

## WVAIUPIX KF-25 200mm

# WVAIUPIX KF-25 SS304 Stainless Steel Vacuum Flexible Hose Bellow

Model: KF-25, Length: 200mm

## 1. INTRODUCTION

This instruction manual provides essential information for the safe and effective installation, operation, and maintenance of your WVAIUPIX KF-25 SS304 Stainless Steel Vacuum Flexible Hose Bellow. Please read this manual thoroughly before using the product to ensure proper function and longevity. The WVAIUPIX flexible hose bellows are designed for use in high vacuum and ultra-high vacuum systems, providing flexibility and vibration isolation between components. Constructed from SS304 stainless steel, they offer excellent corrosion resistance and durability.

## 2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE), including gloves and eye protection, when handling vacuum components.
- Ensure that the vacuum system is depressurized and cooled before attempting any installation, maintenance, or removal of components.
- Avoid over-bending or twisting the flexible hose bellow beyond its specified limits, as this can cause damage and compromise vacuum integrity.
- Do not expose the bellow to corrosive chemicals or extreme temperatures outside its operational range.
- Verify that all KF flange connections are clean and properly sealed with appropriate O-rings and clamps to prevent leaks.

## 3. PRODUCT OVERVIEW

The WVAIUPIX KF-25 flexible hose bellow is a critical component for vacuum systems requiring movement, vibration dampening, or thermal expansion compensation. It features a corrugated stainless steel tube with KF-25 flanges at both ends for quick and secure connections.



This image displays several WVAIUPIX stainless steel vacuum flexible hose bellows of varying lengths and KF flange sizes. The corrugated design allows for flexibility, while the KF flanges ensure a secure, standardized vacuum connection.

### Key Features:

- **Material:** SS304 Stainless Steel for excellent corrosion resistance.
- **Flange Type:** KF-25 (NW25) standard flanges for easy installation.
- **Flexibility:** Corrugated design accommodates axial, lateral, and angular movements.
- **Vacuum Compatibility:** Suitable for high and ultra-high vacuum applications.
- **Length:** 200mm.

## 4. SETUP AND INSTALLATION

Follow these steps for proper installation of the flexible hose bellow:

1. **Inspection:** Carefully inspect the bellow for any signs of damage, dents, or scratches that could compromise its vacuum integrity. Ensure the KF flanges are clean and free of debris.
2. **Cleaning:** If necessary, clean the bellow and KF flanges with an appropriate vacuum-compatible solvent (e.g., isopropyl alcohol) and lint-free wipes. Allow to dry completely.
3. **O-Ring Placement:** Place a new, clean KF O-ring (typically Viton or Buna-N, depending on application) into the groove of one KF flange.
4. **Connection:** Align the bellow's KF flange with the mating KF flange on your vacuum system. Ensure the O-ring is properly seated between the two flanges.
5. **Clamping:** Secure the connection using a KF centering ring and a KF clamp. Tighten the clamp evenly until a firm seal is achieved. Do not overtighten, as this can damage the O-ring or flanges.
6. **Repeat:** Repeat steps 3-5 for the other end of the flexible hose bellow.
7. **Leak Check:** After installation, perform a leak check on the entire vacuum system, including the

new connections, to ensure vacuum integrity.

## 5. OPERATING GUIDELINES

Once installed, the flexible hose bellow operates passively within the vacuum system. Observe the following guidelines:

- Ensure the bellow is not subjected to excessive bending or compression during system operation.
- Monitor the vacuum system for any unusual vibrations or movements that could stress the bellow.
- Avoid rapid changes in temperature or pressure that could induce thermal stress on the bellow.

## 6. MAINTENANCE

Regular maintenance helps ensure the longevity and performance of your flexible hose bellow:

- **Visual Inspection:** Periodically inspect the bellow for any signs of wear, corrosion, cracks, or deformation. Pay close attention to the convolutions and weld areas.
- **Cleaning:** If the bellow is removed from the system, clean its exterior and interior surfaces as described in the 'Setup and Installation' section. Ensure no cleaning residues remain.
- **O-Ring Replacement:** KF O-rings are consumable items. Replace them whenever the connection is broken or if they show signs of wear, compression set, or damage.
- **Storage:** When not in use, store the bellow in a clean, dry environment, protected from physical damage and contaminants. Cap the flanges to prevent dust ingress.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Vacuum leak at connection	Damaged or improperly seated O-ring; loose clamp; dirty flange surfaces.	Inspect and replace O-ring; re-tighten clamp; clean flange surfaces.
Bellow appears stiff or damaged	Over-bending; material fatigue; external impact.	Ensure proper installation within flexibility limits; replace if damaged.
Corrosion on surface	Exposure to corrosive substances; improper cleaning.	Clean with appropriate methods; ensure proper handling and storage.

## 8. SPECIFICATIONS

Feature	Detail
Model	KF-25
Length	200mm
Flange Standard	KF (NW)

Feature	Detail
KF-25 Outer Diameter (OD)	40mm
Material	SS304 Stainless Steel
Item Weight	111 Grams
Manufacturer	WVAIUPIX

## 9. WARRANTY AND SUPPORT

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For warranty information or technical support regarding your WVAIUPIX KF-25 SS304 Stainless Steel Vacuum Flexible Hose Bellow, please contact your supplier or refer to the product packaging for specific contact details. Keep your purchase receipt as proof of purchase.