

<https://www.dezeen.com/2012/10/31/improvisation-machine-for-rotational-moulding-by-annika-frye/>

## **improvisation Machine by Annika Frye**

[Emilie Chalcraft](#) | [31 October 2012](#) [3 comments](#)

**Istanbul Design Biennial 2012:** German designer [Annika Frye](#) incorporated a cordless drill in the rotational moulding machine she built for making one-off items using a process that would normally result in an identical series (+ movie).



The Improvisation Machine was designed by Frye as a way to incorporate spontaneity and unpredictability into the process of serial production. "It was difficult to 'design' something improvised," Frye told Dezeen. "Improvisation can't be repeated or planned – and therefore I can only try to design somehow the framework in which improvisation will eventually happen."



The spontaneity comes from never using the same mould twice. The resulting objects resemble ceramic, but are actually made from a plastic that hardens in half an hour.



To begin the process, Frye makes a plastic mould from a flat sheet by adapting a net based on tessellated octagons. The pattern can easily be altered and the same one is never used again.



The mould is then suspended in the frame by strips of fabric tape, filled with wet polymer plaster and sealed before the drill is switched on. The screw pressing the switch of the drill enables the user to control the speed of the rotation while the plastic cures.



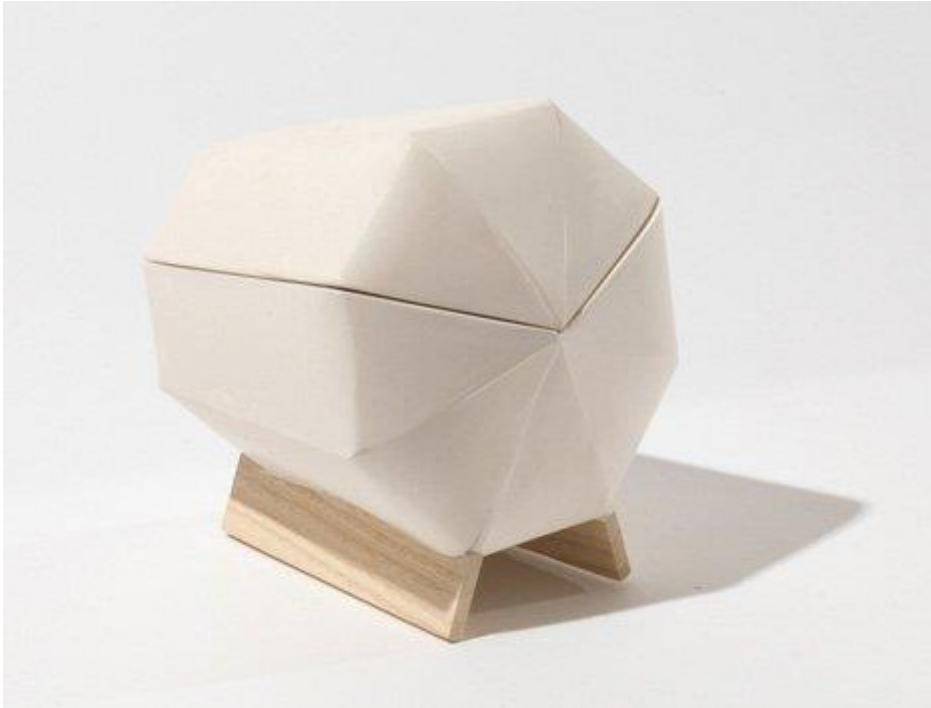
After hardening, the objects are sanded outside and varnished inside. Some are sawn open to widen the aperture of the container or create a lid.



While each of the vessels is slightly different, all of the objects are related to each other as they are based on the same octagonal grid.



The Improvisation Machine is on show at the [Istanbul Design Biennial](#) as part of the [Adhocracy](#) exhibition, which investigates the impact of open-source thinking on the design world.



"Adhocism is not only a design activity, but also a political statement," said Frye. "Since it uses everything that is immediately available, mass production loses influence. Instead of shaping things anew, the improviser uses what is already there and solves his specific problem immediately. He can directly respond to a situation."



Exhibition curator and [Domus](#) editor [Joseph Grima told Dezeen about the concept of "adhocracy" at the opening of the exhibition](#), arguing that as systems of mass production are increasingly replaced by flexible peer-to-peer networks and new technologies, we can expect a "cultural revolution" – [read the full interview with Grima](#).



Other projects from the biennial we've reported on include [an open source design for a water purifier](#) and [a 3D printing project that explores how objects created from identical digital files can be as unique as hand-made ones](#) – [see all our stories from the Istanbul Design Biennial](#). The biennial continues until 12 December 2012.



We previously featured a similar [rotational moulding machine powered by a cordless drill](#) that produced plastic piggy banks, and [Phil Cuttance has just contributed a vase using a similar process](#) to the Stepney Green Design Collection curated by Dezeen.





[See all our stories about machines »](#)

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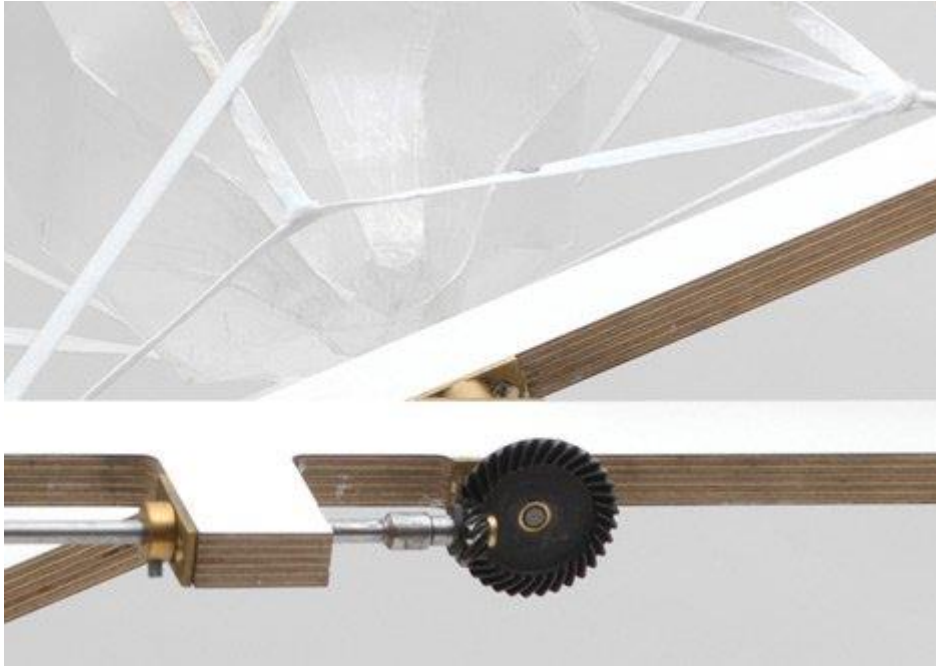
Photographs are by Annika Frye and the movie is by [Aiko Telgen](#).

Here's some more information from the designer:

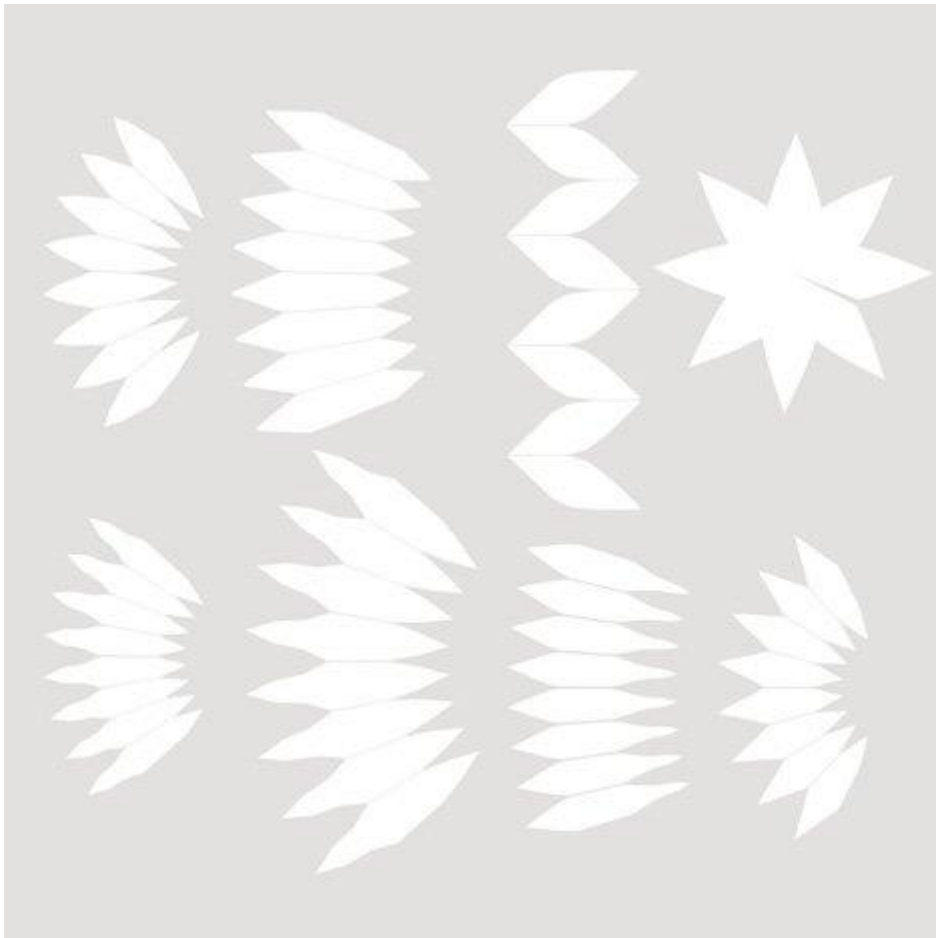
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A series of rotational moulded pieces was produced in a experimental production setup. By using a self-made rotational moulding machine I can produce variation instead of repetition.





The moulds were made from simple geometric patterns, the material is a special plaster that hardens within short time. I also added wooden parts and other materials. The hollow objects were cut in order to create a vase/dish/container.



The Machine, for me, is more than just a tool: I designed the machine itself by using basic characteristics of a piece of furniture such as brass fittings, multiplex and steel tubes.



The first series of pieces comprises different items such as vases, containers and bowls. Each object is unique. Still, all objects are related to each other as all forms are based on an octagonal grid.



The plaster hardens within 30 minutes. The objects are sanded from the outside, their inside is covered with varnish. Some objects were cut with a saw in order to create a container or a vase. In this way, the top and the bottom of the vase/container/dish can be produced within a single mould. At first glance, the material resembles ceramic, but the plaster is more lightweight. Also, wooden parts and other materials can be added. A screw enables continuously variable speed.



The first model of the machine was improvised with Fischertechnik parts. In the beginning, I wanted to make a machine that can improvise, but I figured out that the improvisation cannot be done by a machine. It actually happens when the machine is being made (in the workshop) or when I produce objects with the machine: I am the one who improvises!



The objects were produced in the gallery Kunstverein am Rosa-Luxemburg-Platz in Berlin in June during the DMY design festival. The exhibition Res publica / Res privata was curated by Susanne Prinz and Oliver Vogt. In October, the machine and the objects created in it will be shown at Adhocracy at Istanbul Design Biennial.

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