



air assist for 40mm diode laser engraver



human

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Summary

blowy thing for burny thing

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Tags: [5015blower](#) [engraver](#) [laser](#) [tt25w](#)

adds a air assist to a 40 mm diode laser engraver. should give you slightly better cutting performance by clearing ash from the cut and increase the life span of your laser diode by blowing the smoke away from the lens.

tested on my TT-2.5W laser engraver

YOU WILL LOSE WORK AREA

this mod takes up usable engraving space (roughly 16 mm on x and y), not much, but if you have the smallest laser engraver amazon has to offer this is not the mod for you.

this is for a fixed focal length laser (23 mm in my case) so the entire body is 20 mm tall you will need a 3 mm shim of some kind to set focus, or just eye ball it assuming you haven't burnt those out yet.

you can depending on laser mounting orient the fan to the front or left this will effect which axis you lose work space on depending on machine.

you'll also lose the little colored plastic that allegedly protects your eyes, either just don't look at the pretty blue light or wear laser safety glasses like your supposed to.

ABS or PLA+ recommended, preferably a opaque color to reduce light emission (use your judgement here) some supports necessary, i put them around the blower inlet, on the flat for the fan bracket, and inside the cone

required parts

1x 5015 12 or 24 volt blower fan (self explanatory i hope)

3x m3 heat set inserts (2x on main body to attach bracket, 1x on the bracket for m3x20)

1x m3x20 shcs or bhcs (fan support)

6x m3x12 shcs or bhcs (4x to attach main body to laser and 2x mount bracket to main body)

foam tape (optional but recommended to reduce rattling)

3x m3 nuts (optional if you don't want to or cant use the heat set inserts, just a less elegant solution)

if you chose to use m3 nuts you will need a m3x30 shcs or bhcs instead of the 20, the ability to use nuts was an after thought since i have heat set inserts laying around

Model files



air-assist-main.stl



bracket-air-assist.stl

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