

ARCTIC ACFAN00126A

ARCTIC P14 PWM PST CO 140mm Case Fan Instruction Manual

Model: ACFAN00126A

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your ARCTIC P14 PWM PST CO 140mm Case Fan. Designed for optimal static pressure, this fan is ideal for use on heatsinks, radiators, and as a case fan, ensuring efficient cooling for your computer system. The fan features a Japanese dual ball bearing for continuous, reliable operation and PWM Sharing Technology (PST) for synchronized fan control.



Image 1.1: The ARCTIC P14 PWM PST CO 140mm Case Fan, featuring a black frame and fan blades with the ARCTIC logo at the center.

2. KEY FEATURES

- **Optimized for Static Pressure:** The fan blades are designed to deliver high static pressure, making it highly effective for cooling through restrictive elements like heatsinks and radiators.
- **Japanese Dual Ball Bearing:** Equipped with a premium quality Japanese dual ball bearing, ensuring extended lifespan and continuous 24/7 operation without performance degradation.
- **Efficient Motor Technology:** Features a new generation Neodym-Iron-Boron-Magnet ring motor, providing higher efficiency and lower coil temperature, which contributes to a longer service life.

- **PWM Sharing Technology (PST):** Allows multiple fans to be connected in series and controlled by a single PWM signal, simplifying cable management and fan speed synchronization.
- **0 RPM Mode:** The fan can operate in a 0 RPM mode when the PWM signal is below 5%, providing silent operation during low-load scenarios.

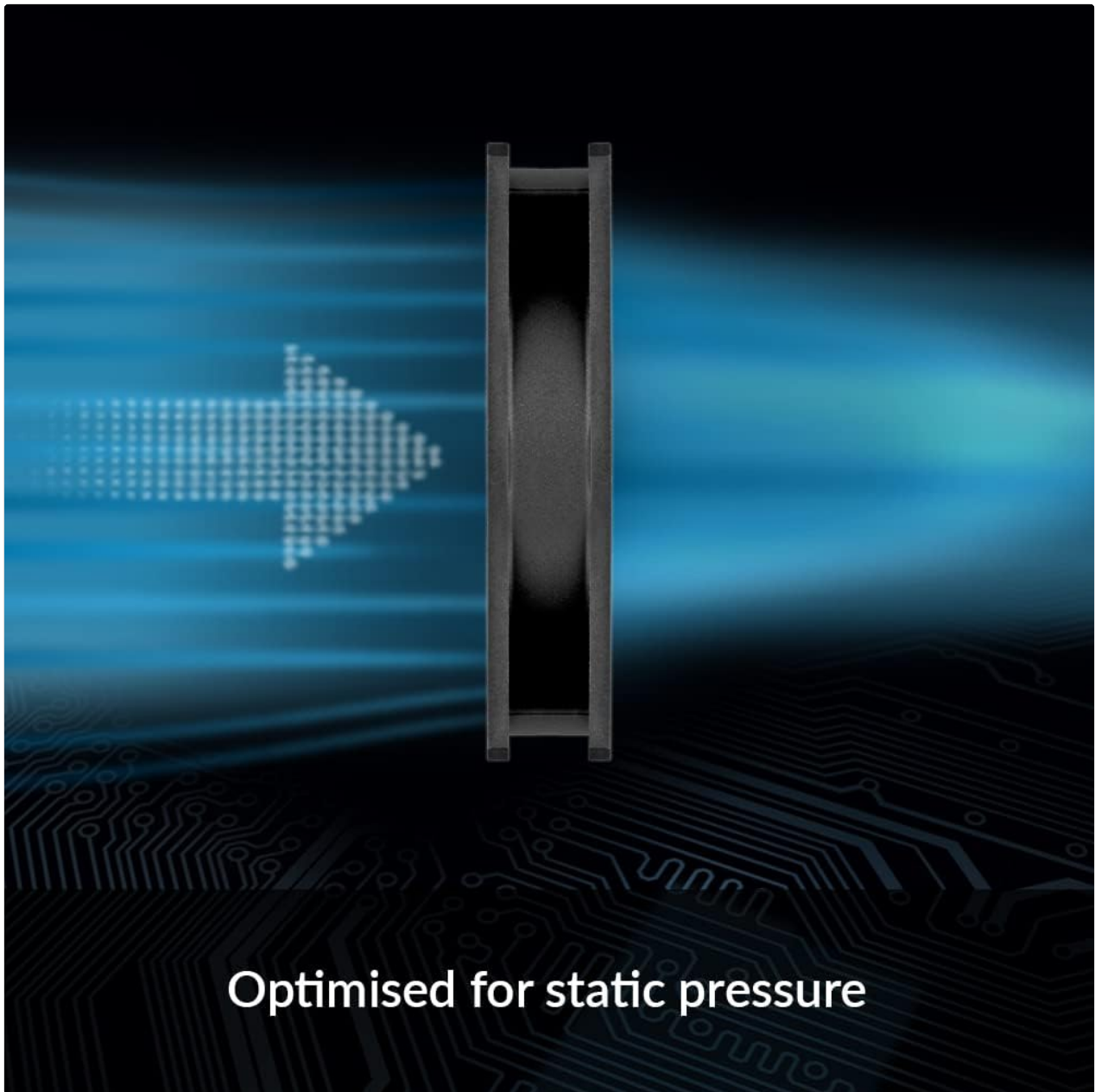


Image 2.1: Illustration demonstrating the focused airflow of a fan optimized for static pressure, indicated by an arrow.

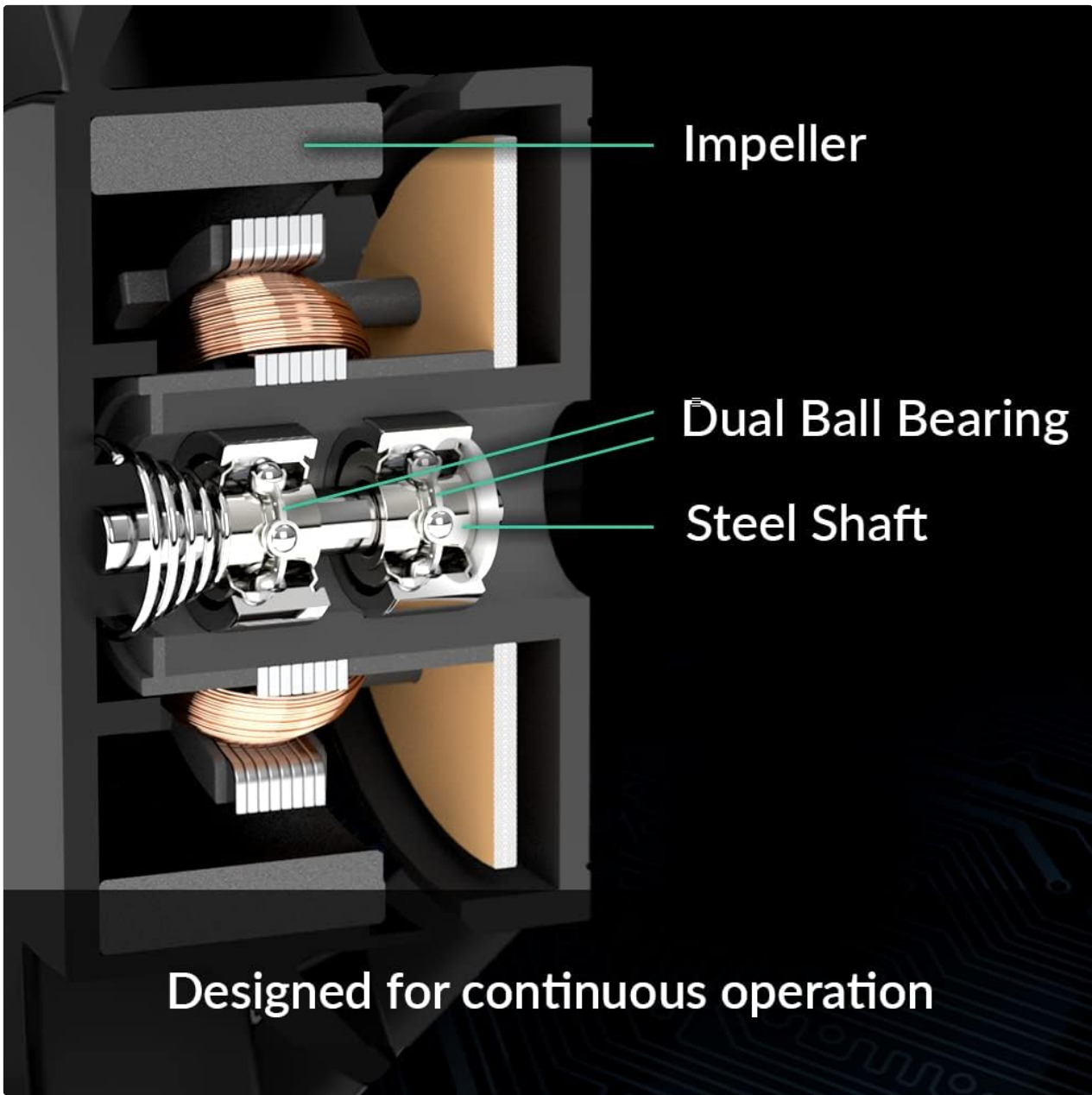


Image 2.2: A cutaway diagram illustrating the internal components of the fan, highlighting the impeller, dual ball bearing, and steel shaft, designed for continuous operation.

3. TECHNICAL SPECIFICATIONS

Attribute	Value
Model Number	ACFAN00126A
Fan Size	140mm
Dimensions (LxWxH)	5.51" x 5.51" x 1.06" (140mm x 140mm x 27mm)
Fan Speed	200–1700 RPM (0 RPM <5% PWM)
Airflow	72.8 CFM 123.76 m³/h
Static Pressure	2.40 mmH₂O

Attribute	Value
Noise Level	0.3 Sone
Bearing Type	Japanese Dual Ball Bearing
Power Connector	4-Pin PWM
Voltage	12 VDC
Current	0.12 A
Wattage	1.44 Watts
Material	Polycarbonate
Color	Black
Item Weight	4.2 ounces

4. INSTALLATION GUIDE

Before installation, ensure your computer is powered off and unplugged from the wall outlet. Refer to your computer case or component manual for specific mounting locations and screw types.

4.1. Package Contents

- 1x ARCTIC P14 PWM PST CO 140mm Case Fan
- Mounting Screws (typically included with case or fan)

4.2. Mounting the Fan

1. **Identify Mounting Location:** Determine where you want to install the fan (e.g., front intake, rear exhaust, top exhaust, CPU cooler, radiator).
2. **Orient the Fan:** Observe the arrows on the side of the fan frame. One arrow indicates the direction of airflow, and the other indicates the direction of blade rotation. Ensure the fan is oriented to push or pull air in the desired direction for optimal cooling.
3. **Secure the Fan:** Align the fan with the mounting holes on your case or component. Use the appropriate screws to secure the fan firmly. Avoid over-tightening.

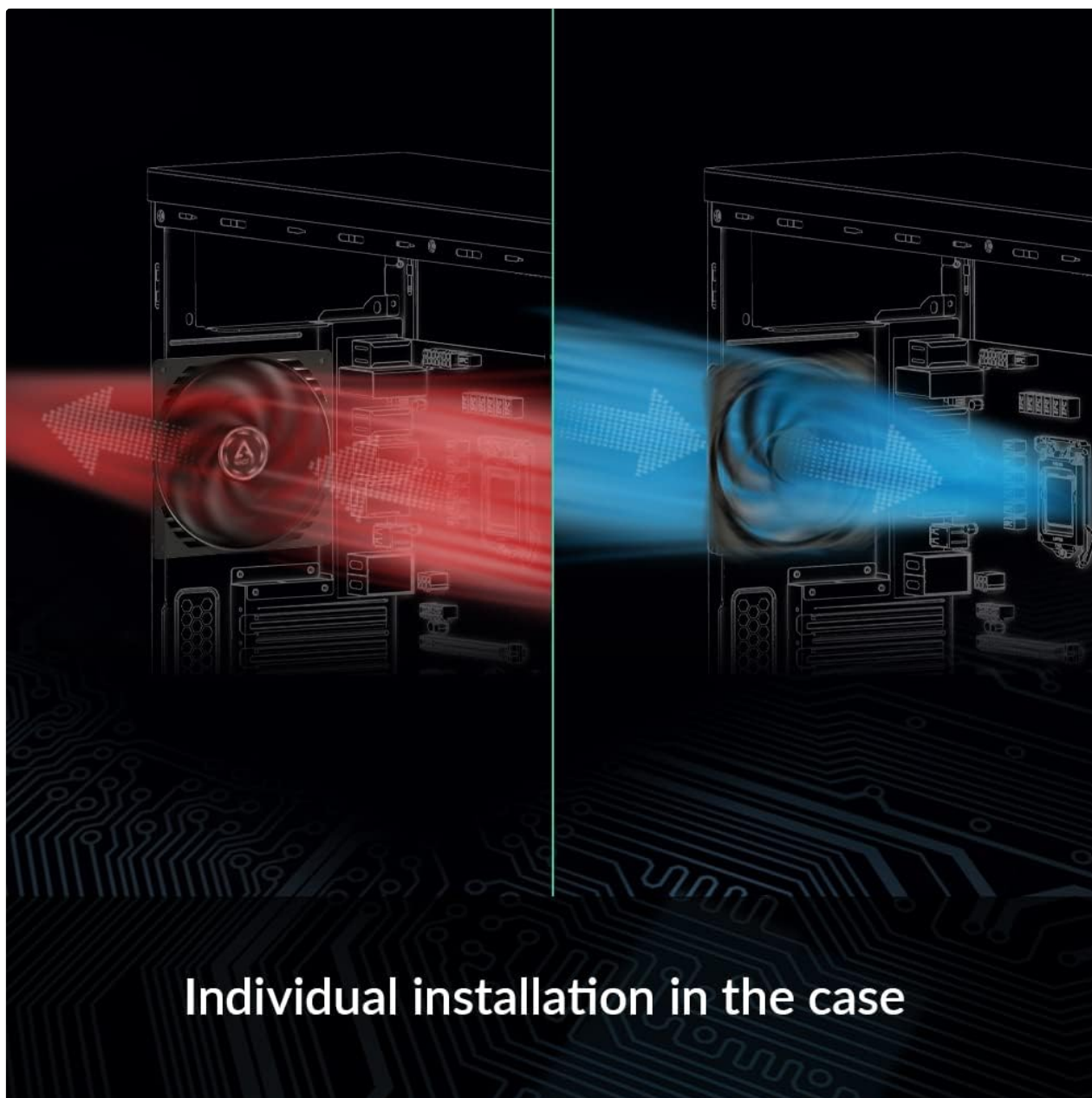
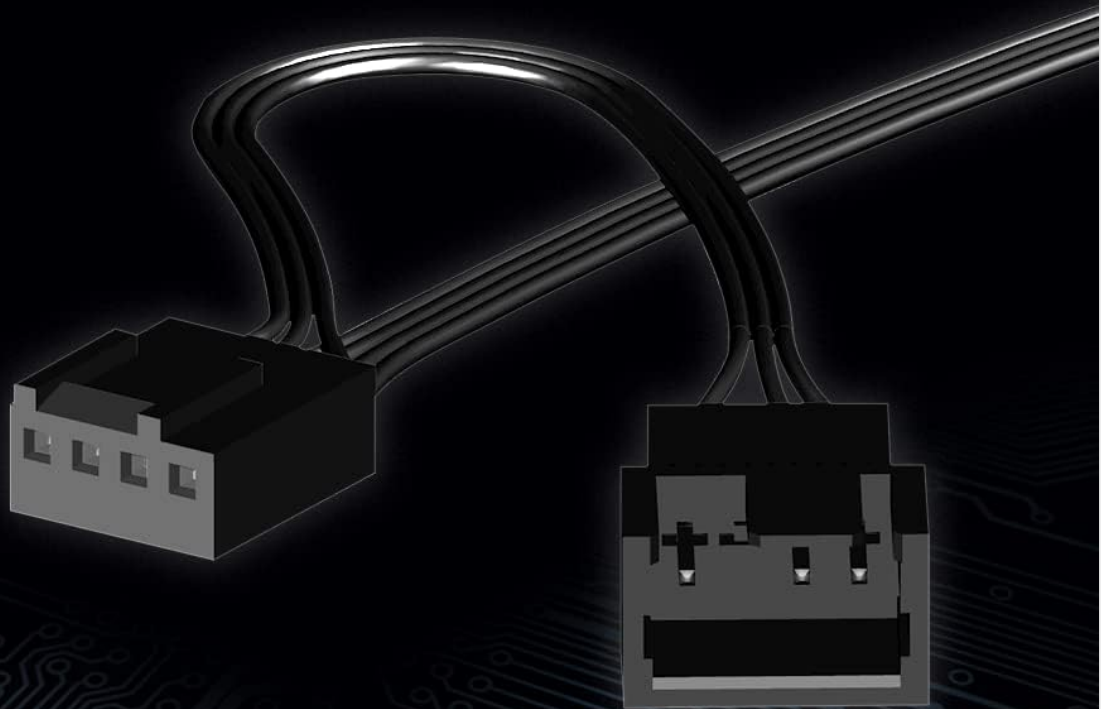


Image 4.1: Diagram illustrating typical fan installation within a computer case, showing red arrows for hot air exhaust and blue arrows for cool air intake.

4.3. Connecting the Fan

1. **Locate a 4-Pin PWM Header:** Find an available 4-pin PWM fan header on your motherboard. These are typically labeled "CPU_FAN", "SYS_FAN", or similar.
2. **Connect the Fan:** Plug the fan's 4-pin connector into the motherboard header. Ensure the connector is fully seated.
3. **PWM Sharing Technology (PST):** The P14 PWM PST CO fan includes a PST connector. This allows you to daisy-chain multiple PST fans together, controlling all connected fans from a single motherboard PWM header. Connect the main fan to the motherboard, then connect additional PST fans to the PST connector of the previous fan.



Innovative PWM Sharing Technology

Image 4.2: A close-up of the 4-pin PWM connector and the PWM Sharing Technology (PST) daisy-chain connector, illustrating how multiple fans can be connected.

Note on Radiator Mounting:

The ARCTIC P14 PWM PST CO has a thickness of 27mm, which is 2mm thicker than standard 25mm fans. Additionally, the mounting hole spacing is 125mm instead of the standard 124.5mm. When mounting to radiators, you may require longer screws (e.g., 32mm or 33mm) and potentially minor adjustments to the mounting holes to ensure a proper fit and avoid stripping the radiator threads.

5. OPERATION

5.1. PWM Control

The P14 PWM PST CO fan utilizes Pulse Width Modulation (PWM) to precisely control its speed. Your motherboard's BIOS/UEFI settings or dedicated fan control software can be used to set custom fan curves based on system temperatures. This allows for dynamic adjustment of fan speed, balancing cooling performance and noise levels.

5.2. 0 RPM Mode

When the PWM signal is below 5%, the fan will enter 0 RPM mode, meaning the fan blades will stop spinning completely. This feature provides absolute silence during low system loads, such as web browsing or light productivity tasks, and conserves power. The fan will automatically resume spinning once the PWM signal increases above the 5% threshold.

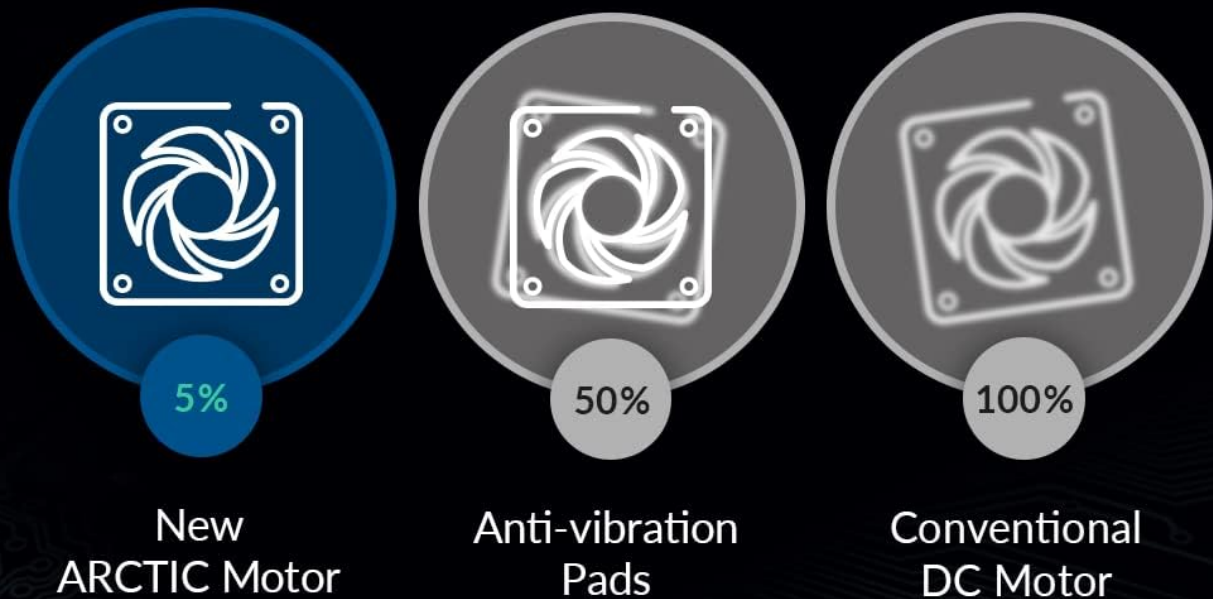


Image 5.1: Visual representation of fan operation at different PWM percentages: 100% (Full Speed, 1700 RPM), 50% (Half Speed, 850 RPM), and <5% (0dB-Mode, Absolute Standstill).

5.3. Noise Levels

The P14 PWM PST CO is designed for quiet operation, with a maximum noise level of 0.3 Sone at full speed. The dual ball bearing and efficient motor contribute to reduced vibration and acoustic output. At lower RPMs, the fan is virtually inaudible, especially in 0 RPM mode.

Fan vibration



Maximum quietness, minimum vibration

Image 5.2: Comparison of fan vibration levels: New ARCTIC Motor (5%), Anti-vibration Pads (50%), and Conventional DC Motor (100%), illustrating the reduced vibration of the ARCTIC fan.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your fan.

- **Dust Removal:** Periodically inspect the fan blades and frame for dust accumulation. Use compressed air or a soft brush to gently remove dust. Ensure the fan is powered off and unplugged before cleaning.
- **Bearing Longevity:** The Japanese dual ball bearing is designed for continuous operation and requires no lubrication. Avoid applying any lubricants to the bearing.
- **Cable Inspection:** Check the fan cable for any signs of wear or damage. Ensure it is securely connected to the motherboard.

7. TROUBLESHOOTING

If you encounter issues with your ARCTIC P14 PWM PST CO fan, refer to the following common solutions:

- **Fan Not Spinning:**
 - Ensure the fan is correctly plugged into a 4-pin PWM header on the motherboard.
 - Check BIOS/UEFI settings to confirm the fan header is enabled and not set to 0 RPM mode at current temperatures.
 - Verify that the power supply is functioning correctly.
- **Excessive Noise/Humming:**
 - Check for any obstructions (cables, debris) hitting the fan blades.
 - Ensure the fan is securely mounted and not vibrating against the case.
 - Adjust fan speed settings in BIOS/UEFI or fan control software. Some users report humming at specific RPM ranges; adjusting the fan curve can mitigate this.
 - Dust accumulation can cause imbalance and noise; clean the fan thoroughly.
- **Low Airflow:**
 - Verify the fan is oriented correctly for desired airflow (intake/exhaust).
 - Ensure fan speed is set appropriately for cooling demands.
 - Check for dust buildup on fan blades or filters that might restrict airflow.
- **PST Not Working:**
 - Ensure the primary fan is connected to a motherboard PWM header.
 - Verify that subsequent PST fans are correctly daisy-chained to the previous fan's PST connector.
 - Confirm that the motherboard header supports PWM control for multiple fans.

8. WARRANTY AND SUPPORT

8.1. Warranty Information

The ARCTIC P14 PWM PST CO fan comes with a **6-year limited warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

8.2. Further Assistance

For additional information, online manuals, video guides, or technical support, please visit the official ARCTIC support resources:

- **Online Manual & Video Guide:** arctic.de/p14-pwm-pst-co
- **Contact Support:** support.arctic.de/p14-pwm-pst-co/contact

Item name	P14 PWM PST CO (Black) giftbox
Item code	PKPBX00280M
Dimensions	143(L) x 29(W) x 143(H) mm
Material	450 g grey back MC board (粉灰明)
Color	4C
Finishing	Matte coating (哑油)
Qty / Remarks	1 pcs


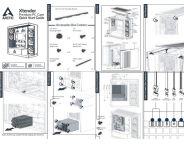


Image 8.1: Product packaging displaying key features, specifications, and QR codes linking to online manual and support resources.

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Related Documents - ACFAN00126A

	<p>ARCTIC P14 PWM PST CO Online Manual</p> <p>Access the online manual for the ARCTIC P14 PWM PST CO PC fan. Find information on preparation, installation, and video guides. Manual available in multiple languages.</p>
	<p>ARCTIC P12 PWM PST CO Online Manual</p> <p>Comprehensive online manual for the ARCTIC P12 PWM PST CO PC fan, offering preparation guides, installation instructions, and video resources in multiple languages.</p>
	<p>ARCTIC P12 Pro PST 120 mm PWM Fan with Cable Splitter - Technical Specifications</p> <p>Detailed technical specifications for the ARCTIC P12 Pro PST, a 120 mm PWM computer fan featuring a cable splitter, fluid dynamic bearing, and a 6-year warranty. Includes performance curves, dimensions, and shipping information for various pack types.</p>
	<p>ARCTIC P12 Slim PWM PST Online Manual</p> <p>Access the online manual for the ARCTIC P12 Slim PWM PST fan, including preparation, installation, and video guides. Available in multiple languages.</p>

 <p>Liquid Freezer III 280 All-in-One CPU Water Cooler</p> <table border="1"><thead><tr><th colspan="2">General Specifications</th></tr></thead><tbody><tr><td>Model</td><td>LF3-280</td></tr><tr><td>Form Factor</td><td>280mm</td></tr><tr><td>Mounting Hardware</td><td>Intel LGA1700, AMD AM5, AM4, AM3+ (included)</td></tr><tr><td>Flow Rate</td><td>1.5 LPM @ 12V, 1.0 LPM @ 5V</td></tr><tr><td>Static Pressure</td><td>1.2 mmHg @ 1200 RPM</td></tr><tr><td>Power Consumption</td><td>1.5W (pump), 1.5W (fan)</td></tr><tr><td>Dimensions (HxWxD)</td><td>157x115x115mm</td></tr><tr><td>Weight</td><td>1.2kg</td></tr></tbody></table>	General Specifications		Model	LF3-280	Form Factor	280mm	Mounting Hardware	Intel LGA1700, AMD AM5, AM4, AM3+ (included)	Flow Rate	1.5 LPM @ 12V, 1.0 LPM @ 5V	Static Pressure	1.2 mmHg @ 1200 RPM	Power Consumption	1.5W (pump), 1.5W (fan)	Dimensions (HxWxD)	157x115x115mm	Weight	1.2kg	<p>ARCTIC Liquid Freezer III 280 CPU Water Cooler - Technical Specifications</p> <p>Comprehensive technical specifications, performance data, and dimensional details for the ARCTIC Liquid Freezer III 280 All-in-One CPU Water Cooler. Covers compatibility, pump and fan performance, and shipping information.</p>
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 <p>ARCTIC Xtender Premium PC Case Quick Start Guide</p>	<p>ARCTIC Xtender Premium PC Case Quick Start Guide - Assembly and Installation</p> <p>Comprehensive quick start guide for the ARCTIC Xtender Premium PC Case. Learn how to install components, manage cables, and assemble your PC with detailed instructions and diagrams.</p>																		