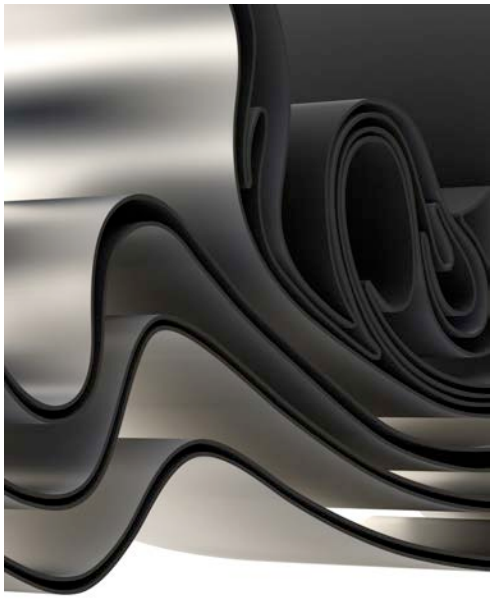
JORIS LAARMAN LAB: BITS AND CRAFTS
May 1 – June 14, 2014
Opening Reception: Thursday, May 1, 6:30-8:30 PM



New York, NY—Friedman Benda is pleased to announce *Joris Laarman Lab: Bits and Crafts*, a groundbreaking exhibition by Dutch designer Joris Laarman.

Formed around the theme of digital fabrication and generative design tools, Laarman's exhibition is testament to the seismic impact of digitalization on the design world.

The transition from analog to digital in the last decades has fundamentally changed many aspects of our lives. In the early 20th Century, modernist pioneers valued and changed notions about aesthetics and design, which were inspired by emerging industrial manufacturing methods. Now, the digital revolution has begun to define an evolution in the way physical objects are designed, manufactured, distributed, protected, and recycled. The realm of digital design tools and digital fabrication is shifting our ideas on design in all its facets—and this pushes the Lab to explore the endless new possibilities of the digital revolution.

While Joris Laarman employs cutting-edge tools to enable new shapes, fabrication and methods, his enduring signature is manifested through a combination of both technology and craftsmanship, which further establishes his personal design vocabulary. As with each of his designs to date, the works in *Joris Laarman Lab: Bits and Crafts* are a distinct convergence of technological innovation and surprising beauty.

The exhibition comprises four thematic explorations; *Maker furniture*; *Micro Structures*; *Vortex*; and *Spirographic*—each the culmination of massive research, cutting-edge fabrication, handcraft, and personal aesthetic.

Aside from creating significant experimental designs, similar to the modernists who made manuals of their designs, Laarman's lab plans to publish digital blueprints on the Internet accessible to all. Not compromising freedom of form and personalization, the blueprints are open for people to change, modify and creating themselves, thereby offering an entirely new paradigm for manufacturing and distribution. The Maker puzzle chair is the world's first crowd fabricated prototype, also available for home printing.

Maker: Born out of disagreement with the limited bounding box and poor material choice of many today's digital fabrication methods, *Maker* pieces are built from many parametric parts engineered to fit exactly like a 3 dimensional puzzle. Multiple materials (resin, solid woods, plastics, metals) and differentiated shapes (triangular, hexagonal, figurative, pixilated) respond to strength and aesthetic necessities, while the multiplicity of small elements enable greater freedom and complexity of shape. For example, the efficient use of high quality materials like solid wood in surprising organic shapes.

Vortex: Using digital algorithms, new and unexpected forms emerge that balance functionality and ornament – a theme that exists in many of Laarman's works, each behaving in some way symbiotically. The generative design tool and manufacturing method of the aluminum *Vortex Bookshelf* and *Console* allows the production of unique designs. *

Spirographic Series: Pieces manufactured using the MX3D printer (MX3D-metal), a robotic 3D printer created by Joris

Laarman Lab. With the 12 x 8-foot *Dragon bench*, small amounts of molten stainless steel are printed mid-air, enabling Laarman to draw lines in space, at times complexly intersecting. The printed shapes are based on algorithms and non- repetitive parametric modules so the generated forms are unique. For an advance preview on MX3D: www.jorislaarman.com/mx3d-metal.html*

Mircro Structures: Representing Laarman's delve into the deeper facets of 3D printing furniture, this group of work, including the *Gradient Chair*, is engineered on a cellular level. Elaborating on a long history of polyurethane use in furniture design, the *Gradient chair* is made of 3D printed thermoplastic polyurethane modulated at its structural points to be solid, and at the open parts, to be flexible and soft like foam that is engineered on a cellular level. *

About Joris Laarman
Joris Laarman was born in the Netherlands in 1979, and graduated Cum Laude from the Design Academy Eindhoven in 2003. While still in school he created the "Heatwave radiator," a design widely-lauded and incorporated into many museum collections. In 2004, Laarman together with his partner Anita Star, founded Joris Laarman Lab. The lab currently situated in Amsterdam, collaborates with craftsmen, scientists and engineers on the possibilities of emerging technologies as CNC systems, 3D printing, robotics or parametric software. His work has been exhibited internationally and can be found in many major public collections worldwide including MoMA, New York; V&A, London; Centre Pompidou, Paris. His Bone Chair and its prototype were recently added as the closing works of the 20th century collection of the Rijksmuseum, Amsterdam.

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The Laarman Studio would like to acknowledge the following people involved in the process of creating the bodies of work in *Joris Laarman Lab: Bits and Crafts*:

Vortex
Vortex animation: Mark J. Stock

Mx3d
Design: Joris Laarman
Engineering: Tim Geurtjens, Filippo Gilardi, Acotech Automation B.V., Hal
Supported by: Autodesk

Microstructures
Parametric design: Michal Piasecki
Collaboration: Ewa Jankowska and Jacek Markusiewicz

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