



*I not only know everything,
I even know it all better.*

PanicPete tells you...

How to grease linear bearings



(Photos and text by Peter D. Habermehl, 2020/06)

Preface

So what is this about?

This document is specifically aimed at people who want to lubricate the linear bearings of their 3D printers.

There are many different opinions and methods on the Internet. I take no responsibility for the information given here, but I report to the best of my knowledge.

Roller linear bearings are not intended for unlubricated operation. Unsealed bearings should be run in an oil bath / oil spray. Sealed bearings should be filled with grease. Because dust and abrasion have a destructive effect on the bearings, encapsulated bearings are generally preferable for use in 3D printers, whereby care must be taken to ensure that the seals are undamaged.

For this reason, the precision rods should always be kept clean, as dirt can damage the seals.

To clean the shafts, use a lint-free cloth, moistened with isopropyl alcohol if necessary. After cleaning, the shaft can be slightly oiled, especially if it is not stainless steel.

What do we need?

You'll need

- Lithium grease
- Brake cleaner fluid
- An empty (tin) bowl
- A steel rod for the bearing
- Optionally but recommended some kind of spatula
- Optionally the printed grease caps ¹⁾



1) <https://www.youmagine.com/designs/grease-caps-for-8-and-10mm-linear-bearings>

Step 1: Clean the bearing

We have to remove old lubricant and all kinds of debris. Sometimes there are even metal flakes left from production, which naturally won't impact durability positively.

Old lubricant leftover may react with the new grease due to the additives mixed in. So instead of lubricating, the grease may get sticky and lose its lubricity.

Use the brake cleaner intensely and



from now on be careful not to contaminate the bearing with any dirt during the further processing.



Step 2: Applying some grease

Thoroughly fill the bearing with grease. You might want to use some kind of spatula, but since your fingers will get greasy anyway ... do how you feel.



Step 3: Put on the cap

Now put on the grease cap to close up one side of the bearing. If you don't have the cap available, just hold the bearing tightly to a CLEAN surface.



Step 4: Pressurize the grease

Use the polished rod to slowly press the grease into the bearing.



Be careful not to damage the seals during this process.

The grease will now fill out the cavities around the bearing roller Balls.

Unneeded grease will exit at the top and bottom.

You might repeat steps 2 to 4, just to make sure to get enough grease into the bearing.



Step 5: Cleaning up

Wipe off any unneeded grease. Again, make sure that the bearing does not get contaminated with any kind of dirt, especially on the inside. Carefully slide it onto the polished rod and take care not to damage the seal.



That's it!

Now enjoy the silence of the well-lubricated bearings.

If you are a Prusa owner, have some gummi bears now.

