

Utility Knife F1



FAYRON



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Summary

We think we've created one of the best 3d printed utility knives...



2.94 hrs



1 pcs



0.10 mm



0.40 mm



PLA



15 g



Prusa MK4

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Tags: [tool](#) [light](#) [mechanism](#) [knife](#) [easy](#) [keychain](#)
[interlocking](#) [click](#) [compact](#) [quick](#) [portable](#) [extrudr](#)
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Introducing the revolutionary F1 3D Printer Utility Knife, a cutting-edge tool designed for precision and versatility. Crafted through a collaboration between our team and Extrudr, a leading filament manufacturer, this utility knife combines innovative functionality with good looks.

At the heart of this utility knife is its modular design, consisting of two main printable parts: the **shell** and the **slide**. Both components are meticulously engineered to ensure seamless integration and effortless blade replacement. The **shell** features hexagons for an ergonomic grip, providing comfort and control during prolonged use.

The blade holder is designed with precision tolerances to securely hold the interchangeable blades in place. These blades are easily installable and removable.

Smooth operation is a hallmark of this utility knife, thanks to its carefully engineered mechanisms. The blade holder incorporates two locking points, ensuring that the blade remains securely in place during use. This dual-locking system not only enhances safety but also provides peace of mind, knowing that the blade won't disengage unexpectedly.

To further customize your experience, we've incorporated three hardness levels for the locking levers, allowing you to adjust the tension to your desired preference. Whether you prefer a **HARD**, **MEDIUM** or **SOFT** feel, you can tailor the locking mechanism to suit your cutting style and comfort level.

For Instructions on how to assemble it check out this video:

NOTE:

Since the tolerances of this model are really tight, with less precise printers (Unlike Prusa or Bambulab printers) or hard to print materials, your knife might not be as fluid as it could be. In that case consider using some grease between the shell contact points and the slide to decrease friction.

RECCOMANDATIONS:

- Print with a nozzle **not bigger** than 0.4mm;
- Print with a layer height **not taller** than 0.2mm;
- We Recommend printing with **PLA, MATT** Filaments or **CARBON FILLED** Filaments for **best results**;
- In PrusaSlicer (and most other slicers) → Print Setting → Infill → Enable Ironing: **ON** (For a smoother sliding experience, only really needed on the **Shell**);
- In PrusaSlicer (and most other slicers) → Print Setting → Layers and perimeters → Avoid crossing perimeters: **ON (to reduce stringing)**;
- Print with **100% Infill**;
- Print with at least **3 Perimeters**.

SHELL HARDNESS RECCOMANDATIONS:

Hardness Level	Recommended Material
HARD	For use with softer and more flexible materials like PETG, MATT Materials
MEDIUM	For use with harder and less flexible materials like PLA

SOFT	For use with Hard materials like CARBON FILLED Materials
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*Different materials may give a different feel

NEEDED PARTS:

Reccomended SK5 Blades (Amazon IT): <https://www.amazon.it/gp/product/B072LM>

Reccomended SK5 Blades (Amazon DE/AT): https://www.amazon.de/Bosch-Profess__mk_de_DE=%C3%85M%C3%85%C5%BD%C3%95%C3%91&crid=2YR8JV5XTXO_HmMrfbvXGjHj071QN20LucGBJIeps.C_MrRsbz814A7U33la11kmRmm8w7JZZExeM3

Reccomended SK5 Blades (Amazon USA): https://www.amazon.com/Goldblatt-100dKh59udBgb6rnAEp_D3pEFscFI8nd7scftfstLoVxC-rMoyYIB4LZ6Ylyco4fKiV7wU31z0n7aNGBL4RSumFtRzcZj7Mv2c_sZr_G1vdJ1HZ18cCIGYkXKz_mEI6tRnAijnh3mDhTiAjbyYQ3FCSP9vAQ0UzYlek&dib_tag=se&keywords=sk5+blade+goldblatt&qid=1711

Model files



slide.stl

☐ The Slide in which you insert your SK5 Utility knife Blade



shell-h.stl

☐ The Shell, where the slide with the blade move (HARD Feel)



shell-m.stl

☐ The Shell, where the slide with the blade move (MEDIUM Feel)



shell-s.stl

☐ The Shell, where the slide with the blade move (SOFT Feel)

Print files



shell-m_04n_01mm_pla_mk4_2h57m.bgcode

⚙️ PLA ⚙️ 0.40 mm ⚙️ 0.10 mm ⌚ 2.94 hrs ⚖️ 15 g 🖨️ Prusa MK4

📄 Prusa MK4 0.4mm

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