor carbon brush 5/6mm with spiral spring (set of 2 pieces)
528	Motor pulley, d=55/10mm
529	PWM DC power control 9-28V, 10A max.
521	150W single output switching power supply, 24V/6.5A
533	LED signal, blue, 24VAC/DC
535	Potentiometer 5k Ohm, 0.5W, linear, carbon, fully wired
555	Conveyor roller complete with shaft, d=6mm and rubber ring #257
604M	Moistening basin arm with short moistening roller and complete shaft
FD 430-10	Complete moistening basin arm with long two-piece roller and shaft
607	Flap feeding bar to part #604, respo 605 with knurled nut M6
607SF	Flap feeding bar, special square flap to part #604 resp. 605 with knurled nut M6
609CR	Flap feeding plate standard with 3 screws for moistening basin arm
616	Water reservoir bottle, transparent with valve, vacuum system
623	Stainless steel cover for moistening roller against centrifugal water
653J	Infeed tray format slide complete
654	Fixing lever, black
686	Slide bearing brush for format slide
693	Pile angle stacker for receiving tray, magnetic
855	Receiving tray, 391 x 326 x 190mm, without pile angle stacker
859	Flap pressure plate

9. FD 342

Technical Data

Speed	Up to 18,000 envelopes per hour
Infeed Capacity	Up to 4.5" stack height* (114mm)
Outfeed Capacity	Up to 4.5" stack height* (114mm)
Media Size	Up to 13" W (330mm) Up to 15" L (381mm)
Envelope Flap Length	Standard: up to 2.75" (70mm) Extended: up to 4" (102mm) (w/optional extended sealing kit)
Envelope Thickness	Up to 15mm
Dimensions (including catch tray)	43.7" L x 14.3" H x 17.7" D (111 x 36 x 45cm)
Weight	71 lbs (32kg)
Power	110V, 60Hz
Safety Certification	CE