



Smoke exhaust for laser fumes



[VIEW IN BROWSER](#)

updated 10. 2. 2022 | published 10. 2. 2022

Summary

Universal adapter to fit a Stepcraft Toolholder. Smoke/Chips exhaust, Air blast and Laser pointer.

[Hobby & Makers](#) > [Tools](#)

Tags: [3dprinting](#) [cncmill](#)

Smoke exhaust is important when using a laser, it keeps the lens clean and removes most of the smell from burning material.

Some dust collectors will do the job, but the laser sticks 20mm out of the toolholder plate so check if that is a problem.

But here is the solution, a redesigned smoke/dust exhaust for laser as well milling chips.

This is a small redesign of my "Dust collector for Kress"

Update 0.1 (nov 2021)

This is an improved version of the Smoke exhaust for a Stepcraft CNC. It consist of a universal adapter and different cones for laser or milling use.

The universal adapter is designed for:
Smoke and chip exhaust during laser or milling operation,
Air blast assist during laser and/or milling operation,

Integrated adapter for 12mm laser pointer (X-Y origin setting for milling work),

Changeable cones and brushes for milling or laser operation.

The first file is the universal adapter which hold the exhaust hose, air hose and laser pointer. This is attached to the toolholder plate by a M4 screw and washer and its anti rotation lock.

The second file is a cone with the air blast assist in it to blow out flames during laser ops or blow the chips away during milling on the workpiece. It will fit with 5 magnets to the universal adapter and the air intake will slide in the adapter.

Note: maybe you should wider the hole on the adapter with ad drill to 5,1mm to get a nice fit. depends on the printer accuracy.

The new design doesn't need any support during printing. For the cone a brim is advised because you print it on the small ring.

hardware used;

10 3 x 2mm magnet (only if cone or brush is used)

1 M4 x 12mm screw

1 12 Laser pointer (optional)

Filament: PETG

Layer: 0,2mm

Model files



universal-adapter.stl



airblast-short-cone.stl



washer.stl

License ©

This work is licensed under a
Creative Commons (4.0 International License)



Attribution-NonCommercial

- ✗ | Sharing without ATTRIBUTION
- ✓ | Remix Culture allowed
- ✗ | Commercial Use
- ✗ | Free Cultural Works
- ✗ | Meets Open Definition