HIGH PERFORMANCE DUAL-WEB CUTTER

SERIES TC 2000

Corso Vercelli 139 – 10015 Ivrea (To) – Phone # (39) 0125 / 615431 – Fax # (39) 0125 / 615344

USER GUIDE

Table of contents ***Page***

1.	Product description	3
2.	Product characteristics	4
3.	Technical specification	5
4.	Cutter models	7
5.	Transport and installations	9
6.	Main groups description	11
7.	Replacement of the cartridge	16
8.	Operating instructions	17
9.	Interface Signals	34
10.	Maintenance	37
11.	Suggested spare part list	41

1) PRODUCT DESCRIPTION

- The TECNAU high performance cutter is formed of modular groups, assembled with rigid metallic structures and high precision components that guarantee long life and easy maintenance.

- The TECNAU cutters are generally integrated in complex systems and lines like laser printers, bookmaking systems, high performance inserters , finishing on demand applications because of their high reliability and durability.

- The main structure is built in stabilised aluminium and steel with cross bar of stabilised cast iron.

- The cross blade group and the side trimming circular knives group are designed and built as removable and interchangeable cartridges (patented) that can be easily replaced by the operator.

- Two different models of cross blade cartridges, the Oscillating Blade Cartridge (TC 2010) and the Vertical Blade Cartridge (TC 2020) can be used with the Tecnau cutter, depending on the Customer application.
  The two cartridges, interchangeable, are changed in few minutes and the customer can use one of the two according with his needs.

  * The Oscillating Blade Cartridges achieves highest durability and cutting speed in applications not requiring strip removal.

  * The Vertical Blade Cartridges is able to remove strips, of the same blade thickness, at a single stroke.

- The TECNAU cutter has a vertical lifting device that allows to adjust the height of the paper level in order to easily connect the cutter to other equipment.

- The TECNAU cutter has one or two feeding channel and is able to cut and trim continuous stationery of various format and material with single and with dual webs.

2) PRODUCT CHARACTERISTICS

TECNAU CUTTER TC 2000

- Microprocessor controlled
- Up to two independent feeding channels
- Single or dual web entry
- Paper transport and blade driven by brushless motors (no wear and maintenance)
- Up to 99 cutting programs memory
- Parallel and serial interface for on-line connection with external devices
- Minimised maintenance cost and time
- Modular design and construction

    * Oscillating Blade Cartridge (TC 2010)
    * Vertical Blade Cartridge (TC 2020)
    * Side Trimming Cartridge (TC 2002)
    * Side trimming and central cut cartridge (TC 2003)

- Base on wheels with blocking device
- Height adjustment paper level device (TC2005)
- Display and keyboard for programming , information and services
- Automatic paper loading
- Automatic stop and paper end
- Programmable cut length
- Cutting speed and paper acceleration control
- Plexiglas cover
- Service counter
- Optical mark reader (OMR) (Optional)
- Bar code reader (Optional)
- 1/6” and 1/8” paper increments
- Maximum pin feeders width 480 mm

3) TECHNICAL SPECIFICATION

Paper Specification

- Paper weight: Min 50 gr/mq
  Max 150 gr/mq

- Multicopy forms: Max weight 150 gr/mq
- Form width: Max 480 mm
- Form height: Min 2” 5/6 max 24”
- Strip cut facility: Programmable with Oscillating Blade (TC 2010)
  1/6” with vertical Blade (TC 2020)

- Trimming up to 25 mm per side
- Paper speed adjustment : 99 positions
- Height paper level from the floor (TC 2005 option): from 970 mm to 1210 mm

Size and weight

- Width: 800 mm
- Dept: 650 mm
- Height: 1100 m
- Height: TC 2005 option: min 1055 mm, max 1295 mm
- Weight: 180 kg

Power requirement

- 230 V
- 50/60 Hz
- 2.0 KVA

Cartridge

- Oscillating Blade Cartridge (TC 2010)
- Vertical Blade Cartridge (TC 2020)
- Side trimming cartridge (TC 2002)
- Side trimming and central cut cartridge (TC 2003)

Cutting (cuts per hour)

Cartridge	TC 2010	TC 2010	TC 2020	TC 2020
Cut Selected	Strip Cut Dual Stroke	Single Cut	Single Cut	Strip Cut Single Stroke
Form Height 4”	17.000	30.000	30.000	30.000
Form Height 8”	14.000	22.000	22.000	22.000
Form Height 12”	12.000	18.000	18.000	18.000

4) CUTTER MODELS

TC 2000 MODELS	2012	2013	2022	2023
Oscillating Blade Cartridge	*	*		
Vertical Blade Cartridge			*	*
Side Trimming Cartridge	*		*	
Side Trimming and Central Cut Cartridge		*		*

MODELS DESCRIPTION

TC 2000 LINE

High performance, dual channel, standalone cutter with oscillating or vertical blade cartridge and with side trimming cartridge, parallel and serial interface ,display for programming and operating purpose.

Mod. TC 2012 TC 2000 with oscillating blade cartridge and side trimming cartridge 20.000 cuts per hour with 12” form height.

Mod. TC 2013 TC 2000 with oscillating blade cartridge , side trimming and central cut cartridge, 20.000 cuts per hour with 12” form height.

Mod. TC 2022 TC 2000 with vertical blade cartridge and side trimming cartridge, 18.000 cuts per hour with 12” form height, strip cut 1/6” single stroke.

Mod. TC 2023 TC 2000 with vertical blade cartridge, side trimming and central cut cartridge, 18.000 cuts per hour with 12” form height strip cut 1/6”, single stroke.

CUTTER OPTIONS

TC 2004 Merger interface for TC 2000 models. The option enable the connection of the cutter to the merger device.

TC 2005 Cutter height (floor paper level) adjustment device for TC 1000 and TC 2000 models. Paper level adjustment from 970 mm. to 1210 mm.

TC 1006 Waste paper bin.

TC 2007 Central knife group.

TC 2008 Paper loop control device for connection to laser printers up to 85 mt/min.

CUTTER CARTRIDGES

TC 2010 Oscillating blade cartridge.

TC 2020 Vertical blade cartridge.

TC 2002 Side trimming cartridge.

TC 2003 Side trimming and central cut cartridge.

OTHER DEVICES

TC 1100 Merger device with basement for connection to the TC 2000 models with TC 2004 option (merger interface).

5) TRANSPORT AND INSTALLATION

- The cutter can be lifted with a lifting unit by passing it through the two bars under the structure as indicated in the figure 1.

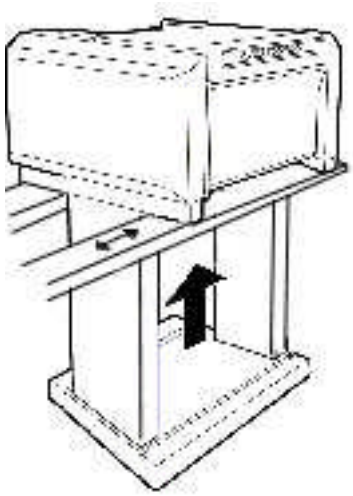


Fig. 1

- Four wheels are located in the base and allow to move the cutter in the working area manually.
  The cutter can be fixed at the floor rotating the four screws at the corner of the base with the key.
  Four cylinders with anti-shocking material will be moved vertically by the screws up to fixing the cutter on the floor. See figures 2 and 3.

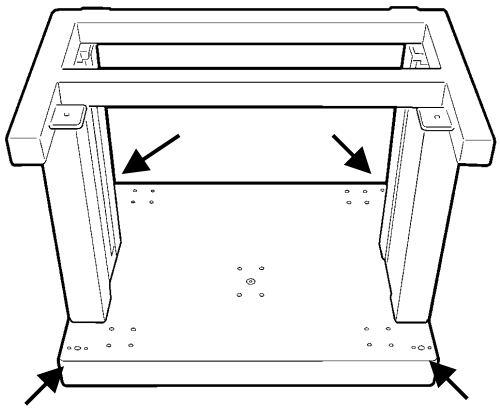


Fig. 2

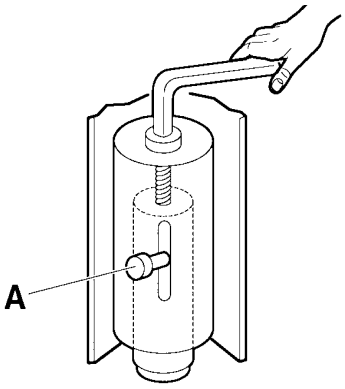


Fig. 3

If the cutter has the option TC 2005, it is possible to adjust the height of the paper output plane from 970 mm to 1210 mm. rotating the screw located at the centre of the base with the key. See figure 4.

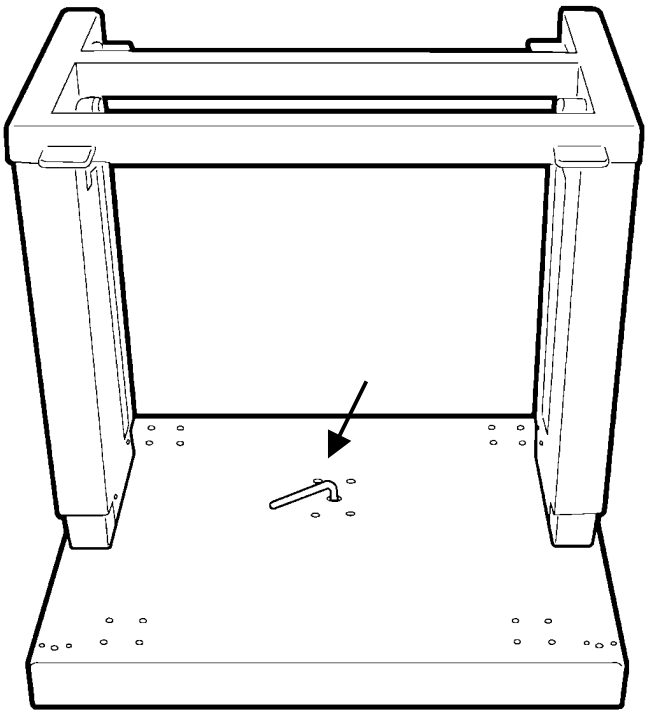


Fig.4

ATTENTION!!!

In order to minimize the static electricity is necessary to check and, if is not, to ground and connect to the earth, all the devices, before and after the cutter, where the paper is flowing or touching.

6) MAIN GROUPS DESCRIPTION

PAPER FEEDING GROUP

The brushless motor drives the splinted shaft through the tooth belt and the pulley fixed at the left side of the shaft (fig.5).

The shaft moves the two tractors, one on the left and one on the right side that transport the paper.

The position of the two tractors along the shaft can be adjusted according with the paper width.

On the left tractor there is one optical fibre sensor to fix the correct position of the cutting line when the paper is loaded.

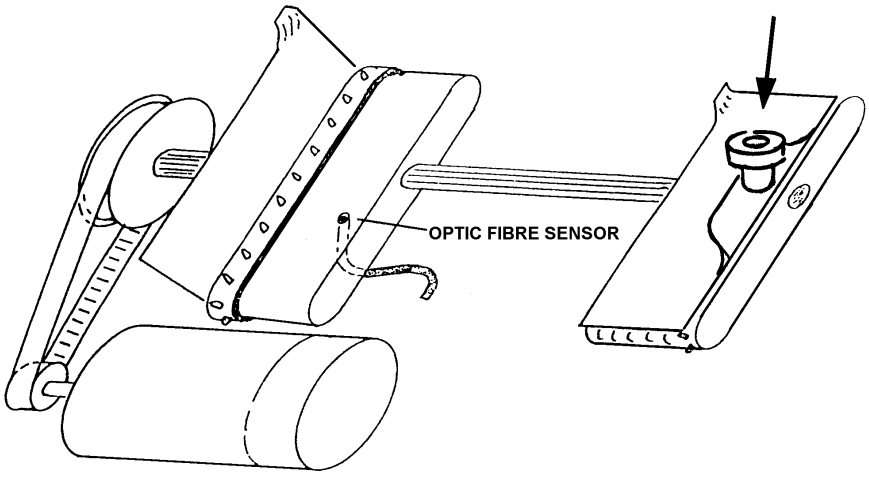


Fig. 5

OSCILLATING BLADE CARTRIDGE

The oscillating blade cartridge (Fig.6), with the reduced inertia of its mechanism, allows to reach the highest speed and productivity (cuts/hour) in the jobs where the strip cut is not required.

Because of the blade group rigidity, the life of the oscillating blade is longer than the vertical one, up to ten million cuts.

The pinion moves the shaft (1) that transmits the motion to the two eccentrics, the side rods (2) and the pins (3) that move with oscillating motion the bar (4).

The blade that has the shape of cylindrical segment is fixed at the oscillating holding bar.

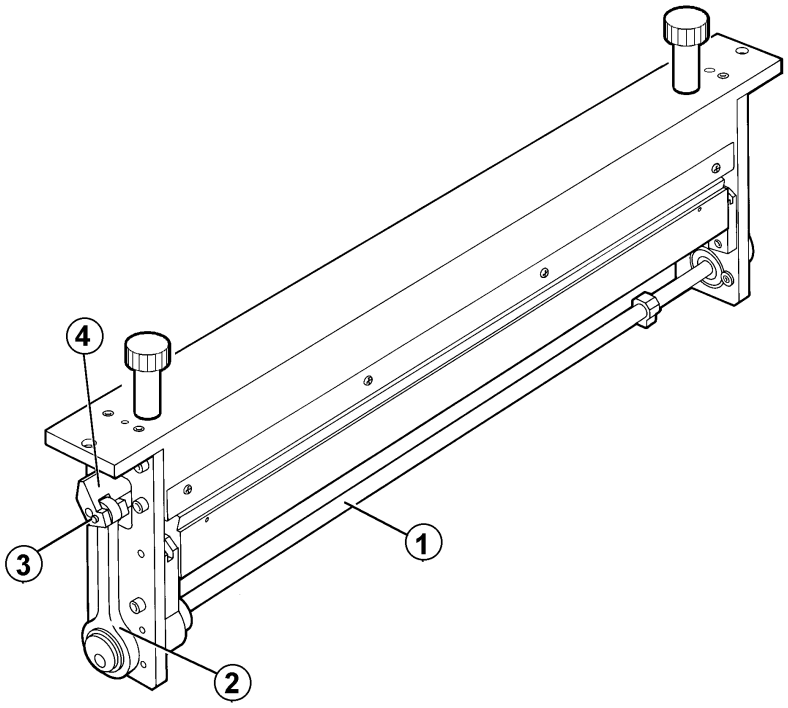


Fig. 6

VERTICAL BLADE CARTRIDGE

The vertical blade cartridge (Fig. 7) is preferably used in the applications where the 1/6" strip cut is required.

The vertical blade mechanism takes the motion from the cutter through the pinion (1) assembled on the main shaft of the rods.

The shaft (2) transmits the motion to the two eccentrics (3) mounted at the two edge of the shaft.

The two eccentrics (3) drive through roller bearings, the two rods with two steel plates (4) that move vertically the blade (5) fixed to their edge.

This system avoids pins, bearing and other connecting devices minimising any mechanical play.

The vertical blade moves between two lubricated adjustable guide blocks (6).

To obtain the strip requested there are two counter – blades (7) assembled with two cast iron bars pulled against the central vertical blade by two springs.

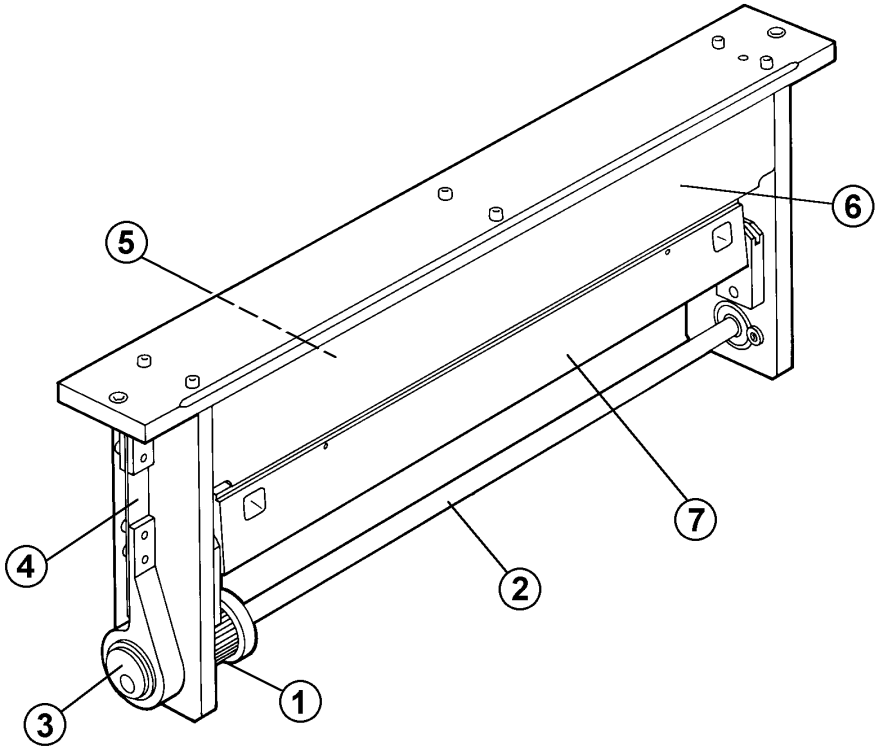


Fig. 7

SIDE TRIMMING CARTRIDGE (TC 2002-TC 2003)

The cartridge TC 2002 (fig.9) has two couples of circular knives, Fig.8 (A), for trimming one the left and one the right side of the paper module.

The lower knife is driven by the shaft (F) controlled by a bruhsless motor through one tooth belt and a couple of pulleys (G is one).

The upper knife is driven by the couple of cog- wheels (E)

The lower knife is slightly pressed against the upper knife by two dished plate springs. The pressure is adjusted with the flange (C).

The paper strip trimmed are ejected through the two plates (B).

The cartridge TC 2003 has three couples of circular knives, two for trimming the left and right side and one for cutting the continuos module in the middle.

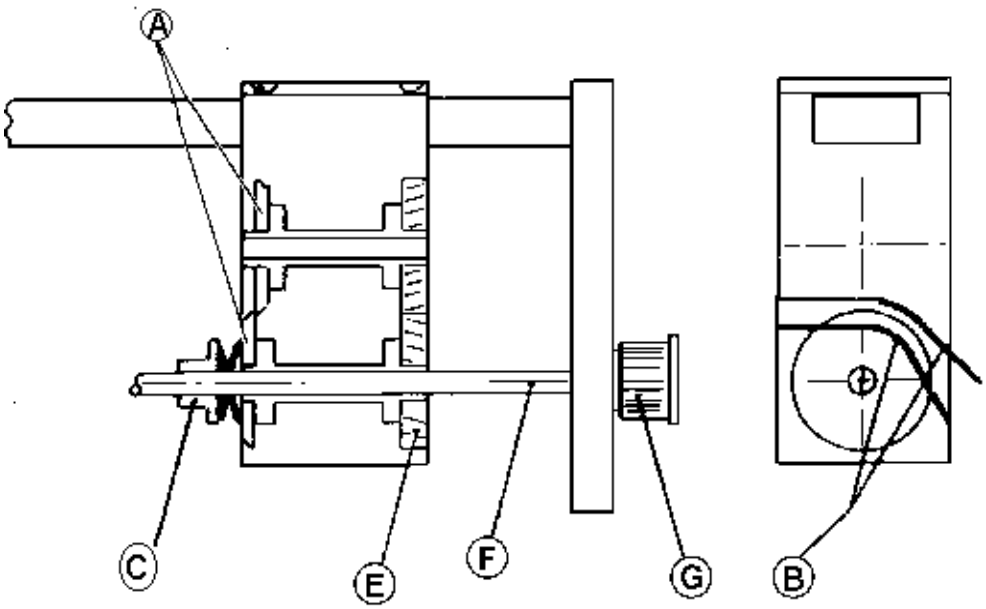


Fig. 8

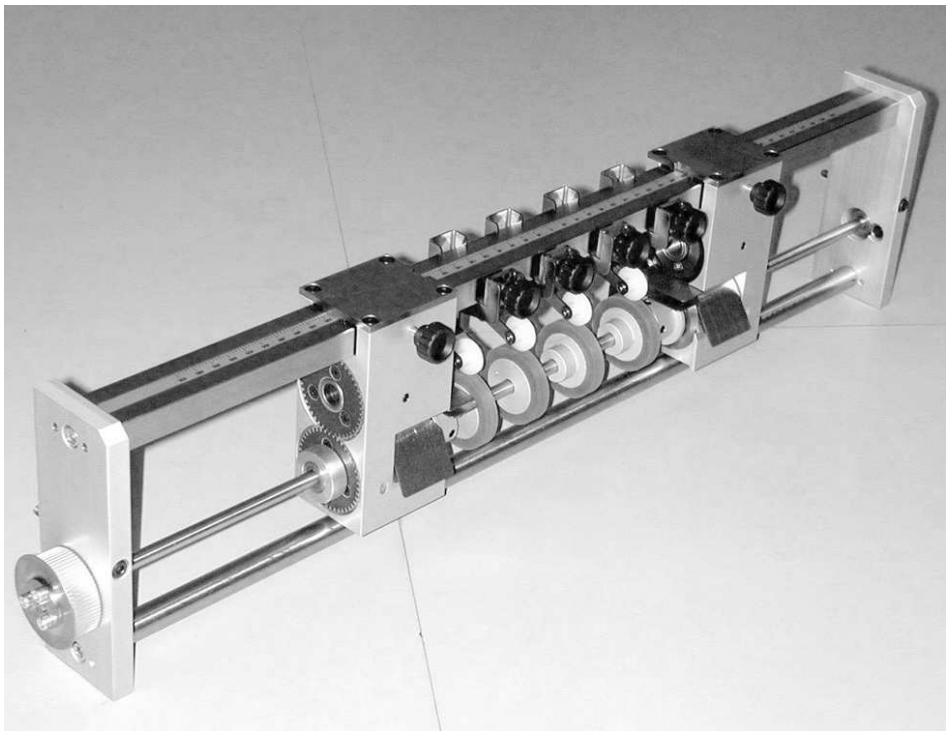


Fig. 9

SHEET EXTRACTOR GROUP

Is integrated in the side trimming cartridge at the exit of the blades.
This sheet extractor group gives a light traction to the sheet and guarantee this traction constant at different speeds.

The rollers and the pressure rollers can be adjusted on the shaft and on the support bar, in the most suitable position, according to the job.

7) REPLACEMENT OF THE CARTRIDGES

A. To replace the Oscillating Blade Cartridge (TC 2010) or the Vertical Blade Cartridge (TC 2020):

1) Remove first the "**Side trimming cartridge"** (see below)
2) Unscrew the two screws on the top of the cartridge.
3) Screw into the two holes two handles supplied with the cutter.
4) Lift moving forward carefully the cartridge
5) Replace the cartridge with another one using the same handles.
6) Screw off the two handles.
7) Screw down the two locking screws on the top of the cartridge.
8) Replace then the "**Side trimming cartridge"** and close the cover.

B. To replace the Side trimming cartridge (TC 2002 or TC 2003):

1) Open the right side cover, removing the two screws.
2) Remove the belt between the motor and the cartridge placed on the right side of the cutter.
3) Unscrew the two screws in front of the cartridge and remove it carefully.
4) Replace the cartridge with the new one.
5) Screw down the two screws to lock the new cartridge.
6) Put in the same position as before the belt and the side cover.

8) OPERATING INSTRUCTIONS

1) GENERAL INFORMATION

1.1. How to load the paper

* Open the plexiglas cover

* Open the tractors' covers

* Pass the paper under the brush, turn out the two knobs of the tractors adjusting their position and centring the paper holes on the sprockets, then lock the knobs. (Avoid having the paper too tight / loose between the tractors).

* Close the tractors' covers.

Same operation for the upper web.

* To position the circular knives, turn out the knobs put on each knife, and moving the knife groups to right or left, adjust them to have the knives in the position of the wanted trimming.

* Close the plexiglas cover.

* Turn-on the cutter through the main switch.

* The display shows information of the software installed.

1.2. *The Keyboard*

The keyboard is placed on the left side of the cutter and is divided into four parts:

* The EDITING keyboard on the left side: six keys, four blue to select and/or edit the applications, two white for service.

* The OPERATING keyboard on the center: four keys that allow to start and stop the selected application

* The ALPHANUMERIC keyboard on the right side: 12 keys that allows, in connection with the EDITING keyboard, to set up new applications and to modify the existing ones and to settle the cutting line and the cutter speed.

* The alphanumerical DISPLAY for text messages

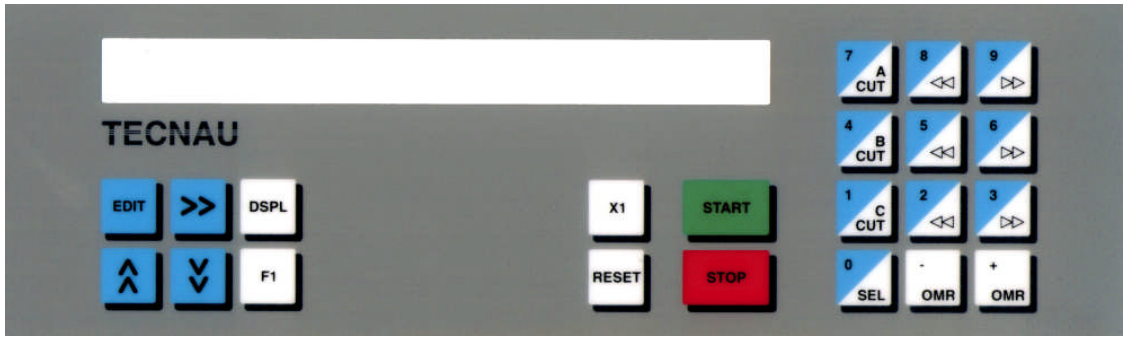


Fig. 10

1.2.1 The Display

It is possible to display different windows, with different data, pressing **DSPL** key. For every windows, the actual Application number is available on the left of the first line.

At power on, the **STATUS** window is displayed.
According with the status of the cutter, the displayed information are:

Ap.01 < Cutter mode > < Merger mode >

< To run 1st LW*/UP* > < ready > < Printer loop/no loop >
< In run 1st LW/UP > < no ready >

***** **1st** cut upper or lower selectable by **SEL** on keyboard.

Pressing once the **DSPL** key, the display show**: PASSWORD** , "*Total cuts*" counter, "*Partial cuts*" counter, (upper line); name and date of the "*Firmware version*" (lower line).
In this page is possible to enter the Passwords (see page 22, THE APPLICATIONS and page 29, MACHINE PARAMETERS).

If you do not enter the operator password, pressing again **DSPL** key, the **SPEED** window is displayed.(lower line)

Spd= 077	presetted speed or actual speed value
mt/m= 080	meter per minute
ft/m= 260	feet per minute
Pg/h= 17600	pages per hour

On the next pressing of **DSPL** key changes again to the **STATUS** window.

1.3. How to start the application or job

Switch on the cutter.

After few seconds, the display shows the STATUS window with the number of the last application executed on the left of the upper line.

- **To start again the last application** executed, load the paper and press on the OPERATING keyboard **START :**

  the blade moves to phase position, the upper and lower transport load the two webs to the cutting line

- **To start a new application:**

  * Press **EDIT** for two seconds: the display shows the number of the last application.

  * Through the ALPHANUMERIC keyboard, select the number of application to execute. **(password requested – see page 22)**

  * Press on the OPERATING keyboard, in sequence:

    - **START** to confirm the application number
    - **START** to reload the paper

1.4 How to stop the job

To stop the job press **STOP** on the OPERATING keyboard

1.5 Cutting position adjustment transport upper

The OPERATING keyboard has two keys, **8** and **9** split with the arrow forward (8) and backward (9).

The two keys are used to adjust the paper cutting line position if requested.
Each press of the keys move the paper 1/144" in the selected direction.

1.6 Cutting position adjustment transport lower

The OPERATING keyboard has two keys, **5** and **6** split with the arrow forward (5) and backward (6).

The two keys are used to adjust the paper cutting line position if requested.
Each press of the keys move the paper 1/144" in the selected direction.

1.7 Cutting cycle transport upper

The OPERATING keyboard has key **7**.
pressing key **7** start **one cut cycle** on the upper transport only if **ManuEnable** is selected

1.8 Cutting cycle transport lower

The OPERATING keyboard has key **4**.
pressing key **4** start **one cut cycle** on the lower transport only if **ManuEnable** is selected

1.9 Error or information messages on the display

When error messages or information are displayed, to reset the error press **RESET** and start again the job.

If the error message continue to be displayed, detect the error code in the upper line at right of the display and **call the service centre**.

2. THE APPL ICATIONS

2.1 How to set up or to change the applications.

* Switch the cutter on

  New or modified data can only be entered with specific Operator PASSWORD

  To enter password press **EDIT**, then **DSPL** to show:

  ## PASSWORD ##

  press keys **1, 2, 3, 4, 5** on numeric keyboard and **DSPL**

* Now is possible to enter and **modify** the application data.

* **Press EDIT for two seconds**

* Set the number of the required application on the ALPHANUMERICAL keyboard**,** **examine** the existing applications using arrow up / arrow down.

* **To switch from one parameter to another press the blue key arrow up or arrow down on the EDITING keyboard**

* **To enter more data in the same parameter line press the blue key arrow backward on the EDITING keyboard**

* The maximum number of application that can be memorised is 99
  To exit press **EDIT** or **START**

* To logout from the operator Password, enter “00000” as Password.

While you are logged with the operator Password, the “=” sign between “**Spd**” and the set value of the speed (e.g. “45”) is flashing, reminding you that the speed can be changed with “**-**“ and “+” keys of the alphanumeric keyboard.

1° Parameter

Application # :

Pressing the key arrow up the display visualise "APPLICATION" and it's possible to enter the number of the application from 1 to 99.

7	8	9
4	5	6
1	2	3
0	-	+

2° Parameter

Paper speed:

This parameter sets the paper feeding speed.
The numerical value is between 5 for the minimum speed and 99 for the maximum speed.

Sequence : select the parameter
Introduce the speed value (two digits)

3° Parameter

Merger mode < 0=no 1=up 2=lw 3=both > **:**

Select " **0** " to run paper from fan-fold

Select " **1** " to run paper from merger to upper web only

Select " **2** " to run paper from merger to lower web only

Select " **3** " to run paper from merger to upper and lower web in alternate mode

4° Parameter

Cut mode < 0=presel. 1=sel. 2=altern. > **:**

Select " **0** " to run preselected mode defined in parameter ***6°***

Select " **1** " to run in selective mode by External Start UP/LW signals

Select " **2** " to run in alternate sequence mode Upper and Lower web

5° Parameter

Foils qty. < cut mode 2 > **:**

To define the number of foils per group

Select " **00000** " to run continuously

6° Parameter

UP.LW < mode 0 > **: xx.xx.xx.xx.xx.xx.xx.xx**

To define the sequence and the number of foils cuts for each transport for the composition of one set (group).
For each group the number can change from 0 to 98

Sequence: select the parameter
Introduce the value

7° Parameter

UP cut length 01 ("+/96") **:**

To define the length of the sheet to be cut from the upper transport Inches + /96

Sequence: select the parameter
Introduce the value

8° Parameter

UP cut length 02 ("+/96") **:**

To define the length of the second cut or, of the strip to be cut from the upper transport

Sequence: select the parameter
Introduce the value

9° Parameter

LW cut length 01 (“+/96”) **:**

To define the length of the sheet to be cut from the lower transport Inches + /96

Sequence: select the parameter
Introduce the value

10° Parameter

LW cut length 02 (“+/96”) **:**

To define the length of the second cut or, of the strip to be cut from the lower transport
.

Sequence: select the parameter
Introduce the value

11° Parameter

LW cut length 16 (“+/96”) **:**

To define the length of the sixteenth cut from the lower transport
.

Sequence: select the parameter
Introduce the value

12° Parameter

Printer loop <merger mode 3 > 1=yes **:**

Only in <merger mode 3 > condition, when the paper is supplied from a digital printer

Select " **0** " to run paper from fan-fold or from unwinder

Select " **1** " to run paper from digital printer

13° Parameter

Blade version < 0=osc. 1=V1 2=V2 > **:**

Select " **0** " when use " Oscillating blade system" **TC 2010**

Select " **1**" when use " Vertical blade system" **TC 2050**

Select " **2**" when use " Vertical blade system" **TC 2020**

MACHINE

PARAMETERS

ATTENTION!!!

This Password allows the access to the RAM of the CPU. Must be managed by specialised personnel only.

Switch the cutter on, press **DSPL**, the display shows:

PASSWORD

Press 5 (five) times the key **7** and 3 times **DSPL**

Press the keys “arrow up” and “arrow dw” to select each parameter.

MACHINE PARAMETERS

1. Paper load UP, 1”=192 **Default data 01250**

The parameter defines the distance between the photo sensor of paper presence on upper right tractor and the Cut Line.
The data is expressed in 1/192 of inch.

2. Paper load LW, 1”=192 **Default data 01305**

The parameter defines the distance between the photo sensor of paper presence on lower left tractor and the Cut Line.
The data is expressed in 1/192 of inch..

3. Merger paper jam (1=yes) **Default data 00000**

Select “ **0** “ to ***disable*** paper jam device on merger

Select “ **1** “ to ***enable*** paper jam device on merger

4. Cutter jam, (0=no 1=up 2=lw 3=both) **Default data 00000**

Select “ **0** “ to ***disable*** paper jam device on ***up*** and ***lw*** transport

Select “ **1** “ to ***enable*** paper jam device on ***up*** transport only

Select “ **2** “ to ***disable*** paper jam device on ***lw*** transport only

Select “ **3** “ to ***enable*** paper jam device on ***up*** and ***lw*** transport

5. Pg. Counter stacker reset **Default data 00020**

This parameter defines the number of pages cut after witch the stacker table check position (upper reset).

6. OMR phot. UP 1”=192 **Default data 02400**

This parameter defines for upper transport, the distance between the “OMR reading device” and the paper cutting line.
The data is in 1/192 of inch.

7. OMR phot. LW 1”=192 **Default data 02400**

This parameter defines for lower transport, the distance between the “OMR reading device” and the paper cutting line.
The data is in 1/192 of inch.

8. OMR window 1”=192 **Default data 00020**

This parameter is the window size within which the “OMR reading device” can read and recognize the information printed.
The data is in 1/192 of inch.

9. Auto. OMR Set, 0Yes 1No 2NoOMR **Default data 00002**

Select “ **0** “ to ***enable*** “automatic centring mark position” device.

Select “ **1** “ to ***disable*** “automatic centring mark position” device.

Select “ **2** “ to ***disable*** all OMR reading device.

10. Language 0=It 1=Uk 2=Dc **Default data 00001**

This parameter allows the language selection.

11. Delay between groups 1=5ms. **Default data 00020**

12. Max strip dimension 1”=192. **Default data 00096**

This value defines the maximum length within which the paper cut is calculated as strip.

13. Keyboard position, 1=right **Default data 00000**

This parameter is normally set to **0**
Must be set to **1** if the Keyboard (with Display) is mounted on the right side of the Cutter.
Doing this, some specific keys like “Cutting position adjustment”, and some display indications, assume the correct direction.

14. Without controls ? * 1=yes **Default data 00000**

Setting the value to **1** the “paper presence” and the “cover open” controls are disabled.

15. Reload default parameters ? (*) 1=yes **Default data 00000**

If this value is **0** any changing of listed parameters is valid. Enter **1** to reload the "default parameters" at next Power-on.

To confirm any change of parameter value, press **arrow up** or **arrow down**, then switch **off** and **on** again the cutter.

(*) NOTE:

Parameter **14** and **15** that when switch off, reset itself to **0**.

9) INTERFACE SIGNALS

Input/Output Signals for external devices connection are available on two external connectors **"D"** type, **25 way Female**, named **U6 A** and **U6 B**.

INPUT SIGNALS:

All the inputs are **active low** and have an internal pull-up of 10 Kohm to +24V.

1) External Group Start U6A/B-25

When the 4° Parameter **"Cut Mode"** is set to **"0"** (presel), a pulse on this input starts the sequence on upper and lower web defined by the 6° Parameter "**UP.LW<mode 0>"**.

2) External Start UP U6A/B-13

a) When **Cut Mode** parameter is set to **"1"** (sel), a pulse on this input starts the cutting activity on the upper web.
If the **External Stop** signal is active, a pulse on this input starts a single sheet cut on the upper web.
b) When **Cut Mode** parameter is set to **"2"** (altern), a pulse on this input starts the activity of the cutter.
If the **External Stop** signal is active, a pulse on this input starts a single sheet cut.

3) External Start LW U6A/B-11

a) When **Cut Mode** parameter is set to **"1"** (sel), a pulse on this input starts the cutting activity on the lower web.
If the **External Stop** signal is active, a pulse on this input starts a single sheet cut on the lower web.
b) When **Cut Mode** parameter is set to **"2"** (altern), a pulse on this input starts the activity of the cutter.
If the **External Stop** signal is active, a pulse on this input starts a single sheet cut.

4) External Stop U6A/B-10

A pulse on this input stops the cutting activity of the Cutter.
If this signal is tied active, a pulse on **External Start LW** or **External Start UP** starts a single sheet cut on the appropriate web.

5) External S/S Common (Return) U6A/B-12

Common Signal (0V of input circuit) for External Start and Stop Signals.

OUTPUT SIGNALS:

All the Outputs are electrically insulated contacts.

Cutter Ready Common U6A/B-4

Common contact of Cutter Ready relay.

Cutter Ready NO U6A/B-5

Normally Open contact of Cutter Ready relay.
This contact is **closed** when:
a) the Cutter is working
b) the Cutter is ready to work waiting for START or an External Start.
c) the Cutter is waiting for Paper Loop presence (if enabled).

Cutter Ready NC U6A/B-6

Normally Closed contact of Cutter Ready relay.
This contact is **open** when:
a) the Cutter is working
b) the Cutter is ready to work waiting for START or an External Start.
c) the Cutter is waiting for Printer Loop presence (if enabled).

Cutter Powered Common U6A/B-7

Common contact of Cutter Powered relay.

Cutter Powered NO U6A/B-8

Normally Open contact of Cutter Powered relay.
This contact is **closed** when the machine is switched ON.

Cutter Powered NC U6A/B-9

Normally Closed contact of Cutter Powered relay.
This contact is **open** when the machine is switched ON.

End Of Group Common U6A/B-15

Common contact of End Of Group relay.

End Of Group NO U6A/B-16

Normally Open contact of End Of Group relay.
This contact is **closed** for the time set in the Machine Parameter "**Delay between groups"** at the end of each Group of sheets.

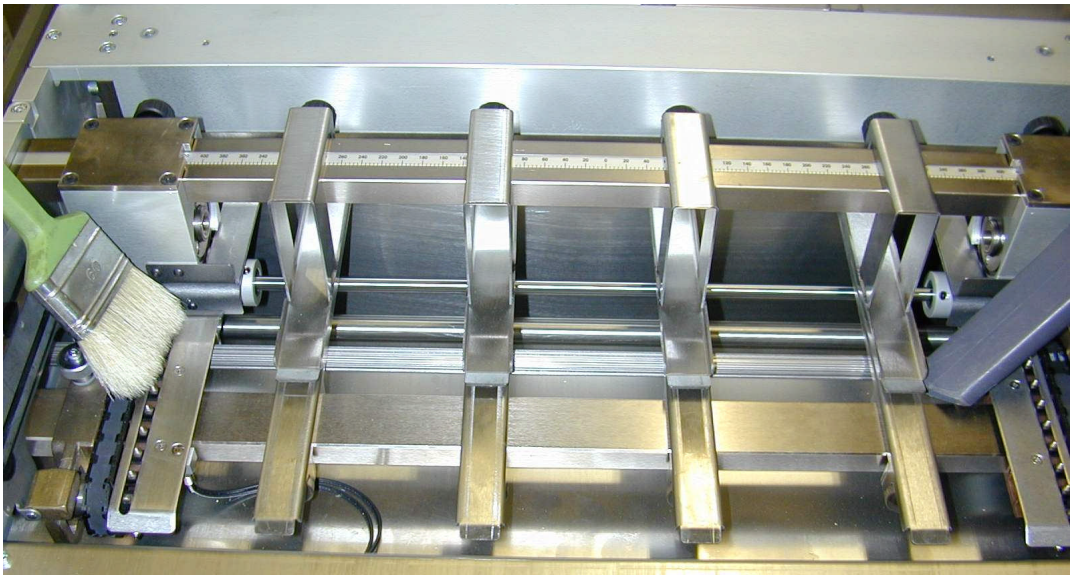
10) MAINTENANCE

- The main cutter parts are protected by gaskets to avoid the paper dust to enter into the rotating devices and to block them.

  It's important to clean the cutter, using vacuum cleaner, when the paper dust starts cumulating.

  It's suggested to clean the cutter every day before starting working.

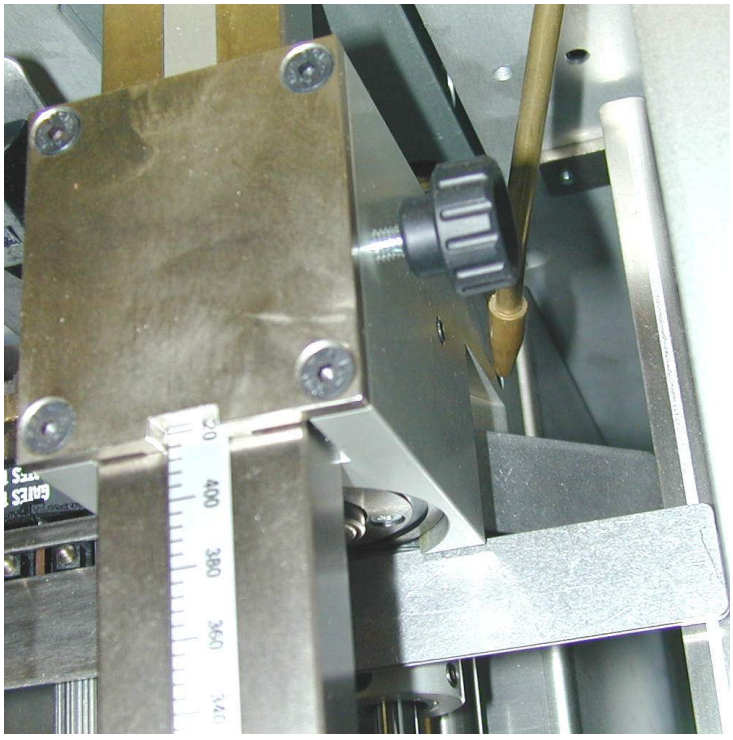
  The most important parts are lubricated with grease (bearing etc.) for life and sealed.



Frequency: daily

- The trimming circular knives are lubricated with oil through a wick that pushes against the thread of the lower knives: this transmits the lubrication to the upper knives by rubbing.

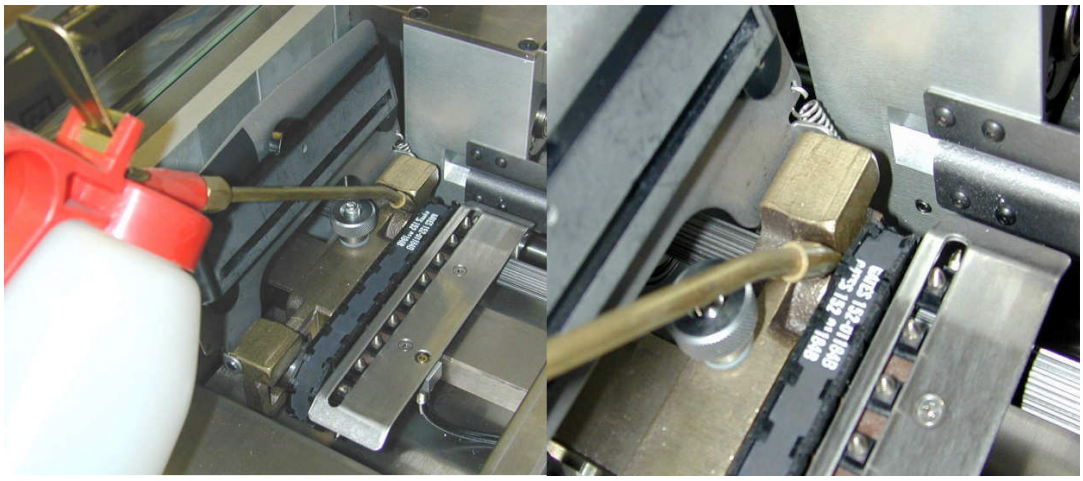
- It's recommended to introduce oil in the lateral hole, daily, as indicated in the figure.



Frequency: daily

- The lubrication increase the life of the knife and keep the cut quality at the original level.

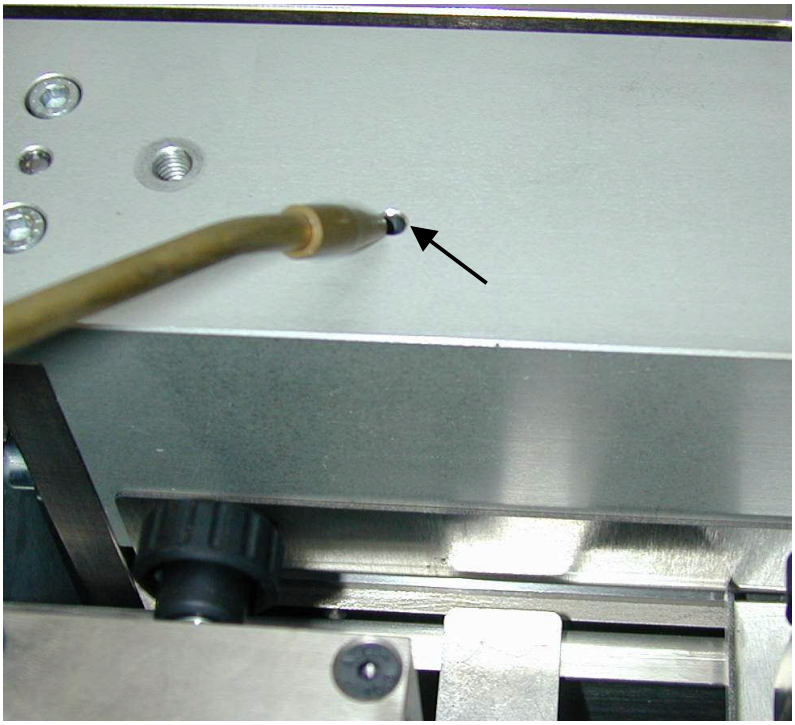
- Lubricate tractor drives monthly. Prevent tractor jamming. During normal working hours, the operator of the units should follows the listen procedures as a preventive action against dust build up and to achieve maximum performance and production reliability of machines.



Frequency: monthly

- Check and oil all moving parts with a very light coat, oil wicks in slitting blocks.

- Oil the cross oscillating blades at the extremity (from the holes on the upper side of cartridge).



Frequency: weekly

Suggested spare part list

TECNAU PART NUMBER	DESCRIPTION
TC 1010	OSCILLATING BLADE CARTRIDGE
TC 2002	SIDE TRIMMING CARTRIDGE
COMM0144	BELT - EJECTOR
COMM0146	BELT - BLADE DRIVE
COMM9359	BELT - TRACTOR DRIVE
COMM0400	BLADE - MOTOR
COMM0401	TRACTOR --MOTOR
COMM0403	PAPER SENSOR AMPLIFIER
COMM0404	OPTICAL FIBER
COMM0405	FAN
COMM0407	CAPACITOR
COMM0408	RECTIFIER
COMM0409	MAIN TRANSFORMER
R/COMM0410	KEYBOARD WITH DISPLAY
COMM0411	BLADE MOTOR DRIVER
COMM0412	TRANSPORT MOTOR DRIVER
COMM0415	ELECTRONIC BOARD
COMM0416	ELECTR. BOARD TRANSFORMER
CT18.03/C03	CENTRAL OR SIDE KNIFE
CT18.03/C39	LOWER EJECTOR WHEEL
T200HP 90	UPPER EJECTOR GROUP