



## Shi SLOPEHELPER Harvesting Set

Base platform conversion into a 8-worker harvesting or plantation service platform

Modern plantations require continuous maintenance of wiring, pillars, hail nets, and tree structures, all of which are still largely performed manually using various platforms. Even with autonomous harvesting systems like the Slopehelper Fruit Picker, **certain tasks remain—up to 3% of fruit** (e.g., apples stuck to trunks or hidden between branches) may remain unharvested in older plantations, pruning control and improvement still require grower supervision, and hail net **servicing** and **infrastructure maintenance** are ongoing needs.

**100% Autonomous** | **100% Electric**

Investing €50,000 or more in a standalone harvesting platform or combine is an unreasonable expense for growers already using the Slopehelper Agrosystem. Instead of purchasing seasonal-use equipment, the Slopehelper Harvesting Set transforms the Base Platform and Cargo Platform into a **fully functional harvesting and maintenance platform**—without additional costly investments.

This hinged attachment, mounted on the rear of the Base Platform and integrated with the Cargo Platform, allows for efficient harvesting and orchard **operations for up to 8 workers across 4 levels (ground level + 3 elevated levels)**.

Components of the Slopehelper Harvesting Set:

1. **Frontal Portal Crane – Handles**
  - Loading empty agro bins onto the platform.
  - Transferring filled harvesting bins from ground workers to the agro bin on the Cargo Platform.
2. **Rear Slip System** – Enables Seamless unloading of filled agro bins to a trailer or directly to the ground for collection.
3. **Left & Right Shelves (Lower Level)** – Provides space for Ground-level workers picking fruit and placing them in bins.
4. **Left & Right Shelves (Middle & Upper Levels)** – Supports High-level fruit picking, pruning, hail net servicing, and other plantation tasks.

Instead of purchasing a dedicated harvesting platform that sits unused for half the year, the Slopehelper Harvesting Set maximizes the efficiency of the year-round Slopehelper Agrosystem. This simple yet reliable equipment upgrade allows growers to perform multiple plantation operations with a single, multi-functional machine, reducing capital investment and increasing overall productivity.

## Features & Benefits



### Low-Cost Alternative to Conventional Harvesting & Service Platforms

The Slopehelper Harvesting Set transforms the Slopehelper Base Platform into a **fully functional harvesting and service platform**, offering a **cost-efficient alternative** to purchasing a separate dedicated harvesting machine. Instead of investing in a standalone platform that is only used seasonally, this modular system allows growers to **maximize the utility** of their existing Slopehelper Agrosystem.

By integrating seamlessly with the Base Platform, the Harvesting Set not only reduces capital investment but also **enhances efficiency**, delivering a higher operational performance than conventional standalone harvesting or service platforms. This smart multi-purpose solution ensures that growers can **harvest, maintain, and service their plantations** with greater flexibility and productivity—all while keeping costs low.





## Modular Architecture for Maximum Flexibility

The Slopehelper Harvesting Set is designed with a modular architecture, allowing growers to **customize the setup** based on specific plantation tasks. Unlike conventional harvesting platforms, which come as fixed, one-purpose machines, the Slopehelper system **enables fast and easy attachment installation** depending on operational needs.

If a grower is working only with hail net maintenance, they can **quickly install just the Upper-Level Shelf** without unnecessary components. For pruning operations, there is no need for the Crane or Rear Slip, simplifying the setup and **making the machine lighter**. This adaptability ensures that the Harvesting Set remains highly efficient, regardless of the task at hand.

While conventional solutions might seem simpler because they do not require attachment installation, they lack the flexibility of the Slopehelper system. With the ability to modify the platform instantly, the Slopehelper Harvesting Set provides a more **efficient, versatile, and user-friendly** alternative, ensuring that growers can optimize operations without unnecessary equipment overhead.



## High-Level Shelves' Articulation for Optimal Ergonomics

Each shelf on the Slopehelper Harvesting Set is designed with **full articulation**, allowing **movement up/down** and **outside/inside** relative to the row. This flexibility ensures that workers can maintain an **optimal ergonomic position**, reducing strain and improving efficiency during harvesting, pruning, or maintenance tasks.

By adapting to the natural movement range of workers, the articulated shelves allow for **better reach**, minimizing unnecessary stretching or repositioning. This worker-friendly design enhances **comfort, safety, and overall productivity**, making the Slopehelper Harvesting Set superior to conventional, rigid harvesting platforms.



## Secure Shelves for Worker Safety & Ergonomic Efficiency

All shelves in the Slopehelper Harvesting Set are designed with **built-in safety features**, ensuring full compliance with **safety regulations** while maintaining worker comfort and efficiency. Each worker is surrounded by **protective barriers**, preventing accidental falls or missteps during operation above ground level.

At the same time, the ergonomic design of the barriers **allows unrestricted movement**, enabling workers to operate efficiently for extended periods without discomfort. This combination of safety and usability ensures that harvesting, pruning, and maintenance tasks can be performed securely, comfortably, and with maximum efficiency.



## Automatic Harvesting Basket Opening for Seamless Fruit Transfer

During harvesting, ground workers (typically two) **collect fruits into a harvesting basket attached to the Portal Crane**. Once the basket is full, the crane **autonomously lifts and transfers** the harvested fruit **to the agro bin with just one button press**, eliminating manual lifting and reducing worker fatigue.

As the harvesting basket reaches the agro bin, it features an innovative **automatic opening mechanism**, ensuring a **smooth and damage-free fruit transfer** without requiring manual intervention. This system streamlines the harvesting process, improving efficiency, speed, and ergonomics, making the Slopehelper Harvesting Set a superior alternative to conventional fruit collection methods.



## Gravity Stabilization of Harvesting Shelves & Agro Bin

The Slopehelper Base Platform features a **self-stabilizing cargo platform** that **automatically maintains a horizontal position**, ensuring optimal working conditions regardless of terrain inclinations. This unique gravity-stabilized system provides a major advantage over conventional harvesting platforms, which typically only compensate for inclines in the uphill-downhill direction but not sideways inclinations.

Because the harvesting shelves are attached to the stabilized cargo platform, **workers can stand and operate comfortably**, without experiencing balance issues or discomfort, even on uneven or sloped terrain. Similarly, the agro bin remains level, preventing harvested fruit from shifting, rolling, or sustaining damage due to instability.

This advanced stabilization system ensures maximum safety, efficiency, and ergonomic working conditions, making the Slopehelper Harvesting Set a **superior choice** for plantations with **varied terrain profiles**.





## Easy Agro Bin Unloading to Trailer or Ground

The Slopehelper Harvesting Set features a **simple and highly reliable unloading system**, allowing full agro bins to be easily transferred either onto a trailer or directly onto the ground.

By adjusting the position of the Cargo Platform, a **5-degree inclination enables the agro bin to slide naturally onto the rear slip**, eliminating the need for complex mechanical lifting systems. This gravity-assisted unloading method ensures a smooth and effortless transfer, reducing downtime and **making the process fast, efficient, and maintenance-free**.

This intelligent unloading design provides **maximum practicality**, making fruit collection and logistics seamless and highly effective without requiring additional specialized equipment.



## Handling of Empty & Filled Agro Bins

The Slopehelper Harvesting Set functions as a harvesting platform, efficiently managing the entire agro bin cycle. Before harvesting begins, empty agro bins are placed in the passage, ready for collection.

Using the portal crane, the **Slopehelper grabs an empty agro bin and securely positions it on the Cargo Platform**. Workers then fill the bin with harvested fruit, and once full, **the rear slip system smoothly unloads it back** into the passage for collection or transfer to a trailer.

This crane and rear slip bin-handling process **eliminates the need for manual lifting** or repositioning, reducing worker fatigue and ensuring continuous, uninterrupted harvesting operations. The Slopehelper Harvesting Set provides a seamless, and highly productive alternative to conventional harvesting platforms.

## Technical Specifications

DIMENSIONS	VALUE
Height	2700 mm
Length	3050 mm
Width	2020 mm
Weight	340 kg
WORKING DIMENSIONS	VALUE
Working slopes	up to 25°
Harvesting height	1500-3800 mm
Number of workers	3-6
Sound power level	60 dB
CONTROL	VALUE
Bin loading/unloading	Manual with Motorized Loader
Drive control	Manual with Remote Controller
Shelves control	Manual, separate for each basket



# Technical Specifications

## GENERAL SPECIFICATIONS

## VALUE

Compatibility

SH.056 Slopehelper

Drive method

V-belt

Number of belts

3

Motor

Brushless motor - BLDC

## SHELVES SPECIFICATIONS

## VALUE

Frontal basket floor initial height

1100 mm

Fronral basket floor height adjustment range

500 mm from the ground

Frontal basket floor maximum extension

390 mm

Middle basket floor initial height

1480 mm

Middle basket floor height adjustment

580 mm up

Middle basket floor maximum extension

1280 mm

Rear basket floor height

2400 mm

Rear basket floor maximum extension

390 mm

