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› PXFOCOYD Z3 Expansion Sleeve Instruction Manual (Model Z3-22x47x31)

PXFOCOYD Z3-22x47x31

PXFOCOYD Z3 Expansion Sleeve Instruction Manual

Model: Z3-22x47x31

1. INTRODUCTION

This instruction manual provides essential information for the safe and effective use of the PXFOCOYD Z3 Expansion Sleeve. Please read this manual thoroughly before installation and operation to ensure proper function and to prevent damage to the product or injury to personnel. Keep this manual for future reference.

2. PRODUCT OVERVIEW

The PXFOCOYD Z3 Expansion Sleeve is a precision component designed for securely fixing bolts and other connectors by processing threaded holes in various metal materials. It is engineered for high wear and heat resistance, ensuring durability and high precision in its applications.

Key Features:

- **Function:** Used to process threaded holes in metal materials, ensuring firm fixation of bolts and connectors.
- **Productivity:** Suitable for threading on machine tools, significantly improving operational efficiency.
- **Versatility:** Compatible with a variety of metal materials, including stainless steel and ferrous metals.
- **Durability:** Constructed from high-quality materials for excellent wear and heat resistance, ensuring a long service life.
- **Precision:** Designed to achieve high-precision threads that meet stringent requirements.



Figure 2.1: Main view of the PXFOCOYD Z3 Expansion Sleeve, showing its robust construction and multiple hex bolts for secure fastening.

3. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury and damage:

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves, during installation and operation.
- Ensure the work area is clean, well-lit, and free from obstructions.
- Do not exceed the specified torque values when tightening bolts.
- Inspect the expansion sleeve for any signs of damage or wear before each use. Do not use damaged components.
- Keep children and unauthorized personnel away from the work area.

4. SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance of the Z3 Expansion Sleeve.

1. **Prepare the Shaft and Hub:** Ensure that the shaft and the bore of the hub are clean, dry, and free from grease, oil, or burrs. The surfaces should meet the required tolerances for a press fit.
2. **Position the Sleeve:** Slide the Z3 Expansion Sleeve onto the shaft. Then, slide the hub over the expansion sleeve. Ensure proper alignment.
3. **Initial Tightening:** Lightly tighten all clamping bolts in a star pattern (or alternating pattern) until they are finger-tight. This ensures the sleeve is centered.

4. **Gradual Tightening:** Gradually tighten the clamping bolts in several passes, following the star pattern. Increase the torque incrementally until the specified tightening torque is reached. Refer to the specifications section for torque values.
5. **Final Check:** After tightening, verify that the hub is securely fixed to the shaft and that there is no axial or radial play.



Figure 4.1: A selection of PXFOCOYD Z3 Expansion Sleeves, illustrating different sizes available for various applications.

5. OPERATING INSTRUCTIONS

The Z3 Expansion Sleeve operates by creating a friction fit between a shaft and a hub when its clamping bolts are tightened. This keyless connection transmits torque and axial forces.

1. **Torque Application:** Once installed, the expansion sleeve maintains its connection through the friction generated by the tightened bolts. Ensure the applied torque on the bolts matches the manufacturer's specifications for your specific application.
2. **Monitoring:** Periodically monitor the connection for any signs of loosening, especially during initial operation or after heavy loads.
3. **Disassembly:** To disassemble, loosen the clamping bolts gradually and evenly in a reverse star pattern. The sleeve will release its grip, allowing the hub and shaft to be separated.



Figure 5.1: Detailed view of the Z3 Expansion Sleeve, highlighting the hex bolts and the split design for expansion.

6. MAINTENANCE

Regular maintenance ensures the longevity and reliable performance of your expansion sleeve.

- **Cleaning:** Keep the expansion sleeve clean and free from debris, especially before installation. Use a clean cloth and a suitable degreaser if necessary.
- **Inspection:** Periodically inspect the sleeve and its bolts for any signs of corrosion, wear, or deformation. Replace any damaged components immediately.
- **Lubrication:** While the sleeve itself does not require lubrication for its primary function, ensure that the threads of the clamping bolts are lightly lubricated with a suitable anti-seize compound before tightening to ensure accurate torque readings and prevent galling.
- **Storage:** Store the expansion sleeve in a dry, clean environment, protected from moisture and extreme temperatures.

7. TROUBLESHOOTING

This section addresses common issues that may arise during the use of the Z3 Expansion Sleeve.

| Problem | Possible Cause | Solution |
|--|--|---|
| Sleeve does not grip shaft/hub securely. | <ul style="list-style-type: none">Insufficient tightening torque.Incorrect shaft/hub dimensions.Grease or oil on contact surfaces. | <ul style="list-style-type: none">Re-tighten bolts to specified torque.Verify shaft/hub dimensions against specifications.Clean surfaces thoroughly before re-installation. |
| Difficulty in disassembly. | <ul style="list-style-type: none">Bolts overtightened.Corrosion. | <ul style="list-style-type: none">Loosen bolts gradually and evenly.Apply penetrating oil if corrosion is present. |
| Vibration or misalignment. | <ul style="list-style-type: none">Improper installation/alignment.Damaged sleeve or shaft. | <ul style="list-style-type: none">Re-install, ensuring precise alignment.Inspect components for damage and replace if necessary. |

8. SPECIFICATIONS

The following specifications apply to the PXFOCOYD Z3 Expansion Sleeve (Model Z3-22x47x31):

- **Model Number:** Z3-22x47x31
- **Brand:** PXFOCOYD
- **Package Dimensions:** 1.18 x 0.79 x 0.39 inches
- **Item Weight:** 1.48 pounds
- **Number of Pieces:** 1
- **Material:** High-quality, wear and heat resistant material
- **Application:** Threading in various metal materials (stainless steel, ferrous metals, etc.)



Figure 8.1: Four Z3 Expansion Sleeves, showcasing the range of sizes and consistent design.

9. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact your retailer or the manufacturer directly. Ensure you have your product model number (Z3-22x47x31) and purchase details available when contacting support.



Figure 9.1: A vertical arrangement of five Z3 Expansion Sleeves, demonstrating the size progression from smallest to largest.

