

CEMELI 015Q, 015S, 015P, 015C

CEMELI Precision Air Filter Element User Manual

Models: 015Q, 015S, 015P, 015C

1. PRODUCT OVERVIEW

The CEMELI Filter Elements (015Q, 015S, 015P, 015C) are essential components designed for precision filtration in air compressor systems. These cartridges effectively separate air, water, and oil, ensuring clean and dry compressed air for various industrial and automotive applications.

Filter Element Types and Functions:

- **015Q (Main Pipe Filter):** Used to protect the entire system before the air compressor, rear cooler, or freeze dryer. Filters out a large number of liquid and solid particles greater than 3 microns, achieving a minimum residual oil content of only 5PPMW/W.
- **015P (Air Piping Filter):** Removes moisture and particles from equipment, machinery, motors, cylinders, and acts as an ultra-high efficiency oil removal filter before or after an adsorption dryer. Filters liquid and solid particles down to 1 micron, with a minimum residual oil content of 0.5PPMW/W.
- **015S (Ultra High Efficiency Oil Removal Filter):** Typically used upstream of an adsorption dryer or refrigeration dryer to ensure completely oil-free air. Filters liquid and solid particles down to 0.01 micron, achieving a minimum residual oil content of 0.01PPMW/W. It is recommended to equip with 015P air pipe filters upstream for protection.
- **015C (Activated Carbon Filter):** Primarily functions to remove peculiar odors from the compressed air.



Image: Overview of CEMELI 015Q, 015S, 015P, and 015C filter elements with their packaging.

2. SPECIFICATIONS

General specifications for the CEMELI Filter Elements:

Specification	Detail
Package Dimensions	1.18 x 0.79 x 0.39 inches
Item Weight	1.76 ounces
Manufacturer	CEMELI
Country of Origin	China
Number of Pieces	1 (per filter element)

Specification	Detail
Assembly Required	No



Image: CEMELI filter elements showcasing their internal filtration material.

3. SETUP AND INSTALLATION

Proper installation of the filter elements is crucial for optimal performance and system protection. Always refer to your air compressor system's manual for specific instructions regarding filter housing access and replacement procedures.

- 1. System Depressurization:** Before attempting any installation or replacement, ensure the compressed air system is completely depressurized and isolated from the power source.
- 2. Housing Access:** Open the filter housing according to your system's design. This typically involves unscrewing a bowl or releasing clamps.
- 3. Remove Old Element:** Carefully remove the old filter element. Be prepared for residual oil or water. Dispose

of the old element responsibly.

4. **Inspect Housing:** Clean the inside of the filter housing, ensuring no debris or contaminants remain. Inspect seals and O-rings for wear or damage; replace if necessary.
5. **Install New Element:** Insert the new CEMELI filter element into the housing, ensuring it is seated correctly and securely. Verify the correct filter type (Q, P, S, C) is installed in its designated stage within the filtration system.
6. **Secure Housing:** Close and secure the filter housing, ensuring all connections are tight to prevent leaks.
7. **System Re-pressurization:** Slowly re-pressurize the system and check for any leaks around the filter housing.



Image: CEMELI filter elements, illustrating their form factor for installation.

4. OPERATION PRINCIPLES

CEMELI filter elements operate by trapping contaminants as compressed air passes through their specialized media. Each filter type is designed with specific pore sizes and materials to target different types and sizes of impurities:

- **Particulate Filtration:** Solid particles (dust, rust, dirt) are physically blocked by the filter media.
- **Coalescing Filtration:** Oil and water aerosols (fine droplets) are captured by the filter fibers, coalesce into larger droplets, and then drain away.
- **Adsorption (Activated Carbon):** The activated carbon in the 015C filter adsorbs hydrocarbon vapors and odors, chemically bonding them to the carbon surface.

The efficiency of each filter element is determined by its micron rating and its ability to reduce residual oil content, ensuring the quality of compressed air meets the requirements of downstream equipment.

5. MAINTENANCE

Regular maintenance of your filter elements is vital for maintaining air quality and extending the life of your compressed air system. Filter elements are consumable items and require periodic replacement.

- **Inspection Frequency:** Inspect filter elements and their housings regularly, typically every 3-6 months, depending on air quality and usage.
- **Replacement Schedule:** Filter elements should be replaced based on pressure differential readings or a recommended time interval, usually every 6-12 months, or sooner if a significant pressure drop is observed across the filter. Activated carbon filters (015C) may require more frequent replacement if odor removal efficiency decreases.
- **Pressure Differential:** A rising pressure differential across the filter indicates that the element is becoming clogged and needs replacement.
- **Visual Inspection:** Look for discoloration, damage, or excessive accumulation of contaminants on the filter element.
- **Genuine Parts:** Always use genuine CEMELI replacement filter elements to ensure compatibility and optimal performance.



Image: Packaging of CEMELI filter elements, representing new replacement units.

6. TROUBLESHOOTING

Most issues related to filter elements stem from improper installation or overdue replacement. Here are common problems and their solutions:

- **Reduced Airflow/Pressure Drop:**

Cause: Clogged filter element.

Solution: Replace the filter element. Check for proper sizing and installation.

- **Contaminants in Air (Water, Oil, Particles):**

Cause: Filter element is saturated, damaged, or incorrect type for application; improper installation (leaks).

Solution: Replace the filter element. Ensure correct filter type is used. Check seals and O-rings for leaks.

- **Persistent Odor in Air:**

Cause: Activated carbon filter (015C) is saturated.

Solution: Replace the 015C filter element.

- **Short Filter Life:**

Cause: High contaminant load in incoming air; incorrect filter sizing; lack of pre-filtration.

Solution: Install appropriate pre-filters (e.g., 015Q before 015P/S). Address source of contamination.

7. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or to purchase replacement parts, please contact your CEMELI product supplier or authorized distributor. Ensure you have your product model number and purchase details available when contacting support.

For further assistance, please visit the official CEMELI website or consult your product's purchase documentation.

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