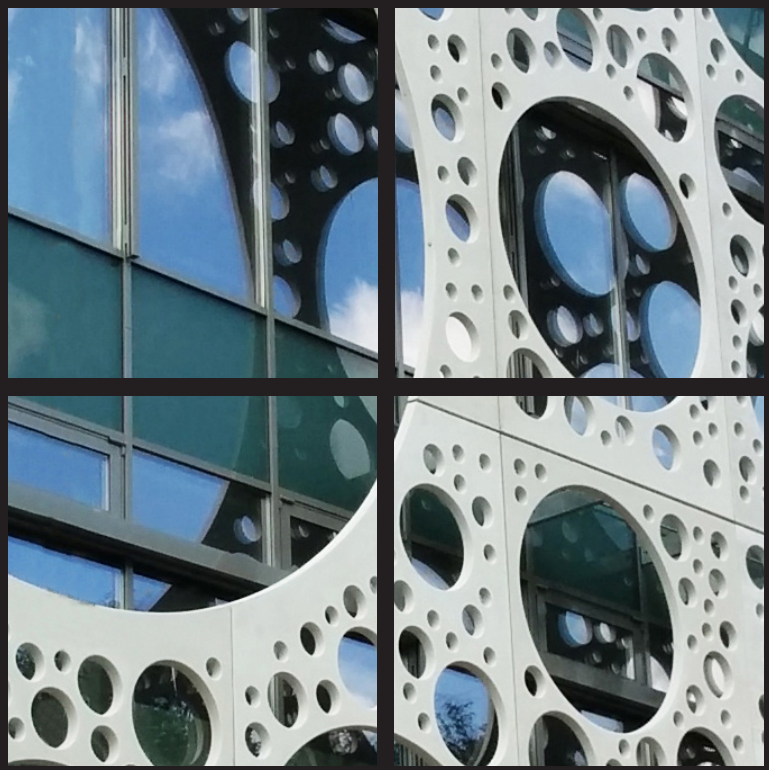
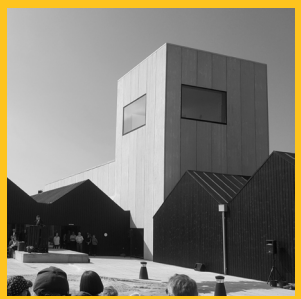
FACADES

in ultra high performance concrete



HiCON

HIGH PERFORMANCE CONCRETE



IMAGINE
INNOVATE
IMPRESS

if you can dream it,
you can do it…

Walt Disney

HiCON®

HIGH PERFORMANCE CONCRETE

WE MAKE YOUR FACADE DREAMS COME TRUE

Hi-Con facades are tailor-made solutions that create value for the entire value chain. We produce facade elements in ultra high performance concrete for buildings, where both a strong design and functionality are needed.

Our facades utilize the properties of ultra high performance concrete so that the facades can both be scaled up, made slimmer, and with greater design possibilities than with other materials. At the same time, we can work with several different types of insulating materials enabling us to use your preferred material.

This facade brochure lists several of our reference projects, mounting principles, and facade categories as an inspiration for your next building project. We therefore hope to inspire you to design exactly the facade solution you dream of.

ADVICE AND KNOWLEDGE ARE PART OF THE PACKAGE

When choosing a facade solution from Hi-Con, our knowledge and advice are always included as part of the package. Early in the process, we are ready to talk with you about design and mounting principles and together, we can create the optimum facade solution. With ultra high performance concrete, there is a wealth of possibilities for combining function, shape, and mounting principles – we are more than pleased to contribute with our knowledge and experience.

THE BENEFITS OF
ULTRA HIGH PERFORMANCE CONCRETE

HI-CON FACADES WILL GIVE YOU:

- High insulation Capacity
- Fireproof material
- Self-supporting and tailored elements
- Large format option
- Slender and more lightweight elements
- More square metres for effective living space
- Minimal maintenance and 100+ durability


HiCON

A NEW GENERATION OF CONCRETE

Back in 1986, the engineers at Aalborg Portland invented a whole new concrete type with a complex mix of cement binder and steel fibres, which they named Compact Reinforced Composite (CRC).

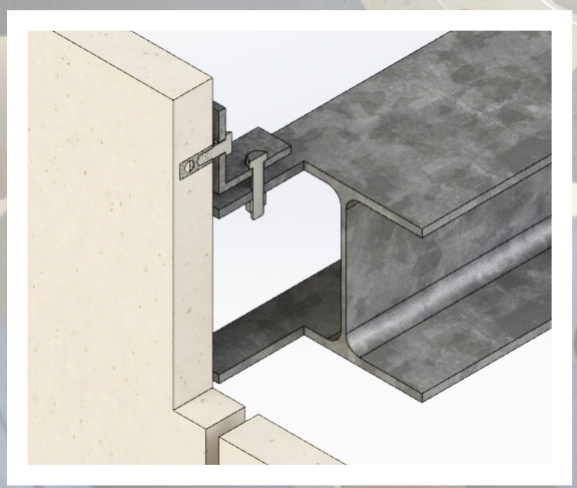
This new concrete was found to be extremely strong and durable. The concrete is not very porous and it therefore fits tightly around the reinforcement, which is used for a very small covering layer. At the same time, the concrete utilizes the reinforcement more efficiently without cracking, even under extreme conditions.

In practice, this means that a smaller amount of ultra high performance concrete can be used compared to normal concrete.

MATERIAL SAFETY WITH CRC

Since 2001, Hi-Con has been developing this type of concrete and our generation of the material is today the world's oldest, best-documented, and tested ultra high performance concrete. CRC has therefore developed into a new generation of ultra high performance concrete with the same high material safety as the original mix. We call the new generation of ultra high performance concrete i2®, i3®, and i4®.

You can read more about our materials on our website and our blog.



CURTAIN **WALLS**

Curtain walls from Hi-Con can be developed and produced with an aesthetic goal in mind - and at the same time function as sun shields. For that purpose, it is possible to produce large format elements, which are tailored for each individual project and with endless design options.
At the same time, CRC i2® makes it possible to manufacture extremely slender and light-weight elements, which can be used to clad the facade. The elements can be cast with a thickness down to 45 mm.

Curtain wall elements in CRC i2® are especially suitable for projects where the architect has a dream to create a distinctive, unique, and aestheti-cally prominent facade. For this, Hi-Con can assist in developing bespoke curtain wall elements that help to create the architectural expression of the building yet at the same time living up to the architect's dreams and expectations of the project.

MOUNTING PRINCIPLES
The mounting principle used for curtain walls varies from project to project.
See example on page 10

UNIVERSITY OF SOUTHERN DENMARK

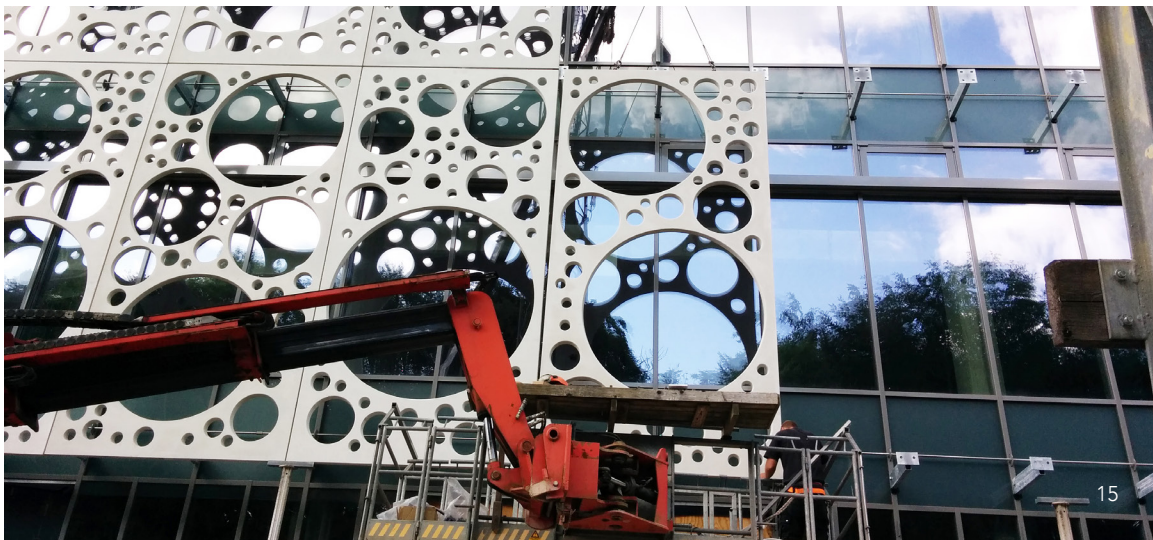
UNIVERSITY OF SOUTHERN, DENMARK, ODENSE

FACADE TYPE:
CURTAIN WALLS

ARCHITECT:
C.F. MØLLER A/S

CONTRACTOR:
AE STÅLMONTAGE A/S

YEAR OF CONSTRUCTION:
2014



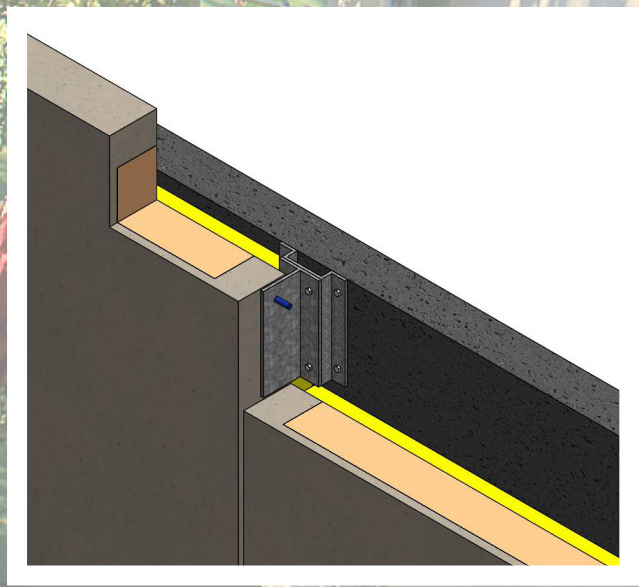
ACCSYS TECHNOLOGIES

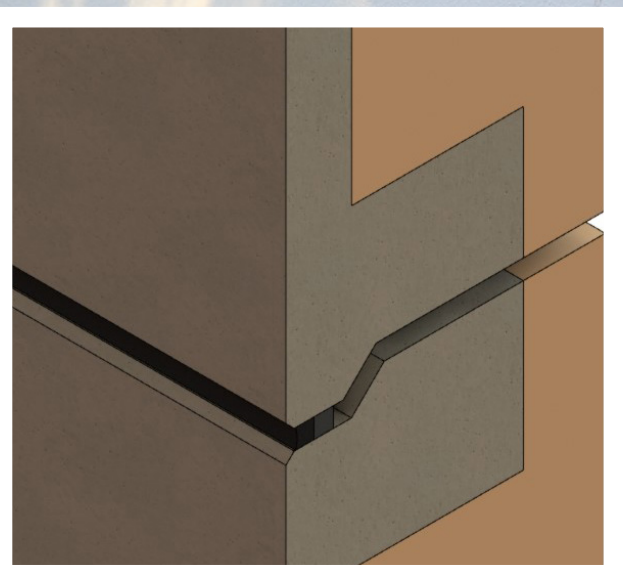
ACCSYS TECHNOLOGIES, ARNHEM

FACADE TYPE:
CURTAIN WALLS

CONTRACTOR:
BRUIL BOUW, EDE - NL

YEAR OF CONSTRUCTION:
2017





SINGLE-SIDED

Single-sided insulated facade elements from Hi-Con can be used for renovation and thermal insulations projects as well as new buildings. As the name implies, the elements are insulated with concrete on one side and can be mounted on an already existing back wall or a newly erected raw house. The single-sided insulated facade elements are suitable for renovation of an existing facade or cladding of a new back wall as they are slender, lightweight, and simple to install.

The facade elements can be cast with a thickness down to 30 mm and be manufactured as self-supporting elements with insulation. In addition, the strength and the density of the CRC i2® make it possible to produce large format elements, and you will also have the opportunity of designing the surface of the elements to fulfil your dreams of a unique aesthetic expression.

MOUNTING PRINCIPLES

The applied mounting principle for single-sided insulated facade elements is adapted to each individual project. See examples on page 18

KISTA

KISTA, STOCKHOLM

FACADE TYPE:
SINGLE-SIDED INSULATED
FACADE ELEMENTS

CONTRACTOR: SOLEED

ARCHITECT: SOLEED

YEAR OF CONSTRUCTION:
2014

HERNINGSHOLM VOCATIONAL SCHOOL

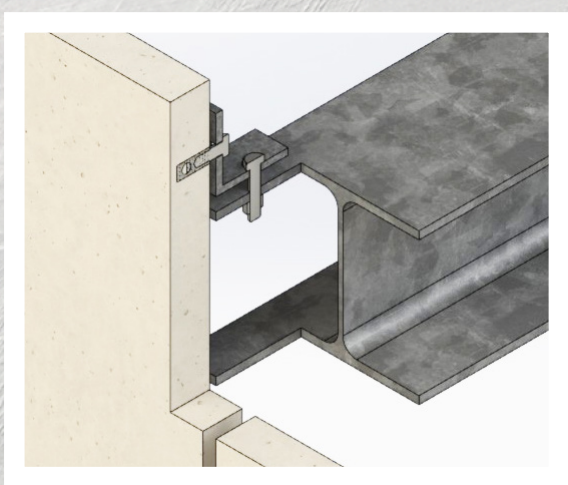
HERNINGSHOLM VOCATIONAL SCHOOL, HERNING

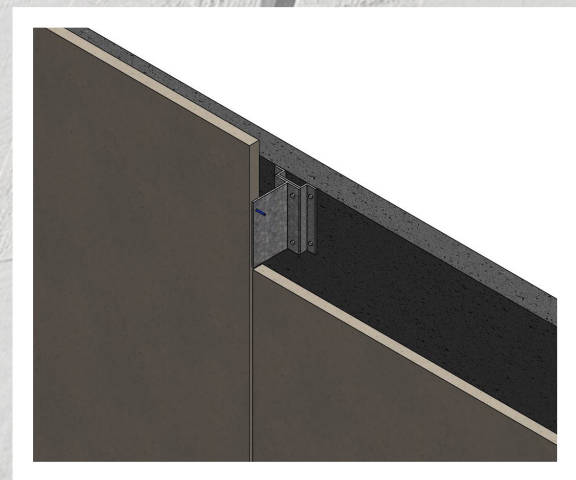
FACADE TYPE:
SINGLE-SIDED INSULATED FACADE ELEMENTS

CONTRACTOR:
JACOBSEN & BLINDKILDE A/S

ARCHITECT: C.F. MØLLER A/S

YEAR OF CONSTRUCTION:
2016





CLADDING

Hi-Con cladding elements are often used when special solutions and other cladding elements in connection with a facade solution are needed. Cladding elements are also useful to create uniformity between elements applied on the facade and thus create a complete building envelope.

With Hi-Con cladding elements it is possible to cast elements that help to create a nice overall impression of your building, while keeping elements lightweight and easy to install. This could e.g. be lightweight elements with glued bricks, cladding elements with the right surface colour, stern elements or other special elements, which create consistency with the rest of the building envelope.
The cladding elements can be designed down to 45 mm thickness and be cast in large format.

MOUNTING PRINCIPLES

The mounting principle applied for the cladding elements is adapted to each individual project. See examples on page 24

STRANDINGSMUSEUM

STRANDINGSMUSEUM, ULFBORG

FACADE TYPE: CLADDING W/ SPECIAL STRUCTURE.

ARCHITECT:
FRANK MAALI & GEMMA LALANDA ARKITEKTER M.A.A

CONTRACTOR:
BJARNE ØRTS & CO.

YEAR OF CONSTRUCTION:
2016

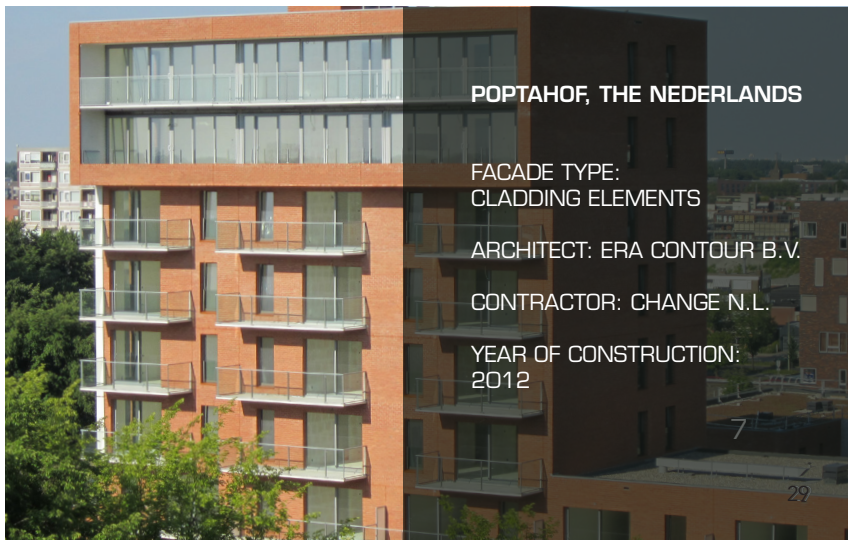
FRB. C. SHOPPING

FACADE TYPE: CLADDING
W/ BRICK TILES

ARCHITECT:
KHR ARKITEKTER A/S

CONTRACTOR: GRONTMIJ

YEAR OF CONSTRUCTION:
2013



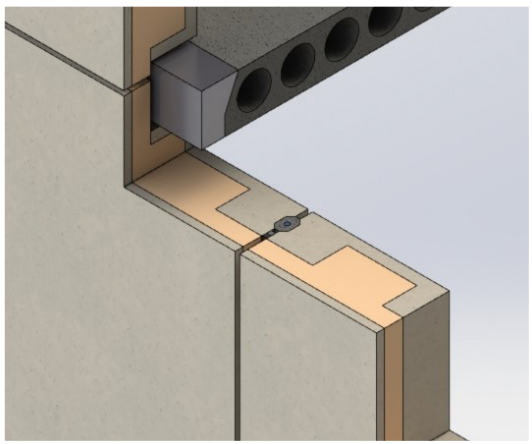
POPTAHOF, THE NEDERLANDS

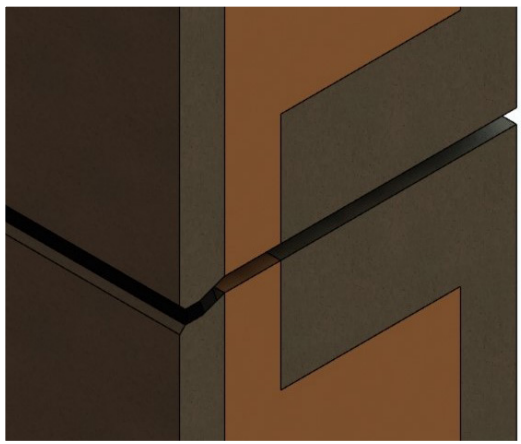
FACADE TYPE:
CLADDING ELEMENTS

ARCHITECT: ERA CONTOUR B.V.

CONTRACTOR: CHANGE N.L.

YEAR OF CONSTRUCTION:
2012





SANDWICH **ELEMENTS**

Hi-Con sandwich elements are slender elements with high insulation capabilities that can function with finished surfaces both indoor and outdoor.
The measurements of the slender sandwich elements vary from project to project and can measure down to less than 300 mm in thickness and always live up to the U-value requirements. The slenderness of the elements increases the effective living space of the building and the extra square meters can thus help to increase the value of your building project.
In addition, it is possible to use Hi-Con sandwich elements as heavy load-bearing elements designed to resist fire.

MOUNTING PRINCIPLES

The mounting principle applied for sandwich elements is adapted to each individual project.
See example on page 30

Herningsholm Vocational School, Herning

HERNINGSHOLM VOCATIONAL SCHOOL

HERNINGSHOLM VOCATIONEL SCHOOL, HERNING

FACADE TYPE:
SANDWICH ELEMENTS

ARCHITECT: C.F. MØLLER A/S

CONTRACTOR:
JACOBSEN & BLINDKILDE A/S

YEAR OF CONSTRUCTION:
2016

BOX **MODULES**

Box modules in CRC i2® have a long lifecycle, are lightweight, and are insulated according to the U-value requirements. The box modules consist of slender elements which, depending on the individual project, can measure less than 300 mm in thickness and offer the possibility of making finished interior and exterior facades. This means that there is no need for cladding of the exterior facades which – together with the slenderness of the elements – provides more effective square meters for living.

At Hi-Con, it is possible to create box modules in customized sizes and formats and to stack the box modules so that they can be used in a multi-storey building. The modules are self-supporting and are dimensioned for the requested number of floors with the possibility of connecting pipes and power lines.

MOUNTING PRINCIPLES

The mounting principle applied for box modules is adapted to each individual project. See example on page 36

HI-CON OFFICE EXTENSION

HI-CON OFFICE EXTENSION, HJALLERUP

FACADE TYPE:
BOX MODULES

ARCHITECT:
FRIER ARCHITECTURE

CONTRACTOR:
SVEND AAGE CHRISTIANSEN A/S

YEAR OF CONSTRUCTION:
2017/18

CAMPUS BJÖRKSÄTRA

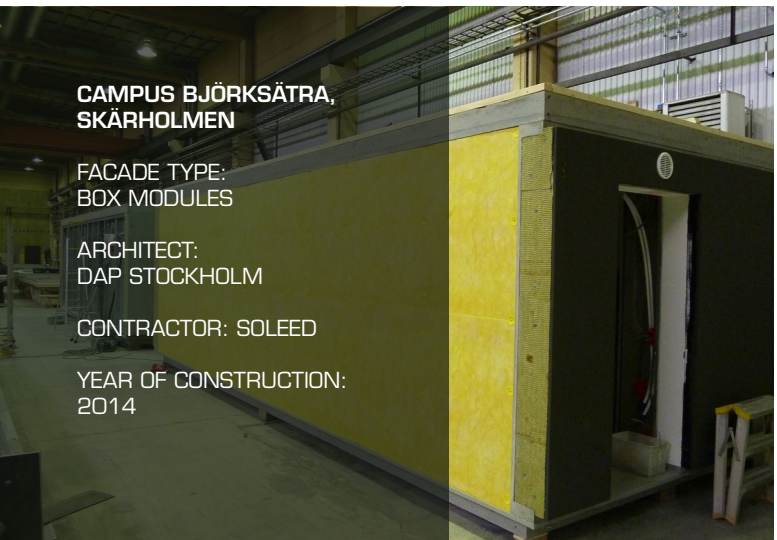
CAMPUS BJÖRKSÄTRA, SKÄRHOLMEN

FACADE TYPE:
BOX MODULES

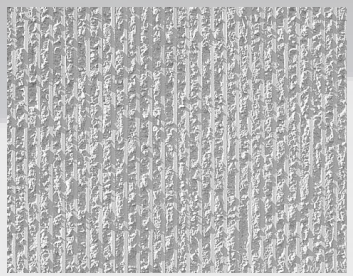
ARCHITECT:
DAP STOCKHOLM

CONTRACTOR: SOLEED

YEAR OF CONSTRUCTION:
2014

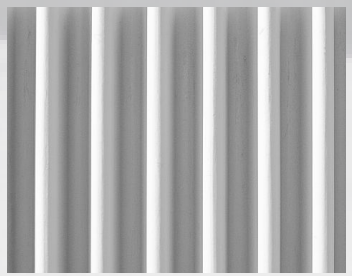


SURFACE INSPIRATION

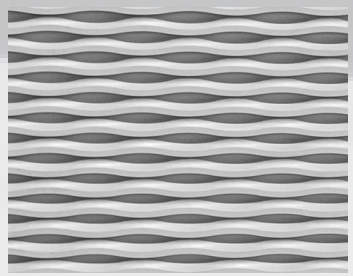


Reckli Amur

Reckli Gysenberg



Reckli Madeira



Reckli Gascogne

Real board structure

Randers Tegl 153 Ultima

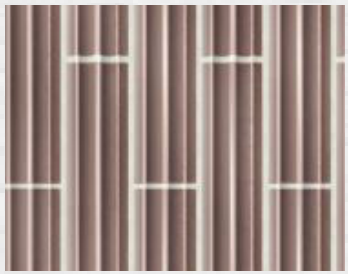
Randers Tegl 573 Fusion

Randers Tegl 571 Fusion

Concrete structure

Concrete structure

C2 Elements -
Tempio Pirámide

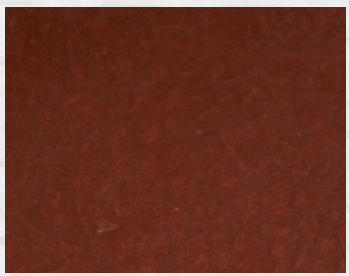


C2 Elements - Tempio Valle

Light CRC i2®

Grey CRC i2®

CRC i2® pre-dyed orange



CRC i2® pre-dyed red

COLOURS & SURFACES

The possibilities of tailoring both colour and surface of your facade elements are endless. At Hi-Con, you can, among other things, get surfaces with cast-in or glued brick shells, textured or dyed surfaces of your choice as well as surface treatments to create a uniform surface of the elements – only your imagination sets the limits for your next surface design. You can see a selection on page 42.

The innovative potentials of ultra high performance concrete are very large - and in the future many new applications will be sees in this fantastic building material.

However, unlocking the potentials requires open and innovative co-operation and networking between the parties of the construction industry – project developers, architects, engineers, contractors, producers, costumers, and end-users.

We invite everyone to join the work of exploring the future's potentials within ultra high performance concrete.

HiCON

HIGH PERFORMANCE CONCRETE

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