QUINTA GROUP

HOLLAND GREENTECH

Solar Dryer

Innovative & energy-efficient system designed to optimize the coffee drying process while maintaining bean quality



Introduction

Challenges

Traditional coffee drying process

Space Requirement

Traditional drying demands vast ground space, which may not always be available.

Animal Interference

Open drying areas expose beans to potential contamination from animals.

Logistics

Covering & uncovering beans daily is labor-intensive & costly especially in rainy seasons.



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Introduction

Challenges

Traditional coffee drying process

Wind Exposure

Beans are vulnerable to being blown away or contaminated by dust and debris.

Moisture & Mold

Beans must be covered at night to prevent moisture buildup and mold growth.

Compromised Quality

Inconsistent drying conditions impact bean quality, a major concern for export markets.



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Introduction

The Solution

Protection
Shields coffee beans from wind, rain, and animal interference.

Faster Drying Time
Accelerated drying process, allowing large quantities dried in fraction of the usual time

Year-Round Drying
Enables consistent drying even during the rainy season.

Enhanced Quality
Ensures cleaner, higher-quality coffee beans for export. Higher ROI

Increase Efficiency
Lower labor & land requirements: Reduces the need for extensive ground space and manual handling.

Financial Stability
Cuts operational costs, making coffee production more profitable.

Product Design

Solar Dryer

Description

The Solar Dryer helps coffee producers achieve higher quality beans with enhanced flavor profiles meeting international standards & increasing market value

Plastic Cover: transparent color stabilizing UV

Side roll up: controlled indoor environment natural & forced ventilation

Moisture evaporation: regulating temperature & humidity levels preventing mold growth & fermentation

Raised beds: protects coffee beans from rain, dust, and pests while maximizing dried quantities

Sustainability: reduced reliance on fuel-based drying methods, reduced carbon emissions



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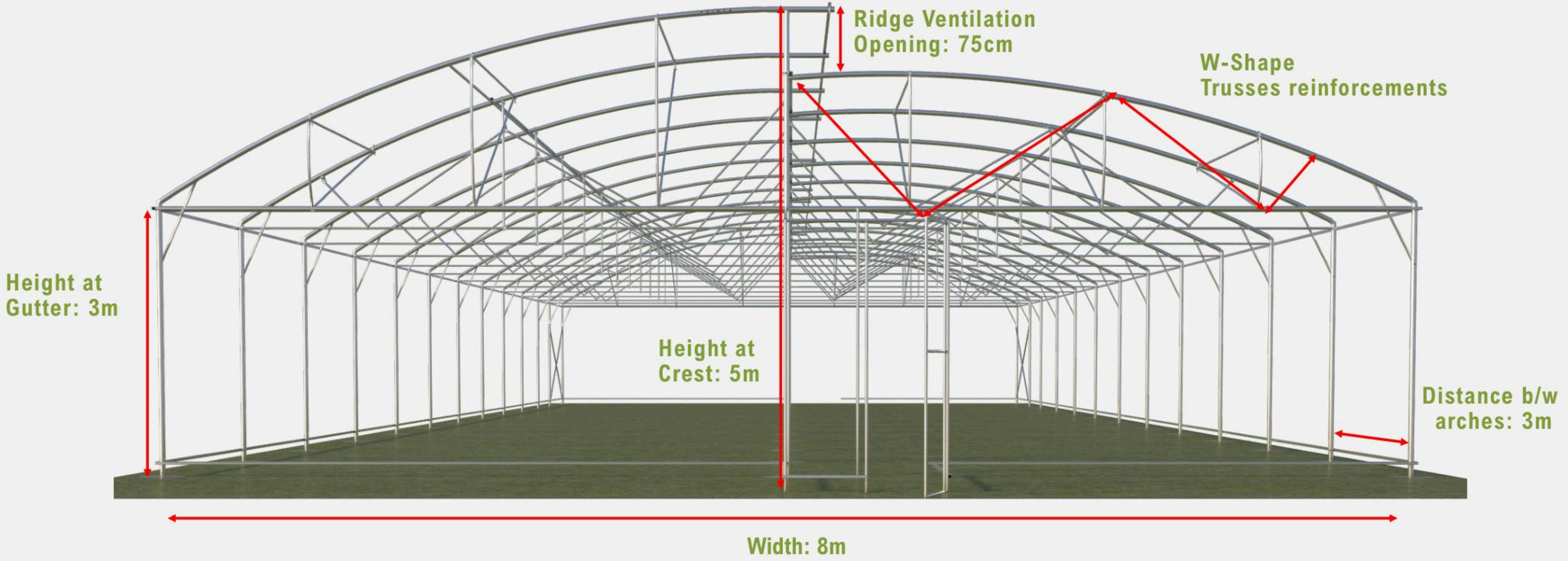
Product Design

Solar Dryer

Dimensions & Features



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Product Design

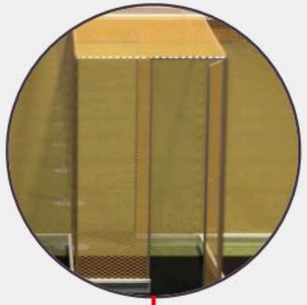
Solar Dryer

Dimensions & Features



Sustainable Connection

Ready-to-assemble delivered with all required accessories and connections where no on-site welding is needed



Double Door
Safety Access System

Designed to reduce contamination when entering or leaving the greenhouse

Side Roll ups with Mechanical Crank

Designed to have full control over ventilation to better harvest the desired heat generated indoors especially during temperature drops

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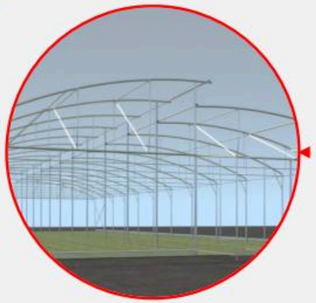
Product Design

Solar Dryer

Dimensions & Features

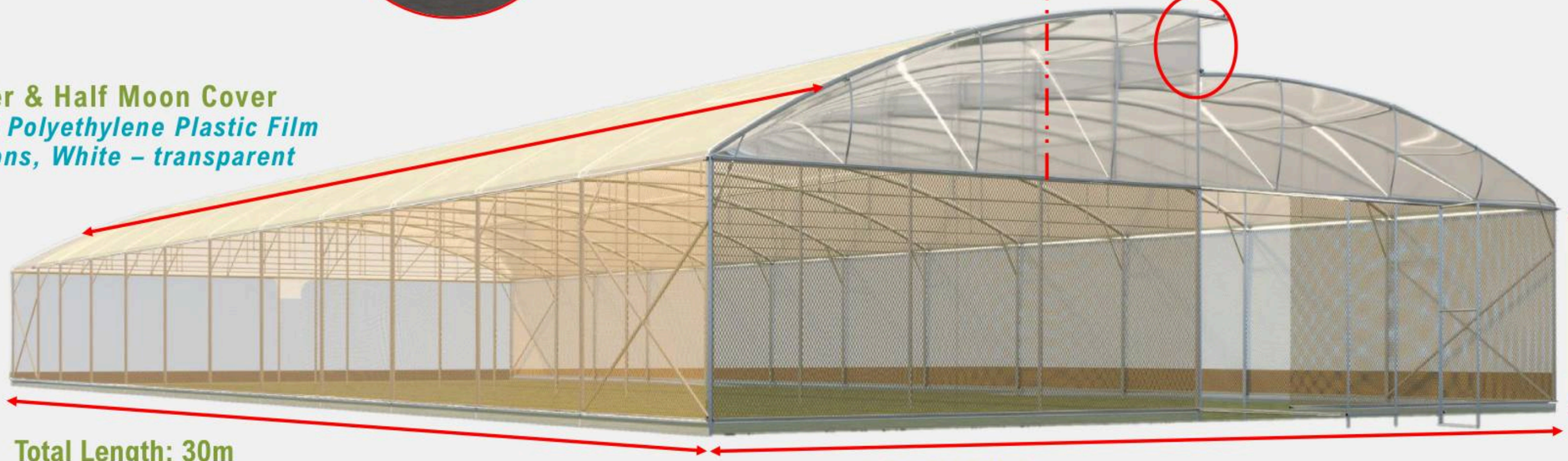
Robust Structure
Made of galvanized steel tubes with zinc coating of 275 gr/m2 able to resist harsh climate variations and hard wind conditions
Lifecycle 15+ years



Natural Ventilation
Fixed top opening designed for optimal excess heat discharge



Top Cover & Half Moon Cover
3-layered Polyethylene Plastic Film
200 microns, White – transparent



All sides covered with *40-mesh anti-insect nets*

Total Length: 30m

Total Width: 8m

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Impact & Advantages

Business Case

Uganda Success Story

Pioneers in Coffee Drying Innovation

Holland Green Tech Uganda played a leading role in introducing the use of the Solar Dryer for coffee.

By being the **first** to adopt this concept, they paved the way for transforming traditional drying methods in East Africa.

Their early adoption and strong field presence provided vital insights that helped tailor the design to meet on-ground realities, ensuring practicality and success.







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Impact & Advantages

Business Case

Uganda Success Story

Minimal Investment Required,

Quinta 240 sqm greenhouse solution with side roll up features as described above

Greenhouse installation, operations and maintenance

Custom made wooden or galvanized steel raised bed trellis and shelving system providing ease of mobility and accessibility.

Shelving system can go up to 3m in height maximizing space with four

Ground cover of preferrable black or dark color since heat preservation inside is the main required resource and not sunlight.



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Impact & Advantages

Business Case

Uganda Success Story

With Maximum Impact Recorded

Increased Production: 10 tons of coffee dried within 240 sqm

Reduced Drying Time: 7 days instead of 14 days using conventional methods

Fostering Growth: acquiring offtake from growers in the region to maximize profitability

Scaling Opportunities: potential investment in another Quinta Solar dryer

Time is Money: mass production of dried coffee beans requiring less drying time enabling continuous market supply hence acquiring bigger market share



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Together for a Sustainable Future



This collaboration goes beyond engineering. It’s about shared purpose, innovation in the field, and empowering communities through sustainable practices

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