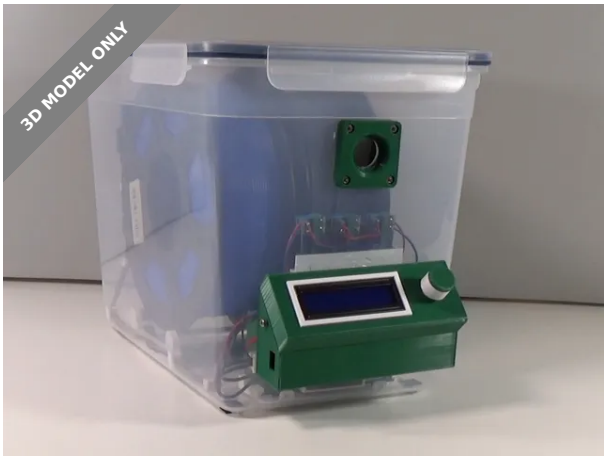


# Filament dry box - heated, ventilated, Arduino controlled

werner_rh

VIEW IN BROWSER

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## Summary

Heated and activ ventilated filament dry box. Controlled by an Arduino Nano.

3D Printers > Accessories

Tags: arduino filamentdrybox anycubickobra activeventilation heatedfilamentdrybox

Bau einer beheizten und aktiv belüfteten Filament Trockenbox. Gesteuert durch einen Arduino Nano. Gebaut aus einer Ikea365 10,4L Vorratsbox, ein paar elektronische Teile und ein paar Teilen aus dem 3D-Drucker. Alle Teile sind leicht zu beschaffen und die Bauteilekosten betragen etwas über 50€.

Eine erhebliche Verbesserung hinsichtlich Aufheizgeschwindigkeit und Temperaturstabilität wird durch eine Isolation der Innenwände mit einer Auto-Sonnenschutzfolie (mehrlagig) erreicht.

How to build a heated and actively ventilated filament dry box. Controlled by an Arduino Nano. Built from an Ikea365 10.4L storage box, a few electronic parts and a few parts from the 3D printer. All parts are easy to obtain and the component costs are just over €50.

A significant improvement in terms of heating speed and temperature stability is achieved by insulating the interior walls with a car sun protection film (multi-layer).

**Partlist with links and additional infos is stored beside the stl files.**

Note: if you are have just finished the build of the DryBox, start with software version 0.48!

Software on GitHub Version0.48: https://github.com/werner-rh/drybox-control/tree/v0.48

If your Box runs fine, you can try out the improvements and extensions made by other developers.

See also the circuit diagramm and assembly pictures.

**2024-05-25: software update version 0.48 available**

The version 0.48 contains a bigger refactoring and some improvements. I implemented some nice ideas from HigiStyx. The temperature controlling is splitted into 6 ranges and enables a finer regulation adjustment for different temperature ranges. Also a “turbo mode” for faster initial heat up is implemented. See change log on github for more details.

**2024-05-16: bug fix and additional english partlist**

Software version 0.47 is available. It contains a bug fix and some improvements. I strongly recommend updating to 0.47.

Also added a fine english partlist, thanks to HigiStyx for this, containing linked parts on AliExpress.

2024-03-03: added electric-schematic diagram as PDF file.

# Model files

**dht11-holderv2-ex.stl**

**ehouse-basebox-ex.stl**

**encoder-knob-cap18-ex.stl**

**mosfet-modules-mountv2-ex.stl**

**encoder-knob18-ex.stl**

**fetmodule-holder-ex.stl**

**cable-clamp-ex.stl**

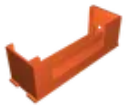
**ehouse-front-ex.stl**

**ehouse-boxwasher-ex.stl**

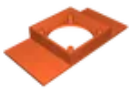
**lcd-frame16x2-v21.stl**

**lcd-haltebolzen_ex.stl**

**ptc-airheater-top-ex.stl**



**ptc-airheater-base-ex.stl**



**fanmount-airheater-ex.stl**

**airheater-mountbase2-ex.stl**

**axle-10x145mm-ex.stl**

**rollstand-connector-ex.stl**

**rollstand-axle-mount-ex.stl**

**rollholderwasherbig-ex.stl**

**rollholderbig-10mm-ex.stl**

**rollstand-boxmount-ex.stl**

**axle-10x175mm-ex.stl**

**fan-outer-airflap-mount-airexchange-ex.stl**

**front-vent-inflap-mount-ex.stl**

**airflap-front22mm01-ex.stl**

**flapaxis-lock-ex.stl**

**fan-innermount-airexchange-ex.stl**

**fanmount-drilltemplate-ex.stl**

**frontair-drill-template-ex.stl**

**front-vent-outer-cover-ex.stl**

**airflap02-ex.stl**

**roll-adapter-54-withborder-ex.stl**

**roll-adapter-72-withborder-ex.stl**

**roll-adapter-75-withborder-ex.stl**

**roll-adapter-74-withborder-ex.stl**

**roll-adapter-52-withborder-ex.stl**

**roll-adapter-50-withborder-ex.stl**

**roll-adapter-70-withborder-ex.stl**

# Other files

**partlist-info-heated-drybox.txt**

Parts with links and additional infos

**electric-schematic.pdf**

wiring diagram

**drybox-english-partslist.txt**

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