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> [xTool Smoke Purifier M1/M1 Ultra/F1 Ultra/S1/P2 Laser Engraver D1/D1 Pro Compatible Instruction Manual](#)

### xTool 1421

# xTool Smoke Purifier M1/M1 Ultra/F1 Ultra/S1/P2 Laser Engraver D1/D1 Pro Compatible Instruction Manual

Brand: xTool | Model: 1421

## 1. INTRODUCTION

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The xTool Smoke Purifier is an essential accessory designed to create a healthy and safe working environment when operating laser engravers indoors. It efficiently removes smoke, dust, and harmful gases generated during laser processing, ensuring clean air quality. This manual provides comprehensive instructions for the setup, operation, and maintenance of your smoke purifier.

## 2. SAFETY INFORMATION

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Please read and understand all safety instructions before operating the xTool Smoke Purifier. Failure to follow these instructions may result in injury or damage to the product.

- Ensure the device is placed on a stable, level surface.
- Do not block the air inlet or outlet vents during operation.
- Use only the power adapter provided with the device.
- Keep the device away from water or other liquids.
- Do not attempt to open or repair the device yourself. Contact customer support for assistance.
- Regularly check and replace filters as recommended to maintain optimal performance and safety.
- Ensure proper ventilation in the workspace, even with the purifier in use, especially when processing materials that produce strong odors or fumes.

## 3. PACKAGE CONTENTS

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Verify that all items listed below are included in your package:

- xTool Smoke Purifier Unit
- Pipe Adapter (for xTool M1)
- Pipe Adapter (for Smoke Purifier)
- Pipe Clamp (for Smoke Purifier)

- Pipe Clamp (for xTool M1)
- Power Cable
- Screwdriver
- User Manual
- Filter Pack (includes replacement pre-filter)

## パッケージ一覧



パイプアダプター  
(xTool M1)



パイプアダプター  
(煙清浄機)



パイプクランプ  
(煙清浄機)



パイプクランプ  
(xTool M1)



電源ケーブル



ドライバー



煙清浄機のユーザーマニュアル



フィルターパック

※ご注意: 交換用プレフィルターが付属されています

A visual representation of all items included in the product package: two pipe adapters (for xTool M1 and smoke purifier), two pipe clamps, a power cable, a screwdriver, the user manual, and a filter pack (with a replacement pre-filter).

## 4. SETUP

### 4.1 Unboxing and Assembly

1. Carefully remove all components from the packaging.
2. Place the xTool Smoke Purifier on a stable surface near your laser engraver.
3. Connect the flexible exhaust hose to the smoke purifier's air inlet using the appropriate pipe adapter and clamp. Ensure a secure fit to prevent smoke leakage.

4. Connect the other end of the exhaust hose to your laser engraver's exhaust port, again using the correct adapter and clamp. For D1/D1 Pro models, ensure a protective cover is in place for effective smoke capture.



This image shows the xTool Smoke Purifier connected via a flexible hose to a laser engraver, illustrating its primary function of extracting smoke and fumes from the engraving area.

# xTool M1、Laserbox、及び他の 密閉型レーザーカッターと互換性がある



The image displays the xTool Smoke Purifier alongside an xTool M1 laser engraver, highlighting its compatibility and compact design for integration into a workspace.

# xTool D1&D1 Proにも対応できる (ご注意：カバー付きが必要です。)



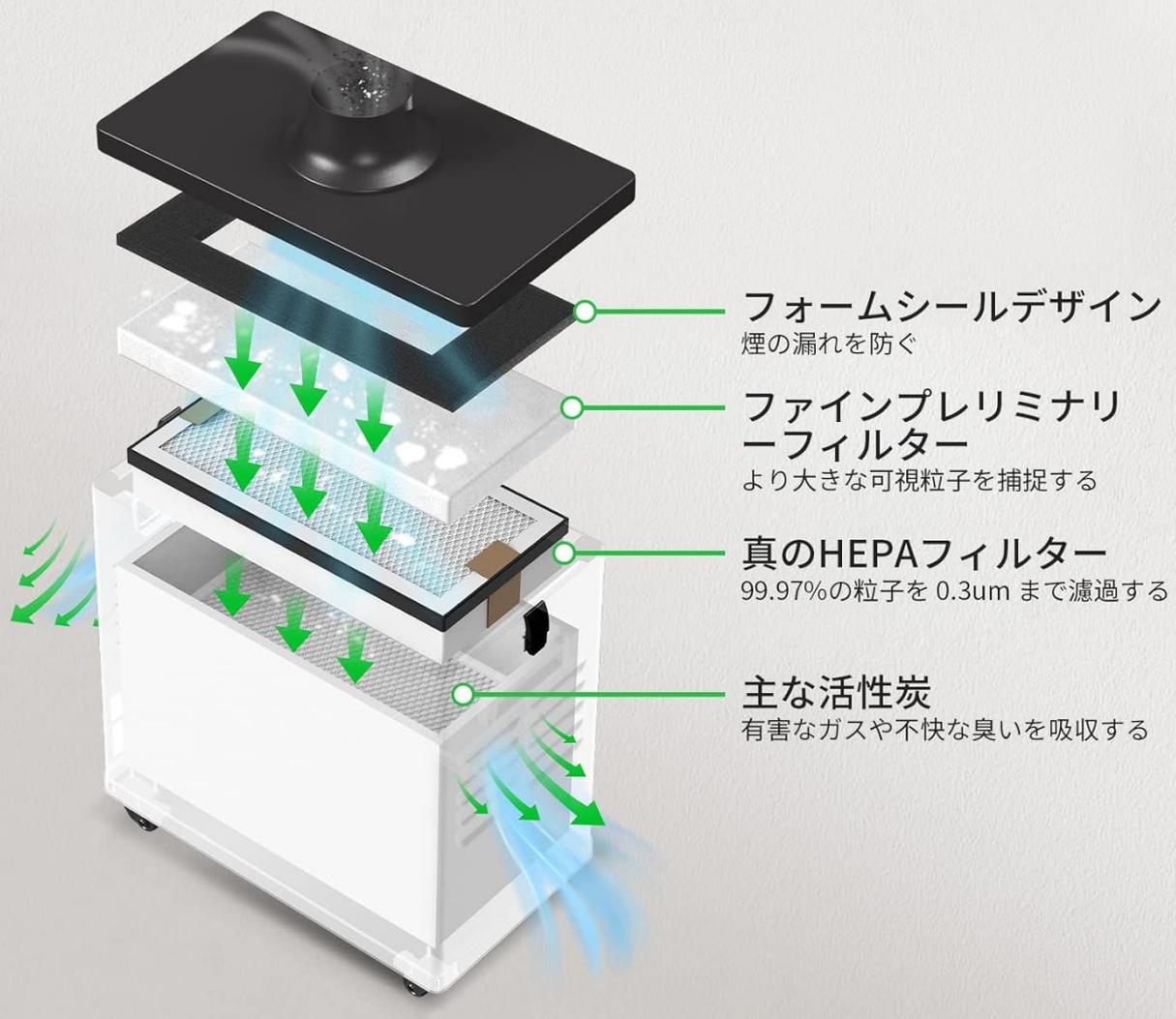
The image illustrates the xTool Smoke Purifier's compatibility with xTool D1 and D1 Pro laser engravers, noting that a protective cover is required for proper integration and smoke extraction.

## 4.2 Filter Installation

The xTool Smoke Purifier comes with a pre-installed 3-stage filtration system. Ensure all filters are correctly seated before first use. Refer to the Maintenance section for future filter replacement.

# アップグレードされた3段階の濾過

最大99.97%の煙浄化率を達成する



A detailed diagram showing the internal components of the smoke purifier, including the pre-filter, HEPA filter, and activated carbon filter, which work together for comprehensive air purification.

## 5. OPERATING INSTRUCTIONS

### 5.1 Power On/Off and Fan Speed Adjustment

1. Connect the power cable to the smoke purifier and a suitable power outlet.
2. Turn the rotary knob on the front panel clockwise to power on the device. Continue turning to adjust the fan speed from minimum to maximum. Turn counter-clockwise to reduce speed and power off.
3. For optimal smoke removal, adjust the fan speed according to the material being processed and the density of fumes generated.

# 使いやすい仕上がり



ハンドルとキャスター付きで  
移動もラク



使いやすいデザインのクイック  
リリースメタルバックル



繊細なツマミのデザインで  
吸引力をスムーズに調整で  
きる



This image highlights the ergonomic features of the purifier, including convenient handles and wheels for easy mobility, and a simple knob for precise fan speed control.

## 5.2 Compatibility

The xTool Smoke Purifier is designed for wide compatibility with various xTool laser engravers, including:

- xTool M1
- xTool M1 Ultra
- xTool F1 Ultra
- xTool S1
- xTool P2
- xTool D1 (requires cover)
- xTool D1 Pro (requires cover)

It is also suitable for use with most other enclosed laser engravers.

## 6. KEY FEATURES

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## 6.1 Powerful 150W Suction

The xTool Smoke Purifier features a powerful 150W suction capability, designed to efficiently remove smoke and harmful substances generated during laser engraving. This ensures a healthy and safe indoor working environment for users.

## 6.2 Advanced 3-Stage Filtration

Equipped with a high-quality 3-stage filter system, including a 25mm pre-filter, an expanded HEPA filter, and premium activated carbon, the purifier captures all smoke, dust, and harmful gases. It achieves a filtration and purification efficiency of 99.97%.

## 6.3 Sealed Design for Smoke Leak Prevention

The integrated design of the xTool Smoke Purifier prevents random smoke emission. Its unique form covers the air inlet, and the external exhaust port is designed with a metal buckle. By maintaining only the air inlet and outlet, smoke leakage is prevented, significantly enhancing air purification effectiveness.

## 6.4 Ergonomic and Quiet Operation

Operating at a maximum noise level of only 55dB, the xTool fume extractor ensures a quiet and comfortable working environment during laser cutter use. It features handles and wheels for easy mobility. The knob switch allows for precise adjustment of fan speed to maximize purification efficiency.

# 静音設計

粒状 dB未満の音量で一貫した強力な吸引力作  
動中の電子レンジの音量よりも小さい



This image features a smartphone displaying a decibel reading of 54dB, demonstrating the low noise level of the xTool Smoke Purifier during operation, ensuring a quiet working environment.

# 効果的なパフォーマンス



**使用前**

PM2.5	62 $\mu\text{g}/\text{m}^3$
PM10	107 $\mu\text{g}/\text{m}^3$
HCHO	0.596 $\text{mg}/\text{m}^3$
TVOC	1.465 $\text{mg}/\text{m}^3$

空気の質: 掃除が必要

**使用后**

PM2.5	7 $\mu\text{g}/\text{m}^3$
PM10	9 $\mu\text{g}/\text{m}^3$
HCHO	0.144 $\text{mg}/\text{m}^3$
TVOC	0.039 $\text{mg}/\text{m}^3$

空気の質: 良い

※材質や環境により検知結果が異なる場合があります。

Two screens show air quality data: 'Before Use' with high pollutant levels (PM2.5 62 $\mu\text{g}/\text{m}^3$ , PM10 107 $\mu\text{g}/\text{m}^3$ , HCHO 0.596 $\text{mg}/\text{m}^3$ , TVOC 1.465 $\text{mg}/\text{m}^3$ ) and 'After Use' with significantly reduced levels (PM2.5 7 $\mu\text{g}/\text{m}^3$ , PM10 9 $\mu\text{g}/\text{m}^3$ , HCHO 0.144 $\text{mg}/\text{m}^3$ , TVOC 0.039 $\text{mg}/\text{m}^3$ ), indicating effective purification.

## 7. MAINTENANCE

### 7.1 Filter Replacement

The lifespan of the filters depends on usage frequency and the types of materials processed. Replace filters when you notice a decrease in suction power or an increase in odors.

- **Pre-filter:** The pre-filter can be washed and reused multiple times. Clean it regularly to extend the life of the other filters.
- **HEPA and Activated Carbon Filters:** These filters are not washable and must be replaced when saturated. Replacement filter kits are available from xTool.

### 7.2 Cleaning the Unit

Wipe the exterior of the smoke purifier with a soft, dry cloth. Do not use abrasive cleaners or solvents.

## 8. TROUBLESHOOTING

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If you encounter issues with your xTool Smoke Purifier, refer to the following common problems and solutions:

- **Reduced Suction Power:** Check if the filters are clogged and require cleaning or replacement. Ensure the exhaust hose connections are secure and not obstructed.
- **Smoke Leakage:** Verify that all hose connections are tightly clamped and that the laser engraver's cover (if applicable) is properly sealed. The integrated design aims to minimize leaks, but external factors can contribute.
- **Unusual Odors:** This indicates that the activated carbon filter is saturated and needs replacement.
- **Device Not Powering On:** Ensure the power cable is securely connected to both the device and the power outlet. Check the power switch position.

If the problem persists, please contact xTool customer support for further assistance.

## 9. SPECIFICATIONS

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Feature	Detail
Manufacturer	Makeblock Co., Ltd.
Model Number	1421
Package Dimensions	54.9 x 52.2 x 34.3 cm
Color	White
Package Weight	19.55 Kilograms
Batteries Required	No
Brand Name	xTool
Product Dimensions	20 depth x 20 width x 80 height cm
Power Source	Corded Electric
Control Method	Touch

## 10. PRODUCT APPLICATION CONTEXT

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The xTool Smoke Purifier is designed to work seamlessly with various xTool laser engravers, enhancing the user experience by managing fumes and particles. Below are videos showcasing some of the compatible laser engravers in action, demonstrating the types of projects where the smoke purifier would be beneficial.

**Video:** xTool F1 Laser Engraver. This video demonstrates the xTool F1 laser engraver's capabilities with various materials, highlighting its speed and precision for different projects. The smoke purifier would ensure a clean workspace during these operations.

**Video:** xTool M1 Ultra Laser Engraver. This video showcases the xTool M1 Ultra, a 4-in-1 craft machine, performing various engraving and cutting tasks. The smoke purifier is essential for maintaining air quality during such versatile crafting.

**Video:** Using the S1 Dedicated Riser. This video demonstrates the use of a dedicated riser for the xTool S1, expanding its capabilities. The smoke purifier would be used in conjunction with the S1 to manage fumes from larger projects.

**Video:** xTool F1 Laser Engraver. Another demonstration of the xTool F1 laser engraver, showcasing its versatility. The smoke purifier ensures a clean and safe environment for all engraving tasks.

## 11. WARRANTY AND SUPPORT

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The xTool Smoke Purifier comes with a standard manufacturer's warranty. For detailed warranty information, product support, or service inquiries, please visit the official xTool website or contact their customer service directly. Keep your purchase receipt as proof of purchase.