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VEVOR SFC20-1200L

VEVOR Linear Rail Slide SFC20-1200mm Instruction Manual

Model: SFC20-1200L

1. PRODUCT OVERVIEW

The VEVOR Linear Rail Slide SFC20-1200mm kit provides smooth, precise, and stable linear motion for various industrial and DIY applications. Constructed from high carbon steel and aluminum alloy, it offers durability and high load capacity, making it ideal for engraving machines, woodworking machinery, printing machinery, CNC machines, and more.



Figure 1: VEVOR Linear Rail Slide SFC20-1200mm Kit Components

Key Features:

- **Smooth Precision:** Experience effortless, high-precision movement with carbon steel main axle and aluminum alloy support.
- **Durable Construction:** Built to last with high carbon steel and aluminum alloy, ensuring longevity and resistance to wear and tear.
- **Versatile Application:** Ideal for a wide range of machinery, including engraving machines, woodworking machinery, printing machinery, and more.
- **Easy Assembly:** Pre-drilled holes on aluminum support rails simplify installation, saving time and effort.
- **High Load Capacity:** Supports high loads with a static load capacity of 1370 N per block and a dynamic load capacity of 882 N per block.

2. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and longevity of your linear rail slide system. The pre-drilled holes on the aluminum support rails facilitate straightforward mounting.

Components Overview:



Figure 2: Carbon Steel Linear Shaft and Aluminum Alloy Components

The kit includes carbon steel linear shafts (HRC62 Hardness) and aluminum alloy support rails and slide blocks. The slide blocks contain ball bearings for smooth movement.

Installation Steps:

- 1. Prepare Mounting Surface:** Ensure the surface where the linear rails will be mounted is clean, flat, and stable.
- 2. Position Rails:** Place the aluminum support rails in the desired position. Utilize the pre-drilled mounting holes for accurate alignment.
- 3. Secure Rails:** Fasten the support rails securely to the mounting surface using appropriate fasteners (not included). Ensure the rails are parallel and level to prevent binding.
- 4. Install Slide Blocks:** Slide the SC20 slide blocks onto the linear shafts. The blocks are designed for easy integration.

5. **Attach to Moving Part:** Secure the slide blocks to the moving component of your machine or DIY project. The blocks have mounting holes for this purpose.

6. **Verify Movement:** After installation, manually move the slide blocks along the rails to ensure smooth, unhindered motion. Check for any binding or excessive play.

Video 1: VEVOR Linear Rail for DIY CNC Routers - Demonstrates the installation and smooth operation of the linear rail system.

3. OPERATING PRINCIPLES

The VEVOR Linear Rail Slide system operates on the principle of rolling friction, utilizing internal ball bearings within the slide blocks to provide low-resistance movement along the hardened linear shafts. This design ensures high precision and minimal noise during operation.

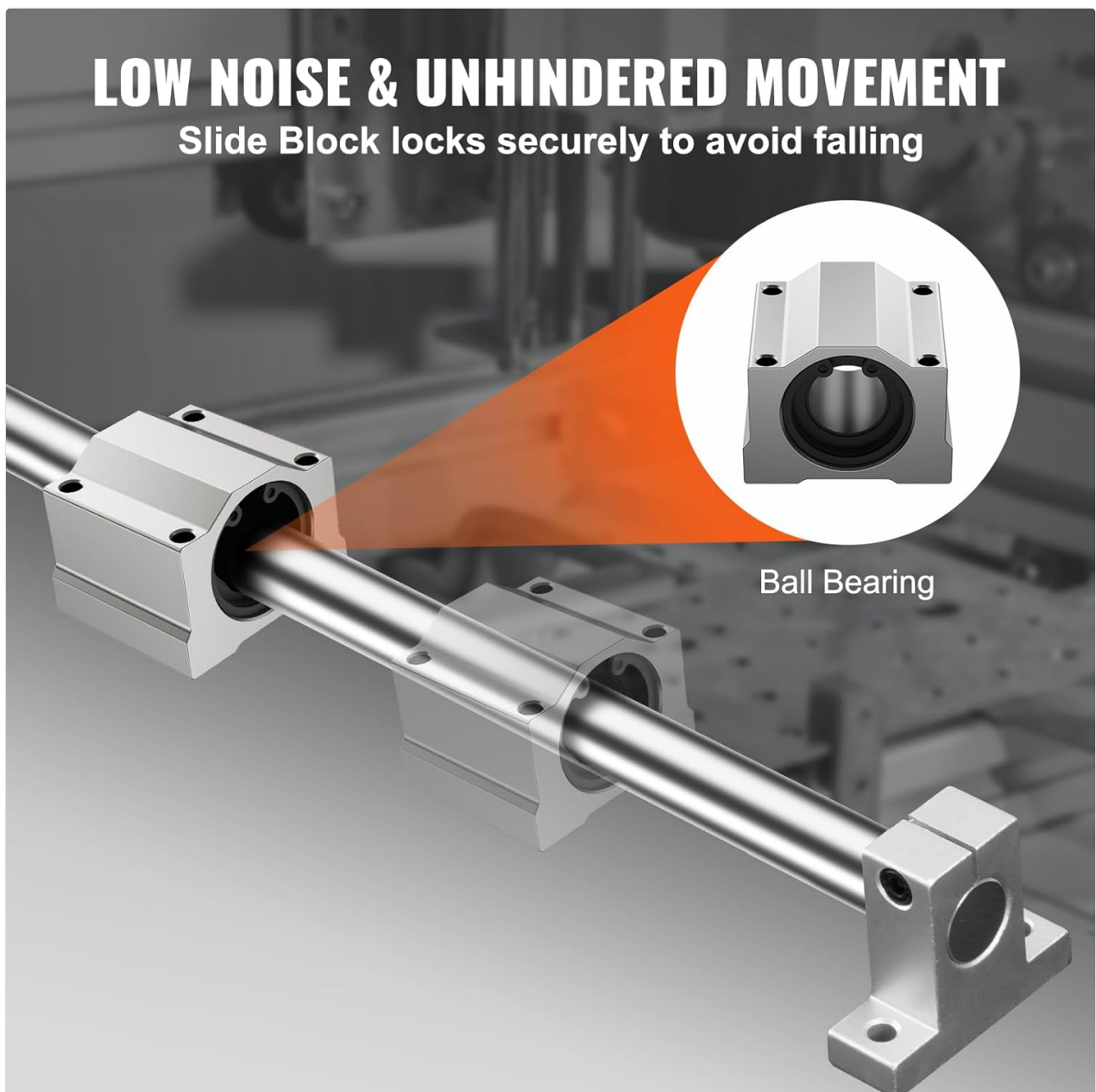
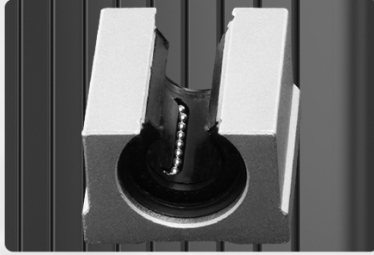


Figure 3: Internal Ball Bearing Mechanism

The chrome-plated surface of the linear shafts provides corrosion resistance, allowing for reliable performance even in environments with moisture. The robust construction ensures the system remains highly stable and non-deformable under load, maintaining accuracy over time.

High Precision Smooth Motion

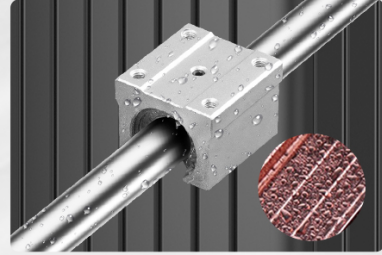
Built-in ball bearing, Low friction movement



Dust-proof Clip
Avoid Bearing Contamination



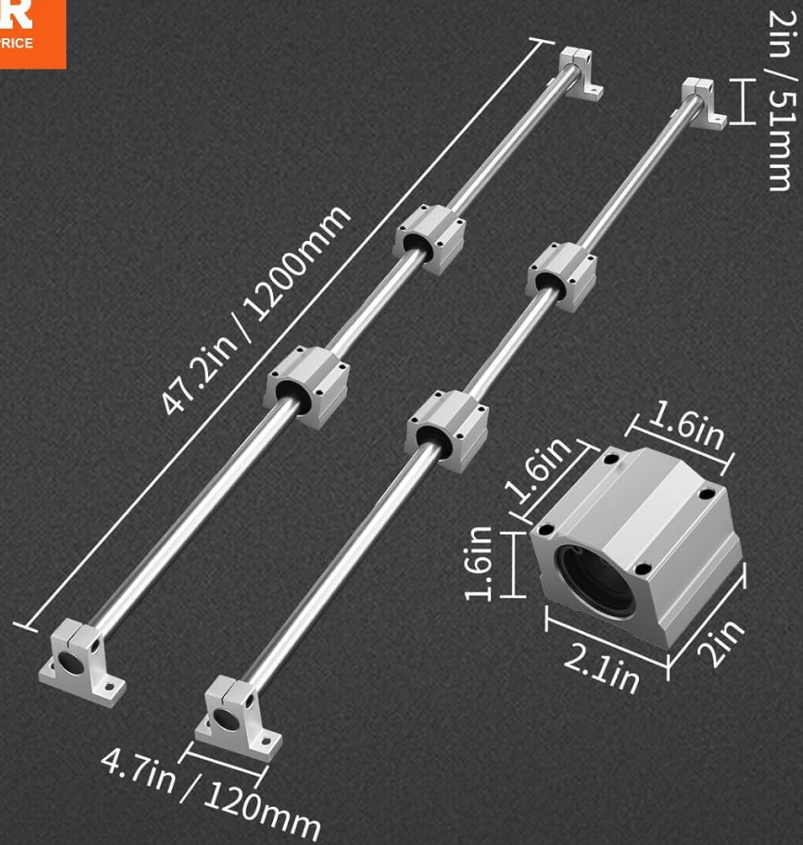
Pre-lubrication
Ensures Long-term Stable Operation



Chrome Plated Surface
Fearless of Wet Environment

Figure 4: Features for High Precision Smooth Motion

Precision details such as minimal linear deviation error ($\leq 80 \mu\text{m} / 1000 \text{mm}$) and shaft roundness error ($\leq 3 \mu\text{m}$) contribute to the system's accurate motion capabilities.



Assembly Model : **SFC20-1200L**

Static Load (per block) : **1370 N**

Slide Block Model : **SC20**

Net Weight : **15.7 lbs / 7.1 kg**

Guide Rail Length : **47.2 in / 1200 mm**

Package Size : **51.6 x 5.7 x 3.1 in**

Shaft Diameter : **Φ 20 mm**

Material :

Dynamic Load (per block) : **882 N**

High Carbon Steel & Aluminum

Figure 5: Precision Details for Accurate Motion

4. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your VEVOR Linear Rail Slide system.

Cleaning:

- Periodically wipe down the linear shafts and slide blocks with a clean, lint-free cloth to remove dust, debris, and old lubricant.
- For stubborn grime, use a mild, non-corrosive cleaning agent. Ensure all cleaning residues are removed before re-lubrication.

Lubrication:

- The slide blocks are pre-lubricated from the factory. However, for continuous smooth operation, especially in high-use applications, periodic re-lubrication is recommended.

- Apply a thin layer of high-quality linear bearing grease to the linear shafts. Move the slide blocks back and forth several times to distribute the lubricant evenly.
- Frequency of lubrication depends on usage and environmental conditions. Inspect regularly for signs of dryness or increased friction.

Inspection:

- Regularly inspect the shafts for any signs of wear, scratches, or corrosion.
- Check the slide blocks for any damage or excessive play.
- Ensure all mounting bolts are tight and secure.

5. TROUBLESHOOTING

If you encounter issues with your linear rail slide system, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Binding or Sticking Movement	Misalignment of rails; insufficient lubrication; debris on shafts; damaged bearings.	Check rail parallelism and levelness; clean shafts and re-lubricate; inspect for foreign particles; replace damaged components.
Excessive Play or Looseness	Worn bearings; loose mounting bolts; incorrect component sizing.	Tighten all mounting bolts; inspect bearings for wear and replace if necessary; ensure correct shaft and block sizes are used.
Increased Noise During Operation	Lack of lubrication; presence of debris; worn bearings.	Clean and re-lubricate the system; remove any debris; replace worn bearings.
Corrosion on Shafts	Exposure to moisture without proper protection.	Clean off corrosion (if minor); apply rust preventative lubricant; ensure proper environmental conditions or protective measures.

6. SPECIFICATIONS

Attribute	Value
Assembly Model	SFC20-1200L
Slide Block Model	SC20
Guide Rail Length	47.2 in / 1200 mm
Shaft Diameter	Φ 20 mm
Dynamic Load (per block)	882 N
Static Load (per block)	1370 N
Net Weight	15.7 lbs / 7.1 kg
Material	High Carbon Steel & Aluminum
Product Dimensions	47.2 x 4.7 x 2 inches

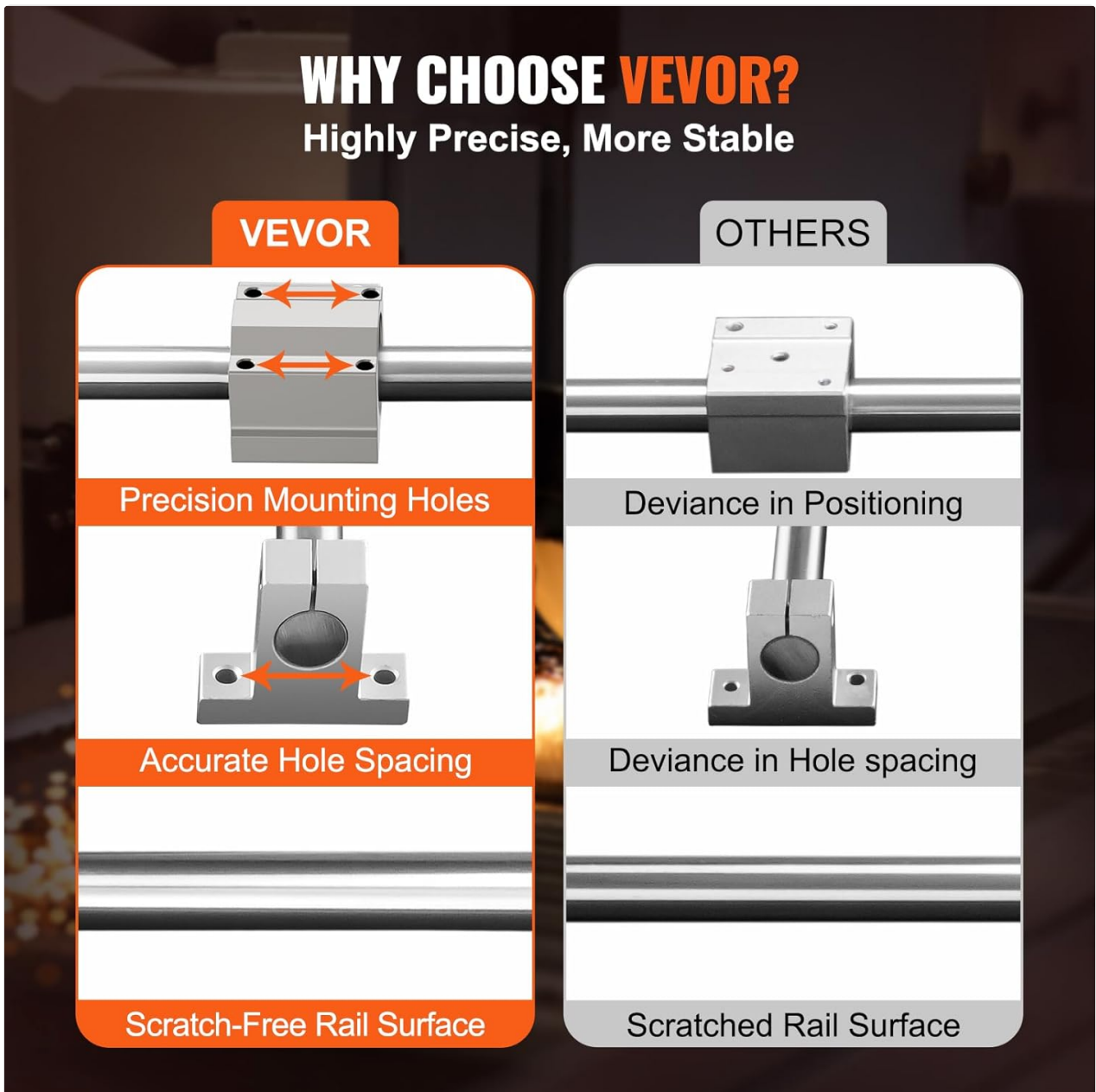


Figure 6: Detailed Specifications and Dimensions

7. WARRANTY AND SUPPORT

For warranty information, product support, or technical assistance, please contact VEVOR customer service directly. Refer to your purchase documentation for specific warranty terms and conditions.

VEVOR is committed to providing quality products and support. For further assistance, visit the official VEVOR website or contact their customer service department.

Note: Return policies may vary based on the retailer. This product has a 30-day refund/replacement policy through the original seller.