



# La Canne Vale

## Eclairvaleur<sup>®</sup>

Controlled fruit thinning



La   
Canne  
Vale

Modèle EH, FR

1600, 2100, 2500, 3000, 3500

DESIGN OF INNOVATIVE SOLUTIONS FOR AGRICULTURAL

# Eclairvale<sup>®</sup>, a versatile machine

## MECHANISE orchards

**Eclairvale<sup>®</sup>** is a new machine developed using patent n° EP 2677856, validated in 26 countries, which allows the **thinning of fruit trees from blossoming to the young fruit stage**. Attached to a tractor, it has a freely rotating rotor onto which semi-rigid rods are attached. Its rotation occurs through the **penetration of the rods into the vegetation** and the advancement of the tractor, which induces a slow rotation and rubbing of the rods against the branches, which causes some of the **flowers or fruit to fall**.

This mode of action is a breakthrough innovation **as the plant is neither hit nor shaken**, which guarantees the integrity of the tree and the remaining fruit. **Eclairvale<sup>®</sup>** is also the **first post-floral mechanical tool** capable of homogeneously regulating the fruit load. As clarified by the work carried out by numerous research centres, **Eclairvale<sup>®</sup>** allows producers to consider new thinning itineraries that are less expensive and more respectful of the environment.

**Eclairvale<sup>®</sup>** proposes:

- replaces/limits manual thinning
- eliminates/limits the use of chemical substances
- lowers the cost of production

### The tasks

#### Thinning

Buds  
Flowers  
Young fruits

#### Collecting

Fruit  
Flowers  
Leaves

### The species

Peach  
Apricot  
Plum  
Apple / Pear  
Almond  
Other...



# Hydraulic folding device

for EASY transport

## In transport position

Width: 2.10 metres



## Hydraulic opening of the folding device

Brush diameter: 3 metres



### MODEL FR 2500

Apricot / Peach / Plum rods

### MODEL EH 1600

Apple / Pear rods

## Folding, transport and storage device



## Storage frame



# Eclairvale® in operational position

## Eclairvale® FR



The brush penetrates the tree and does not go beyond the tractor

### The intensity of thinning depends on:

- The phenological stage
- The driving mode
- The penetration of the rods into the tree
- The forward speed of the tractor

## Advantage

- Driving along fruit wall

## Eclairvale® EH



For the EH model, a jack set in the vertical beam makes it possible to **work on trees 5 metres high** or to work exclusively on the **upper part of the orchard**.

The **Eclairvale®** is tilted using the hydraulic jack of the tractor lift.

### The offset jack allows:

- Working on the left or on the right
- Regulation of the penetration of the rods

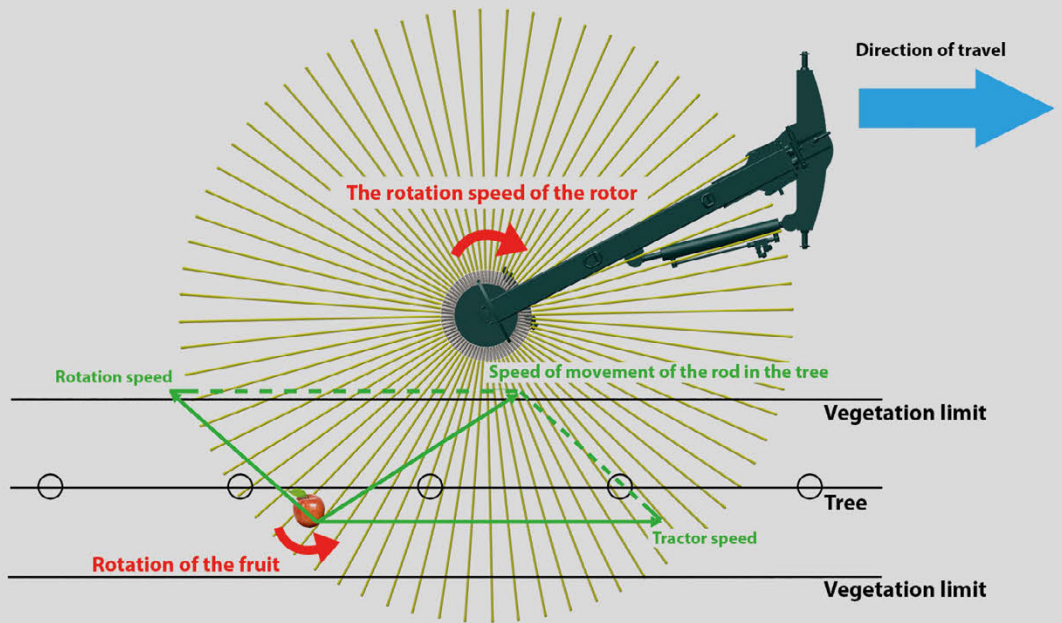
# The heart of the device: THE RODS

The rotation of the brush occurs through the contact of the rods in the tree and the movement of the tractor.

The absence of motorisation makes it possible to continuously adjust the rotation speed by means of the forward speed, which allows the tree and the fruit to be preserved.

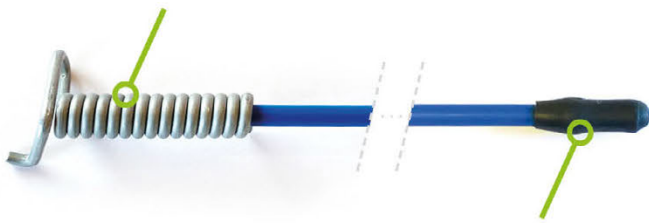
The rod does not hit the tree or the fruit.

**Eclairvale®** works predominantly through the action of the rods rubbing against the flowers or fruit.



**Retaining spring:**

Protects and facilitates the exchange of the rod



**Protective cap:**

Absorbs shocks, preserves fruit

**Fibreglass**

**Covering:**  
Increases the breaking strength of the rod by 50%



**Plastic**

**Damper**

**Retaining spring:**

Protects and facilitates the exchange of the rod



**Soft over-moulding with integrated cap:**

Coating of the rod increases its grip and efficiency

**Fibreglass**

**Covering:**  
Increases the breaking strength of the rod by 50%



**Soft over-moulded plastic**

**Plastic**

**Damper**

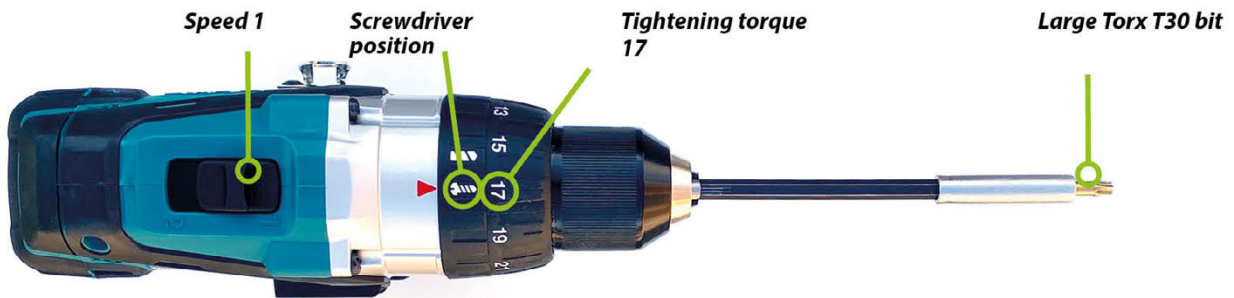
MAPP rod

MPP rod

# L'entretien des tiges

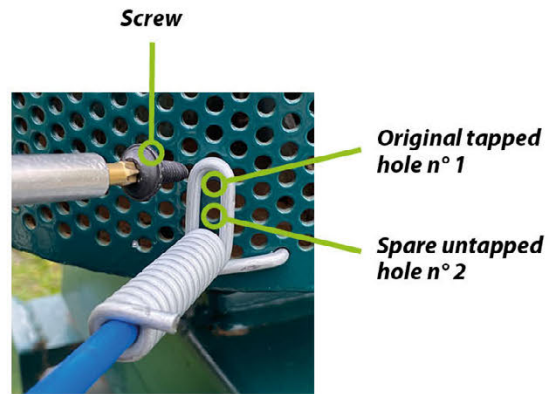
## I/ Replacement of a complete rod with spring using the Makita screwdriver

Use the screwdriver position and always set it to speed 1, and never exceed the tightening torque of 17, otherwise the thread of the rotor may be damaged. Always use the large T30 Torx bit supplied with the machine.



**1** **Using the original tapped hole n° 1:**  
Thread the screw into the original tapped hole with the above settings.

**2** **Using the spare hole n°2:**  
If the thread of hole n° 1 is damaged, use spare hole n° 2 by lubricating the screw with WD40 for example. The lubrication is important to give the screwdriver sufficient torque to tap the smooth hole.

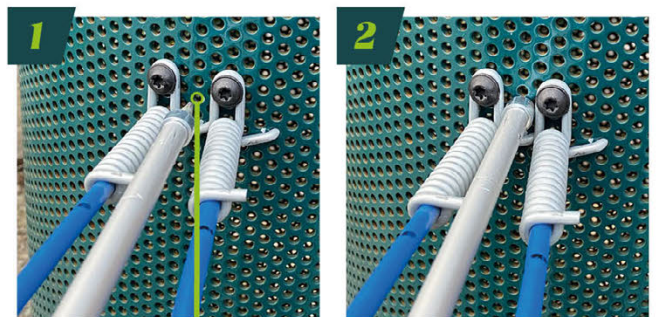


## II/ Replacement of a rod while keeping the retaining spring

### Spring setting tool

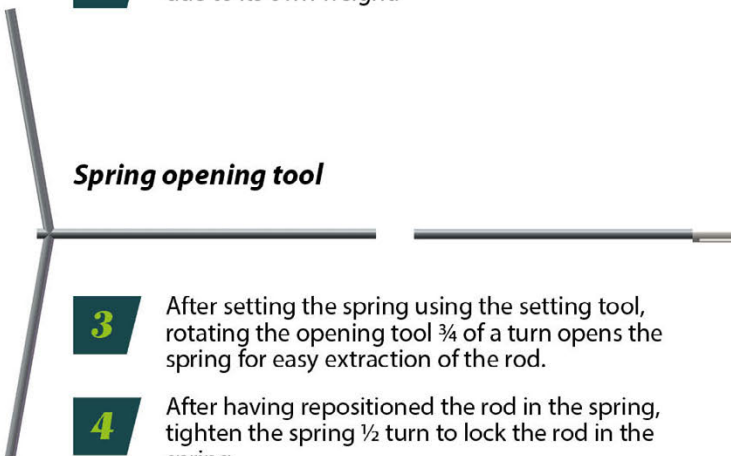


- 1** Position the setting tool in hole 1
- 2** Release the setting tool which stays in place due to its own weight.

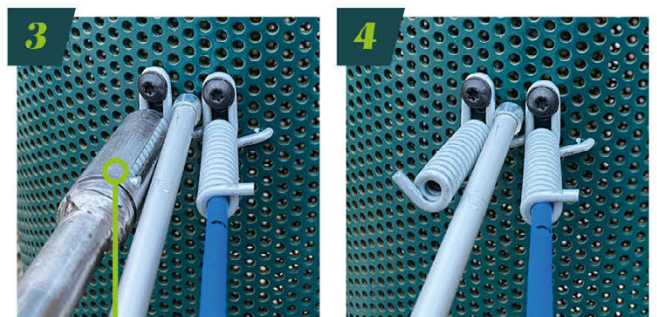


Hole 1

### Spring opening tool



- 3** After setting the spring using the setting tool, rotating the opening tool  $\frac{3}{4}$  of a turn opens the spring for easy extraction of the rod.
- 4** After having repositioned the rod in the spring, tighten the spring  $\frac{1}{2}$  turn to lock the rod in the spring.



Opening tool

# Scientific references

The performance of **Eclairvale**<sup>®</sup> has been evaluated by numerous research centres, the reports are available on the site [www.lacannevale.fr](http://www.lacannevale.fr)



## CANTON DU VALAIS Office d'arboriculture et cultures maraîchères

- « A significant time saving was observed on the apricot varieties Apriqueen<sup>COV</sup> (+/-47%) and Flopria<sup>COV</sup> (+/-37%). »
- « **No marks on the fruit during the operation.** »

*Rapport d'activités 2019 - Office d'arboriculture et cultures maraîchères P.29 (in French)*



## CREA Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

- « In the context (peach and apricot) in which it is operated, the machine has on average reduced by 40 % the load initial flowering and, while requiring a manual finishing on the fruit, led to a significant reduction in the required working time to the execution of the thinning. »
- « Mechanical thinning can reduce the manual thinning requirement from 40 % to 100 %. »

*Mechanical Thinner of Apricot Fruitlets CET1758044*



## IRTA Institut de Recerca i Tecnologia Agroalimentàries

- « For the species, varieties and agro-climatic conditions in which the study was carried out, the use of Eclairvale during blossoming proved to be the most appropriate strategy as it allowed improvement in fruit size and quality with moderate drops in production and savings of 75 to 80 hours of manual thinning. »
- « For the species and varieties tested (Oscar<sup>COV</sup> apricot, UFO 4<sup>®</sup> peach and Tiffany<sup>COV</sup> nectarine, **no damage or scratches were observed on the fruit at the time of harvest.** »

*Estudio de la eficiencia del cepillo Eclairvale 2500<sup>®</sup> en el aclareo de frutales de hueso.  
Informe número: V2999-4435*

*29/ Noviembre / 2015 (Rev. 4. R-75-00-02), pp. 1-59 (in Spanish)*



## CTIFL Centre Technique Interprofessionnel Fruits Légumes

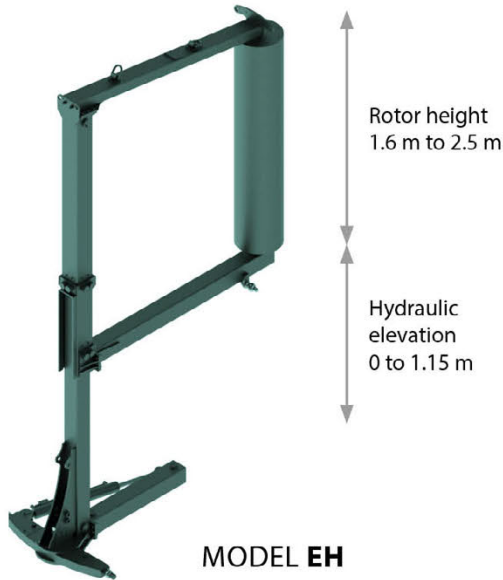
- « • Post-floral use on the apple tree »
- « • Positive impact on size and colouring »
- « • Localisation of thinning in the fruit hedge »
- « • Very effective on varieties with a short peduncle »
- « • Simple, reliable tool, without motorisation »
- « • Significant reduction in thinning costs »

*Eclaircissage et récolte mécanique pommier & poirier à l'aide de l'outil Eclairvale  
Travaux 2016 Centre de Lanxade*

*Good Fruit Grower, Roche : Mechanical fruitlet thinning / Jul 27, 2020 (in French)*

# TECHNICAL DATA

The frames



	MODEL EH			MODEL FR				
	EH1600	EH2100	EH2500	FR1600	FR2100	FR2500	FR3000	FR3500
Operational height	1572 mm	2073 mm	2503 mm	1572 mm	2073 mm	2503 mm	3004 mm	3505 mm
Machine height	2210 mm	2590 mm	3025 mm	2385 mm	2765 mm	3200 mm	3701 mm	4202 mm
Height on its folding frame	2445 mm			3311 mm	3311 mm	3311 mm		
Brush diameter	3010 mm							
Rod length	1349 mm							
Folded width	2100 mm							
Total length	3402 mm			3480 mm				
Forward speed	1.5 - 15 km/h							
Area worked	0.25 - 3 ha/h							
Mass with MAPP rod (blue)	580 kg	716 kg	812 kg	540 kg	668 kg	725 kg	830 kg	935 kg
Mass with MPP rod (yellow)	751 kg	945 kg	1095 kg	710 kg	896 kg	1006 kg	1166 kg	1325 kg
Number of rods	1715	2255	2808	1715	2255	2808	3348	3888
Mass of the folding frame	300 kg	90 kg	90 kg	325 kg	325 kg	325 kg	70 kg	70 kg
Total mass MAPP (blue)	880 kg	806 kg	902 kg	865 kg	993 kg	1050 kg	900 kg	1005 kg
Total mass MPP (yellow)	1051 kg	1035 kg	1185 kg	1035 kg	1221 kg	1375 kg	1236 kg	1395 kg
Hydraulic elevation	Yes			No				
Tractor coupling	CAT. II						CAT. III	
Hydraulic lateral angular displacement	+/- 40°							

**We can also adapt the machine to your orchard, do not hesitate to consult us.**

All spare parts are in stock at your distributor.

You receive a **5-year manufacturer's warranty** on the entire structure (according to the warranty certificate).

A financing offer tailored to your needs may be offered to you.



**DISTRIBUTOR:**