

DES-1 & DES-1E
MANUAL

www.drytac.com

CUSTOMER: _____

MODEL NUMBER: _____

SERIAL NUMBER: _____

DATE: _____

IMPORTANT SAFETY NOTICES

1. READ THIS ENTIRE MANUAL PRIOR TO PROCESSING ANY WORK THROUGH THIS MACHINE.
2. TO PREVENT ANY INJURY, ONLY ONE OPERATOR SHOULD MAKE THE NECESSARY SETTING ADJUSTMENTS.

DEAR CUSTOMER:

Welcome to the world of DRYTAC - the professional edge finishing system.

Before starting to work with your new edge finishing system, please take the time to read this manual, "DES-1 & DES-1E MANUAL" ; you will find it invaluable in simplifying the setup and operation of your machine.

WARRANTY

The warranty on your DES-1 and DES-1E is twelve months from date of purchase and covers replacement parts in the unlikely event of a manufacturing defect.

(Please note that labor and shipping charges are not included under warranty)

To enable us to respond promptly to a warranty claim or any other inquiry relating to your DES-1 or DES-1E, please complete the "WARRANTY REGISTRATION" form, on the following page, and return it to us as soon as possible.

Drytac Canada Inc.

Corporate office

137 Buttermilk Ave.
Concord, ON.
Canada, L4K 3X5

Tel.: 905-660-1748
Fax: 905-660-1752

Toll Free Tel.
CANADA: 1-800-353-2883
Toll Free Fax
CANADA: 1-877-437-9822

Drytac Corporation

Corporate office

5383 Glen Alden Drive
Richmond, VA. USA,
23231

Tel.: 804-222-3094
Fax: 804-226-2330

South Central Office

11425 Mathis, Suite 400
Farmers Branch, TX. USA,
75234

Tel.: 972-910-8811
Fax: 972-910-8839

South West Coast Office

12207 'D' Los Nietos Road
Santa Fe Springs, CA. USA,
90670

Tel.: 562-941-9630
Fax: 562-941-2927

Toll Free Tel.
USA: 1-888-622-3236
Toll Free Fax
USA: 1-800-622-8839

Drytac Corporation

North West Coast Office

1201 East D Street, Suite 202
Tacoma, WA. USA
98421

Tel.: 253-627-3005
Fax: 253-627-3039
Toll Free Tel.: 1-800-280-6013

North Central Office

1546 Ridge Road
Vienna, OH. USA
44473

Tel.: 330-856-1878
Fax: 330-856-2562

Drytac Europe Limited

Drytac House

Filwood Road
Fishponds
Bristol, BS16 3RY
United Kingdom

Tel.: ++44 (0) 117-958-6500
Fax: ++44 (0) 117-965-4411

DRYTAC EDGING SOLUTION -1

DES -1

(DES -1 E European model)

The Drytac DES-1 is the most advanced edge finishing system developed especially for the plaquing industry. This machine allows you to finish the edge perimeter of a board profile at 45°/90° and applying a dry thermal transfer foil finish.

Images mounted on boards are processed through the system by placing them on the feed conveyor. The conveyor transports these boards past the shaping / cleaning and oven / foil applicator stations.

Polyurethane rubber holddown rollers apply pressure on the plaqued artwork to secure it in place on the feed conveyor while it is being processed.

The shaper / cleaning station cuts and cleans the 45° and 90° profile onto the plaqued artwork as it is being transported past the spinning shaper head and cleaning brushes. This station has a manifold attachment for a dust collector, which ensures proper dust removal on the edge of the plaqued artwork, preparing it for the thermal transfer foil finish.

The oven / foil applicator station will chronologically: dispense the selected colored transfer foil, apply heat and pressure to the board thereby thermally coating the edge perimeter of the plaque with the selected colored foil.

As the plaqued artwork exits the oven / applicator station a torque rewind take-up system collects the (spent) donor foil onto a, throw-away, core. The plaqued artwork can now be retrieved from the DES-1 and the next edge can be processed. When all edges on the same plaque are run through the machine, a perfect miter is automatically performed at each corner.

Stop!!!

Please Read First

Failure to follow these instructions may result in loss of components

You are the new owner of DRYTAC Edging Solution Equipment.

Your equipment was carefully packed with all the necessary components.

Your equipment was packaged either by using staples, or screws. Please be cautious with sharp staples or screws as you unpack.

1. Using a knife carefully cut the tape on the box.
2. Remove staples or screws that support center wood.
3. Remove all staples/screws from around the bottom part of the shipping crate/box
4. Lift off the outside protective box.
5. Remove staples/screws from around the bottom part of the box.
6. Remove plastic wrapping.
7. Remove Aluminum "Support Table" (machine component, see page 14, of this manual).
8. Cut straps that are holding component boxes.
9. Remove all boxes from the skid.
10. Un-screw bolts holding skids onto the base of machine.
11. Using a pallet mover (pump truck), move DES-1 to desired location.
12. Remove components from boxes.
13. Locate and identify tables and guides.
14. Remove bolts from either side of equipment; you will require these bolts to attach the tables to your DES-1.
15. Secure the in-feed table (marked In-feed table) with 4 bolts (screwed on Equipment)
16. Tables have been marked with a black reference tape for quick installation.
17. Align black reference tape on Table with black reference tape on Conveyor assembly.
18. Tighten bolts.
19. Locate and identify "Out-feed" table.
20. Follow steps 14,15,16,17, and 18.
21. Locate and identify "In-feed guide".
22. Follow steps 14,15,16,17, and 18.
23. Carefully install shaper head (beware of sharp blades).
24. Tighten bolt to secure shaper head (do not use excessive force).

You are now ready to read your user's guide for plugging your equipment and set-up procedure.

If you have any questions, or in doubt, please feel free to contact your Drytac representative.

Electrical hook up

(also see page 35)

NORTH AMERICA:

DES-1: North American models only, DES-1 Edge Finishing Systems are equipped with a UL, CSA and NEC approved plug and wire.

Plug Type: HUBBEL # **HBL2621CN** 250V 30A

Power Required: AC 220 Volts, Single Phase, 60 Hz, 30 Amps.

EUROPE:

DES-1E: No plug and external electrical connection wires are included with DES-1E.

Electrical hook up, on European model, DES-1E, should be performed according to local codes.

Power Required: AC 220 Volts, Single Phase, 50 Hz, 30 Amps.

CONTROL PANELS

There are two control panels on this machine:



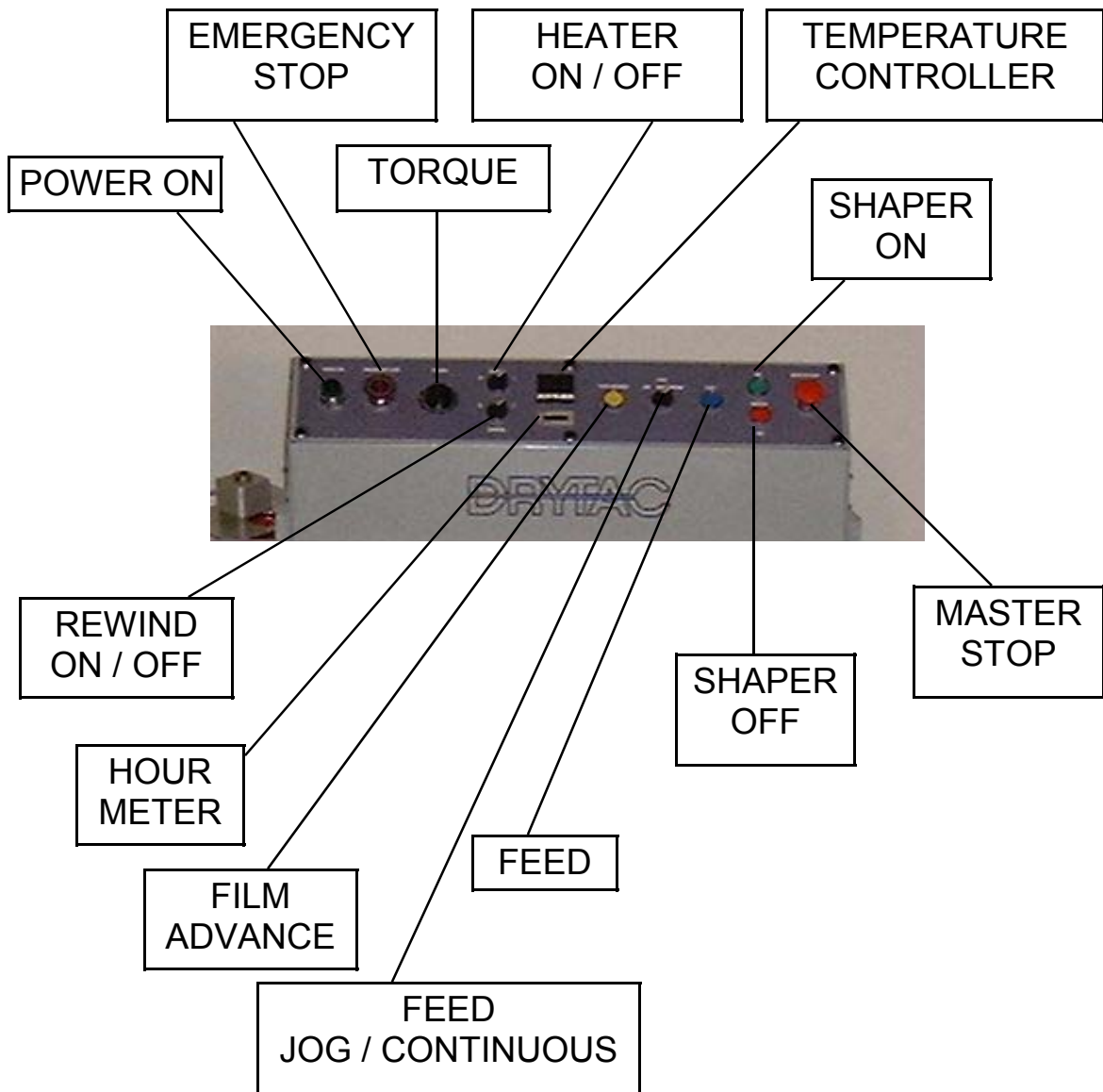
1. MAIN PANEL:

Located at the lower front of the machine, underneath the conveyor. Accessible, on the swing door, is the main machine activate power switch. This switch must be turned on first in order to provide power to the rest of the machine. Inside the cabinet you will find the fuses, breakers, relays and transformer required for the proper operation of the unit.



2. CONTROL PANEL:

Ergonomically positioned at a 45 degree angle at the upper front of the machine, designed for easy access to all the controls and operator safety.



POWER ON:

PUSH IN to activate all panel controls.

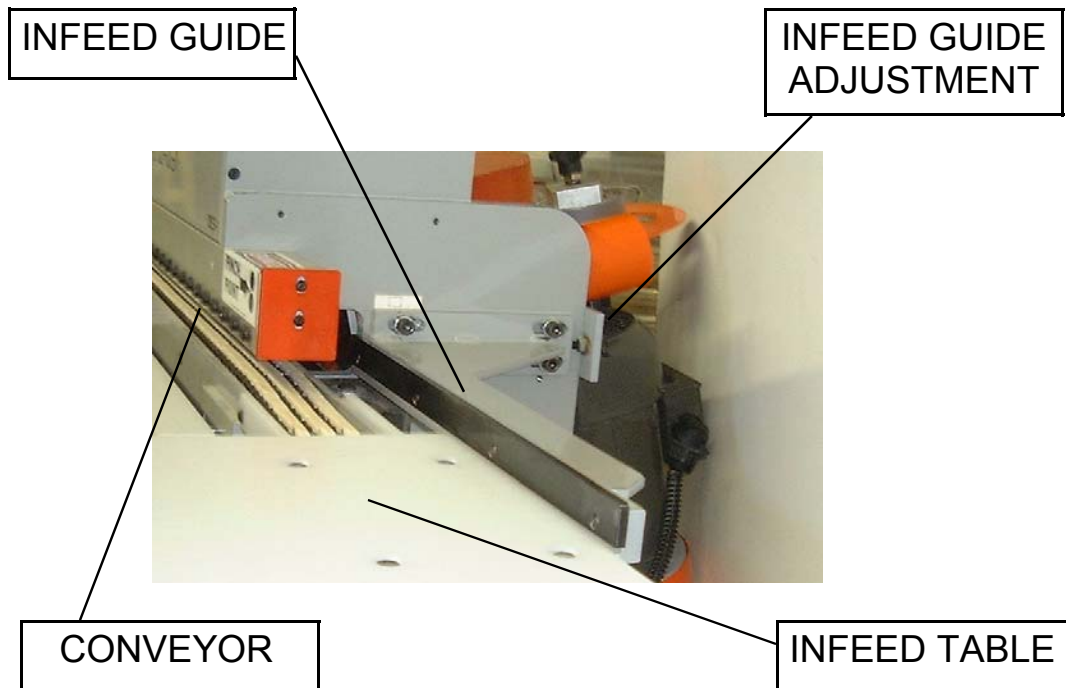
EMERGENCY STOP:

PUSH IN to stop all machine functions.
To reactivate all controls **PULL OUT** then **push in** POWER ON.

TORQUE:

ROTATE to provide torque load to rewind motor.

HEATER ON / OFF:	ON / OFF control for heating oven 0 = Heater Off 1 = Heater On
REWIND ON / OFF:	ON / OFF control for torque motor, used for rewinding donor (spent) thermal transfer foil.
TEMPERATURE CONTROLLER:	Coupled with an infrared sensor, the temperature controller allows you to accurately control the required application temperature of the thermal transfer foil.
HOUR METER:	Like the odometer on a car, this unit accumulates the number of hours the edger is in operation. A very useful device for timing scheduled maintenance and work throughput. Activates only when "FEED" is pressed and conveyor is in motion.
FILM ADVANCE:	Used to advance a small amount of foil onto the the rewind station. Foil left in front of the heated wheel during preheat or setup will not transfer properly due to the adhesive burning.
FEED JOG / CONTINUOUS:	This switch allows you to choose between two settings: JOG mode - used when setting up. CONTINUOUS mode - used when running jobs.
FEED:	PUSH IN to activate conveyor drive mechanism and the HOUR METER monitor.
SHAPER ON / OFF:	ON - PUSH IN to activate shaper motor. OFF - PUSH IN to stop shaper motor and conveyor motor.
MASTER STOP:	PUSH IN to stop all machine functions. PULL OUT to reset.



INFEED GUIDE:

Aligns and guides plaqued artwork at infeed.

INFEED GUIDE
ADJUSTMENT:

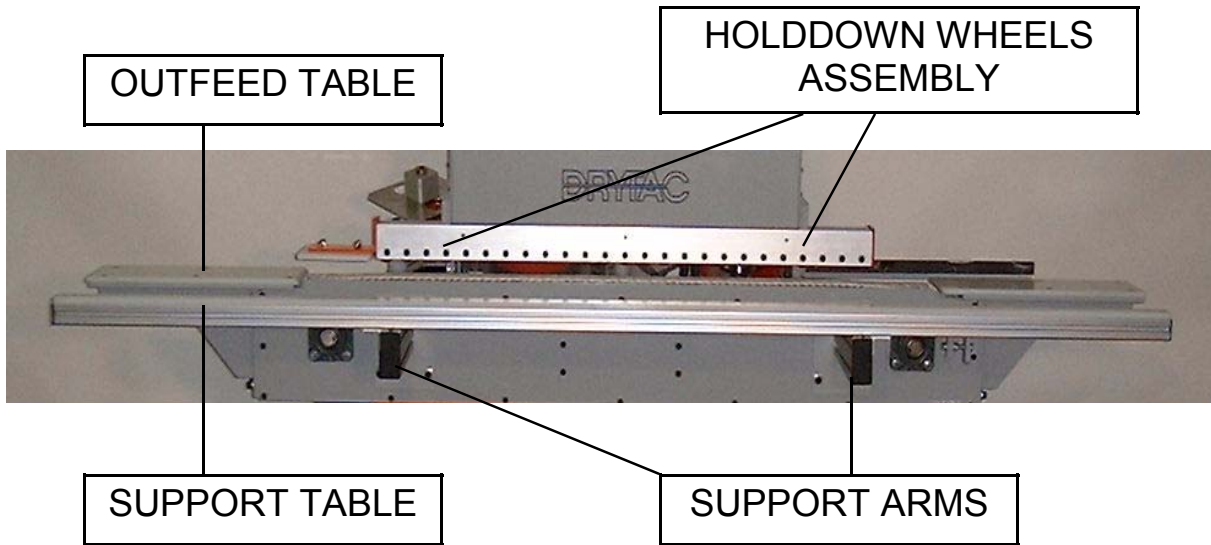
Allows you to control the depth of cut on the edge of your plaque.

INFEED TABLE:

Helps support plaqued artwork as it enters the conveyor infeed.

CONVEYOR:

Carries plaqued artwork through to all processing stations.



HOLDDOWN WHEELS
ASSEMBLY

Allows for smooth transport of the laminated plaqued to each station.

OUTFEED TABLE:

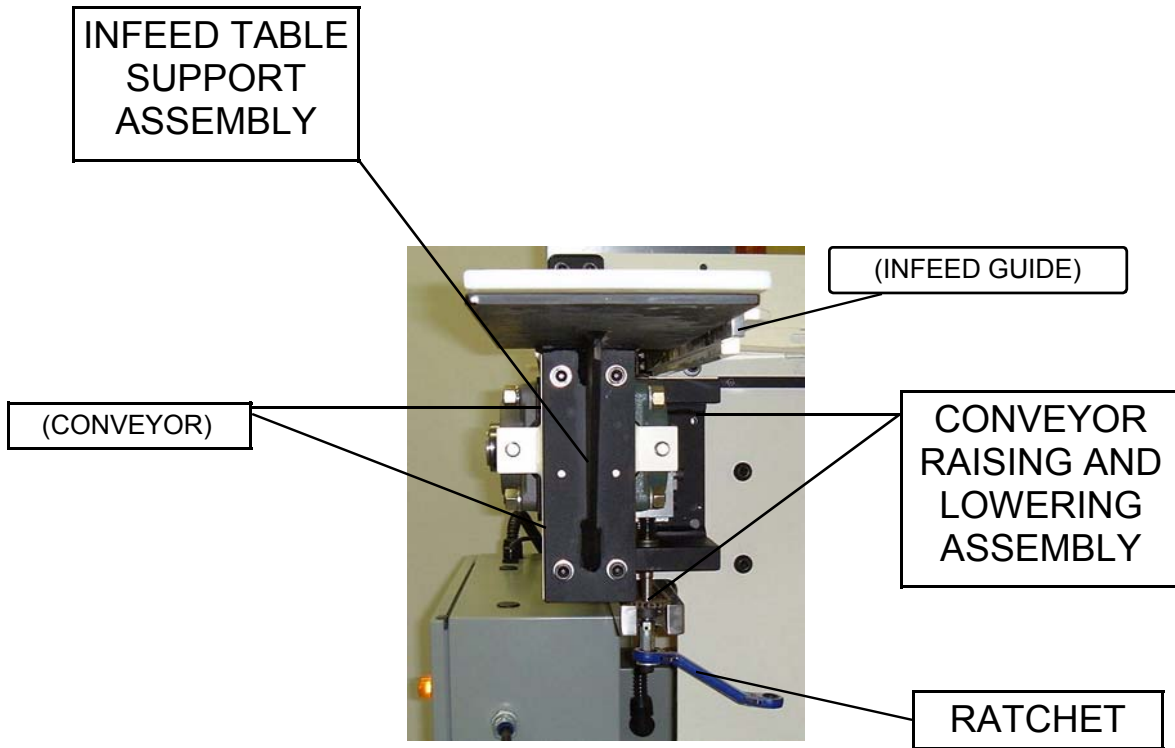
Helps support the laminated plaque as it exits.

SUPPORT TABLE:

Helps support oversized laminated plaques, while being processed.

SUPPORT ARMS:

Attached to the conveyor, assure proper parallelism between the conveyor and the support table.



**INFEED TABLE
SUPPORT ASSEMBLY:**

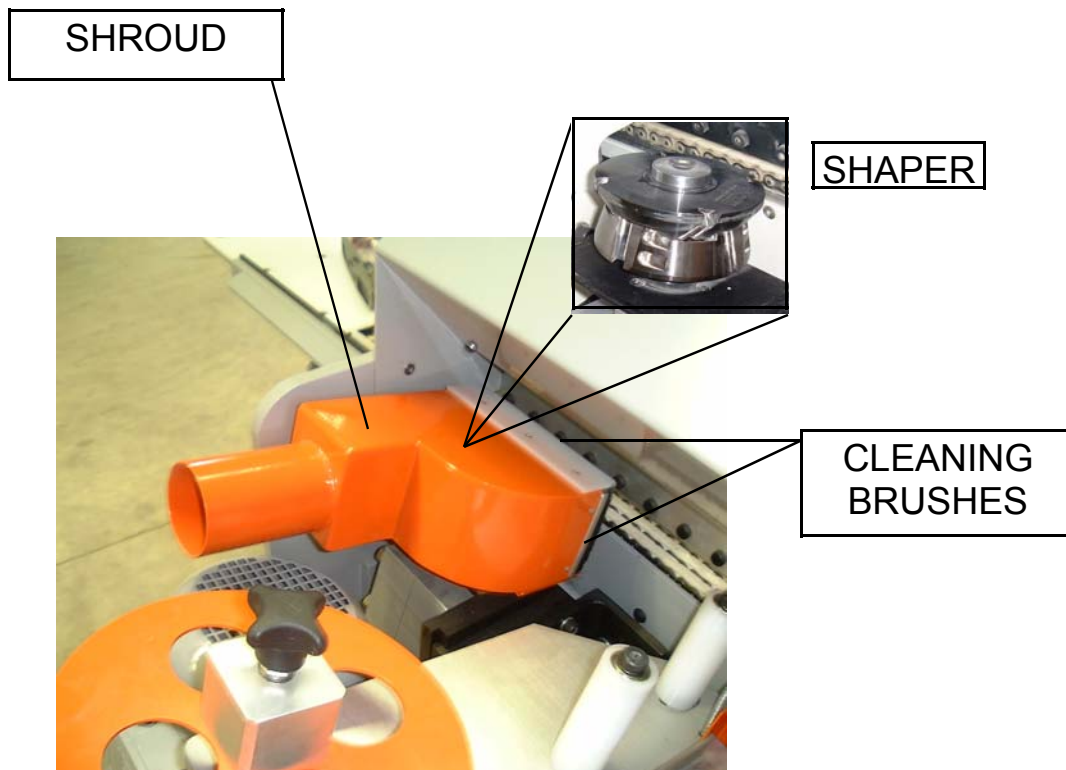
Allows you to adjust the height of the infeed table with the height of the conveyor. (Please note: A similar support assembly is used on the outfeed table)

**CONVEYOR RAISING AND
LOWERING ASSEMBLY:**

Allows you to control the nip between the conveyor and the holddown wheels.

RATCHET:

Ratchet handle device used to set the proper conveyor nip point.

**SHAPER:**

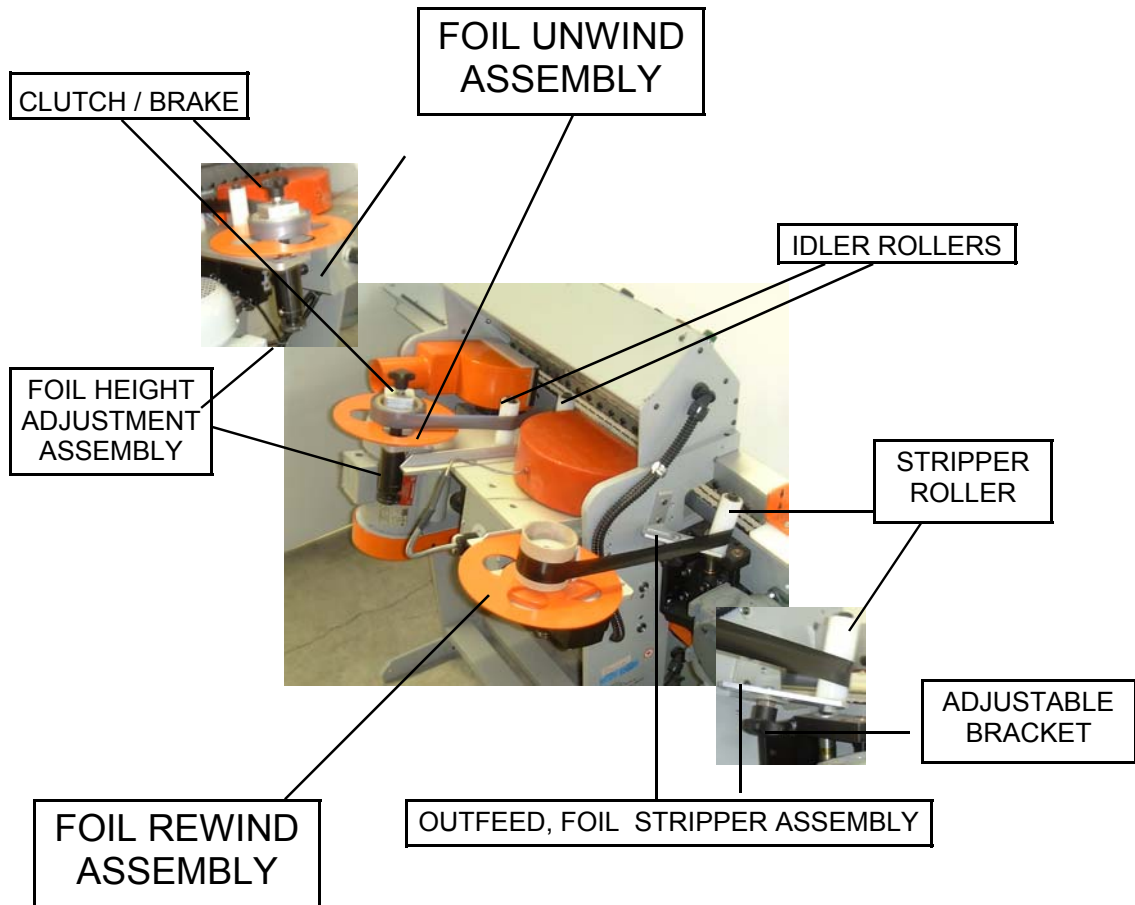
A high velocity shaper unit, with 4 top and 4 bottom blades insert, with a maximum thickness of cut of 1.125" (28.5 mm).

SHROUD:

Engineered for easy evacuation of dust and encloses the shaper unit. Complete with a 3" (76.2 mm) O.D. manifold used for attaching an evacuation tube to your dust collector.

CLEANING BRUSHES:

Built right onto the shroud, these brushes assure that the laminated plaque is dust-free, prior to the application of the thermal transfer foil.



FOIL UNWIND ASSEMBLY:

Holds and dispenses a roll of thermal transfer foil on a standard 3" (76.2 mm) I.D. core. Equipped with a CLUTCH / BRAKE device to ensure a smooth unwind. The FOIL HEIGHT ADJUSTMENT UNIT and the IDLER ROLLERS keep the foil in the proper path.

FOIL REWIND ASSEMBLY:

Accepts a standard 3" (76.2 mm) I.D. core and rewinds the donor (spent) thermal transfer foil. All driven by a torque motor controlled by a selection knob on the front panel. Proper foil separation is controlled by adjusting the STRIPPER ROLLER.

Hardware Setup

Hardware setup was done in house during testing and compliance. However, your requirement may demand that you change all or some of the hardware setup.

The most important part is the “In-feed” guide. This guide will determine how much of the plaque perimeter will be removed by the cutting head (see In-feed guide picture, below).



(In-feed Guide)

(Adjustment plate)

This section will describe step by step how to setup the DES-1 to fulfill your needs.

Your in-feed guide has also been set according to specification. However, the adjustable plate on “in-feed” guide may need adjustment again due to transportation vibration.

i. CONVEYOR NIP

1. Using an identical thickness plaque, as your artwork that requires edging as a leader. Place this piece on the conveyor system, under at least three “7” hold-down wheels (marked with a downward arrow).

(place plaque to this line)



2. Ensure that your plaque is fully against the black in-feed guide.
3. Using the ratchet to adjust the conveyor system height, bring the conveyor up to put pressure on the plaque.



(ratchet)

4. The top of the plaque must be flat and even with the top edge of the adjustable plate of the in-feed guide.



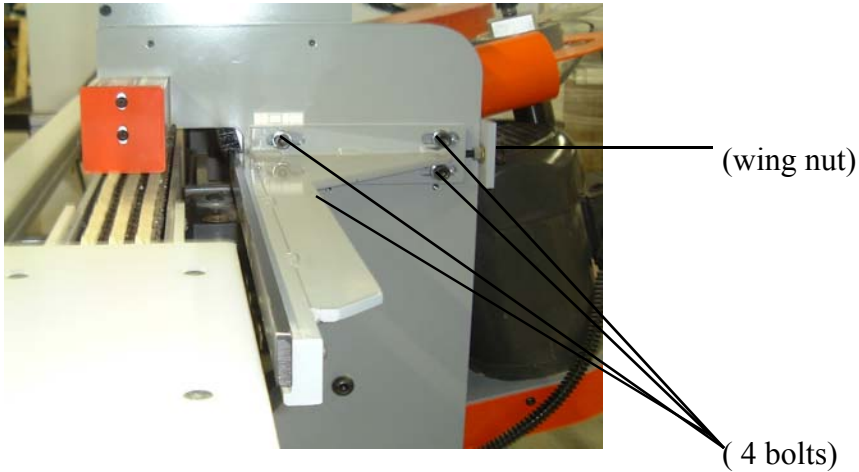
(Top edge of black guide)

5. Turn your vacuum (Dust Collector) system on.
6. Turn the "Feed" knob to "JOG" mode.
7. Press the green "Shaper On" switch.
8. Press the blue "Feed" button, until plaque is pulled in.
9. Allow the plaque to travel, through shaper, for approximately 3" (8 cm.). Release the "Feed" Button.
10. Turn Shaper off.
11. Wait until shaper stops completely.
12. Lower the conveyer and remove plaque.
13. Measure how much the plaque is being shaved and make adjustments accordingly.

If you require to remove more, or less from the edge,

ii. EDGE PERIMETER CUT

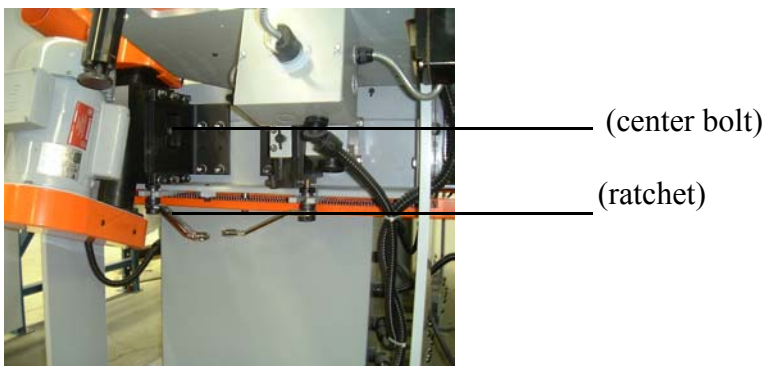
1. Loosen four “4” bolts on “in-feed” guide. (Do not remove).
2. Using the wing nut, turn clock-wise to remove more, counter-clockwise to remove less.



3. Tighten the 4 bolts. If you require more or less bevel.

iii. DEPTH OF BEVEL

1. Loosen the center bolt on the height adjustment mechanism of the shaper head. (Do not remove).



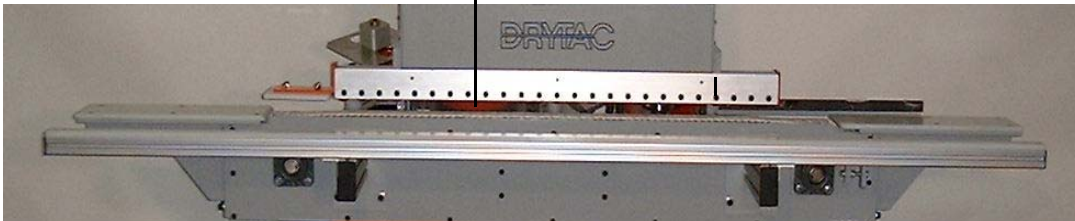
2. Using the ratchet, turn counter-clockwise to have smaller bevel, clockwise to have a stronger bevel.
3. Tighten the center bolt.

This section will take you through the applicator wheel setup process, so that it matches the shaper profile for a perfect final process.

iv. APPLICATOR WHEEL SETUP

1. Using a different side of the leader board, or a new board, repeat steps 1,2,3, and 4 in section “i. CONVEYOR NIP”.
2. Turn your Vacuum (Dust Collector) system on.
3. Turn the shaper on.
4. Press and hold the “Feed” button, while in “JOG” mode.
5. Allow the plaque to go through the shaper blades, but stop the leading edge of the plaque in the middle of the applicator wheel. (At the arrow)

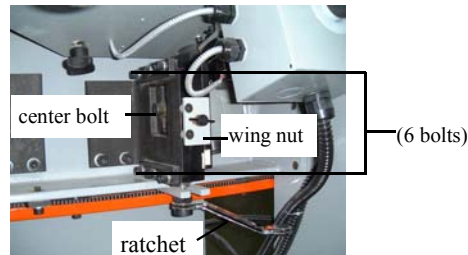
(stop leading edge of plaque here)



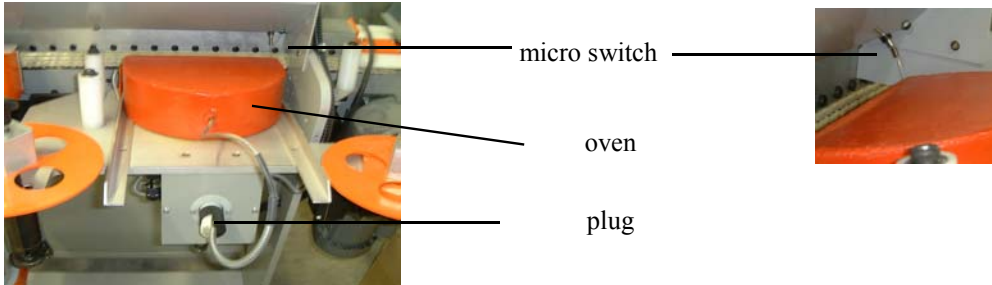
6. Using the mirror (Provided with your equipment), check the distance between the plaque and the applicator wheel.

If adjustment needs to be done, (Note: applicator wheel must be at room temperature for this procedure)

7. Loosen six “6” bolts on the applicator wheel adjustment mechanism.
8. Using the wing nut, turn clockwise to pull applicator wheel (back, away from plaque), or counter-clockwise to push applicator wheel in (towards plaque).
9. When the (cold) applicator wheel lightly touches the plaque, turn the wing-nut $\frac{1}{4}$ turn counterclockwise to apply sufficient pressure onto the plaque.
10. Tighten the six “6” bolts.
11. Loosen the center bolt.
12. Using the ratchet, turn clockwise to go up to match a smaller bevel, or counter-clockwise to go down, to match a stronger bevel.

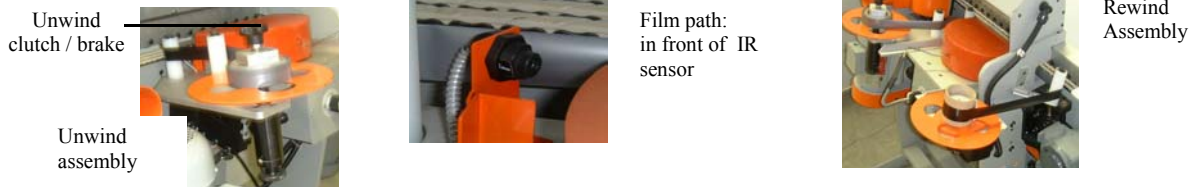


13. When (cold) applicator wheel has touched the bevel, rotate ratchet device $\frac{1}{4}$ turn more, in the downward direction to apply sufficient pressure.
14. Tighten the center bolt.
15. Press Feed button and allow plaque to exit.

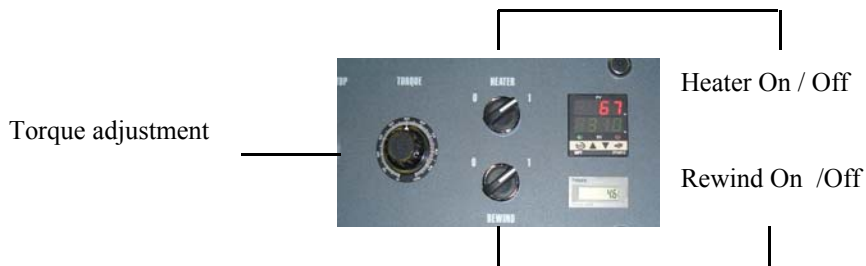


You are now ready to run a test with heater on, and continuous mode.

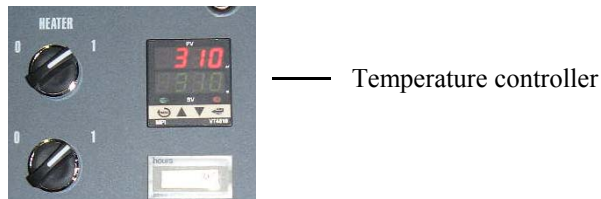
vi. FOIL ASSEMBLIES



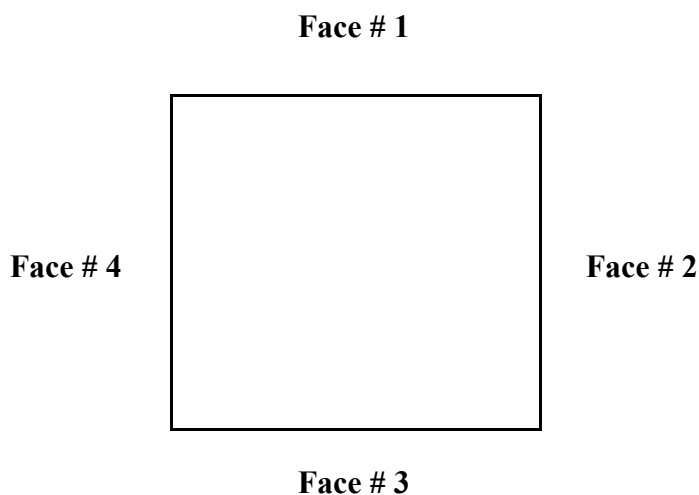
1. Place your foil on “Unwind Assembly” (on the left hand side)
2. Pull your foil through as per diagram (Remember, adhesive side should be facing the plaque and the protective foil carrier facing the applicator wheel.)
3. Make sure the foil is in the proper path:
webbing around idlers, in front of Infra Red sensor, in front of applicator wheel, around Stripper idler and onto rewind mechanism core.



1. Place heater oven in position.
2. Plug in the heater and slightly twist the plug to lock in position
3. Push heater forward (make sure the micro-switch whisker is depressed by the oven).
4. Using the front control panel, turn "Heater" to "1" position.
5. Turn the "Rewind" switch to "1" position and the torque to 50%, while applying back tension with the unwind brake. At this point the foil should be tightly stationary between the unwind and the rewind, waiting for a plaque to drag it through. As the foil starts moving, the torque rewind motor gathers all the spent foil.

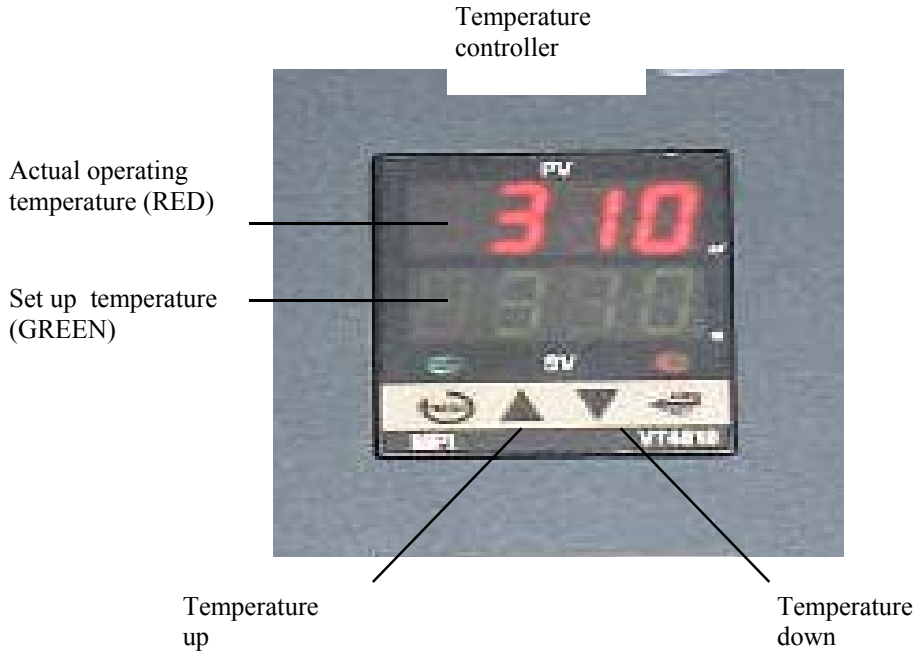


6. The temperature was set at the time of shipping to 310 °F (Recommended operating temperature is between 290 °F and 330 °F).
7. Allow the controller to reach the operating temperature.
8. Turn your Vacuum (Dust Collector) system on.
9. Turn the Shaper on
10. Allow the Shaper to reach its peak speed
11. Turn the Feed function key to "Continuous" position
12. Press the blue "Feed" button
13. Push plaque against the "In-feed" guide and onto the conveyer system
14. The plaque should be pulled by the system for edging
15. Once first side has been processed, examine the edge and make any appropriate adjustment if necessary
16. Turn plaque counter-clockwise to run another side (Refer to diagram).



Caution: For best results, always turn plaques counter-clockwise to finish the adjacent side

vii. CHANGING TEMPERATURE



1. Use up (ù) button to increase temperature.
2. Use down (ü) to decrease temperature.

Note: The temperature Controller's displays temperatures in degrees Fahrenheit.
Most foiling films will activate between 290 F and 330 F (144 C to 166 C).

Drytac tests every machine at 310 F. This temperature is a good starting point, however, there are some foils that activate at a higher temperature and some that will activate a lower set point. Please test and adjust your temperature set point accordingly.

Experimenting within your environment (i.e. room temperature and relative humidity) will be your best guide. Recording your results will help you with future diagnosis.

viii. SHAPER ASSEMBLY



Shaper Head Assembly

Shaper Head Blades Replacement / Rotation

Shaper head blades are double sided. Each face is designed to perform for 4 machine hours. You are required to rotate the blades once after 4 machine hours and remove, discard and Replace, all 8 blades (4 top and 4 bottom), after 8 machine hours. The Hour Meter is progressive and cannot be reset, like the odometer in your car, we recommend you create a “Blade Change Log” to keep track of usage.

To rotate/replace the blade;

1. Turn DES-1 off by pressing the emergency button and turning the main power switch to off position.
2. Allow the DES-1 to stop completely.



Bolt, washer & conic collet

Top half of shaper (for bevel)

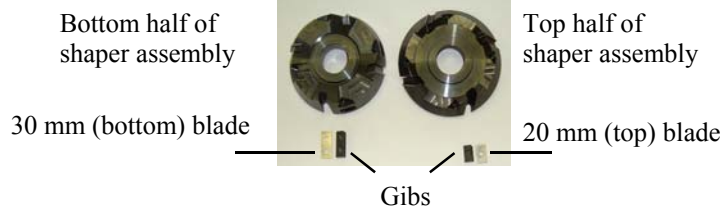
Bottom half of shaper
(for edge)



Shaper components sequence



Allen key used to
loosen set screws



3. Remove the Shroud.
4. Use Allen key (supplied with your DES-1 at time of shipping), and remove the bolt.
5. Remove flat spacer and beveled split washer
6. Remove the top section of Shaper head assembly.
7. On a flat surface, turn the upper part of the shaper head upside down.



Allen key used to
loosen set screws

ix. BLADES

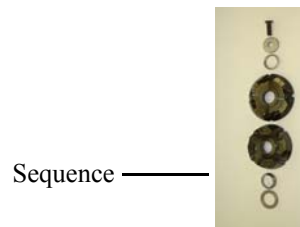
1. Use T-handle Allen key (supplied with DES-1) loosen, but not remove the bolt (you should hear a click).



2. Rotate / replace one blade at a time.
3. Tighten bolts as you replace/rotate blade (to ensure proper tightening, tighten one screw, and try to loosen again. If you hear a click it was tight enough, otherwise it was loose. Do not over tighten the bolts).
4. Remove the lower part of the Shaper Head.
5. Loosen the bolts (Notice that the lower part has two bolts per blade).
6. Rotate/Replace the blade.
7. Ensure that blade is properly seated in place.
8. Tighten the bolts.



Final assembly



Sequence

9. Install the lower part of the Shaper head first.
10. Install the upper part.
11. Install the beveled spacer.
12. Install the round spacer.
13. Tighten the center bolt.
14. Place the shroud in position
15. Remember to turn the power on and pull any emergency switch or master switch.
16. Press "Power on Switch"

Troubleshooting

Symptoms

Solution

1. DES-1 is plugged in, but there is no power

- Check main fuse breaker, and refer to DES-1 requirements. (Building fuse breaker)
- Check if power switch on lower front Main Panel box is in "ON" position
- Check if Master switch on control panel is pulled out
- Check if Emergency button on control panel is pulled out
- Press the green Power button on control panel
- Inspect/replace fuses in lower front Main Panel.

2. DES-1 shuts down and there is no power, after edging a few plaques

- Check if your main fuse breaker has triggered. If so, reset and resume work. If problem persists, have a qualified Electrician inspect and /or install a 30A, 220V breaker.
- Press to reset, blue button inside the lower front Main Panel, identified with "Conveyor Belt" and "Shaper Head"
- Readjust your conveyor's nip pressure set point. Excessive pressure increases drag and subsequently the breaker trips.
- Applicator wheel should be turning while heater is turned ON. If shut down caused by applicator wheel see section 15 of this guide.
- Press the Green "Power" button

3. Too much is removed from the Plaques (Example: 8 ½" X 11" plaque is finished measuring 8" X 10 ½")
 - Move your In feed guide outward (towards the front of the DES-1) by loosening the four "4" bolts and turn the wing nut counter-clockwise

4. Too little is removed from the Plaques (Example: 8 ½" X 11" plaque is finished measuring 8 7/16" X 10 15/16")
 - This is the ideal setting, however, cut marks from saw may still be visible. Square saw fence, on your table saw, to remove marks. Or adjust In-Feed guide to remove more material from edge of plaque.

5. Leading edge of plaque is missing foil, or has wrinkled foil
 - You may have too much pressure on the applicator wheel. Re-adjust applicator wheel assembly.
 - You may not have enough pull torque on the rewind / torque mechanism.
Increase tension on the rewind/torque station while balancing tension with the clutch /brake adjustment. knob on the unwind station

6. Larger plaques have a wave on the beveled edge
 - If wave is at approximately 19" (480 mm) on larger plaques, then you have too much forward pressure on the applicator wheel.
 - If problem is new, and you have not moved or adjusted the applicator assembly recently, then check if component plate has shifted and turned (If this plate has shifted or turned, please call Technical support for help).

7. Foil is covering only half of the edge

- Your foil is either too low, or too high. Use the hand-wheel at the bottom of the unwind assembly to raise or lower the unwind foil seat plate of the assembly to proper level.

8. Foil is applied at an angle. Either travels upward, or downward

- Increase tension on the torque/rewind mechanism and balance it with clutch/brake on the unwind. Generally, the torque should be set at 45 to 75, (depending on foil width and tightness of wind). Proper balance is achieved when foil is stationary between the foil unwind and rewind stations — and moves only when pinched by the moving plaque against the spinning applicator wheel.

9. Foil keeps melting and breaking

- If your temperature is within operating range, then you may have too much torque on the rewind assembly. Readjust torque/rewind tension and balance, until stationary, with clutch/brake unwind mechanism. (ex. Suggested torque /rewind set point for 3/4" [19 mm] foil is 45 to 60.)

10. There is a fine line on the edge after it has been foiled.

- You may have either a chipped blade, or it is time to rotate/replace the blades. (In some cases, a small piece of metal in "Recycled" wood can cause chipping of the blade.)
- It is time to rotate or replace the blades. These blades are double sided. Each side is effective for approximately 4 machine hours, depending on the hardness of the material being cut.

If the DES-1 is used non-stop, 8 hours per day, (Work day starts at 8 am, and ends at 5 pm, with one hour break, per day), then we recommend you rotate the shaper blades at noon, plus a full replacement the blades at the end the work day.

- Refer to “Scheduled Maintenance” for more Information.

11. Wheels are squeaking and making noise

- You may have too much downward pressure on plaques. — Recalibrate hold down wheel / conveyor pressure setting. Try lowering the conveyor belt assembly.
- Your hold down wheel and axel assembly requires cleaning
- Hold down wheels require relocation into a different slot. (Same as rotating the tires on a car.)

12. There are black dust marks on the back and front of plaques

- Black dust is an indication of cleaning overdue on the conveyor chain /pads assembly.
- Turn off DES-1 and use pressurized air to clean the conveyor belt assembly.
- Refer to “Scheduled Maintenance” for more Information.

13. There are ‘ghost track marks’ left on plaque from hold down wheels

- Make sure there is proper and not excessive pressure on the hold down wheels /conveyor pinch point.
- This is a symptom of ‘uncured’ Pressure-Sensitive (cold) laminating film and P.S. adhesive –

Depending on the adhesive hardness, allow your work piece to cure flat, for 8 to 24 hours.

- Dry mounting and laminating with HeatSet laminates, such as ArtShield Matt and H/S adhesives, such as Trimount will help eliminate ‘ghost track marks’ symptoms.

14. In-feed guide needs adjustment

- Remove both the applicator wheel, and the shaper head blade assembly to avoid damages.
- Loosen four screws on “in-feed” guide.
- Place a plaque against the in-feed guide
- Turn “feed” to “Jog” mode
- Raise conveyer belt until plaque is squeezed
- Try and pull the plaques by hand
- Press JOG, and bring plaque to the center of conveyor belt, and try pulling out again.
- Press JOG and bring plaque to the end of Conveyor, but not out and try pulling plaque out again
- Plaque should not be pulled out by hand.
- Run the plaque through again, but maintain position in front of in-feed guide
- Top of plaque and black plate on in-feed guide must be flat and even.
- Tighten screws
- Install applicator wheel and shaper head assembly

15. Applicator wheel hesitates while spinning in a 'jerky' fashion, triggering a full shut down.

- Replace directional clutch bearing between the applicator wheel motor and the arbor.
(As a temporary measure, you can loosen the Loosen screw on arbor collet, lower the collet by 0.010" [250 micron] and tighten into position.)
- Loosen applicator motor support screws by a ¼ turn, if problem persists, replace directional clutch bearing.

16. After a full blade replacement or blade rotation DES-1 doesn't sound same as usual.

- (Warning: Shut down machine. Wait until Shaper head has come to a full stop. Remove protective shroud, then proceed.)
- Verify blades on the shaper head, make sure each blade is seated properly into the matched directional slot.
(Warning: The excessive vibration, generated by this condition, can cause premature wear on the shaper shaft and bearings.)

Scheduled Maintenance

Like any other equipment and machinery, your DES-1 requires regular maintenance for optimum performance.

Main components that would require a regular attention,

1. Holddown wheel assembly
2. Conveyor assembly
3. Conveyor assembly bearings
4. Conveyor assembly chain tension

In this section, each of the above mentioned component/assembly cleaning and maintenance is outlined.

1. Holddown Wheel Assembly

Using the Allen Keys provided with your DES-1, unscrew two bolts that holds the assembly in position.

On a clean surface area, remove five wheels, clean, and set aside.

Remove the next five wheels, clean and place where the first five wheels were originally installed.

Remove the next five wheels, clean and place where the second set of five were removed.

You will have room for five wheels at the end of the aluminum bar. Place the first set of wheels that was kept aside, in this area.

Wheels require rotation to maintain proper grip.

Reassemble the assembly in original position.

2. Conveyor Assembly

Conveyor assembly needs to be cleaned once a month.

Lower the conveyor assembly. Using pressurized air, clean the conveyor belt, through the chain, pads, and from each side.

3. Conveyor Assembly Bearings

Conveyor assembly has four “4” bearing that requires greasing.

Two of these bearing are located in the front, and two are at the back.
Do not over grease.
Greasing should be done once every six month.

4. Conveyor Assembly Chain Tension

Chain should be checked against wear and tear.

Inspect the tension every six months
Lift up the chain from track
Maximum allowable tension should be ½ inch (13 mm) clearance.
If needed, make necessary adjustment

How to adjust chain tension

Using a 9/16 wrench, loosen four nuts that holds bearing in place (If you are standing in front of DES-1, this assembly is on the right hand side).

Loosen other four nuts on the other side of Conveyor assembly (If you are standing at the back of DES-1, this assembly is on the left hand side).

Use 9/16 wrench to tighten bolts on either side of Conveyor assembly, while checking for tension periodically.

Do not over-tighten. Chain may snap.

Note:

Keep DES-1 clear and clean from any debris.

Do not allow excessive wood dust to accumulate.

Do not block air flow to Gear unit.

Do not modify DES-1 / E mechanically or electrically, doing so, will void the warranty.

Ensure proper dust removal system is provided.

If in doubt, call your nearest Drytac representative.

Electrical Setup

(Also see page 9)

North American models only, DES-1 Edge Finishing Systems are equipped with a UL and CSA approved power plug (also approved by the NEC).

Type: HUBBEL # **HBL2621CN** 250V 30A.

(No plug and external electrical connection wires are included with DES-1E. Electrical hook up, on European [DES-1E] model, should be performed according to local codes.)

1. Ensure that a dedicated power receptacle is installed near the machine, providing the required 220 Volts, 30 Amps.
2. On the main panel box, you will find the master switch with “On” and “Off” marking.
3. Turn the main power to “ON” position.
4. On the control Panel, you will find all the controls you need to operate the machine. For safety reasons, all switches have been turned to “OFF” position, prior to shipping.
5. On the right hand side of the control panel, pull the red button marked “Master Stop”.
6. On the left hand side of the control panel, pull the red button marked “Emergency Stop”.
7. Next to “Emergency Stop” is a green button marked “Power”. Pressing this button will provide power to the machine and all the components.
8. Your temperature control display should light up. (If at this stage, nothing turns on, please refer to “Trouble shooting” section).

You have now completed plugging in your equipment, and verified all the electrical connections have been made according to specification.

You may continue to Hardware setup section only if the electrical section has been successful.

Unwind Assembly

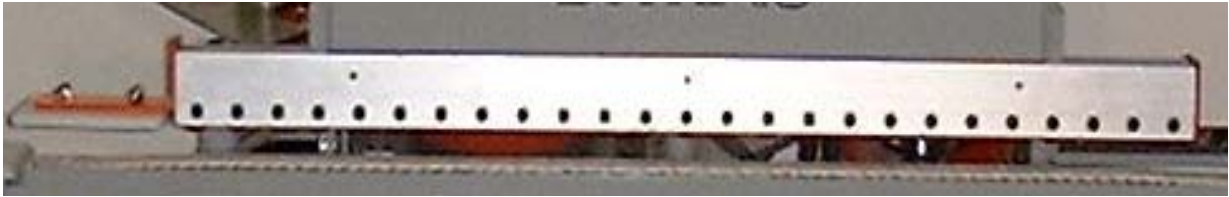
DES-7020



Part Number	Description
DES-7020-001	Center Shaft
DES-7020-002	Center Height Adjustment Screw
DES-7020-003U	Upper Height Adjustment Housing
DES-7020-003M	Middle Height Adjustment Housing
DES-7020-003L	Lower Height Adjustment housing
DES-7020-004	Center Screw Brass Bushing
DES-7020-005	Set Screw with Hex Nut/ Height Guide
DES-7020-006	Knurled Height Adjustment Hand Wheel
DES-7020-007	3" Aluminum Core Holder Block
DES-7020-008	Tension Spring and Spacer
DES-7020-009	Plastic Tension Knob
DES-7020-010	Core Holder Block Brass Bushing
DES-7020-011	Foil Support Plate
DES-7020-012R	Tension Roller Bearing
DES-7020-012BR	Tension Bearing Race

Holddown Wheels Assembly

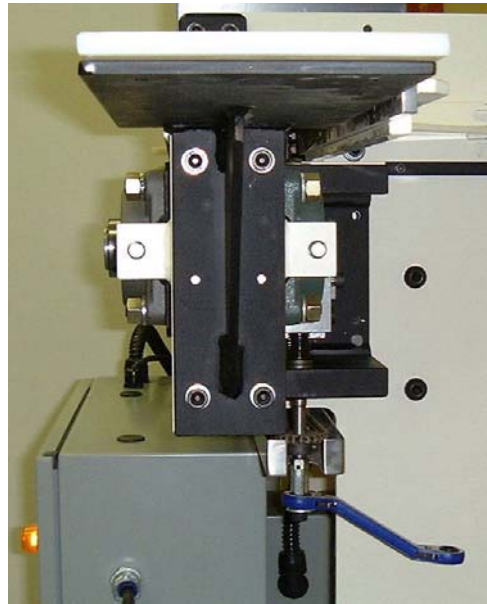
DES-7013-C



Part Number	Description
DES-7013-001	Holddown Wheel Assembly Aluminum Bracket
DES-7010-001	Holddown Wheels (Pkg of 48)
DES-7010-001A	Holddown Wheels (Individual)
DES-7010-002	Holddown Wheel Axel (Pkg of 48)
DES-7010-002A	Holddown Wheel Axel (Individual)
DES-7013-002	Infeed Guard Plate
DES-7013-003	Outfeed Guard Plate
DES-7013-004	Neoprene Outfeed Protector

Height Adjustment Assembly

DES-7015



Part Number	Description
DES-7015-001	Support Bracket
DES-7015-002	Collets
DES-7015-003	Guide Shaft
DES-7015-004	Support Block
DES-7015-005	Height Adjustment Screw Bushing
DES-7015-006	Guide Brass Bushing
DES-7015-007	Height Adjustment Block
DES-7015-008	Attachment Collet
DES-7015-009	Height Adjustment Extension
DES-7015-010	Sprocket
DES-7015-011	Offset Ratcheting Ratchet
DES-7015-012	Threaded Brass Nut
DES-7015-013	Height Adjustment Screw (Gear Unit Side)
DES-7015-014	Height Adjustment Screw (In-feed Side)

Rewind Assembly

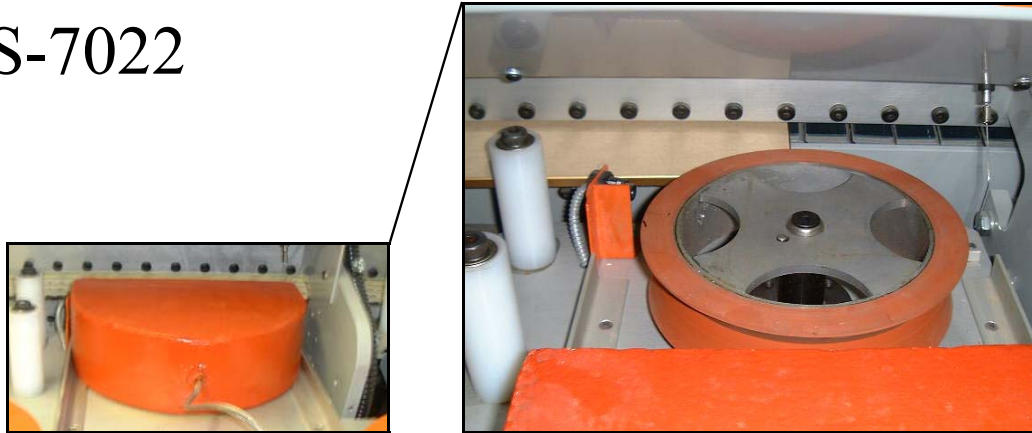
DES-7019



Part Number	Description
DES-7019-001	Rewind Motor
DES-7019-002	Rewind Motor Sprocket
DES-7019-003	Drive Shaft Support Block
DES-7019-004	Rewind Shaft
DES-7019-005	Drive Sprocket
DES-7019-006	Chain Guard
DES-7019-007	Chain
DES-7019-008	Motor Support Plate
DES-7019-009	Foil Support Plate
DES-7019-010	3" Aluminum Core holder Block
DES-7019-011	Bearings

Applicator Wheel Assembly

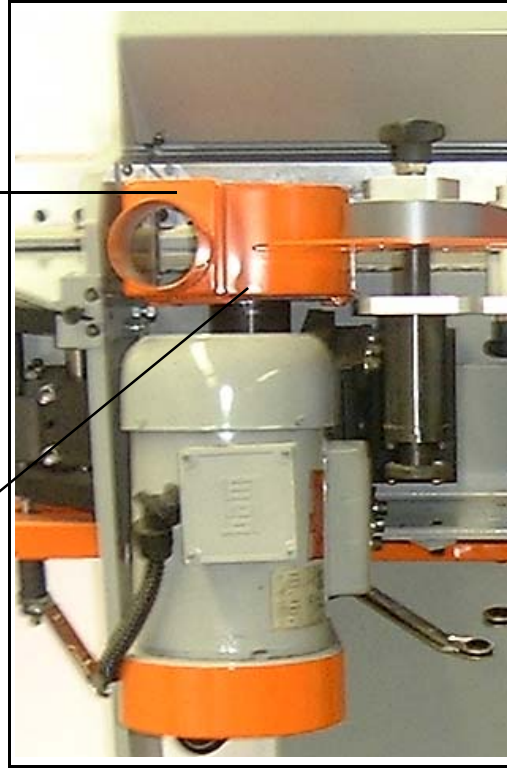
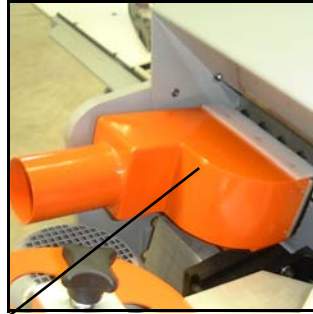
DES-7022



Part Number	Description
DES-7022-001	Applicator Wheel Motor Support Block
DES-7022-002	Clutch Bearing
DES-7022-003	Applicator Wheel Motor Support Plate
DES-7022-004	Applicator Wheel Shaft
DES-7022-005	Support Collet
DES-7022-006	High Temperature Bushings
DES-7022-007	Spring Spacer
DES-7022-008	Applicator Wheel Shaft Housing
DES-7007	Applicator Wheel Motor
DES-7005	Applicator Wheel

Shaper Head Assembly

DES-7023



Part Number	Description
DES-7023-001	Shaft Housing
DES-7023-002	Drive Sprocket
DES-7023-003	Shaft Sprocket
DES-7023-004	Motor/Shaft Support Plate
DES-7023-005	Motor/Shaft Guard Plate
DES-7023-006	High Speed Bearings
DES-7023-007	Drive Shaft
DES-7023-008	Dust Collector Manifold
DES-7023-009	Motor
DES-7023-010	Manifold Guide Plate
DES-7006	Shaper Head
DES-7010	Drive Belt