



AgriLive Platform User Manual

Ver. 1.0

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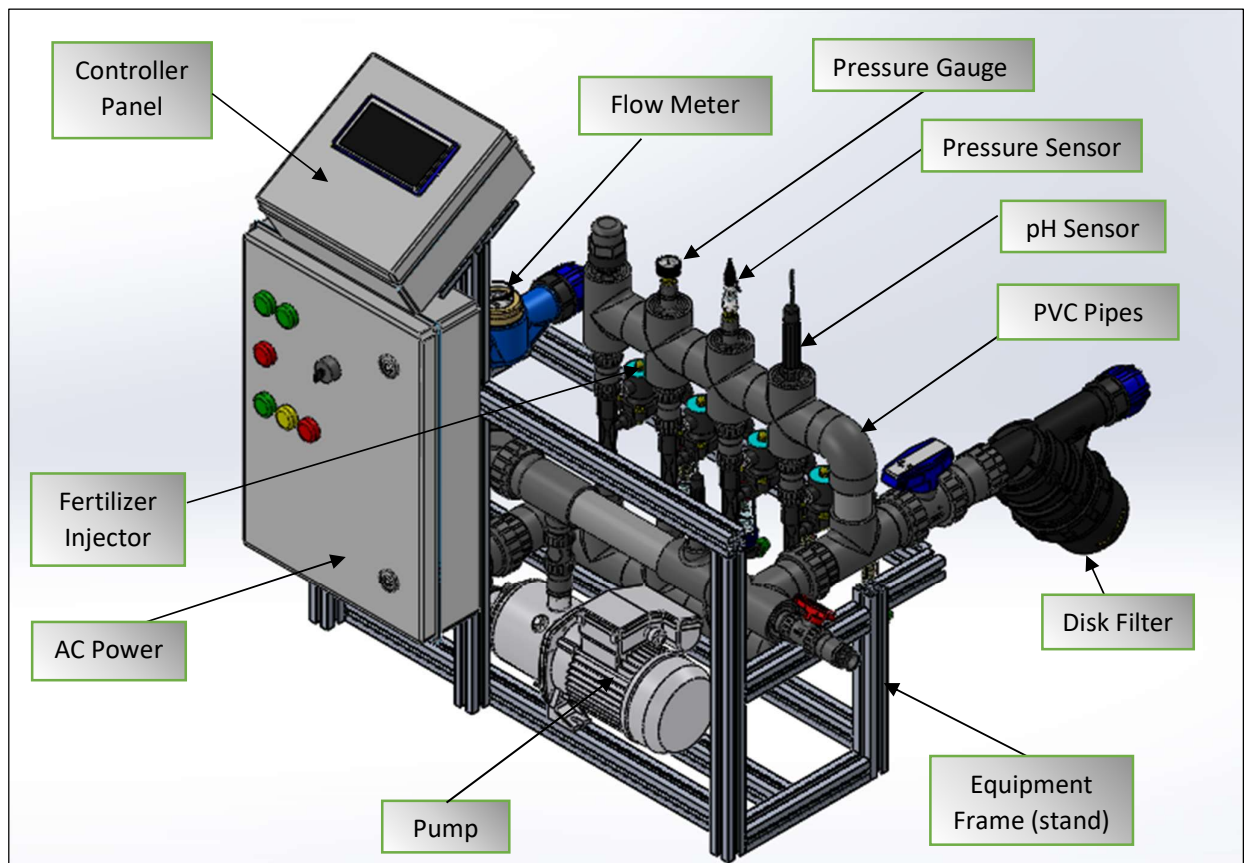
Section 1: Overview

AgriLive is a precision fertilization and irrigation (fertigation) platform which automates and controls fertilization of a crop field by accurately injecting desired pre-mixed fertilizers into the irrigation water.

The user creates custom irrigation programs that can determine time and duration of each irrigation zone based on soil moisture condition, soil nutrients, weather condition, as well crop requirements. This manual will provide the instructions on how to program this equipment.

AgriLive platform consists of the following key items:

1. Equipment Frame (aluminum stand)
2. AC Power
3. Controller Panel
4. Pump
5. PVC Pipes
6. Pressure Sensor
7. Flow Meter
8. Fertilizer Injector
9. Pressure Gauge
10. pH Sensor
11. Disk Filter



Principle of Operation:

AgriLive platform is designed to accurately irrigate and fertilize open farms or greenhouses to optimize water and fertilizers usage based on soil nutrients, weather conditions, and crop needs.

The equipment can be set to irrigate, or fertilize through an irrigation program, commonly referred to as irrigation and fertilization Job

Upon user entry of desired amounts of water and fertilizers, the equipment mixes the desired fertilizers with irrigation water. The system can be configured to run manual or automatic Jobs

Section 2: Modes of Operation

The equipment can be operated in multiple modes as follows:

- 1- Manual control using panel mode switch
- 2- Manual control using touch screen display
- 3- Manual irrigation (with fertilization, if needed) Job
- 4- Scheduled irrigation (with fertilization, if needed) Job

Manual control using panel modes switch: This mode allows the user to run the main pump by setting the panel mode switch (Water Pump Switch) to “**M**” (**Manual**) position on the power panel. Note that this mode does not support flow meter operation and therefore, system reports will not be available.

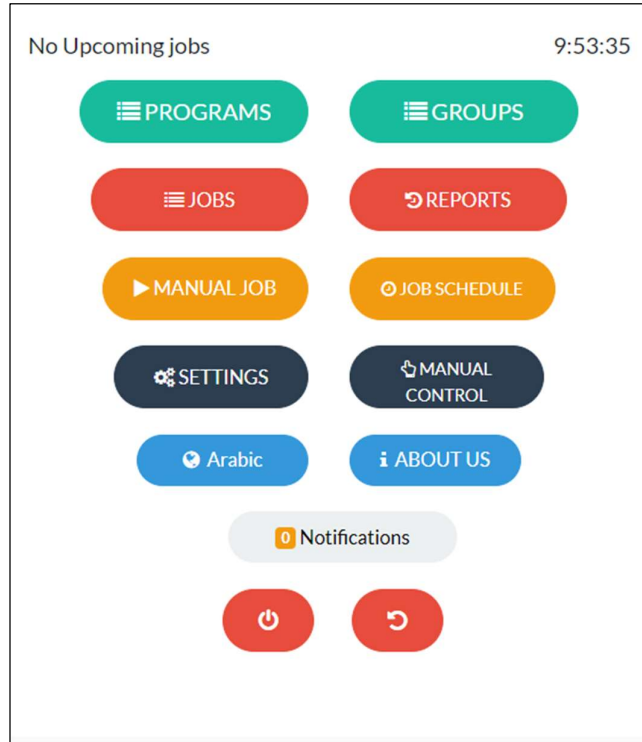
Manual control using touch screen display: In this mode, the user can control system operation by setting the panel modes switch to “**A**” (**Auto**) position.

Manual irrigation Job: This mode of operation allows the user to run an irrigation (and fertilization, if needed) Job by selecting a pre-programmed Job. This is done by pressing the “**Start**” button on the display screen.

Scheduled irrigation Job: This mode allows the user to run the equipment by selecting a previously programmed irrigation (and fertilization, if needed) Job under “**JOB SCHEDULE**”.

Section 3: Touch Screen Interface

Below is the home screen display with available menu options. The home screen also shows the local and remaining time of the current Job or “No Upcoming Job” if no Job is scheduled for the day.



Menu options allow the user to run the system in different modes of operation, They also set programs, schedules, save reports, and view or edit settings. In addition, the user can select the desired language between Arabic or English.

Below is a brief description of each home screen option:

Menu Options Definition:

PROGRAMS: Pressing this button will show a table of previously set programs which provides the option to edit or delete any pre-set program. Furthermore, it allows the user to create ne

A Job or a program defines the desired quantity of water and fertilizers that the user can store for later use either in manual or scheduled modes. The program defines three quantities of water:

1. **WB (Water Before):** This quantity represents the amount of water used before mixing fertilizers (m^3) intended to flush and pressurize the system before irrigation.
2. **MQ (Main Quantity):** This quantity represents the amount of water that is mixed with the desired fertilizers (m^3). This is the water quantity that's needed to irrigate a Group (or zones in a Group)
3. **WA (Water After):** This quantity represents the amount of fresh water (m^3) intended to flush the system after an irrigation Job

The quantity of fertilizers (liter) can be set based on crop needs. The system can support 3-6 types of fertilizers depending on equipment model

GROUPS: This option shows a table of previously set groups. It also gives the option to edit or delete them. Additionally, it allows the user to create a new Group. A Group can be a single or multiple zones. A zone is a designated farm area that's controlled by a dedicated valve

JOBS: Selecting this button will list a table of previously programmed Jobs and gives the ability to edit or delete them. Additionally, it allows the user to create new Jobs. A job is a program that supports the irrigation (and fertilization) of one or more Groups

REPORTS: This option allows the user to view Jobs reports, errors, or notifications. The user can choose when to view these reports

MANUAL JOB: This option gives the user the ability to manually run a Job

JOB SCHEDULE: This option lists the schedules of programmed Jobs. User can also edit Job Schedule as needed

SETTINGS: Selecting this button allows the user to view equipment settings

MANUAL CONTROL: This option allows the user to manually control the equipment

Arabic: This button allows the user to change user interface language to Arabic

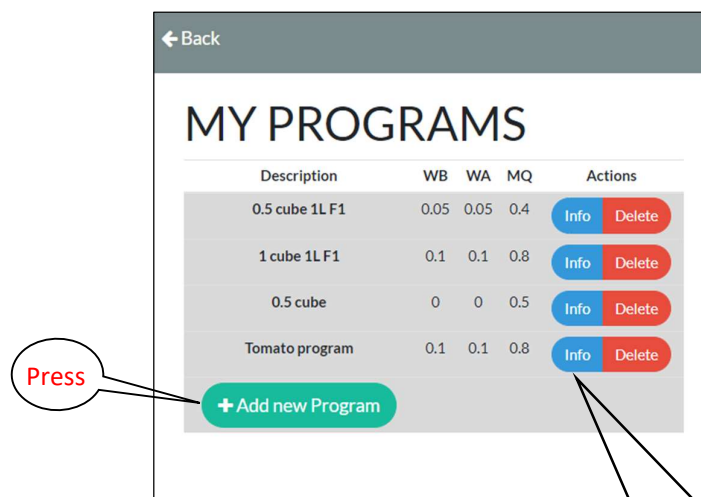
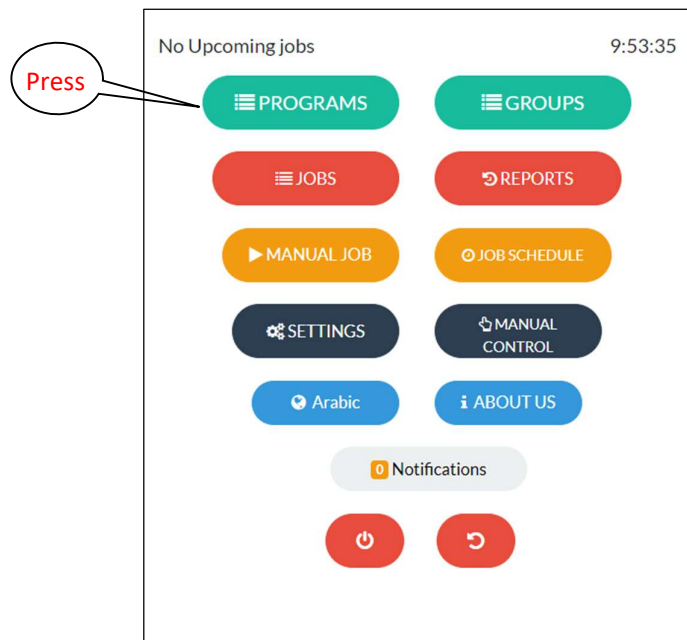
ABOUT US: This button provides Snipe contact information

Notifications: This button displays Notification Log

Power ON and Reset are available at the bottom of the Home Screen

How to create a new program:

1. From the Home Screen, press on “**PROGRAMS**”
2. Press “**Add new Program**”
3. Assign a name to the program
4. Set quantity of water to use before mixing fertilizers (**WB**)
5. Set quantity of water to use for irrigation (**MQ**)
6. Set the quantity of water to use (**WA**) after mixing fertilizers
7. Set the quantity and type of fertilizers required to mix with water
8. Press “**Add**”



Info allows you to view or edit a saved program

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ADD PROGRAM

Name Fertilizers on (L) Edit Mode: ON

WB(m³) MQ(m³) WA(m³)

WB MQ WA

F1(L) F2(L) F3(L)

Enter program name

Set Fertilizer Quantity Unit (Liter or Liter/m3)

Edit Mode Enabled

Enter water quantity before mixing fertilizer

Set water quantity after mixing fertilizers (WA)

Set main water quantity (MQ) to be mixed with fertilizers if needed

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ADD PROGRAM

Name Fertilizers on (L) Edit Mode: ON

WB(m³) MQ(m³) WA(m³)

WB MQ WA

F1(L) F2(L) F3(L)

Set fertilizer 1 quantity

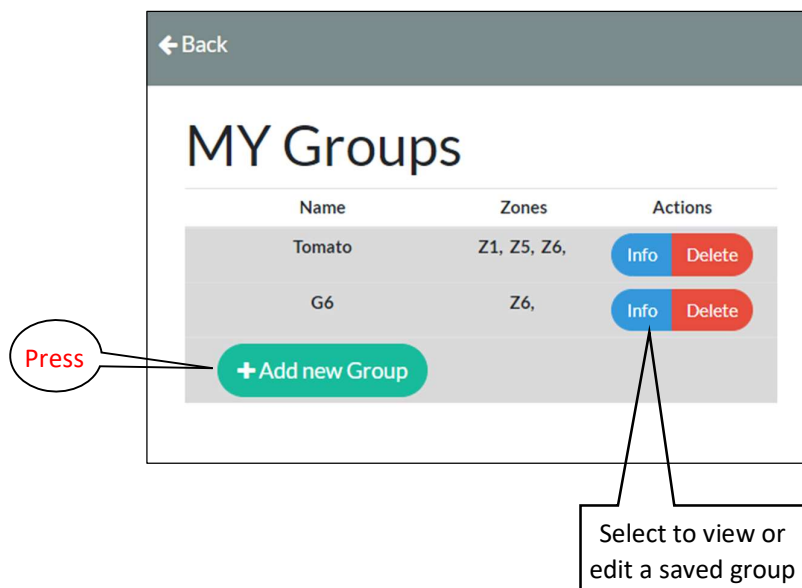
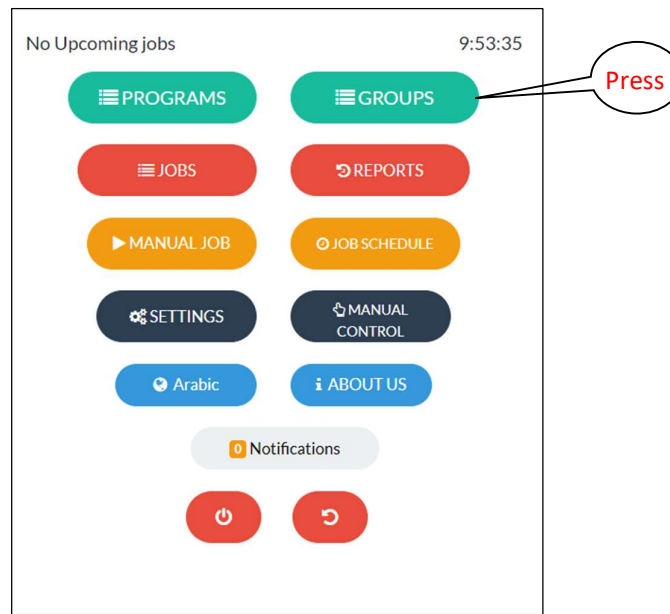
Set fertilizer 2 quantity

Set fertilizer 3 quantity

Press

How to add a new Group:

1. From the Home Screen, press “GROUPS”
2. Press “Add new Group”
3. Enter group name
4. Select all the zones that you want to add to the group.
5. Press “Add”



The image shows a mobile application screen titled "ADD Group" with a "Back" button in the top left corner. The form contains a "Name" input field, a "Zones" section with checkboxes for Z0, Z1, Z2, and Z3, and a separate section with checkboxes for Z4, Z5, Z6, and Z7. A green "Add" button is located at the bottom right. Annotations include a box pointing to the "Name" field with the text "Enter Group name", a box pointing to the Z0-Z7 checkboxes with the text "Select all applicable Zones", and a circle pointing to the "Add" button with the text "Press".

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ADD Group

Name

Zones

Z0

Z1

Z2

Z3

Z4

Z5

Z6

Z7

Add

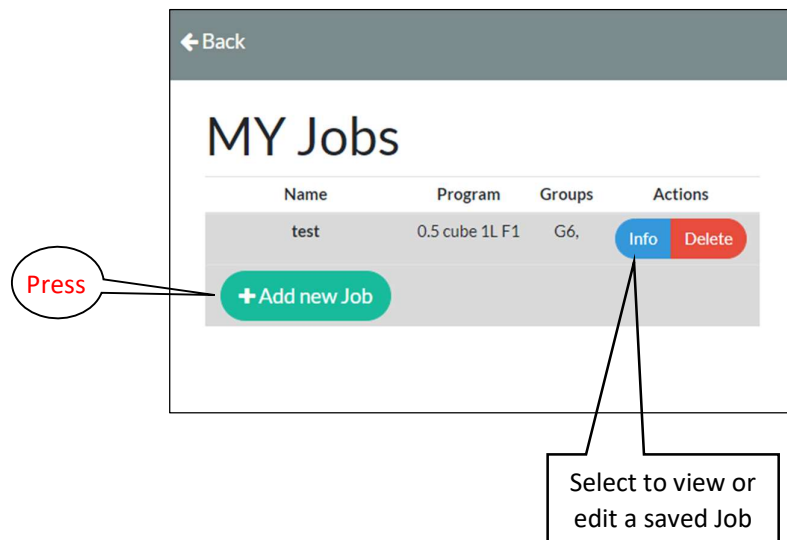
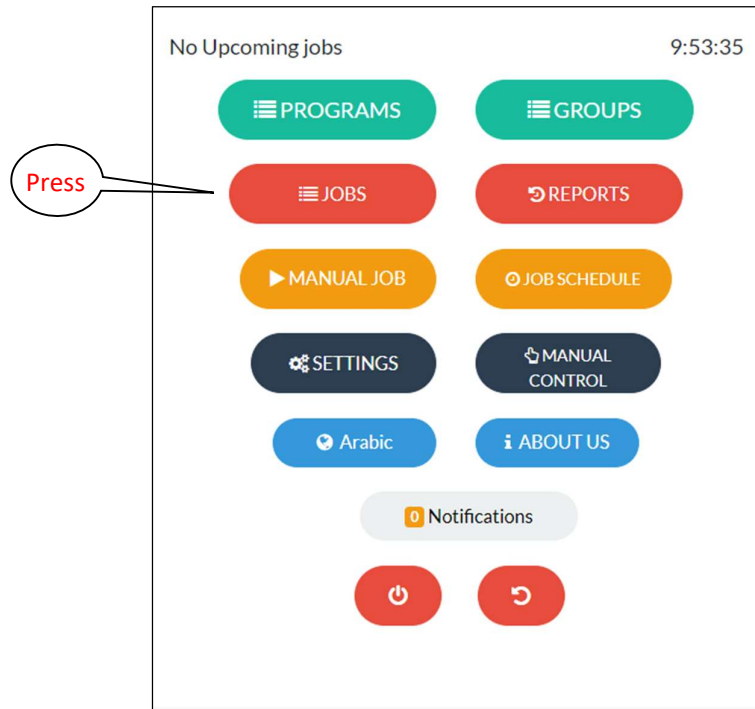
Enter Group name

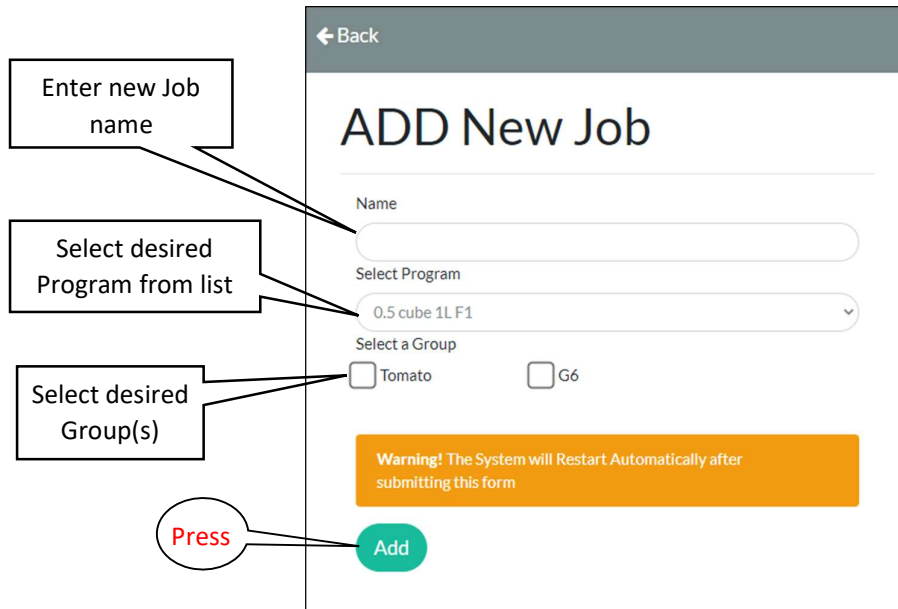
Select all applicable Zones

Press

How to add a new Job:

1. From the Home Screen, press “**JOBS**”
2. Press on “**Add new Job**”
3. Enter job name
4. Select a program from the list
5. Select desired Groups
6. Press “**Add**”



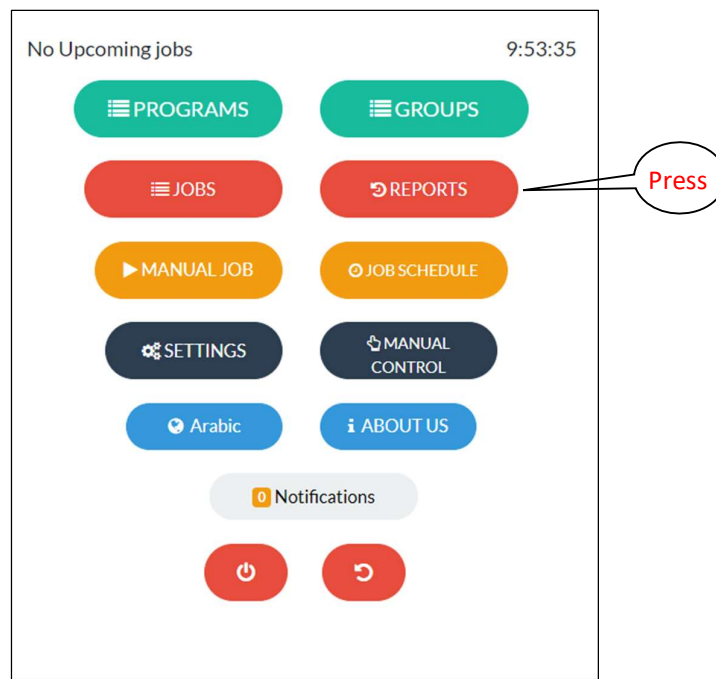


How to view reports:

1. From the Home Screen, press **"REPORTS"**
2. Select the desired category: **"JOBS"**, **"ERRORS"** or **"NOTIFICATIONS"**

Note: Categories **"JOBS"** and **"ERRORS"** provide the option to define duration over which to view the reports

Note: Category **"NOTIFICATIONS"** will allow user to view reports directly



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Choose category you want to make report for it:

JOBS ERRORS

NOTIFICATIONS

Enter Report "From" Date

Enter Report "To" Date

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Enter a date range to get jobs information

Date From:

Date To:

Submit

OR Choose One Of Reports Below

Today Last Week Last Month

Jobs Report

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Jobs Log Report

From 04-12-2022 To 11-12-2022

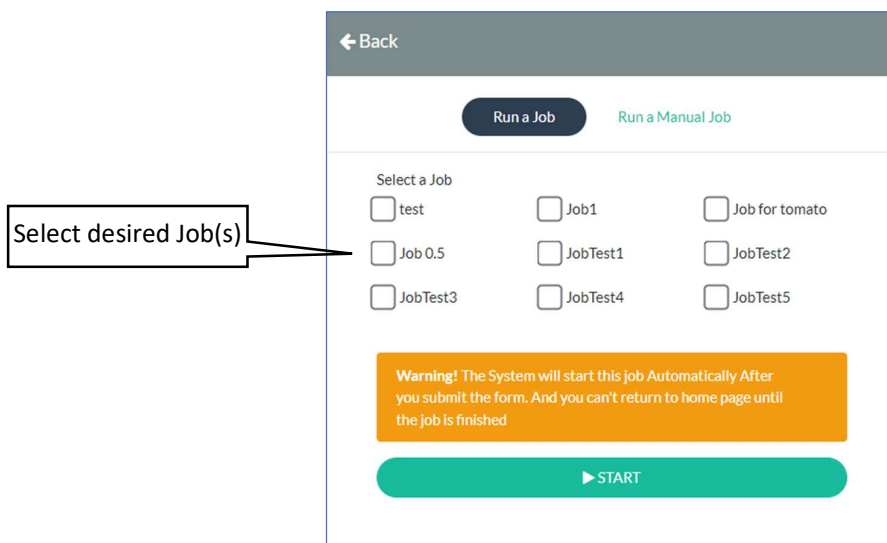
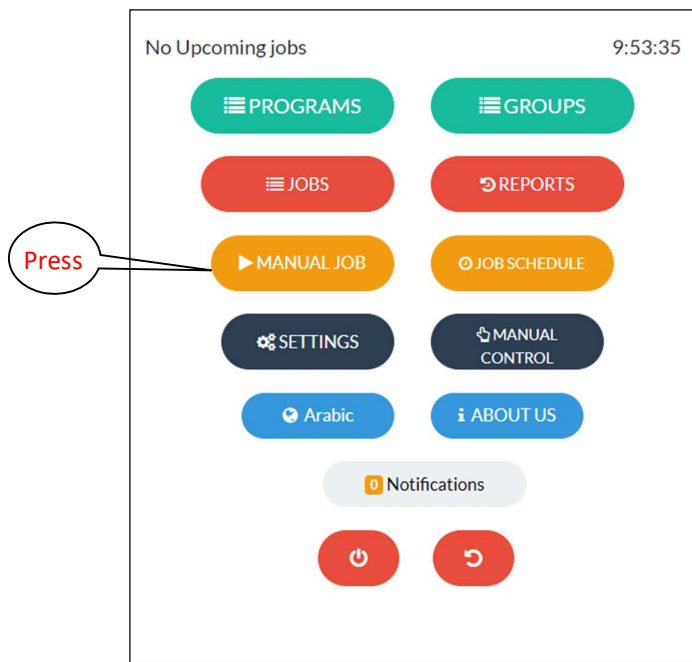
Description	Value
Total # of Jobs	6
Total Water Quantity	3.00 M ³
F1	0.00 L
F2	0.00 L
F3	0.00 L

Jobs List

Date	Job Name	Info
08-12-2022 at 15:32	JobTest3	Details
08-12-2022 at 15:00	JobTest4	Details
08-12-2022 at 14:57	JobTest1	Details

How to start a manual job:

1. From the Home Screen, press **“MANUAL JOB”**
2. Select **“Run a Job”** or **“Run a Manual Job”**
3. For **“Run a Job”**:
 - Select all Jobs needed
 - Press **“START”**
4. For **“Run a Manual Job”**
 - Select the desired program from the list
 - Select all the required Groups
 - Press **“START”**



Select desired program from list

Select desired Group(s)

Press

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Run a Job Run a Manual Job

Select a Program
Tomato program

Select a Group
 test g G6 Tomato group
 Z4 Z0 Z6

Warning! The System will start this job Automatically After you submit the form. And you can't return to home page until the job is finished

▶ START

Job Status

0.5 cube on group G6

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00:02:17

■ STOP!

Water Progress Bar

6% (MQ)

Pressure	W. Temp.	pH	EC
-0.4 bar	-20.0 C	0.0	0.00 mS/cm

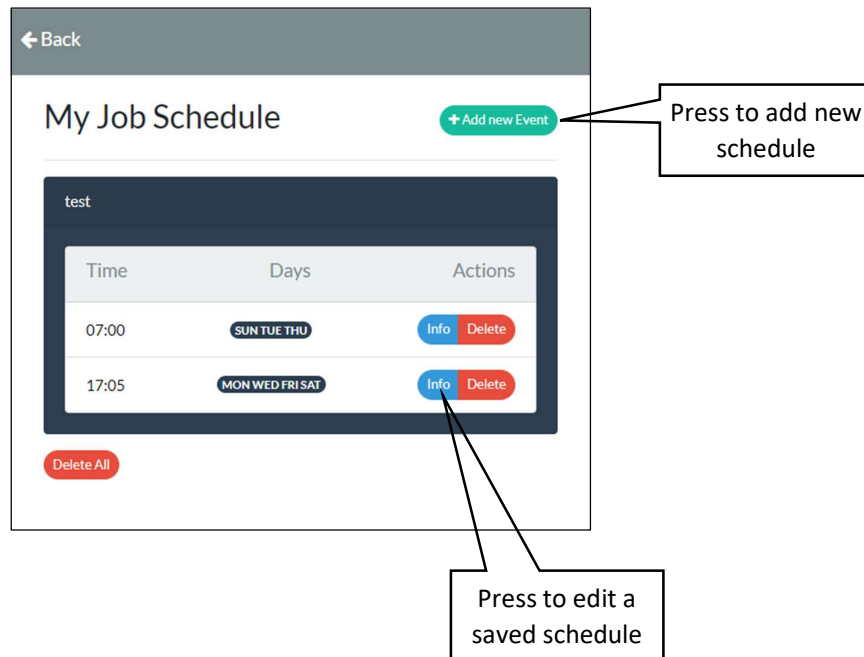
Main Water  12.1 m³/h 0.04/0.50m³

F1	F2	F3
0.0 l/h 0.00/0 L	0.0 l/h 0.00/0 L	0.0 l/h 0.00/0 L

TDS
0

How to use Job Schedule:

1. From the Home Screen, press “JOB SCHEDULE”
2. Press “Add new Event”
3. Select Job
4. Select start time
5. Select days
6. Press “Add”



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Add New Event

Select a Job

test

Select time

--:-- --

Select days

SUN MON TUE

WED THU FRI

SAT

▶ ADD

Select Job

Set start time

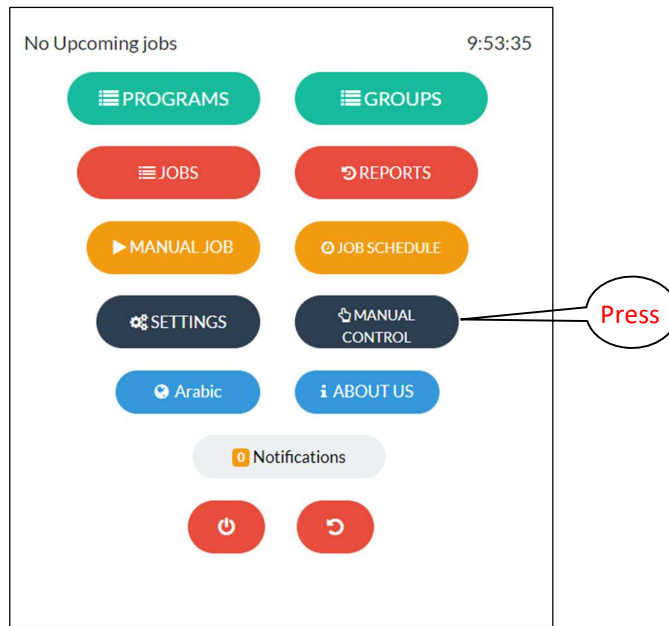
Select days of the week

Press

How to use manual control:

Note: The purpose of this mode is to view equipment readings, diagnostic or testing mode, and equipment rinsing.

1. Confirm that the switch on the control box is in AUTO mode to allow control of main pump from the touch screen
2. From the Home Screen, press **“MANUAL CONTROL”**
3. For testing or rinsing modes, control equipment using slide buttons
4. Observe sensors readings to confirm nominal values



Press to stop all running equipment

Note Sensors readings

Note flow rates of main water line and fertilizer injectors

Pressure	W. Temp.	TDS	EC	pH
0.0 bar	-20.0 C	0 ppm	0.00 mS/cm	0.0

Flow Rate	Unit
0.0	m ³ /h
0.0	l/h
0.0	l/h
0.0	l/h
0.0	l/h
0.0	l/h



Warning: Avoid tampering with these controls unless fertilizer tanks are rinsed
(main & dosing pumps; fertilizer & zone valves)

Device	Toggle	ID	Toggle
Main Pump	<input type="checkbox"/>	Z0	<input type="checkbox"/>
Dosing Pump	<input type="checkbox"/>	Z1	<input type="checkbox"/>
F1	<input type="checkbox"/>	Z2	<input type="checkbox"/>
F2	<input type="checkbox"/>	Z3	<input type="checkbox"/>
F3	<input type="checkbox"/>	Z4	<input type="checkbox"/>
F4	<input type="checkbox"/>	Z5	<input type="checkbox"/>
F5	<input type="checkbox"/>	Z6	<input type="checkbox"/>
F6	<input type="checkbox"/>	Z7	<input type="checkbox"/>

Section 4: Safety Warnings

A special room must be prepared to house the equipment for protection from weather, tampering, or damage. This room must be prepared with inlets and outlets for pipes that connect between the equipment and the field irrigation system and fertilizer tanks. Also, the room must provide easy and safe access to electric power and insure reliable internet connectivity.

The following are safety conditions and handling instruction that must be observed when operating the equipment:

- 1- Ensure that all electrical connections are in good condition and wired per local electric code
- 2- Ensure that the water pipes are in good condition
- 3- Ensure that the fertilizer tanks and the fertilizer pipes connected to the equipment are in good condition and that no chemical substances are leaking
- 4- Ensure that the equipment room is safely closed to keep away from children, animals or tampering
- 5- While the equipment is running:
 - Do not open or close any manual or electric valves during operation
 - Ensure that the appropriate manual valves are open before operating



Warnings:

- 1- Do not open the Controller or AC Power panel
- 2- Do not tamper with any parts of the equipment
- 3- Do not set fire next to the equipment or anywhere inside the equipment room
- 4- Do not smoke next to the equipment or anywhere inside the equipment room
- 5- Do not allow children to play in the equipment room
- 6- Do not bring pets, domestic animals into the equipment room and make sure that no animal can enter when no person is present
- 7- Do not stay for longer than one hour inside the equipment room if it contains fertilizers and other chemicals
- 8- For liquid fertilizers, do not mix the following formulations. Incompatible fertilizers lead to crystallization and blockage of pipes and fertilizer injectors:

Calcium Nitrate + Ammonium Sulfate => Calcium Sulfate

Calcium Nitrate + Potassium Sulfate => Calcium Sulfate

MKP + Calcium Nitrate => Calcium Phosphate

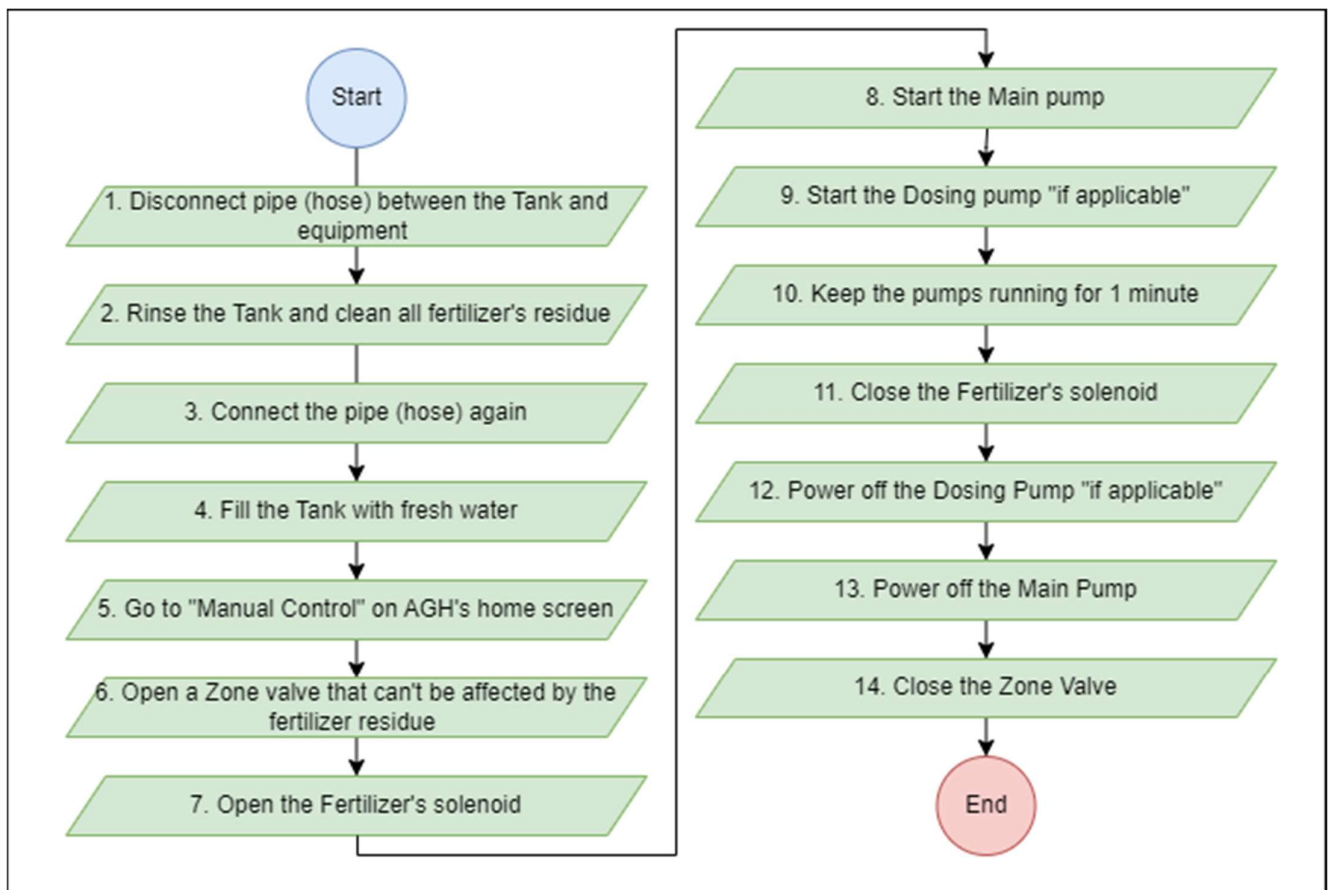
MAP + Calcium Nitrate => Calcium Phosphate

Phosphoric acid + Calcium Nitrate => Calcium Phosphate

Iron (II) sulfate + Calcium Nitrate => Calcium Phosphate

Please consult fertilizers' manufactures or experts if in doubt about the safe use of any combination of fertilizers.

- 9- Do not use fertilizer injector for more than one type of fertilizers until it's been thoroughly rinsed with fresh water. Below is the flow chart that should be followed to rinse each fertilizer tank and injector at a time.





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