



Iris Gift Box

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Summary

This box features an iris mechanism with very little resistance as to turn the lid easily with two fingers.



12.17 hrs



4 pcs



0.15 mm
0.20 mm



0.40 mm



PLA



124 g



Prusa
MK3/S/S+

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Tags: [gift](#) [mechanicaltoy](#) [irisbox](#) [iris](#)

This box features an iris mechanism with very little resistance as to turn the lid easily with two fingers. It's achieved by a sort of ball bearing using 6mm steel balls and a pattern of leaves that don't overlap. What makes it a gift box? Well, you can store little gifts inside or use it as a gift :-).

I uploaded a short video here: <https://www.youtube.com/watch?v=FOQdQyLQQjw>

The lid has to be mounted following a specific path to prevent the lid from detaching when grabbing it.

Outer diameter: about 13 cm, height: < 5 cm.

Credits:

This design is basically the following one by Acop Minasean turned printable and with a box wrapped around it: <https://grabcad.com/library/mechanism-of-shutter-1>

You have to get yourself 12 6mm steel balls. They are quite cheap as it is a common ammunition for slingshots. Random example: [https://www.amazon.de/Sector-71-Hochwertige-Stahlkugeln-Kugellager/dp/B01HGV0EZQ/ref=sr_1_6?](https://www.amazon.de/Sector-71-Hochwertige-Stahlkugeln-Kugellager/dp/B01HGV0EZQ/ref=sr_1_6?__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crd=KEAL8YZ3SZJ8&)

[__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crd=KEAL8YZ3SZJ8&](https://www.amazon.de/Sector-71-Hochwertige-Stahlkugeln-Kugellager/dp/B01HGV0EZQ/ref=sr_1_6?__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crd=KEAL8YZ3SZJ8&)

For those who want it food-safe: These little boxes fit inside: [https://www.amazon.de/Kigima-Mini-Tiefkühl-dose-rund-10x10x3-5cm/dp/B06XRZFSVR/ref=sr_1_10?](https://www.amazon.de/Kigima-Mini-Tiefkühl-dose-rund-10x10x3-5cm/dp/B06XRZFSVR/ref=sr_1_10?__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&keywords=dose+rund)

[__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&keywords=dose+rund](https://www.amazon.de/Kigima-Mini-Tiefkühl-dose-rund-10x10x3-5cm/dp/B06XRZFSVR/ref=sr_1_10?__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&keywords=dose+rund)

Print instructions Category: Containers Print Settings

Printer Brand: Prusa

Printer: I3 MK3S

Rafts: No

Supports: No

Resolution: 0.15 - 0.2

Infill: 5% - 100%

Filament: DasFilament PLA Ton-weiß

Notes:

Recommended layer height: 0.2 mm, except for the leaves („Flügel“) and the „Schienenscheibe“ that ask for 0.15 mm. I adjusted single layers to match the print and the modell and went down to 0.15 for the moving heights. Don't know if that is really necessary though.

The balance point of the leaves should be on the outer side. To achieve this, you have to print them with 100% except for the layers between 0.5 and 1.4 mm, print these with 5% infill.

Model files



irisgehaeuse-flugelnachneu-12x.3mf



irisgehaeuse-schienenscheibe.3mf



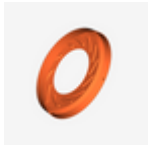
irisgehaeuse-deckelscheibe.3mf



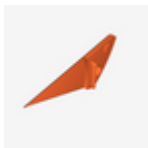
irisgehaeuse-topf-dasfilamantpla.3mf



irisgehaeuse-schienenscheibe.stl



irisgehaeuse-deckelscheibe.stl



irisgehaeuse-flugelnachneu-140.stl



irisgehaeuse-topf.stl

Print files



irisgehaeuse-schienenscheibe_015mm_pla_mk3s_1h4.gcode

🌀 PLA 📏 0.40 mm 📏 0.15 mm ⌚ 1.67 hrs ⚖️ 15 g 🖨️ Prusa MK3/S/S+



irisgehaeuse-flugelnachneu-12x_015mm_pla_mk3s_2.gcode

🌀 PLA 📏 0.40 mm 📏 0.15 mm ⌚ 2.41 hrs ⚖️ 21 g 🖨️ Prusa MK3/S/S+



irisgehaeuse-deckelscheibe_02mm_pla_mk3s_2h43m.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 2.72 hrs ⚖️ 20 g 🖨️ Prusa MK3/S/S+



irisgehaeuse-topf-pla_02mm_pla_mk3s_5h22m.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 5.37 hrs ⚖️ 69 g 🖨️ Prusa MK3/S/S+

[Find source .stl files on Thingiverse.com](#)

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