

K-Rain 6403

K-Rain 6000 Series Indexing Valve

Model 6403: 4-Outlet, 3-Zone Irrigation Valve Instruction Manual

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your K-Rain 6000 Series Indexing Valve, Model 6403. This valve is designed for efficient and reliable control of irrigation systems, managing water flow to up to three distinct zones sequentially.

The K-Rain 6000 Series Indexing Valve features a durable metal die-cast body, ensuring longevity and performance in high-pressure applications. Its design prioritizes ease of maintenance and serviceability.

2. PRODUCT FEATURES

The K-Rain 6000 Series Indexing Valve incorporates several key features for optimal irrigation management:

- **Metal Die-Cast Body:** Constructed for durability, long product life, and capability in high-pressure environments.
- **Simplicity of Design:** Engineered for easy maintenance and servicing, contributing to extended product lifespan.
- **Minimum Flow Requirement:** Operates efficiently at a minimum flow rate of 15 GPM (Gallons Per Minute).
- **Versatile Application:** Ideal for use with pump-fed systems or high-flow city water systems.
- **Built-in Atmospheric Vacuum Breaker:** Automatically releases any vacuum that may form between the pump and the valve during system shutdown, preventing back-siphonage.



Figure 2.1: K-Rain 6000 Series Indexing Valve, Model 6403. This image shows the robust metal construction of the valve.

3. SETUP AND INSTALLATION

Proper installation is crucial for the efficient operation of your indexing valve. It is recommended that installation be performed by a qualified professional.

3.1 Pre-Installation Checks

- Ensure your water supply system can provide a minimum of 15 GPM for optimal valve performance.
- Verify that the installation site allows for proper drainage and access for future maintenance.
- Confirm that all necessary plumbing fittings (1-inch inlet/outlet) are available.

3.2 Installation Steps (General)

1. **Mounting:** Securely mount the valve in an upright position, ensuring it is level.
2. **Inlet Connection:** Connect the main water supply line to the 1-inch threaded inlet. Ensure a watertight seal using appropriate sealant.

3. **Outlet Connections:** Connect the irrigation zone lines to the NPT outlet ports. The valve will cycle through these ports sequentially.
4. **Vacuum Breaker:** The built-in atmospheric vacuum breaker requires no additional setup but must remain unobstructed.
5. **System Flush:** Before connecting to sprinklers, flush the lines to remove any debris that could interfere with valve operation.

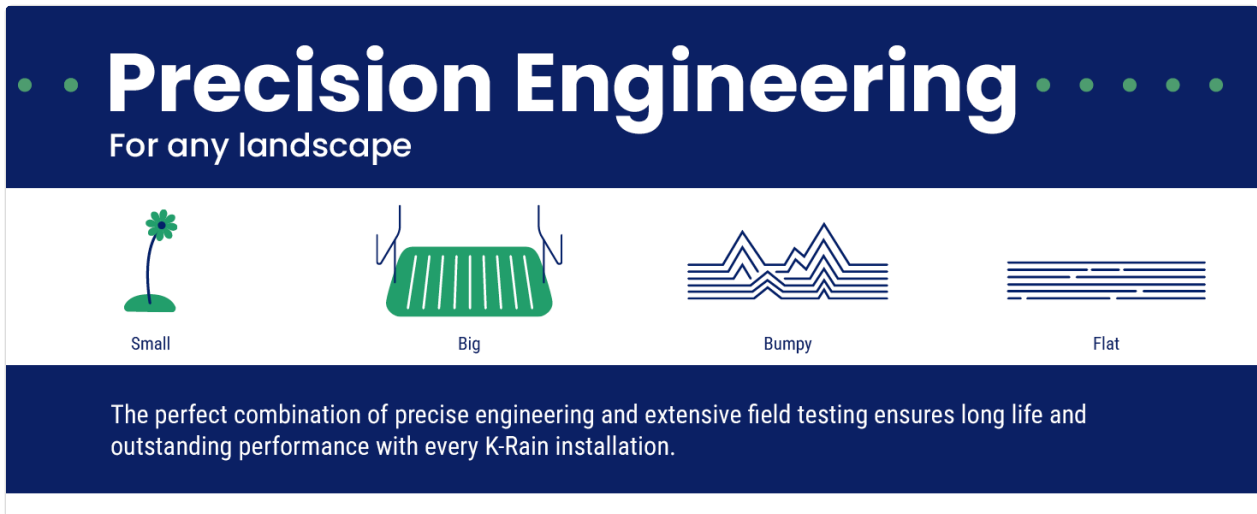


Figure 3.1: The K-Rain 6000 Series Indexing Valve is designed for versatile application across various landscape types, including small, large, uneven, and flat terrains.

4. OPERATING INSTRUCTIONS

The K-Rain 6000 Series Indexing Valve operates automatically, cycling through its zones based on water pressure changes. It is designed to manage up to three zones sequentially.

4.1 Basic Operation

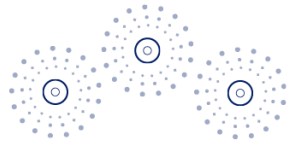
1. **Initiating Flow:** When water pressure is applied to the valve (e.g., by turning on a pump or main water supply), the valve will open to the first zone.
2. **Zone Cycling:** To advance to the next zone, the water supply to the valve must be temporarily interrupted (e.g., by turning off the pump or closing a master valve) and then restored. Each interruption and restoration of flow will cause the valve to index to the next available zone.
3. **Zone Completion:** After cycling through all active zones, the valve will return to the first zone or a closed position, depending on the system configuration.

4.2 Zone Management

This 4-outlet valve is configured for 3-zone operation. Ensure your irrigation system is designed to utilize these three zones effectively. The valve will automatically manage the distribution of water to each zone in sequence.

Smart Choice

For Water Conservation and Savings



Methodically water each
zone of your lawn

**Ensures comprehensive coverage
and maximizes water efficiency**

Why it's unique

Water conservation
Minimize water runoff and evaporation
Efficient Coverage
Uniform water distribution
High Quality
Built to last

Figure 4.1: The indexing valve enables methodical watering of each designated zone within your lawn or landscape, ensuring comprehensive coverage.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your K-Rain 6000 Series Indexing Valve.

5.1 Routine Checks

- **Visual Inspection:** Periodically inspect the valve for any signs of leaks, cracks, or physical damage.
- **Debris Removal:** Ensure the area around the valve is clear of debris that could obstruct its operation or the atmospheric vacuum breaker.
- **Flow Rate:** Monitor your system's flow rate to ensure it meets the minimum 15 GPM requirement for efficient valve indexing.

5.2 Servicing

The valve's design allows for easy servicing. If internal components require attention, consult a qualified irrigation technician or refer to K-Rain's official service guides for detailed instructions. Always shut off the main water supply before attempting any service.

6. TROUBLESHOOTING

This section provides guidance for common issues you might encounter with your K-Rain 6000 Series Indexing Valve.

6.1 Common Issues and Solutions

- **Valve Not Indexing:**
 - Ensure the water supply is being completely interrupted and restored between cycles.
 - Check for sufficient water pressure and flow (minimum 15 GPM). Low flow can prevent proper indexing.
 - Inspect for internal debris that might be obstructing the indexing mechanism.
- **Constant Water Flow to One Zone:**

- This often indicates an issue with the indexing mechanism or internal seals. Professional servicing may be required.

- **Leaks from Valve Body:**

- Check all threaded connections for proper sealing.
- If the leak is from the valve body itself, inspect for cracks or damage. Replacement may be necessary.

- **Reduced Water Pressure in Zones:**

- Verify the main water supply pressure.
- Check for blockages in the supply line or within the valve.

For issues not covered here, or if troubleshooting steps do not resolve the problem, contact K-Rain customer support or a certified irrigation professional.

7. SPECIFICATIONS

Specification	Detail
Brand	K-Rain
Model Number	6403
Material	Metal (Die-Cast)
Product Dimensions (L x W x H)	5.75 x 5.75 x 5.75 inches
Item Weight	2 pounds
Inlet Connection Size	1 Inch
Inlet Connection Type	Threaded
Outlet Connection Size	1 Inch
Outlet Connection Type	NPT
Number of Ports	1 (for sequential indexing to 3 zones)
Maximum Operating Pressure	290 Bars
Minimum Operating Flow	15 GPM
UPC	671923102296

8. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or to purchase replacement parts, please contact K-Rain directly through their official website or customer service channels. Keep your purchase receipt and model number (6403) readily available when contacting support.

