

Demonstration 01 – Bench & showcase

Printed by: Savonia University of Applied Sciences

Design: Niilo Herlevi

AM design: Sampsa Ylönen & Lauri Alonen

This demonstration is a combination of bench and showcase. Parts were printed separately and attached to birch plywood to separate sitting area from the showcase.

Part was printed in horizontal orientation. Geometry was optimized for large format AM.

Sulapac Flow 1.7 has 72% USDA certified biobased content with wood from industrial side streams and biodegradable biopolymers. It also meets EU and US FDA requirements for food contact materials. More information can be found from <https://www.sulapac.com/3d-printing-material/>.

The material reacts quickly to humidity and is susceptible to warping when cooling down during the printing process in typical industrial hall conditions without chamber. When printing large structures, it is important to ensure good adhesion to print bed, preferably with mechanical fastening.

Warping issues were avoided by using mechanical fastening (1) and redesigning the geometry to avoid long straight structures (2).

Link to video: [<click to open link>](#)

Print info: Panel

Material: Sulapac Flow 1.7
Dimensions: 2000 x 1000 x 50
Weight: 15 kg
Print time: 3 h 46 min
Software: Adaxis AdaOne
Extruder: CEAD robotextruder
Robot: KUKA KR-120 R2700

Nozzle size: 6 mm
 Layer height: 3 mm
 Wall thickness: 8 mm
 Print speed: 50 mm / sec

Print info: Bench

Material: Sulapac Flow 1.7
Dimensions: 2000 x 1100 x 900 mm
Weight: 85,5 kg
Print time: 10 h 20 min
Software: Sprucam Robot X
Extruder: CEAD robotextruder
Robot: KUKA KR-120 R2700

Nozzle size: 10 mm
 Layer height: 4 mm
 Wall thickness: 12 mm
 Print speed: 45 mm / sec

