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LiebeWH LiebeWH759ywteocg

LiebeWH HG15-300mm Linear Guide Rail System User Manual

Model: LiebeWH759ywteocg

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your LiebeWH HG15-300mm Linear Guide Rail System. This system is designed for applications requiring precise linear motion, such as automation equipment and measuring devices. Please read this manual thoroughly before use to ensure optimal performance and longevity of the product.

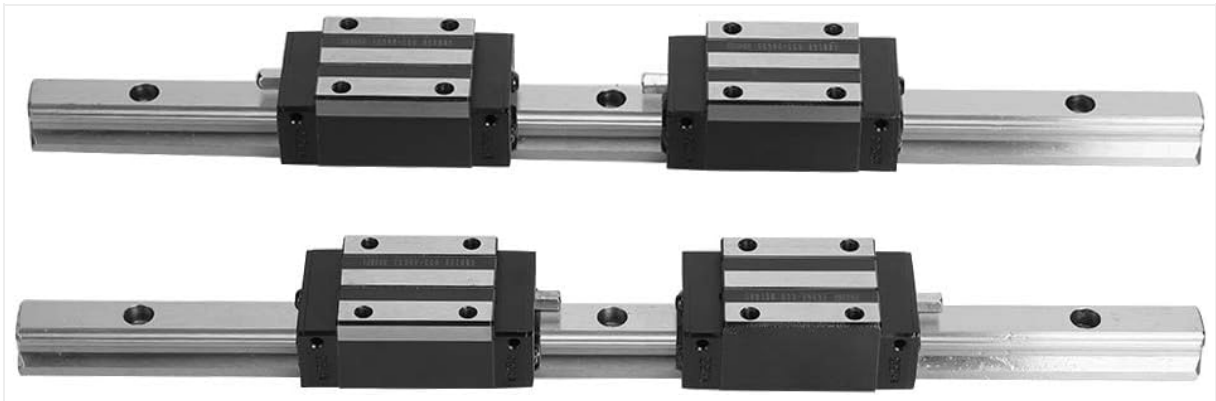


Figure 1.1: Overview of the LiebeWH HG15-300mm Linear Guide Rail System. This image displays two linear guide rails, each equipped with two HGH15 bearing slide blocks, ready for installation.

2. PRODUCT FEATURES

- **High Accuracy:** Supports the exchange of sliders with high accuracy and minimal error, ensuring smooth movement.
- **Dust Prevention:** Equipped with thickened pads at both ends to effectively prevent dust ingress, contributing to a longer service life.
- **Durable Construction:** Manufactured from high-hardness cast iron, providing wear resistance, good durability, and stability.
- **Versatile Application:** Suitable for automation equipment, measuring equipment, and various other

machines requiring precise linear motion.

- **Professional Design:** Features professional linear guide sliders, casting, thick materials, and exquisite workmanship for ease of operation.



Figure 2.1: Detailed view of a single linear guide rail and its corresponding slide block. This image emphasizes the material quality and design features.

3. PACKAGE CONTENTS

Upon unpacking, please verify that all components listed below are present and undamaged:

- 2 x Linear Guide Rail (HG15-300mm)
- 4 x HGH15 Bearing Slide Block
- 1 x Bag of Installation Accessories (e.g., screws, tools)



Figure 3.1: Contents of the package, showing two linear guide rails, four slide blocks, and a small bag containing installation accessories.

4. SETUP AND INSTALLATION

Proper installation is crucial for the performance and lifespan of the linear guide system. Follow these steps carefully:

1. **Preparation:** Ensure the mounting surface is clean, flat, and free from debris. Any unevenness can affect the linear guide's accuracy.
2. **Rail Placement:** Position the linear guide rails on the desired mounting surface. The rails have pre-drilled holes for secure fastening.
3. **Secure Rails:** Use appropriate fasteners (from the installation accessories bag or suitable alternatives) to secure the rails to the mounting surface. Tighten screws evenly to avoid distortion.
4. **Slide Block Installation:** Carefully slide the HGH15 bearing slide blocks onto the linear rails. Ensure they move smoothly without obstruction. The design allows for easy exchange of sliders.
5. **Alignment:** For systems requiring multiple rails, ensure precise parallel alignment between them. Misalignment can lead to increased friction and reduced accuracy.
6. **Dust Protection:** Verify that the thickened pads at both ends of the slide blocks are properly seated to prevent dust from entering the bearing mechanism.



Figure 4.1: Angled perspective of the linear guide rails and slide blocks, illustrating the components as they would appear during installation.

5. OPERATION

The LiebeWH HG15-300mm Linear Guide Rail System is designed for integration into various machinery requiring precise linear movement. Once properly installed, the system provides a stable and low-friction path for attached components.

- **Load Application:** Ensure that the load applied to the slide blocks is within the specified radial thrust capacity. Overloading can lead to premature wear and reduced accuracy.
- **Smooth Movement:** The hydrostatic bearing mechanism ensures smooth and consistent movement. If any resistance or uneven motion is detected, refer to the troubleshooting section.
- **Environmental Considerations:** Operate the system in an environment free from excessive dust, moisture, or corrosive substances to maintain optimal performance and extend lifespan.



Figure 5.1: Example of linear guide rails in an operational context, showing their use in an automated system for precise movement.

6. MAINTENANCE

Regular maintenance is essential to preserve the accuracy and extend the service life of your linear guide system.

6.1. Lubrication

- **Lubricant Type:** Use oil lubrication.
- **Method:** Drip lubrication is the recommended method.
- **Frequency:** Inspect the lubrication status regularly. Maintain a boundary lubrication status to prevent excessive wear. The frequency will depend on the operating environment and usage intensity.
- **Application:** Apply lubricant directly to the moving parts of the slide blocks and rails as per the drip lubrication method.

6.2. Cleaning

- **Dust Removal:** Periodically clean any accumulated dust or debris from the rails and slide blocks. The thickened pads help, but external cleaning is still necessary.
- **Inspection:** Regularly inspect the rails and slide blocks for any signs of wear, damage, or corrosion. Address any issues promptly.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

| Problem | Possible Cause | Solution |
|-------------------------|--|--|
| Rough or Stiff Movement | Lack of lubrication, dust/debris, misalignment, damaged bearing. | Apply lubricant. Clean rails and blocks. Check alignment and adjust. Inspect for damage; replace if necessary. |
| Excessive Noise | Insufficient lubrication, foreign particles, worn components. | Ensure proper lubrication. Clean thoroughly. Inspect for wear and replace worn parts. |
| Reduced Accuracy | Misalignment, wear on rails or blocks, loose mounting. | Re-align the system. Inspect for wear and replace components. Tighten all mounting screws. |

8. SPECIFICATIONS

| Attribute | Detail |
|---|---|
| Condition | Brand New |
| Item Type | Linear Guide Rail |
| Material | Cast Iron |
| Slide Block Color | Black |
| Load Direction | Radial Thrust |
| Bearing Mechanism | Hydrostatic Bearing |
| Lubricant | Oil Lubrication |
| Oil Lubrication Method | Drip Lubrication |
| Lubrication Status | Boundary Lubrication |
| Properties | High Speed |
| Weight (Approx.) | 1805g / 63.7oz (Total package) |
| Linear Guide Rail Size (Approx.) | 30 x 1.5 x 1.5 cm / 11.8 x 0.6 x 0.6 in |
| Slide Block Size (Approx.) | 6 x 3.5 x 2.5 cm / 2.4 x 1.4 x 1.0 in |

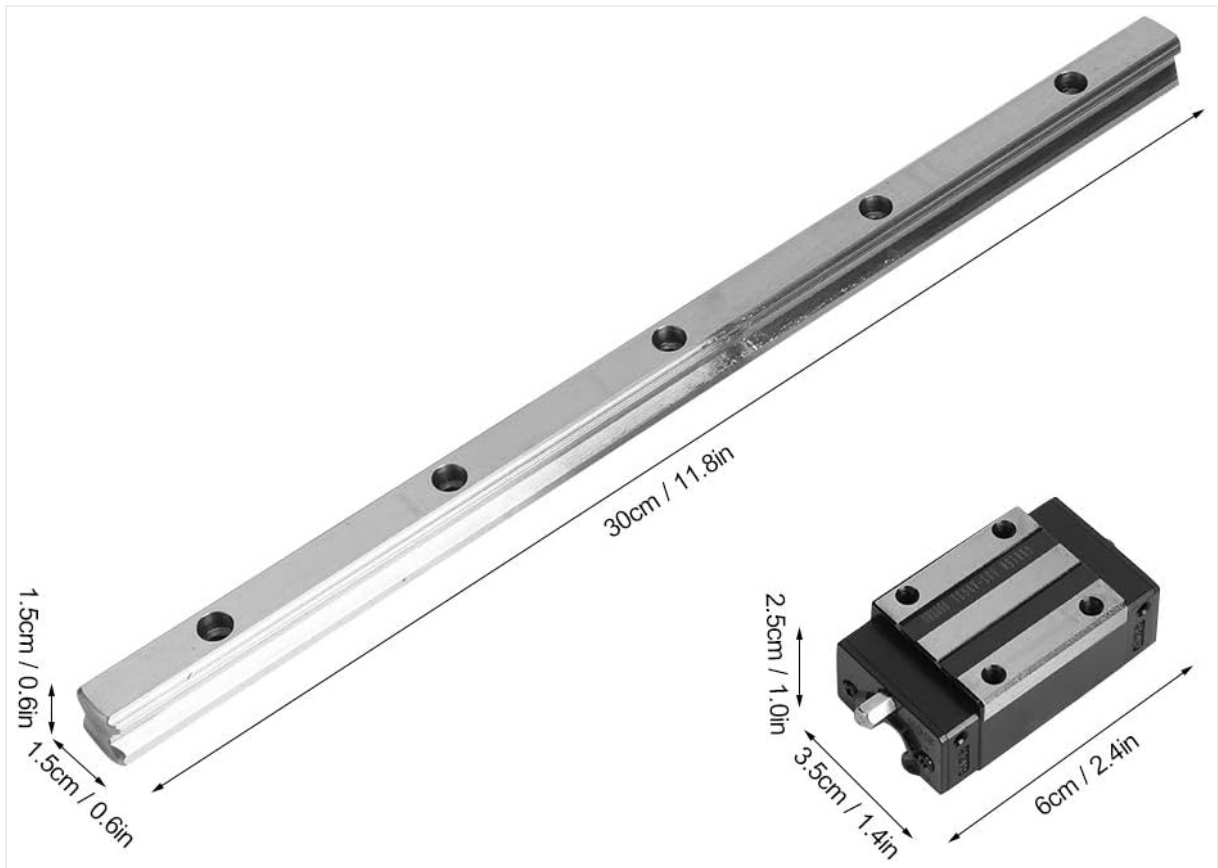


Figure 8.1: Dimensional drawing of the linear guide rail and a single slide block, indicating key measurements for reference.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or any inquiries regarding your LiebeWH HG15-300mm Linear Guide Rail System, please contact the manufacturer or your point of purchase. Keep your purchase receipt for warranty claims.

Manufacturer: LiebeWH

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