SMART AGRICULTURE CATALOGUE

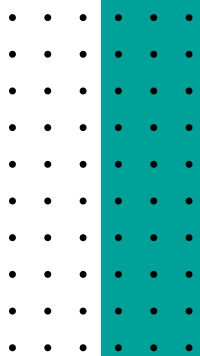**2025**

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COMPANY OVERVIEW

PKYDrip Irrigation was established in 2014 and is headquartered in Shijiazhuang, Hebei Province, China, with its R&D department based in Melbourne, Australia.

We specialize in the development and production of water-saving irrigation products, such as irrigation timers, irrigation controllers, wireless solutions, and 4G remote-controlled valves.

Our product range offers innovative, customizable, reliable, and scalable designs and systems for agriculture, landscaping, and urban greenery projects, enabling users to complete their projects more easily and efficiently.

The mission of PKYDrip is to provide sustainable, technology-driven solutions and products, creating value for a wider range of users.

Smart Controller

The smart controller is designed to manage and optimize the environmental conditions of greenhouses, hydroponic systems, and plant factories.

Utilizing advanced technologies such as PID control, WiFi, or 4G connectivity, it integrates with a variety of intelligent sensors, including soil EC, pH, temperature and moisture, air temperature and humidity, CO_2 concentration sensors and more.

The system enables real-time data collection and analysis, empowering precise control of equipment such as air conditioners, fans, cooling pads, grow lights, and CO_2 generators.

With cloud platform integration, it also supports remote control, allowing users to monitor and adjust environmental parameters anytime, anywhere, ensuring optimal conditions for plant growth and efficient resource management.
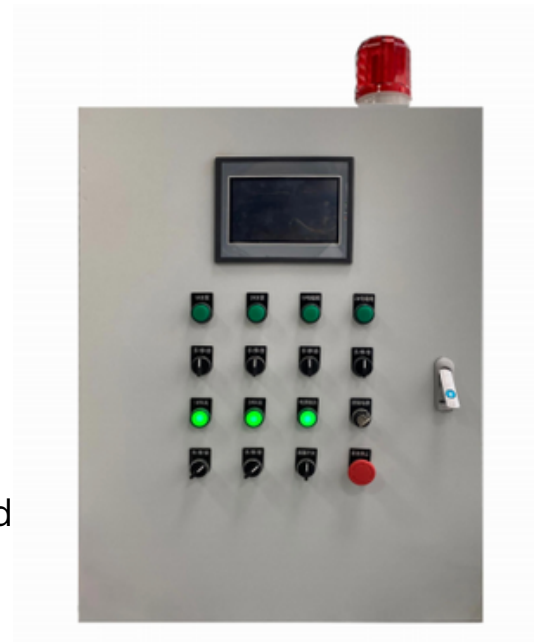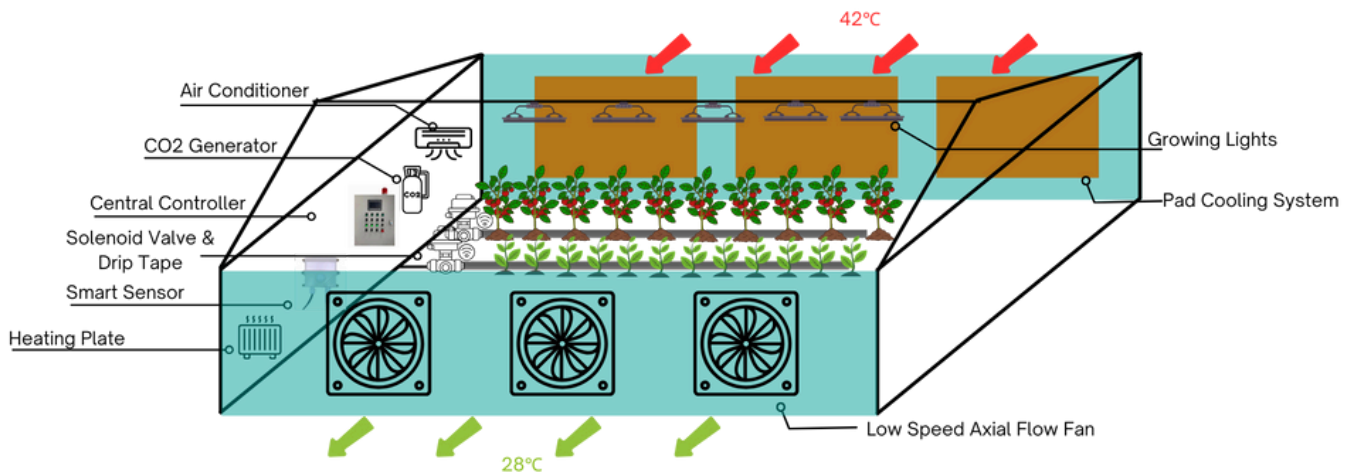

Control Box Specifications

- 4,8,16,32 control channels
- Compatible with RS485 Modbus protocols
- Local and Remote control
- WiFi / 4G connectivity
- Real-time monitoring & control
- 7-inch touch screen

 * It can be used in a greenhouse of 30*8 meters, and the hardware facilities can also be customized according to the size and needs of the greenhouse.

Smart Controller

Greenhouse Components

Air Conditioner
CO2 Generator
Central Controller
Solenoid Valve & Drip Tape
Smart Sensor
Heating Plate

42°C
Growing Lights
Pad Cooling System
Low Speed Axial Flow Fan
28°C

Components

- Main brake
- Air protection switch
- Overload switch
- Data Transmission Unit (DTU)
- PLC controller (Optional: RS485 Hub)
- Touch screen
- Host power supply
- Panel (Switching power supply, control button, indicator light, emergency stop, reset switch)
- Contactor
- Cooling Fan

REMOTE CONTROL

Control Your Irrigation Anytime, Anywhere

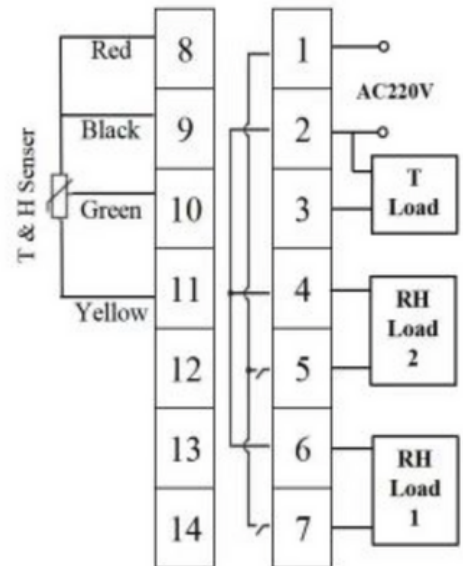|	
4-Channel Controller	**PKCB-04**
8-Channel Controller	**PKCB-08**
16-Channel Controller	**PKCB-16**
32-Channel Controller	**PKCB-32**

Smart Controller

Digital Intelligent Temperature Humidity Controller

Features:

The device adopts a high-performance imported temperature and humidity sensor, capable of simultaneously measuring and controlling the temperature and humidity of the monitored environment. It features high accuracy, strong stability, and fast response speed.

Specifications:

- Temperature Control Range (°C): 1~120
- Temperature Control Accuracy (°C): ±0.2°C
- Display Type: Digital tube (3-digit display)
- Dimensions (mm): 72mm × 72mm × 90mm
- Humidity Control Range (RH): 1~100%
- Humidity Control Accuracy (RH): ±3%
- Sensor Type: Stainless steel temperature and humidity probe

Temperature & Humidity Controller   **PKC02-3**

Smart Controller

Light Controller

Features:

Fast response speed and high transmission efficiency. The signal cable is waterproof and corrosion-resistant, with a standard length of 1 meter. Adjustable threshold and hysteresis settings, offering three control modes for flexible operation.

Specifications:

- Illuminance Range: 0~65,535 LUX
- Resolution: 10 LUX
- Relay Capacity: 10A 250V
- Baud Rate: 9600
- Communication Port: RS485
- Mechanical Lifespan: Minimum 3,000,000 operations
- Power Supply: AC 185~265V, 1A
- Power Consumption: ＜5W
- Storage Temperature: -30~80℃
- Operating Environment: -40~80℃

Light Controller   **PKC01**

Smart Controller

Lora Valve Controller

Features:

Supports control of various types of solenoid valves.Reliable LoRa Wireless Communication.

Specifications:

- Power Supply: Built-in battery (3.6V) or DC 10~30V
- Battery Life: 19,000mAh lithium-thionyl chloride battery can support 3-4 operations per day, lasting for 3-4 years.
- Temperature & Humidity Resistance: -40℃ to +80℃, 0%RH to 95%RH (non-condensing).
- Waterproof Rating: IP65.
- Data Transmission: LoRa wireless signal.
- Output Control Signal: Pulse signal ±9V.
- Control Response Time: Less than 2 seconds.
- LoRa Wireless Transmission Distance:
  - Indoor (urban areas): Can penetrate 3-4 concrete walls.
  - Outdoor (line-of-sight): Up to 3000 meters.

Lora Valve Controller   **PKKZQ01**

8-Station WiFi Irrigation Controller OEM

Upgrade your home or small-scale irrigation system with our 8-Channel Smart Irrigation Controller, designed for gardens, lawns, and small farms. This user-friendly device provides efficient water management, ensuring your plants thrive while conserving resources.

Key Features:

- **Zoned Irrigation:** Select the specific area to be irrigated. Manually open and close the irrigatioin system on the device or via the app.

- **Timed Irrigation:** Schedule irrigation dates from Monday to Sunday, set the time and configure the watering cycle. Set the absorption time, which is the pause period in a single watering cycle allowing the soil to absorb moisture before resuming watering.

- **Remote Control:** Comes with apps for both Android and Apple platforms, making it easy to install, enabling remote irrigation control, and allowing real-time viewing of historical data.

- **Easy To Install:** Accommodate up to 8 stations and is suitable for indoor or outdoor applications.Requires only four screws for easy wall mounting.

8-Station WiFi Irrigation Controller OEM

OEM Customization Optioins

Custom PCB Board Development

– Tailored to specific application requirements.

Customizable Product Enclosure

– Choose materials, colors, and branding for the device casing.

Supports RS485 & Modbus Protocol

– Ensures seamless integration with agricultural systems.

Multiple Communication Options

– Available in WiFi, 4G, and LoRa versions.

Customized Cloud Platform & Mobile App

– PKYDrip Cloud with tailored features and branding.

Comprehensive Sensor Integration

– Soil Temperature & Moisture

– Air Temperature & Humidity

– Carbon Dioxide (CO_2) Levels

– Light Intensity

– Soil pH

– Soil EC (Electrical Conductivity)

Fertigation Machine

Our Fertigation System is an advanced solution that combines irrigation and fertilization, delivering precise nutrient management for agricultural and horticultural applications. Featuring cutting-edge sensors, the system continuously monitors and adjusts pH, EC (electrical conductivity), and nutrient levels, ensuring optimal plant health and growth.

Key features include:

- **Multi-channel** fertilization for simultaneous nutrient application.
- **Customizable** scheduling for fully automated operation.
- **IoT Enabled:** Seamlessly connects to the cloud, enabling real-time data synchronization and remote control of the machine, water pumps, valves, and more. It allows users to monitor the operational status, water pressure, and other key metrics in real time. In case of abnormalities or faults, the system sends timely alerts and activates protection mechanisms. Additionally, it tracks water and fertilizer usage, providing insightful analysis to help users optimize future irrigation and fertilization plans.
- **Compatibility** with various irrigation methods, including drip, ebb-and-flow, and sprinkler systems.

Get our APP on Apple Store or Google Play

Single Channel Fertigation System

Manual Operating – Economical Model PKFM01–E	IoT based Venturi fertigation machine PKFM01–I

Cost-effective solution ideal for fertilizing small-scale fields or individual greenhouse
• **Single Channel**
• **User-friendly Operation**
• **Built-in Timer for automatic control**
• **Equipped with a 200L fertilizer tank and mixer**
• Specifications:
  ○ Total Operating Power: 750W
  ○ Fertilizer Suction Power: 450W
  ○ Voltage Options: 220V or 380V
  ○ Water Inlet and Outlet: DE32
  ○ Fertilizer Suction Rate: 50–600L/H
  ○ Main Pipeline Pressure: 0.1–0.3MPA
	Venturi Fertilizer Channel with Adjustable Flow Valve + Remote Control
	• **Venturi Single Channel**
	• **Local + Remote Control**
	• **Customizable Irrigation Modes**
	• **Fertilizer tank and mixer need to be purchased seperately**
	• Specifications:
	  ○ Total Operating Power: 750W
	  ○ Fertilizer Suction Power: 450W
	  ○ Voltage Options: 220V or 380V
	  ○ Water Inlet and Outlet: DE32
	  ○ Fertilizer Suction Rate: 50–600L/H
	  ○ Main Pipeline Pressure: 0.1–0.3MPA
	• **7-Inch LCD Touch Screen**
	• **Integrated Pressure and Venting Systems**
	• **Durable and Corrosion-Resistant Piping System**

Multi-channel Fertigation System

Three–channels Standard PKFMO3–I	Three–channels Premium PKFMO3–P
- Three fertilizer channels - Corrosion-resistant adjustable rotameters for precise fertilizer flow monitoring - High-quality Aluminum frame - High-performance stainless steel fertilizer pump - UPVC industrial-grade chemical-resistant piping 7-Inch high-brightness LCD Touchscreen with login authentication - Three control modes: physical buttons, touchscreen, and cloud-based remote access. 1 main pump, 4-8 irrigation zone valves (expandable) - Fertilizer tank and mixer need to be purchased seperately - Specifications: - Total Operating Power: 2000W - Fertilizer Suction Power: 1500W - Voltage Options: 220V or 380V - Water Inlet and Outlet: DE32 - Fertilizer Suction Rate: 50–600L/H - Main Pipeline Pressure: 0.1–0.3MPA	**Upgrades based on standard version:** 10-inch high-brightness LCD Touchscreen - Israel imported pulse solenoid valve for quick and precise fertilizer ratio adjustments - Added high-precision pH and EC sensors for real-time data monitoring

Multi-channel Fertigation System

Four-Channel Fertigation System

Specifically Designed for Soilless Cultivation
PKFM04-I

- **4 fertilizer channels**
- **10-inch** high-brightness LCD Touchscreen
- **High-power multistage pump**: provides higher efficiency
- **EC/PH display:** automatically adjusts fertilizer input based on EC values
- **Flexible scheduling**
- **Valve control:** Supports wired or wireless control of multiple field solenoid valves
- **Sensor Integration**: Connects with multiple sensors for advanced monitoring and control.
- **Control modes:** touchscreen, web browser, mobile APP.
- Fertilizer tank and mixer need to be purchased seperately

Seven-Channel Fertigation System

High-end Solution
PKFM07-P

- **7 fertilizer channels**
- **10-inch** high-brightness LCD Touchscreen
- **High-power multistage pump**: provides higher efficiency
- **EC/PH display:** automatically adjusts fertilizer input based on EC values
- **Flexible scheduling**
- **Valve control:** Supports wired or wireless control of multiple field solenoid valves.Controls 16 Solenoid Valves (Expandable to 32 Channels)
- **Sensor Integration**: Connects with multiple sensors for advanced monitoring and control.
- **Control modes:** touchscreen, web browser, mobile APP.
- **Water Pump** with ABB Soft Starter
- Fertilizer tank and mixer need to be purchased seperately

Multi-channel Fertigation System

Optional Accessories

Fertilizer Tank		Mixer	
Capacity	**Item No**	**Voltage**	**Item No**
200L	PKWT200	220V	PKMX220
500L	PKWT500	380V	PKMX380
1000L	PKWT1000		
Materials: PE High-Density Polyethylene **Features**: Acid and Alkali Resistant * Due to its large size and low value, the shipping cost is excessively high. It is recommended that the customer purchase locally.			

Intelligent Sensor

Our intelligent sensors are designed to provide accurate, real-time data to enhance decision-making in agricultural and irrigation management.

Equipped with advanced technology, these sensors monitor key environmental and soil parameters, enabling precision and efficiency in resource utilization.

Key Features:

- **Comprehensive Monitoring:** Measures soil moisture, pH, EC, temperature, and environmental factors like humidity and CO_2 concentration.

- **High Accuracy:** Ensures precise data collection to support optimal irrigation and nutrient management.

- **Real-Time Data:** Delivers instant insights for better control and automation of agricultural systems.

- **Seamless Integration:** Compatible with smart irrigation controllers and IoT platforms for centralized management.

- **Durable Design:** Built to withstand harsh environmental conditions, ensuring long-term reliability.

Environmental Sensor

Temperature | Humidity | LUX

- Temp Measurement Range: -40℃~+80℃
- Humidity Measurement Range: 0%RH~100%RH
- Light Intensity Measurement Range: 0~65535Lux
- Temp Measurement Accuracy: ±0.5% (25 ℃)
- Humidity Measurement Accuracy: ±3% RH (60%RH, 25℃)
- Light Intensity Measurement Accuracy: ±7% (25℃)
- Communication protocol: RS485
- Power Supply: 10~30v DC

Light Intensity	**PKS020-1**
Temperature & Humidity	**PKS020-3**
Temperature, Humidity & LUX	**PKS020-2**

Wind Direction

- Communication protocol: RS485
- Wire Length: 0.7 meter

Wind Direction	**PKS020-8**

Environmental Sensor

Wind Speed

- Measurement Range: 0~70 m/s
- Working Environment: -40~+60℃ 0%RH~80%RH
- Measurement Accuracy: ±0.1 m/s
- Communication protocol: RS485
- Power Supply: 10~30v DC
- Wire Length: 0.7 meter

Wind Speed   **PKS020-4**

Carbon Dioxide Transmitter

- Measurement Range: 0~5000ppm
- Working Environment: -10~+50℃ 0%RH~95%RH
- Measurement Accuracy: ± (50ppm+3%FS) (25℃)
- Communication protocol: RS485
- Power Supply: 10~30v DC

Carbon Dioxide   **PKS020-5**

Environmental Sensor

Oxygen Sensor

- Measurement Range: 0~30%VOL
- Operating Temperature: -20~+50℃
- Operating Humidity: 5%RH~95%RH
- Measurement Accuracy: ±2%FS
- Communication protocol: RS485
- Power Supply: 10~30v DC
- Service Life: >2 years in air

Oxygen Sensor   PKS020-9

Rain Sensor

- Measurement Range: 0mm~4mm/min (maximum allowable: 8mm/min)
- Operating Temperature: 0~50℃
- Operating Humidity: <95%RH (at 40℃)
- Measurement Accuracy: ±3%
- Height(MM):405
- Communication protocol: RS485
- Power Supply: 10~30v DC

Rain Sensor   PKS020-10

Soil Sensor

pH | EC | Temperature | Moisture

- Measurement Range: 0~30%VOL
- Operating Temperature: -40~+60℃
- Humidity Range: 0%~100%RH
- Temperature Range: -40~+80℃
- EC Range: 0-20000 µS/cm
- pH Range: 3~9 pH
- Humidity Accuracy: ±2% within the range of 0-50%, @(brown soil, 30%, 25℃)
- Temperature Accuracy: ±0.5℃ (at 25℃)
- EC Accuracy: ±3% FS within the range of 0-10000 µS/cm
- Protection Rating: IP68
- Measurement Accuracy: ±2%FS
- Communication protocol: RS485
- Power Supply: 4.5~30v DC
- Probe Material: Corrosion-resistant special electrodes
- Sealing Material: Black flame-retardant epoxy resin
- Default Cable Length: 2 meters

|	
Temperature & Moisture	**PKS019-2**
pH & EC	**PKS019-6**
pH,EC,Temperature & Moisture	**PKS019-7**

Solenoid Valve

- Suitable Water Temperature:
  <= 50℃
- Ambient Temperature: <= 82℃
- Power Supply: 24V AC/DC
- Material:
  Glass fiber reinforced plastic steel valve body (PA66)
  Stainless steel spring
  Corrosion-resistant diaphragm

1/2 inch	PKSV050
3/4 inch	PKSV075
1 inch	PKSV100
1.5 inch	PKSV150
2 inch	PKSV200
2.5 inch	PKSV250
3 inch	PKSV300
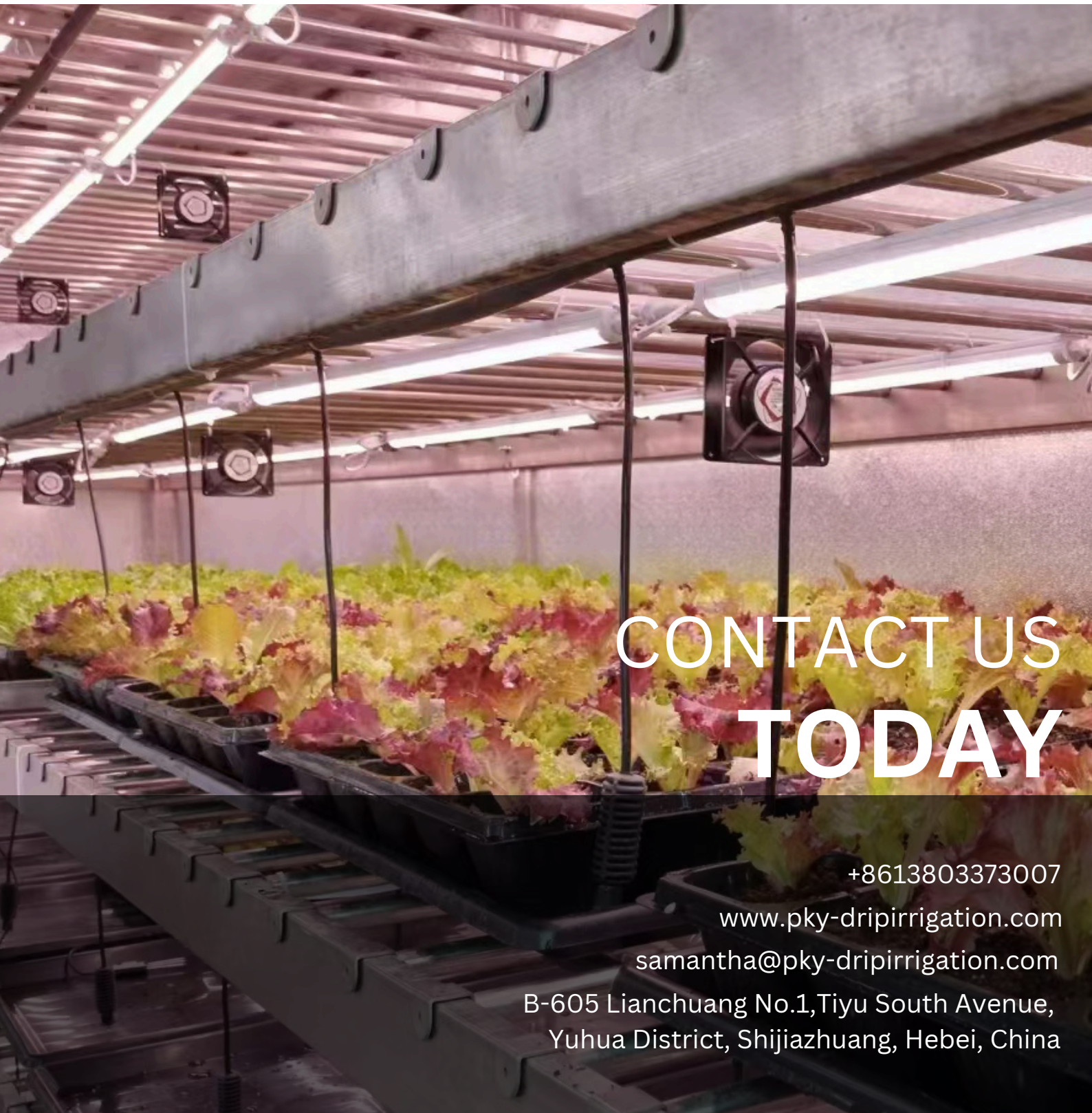
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