

Press release

Both art and commerce: PrintStool One, design Thorsten Franck The dynamic, 3D-printed stool

Bad Münster, October 2016. Wilkhahn is the first furniture manufacturer worldwide to produce ready-to-use, 3D-printed furniture. A collaboration with designer Thorsten Franck has produced a stool collection whose shapes are ideal for production via this method with its sparing use of materials. It's the innovative technology that makes the progressive aesthetic of the PrintStool One possible in the first place. The sophisticated, three-dimensional structures of the stool's body stand out for efficient use of material. The stool is very strong due to the clever way the seat and base are connected and it can take people weighing up to 100 kg. The renewable and fully biodegradable printing material also has huge potential. The Orgatec showcase will feature prototypes of the current stage of development to try out in diverse colours and shapes.

Together with the digital revolution that's Industry 4.0, 3D printing is considered a key technology. In the office furniture industry, Wilkhahn's PrintStool One places the company at the forefront of this state-of-the-art manufacturing method that taps into totally new dimensions. 3D printing techniques allow the roles of producer and consumer to merge – customers become prosumers. Once they send their printing jobs, they control production and can become co-designers who define structures, shapes, colours and even sizes. The results are simply sent as data sets to 3D printers that produce the stools within just a few hours. In terms of despatch, the new method is also very promising. It's feasible for example that to save time, but also costs and emissions during transportation, furniture production could take place locally, or even at the place it's destined for.

Biodegradable printing material

Wilkhahn uses lignin as the basic material for the PrintStool One. This occurs as a natural polymer in plants and is responsible for turning cell walls into wood – and is therefore a solid filler. Accounting for 20 to 30 per cent of the dry matter of woody plants, along with cellulose and chitin, lignin is one of the most common organic compounds available on Earth. This natural, renewable material is available in virtually unlimited quantities. Therefore, 3D printing with lignin is a combination of groundbreaking technology and real environmental protection because the printed stool is biodegradable at the end of its useful life.

However, there's still a lot to do in order to comply with the international norms and standards that are associated with industrial production for the contract furniture business. At the moment there are no valid long-term studies on the technical characteristics of the material used, the same applies to the reliability of the processing technology. However, investments in this development project already reveal that Wilkhahn is a pioneer where this technology's concerned too and is pressing ahead with developments of the 3D printing technology together with OEMs and designers. Visitors can look forward to experiencing the current stage of development live.

Wilkhahn at Orgatec 2016: in hall 6.1, stand B88/C89

Wilkhahn



PrintStool One collection by Wilkhahn, design: Thorsten Franck: the stools vary in terms of their colour, shape and finish. All PrintStool types are made in the same way with innovative 3D-printing technology. Photo: Wilkhahn

Wilkhahn



3D printing makes it possible: PrintStool's sophisticated, three-dimensional surface structures require little material, but are strong at the same time. Design: Thorsten Franck: photo: Wilkhahn

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