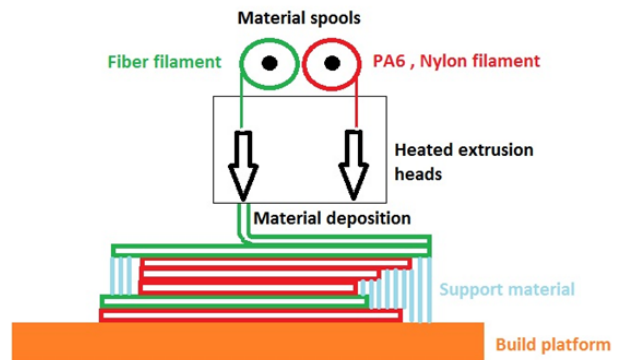
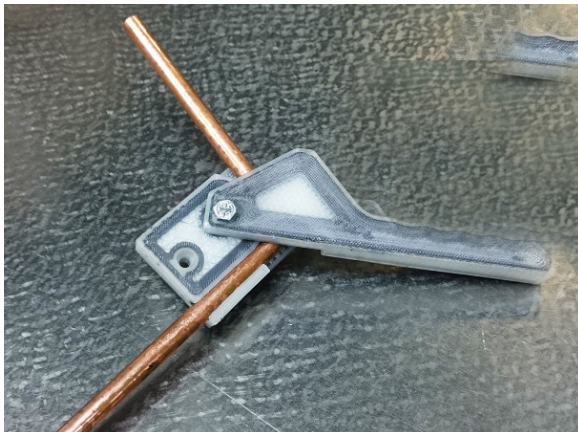


# Fused Filament Fabrication (FFF) and Continuous Filament Fabrication (CFF)

3-dimensional parts are built in a layer building process. The machine has two nozzles; one is used for polyamide (nylon) deposition in a Fused Filament Fabrication (FFF) process and the other for the selected fibre in a Composite Filament Fabrication (CFF) process. It is a true multi-material machine using nylon (tough engineering plastic) and Carbon fibre (highest strength-to-weight ratio), Kevlar® (highest abrasion resistance) or Fibreglass (highest strength-to-cost ratio). No post-curing is needed.



Build volume (X, Y, Z) mm: 320×132×160

Build speed, cm<sup>3</sup>/h: 5

Layer thickness, μm: 100

Print resolution, μm: 100 (FFF)

Materials: PA6, Can be combined with Carbon, Glass and Aramid fibres.

## Advantages

It is a multi-material machine for direct part production using nylon and one of three possible continuous reinforcing fibres. By adding fibre reinforcement to the part, the strength will be increased significantly with very low weight gain, when compared to parts made in pure plastic. The part is ready for use as no post-curing is needed. There are possibilities of adding inserts like metallic treads or electronic features inside the produced parts for improved functionality.

## Challenges

There are limitations on the placement of the fibre reinforcement since the area of the layer where the fibre will be placed needs to be of a certain size. Warping of the part will take place as with all additive manufacturing. By adding fibres this drawback can be reduced.

## Contact

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