



ARTGROWING
by ISII NITZAN GMBH






AVE+ *Junior*

VERTICAL FARMING



PRODUCT BROCHURE

Artgrowing
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Design



Engineering



Realisation



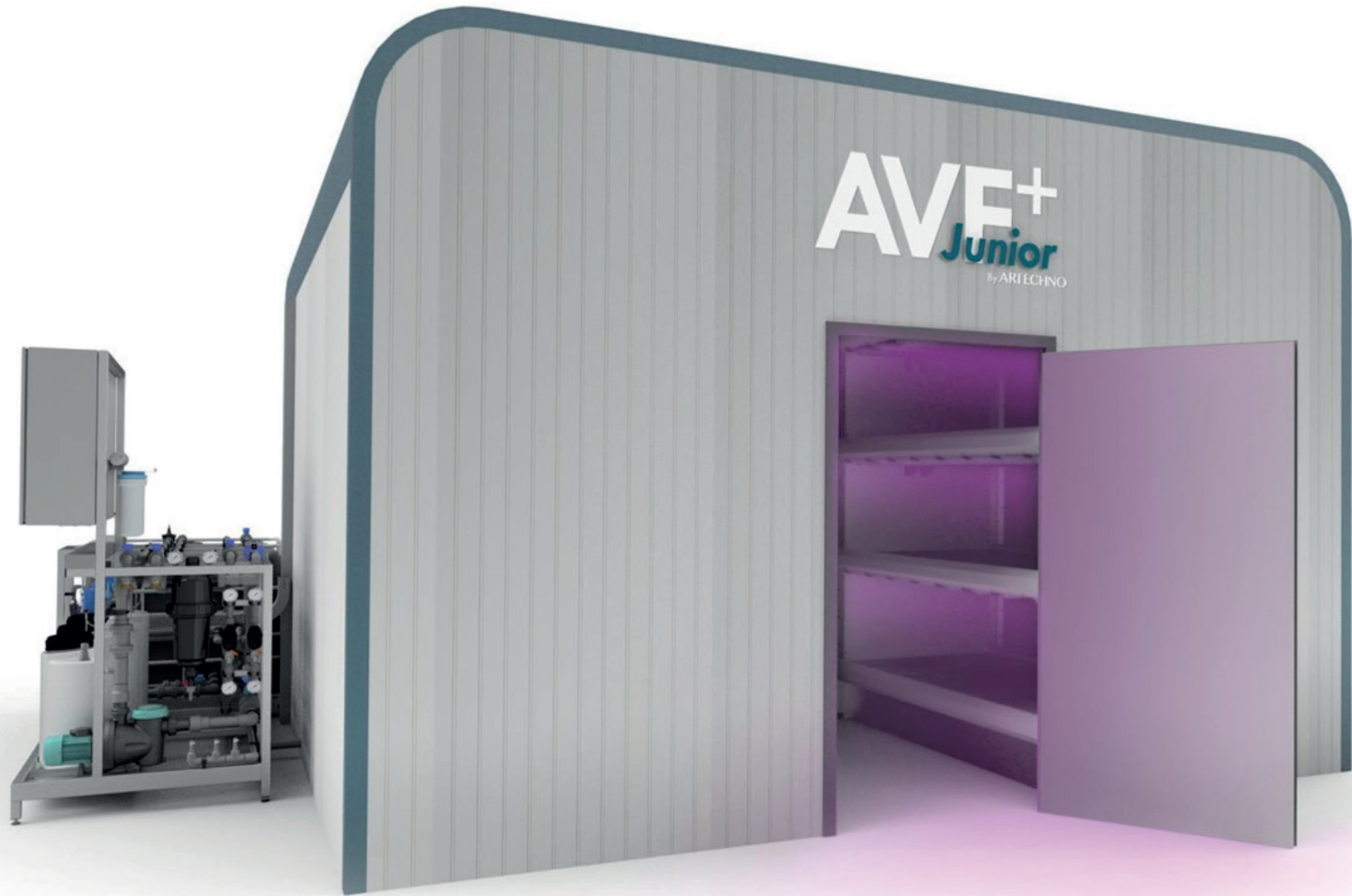
Content

This brochure presents an overview of the vertical farming system AVF+ Junior. It provides general information, advantages, the unique attributes of the system and how it works. The final chapters show the history of Artgrowing and our extended vertical farming portfolio.

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The essential ingredients to give plants the best they can get.
- 3 What Can You Grow?**
A selection out of many crops that will grow well in a vertical farm.
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Choose between different sizes, levels of research capabilities and options.
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Advantages of the AVF+ Vertical farming system line.
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We provide vertical farming technologies for different purposes, check our portfolio here.
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ARTGROWING



Introduction - What is AVF+ Junior?

AVF+ Junior is a vertical farming system designed for crop research and innovation/creation of growing recipes for a wide variety of leafy greens, herbs and micro greens, so they can be used in large scale vertical farms.

The AVF+ Junior is the ideal system for vertical farmers that want to research new crop growing recipes and enhance already existing recipes. It has been designed for testing the different effects that growing variables like climate, light and nutrient can have on the growth of crops. The system consist of a climate cell with separate growing positions - in which the growing variables can be controlled - and a water management unit that distributes the nutrient solutions.

Operation of a Junior is simple and straight forward with the [AVF+ Farm Management Software](#), which lets you control the entire growing process inside.

Insight into growth and health of crops is of utmost importance, that's why the management software is connected to the AVF+ Crop Cloud - a cloud database where all data points from the farm are collected and stored.

We provide three sizes options for growth surface: 15 m², 30 m² and 60 m².

The AVF+ Junior provides the tools to do proper research into crops for vertical farming. In this brochure you'll find more information about the system and how it works.

Crop Research, Recipe Creation and Innovation for Large Scale Vertical Farming



Integrated Solution

Climate, light, water, nutrients and growth insight are perfectly integrated to create a system that performs.



Crop/Recipe Innovation

Time-lapse imaging, growth data collection and analysis software, give you the essential tools to improve or create new recipes.



Flexible Research

With 6, 12 or 24 growing positions the Junior has a large enough capacity to do multiple crop research projects.



Complete Climate

AVF+ Junior uses a climate cell that enables you to create the ideal climate conditions for crops to grow strong, healthy and fast.

Climate Cell - The Best a Plant Can Get!



Multiple Independent Growing Positions

The Junior Cell is divided into 6, 12 or 24 growing positions in which multiple growing recipes can be tested at any time. Each position can be operated independently.



Complete, Controllable Climate

Inside the climate cell Temperature, Relative humidity, Air flow and CO₂ are all controllable to create the perfect climate conditions for crop research.



LED Light Done Right

We use light fixtures from renowned led light suppliers, specialized for growing crops; Light recipes (spectrum, intensity and time on/off) can be adjusted for each individual growing position.



Precision Water & Nutrient Management

A water management unit carefully prepares the nutrient solution by mixing in the right ingredients. Every growing position is supplied with the exact amount of predetermined nutrients. All used water is recycled back into the system.



Direct Growth Insight

Every growing positions can be equipped with a time-lapse camera that takes pictures at a pre-set interval.

What Can You Grow?

The possibilities for crop research are almost endless, there are many crops that will thrive in a vertical farm. We've listed the below crops as good starting points and there are even more possibilities. For more crops please contact Artgrowing.

Leafy Greens



Microgreens



Herbs



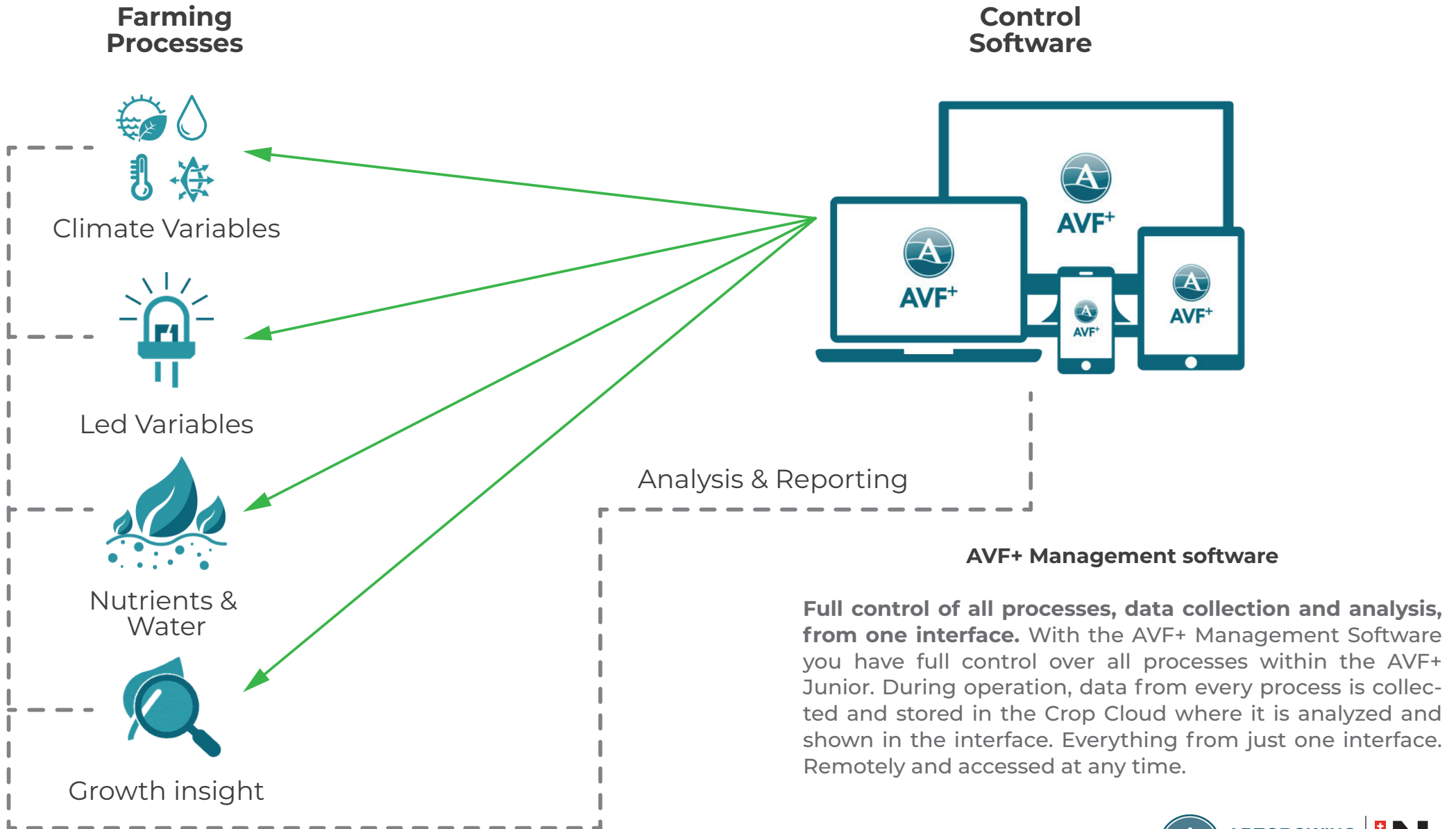
Lettuce



Berries

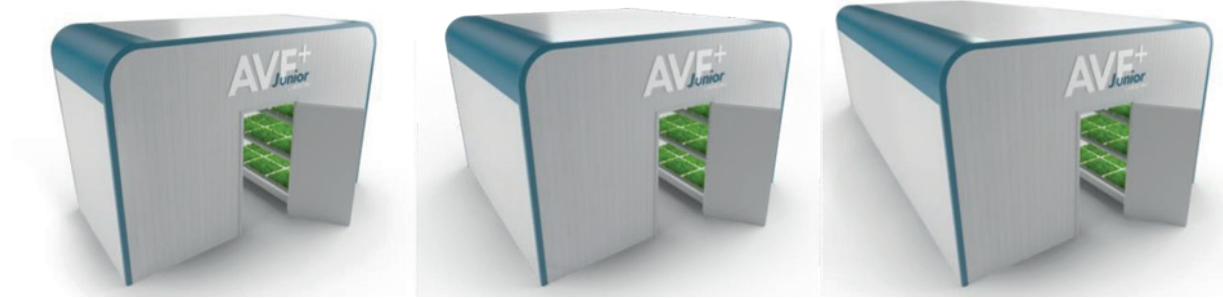


The Farming Process - How Does It Work?



Choose The Right Solution For You

AVF+ Junior



Junior¹⁵

Junior³⁰

Junior⁶⁰

	Junior ¹⁵	Junior ³⁰	Junior ⁶⁰
Growth Surface	15 m ²	30 m ²	60 m ²
Complete and adjustable climate	✓	✓	✓
365 days of growing a year	✓	✓	✓
Dedicated Light plans	Up to 6	Up to 12	Up to 24
AVF+ Farm Management software	✓	✓	✓
Basic Irrigation System	✓	✓	✓

Options	
Precision Irrigation System (WMU)	Available for all Junior versions
Philips GP Led 3.0 Fixed	
Philips GP Led 3.0 Dynamic	
Growth Insight / Time-lapse Integration	
Training & Farming Support <ul style="list-style-type: none"> • Growth/Agro support • Operational Support • Technical support 	

* Price excl. transport, installation, commissioning and options

AVF+ General Advantages



High growing efficiency & flexibility



Growing from seeding to harvesting



Consistent Climate



Low labor cost



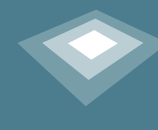
Year round production



95% less water needed



No Pesticides



Scalable to 20.000 m2 growth area

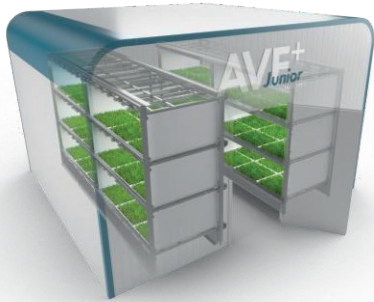


Higher yields



ROI < 5 years

Our Vertical Farming Portfolio



Purpose

Crop research and innovation.

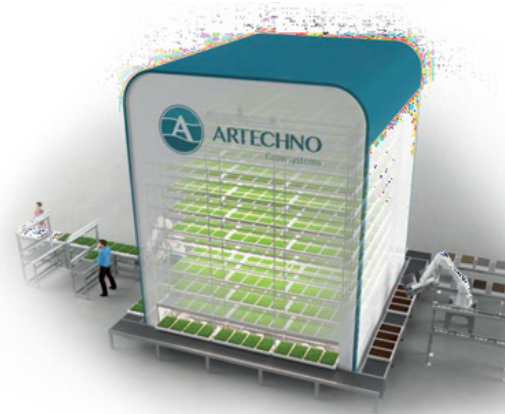
Growing Characteristics

Controllable consistent climate, 12 independent growing positions, adjustable LED light recipes, precise water & nutrient management.

Growing Surface

15 m², 30 m² or 60 m².

AVE+
Junior



Purpose

Small to medium scale vertical crop production.

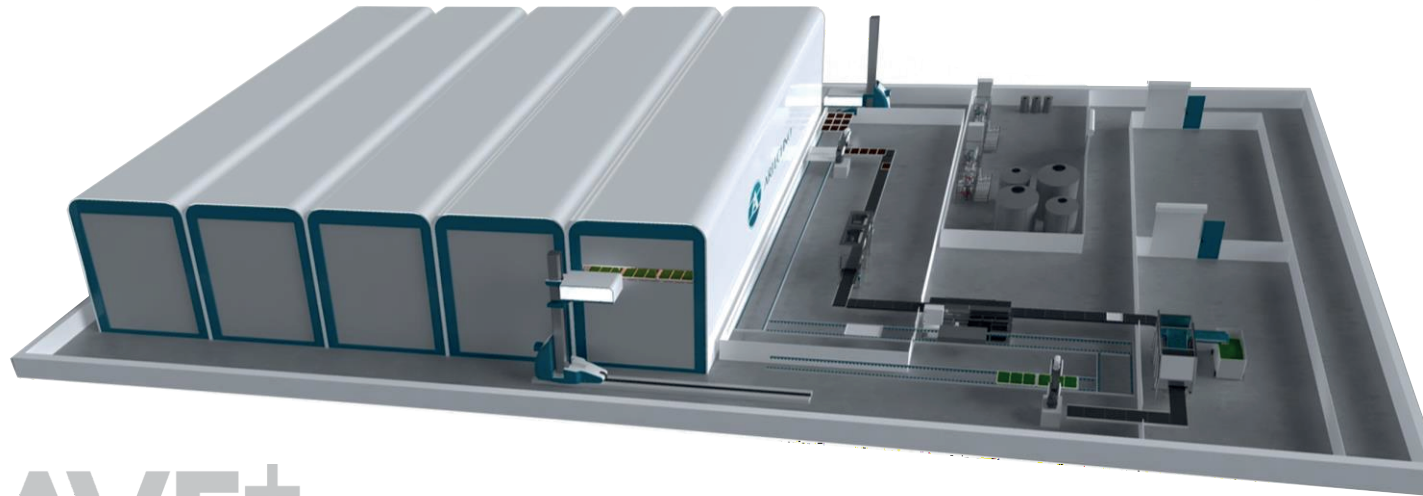
Growing Characteristics

10 growing layers, Controllable climate, adjustable LED light recipes, precise nutrient & water management.

Growing Surface

240 m², 480 m², 720 m², 960 m² up to 4,600 m².

AVE+
Compact



AVE+
Scale

Purpose

Large scale, high volume (automated) vertical crop production.

Growing Characteristics

Multiple controllable climates, adjustable LED light recipes, precise nutrient & water management.

Growing Surface

Starting at 4,600 m² and larger.



Next Steps

Give us a call

To find the right solution for your specific needs we would love to work together with you and come to the ideal system, give us a call and we'll answer any question you have or discuss the possibilities for a quotation.

Visit our website

Interested in more about Artgrowing and our products? Visit www.isii-nitzan.swiss to find more information about vertical farming, Deep Float Hydroponics, harvesting, water systems and more.

Schedule an appointment for a demo

Would you like to see our systems in action, contact us and we'll schedule an appointment for a visit and a tour of our home facility.

Reserve a spot in our vertical farming facility

Are you interested in testing for vertical farming but not yet ready to invest in a system? We provide a limited amount of growing positions inside our research facility for hire. Contact Artgrowing to learn more.

Contact us:



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