

# MODEL MITC-3

## 3 PUMP AUTOMATED SKID MOUNT SYSTEM

The Model MITC-3 Chemical Injection System is a fully automated 3 Pump System designed to give the operator full control of the system from most anywhere in the world with the use of a computer, tablet or smart phone.

Pumps are installed on a skid for portability. The electronic components and controller are installed in a NEMA 4 Enclosure for protection, security and also mounted to the skid. By design it is a fully automated system you can dial up with your cell phone to start/stop or make adjustment to the pump and monitor results and download result to spreadsheets. The system comes pre-wired and plumbed for simple start-up and operation and includes 3- ITC Chemical Injection Pump, controllers, back flush system, Wi-Fi Connector gate to ITC cloud and includes many other features.



### **Injection Pump & Plumbing**

3 ITC Chemical Injection pumps sized to customer needs.

Suction line plumbed for all 3 pumps

Discharge line plumbed for all 3 pumps



### **NEMA 4 Enclosure**

Electrical Control Panel

Controllers, inverters, Modem, router

NOTE: See ITC Water Controller

3000 section for full details on control and monitoring capabilities.

Material: Carbon Steel

Size: 42" long x 12" wide x 36 high

Color: Light Gray

Weight: 170 Pounds

# ITC Water Controller 3000

## **SIMPLICITY IN IRRIGATION CONTROL**

Control of 96 blocks through 50 irrigation programs. Easy and intuitive programming allows the user to avoid schedule problems such as valve overlaps. Automatic filters cleaning and pumps starter function are available as well as the Watering Factor to modify the duration of all the irrigation programs.



### **Wi-Fi Connection:**

Brand: MULTITECH 100 Series Router  
Part #: 82102051L

The MultiConnect Cell 100 Series Router (MTR-LTE) provides secure data communication between many types of devices that use legacy and the latest communication technologies



- Power supply: 230Vac (+/-20%) 50-60Hz  
Protection: IP55
- Temperature: 0-45°C  
Max relative humidity: 95% (without condensation)

### **Inputs**

	Water Controller 3000
	6/24
Flowmeter	x
EC (electrical conductivity)	x
pH	x
Pressure	x
Activation filter cleaning	x
Emergency stop	x

### **Outputs**

	Water Controller 3000
	6/24
24 Outputs for electro valves and pumps	x
6x Pump output (4-20mA)	x
Alarm EC	x
Alarm pH	x
Alarm flow	x
Alarm pressure	x
Ethernet / LAN	x

### **Chemical Injection Pump**

Brand: ITC

Model: Per customer request

# CloudManager App

ITC's CloudManager is the online platform that can control remotely the water controller 3000 irrigation controller



Intuitive application to set up the **50 irrigation programs** as well as the **48 fertigation recipes** in the Water Controller, and to monitor at **real-time** the parameters used as key indicators of the crop.

Available on:



All the actions can be done through the mobile or tablet **via a direct WI-FI link** with the unit in the field, or remotely through internet access. The app holds all the data which is easily displayed in graphics, spread sheet or pdf monthly reports (e.g.).

All this information is stored in the ITC Cloud-Manager Server which is **in continuous communication** with the units in the field through a high secure encrypted m2m communication.

# Key Features

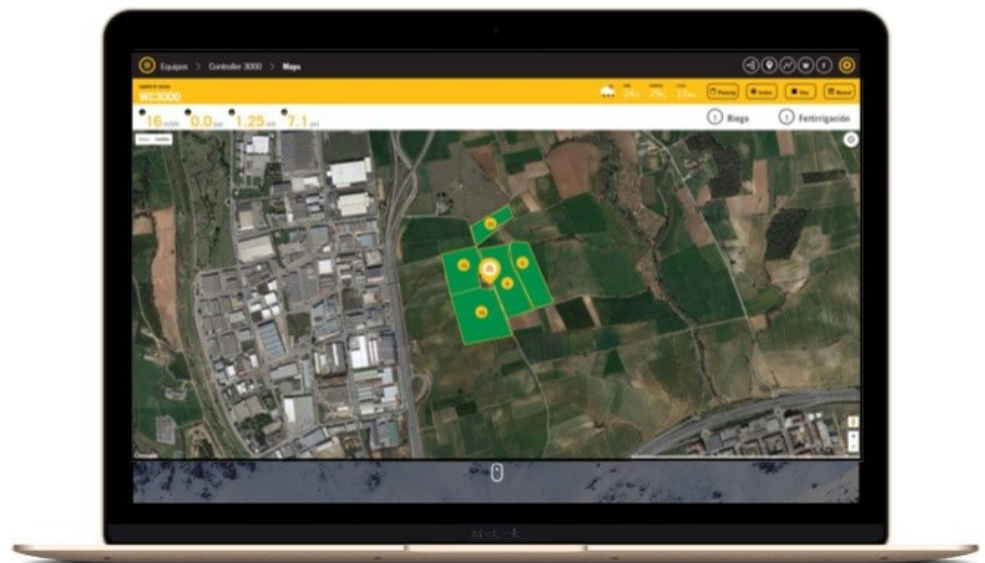
## Real-time information

Check if the irrigation program has started correctly with the appropriate flow rate and the provided valves from your phone or tablet. Alarms can also be programmed in case of anomaly.



## Satellite view

Of the installation water resources: the fact of being able to see the irrigation sectors drawn on a satellite image with each sector Flow allows to check, at a glance, if we have the system well organized.



## Conductivity and pH readings

See the last 100 readings of EC, pH flow and pressure from your mobile device to check if the fertigation is being carried out correctly. If there are oscillations or problems to get the values of pH or EC to set-point, the adjustment parameters can be corrected from the mobile or tablet at the moment.



## Easily check the cost

The CloudManager App offers the possibility of knowing the exact cost of the crop. Reports are generated automatically and allows to know the water consumption and fertilizers separated by sectors and by dates.

**ITC**  
IRRIGATING FERTILIZERS

**TRACKING REPORT**

Irrigation Program: 4      From: 2016/06/21 09:44  
 Serial number: 65535      To: 2016/06/22 09:44  
 Fertigation Program: -

**WATER**

	VOLUME	Time	min(mS)	max(mS)	average(mS)
TOTAL WATER	9.58	20+ 10s	16.30	16.30	16.30
WATER WITH FERTILIZER	9.54	20+ 2s	16.30	16.30	16.30
CLEAN WATER	0.04	8s	16.30	16.30	16.30

**PRODUCT AND PERCENTAGE IN RELATION TO WATER**

	VOLUME	(%)	min(mS)	max(mS)	average(mS)
PI product 1s	0.10	0.00	0.00	3.00	3.00
PI product 2s	21.00	0.00	0.00	36.00	36.00
PI product 3s	0.00	0.00	0.00	4.00	4.00
PI product 4s	1.00	0.01	0.00	1.00	1.00
PI product 5s	0.00	0.00	0.00	0.00	0.00
PI product 6s	0.00	0.00	0.00	0.00	0.00

**SENSORS**

	min	max	average
EC (mS)	1.26	1.30	1.28
F (bar)	0.00	0.00	0.00
pH	7.10	7.10	7.10

**FILTERS**

	Flushings	Total Time
FILTER FLUSHING	2	24.00s

From: 2016/06/21 09:44  
 To: 2016/06/22 09:44

Product	Volume (m <sup>3</sup> )	EC (mS)
PI product 1s	0.10	3.00
PI product 2s	21.00	36.00
PI product 3s	0.00	4.00
PI product 4s	1.00	1.00
PI product 5s	0.00	0.00
PI product 6s	0.00	0.00

Filter	Volume (m <sup>3</sup> )	EC (mS)
FILTER FLUSHING	0.04	16.30

## Weather forecast

Having the weather forecast to five days is very useful to anticipate what are the most appropriate actions that must be carried out.



## Key Points

- *Extremely easy-to-use system which convert the tough job of setting up the irrigation programs into an easy*
- *an intuitive few steps job*
- *Plug &play m2m system. Just giving power to the unit in the field the unit link automatically to the CloudManager and the unit is available in your mobile*
- *Geolocate the unit and display valves, pumps, filters and blocks on a satellite view or map, highlighting the activated devices on real time*
- *Graphic display of the evolution of fertigation parameters such as EC and pH as well as water flow and pressure. Fertilizer instantaneous flow can be displayed in the same graph as EC, pH and water flow to check and correct, of necessary, pH and EC automatic PI control*
- *SMS and email alarm service for any of the parameters controlled (water flow, pressure, EC, pH...)*
- *Thanks to geolocation the assistant informs about the weather forecast for the next 5 days, which can be directly linked to increase or reduce the irrigation run time through the Watering Factor.*