

**GAME-CHANGING  
SOLUTIONS FOR  
OPTIMIZED IRRIGATION**

Water-Smart Swiss Efficiency



## Swiss technology for a sustainable agriculture

Global warming is affecting growers worldwide. Growing water shortages and excessive use of chemicals and fertilizers have taken their toll on soils. Many agribusiness companies seek solutions that will improve yields and sustainability.

In 2004, after years of extensive research, Swiss clean-tech company Aqua4D® developed an innovative system that harnesses electromagnetic frequencies to permanently transform unwanted elements in irrigation water. The eco-friendly process returns the soil's biology to an almost natural state. It also provides an environment in which plants thrive and optimize their ability to absorb key elements.

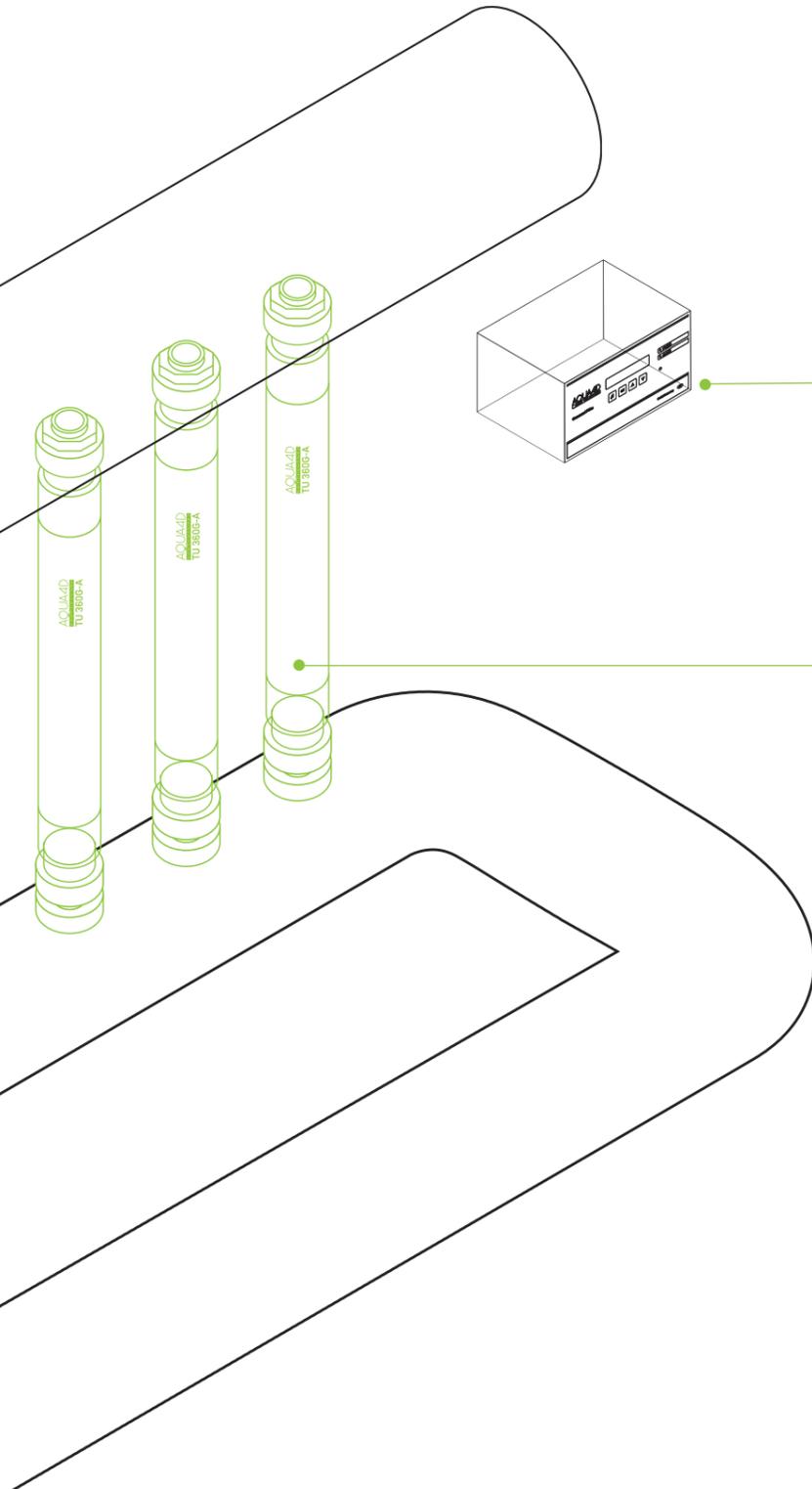
Aqua4D®'s results are immediate and long-lasting. The system changes the way a plant behaves without changing the water's chemical structure.

There is no maintenance, improved water and fertilizer use, and very low energy consumption. Aqua4D® is the cleanest, safest way to nurture your plants and your business.

Decrease the crystallization  
and accumulation of  
salts in the rhizosphere



## The Aqua4D® System



**Command F Pro**  
Generates the electromagnetic signals to the treatment units

**Treatment Units (TU)**  
Transmit the signals to the water

### Installation

Aqua4D®'s process works with virtually all irrigation systems and requires very little maintenance. Water is quickly treated before it is applied to your fields, vineyards or greenhouses.

### Capacity

The Aqua4D® system treats surface and groundwater supplies in various flow requirements. It is adaptable to any type of pipe (steel, copper or plastic) and it works with any water chemistry.

### Efficiency

The positive effects of the system on water can be observed vast distances from the treatment site, as long as there is a continuous source of power. Water can be treated 24 hours a day in a safe, non-corrosive and chemically free process.



**Reduce your water consumption by 20 - 30%**

### Chemical Free

The Aqua4D® system uses no chemicals. It also optimizes fertilizer use by increasing a plant's ability to absorb key nutrients.

### Infinite water flow

The system allows for almost infinite coverage thanks to its capacity to add components according to the water flow's requirements.

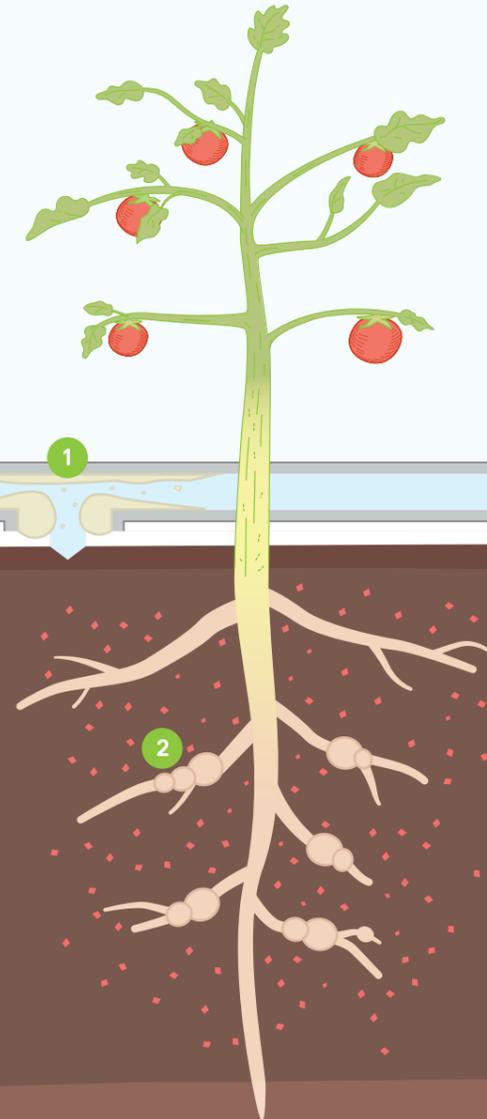
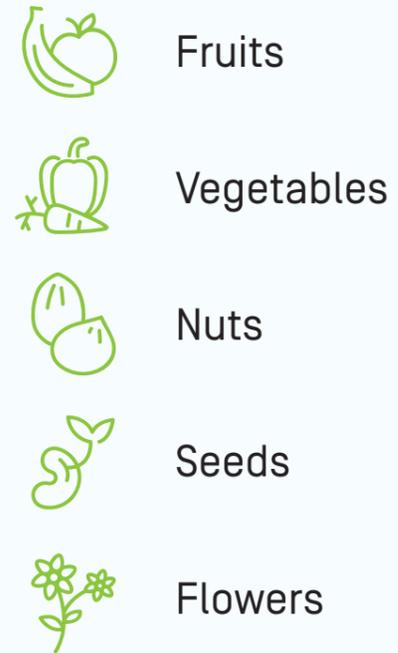
### Low energy consumption

The Aqua4D® system uses minimal energy and can be solar-powered.



## The Solutions

Whether you are faced with a single problem or multiple issues, or perhaps a production increase or optimization is required, Aqua4D®'s actions on the water network will have a direct, positive impact on the soil and plants.



### 1.

#### Clogging prevention

Clogging in drips and sprayers may occur as a result of mineral deposits (lime scale, iron and manganese deposits) or organic deposits (biofilms, algae). With Aqua4D®, these no longer adhere to surfaces in contact with water and existing deposits are gradually eliminated. Biofilm is permanently eliminated and further bacterial growth is reduced with a preventive and curative effect on biofilm formation in irrigation networks.

### 2.

#### Nematodes

With its nemostatic effect, the gall nematode population is reduced by disrupting its life cycle. Nematodes are left distressed, disoriented and, as a result, lay fewer eggs. The system reduces the nematode population to a sufficiently low level to no longer cause crop damage, without affecting the soil's biodiversity.

### 3.

#### Improved fertilizer efficiency

Improves dissolution of fertilizer in water. Also, the improved root development increases fertilizer absorption.



### 4.

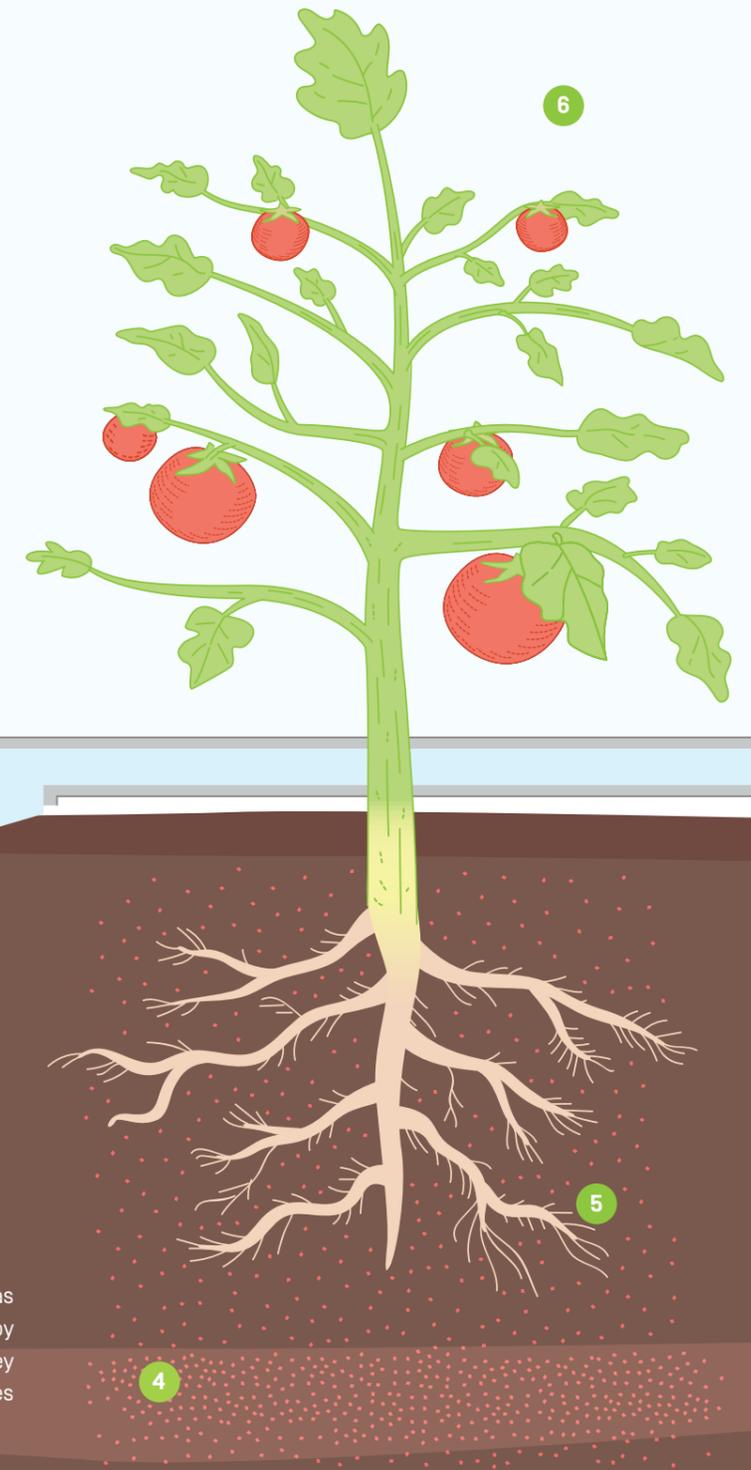
#### Salt saturated soils

The system has a leaching effect on harmful salts as they remain dissolved in water. Those not absorbed by the plant are carried off under the rhizosphere. They no longer crystalize and accumulate in the soil pores and can no longer inhibit the nutrition of the plant.

### 5.

#### Root development

The increased water retention in the soil improves the capillary effect and allows for a better development of the roots [reinforced hairy structure less deep in the soil. This increases capacity to absorb nutrients.



### 6.

#### Improved plant health

With an increased ability to absorb water and nutrients, the plants are healthier and develop better, they are more resistant to pests and infection.

## The components

Specially designed for its use within agriculture, Aqua4D® is a kit composed of two items. Depending on the requirements of the installation, models are combined to ensure a perfect setup suited to your needs.



**Modular**  
**Programmable**  
**Synchronized**

Acting as the brain, the Command F Pro emits the treatment signals to the TUs and continuously controls the precise operation of the system at the same time.

## The Command F Pro

### Modular design

Multiple Command F Pros can be synchronized to work together, with each one connecting up to four TUs, effectively bringing an almost unlimited water flow treatment capacity.

### Alarm management

The display and command buttons allow for a clear visualization of the system's status as well as management of potential alarms.

### Parameter configuration

The operating mode, language choice and alarm management can be configured straight from the Command F Pro.

### Alarm report

An optional "alarm report" extension card allows the transmission of alarms to a central management unit. The system's status is permanently tracked.



## TU 360G-A

Our larger treatment unit (TU), this model diffuses the signals generated by the Command F Pro in the water. Up to four TU 360G-A can be connected to a single Command F Pro.\*



### Flow rate

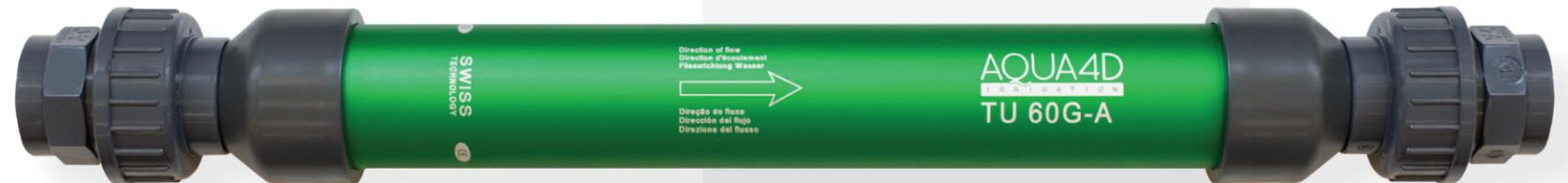
[L/s]	from 0	to 6
[L/min]	from 0	to 360
[m <sup>3</sup> /h]	from 0	to 21.6
[gpm]	from 0	to 79.2
[US gpm]	from 0	to 95.1

## TU 60G-A

This smaller treatment unit (TU) acts in the same way as its larger sibling but varies in its water flow capacity.\*

### Swiss quality

The meticulous choice of all the components as well as adherence to the protection index IP65 ensure that all Aqua4D® products are robust, reliable and long-lasting Treatment Units [TU].



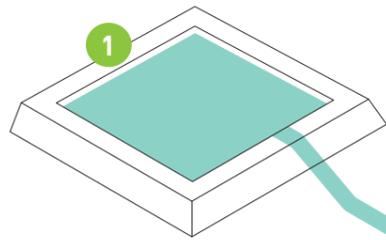
### Flow rate

[L/s]	from 0	to 1
[L/min]	from 0	to 60
[m <sup>3</sup> /h]	from 0	to 3.6
[gpm]	from 0	to 13.2
[US gpm]	from 0	to 15.8

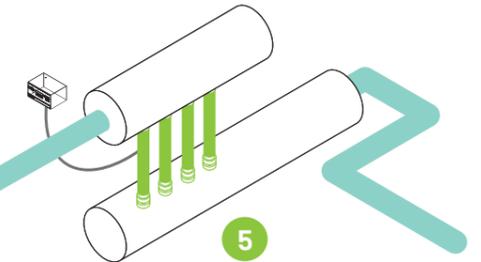
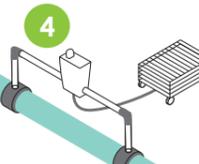
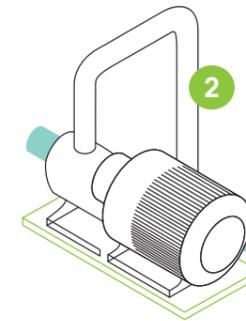
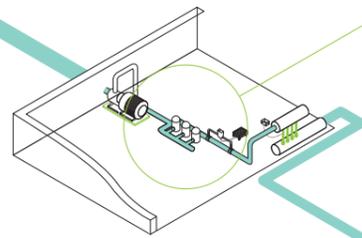
6 to 24 months ROI

Eco-friendly technology:  
an efficient solution without  
the use of chemicals

## Installation examples

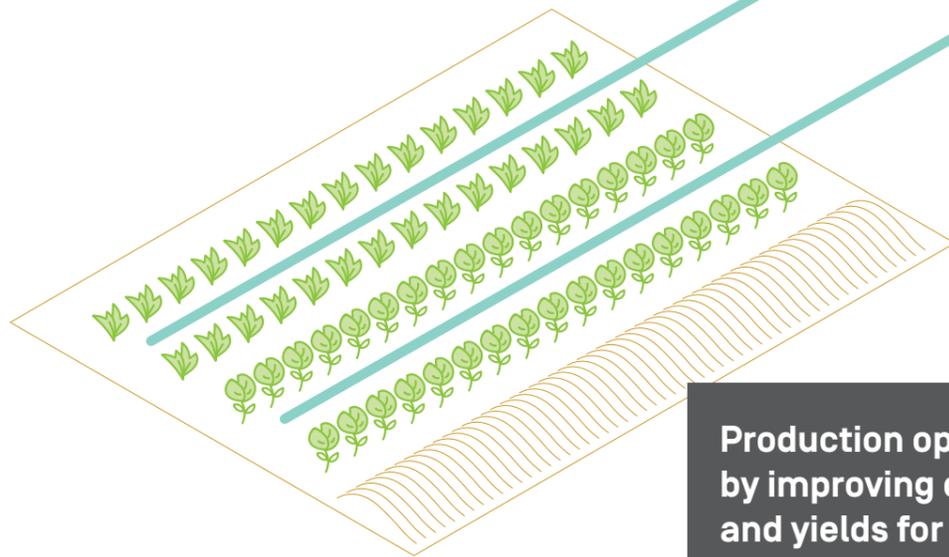


- 1. Basin
- 2. Pump
- 3. Filters
- 4. Fertilizer
- 5. Aqua4D® System



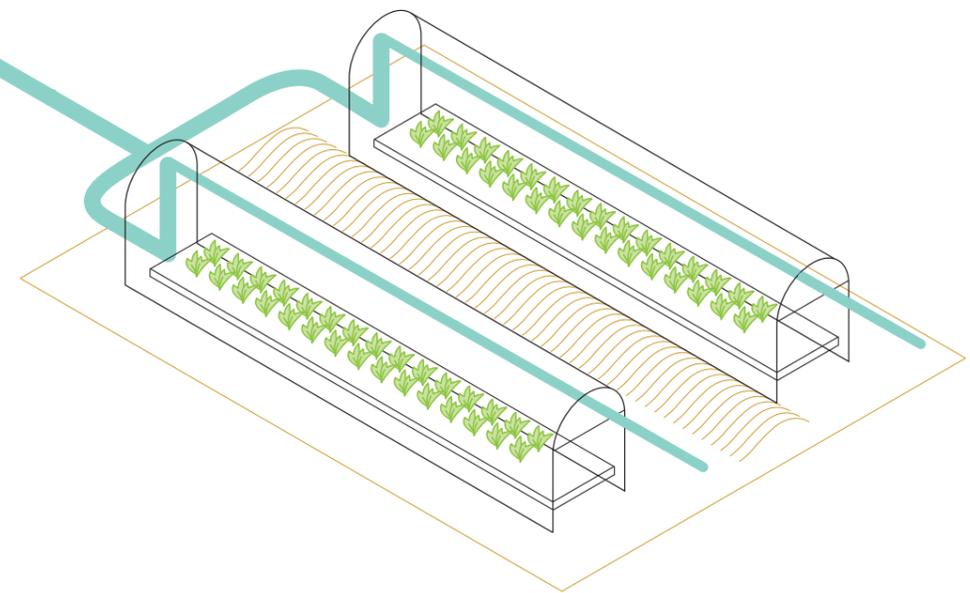
Swiss quality  
and robust design

## Open field



Production optimized  
by improving quality  
and yields for a faster ROI

## Greenhouse



## Aqua4D® works

Aqua4D® is a carefully designed system that modifies the water's physical structure, affecting the behavior and dissolution of minerals and any organic matter present.

### Benefits for your plants

- Improves overall health, more resistant to pests and infection
- Increases capacity to absorb water
- Improves root development
- Increases nutrients fertilizer intake
- Increases yields and quality
- Allows cultivation in saline soils

### Benefits to you

#### Ease of use

- Simple installation
- No maintenance required
- Adapts to virtually all drip or sprinkler systems
- Very low power requirements

#### Cost savings

- No consumables
- Reduces overall water consumption
- High salinity water it's no longer a problem
- Optimizes fertilizer and pesticide use
- Increases your installation's lifecycle
- Decreases labour and product costs
- Saves time and effort

#### Long term

- Eco-friendly solution
- Increases production and quality
- Increases exports thanks to lower pesticide and chemical requirements
- Improves the life cycle of your irrigation system
- Allows the use of more organic substances
- ROI between 6 and 24 months

Chemical free



Join the increasing number  
water-smart growers worldwide.



Water-Smart Swiss Efficiency

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