NON-ELECTRIC FLUID-DRIVEN DOSING PUMPS

IRRIGATION

- FRUIT & VEGETABLE PRODUCTION
- GREENHOUSE - NURSERY
- FIELD CROPS
- LANDSCAPING

DOSATRON®

WATER POWERED DOSING TECHNOLOGY

Our mission

Dosatron provides high quality equipments for the treatment of fluids, service excellence, a high level of expertise and customer proximity worldwide. Our ambition is to offer simple, clear, reliable and sustainable solutions to help you meet your challenges of today and tomorrow

Our ambition

Our ambition is to offer simple, clear, reliable and sustainable solutions to help you meet your challenges of today and tomorrow.

Our vision

We want to be an actor in your designs and projects and actively participate in the development of your knowledge and solutions.

The technical expertise and customer proximity are the cornerstones of our vision.DOSATRON is committed to guarantee a quick and entirely customized service to your special needs, and maintain a continuous dialogue based on trust, listening and recommendation.

OUR COMPANY

An international presence in more than 100 countries

Environment

Water consumption control:
►**25% reduction** in water consumption.

Energy control:
►**20% reduction** in site energy consumption.

Waste recovery/treatment:
►**more than 60% of waste produced is recycled.**

Safety

For DOSATRON, the safety of its staff and its partners is a high priority. Action taken by the company's Quality Safety Environment service is intended **to prevent and control all risks on site and for the associated activity.**

All the company's employees, regardless of their occupation and role, are the driving force behind, and are involved in the process.

By carrying out an ergonomic study of the current situation, DOSATRON has been able to design tailored tools and work stations, thereby reducing the severity of working conditions.

Quality

100% of products tested. Monitoring and traceability of all parts and products assembled during the manufacturing process. A close and mutually beneficial partnership with DOSATRON's suppliers so as to ensure higher quality of purchased components. Visual and synthetic methods for monitoring production problems (Delays, Quality, Maintenance of Equipment, Staff Competence, etc.) in real time.

Ecodesign

By broadening the scope of its ISO 14001 certification and by integrating the activities of Design and development, DOSATRON can now pride itself on implementing a true Ecodesign process. This step has allowed the company to understand the entire life cycle of its product and thus to find solutions to limit the associated environmental impact.

DOSATRON, INNOVATION BORN OUT OF EXPERIENCE

The company born of an invention

Innovating for your development

Innovation that helps you to grow

Technological design is our hallmark
The mains supply service is our solution

DOSATRON Technology

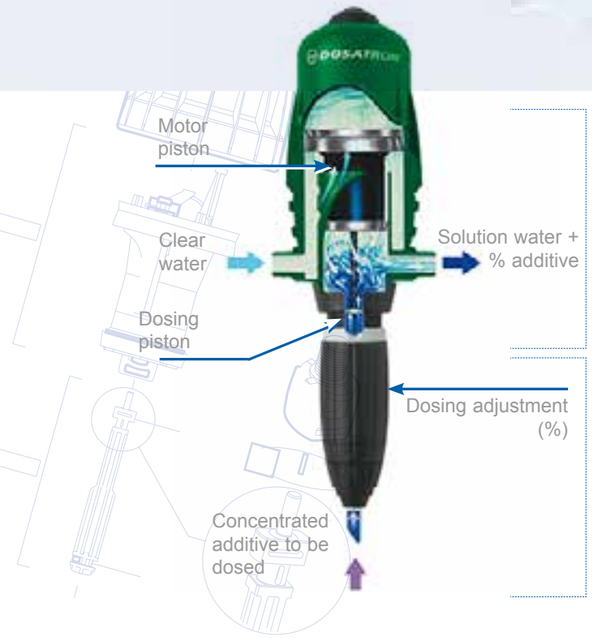
Dosatron technology is based on a **hydraulic motor pump activated only by pressure and the flow of the water.**

Installed directly on the water supply line, the Dosatron operates by using the Water flowrate as a source of energy.

The pressure and flow rate of the water actuate the motor piston which drives a second, product dosing piston.

The product is injected and mixed continuously with the water from the mains supply at the selected dosing rate % (rate of product/water incorporation).

The dose of concentrated product is directly proportional to the volume of water which passes through the Dosatron, independently of variations in the flow rate and pressure of the mains water supply.



The hydraulic motor

The motor piston moves under the pressure of the water. A system of valves allows the movement to be reversed.

Each piston cycle corresponds to a predetermined volume of water which passes through the pump (motor volume). The speed of the motor varies proportionally with the flow of water.

The dosing pump is called a VOLUMETRIC pump.

The dosing assembly

The Dosing piston driven by the motor continuously injects a fixed volume of product (adjustable capacity of the dosing body). The dosing piston will inject the quantity of product that corresponds to the volume of water passing through the motor. Therefore, the operating principle ensures constant dosing, independently of the variations in flow rate and pressure of the water.

The injection of the product is PROPORTIONAL to the Water flowrate.

DOSATRON

THE PERFECT SOLUTION at your service....

- For metering the amount of chemical solution.
- For a constant solution with a proportional, accurate and homogeneous dosage.
- For facilities without electricity or in difficult or technical environments.
- For a reasonable cost, ease of installation, for a significant and immediate added value and productivity.

The universal solution

- Pure core business: **"Dosing Solutions Specialists"**
- Pure core market: **Fertigation, Treatments, Fumigation, Acidification**

PROPORTIONAL DOSING WITHOUT ELECTRICITY

Dosatron technology is based on a hydraulic motor pump activated only by pressure and the flow of the water.

Dose any liquid or water-soluble product

Multiple applications, one solution

High precision dosing

AGRICULTURAL REGULATIONS AND ECONOMY OF ADDITIVES

Growers strive constantly for reliable, high-quality produce, while contending with a complex regulatory framework. The gradual, measured release of additives can improve production in full compliance with environmental regulations.

Managing the addition of added components is one of the keys to success.

FRUIT & VEGETABLE PRODUCTION

DOSATRON meets your needs

Fertigation, crop protection treatments, pH adjustment ◄

Open fields, greenhouses, cold tunnels, soil-less cultivation ◄

Drip irrigation, micro-sprinklers, sprinklers ◄

Water flow from 10 to 30 000 l/h ◄

Water pressure in the system between 0.12 and 10 bar ◄

A SOLUTION FOR YOUR FRUIT & VEGETABLE PRODUCTION NEEDS

Fertigation **without electricity**

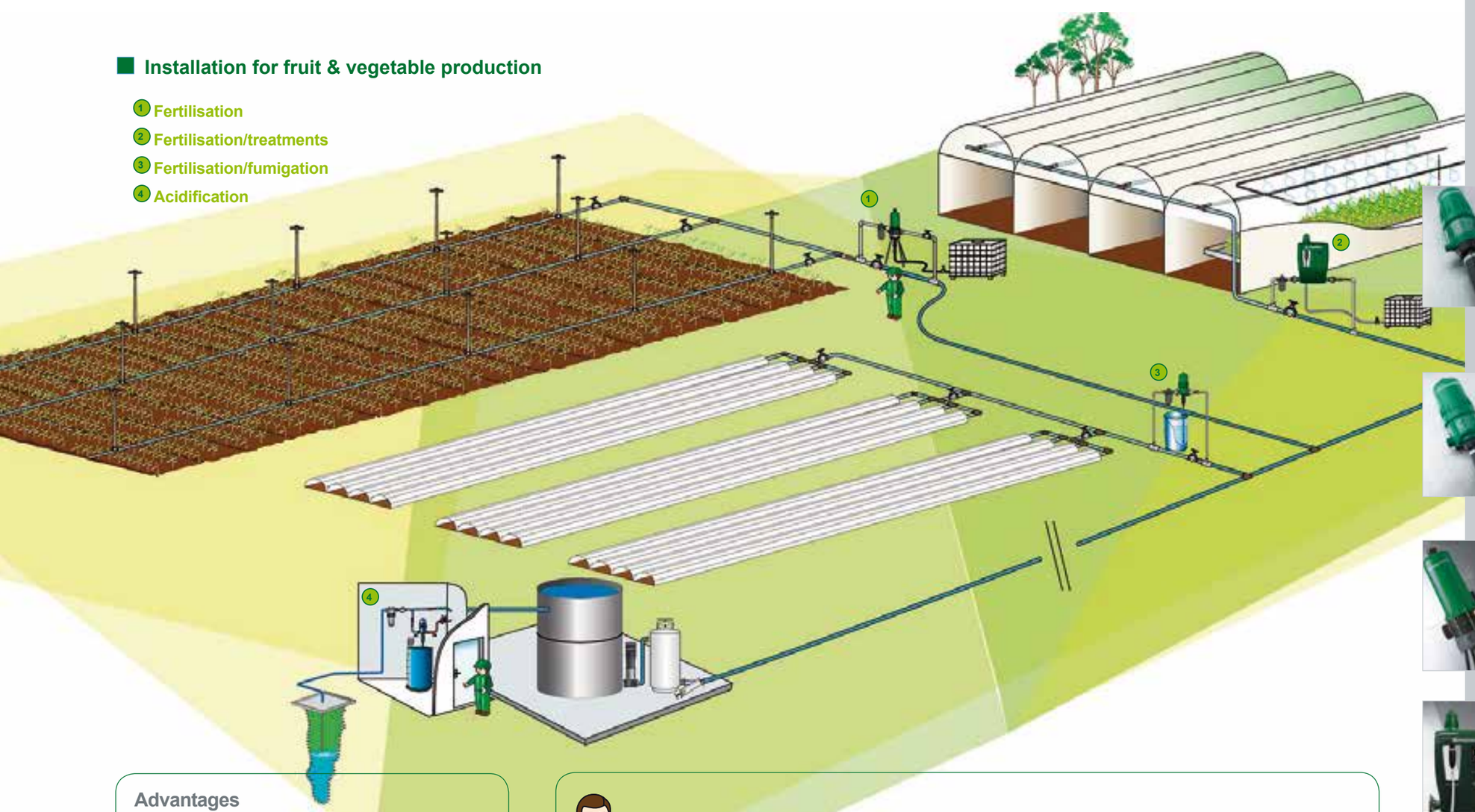
Homogenous distribution of nutrient solutions

Less use of additives

Robust equipment

Installation for fruit & vegetable production

1. Fertilisation
2. Fertilisation/treatments
3. Fertilisation/fumigation
4. Acidification



Advantages

- ► **Operates with water pressure- non-electric**
- ► **Reduces** mineral intake
- ► **Improves yield**
- ► **Limits** leaching due to small but frequent additions of nutrients
- ► Water powered proportional dispensing **guarantees** an even distribution of products
- ► Option of automated operation

Recommendations

In fruit and vegetables production, you usually have raw unfiltered water and that affects how your equipment works. Positioning a filter (300µ maximum) upstream the Dosatron is recommended to ensure that you obtain accurate doses and extend the life of your equipment. Check the viscosity level shown on the safety data sheet (SDS) for your products. Several pumps may be required to inject different products: please check that the various products are compatible. To prevent blockages on your suction valve, leave at least 10 cm between the bottom of the strainer and the bottom of your tank: adjust the length of your suction pipe to suit your equipment.

Choice of the Dosatron

The choice of the Dosatron essentially depends on the required minimum and maximum irrigation flow rate and the injection rate you want to achieve.

For example:

• If you have between 2 and 6 m^3/h to irrigate, and you want to inject a 1.5% fertiliser solution, we would recommend the Dosatron D20GL2 or D30GL02

• If you want to inject a crop protection product, or a solution with a high acid content, there is a special PVDF range.

Please contact us for more information.

Recommended models:

The main flow rate and the daily volume of water to be treated determine the choice of range.

Additional options exist for special products.

D3GL

Water flow: 10 to 3 000 l/h
Operating pressure: 0.3 to 6 bar
Dosage: 0.2 to 2% **D3GL2**
0.5 to 5% **D3GL5**
1 to 10% **D3GL10**

D8GL

Water flow: 500 to 8 000 l/h
Operating pressure: 0.15 to 8 bar
Dosage: 0.2 to 2% **D8GL2**

D20GL

Water flow: 1 000 to 20 000 l/h
Operating pressure: 0.12 to 10 bar
Dosage: 0.2 to 2% **D20GL2**

D30GL

Water flow: 8 000 to 30 000 l/h
Operating pressure: 0.5 to 6 bar
Dosage: 0.02 to 0.2% **D30GL02**
0.1 to 1% **D30GL1**

D3PVDF

Water flow: 10 to 3 000 l/h
Operating pressure: 0.3 to 6 bar
Dosage: 0.03 to 0.3% **D3RE3000**
0.2 to 2% **D3RE2GREENSPRAY**

OPEN FIELDS, GREENHOUSES, COLD TUNNELS, SOIL-FREE

Precision independent of the water pressure and flow rate in the system

Even product distribution

Easy to maintain

Injection rate **easily adjustable**

GUARANTEED GROWTH, YIELD AND OPTIMUM QUALITY

The challenge facing today's growers is to meet increasing demand using decreasing amounts of cultivable land.

Improved water quality produces higher yields and a better quality of product, whilst meeting environmental protection requirements.

The carefully controlled addition of mineral supplements and crop protection products reduces climate effects and guarantees optimum harvest maturity.

GREENHOUSE - NURSERY

DOSATRON meets your needs

Fertigation, treatments, fumigation, pH adjustment ◄

Greenhouses, cold tunnels, open fields ◄

Drip irrigation, micro-sprinklers, sprinklers, spray boom ◄

Water flow between 10 and 30 000 l/h ◄

Water pressure in the system between 0.12 and 10 bar ◄

A SOLUTION FOR YOUR GREENHOUSE NURSERY NEEDS

Reduced consumption of water and additives

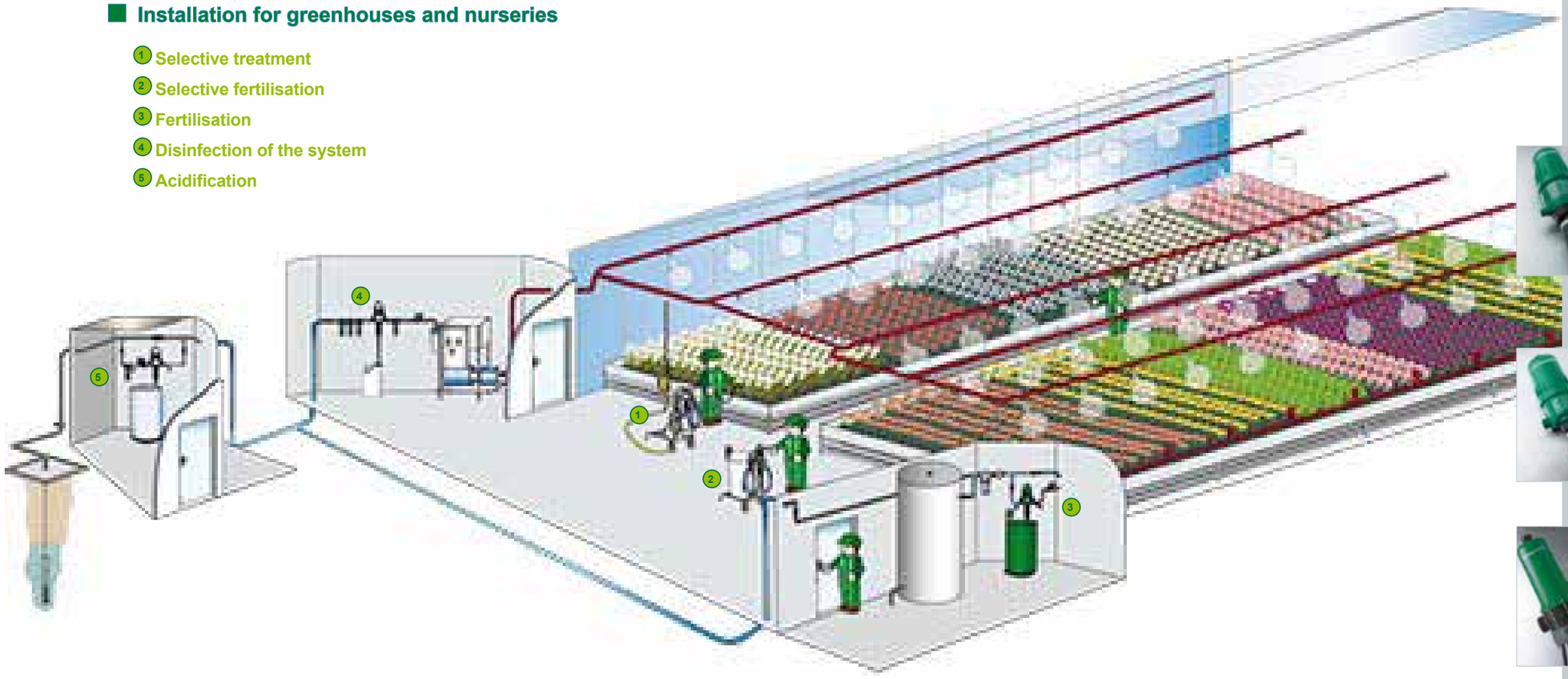
Easy dosage control (%)

Easy to maintain

No electricity (saves energy)

Installation for greenhouses and nurseries

1. Selective treatment
2. Selective fertilisation
3. Fertilisation
4. Disinfection of the system
5. Acidification



Advantages

- **Reduces the number of additives**
- **Accurate dosage,** even and continuous
- **Suitable for new generations of products:** oils, wetting agents, etc.
- **Dispensing capacity between 0.03 and 25%**
- **Portable kit**
- **Saves water, product and labour**

Recommendations

Dosatron pump installed close to the horticultural water conditioning unit or on the water system at the point of sale ensure that cut flowers last longer and prevent the formation of bacteria and unpleasant odours. Several pumps may be required to inject different products: please check that the products you use are compatible. To prevent blockages on the suction valves, leave at least 10 cm between the bottom of the strainer and the bottom of your tank: adjust the length of the suction hose to your equipment. Unfiltered water will affect performance. Positioning a filter (300µ maximum) upstream of the dispensing device is recommended to guarantee that you obtain accurate doses and extend the life of the equipment.

Choice of the Dosatron

The choice of the Dosatron essentially depends on the required minimum and maximum irrigation flow rate and the injection rate you want to achieve.

For example:

• If you have between 9 and 22 m^3/h to irrigate, and you want to inject a 0.5% fertiliser solution, we would recommend the Dosatron D20GL2 or D30GL02.

• If you are injecting an acid solution or treatment, there are models available with a PVDF body. In certain cases where growing takes place without soil, the pH of the water needs to be continuously adjusted: special models can be recommended for use with solutions containing acid above 10% by weight.

Please contact us for more information.

Recommended models:

The main flow rate and the daily volume of water to be treated determine the choice of range:

Additional options exist for special products.

D3GL

Water flow: 10 to 3 000 l/h
Operating pressure: 0.3 to 6 bar
Dosage: 0.2 to 2% **D3GL2**
0.5 to 5% **D3GL5**
1 to 10% **D3GL10**

D8GL

Water flow: 500 to 8 000 l/h
Operating pressure: 0.15 to 8 bar
Dosage: 0.2 to 2% **D8GL2**

D20GL

Water flow: 1 000 to 20 000 l/h
Operating pressure: 0.12 to 10 bar
Dosage: 0.2 to 2% **D20GL2**

D30GL

Water flow: 8 000 to 30 000 l/h
Operating pressure: 0.5 to 6 bar
Dosage: 0.02 to 0.2% **D30GL02**
0.1 to 1% **D30GL1**

D3PVDF

Water flow: 10 to 3 000 l/h
Operating pressure: 0.3 to 6 bar
Dosage: 0.03 to 0.3% **D3RE3000**
0.2 to 2% **D3RE2GREENSPRAY**

GREENHOUSES, COLD FRAMES, OPEN FIELDS

Better production quality

Special dispensing devices for crop protection products

Better safety duirng application

Works with the water pressure

OPTIMISE PRODUCTION AND CARE FOR THE ENVIRONMENT

Research into new technology and its applications helps us to meet increasing world demand.

We need to be able to guarantee a supply of high quality water if the harvest is to reach adequate maturity.

Adopting a sensible approach to cultivation in order to obtain the best possible yields whilst taking adequate care of our agricultural heritage.

FIELD CROP CULTIVATION

DOSATRON meets your needs

'Spot' treatments, acidification, supplements ◄

Open fields ◄

Drip or trickle irrigation, sprinklers, pivots, traveler systems ◄

Water flow between 10 and 30 000 l/h ◄

Water pressure in the system between 0.12 and 10 bar ◄

A SOLUTION FOR YOUR FIELD CROP CULTIVATION NEEDS

Operates with water pressure non electric

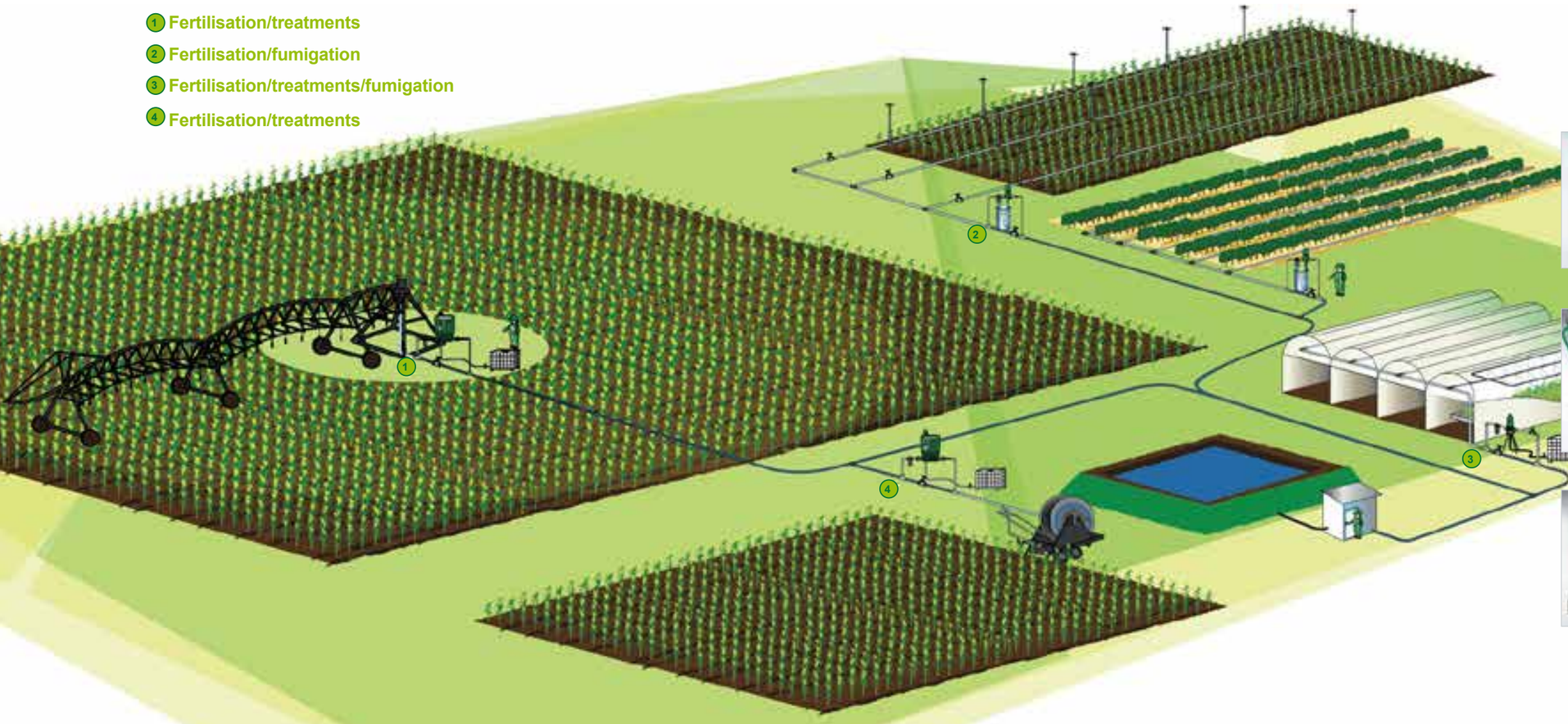
Optimises the addition of nutrients via the micro irrigation system

Accurate dosages

Adaptable to a wide variety of irrigation systems

Installation for open field cultivation

1. Fertilisation/treatments
2. Fertilisation/fumigation
3. Fertilisation/treatments/fumigation
4. Fertilisation/treatments



Recommended models:

The main flow rate and the daily volume of water to be treated determine the choice of range.

Additional options exist for special products.

D8GL

Water flow: 500 to 8 000 l/h
Operating pressure: 0.15 to 8 bar
Dosage: 0.2 to 2% **D8GL2**

D20GL

Water flow: 1 000 to 20 000 l/h
Operating pressure: 0.12 to 10 bar
Dosage: 0.2 to 2% **D20GL2**

D30GL

Water flow: 8 000 to 30 000 l/h
Operating pressure: 0.5 to 6 bar
Dosage: 0.02 to 0.2% **D30GL02**
0.1 to 1% **D30GL1**

Advantages

- ► **Optimises** the addition of nutrients
- ► **Improves** yield quantity and quality
- ► **Compatible with different products**
- ► **Reduce energy consumption**

Recommendations

When using with spray boom or seeders, make sure that your products are compatible: several pumps may be required to inject different products. Depending on what equipment you have, various installation options may be available. Please consult us. Unfiltered water will affect performance of your equipment. Positioning a filter (300µ maximum) upstream the Dosatron is recommended to guarantee that you obtain accurate doses and extend the life of the equipment.

To prevent blockages on the suction valve, the strainer must be suspended at least 10 cm above the bottom of the tank. Adjust the length of the suction hose to your equipment. Check the viscosity shown on the Safety Data Sheet (SDS) for your products.

Choice of the Dosatron

The choice of the Dosatron essentially depends on the required minimum and maximum irrigation flow rate and the injection rate you want to achieve.

For example:

• If you have 9 to 22 m^3/hr sector to irrigate, and you want to inject a 0.5% fertiliser solution, we would recommend the Dosatron D20GL2 or D30GL02. For acid or treatment dosing, PVDF models are available.

Please contact us for more information.

DRIP OR TRICKLE IRRIGATION, SPRINKLERS, PIVOTS, TRAVELER SYSTEMS

Easy to maintain

Operates with the water pressure - **no electricity required**

Improves the yield and the quality of the crop

Protects the environment

FLORAL DISPLAYS AND THE QUALITY OF THE ENVIRONMENT

Getting back to nature promotes a feeling of well-being in people.

The challenge is to balance the quality and vitality of plants, by providing them with the right amount of water and giving them the correct number of nutrients.

From planting flowers in city centres to growing plants on walls or creating sports parks, DOSATRON can find the right solution.

LANDSCAPING

DOSATRON meets your needs

Nutrition, treatments, weed control ◄

Landscape, turf, green wall, green roof ◄

Drip irrigation, integrated watering systems ◄

Water flow between 10 and 30 000 l/h ◄

Water pressure in the system between 0.12 and 10 bar ◄

A SOLUTION FOR YOUR LANDSCAPING NEEDS

Operares with water pressure

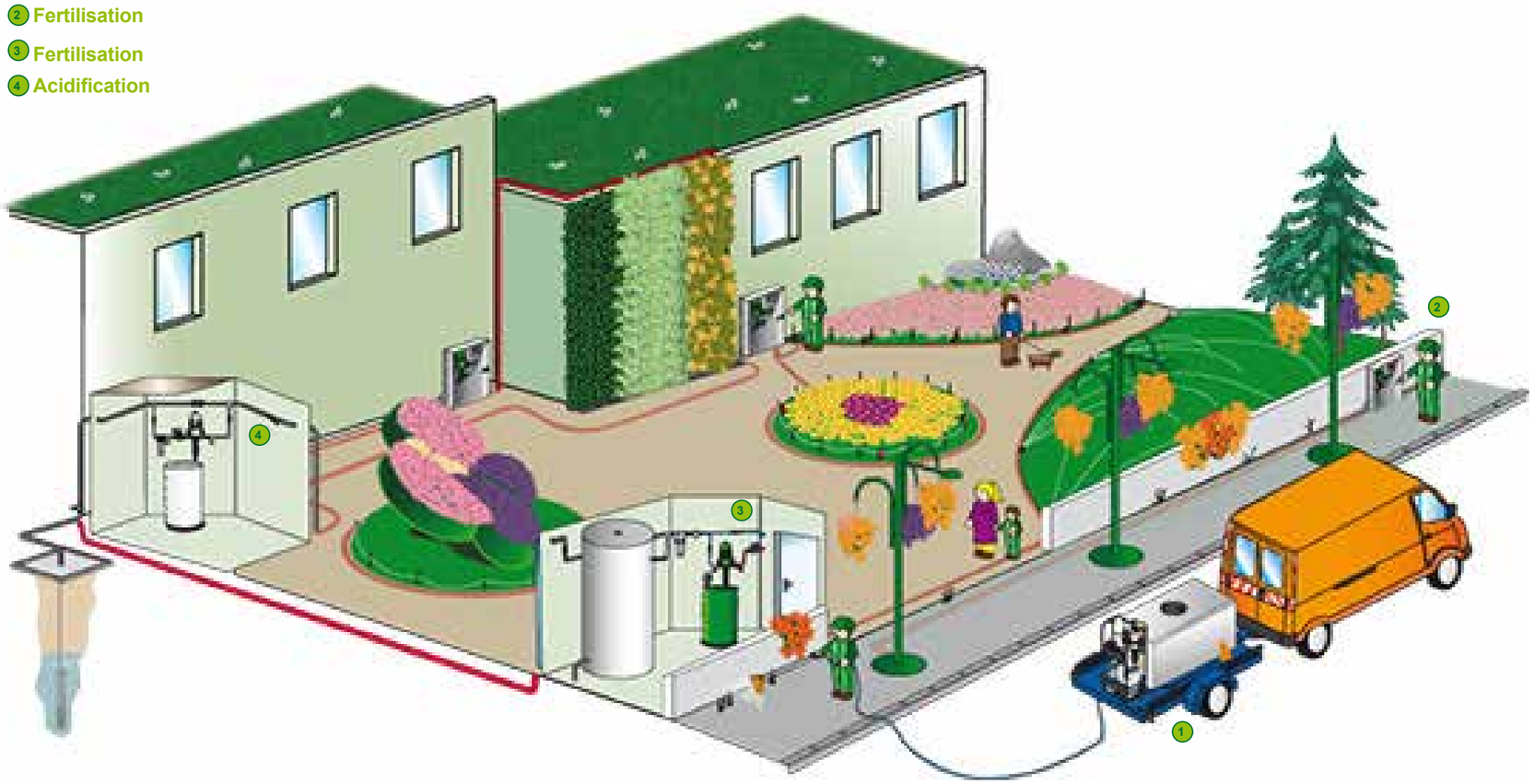
Optimises the irrigation system

Reduces maintenance costs

Respects the environment

Installation for landscaping

1. Treatment
2. Fertilisation
3. Fertilisation
4. Acidification



Advantages

- ► **Optimises** the addition of nutrients
- ► **Enhances** an ecological approach
- ► **Enhances** plant quality
- ► **Can be adapted** to all irrigation systems
- ► **Accurate dispensing** appropriate to the needs of the plants

Recommendations

For weed control and crop protection treatments, we have a range of specific dispensing devices made from PVDF. On sprinkler machines with infrared sensors, there are dispensing devices that are suitable for operating at low flow rates. Check the viscosity shown on the Safety Data Sheet (SDS) for your products. Unfiltered water will affect performance. Positioning a filter (300 µ maximum) upstream of the dispensing device is recommended to guarantee that you obtain accurate doses and extend the life of the equipment. Several pumps may be required if injecting different products: please check that your products are compatible. To prevent blockages on the suction valve, leave at least 10 cm between the bottom of the strainer and the bottom of your tank: adjust the length of your suction pipe to suit your equipment.

If using a mounted sprayer, or for applying fertiliser from a tank, please bare in mind the specific features of the dispensing devices: flow rate, pressure, type of mount.

Choice the Dosatron

The choice of the Dosatron essentially depends on the required minimum and maximum irrigation flow rate and the injection rate you want to achieve.

For example:

• If you have a sector covered by an automatic watering system with 2 to 6 m^3/h irrigation flow rate and you want to inject a 1% fertiliser solution, you can opt for the Dosatron D25GL, D3GL or D8GL range.

Please contact us for more information.

Recommended models:

The main flow rate and the daily volume of water to be treated determine the choice of range:

Additional options exist for special products.

D25GL

Water flow:	10 to 2 500 l/h	
Operating pressure:	0.3 to 6 bar	
Dosage:	0.2 to 2%	**D25GL2**
	0.2 fixed	**D25F02**

D3GL

Water flow:	10 to 3 000 l/h	
Operating pressure:	0.3 to 6 bar	
Dosage:	0.2 to 2%	**D3GL2**
	0.5 to 5%	**D3GL5**
	1 to 10%	**D3GL10**

D8GL

Water flow:	500 to 8 000 l/h	
Operating pressure:	0.15 to 8 bar	
Dosage:	0.2 to 2%	**D8GL2**

D20GL

Water flow:	1 000 to 20 000 l/h	
Operating pressure:	0.12 to 10 bar	
Dosage:	0.2 to 2%	**D20GL2**

D30GL

Water flow:	8 000 to 30 000 l/h	
Operating pressure:	0.5 to 6 bar	
Dosage:	0.02 to 0.2%	**D30GL02**
	0.1 to 1%	**D30GL1**

DRIP IRRIGATION, INTEGRATED WATERING SYSTEMS

Operates with water pressure - **no electricity**

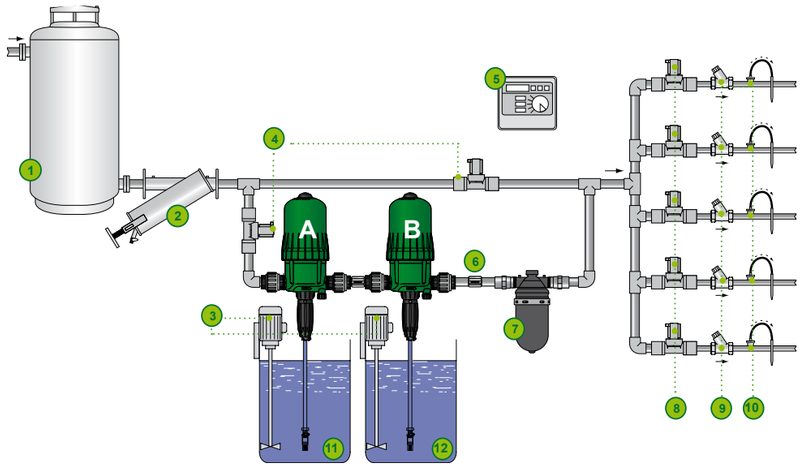
Injection rate **easily adjustable**

Dispensing capacity ranging from 0.03% to 25%

Environmentally friendly

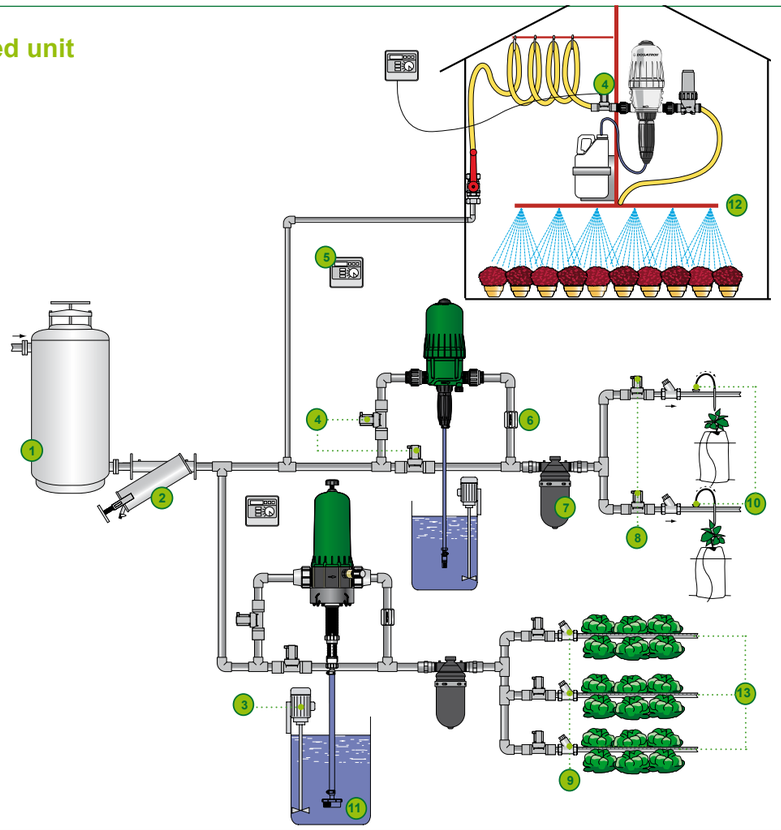
Integral bypass principle
(automated or not)

1. Sand filter
2. 300 micron filter
3. Mixers
4. Solenoid valves
5. Timer
6. Non-return valve
7. 80 to 130 micron filter
8. Sector solenoid valve
9. Pressure reducers
10. Drip irrigation system
11. Stock solution tank A
12. Stock solution tank B



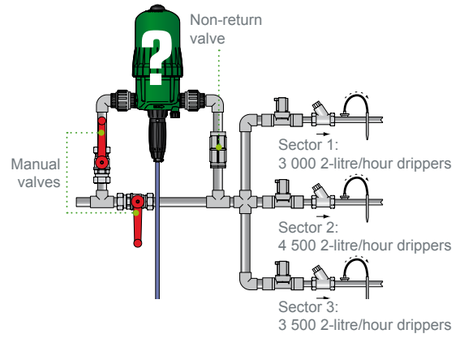
Principle of a decentralised unit
(automated or not)

1. Sand filter
2. 300 micron filter
3. Mixers
4. Solenoid valves
5. Timer
6. Non-return valve
7. 80 to 130 micron filter
8. Sector solenoid valve
9. Pressure reducers
10. Drip irrigation system
11. Stock solution tank
12. Spray boom
13. Drip tape



Choice of the Dosatron

The choice of the Dosatron essentially depends on the required minimum and maximum irrigation flow rate and the injection rate you want to achieve.



1 - Calculating the required irrigation flow rate

● **The minimum irrigation flow rate:**
Multiply the number of drippers (or sprayers or nozzles) on the smallest irrigation sector by the unit flow.
3 000 x 2 l/h = 6 000 l/h or 6 m³/h

● **The maximum irrigation flow rate:**
Multiply the number of drippers (or sprayers or nozzles) on the **largest irrigation sector** by the unit flow.
4 500 x 2 l/h = 9 000 l/h or 9 m³/h
Or multiply the number of drippers (or sprayers or nozzles) on **all the irrigation sectors** by the unit flow.
3 000 + 4 500 + 3 500 = 11 000 x 2 l/h or 22 m³/h

2 - Choice of dispensing device

Its maximum flow must be equal to or less than the required irrigation flow rate for the smallest sector.

Example sector 1: 6 m³/hr

Options: D8GL 500 l/hr to 8 m³/hr

D20GL 1 m³/hr to 20 m³/hr

As for the maximum flow, there are two options:

For fertigation sector by sector, the crucial factor is the maximum flow required for the largest irrigation sector, i.e. sector 2 with a flow rate of 9 m³/h.

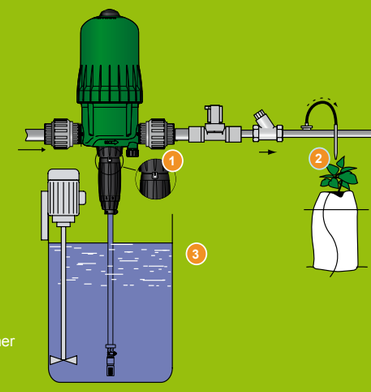
The required Dosatron is the D20GL with a range from 1 m³/h to 20 m³/h.

For **simultaneous fertigation** of all sectors, you have to calculate the sum of all the flow rates required, for example 22 m³/h.

In this case the required Dosatron is the D30GL, which ranges from 8 m³/h to 30 m³/h.

Note: it is preferable to choose a Dosatron with a maximum flow capacity higher than the required irrigation flow in order to optimize its life.

Preparing the stock solution
from water soluble fertilizer



N.B.: This solution preparation example is given for guidance only, and we cannot be responsible for it. Please call your chemical supplier for further information.

% Adjustment ↓	Final concentration in grams/litre →										
	0.5	0.75	1	1.25	1.50	1.75	2	2.5	3	4	5
0.2	250										
0.4	125	188	250								
0.6	83	125	167	208							
0.8	63	94	125	156	188	219					
1.0	50	75	100	125	150	175	200	250			
1.2	42	63	83	104	125	146	167	208	250		
1.4	36	54	71	89	107	125	143	179	214		
1.6	31	47	63	78	94	109	125	156	188	250	
1.8	28	42	56	70	83	97	111	139	167	222	
2.0	25	38	50	63	75	88	100	125	150	200	250
	Concentration stock solution ↓										

Weight of fertiliser (in g) to be put in the container and to be topped up with water (for 1l)

TECHNICAL INFORMATION

Recommendations

Depending on the water quality, install a 300 µ maximum filter upstream the Dosatron. Never use an inlet T at the intake to draw in two different solutions. For parallel configurations, a single stock of solution should supply the various Dosatrons. Always adjust the suction lenght to suit your equipment, leaving at least 10 cm between the bottom of the tank and the strainer. The level in the stock solution tank must never be higher than the Dosatron (risk of siphoning). Give preference to bypass configurations that allow : start irrigation first, and start fertilization (total bypass installation) only once the whole irrigation system is full of water (after a few minutes). If the Dosatron is used to supply more than one sector, activate the solenoid valves (which open and close gradually) simultaneously : close one sector and open the newt at the same time. Water is used to lubricate the pump motor never apply grease to the motor. For acid dosing, it is preferable to move the acid drum away from the Dosatron and put a cover on the drum.

INTEGRAL BYPASS OR DECENTRALISED INSTALLATION

Works with water pressure - **no electricity**

- Crop protection treatments
- Fumigation
- pH adjustment
- Flower preservation
- Post-harvest treatments
- Disinfection
- Etc.

To download
DOSATRON
app for free

or

DOSATRON INTERNATIONAL S.A.S.

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