Hon&Guan HI-200EC

Hon&Guan 8-Inch Inline Duct Fan with Damper User Manual

Model: HI-200EC

1. Introduction

Thank you for choosing the Hon&Guan 8-inch Inline Duct Fan with Damper. This manual provides essential information for the safe and efficient operation of your new ventilation system. Please read these instructions thoroughly before installation and use, and retain them for future reference.
This inline duct fan is designed for various ventilation applications, including grow tents, bathrooms, kitchens, hydroponics, and general HVAC systems, ensuring optimal airflow and air quality.

2. Safety Instructions

WARNING: Failure to follow these safety instructions may result in electric shock, fire, or serious injury.

- Always disconnect power before servicing or cleaning the unit.
- Ensure all electrical connections comply with local codes and ordinances.
- Do not operate the fan with a damaged cord or plug.
- Avoid installing the fan in areas with excessive moisture or direct water exposure unless specifically rated for such conditions. The junction box has an IP44 protection class.
- Keep fingers and foreign objects away from the fan blades during operation.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not use this fan with any solid-state speed control device unless specifically designed for this

purpose.

- The fan is suitable for air temperatures from -4°F to 140°F (-20°C to 60°C).

3. Product Features

- **Enhanced Damper Design:** Features two inwardly recessed ribs, 0.6mm thickness, and 3 springs for increased robustness and reduced deformation.
- **Durable Construction:** 8-inch backdraft damper and flap leaves made of galvanized steel, aluminum axis, and carbon steel springs, capable of withstanding temperatures up to 140°F.
- **Powerful & Quiet Operation:** Mixed flow design with an EC motor ensures quiet and energy-efficient performance.
- **Energy Efficiency:** EC motor can save up to 50% on energy costs compared to traditional motors.
- **Variable Speed Control:** Includes a speed controller for precise optimization of fan speed and energy consumption.
- **High-Quality Material:** Booster duct fan with durable plastic housing, ideal for long duct runs.
- **IP44 Protection:** Junction box with built-in sealing ring for protection against splashing water.

4. Specifications

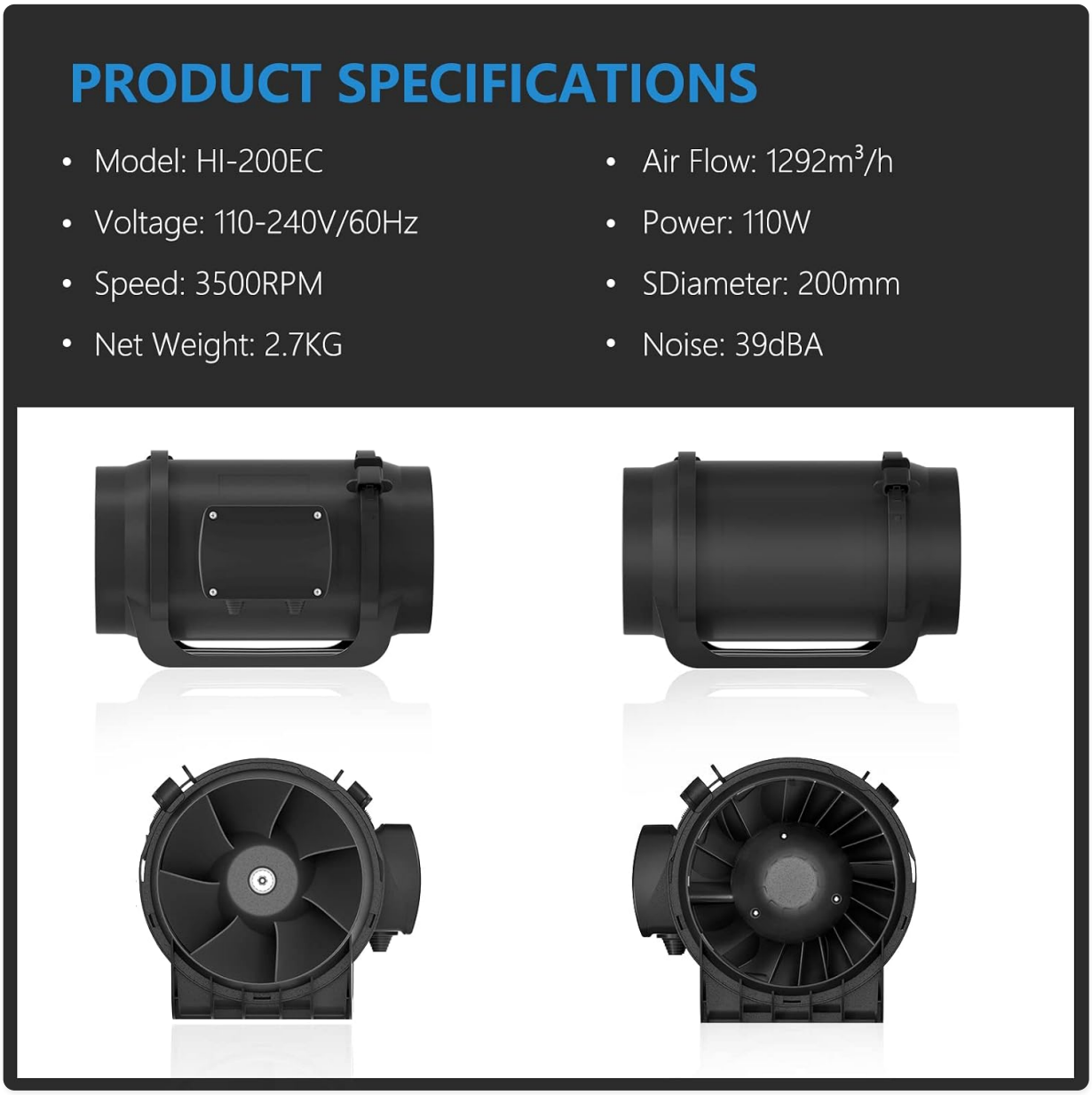

Image: Detailed product specifications including model number, voltage, speed, net weight, airflow, power, diameter, and noise level.

Technical Data for Model HI-200EC

Parameter	Value
Model	HI-200EC
Voltage	110-240V/60Hz
Speed	3500 RPM
Net Weight	2.7 KG
Air Flow	1292 m³/h (approx. 760 CFM)
Power	110W
Diameter	200mm (8 Inch)
Noise Level	39 dBA

Parameter	Value
Operating Temperature	-4°F to 140°F (-20°C to 60°C)
Damper Opening	200 mm
Damper Length	88 mm

5. Setup & Installation

Proper installation is crucial for the performance and longevity of your inline duct fan. Follow these steps carefully.

5.1 Unpacking and Inspection

- Carefully remove all components from the packaging.
- Inspect the fan and damper for any signs of shipping damage. Do not install if damaged.
- Ensure all listed components are present.

5.2 Damper Installation

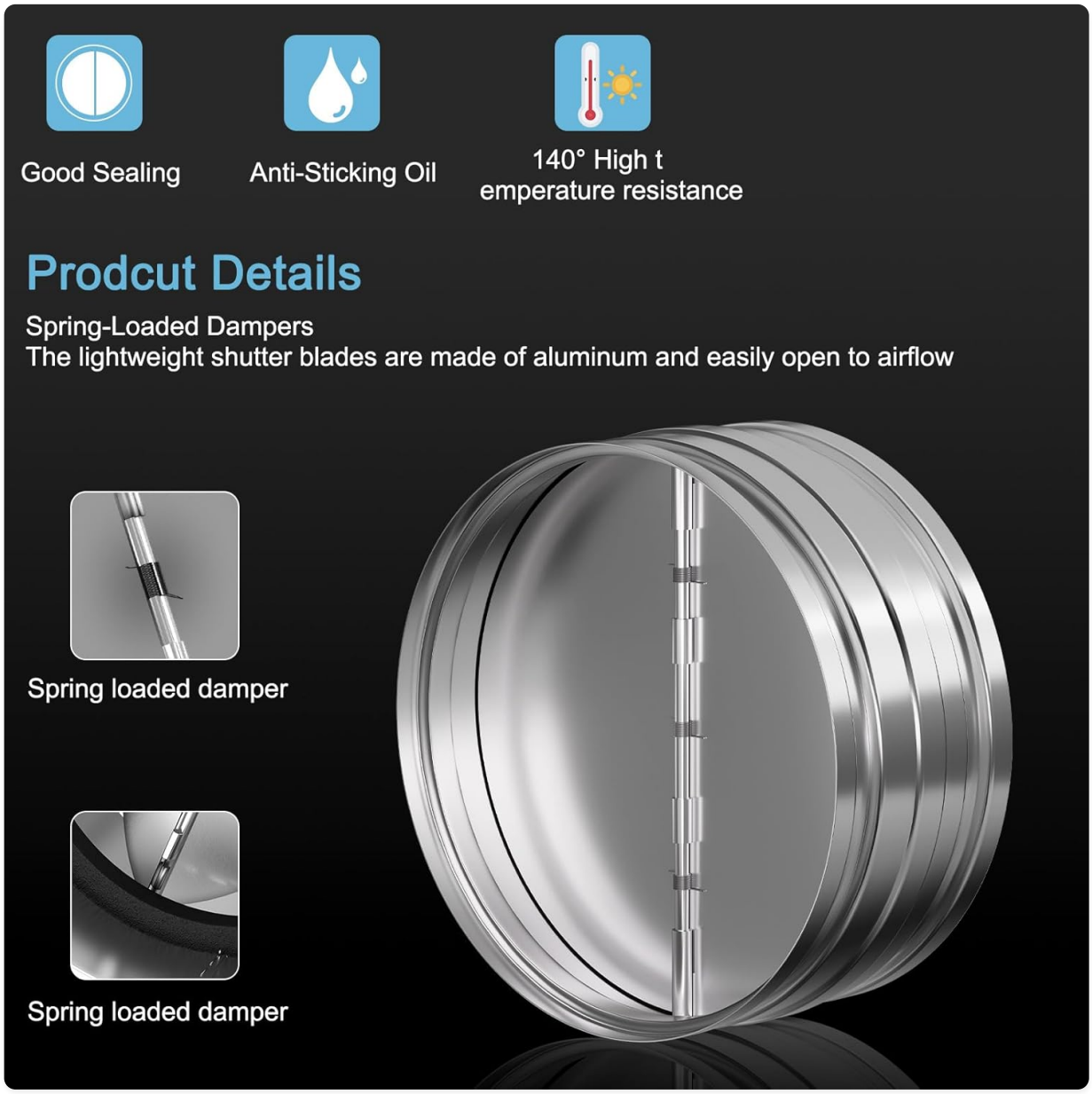

Image: Close-up view of the spring-loaded backdraft damper, highlighting its construction and mechanism.

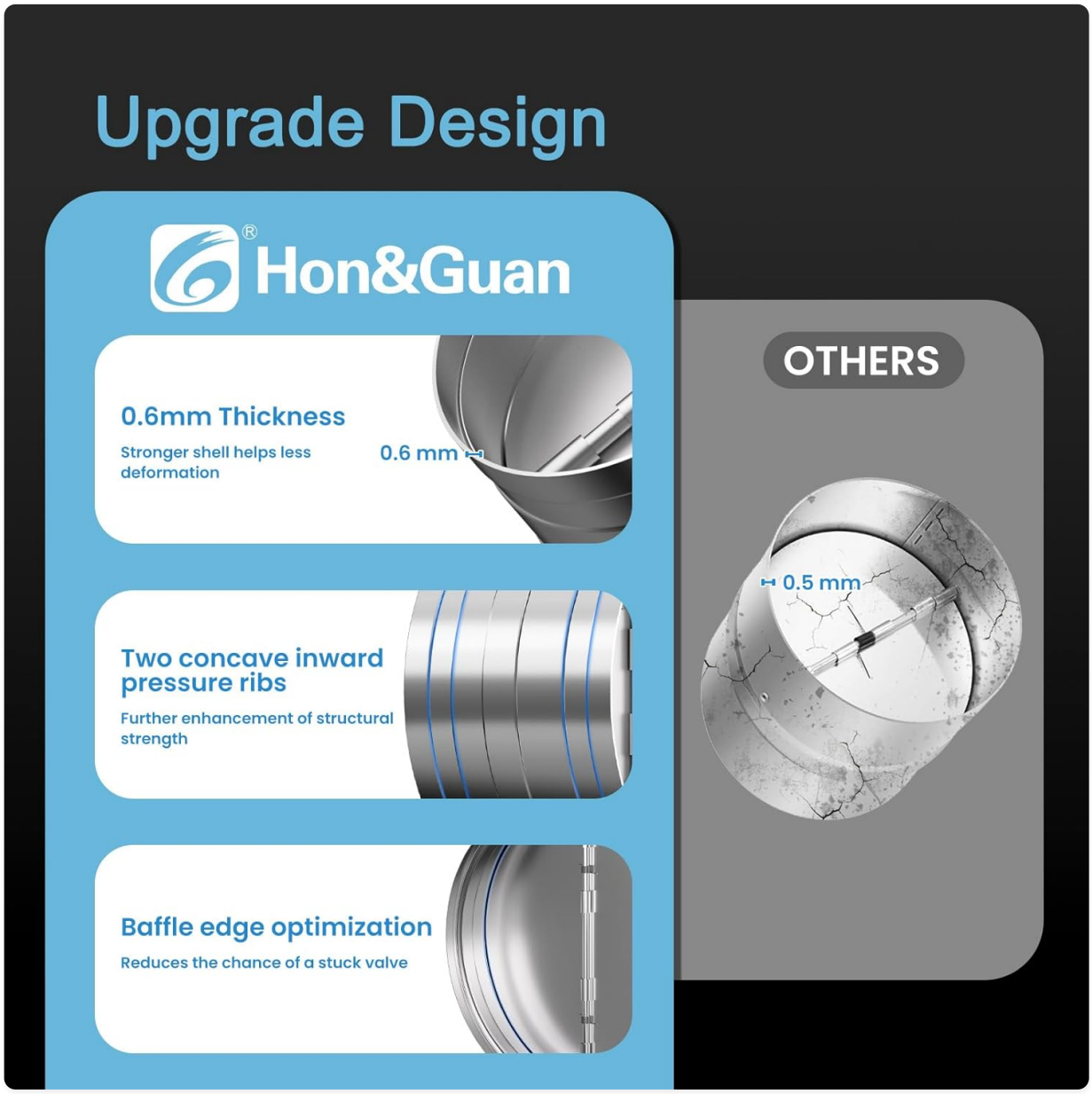

Image: Illustration detailing the upgraded design of the damper, showing 0.6mm thickness, inwardly recessed ribs, and baffle edge optimization.

- The 8-inch duct damper has an opening of 200 mm and a length of 88 mm.
- When installing the damper horizontally, ensure the springs are positioned horizontally. This allows for optimal opening and closing of the damper flaps.
- Connect the damper to your ducting system using appropriate clamps or fasteners (not included). Ensure a tight seal to prevent air leakage.

5.3 Fan Placement and Ducting Connection

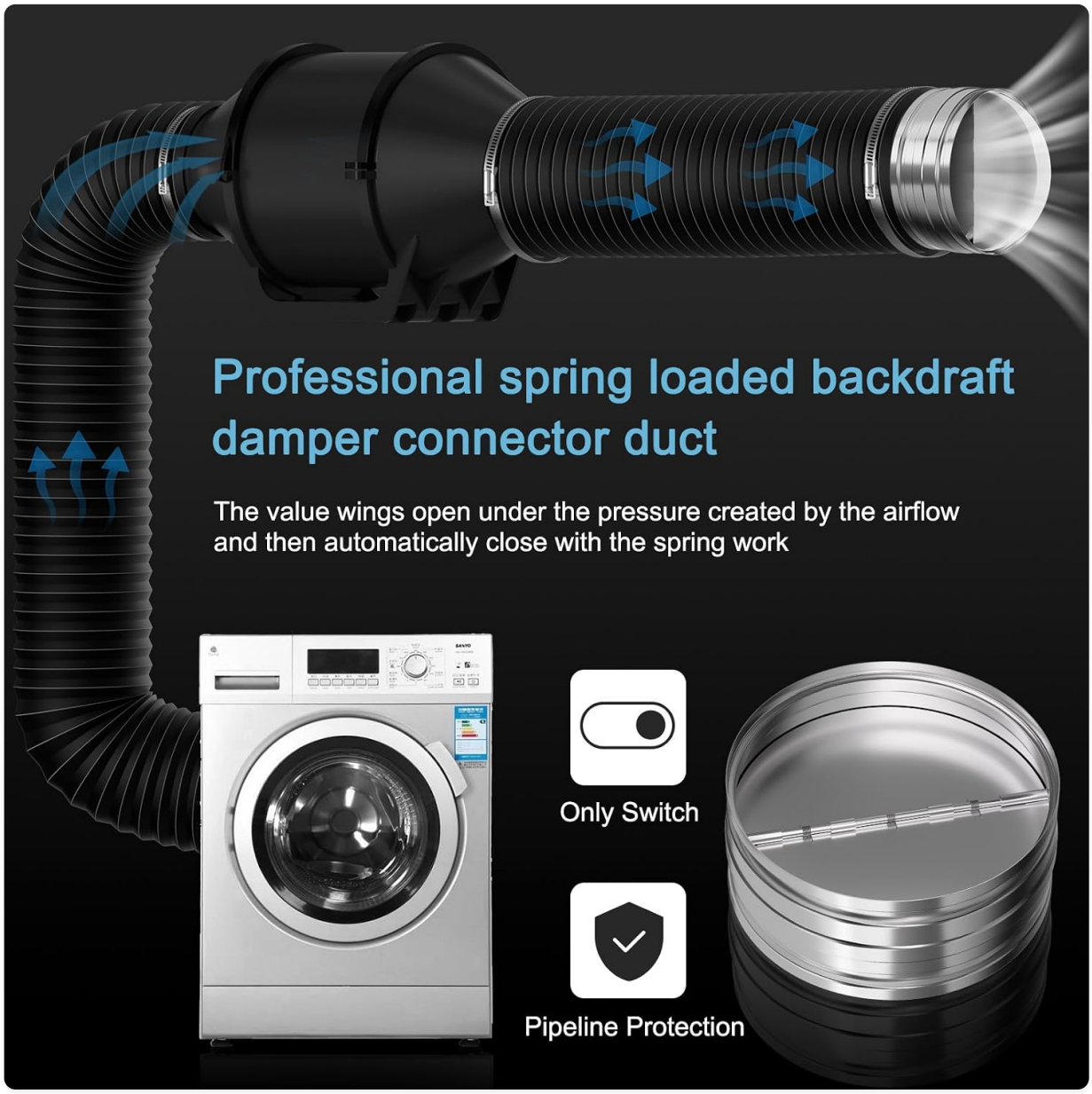

Image: Example installation showing the inline duct fan connected to a flexible duct, illustrating its use in an exhaust system, possibly for a washing machine or similar appliance.

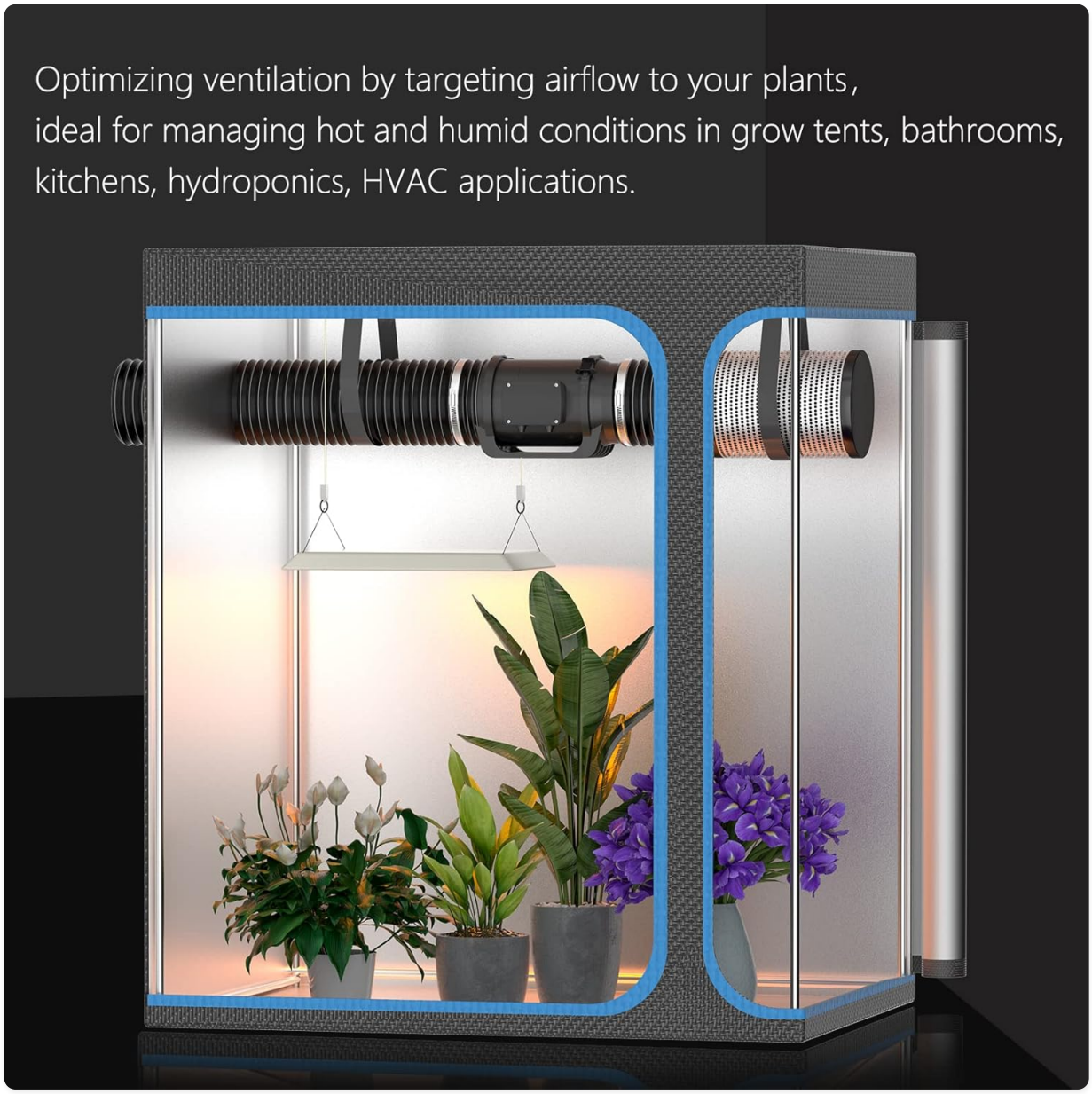

Image: The inline duct fan integrated into a grow tent setup, demonstrating its role in optimizing ventilation for plants by managing hot and humid conditions.

- Position the fan in a location that allows for efficient airflow through your ducting system. The fan can be suspended using appropriate hangers (not included).
- Connect the fan to your 8-inch ductwork. Ensure all connections are sealed tightly to prevent air leaks and maximize efficiency.
- The fan is designed for long duct runs and can be used in various applications such as grow tents, bathrooms, kitchens, and HVAC systems.

5.4 Electrical Connection

- Ensure the power supply is disconnected before making any electrical connections.
- Connect the fan to a compatible power source (110-240V/60Hz) according to local electrical codes.
- The junction box has an IP44 protection class, offering protection against splashing water. Ensure the wiring within the junction box is secure and properly sealed.

6. Operating Instructions

The Hon&Guan inline duct fan is equipped with a variable speed controller for precise airflow management.

6.1 Powering On/Off

- Once installation is complete and all connections are secure, connect the fan to the main power supply.
- Use the integrated speed controller to turn the fan on or off.

6.2 Adjusting Fan Speed

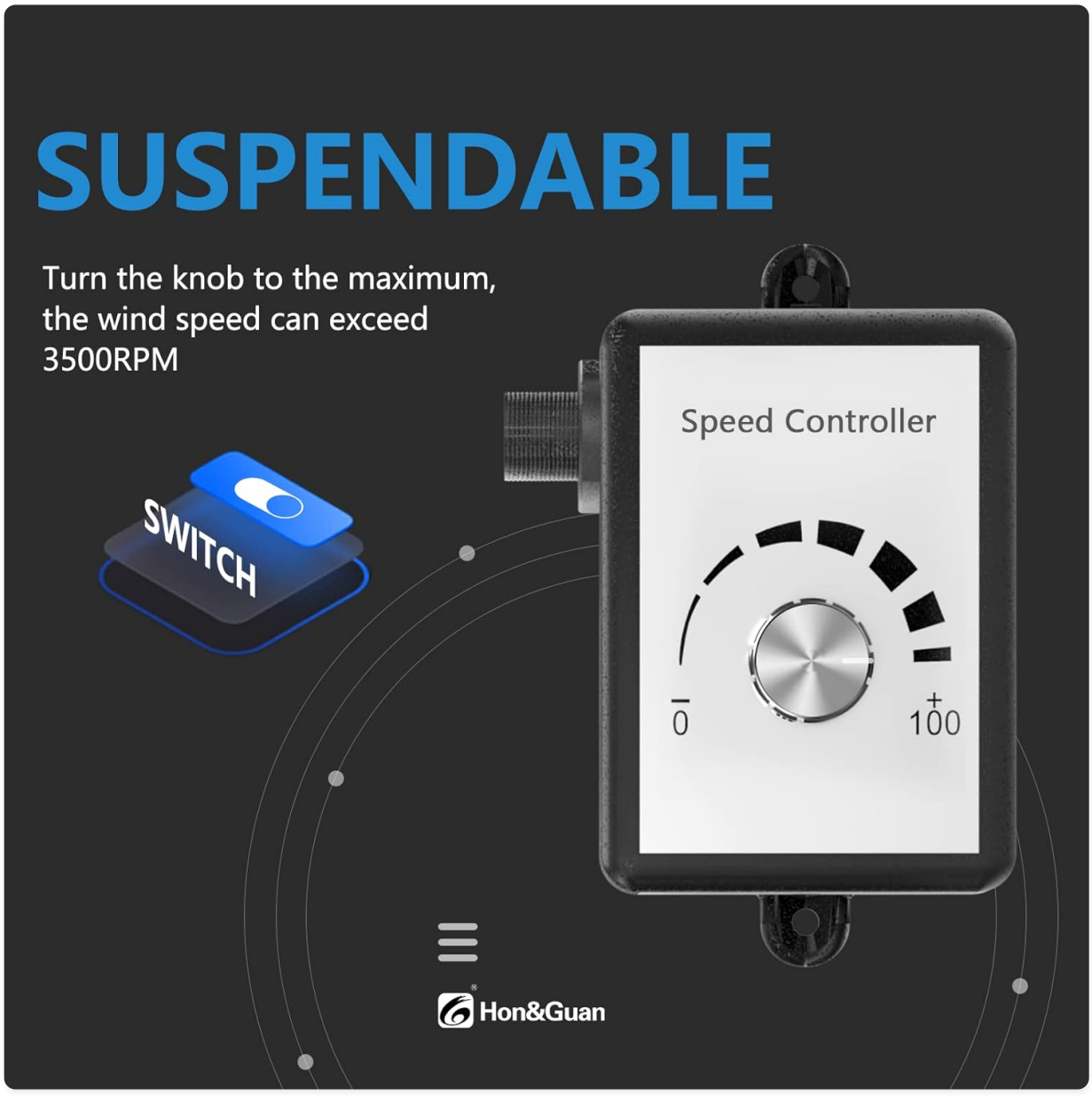

Image: The external speed controller with a rotary knob, indicating adjustable settings from 0 to 100, and a switch for power.

- The fan comes with a variable speed controller. Rotate the knob to adjust the fan speed from minimum to maximum.
- Turning the knob to the maximum position allows the fan speed to exceed 3500 RPM, providing maximum airflow.
- Adjust the speed as needed to optimize ventilation for your specific application, balancing airflow with noise levels and energy consumption.

6.3 Damper Functionality

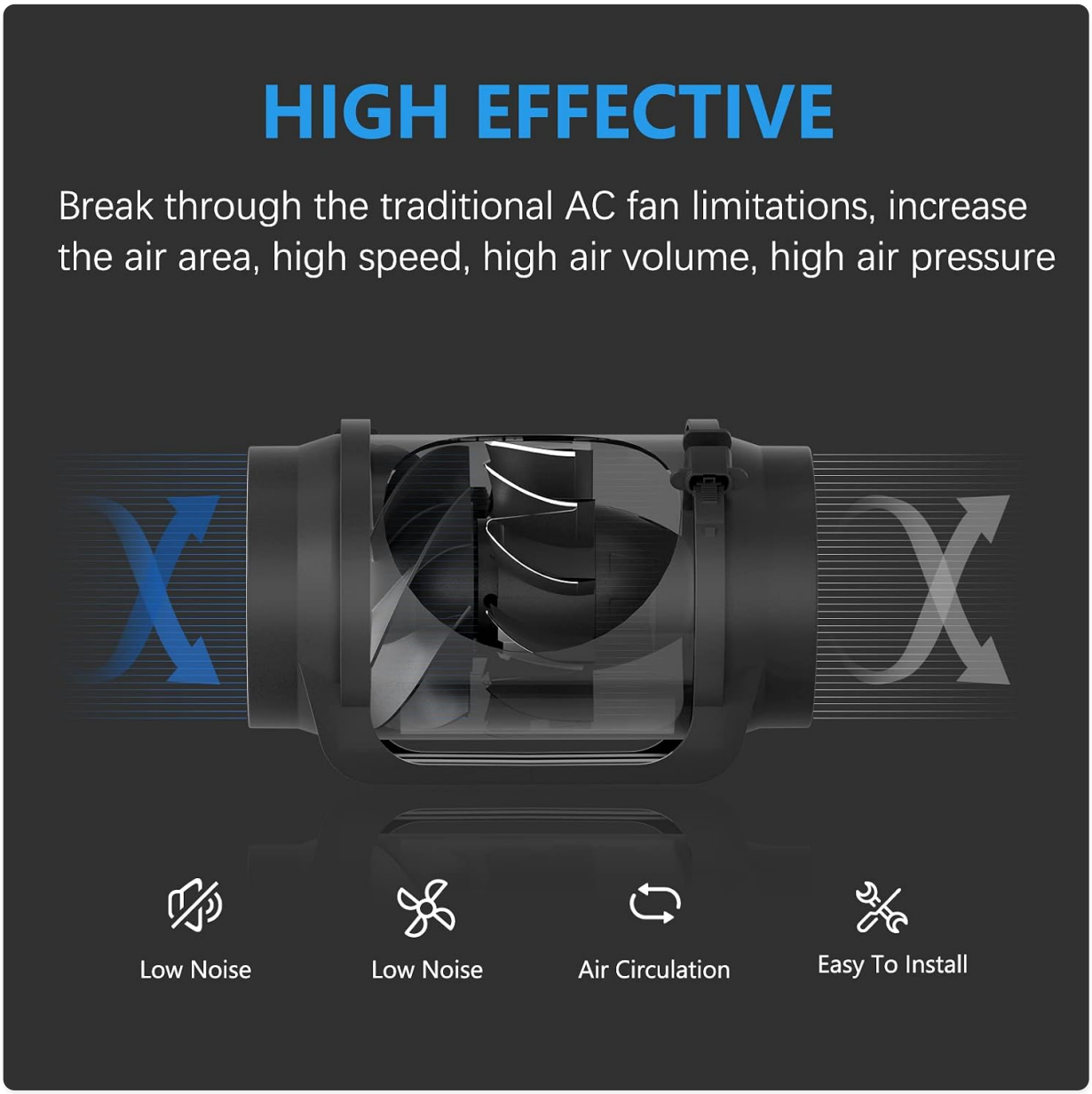

Image: Diagram illustrating the high-effective airflow of the inline duct fan, showing air moving through the fan and highlighting features like low noise, air circulation, and easy installation.

- The integrated backdraft damper automatically opens under the pressure created by the airflow when the fan is operating.
- When the fan is turned off, the springs in the damper automatically close the flaps, preventing backdraft and unwanted air intrusion.

7. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your fan.

- **Disconnect Power:** Always ensure the fan is disconnected from the power supply before performing any maintenance.
- **Cleaning Fan Blades:** Periodically inspect the fan blades for dust and debris buildup. Use a soft brush or cloth to gently clean the blades. Avoid using harsh chemicals or abrasive materials.
- **Cleaning Damper:** Check the damper flaps and springs for any obstructions or dirt that might prevent them from opening or closing properly. Clean as needed.
- **Ducting Inspection:** Inspect the ductwork for any blockages, leaks, or damage. Ensure all

connections remain secure.

- **Motor:** The EC motor is designed for long-term, maintenance-free operation. No lubrication is required.

8. Troubleshooting

If you encounter issues with your Hon&Guan inline duct fan, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Fan does not turn on.	No power supply; loose wiring; faulty speed controller.	Check power connection and circuit breaker. Verify all wiring connections. Test or replace speed controller if necessary.
Reduced airflow.	Ducting blockage; dirty fan blades; damper stuck closed; incorrect speed setting.	Inspect ductwork for obstructions. Clean fan blades. Check damper for obstructions and proper horizontal spring alignment. Increase fan speed.
Excessive noise or vibration.	Loose mounting; debris on fan blades; damaged fan blades; motor issue.	Ensure fan is securely mounted. Clean fan blades. Inspect blades for damage. If noise persists, contact support.
Damper not closing/opening properly.	Obstruction in damper; incorrect horizontal installation; damaged springs.	Clear any debris from damper flaps. Ensure springs are positioned horizontally for horizontal installation. Inspect springs for damage.

If the problem persists after attempting these solutions, please contact Hon&Guan customer support.

9. Warranty & Support

Hon&Guan products are manufactured to high-quality standards and are backed by a manufacturer's warranty. Please refer to the warranty card included with your purchase for specific terms and conditions, including the warranty period and coverage details.
For technical assistance, replacement parts, or warranty claims, please contact Hon&Guan customer support through the retailer where the product was purchased or visit the official Hon&Guan website for contact information.
When contacting support, please have your product model number (HI-200EC) and purchase date available.