SLOPEHELPER

Blossom Thinner

Flower removal in orchards to regulate harvest development

Lateral blossom thinning in orchards is a crucial operation for **maximizing fruit yield** by regulating flower density. However, conventional blossom thinners are tractor-mounted instruments, requiring a highly skilled driver to maintain precise positioning relative to the row, adjust the correct inclination, and synchronize the instrument's rotation speed with tractor speed. Any deviation can lead to over-thinning, damaging the flowers, and ultimately reducing the harvest instead of improving it.

Unlike traditional methods, the **Slopehelper Blossom Thinner** operates **fully autonomously**, eliminating the need for manual expertise. The system **automatically adjusts its position, speed**, and **rotation settings**, ensuring **gentle** and **precise thinning** without human intervention. This advanced automation guarantees **optimal thinning efficiency**, minimizing flower loss, and maximizing orchard productivity with **zero operational errors**.

100% Autonomous | **100% Electric**

Features & Benefits

Adjustable Vertical Position for Precision on Slippery Terrain

Since the **Blossom Thinner** is a tall instrument, even minor slippage on uneven or slippery terrain can significantly impact its positioning and effectiveness. To ensure that the rotating brush wires remain at the correct height, the **Slopehelper Blossom Thinner** is equipped with an **automatic vertical positioning system**.

This system continuously adjusts the instrument's **height**, compensating for **terrain variations** to maintain **precise contact** with the flowers. By stabilizing **vertical alignment**, it ensures consistent **thinning accuracy**, preventing **over-thinning** or ineffective operation, and maximizing **fruit yield potential** in all orchard conditions.

Adjustable Distance to the Row for Precise Thinning

In real-world orchards, plantation rows are rarely perfectly straight, meaning the Blossom Thinner must continuously adapt its position relative to the row for accurate thinning.

The **Slopehelper Blossom Thinner** is equipped with a special **actuator system** that **automatically adjusts** the instrument's **lateral position**, ensuring **optimal alignment** with the trees. This dynamic adjustment prevents **flower damage** from incorrect positioning and guarantees **precise, uniform thinning**, regardless of row irregularities.

Precise Control of Rotation Speed for Optimal Thinning

Maintaining the correct number of **wire/string impacts** per canopy surface is critical for effective **blossom thinning**. If the **rotation speed** is too high, it may damage flowers, while if it's too low, the thinning effect will be insufficient.

As a fully robotic instrument, the **Slopehelper Blossom Thinner** automatically regulates the **rotation speed** of the **string drum**, ensuring a precise and consistent number of impacts per canopy surface. This advanced **automation** eliminates the need for **manual adjustments**, guaranteeing **optimal thinning efficiency**, **uniform flower removal**, and **maximized fruit yield** without the risk of over-thinning or damage.

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Bent Wire/String Tips for Superior Blossom Thinning Performance

Conventional blossom thinners typically use either thick silicone rods or polymer fingers to improve thinning efficiency. However, these solutions come with trade-offs:

- **Thicker strings** may be less precise, leading to **over-thinning** and reduced fruit set.
- **Thin strings** provide better thinning precision but often damage future fruit stems and branches, negatively impacting fruit development.

The **Slopehelper Blossom Thinner** introduces **an innovative bent-tip design** for its **polymer wires/strings**, combining the **efficiency** of **thin-string thinning** with **damage prevention**.

The **bent tips** provide **gentle yet effective thinning**, ensuring that excess blossoms are removed while future **fruit stems remain undamaged**.

Unlike thicker rods or polymer fingers, the contact surface remains small, allowing for **precise thinning** without completely stripping the fruiting zones.

This optimized thinning method ensures **higher-quality thinning**, better **fruit distribution**, and improved **harvest potential**, making the **Slopehelper Blossom Thinner** a superior solution for orchard management.

Amortized Wires/Strings for Enhanced Thinning Performance

To achieve optimal **blossom thinning** efficiency, the **Slopehelper Blossom Thinner** features a special **string amortization system**, which improves both **performance** and **operational speed**.

Unlike conventional static strings, **amortized wires** can **absorb impact forces**, allowing for **gentler** and **more controlled contact** with the canopy. This results in:

- **Smoother thinning action**, reducing stress on fruit-bearing stems.
- Increased **operational speed** without the risk of excessive flower loss or damage.
- More **consistent thinning**, as the flexible movement of the strings adapts dynamically to canopy variations.

This advanced **amortization system** ensures **efficient and uniform thinning**, maintaining high **fruit yield potential** while allowing for fast, **damage-free operation**.

Technical Specifications

DIMENSIONS	VALUE
Height	2720 mm
Length	2315 mm
Width	2282 mm
Weight	195 mm

GENERAL SPECIFICATIONS	VALUE
Thinning depth	up to 245 mm
Thinning height	up to 2350 mm
Thinning width	660 mm
Sound power level	60 dB
Compatibility	SH.056 Slopehelper
Motor	Brush-less motor - BLDC