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Services

Solution

After years of development, Graphic Concrete has grown into a business offering a broad range of services. At the heart of our business is our essential product: the Graphic Concrete membrane. The membrane enables manufacturing of attractive and durable patterns and images on prefabricated concrete surfaces. Our solution is a tool for architects and designers to integrate visual creativity into construction projects, while also serving the builders, investors and developers with a highly visual and everlasting result. We serve with solid expertise and know-how, and we offer consultation and training for all our partners, from architects and prefabrication companies to builders, investors and developers.

Architect Consulting

Designing a pattern for a Graphic Concrete surface is relatively simple. A well-functioning pattern does require, however, some knowledge regarding repetition, contrast and the use of rasters, for example. Our architects and graphic specialists will guide you through the design process and provide design services if needed. You can also take advantage of our expertise and outsource the pattern design to us, releasing your time to focus on the big picture. You can also choose a ready-made pattern from our collection – all of the patterns are listed on our website:

www.graphicconcrete.com

Prefabrication Training

Prefabricating elements with Graphic Concrete is not more difficult than the regular prefabrication process, but it still requires a variety of details to be acknowledged before the actual casting can be started. We provide materials and training sessions for all prefabrication clients. We also offer general consultation regarding the use of Graphic Concrete based on our extensive knowledge of concrete construction and concrete design.



Advantages

The Graphic Concrete technique is easy to use

- The membrane is disposable and flexible to use; it can be cut into small sheets or larger pieces can be joined together. There are no limitations to the slab sizes.
- It can be used with very different types of concrete mixes.
- It requires no special equipment. A factory that can make exposed aggregate surfaces can also make Graphic Concrete.
- It requires no special structural adjustments. The exposed areas are only about one millimeter deep, so the image does not affect the thickness of the slab.

The Graphic Concrete membrane is an environmentally friendly product

- The membrane is recyclable and safe to use.
- It does not emit any harmful gas or chemicals.
- It reduces the use of solvent based materials and dust inconvenience during production.
- It does not have any effect in regards to the environmental loading of a building.

The Graphic Concrete surface is finished and assembly-ready directly after production

- It reduces the need for additional material use on the facade (e.g. additional cladding, treatments or paints).
- It also reduces the need for additional scaffolding at the construction site, which minimises any disruptions at the site and saves time during construction.
- The outcome is 100 % made of concrete and the surface is as durable as concrete itself.
- A Graphic Concrete surface is virtually maintenance free, which saves costs during the whole lifespan of the building.



Graphic Concrete in the Precast Factory

What is Graphic Concrete?

Graphic Concrete is a proprietary technology that enables the reproduction of attractive and durable patterns and images on prefabricated concrete surfaces, such as façades, partitions, walls, floors, and pavement slabs. It provides both timeless and aesthetic details that enhance the architectural appearance of the building. All building parts prefabricated by means of horizontal casting are suitable applications. Our end product is a membrane used in the prefabrication process of concrete. The desired image is printed on the membrane with a surface retarder, after which the membrane is sent to the local concrete prefabrication company. Concrete is cast on the membrane and when the retarder is washed away the image is revealed. The image results from the contrast between the fair-face and the exposed aggregate surface. Changing the aggregate and/or cement color offers a vast amount of variations in the outcome.



exposed aggregate



fair-face surface



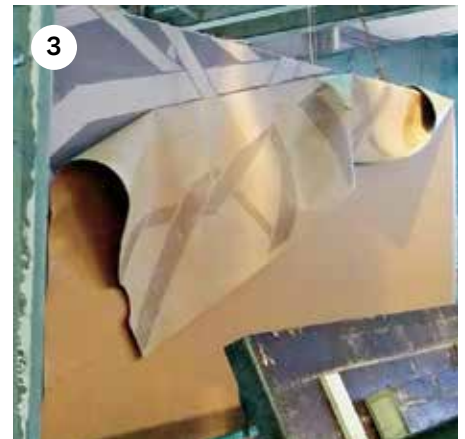
graphic concrete



1 The Graphic Concrete membrane is spread on the mould table.



2 The mould is prepared and the slab is cast.



3 The slab is demoulded and the membrane is removed.



4 The slab is washed using a high pressure washer.



5 The end product is a patterned concrete element.



How it all began – The story of Graphic Concrete

The idea of Graphic Concrete was born in 1996 while **Samuli Naamanka** was studying at the **Helsinki University of Art and Design**. He enrolled in a course on concrete applications to learn more about concrete as a building material. The aim of the course was to examine the new look of concrete, resulting in a design for the **Pikku Huopalahti Concrete Park** in Helsinki, Finland. Naamanka studied the aesthetic values of concrete as a façade material and how to treat the concrete surface in an industrially viable way. This resulted in a new method for creating patterned concrete surfaces, Graphic Concrete, which was patented in February 1999.

The real challenge was to apply the invented technology to precast concrete production. In 2000 a product development project was launched together with leading Finnish concrete factories, paper manufacturers and printing laboratories. The project was financed by companies affiliated with the Finnish concrete industry and the **Finnish Funding Agency for Technology and Innovation** (Tekes).

The R&D project was a success, and in 2002 the company **Graphic Concrete Ltd** was founded. Right from the outset Graphic Concrete was developed as a tool for architects and designers. With this tool they could integrate their visual creativity into construction projects and design large-scale concrete surfaces.

Today Graphic Concrete has been used in over 700 projects in 25 countries around the world by numerous architectural offices and concrete element factories. Our extensive list of references demonstrates the vast range of designs in which graphic concrete can be used: public, residential, industrial and infrastructure.

Learn more about Graphic Concrete: www.graphicconcrete.com

Photography

Cover photo

Graphic Concrete Sample Slab
Pattern: Textilia & Mosaic Ellipse
Photography: Kuvatoimisto Kuvio Oy

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Perilänkuja Residential Building, Finland, 2018
Architecture: HPK-Arkkitehdit
Photography: Kuvatoimisto Kuvio Oy

Vantaa Astrum Residential Building, Finland, 2018
Architecture: Arkkitehtitoimisto Forma-Futura Oy
Photography: Graphic Concrete

Hämeenlinna Provincial Archive, Finland, 2009
Architecture: Heikkinen-Komonen Architects
Photography: Jussi Tiainen

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Viborg Provincial Archive, Viborg, Denmark, 2015
Architecture: Schmidt Hammer Lassen Architects
Photography: Helene Høyer Mikkelsen

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Graphic Concrete Production Process
Photography: Pekka Agarth, Veli-Pekka Rydenfelt

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Skanska Headquarters Sweden, Lustgården, Sweden, 2013
Architecture: Strategisk Arkitektur
Photography: Graphic Concrete

Pihlajalaakso Sound Barrier, Finland, 2014
Architecture: Ramboll Finland
Photography: Kuvatoimisto Kuvio

Crevin Upper Secondary School, France, 2014
Architecture: Jean-Francois Golhen Architecte
Photography: Graphic Concrete

Ulappatori Residential Building, Finland, 2013
Architecture: Arkkitehtitoimisto Petri Rouhiainen
Photography: Graphic Concrete

Ospedale Giovanni XXIII Chapel, Italy, 2012
Architecture: Traversi + Traversi Architetti
Photography: Graphic Concrete

Kuopion Majakka Residential Building, Finland, 2014
Architecture: QVIM Arkkitehdit
Photography: Kuvatoimisto Kuvio

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