



# Noctua NF-S12A FLX 120mm Quiet PC Fan

\$21.95

## Product Images



## Short Description

Award-winning S12 design. The NF-S12A features the third evolution of Noctua's classic Straight Blade Design that has earned its S12 series countless recommendations from hardware journalists and enthusiasts around the world. Further optimised for even better airflow/noise efficiency, it makes the NF-S12A an ideal quiet case fan.

## Description

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The NF-S12A marks the third generation of Noctua's signature S12 series quiet case fans, which have received more than 250 awards and recommendations from the international press. Featuring a further refined blade design with [Anti-Stall Knobs](#) that works in tandem with the new [AAO](#) (Advanced Acoustic Optimisation) frame, the NF-S12A improves the airflow/noise efficiency of its renowned predecessor by up to 8%. The FLX version provides 1200/900/700rpm speed settings via the supplied Low-Noise Adaptors in order to give you full flexibility in fine-tuning the fan for maximum ventilation performance or near-silent operation. Its superb running smoothness, [SSO2](#) bearing and Noctua's trusted premium quality make it an elite choice for quiet case cooling.

### Award-winning S12 design

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## Features

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### Anti-Stall Knobs

The NF-S12A's Anti-Stall Knobs reduce flow separation phenomena in medium to high impedance situations and thereby increase the fan's stall margin. This means that the NF-S12A is even more versatile than its renowned predecessor and can achieve better performance on heatsinks and radiators.

### AAO Frame

Noctua's AAO (Advanced Acoustic Optimisation) frames feature integrated anti-vibration pads as well as Noctua's proprietary Stepped Inlet Design and Inner Surface Microstructures, both of which further refine the fan's performance/noise efficiency.

### Stepped Inlet Design

Noctua's Stepped Inlet Design adds turbulence to the influx in order to facilitate the transition from laminar flow to turbulent flow, which reduces tonal intake noise, improves flow attachment and increases suction capacity, especially in space restricted environments.

### Inner Surface Microstructures

With the tips of the fan blades ploughing through the boundary layer created by the Inner Surface Microstructures, flow separation from the suction side of the blades is significantly suppressed, which results in reduced blade passing noise and improved airflow and pressure efficiency.

### Integrated Anti-Vibration Pads

Integrated Anti-Vibration Pads made from extra-soft silicone minimise the transmission of minute vibrations while maintaining full compatibility with all standard screws and other mounting systems.

### Smooth Commutation Drive 2

The latest version of Noctua's advanced Smooth Commutation Drive system ensures superb running smoothness by eliminating torque variations and switching noises. This makes the NF-S12A remarkably quiet even at very close distance.

### 3 speed settings for full flexibility

Providing 1200, 900 and 700 rpm speed settings via the supplied Low-Noise and Ultra-Low-Noise Adaptors, the NF-S12A FLX (Flexibility) can be fine-tuned for superior airflow or maximum quietness.

### Extensive Cabling Options

The fan's short 20cm primary cable minimises cable clutter in typical applications while the supplied 30cm extension provides extended reach when necessary. Both cables are fully sleeved.

### SSO2 Bearing

The NF-S12A features the further optimised second generation of Noctua's renowned, time-tested SSO bearing. With SSO2, the rear magnet is placed closer to the axis to provide even better stabilisation, precision and durability.

### Metal bearing shell

In order to guarantee the highest possible degree of manufacturing precision, minimum tolerance and excellent long-term stability, the NF-S12A sports a CNC milled bearing shell made entirely from brass.

### 6 years manufacturer's warranty

Noctua fans are renowned for their impeccable quality and outstanding longevity. Like all Noctua fans, the NF-S12A features an MTBF rating of more than 150.000 hours and comes with a full 6 years manufacturer's warranty.

## Specifications

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Size	120x120x25 mm
Connector	3-pin
Bearing	SSO2
Blade Geometry	S-Series with <a href="#">Anti-Stall Knobs</a>
Frame Technology	<a href="#">AAO (Advanced Acoustic Optimisation)</a>
Rotational Speed (+/- 10%)	1200 RPM
Rotational Speed with L.N.A. (+/- 10%)	900 RPM
Rotational Speed with U.L.N.A. (+/- 10%)	700 RPM
Airflow	107,5 m <sup>3</sup> /h
Airflow with L.N.A.	83,2 m <sup>3</sup> /h
Airflow with U.L.N.A.	65,8 m <sup>3</sup> /h
Acoustical Noise	17,8 dB(A)
Acoustical Noise with L.N.A.	10,7 dB(A)
Acoustical Noise with U.L.N.A.	7,4 dB(A)
Static Pressure	1,19 mm H <sub>2</sub> O
Static Pressure with L.N.A.	0,73 mm H <sub>2</sub> O
Static Pressure with U.L.N.A.	0,51 mm H <sub>2</sub> O
Max. Input Power	1,44 W
Max. Input Current	0,12 A
Voltage	12 V
MTBF	> 150.000 h

Scope of Delivery

- Low-Noise Adaptor (L.N.A.)
- Ultra-Low-Noise Adaptor (U.L.N.A.)
- 3:4-Pin Adaptor
- 30cm Extension Cable
- 4 Vibration-Compensators
- 4 Fan Screws

Warranty

6 years

## Additional Information

Brand	Noctua
SKU	NF-S12A-FLX
Weight	0.6000
Color	Brown
Fan Dimensions	120mm
Fan Width	25mm
Fan Connection	3-Pin
Fan Voltage	12 VDC
Fan RPM	1200
Fan CFM	64
Fan Noise (dB)	18

### Internet Reviews

#### ThermalBench Review:

The Noctua NF-S12A FLX is available for purchase for \$24.95 from Performance PCs in the USA as of the date of this article. If that is too steep a price for you, then also consider the PWM variant, that does not come with the ULNA or 3 pin to Molex adapter, at \$19.95 instead. Finally, there is also the NF-S12A ULN at \$23.95 which does not come with the ULNA but has a lower max RPM of 800 with the LNA resulting it being 600. I would personally go with the PWM variant for the lower price as well as expecting a finer, broader range of control if the other Noctua PWM fans tested so far are any indication. The adapter and extension cables go for ~\$5-6 in total so that contributes to the price too. If using this as a case fan, then the included soft rubber mounts will also contribute in the decision.

This is a prime example of price/performance shoots up at the higher end. The build quality, packaging and unboxing experience all contribute to that feeling as well. Noctua markets this as a case/ventilation fan so it does punch above its weight in a higher impedance situation as well but mostly because of lower noise than actual airflow through a radiator. As a case fan, I would imagine this is really hard to beat. But taking the \$24.95 price tag into consideration, and knowing there are other fans that perform better or similarly, built to a similar quality and cost less makes this a harder buy for water coolers who tend to get a lot more fans than air coolers.

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