

## Fengda FD-189

# Fengda FD-189 Professional Airbrush Compressor User Manual

Model: FD-189

## 1. INTRODUCTION

The Fengda FD-189 is a professional, oil-free mini airbrush compressor designed for a variety of applications including airbrushing, cosmetic studios, nail art, tattoo art, and hobby use. This compact and portable compressor features a 3-liter air tank, a pressure regulator with a filter and manometer, and operates quietly at 47 dB. It is suitable for airbrushes with nozzle sizes ranging from 0.2 mm to 1.0 mm.

Key features include:

- Maintenance-free and oil-free piston design.
- Compact, portable, and quiet operation (47 dB).
- Integrated pressure regulator with manometer, water trap, and air filter.
- Safety valve and automatic overheat protection.
- Dual operating modes: Level 1 (Max 4 bar, auto stop/start) and Level 2 (Max 6 bar, non-stop).
- 3-liter air receiver tank for pulse-free output and consistent air flow (20-23 L/min).



Figure 1: Overview of the Fengda FD-189 Airbrush Compressor. This image displays the main unit with its black air tank, silver compressor head, pressure regulator, and carrying handle.

## 2. SAFETY INSTRUCTIONS

**Read all safety warnings and instructions before operating this product. Failure to follow these instructions may result in electric shock, fire, or serious injury.**

- **Electrical Safety:** Ensure the power supply matches the voltage specified on the compressor (220-240V / 50Hz). Do not operate the compressor with a damaged cord or plug. Keep the power cord away from heat, oil, sharp edges, or moving parts.
- **Operating Environment:** Use the compressor in a well-ventilated area. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Keep children and

bystanders away while operating.

- **Personal Safety:** Always wear appropriate personal protective equipment, including eye protection, when operating the airbrush and compressor. Do not direct the air stream at people or animals.
- **Pressure Safety:** Never exceed the maximum operating pressure of the airbrush or the compressor. Ensure all connections are secure before operation. Do not tamper with the safety valve.
- **Maintenance:** Disconnect the power supply before performing any maintenance or adjustments. Regularly drain condensation from the air tank.
- **Overheat Protection:** The compressor is equipped with automatic overheat protection. If the unit overheats, it will shut down automatically. Allow it to cool before restarting.

### 3. PACKAGE CONTENTS

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Carefully unpack the box and ensure all items are present and undamaged. If any items are missing or damaged, contact your retailer.

- 1x Fengda FD-189 Airbrush Compressor with 3L Air Tank
- 1x Pressure Regulator with Filter and Manometer
- 1x Power Cable
- 1x User Manual



Figure 2: The Fengda FD-189 Airbrush Compressor as packaged in protective foam. This image shows the compressor securely nestled within custom-fit white foam packaging, indicating careful protection during transit.

## 4. SETUP

1. **Placement:** Place the compressor on a stable, level surface in a well-ventilated area. Ensure there is adequate space around the unit for air circulation.
2. **Connect Air Hose:** Connect your airbrush hose (not included) to the G 1/8" air outlet on the pressure regulator. Ensure the connection is tight to prevent air leaks.
3. **Connect Power:** Plug the power cable into a suitable grounded electrical outlet (220-240V / 50Hz).
4. **Initial Check:** Before turning on, ensure the pressure regulator knob is turned fully counter-clockwise to the lowest pressure setting.



Figure 3: Detailed view of the pressure regulator, manometer, and rubber feet of the Fengda FD-189 compressor. This image highlights the adjustable pressure knob, the pressure gauge for monitoring, and the stable rubber feet designed to reduce vibration.

## 5. OPERATING INSTRUCTIONS

1. **Power On:** Locate the power switch on the compressor and turn it to the 'ON' position. The compressor will begin to fill the air tank until it reaches the set pressure.
2. **Select Operating Mode:** The FD-189 features dual switches for different operating modes:
  - **Level 1 (Auto Stop/Start):** This mode allows the compressor to automatically stop when the tank pressure reaches 4 bar (57 PSI) and restart when the pressure drops to 3 bar (43 PSI). This conserves energy and reduces wear.
  - **Level 2 (Non-Stop):** In this mode, the compressor operates continuously up to a maximum pressure of 6 bar (87 PSI). This is suitable for applications requiring a constant, higher air flow.
3. **Adjust Pressure:** Turn the knob on the pressure regulator clockwise to increase the output air pressure, and counter-clockwise to decrease it. Monitor the manometer to set the desired working pressure for your airbrush. Pull the knob up to unlock it for adjustment, then push it down to lock the setting.
4. **Drain Water Trap:** The water trap (moisture filter) collects condensation. Regularly check and drain it by pressing the small pin or turning the valve at the bottom of the filter cup.
5. **Power Off:** After use, turn the power switch to 'OFF'. Disconnect the power cable from the outlet.



Figure 4: Close-up view of the carrying handle and the model identification label on the Fengda FD-189 compressor. This image shows the ergonomic handle for portability and the label displaying the model number FD-189 and electrical specifications.

## 6. MAINTENANCE

The Fengda FD-189 compressor is designed to be maintenance-free due to its oil-free piston design. However, regular checks and simple procedures will ensure its longevity and optimal performance.

- **Drain Air Tank:** To prevent rust and ensure proper function, regularly drain any condensation from the 3-liter air tank. This is typically done via a drain valve located at the bottom of the tank.
- **Clean Water Trap:** Periodically inspect and clean the water trap filter. Drain accumulated moisture as described in the operating instructions. If the filter element appears dirty or clogged, it may need cleaning or replacement.
- **General Cleaning:** Keep the exterior of the compressor clean and free of dust and debris. Use a soft, dry cloth. Do not use harsh chemicals or solvents.
- **Air Filter:** The compressor includes an air filter. Check it periodically for cleanliness. A clogged air filter can reduce performance.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Compressor does not start	No power; Overheat protection activated; Faulty switch	Check power connection; Allow compressor to cool down; Contact support if switch is faulty.
Low or no air pressure	Air leak in connections; Regulator set too low; Clogged air filter; Compressor malfunction	Check all hose connections; Adjust pressure regulator; Clean/replace air filter; Contact support.
Compressor runs continuously (Level 1)	Air leak; Pressure switch malfunction	Check for air leaks; Contact support for pressure switch inspection.
Excessive moisture in air output	Water trap full; High humidity environment	Drain water trap; Ensure proper ventilation.

## 8. SPECIFICATIONS

Feature	Specification
Model Number	FD-189

Feature	Specification
Manufacturer	CN Bida
Voltage	220-240 V / 50 Hz
Power	125 W (0.16 HP / 1/6 CV)
Speed	1450/1700 r.p.m.
Air Flow Capacity	20-23 Liters per minute
Air Tank Capacity	3 Liters
Max Pressure	6 Bars (87 PSI)
Auto Start Pressure	3 Bars (43 PSI)
Auto Stop Pressure	4 Bars (57 PSI)
Noise Level	47 dB / 1m
Air Connection	G 1/8" BSP
Cord Length	1.9 meters
Weight	5.87 Kilograms
Dimensions (Package)	40.9 x 33.5 x 22.9 cm
Certifications	CE, GS, ETL, CETL, ROHS
Special Features	Maintenance-free, Very quiet operation, Constant air flow
Recommended Uses	Design, Modeling, Cake Decorating, Nail Art, Spray Tanning

## 9. WARRANTY AND SUPPORT

Information regarding specific warranty terms and conditions is not detailed in the provided product materials. For warranty claims or technical support, please contact your original retailer or the manufacturer, Fengda, directly. Keep your purchase receipt as proof of purchase.