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Lower carbon emissions, greater productivity: 3D construction printing is revolutionising the future of construction.

Umdasch Group Ventures will be presenting the innovative method of 3D construction printing at bauma 2022

The construction industry is facing major challenges. Time pressure, lower budgets, a shortage of skilled workers and the scarcity of resources are the challenges that increase the complexity of construction projects – not to mention the need for greater productivity and environmental protection. Umdasch Group Ventures is developing what the construction industry of the future needs – innovative construction methods, state-of-the-art technologies and future-oriented solutions that enable the digitalisation of the entire construction life cycle. The new 3D construction printing system from Umdasch Group Ventures helps to produce high-quality concrete elements more efficiently and using less resources.

3D printing is a familiar technology within the field of consumer goods. Virtually anything – for example, toys, tableware and medical supplies – can be printed in 3D using diverse materials. So why not print sophisticated concrete components for the construction of bridges, tunnels and other types of building? The new 3D construction printer from Umdasch Group Ventures does just that by printing complex concrete elements straight from digital construction plans. The unique feature of this solution is that it enables complex elements to be printed quickly, directly on the construction site – without compromising on quality. Furthermore, the material- and design-optimised concrete elements are printed using a honeycomb structure. The honeycomb-shaped concrete part dries quicker, which means it can be used quicker. Finally, the 3D construction printer enables local materials to be used in the mix, which is produced exactly when needed. All of this saves time, costs, materials and other valuable resources – not to mention significant amounts of carbon dioxide.

3D concrete printing: Umdasch Group Ventures is developing innovative future technologies

Umdasch Group Ventures is the Future & Innovation Hub of the Umdasch Group. This hub develops innovative solutions from their conception to market readiness. Product development is led by the principles of using resources sparingly, ensuring profitability and delivering environmentally friendly solutions. The ultimate objective is to make construction processes and the construction site as safe, successful and efficient as possible *“The digitalisation of construction is the industry’s answer for the future. Our aim is for our*

innovations to open up the full potential of modularisation and automation on construction sites, as well as digitalisation and data management within the construction sector. To this end, development focuses on the entire construction life cycle,” says COO Johann Peneder, summarising Umdasch Group Ventures’ future-centric approach to development. The revolutionary 3D construction printing will provide testimony to this innovative focus at bauma 2022, which will take place between 24 and 30.10.2022 in Munich. The ground-breaking technology of the digital 3D construction printing system is a prime example of how Umdasch Group Ventures is leading the way into the digitalised construction industry of the future.

Umdasch Group Ventures presents its innovative solutions at bauma 2022

The new 3D construction printer will be showing what it’s capable of on the Umdasch Group Ventures exhibition stand at bauma 2022 in Munich. There will also be a comprehensive programme of events on all trade fair days where industry experts will be giving exciting presentations about construction, digitalisation and sustainability. Alongside its innovative 3D construction printing, Umdasch Group Ventures will also be presenting its new **digital construction progress recognition software** at bauma. The AI-based system with a 3D computer vision system detects physical objects and people on the construction site and uses 3D technology to deliver valuable information about their location. The companies and holdings of Umdasch Group Ventures will also have an exhibition stand at bauma 2022, presenting their latest solutions for modern construction processes:

- **NeoTwin** will be presenting its **real-estate platform** designed to enable constructors, investors and real estate managers to control projects and manage their assets.
- **NEULANDT** will be presenting its portable precast plant N3P that enables efficient, sustainable and cost-effective construction anywhere in the world, and thereby the creation of affordable living spaces.
- **CONTACT**, in association with b.i.m.m, will be presenting the new features of the construction site software Sitelife, designed to enable construction companies, construction managers, foremen and project developers to manage the entire construction process and all subcontractors digitally – from the digging of the foundations to the final handover.
- **Concrefy** will be presenting its Factory Production Control, an innovative decision support tool that monitors the performance of freshly poured concrete so that both the concrete and its production is more efficient, cost-effective and sustainable.
- Also part of the multinational Umdasch Group and specialised in formwork technology, **Doka** will be showcasing its range of services on the adjacent stand.

Images

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Images of 3D digital construction printing:



On-site 3D construction printing

The 3D construction printer from Umdasch Group Ventures can be used both in prefabrication and directly on the construction site, thanks to its light and compact structure and innovative technologies.

Photo: bauma-ugv-01.png

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About the Umdasch Group

The Umdasch Group, founded over 150 years ago in Austria, is a family-managed multinational group of companies. The innovative strength and expertise of the Umdasch Group, consisting of Doka (a global market leader in formwork technology), Umdasch. The Store Makers, (specialists in shopfitting and retail) and Umdasch Group Ventures (the innovation hub for the construction and retail industries), is represented globally in more than 170 locations on 5 continents, and employs almost 8,300 people.

www.umdaschgroup.com

About Umdasch Group Ventures

Umdasch Group Ventures is the technology driver within the Umdasch Group, developing new, disruptive solutions and business models. The company invests in mature start-ups and young enterprises that provide potentially disruptive business models and/or unique technologies/services in the fields of construction and retail. The aim of the innovation hub is to continue developing their own ready-to-market business models and portfolio of strategic investments, to establish these on the market and drive market growth.

www.umdaschgroup-ventures.com

About NeoTwin

NeoTwin provides a platform for controlling projects and managing assets throughout the entire building life cycle. The Munich-based prop-tech company in which Umdasch Group Ventures has a 51% share addresses the major challenges in the construction and real estate sectors. NeoTwin is a central tool for managing entire real estate portfolios, construction projects and renovation projects, and has primarily been designed for constructors in the public and private sectors, as well as owners and operators of buildings, regardless of the types of building and their use, and infrastructure operators.

www.neotwin.com

About NEULANDT

Since its founding in 2019, NEULANDT has specialised in the active development of future-oriented construction solutions. N3P – the portable high-performance plant for the industrial production of precast concrete elements resolves many global challenges. A subsidiary of the Umdasch Group Ventures innovation hub, NEULANDT is setting new benchmarks and designing tomorrow's living spaces for hundreds of people. Being a member of the Umdasch Group, NEULANDT has the backing of a strong group of companies and benefits from long-standing experience and expertise in the construction industry.

www.neulandt.build

About CONTACT

As a corporate start-up, CONTACT consolidates comprehensive construction expertise from a wide range of different areas and software development within the one company.

CONTACT GmbH was borne out of the innovative strengths of Umdasch Group Ventures GmbH. It specialises in the development of revolutionary concepts for the construction and retail industries.

www.kontakt.com

About Concrefy

Concrefy is an international centre of excellence for concrete technology, focusing on the construction industry as a whole, specialising in particular in the concrete industry. With over 40 years of first-hand experience in this field, the team of concrete technologists is an expert port of call for all concrete-related issues. A subsidiary of Umdasch Group Ventures and member of the global Umdasch Group, Concrefy develops innovative solutions to optimise industrial production processes and operations in the construction and precast concrete industries – driving greater safety, productivity, transparency and sustainability.

www.concrefy.com