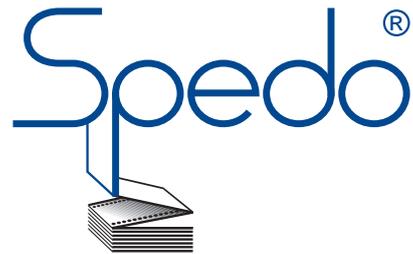


# Spedo 2600 Pinless Forms Cutter

Operator Manual

Issue 5

Part Number SP 007 005



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# Spedo 2600 Pinless Forms Cutter

## Publisher

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76 Woolmer Way  
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## First Published March 2012

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# Spedo 2600 Pinless Forms Cutter

## Safety Measures

This instruction manual contains certain WARNING and CAUTION notices which must be followed by the user to ensure safe operation and to retain the equipment in a SAFE condition.

All users of the equipment described in this manual MUST have received adequate training in its use and application in order to ensure SAFE AND PROPER USE.

Any adjustment, maintenance or repair of the opened apparatus under voltage shall be carried out only by a skilled person who is AWARE OF THE HAZARD INVOLVED.

# Spedo 2600 Pinless Forms Cutter

## Table of Contents

History Sheet.....	2
Copyright.....	3
Safety Measures.....	4
Table of Contents.....	5

## GENERAL DESCRIPTION

## SECTION 1

INTRODUCTION .....	7
TECHNICAL DATA.....	8
DESCRIPTION OF OPERATION .....	9
Spedo 2600 Forms Cutter.....	9
Operation with Web Control Units.....	10
Operation with a Printer or Unwinder .....	10
Operation with a 9400.....	11
MODES OF CUT.....	12
Introduction.....	12
Setting the Form Depth .....	14
Setting the Strip Depth in Dual Cut Mode.....	18
APPENDIX A1 Optional Accessories .....	19
APPENDIX A2 Residual Current Device .....	20

## COMMISSIONING THE SYSTEM

## SECTION 2

INTRODUCTION .....	21
UNPACK .....	21
ACCESSORIES .....	21
SITE CONSIDERATIONS .....	21
INSTALLATION .....	21
Connecting the Mains (Power) Lead .....	21
Installation Checks.....	22

## OPERATING INSTRUCTIONS

## SECTION 3

SUMMARY OF CONTROLS .....	24
Paper Transport deck .....	24
Control Panel .....	24
OPERATING PROCEDURE.....	25
Summary of Controls - Pushbuttons.....	25
Paper Loading .....	26
Operation from the Control Panel.....	26
Preliminary Manual Cut Operation.....	27
Start Continuous Operation.....	27
Stop Continuous Operation .....	27
Emergency Stop Operation.....	27
Paper Run-out.....	28
Loading the Paper Web .....	29

Lowering and Adjusting the Pressure Wheel.....	30
Setting Side Trimmers.....	32
Setting Centre Cutter .....	33
<b>OPERATOR PANEL INSTRUCTIONS .....</b>	<b>25</b>
Mode Selection.....	34
Creating a Job .....	35
Editing a Job.....	36
Optical Mark Recognition (OMR) Operation .....	37
Enabling / Disabling the OMR Sensor.....	39
Adjusting the OMR Sensor .....	41
Counter / Batch Mode Operation .....	42
Maximum Speed Operation .....	44
User Menu Settings .....	45
Maintenance and Engineers Mode .....	47
Changing the Blade Setup .....	48
Parts Catalogue.....	49
<b>OPERATIONAL MAINTENANCE</b>	<b>SECTION 4</b>
<b>WARNINGS .....</b>	<b>50</b>
<b>CLEANING .....</b>	<b>50</b>
<b>LUBRICATION.....</b>	<b>51</b>

## GENERAL DESCRIPTION

## SECTION 1

### INTRODUCTION

The Spedo 2600 Pinless Forms Cutter is designed to produce cut sheets from continuous paper webs. In addition, the machine can also optionally trim away either or both margins and optionally centre cut the paper web.



**Fig 1.1 Spedo 2600 Pinless Forms Cutter**

A normal cross-cut is made at the leading edge of the paper web. However, the machine is also capable of operating in double cross-cut mode, when it is required to cut before and after the leading edge to shorten the overall length of the form.

The depth of form to be cut, depth of strip and feed are all measured in terms of line increments, either as a 6 lines per inch, 8 lines per inch, 10 lines per inch, 12 lines per inch or 16 lines per inch. In double cut mode, a second cross-cut is made at any interval of between 1 to 9 lines after the first cut as set by the digital coding switch.

## TECHNICAL DATA

### Basic Design:

The standard machine comprises the operator's panel, 2 tractor units with width adjustment by hand wheel, LH & RH edge (margin) trimmers, noise absorbing protective cover, & paper guides.

### EMC Conformity:

The electrical equipment incorporated in this machine with EMC Directive (89/336/EEC amended by 91/236/EEC and 92/31/EEC), TUV Rheinland Certification & CE Certification.

### Finish:

Spedo white main frame with graphite grey operator panel.

### Modes of Cut:

Normal single cut, double (strip) cut or Twin-cut operation.

### Paper Weight:

Single Web: 40 g/m<sup>2</sup> to 300 g/m<sup>2</sup>.

### Performance:

Form Depth	S/Cut	1/6 Strip Cut	Twin cut
14 inch	22,320	14,880	
12 inch	24,480	15,840	19,680
11 inch	25,920	16,440	
10 inch	27,480	17,040	
8 inch	31,080	18,360	
7 inch	32,760	19,080	
6 inch	35,400	20,040	
4 inch	42,000	21,120	
3 inch	42,120	21,240	

### Line Feed Increments:

1/6 in, 1/8 in, 1/10 in, 1/12 in, 1/16 in or millimetres

### Form Width:

145 mm - 482 mm (5 ¾ - 19inches)

### Form Depth:

64mm – 700mm (2 ½ inch – 27 ½ inch)

### Strip Cut:

1mm – 38mm (1/32 inch – 1 ½ inch)\*

\*Subject to stock weight and production speed.

**Width of Continuous Web:**

510 mm (20inches)

**Feed Speed:**

Rotary control, continuously adjustable.

**Counter Type:**

Integrated multifunction batch counter.

**Power Requirements:**

Voltage:	230 V +/-10%
Frequency:	50 Hz to 60 Hz.
Power Consumption:	690 W (approx).

**Noise Emissions:**

69dB

**Dimensions:**

Length:	575 mm.
Width:	980 mm.
Height:	1070 mm.

**Weight:**

140 kg (approx).

**Options**

Options are listed in Appendix A1 to this section.

**DESCRIPTION OF OPERATION****Spedo 2600 Pinless Forms Cutter**

Paper is fed into the machine under the paper tension brush, over the in-feed plate, along the paper supports onto two paper guide units. Once the paper guide units have been adjusted for width and thickness (weight) of paper web, the web is 'jogged' forward and backwards by the operator until it has been aligned with the edge of the paper guide unit flaps.

At this stage, if the carrier sides (margins) are to be cut off, LH and RH trimmers can be engaged, their precise position being set by aligning their cut marks with the carrier perforations. In addition, a centre cutter can be engaged and aligned by the operator at this point, if required.

The machine is capable of operating in conjunction with an ancillary unit (e.g. a web control, printer or labeller) and successful co-operation between the two units depends on the loop of paper that forms between the two machines. The presence of paper feeding into the machine is detected by a paper run out switch located on the in-feed plate. If the paper runs out, the machine automatically stops.

### Operation with Web Control Devices.

It is possible to run the 2600 Pinless Forms Cutter In-Line with a variety of input devices. Depending on the speed and application of the input device the correct interface unit can be configured using the examples below.

### Spedo 2230 Optical Loop Switch.

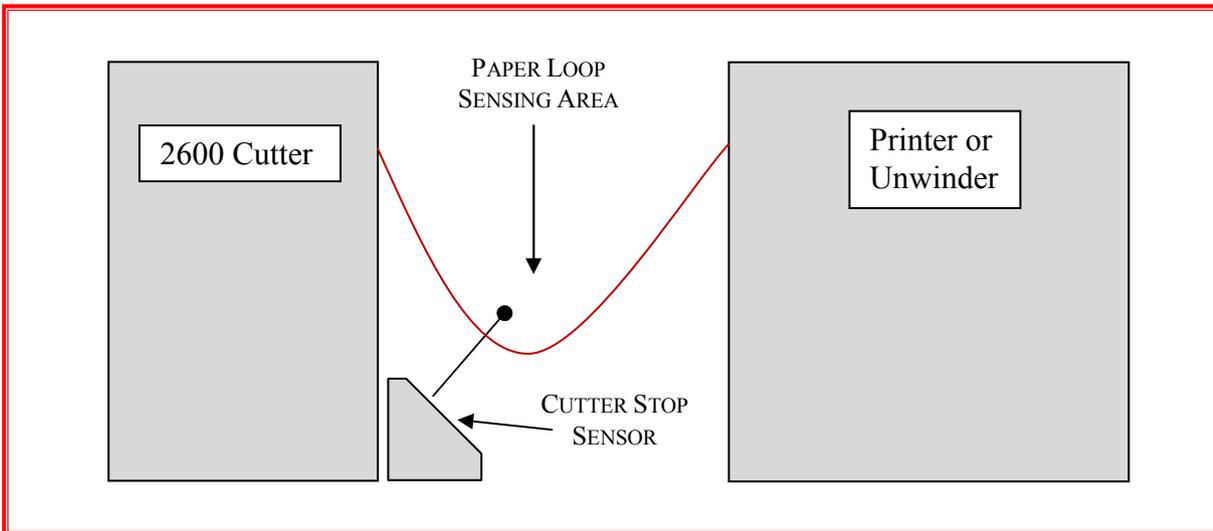


Fig1.2

### Operation with a Printer or Unwinder

When the machine is being supplied from a printer or unwinder which has no means of controlling its out-feed, it will be necessary to control the paper loop height by positioning either a Spedo Optical Loop Switch Unit or an Optical Loop Interface Unit between the machine and the printer or unwinder as shown in Figs 1.2 & 1.3.

### Spedo 2231 Optical Loop Interface.

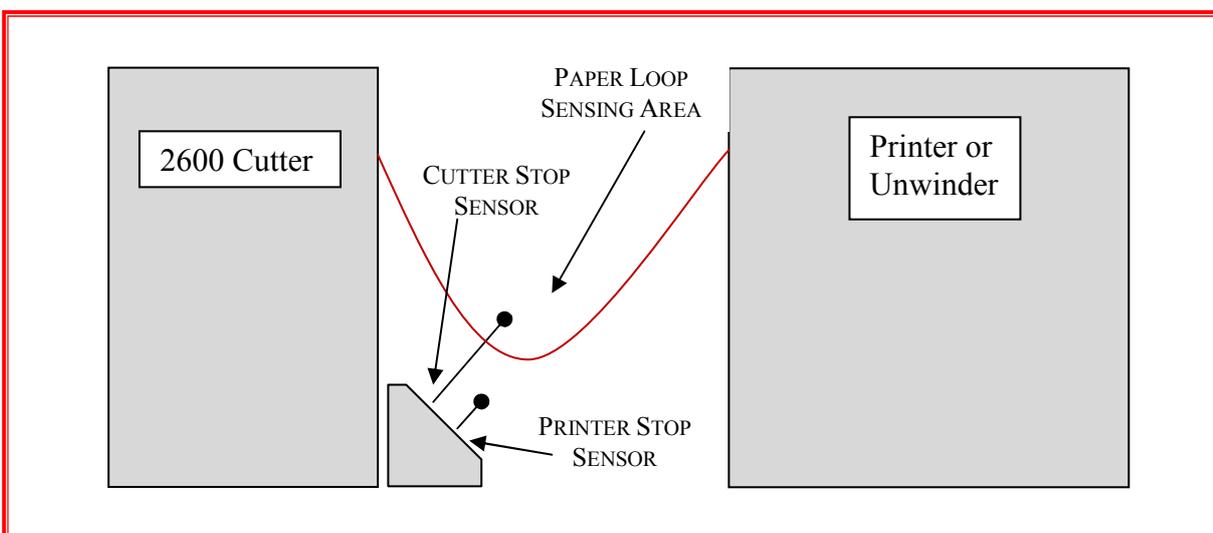


Fig1.3

### Spedo 9400 Web Control Unit.

The Spedo 9400 Web Buffer is an interface unit designed to allow the Spedo 2600 pinless forms cutter to be run in line with high speed continuous forms printers and unwinders.

The 9400 is able to pause both the cutter and the printer or unwinder as needed, as well as being able to speed up and slow down to match the speed of the input device.

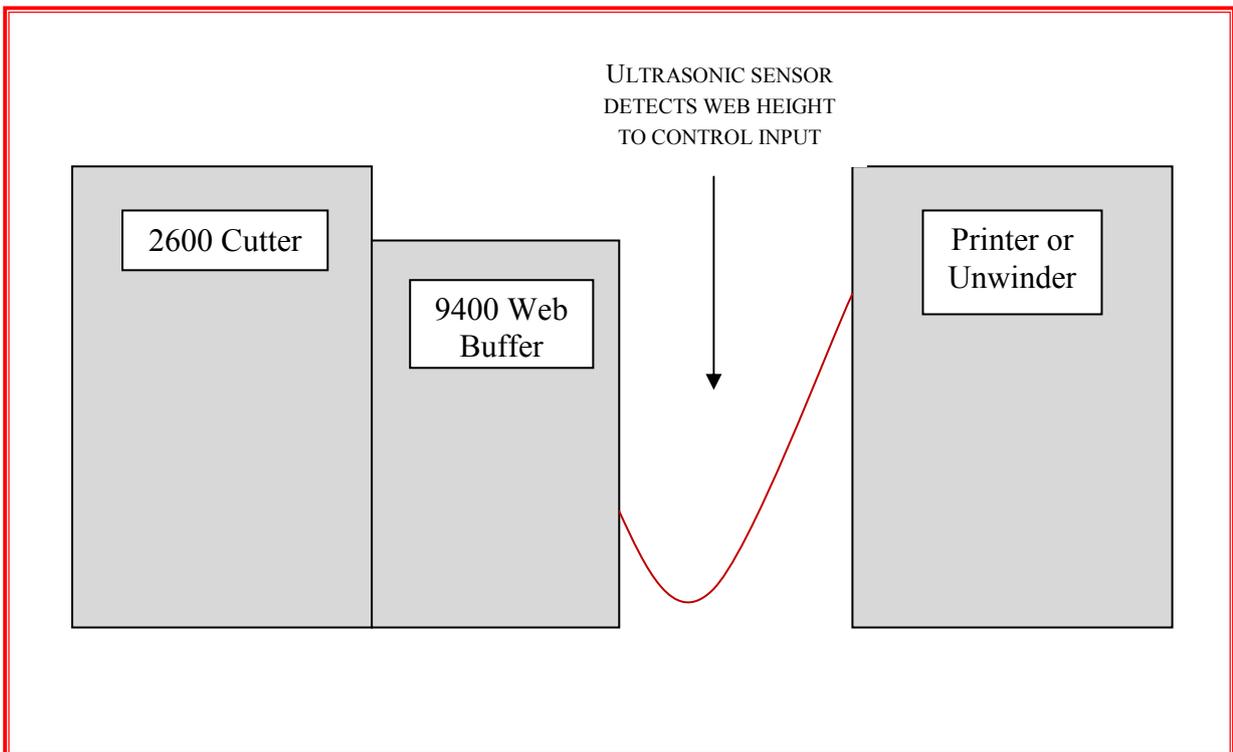


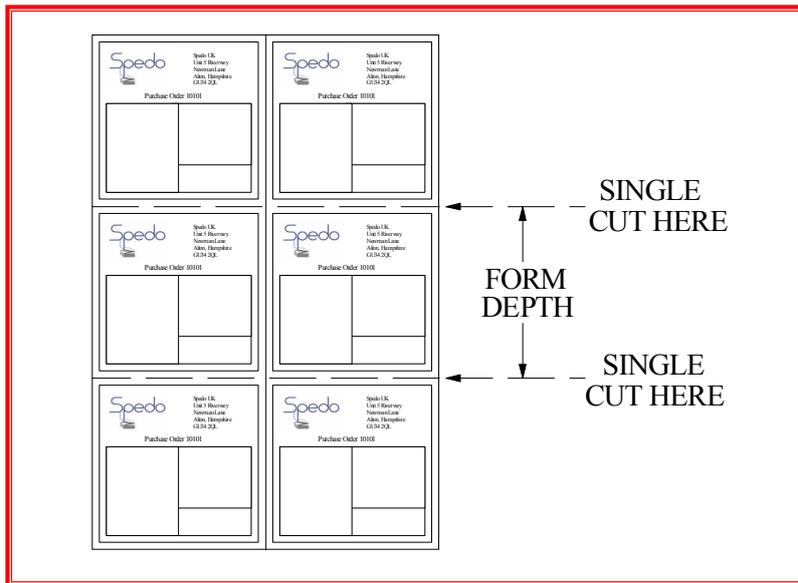
Fig1.4

## MODES OF CUT

### Introduction

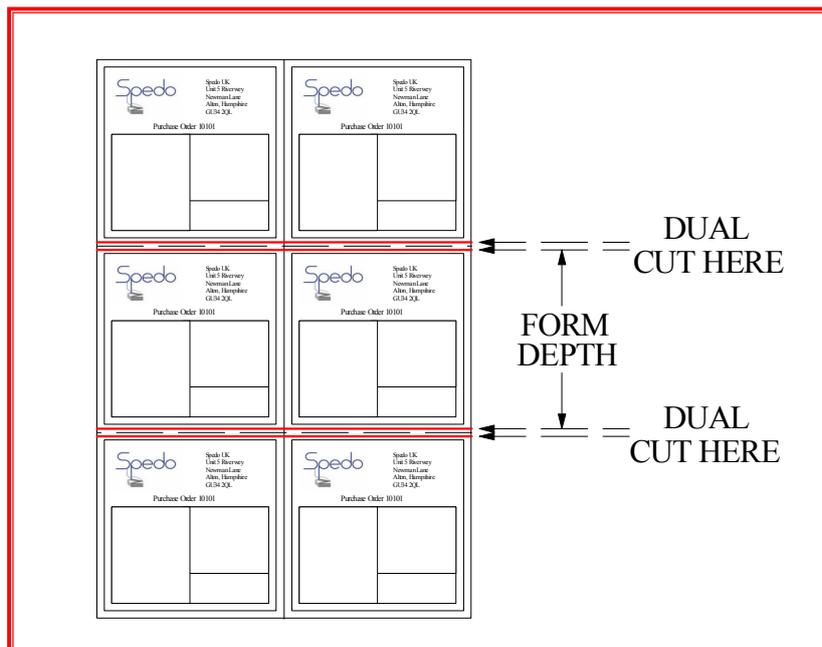
Forms can be cut either by a single cut or by a dual (double) cut as configured by the digital coding switch. The terminology used in the following explanation relates to Fig 1.5.

Single cut mode is used when it is required to make the cut at the leading edge of the paper web as shown. The value of form depth is set on the digital code switch on the control panel.



Modes of Cut - Single Cut

Dual cut mode is used when the cut form depth required is smaller than the depth of the original stock size as shown below, this results in a strip being cut away between forms. In this mode, the value of the form depth and the strip depth is set in on the digital code switch on the control panel.



Modes of Cut - Dual Cut

DUAL CUT  
REDUCED BY 7.8MM  
WITH A CENTRE CUT



SINGLE CUT  
WITH A CENTRE CUT



## Setting the Form Depth

The principle of setting form depth is by line count. The machine motor is geared such that 1 revolution of the drive roller moves the paper web forward exactly 6 inches.

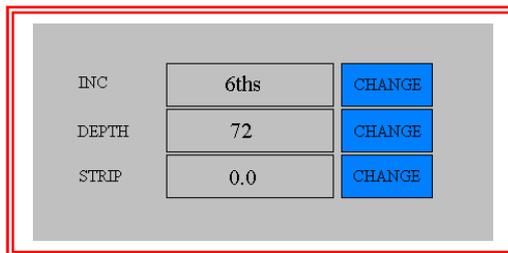
For single cut mode, the Strip Depth switch is always set to 0 and can be ignored during the following explanation.

In order to allow the operator to set various form depth values (6, 12, 18 inches etc..) by line increment, the machine is fitted with a line increment feature that allows the cut to be made at line positions. The incremental values can be selected at the Increment switch and are as follows:

1/6 in	=	6 lines per inch
1/8 in	=	8 lines per inch
1/10in	=	10 lines per inch
1/12 in	=	12 lines per inch
1/16 in	=	16 lines per inch

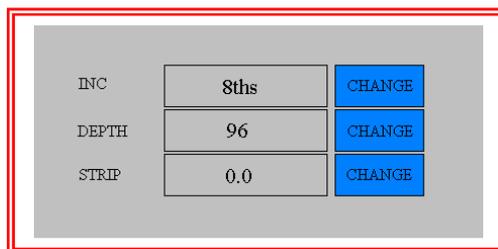
From the above table, it can be seen that if you wished to cut to a form depth of 12 inches, if you selected a line increment of 1/6 in, this would be 6 lines x 12 inches = 72 lines.

So you would dial up 072 on the Form Depth switch. The machine would then cut at each 72 line point.



Similarly, if you selected 1/8 in line increment, this would be 8 lines x 12 inches = 96 lines.

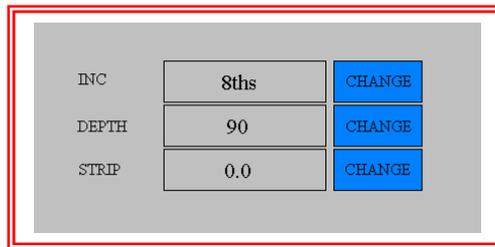
So you would dial up 096 on the Form Depth switch and the machine would then cut at each 96 line point and still maintain the 12-inch form depth.



**Example 1.** If you wished to cut a form of depth  $11\frac{1}{4}$  inches from a continuous paper web, the line increment set-in must be a multiple of the denominator of the fractional value (in this example it is 4). 4 is a multiple of 8, 12 or 16, so either of these incremental values can be set to give a round number of total lines per form depth:

With  $1/8$  in selected = 8 lines per inch,

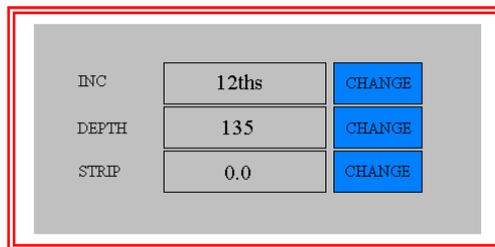
$$\begin{aligned} 8 \times 11 &= 88 \\ 8/4 &= 2 \text{ lines} \\ 88 + 2 &= 90 \text{ lines.} \end{aligned}$$



The values set on the digital code switches would be 8 090.

With  $1/12$  in selected = 12 lines per inch,

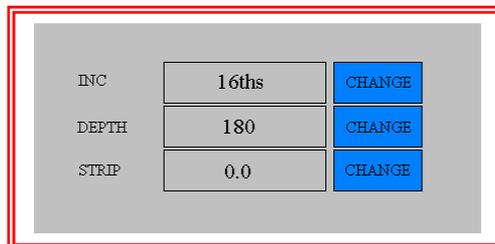
$$\begin{aligned} 12 \times 11 &= 132 \text{ lines} \\ 12/4 &= 3 \\ 132 + 3 &= 135 \text{ lines} \end{aligned}$$



The values set on the digital code switches would be 12 135.

With  $1/16$  in selected = 16 lines per inch,

$$\begin{aligned} 16 \times 11 &= 176 \text{ lines} \\ 16/4 &= 4 \\ 176 + 4 &= 180 \text{ lines} \end{aligned}$$

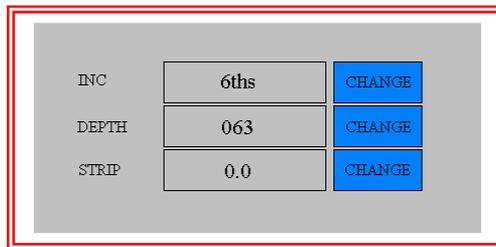


The values set on the digital code switches would be 16 180.

**Example 2.** If you wished to cut a form of depth 10 1/2 inches from a continuous paper web, the line increment set-in must be a multiple of the denominator of the fractional value (in this example it is 2). 2 is a multiple of 6, 8, 12 or 16, so either of these incremental values can be set to give a round number of total lines per form depth:

With 1/6 in selected = 6 lines per inch,

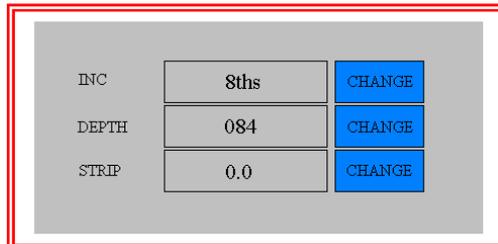
$$\begin{aligned}
 6 \times 10 &= 60 \text{ lines} \\
 6/2 &= 3 \\
 60 + 3 &= 63 \text{ lines}
 \end{aligned}$$



The values set on the digital code switches would be 6 063.

With 1/8 in selected = 8 lines per inch,

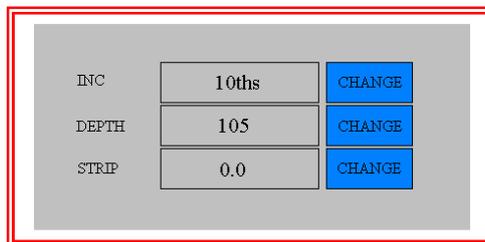
$$\begin{aligned}
 8 \times 10 &= 80 \text{ lines} \\
 8/2 &= 4 \\
 80 + 4 &= 84 \text{ lines.}
 \end{aligned}$$



The values set on the digital code switches would be 8 084.

With 1/10 in selected = 10 lines per inch,

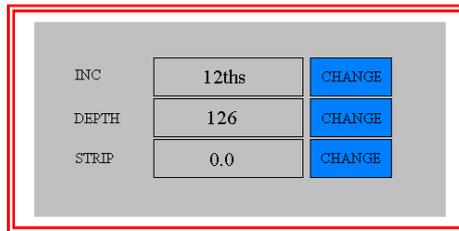
$$\begin{aligned}
 10 \times 10 &= 100 \text{ lines} \\
 10/2 &= 5 \\
 100 + 5 &= 105 \text{ lines.}
 \end{aligned}$$



The values set on the digital code switches would be 10 105.

With 1/12 in selected = 12 lines per inch,

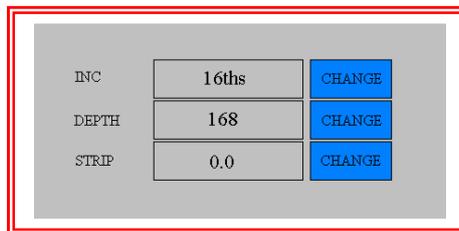
$$\begin{aligned}
 12 \times 10 &= 120 \\
 12/2 &= 6 \\
 120 + 6 &= 126 \text{ lines.}
 \end{aligned}$$



The values set on the digital code switches would be 12 126.

With 1/16 in selected = 16 lines per inch,

$$\begin{aligned}
 16 \times 10 &= 160 \text{ lines} \\
 16/2 &= 8 \\
 160 + 8 &= 168 \text{ lines.}
 \end{aligned}$$



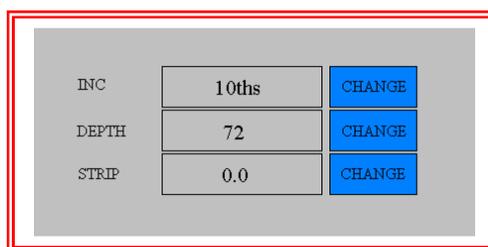
The values set on the digital code switches would be 16 168.

**Example 3.** If you wished to cut a form of depth  $7 \frac{1}{5}$  inches from a 12-inch continuous paper web, the line increment set-in must be a multiple of the denominator of the fractional value (in this example it is 5).

5 is a multiple of 10, so only an incremental value of 10 can be set to give a round number of total lines per form depth:

With 1/10 in selected = 10 lines per inch,

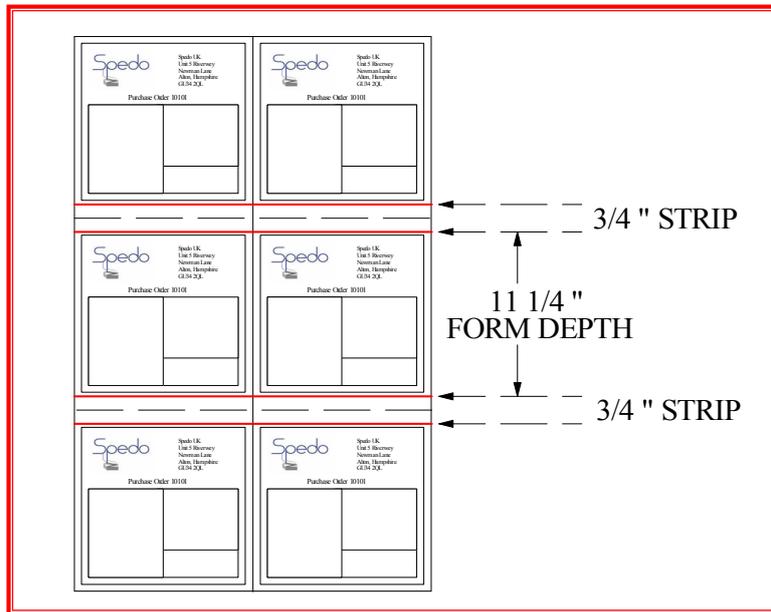
$$\begin{aligned}
 10 \times 7 &= 70 \text{ lines} \\
 10/5 &= 2 \\
 70 + 2 &= 72 \text{ lines.}
 \end{aligned}$$



The values set on the digital code switches would be 10 072.

### Setting the Strip Depth in Dual Cut Mode

When in dual cut mode, the machine makes a cut immediately before and after a perforation, resulting in a strip being cut out. The strip depth value is set in terms of line increment on the Strip Depth switch.



Consider Example 1 again. A form depth of 11 1/4 is to be cut from a 12-inch web:

$$12 - 11 \frac{1}{4} = \frac{3}{4}$$

This means that a 3/4 inch strip must be cut out between forms. A 3/4 inch depth at a line increment of 1/8 in works out as|:

$$\begin{aligned} \frac{8}{4} &= 2 \\ 2 \times 3 &= 6 \text{ lines.} \end{aligned}$$

With the value 6 set on the Strip Depth switch, 6 must be deducted from the original value of 90 set in for a single cut, so that 84 is now set-in on the Form Depth switch.

INC	8ths	CHANGE
DEPTH	84	CHANGE
STRIP	6	CHANGE
STRIP [X]	1	CHANGE

The Strip Depth switch can be set in the range 0 to 9 (lines) and these will relate to the line increment setting selected.

The cut positions can now be 'fine tuned' by the using the JOG pushbuttons to determine how many lines before and after the perforation line the cuts are made ( i.e., 3 lines before and 3 lines after, or 1 line before and 5 lines after, etc.)

Multiple strips can also be performed by increasing the STRIP[X] multiplier function.

## OPTIONAL ACCESSORIES

## APPENDIX A1

### Double Cross-Cut Blade

This is a cross-cutting device for removing the cross perforation from the paper web, without any loss of time or performance. The strip depth can be changed from 1/6<sup>th</sup> to 7.8mm depending on the size of blade to be fitted. The strip is cleanly separated from the forms on each motion of the blades by blown air. The movable lower blade can be tilted off for single cut operation, if required. In this mode, the Strip Depth switch on the control panel will be removed.

### Optical Loop Switch Unit 2230

This unit is designed to control the height of the paper loop which forms between an out-feeding printer or collator and the associated in-feeding Spedo Forms Cutter.

### Optical Loop Interface Unit 2232

This unit is designed to control the height of the paper loop that forms between an out-feeding printer or collator and the associated in-feeding Spedo Forms Cutter. It also detects the overflow of paper out-feeding from the printer or collator that occurs if the Forms Cutter stops accepting paper infeed.

### Web Control Unit 9400

This unit is a high speed web buffer used to accurately control the paper web into the forms cutter. The web buffer allows the operator to stop and start the entire print line automatically, thus improving productivity.

### Side Strip Chopper

This is used for shredding the cut-off side strip which is collected in a metal tray.

### Anti-Static Kit

This is supplied with mounting accessories to remove static built up from the laser printing process.

### Centre Cutters

Additional Centre Cutter Assemblies can be fitted, providing additional longitudinal cuts along the paper web.

### Additional Accessories

- Stack Tray & Paper Stops

## RESIDUAL CURRENT DEVICE

## APPENDIX A2

### USE OF RESIDUAL CURRENT DEVICE (RCD)

As part of its highly reliable cutting mechanism, the Spedo 2600 Pinless Forms Cutter uses brushless AC servomotors. These servomotors use a high frequency switching current. If it is necessary to use a Residual Current Device with your system, it must be a unit that has been specified for inverter use.

Spedo UK recommends that only RCDs provided by Spedo UK are used. Spedo UK will not accept any responsibility for a system failure if an RCD from another supplier is used.

Two versions are available:

- Part No. SP005 376 Residual Current Device, c/w Cord Set.
- Part No. SP005 377 Residual Current Device, Wall Mounted.

## COMMISSIONING THE SYSTEM

## SECTION 2

### INTRODUCTION

The procedures given in this section should only be carried out by a competent trained service technician. Once the forms cutter has been declared ready to operate, the operating personnel should be made familiar with its safe operation.

### UNPACK

- Unpack the equipment and examine it thoroughly to ascertain whether any damage has occurred in transit.
- Report immediately any such damage to the agent or manufacturer. Retain the packing should further transportation be necessary.

### ACCESSORIES

The following items are supplied as standard:

- Operators Manual

### SITE CONSIDERATIONS

For optimum use of the forms cutter with an ancillary unit, the distance between them should be at least 3 feet up to a maximum of 8 feet. If heavy weight paper is to be cut, the maximum possible distance should be allowed.

Consideration must also be given to the layout and positioning of work tables and cupboards surrounding working area, at the same time leaving enough space around the system for the operator to have access to all operational requirements.

The forms cutter should be set square in relation to any ancillary unit.

If an ancillary unit is to be used with the forms cutter, refer to the relevant instruction manual, before making up the combined system.

### INSTALLATION

#### Connecting the Mains (Power) Lead

Connect the power lead to a plug suitable for the local power source. The colour codes are as follows:

- L (live) = BROWN wire
- N (neutral) = BLUE wire
- E (earth / ground) = GREEN/YELLOW wire.

Connect the power lead into the local power source socket.

## WARNINGS

The putting into operation of the machine, especially the actuation of the cross-cut guillotine blade presupposes that the guillotine has been correctly installed by a Spedo trained technician. The manufacturer is not liable for damage caused by non-observance of the procedures given in this manual. Please observe the following precautions before switching on the cutter for the first time:

- Never wear items of loose clothing or other decorative jewellery, such as necklaces or bracelets as they could become entrapped in the moving parts of the machinery and cause injury.
- Never touch the working area of the longitudinal cross-cut blade. This is applicable especially when standing at the stacker end, when the motor is running.
- If any malfunction occurs, contact the Customer Services Department of Spedo or their agent for assistance. DO NOT ATTEMPT to correct any mechanical malfunction that occurs.

## Installation Checks

- Note: If there is a delay of greater than 1 minute in moving between steps in the following procedure, the forms cutter goes into 'sleep mode'. To return to normal operation, hold down the START button for at least 2 seconds.
- The first time that the cross-cutting blade is to be actuated, it must only be carried out manually by a Spedo trained technician.
- Connect the machine to the local mains supply. Switch ON and check that the STOP and START pushbuttons illuminate. Close the protective cover.
- Set the digital coding switch to 6 035 1. Press the START pushbutton once. The STOP pushbutton should extinguish.
- Press the Line Advance pushbutton, so that the feed shaft rotates until the groove on the shaft is clearly visible, as shown in Fig 2.1.
- Press the In Feed pushbutton 6 times and check that the feed shaft rotates 6 times, returning to its original position.
- Press the Manual Blade pushbutton and check that the blade motor fires once per press.
- Press the START pushbutton once. Check that the feed shaft rotates one complete revolution and that the blade motor fires twice (dual cut). Check that the feed shaft has returned to its original position.
- Hold down the START button and check that the machine runs continuously.
- Place a sheet of paper under the paper tension brush, so as to cover the paper run out switch.
- Press the Continuous pushbutton once. Check that it has locked in position and that it has illuminated.
- Press the START pushbutton once. Check that the machine now cycles continuously with the feed shaft rotating one complete revolution, returning to its start point, and the blade firing twice (dual cut).

- Check that this cycle is repeated until either the STOP is pressed or the Continuous pushbutton is pressed once and released.
- As a safety check, open the protective cover and check that none of the above steps can be activated. Check also that the side trimmer shafts are not rotating.
- Repeat the safety check above with the main door removed.
- Once satisfied that the forms cutter is operating satisfactorily, install any other ancillary equipment that is to form the system (all instruction manuals provided with Spedo equipment contain installation and operating instructions). Connect any system leads between the forms cutter and any ancillary units as necessary.
- Load the forms cutter with a paper web as shown in Fig 2.1 and align it as shown in Fig 2.2.
- Operate the combined system and check that it functions satisfactorily. Before handing over, ensure that the operating personnel are familiar with all operating procedures (as given in Section 3) and are aware of any safety hazards involved

## OPERATING INSTRUCTIONS

## SECTION 3

### SUMMARY OF CONTROLS

#### Paper Transport Deck

The major operational components of the paper transport deck are identified on Fig 3.1.

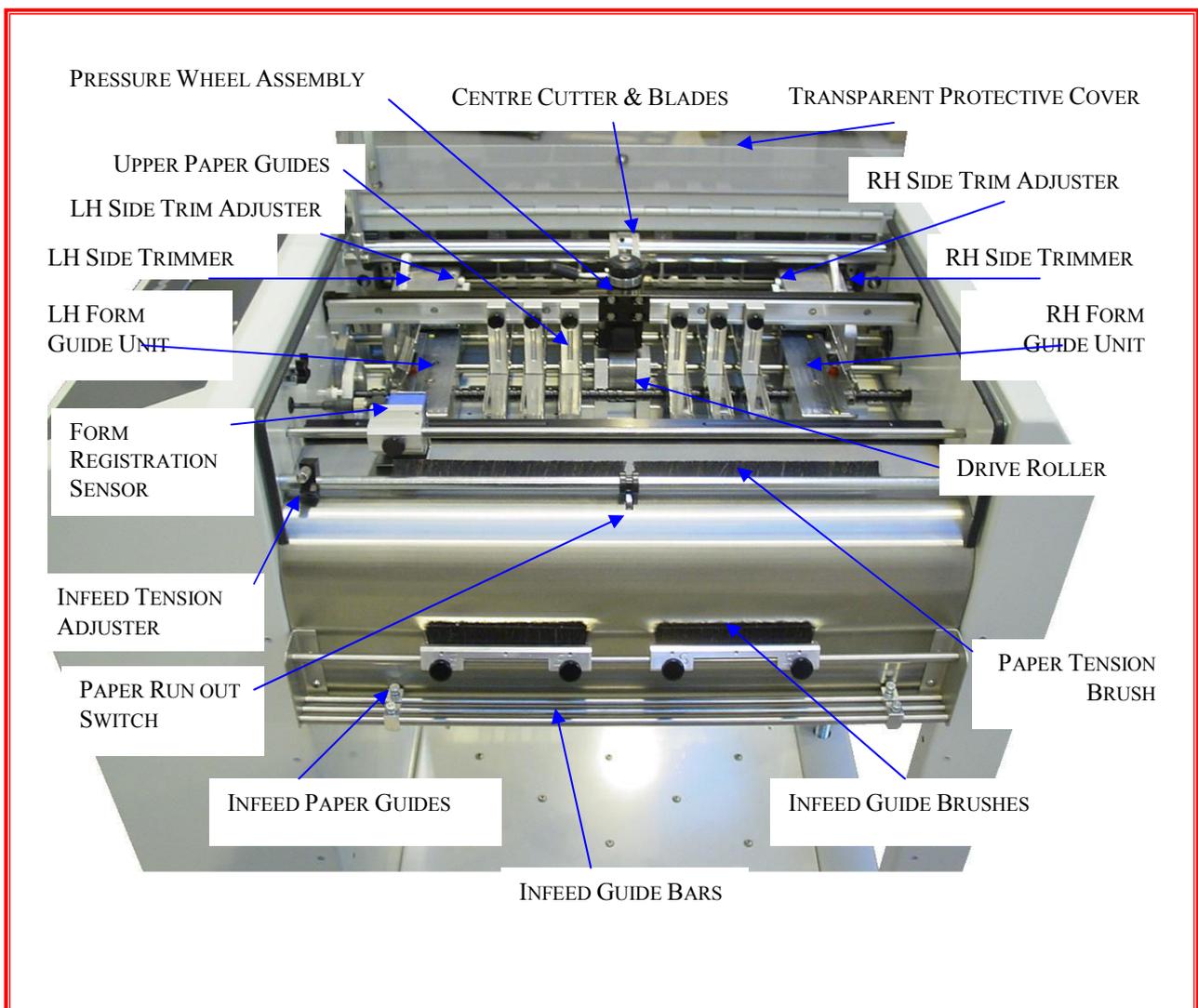


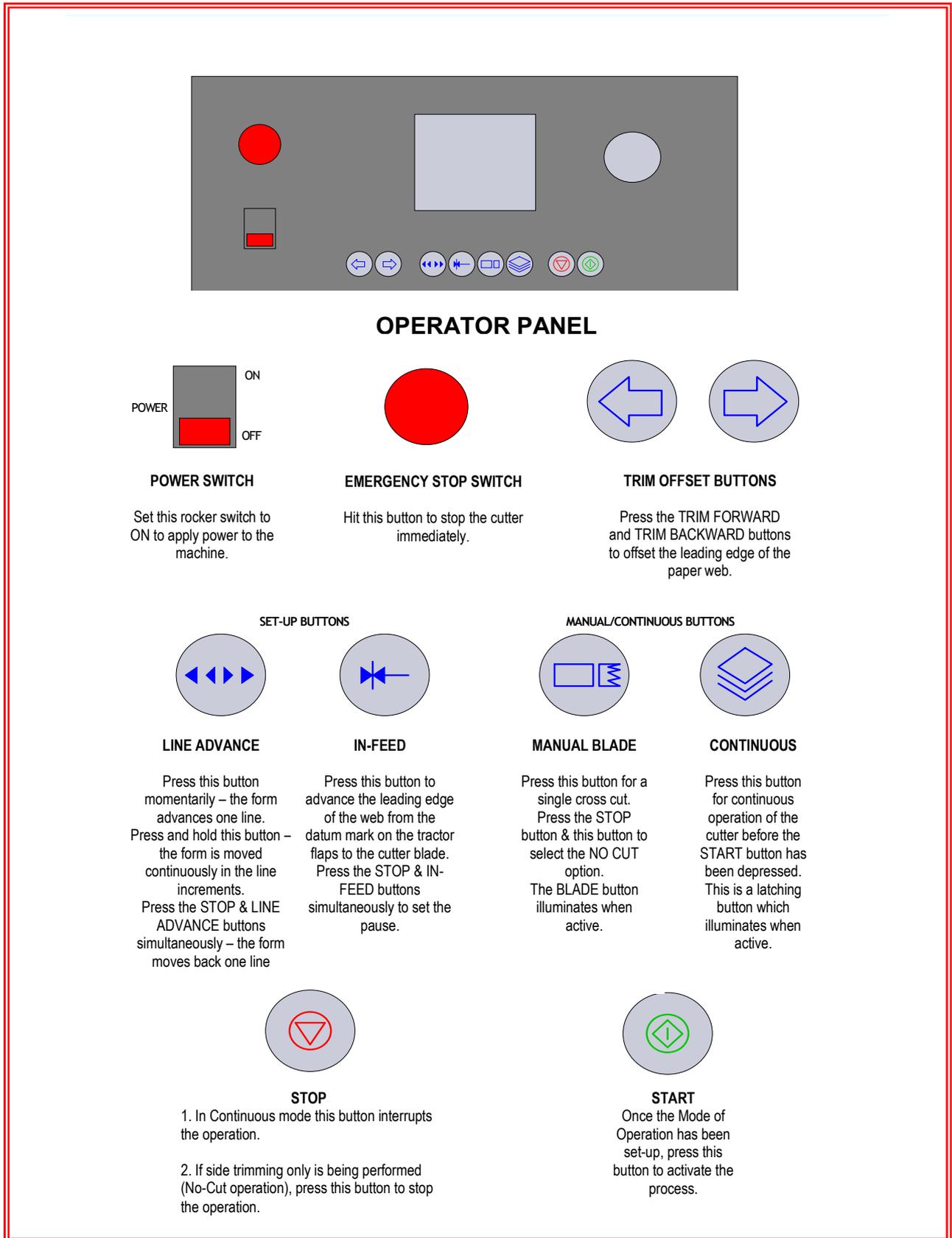
Fig 3.1 Summary of Controls - Paper Transport Deck

#### Control Panel

The guillotine is operated from the enhanced control panel. The controls are described under three main categories. Fig 3.2 gives a summary of pushbuttons and Fig 3.3 explains the use of the batch and total counters and the Speed Adjust control.

## OPERATING PROCEDURE

The following procedure is given as a general guide only, laying out a suggested order of setting up and operating the guillotine. It is essential that the operator is familiar with all the controls as summarised in the beginning of this section.



**Fig 3.2 Summary of Controls – Pushbuttons**

## Paper Loading

- Select required job from the JOB LIST page.
- Check the form length; if necessary adjust the form depth and strip depth using the on-screen digital coding keypad displayed on the touch panel.
- Switch on the MAINS switch. Check that the MAINS switch and the STOP switch have illuminated.
- Open the protective cover. Release the centre cutter away from the paper path.
- Open the in-feed tension brush and feed the paper web underneath it over the in-feed plate. Return the in-feed tension brush to its operating position.
- Pull enough length of paper web through so that it can lie unsupported on top of the paper supports.
- Set the space between the paper guide units at approximately the required distance and position the paper clamps and paper supports at equal intervals between the guide units.
- Open the paper guide unit flaps and pull enough length of paper through so that it now covers the main drive roller. Lower the pressure roller and adjust the pressure if necessary.
- Close the paper guide unit flaps and check that the space under the flaps is enough to cater for the weight (thickness) of paper web. If necessary, adjust the height of the RED adjusters until the flaps are at the required setting.
- With the flaps closed, adjust the space between guide units so that the paper lies flat and is slightly tensioned across its width.
- Close the protective cover. Press the START pushbutton to extinguish the STOP pushbutton. Use the Line Advance pushbutton to align the leading edge of the paper web with the end of the paper guide unit flaps.
- If side trimming is required, open the protective cover and slide the side trimmer(s) so that the trimmer block(s) engage with the guide unit(s), (position 3 as shown on Fig 3.9). Align the yellow cut mark with the side carrier cut line.
- If a centre cut is required, engage the centre cutter and adjust its position to align with the centre cut mark on the paper web, as shown in Fig 3.8. Close the protective cover. Press the START pushbutton to extinguish the STOP pushbutton.
- Set the batch counter as required. A pause facility has been incorporated to allow automatic batching of form sets without the need for operator intervention.
- The cutter is now ready to be operated. However, before starting, ensure that a paper loop has formed between the in-feeding ancillary unit (if present) and the guillotine and that the loop will be automatically controlled by the system.

Having set the guillotine as required above, proceed as follows:

## Preliminary Manual Cut Operation

- Press the START pushbutton. Check that the RED STOP pushbutton has extinguished.
- Press the In-Feed pushbutton and check that the leading edge of the paper web advances to the guillotine blade.
- Press the Manual Cross-Cut pushbutton and check that the guillotine blade cuts across the full width of the paper web.
- Press the START pushbutton a few times to produce some cut forms and check the forms for correct cut position and depth. Fine tune the cut position using the JOG pushbuttons.
- It may also be necessary to re-adjust the side trimmers and the centre cutter positions at this time.
- Set the stacking guides and paper stops according to the position and size of the cut forms.
- Start Continuous Operation.

## Start Continuous Operation

- Once satisfied that the machine is operating correctly in manual operation, select Continuous mode by pressing the self-locking Continuous pushbutton and press START. The machine will now cycle at the values previously set. This applies to cut and no-cut operation.

## Stop Continuous Operation

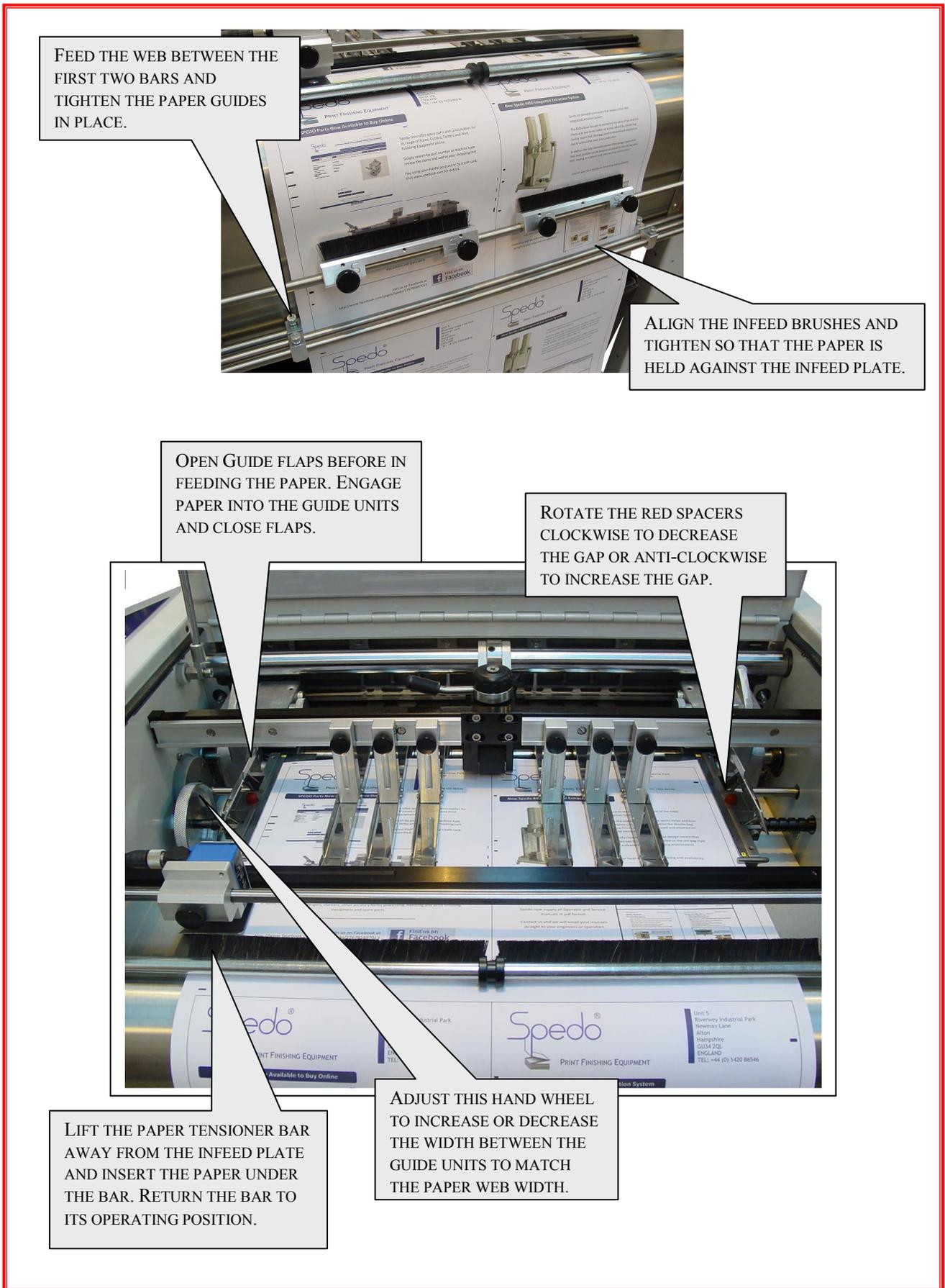
- Press the STOP pushbutton or release the Continuous pushbutton to interrupt continuous operation. The machine will, however, continue its current cycle and then stop. This applies to cut and no-cut operation.

## Emergency Stop Operation

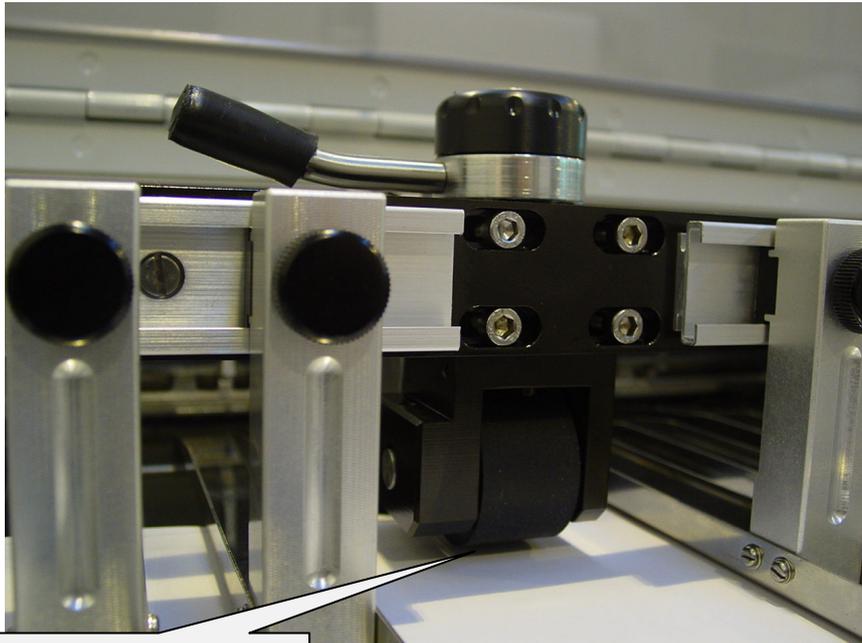
- Open the protective cover. The machine will stop immediately in mid-cycle. To start again, close the cover and resume the normal operating procedure from the beginning.
- Note that this method of stopping the machine is bad practice and should not be used for normal operation. This applies to cut and no-cut operation.

## Paper Run-out

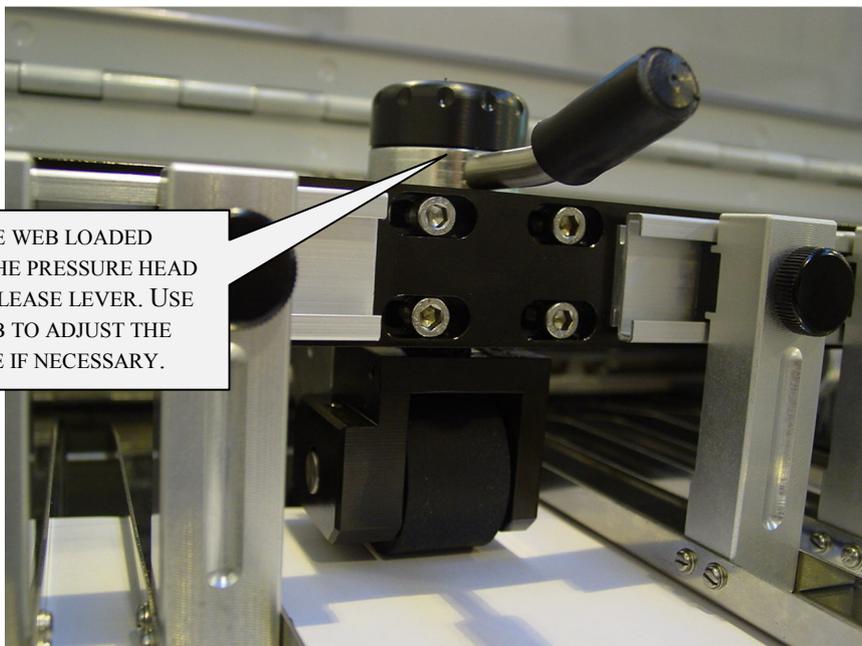
- The machine will continue to cycle until the trailing edge of the paper web passes over the paper run-out switch. When this happens, the machine will stop, leaving the last forms unprocessed. This applies to cut and no-cut operation.
- In this instance, de-select the Continuous pushbutton and cycle the remaining forms through manually, by pressing the START pushbutton, using the In-Feed pushbutton to advance the paper and the Manual Blade pushbutton to cut the remaining forms.



**Fig 2.1 Loading the Paper Web**

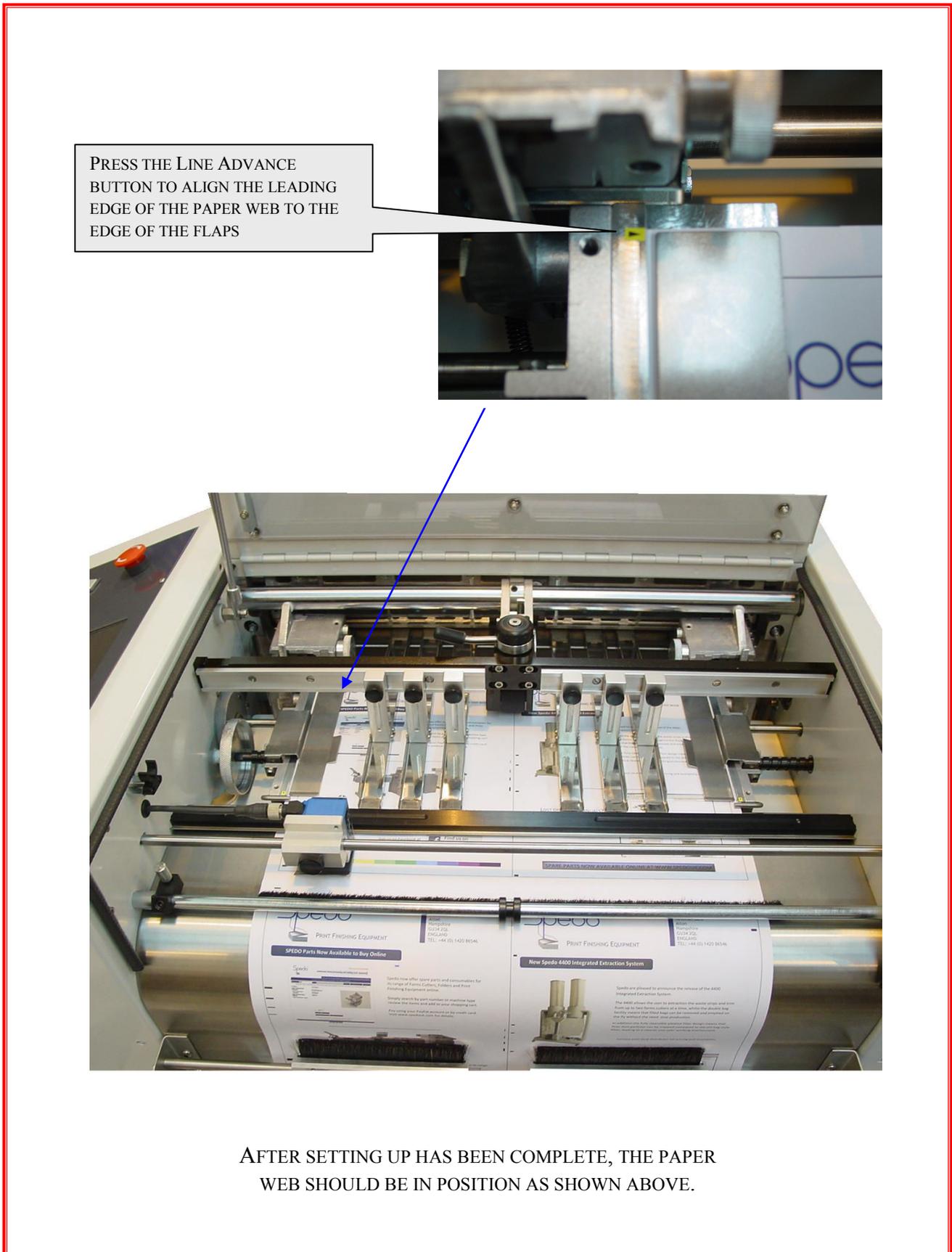


LOAD THE WEB UNDER THE  
RAISED PRESSURE WHEEL

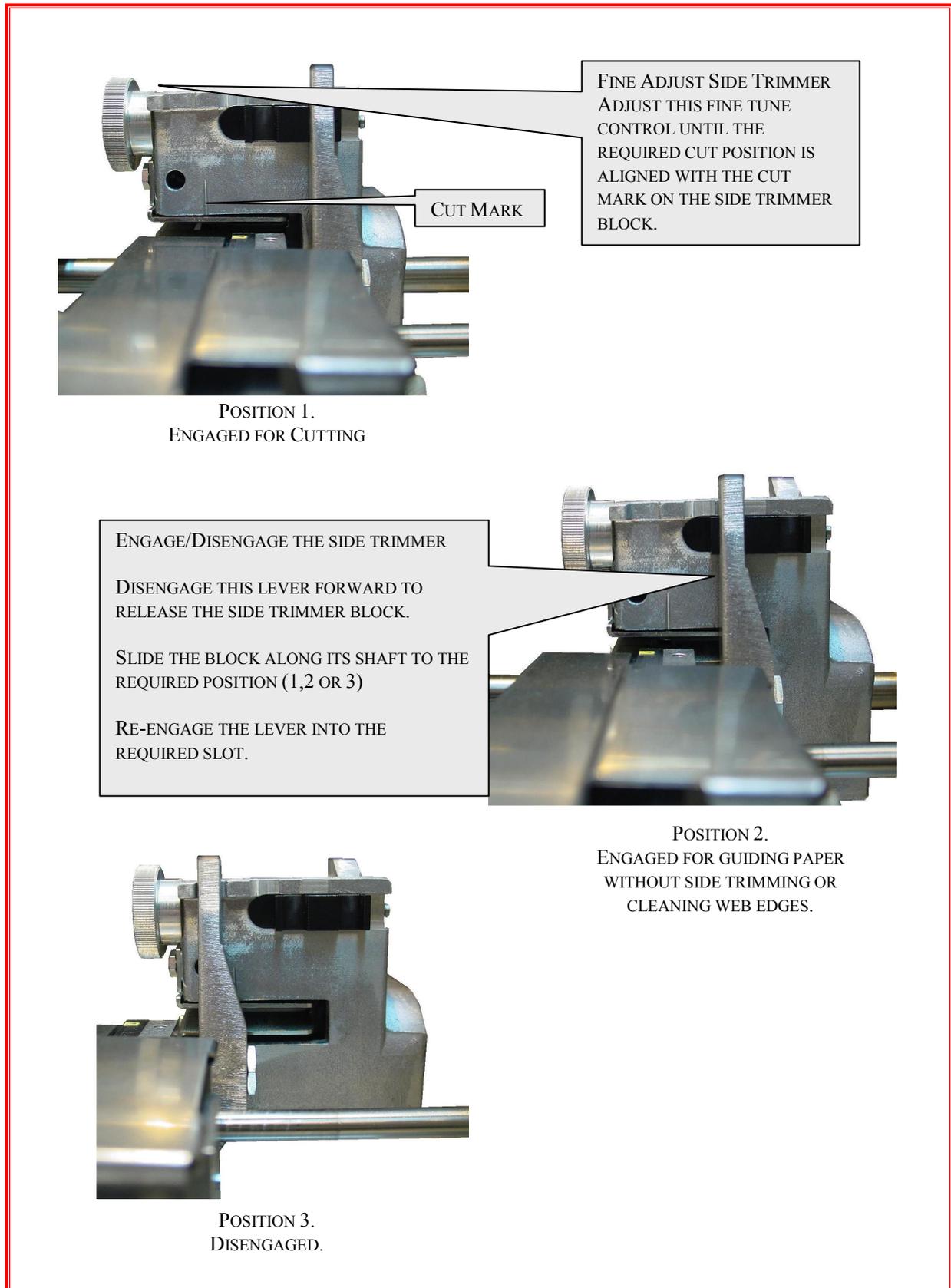


WITH THE WEB LOADED  
LOWER THE PRESSURE HEAD  
USING RELEASE LEVER. USE  
THE KNOB TO ADJUST THE  
PRESSURE IF NECESSARY.

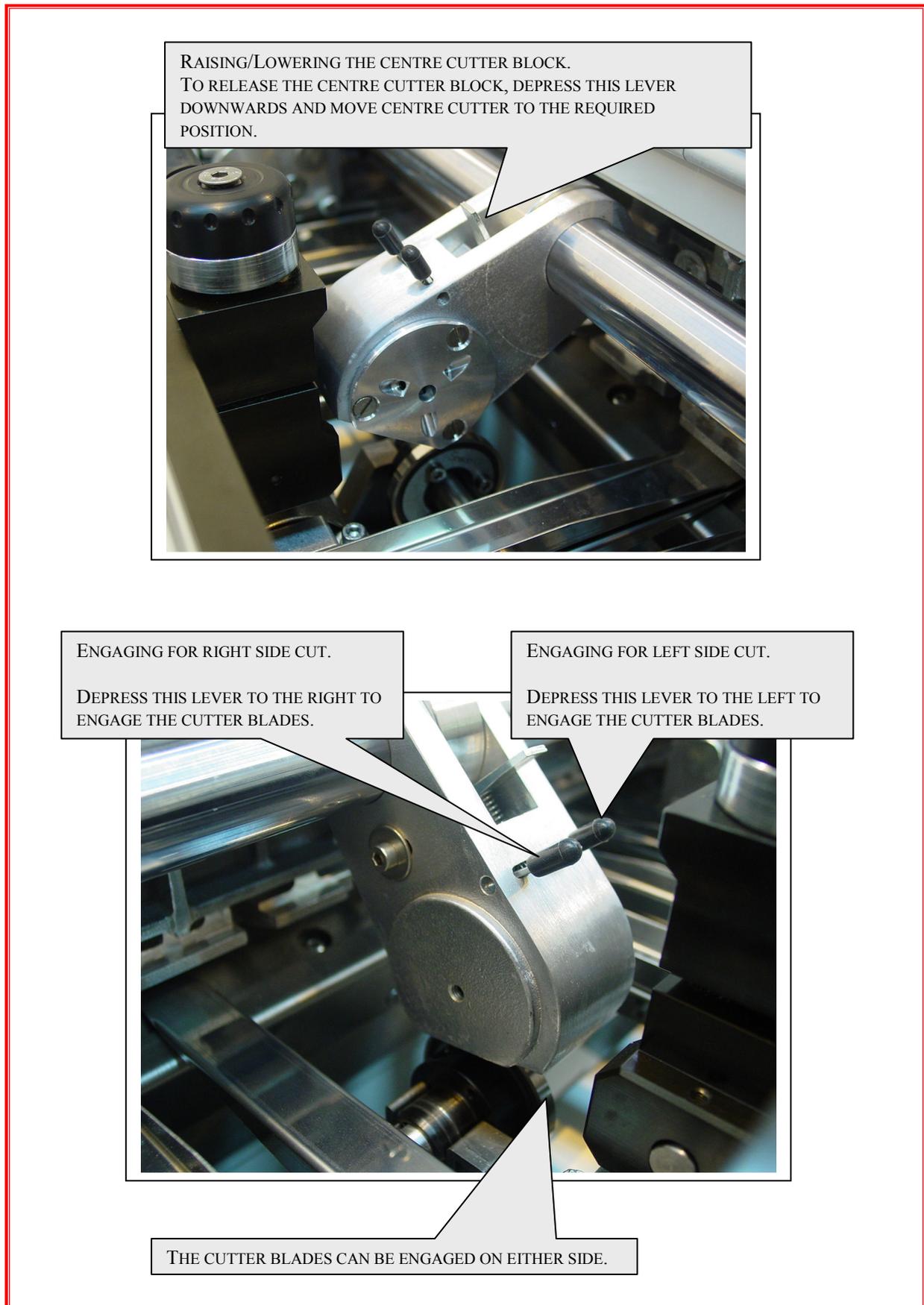
**Fig 2.2 Lowering and adjusting the pressure head.**



**Fig 2.3** Aligning the Paper Web.



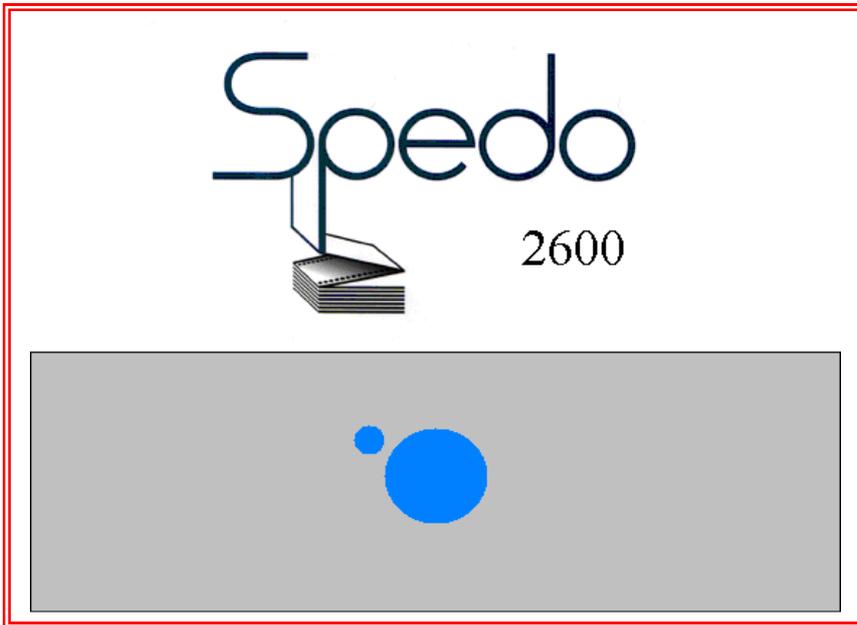
**Fig 3.8 Setting the Side Trimmers**



**Fig 3.9 Setting the Centre Cutter**

## Spedo 2600 Operator Panel Instructions.

**Initialisation.** – The following screen will be displayed for a few seconds while the cutter initialises.



**Opening Menu.**

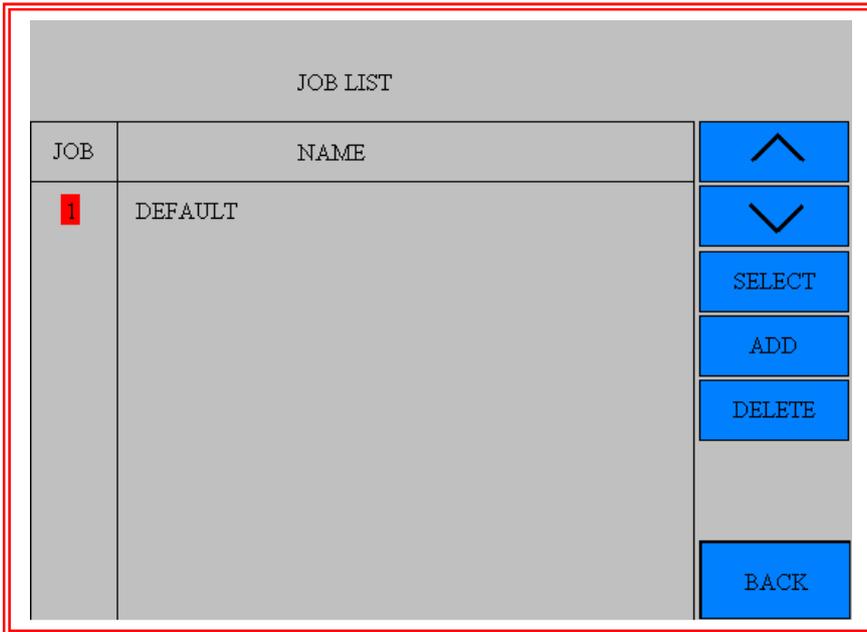


Select the required function from the opening menu.

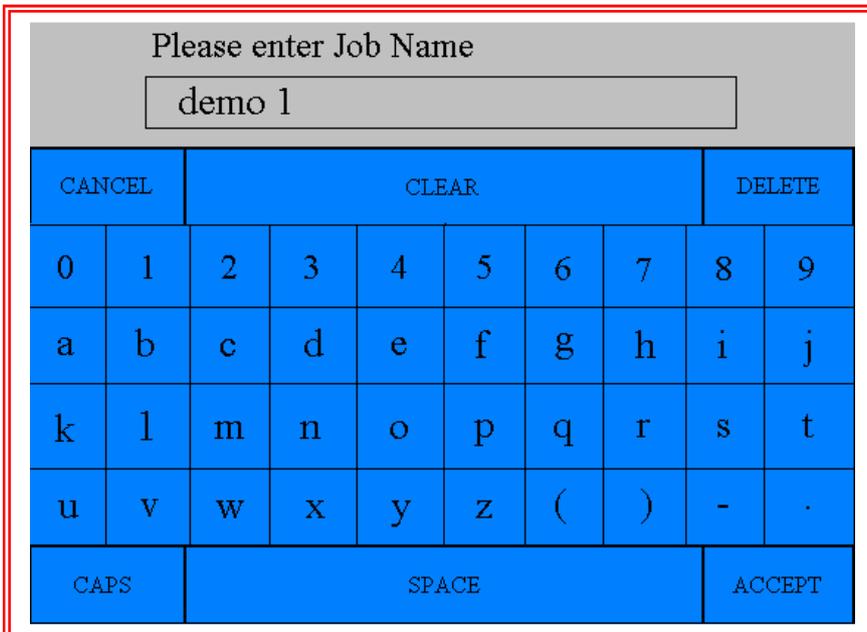
**JOB LIST** – Lists all save jobs as well as the standard DEFAULT screen.

**MENU** – Menus for Advanced Functions, Maintenance and Parts Catalogue.

**CREATING A JOB:**



After pressing JOB LIST on the opening menu the JOB LIST screen will be displayed. JOB 1 – DEFAULT will be listed along with any other saved jobs. JOB 1 – DEFUALT can be used when jobs are not required to be saved, and cannot be deleted. To add a new job press the ADD button and the job name screen will be displayed.



Enter the required job name using the keypad and press ACCEPT to save. The job name will now be save in the JOB LIST.

**EDITING A JOB:**

NAME:	DEFAULT	OMR OFFSET	100 mm
LENGTH:	12.00 inches	OMR WINDOW	10 mm
		OMR TRIM	0
		OMR SEEN	
INC	6ths	CHANGE	OMR SETUP
DEPTH	71	CHANGE	B-MODE 1
STRIP	1.0	CHANGE	Pause 1.0s
STRIP [X]	1.0	CHANGE	M-SPD 100
			Speed 40
OUTPUT	0 f/m		SET M-SPD
CHANGE	RST	4 COUNT	10 TARGET
			BACK

**Entering the page format.**

- Select Increment value using the CHANGE button the scroll through the options.
- Enter the Form Depth by pressing the CHANGE button and entering the value on the numeric keypad.
- Enter the Strip Depth by pressing the CHANGE button and entering the value on the numeric keypad.
- The combined value of the Form Depth and the Strip Depth is displayed at the top of the screen as LENGTH.

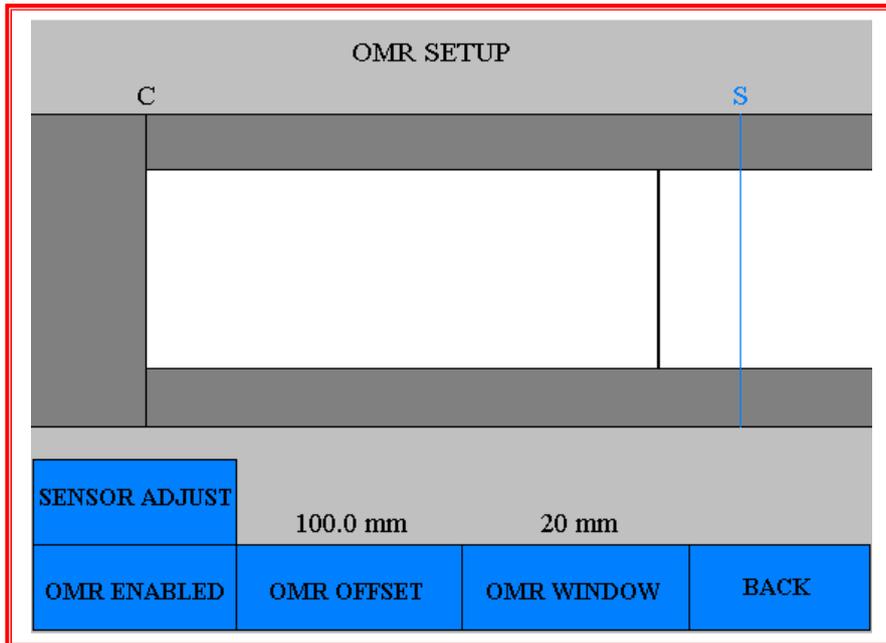
71_									
CANCEL		CLEAR						DELETE	
0	1	2	3	4	5	6	7	8	9
									.
								ACCEPT	

Above: Numeric Keypad.

## OMR SETUP:

The Spedo 2600 Pinless Cutter requires a reference mark in order to maintain registration of the pinless web. This can be any edge of dark print which must be a minimum size of 2mm x 2mm. This mark can be anywhere on the form but must be repeated in the same place on every consecutive form. The mark should ideally be placed in area with an amount of blank space around it; this window should be as large as possible to ensure greater accuracy of registration at higher speeds.

Press the OMR SETUP button to enter the OMR SETUP page.



On the OMR SETUP page the aspects of the job are shown in the graphic in the middle of the page.

C – Represents the CUT position.

S – Represents the SENSOR position.

Individual forms are shown between these two points.

OMR ENABLED – Press to enable or disable the sensor.

SENSOR ADJUST – Press to enter the SENSOR ADJUST screen.

OMR OFFSET – Position of the registration mark in millimetres or inches

OMR WINDOW – Largest amount of 'free' space around the mark.

**Entering the mark position:**

To enter the OMR OFFSET (the position of the registration mark) press the OMR OFFSET button.

Please enter OMR offset (mm) max 368									
62									
CANCEL		CLEAR						DELETE	
0	1	2	3	4	5	6	7	8	9
									.
								ACCEPT	

To measure the mark position you must first find the leading edge of the form you wish to cut. The OMR OFFSET is the distance from the edge of the form to the leading edge of the registration mark in millimetres or inches. Enter this number and press ACCEPT to store.

**Changing the OMR WINDOW:**

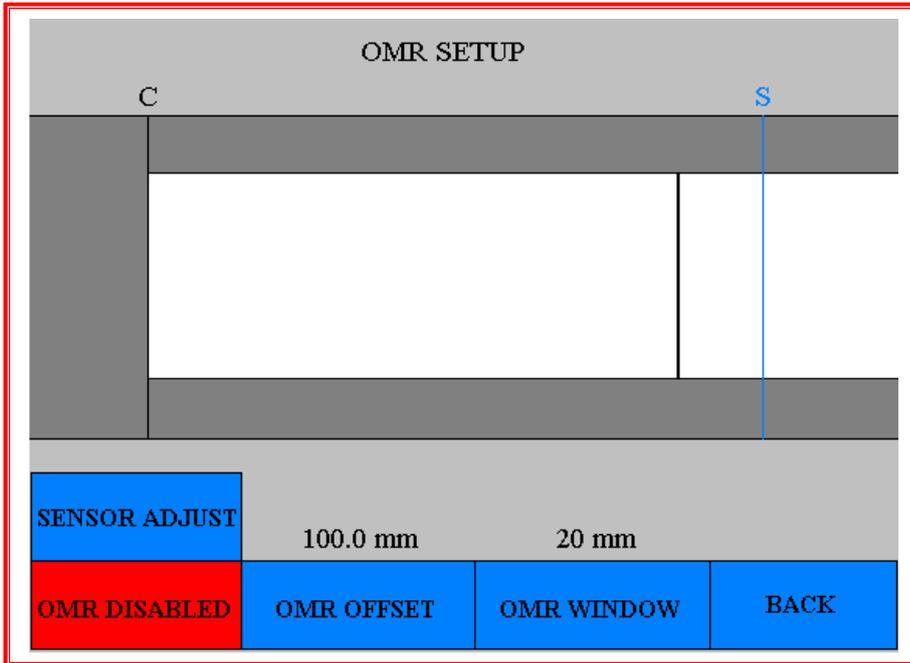
Press the OMR WINDOW button to enter the OMR WINDOW page. Enter the required window size. (Amount of free space around the mark) and press ACCEPT to store.

Please enter OMR Window Width (mm) Max 20									
10									
CANCEL		CLEAR						DELETE	
0	1	2	3	4	5	6	7	8	9
									.
								ACCEPT	

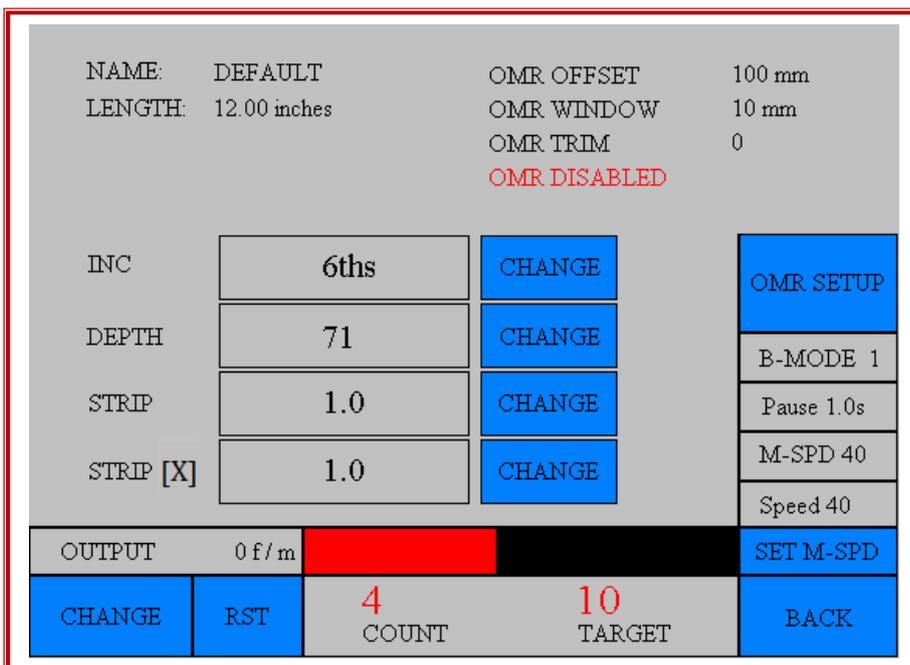
**ENABLE/DISABLE the OMR sensor:**

It is possible to run the 2600 Forms Cutter without using the OMR registration sensor active. This should only be done where small a quantity of unprinted stock needs to be run though during the setup process. Running with the OMR registration sensor disabled during production is not recommended as registration of the forms will be lost.

To ENABLE or DISABLE the OMR registration sensor press the OMR ENABLE/DISABLED button.



The button will turn red when the sensor is disabled. Press the BACK button the return to the job setup screen to run the cutter with the sensor disabled.



**Testing the mark position:**

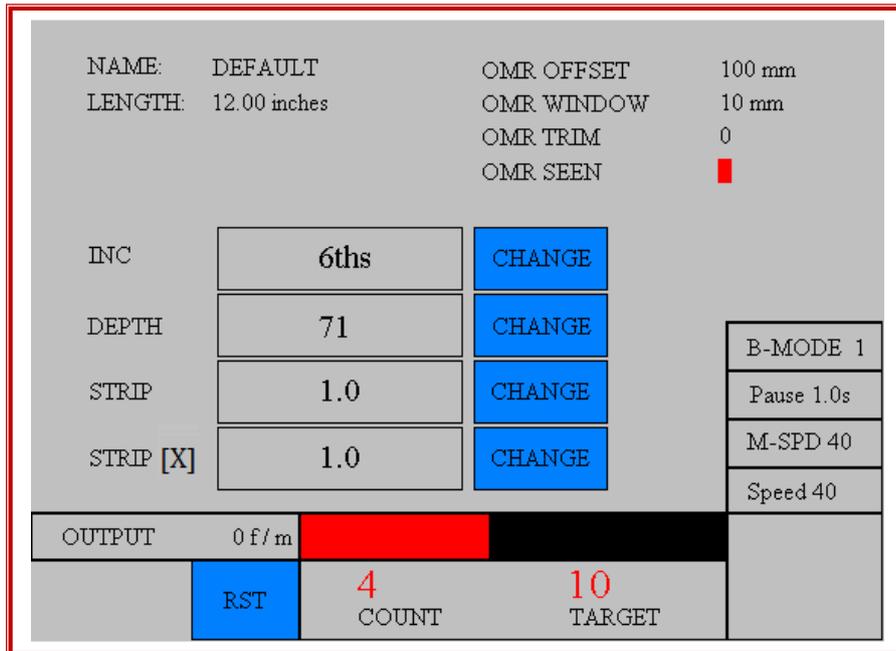
Enable the OMR SENSOR.

Load the paper and setup the form as described in fig 2.2 (page24).

Whilst in single feed setup mode, press the infeed button to move the form to the CUT position.

Press the CUT button to prepare the leading edge of the first form.

Then press the START button once to feed and cut one form. If the OMR OFFSET has been entered correctly the OMR SEEN icon will flash.



If the sensor does not read the OMR registration mark three times in a row the following screen will be displayed. Follow the instructions displayed and touch the screen to continue.



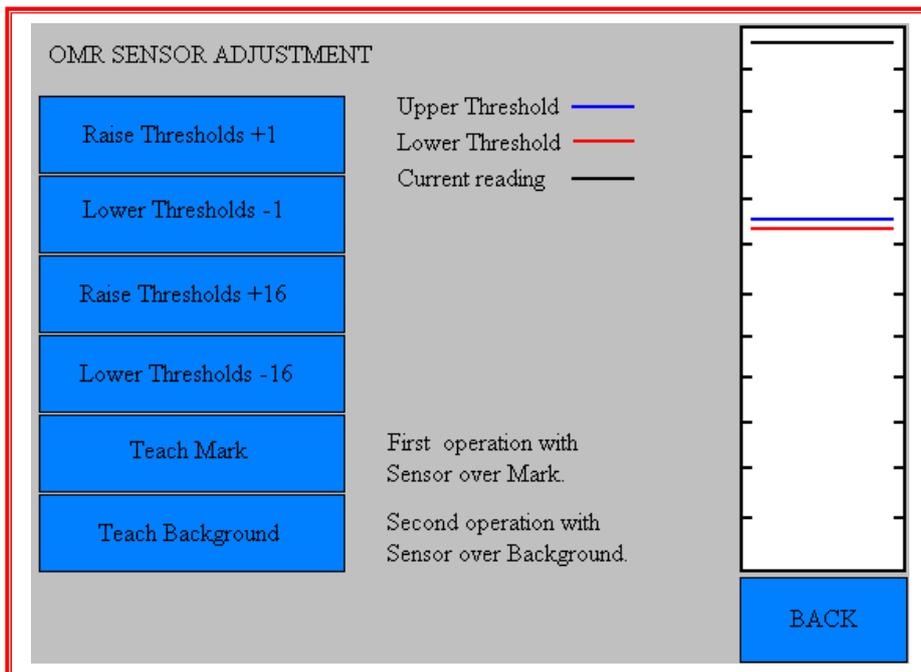
### Changing the cut position:

The position of the cut can be fine-tuned by pressing the FINE TUNE buttons. The amount of adjustment relative to the OMR position can be seen next to OMR TRIM as a +/- value.

OMR TRIM should normally be set to 0

### Adjusting the OMR Sensor:

To adjust the OMR sensor press the SENSOR ADJUST button.



To set sensor first move the paper so that the registration mark to be used is under the sensor and press the Teach Mark button to store the Mark value.

Then move the paper so that the background is under the sensor and press the Teach Background button to store the Background value.

If required the switching threshold can be adjusted by pressing the Raise and Lower Threshold buttons. (+/- 16 for course adjustment and +/- 1 for fine adjustment.)

## COUNTER & BATCH MODE SET-UP:

- Enter the counter screen by pressing the CHANGE button in the bottom left hand corner of the screen.
- The Counter screen will now be displayed.

COUNTER & BATCH MODE SET -UP		
TARGET COUNT	10	CHANGE
CURRENT COUNT	4	RESET
BATCH MODE	1	CHANGE
MODE 1 TIME	1 Secs	CHANGE
MODE 2 TIME	0.5 Secs	CHANGE
MODE 3 TIME	0.5 Secs	CHANGE
MODE 4 TIME	1 Secs	CHANGE
Batch Mode: Normal. Cutter: Pauses Mode 1 Time.		BACK

- Change the TARGET COUNT by pressing the CHANGE button and entering the required total into the numeric keypad.
- Reset the CURRENT COUNT by pressing the RESET button.

### Batch Mode Set-up.

Different batch modes can be set depending on the type of output device attached to the cutter.

#### BATCH MODE 1: Normal

This is the default batch mode; in this mode the cutter will pause for the time period selected in MODE 1 TIME (this is selected by using the CHANGE button to scroll through the different values).

Once the TARGET COUNT has been reached, the counter will be reset and the cutter will resume once the time period is over.

If the timer is set to 0 the cutter will stop once the target is reached, and will have to be restarted manually.

#### BATCH MODE 2: Conveyor Boost

This batch mode is used for boosting the 8400 Conveyor; in this mode the conveyor will be set to full speed for the time period selected in MODE 2 TIME (this is selected by using the CHANGE button to scroll through the different values).

Once the TARGET COUNT has been reached, the counter will be reset and the conveyor will resume once the time period is over.

In this mode the cutter will not pause when the target is reached.

### **BATCH MODE 3: Conveyor Boost**

This batch mode is used for boosting the 8400 Conveyor; in this mode the conveyor will be set to full speed for the time period selected in MODE 3 TIME (this is selected by using the CHANGE button to scroll through the different values).

At the same time as the conveyor is boosted the cutter will also pause for the same period of time.

Once the TARGET COUNT has been reached, the counter will be reset and the conveyor and the cutter will resume once the time period is over.

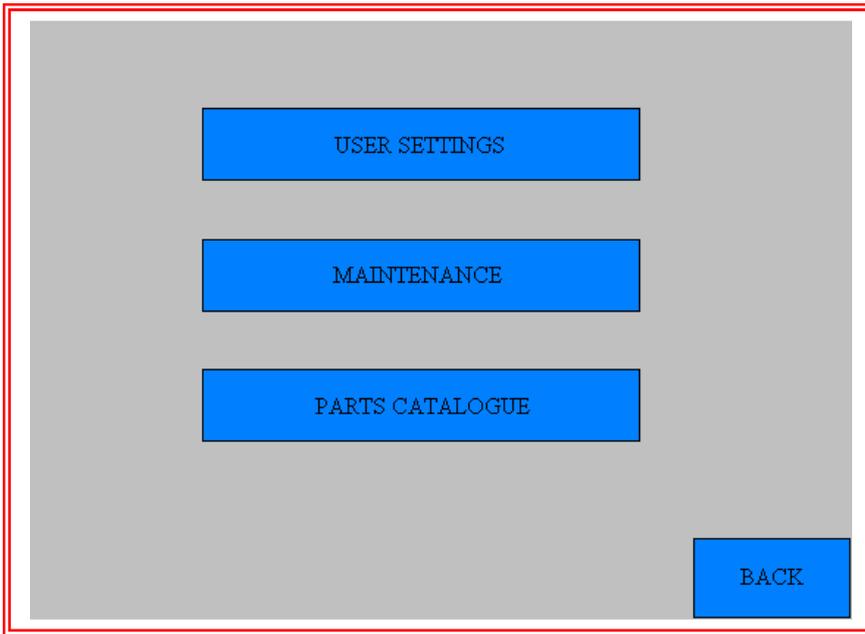
### **BATCH MODE 4: 3<sup>rd</sup> Party Dropping Stacker**

This batch mode is used for operation with a 3<sup>rd</sup> party dropping stacker; in this mode the cutter will pause for the time period selected in MODE 3 TIME (this is selected by using the CHANGE button to scroll through the different values).

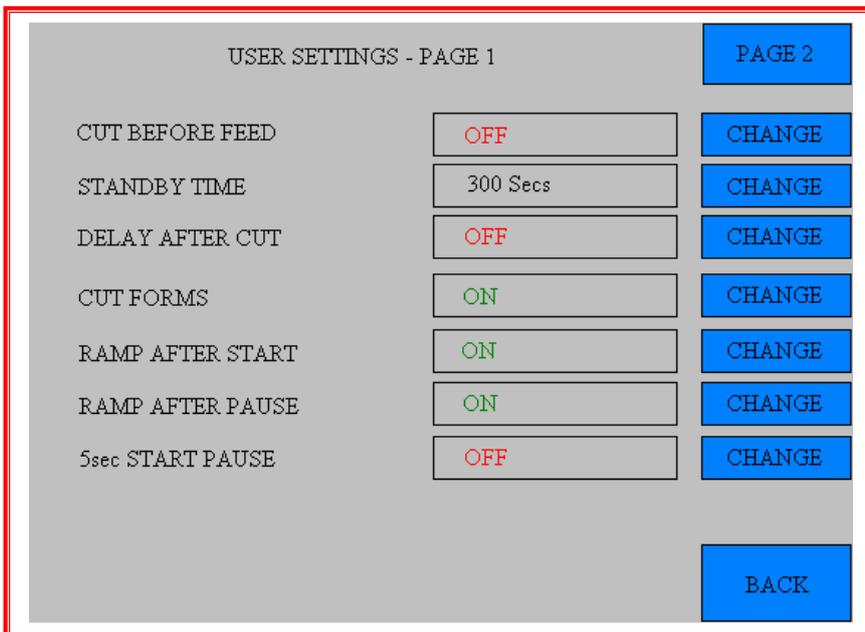
Once the TARGET COUNT has been reached, the counter will be reset and the conveyor will resume once the time period is over.

Once the required batch mode and counter settings have been achieved return to the JOB RUNNING screen by pressing the BACK button.



**MENU:**

From the menu screen you can access the USER SETTINGS, the MAINTENANCE screens and the PARTS CATALOGUE.

**USER SETTINGS****Page 1.**

**CUT BEFORE FEED:** the operation of the cutter can be reversed. Press the CHANGE button to toggle the function ON / OFF.

**STANDBY TIME:** the time allowed until the machine enters standby mode can be adjusted. Press the CHANGE button to scroll through the options.

**DELAY AFTER CUT:** a small delay can be added after each cut. Press the CHANGE button to scroll through the options.

**CUT FORMS:** this function allows the blade operation to be turned off. Press the CHANGE button to toggle ON / OFF.

**RAMP AFTER START:** this function allows the cutter to gradually increase in speed when started. Press the CHANGE button to toggle ON / OFF.

**RAMP AFTER PAUSE:** this function allows the cutter to gradually increase in speed when restarted from a pause. Press the CHANGE button to toggle ON / OFF.

**5sec START PAUSE:** this function adds a 5 second delay between the start button being pressed and the cutter running. Press the CHANGE button to toggle ON / OFF.

## Page 2.

USER SETTINGS - PAGE 2		
PAPER RUN OUT	ON	CHANGE
LANGUAGE	ENGLISH	CHANGE
SPEED FORMAT	M/Min	CHANGE
OMR DATA FORMAT	MM	CHANGE
9300 CONNECTED	NO	CHANGE
ANA0 CONNECTED	NO	CHANGE
		BACK

**PAPER RUN OUT:** this function allows the paper run out switch to be overridden. Press the CHANGE button to toggle ON / OFF.

**LANGUAGE:** This function allows different languages to be selected. Press the CHANGE button to toggle through the options.

**SPEED FORMAT:** This function allows performance to be displayed on the operator panel in feet per minute or metre per minute. Press the CHANGE button to toggle through the options.

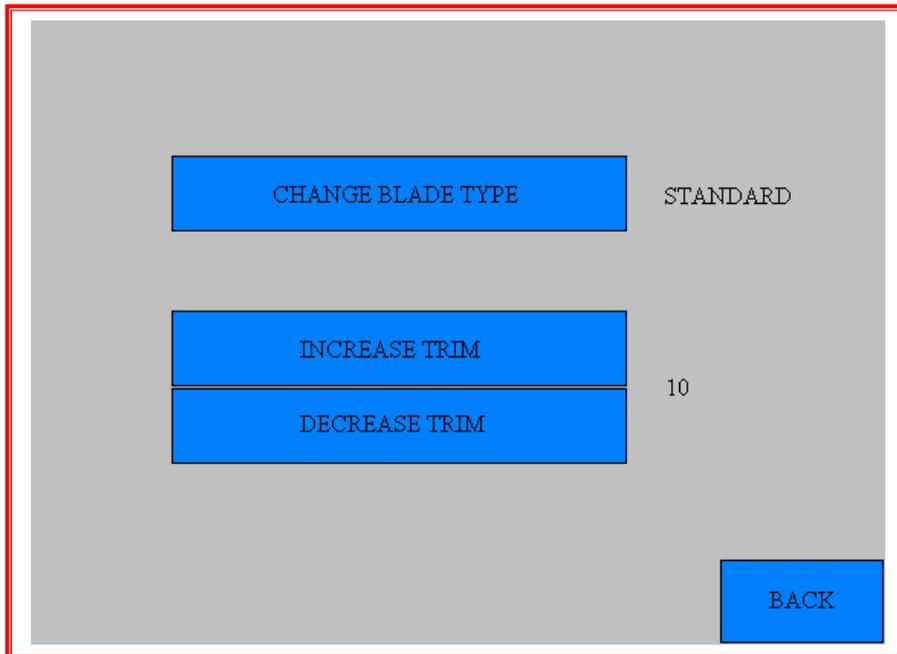
**OMR DATA FORMAT:** This function allows the OMR data to be entering in either mm or inches.

**9300 CONNECTED:** This function is selected when running 9400 Web Buffer in 9300 mode.

**ANA0 CONNECTED:** This function is selected when using an external analogue control sensor.



- Press TWIN CUT to toggle the double blade option ON/OFF. (Note: Double blade must be fitted)
- Press RESET FRAM VALUES to reset all user parameters (batch values etc.)
- Press CLEAR SERVICE CUTS to reset CUTS SINCE LAST SERVICE to 0.
- Press CHANGE SUPERVISER ACCESS CODE to change the supervisor password, which is used for protecting the M-SPD values. The default setting for this is 123456.
- Press CHANGE ENGINEERING ACCESS CODE to change the engineer's password, which is used to access the ENGINEER screen. The default setting for this is 123456.
- Press CHANGE BLADE TYPE/TRIM to change from NARROW to STANDARD and also to change the cycle time to optimise performance.



- Press CHANGE BLADE TYPE to toggle between NARROW and STANDARD blades.
- Press INCREASE TRIM to increase the blade cycle time to optimise the cutter to run with small strip cut values.
- Press DECREASE TRIM to decrease the blade cycle time to optimise the cutter to run with larger strip cut values. **Note excessively small trim values will result in a blade cycle error.**

## PARTS CATALOGUE:

PARTS CATALOGUE		
PART NO	DESCRIPTION	
SP 000 063	45deg ET BLADE	^
<b>SP 000 064</b>	90deg ET BLADE	v
SP 000 066	LOWER X-CUT BLADE	
SP 000 161	INFEEED BRUSH	
SP 000 164	OIL WICK COMPLETE	
SP 000 181	OIL WICK (X-CUT)	
SP 001 957	KICKOUT DRIVE BELT	
		SELECT
		BACK

Using the up and down buttons highlight the required part number and press the SELECT button to view the highlighted component.



## OPERATIONAL MAINTENANCE

## SECTION 4

### WARNINGS

Before starting any preventive maintenance, ensure that the forms cutter has been disconnected from the main electrical supply.

The angular blades on the side trimmers, the centre cutter and the cross-cutter are extremely sharp and care should be taken to protect fingers when the protective cover has been opened.

### CLEANING

- Remove any paper dust or other debris from the inside of the paper transport deck, using an air line or vacuum cleaner. This should be checked on a regular basis and performed as required.
- Open the paper guide units and remove any paper dust.
- Clean away any ink residue or other tenaciously adhering debris from bare lubricated parts with a clean cloth.
- Remove each side trimmer guide by slackening the thumbscrew on the side of the trimmer block, as shown in Fig 4.1. This gives access to the trimmer blades. Clean the side trimmer blades using an airline and a soft-hair hand brush.
- Clean the centre cutter blades using a soft-hair hand brush.
- Never use a metal instrument to remove paper debris adhering to the blade surfaces.
- Clean the protective cover using foam cleaner.

### LUBRICATION

- Lightly oil the paper guide unit drive bushes. Loosen their clamps and slide the units along the shaft to spread the oil.
- Lightly oil the centre cutter bush, which runs in the centre bridge (see Fig 4.1).
- In order to gain access to the lubrication points on the cross-cutter, the protective cover over the cutter must be removed. This is a task for a service technician and should not be attempted by the operator, unless trained in this procedure by Spedo UK Ltd.

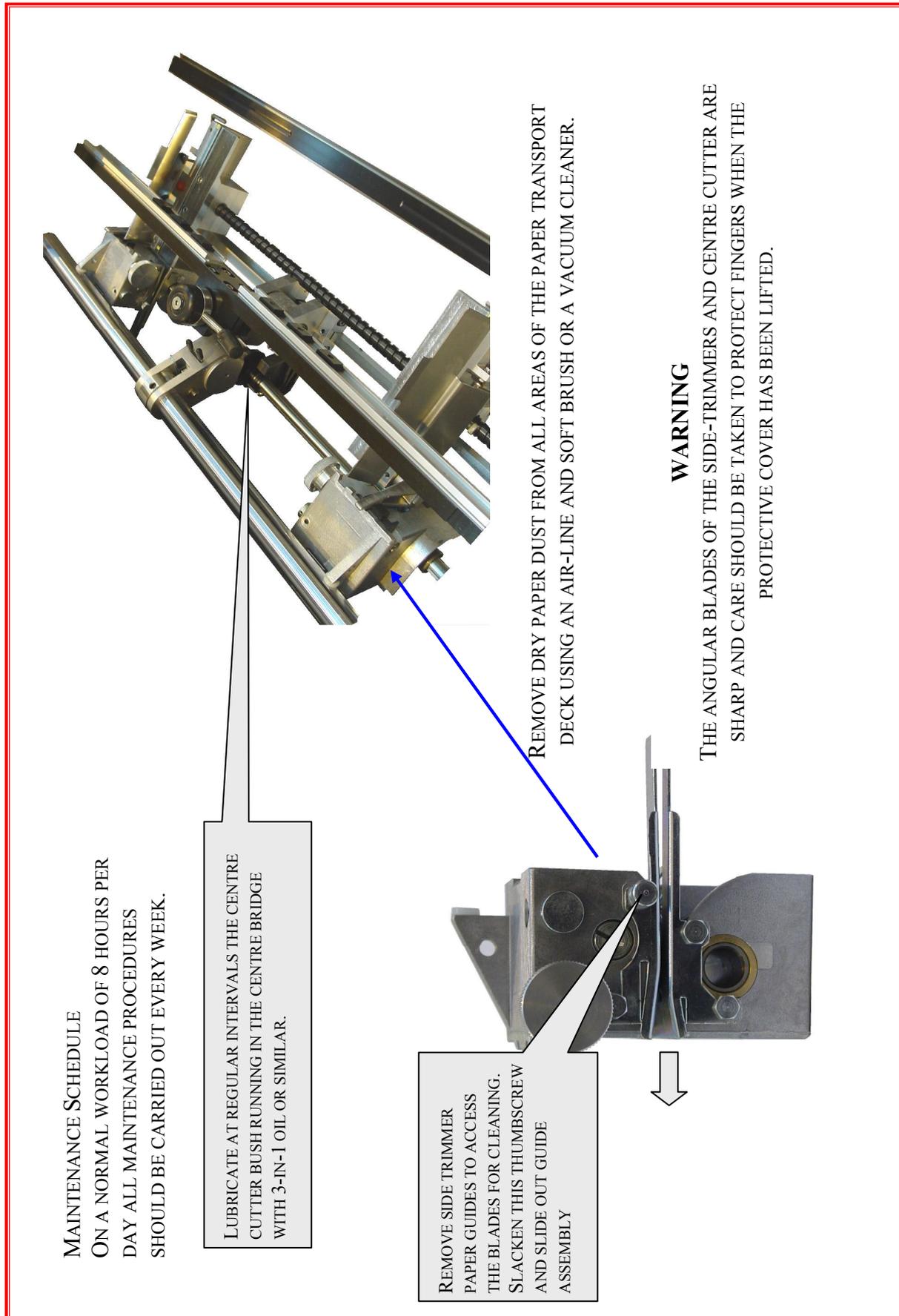


Fig4.1 Cleaning & Lubrication Areas