

User guide Belle 2®



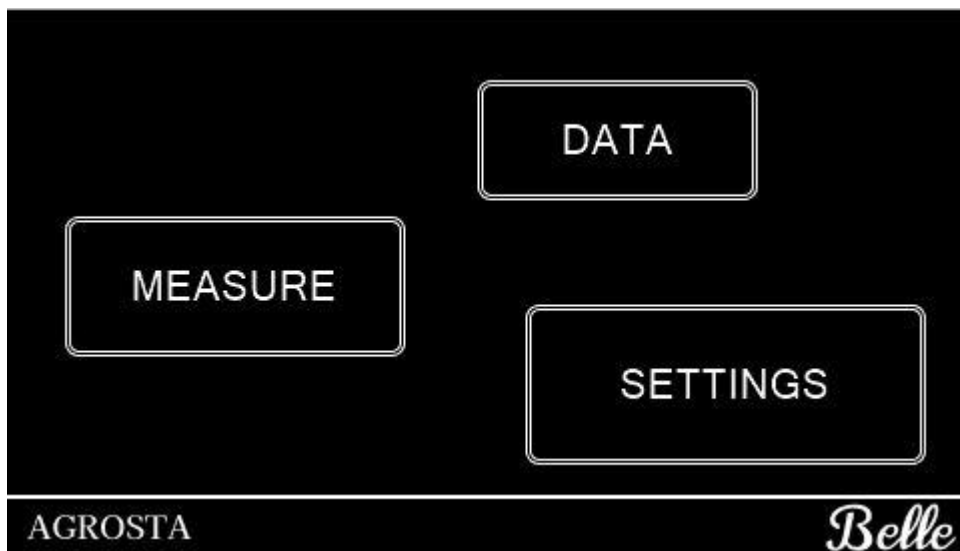
Texture analyzer for food and pharmacy

Thanks for having acquired Belle2, it comes with :

- The machine itself
- The power module
- The manual with 2 apps downloadable : One for Windows and the other one for android
- The certificate of conformity

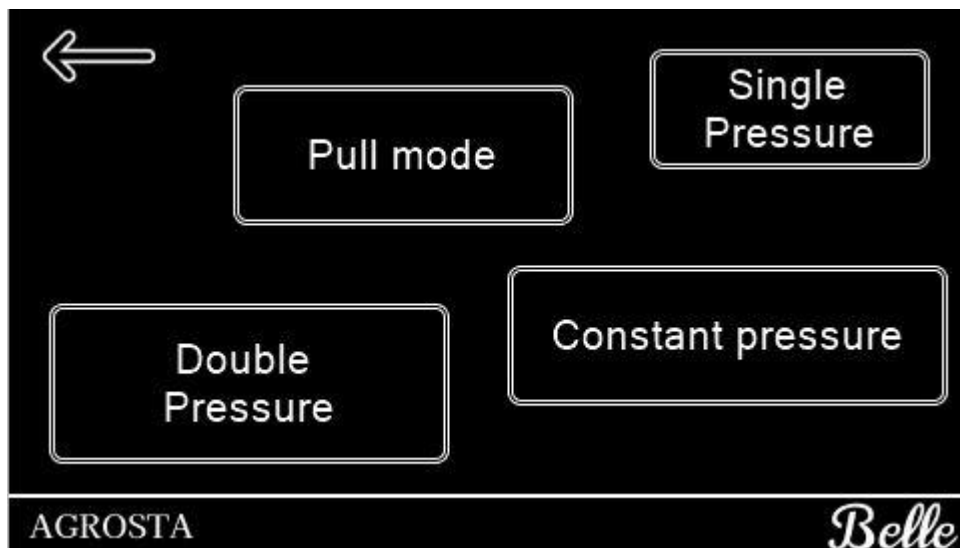
Please note that when you connect the power plug to the machine, the touchscreen restarts after 3 seconds

Touchscreen interface



[1] Home page

This homepage allows you to navigate through the many features of our texturometer. From there, you can set up your device, view your data and initiate measurements.



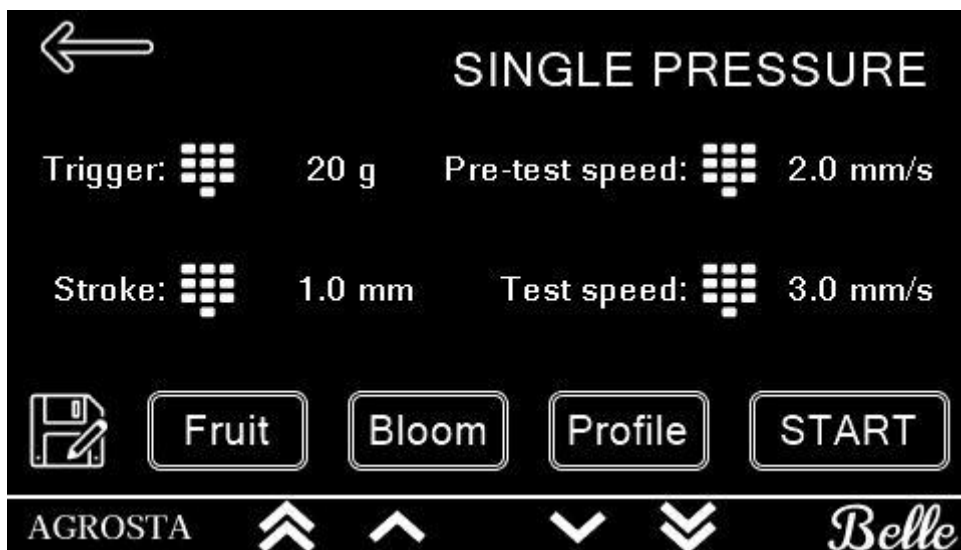
[2] MEASURE page

Texturometer for soft materials, semi-solids and gels, pharmacy, food

Belle 2® allows you to perform 4 tests to meet all your needs, here is the data it gives you:

- **SINGLE PRESSURE:** Hardness, fracturability, adhesiveness, resilience.
- **DOUBLE PRESSURE:** Hardness, fracturability, adhesiveness, resilience, gumminess, springiness, chewiness, cohesiveness.
- **PULL MODE:** Max pressure, fracturability.
- **CONSTANT PRESSURE:** Initial deflection (once we first reach the load), final deflection (at the end of the measure).

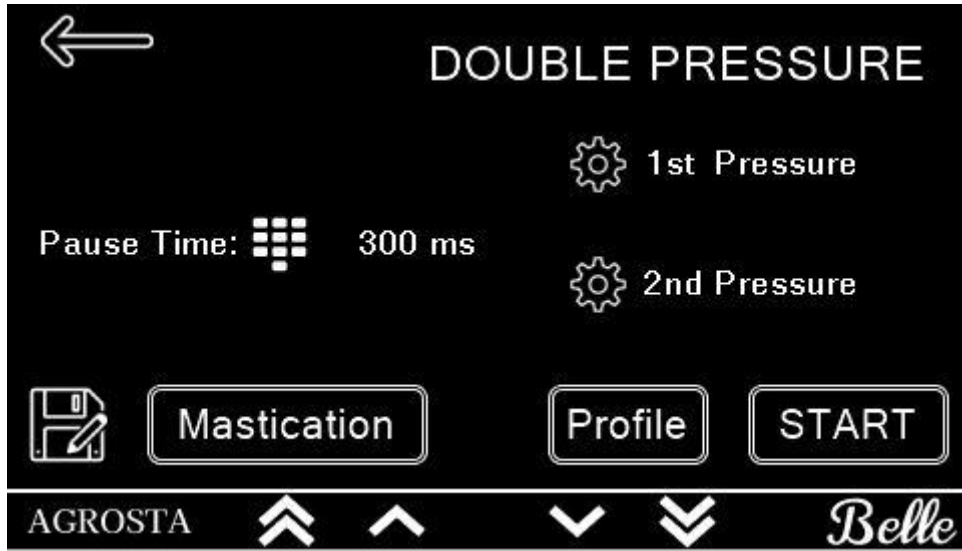
Our texturometer is designed to provide the greatest flexibility, which is why you can change every parameter. Here is an overview of customization for each mode. If you have any questions, please send us a message at lak@agrosta.org.



[3] Single pressure

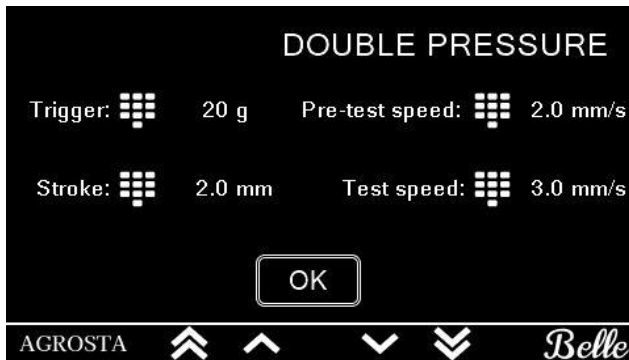
Fruit and Bloom initializes a predefined set of parameters optimized to perform tests on fruits and gelatins.

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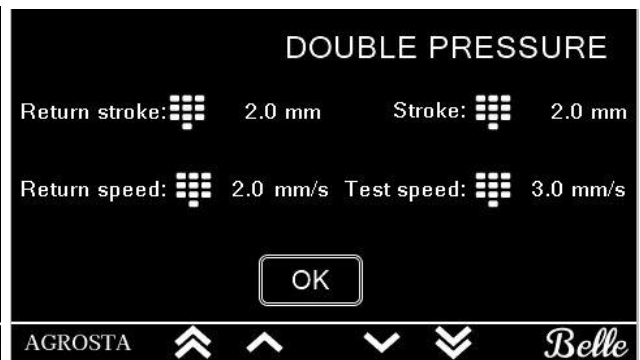


[4] Double pressure

Mastication initializes a predefined set of parameters optimized to reproduce mastication.

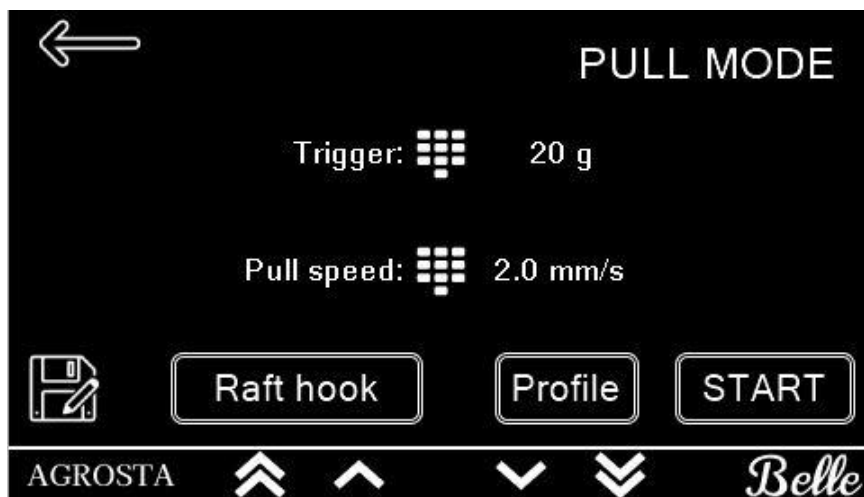


[4.a] Double pressure (1st pressure)



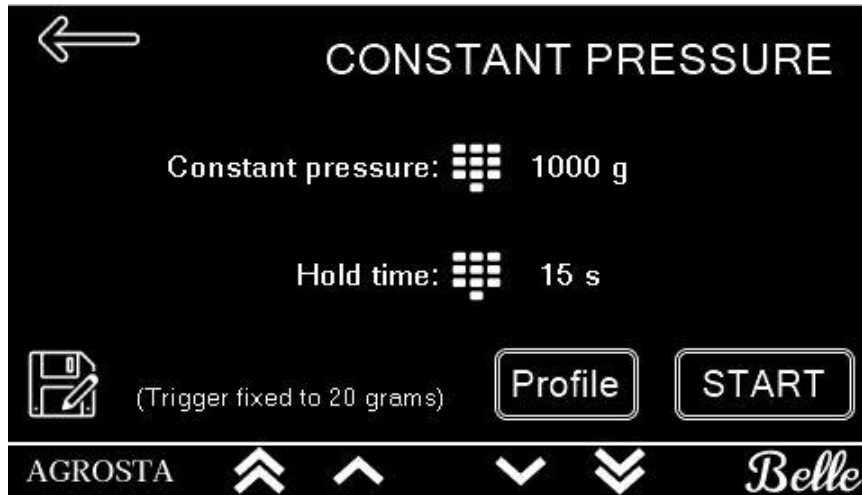
[4.b] Double pressure (2nd

pressure)



[5] Pull mode

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[6] Constant pressure

In order to optimize your time once you have set your parameters, each mode allow you to save up to 6 profiles (6 set of parameters) by clicking the button



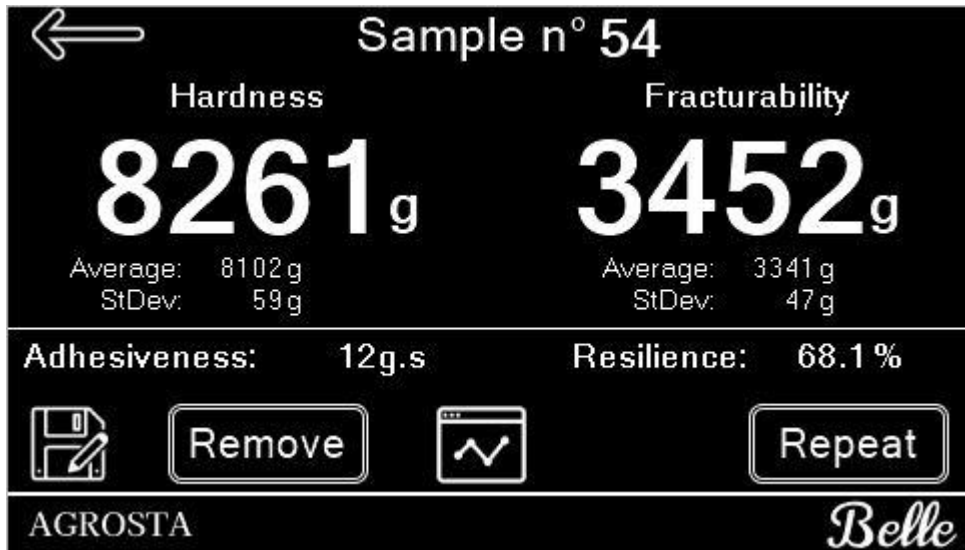
At any time you can reach your profiles by clicking the button which bring you to this page:



[6] Typical profiles page


Once everything is set, you can start the measurement, you will be redirected to the results page. Here you will have access to all the data of your mode and see the AVERAGE and STANDARD DEVIATION (StDev) of the most important data.

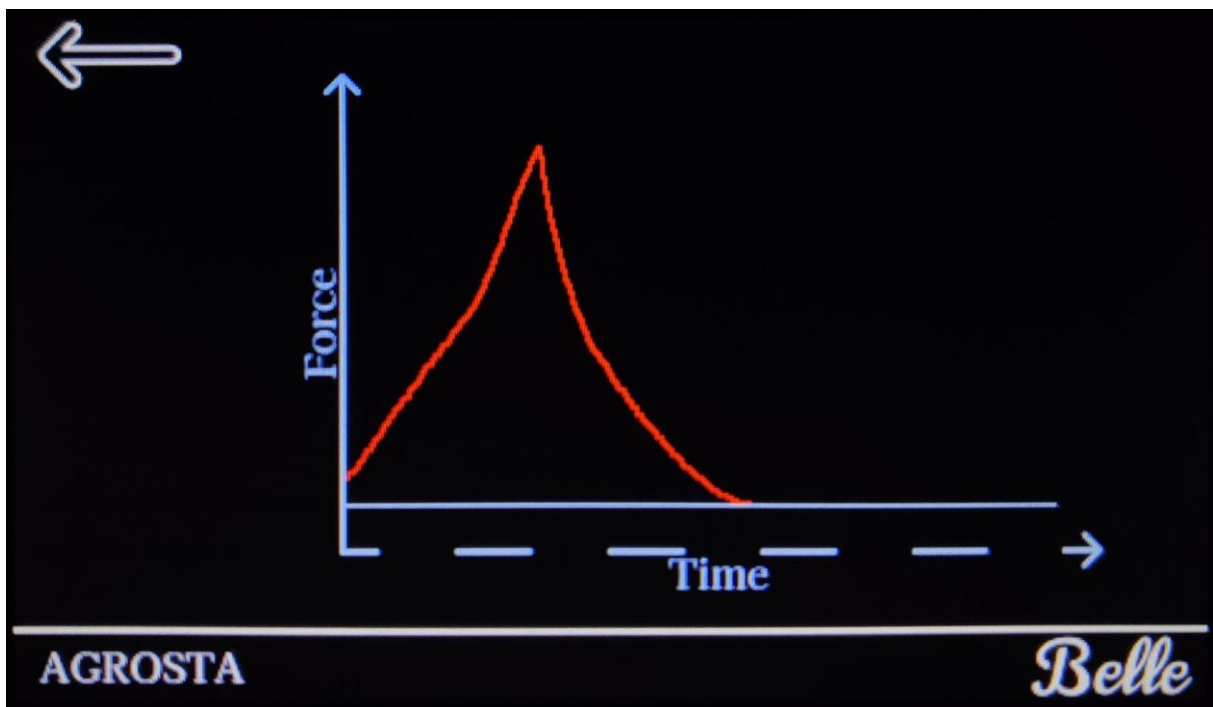
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[7] Example of a result page (here the simple pressure mode)

If a sample is corrupted you can remove it from the batch. Each batch can have **300 measures**. For each sample you can see the measure graph by

clicking the button .



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Once you are done you can save the data of the batch by clicking on the save button, then tap the keyboard to enter the batch name. At any time you can see your saved data by clicking the DATA button on the **[1] Home page**. By doing so you'll see your data table:

← SINGLE MODE DATA				
Batch	Hardness (g)		Fracturability (g)	
	Average	StDev σ	Average	StDev σ
BATCH5	8102	59	3341	47
BATCH4	8356	84	3512	62
BATCH3	8004	54	3316	39
BATCH2	7994	42	3210	24
BATCH1	8523	99	3841	90
18.01	5123	562	265	12
-----	0	0	0	0
-----	0	0	0	0
-----	0	0	0	0
-----	0	0	0	0

AGROSTA < 1 / 5 > Belle

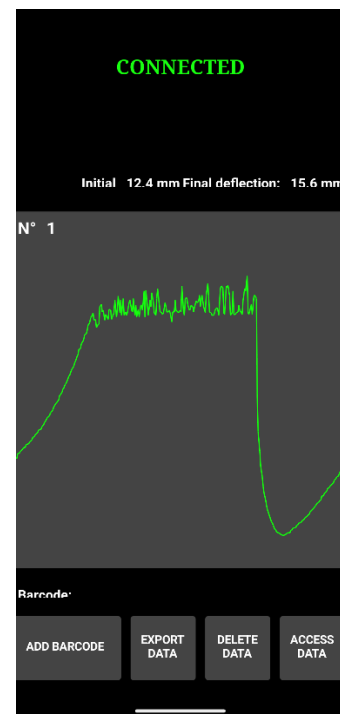
The settings in **[1] Home page** allow you to choose the unit of result data: either **gram** or **mlb**. You can also select the maximum pressure of the device to keep your sample safe: 1Kg - 2Kg - 5Kg - 10Kg - 17Kg.

App for android

- First, switch on your Belle2 and associate it to your phone or tablet
- For this, go in PARAMETERS / BLUETOOTH and click on “Add device”

You can download the app here : <https://agrosta.org/BELLE.apk>

Or scan this QR code :



The app comes with a barcode scanner

The data is stored under CSV format and can be accessed on your phone or tablet in this directory : **Android/data/com.lak.BELLE/files**

App for windows

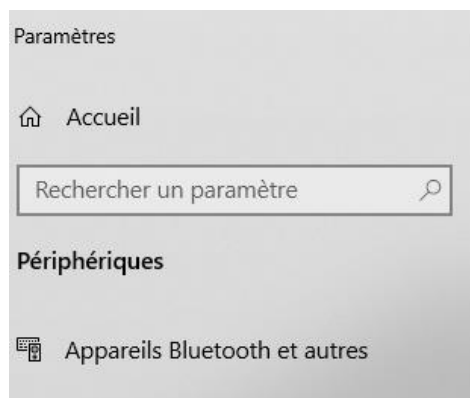
You can download the app for Windows here :

<https://agrosta.org/belle2.zip>

First, you need to add the Bluetooth device to your PC :

Setting up the Bluetooth communication :

- **Switch on the Belle 2**
- **On your computer, go the parameters, and then Bluetooth devices:**



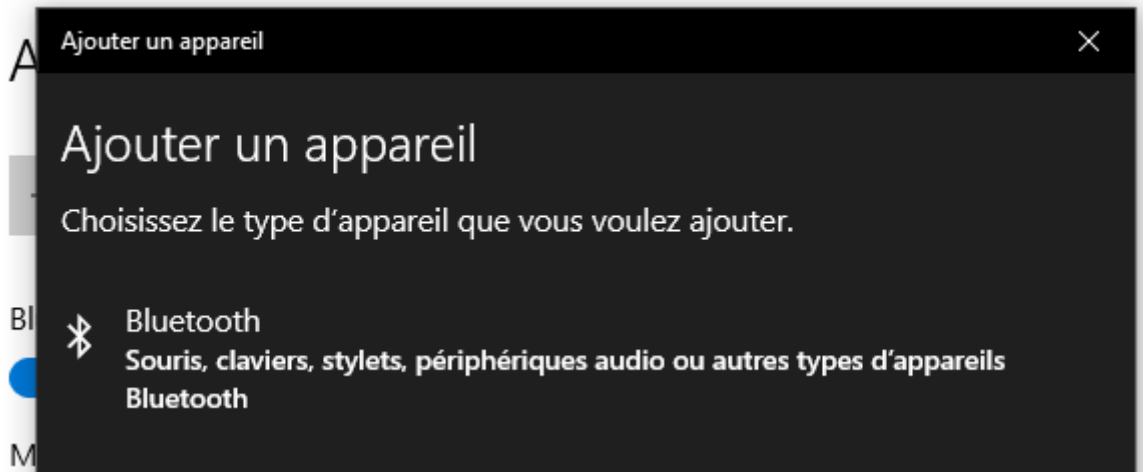
Appareils Bluetooth et autres

+ Ajouter un appareil Bluetooth ou un autre appareil

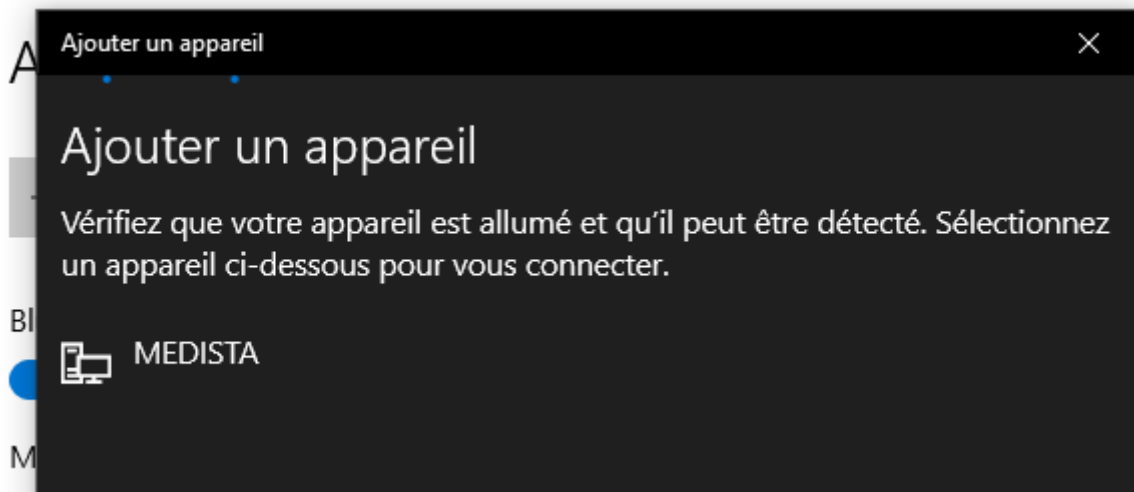
Bluetooth
 Activé

- **Click on “Add a Bluetooth device”, and check that the Bluetooth is activated**
- **Then click on the first category : Bluetooth keyboards, mouse, audio and others :**

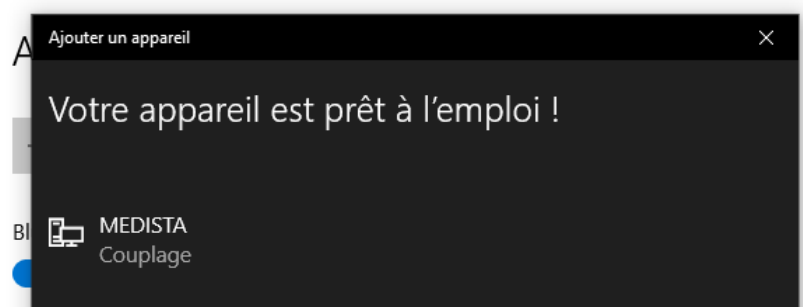
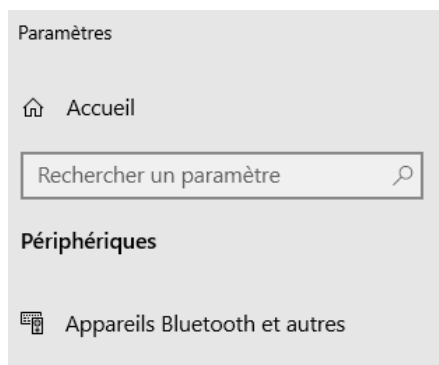
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Then click on "BELLE"



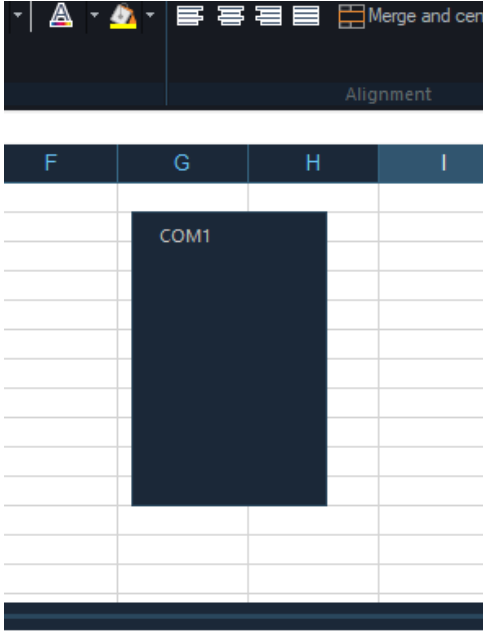
- Once you have clicked on "BELLE"
- Your computer indicates : "the device is ready to use"



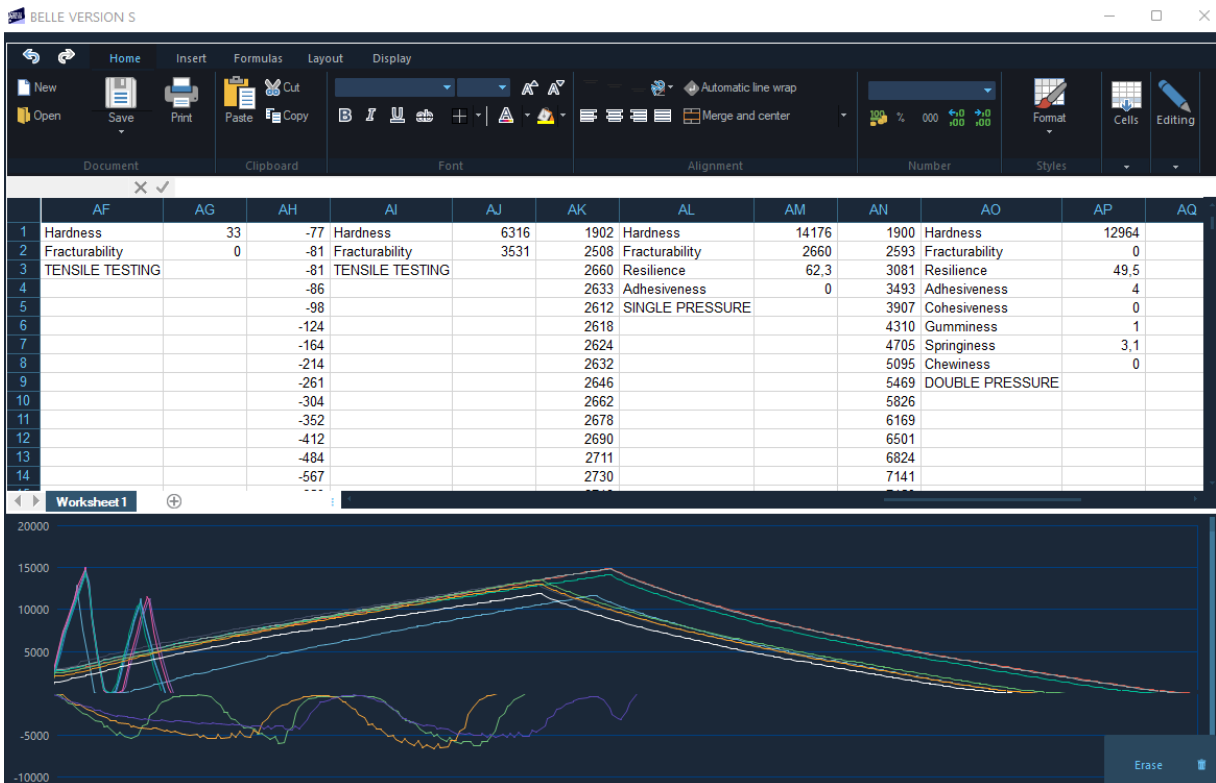
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Start the software – One of the COM indicated in the middle corresponds to your device

Click on it 2 times



If you have selected the right COM, the data will arrive automatically when you are doing some tests

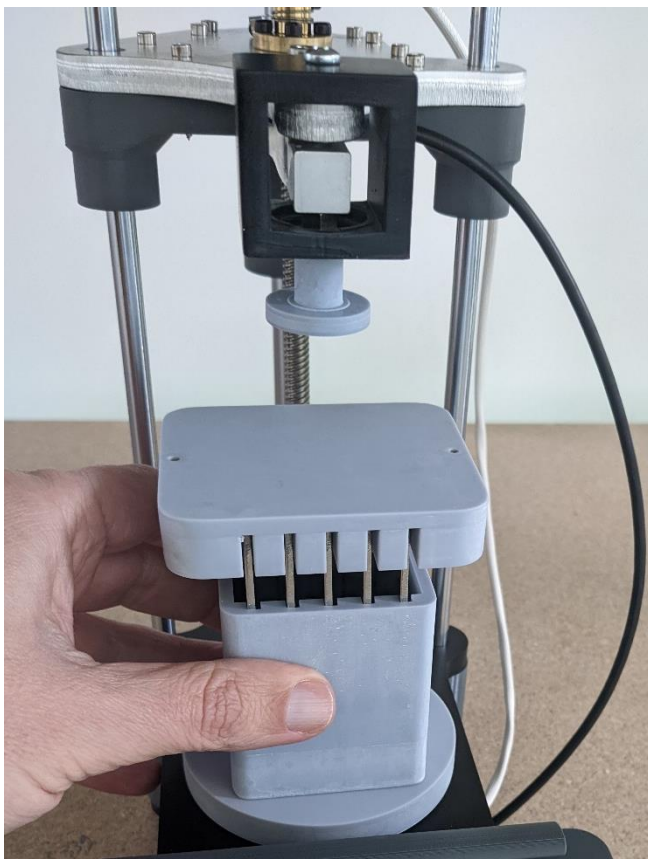


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How Warner Bratzler module is mounted :



How Kramer Ottawa module is mounted (free) :



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Specific instructions when using loosely fitted tips

Those tips have a black seal positioned on the clamping screw



Do not overtighten them: once the desired angle is reached (parallel or perpendicular to the table), and a slight pressure is applied, stop tightening.

These tips are not meant to be tightened all the way

ES

No las apriete demasiado: una vez alcanzado el ángulo deseado (paralelo o perpendicular a la mesa), y aplicando una ligera presión, deje de apretar.

Estas brocas no deben apretarse del todo.

FR

Ne surtout pas les serrer trop fort : une fois l'angle désiré atteint (parallèle ou perpendiculaire à la table), et une légère pression exercée, cesser de serrer.

Ces embouts ne sont pas faits pour être serrés à fond