



## Replacement for lock brace arm (BRESSER tripod and others)



3DJG

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### Summary

I have made this mechanism to replace the original. Its function is to give rigidity and stability to the tripod.



4.78 hrs



3 pcs



0.20 mm



0.40 mm



Nylon



34 g



Prusa  
MK3/S/S+

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Tags: [tripodmount](#) [tripod](#) [telescope](#) [astronomy](#) [bresser](#)

### Replacement for lock brace arm (BRESSER tripod and others)

I have made this mechanism to replace the original completely. Its function is to give rigidity to the tripod in its working position.

The parts were worn and the mechanism did not lock firmly. Finally one of the arm supports broke, rendering it unusable.



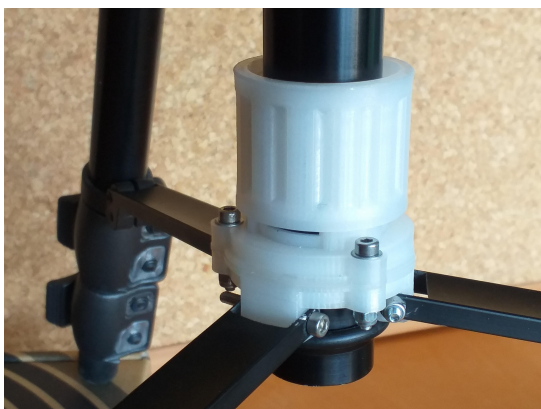
The design is conceptually identical to the original, with the same functions. The broken piece is divided into two parts to improve its printing, without supports and to avoid deformations as much as possible. It is designed to be printed with PA (Nylon), since it needs to have good structural and wear resistance qualities.



Identical original mechanism (ETX70 AT)

Designed mechanism

For these pieces I used a Taulman3D 645 Nylon 1lb filament – Natural. You will find the printing parameters that have worked well for me in the 3mf files, but you already know that to work with these technical materials, your own experience is very important.



The original part replaced is from the tripod of a discontinued BRESSER 20-60x90 spot telescope, but the same part is still used in other current BRESSER spot telescopes and tripods, for example the BRESSER TR-688V video tripod or BRESSER TR-682AN Travel Tripod . It is also used in small

beginner telescopes: BRESSER NightExplorer 80/400 Telescope.



Current tripod bresser with the same mechanism

This mechanism can also be found in former MEADE astronomical telescopes, for example, the ETX70 AT. (MEADE and BRESSER established commercial collaboration)

Finally, I think it can be used for other tripods or be easily adaptable, as long as the central bar has a diameter of 27 mm (1-1/16"). In some cases it may be necessary to modify only the lower\_part.



Amazon basic tripod is identical (for example)

The mechanism is drawn with CATIA V5. I add the STEP files in case you need to make any modifications or adaptations to another tripod.

### **Other necessary materials for assembly**

3x Screw M3x18 DIN912 (ISO4762)

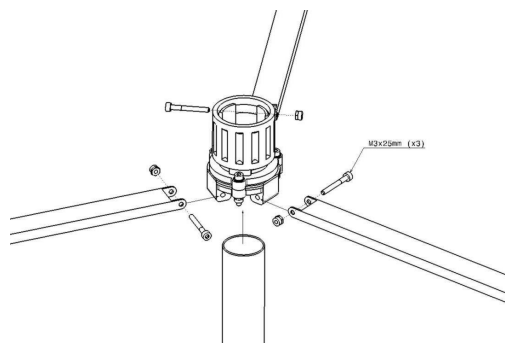
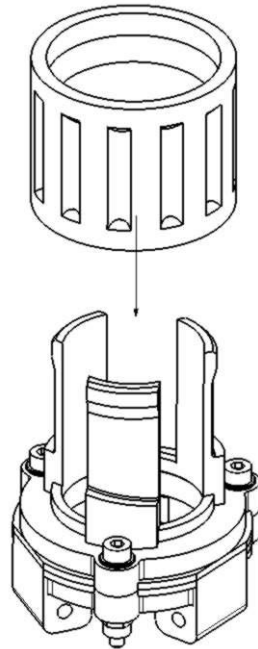
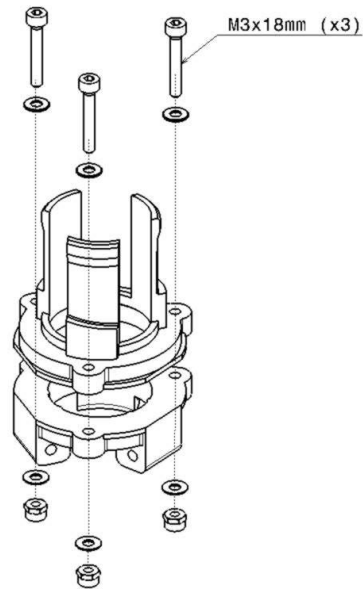
3x Screw M3x25 DIN912 (ISO4762)

6x Washer 3x7 DIN125 (ISO7089)

6x Nut M3 DIN985 (ISO10511) prevailing

torque

### **Assembly**



I do not know if this locking mechanism is patented, therefore the license I have chosen does not allow commercial use.

# Model files



**tripod\_lock.stl**

☐ No print



**upper\_part.3mf**



**lower\_part.3mf**



**brake\_wheel.3mf**



**upper\_part.stl**



**lower\_part.stl**



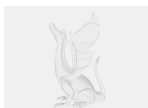
**brake\_wheel.stl**



**upper\_part.stp**



**lower\_part.stp**



**brake\_wheel.stp**

# Print files



## upper\_part\_02mm\_nylon\_mk3s\_1h25m.gcode

🌀 Nylon 📏 0.40 mm 📐 0.20 mm ⌚ 1.41 hrs ⚖️ 10 g 🖨️ Prusa MK3/S/S+



## lower\_part\_02mm\_nylon\_mk3s\_1h11m.gcode

🌀 Nylon 📏 0.40 mm 📐 0.20 mm ⌚ 1.18 hrs ⚖️ 10 g 🖨️ Prusa MK3/S/S+



## brake\_wheel\_02mm\_nylon\_mk3s\_2h12m.gcode

🌀 Nylon 📏 0.40 mm 📐 0.20 mm ⌚ 2.19 hrs ⚖️ 14 g 🖨️ Prusa MK3/S/S+

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