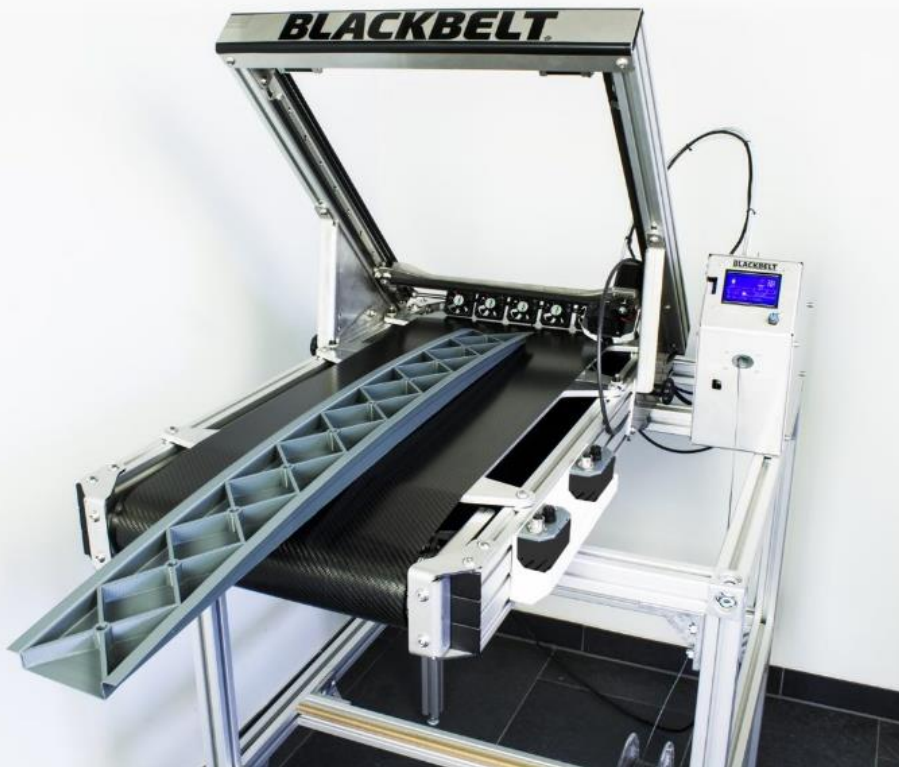


BLACKBELT



Technical Details

max. Print width:
340 mm

max. Print height:
300 mm

max. Bed temperature:
140 °C

max. Print temperature:
300 °C

max. Travel speed:
150 mm/s

Layer height:
0.05 - 0.8 mm

Package includes:

- 2 spools of high-quality filament
- Individual printhead

The **BLACKBELT 3D printer** is a new type of 3D printer using fused filament fabrication in combination with a unique belt technology. Printing on a belt (patented) provides new possibilities, like long prints, printing horizontal overhangs without support and producing series production of same or individual parts.

Why limit yourself?

The BLACKBELT 3D Printer is a new type production technology for a variety of industrial applications. It is designed for outstanding printing projects that require big scale or series builds. **BLACKBELT 3D printer** has proven to be a valuable addition to a variety of production or prototyping processes.



Long Prints

Length is no longer a limit. Print long profiles in one go.



Series Production

Print individual parts hundreds of times or a hundred parts once.



No Support

Printing at an angle lets you achieve overhangs not possible before without support structures.



official material partner:



BLACKBELT

Typical Applications

Plastic profile extrusion

Profile printing in full length, applicable for prototyping extrusion profiles.



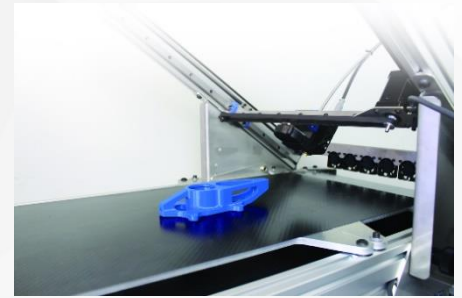
Series production

Printing series of same or individual parts, true mass customization is within reach.



Support free overhangs

New design guidelines allow printing with less support material. The result is less time on printing and finishing.



Main features

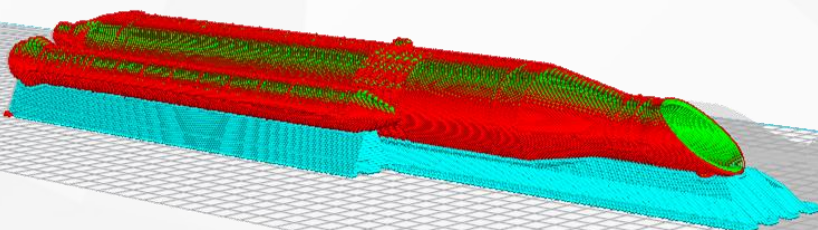
The BLACKBELT 3D Printer is a new type production technology for a variety of industrial applications. It is designed for outstanding printing projects that require bid scale or series builds.

This new production technology also comes with certain requirements and new possibilities.

- A modular set up allows easy customization of the machine. Print heads in different sizes can be challenging within seconds.
- Dedicated slicer software, BLACKBELT Cura comes with the ability to do manual or automatic generated break-away support material
- Big spools are recommended and available at colorFabb, in stock or on request. Need help defining the right material for your application feel free to contact us.

Requirements

- We can only print with certain thermoplastic plastics. Data sheets of the supported materials can be found on our website: <https://blackbelt-3d.com/material-data>
- The 3D geometry that needs to be printed must match our design guidelines. Please contact Team BLACKBELT to evaluate your 3D files on printability. The design guidelines are:
 - Every geometry must start on the conveyor belt.
 - From there the geometry can build up along the belt and upwards onto already printed layers.
 - If the geometry does not allow this, we need to add support material.
 - The maximum dimensions are 340 mm in width and 300 mm in height and a unique **endless Z length**.



BLACKBELT

Portfolio 2020



Desktop Version

BlackBelt 3D printer platform with controller and spool holder.



Stand-alone version

BlackBelt 3D printer platform with controller and support frame.



Roller table version

BlackBelt 3D printer platform with controller, support frame and roller table.

All version have the option to choose for a standard **Bowden** or **varioDrive** option.

Comes by default with print heads and 2 spools of nGen copolyester / varioShore.

Bowden vs varioDrive

In the FDM 3 D print market there is a wide range of filaments to choose, from which all have their own applications and advantages. We separate them into two big groups: Flexibles (< 95 A) and Rigids (> 95 A). For the Blackbelt 3D printer platform two print systems are developed, dedicated to print optimal for one of them.

The Bowden setup works well with all the recommended rigid materials. For this configuration we offer brass and hardened steel nozzle printheads. Hardened steel is applied for fiber filled materials or materials that are very abrasive due to added particles as steel, bronze, ceramics etc.

The varioDrive setup is developed for flexible materials and in combination with the varioShore material developed with ColorFabb a wide range of flexibilities can be printed. It also performs well with Nylon carbon filled materials

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Technical Specification

Technical Details

Print volume (max)
340 x 300 x ∞ mm

Travel speed (max)
150 mm/s

Accuracy
+/- 0.4 mm

Layer height
0.05 - 0.6 mm

Filament size
1.75 mm

Software
BLACKBELT Cura

Power requirements
120 - 240 V AC

Power supply
600 w 24 v

Dimensions

Printer size
59 x 105 x 66 cm

Shipping size
80 x 120 x 50 cm

Printer weight
45 kg

Printer packaged
88 kg

Package
Wooden crate on pallet

Supported Materials

nGen copolyester
Economy PETG
Economy PLA
NinjaTek Cheetah

colorFabb varioShore
NinjaTek Flex
colorFabb PA-CF

Miscellaneous

Filaments included
2 spools filament

Available print heads Bowden
0.25, 0.4, 0.6, 0.8, 1.0 mm

Available print heads varioDrive
0.4, 0.6, 0.9, 1.2 mm

Warranty
Guarantee 2 years, excluding wear parts (print head & belt)

Country of origin
The Netherlands

HS Tariff code
84.43.39.10

Maintenance
Minimal required. Maintenance contracts are available.

Support
support@blackbelt-3d.com

Available addons

Run-out Sensor:

Ideal for long prints that consume more than one spool.

BlackBelt Server:

stand-alone network printing with proprietary Queue.

