TEVEMA Installation and Maintenance Guide

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1. Introduction

Welcome to the TEVEMA Installation and Maintenance Guide. This document provides detailed instructions for the installation and maintenance of TEVEMA's air springs and reinforced rubber springs. Proper installation and maintenance ensure optimal performance and longevity of the products.

2. Product Overview

Single Convoluted Air Springs

- Designed for applications requiring a single convolution for load support and vibration isolation.
- Available in various sizes and configurations.

Double Convoluted Air Springs

- Designed for applications requiring a double convolution for enhanced load support and vibration isolation.
- Available in various sizes and configurations.

Triple Convoluted Air Springs

- Designed for applications requiring a triple convolution for maximum load support and vibration isolation.
- Available in various sizes and configurations.

Standard Reinforced Rubber Springs

- Standard rubber springs reinforced for improved performance.
- Ideal for general vibration isolation and load support applications.

Advanced Reinforced Rubber Springs

- Enhanced rubber springs with advanced reinforcement for high-performance applications.
- Suitable for more demanding environments.

3. Installation Instructions

General Guidelines

- Ensure the installation area is clean and free of debris.
- Follow all safety protocols, including the use of appropriate personal protective equipment (PPE).
- Verify that the air spring or rubber spring is the correct size and type for the application.

Specific Installation Steps

Single Convoluted Air Springs

1. **Prepare the Mounting Area**:
    - Clean the surface where the air spring will be mounted.
    - Ensure all mounting hardware is available and in good condition.

2. **Position the Air Spring**:
    - Align the air spring with the mounting holes.
    - Attach the top and bottom plates securely using the provided bolts.
3. **Connect the Air Supply**:
    - Attach the air supply line to the air inlet on the top plate.
    - Ensure a tight seal to prevent air leaks.
4. **Test the Installation**:
    - Inflate the air spring to the recommended pressure.
    - Check for any leaks or misalignments.

Double Convoluted Air Springs

1. **Prepare the Mounting Area**:
    - Follow the same steps as for single convoluted air springs.
2. **Position the Air Spring**:
    - Align the air spring with the mounting holes and attach securely.
3. **Connect the Air Supply**:
    - Attach the air supply line and ensure a tight seal.
4. **Test the Installation**:
    - Inflate to the recommended pressure and check for issues.

Triple Convoluted Air Springs

1. **Prepare the Mounting Area**:
    - Follow the same steps as for single convoluted air springs.
2. **Position the Air Spring**:
    - Align the air spring and attach securely.
3. **Connect the Air Supply**:
    - Ensure a tight connection to prevent leaks.
4. **Test the Installation**:
    - Inflate to the recommended pressure and inspect for issues.

Reinforced Rubber Springs

1. **Prepare the Mounting Area**:
    - Clean the surface and ensure all mounting hardware is available.
2. **Position the Rubber Spring**:
    - Align the rubber spring with the mounting holes.
    - Attach securely using the provided hardware.
3. **Test the Installation**:
    - Ensure the rubber spring is securely mounted and check for any misalignments.

4. Maintenance Instructions

General Maintenance Guidelines

- Regularly inspect the springs for signs of wear or damage.
- Ensure all connections are tight and secure.
- Check for air leaks periodically and address any issues promptly.

Specific Maintenance Steps

Single Convoluted Air Springs

1. **Inspect for Wear**:
    - Check the rubber and metal parts for any signs of wear or damage.
2. **Check Air Pressure**:
    - Ensure the air pressure is within the recommended range.
3. **Tighten Connections**:
    - Ensure all bolts and connections are tight.

Double Convoluted Air Springs

1. **Inspect for Wear**:
    - Follow the same steps as for single convoluted air springs.
2. **Check Air Pressure**:
    - Ensure the air pressure is within the recommended range.
3. **Tighten Connections**:
    - Ensure all bolts and connections are tight.

Triple Convoluted Air Springs

1. **Inspect for Wear**:
    - Follow the same steps as for single convoluted air springs.
2. **Check Air Pressure**:
    - Ensure the air pressure is within the recommended range.
3. **Tighten Connections**:
    - Ensure all bolts and connections are tight.

Reinforced Rubber Springs

1. **Inspect for Wear**:
    - Check the rubber for any signs of wear or damage.
2. **Check Mounting Hardware**:
    - Ensure all mounting hardware is secure.

5. Technical Specifications

Pressure Ratings

- **Single Convoluted Air Springs**: Max 8 bar (standard), 12 bar (high strength)
- **Double Convoluted Air Springs**: Max 8 bar (standard), 12 bar (high strength)

- **Triple Convoluted Air Springs**: Max 8 bar (standard), 12 bar (high strength)

Material Specifications

- **Rubber Compounds**:
    - Natural (NR/SBR): -40°C to +70°C
    - Chlorobutyl (CIIR): -30°C to +115°C
    - Nitrile (NBR): -25°C to +110°C
    - Ethylene Propylene Diene (EPDM): -20°C to +115°C
    - Chloroprene (CR): -20°C to +110°C
- **Metal Parts**:
    - Electro galvanized steel (standard)
    - Stainless AISI-304 (optional)
    - Stainless AISI-316L (upon request)

Temperature Ranges

- **Standard Temperature Range**: -40°C to +70°C
- **High-Temperature Applications**: -20°C to +115°C

6. Troubleshooting

- **Air Leaks**:
    - Check all connections for tightness.
    - Inspect the air spring for punctures or damage.
- **Uneven Height**:
    - Verify air pressure and adjust as necessary.
    - Check for obstructions or misalignments.
- **Excessive Wear**:
    - Inspect mounting surfaces for debris.
    - Ensure the air spring is not overloaded.

7. Contact Information

For additional support, please contact TEVEMA at:

- **Phone**:
- **Email**:
- **Address**:
- **Website**: www.tevema.com