Servo automated iris / aperture for air flow controll

AcE Krystal

VIEW IN BROWSER

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Summary

I finished the project and will upload all the files and code as is.

3D Printers > 3D Printers - Upgrades

Tags: enclosure ikeaenclosure ikealack fan adjustable aperture tunnel airduct airflow casemod 120mm servo

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Servo Test (with end stop current detection) :

Finished Project : https://www.youtube.com/watch?v=DbXVjOoNJw4

Materials needed :
- 5 m3 x 5mm
- Servo FT90R (continuous rotation version of a FT,ST,SG or FG90)

This is for a learning/hobby building project to do precise temperature control in my 3D printed enclosure, while also using the (waste) heat to dry filament storage above.

The setup I'm building uses just cheap continues rotating servo's and does end stop recognition by sensing changing current draw if servo is stalling.

More details, parts and script for the (IKEA LACK) 3D printing enclosure can be found here : https://www.prusaprinters.org/prints/5141-ambient-control-pcb-brain-box.

Remix from "120mm Fan Aperture Door" by "Inertpyro", source : https://www.thingiverse.com/thing:529661
Uploaded tunnel parts for the original aperture (without servo) here : https://www.thingiverse.com/thing:3747061

This remix is based on

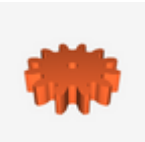
Original Prusa i3 MK3 ENCLOSURE -Ikea Lack table - Prusa Research

by Dominik Císař

Model files

door_blade_final.stl

baseplate-aperature.stl



spur-gear-12th-125mo-145at.stl

underside-tube.stl

spur-gear-107th-125mo-145at.stl

topside-tube.stl

spur-gear-12-teeth.step

spur-gear-107-teeth.step

baseplate.step

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