



## Creality CR-10 Smart Fulcrum Printhead

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### Summary

Complete printhead for the (in)famous CR-10 Smart with dual part-fan, MicroSwiss full-metal hotend and Bondtech LGX-Lite

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#### Creality CR-10 Smart Fulcrum Printhead

This is a custom, complete, fully reversible replacement of the printhead, featuring a full-metal MicroSwiss hotend, a Bondtech LGX-Lite in directdrive setup, dual part fan (and fanducts), hotend fanduct.

It is aimed to:

- implement full-metal hotend and directdrive setup as CR-10 Smart deserves;
- reduce ringing by removing hotend fan and fanduct from the strain gauge assembly;
- let CR-10 Smart to easy print flexible materials;
- add left fan/fanduct for better overhangs (and overall print quality);

- mitigate bed autoleveling/probing by decoupling bowden tube from the printhead (bolted to the strain gauge sensor) and the push-pull problem of other directdrive designs that couple the extruder to the metal carriage.

IMPORTANT NOTICE: this design is for MicroSwiss + LGX Lite only and does not fit CR6 or other Creality printers.

Printing material: PLA+/PETG if not enclosed, otherwise ABS/ASA is mandatory. No supports needed.

BOM: – Work in progress --

Mounting instructions: – Work in progress --

If you want a complete ABS pre-assembled set of the printhead, it will be available for selling on discord channel.

If you like my design and you are happy with it, please consider donating a coffee to justify the time and effort in researching/designing.

Enjoy it!

## Model files



**cr10smart\_fulcrum\_main\_shroud.stl**

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**cr10smart\_fulcrum\_hotend\_fanduct.stl**

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**cr10smart\_fulcrum\_fanduct\_left.stl**

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**cr10smart\_fulcrum\_fanduct\_right.stl**

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**cr10smart\_fulcrum\_fan\_bracket\_right.stl**

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**cr10smart\_fulcrum\_fan\_bracket\_left.stl**

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**cr10smart\_fulcrum\_bowden\_bracket.stl**

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**cr10smart\_fulcrum\_bowden\_bracket\_support.stl**

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**cr10smart\_fulcrum\_cable\_relief\_top.stl**

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**cr10smart\_fulcrum\_cable\_relief\_bottom.stl**

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**cr10smart\_fulcrum\_lgx\_lite\_mount.stl**

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**cr10smart\_fulcrum\_cable\_relief\_bracket.stl**

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