

THE COMPLETE **IRRIGATION AUTOMATION** MANAGEMENT SYSTEM



DconAg **AIR**

10 Pumpsets + 512 Valves

Suitable for
Large Scale Farms



DconAg **SMART**

1 Pumpset + 64 Valves

Suitable for
Medium Scale Farms



TCON series

1 Pumpset + 5 Valves / 12 Valves

Suitable for
Small Scale Farms

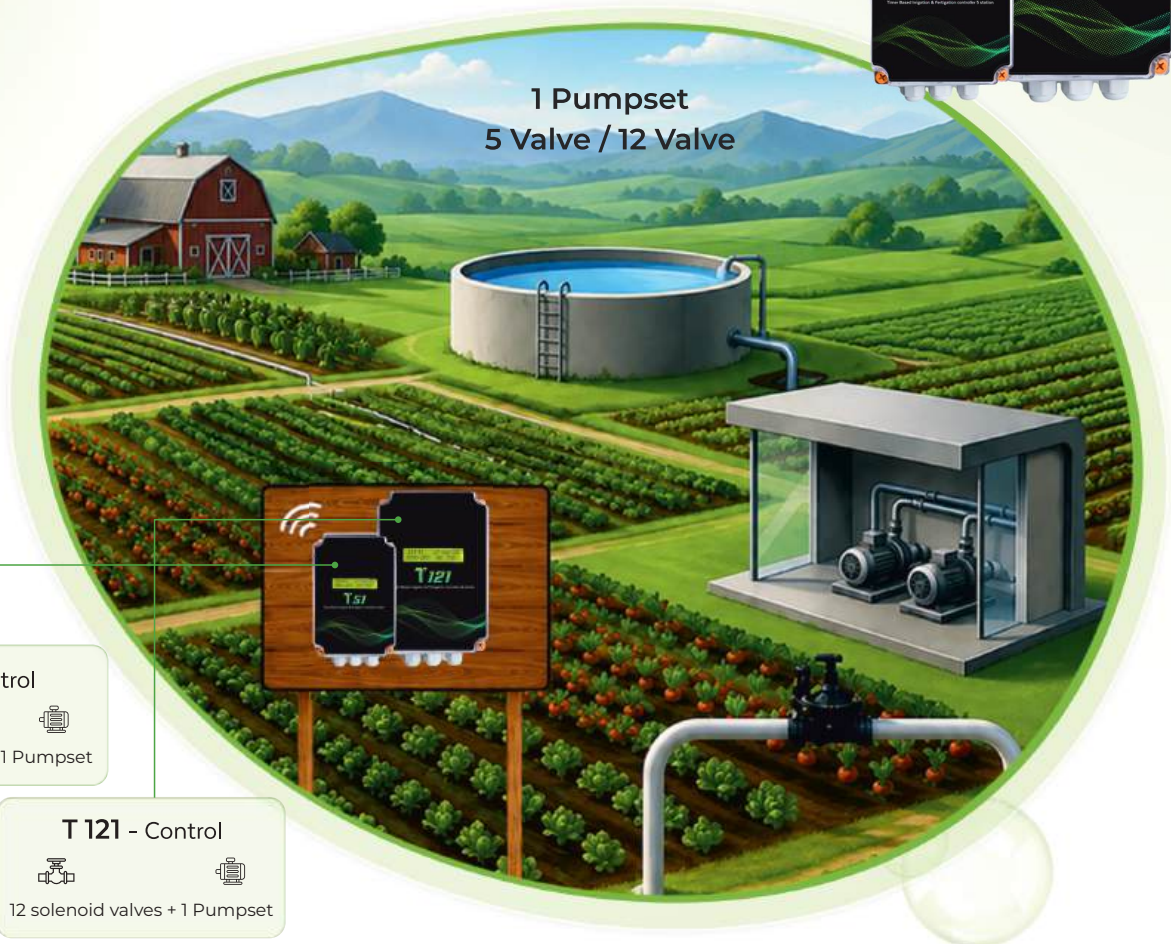


Available on



TCON

Timer Based Irrigation Controller (Wired)



T 51 - Control



5 solenoid valves + 1 Pumpset

T 121 - Control



12 solenoid valves + 1 Pumpset

TCON is an ideal solution for **small scale farms** designed to automate irrigation with precision and ease. It is a time based cellphone motor starter that supports wired drip and sprinkler irrigation systems and includes a built in fertigation timer for efficient nutrient management.



Multi Valve
Management



Pumpset
Automation



Precision
Irrigation



Bluetooth
Connectivity



Durable &
Reliable

TCON

Timer Based Irrigation Controller (Wired)

Compatible with



FEATURE HIGHLIGHTS



Automatic Pump & Valve Control

Fully automated irrigation cycles



Multiple Timer Modes

Cyclic, Clock & Fertigation scheduling



Built-in Fertigation

Nutrient dosing with irrigation



Advanced Protection

Dry run & pressure safety features

TECHNICAL SPECIFICATIONS



Power Source: AC (Alternating Current)



Rain Detection: Yes



Fertigation: Inbuilt fertigation timer



Voltage: 230V AC 50Hz



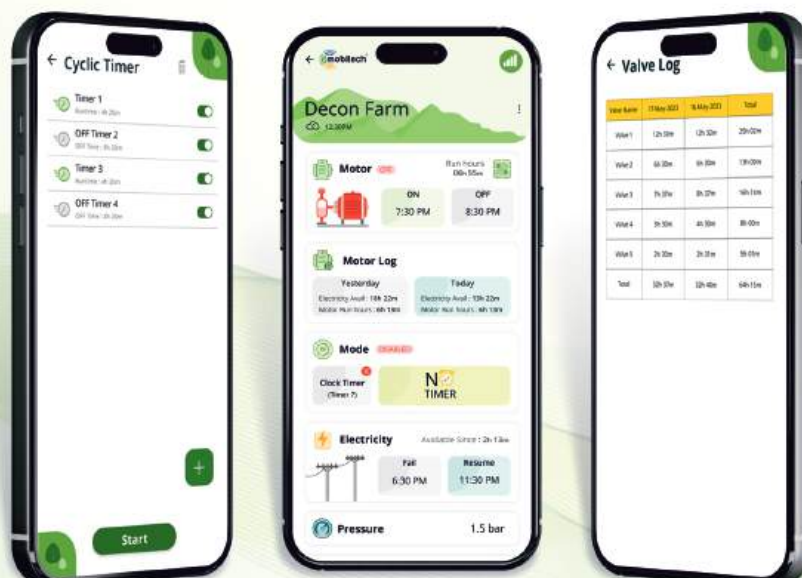
Communication (Additional) : Wi-Fi



Cloud Control: Yes (if Wi-fi enable)



Display: Onboard screen for easy setup



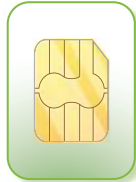
Dcon Ag SMART

Drip Irrigation / Sprinkler Irrigation Automation (Wired / Wireless)

The system connects to **pumps, solenoid valves, and field sensors** to automate drip or sprinkler irrigation. It also works with soil moisture sensors, weather stations, auto backwash systems, fertigation units, and water level sensors for smart irrigation control. Using real time data or set schedules, it automatically operates pumps and valves for accurate water and nutrient supply. The entire system can be monitored and controlled anytime, anywhere through a **mobile app**.



One
Pumpset



One
SIM Card



64
Valves



Satellite
Based Irrigation



Dcon Ag SMART
MSU



Dcon Ag SMART

Drip Irrigation / Sprinkler Irrigation Automation (Wired / Wireless)

Compatible with



FEATURE HIGHLIGHTS

- Designed for small to medium-sized farmlands.
- Controls up to **64 solenoid valves**.
- Operates via mobile app with **Wifi, Bluetooth & GSM**.
- Connects to sensors, pumps, and valves for smart irrigation.
- **Soil Moisture Based** - Automatically controls irrigation based on soil moisture levels.
- **Weather Based** - Adjusts irrigation according to real-time weather conditions.
- **Flow Based** - Monitors water flow to ensure proper distribution and detect issues.
- **Pressure Based** - Maintains optimal pressure and identifies pipeline problems.

TECHNICAL SPECIFICATIONS

-  Supports **1 SIM, 1 Pump Set**
-  Power source : **AC & Solar**
-  Backup Time : **18 Hours**
-  Compatibility : **Suitable for all medium farms**

-  Communication : **Wifi , Bluetooth**
-  Internal Storage : **1 Year Log**
-  Cloud Control : **Yes**
-  Display : **Onboard screen for easy setup**
-  Inbuilt GPS : **Yes**



Dcon Ag AIR

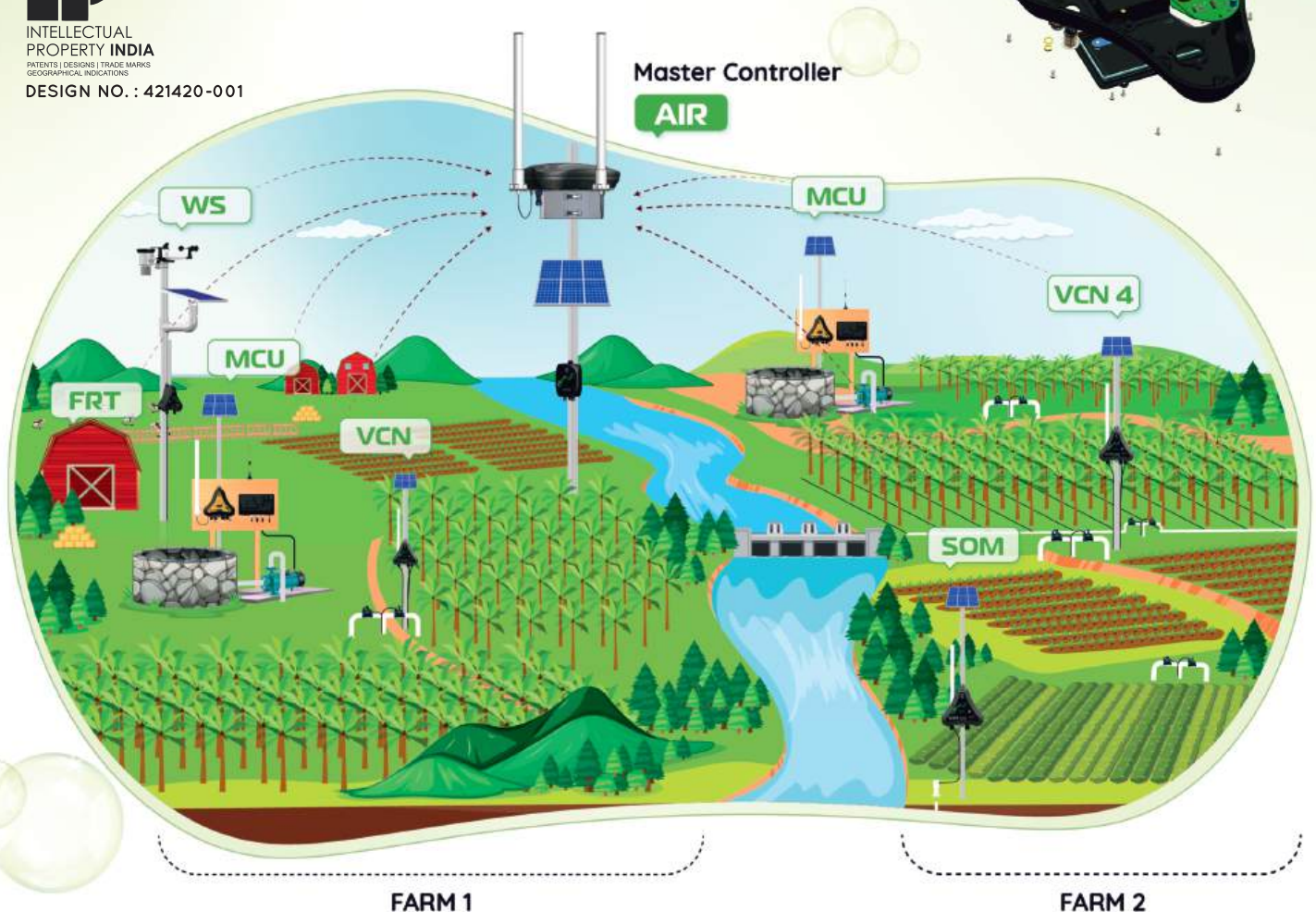
Master Control Unit

Wi-Fi Bluetooth 1% P65



INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

DESIGN NO. : 421420-001



The **Dcon Ag AIR** unit operates, monitors, and manages multiple agricultural processes like **pumpsets, fertigation, solenoid valve control, weather stations, soil moisture**, and reservoir water level. It can handle various input and output combinations. Mesh network technology links field units, with one unit acting as a bridge to the cloud, with **dual channel LoRA**.



**Control Upto
10 Pumpsets**



**Control & Manage
upto 512 Valves**



**Satellite
Based Irrigation**

Dcon Ag **AIR** Master Control Unit

Compatible with



FEATURE HIGHLIGHTS



24/7 Solar Operation

Solar-powered with 72-hour backup.



Remote Cloud Connectivity

Real-time monitoring via 5G/LTE cloud access.



Dual LoRa Communication

Dedicated channels for pump and field control.



Rugged & Scalable Design

IP65-rated, supports 10 motors and multiple connections.



Patented Smart Technology

Cloud-enabled updates for modern farm management.

TECHNICAL SPECIFICATIONS



Solar Panel: 12.5V/40W



Battery Bank: 7.4V/ 15Ah



Internal battery: 3.7V/15Ah



Backup time: 72 hours



Cloud communication: GSM/Wifi/LTE



Local Communication: LoRA (2 band) & Bluetooth 5.0



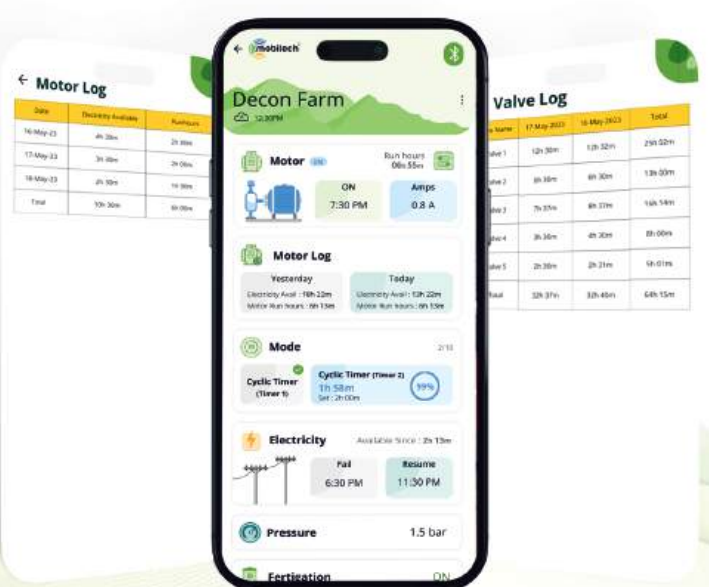
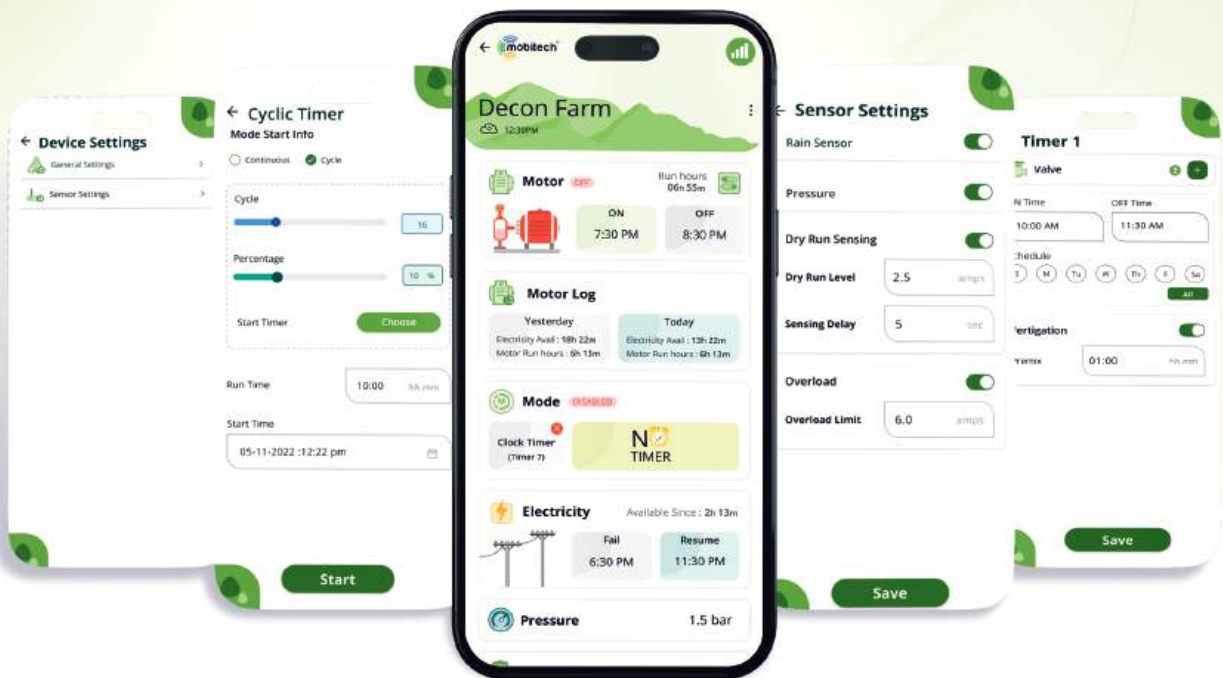
Internal Storage: 1 Year Log Inbuilt GPS



TCON



SCAN FOR APP



Dcon Ag SMART



SCAN FOR APP



Dcon Ag AIR



SCAN FOR APP



Comparison of Micro irrigation automation controllers

Features		Dcon Ag AIR	Dcon Ag SMART	TCON 51 & TCON 121
Functional Features	Pump Control Capability	10	1	1
	Pump Relay Capability	✓	✓	✓
	DOL & Star Delta Starter Compatibility	✓	✓	✓
	Pump Drive Control(VFD)	✓	✓	✓
	Valve Control Capacity	512 (Wired,Wireless)	64 (Wired,Wireless)	5 & 12 (Wired)
	Maximum Parallel Valve Control	20	10	2
	Pressure Release Valve Compatibility	✓	✓	✓
	Auto Backwash Compatibility	✓	✓	
	Auto Backwash Support Capacity	10	1	
	Time Based Auto Backwash	✓	✓	
	Pressure Based Auto Backwash	✓	✓	
	Auto Refill Irrigation Water Source	✓		
	Borewell Refill Motor Control	✓		
	Main Valve Actuation	✓		
	AC Solenoid Coil Voltage	24V AC	24V AC	24V AC
	AC Solenoid Coil Current	100 - 400mA	100 - 400mA	100 - 400mA
	DC Solenoid Coil Voltage	9-12V DC	9-12V DC	
	DC Solenoid Coil Watt	2-4W	2-4W	
	Water Level Control Capability	✓	✓	
	No of Water Level Control Points	10	1	
	Soil Moisture Monitoring	✓	✓	
	Soil Moisture Sensor Integration Capacity	512	64	
	Weather Monitoring	✓	✓	
	Weather Station Integration Capacity	10	1	
	Rain Detection	✓ (Quantify)	✓ (Quantify)	✓ (Detection)
	Wind Speed Monitoring	✓	✓	
	Wind Direction Monitoring	✓	✓	
	Temperature & Humidity Monitoring	✓	✓	
	(LUX) & UV Radiation Monitoring	✓	✓	
	Atmospheric Pressure Monitoring	✓	✓	
	Weather Forecast Integration	✓	✓	
	Weather Forecast Duration	5	5	

Comparison of Micro irrigation automation controllers

Features		Dcon Ag AIR	Dcon Ag SMART	TCON 51 & TCON 121
Functional Features	Multi Schedule Irrigation Control	✓		
	Geospatial Valve Mapping	✓	✓	
	Realtime Pump & Valve Status Mapping	✓	✓	
	Fogger & Fan Control Support	✓	✓	
Pump Protection Features	Single Phase Protection	✓	✓	
	Current Based Dry Run Protection	✓	✓	✓
	Flow Based Dry Run Protection	✓	✓	
	Overload Protection	✓	✓	
	Low and High Voltage Protection	✓	✓	
	Current Imbalance Protection	✓	✓	
	Dry Run Resume Delay	✓	✓	
	Voltage Resume Delay	✓	✓	
	AC Solenoid Coil Current	✓	✓	
Connectivity & Technology	IoT Connectivity	✓	✓	
	Remote Access Capability	✓	✓	
	GSM Communication Support	✓	✓	
	WiFi Connectivity	✓	✓	✓
	Bluetooth Connectivity	✓	✓	✓
	LoRa Connectivity	✓	✓	
	LoRa Channel Capacity	Multiple	Single	
	LoRa Node Capacity	256	32	
	GSM Node Capacity	10		
	LoRa Range Extension	✓		
	Wireless Range Support	Upto 3 kms	Upto 1 kms	
	AI Integration Support	✓	✓	
Electrical Parameter	Power Source Type	AC & Solar	AC & Solar	
	Voltage Sensing Capability	✓	✓	
	Phase Monitoring	1Ph & 3Ph	1Ph & 3Ph	1Ph & 3Ph
	Battery Backup Support	✓	✓	
	Backup Duration Time	72 Hrs	18 Hrs	
	Current Sensing Capability	✓	✓	✓

Comparison of Micro irrigation automation controllers

Features		Dcon Ag AIR	Dcon Ag SMART	TCON 51 & TCON 121
Electrical Parameter	Power Factor Measurement	✓	✓	
	Power Consumption(KW)	✓	✓	
	Voltage & Current Monitoring Display	✓	✓	
Irrigation & Fertigation Timer Controls	Cyclic Timer	✓	✓	✓
	Cyclic Timer With Fertigation	✓	✓	✓
	Cyclic Volume Control	✓	✓	
	Cyclic Volume With Fertigation	✓	✓	
	Clock Based Timer	✓	✓	✓
	Clock Run Timer Control	✓	✓	
	Clock Run Timer With Fertigation Control	✓	✓	
	Calender Based Clock Timer	✓	✓	
	Calender Based Clock Run Timer	✓	✓	
	Calender Based Clock Run Timer With Fertigation	✓	✓	
	Soil Moisture Irrigation Control	✓	✓	
	Rainfall Based Irrigation Control	✓	✓	
	Soil Moisture Triggered Cyclic Timer	✓	✓	
	Soil Moisture triggered Cyclic Volume Control	✓	✓	
	Irrigation Flushing Mode	✓	✓	
Fertigation	Fertigation Management	✓	✓	✓ *
	Fertigation Control Capacity	10	1	1
	Fertigation Channel Capacity	30 Channel	5 Channel	
	Tank Integration Capacity	150	5	
	Simultaneous Tank Control Capacity	10	5	
	EC Monitoring	✓	✓	
	EC Control	✓	✓	
	pH Level Monitoring	✓	✓	
	pH Level Control	✓	✓	
	Booster Pump Safety	✓	✓	
Display & Enclosure Ratings	Onboard Display	✓	✓	✓
	Ingress Protection Rating(IP)	IP65	IP65	

* - Simple Fertigation ● - Coming Soon

Dcon Ag **MCU** & **MSU**

Motor Control Unit & Motor Starter Unit



The **Motor Control Unit (MCU)** is a smart device that automates and manages irrigation motors. It allows farmers to turn motors ON and OFF remotely. The MCU receives control signals and sends them to the **Motor Starter Unit (MSU)**, which then starts or stops the motor. This ensures **safe, reliable, and automated motor operation** without the need to visit the field.



Dry Run



Overload



Phase
Failure



Voltage
Fluctuations



Power Cut
Intimation

Dcon Ag **MCU** & **MSU** Motor Control Unit & Motor Starter Unit

Compatible with



FEATURE HIGHLIGHTS



Real-Time Pressure Control

Maintains optimal water flow using live pressure sensor data.



Single & Three-Phase Support

Compatible with both single-phase and three-phase pump sets.



Wide Power Compatibility (0.5-500 HP)

Supports pump sets across a broad power range for flexible applications.



Easy Installation & Smart Monitoring

User-friendly design with advanced communication for reliable control.



Live Display Monitoring

Shows real-time electrical data and pump status.

TECHNICAL SPECIFICATIONS



Input Voltage 3 Phase: 360V -450V AC



Input Voltage 1 Phase: 180V -240V AC



Default CT Coil: 50A External CT Upto: 500A



Battery: 3.7V/2.6Ah



Backup time: 6 hours



Communication: LoRA & Bluetooth 5.0



Compatibility: Suitable for All types of starter panel

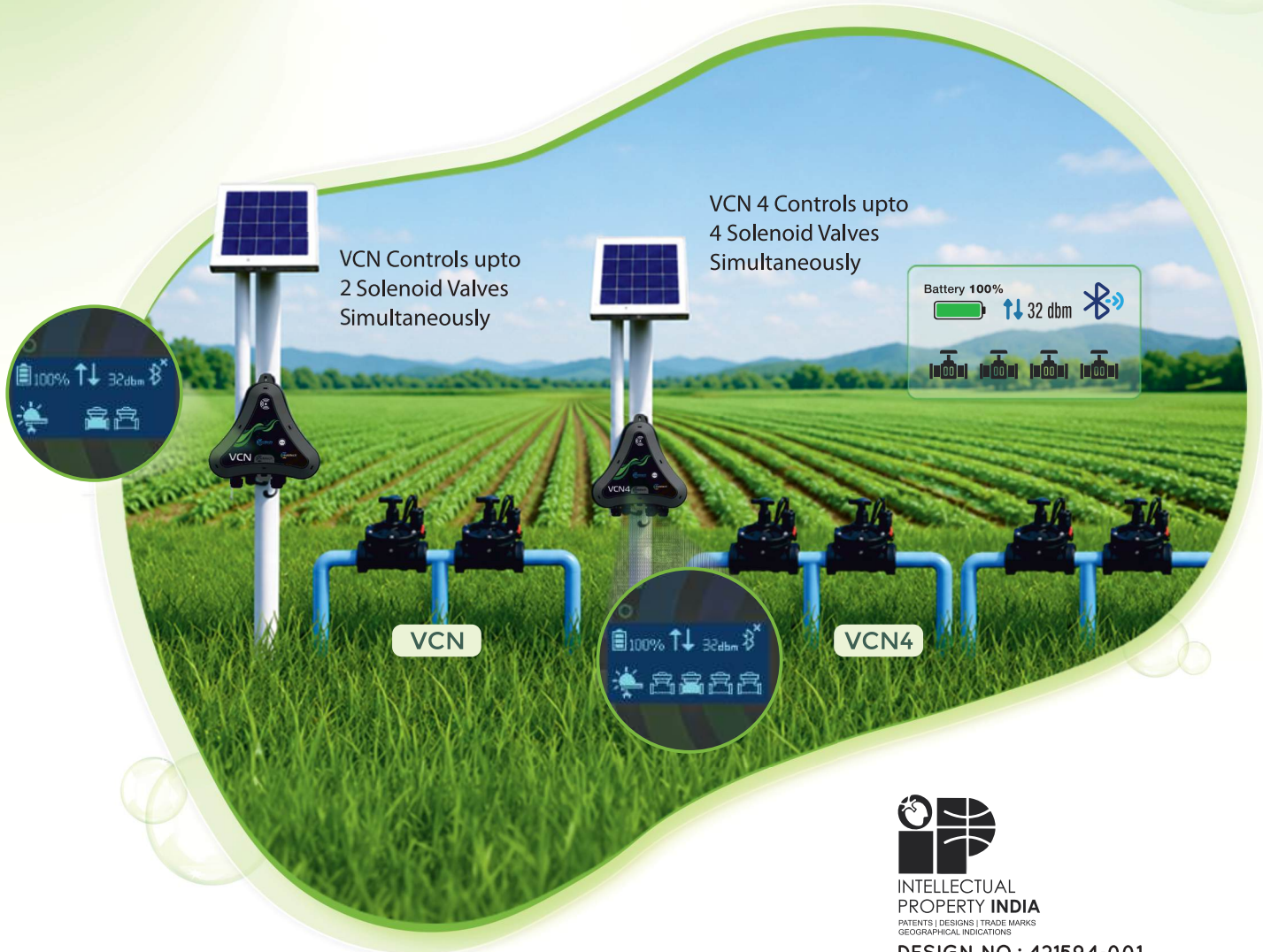


Inbuilt GPS



Dcon Ag **VCN** & **VCN4**

Wireless Valve Controlling Unit



INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS

DESIGN NO.: 421594-001

Dcon Ag VCN and **VCN4** are wireless slave units that connect to **Dcon Ag AIR**.

They are designed to independently control DC solenoid valves, with VCN capable of managing 2 valves and VCN4 capable of managing 4 valves, regardless of their sizes.



Solar
Powered



Easy
Interface



Remote
Monitoring



Durable
Design



Data
Analytics

Dcon Ag **VCN** & **VCN4** Wireless Valve Controlling Unit

Compatible with



FEATURE HIGHLIGHTS



Real-Time Monitoring (Optional)

flow & pressure inputs for smarter irrigation decisions



IP65 Rugged Enclosure

Weather-proof for harsh farm conditions



Ultra-Low Power Solar Operation

Solar powered with long battery backup



Long-Range Wireless Control

LoRa connectivity linked to central AIR unit



Local Status Display

High-brightness display for valve status

TECHNICAL SPECIFICATIONS



Solar Panel: **9V/ 6W**



Battery: **3.7V/2.6Ah**



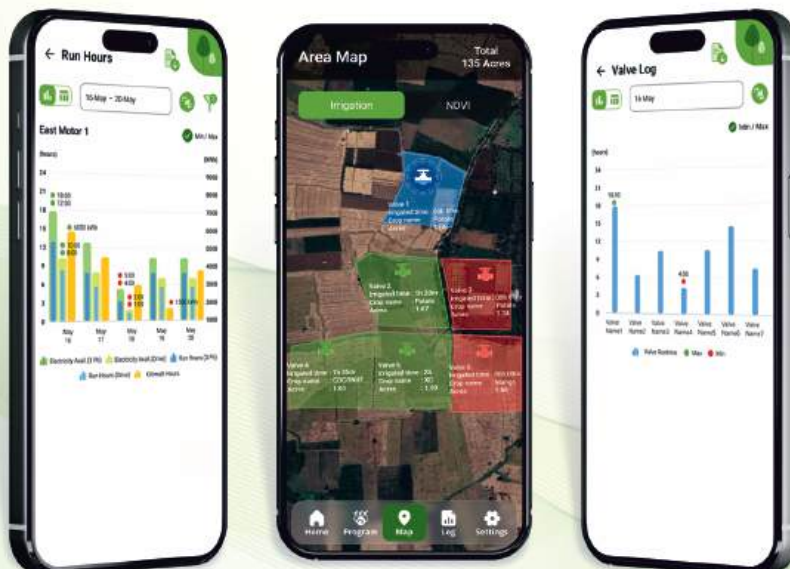
Backup time: **72 hours**



Communication:
LoRA & Bluetooth 5.0



Inbuilt **GPS**



Dcon Ag **WL**

Water Level Controlling Unit



The Water Level Controlling Unit monitor the water level in wells and borewells and shows it clearly on the controller display. It also supports mobile app monitoring, so users can check the water level anytime from their phone.



Real Time
Monitoring



Automatic
Pump Control



Solar Powered



Mobile Alerts &
Remote Access



Smart Water
Conservation

Dcon Ag **WL** Water Level Controlling Unit

Compatible with



FEATURE HIGHLIGHTS



Designed for effective operation in reservoirs up to **100 feet** (31 meters) deep, the system is suitable for a wide range of agricultural and commercial water storage applications.



IP65 protected enclosure ensures durability in harsh environments



Accurate, consistent water level readings, supporting precise irrigation planning, pump control, and effective water resource management.



Corrosion-resistant sensors make the system ideal for hard-water reservoirs, delivering long-term durability and reliability.



Solar-powered, the WL operates continuously, providing uninterrupted monitoring in remote locations without access to electricity.

TECHNICAL SPECIFICATIONS



Solar Panel: **9V/ 6W**



Battery: **3.7V/5.2Ah**



Backup time: **96 hours**



Communication:
LoRA & Bluetooth 5.0

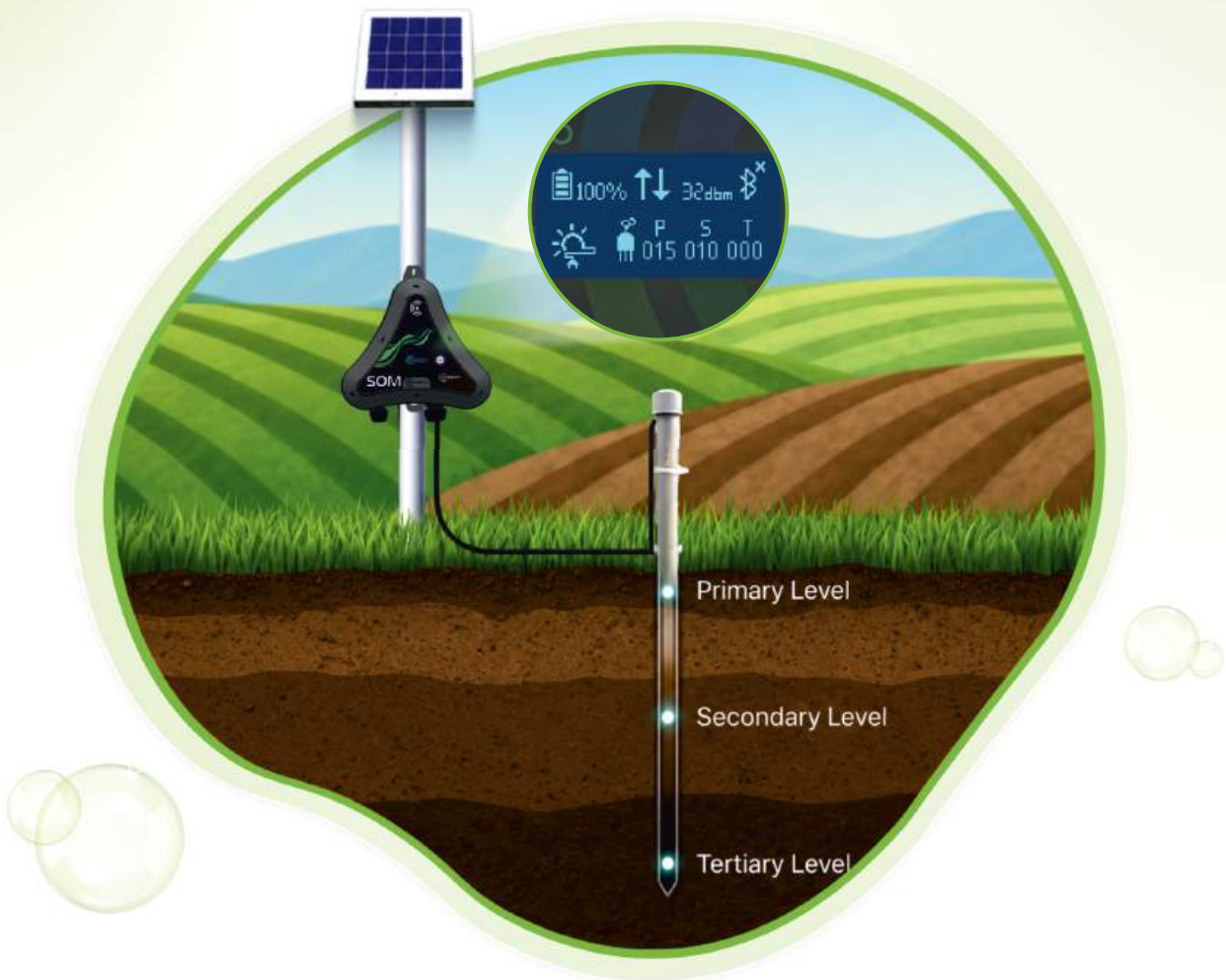


Inbuilt **GPS**



Dcon Ag **SOM**

Soil Moisture Controlling Unit



The **SOM (Soil Moisture)** Slave Unit provides real-time soil moisture data at three levels – primary, secondary, and tertiary. This accurate information helps farmers manage irrigation efficiently, make timely decisions, and maintain healthy soil, supporting sustainable and modern farming practices.



3-Level
Monitoring



Accurate
Moisture Data



Smarter
Irrigation



Healthier
Soil



LoRA +
Bluetooth 5.0

Dcon Ag **SOM** Soil Moisture Controlling Unit

Compatible with



FEATURE HIGHLIGHTS



3-Depth Measurement

Tracks moisture across multiple root zones



Instant Data to Dcon Ag

Faster decisions for irrigation planning



Farm-Ready Durability

Reliable in rain, heat, and varying soil conditions



Corrosion-Resistant Sensors

Ideal for hard-water reservoirs, long service life



Precision Agriculture Support

Optimizes water use, improves yields, reduces wastage

TECHNICAL SPECIFICATIONS



Solar Panel: **9V/ 6W**



Battery: **37V/2.6Ah**



Backup time: **72 hours**



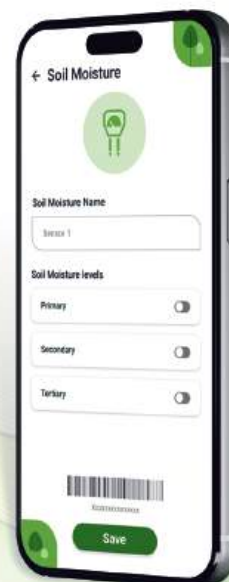
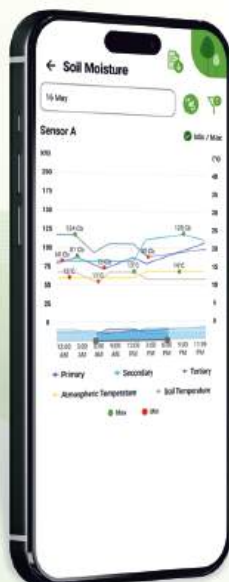
Communication: **LoRA & Bluetooth 5.0**



Number of Soil Moisture Sensor: 3 Nos



Inbuilt **GPS**



Dcon Ag **WS** Weather Station

The **Dcon Ag WS Weather Station** Controller delivers accurate, realtime monitoring of **rainfall, wind speed, temperature and humidity** with automated control for smarter farming. It enhances productivity by improving crop management, yield, and efficient resource utilization. Automated, weather based operations reduce manual effort and costs while enabling informed, proactive decisions to minimize risks.



Dcon Ag **WS** Weather Station

Compatible with



FEATURE HIGHLIGHTS

- The system accurately monitors **wind speed, wind direction, rainfall, temperature, humidity, and air pressure in real time.**
- It helps farmers plan field operations and protect crops from weather-related risks.
- Real-time microclimate data ensures water is applied only when needed, improving irrigation efficiency and crop health.
- **Instant alerts for wind, heat, rain, and frost** help farmers quickly protect their crops.
- **Stored weather data and analytics** help farmers plan better by tracking seasonal trends and forecasting future irrigation needs.

TECHNICAL SPECIFICATIONS



Solar Panel: **9V/6W**



Battery: **3.7V/5.2Ah**



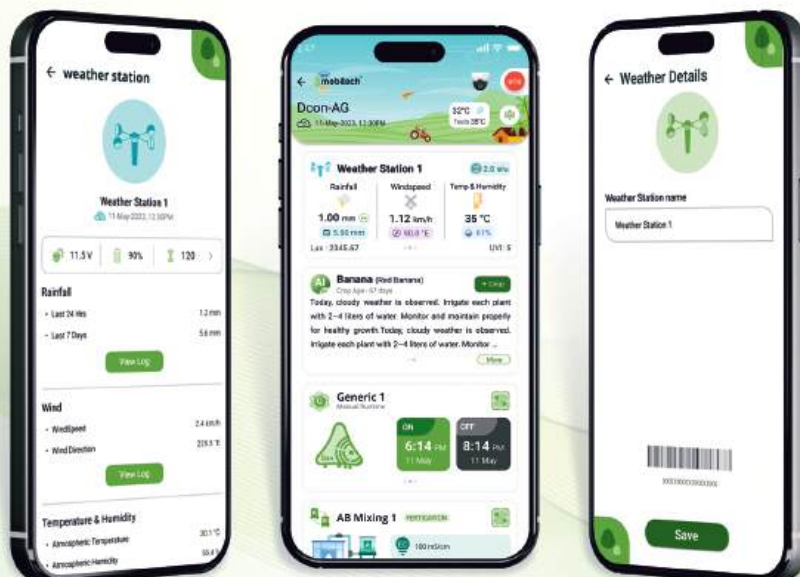
Backup time: **96 Hours**



Communication:
LoRA & Bluetooth 5.0



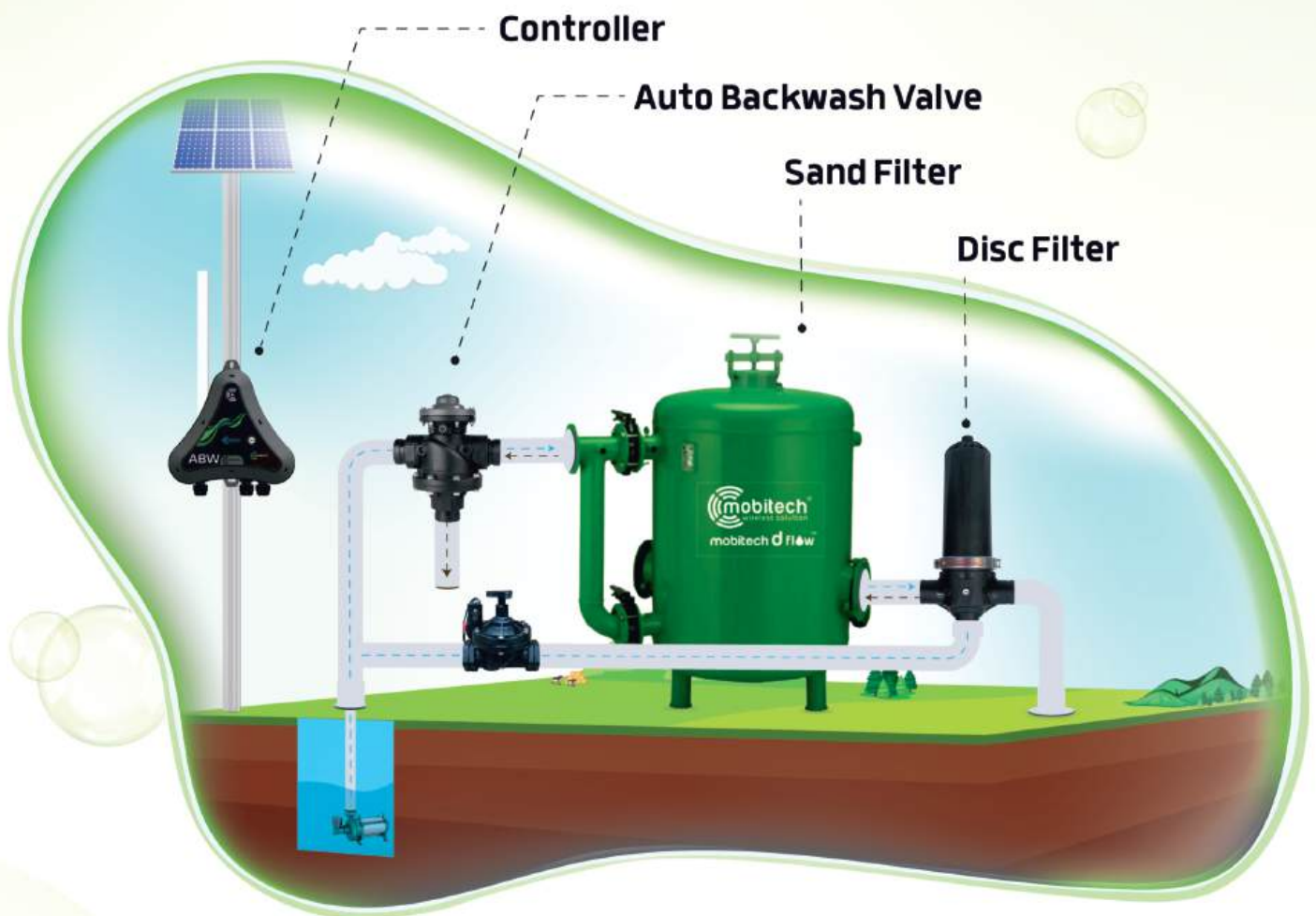
Sensors: **Wind speed, (Anemometer), Wind direction, Rain guage, Temperature, Humidity, UV, LUX.**



Dcon Ag **ABW**

Auto Backwash

The **Auto Backwash Valve** is a smart filtration system that keeps your irrigation running smoothly by automatically **removing dirt, sand, and impurities**. It monitors pressure levels and, when they reach a set limit, automatically flushes out debris keeping filters clean and ensuring efficient, uninterrupted operation.



**IP65 Dust
& Water Resistant**



**72 Hours
Battery Backup**



**Communication
LoRa & Bluetooth 5.0**



**Accommodating
Diverse Filtration**



**Download Reports
in Pdf & Excel
Formats**

Dcon Ag **ABW** Auto Backwash

Compatible with



FEATURE HIGHLIGHTS

- **Dual Power Support (AC & DC)** - Works with both AC and DC power for flexible use in any setup.
- **Smart Pressure Monitoring** - Continuously tracks water pressure to maintain smooth and efficient flow.
- **Automatic Flushing** - Activates self cleaning when pressure reaches a preset level, preventing blockages.
- **Wide Filter Compatibility** - Supports screen, disc, and sand filters for all irrigation needs.
- **Low Maintenance & Cost-Saving** - Self cleaning design reduces manual work, lowers costs, and extends equipment life.

TECHNICAL SPECIFICATIONS



Power : **180–240V AC input** with 12W solar panel and 7.4V battery (up to 72 hours backup).



Connectivity : **LoRa and Bluetooth 5.0** for reliable wireless communication.



Sensors : **Pulse-type** water flow sensor (optional)
Two pressure sensor inputs (4–20 mA).



Inbuilt GPS



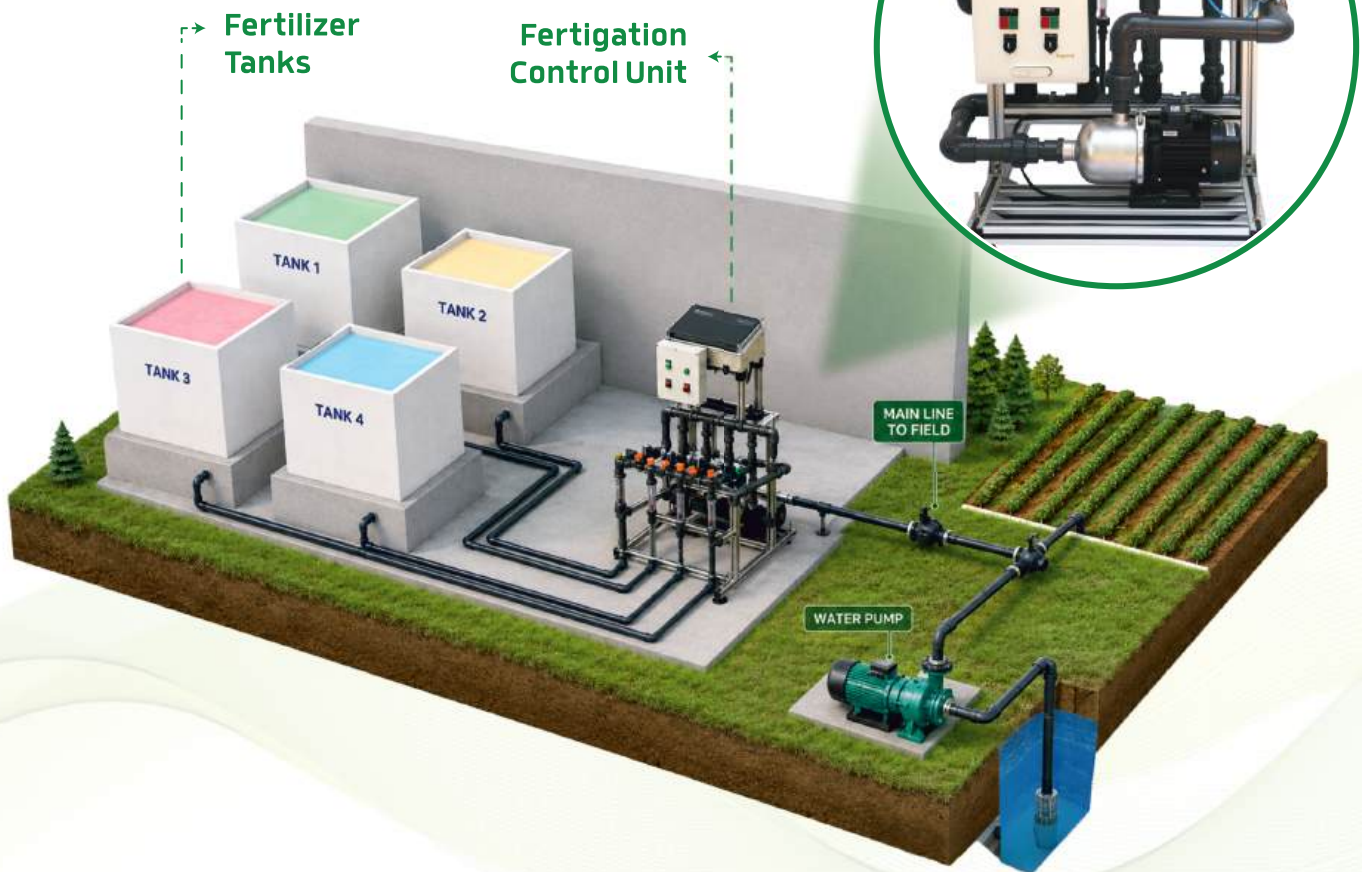
Performance : Designed for **stable, efficient monitoring** and control of irrigation systems.



Dcon Ag FRT

Fertigation Control Unit

The Fertigation unit delivers nutrients to crops through drip irrigation, improving yield while saving water. The **Dcon Ag FRT** unit wirelessly connects to the fertigation controller to enhance irrigation automation. The system can be controlled from a mobile phone anytime, ensuring accurate nutrient dosing, better water management, and efficient farm operations.



Dcon Ag **FRT** Fertigation Control Unit

Compatible with

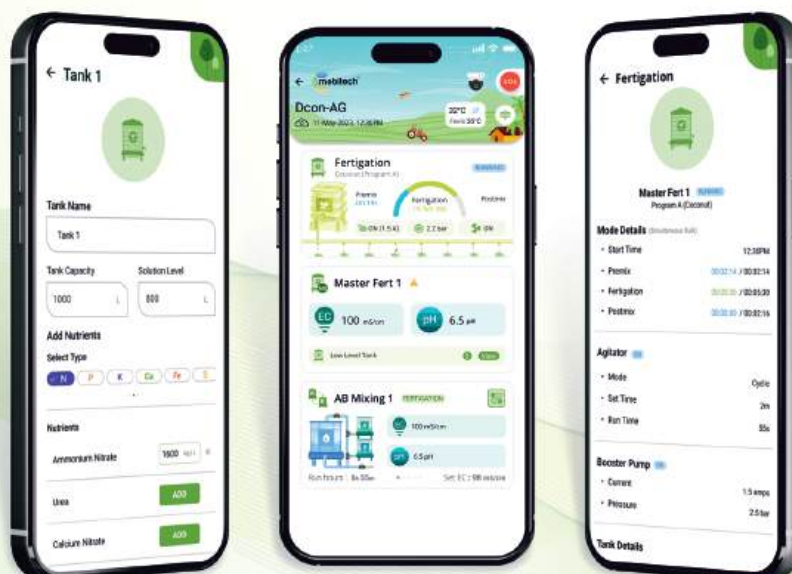


FEATURE HIGHLIGHTS

- **Precision pH and EC Control** Ensures accurate nutrient dosing for healthier crops and improved yield quality.
- **Wide Flow Adaptability** Supports diverse irrigation needs with stable hydraulic performance and quick EC/pH stabilization.
- **Wireless Connectivity** Enables reliable data communication and seamless integration with fertigation controllers.
- **Energy-Efficient Operation** Uses a single pump for nutrient mixing and injection, optimizing water and fertilizer usage.
- **Low Maintenance & Durable Design** Easy to install, minimal upkeep required, and built to withstand harsh agricultural conditions.

TECHNICAL SPECIFICATIONS

- ⚡ Input Voltage: **230V AC / 440V AC**
- 🌱 Number of Injectors: **Minimum 1, Maximum 30 (Customizable)**
- 💧 Injector Capacity: **250 to 1000 liters per hour (LPH)**
- ➡ Main Flow Range: **5 to 60 cubic meters per hour (m³/h)**
- 🏠 Number of Tanks: **Customizable based on specific requirements**



AC10

Wired Irrigation Controller 10 Station

Compatible with



The AC10 Irrigation Controller integrates with **Dcon Ag AIR** and **Dcon Ag SMART** devices to provide reliable irrigation automation. It receives wireless commands and controls solenoid valves through **wired outputs, ensuring accurate, stable, and efficient** irrigation management.



Stable - Accurate
Irrigation Operation



Improved
Water Efficiency



Reliable Solenoid
Valve Control



Reduced Manual
Intervention



Suitable for Farms,
Polyhouses & Landscapes

Solenoid Valves

Automated Water Flow Management.

A solenoid valve is a valve that is controlled by electricity and has a rapid response time. There are two types available: one operates on AC power and the other operates on DC power.



Direct Current (DC)

AVAILABLE SIZES

3/4", 1", 1.5", 2", 2.5", 3" and 4"

OPERATING PRESSURE

1 – 10 Bar

COIL VOLTAGE

9V DC

Alternating Current (AC)

AVAILABLE SIZES

3/4", 1", 1.5", 2", 2.5", 3" and 4"

OPERATING PRESSURE

1 – 10 Bar

COIL VOLTAGE

24V AC

WIRELESS DC



WIRED AC

Pressure Relief Valves

Protecting Your System from Excess Pressure.

Pressure Relief Valve (PRV), Protects the irrigation pipeline from excessive pressure by automatically releasing excess water when pressure exceeds the set limit. This helps prevent pipe damage and ensures safe, efficient system operation.

FEATURE HIGHLIGHTS

- It helps to prevent water line from damage due to high pressure.
- Indirectly it helps for even wetting.

TECHNICAL SPECIFICATIONS

Port Size : **2" to 4"**

Voltage : **No Solenoid**

Pressure range : **0.5 to 4 bar**



Flow Meter

Measure Every Drop with Precision

It helps to achieve volume based Irrigation. We use **electromagnetic flow meter** and **Turbine type flow meter**.



FEATURE HIGHLIGHTS

- It is highly durable
- It helps to measure quantity of water pumped
- Easy Maintenance

TECHNICAL SPECIFICATIONS

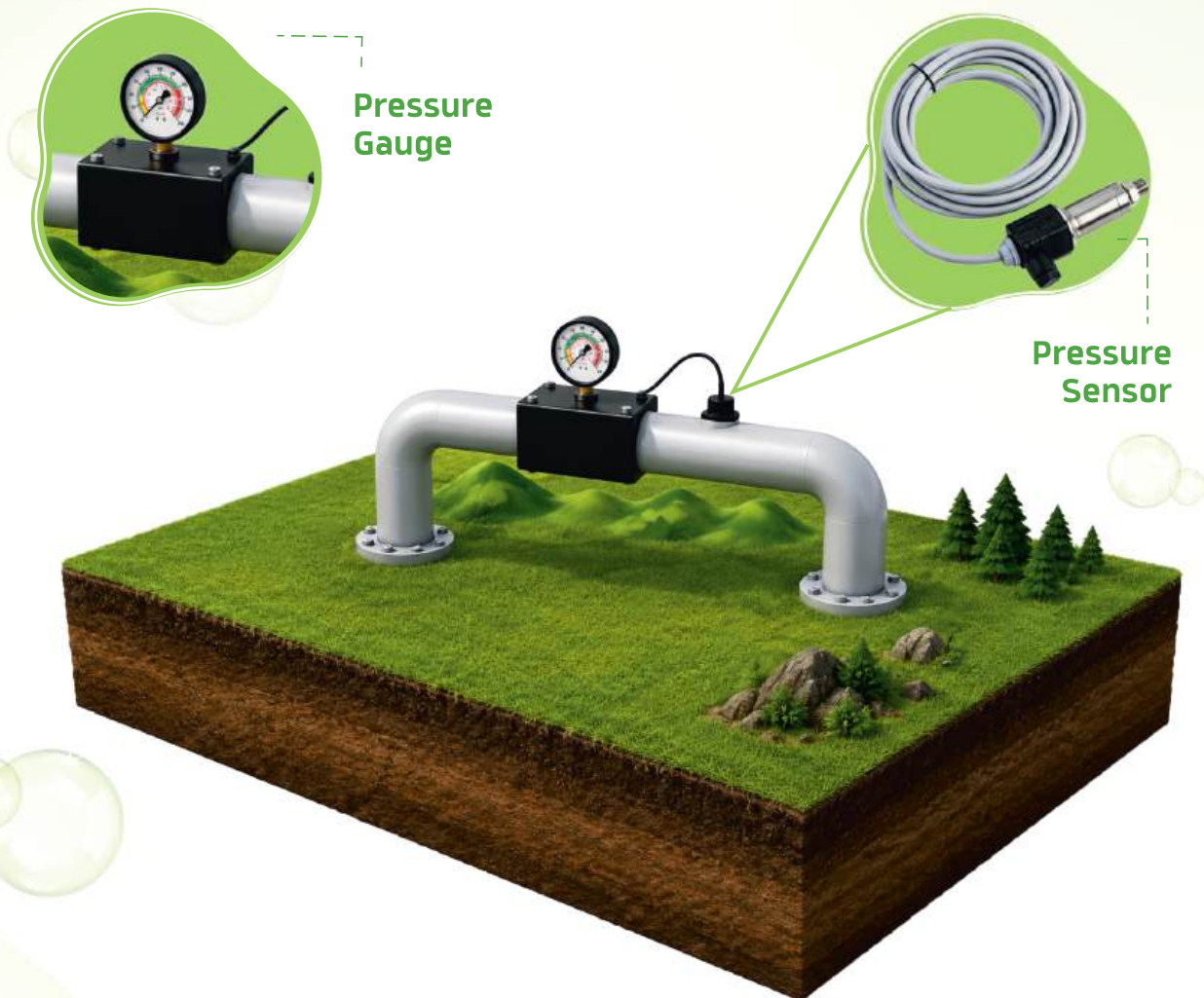
- ✓ Accuracy : $\pm 0.5\%$
- 🔄 Repeatability : $\pm 0.1\%$
- 🚰 Flow range : **0.3 to 2500 ltr/sec**
- 📏 Pipe Size: **63mm to 300mm**



Pressure Sensor

Monitoring Pressure

The **Pressure Sensor** continuously monitors the water pressure inside the irrigation pipeline and transmits the data to the **AIR (Master Control Unit)** for real time analysis.



Realtime
Pressure
Monitoring



Instant
Data Transmission



Low & High
Pressure
Alerts



Ensure
Uniform Water
Flow



Prevents
System Failure

300000+

installation across india

Manufacturer

Mobitech Wireless Solution Private Limited

#1/4, Vengamedu, Erode Road, Perundurai – 638 052
Erode District, Tamil Nadu, **INDIA**.

Phone : +91 99 4343 0000

E-mail : sales@mobitechwireless.in

Web : www.mobitechwireless.in



Product Catalogue

Version 2.1