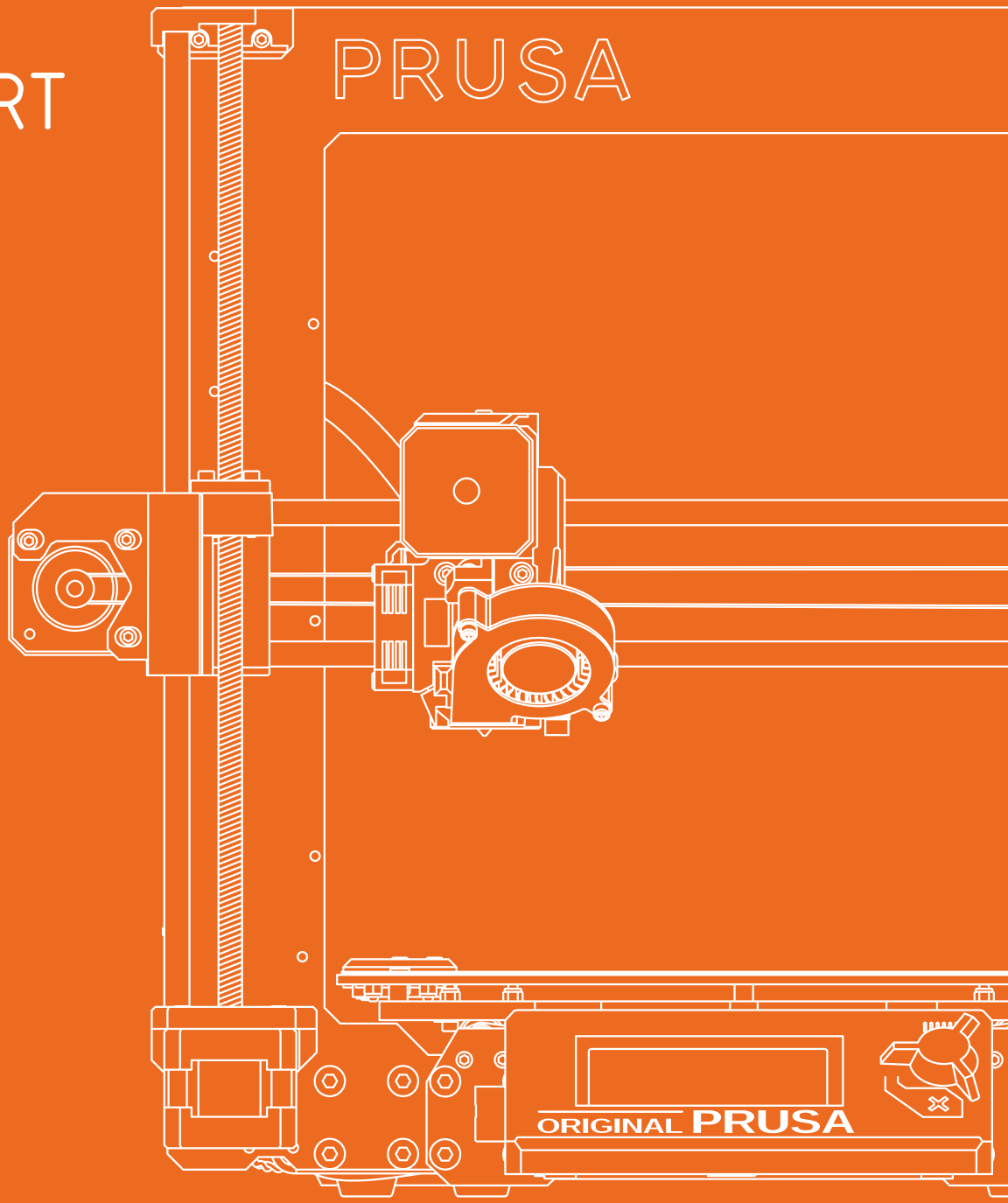
PRUSA PRODUCT PASSPORT
Original Prusa i3 MK3S+



PRUSA RESEARCH
by JOSEF PRUSA

One of the main commitments of our sustainability efforts is to design and manufacture printers that meet the requirements of the circular economy.

In practice, this means having products that are easy to **maintain, upgrade or repair**. And when they reach the end of their lifespan, to be able to reuse or recycle them in some way. We aim to keep all the used materials in circulation for as long as possible.

We also want to be more transparent about where the materials and components for our printers come from and their environmental impact.

That's why we created the first Prusa Product Passport!

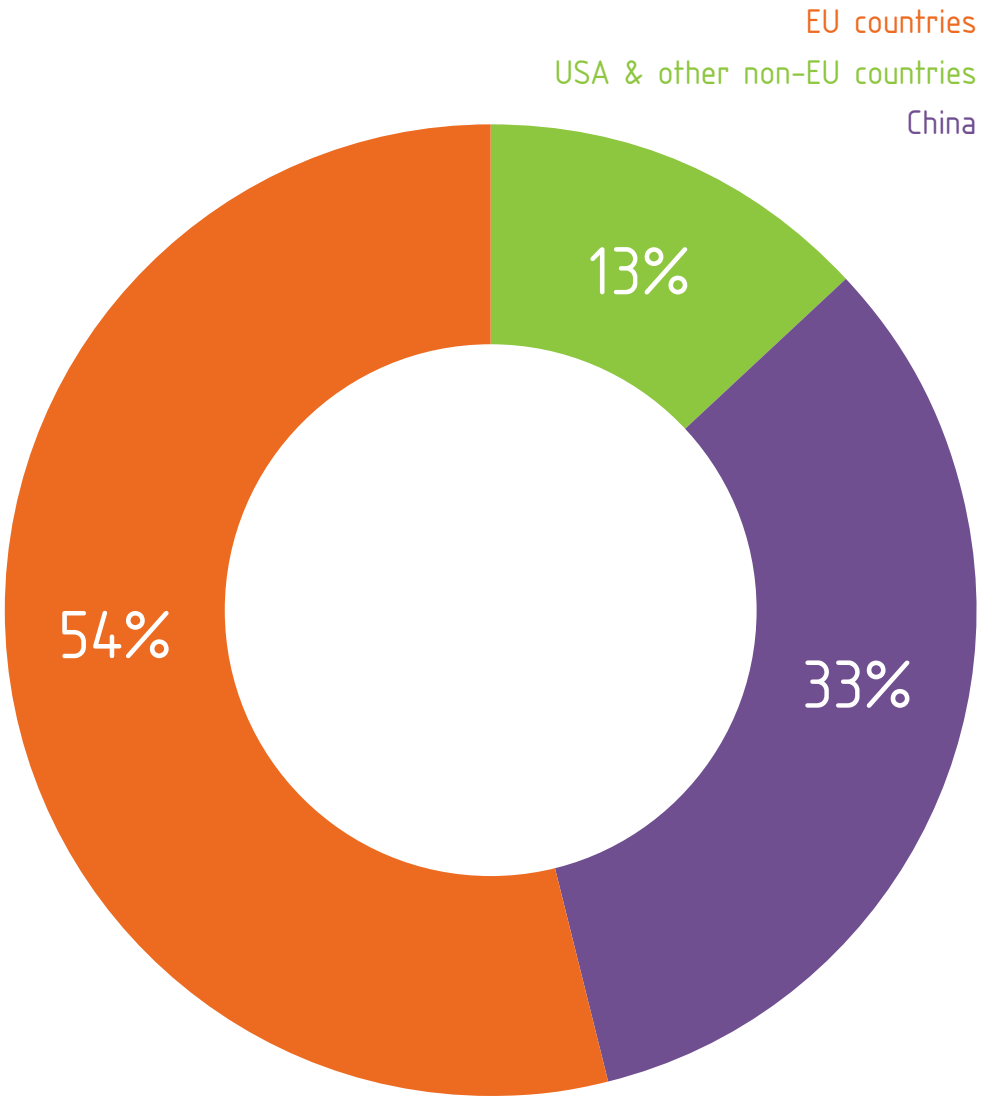
The Prusa Product Passport includes:

- origin of the printer parts by country
- the carbon footprint of the printer
- info on maintenance, repairability, and spare parts
- info on upgrades
- description of the materials of each part for the purpose of recycling
- inspiration on how to reuse selected printer parts at the end of their lifespan

PRUSA RESEARCH by JOSEF PRUSA

Our goal is to source the maximum amount of components for the production of our printers as close as possible to our production lines in Prague.

Parts of the Original Prusa i3 MK3S+ 3D printer by country of origin



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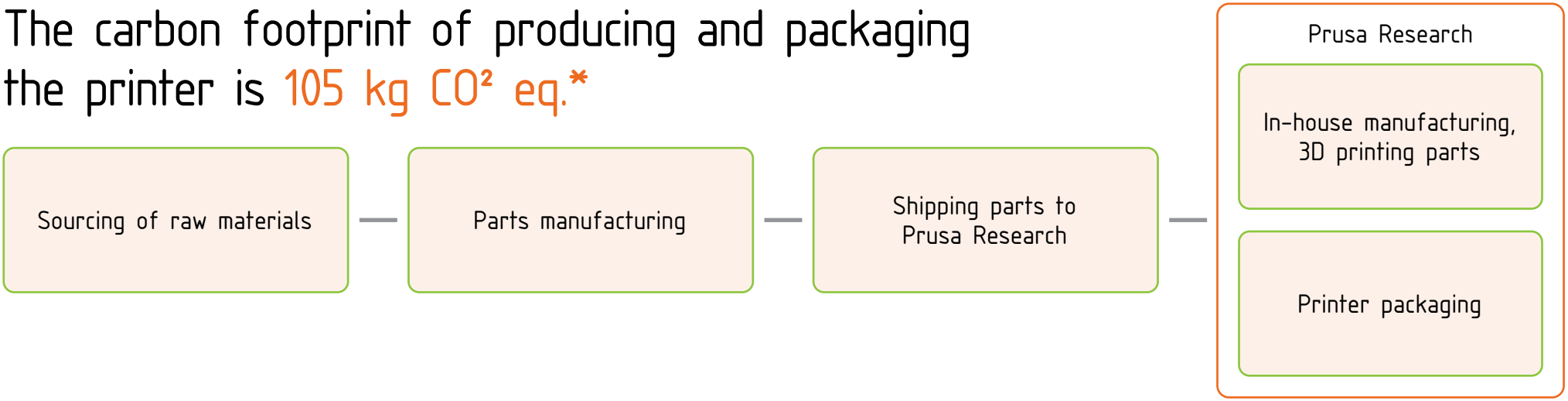
The carbon footprint of the printer

The printer design is purely functional and economical, with no redundant, “show-off” features. This makes the printer as affordable, easy to repair and environmentally friendly as possible. Knowing our carbon footprint gives us room for improvement when developing future products.

The carbon footprint of producing and packaging the printer is 105 kg CO^2 eq.*



*A carbon dioxide equivalent or CO^2 equivalent, abbreviated as CO^2-eq is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

The printer's carbon footprint is calculated in a cradle-to-gate scope, i.e. from the extraction/sourcing of raw materials, their processing, and production of individual printer parts, shipping to Prusa Research, production of the actual parts in-house, to the final assembly of the printer parts and packaging.

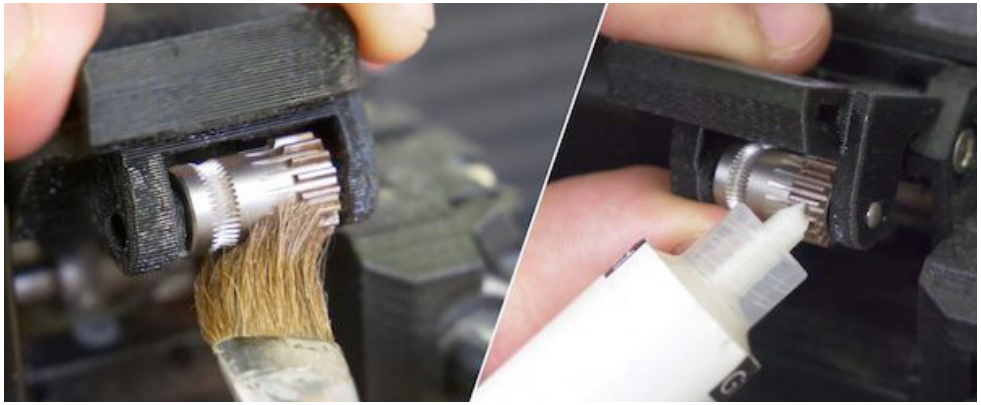
The carbon footprint calculation is based on the Life Cycle Assessment. Prepared by LCA expert Ing.Marie Tichá / MT KONZULT. The methodology of the work was based on the standards ČSN EN ISO 14040/14044, using the software SimaPro 9.3.0.3. and the database Ecoinvent 3.

The calculation was independently verified by Envitrail, a TÜV NORD CERT GmbH-certified company.

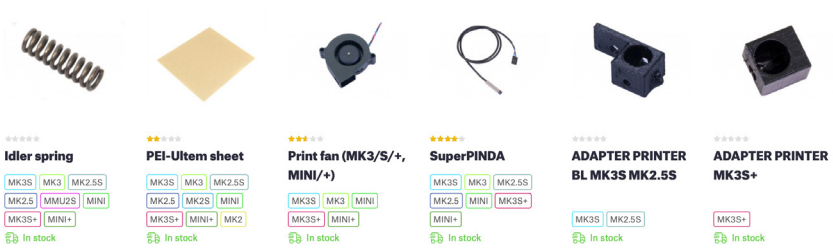
Maintenance, repairability and spare parts

We want your printer to last as long as possible.

We recommend regular maintenance of your printer.
Inspection and maintenance of printer components should be carried out every few hundred printing hours. Instructions can be found here.

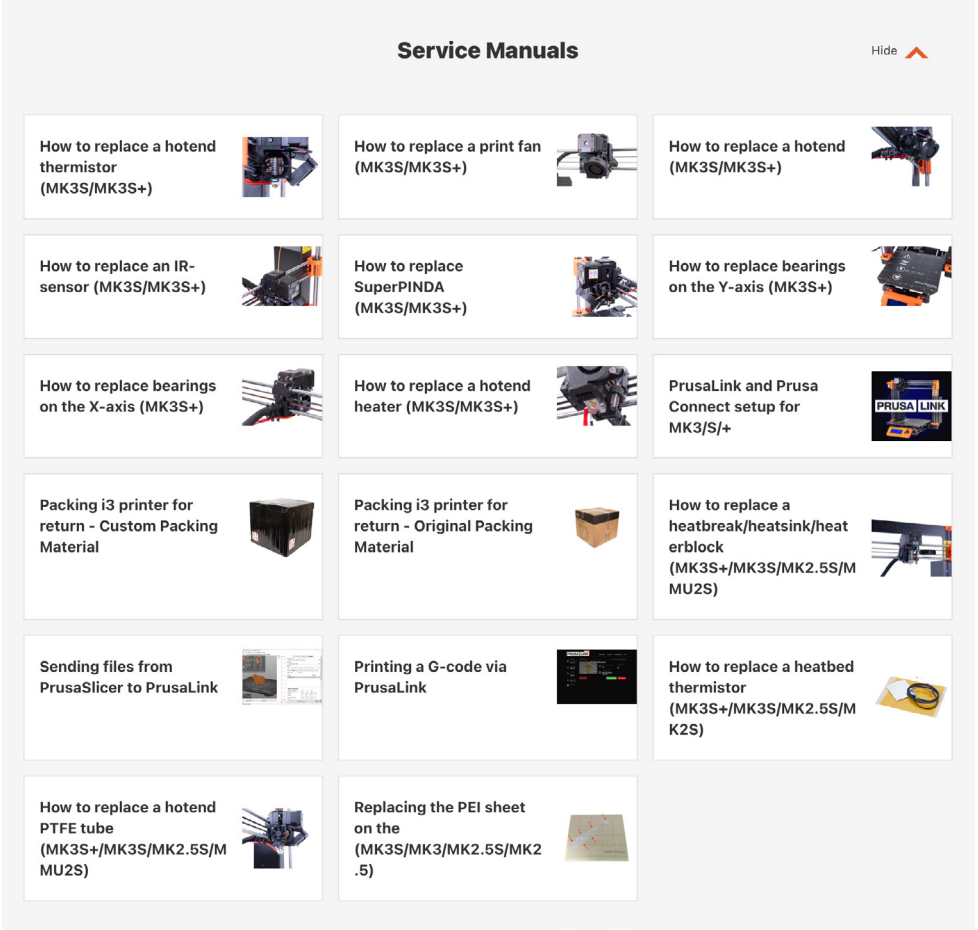


We make sure that our printers are easy to repair.
A wide range of spare parts can be found here.



Our printers are also **open source** and you can **download all the printed parts for free**.

In the event that a part of your printer stops working and is no longer under warranty, we've put together **easy-to-follow repair guides**. Also, you can always contact our 24/7 technical support.



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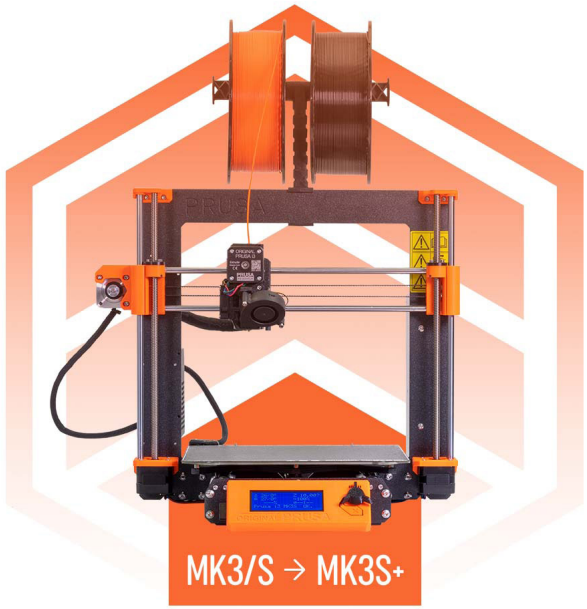
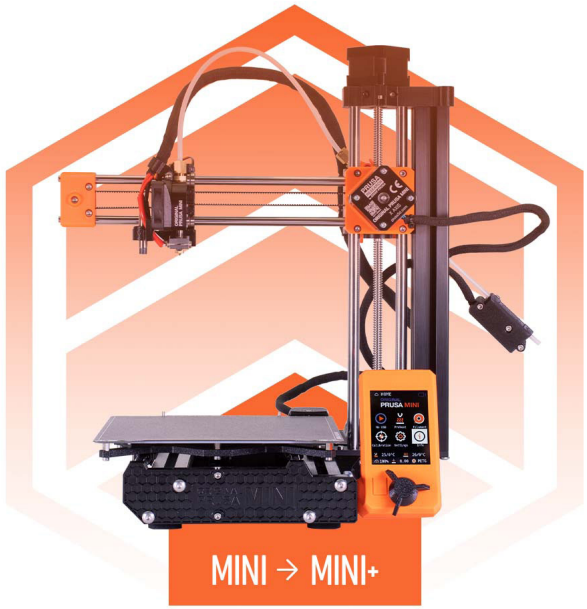
Upgrades

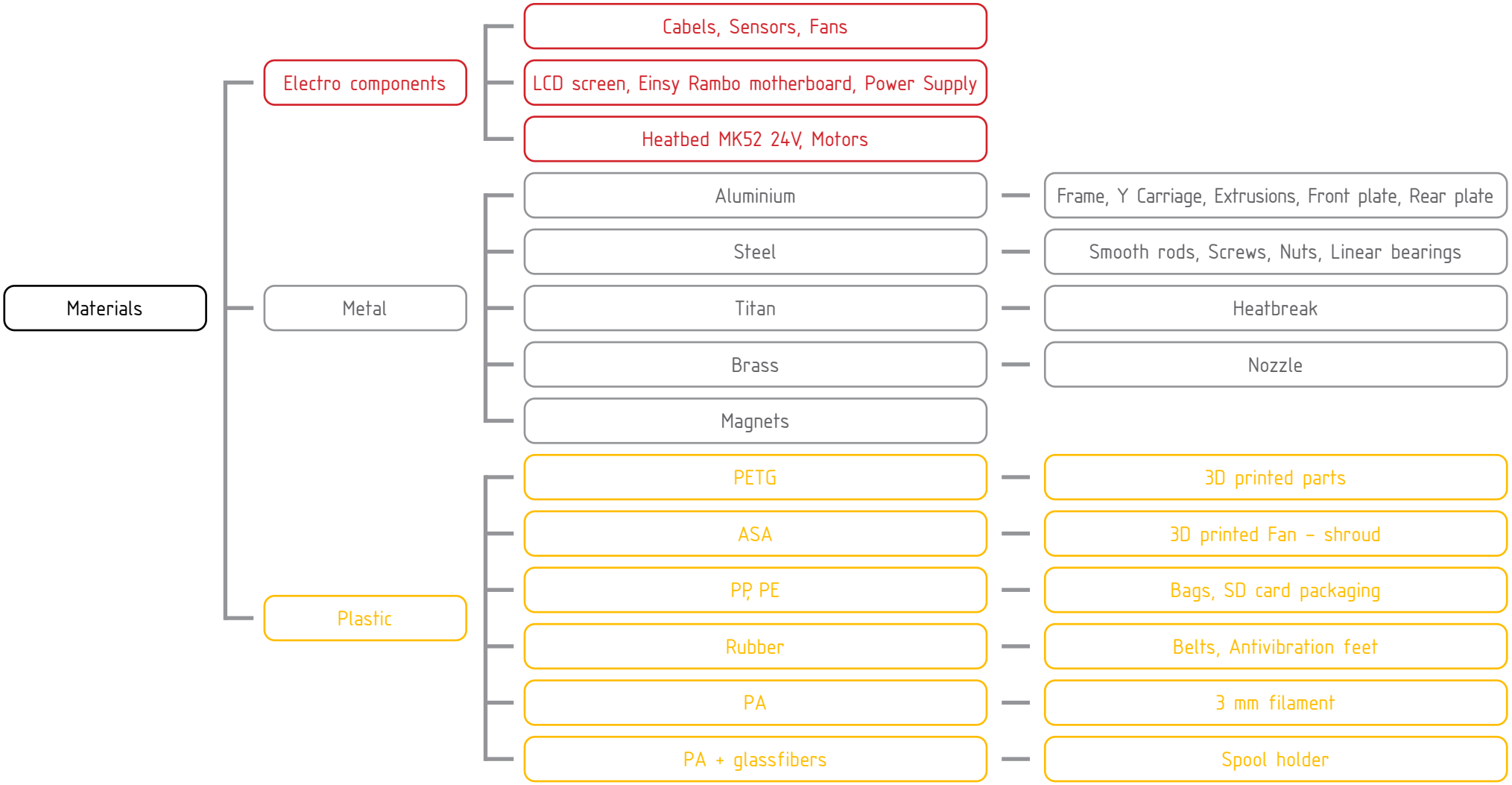
Older models of our printers retain their value longer thanks to the ability to upgrade to a newer model.





Material identification

When a component reaches the end of its lifespan and you want to **recycle it**, you have to find out what material is it made of. We have prepared an overview to help you do this.



Inspiration for further use of printer components

Even if the printer itself is no longer working, you can still make use of some of its parts! Thanks to our wonderful creative community of 3D printer users, we bring you these tips for inspiration.

Arduino Robotic Arm

This 3D printed Pybot SCARA Robotic arm has been created using common and affordable elements from the 3D printed World (NEMA 17 motors, Linear bearings, timing belts...)
The idea was to create a reliable, fast, modifiable and accurate Robotic Arm for everyone who wants to have a very cool desktop robot and/or anyone willing to learn robotics and mechanics.

link

F.R.I.D.G.E

A custom box fitted with the MK3's internals and display assembly. The user can outfit it with custom peripherals such as sensors or moving parts and run custom code on the MK3's board. From this point on, the sky's the limit! Our colleague Jan David provides examples like a toy "ATM" for kids, an RFID reader or an encrypted safe for role playing games.

link

Motorized Camera Slider MK3

A motorized camera slider can be built using the stepper motors, belts, pulleys and other hardware from the MK3S. The slider can be powered either by the Adafruit Metro 328 board, as the model authors suggest, but with a bit of programming, the MK3 Einsy board can be turned into the brain of this slider! Use it to capture smooth videos or timelapses.

link

Do you have your own idea on how to reuse parts of the printer? Upload it on Printables and share with others!

Please, make and share only things that do not pose any hazard (for example, don’t fiddle with the PSU).