



Irrigation

Non-Electric Water-Driven Dosing Pumps

Fruit & Vegetable Production | Greenhouse/Nursery | Field Crop Cultivation | Landscaping

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.

Dosatron Meets Your Needs

- Fertigation, crop protection treatments, pH adjustment
- Open fields, greenhouses, cold tunnels, soil-less cultivation
- Landscape, turf, green wall, green roof
- 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

Advantages

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

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D3GL

| Specifications | D3GL2 | D3GL5 | D3GL10 |
|--------------------|---------|---------------|---------|
| Water Flow | | 10 - 3000L/hr | |
| Operating Pressure | | 0.3 - 6 bar | |
| Dosage | 0.2- 2% | 0.5 - 5% | 1 - 10% |



D9GL

| Specifications | D9GL2 | D9GL5 |
|--------------------|----------------|----------------|
| Water Flow | 500 - 9000L/hr | 500 - 9000L/hr |
| Operating Pressure | 0.3 - 8 bar | 0.3 - 8 bar |
| Dosage | 0.2- 2% | 1 - 5% |



D20GL

| Specifications | D20GL2 |
|--------------------|------------------|
| Water Flow | 1000 - 20000L/hr |
| Operating Pressure | 0.12 - 10 bar |
| Dosage | 0.2- 2% |

D30GL



| Specifications | D30GL02 | D30GL1 |
|--------------------|------------------|----------|
| Water Flow | 8000 - 30000L/hr | |
| Operating Pressure | 0.5 - 6 bar | |
| Dosage | 0.02 - 0.2% | 0.1 - 1% |

D90GL



| Specifications | D90GL |
|--------------------|-------------------|
| Water Flow | 25000 - 90000L/hr |
| Operating Pressure | 0.5 - 8 bar |
| Dosage | 0.1 - 0.5% |

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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.

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.

$$3\,000 \times 2 \text{ L/hr} = 6\,000 \text{ L/hr or } 6 \text{ m}^3/\text{hr}$$

The Maximum Irrigation Flow Rate

Multiply the number of drippers (or sprayers or nozzles) on the largest irrigation sector by the unit flow.

$$4\,500 \times 2 \text{ L/hr} = 9\,000 \text{ L/hr or } 9 \text{ m}^3/\text{hr}$$

Or multiply the number of drippers (or sprayers or nozzles) on all the irrigation sectors by the unit flow.

$$3\,000 + 4\,500 + 3\,500 = 11\,000 \times 2 \text{ L/hr or } 22 \text{ m}^3/\text{hr}$$

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

For simultaneous fertigation of all sectors, you have to calculate the sum of all the flow rates required, for example 22 m³/hr. In this case the required Dosatron is the D30GL, which ranges from 8 m³/hr to 30 m³/hr.

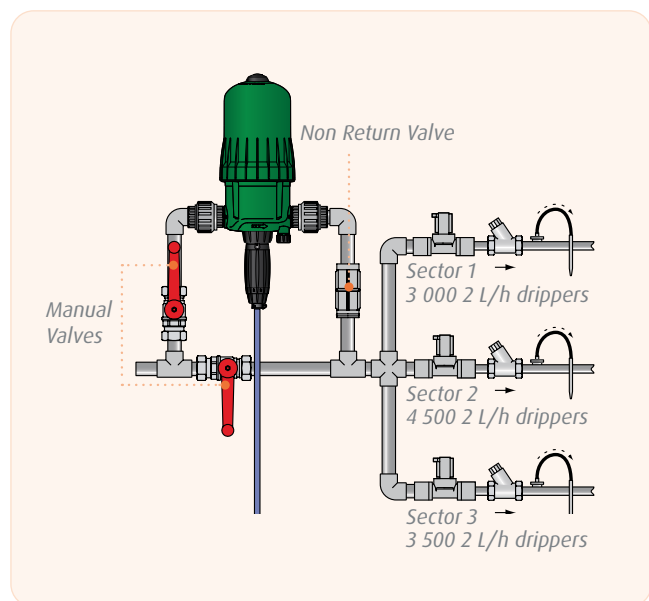
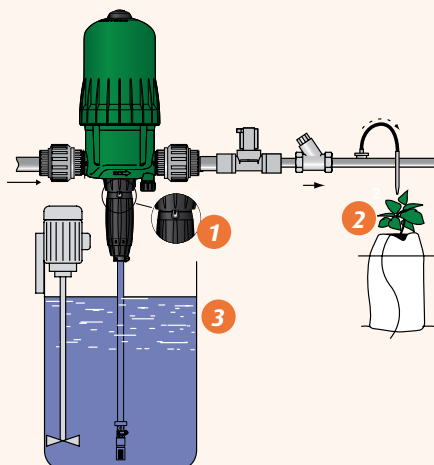
Note: it is preferable to choose a Dosatron with a maximum flow capacity higher than the required irrigation flow in order to optimize its life.

Preparing the Stock Solution

From water soluble fertilizer. This solution preparation example is given for guidance only, and we cannot be responsible for it. Please call your chemical supplier for further 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 length 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 next 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.



2 Final Concentration in Grams/Litre

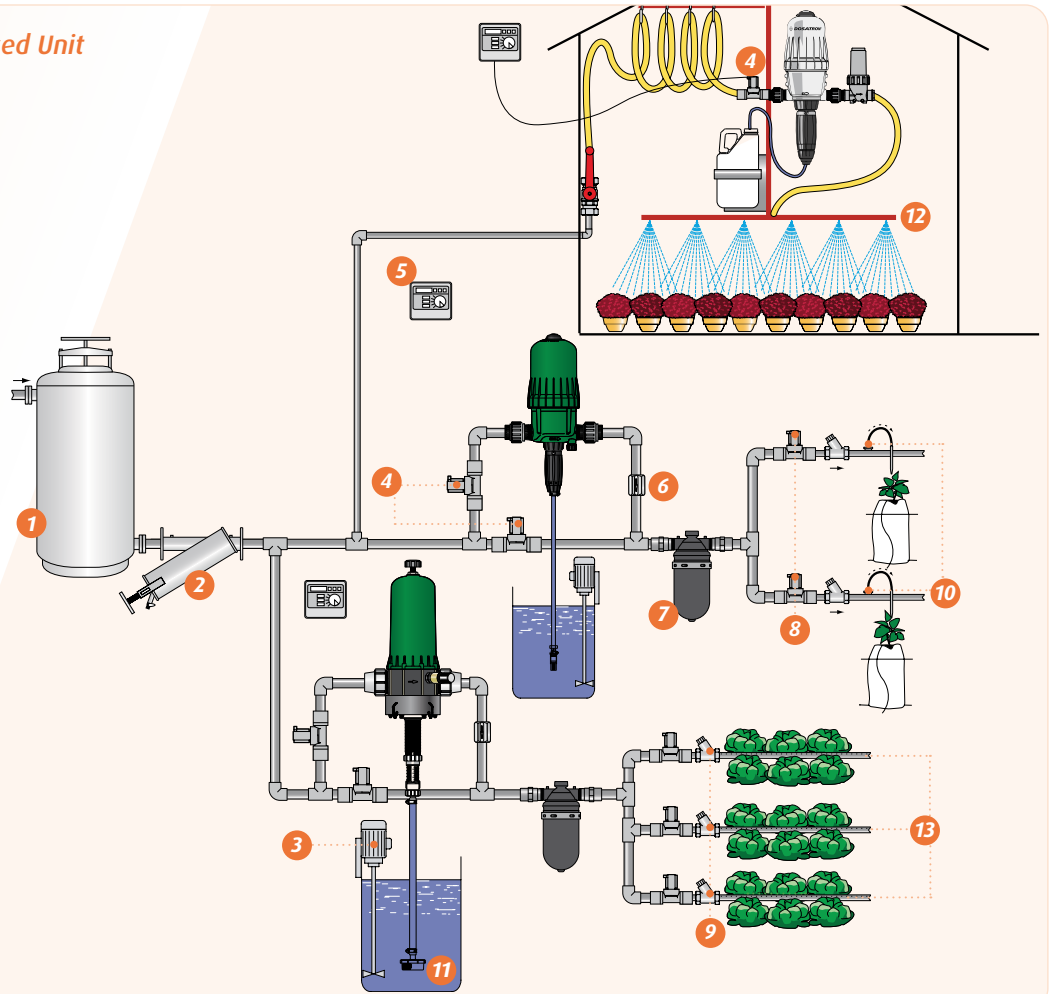
| | | 0.5 | 0.75 | 1 | 1.25 | 1.50 | 1.75 | 2 | 2.5 | 3 | 4 | 5 |
|---|-----|-----|------|-----|------|------|------|-----|-----|-----|-----|-----|
| 1 | 0.2 | 250 | | | | | | | | | | |
| | 0.4 | 125 | 188 | 250 | | | | | | | | |
| | 0.6 | 83 | 125 | 167 | 208 | | | | | | | |
| | 0.8 | 63 | 94 | 125 | 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 |

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

3 Conversion Stock Solution

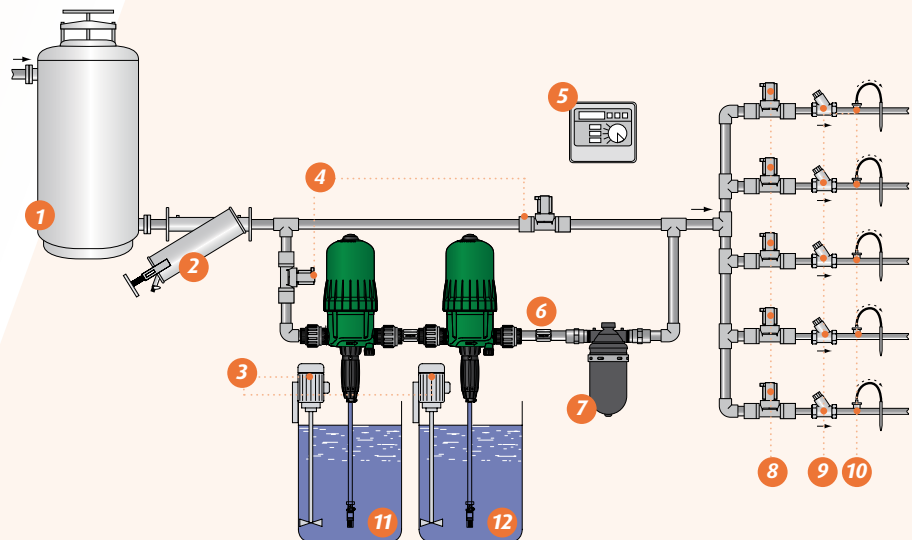
Principle of a Decentralised Unit
(Automated or not)

- 1 Sand Filler
- 2 300 Micron Filter
- 3 Mixers
- 4 Solenoid Valves
- 5 Timer
- 6 Non-return Valve
- 7 80 - 130 Micron Filter
- 8 Sector Solenoid Valve
- 9 Pressure Reducers
- 10 Drip Irrigation System
- 11 Stock Solution Tank
- 12 Spray Boom
- 13 Drip Tape



Integral Bypass Principle
(Automated or not)

- 1 Sand Filler
- 2 300 Micron Filter
- 3 Mixers
- 4 Solenoid Valves
- 5 Timer
- 6 Non-return Valve
- 7 80 - 130 Micron Filter
- 8 Sector Solenoid Valve
- 9 Pressure Reducers
- 10 Drip Irrigation System
- 11 Stock Solution Tank A
- 12 Stock Solution Tank B





DOSATRON®

Because life is powered by water®

Options Accessories Spares

Standard Dosatron Housing & Material

| | |
|----------------|---|
| Housing | Special polypropylene, HT |
| Motor Piston | Polypropylene, polyamide, VF or HT, peek, PVDF |
| Injection area | Polypropylene, polyethylene, hastelloy (check valve spring) |
| Injection hose | PVC or polyethylene |

Available Options

Optimized compatibility

| | |
|---|--------------------------------------|
| AF Recommended seals for alkaline concentrate | PVDF Housing |
| VF Recommended seals for acids, oils, odour-or pest control concentrates | IE External injection |
| K For highly concentrated acids (> 15 %) | V Kit for viscous concentrate |

Injection Hose - Special material for hose and foot strainer available

Note: To ensure compatibility use part number referenced in manual when choosing Options, Accessories & Spares. Or consult your nearest Dosatron expert.

Housing (Optional)

Carter for highly concentrated acids



PV
DF

External Injection (Optional)

Fitted on D25RE2



IE

Seal and Seal Kits



AF

VF

K

V

Mixer (Optional)



Injection Hose & Foot Strainer

Available in PVC or PE



Bypass (Optional)

System for manual activation of the additive suction (on) and stop (off)



Supported Legs

Fitted on D20GL2



Bell Housing Assembly



Lower Body Assembly



Sub Assembly Motor & Plunger Rod



Complete Venturi Injector (Optional)



Vacuum Breaker (Optional)



Injection Stem



Installation Kit

