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› [Fengda](#) /

› [Fengda FD-196 Mini Airbrush Compressor User Manual](#)

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Fengda FD-196 Mini Airbrush Compressor User Manual

Model: FD-196 | Brand: Fengda

1. INTRODUCTION AND PRODUCT OVERVIEW

The Fengda FD-196 is an oil-free, dual-piston mini airbrush compressor designed for a wide range of applications, from hobbyist model painting to professional nail art and cosmetics. It features a 3.5-liter air tank, automatic stop function, and a maximum pressure of 6 bar, ensuring consistent and pulsation-free air delivery. Its quiet operation and integrated water filter and pressure regulator make it a versatile and reliable tool.

Key Features:

- Oil-free dual-piston design.
- 3.5L air tank for stable pressure.
- Automatic start/stop function (Level 1: 2.8 bar start, 4 bar stop).
- Maximum pressure of 6 bar (Level 2).
- Low noise level (approximately 45-55 dB).
- Integrated pressure regulator with manometer and water filter.
- Overheat protection.
- Supports simultaneous operation of two airbrushes.



Figure 1: Overall view of the Fengda FD-196 Mini Airbrush Compressor, showing the main unit, air tank, pressure regulator, and air outlets.



Solenoid Valve

Figure 2: Close-up of the solenoid valve, which contributes to the smooth start-up of the compressor.

2. SAFETY INSTRUCTIONS

Please read all safety instructions carefully before operating the compressor. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Always ensure the compressor is placed on a stable, level surface in a well-ventilated area.
- Do not operate the compressor near flammable liquids, gases, or dust.
- Ensure the power supply voltage matches the specifications on the compressor's label (220 Volts).
- Never touch the compressor with wet hands or while standing in water.
- Unplug the compressor from the power outlet before performing any maintenance, cleaning, or when not in use.
- Do not modify the compressor or its components. Use only original replacement parts.
- Keep children and pets away from the operating compressor.
- Do not direct the air stream at people or animals.
- Regularly drain condensation from the air tank to prevent corrosion and maintain performance.
- The compressor is equipped with an overheat protection system. If it shuts down due to overheating, allow it to cool down before restarting.
- The safety valve is designed to release pressure if it exceeds 6 bar. Do not tamper with or block this valve.



Figure 3: Close-up view of the safety labels and the drain valve located at the bottom of the air tank. Always observe safety warnings and drain condensation regularly.

3. COMPONENTS INCLUDED

Upon unpacking, verify that all the following components are present:

- 1x Fengda FD-196 Airbrush Compressor with 3.5L Air Tank
- 1x Pressure Regulator Outlet with Integrated Filter and Manometer
- 1x Power Cable
- 1x Instruction Manual (this document)



Figure 4: Example of the protective styrofoam packaging used to secure the compressor during transport. Please ensure all components are removed from packaging before setup.

4. SETUP

1. **Unpacking:** Carefully remove the compressor and all accessories from the packaging. Inspect for any damage that may have occurred during transit.
2. **Placement:** Position the compressor on a firm, level, and stable surface. Ensure there is adequate ventilation around the unit to prevent overheating. Keep it away from direct sunlight, heat sources, and moisture.
3. **Attach Pressure Regulator:** Screw the pressure regulator outlet (with filter and manometer) onto the designated air outlet port of the compressor. Ensure it is hand-tightened securely to prevent air leaks.
4. **Connect Airbrush Hose:** Connect your airbrush hose to the outlet of the pressure regulator. The hose fitting diameter is typically 1/8".
5. **Power Connection:** Ensure the compressor's power switch is in the "OFF" position. Plug the power cable into a grounded electrical outlet (220 Volts).

5. OPERATING INSTRUCTIONS

The FD-196 compressor features a dual-level switch for flexible operation modes.

1. **Power On:** Flip the main power switch to the desired operating level.
2. **Operating Modes:**
 - **Level 1 (Automatic Stop Mode):** In this mode, the compressor will automatically start when the pressure drops to 2.8 bar and stop when it reaches 4 bar. This mode is ideal for most airbrushing tasks, providing consistent pressure and reducing wear on the motor.
 - **Level 2 (Maximum Pressure Mode):** In this mode, the compressor will run continuously until it reaches its maximum pressure of 6 bar. A safety valve will automatically release pressure if it exceeds 6 bar. This mode is suitable for tasks requiring higher, sustained pressure.
3. **Pressure Adjustment:** Use the knob on the pressure regulator to adjust the working pressure. The

manometer will display the current output pressure. Adjust the pressure according to your airbrush and paint requirements. The effective continuous working pressure range is 0.35 to 2.5 bar.

4. **Overheat Protection:** The compressor is equipped with thermal overload protection. If the unit becomes too hot during prolonged use, it will automatically shut down. Allow it to cool down completely before attempting to restart.
5. **Dual Airbrush Support:** The compressor is designed to support two airbrushes operating simultaneously, provided the combined air demand does not exceed the compressor's capacity.
6. **Power Off:** After use, switch the compressor to the "OFF" position and unplug it from the power outlet.



Figure 5: Close-up of the main power switch, which allows selection between automatic stop mode (Level 1) and maximum pressure mode (Level 2).

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your compressor.

- **Drain Condensation:** After each use, or at least daily, drain any accumulated condensation from the air tank. This is crucial to prevent internal corrosion. Locate the drain valve at the bottom of the air tank (refer to Figure 3), place a container underneath, and open the valve until all water is expelled. Close the valve securely afterward.

- **Clean Air Filter:** Periodically check and clean the air filter on the pressure regulator. A clogged filter can reduce airflow and efficiency. Refer to the regulator's specific instructions for cleaning or replacing the filter element.
- **General Cleaning:** Wipe down the exterior of the compressor with a damp cloth. Do not use harsh chemicals or abrasive cleaners. Ensure the compressor is unplugged before cleaning.
- **Storage:** When storing the compressor for extended periods, ensure the air tank is drained and the unit is clean and dry. Store in a cool, dry place.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Compressor does not start.	No power, power switch off, overheat protection activated.	Check power cable connection and outlet. Ensure switch is ON. Allow compressor to cool down if it was recently running.
No air output or low pressure.	Airbrush hose disconnected, pressure regulator set too low, clogged air filter, air leak.	Check all hose connections. Adjust pressure regulator. Clean or replace air filter. Check for leaks in connections.
Compressor runs continuously in Level 1.	Air leak in system, faulty pressure switch.	Check all connections for air leaks. If problem persists, contact support.
Excessive moisture in air output.	Condensation in air tank not drained.	Drain the air tank thoroughly (refer to Maintenance section).

8. SPECIFICATIONS

Model Number	FD-196
Brand	Fengda
Manufacturer	Fenghua Bida Machiner Manufacture CO., LTD
Dimensions (L x W x H)	32.99 x 15.01 x 16.99 cm (approx. 33L x 15W x 17H cm)
Weight	7.3 kg (approx. 16.09 lbs)
Air Tank Capacity	3.5 Liters
Voltage	220 Volts
Horsepower	0.16 HP (1/4 HP)
Amperage	1 A
Air Flow Capacity	30-35 liters per minute
Maximum Pressure	6 Bars
Noise Level	45-55 dB

Power Type	Electric Cable
Recommended Uses	Airbrushing

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your retailer or the manufacturer directly. Keep your proof of purchase for warranty claims.



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