



Sprinkling head for filament extrusion water cooling



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Summary

This model is a sprinkling head i use to cool down filament just as it comes out of the extrusion nozzle. I find it...

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This model is a sprinkling head i use to cool down filament just as it comes out of the extrusion nozzle. I find it helpful for some types of filaments like TPU that are very sticky when extruded. It can complete or replace another cooling bath like this one: <https://www.printables.com/model/359521-cooling-sink-for-filament-extrusion>

The head adapts on a 10mm flexible tube. I use a small controllable 24V pump to feed between 1.5 and 5 liter per minute to the head. High flow will cool the filament more efficiently but also cause a lot of pressure on it so i prefer about 2 l/min. I used those adaptors to connect the tubes: <https://www.printables.com/model/359500-20mm-thread-to-10mm-tube-adaptor>.

In my setup the head is connected to an arm using an M6 bolt with handles for easy manipulation: <https://www.printables.com/model/359479-handles-for-m3-to-m6-bolts-and-screwsand>

The arm adapts on a 10mm metal bar (lab stand) and is fixed in place by two more M6 screws.

The two "experimental" files contain heads with smaller and larger outputs.

Category: Tools

Model files



water_jet_head.stl



branch_15cm.stl



water_jet_head_experimental_2.stl



water_jet_head_experimental_1.stl



branch_12cm.stl

[Find source .stl files on Thingiverse.com](#)

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