

# PKYDrip 3-Channel Smart Fertigation Machine



HS Code: 8424820000

The PKYDrip 3-Channel Smart Fertigation Machine is designed to help modern farms and greenhouses precisely manage irrigation and fertilizer usage.

Built for flexibility, ease of use, and large-scale deployment, this unit combines water flow, fertilizer dosing, and cloud-based control into one powerful system.

### Key Features:

- Cloud platform + mobile app for remote management
- 7-inch industrial touchscreen for easy local operation
- Three fertilizer suction channels + main water inlet
- Integrated EC/pH monitoring and automatic dosing control
- Supports multiple irrigation zones
- Quick to install and easy to maintain
- Fully compatible with Chinese industrial supply chains
- Exported globally with multilingual interface support

### Recommended Applications:

- Greenhouse irrigation and fertigation
- Large-scale open field crop management
- Urban landscaping and park maintenance
- Precision agriculture zones and smart demo farms

# Specification & Quotation

Model: PKY-FG3

## 1. Core Specifications

Parameter	Description
Control Channels	3 Fertilizer + 1 Water
Main Pump Power	0.75–1.5 kW
Power Supply	AC 220V / 50Hz
Pump Head	30–50 meters
Flow Rate	2–20 m <sup>3</sup> /h
Screen	7" HMI Industrial Touchscreen
Supported Sensors	EC, pH, Flow, Pressure, Level, Temp
Communication	RS485 / LoRa / Wi-Fi / 4G (optional)
Enclosure	Waterproof cabinet with grounding

## 2. Standard Package Includes

- 1× Main control unit with screen
- 3× Fertilizer suction valves + flow sensors

- 1× Main water pump (optional)
- 1× EC + 1× pH probe with holders
- Pre-installed software with English UI
- Wiring terminal block, power switch, emergency stop

### 3. Price Reference (EXW China)

- Standard 3-channel unit: \$XXX.XX
- Optional: EC/pH sensor kit: \$XX.XX
- Optional: 4G cloud module: \$XX.XX
- Optional: Branded cabinet or housing color customization
- MOQ: 1 set (OEM branding from 10 sets)

Note: Final pricing depends on selected features, quantity, and delivery terms.

## Installation & Usage Manual

### 1. Safety Precautions

- Ensure power is turned off before wiring or servicing
- Install the controller and pump in dry, ventilated areas
- Use certified grounding and proper circuit breakers

### 2. Installation Steps

1. Fix the fertigation cabinet on a flat, stable surface

2. Connect water inlet and fertilizer suction pipes
3. Wire solenoid valves, pump, sensors according to wiring diagram
4. Connect power supply and turn on the main breaker
5. Test each channel via touchscreen manual mode

### 3. First-Time Setup

- Set system date/time and language via touchscreen
- Input EC/pH calibration values if sensors are connected
- Define irrigation zones and set timers or sensor triggers

### 4. Basic Operation

- Manual mode: open/close valves and pumps directly
- Automatic mode: run programs based on time or EC/pH
- Cloud mode: monitor and control remotely via PKYDrip app

### 5. Simple Maintenance

- Rinse fertilizer pipes every week
- Check filter screens and replace if clogged
- Clean EC/pH probes monthly and recalibrate if needed
- Update firmware via USB or remote server (if applicable)

For technical support, contact PKYDrip via WhatsApp or email.

# FAQ & Selection Guide

## 1. Frequently Asked Questions

- Q: How many irrigation zones can this unit manage?

A: It can manage up to 30 valves via expansion. Each program can define timing, fertilizer ratio, and duration.

- Q: Can I use it without an internet connection?

A: Yes, the system runs fully offline via touchscreen. Internet is only needed for remote access.

- Q: What's the difference between 1, 3, 4, 5, and 7-channel models?

A: The number of fertilizer channels defines how many types of fertilizers you can inject independently.

- Q: Can I switch from EC/pH mode to fixed ratio mode?

A: Yes. The machine supports multiple dosing modes — manual, timed, flow-based, and EC/pH automated.

- Q: Can I upgrade to cloud control later?

A: Yes. You can add a LoRa or 4G module at any time.

- Q: Do you offer spare parts and calibration fluid for sensors?

A: Yes. We provide sensor kits, calibration solutions, and maintenance tools on request.

## 2. Selection Tips

- **1-Channel:** Small greenhouse or single tank proportional fertigation
- **3-Channel:** Most common for general horticulture and vegetables
- **4–5 Channels:** Used in fruit orchards or when acid + micro elements are added
- **7-Channel:** Large farms with multiple stock tanks and full nutrient separation

## 3. Simple Customization Language (for OEM/ODMs)

- “We want our logo on the screen and the enclosure.” ✓ Supported.
- “Can you add extra valve control ports?” ✓ Up to 60 total with expansion.
- “We want the HMI to show in Arabic/French.” ✓ Multilingual interface supported.
- “Can we integrate with our own cloud server?” ✓ MQTT/API available for integration.
- “Can we customize fertilizer logic or app?” ✓ Yes, with ODM contract or SDK.

## Why PKYDrip?

We specialize in rapid R&D, flexible manufacturing, ODM customization, and global delivery. Our team has years of experience in 3D design, PCB layout, injection molding, assembly, and quality control — all under one roof in China.