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› SMC CJ2KB16-135RZ Air Cylinder User Manual

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Brand: SMC | Model: CJ2KB16-135RZ

1. INTRODUCTION

This manual provides essential information for the safe and effective use of the SMC CJ2KB16-135RZ Air Cylinder. It covers installation, operation, maintenance, and troubleshooting. Please read this manual thoroughly before using the product to ensure proper function and safety.



Figure 1.1: Two SMC CJ2KB16-135RZ Air Cylinders. These pneumatic cylinders convert compressed air energy into linear motion, commonly used in industrial automation for pushing, pulling, lifting, or clamping applications.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent accidents and ensure safe operation.

- Read and understand all instructions in this manual before installation or operation.
- Ensure that the air supply is disconnected and pressure is relieved before performing any installation, maintenance, or troubleshooting.
- Wear appropriate personal protective equipment (PPE) such as safety glasses and gloves during installation and maintenance.
- Do not exceed the maximum operating pressure specified for the cylinder.
- Ensure proper mounting and secure connections to prevent unexpected movement or detachment.
- Only qualified personnel should perform installation and maintenance.

3. SETUP AND INSTALLATION

Proper installation is crucial for the performance and longevity of the air cylinder.

1. **Unpacking:** Carefully remove the air cylinder from its packaging. Inspect for any visible damage during transit.
2. **Mounting:** Securely mount the cylinder to a stable and rigid surface using appropriate fasteners. Ensure the mounting surface can withstand the forces generated by the cylinder.
3. **Air Line Connection:** Connect the compressed air lines to the cylinder's ports. Ensure connections are tight and leak-free. Use appropriate fittings and sealants.
4. **Load Connection:** Attach the load to the piston rod. Ensure the load is aligned with the cylinder's axis of motion to prevent side loading, which can cause premature wear.
5. **Initial Pressure Check:** Gradually apply air pressure and check for any leaks at the connections.



Figure 3.1: SMC Air Cylinder as received in its packaging. Always inspect the product for damage upon arrival before proceeding with installation.

4. OPERATION

The SMC CJ2KB16-135RZ is a double-acting air cylinder, meaning air pressure can be applied to either side of the piston to extend or retract the rod.

- **Air Supply:** Ensure a clean, dry, and regulated compressed air supply is connected to the cylinder.
- **Control Valve:** Use a suitable pneumatic control valve (e.g., 5/2-way valve) to direct air pressure to the appropriate port for extension or retraction.
- **Speed Control:** If speed control is required, install flow control valves on the exhaust ports of the cylinder.
- **Operating Pressure:** Operate the cylinder within its specified pressure range (Max. 0.7 MPa as indicated on some models).



Figure 4.1: Close-up view of the SMC Air Cylinder's piston rod and end cap. The rod extends and retracts as compressed air is applied to the cylinder chambers.

5. MAINTENANCE

Regular maintenance helps ensure optimal performance and extends the lifespan of your air cylinder.

- **Daily Checks:**
 - Inspect for any visible leaks around fittings and seals.
 - Check for smooth operation and absence of abnormal noise.
- **Weekly/Monthly Checks:**

- Verify mounting bolts are secure.
- Check for any signs of wear or damage on the piston rod.
- Ensure air quality (clean and dry) from the air preparation unit.
- **Lubrication:** SMC cylinders are typically pre-lubricated for life and do not require external lubrication. Refer to specific product documentation if lubrication is mentioned for your model.
- **Cleaning:** Keep the exterior of the cylinder clean. Avoid using harsh chemicals that could damage seals or finishes.

6. TROUBLESHOOTING

This section provides solutions to common issues encountered during operation.

Problem	Possible Cause	Solution
Cylinder does not move or moves slowly.	Insufficient air pressure; clogged air lines/fittings; faulty control valve; excessive load; internal seal damage.	Check air supply pressure; inspect air lines for obstructions; test/replace control valve; reduce load; inspect cylinder for internal damage (requires professional service).
Air leakage from ports or seals.	Loose fittings; damaged seals (rod or piston); incorrect pressure.	Tighten fittings; replace damaged seals (requires disassembly and professional service); ensure operating within specified pressure range.
Erratic or jerky motion.	Contaminated air supply; side loading; worn seals.	Ensure clean and dry air supply (use FRL unit); correct alignment of load; inspect/replace seals.

7. SPECIFICATIONS

Key technical specifications for the SMC CJ2KB16-135RZ Air Cylinder.

Attribute	Value
Model Number	CJ2KB16-135RZ
Manufacturer	SMC (via tahstyk)
Package Dimensions	11.81 x 11.81 x 11.81 inches
Item Weight	10.58 ounces
Date First Available	September 15, 2024
Maximum Operating Pressure	0.7 MPa (as indicated on product images)



Figure 7.1: A selection of SMC Air Cylinders demonstrating various sizes and configurations. The CJ2KB16-135RZ model is part of this product family.

8. WARRANTY INFORMATION

This SMC product is covered by the manufacturer's standard warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase. For specific warranty terms and conditions, please refer to the official SMC documentation or contact your point of purchase. Keep your proof of purchase for warranty claims.

9. CUSTOMER SUPPORT

For technical assistance, spare parts, or further inquiries regarding the SMC CJ2KB16-135RZ Air Cylinder, please contact your authorized SMC distributor or the seller. When contacting support, please have your product model number (CJ2KB16-135RZ) and purchase details ready.

You can also visit the official SMC website for additional resources and product information: www.smcworld.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question