MECCANIXITY SK6

MECCANIXITY SK6 Aluminum Linear Rod Rail Shaft Support 6mm ID Instruction Manual

1. Introduction

This manual provides detailed instructions for the MECCANIXITY SK6 Aluminum Linear Rod Rail Shaft Support. This component is designed to provide stable and precise support for 6mm diameter motion rods in various mechanical systems, including 3D printers and robotic equipment. Its lightweight and durable construction ensures reliable performance in applications requiring smooth linear motion.

2. Product Features

- **Material:** Constructed from aluminum for corrosion resistance and extended service life.
- **Lightweight Design:** Facilitates fast response and reduces overall system weight.
- **High Precision:** Engineered to ensure high-precision rotation and smooth movement of linear shafts.
- **Compatibility:** Specifically designed for 6mm diameter motion rods.

Image 2.1: The SK6 Linear Rod Rail Shaft Support is designed to be lightweight, corrosion-resistant, and durable for reliable performance.

3. Package Contents

Each package contains the following items:

- 2 x MECCANIXITY SK6 Aluminum Linear Rail Shaft Supports
- 1 x M4 Hexagon Wrench

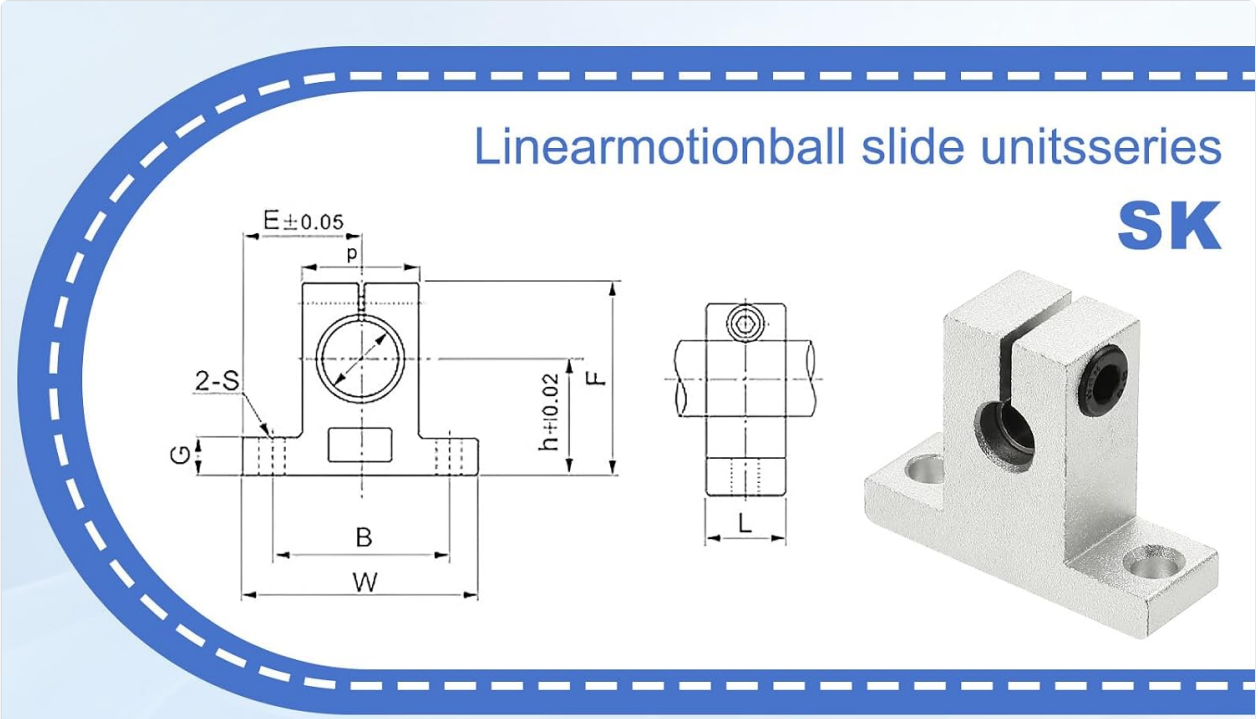
Image 3.1: Contents of the MECCANIXITY SK6 package, including two supports and an M4 hexagon wrench.

4. Specifications

Key dimensions and specifications for the MECCANIXITY SK6 Linear Rod Rail Shaft Support:

- **Shaft Diameter (ID):** 6mm (0.23 inch)
- **Mount Hole Diameter:** 5.5mm (0.22 inch)
- **Hole Center Height:** 20mm (0.79 inch)
- **Package Dimensions:** 3.54 x 2.36 x 0.59 inches
- **Item Weight:** 2.56 ounces

Image 4.1: Detailed dimensions of the SK6 Linear Rod Rail Shaft Support.



Support Designation	Shaft Demensions	Dimensions (mm)									Locking Bpolt	Clamping Bolt	Weight
		h	E	W	L	F	G	P	B	S			
SK6	6	20	21	42	14	32.8	6	18	32	5.5	M4	M5	24
SK8	8	20	21	42	14	32.8	6	18	32	5.5	M4	M5	24
SK10	10	20	21	42	14	32.8	6	18	32	5.5	M4	M5	24
SK12	12	23	21	42	14	38	6	20	32	5.5	M4	M5	30
SK13	13	23	21	42	14	38	6	20	32	5.5	M4	M5	30
SK16	16	27	24	48	16	44	8	25	38	5.5	M4	M5	40
SK20	20	31	30	60	20	51	10	30	45	6.6	M5	M6	70
SK25	25	35	35	70	24	60	12	38	56	6.6	M6	M6	130

Image 4.2: Technical drawing and dimensional table for the SK series, providing comprehensive measurement details for various models including SK6.

5. Installation Guide

Follow these steps to properly install the linear rod rail shaft support:

1. **Select Orientation:** Determine whether a vertical or horizontal support seat is required based on the optical axis installation direction.
2. **Position Support:** Place the linear rail shaft support in the desired location on your mounting surface.
3. **Secure Optical Axis:** Insert the 6mm optical axis (motion rod) into the support.
4. **Fix with Screws:** Use appropriate screws (not included, typically M4 or M5 depending on application) to secure the support to the mounting surface through the 5.5mm diameter holes.
5. **Adjust Locking Mechanism:** Tighten the locking screw on the support using the provided M4 Hexagon Wrench to firmly clamp the optical axis in place. Ensure the axis is securely held without excessive force that could deform the component.

Image 5.1: The SK6 support shown installed with a linear rod, demonstrating its clamping function.

6. Application

The MECCANIXITY SK6 Aluminum Linear Rod Rail Shaft Support is suitable for lightweight and high-precision linear motion support scenarios. Common applications include:

- 3D Printers
- CNC Machines
- Robotic Systems
- Precision Machinery
- DIY Automation Projects

Image 6.1: Example of the SK6 support used in a precision machine, likely a 3D printer or CNC router.

Image 6.2: Various application scenarios where linear rod rail shaft supports are utilized.

7. Maintenance

To ensure optimal performance and longevity of your MECCANIXITY SK6 Linear Rod Rail Shaft Support:

- **Regular Inspection:** Periodically check the supports for any signs of wear, damage, or loosening of the clamping mechanism.
- **Cleaning:** Keep the supports and surrounding linear rods free from dust, debris, and lubricants that could attract contaminants. A dry, soft cloth is usually sufficient.
- **Tightness Check:** Ensure all mounting screws and the clamping screw remain appropriately tightened. Avoid overtightening, which can damage the component or the rod.
- **Corrosion Prevention:** While made of aluminum, avoid exposure to harsh chemicals or environments that could accelerate corrosion.

8. Troubleshooting

If you encounter issues with your linear motion system, consider the following:

- **Rod Slippage:** If the linear rod is slipping, ensure the clamping screw is tightened sufficiently. Check if the rod diameter matches the 6mm ID of the support.
- **Excessive Play:** If there is unwanted movement, verify that the rod is correctly seated and the clamping mechanism is secure. Also, check the stability of the mounting surface.
- **Misalignment:** Ensure all supports are aligned correctly along the linear path to prevent binding or increased friction on the linear rod.
- **Unusual Noise:** Inspect the linear rod and its bearings for any obstructions or damage. Ensure the supports are not causing undue pressure or friction.

9. Important Considerations

Before purchasing and installing, please confirm the size specifications carefully to ensure compatibility with your linear motion rods and application requirements.

10. Warranty and Support

For information regarding product warranty, technical support, or replacement parts, please refer to the MECCANIXITY official website or contact their customer service directly. Keep your purchase receipt for any warranty claims.