

Small size nutrient solution circulation system for plant factories, shops, experiment facilities

Small size nutrient solution circulation system



The small size nutrient solution circulation system is a horticultural nutrient solution circulation system for small scale plant factories and horticultural facilities, such as experimental facilities and various shops.

The system adopts the consecutive processing method, and, although it is small size, uses devices which have excellent endurance such as industrial pH / EC meters, dedicated pumps for fertilizer, up agent and down agent pumps, and mixers with low acoustic noise. In addition, the tank uses polyethylene resin which is safe and shock resistant. The system, is an affordable price through the thorough reduction of costs, has a broad range of options to provide control systems which are suitable for the facilities of the customer. With this one unit, everything can be handled from management of nutrient solutions through to supply to horticultural tanks



With this one unit,
an overall small
scale management
of nutrient
solutions is
possible.

CEMCO



This is a small size nutrient solution circulation system that has a high level of reliability as well as a compact design

The system makes use of resin cases which have an excellent corrosion resistance in addition to strong water proofing properties

Since the fertilizer control machines, the pumps, and the mixers all have a waterproof structure, it is safe even when accidentally subject to inundation with water. In addition use is made of rustproof resin cases, and on top of that the mixing tanks make use of polyethylene which is strongly resistant to shock, all of which increases the endurance of the product.

The system has a compact design which means that it does not take up much installation space

Since the pumps, the mixers, and the tanks are all efficiently placed, there is only a small space that is needed for the installation, so that enables the unit to be placed under the cultivation racks.

Versatile control functions

The system is equipped with functions which can cope with various conditions, such as a timer function as well as an interlock function, etc., which prevents the injection of too large an amount of fertilizer, down agent, or up agent. In addition, with a transfer output of 4 to 20 mA DC as well, it can also be used for data collection.

Procedure of installation is easy

The installation of the system can be carried out simply by assembling the parts. All of the piping is of a hose connection type which can just be cut to the desired length and then simply connected. Since the electrical wiring has been already installed, simply plug the power supply of the control machine, the mixer, and the nutrient solution supply pump into the electric outlet.

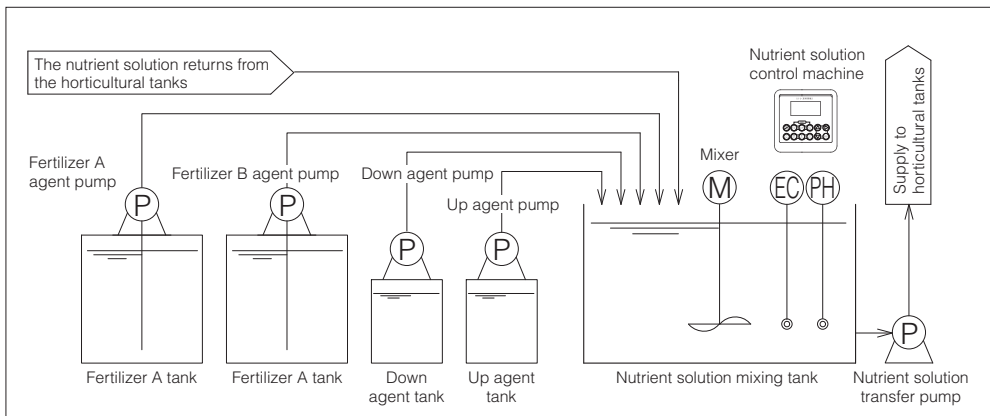
Various controls and system configurations are possible as alternative options

We will offer a system that can meet customer needs such the need for more specialized controls above that offered in the standard configurations as well as the customers desire to add additional functions. For these cases please contact us.

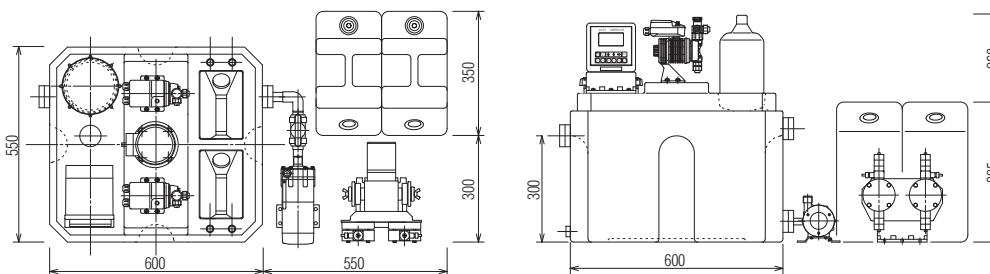
Model	MSOE-100
Nutrient solution transfer pump (changeable depending on scale of cultivation)	Magnet pump: 100 V or 200 V × 90 W 20 L / min × 4 m, bore 16 A
Fertilizer A / B pump	Quantitative pump: 100 V or 200 V × 25 W Dual type: maximum discharge rate 300ml / min
Down agent (acid) pump	Electromagnetic quantitative pump: 100 V or 200 V × 20 W Maximum discharge rate 65 ml / min
Up agent pump (alkali)	Electromagnetic quantitative pump: 100 V or 200 V × 20 W Maximum discharge rate 65 ml / min
Mixer (stirrer)	100 V or 200 V × 45 W
Nutrient solution mixing tank	Made of polyethylene, 100L
Fertilizer A / B tank	Made of polyethylene, 20L
Down agent / up agent tank	Made of polyethylene, 4L
Nutrient solution return port	Bore 25A



Placing the mixer in the center enables the increase of stirring efficiency inside the tanks.



Diaphragm quantitative pump for fertilizer injection



External appearance with optional smoke cover attached

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For inquiry