



## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### WOOD FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	210	°C
Bed Temperature	Off	°C
Print Speed	50	mm/s
Extrusion Multiplier	105	%
Retraction Distance	5	mm
Retraction Speed	50	mm/s
Bed Adhesive	BuildTak	
Fan Speed	75	%

#### Results





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### ULTRADIAMOND FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	220	°C
Bed Temperature	Off	°C
Print Speed	50	mm/s
Extrusion Multiplier	100	%
Retraction Distance	5	mm
Retraction Speed	50	mm/s
Bed Adhesive	BuildTak	
Fan Speed	75	%

#### Results





## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### PLA GLITTER FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	210	°C
Bed Temperature	Off	°C
Print Speed	50	mm/s
Extrusion Multiplier	100	%
Retraction Distance	3	mm
Retraction Speed	30	mm/s
Bed Adhesive	BuildTak	
Fan Speed	100	%

#### Results





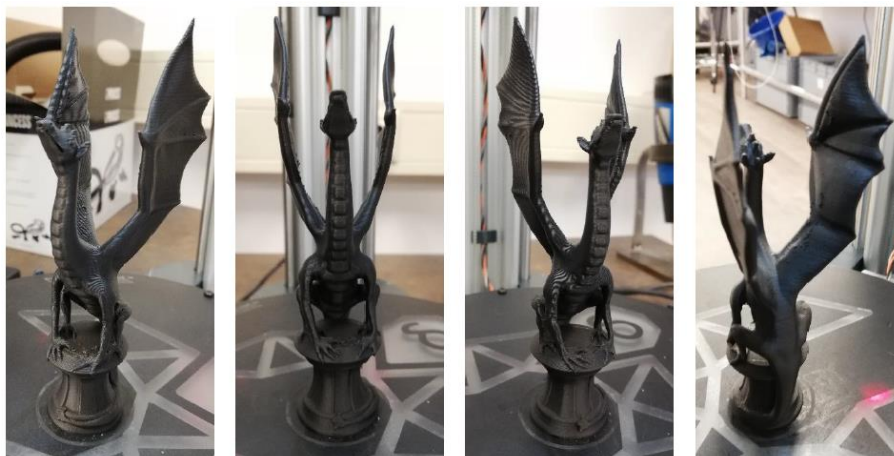
## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### PLA MATT FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	210	°C
Bed Temperature	Off	°C
Print Speed	50	mm/s
Extrusion Multiplier	105	%
Retraction Distance	3,5	mm
Retraction Speed	30	mm/s
Bed Adhesive	BuildTak	
Fan Speed	100	%

#### Results





## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### SATIN FILAMENT

#### Settings

Settings	Values
Enclosure	No
Nozzle Size	0,35 mm
Extrusion Width	0,36 mm
Layer Height	0,2 mm
Nozzle Temperature	220 °C
Bed Temperature	Off °C
Print Speed	50 mm/s
Extrusion Multiplier	100 %
Retraction Distance	3 mm
Retraction Speed	30 mm/s
Bed Adhesive	BuildTak
Fan Speed	75 %

#### Results





## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### PP FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	230	°C
Bed Temperature	Off	°C
Print Speed	30	mm/s
Extrusion Multiplier	100	%
Retraction Distance	3,5	mm
Retraction Speed	30	mm/s
Coasting Volume	2	mm
Bed Adhesive	Glass + PP Aprintapro glue	
Fan Speed	75	%

#### Results





### Notes

PP prints with medium difficulty due to its flexibility in combination with the Bowden tube, but the other materials are very easy to print.

- Medium Printing difficulty
- Flexible material, increasing Retraction settings could cause the material to get stuck
- 10 Brim outlines required for good adhesion



## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### PET-G FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	235	°C
Bed Temperature	Off	°C
Print Speed	45	mm/s
Extrusion Multiplier	95	%
Retraction Distance	5	mm
Retraction Speed	30	mm/s
Bed Adhesive	BuildTak	
Fan Speed	30	%

#### Results







## TEST VELLEMAN FILAMENTS on VERTEX DELTA nov 2019

### TPU FILAMENT

#### Settings

Settings	Values	
Enclosure	No	
Nozzle Size	0,35	mm
Extrusion Width	0,36	mm
Layer Height	0,2	mm
Nozzle Temperature	240	°C
Bed Temperature	Off	°C
Print Speed	15	mm/s
Extrusion Multiplier	105	%
Retraction Distance	0	mm
Print acceleration	1500	mm/s <sup>2</sup>
Print jerk	10	mm/s
Bed Adhesive	BuildTak + Hairspray	
Fan Speed	70	%

#### Results





### Notes

TPU is printable on the Vertex Delta K8800, but it proves to be very difficult to print.

Thanks to the Flexibility of TPU (especially 1,75mm) in combination with a Bowden tube, easily causes the TPU to get stuck at the Stepper motors. That's why it's important that every type of stress that builds up at the filament feeder, needs to be as less as possible.

The TPU filament requires drying before printing.

- Difficult to print
- Flexible. print with the least amount of stress that'll build up in the filament at the feeder
  - High printing Temp
  - Low Acceleration/Jerk
  - Low Extrusion multiplier (as possible)
  - Continuously using the same printing speed/flow
  - Retraction disabled
- Stringing issue
  - As it is required to print without retraction, to make the TPU printable, Stringing could occur
  - stringing is easily removed
- Advised to dry filament before printing
  - Suggested to dry at 60-70°C for ±24h
  - Suggested to Dry after 1 day of printing
- Under extruding TPU could cause the print to Curl