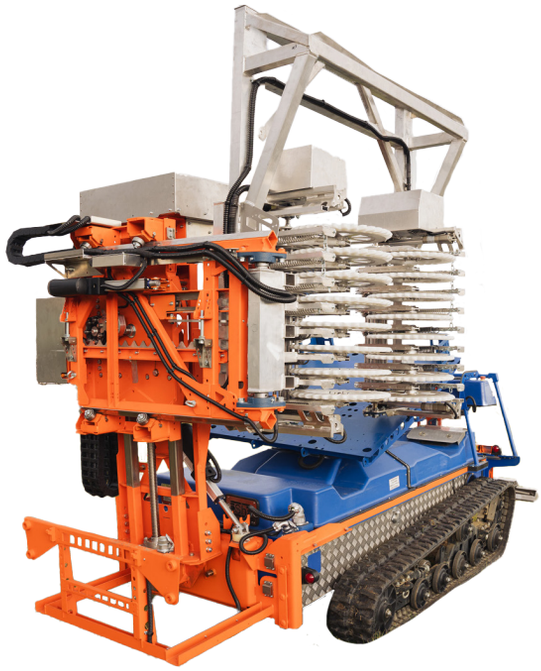

SLOPEHELPER

Pre-pruner

Rotary disk pruning of grapevine branches

The **Slopehelper Pre-Pruner** is an **advanced mechanical pruning attachment** designed for **efficient vineyard pruning**. Whether used as a **vineyard pre-pruner** before manual trimming or as a **fully automated pruning solution**, this **high-efficiency vineyard pruner** ensures **precision pruning** with minimal labor.

Unlike conventional vineyard pruning machines, which operate as a single unit, the **Slopehelper Pre-Pruner** features **independent cutting disc pairs** on both sides of the row. This **automated pruning system** enhances adaptability and **eliminates blind zones**, ensuring a cleaner, more uniform cut.

100% Autonomous | 100% Electric

Traditional **vineyard pre-pruners** struggle with **column bypassing**, leaving untrimmed sections around vineyard posts. The **Slopehelper Pre-Pruner** introduces an innovative solution—**rotating plastic fingers** mounted on the cutting discs, which gently guide the blades around each pillar. This results in zero blind zones pruning, significantly improving **grapevine pruning quality** and consistency.

Many **pruning machines for vineyards** rely on **camera-based** or **ultrasonic sensors**, which often fail due to environmental factors or high pillar density. The **Slopehelper Pre-Pruner** eliminates the need for **pillar detection systems**, preventing errors such as mistaking branches for obstacles. By **synchronizing cutting disc rotation** with its base platform, this **automated vineyard pruner** ensures **seamless, stress-free operation**, without impacting vineyard structures.

Features & Benefits

No-Payload Automatic Pillar Bypass with Suspended Rotating Cutting Disks

The **Slopehelper Pre-Pruner** features an advanced **pillar bypass system**, designed to outperform conventional **vineyard pre-pruners**. Unlike traditional models, where **cutting disks** open prematurely, leaving uncut branches, the **Slopehelper Pre-Pruner** ensures **seamless cutting** with **zero blind spots**, providing **consistent pruning results** across every vineyard row.

Each **rotating cutting disk** is equipped with special **guiding fingers**, smoothly directing the **pruning blades** around **vineyard pillars**. In addition, the cutting disks are mounted on an **independent spring suspension**, allowing them to move over vineyard posts without applying any pulling force. This innovative design **eliminates stress on plantation infrastructure** and **prevents vineyard post damage**, making it the ideal solution for **vineyard automation**.

The system operates with **electronically synchronized disk rotation**, perfectly timed with the **Slopehelper base platform**, ensuring that **cutting disks** engage only with the guiding fingers and never touch the pillar. This guarantees **precise pruning** while eliminating unnecessary **mechanical strain**, which is a common issue with traditional systems.

The **Slopehelper Pre-Pruner** is also optimized for use on **sloped vineyards**, where pillars remain **vertically installed** while the pruning system works at an inclined angle. Unlike conventional pre-pruners, which struggle with **cutting alignment** on uneven terrain, the **Slopehelper Pre-Pruner** ensures **full efficiency**, leaving no branches uncut, regardless of the terrain's inclination.

Automatic Folding for Row Changing

The **Slopehelper Pre-Pruner** operates as a **side-mounted instrument**, extending alongside the **Base Platform** during **pruning operations**. To ensure **smooth row transitions**, the instrument features an **automatic folding mechanism**, which **retracts the cutting frame** before moving to the **next vineyard row**.

This **folding system** prevents **jamming** or **interference** with **vineyard structures**, such as **posts, trellises, and wires**, ensuring **safe and efficient maneuverability** during **row changes**. By **eliminating obstacles** and **reducing downtime**, this system **enhances workflow efficiency**, making **vineyard operations seamless and uninterrupted**.

Special Branch-Guiding Teeth for Secure Branch Grip & Smooth Pillar Bypass

The **Slopehelper Pre-Pruner** features innovative **branch-guiding teeth** that play a vital role in ensuring **secure branch grip** and enhancing **precision pruning**. These teeth, combined with **rotating cutting disks** and a **pillar-contact prevention system**, create a seamless pruning experience.

Unlike conventional systems, where branches can slip away or move unpredictably, the **Slopehelper's branch-guiding teeth** firmly secure each branch in place. This prevents unwanted movement, ensuring **clean, precise cuts** without missed branches, minimizing the need for manual corrections and reducing pruning time.

In addition, these special **guiding teeth** significantly improve the **pillar bypass function**, ensuring that even branches growing close to vineyard pillars are securely held and cut. When combined with the **independent spring-suspension system** and **electronically synchronized disk rotation**, the **Slopehelper Pre-Pruner** guarantees a flawless, **pillar-friendly pruning process** with **no blind spots**.

With its innovative design, the **Slopehelper Pre-Pruner** is the most **advanced solution for vineyard mechanized pre-pruning**, offering superior performance and efficiency for modern vineyards.

Adjustable Cutting Position for Vineyard Customization

The **Slopehelper Pre-Pruner** features an **adjustable cutting position**, offering unparalleled **customization** for vineyard pruning. This fully adjustable system allows users to set the **cutting height** and **cutting angle** according to the specific needs of their vineyard, ensuring **optimal pruning precision** for various vine structures and growth patterns.

With a wide range of adjustments, the **Slopehelper Pre-Pruner** accommodates diverse **vineyard layouts**, making it the perfect solution for vineyards with **low-trained vines**, **high trellises**, or unique plantation configurations. This flexibility ensures that every vineyard receives the ideal pruning treatment, maximizing efficiency and enhancing the **pruning process**.

Whether you're working with different pruning techniques or specific vineyard designs, the **Slopehelper Pre-Pruner** ensures **precision pruning** for all vineyard types, improving overall **vineyard management** and boosting productivity.

Height Adaptation for Slippery Terrain

The **Slopehelper Pre-Pruner** is equipped with a **hinged system** that ensures consistent maintenance of the pre-set **cutting height**, even on **slippery or uneven terrain**. This adaptive mechanism allows the system to dynamically adjust to **slope inclinations**, ensuring **precise cutting positioning** across challenging vineyard landscapes.

With its ability to continuously adapt to varying **terrain conditions**, the **Slopehelper Pre-Pruner** guarantees **uniform and effective pruning** on all types of vineyard terrain. This feature reduces the need for **manual corrections** and ensures **optimal pruning performance** regardless of ground conditions, enhancing **vineyard management** efficiency and productivity.

Whether navigating **sloped** or **uneven terrain**, the **Slopehelper Pre-Pruner** delivers **precision pruning** every time, making it the ideal solution for vineyards of all terrains.

Emergency Stop System for Cutting Deck Jamming

The **Slopehelper Pre-Pruner** is equipped with an advanced **emergency stop system**, designed to protect the cutting deck from damage caused by **deck jamming**. This safety feature includes a **mechanical fuse** that safeguards the **frame with cutting disks**, ensuring that if an obstruction — such as **loose vineyard wiring** or **debris** — becomes jammed, the fuse immediately disengages the frame to prevent excessive force.

Additionally, a **sensor system** detects abnormal movement, automatically stopping the **Base Platform** to avoid further damage to the instrument. This intelligent safety mechanism is designed to ensure **continuous protection** and minimize the risk of unexpected breakdowns during field operations, extending the lifespan of the **Slopehelper Pre-Pruner**.

By preventing damage and reducing maintenance needs, the **emergency stop system** enhances the reliability and **performance** of the **Slopehelper Pre-Pruner**, making it the ideal choice for vineyard professionals seeking **durable, efficient, and safe pruning equipment**.

Vertical Positioning & Row-Center Alignment for Slippery Terrain

When operating on **slippery surfaces** or traversing **steep slopes**, maintaining **precise alignment** of the **cutting frame** with **tree trunks** and **vineyard pillars** is critical. The **Slopehelper Pre-Pruner** is equipped with an advanced **vertical positioning system** that continuously tracks the instrument's **inclination**, ensuring the **cutting disks** remain **perfectly aligned** with **vineyard rows**, even in **challenging terrain**.

Additionally, to guarantee that the **cutting disks** remain **centered in the passage**, the **Pre-Pruner** features an **independent positioning system**. This system **automatically adjusts** the **frame's position**, ensuring that the **cutting edges** stay **exactly in the row center**, regardless of the **autonomous movement trajectory** of the **Base Platform**.

This **dual stabilization technology** allows for **precise, uniform pruning**, eliminating **errors caused by terrain shifts** or **machine drift**, and ensuring **consistent pruning results** across all **vineyard conditions**.

Automatic Wire Bypass at Row Ends

At the **end of each vineyard row**, wires are often **anchored at an angle** to the **last pillar**, rather than running **parallel** to the row. To prevent **accidental cutting** of these **inclined wires**, the **Slopehelper Pre-Pruner** is equipped with a **specialized wire bypass system**.

This **intelligent system** automatically **detects angled wires** and **temporarily opens** the **cutting disks**, allowing the **wire to pass through safely** without **interference**. Once the **wire is cleared**, the **disks return** to their **normal cutting position**, ensuring **seamless operation without interruptions**.

By **protecting vineyard infrastructure** and **preventing unnecessary damage**, this **advanced wire bypass system** enhances the **efficiency, reliability**, and **precision** of the **pre-pruning process**.

Technical Specifications

DIMENSIONS	VALUE
Height	2770 mm
Length	1600 mm
Width	2170 mm
Weight	680 kg

WORKING DIMENSIONS	VALUE
Working width	>2200 mm
Horizontal auto adjustment cutter	up to 1460 mm of movement outside
Vertical movement of frame	885-1375 mm from the ground
Frame tilt	± 10°
Operation speed	1,5 km/h

BLADE SPECIFICATIONS	VALUE
Drum speed	3-7 km/h
Type of blades	High-grade steel
Number of blades	8

Technical Specifications

GENERAL SPECIFICATIONS	VALUE
Compatibility	SH.056 Slopehelper
Drive method	V-belt
Number of belts	2
Motor	Brush-less motor - BLDC