

# Automatic Surface Tape Applicator (ASTA) Model V2A-03



Installation and Operating Instructions  
2/18/03



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# INSTALLATION AND OPERATING INSTRUCTIONS

The Automatic Surface Tape Applicator (ASTA) increases optical labs' productivity by efficiently taping the front side of lenses before surfacing. The process from load to removal is approximately 12 seconds, allowing labs to tape up to 300 pair of lenses a hour. The ASTA offers dual lens operation as well as right or left lens operation for flexibility. It will use any type of surface saver tape with or without a liner.

## Safety Precautions

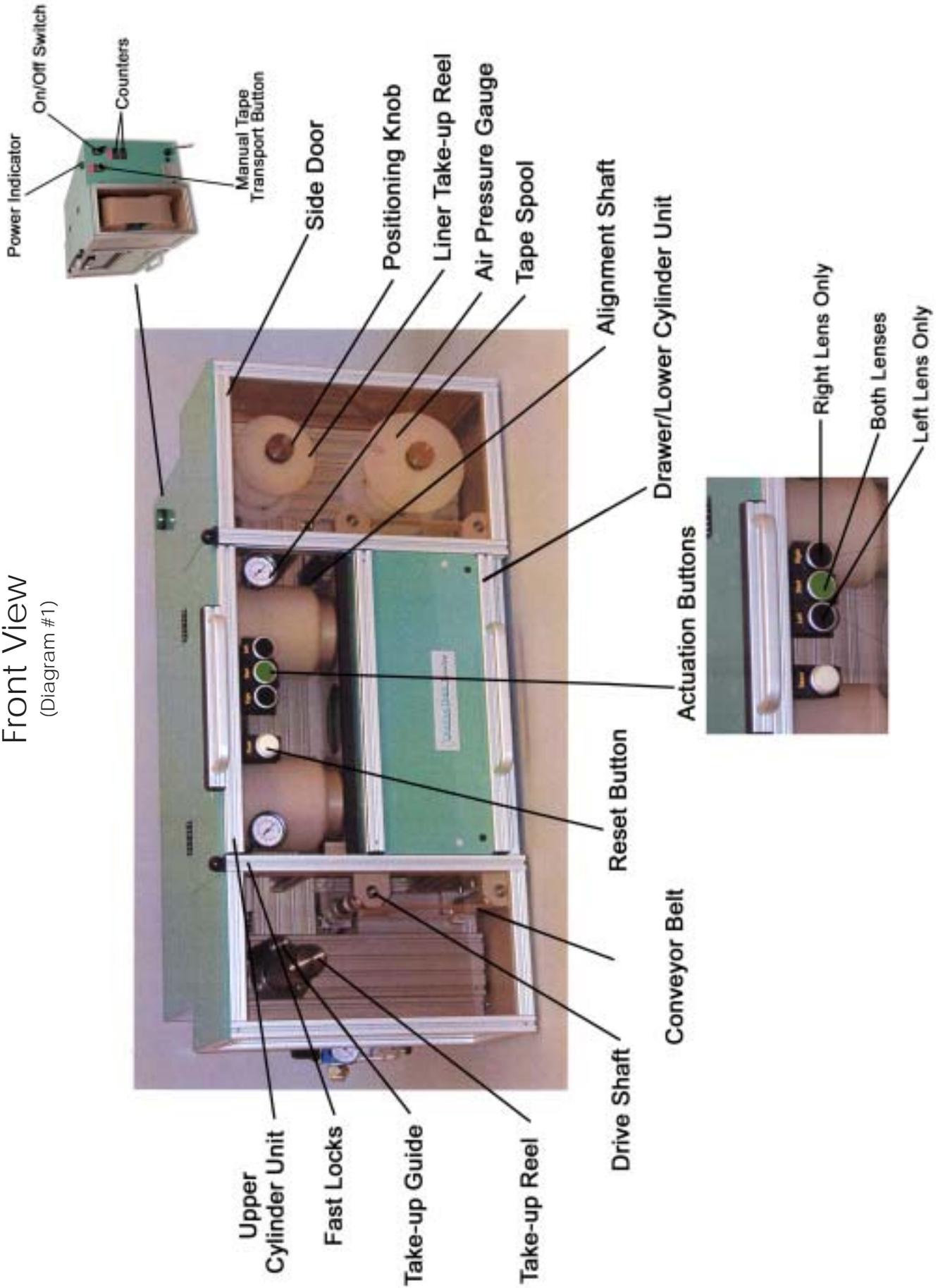
- Never attempt to operate this machine before you have thoroughly read and understand all the instructions. Keep this users manual on hand and review it frequently to ensure continued safe operation.
- Turn off the electrical and air connections before providing maintenance or repairs on the machine.
- The applicator is driven by electrical and pneumatic power.
- The machine will only operate when the upper lid is closed.
- The Manufacturer does not assume any responsibility or liability for any damages caused by negligence or ignorance of the precautions in this manual or use of the machine for any purpose other than applying surface tape to optical lenses. Inappropriate use, installation or maintenance will render the warranty null and void.
- Make sure the ASTA is placed on a stable, vibration-free table at an operator friendly working height.
- The ASTA should only be operated by trained staff who have read the operating manual and are at least 16 years of age.
- Make sure the workstation and surrounding area is clean and worker friendly.

## Unpacking the ASTA

1. The ASTA is delivered in a wooden crate wrapped in plastic. Use only dedicated transport equipment to move the crate. Keep the crate in a clean, dry area that is above freezing until ready to unpack.
2. Check the machine and crate for any damages that may have been caused in transport. If damage is found, notify the transporter and PSI immediately.
3. Verify that the shipment includes all of the following items and that the serial number on the machine matches that of the serial number provided from the manufacturer.
  - 1 pack of 10 Cutter Blades (Part #N/8168)
  - 1 carton of 100 take-up cores (Part #110.380)
  - 1 bottle of Conveyor Belt Cleaner (Part #ASR500)
  - 5 feet of air hose
  - 1 Set of Technical Documents
4. When removing the ASTA from the shipping crate, make sure you hold the machine by the frame and never carry it by holding onto the drawer or door. The ASTA weights 115 pounds.

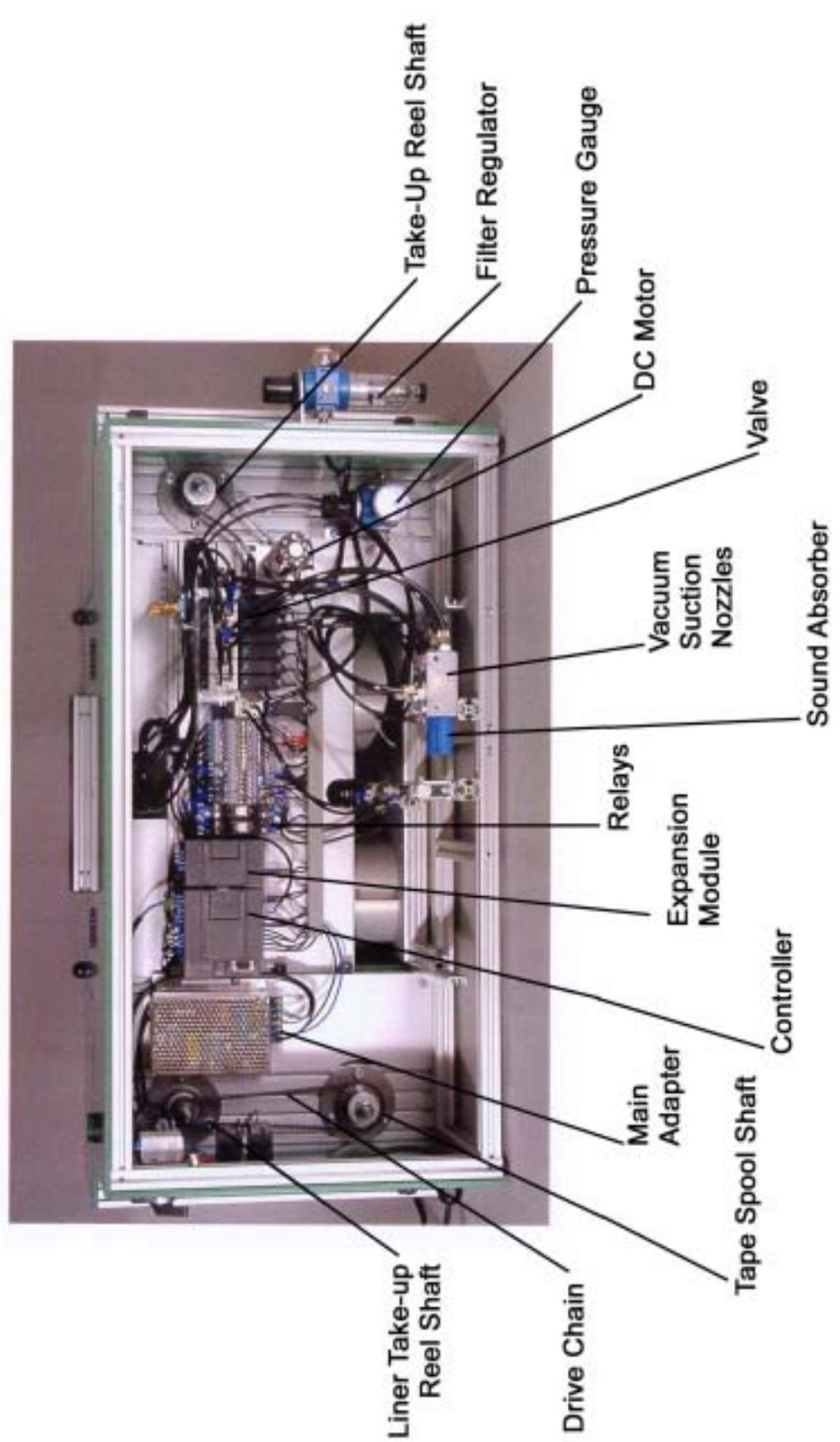
**NOTE:** When carrying the ASTA, DO NOT hold onto the doors. Make sure it is held firmly from the bottom.

Front View  
(Diagram #1)



# Rear View

(Diagram #2)



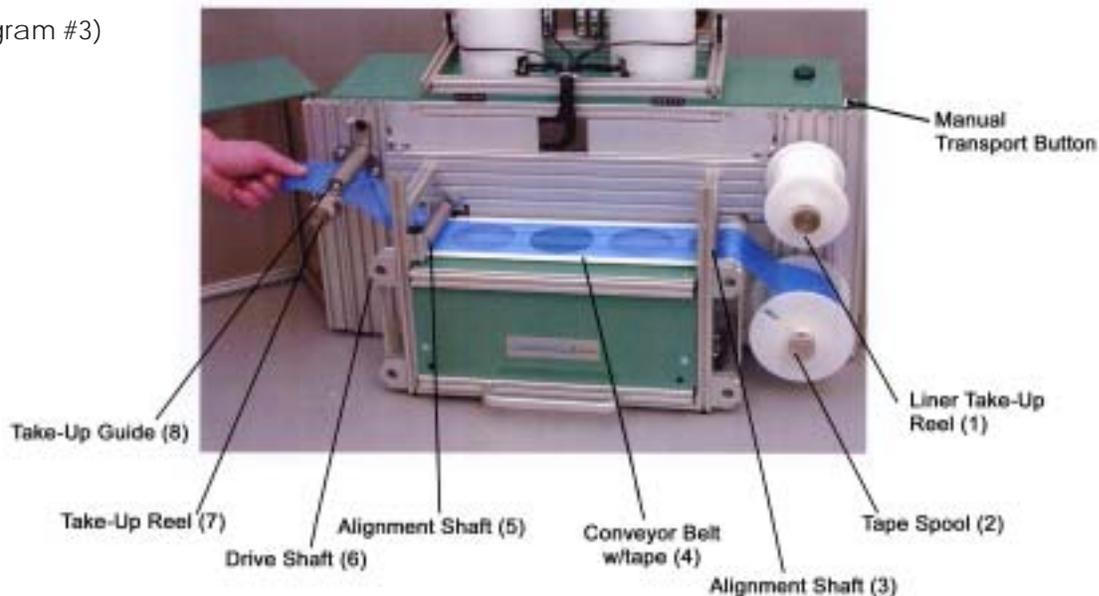
## Installation

1. Place the ASTA on a sturdy, flat table top that is at a comfortable height for the user.

**NOTE:** Make sure the air supply is connected before the electrical power supply.

2. Connect the air supply. It is important that the internal diameter of the air hose be at least 6mm.
3. Plug into an electrical outlet.
4. Adjusted the ASTA's six adjustable feet to make level.
5. Remove the two Transport Safety Devices on the doors.
6. Turn on the power switch. The drawer will automatically open after 2 seconds.

(Diagram #3)



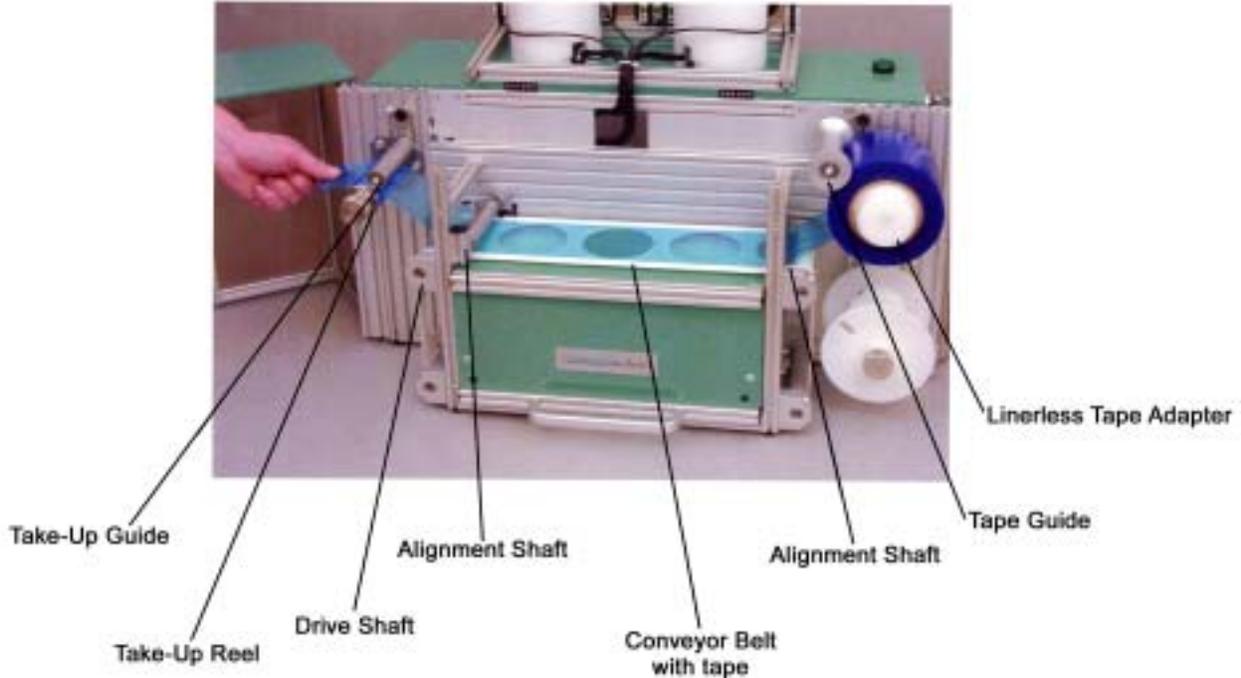
## Set-UP – For Tape With A Liner

Recommended tapes with a liner are PSI's Blue Lens Saver Tape (Part #1007) or Eurolens Saver Tape (Part #1400) for Alloy or PSI's Clear Tape (Part #1006) for Wax Blocking.

1. Open the side doors
2. Release the fast-locks located on the inside of the upper cylinder unit. Lift the cylinder unit up and lay it back on the housing of the machine.
3. Lift up the take-up guide (8).
4. Unscrew the positioning knob on the take-up reel (7) on the left side of the machine. Put an empty take-up core on the reel and screw in the knob.
5. Remove the positioning knob from the tape spool (2) on the bottom right. Put on a roll of surfacing tape with a liner and screw on the positioning knob.
6. Separate the liner from the tape and position the tape onto the tape conveyor belt (4) adhesive side down, in front of the alignment shaft (3).
7. While holding the liner, advance the tape to the left side of the machine using the manual tape transport button on the right.
8. Place an empty core on the liner take-up reel (1) on the top right. Adhere the liner to the empty core with a small piece of tape.
9. Advance the tape to the take-up reel (7) on the left.
10. Place the end of the tape over the empty core and advance tape to secure. Lower the take-up guide.

11. Close the upper cylinder unit and the side doors. The ASTA is ready for operation.

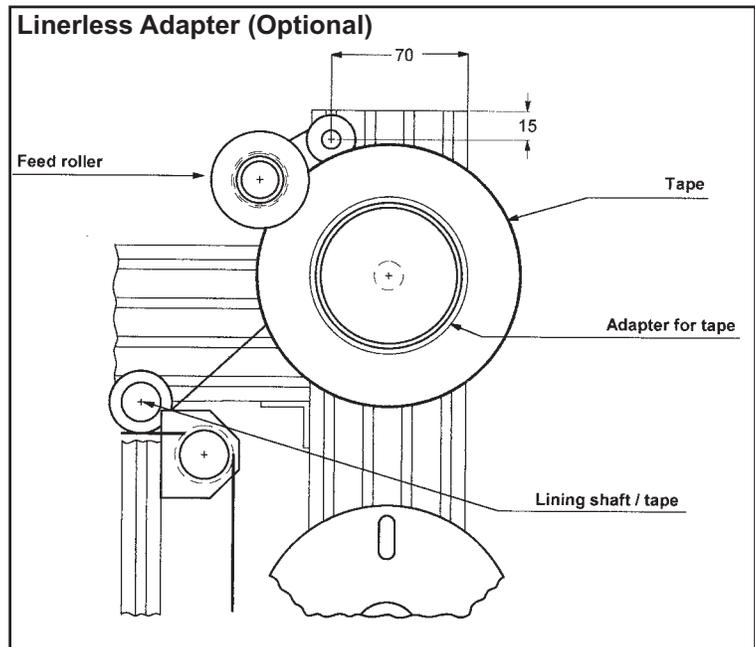
(Diagram #4)



## Set-UP – For Linerless Tape

(Diagram #5)

1. Open the side doors
2. Release the fast-locks located on the inside of the upper cylinder unit. Lift the cylinder unit up and lay it back on the housing of the machine.
3. Unscrew the positioning knob on the liner take up reel and remove it from the shaft.
4. Loosen the inset screw on the rear hub and remove it from the shaft.
5. Position the feed roller assembly in the first channel from the left and center it at 15mm.
6. Place the linerless tape adapter on the shaft and secure with set screw on the flat portion of the shaft. Place a roll of linerless tape on the adapter.
7. Lift up the take-up guide on the left side of the machine.
4. Unscrew the positioning knob on the take-up spool. Put an empty take-up core on the reel and screw in the knob.
5. Position the tape onto the tape conveyor, adhesive side down, in front of the alignment shaft.
6. Advance the tape to the take-up reel on the left side using the Manual Feed Button on the right side of the machine.
7. Place the end of the tape over the take-up spool and advance the tape to secure. Lower the take-up guide.
8. Close the upper cylinder unit and the side doors. The ASTA is ready for operation



## Lens Selection

- Make sure the edge of the lens is not damaged.
- Maximum lens diameter is 82mm and the minimum is 55mm
- The height of the lens should not be higher than the top of the cylinder.
- The lens must be thick enough to ensure that the cutting assembly cannot touch the lens during taping.
- For polycarbonate lenses with large gates (tabs) use a handstone or bench grinder to flatten edge.

## Operating Instructions

1. At the start of the day, or if the machine has been sitting idle for several hours, advance the tape with the manual feed button to make sure it is not adhered too tightly to the conveyor belt.
2. Lenses can be taped as a pair or individually. Place lens in the center of the drawer cylinders, convex side up
3. Press the appropriate operation button on the front of the machine to activate the taping process.  
“Left” for the left side only  
“Right” for the right side only  
“Start” for both sides
4. If there appears to be any trouble during operation, press the reset button immediately to suspend operation. Press the reset button a second time to start a new cycle.
5. Switch off the power at the end of the day and when not in use for long periods of time.

**NOTE:** The drawer will automatically close when the machine is switched off.

## Maintenance (see figures #1 & 2)

**Warning:** Disconnect the machine from all electrical and air supplies before carrying out any maintenance or repair-work.

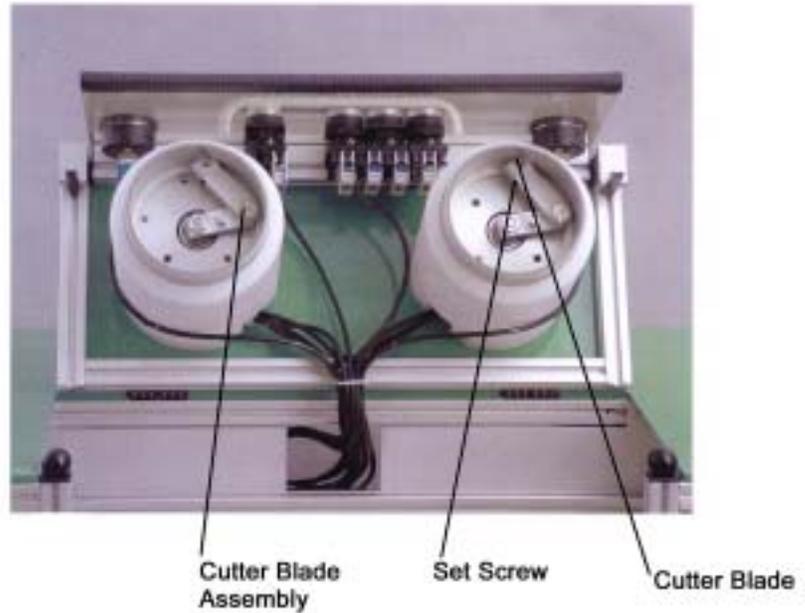
1. The turnable shafts in the cutting assembly and the joints of the cutter reception should be greased once a month with a resin-free product.
2. The drive chain should be greased occasionally with a resin-free spray or grease. Also, check the chain tension and adjust if necessary.
3. If necessary adjust the clutch for the take-up spools. To do this, open the back of the machine and tighten the relevant nut for each spool, **carefully** against the spring. Do not overtighten.
4. Check the clutch plates and hulls for wear on a regular basis and replace if necessary.
5. Regularly check the vacuum jet silencers and clean or replace as necessary.
6. Empty the air pressure regulator’s water collector on a regular basis.
7. Occasionally clean the vacuum filters. To access the filters, remove the two lower screws on the front of the drawer. Then gently lift the drawer cover. The vacuum filters sit just underneath.
8. Access the two vacuum membranes by unscrewing the upper part of the lower cylinder. Clean and check these for wear occasionally.
9. The conveyor belt must be cleaned with the cleanser provided once a week.

**NOTE:** Use only the original cleanser provided with your ASTA from Optimal Optics. Use of other cleansers will result in loss of warranty.

## Replacing Cutter Blades

(Diagram #6)

1. Disconnect machine from electrical and air supplies. Open the doors and release the fast-locks and open the upper cylinder unit.
2. Loosen the cutter blade set screws with an allen wrench and remove the used blades. To prevent hand injuries, wear gloves. Blades are extremely sharp.
3. Replace the blades with new ones. Insert them clockwise with the flat side of the blade facing the set screw.
4. Before retightening the screw, make sure the blade is all the way in.



## Technical Data

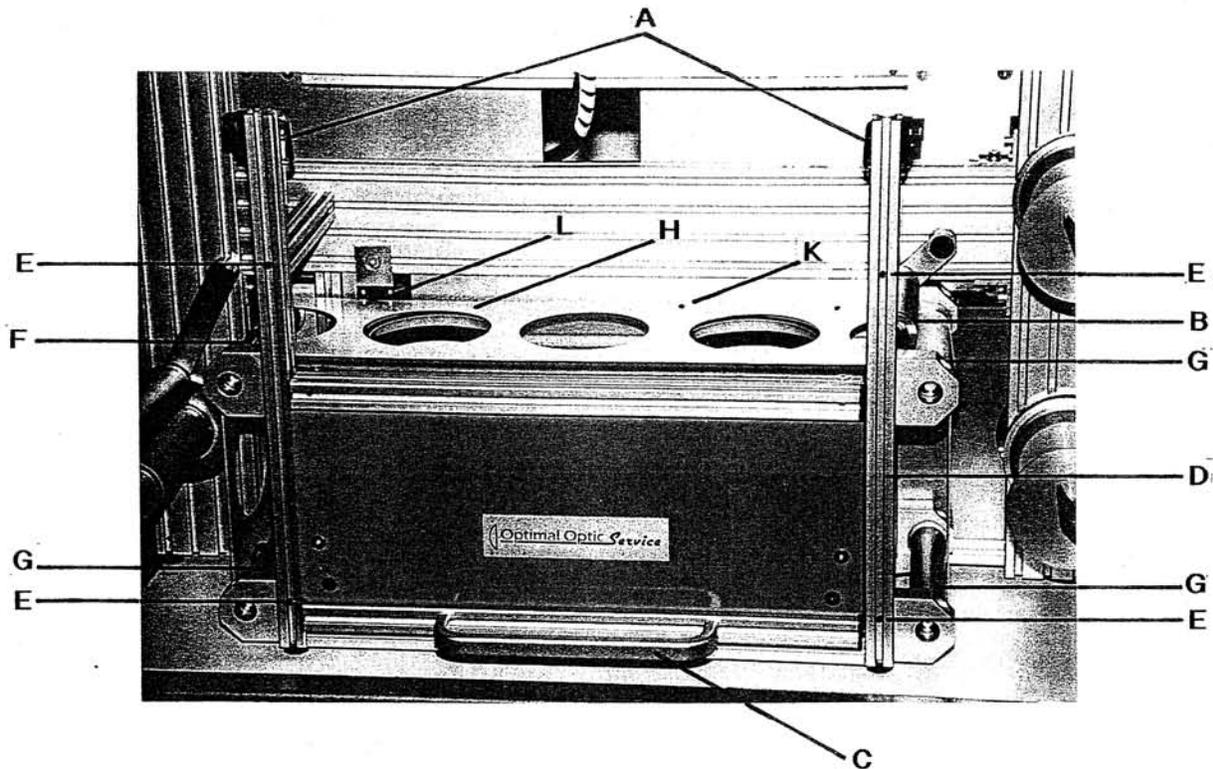
Electrical Power Supply:	Alternating current 110-240 Volts, 50-60 Hz
Air Pressure Supply:	87 psi or 6 bar
	Hose connection must have internal diameter of at least 6mm
Working Pressure:	72-87 psi or 5-6 bar
Capacity:	2 lenses per cycle
Cutter Blade Life:	20,000 - 25,000 cuts for plastic 15,000 - 20,000 cuts for glass
Tape:	Any liner or linerless surfacing tape
Sound Emissions:	under 72 dB(A)
Weight:	115 lbs. (52 kg)
Dimensions:	33.5" L x 18" W x 15.5" W (850mm x 450mm x 390mm)



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**INSTALL INSTRUCTION**  
conveyer belt FAB-5 ER



- Switch off the Applicator
- Close the drawer and open both side doors
- Open both Fast-locks (A) and lift the lid with the upper cylinder unit back
- Screw down the lining shaft-tape role (B)
- Remove the protective foile completely
- Lift up the Applicator slightly and underlay the handle (C )
- Unsrew the Profileframe (D) with reciprocal remove of the 4 Fastening Screws(E)
- Pull the Profileframe forward until the drive pivot role(F) and all the guiding roles (G) are out of their Bearings
- Lift up the Applicator slightly and remove the underlay of the handle (C ) and take off the profileframe to the front
- Take off the conveyer belt (H) to the front
- Put on the new conveyer belt. Pay attention to the correct position  
**IMPORTANT:** Reference-perforation (K) have to look to the back  
conveyer belt have to be between the photoelectric barrier (L)
- Shove the profileframe (D) through the handle (C ) and underlay the handle once again
- Get the profileframe (D) into the correct position and screw firmly by reciprocal screw-in of the 4 Fastening Screws (E)  
**IMPORTANT:** Pay attention, that the bearing bung of the drive pivot role (F) and of the guiding roles (G) slide into the bearings at the same time
- Screw the profileframe firmly and remove the underlay of the handle (C )
- Screw on the lining shaft-tape role (B) again