**The NEW Nixie Machine II and an Impressive Collection of Machine Lights**

**by Frank Buchwald at the M.A.D.Gallery**

To celebrate the 5th anniversary of the M.A.D.Gallery, German sculptor Frank Buchwald introduces the new Nixie Machine II clock created in collaboration with Dalibor Farny, a passionate engineer. The M.A.D.Gallery is thrilled to offer this evolution of the original Nixie Machine in a collection of 12 unique pieces available exclusively from the M.A.D.Galleries in Geneva, Dubai, and Taipei.

Frank Buchwald’s impressively detailed works were part of the initial line-up of artists showcased at the inauguration of the first M.A.D.Gallery in Geneva. Buchwald’s intrepid Machine Lights followed by the first Nixie Machine inspired the admiration of MB&F founder Maximilian Büsser from the start, landing Buchwald’s work a permanent exhibit at the M.A.D.Galleries.

**Nixie Machine II**

Introduced in the 1950s, Nixie tubes – also known as cold cathode displays – became a popular way of presenting numerals using glow discharge. The name Nixie is thought to derive from the Burroughs Corporation’s “NIX I,” which in turn was believed to have stood for “Numeric Indicator eXperimental No.1.”

Each glass tube is filled with a low-pressure neon-based gas and includes a wire-mesh anode and layered cathodes shaped like numerals; a separate cathode is needed for every numeral 0 to 9. A distinctive orange glow discharge surrounds each cathode when power is applied. Assembled in multi-digit arrays by connecting electronic circuitry to several tubes, Nixie tubes were often used for computers, clocks, and frequency counters, though these were eventually supplanted by more practicable, less costly – though arguably less charming – displays such as light-emitting diodes (LEDs).

The new Nixie Machine II represents the next evolutionary stage of the original Nixie Machine. Each and every detail has been manually handcrafted, from the design, construction, and detailed finishes of the clock to the six Nixie tubes produced by Dalibor Farny.

Nixie Machine II is a collaborative project between two Nixie tube fanatics, Frank Buchwald and Dalibor Farny, and it came to life thanks to a chance encounter. As luck would have it, Farny stumbled upon Buchwald during an exhibition of technical antiques in Berlin and instantly recognized him as the creator of the legendary Nixie Machine. One might say it was destiny that brought these two Nixie tube enthusiasts together to develop the new Nixie Machine II.

The architecture of Buchwald’s industrial creation fuses his distinctive design principles with his vivid imagination. The steel-and-brass base of the clock, measuring 1.2 meters, displays insect-like limbs supporting the central body while steel brackets enclose the Nixie tubes like arms gripping time; flexible, tentacle-like tubing “nourishing” the Nixie tubes with energy and information is at the core of the composition. An orange glow surrounding the visible inner structure of the Nixie tubes provides the piece with both an industrial look and a bio-animated character.

Farny manufactures Nixie Machine II’s modern, vacuum Nixie tubes in his workshop in the Czech Republic. Each tube features a steampunk-like inner structure awash with honeycomb grids and tungsten wires smelted with glass lighting up filigree digits encapsulated in blown glass cylinders. Driven by his passion for the subject, Farny spent years researching and experimenting to successfully bring the famous vacuum Nixie tube Z568M back to life.

The electronic heart of Nixie Machine II takes a completely innovative approach. Based on a powerful, Wi-Fi-enabled electronics dock, the clock is connected to the internet to automatically keep accurate time, removing the need to set it manually. All settings and special features – including scroll effects, day/night modes, digit light dimming, time zone settings and more – can be intuitively programmed online. The clock can also operate offline, regulated by a knob on the back.

This collaborative invention will inspire both awe and conversation with anyone viewing the animated time-telling machine.

**Machine Lights**

Buchwald's Machine Lights are majestic hand-crafted lamps featuring an almost anatomical form thanks to their alien-like, four-footed bases and quasi-corporeal symmetry.

Describing his creations, Buchwald says, *“The attentive observer will not fail to notice that the Machine Lights live from a source other than the hand of man. Although I have worked for over ten years on them, I don’t really regard them as my own work: they are beings in their own nature.”*

It took Buchwald many years before he felt that the designs of his sculptural lights were moving in the right direction and an even longer time until he could say he was completely satisfied. *“The individual lamp models were not designed spontaneously in a moment of inspiration,”* he elaborates. *“It was rather a long groping for a hard-to-comprehend, meaningful form.”*

Each lamp is made using more than 200 individual components in an intricate combination where burnished blackened steel throws the rich patina of brass and the warm, yellow glow of visible light filaments into sharp relief. Every brass component is meticulously hand-polished, while the steel is repeatedly hand-burnished with chemicals to achieve an impressive silky black oxidation. The creation is often completed with the addition of a hand-blown glass globe.

After dedicating more than a decade to the collection of his Machine Light designs Buchwald admits, *“I have the feeling that the Machine Lights now portray what I imagine them to,* *I think that they have now reached the right level of completeness and perfection.”*

**Development process**

The purpose of Buchwald’s work is to endure through generations. He does not follow a specific design formula, which provides him with the freedom to create objects that eschew modern trends or market requirements, nor does he feed from the positive reactions of customers and art connoisseurs.

Buchwald’s philosophy and inspiration result from past and everyday experiences. “*Pencil, glue and cardboard...railway stations, steam engines...childhood memories. Creativity and enthusiasm form the golden thread that has weaved through my life. They’re my fuel.”* he explains.

The development process begins with a simple, quick sketch that usually forms the foundation of a new project, followed by several iterations of drawings. Typically, the rough drafts are executed with pencils and marker pens, allowing Buchwald to find the essence of a new object by effortlessly making changes.

“*My work has to be open, capable of being quickly modified: any detail can change with one stroke at any given time. It's an evolutionary process in motion.”* Buchwald explains, “*I follow ideas and impressions. I am passionate about sketching and drawing because they allow me to bring my visions to life. If I don’t manage to make something of the ideas in my mind, then I feel unsatisfied.”*

Once the sketch is complete, an engineering draft follows, but the artistic process continues in the workshop. The nature of the material or a spontaneous idea can still transform the original concept, making for an excitingly dynamic process.

For Buchwald, metal is the perfect material with which to creatively work, and he applies a variety of techniques: melting in blastfurnaces and shaping by massive machines feels like an "act of creation" for him, bringing energy and power into the metal.

**Background – Frank Buchwald**

Berlin-based Frank Buchwald was born in Hannover, Germany in 1956. After studying design at the University of Arts in Berlin, he worked as a freelance artist and science-fiction illustrator until 1993, when he turned his attention to designing and manufacturing metallic furniture.

He created all manner of metal furniture, gradually turning his focus and efforts toward making lamps, however it took Buchwald many years before he felt that the designs of his sculptural lights were satisfactory.

Buchwald's studio, where he meticulously creates everlasting objects, is located in Berlin inside an old-time industrial building outfitted with bricks, large windows, dark staircases, antique electric switches, and visible scars from World War II. The entrance is stuffed with steel bars and metal plates. In the heart of his studio, the walls are lined with comprehensive sketches and work tables covered with lathes, welders, and hand tools – all the skilled artist needs to imprint his characteristic look onto raw materials.

Büsser has been fortunate to witness Buchwald at work. *“It was a fascinating experience,”* says MB&F’s founder. *“Frank is incredible, as is his workshop – it is full of metal bars and blocks of metal. He designs, machines, assembles, and finishes everything himself. It is really a way of life for him.”*

*“Frank Buchwald’s Machine Lights typify the mechanico-artistic excellence that forms the cornerstone of the* M.A.D.Gallery*,”* Büsser adds, *“Frank creates machines that give light, where his craft transcends a practical purpose and his creations well and truly assume the status of artworks.”*

Buchwald’s soul embodies each work: his dedication is apparent in the artistic fabrications expressed by every minute detail of their unique creativity.

**Background – Dalibor Farny**

A deep passion for Nixie tubes pushed Farny through years of research and experimentation to build a modern Nixie tube based on the notable Z568M. His fervour and technical background in engineering enabled him to complete his own RIZ658M after two short years filled with a multitude of successes and failures.

Farny handcrafts his Nixie tubes in a studio that looks like a cross between a laboratory and workshop located inside an old castle near Topolna in the Czech Republic. The rooms are loaded with numerous technical devices, including gas torches, neon gas bottles, spot welding machines, vacuum pumps, leak detectors, and many more instruments important for the precise and perfect production of vacuum Nixie tubes.