

K-Rain 4404

K-Rain 4404 4000 Series Indexing Valve User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the K-Rain 4404 4000 Series Indexing Valve. This valve is designed for reliable automation of multiple-zoned residential and small commercial irrigation or wastewater systems. Please read this manual thoroughly before installation and operation to ensure proper function and longevity of your product.

2. PRODUCT OVERVIEW

The K-Rain 4404 4000 Series Indexing Valve is a robust irrigation component featuring a high-impact ABS polymer construction for durability and corrosion resistance. It is designed to manage up to 4 watering zones efficiently.



Image 1: K-Rain 4404 4000 Series Indexing Valve. This image displays the main unit of the K-Rain 4404 valve, showing its robust black ABS polymer casing, the '4000 K RAIN' branding, and the inlet/outlet ports.

Key Features:

- **High-Impact ABS Polymer Construction:** Provides high strength and a non-corrosive body for extended product life.
- **4-Outlet Design:** Capable of managing 4 watering zones.
- **Simplified Design:** Facilitates easy maintenance and servicing.
- **Operating Range:** Functions reliably at low flow rates (10 GPM) and pressures between 25-75 PSI.

3. SAFETY INFORMATION

Observe the following safety precautions during installation, operation, and maintenance:

- Always turn off the main water supply before performing any installation or maintenance on the valve.
- Wear appropriate personal protective equipment, such as safety glasses and gloves, when handling tools and plumbing materials.
- Ensure all electrical connections (if applicable to your system, though this is a mechanical valve) are made by a qualified professional and comply with local codes.
- Do not operate the valve outside its specified pressure range (25-75 PSI) to prevent damage.
- Keep children and pets away from the irrigation system during operation and maintenance.

4. INSTALLATION

4.1 Pre-Installation Check

- Verify that the valve received matches your system requirements, particularly the number of zones (4 outlets).
- Inspect the valve for any visible damage from shipping.
- Ensure you have all necessary plumbing tools and materials (PVC cement, primer, pipe cutters, etc.).

4.2 Mounting and Plumbing

1. **Select Location:** Choose a location that is easily accessible for maintenance and protected from extreme weather conditions.
2. **Prepare Piping:** Cut existing pipes or new pipes to the appropriate lengths for connection to the valve's 1.5-inch FNPT inlet and outlet ports. Ensure clean, burr-free cuts.
3. **Connect Inlet:** Apply PVC primer and cement to the inlet pipe and the valve's inlet port. Securely attach the inlet pipe, ensuring a watertight seal.
4. **Connect Outlets:** Similarly, apply primer and cement to the outlet pipes and the valve's 1.5-inch FNPT outlet ports. Connect each zone's pipe to an outlet.
5. **Allow Curing Time:** Refer to the PVC cement manufacturer's instructions for recommended curing times before pressurizing the system.

4.3 Cam Configuration (Important Note)

The K-Rain 4404 valve is designed for 4 zones and typically comes with a 4-zone cam installed. If your irrigation system requires fewer than 4 zones (e.g., 2 zones), you may need to acquire a specific cam designed for that number of zones. Consult with your supplier or K-Rain customer support for guidance on obtaining and installing the correct cam for your specific zone configuration. Incorrect cam installation can lead to improper zone indexing or continuous water flow.

5. OPERATION

The K-Rain 4000 Series Indexing Valve operates mechanically based on water flow and pressure. When water flows into the valve, an internal mechanism indexes to the next zone each time the water flow is interrupted and then restored. This allows for sequential watering of multiple zones without the need for electrical controllers.

- **Initiating a Cycle:** Turn on the main water supply to the valve. The valve will direct water to the first active zone.
- **Advancing Zones:** To advance to the next zone, temporarily shut off the water supply (e.g., by

turning off the pump or main valve) and then turn it back on. The internal mechanism will rotate, opening the next zone and closing the previous one.

- **Completing a Cycle:** The valve will cycle through all configured zones and then return to the first zone, repeating the sequence as long as the water supply is cycled.

6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your K-Rain Indexing Valve.

- **Annual Inspection:** At the beginning of each irrigation season, inspect the valve for any signs of wear, cracks, or leaks.
- **Cleaning:** Periodically, especially if water quality is poor, the internal components may accumulate debris. To clean, turn off the water supply, remove the top cover (typically secured by screws), and carefully clean any sediment from the cam and indexing mechanism.
- **Gasket Check:** Inspect the gasket under the top cover for deterioration. Replace if cracked or worn to prevent leaks.
- **Winterization:** In freezing climates, ensure the valve is properly drained and protected from frost damage according to local winterization practices for irrigation systems.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Valve is leaking	Damaged gasket or loose cover screws. Internal debris.	Tighten cover screws. Inspect and replace gasket if necessary. Clean internal components.
Valve not indexing to next zone	Insufficient water pressure drop during cycle. Debris obstructing cam mechanism. Incorrect cam for number of zones.	Ensure complete water shut-off between cycles. Clean internal mechanism. Verify correct cam is installed for your zone configuration.
Water continuously flows to one zone	Stuck cam or indexing mechanism.	Turn off water, remove cover, and inspect/clean the cam and indexing mechanism for obstructions.
Low water flow from outlets	Clogged internal components or supply line.	Check for debris inside the valve. Inspect supply lines for blockages.

8. SPECIFICATIONS

Attribute	Detail
Brand	K-Rain
Model Number	4404
Material	Acrylonitrile Butadiene Styrene (ABS)

Attribute	Detail
Item Dimensions (L x W x H)	5.75 x 5.75 x 5.75 inches
Item Weight	1 pound
Inlet Connection Size	1.5 Inches
Inlet Connection Type	FNPT
Outlet Connection Size	1.5 Inches
Outlet Connection Type	FNPT
Number of Ports	1 (main inlet)
Maximum Operating Pressure	290 Bars (approximately 4200 PSI, but product description states 25-75 PSI for reliable operation, adhere to lower range for irrigation systems)

Note: While the maximum operating pressure is listed as 290 Bars, the manufacturer specifies reliable operation for irrigation systems at 25-75 PSI. Always operate within the recommended range for optimal performance and product longevity.

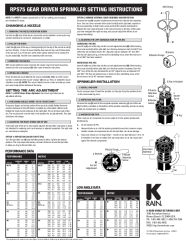
9. WARRANTY AND SUPPORT

9.1 Limited Warranty

The K-Rain 4404 4000 Series Indexing Valve comes with a **Two-Year Limited Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service. It does not cover damage resulting from improper installation, misuse, abuse, neglect, accident, or unauthorized repairs.

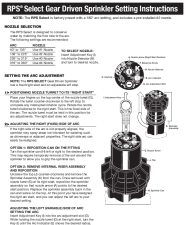
9.2 Customer Support

For technical assistance, warranty claims, or questions regarding your K-Rain product, please contact K-Rain customer support. Refer to the official K-Rain website or product packaging for the most current contact information.



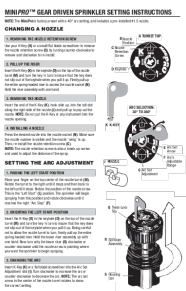
[K-Rain RPS75 Gear Driven Sprinkler Setting and Installation Instructions](#)

A comprehensive guide detailing the setup, adjustment, and installation procedures for the K-Rain RPS75 Gear Driven Sprinkler, including nozzle replacement, arc setting, performance data, and winterization tips.



[K-Rain RPS Select Gear Driven Sprinkler: Setting and Adjustment Guide](#)

Comprehensive guide to setting up and adjusting the K-Rain RPS Select Gear Driven Sprinkler, including nozzle selection, arc adjustment, installation, and performance data.



[MINIPRO™ Gear Driven Sprinkler Setting Instructions and Performance Data](#)

Comprehensive guide to setting up and adjusting the K-Rain MINIPRO™ gear-driven sprinkler, including nozzle changing, arc adjustment, installation, winterization tips, and performance specifications.



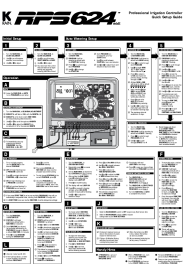
[K-Rain PRO-LC Wi-Fi Irrigation Controller Manual](#)

Installation, programming, and operation guide for the K-Rain PRO-LC Wi-Fi Irrigation Controller. Learn about features like Wi-Fi connectivity, EPA WaterSense approval, scheduling, and system management.



[K-Rain KRX6 6-Zone Indoor Wi-Fi Irrigation Controller User Manual](#)

A comprehensive user manual for the K-Rain KRX6 6-Zone Indoor Wi-Fi Irrigation Controller, covering installation, setup, operation, and troubleshooting.



[K-Rain RPS624 mkII Professional Irrigation Controller Quick Setup Guide](#)

A quick setup guide for the K-Rain RPS624 mkII Professional Irrigation Controller, covering initial setup, auto watering configuration, manual operation, wiring, and troubleshooting.