CB-20 STRINGING MACHINE

INTRODUCTION

TENNISPRO DISTRIBUTION makes your life easier. You just obtained the CB-20 stringing machine in order to string tennis, squash and badminton racquets.
However, we advise you to carefully read this guide before stringing your first racquet. This guide will provide you with all of the necessary information regarding your machine, how it functions and the correct way to string. This information will help you learn how to quickly string all types of racquets.

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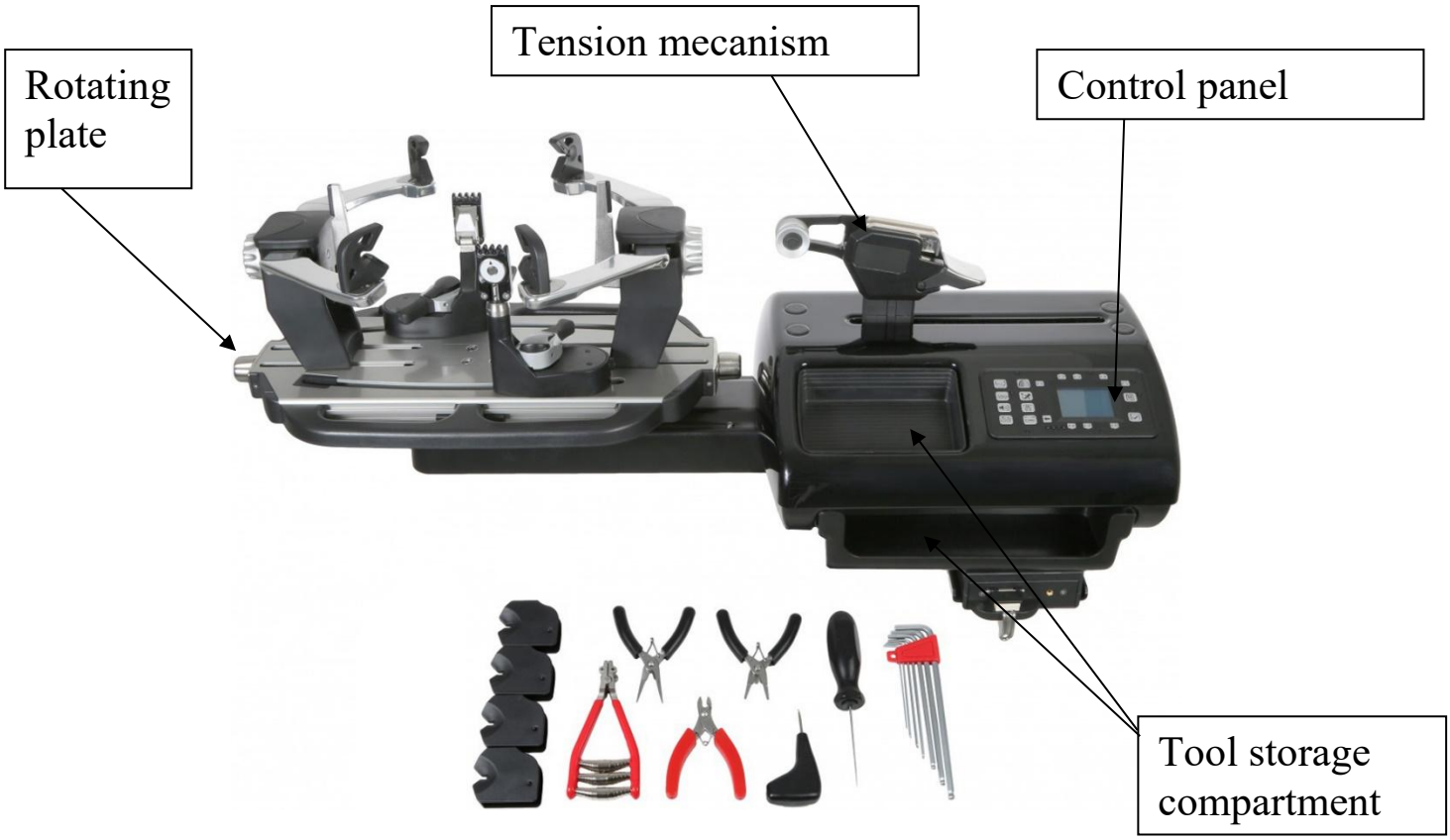
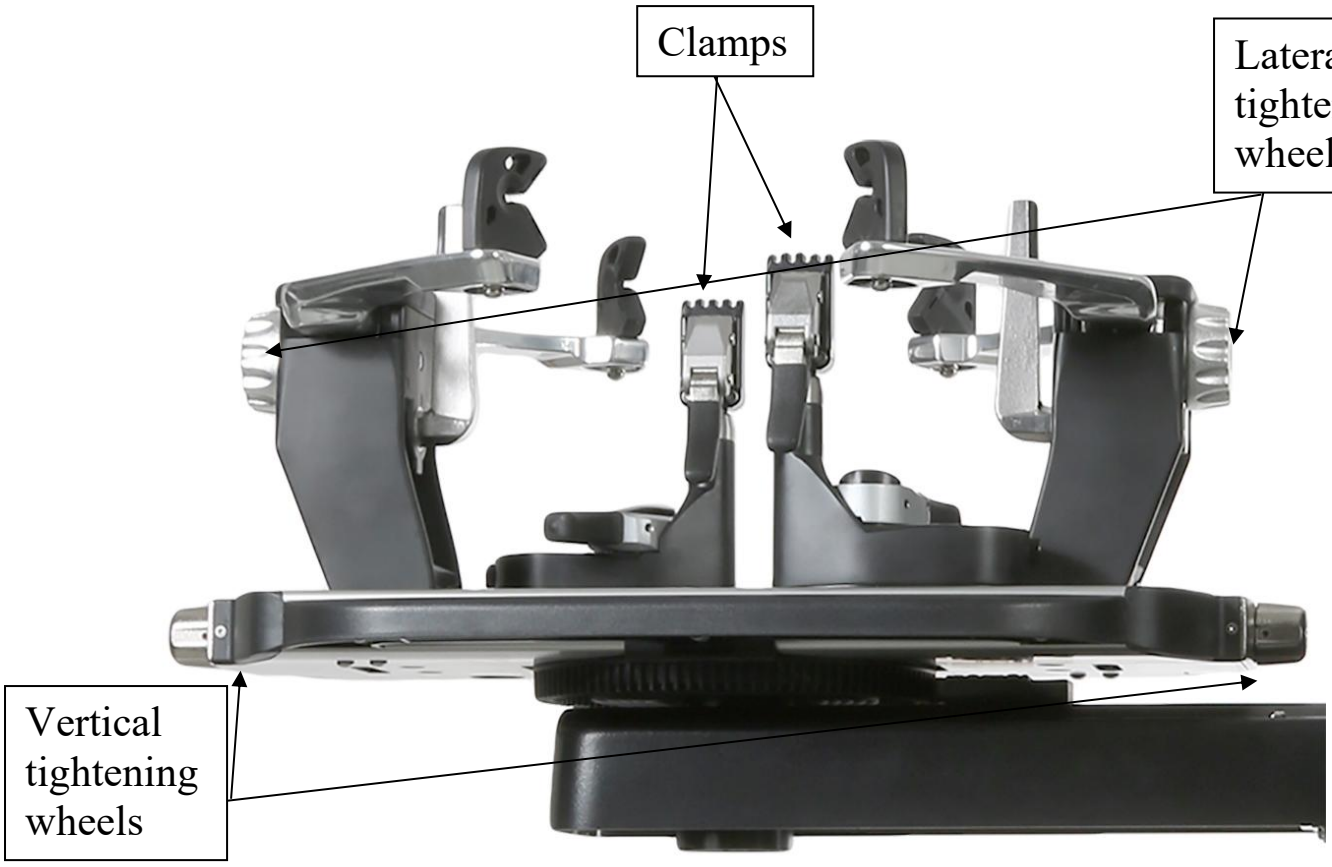
I. THE STRINGING MACHINE : COMPOSITION

A. The Stringing Machine





B. The tools

On top of your stringing machine, you will receive all of the necessary tools to begin stringing:

- Starting clamp
- Multi-use clamp
- One pair of cutting pliers
- Awl
- Allens keys
- 4 adaptors for badminton

C. The tension system

On this CB-20 stringing machine, there is a controlled electronic tension mecanism thanks to the control panel (control panel functionalities in part IV).
This tension system has been optimised to save you time . This system avoids wasting your time by obligating you to press a button. This is why the Touch Pad has been added right next to the mecanism you use to tighten the string. This will increase fluidity.

D. Putting the Machine Together

To simplify putting the CB-20 stringing machine together, you will find the following link that explains the provided parts of the machine, along with the steps for putting the machine together. Découvrir notre manuel de cordage de la machine à corder CB-20

II. RACQUET AND STRING PREPARATION

A. Putting the racquet on the machine

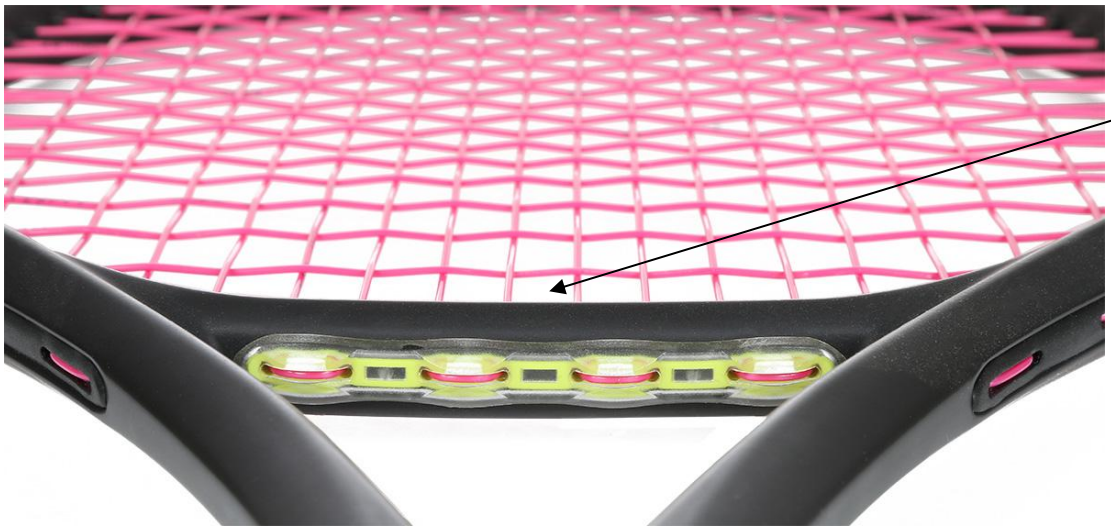
To correctly place your racquet on the machine, make sure the two pillars are found in the interior of the racquet frame as shown in the photo below :

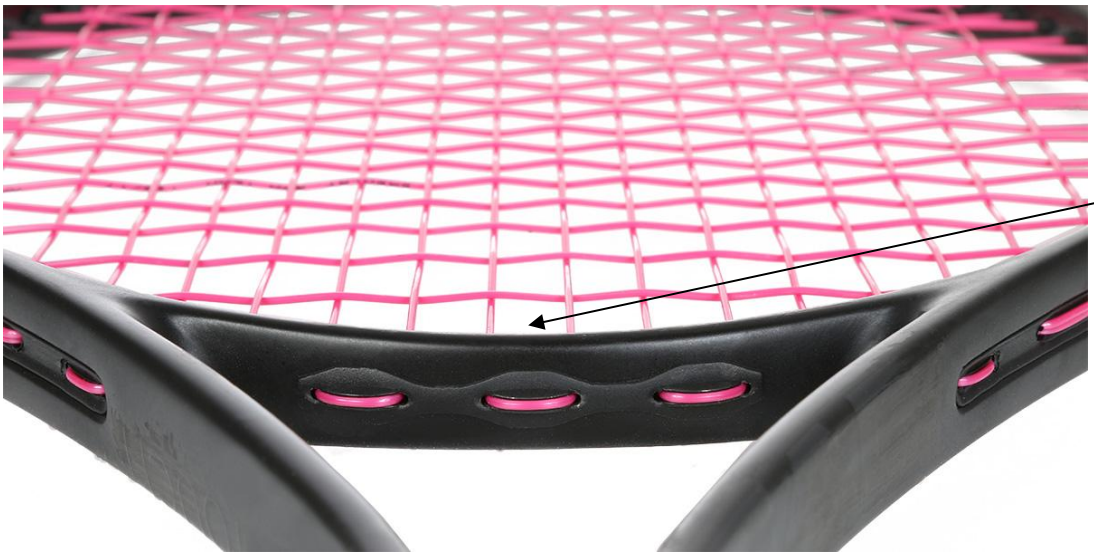
Next, tighten the two central pillars with the spanner adjuster in order to ensure that the racquet's frame does not move (shown below) :

Lastly, tighten the lateral arms in order to completely block your racquet :

Below you will find a photo of the two spanner adjusters :

Position the pillars based on the number of grommet holes :





Attention: make sure the butt cap (logo) of the racquet is right side up when you are putting the racquet on the machine.

A. Advice before beginning

First of all, you need to study the present document in the B section to learn the terminology for the strings and holes. Almost all modern racquets do not have a left and right side. However, certain models offer a « Short Side ». This is the side where you must do your knot for the mains when you are stringing with the « two knot » method. For the « four knot » method, you need to tie off your superior knot on the Short Side.

→ This is the right side when the racquet is correctly placed on the stringing machine (see putting the racquet on the machine).

Once you have started stringing, do not remove the frame from the vice, unless you have:

- Finished stringing
- Released the tension for all of the strings that are already tightened.

Failing to take this precaution into consideration could lead to racquet deformation.

B. Preparing the String

To know whether you need to start stringing the racquet from the top or bottom, count the number of string passages there are at the throat of the racquet :

- If your racquet has 3 passages, start stringing at the throat area (bottom of racquet frame).

- If your racquet contains 4 string passages, you can start at the top of the racquet.

Starting to string at the throat or the top of the racquet does not have any impact on the following methodology.

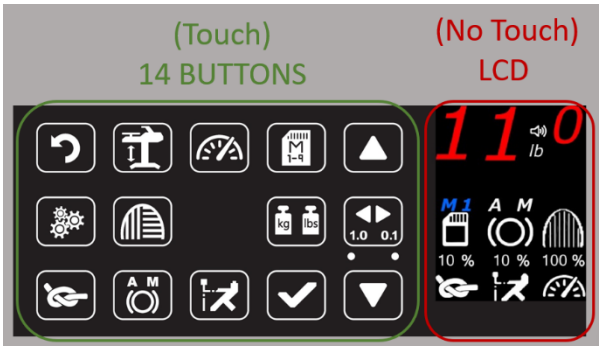
String can come in two forms (packages):

- A string pack of 12 metres
- A string reel. In this case, you need to measure and cut 12 metres in order to string your racquet.

III. HOW THE STRINGING MACHINE WORKS

A. Selecting tension

On this CB-20, an electronic screen has been added. It is divided into 2 parts: a Touch section with 14 buttons and a No Touch section.



B. The clamps

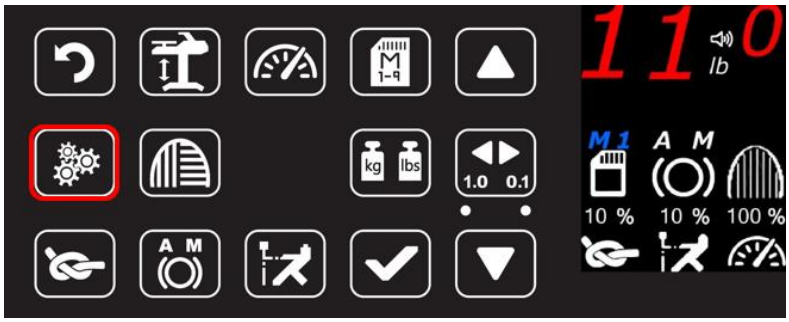
The provided clamps are made of brushed aluminium. These clamps can be adjusted (in terms of tightening) to adapt to your string's gauge. The blocking system is enhanced to allow you to save more time. When you liberate the clamp, the base will be liberated as well.

IV. HOW THE CONTROL PANEL WORKS

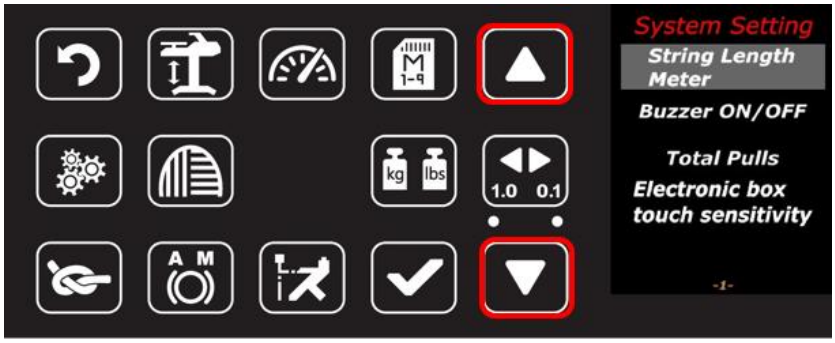
A. The screen

The CB-20 control screen is a LCD screen. There are two different screens:

The settings screen: This is displayed after pressing the corresponding button for 3 seconds.



To navigate the menu, use the 2 arrows to pull down the menu.



1. String Length Meter

In the menu, choose the string length measurement and confirm. Press on ✓ to reset to 0. To return to the settings menu, press on ↩

2. Buzzer On/Off

Scroll down the menu and find the option. Enter the menu and use the arrows. Press on ✓ to confirm. Press ↩ to return to the menu without changes

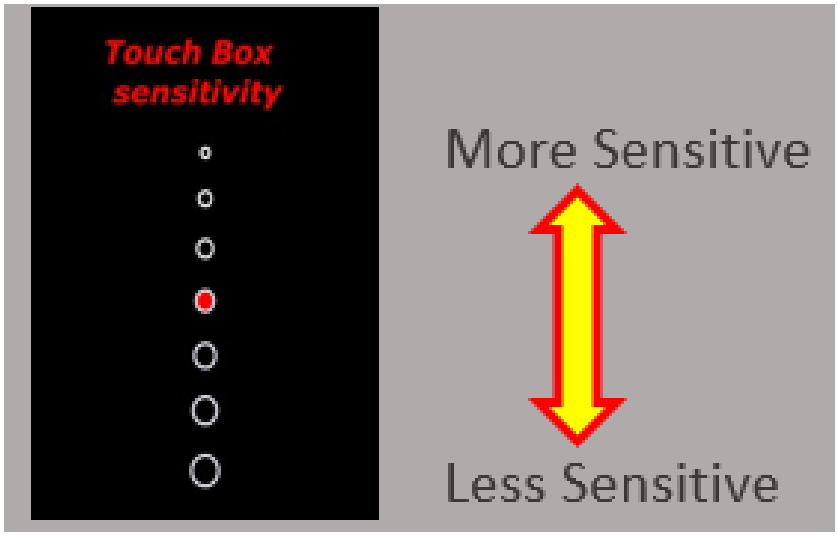
3. Total pulls

Scroll down the menu and find the option. Once in the menu, the number of prints is displayed. Use ↩ to return to the menu.

4. Touch Sensitivity of the Touch Pad

The settings menu also lets you adjust the tactile sensitivity of the buttons. Use the arrows to raise and lower the sensitivity.

CAUTION: Only change if necessary. Setting the sensitivity too high could cause the buttons to be used without even physical contact.



5. Restore to default setting

In the second part of the drop-down menu, the first option is to return to default settings. Choose the option that interests you and confirm  or go back 

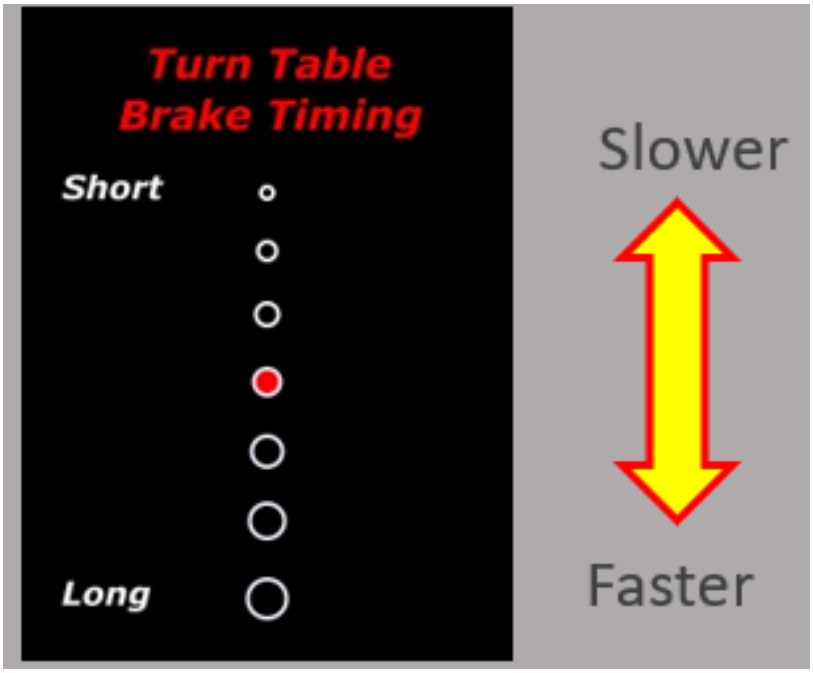
WARNING: returning to the default settings will reset all previously modified settings.

6. Calibration

Calibration is the setting just below. This parameter is set in 4 identical steps: place the tensiometer on the machine and switch on the traction head. Tense the tension until the value is displayed. Use the arrows to adjust the calibration value to the tensiometer value. Press on  to save. Repeat 3 times to complete calibration.

7. Turntable Brake Activation Time Adjustment

The penultimate adjustable parameter lets you adjust the turntable. Use the arrows to increase and decrease speed. Press on  to confirm. Press  to return to the menu without changes

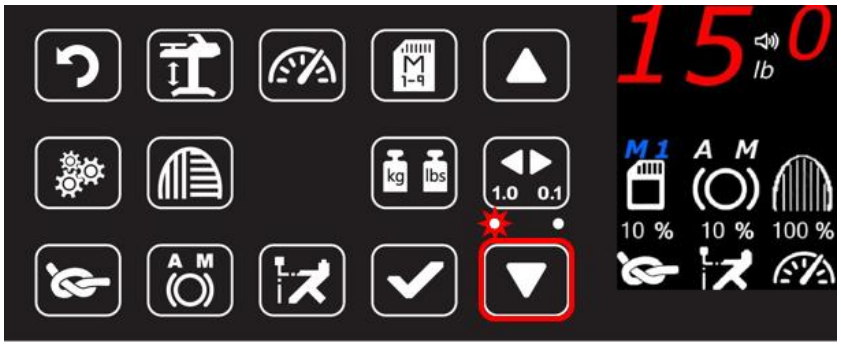


8. Metal START/STOP Touch Button Sensitivity Adjustment

The last adjustable parameter lets you adjust the sensitivity of the turntable on/off button. Use the arrows to increase and decrease sensitivity. Press on  to confirm. Press  to return to the menu without changes.

B. Selecting tension

The screen lets you change the tension at which you are going to string your racket. To do this, simply use the arrows to lower or raise the racquet tension. On the non-touch side, you can see the current tension set on the machine.



To be even more precise, the button shown below will allow you to adjust the racket tension by 0.1 or 1 unit.

C. The different functions

 **Knot**: if you press this button, the knot value is displayed and the LED next to the knot button lights up yellow. The function is activated for 1 run.
To change the value, press the knot button again for 3 seconds. The value can then be adjusted from 0 to 30%. To confirm, press 

 **Speed**: Press the speed button to display the speed icon on the screen. If you wish to change the speed, press and hold the speed button again (3 seconds). The speed can be adjusted from 30 to 100%.

 **Mains/Crosses**: This button is used to toggle between the selected uprights and cross-riggers. If the uprights are selected, a different tension value for the cross rigging (other than the tension for the uprights) can be selected.

 **LBS-KG**: At any time, you can modify the displayed tension from kg to lbs (or vice-versa). You can even do this during calibration. The latest choice will be automatically memorized.

 **Pré-stretch**: Press the button to display the setting. If the pre-stretch is to be changed, press and hold the pre-stretch button again (3 seconds) until the pre-stretch value is displayed and flashes. You can then adjust the pre-stretch from 0% to 30%.

 **Magnetic Turntable Brake:** Press the button to display the setting. Once activated, the LED on the screen lights up red. If you hold down the button for 3 seconds, the mode changes successively from Automatic to Manual to Automatic etc.

In automatic mode, the turntable locks when you pull the cord. You can still lock or unlock the turntable manually by pressing the brake button. In manual mode, the turntable locks. Press the brake button again to unlock.

Note: this function is only available if it is installed and authorized.

Memory: The memory program saves up to 10 different personal stringing choices/combinations. Push the M button to conjure the memory icon for 3,5 seconds. If within these 3,5 seconds, you press the same button once again, you will find the following memory: M1 -> M2 -> M3 -> M4 -> M5 -> M6 -> M7 -> M8 -> M9 -> M1, etc. Each memory is modifiable regarding all string characteristics (pre-stretch, knot, tension, string speed...). Once the characteristics have been modified, confirm with 

D. Troubleshooting

Error codes can be displayed in certain situations. You will find the different possibilities below:

- **C01** – if the extractor does not reach the end position on the right side 6 seconds after the machine is put under tension
- **C02** – a string is detected in the extraction head when the machine is under tension
- **C03** – the initial tension of the force sensor is too high
- **C04** – Motor current is too significant/strong
- **C05** – power switches at the end position on the left and right sides are active
- **C06** – sudden collapse of the weighing cell signal (when the machine pulls a string and the string slides in the clamp's teeth or within the extractor)
- **C07** – motor overcurrent (happens when the string is in the extractor when powering up ; or if the end position is not functionning).

V. STRINGING THE RACQUET

A. Two knot method

1. The mains

Based on the present photos in part II.D and based on the model of your racquet, you will begin stringing one side (the chosen side is not important EXCEPT for racquets with a « Short Side »). This string length is determined by the following calculation: **(Number of mains/2)+1**

For instance, for a racquet with 16 mains (16/2)+1=9
You will then measure 9 lengths of a main string, permitting you to have enough string for the 8 mains on one side of the racquet and +1 extra main length to tie off the racquet with a knot.

Once this has been done, you can begin stringing the mains. Block the string on one side in order to not lose tension while you are stringing the other side. String your first main as previously explained, then block the string with your second clamp.

Put your string in the next grommet (hole) and repeat the above procedure.

Once you have finished the side with your 9 lengths measured, you can tie them off with a knot (**explained in part C below**).

Attention :

- Do not string one entire side at once as you will risk damaging your racquet. Do 3 or 4 on each side until you finish the mains.
- Certain racquets have mains where you will need to skip a string (primarily between the sixth and seventh holes and the seventh and eigth holes). Verfiy before you begin stringing.

2. The crosses

To tie tje crosses of your racquets using the two-knot method, follow these steps:

- After doing your knot with the shorter amount of string, the second amount must be another 6 metres (roughly) to enable you to string the crosses. If the last string finishes on the top, you will put the string through the first available cross hole.
- After this, you will put the string under the first main string, then over the second main string, then under... until you arrive at the same hole positioned on the other side of the racquet (starting by putting the string over or under the first main does not change anything ; it is your choice).
- Put the string under tension, then clamp the string as close to the grommet as possible to maintain the applied tension.
- Continue by putting the string through the next available hole in order to do your second cross.
  Attention: the crosses must be done in staggered rows. This means if you put the string OVER the main for the cross 1, your cross 2 must go UNDER the same main !

- Continue stringing the crosses of your racquet until the last cross string by putting each string under tension and clamping each tightened string.
- After your last cross, you can do your final knot (explained in part C below)

B. Stringing with 4 knots

To string with four knots, cut your string into two parts in order to have two pieces of 6 metres : one will be used for the mains and the other for the crosses..

1. The mains

The construction of the uprights for the four-knot method is the same as for the two-knot method, with three exceptions:

- If your racquet possesses a « Short Side », it is not necessary to take this information into account for the mains.
- t is not necessary to calculate the length of the mains. You can simply split the 12 metre string in half, obtaining two 6 metre pieces.
- **A knot is to be completed on each side once the mains are completed** (explained in part C below)

2. The crosses

To complete your crosses with 4 knots, the same procedure for the 2 knots method is to be followed, except there is one exception:

- Your crosses will be completed with a second piece of 6 metres. You can directly string your cross and leave extra string on one side in order to tighten it later (prepare enough string to be able to tighten it with the tension mecanism). **Next, this string should be blocked thanks to the departing clamp (not included with the CB3 stringing machine) until you finish all of your crosses. Here is the reference on the Tennispro.eu website** : **800**.

  Once your knot is tied on the bottom, you can tighten the first cross and tie off your last knot.

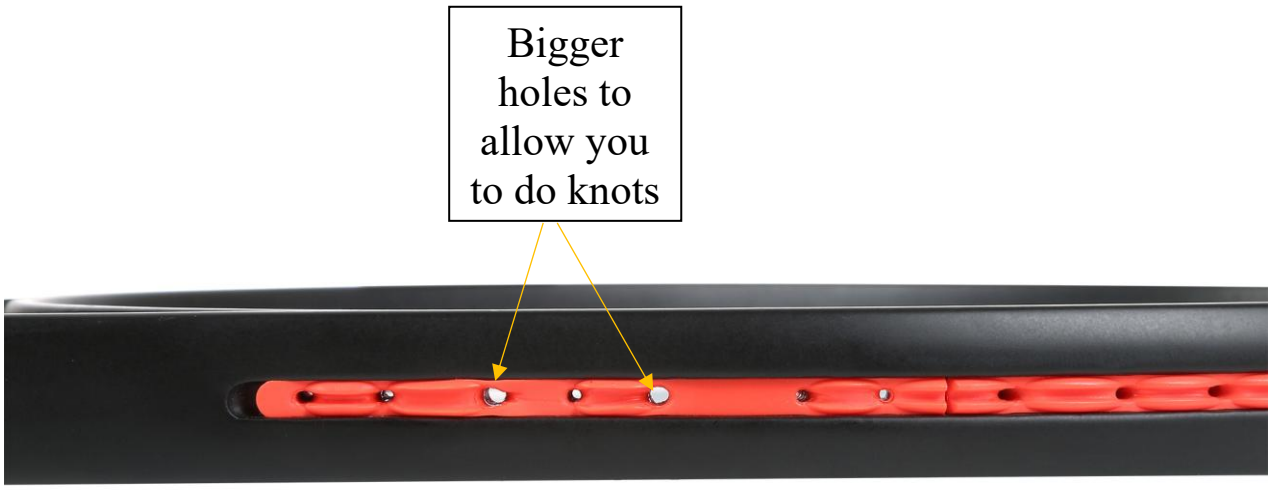
  Attention: if your racquet possesses a « Short Side », you need to respect this information and put the extra piece of string on the right side.

C. Doing a knot

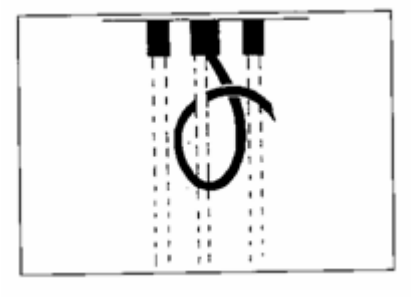
1. Tying off knots

Once you have completed your mains and crosses, you need to tie off a knot in order to maintain the tension on your strings. For this :

- If no error has been made on your racquet, you need to find a hole that is wider than the other closer holes after tightening your last string. This needs to be done in order to able to tie the last string off with a knot.



- Put your string through the wider hole
- Put the string in an interstice on one side or the other
- Raise the string on the other side of the same thing and put it in a formed loop.
- Delicately, but firmly tighten the knot and repeat his same procedure in order to do a second knot.
- Cut the excess string
- Release the clamp



Remark : For the majority of modern racquets, the holes do not contain two strings, except for the ones in which you use to do knots.
However, on certain racquet heads, two strings can be put in the same hole. If it is difficult to put a string in a hole that already has a string in it, here is how you can proceed:

- Make the end of the string sharper of like a needle by using cuting pliers.
- Put the sharper string in the hole with the help of the multi-use pliers.
- Use the string guider (provided with the machine).

2. What to do if the string is too short to reach the mecanism to tighten the string ?

If the last string is too short and it is not possible to use the tension system on the stringing machine, there are two possible solutions:

- Use the bossage clamp (not provided with the CB-20 machine. See the reference **808** as it will allow you to manually tighten the string up to 35kg/77lbs.
- Use the starting clamp (provided with the CB-20 machine.), which connects and can be used to « lengthen » the string when it is too short to reach the tension mecanism.

If you have any problem or question regarding your stringing machine, contact our Return of Goods Service at the following address :

TENNISPRO
11 Rue des Cigognes, CS 40138
67960 ENTZHEIM CEDEX FRANCE
Phone. : +44(0)20 36 081 983
E-Mail : info@tennispro.eu