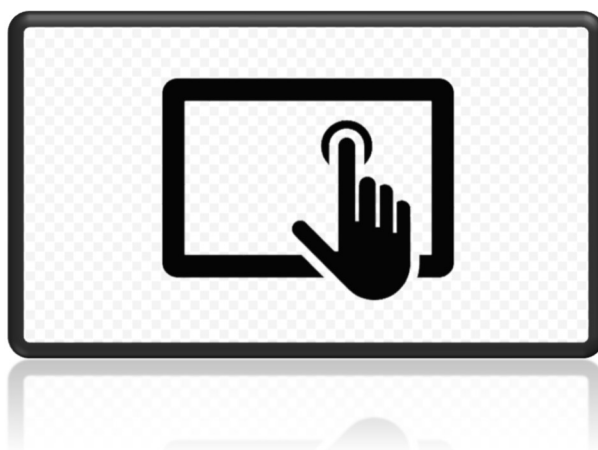




# BM116 Instruction manual Touch screen



**High-speed machine for cutting  
rootstocks**

Version: 11/2021

Original manual



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# 1 Touch screen

## 1.1 User profiles

The VPG-Production software installed on the **BM116** has three user profiles.



The current profile is indicated in the top left corner of the screen.  
The Operator profile is loaded by default.

### Operator

Accessible functions:

- ▶ Machine controlled via control buttons.
- ▶ Selection of a production programme.
- ▶ Turn on the cameras.
- ▶ Acknowledgement of common faults.
- ▶ Access to Statistics, Events and Information menus.

The operator cannot close the software window

### Maintainer

Accessible functions:

- ▶ All functions of the Operator profile.
- ▶ Access to production settings.
- ▶ Access to Configuration menus.
- ▶ Creation/Modification of a production programme.

### Manufacturer

This profile is reserved for the **SFERE BM** customer service department.

## 1.2 Production screen



The screen below is displayed when VPG-Production software starts.  
The Operator profile is loaded by default.

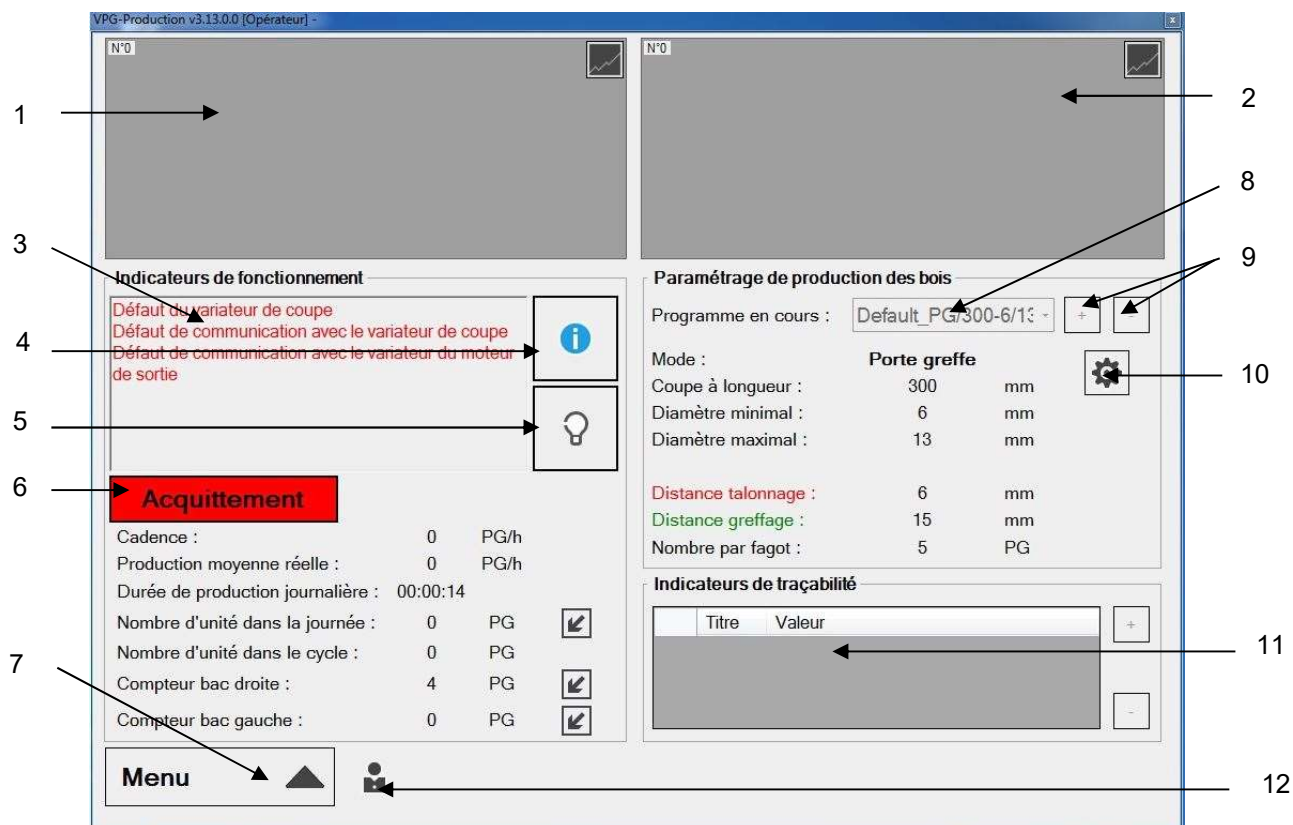


Figure 1 - General production screen

1. Left camera image.
2. Right camera image.
3. Display of faults and miscellaneous information.
4. Accessing information on the last wood that passed in front of the cameras.
5. Switching on the LED spotlights.
6. Acknowledgement of faults noted in red in zone 5.
7. Access to menus.
8. Selection of the production programme.
9. Addition or deletion of production programmes.
10. Access to production settings.
11. Creation of traceability indicators.
12. Access to maintainer and manufacturer level by numerical code.



Depending on the connection order, the left camera image (ref. 1) and the right camera image (ref. 2) may be reversed. Check the direction by passing your hand in front of a camera.



The Information button (ref. 4) can be activated or deactivated during production.

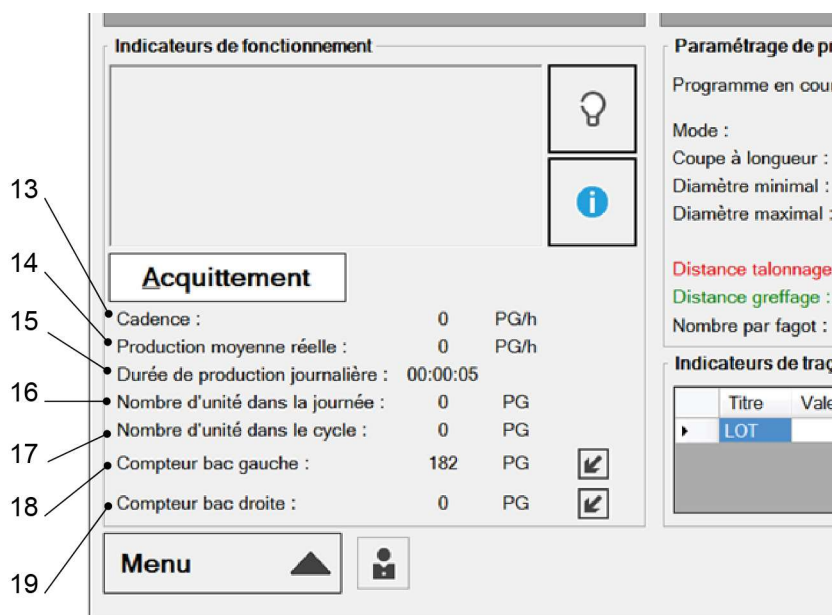


Figure 2 - Function indicators

- 13. Average production rate per hour.
- 14. Actual average production rate per hour.
- 15. Production time of the day.
- 16. Number of rootstocks produced in one day in real time.
- 17. Number of rootstocks produced during a cycle.
- 18. Number of rootstocks in the left-hand tray.
- 19. Number of rootstocks in the right-hand tray.



One cycle (ref. **17**) corresponds with the production time of rootstocks between a machine start and stop.



The number of rootstocks in the trays (ref. **18 & 19**) can be reset.



If the LEDs (**Erreur ! Source du renvoi introuvable.** see page 5) light up, this is considered a fault. This fault must be acknowledged.

## 1.3 Access to the menus

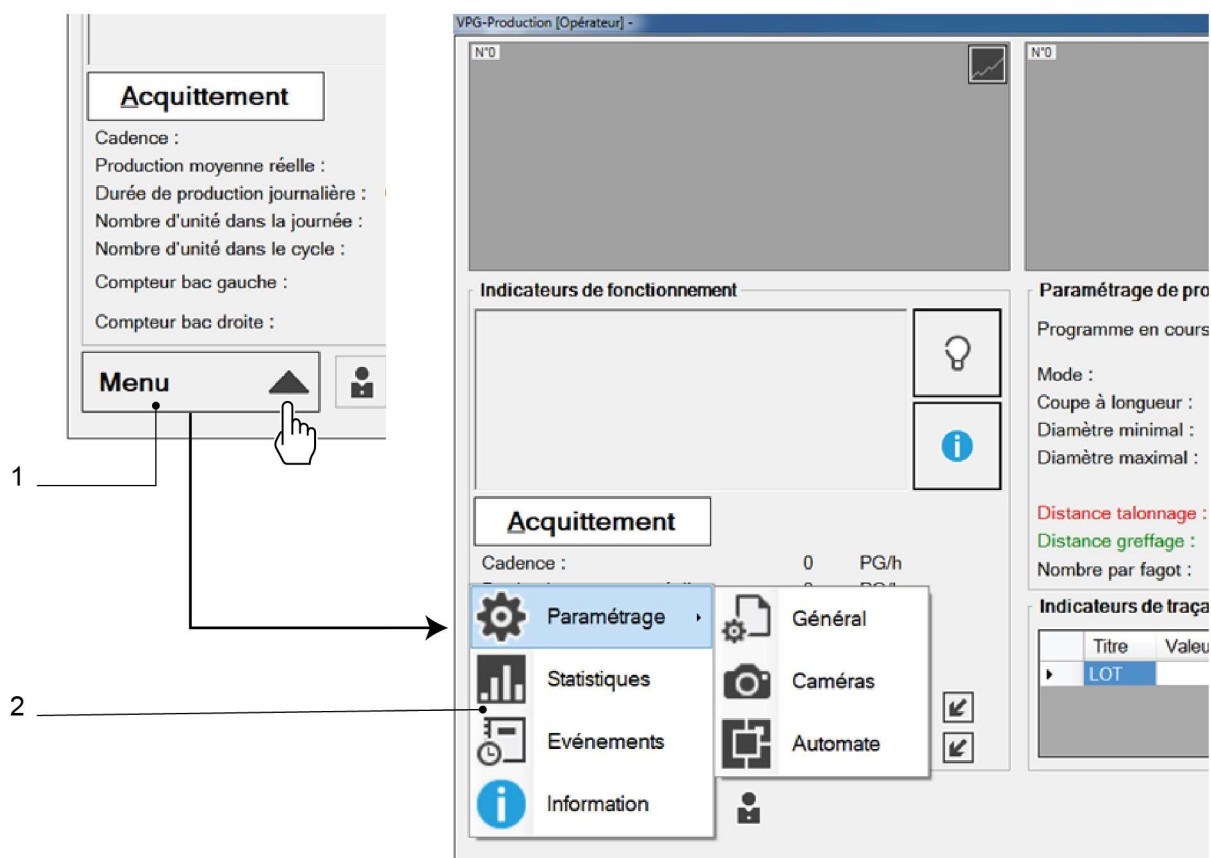


Figure 3 - Accessing the menu

To access the different menus of the VPG-P software:

1. Click on the "Menu" button in the bottom left corner of the screen.
2. Select the desired menu.

## 1.4 Menus

### 1.4.1 Configuration > General menu

In the “General configuration” menu you can configure various options in the machine interface.

It is also used for remote troubleshooting.



Access is restricted to the Maintainer and Manufacturer profile.

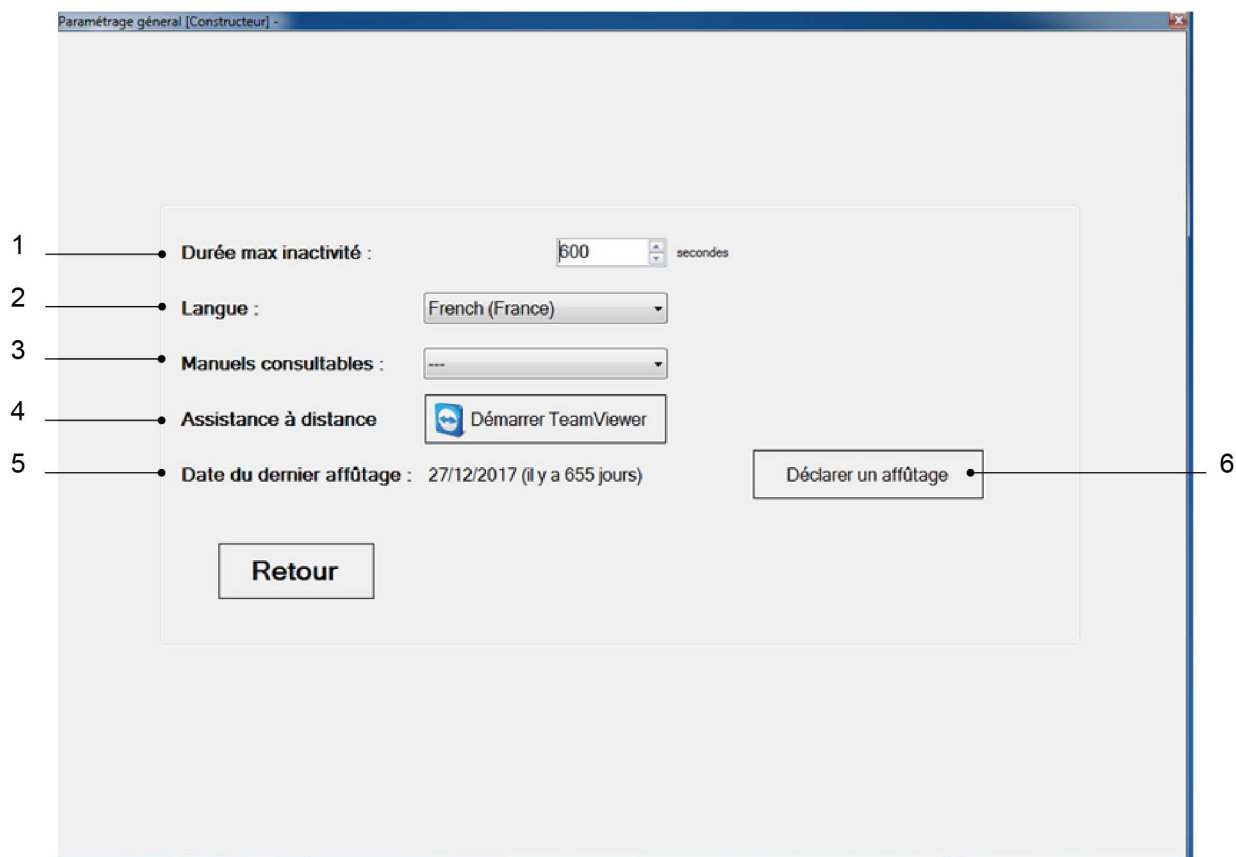


Figure 4 - General configuration

1. Time-out for motors running time outside wood passage.
2. Selecting the interface language.
3. Access to Manuals in PDF format.
4. Starting TeamViewer for remote troubleshooting.
5. Date of last recorded sharpening.
6. Updating the date of last sharpening.



For remote support via TeamViewer (4) the BM116 must be connected to the Internet.



## 1.4.2 Configuration > Cameras menu



Access is restricted to the Maintainer and Manufacturer profile.

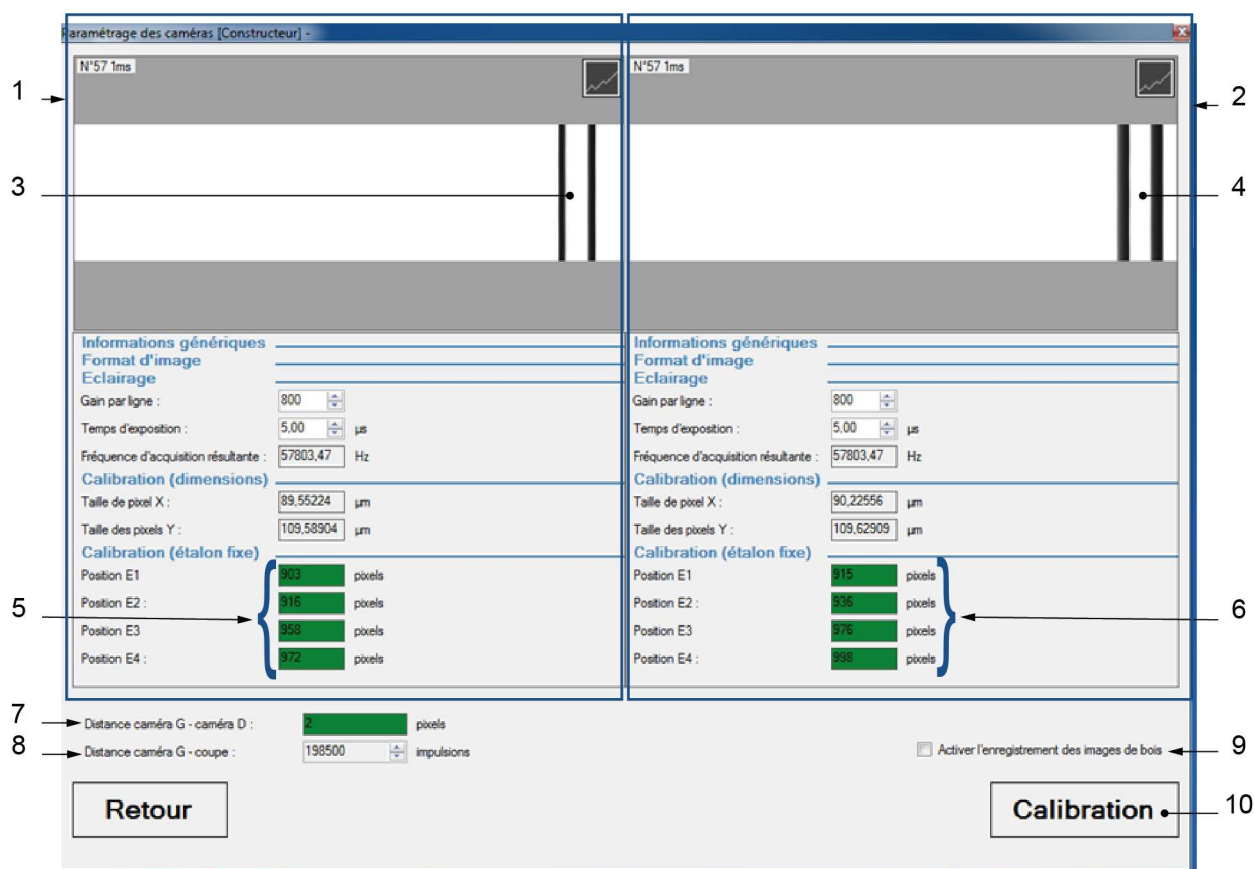


Figure 5 - Camera configuration

1. Left camera area.
2. Right camera area.
3. Fixed standard on the left camera.
4. Fixed standard on the right camera.
5. Left camera alignment indicator.
6. Right camera alignment indicator.
7. Difference in alignment between left and right camera.
8. Distance between the left camera and the cut in number of pulses.
9. Recording of wood images.
10. Access to camera calibration system.



Depending on the connection order, the left camera image (ref. 1) and the right camera image (ref. 2) may be reversed. Check the direction by passing your hand in front of a camera.



The correct alignment of the cameras can be seen with the help of the indicators ref. 5 & 6.

- Green indicator: correct alignment.
- Orange indicator: incorrect alignment.
- Red indicator: fault in the camera's field of view.



The difference in alignment (ref. 7) between the two cameras cannot exceed 10 pixels.

### 1.4.3 Configuration > PLC menu



Access is restricted to the Maintainer and Manufacturer profile.

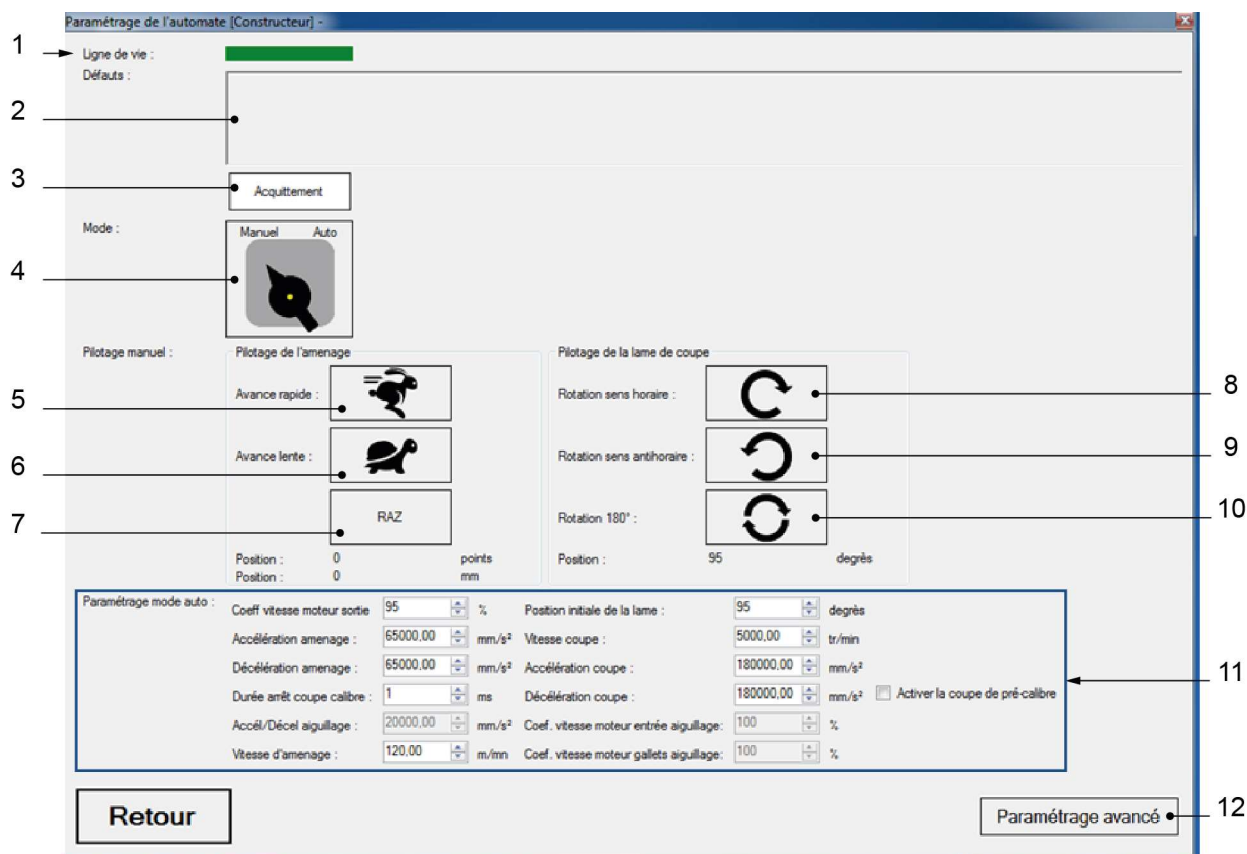


Figure 6– Controller configuration

1. Lifeline of the PLC.
2. Faults display area.
3. Acknowledgement of faults displayed in red in zone 2.
4. Forced start of the feed motors.
5. Manual feed, fast mode.
6. Manual feed, slow mode.
7. Reset the feed motor.
8. Manual clockwise rotation of the blade.
9. Manual counter clockwise rotation of the blade.
10. Manual rotation of the blade by 180°.
11. Engine settings area, accessible restricted to the Manufacturer profile.
12. Access to advanced configuration.

## 1.4.4 Configuring a production programme



Access is restricted to the Maintainer and Manufacturer profile.

On the start-up screen, click on the “Settings” icon:

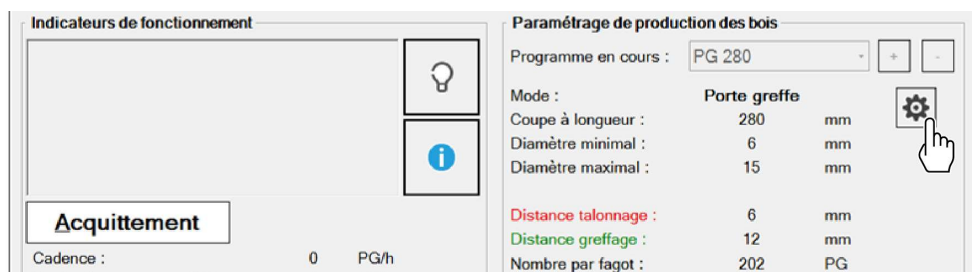


Figure 7 - “Settings” Icon

The screen below appears:

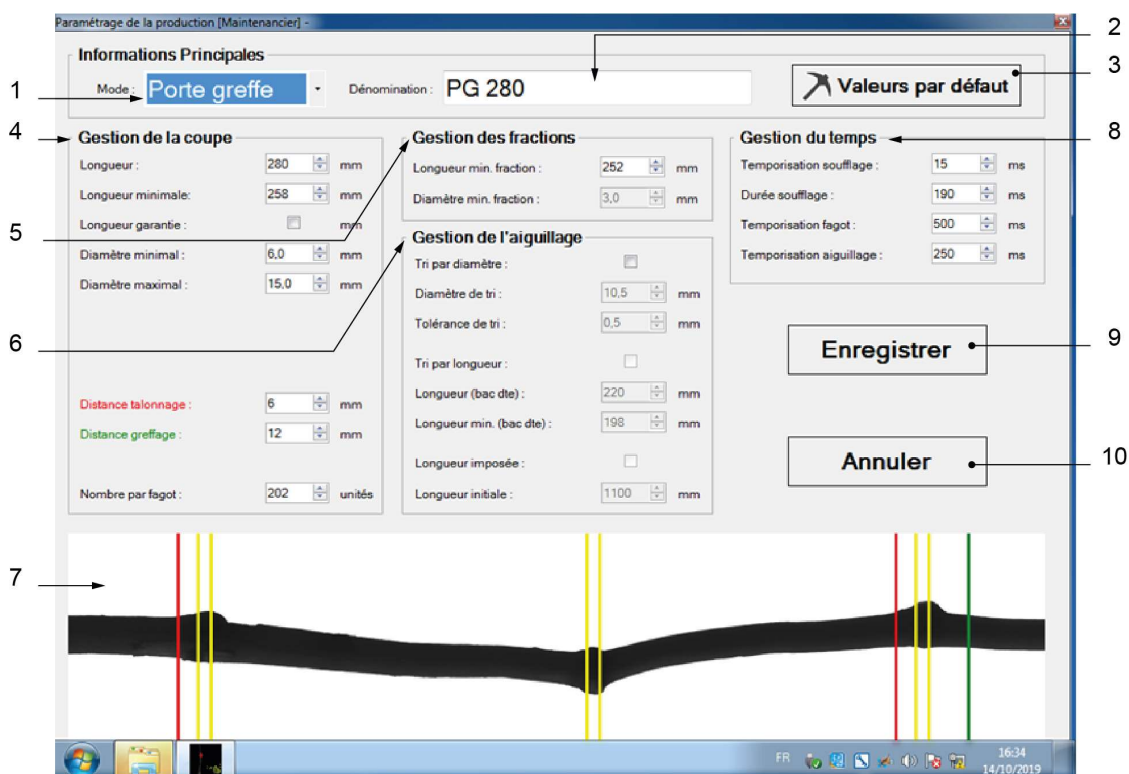


Figure 8 - Configuring a production programme

1. Selection of the production mode.
2. Name of the new production programme.
3. Reset to default values.
4. Set of values to be adjusted for the creation of rootstock.
5. Definition value of a fraction.
6. Set of values for routing management.
7. Viewing screen for the visualisation of cutting management values.
8. Management of the various time-out settings.
9. Saving the programme.
10. Return to production screen without saving the changes.



Routing management (ref. 6 on page 11) is primarily used when the machine is equipped with the “Long tray” option.

## 1.5 “Statistics” menu

The “Statistics” window features 3 tabs:

- ▶ Wood
- ▶ Cycles
- ▶ Indicators

### Wood tab

This tab shows statistics on wood production.

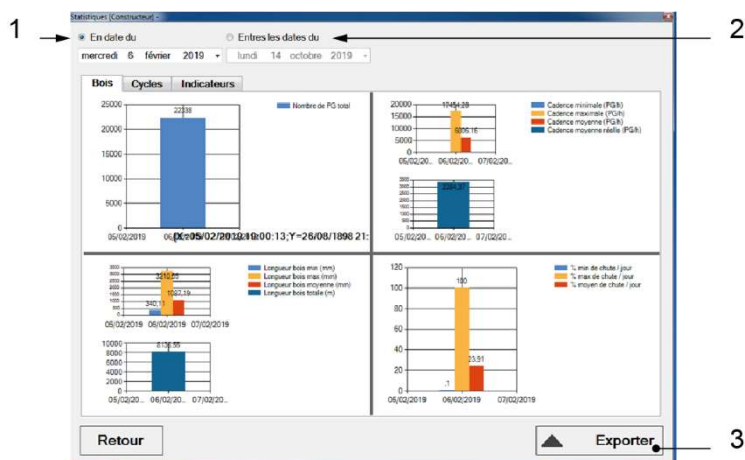


Figure 9 - Statistics - “Wood” tab

1. View daily statistics.
2. View statistics between 2 chosen dates.
3. Export statistics in different formats.

### Cycles tab

This tab shows statistics on the machine production rate.

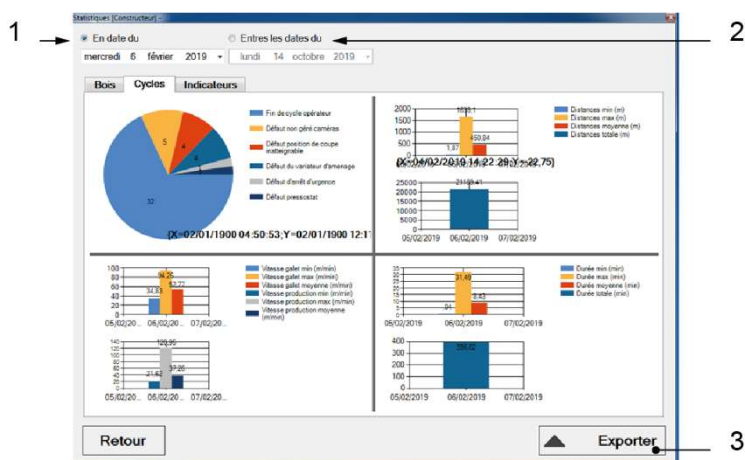


Figure 10 - Statistics - “Cycles” tab

## Indicators tab

This tab shows indicators on the wood produced by production cycle.

1 →

← 2

3

Statistiques (Constructeur)

En date du: mercredi 6 février 2019 - Entres les dates du: lundi 14 octobre 2019 -

Bois Cycles Indicateurs

Début	Fin	Durée	Vitesse moyenne production (m/min)	Longueur bois utile (m)	% bois utile	Nombre de bois	Nombre d'unité
06/02/2019 16:40:43	06/02/2019 16:50:14	00:09:31	38,46	155,69	75,8	192	562
06/02/2019 16:35:02	06/02/2019 16:39:24	00:04:22	37,08	50,96	75,3	63	184
06/02/2019 16:27:26	06/02/2019 16:30:45	00:03:19	36,26	60,01	76,2	71	216
06/02/2019 16:23:33	06/02/2019 16:26:37	00:03:03	36,35	50,89	76,4	61	184
06/02/2019 16:23:03	06/02/2019 16:23:18	00:00:14	42,10	3,32	77,9	4	12
06/02/2019 15:57:15	06/02/2019 16:21:48	00:24:32	36,32	409,69	76,8	491	1478
06/02/2019 15:41:28	06/02/2019 15:55:41	00:14:13	36,82	248,34	75,7	301	895
06/02/2019 15:40:36	06/02/2019 15:41:12	00:00:36	35,04	10,26	76,2	12	37
06/02/2019 15:39:51	06/02/2019 15:39:57	00:00:06	43,89	0,83	76,2	1	3
06/02/2019 15:18:29	06/02/2019 15:26:54	00:08:25	35,68	163,69	76,5	192	590
06/02/2019 15:10:18	06/02/2019 15:17:58	00:07:39	35,85	135,48	75,7	165	488
06/02/2019 15:08:29	06/02/2019 15:10:14	00:01:44	34,91	28,33	76,6	34	102
06/02/2019 15:03:22	06/02/2019 15:08:23	00:05:01	35,53	84,05	75,8	104	303
06/02/2019 14:53:12	06/02/2019 15:00:49	00:07:36	36,87	132,44	75,9	161	477
06/02/2019 14:41:13	06/02/2019 14:53:07	00:11:54	36,40	201,48	76,6	245	726
06/02/2019 14:39:50	06/02/2019 14:40:59	00:01:09	34,86	18,04	79,1	21	65
06/02/2019 14:15:26	06/02/2019 14:38:07	00:22:41	36,49	399,66	75,9	478	1443
06/02/2019 14:12:29	06/02/2019 14:15:21	00:02:52	37,64	40,00	74,2	50	144
06/02/2019 13:45:36	06/02/2019 14:10:09	00:24:32	37,32	378,12	76,3	457	1365
06/02/2019 13:43:39	06/02/2019 13:44:45	00:01:05	36,57	19,46	78,2	22	70

Retour Exporter

Figure 11 - Statistics - "Indicators" tab

## 1.6 “Events” menu

The event log provides a history of errors while using the machine.

This log can be configured to track errors at a specific time.

Events are listed under four categories (ref. 1):

- ▶ Verbal
- ▶ Information
- ▶ Warning
- ▶ Error

The “Purge” button (ref. 7) clears the history.

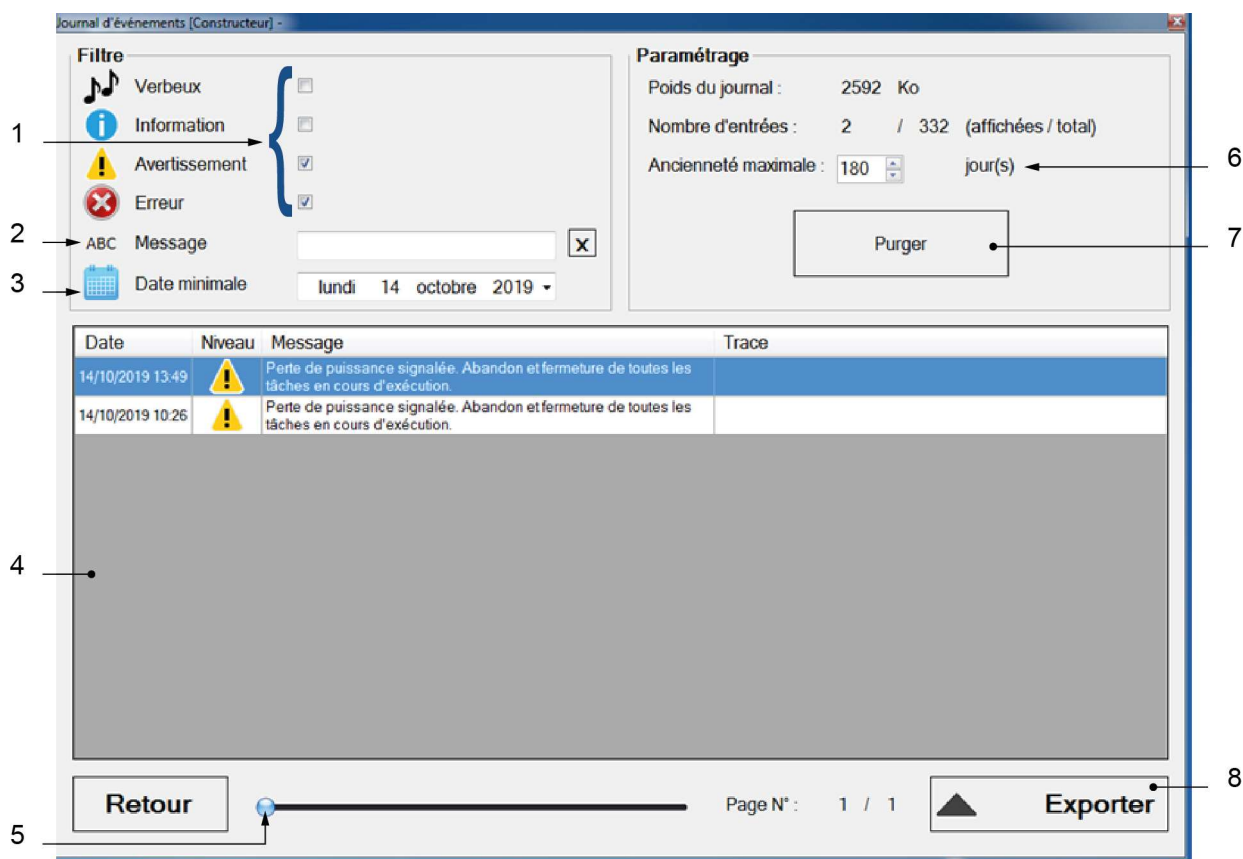


Figure 12 - “Events” menu

1. Buttons for filtering by event category.
2. Text filter of the event list.
3. Display date selection.
4. Event display area.
5. Scrolling events.
6. Maximum number of days for saving.
7. Delete event history.
8. Export events in different formats.

## 1.7 “Information” menu

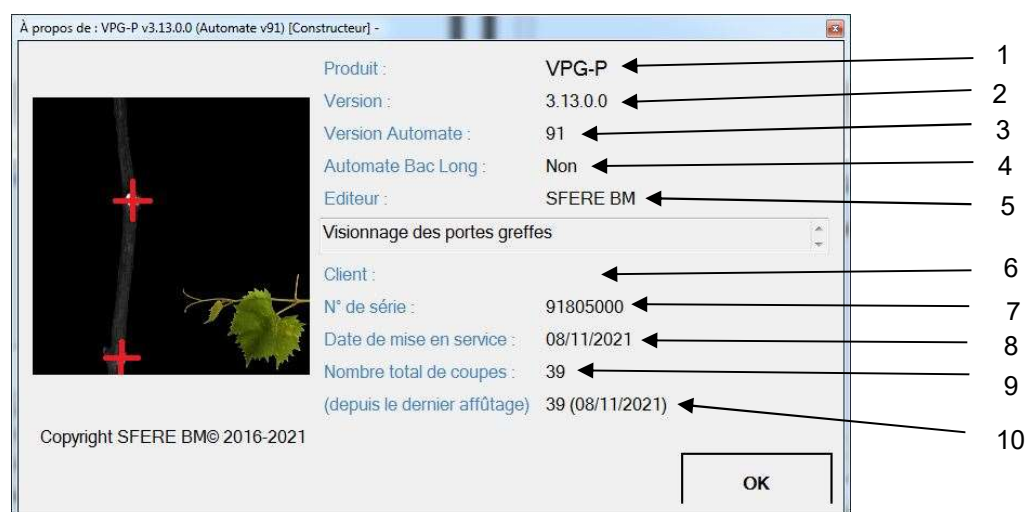


Figure 13 - “Information” menu

1. Name of the software.
2. Software version.
3. Controller version.
4. Long Tray configuration.
5. Software publisher.
6. Name of the owner of the machine.
7. Serial number of the machine.
8. Date of machine start-up.
9. Total number of rotations of the cutting blade.
10. Number of blade rotations since last sharpening.

## 2 Appendices

### 2.1 Revision history

Revision	Date	Details
01	12/2019	Creation
02	03/2020	“Exploded view” updates
03	07/2021	Update - Electrical diagram + addition of a reference
04	11/2021	Manual divisions