

The magazine for Jansen Steel Systems | Issue 3.2022

# SCALE.

BUILDING WITH STEEL & STYLE

## Design

**Amsterdam** A building for mobility

**Specialist article** Discourse on materials

**Ghent** Contemporary access

**Specialist article** Planning and building in BIM

**Rotterdam** Art:fully mirrored

**Valle de Bravo** Inside in the woods, outside in the house

**Specialist article** Rules for good design?

**Munich** Putting the 'wow' factor into a commercial building

**Methoni** Spatial continuum in white

JANSEN



## Editorial

# Design – Aesthetics and Functionality

Good design even fulfils more sensual demands when functionality and aesthetics are in harmony: Well-engineered functionality and practical handling then go hand in hand with an attractive appearance. With design quality, Jansen inspires beyond functional perfection. Finally, buildings should offer the occupants or users the greatest possible comfort and protection, but also fit into their surroundings, to make a concept visible and be formally convincing.

For product development, a holistic design approach means thinking about aesthetics in addition to covering all tests and standards. This approach is reflected in the

entire Jansen product range of steel windows, doors and façades and also includes handles, opening folds, special shapes or details such as face widths. In this issue, discover projects realised in different countries that impressively illustrate the results that can be achieved with steel systems from Jansen. Let's think about what significance the design theses of Dieter Rams, former architect and head of design at Braun, still have today, and delve deeper into the topic of 'Materiality in Architecture' with the contribution of Prof. Thomas Schröpfer from the Singapore University of Technology.

Enjoy reading!

Your SCALE Editorial Team

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Title image: The extravagant KHI House in the Peloponnese impresses with a seemingly endless external wall with just the occasional openings. Thanks to the Economy 60 steel profile system and its slender design, the casements impress with their vast glass surfaces and minimal face widths.



48

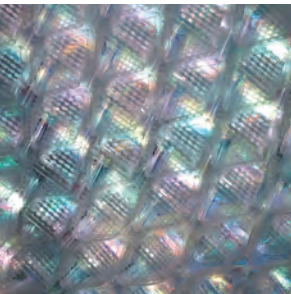


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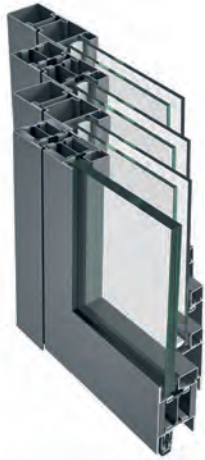


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# NEWS



## Many requirements, a uniform view

'Design is invisible' – this well-known guiding principle for design, has also been adopted by Jansen. Thanks to the same face widths and compatible fittings, many systems can be combined 'invisibly' with one another without any purely visual difference being noticeable. For example, the door systems Economy 50/60, Janisol and Janisol 2 EI30: Wherever several doors directly follow each other, the different building requirements for exterior and interior doors can be solved in a uniform design in an attractive way. In constructions with high security requirements, such as airlocks for the separation of people, further protection goals such as bullet resistance can also be integrated in an optically invisible way. The combination of slender profile geometries with large glass formats, results in the greatest possible transparency – this is what architects and planners appreciate about the steel systems from Jansen.

[jansen.com/design](https://jansen.com/design)



## Recommended reading

From A for 'added value' to Z for 'Zielgruppe' ('target group'): 110 renowned experts from all over the world have provided term definitions and original article for the 'Design Dictionary'. The cultural differences offer perspectives for a comparative understanding of central design categories and communication via design. The 470-page volume covers both the classics of design discourse and terms used in current discussions, some of which are still relatively new. The book thus offers both a scientific basis for a serious design discourse and an entertaining read for browsing and discovery. It is a handbook for all those who are involved with design in a professional or educational capacity, or who simply enjoy it and want to delve deeper.

Michael Erlhoff, Tim Marshall (eds.):  
*Design Dictionary. Perspectives on Design Terminology*  
Birkhäuser Verlag,  
Basel/Boston/Berlin 2008,  
ISBN 978-3-7643-7738-0.

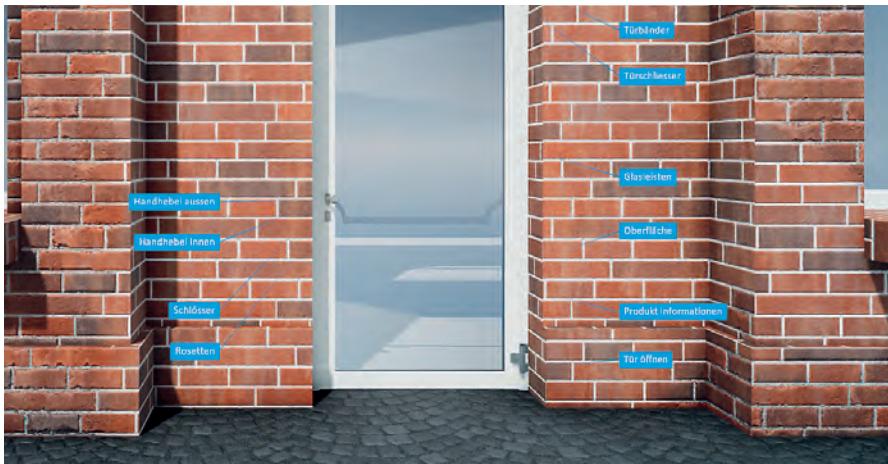


## Jansen illustrated book: 'Architecture in steel'

The illustrated book 'Architecture in steel' presents selected property references with Jansen steel profiles from all over Europe. The numerous examples inspire, deepen interest in steel and arouse curiosity for bold solutions. The division in the book is structured according to the different subject area on the Jansen website and provides insights into properties built from 2016 onwards. Buildings with a wide variety of functions illustrate Jansen's maxim of 'form and function perfectly combined'. In every context Jansen steel profile systems meet the highest performance standards in terms of quality and service life as well as safety and, at the same time, set aesthetic standards.

[jansen.com/architectsbook](https://jansen.com/architectsbook)

# AGENDA



## JANSEN virtual showroom

As a further component of the digitalisation strategy, the virtual showroom now complements Jansen's range of services. The virtual representation illustrates a great deal more options than the physical product alone. This can be discovered in different areas of the showroom:

- The product overview contains most of the series and products offered by Jansen. They can be found via categories, such as windows, doors, façades and folding and sliding doors, or via the 'Jansen world'. In the 'Jansen world' the products can be selected by means of several pre-selection options.
  - Under Product Information the most important points for the various target groups are summarised. At the same time, the overview also offers the possibility for deeper access, for example by means of sections, brochures or forwarding to the product pages.
  - With the exploded view you can view the individual parts down to the smallest detail.

- The design configurator goes one step further and also offers the users the selection of various handles, hinges, surfaces or materials. These changes are applied directly to the representation of the element. Thus architects, investors or even end users have the possibility of displaying 'their' door or displaying 'their' window - and even 'integrating' it into predefined surroundings.
- In the Safety Applications section, it is explained in a short, simple and also entertaining way how, for example, fire protection or burglary protection are tested and classified, and which products can be assigned to the safety areas. The virtual showroom makes it very easy to obtain complex information about the products on display. The virtual showroom complements the existing digital offerings BIM, JANIsol and Jansen Docu Center.

[jansen.com/virtualshowroom](https://jansen.com/virtualshowroom)

## Telescope Design Event 2022

As a continuation of the previous year's series of events on the topic of 'safety', Jansen 2022 takes up the theme of 'design'. With various measures and activities – including a multilingual brochure, videos and PR contributions – we are giving this topic the exposure it deserves. In this context, as a manufacturer of steel profile systems, we would like to stimulate dialogue with architects, metal builders and sales partners worldwide. The virtual event will be accompanied by an exclusive roadshow throughout the year, where the products can be experienced first-hand. The Virtual Telescope Design event will take place on June 14th 2022.

Detailed information can be found at

[jansen.com/2022](https://jansen.com/2022)

# Form and Function

Jansen steel systems are an integral component of buildings. In terms of time, the period in which a building is built is comparatively short compared to the period of time during which it later shapes its surroundings. Our society rightly demands that architecture be sustainable and usually assesses this in terms of its carbon footprint. But there are other criteria for sustainability: for example, good design.

The question of what constitutes 'good' design, is also addressed by the comparatively young science of 'environmental design'. It examines what we feel when we see a building or enter a room. One of its findings is that we perceive a building or a room as 'beautiful' when the first impression promotes our sense of well-being, i.e. when it touches us pleasantly in our innermost being. It has also been proven that bright, light-flooded rooms also contribute to this, as does a pleasant room temperature and the feeling of being in a safe place.

But it would be too short-sighted if we were to limit our demand for good design to the purely functional aspect. We attach at least as much importance to the formal aspect: ideally form and function are inseparable. This is the only way to create products that are convincing both in appealing appearance as well as intuitive, pleasant handling.

The harmonious interaction of various components and elements can be visualised with the help of digital building models long before the building itself is erected. Jansen promotes this holistic planning approach through digital twins of all profiles, hinges and fittings. The good design of our products is not least due to the fact that the necessary documentation is comprehensively prepared and digitally available for all parties involved.

What is design and how do you recognise good design? SCALE has asked experts the following question:

**'In terms of architecture, façades and windows: What does good design mean for you?'**



*the façade is the first signal for the viewer. The doors and windows decide the gesture of the invitation, the transparency towards the outside and, above all, in the choice of materials and, where applicable, the craftsmanship of the execution, on the haptic quality and, in my opinion, also on the humanity.'*

**Michael Stratmann**

Managing Director of Metal Design  
Stratmann GmbH, Essen (D)

*'Good design ... always goes beyond the mere fulfilment of the function. The look and feel of the material should be appropriate to the task and as sustainable as possible. If a detail is particularly eye-catching and triggers a positive reaction in the user or observer, everything has been done right.'*

**Katja Reich**

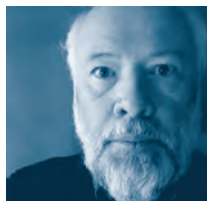
Editor-in-chief of DBZ,  
Bauverlag BV GmbH, Gütersloh (D)



*'Good design is particularly evident in its unobtrusive presence. If the eye always seeks a connection with the building and a subtle symbiosis between the shell and the inner core is created, the special nature of the structural product becomes apparent. If we fathom the aesthetics of a building, all components such as façades and window elements, their design in terms of materiality and colouring, and the positioning are therefore involved in this process.'*

**Morris Breunig**

Editor-in-Chief, Architecture and  
Engineering, BL Verlag AG Zurich (CH)



*'Windows and façades are the outer finish, the skin of an architecture, so to speak. We understand the skin, the surface, as "the inside carried to the outside"'*





*'For some time now materials and materiality in architecture have been experiencing a significant paradigm shift. Innovative bring with them new aesthetics and often better material performance. One of the hallmarks of good and progressive design is that it explores and expands the possibilities that these developments offer us for more sustainable building.'*

**Prof. Dr. Thomas Schröpfer**

Professor of Architecture and Sustainable Design,  
Director of Advanced Architecture Laboratory, Singapore University of Technology and Design (SGP)



*'Façades, windows and glazing of all kinds are an integral part of the building envelope. Design is reflected in them as a symbiosis of maximum function and optimum aesthetics, in order to combine maximum functionality and practicability, optimised manufacturing processes and compliance with strict standards and legal requirements.'*

**Fabio Rea**

Managing Director of Swiss Headquarters Windows and Façades (SZFF/CSFF),  
Olten (CH)



*'Good design refers to a good understanding and knowledge of the rules of nature and their effects, which is taken into account when designing a space that meets the needs of the users. It is related also with the appropriate use of materials and systems that make up a specific building.'*

**Prof. Dr. Ana-Maria Dabija**

University of Architecture and Urban Planning Ion Mincu, Bucharest (ROU)



*'For me, good design is sustainable, timeless, restrained and relates to the essentials. It is in balance with nature and respects it. Good design is not flashy, the beauty and quality is in the detail. Keep it true, simple and clean and the beauty will last forever.'*

**Roger Kurath**

Architect, Design 21, Los Angeles (USA)



*'Good façade design today is complex – sometimes screamingly quiet, sometimes whisperingly loud. Meaning is created through a convincing attitude to independence, which is understood and, ideally, loved by its addressees.'*

**Michael Purzer**

Director Business Development  
Frener & Reifer GmbH, Brixen (I)



*'Windows are an essential design element. They provide light and thus determine the atmosphere both inside and outside. A window can surprise and seduce by drawing the eye to a certain view. Windows should be carefully matched to the façade in terms of proportion and profile.'*

**Joep van As**

Architect at BiermanHenket, Esch (NL)



Werk 12 Munich, Germany

# Putting the 'wow' factor into a commercial building

With Werk 12, MVRDV has created a spectacular addition to the Werksviertel business park in Munich with a building that really has the proverbial 'wow' factor. Its simple form, the use of 'honest' materials (to quote the judging panel) and the transparent façades have earned the new building the prestigious DAM Prize for Architecture.



Janisol 2 F30 fire-resistant glazing in the (cold) stairwell was implemented with ZiE as it was installed before DIN EN 16034 came into force on November 1st 2019.

In the pool area, the steel profiles were pretreated to provide the best possible protection against corrosion (corrosiveness category C4; in all other areas C3).



In the areas in front of which the cascade staircase runs, the loads of the glazing will be transferred laterally into the concrete structure via the crossbeam.





What's more, the five-storey building's VISS façade is made even more spectacular when darkness falls thanks to the artwork comprising onomatopoeic expressions emblazoned in bold letters on the exterior.

Knödelgasse (Dumpling Lane), Kartoffelgleis (Potato Alley) or Zündappbogen: The street names in Munich's Werksviertel bear witness to the time when the site behind the Munich East train station was home to traditional German companies such as Pfanni, Zündapp and Optimol. Since the beginning of the 2000s, a mixed-use urban district has been under development here: Factory buildings that are characteristic of the townscape have been or are being refurbished and converted into contemporary living and working spaces, while new buildings have been added in a modern architectural style. With a mixed use of 7000 workplaces, 1100 apartments and spaces offering a wide range of cultural and leisure activities, this location is set to be the future of Munich life. And it is right in the midst of this heterogeneous structural environment that Amsterdam-based architects MVRDV built Werk 12. With its simple form, economical materials and transparent façades, the five-storey building on the plaza would blend right in if it weren't for the wide terraces surrounding each floor and the cascade staircases that connect them. The most striking feature of the new building, however, is the onomatopoeic artwork emblazoned in bold letters on the façade's exterior. Phrases include AAHHH, OH, PUH, or simply WOW.

### Extremely intricate post and mullion façade

There is no doubting that the building has the 'wow' factor. The architects wanted to make the steel and glass structure as minimal as possible. It was realised as a VISS façade with a face width of just 50 millimetres, and two different construction depths: The surrounding framework, which is 120 millimetres deep, holds two posts and one transom at a height of three metres, each of which are just 95 millimetres deep. As if it were not difficult enough to combine the different construction depths into one façade element, certain areas required the additional load exerted on the concrete structure by the cascade staircase to be taken into account. In these areas, the loads on the steel and glass façade are transferred laterally into the concrete structure via the crossbeam – a static approach that is only possible with steel profiles. The transoms loaded in this way were reinforced with flat steel on the interior, which is fully concealed from the outside. In line with the façade grid, the escape doors to the surrounding terraces – which are required on all levels in order to secure the escape route via the cascade stairs – are almost three metres high. In other words, they are much higher than the DIN specifies. Thanks to the Janisol steel profile system, which has been tested and approved for this height, these were able to be discreetly integrated into the VISS façade, and those on the ground floor were also designed to meet the criteria for resistance class RC2.

### Complete with inspiring views

The main tenant of Werk 12 is the body + soul fitness studio. In a loft-like atmosphere, the premium fitness centre in Munich offers three floors of workout and wellness facilities, including hypobaric chambers, high-tech interval training in the 'Beatbox', and a 25-metre-long swimming pool. In the pool area, the steel profiles were pretreated to provide the best possible protection against corrosion (corrosiveness category C4; in all other areas C3). The ground floor features several restaurants, while the top floor has become home to Audi's experts in design, e-commerce and mobility services. The oversized Janisol lift-and-slide doors and folding wall element enable a seamless transition from the inside to the outside, providing inspiring views over Munich and the nearby Alps, whatever the weather. (AMR) ■

### PROJECT DETAILS

**Client:**

OTEC GmbH, Munich

**Architects:**

MVRDV, Amsterdam, with N-V-O Nuyken von Oefele Architekten BDA, Munich

**Façade construction:**

Pazdera AG, Coburg

**Fire safety/smoke control elements:**

Werthie Michael Werner GmbH, Lutherstadt Eisleben

**Steel profile systems:**

VISS façade, Janisol, Janisol 2, Economy 60, extra-high Janisol lift-and-slide doors and Janisol folding walls



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Bau 30, Raumfabrik Durlach, Germany

# Around the corner

This office building promises a very unique spatial experience. The elevated upper floors, the floor-to-ceiling glass façades with rounded corners and two atriums give the building the perfect level of transparency and openness for a contemporary office.

The clue is in the name: In its 'An der Raumfabrik' ('At the Space Factory') business park, Raumfabrik Rental offers businesses of all sizes flexible office space in a total of 21 buildings; some in historically preserved properties and others in modern new-builds. The so-called 'Bau 30', designed by the Karlsruhe architecture firm Ruser und Partner mbB, forms the northern end of a series of solitary buildings on the site. Its amorphous shape – an irregular pentagon – reflects this structural context, within which Bau 30 marks the entrance. In this exposed location, the architects were determined to avoid the harshness of sharp, tapered corners. Fortunately, in Raumfabrik Rental, they had an understanding building owner who was enthusiastic about their extraordinary design. The result is a highly distinctive building that is also characterised by having almost completely glazed façades. The only parts not glazed were the opening vents for natural ventilation, which instead are sealed with anthracite-coloured panels. The radiators are concealed behind them, making them invisible from the outside.

### Rounded steel façades

Hellmann Metallbau GmbH, based in Eggenstein, Germany, manufactured the floor-to-ceiling glazed post and mullion façade using two profiles from the VISS series of systems. For the straight lines, VISS façades with a face width of 50 millimetres were used, whereas the curved areas in the floor plan were created using VISS Basic. The steel profiles hold the huge panes of glass – all of which are 3.20 metres high and the largest is 3.50 metres wide – in comparatively narrow frames. The difficulty for the metalworker lay less in the façade construction itself and more in the fact that production of the elements had to start before the shell construction was completed. Measurement on site was therefore not an option. In order to absorb any tolerances in the shell, a compensation field was provided on each floor, which was only closed at the very end with a precisely manufactured element. Accuracy of fit is always a challenge when manufacturing façades with curved floor plans. Despite this high level of precision, there may be slight deviations in the parallel course of the steel profile and the pane. To compensate for such





tolerances, Jansen recommends wet glazing, which was also used here for all curved profiles. The glass is double-glazed insulating glass with a very fine solar protection coating. Despite the round glazing, external solar protection was implemented on the entire façade; lasered on the rounded corners for a custom-made, curved design.

### Unique design pays off

The ground floor of Bau 30 houses the entrance area and a small exhibition area for displaying users' products and services. The elevation of the levels above created covered parking spaces right next to the building. The two upper floors each offer 900 square metres of office space. A solid stairwell core made of reinforced concrete connects the three levels. The seemingly floating upper floors, the glazed post and mullion façade with rounded corners, and the two green atriums, which are also glazed from floor to ceiling, give the building the perfect level of transparency and openness for a contemporary office – and thus contribute to its marketability. In fact, Bau 30 had been let long before it was completed. (AMR) ■



The bright interiors of Bau 30 contribute significantly to the pleasant working atmosphere.

The 'floating' upper floors with the post and mullion façades rounded at the corners lend a sense of lightness and transparency to the building.

### PROJECT DETAILS

**Client:**

Raumfabrik Vermietungsgesellschaft GmbH & Co. KG, Karlsruhe

**Architects:**

Ruser und Partner mbB, Karlsruhe

**Metalwork:**

Hellmann Metallbau GmbH, Eggenstein

**Steel profile systems:**

VISS 50, VISS Basic and Janisol 2 fire doors



QR code: more images



## ‘Gründerzeit’ house Zurich, Switzerland

Worlds collided during the renovation and conversion of a historic residential building in the Zurich district of Wipkingen. However, the coherent approach adopted by AMJGS Architektur enabled these worlds to be reconciled to create a harmonious whole. The multi-storey extension made of glass, which was implemented in a unique style by Baur Metallbau AG using Janisol Arte 2.0 steel profiles, plays a key part in this.

# An extension as a style bridge



The aim of the building owner, Niklaus Leuthold, and the architects from AMJGS Architektur was to implement a renovation as close as possible to the original condition of this building in the clinker brick style, which is classed as worth of protection, while increasing its residential value at the same time. The building, which was built in 1891 in the ‘Gründerzeit’ style, had been rebuilt and expanded several times over the years. Various extensions were added to it in the 1930s and 1940s. While the exterior largely retained its original look, the interior was gutted in the 1970s and adapted to the style of the time.



The residential building, which was built in 1891 in the 'Gründerzeit' style of the late 19th century, was given a glass annex with an industrial look, constructed using raw steel girders and Janisol Arte 2.0 steel profiles.

## Clarification and modernisation

During the renovation, particular attention was paid to using historical materials, construction methods and details that were as authentic as possible. The architects were inspired by historical examples from the same period of construction and the surrounding area. Elements that ensure comfort and energy efficiency, such as windows and doors, were created new using the historical examples as a template. However, they were given original details such as box locks and rod locks.

When extending the building, an alternative to the original part built using solid bricks was to be created, ideally using glass. The starting point for the building was the client's desire to create the house as a communal hou-

sing project. This prompted the search for a way for all three apartments, positioned one on top of another, to be directly connected to the garden and each other. Through the close cooperation with the heritage conservation authorities, it has been possible to create something that is in keeping with the historical period in which it was built and yet has its own independent identity. In line with the architects' intentions, the extension made of steel and glass took inspiration from historical sources and then interpreted them in a unique way. 'Its façade was to have small-scale window areas, which can be implemented very easily with the Janisol Arte profile from Jansen. It's a great product, but you also need a metalworker who knows exactly how to handle it,' Sandra König and Anja

Meyer from AMJGS Architektur explain about the extension and the cooperation with Baur Metallbau.

The extension was ultimately created through a process of borrowing from historical industrial buildings. The idea was to give it the feel of a workshop and the buildings of Jean Prouvé and Zurich subcultures of the last three decades served as inspiration here.

### Careful selection of materials for historical effect

Today, the old building shines again with the inviting cohesiveness of light wooden floors, white walls and doors, patterned tiles and the warm tones of clinker bricks. The industrial-style extension provides an effective contrast here. It consists of raw steel girders, varnished concrete ceilings and huge panes of glass. In this context, Janisol Arte 2.0 steel profiles perfectly meet the brief of gently and aesthetically transforming a listed building into a comfortable contemporary living space. The intricate window system is particularly well suited for individually reconstructing historical windows. The narrow profile face widths of just 25 or 40 millimetres with fixed glazing and an installation depth of 60 millimetres can be used to produce delicate yet robust designs with a high proportion of glass and excellent thermal insulation. The system makes it possible to construct inward and outward-opening windows as side-hung, double casement, bottom-hung or top-hung windows and fixed glazing in panel sizes up to 1000 millimetres wide x 2400 millimetres high (max. 150 kg/casement). Special opening types such as drop-down windows, pivot windows and sliding windows are also possible. It was these possibilities that helped to persuade the architects and the building owner to use this system.

The integrated kitchen serves as a living room and a visual link between the old and the new. It is constructed from steel and wood and emphasises the feeling of being in a workshop. Following its refurbishment, the residential building, which was built during the 'Gründerzeit' period, once again has its original look from the end of the 19th century, but also meets today's requirements with regard to comfort. In the multi-storey glass extension, all requirements are successfully met in a way that delivers outstanding design quality. (NS)



In this context, Janisol Arte 2.0 perfectly meets the brief of gently and aesthetically transforming a listed building into a comfortable contemporary living space.



The industrial-style extension provides an effective contrast here. It houses a kitchen constructed from steel and wood that visually underscores the workshop feel.

#### PROJECT DETAILS

**Client:**

Niklaus Leuthold, Zurich

**Architects:**

AMJGS Architektur, Zurich

**Metalwork:**

Baur Metallbau AG, Mettmensstetten

**Steel profile system:**

Janisol Arte 2.0



QR code: more images

National Archaeological Museum of Tarragona, Spain

# Window into the past



Reliable fire protection and stable air conditioning were part of the architects' specifications – for them, the challenge was to implement contemporary requirements in a museum building that was over 70 years old without impairing its external appearance.

Given the rich cultural heritage of the Catalan port city of Tarragona, the National Archaeological Museum is of particular importance. The building, which has housed the exceptionally diverse collection since 1960, was erected in 1942 as purely a museum building, without any archive rooms or work spaces. Vertical access to the exhibition areas is provided via a rectangular staircase that runs around an oblong stairwell hole, lit from above by the roof glazing. The task now was to reconfigure and safeguard escape routes and to install an air conditioning system. However, stable air conditioning requires tightly closing windows and fixed glazing. The architects opted for the slender Janisol Arte 2.0 glazing bar system to renovate the original structures featuring T profiles and single glazing. (...)

Read more online at: [scale.jansen.com](https://scale.jansen.com)

## PROJECT DETAILS

### Client:

Ministry of Culture and Sport of the Government of Spain

### Architects:

Rubén Heras Tuset and Miquel Orellana Gavalda, Tarragona, Spain

### Metalwork:

Metalisteria Almansena, Almansa

### Steel profile systems:

Janisol Arte 2.0, VISS roof glazing, Janisol C4



QR Code: complete article

Discourse on materials

# Material – Design: The Alternative Approach

An understanding of materials is part of the design. The choice of material has an immense influence on the feasibility and functionality of a design. It is the properties of a material that decide for which area of application it is ultimately suitable. It is not for no reason that building materials come from a wide range of materials.

Architects rarely have the opportunity to directly deal with the physical objects of their designs. While others – creators, artists and designers – work directly with materials, architects do so abstractly. They represent them and decide on how they are to be used, but they do not process and build them themselves. However, all the perceptible qualities that architects try to convey in their designs ultimately depend on their manifestation in built form. The design can underline these material properties, but it also sets limits. No matter how much architects try to abstract in their designs and distance themselves from concrete questions about materials, it is ultimately these that represent the architectural idea. A sensitive understanding of materials therefore always conveys more than just the implementation of design ideas through the means of the builder. It enables both new interpretations of the relationships of the parts to the whole and the creation of new overall relationships, organisational connections and phenomenological effects. A sensitive approach to materials at different scales, from architectural detail to urban design, is therefore always able to convey a contemporary understanding of our built environment in terms of its components and their interconnection.



**Material ConneXion, New York City (USA), Materials Collection**

### Design versus choice of materials?

In the discourse of architecture, questions about the role of materials were often linked to questions about the relationship of the overall form to the tectonics. Should the use of materials be subordinated to an overriding formal idea or follow a ‘nature’ inherent in the materials? Especially in times of great technological advances and rapid material developments, this role is questioned. We find ourselves in such a time today. But instead of engaging in fruitless arguments and committing to one of the



**materiO', Paris (F), Materials Collection**

camp, this article argues for an alternative approach to the relationship between architecture and materials. By directly experiencing and looking at materials and their properties, designers can gain new insights into their formal, functional, conceptual and expressive potentials. The direct confrontation with materials points the way to their targeted use, in the best case also to novel functions and design possibilities. The guiding principle is the unique combination of the potential of the material and the intention of the design. In this way, the architectural discourse can be led beyond the outdated opposition between form and tectonic structure as well as beyond fashionable trends based on the latest material development. Observation, speculation and experimentation as an approach can make designers, planners or architects aware of their intentions in dealing with materials and in this way promote the design of their drafts. Such an approach can expand the boundaries of how an idea can be built, and it can give a whole new twist to the discussion of material issues. A distinction between the theory and practice of materials is no longer meaningful, if it ever was. The investigation of the properties of a material leads to questions about the operative logic of dealing with them. Rolling, drawing or pressing, for example, applied to a material such as steel, emphasises its malleability and at the same time represents a fundamental material process. Both material and process in this case are scale-free and can therefore be applied from detail to comprehensive profile systems to the whole building and beyond, and translated into individualised design.

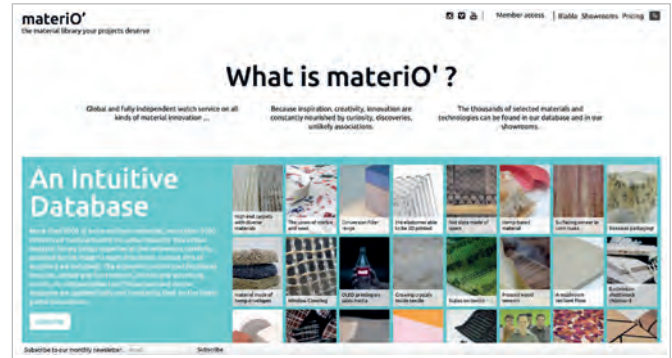
### Material experiments

For material studies to gain greater significance in architecture beyond individual experimentation, a collective approach is necessary. Universities should take seriously their role as pioneers and disseminators of material studies and should provide sufficient research projects. Material studies have always been an integral part of architectural training since the days of

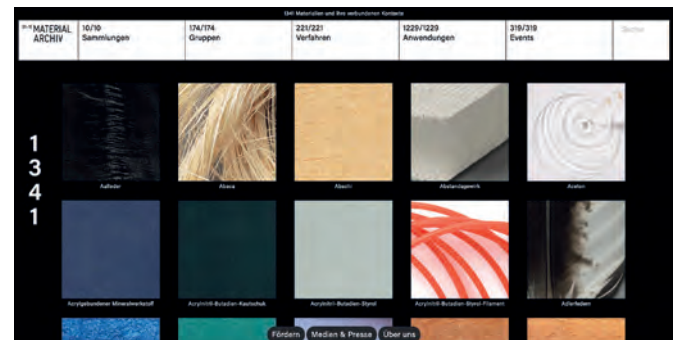
early modernism Johannes Itten, for example, established a compulsory basic course at the Bauhaus in which all students had to experiment with materials and demonstrate their properties. At the time, this approach shaped the way a whole generation of architects dealt with materials. There are currently many efforts to reintegrate material studies into architectural education. For example, the Graduate School of Design at Harvard University has a unique materials collection. The so-called 'Materials Collection' is not just a catalogue of products, but an active and continuously updated collection of material and material applications. It also documents material experiments and research projects of students and teaching staff at the university. In this way, future generations of students can refer back to the previous experiments. The database of the collection is organised in such a way as to promote an understanding of materials that goes far beyond the conventional classification into families of materials. Thus, for example, material is catalogued in the context of its properties, not only in relation to given applications. This allows users of the database to discover, for example, a material for a building façade that is normally used to reduce the reflection of computer screens. Other institutions outside universities have also recognised the need for comprehensive material catalogues for designers. These include the New York-based Material ConneXion (a source of new and innovative materials for architects, artists and designers), the in Paris-based materio' and the Swiss database 'Material-Archiv,' to name but a few.

### New material collections for new design

Today's design ambitions are based on the desire for more spatial complexity, a more subtle experience of architecture and increasingly tailored design solutions. The search for material innovations is not only for the next fashionable façade, but also for the urgently needed materials that express the design ambitions of the 21st century. It is hardly surprising that the solutions developed 50 years ago, for example, are no longer adequate for today's world. The range of materials available to designers today is also very limited due to outdated classification systems and the lack of integrated research. The direct engagement of architects with materials through observation, speculation and experimentation with the help of new material collections and databases, briefly outlined here, offers a promising alternative to enable and determine the design of tomorrow. ■



materio', online database ([materio.com](https://materio.com))



Material-Archiv, online database ([materialarchiv.ch](https://materialarchiv.ch))

Dr. Thomas Schröpfer is Professor of Architecture and Sustainable Design at the Singapore University of Technology and Design. His book publications have been translated into several languages and include: *Dense + Green Cities: Architecture as Urban Ecosystem* (2020); *Dense + Green: Innovative building Types for Sustainable Urban Architecture* (2016); *Ecological Urban Architecture* (2012) and *Material Design: Informing Architecture by Materiality* (2011). He has received numerous renowned national and international prizes and awards, such as The European Centre for Architecture Art Design and Urban Studies Award, The German Design Award and The President's Design Award, Singapore's highest honour for designers and design of all disciplines.



Gut Wagram Kirchberg, Austria

# From a dilapidated 'Meierhof'

In the interplay of wine and architecture, it is not just about presenting a product in an attractive setting – ideally, the production process should also be brought to life. At the Wagram winery, this is simply achieved with glazed interior walls.



# to a modern winery

A fully glazed construction using a Jansen VISS façade connects the old company building with the new one. Interior walls glazed with Janisol Arte 2.0 allow glimpses into various stages of production at the Clemens Strobl winery. This type of transparency helps to create trust and give customers confidence.





The sales area and the processing area are visually linked by a glazed inner gable made using Janisol Arte 2.0.



The tasting area is inserted into the vaulted cellar as a cuboid, glazed on two sides using Janisol Arte 2.0.

Wine culture and building culture have been beautifully intertwined for centuries. This can be seen in stately residences as well as in the contemporary new buildings that more and more winegrowers want to use to offer their customers a special spatial experience in addition to the taste experience. The Wagram winery in Mitterstockstall, located in the market town of Kirchberg am Wagram, is made up of a unique blend of old and new buildings. Clemens Strobl, the owner of the winery of the same name, had the dilapidated manor farm on the estate of the long derelict Winklberg Castle converted into contemporary residential and business premises. While the historic 19th-century manor house will soon be used as a residential building, the business premises consist of two long gabled buildings that meet at an obtuse angle. One of these has been painstakingly restored together with its vaulted cellar and the other is a newer building that replaced a barn which was beyond saving.

### As little design as possible

This was the client's request for the conversion and renovation of the dilapidated Meierhof. The team of architects at Destilat Interior Design reacted to this request with a very reduced colour language and design vocabulary as well as an equally puristic material selection in the industrial style. The connecting element of the two buildings – the sales room on one side and the processing area with delivery area on the other side – is a steel construction built using the Jansen VISS façade steel system, that tapers towards the residential building opposite and references the industrial architecture of bygone days with its narrow sash bars. This area also features a tasting room that connects the operations room and the sales room. The necessary spatial separation is provided by a glazed inner wall that extends as far as the roof. The transparent gable allows for exciting lines of sight and enables customers to see the production facility in action. At the same time, it protects the sales area from unwanted odours and sounds from the processing area, which are unavoidable in autumn when the grapes are brought in and in spring when the wine is bottled. In addition, the two areas also have different temperatures. The interior designers opted for the slender Janisol Arte 2.0 glazing bar system to create the glazed inner wall. 'In addition to the thermal requirements for this wall, we wanted to work with a profile that most closely matched the appearance of original industrial glazing without sacrificing technical requirements,' explains Sophie Pfeffer from Destilat. Several other systems had previously been tested for the construction of the partition wall together with the architect leading the

project, Claus Ullrich from Krems. 'Due to the profile strength and flexibility of this system, we were convinced it was the right product for this area,' says the interior designer.

### Award-winning interior design

Shortly after the project was completed, the winery Clemens Strobl at Gut Wagram was presented with the Dezeen Award in the Interior Design category. The team of architects at Destilat Interior Design has now also been honoured with the German Design Award 2021. From the jury's statement: 'The clear design vocabulary of the architecture and the consistent use of concrete, glass and steel, not only helps to create an extremely contemporary and high-quality look at the winery, but also consistently draws the visitor's attention to what it is all about: the production of good wine.' (AMR) ■

### PROJECT DETAILS

**Client:**

Weinmanufaktur Clemens Strobl, Kirchberg

**Architects:**

DI Claus Ullrich, Krems; Destilat Interior Design, Vienna

**Metalwork:**

Schinnerl Metallbau GmbH, Tulln

**Steel profile systems:**

VISS façade, Janisol Arte 2.0; Janisol doors, Janisol 2 EI30 fire doors, Janisol lift-and-slide doors and Janisol folding wall



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St. Bavo's Cathedral Ghent, Belgium

# Contemporary access





The new arched metal doors in the vestibule area of the cathedral were constructed using highly thermally insulated Jansen VISS steel profiles with a cover cap, normally available in aluminium but in this case made of brass and bronze.



**St. Bavo's Cathedral in Ghent, Belgium, is a place of pilgrimage for both religious people and those interested in cultural history. Among other things, the abbey houses one of the most important works of European art history – the 'Adoration of the Mystic Lamb', attributed to the van Eyck brothers. The cathedral now has a new visitor centre that is fitting for the cultural and historical treasures it contains and the religious people who visit it. Through its design featuring the use of VISS steel profiles, the visitor centre is synonymous with its valuable heritage.**

The 'Ghent Altarpiece' has a turbulent history. This work of art, which is presumed to have been created by Jan and Hubert van Eyck, featuring the 'Adoration of the Mystic Lamb' in the centre, was installed in the cathedral of Ghent – at that time still the parish church of Sint Jans (St. John) – as early as the 15th century. But it left this place again and again over the following centuries. It was hidden from the iconoclasts, saved from fires, looted first by Napoleon and later by the Nazis, but it was found again at the last moment in the Altaussee salt mines while still in their hands thanks to the legendary 'Monuments Men' of the US military, before the Nazis were able to destroy it as planned. Over the years, a good 90% of the original had been overpainted. Finally, after the Second World War, the altarpiece found its way back to the cathedral of Ghent. From the 1980s onwards, the winged altarpiece was housed in a side chapel here, until the decision was taken to completely restore this work of art. The process of restoration, which is still ongoing, began in 2012. It was able to be displayed to the public again in spring 2020.

### **A masterpiece as a driving force**

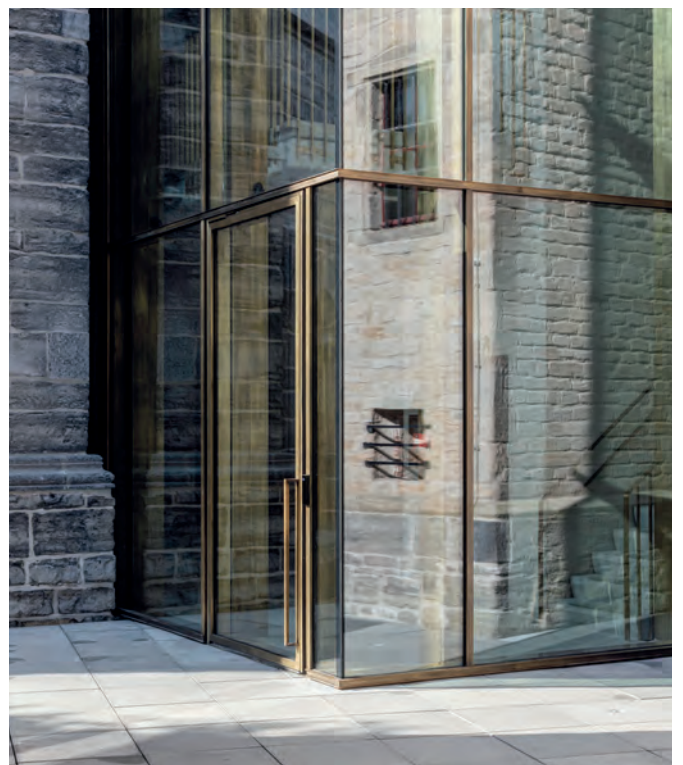
The restoration of this important work of art was the driving force behind the project to create an ambitious new visitor centre. This was all the more important given the 'Flemish Masters' regional tourism project and once it became clear that the art work needed to be exhibited better and made more accessible. In order to achieve this, the famous altarpiece was once again given a prominent posi-



The towering glass front around the new entrance is a mullion-transom construction made using VISS.



The transparent areas were supplemented with wood, concrete and simple ceramic tiles. Metal provides the link to the original features.





The glass stair tower with integrated lift on the outer wall provides barrier-free access. Thanks to the large amount of glass, the intervention preserves the view of the original fabric of the building.



tion within its religious location – in the Sacrament Chapel of the cathedral. While integrating the art work into its original liturgical setting means it is showcased in an optimal location, this also poses a considerable challenge. Today, the precious work is protected by an air-conditioned display case. Another problem arose from the fact that this is an actively used place of worship that is primarily intended for liturgical purposes and needs to be kept open for religious believers. In parallel to this, routes had to be created for visitors primarily interested in cultural artefacts so that the different flows of visitors are organised and distributed as harmoniously as possible. And all this without compromising the historic building.

### A light-footed solution

The existing crypt and part of the choir were chosen as the centrepiece of the new visitor centre. Here visitors are presented with information about the work of the brothers van Eyck and many other treasures. The latest virtual presentation techniques such as augmented reality are used here. They also tell the story of the cathedral, which was first consecrated in 942, and was once the centre of one of the most powerful cities of the Middle Ages. Traces of the original Romanesque building can still be seen in the crypt, which is adorned with murals. The church above it, however, grew even larger and more magnificent over time. Around the middle of the 16th century, the church became the cathedral it is today. From the crypt, the route takes visitors to the highlight of the tour: the ‘Holy Lamb’ by the van Eycks in the Sacrament Chapel. To ensure direct and barrier-free access to these areas and the various floors, Bressers Architecten from Ghent designed a glass stair tower with an integrated lift for the outer wall. Their intervention followed two important design principles: continuity and confrontation. All new interventions aim to achieve maximum integration into the existing architecture. In the case of the cathedral, this was realised by consistently repeating its architectural language and creating a ‘clear path’ through the series of circulation areas.

### Profiles specific to the building

The choice of materials also played an important role in ensuring continuity. The new elements are largely made of glass, enabling visitors to still see the fabric of the original cathedral building. There is inevitably a confrontation between new and old elements. In order to provide a subtle stage for the building’s main attractions, the transparent areas were supplemented with wood, concrete and simple ceramic tiles. Metal, or brass to be more precise, provides the link to the existing features as it is used prominently throughout. It is picked up by the new arched metal doors

and windows in the vestibule area of the cathedral. These were constructed using highly thermally insulated Jansen VISS steel profiles with a cover cap, normally available in aluminium but in this case made of brass and bronze. The towering glass front of the new entrance in the corner between the choir and the side chapel, together with the new entrance, is also a construction made using Jansen VISS, in this case the mullion-transom option. The curtain wall in the dome was connected using a screw coupling and welded to the outer wall. The steel profiles were specially selected for the building and meticulously installed there by the metalworkers from Lootens. All the Jansen profiles – VISS and Janisol – were given a special coating to prevent any electrolysis and corrosion between steel and brass. The planners carried out an investigative design process specifically for the cathedral with BLAD (Bressers Laboratory Architecture Design) in close collaboration with the client. The refurbishment and extension of the cathedral building using steel and glass elements that are both modern and artistic make it an architectural masterpiece for the 21st century from both a functional and an aesthetic perspective. (NS) ■

### PROJECT DETAILS

**Client:**

St. Bavo’s Cathedral

**Architects:**

Bressers Architecten, Ghent

**Metalwork:**

Lootens, Deinze

**Steel profile systems:**

VISS, Janisol



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## Paragon 700 Boutique Hotel & Spa Ostuni, Italy



# Centuries-old gem

The relatively new boutique and design hotel Paragon 700 pays homage to the history of its location. While on holiday in Ostuni in Apulia, Italy, a few years ago, interior designer Pascale Lauber from ID Living and her partner Ulrike Bauschke fell in love with the only splash of colour in the otherwise pure white city. Over several years of work, they managed to transform the elegant red palace dating from the 18th century into a small luxury retreat. A custom-made product consisting of Janisol profiles helped them to realise their very unique style.



The owners immediately noticed that the stones on the façade of the Red Palace are reminiscent of a diamond. One of the largest diamonds in the world is known as the 'Paragon'. Since their jewel of a building is located between the 700th and 800th district of Ostuni, the name 'Paragon 700' was quickly born. Given the fact that it also has the largest private garden in the city, the compact building painted in Pompeian Red is a unique focal point – an oasis in the heart of the city. Historically, it was the centre of the social and cultural scene until the 1970s. It was at that time that things fell quiet around the building. That is until just a few years ago, when the two women discovered the empty building for themselves and gave it a new lease of life. In order to preserve the history of the building, the earliest parts of which are thought to date back to the 17th century, while at the same time creating a luxurious ambience, they renovated the entire building and made various modifications. The renovation of the Palazzo Rosso took three years. As part of this work, the distinctive cathedral ceilings were reconsolidated and today these play a key role in creating the atmosphere of monastic tranquillity in the rooms. Traditional craftsmanship such as monastery doors and majolica tiles have been preserved and highlighted. Additional treasures were also revealed, such as unique neoclassical frescoes that were uncovered when the wall paint was removed from the interior rooms. The palace's former water cistern, seven metres below the ground, has been completely redesigned and is now the location for an exceptional spa offering a wide range of treatments.

### Boutique style that meets practical needs

The owners' great creativity and attention to detail are evident everywhere. All eleven rooms and suites are individually furnished and decorated. Antiques and furniture from different cultures are stylishly combined with contemporary design pieces and works of art. However, in order to elevate a building like this to the level of a luxury hotel, a large number of practical adjustments needed to be made to the building. Here too, the owners were able to indulge their love of design. This can be seen in the windows and the door to the restaurant, an old stone hall with

a vaulted ceiling, leading onto a terrace. For these, Pascale Lauber designed asymmetrical profile shapes with sash bars, evoking the appearance of a diamond. They were manufactured using the Janisol steel profile system. By choosing to use Jansen's product, Pascale Lauber opted for a design-friendly, thermally separated profile and chose to work with, in her words, the 'world leader' in this sector. The steel profile system makes it possible to economically manufacture individual pieces or small batches, such as arch windows, static reinforcements or design variants using commercially available steel profiles. The powder coating made it possible to adapt the colour to the elegant interior design of the surrounding area. At the same time, the highly insulating profiles meet the requirements for sustainable and environmentally friendly running of this semi-public space. After all, 'green' hospitality and sustainability are particularly important to the owners. With this approach and the appropriate tools, the empty palace has once again been transformed into a precious jewel that meets the highest standards. (NS) ■

### PROJECT DETAILS

**Client:**

Pascale Lauber and Ulrike Bauschke

**Architects:**

ID Living Srl

**Metalwork:**

Tecnoinfissi Palumbo Snc, Ostuni

**Steel profile system:**

Janisol

With their special geometry, the highly insulating Janisol profiles are reminiscent of a diamond and meet the requirements of sustainable and environmentally friendly renovation.

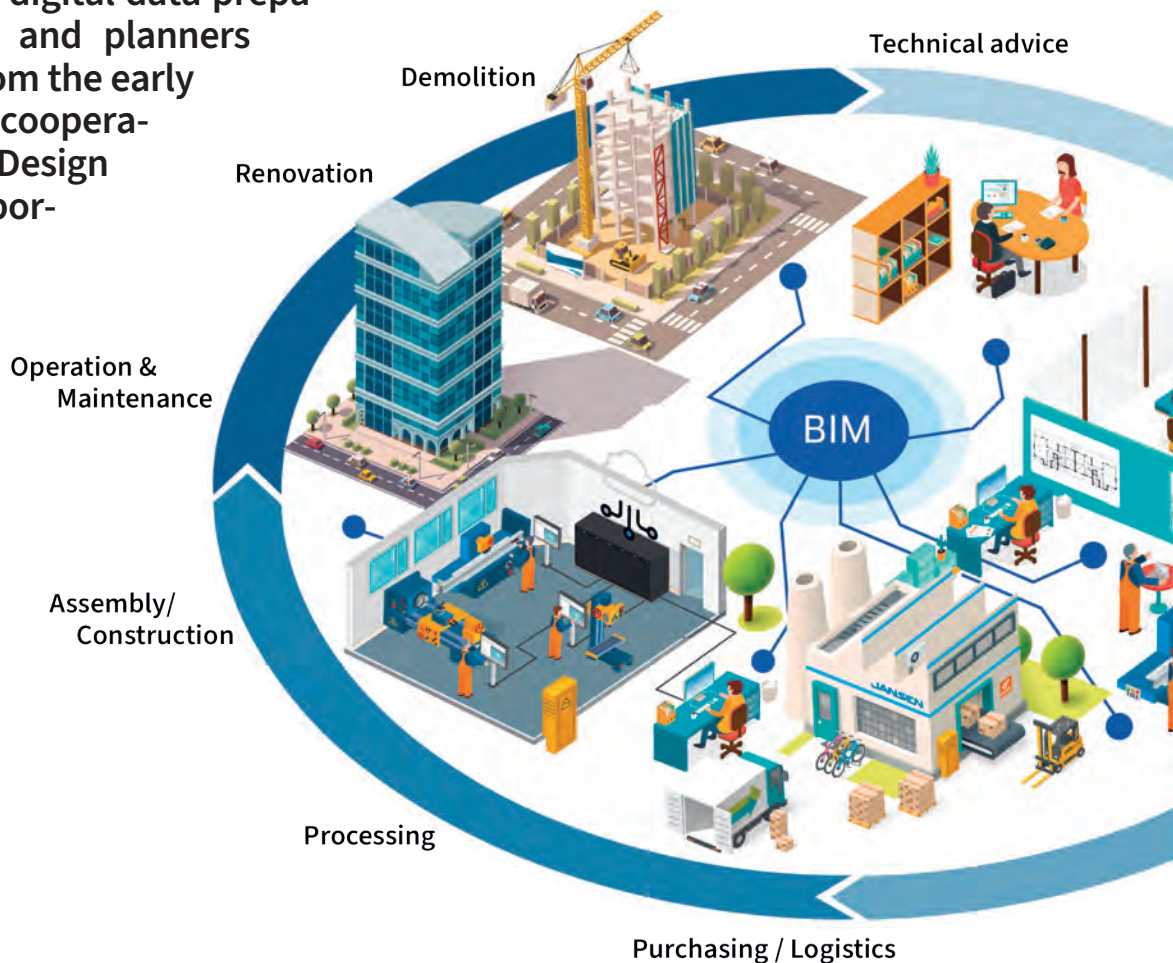


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## Planning and building in BIM (Building Information Modelling)

# Design meets digital planning and construction

BIM has become increasingly popular in recent years and is now largely state of the art. Thanks to the continuous digital data preparation, architects and planners already benefit from the early planning phase in cooperation with Jansen. Design aspects are an important factor.



In the company's own interest, work has already been underway since 2015 on digital processes for architects, planners, fabricators and operators of buildings in order to offer users added value in the world of digitally supported planning and construction. Through digital data preparation, Jansen supports architects and planning offices right from the very first phase – conception, planning and specification. Via the BIMobject cloud, Jansen offers BIM models of various steel systems for individual download. As part of the manufacturer initiative 'productsforbim', Jansen is one of the first to offer digital models of their window, door and façade systems. Jansen promotes the holistic planning approach through digital twins. BIM models are available to architects and planners as 3D elements in Autodesk Revit® and ArchiCAD® formats without restriction and free of charge. We support fabricators in the BIM process with the JANIssoft calculation software, which can be used to read in Revit models or create new object-specific models. Last but not least, the good design of our products means that the required documentation is comprehensively prepared and digitally available for all participants.

### Simplified planning with high added value

All Jansen systems are designed for planning with BIM. As a manufacturer of building products, we focus on the aspect of how product-specific manufacturer data enters the construction process and at what point in the construction which information is required.

BIM presupposes that 3D architecture programs such as Revit (Autodesk) or ArchiCAD (Graphisoft) are used for the construction. The advantage of this 3D modelling software is practically almost self-explanatory:

They detect and reduce any design errors at an early stage (collision checks on the overall model) and provide reliable quantity information. For example: Instead of counting all

the doors in 2D CAD drawings, in the 3D modelling software packages all the doors installed in the building can be determined at the push of a button and thus the costs can also be elicited at an early stage. Another benefit is: The client receives an almost photo-realistic representa-

tion (high-resolution renderings) of the commissioned building at a very early stage; materials used are visualised. A virtual tour of the building offers enormous added value compared to the conventional working method. The client has the opportunity to influence the project at a very early stage. Also misunderstandings or misinterpretations between the client and the architect are avoided, as the object can be viewed in 3D in advance.

### Digital collaboration in the construction industry

Jansen BIM models thus make it possible to design window, door and façade systems which can then be combined, visualised and optimised as early as the building planning stage. The BIM process offers great potential for cost and time savings in construction. Large construction projects in particular are a particular challenge for digital collaboration. Standards for data formats must be created so that the individual digital models in the building provided by the respective manufacturer can also communicate with each other. So it all comes down to the interfaces. As an architect, engineer, designer or planner you receive free access manufacturer-specific BIM objects. The Jansen BIM models are used as 3D elements for digital building models. These include information on both geometry and product data. The BIM models can be downloaded for Revit and ArchiCAD as well as in neutral IFC format on request.

### Multifaceted range of services

Thanks to the tried-and-tested JANIssoft software, Jansen Revit interface ad hoc-specific BIM models can be created at the customer's request. Even tests, calculations and dimensioning are part of the range of services. In the Jansen Docu Center, you can call up all support documents for the steel profile systems. There you will find the latest versions of the delivery programs, processing documents, relevant certificates and evidence required by the metal fabricator for declarations of performance and required CE markings. In addition, we offer brief tutorials. In these, the processing of certain products is explained by the experts of the Technology Centre. ■



[jansen.com/bim](http://jansen.com/bim)



QR code: Jansen BIM models – Introduction





## KHI House Methoni, Greece

# Spatial continuum in white

A bright white building with four rounded arms: like a stranded giant starfish, this stunning villa is embedded in the arid soil of the Peloponnese. The building has just a few windows in order to provide additional protection from the heat and these have been positioned very deliberately to showcase the view even better.

Amid a shimmering heat haze and dry, dusty ground, the gnarled olive trees provide limited shade. Here at the southwest end of the Peloponnese, the peninsula in the south of the Greek mainland, lies the small port town of Methoni. This town was mentioned by Homer in his epic 'Iliad' under the name Pedasos. It has a rather fierce history, successfully defending itself against the Spartans for a long time until 620 BC. Today, life runs at a more leisurely pace here. Tourists visit in modest numbers and there is no industry to be seen.

### Harmoniously embedded

In a gently sloping olive grove above Methoni, a white building nestles into the slope. Its extravagant design contrasts sharply with its surroundings. The KHI House consists of a single continuous rippling wall. In the floor plan, this forms a building structure in the shape of a four-armed starfish. The different length arms divide the building into four wings. The flat, almost windowless building frames a protected open courtyard at the extremity of each wing.



White space continuum: Huge window sashes open the way into the small courtyard and the large roof terrace.

The individual, narrow windows are deeply recessed into the reveal.



The bright white villa with its unique design was commissioned by an art collector couple. The team of architects therefore created an unusual building, combining elements from two building typologies: that of a gallery – closed, white and without direct light – and that of a monastery with enclosed gardens. As a result, the building exudes a great sense of inner peace and provides the perfect setting in which to display art and allow it to make an impression.

### Each window is a revelation

The outer wall is pierced in just a few places. The first of these is in the living area, where a huge sliding door opens up the building and expands the living space to the outdoors. Then the four wings of the building also extend to room-height window sashes at each end. Thanks to the Jansen Economy 60 steel profile system and its slender design, the casements impress with their vast glass surfaces and the minimal face widths of the slim profiles. The Jansen Economy 60 demonstrates its strengths particularly well in these double-leaf door elements, which are subject to heavy use. The design and functionality of these elements are fully geared towards creating a large opening in the outer shell. The other window openings in the bedrooms, bathrooms and ancillary rooms – individual, vertically oriented narrow windows that are deeply recessed into the reveal – are also constructed using Jansen Economy 60. The proven burglar resistance and mechanical strength of the steel profile system with a construction depth of 60 millimetres is particularly appreciated in villas and sparsely populated regions.

Despite the heat of southern Greece, the extravagant building structure exudes a cool sobriety. It forms a protective refuge that is almost completely closed to the outside. The building, which covers an area of approx. 200 m<sup>2</sup>, is almost pressing itself into the ground and emerges from it at varying heights. Its height is constrained to the tops of the surrounding olive trees. From the highest point in the centre of the building, the outer wall tapers down to 1.20 metres at the end of each wing. The excavated earth was reused to allow a harmonious integration of the project into the agricultural environment. The accessible roof with its back wall curved to the south-west is reminiscent of Villa Malaparte on the island of Capri, offering a wonderful panorama of the deep blue sea below.

The seemingly endless curves of the outer wall characterise the building, give it its striking shape, determine its height, create interior spaces and define the adjoining outdoor spaces; the wall of the room

Thanks to the Jansen Economy 60 steel profile system and its slender design, the casements impress with their vast glass surfaces and minimal face widths.



continues outdoors and surrounds a lemon tree in the courtyard. The building has only a few windows but these are very deliberately placed. Each view thus becomes a revelation, presenting the changing colours of the sky and the landscape as a framed picture.

This also applies to the façade: The curved white wall creates a strong presence of the sky, and of light and shadow. The surface of the outside of this wall is animated by vertical ripples; the sun creates a fascinating play of shadows on the undulating surfaces.

### Sacred spatial experience

Towards the south-west and between two wings of the building, a white metal gate marks the entrance. The building behind it has a flowing entrance area, creating an almost sacred spatial experience. This open space connects and unites the four wings of the building, leading visitors to the living and dining area. Inside, the continuous white surfaces form a fascinating sequence of rooms. The white ceiling, white walls and the almost white terrazzo floor underline the flowing spatial continuum.

The public areas are contained within the building wing that extends towards the east and is around 16 metres long and 5 metres wide at its widest point. In the adjoining courtyard, a staircase leads along the round outer wall up to the roof terrace. An island has been placed lengthways in the middle of the living area. From here, a floor-to-ceiling window front with sliding doors offers a view of the garden terrace and the sea beyond. The terrace is largely sheltered from the sun by a canopy and it leads over to a swimming pool. The other wings of the building each house the private areas such as the bedrooms, bathrooms and adjoining rooms.

‘The KHI House combines two extreme conditions that complement each other – the courtyards that offer a meditative enclosure, and the east wing and the roof, which, in contrast, offer an unobstructed panoramic view of the sea,’ explains Theo Sarantoglou Lalis. This arrangement creates a visual intimacy, leading to quiet, contemplative spaces. KHI was designed by London-based architects Theo Sarantoglou Lalis and Dora Sweijd of LASSA Architects. The white villa was built by local contractors, who were supported by LASSA with their experience in digital design and the manufacture of non-standard parts. (GB) ■

### PROJECT DETAILS

**Client:**

Private

**Architects:**

LASSA Architects, Theo Sarantoglou Lalis and Dora Sweijd, London/Brussels

**Metalwork:**

TD Steel (Daniel Detilleux)

**Steel profile system:**

Jansen Economy 60



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Olivia Star Business Centre Gdańsk, Poland

# Sloping high-rise building façade on the sea line

The upper floors of the Olivia Star Business Centre in the Oliwa district of Gdańsk are pretty edgy: from the top of the building to the 32nd floor, the façade inclined inwards by 12 degrees creates space for a fully glazed viewing platform.



**A high-rise building façade on the sea line must meet the most stringent wind load requirements. In spite of this, the architects doubled the size of the glass panels on the top floors of the building, which is also inclined inwards at this point. The VISS façade enabled them keep the number of mullions to a minimum.**

The largest business centre in northern Poland has been evolving in the tri-city area formed by Gdańsk, Sopot and Gdynia since 2010. It currently consists of seven buildings, among which the 180-metre-high Olivia Star Business Centre in the Oliwa district of Gdańsk occupies an 'outstanding' position in the truest sense of the word. However, it is not only its height that makes the building stand out from afar, but also its sloping façade: from the top floor to the 32nd floor, it tilts further and further inwards. The result is a viewing platform from which visitors can enjoy a breathtaking view over the Bay of Gdańsk and far into the hilly landscape of forests and lakes southwest of Gdańsk. The platform with glazed parapet is part of the three-storey restaurant and function area in the Olivia Star Business Centre, which is also open to the public.

The Gdynia-based architecture firm, BJK Architekci, chose the Jansen VISS façade system to create the mullion-transom structure, which is inclined twelve degrees inwards. Using the heavy-duty steel system meant that the glass panels were exactly double the width of the aluminium profiles of the office façades underneath. In other words, the VISS façade has reduced the number of mullions that disrupt the view to a minimum. As the building is located on the sea line (i.e. as if it were positioned on the open sea), wind pressure and suction forces of approximately 4000 Pascals were taken into account. This is why the façade constructor used stainless steel connectors from the VISS Fire steel profile system. There is no need to worry about the corrosive effect of sea salt, however, as the Baltic Sea is a brackish sea, i.e. a mixture of fresh water and seawater. As the salt water only feeds in from the North Sea via a narrow channel, the salinity of the Baltic Sea decreases the further east you go – in the Bay of Gdańsk it is less than 0.8%. By way of comparison, the average salinity of the North Sea is around 3.5%. (AMR) ■



#### PROJECT DETAILS

**Client:** Olivia Star Business Centre, Gdańsk

**Architects:** BJK Architekci, Gdynia

**Metalwork:** Defor S.A., Śrem

**Steel profile systems:** VISS façade, VISS Fire



QR code: more images



# Design Element Special Geometries

It's human nature: the pursuit of individuality. Accordingly, the buildings in which we live and work should also be different from others. Special geometries, i.e. windows, doors and façades in 'special' shapes, give buildings a unique and unmistakable appearance. In this way, object-related special geometries create added value that goes far beyond the purely functional aspect.

## Special geometries for unmistakable façades

Depending on the profile system, different window types are possible; for example, studio windows, round and segmental arch windows or bevelled elements. Doors are also possible, in order to individually design the entrance area. Steel profile systems from Jansen are suitable for public buildings with high levels of public traffic as well as for commercial and industrial buildings or upmarket residential buildings. Thanks to their versatile design options, an individual appearance can be achieved for every building.

## Individually designed roofscapes

With Jansen mullion-transom systems, individual roof glazing can also be realised. Due to their great freedom of form, not only are common roof types such as monopitch or pitched roofs possible, but steel is also ideally suited for glazed pyramids or domes with their usually complex structural connections. Whether insulated or non-insulated, with or without fire protection requirements: in a mutual dialogue, we develop the right solution for your very personal ideas regarding design, functionality and safety.

## Certified safety thanks to CE marking

While architects benefit from the wide range of variants and openings of Jansen steel systems, the CE marking of the building element is important to specialist planners. CE marking is always possible when a harmonised techni-

cal standard exists for the construction product. For windows and exterior doors, the product standard EN 14351-1 is authoritative. There is no harmonised standard for roof glazing, so that CE marking is not possible.

## CE marking for special geometries made from Janisol

In accordance with the EN 14351-1 product standard, various special geometries were tested from the Janisol, Janisol Primo, Janisol HI and Janisol Arte steel profile systems. As part of this testing, the following verifications were provided: Resistance to wind load in accordance with EN 12210, driving rain tightness in accordance with EN 12208 and air permeability in accordance with EN 12207. As a result, the verified values vary depending on the element type and fitting; however, the target value was always achieved or even exceeded. The respective performance values of the individual steel profiles are shown in detail in the delivery programme. This ensures a high degree of planning reliability for architects and a long-term financial advantage for building owners and investors. All the necessary documents and instructions for CE marking can be found at [www.jansen.com/docucenter](http://www.jansen.com/docucenter); The JANIssoft planning software enables a simple and efficient ordering process. ■

MOVE Amsterdam, Netherlands

# A building for mobility



The conversion of the Citroën building was based on the premise of ‘preserving and augmenting’. It’s not so easy to tell which parts of the building have been preserved and which have just been added. The latter includes a new entrance with a semicircular stairwell: a fully glazed post and mullion structure made of steel profiles curved into the floor plan.



Clear lines, white façades and rounded corners characterise the southern Citroën building on Amsterdam's Stadijnsplein, with an unmistakable stylistic reference to the architecture of Frank Lloyd Wright. Much of Jan Wils' modernist design from the 1930s disappeared during a renovation in the 1980s, when the building was gutted and converted into a multi-purpose building. Among other

things, the numerous sash windows were replaced by metre-long ribbon windows. The aim of the current renovation was to reverse this deformation of the original design. For this reason, the small-format window openings in the masonry façade were restored and sealed with delicate sash windows from the Janisol Arte 2.0 steel system. A coat of white mineral paint has restored the original appear-

ance of the historical structure. However, a large part of the building fabric proved to be impossible to renovate, so was demolished and rebuilt in line with Wils' design language – albeit with much more transparency. In keeping with the current trend, the central area of the new building houses a large event space with a huge glass roof.

### Stairwell with all-round glazing

The interface between the old and new buildings is marked by a new entrance with stairwell glazed all the way around; 'around' being the operative word, as the 15-metre-high glass façade was realised with steel profiles cur-

### Hydraulically accessible façade element

Another special feature in terms of functionality and design is the existing façade facing the Stadionsplein with the new main entrance. At first glance, the floor-to-ceiling glass structure looks like a standard post and mullion façade. Only on closer inspection is it apparent that one façade element differs from the others in the parapet area, in that it can be pivoted up 90 degrees using a hydraulic system. When open, it acts as a canopy under which the interior and exterior space merge imperceptibly. This inviting gesture leads directly to Pon's 'Mobility Experience Center'. The company is known in the Netherlands as



ved in the floor plan. The architects refer to it as an 'integral construction' because the steel staircase also supports the glass, which is curved in such a way that it stabilises itself. The curve is only about one third of the length, with two thirds of the pane being linear. The structural glazing façade was realised using the VISS SG steel system. The self-supporting stairs covered in white marble taper from the inside out and extend all the way up to the glass, eliminating the need for a handrail. The transoms act as a balustrade – an inconspicuous detail that lends the entire construction an almost playful lightness. The steel stairs, mullions and transoms have the same surface finish, so that the building, architecture and interior design merge into a single design unit. The steel staircase with the glass façade was pre-fabricated in the workshop of M.C. Kersten B.V., Amsterdam and was brought on site in ready-to-install elements.

an importer of Volkswagen, Seat, Audi and Skoda. What is less well known is that Pon also manufactures bicycles and develops car sharing solutions. Because abstract ideas such as alternative modes of transport are difficult to convey, Pon has initiated the 'Mobility Experience Center' with changing exhibitions on the topic of future-focused mobility. With its mix of businesses, restaurants and events, MOVE – as the building has become known since its transformation – offers the perfect setting for presenting the mobility solutions of tomorrow – in a building that has always been dedicated to mobility. (AMR) ■



## PROJECT DETAILS

**Client:** Bouwinvest Office Development B.V., Amsterdam

**Architects:** Bierman Henket Architecten, Esch; Bronsvooort  
Blaak Architects, Amerongen

**Metalwork:** M.C. Kersten B.V., Amsterdam; Rollecate Hoofd-  
kantoor, Staphorst

**Steel profile systems:** VISS, VISS SG, Janisol Arte 2.0



QR code: more images

## Rules for good design?

# From the Small to the Large

**Can architects learn from designers? Usually it has been the other way around.**

**Postmodernism even spoke of microarchitectures in design. However, the industrial designer Dieter Rams has put forward ten theses for a good design that are absolutely worthy of architects' consideration.**

The history of architecture is full of rules, theses and theories about good architecture. The best-known are certainly the oldest of the Roman architect and author of the 'Ten Books on Architecture,' published around 20 B.C. The Vitruvian categories *firmitas* (strength), *utilitas* (usefulness) and *venustas* (beauty) have not lost their validity to this day and are also in the ten theses of the German industrial designer Dieter Rams, which we are talking about here. To this end, let's first introduce the author of these theses.

### **Dieter Rams**

Rams, born in Wiesbaden in 1932, is best known as the chief designer of the electrical appliance manufacturer Braun. In 1955, he triggered a kind of design revolution when he launched white, function-oriented, clearly designed radio sets that left the polished wooden chassis with gold trim behind. Initially, the legendary HfG Ulm was involved, and the best-known product of the early days was the SK 4 radio-phono combination with a transparent acrylic glass lid, which soon went down in design history as 'Snow White's Coffin'. Their fathers, Dieter Rams and Hans Gugelot, were not either of them industrial desig-

ners, but architects. Dieter Rams had studied architecture and interior design at the Wiesbaden Werkkunstschule and initially worked in Otto Apel's office in Frankfurt on the US Consulates General. Here he also met Skidmore, Owings and Merrill from Chicago, who impressed him in no small way. It was more by chance that he came to Braun as an architect and then, after a short time, to industrial design, because it was recognised that only an in-house design department was in a position to produce something really new in close coordination with technology.

Dieter Rams always designed with a 6B pencil on an architect's roll, mostly at right angles and with precisely designed details. Today, he is regarded as one of the world's most influential industrial designers of the 20th century, to whom not least Jony Ive of Apple has referred. The designer Rams has created over 350 products for Braun, the furniture manufacturer Vitsoe as well as several other companies, all of which exhibit a common and stringent design language, but form anything but a schematic style.

### **Ten theses about good product design**

Rams formulated his ten theses on good product design (theses, mind you, not rules!) successively between 1975 and 1985, always insisting that they were not set in stone, but be taken further by younger generations. The occasion was initially to define principles within the company in order to further develop the design attitude in the right direction. Through his many lectures, most of which ended with the ten theses, they became popular not only in de-

sign circles but also in the general public discussion about the things around us. It is noteworthy that as early as the 1980s, he emphasised environmental compatibility and sustainability. To this day, his mantra is 'less, but better'. On the one hand, this reflects 'Less is more', which can actually be traced back to Peter Behrens, but was propagated above all by Ludwig Mies van der Rohe in the USA. On the other hand, the 'less is a bore' of postmodernism, the short-livedness of which no longer seems responsible to him from an environmental point of view.

Braun products, on the other hand, had and still have a very long product cycle and are repairable. The MPZ 2 citrus juicer, which is still available, will even celebrate its 50th birthday in 2022 and is still unchanged in terms of design. Ram's plea, however, is more than criticism of an 'ex and hop' mentality of throwaway consumption. It is indeed that too, but above all Dieter Rams was and is concerned with higher product quality, which is ultimately not only more durable, but also more enriching. This also includes an emotional approach. His designs are not cold and forbidding, but have a fascination all of their own, convincing proportions, inventions of form, genuine detailed solutions and a subtle play of colours. It is no coincidence that there are more collectors of Braun products than of any other industrial company – apart from vintage cars.

### Design theories as architectural theories?

To what extent can Dieter Rams' ten theses be transferred to architecture – I mean 1:1? Good architecture should certainly be innovative, demonstrate new possibilities and incorporate the latest technology. Of course, it should also be useful, as Vitruvius demanded with his 'utilitas'. Beauty also has something to do with usability, with identification, emotional and cognitive access and, last but not least, with long-lasting acceptance. And architecture should also explain itself and not become a maze. Clear sign functions, which make operating instructions largely superfluous, have always been a particular strength of Braun. Honesty? Whole armies of architectural theorists have talked about this, from Semper's demand for material honesty in the 19th century to the honesty of the façade, which promises no more than it delivers on the inside. Unobtrusiveness is a challenge if it is not to lead to monotony. In this respect, so-called classical modernism was certainly more linguistically talented than the soulless post-war modernism. And the gift of post-modern architecture was to find forms for different types of buildings, that make a city legible. One is reminded of Venturi's

'duck', even if you often overshoot the target. Durability, not only in the sense of strength, but also visual endurance, is certainly one of the most important of Dieter Rams' theses. It is more than questionable whether office buildings have to be demolished after 30 years in order to erect new fashionable buildings, that don't last much longer either. The longevity of products and architecture is the great environmental and resource-related challenge of the present.

And details are not only the soul of products as the industrial designer Charles Eames once said, but certainly also of architecture.

Environmental friendliness results from what has been said. What remains is Dieter Rams' final thesis: 'Good design is as little design as possible. Back to the pure, the simplicity.' Every architect must answer the question of concentrating on the essentials for himself or herself. Ultimately, it is the question of every design.

Dieter Rams does not provide an instruction manual in his ten theses. He actually asks questions that every designer, whether of things or of buildings, have to answer for themselves. I think they are more topical than ever. ■

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Prof. Dr. Klaus Klemp, born in Dortmund in 1954, was, until 2020, Professor for Design History and Design Theory at the Offenbach a.M. School for Design and Curator for Design at the Museum of Applied Art, Frankfurt a.M.; to this day, he is Director of the Institute for Design Exchange (IDeE) at the HfG Offenbach, board member of the Dieter and Ingeborg Rams Foundation, on the advisory board of the Gesellschaft für Designgeschichte und Chairman of the Ernst-May-Gesellschaft, Frankfurt a.M.; he has produced numerous exhibitions and publications on architecture, art and design.



### **Good design is innovative**

The possibilities for innovation are not, by any means, exhausted. Technological development is always offering new opportunities for innovative design concepts that optimise the practical value of a product. But innovative design always develops in tandem with innovative technology, and can never be an end in itself.

### **Good design makes a product useful**

A product is bought to be used. It has to satisfy certain criteria, not only functional, but also psychological and aesthetic. Good design emphasizes the usefulness of a product whilst disregarding anything that could possibly detract from it.

### **Good design is aesthetic**

The aesthetic quality of a product is integral to its usefulness because products we use every day affect our personal environment and our well-being. But only well-executed objects can be beautiful.

### **Good design makes a product understandable**

It clarifies the product's structure. Better still, it can make the product talk. At best, it is self-explanatory.

### **Good design is honest**

It does not make a product appear more innovative, powerful or valuable than it really is. It does not attempt to manipulate the consumer with promises that cannot be kept.

### **Good design is unobtrusive**

Products fulfilling a purpose are like tools. They are neither decorative objects nor works of art. Their design should therefore be both neutral and restrained, to leave room for the user's self-expression.

### **Good design is long-lasting**

It avoids being fashionable and therefore never appears antiquated. Unlike fashionable design, it lasts many years – even in today's throw-away society.

### **Good design is thorough down to the last detail**

Nothing must be arbitrary or left to chance. Care and accuracy in the design process show respect towards the user.

### **Good design is environmentally friendly**

The design makes an important contribution to the preservation of the environment. It conserves resources and minimises physical and visual pollution throughout the lifecycle of the product.

### **Good design is as little design as possible**

Less, but better – because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity!

Version of October 1995 (slightly modified and expanded in 2002)









Depot Boijmans van Beuningen Rotterdam, Netherlands

# Art:fully mirrored

The way that the Boijmans van Beuningen viewable storage area reflects its surroundings means that the building itself has an inconspicuous presence. While the VISS structural glazing façade made from the curved mirror panels may seem unassuming, it complies with RC4 burglar resistance. This is important given the priceless works of art stored inside the building.

With the viewable storage area at Museum Boijmans van Beuningen, architects from MVRDV have created a new type of building: a publicly accessible art storage facility in which all of the pieces can be viewed. The extensive collection, comprising more than 151,000 works from seven centuries, is not only stored and conserved here, but also exhibited. Given the different conservation requirements, the repository has several climate zones in different room sequences, which can be accessed from the central atrium. Its sophisticated interior cannot be seen from the outside – ‘de Pot’ (the pot) as the Dutch have nicknamed it, is mirrored all around and from top to bottom. The Depot Boijmans van Beuningen was awarded the Dutch Glas Award 2021 for its unique design and has now also been named the Public Building of the Year 2021 by Architectenweb, the leading online platform for architects in the Netherlands. One of the reasons for this win is that the mirrored, convex shape surprisingly allows you to see the silhouette of Rotterdam at ground level. The 1664 mirrors, which have been arranged in 26 rows of 64 mirrors that stretch all the way around the building were installed in a VISS SG façade with the requirement of RC4 burglar resistance. The installation of the double-curved – and in some places triple-curved – panels using specially measured anchors required extensive engineering by both the system provider Jansen and its Dutch partner ODS as well as by the façade constructor Intal Producties Zuid. The biggest challenge, however, was in the entrance areas, where several automatic doors with pivot sashes were to be seamlessly integrated into the façade structure. The façade construction specialist Sorba Projects developed these swing doors in cooperation with Intal Producties Zuid. As they also have a reflective coating, the mirror image seen by visitors splits in two as soon as they approach the doors. Once you pass through the relatively small entrance, you enter the atrium, which is almost 40 metres high. From here, the tour takes you via criss-crossing staircases, walkways and galleries, and past numerous repositories, exhibition rooms and glazed workshops to the roof garden overlooking the 6th floor. The interior windows and fixed glazing on every level ensures that there is no doubt as regards the function of the building – the archiving and restoration of valuable works of art. Even the lifts pass glass display cabinets in which constantly changing exhibits are presented. All of the glazed inner façades have been installed in the Jansen VISS RC3 system with a fire protection requirement of EI60 and equipped with heat-insulated Janisol C4 RC3 fire-proof doors. Low-iron glass was used in the glazing. Thanks to its distinctly more neutral colour, this special glass guarantees an un-

adulterated view of the exhibits. On the roof terrace, visitors will find a sculpture garden surrounded by numerous trees that were planted to replace all of the trees that had to be removed during construction. The VISS façades on the roof structure, which house a restaurant among other things, comply with RC2 burglar resistance. From RC4 and RC3 to RC2: The advantage of the system solution with the Jansen VISS steel profile system is that different solutions can be implemented as one cohesive aspect, and additional requirements – in this instance, different classes of fire protection – can also be integrated invisibly. The façade had become a selfie hot-spot even before the opening of the exhibition depot. A striking effect is provided by the curved mirror on the façade distorting the reflection and making the Rotterdam skyline appear higher than it actually is. The 1664 mirrors are incidentally a kind of memorial wall, as they bear all of the names of the donors. Altogether, 35 private investors have provided 92 million euros to make the dream of a publicly accessible art repository a reality. The result is a building that is itself a work of art. (AMR)





Large glazing units in various exhibition rooms help to give visitors an idea where they are and help to establish a spatial relationship with the park that surrounds the building.



In the atrium, which is almost 40 m high, criss-crossing stairs and galleries lead visitors past numerous storage areas, exhibition rooms and workshops.

The installation of the double-curved – and in some places triple-curved – panels using specially measured anchors required extensive engineering by all those involved.

In the entrance areas, several automatic single and double casement swing doors have been seamlessly integrated into the façade structure.





The VISS façades of the roof structures, which are also mirrored in some areas, comply with RC2 burglar resistance.

## PROJECT DETAILS

### Clients:

Depot Boijmans van Beuningen, Rotterdam

### Architects:

MVRDV, Rotterdam

### Exterior façade:

Bespoke special solution with Jansen VISS SG RC4

### Installation:

Intal Producties Zuid B.V., Horst

### Double-curved swing doors on the outer façade:

Bespoke special design with Janisol C4

### Development, manufacture, installation:

Sorba Projects B.V., Winterswijk and Intal Producties Zuid B.V., NS Horst

### Roof structures:

Standard solution with Jansen VISS RC2

### Installation:

ZNR Zuid Nederlandse Ramenfabriek B.V., Rucphen

### Interior façades:

Bespoke special design with VISS RC3 EI60

### Installation:

ZNR Zuid Nederlandse Ramenfabriek B.V., Rucphen



### Fire doors:

Bespoke Janisol C4 RC3 EI60 special solution

### Metalwork:

Aalbers Wico, AC Renswoude

### Extra-high sliding doors:

380-cm-high Economy 60 EW60 standard solution

### Metalwork:

Hoefnagels Fire Safety, Tilburg

### Fire-proof revolving doors:

Standard solution with Economy 60 EW60

### Metalwork:

ZNR Zuid Nederlandse Ramenfabriek B.V., Rucphen



QR code: Video





## Rancho 6 Valle de Bravo, Mexico

# Inside in the woods, outside in the house

Heat and frost, high humidity, heavy tropical rain and a picturesque landscape: the architects of this property in Mexico had to take a wide range of conditions into account. However, the use of the large-scale VISS pivot door allowed them to implement their design concept without compromising.

It could hardly be more idyllic: this majestic property, which goes by the name of Rancho 6, is set in a clearing with a green meadow in the heart of a mountainous pine forest. The complex is nestled among the surrounding greenery, incorporating the trees into the architecture. The property consists of several buildings with gabled roofs and a low-rise building with a flat roof. The latter forms the heart of the complex, and includes internal spaces in the form of four atria containing numerous trees. It is, however, completely shielded from the outside. By contrast, the adjoining buildings with gabled roofs face outwards with huge floor-to-ceiling pivot doors opening up to the green surroundings and the forest.

### Tradition and modernity

The property is located 90-minutes' drive to the west of Mexico City in the wooded area of Valle de Bravo. The city has around 26,000 inhabitants and is situated by the

reservoir of the same name in largely mountainous terrain at around 1,850 metres above sea level. The architecture of Pablo Sepulveda Arquitectos subtly combines a traditional Mexican approach with a regional architectural style, natural building materials and earthy colours. This combination has been interpreted and implemented with a contemporary feel: Rancho 6 consists of cubic, rather compact buildings and archetypal gabled houses with extra-high interior spaces. Complete with modern, technically sophisticated solutions, refined interior design, stylish furnishings and art from all over the world, Rancho 6 is an urban oasis in the heart of this mountainous and rural province. The spaciousness of the buildings and their rooms gives them a prestigious, almost glamorous feel. In addition to the users, the architects also paid particular attention to the topography and, above all, the prevailing climate in the design.



**With this large-scale building-specific solution, the VISS façade profile system shows its strengths as a floor-to-ceiling pivot door.**

The large façade fronts and the connection with the surrounding area are the property's outstanding features.



Pablo Sepulveda Arquitectos combined a traditional Mexican approach with a regional architectural style.

Inside and outside become one when the huge fronts are opened allowing a pleasant breeze to flow through the house.



The refined interior design, stylish furnishings and art from all over the world make Rancho 6 an urban oasis in the heart of this mountainous province.

## Climate a key factor

The region is located in the tropics, more precisely in the cold tropics, where, due to the high altitude in the mountains, it can be quite warm during the day at 20 to 25° C, but frosty at night. During the summer between April and June, temperatures can reach as high as 30° C around midday. The rainy season follows from June to September, usually with heavy showers in the afternoons and evenings. As a result, it becomes very muggy. October to May is dry season. The climatic range with all its variations – heavy rainfall, intense heat during the day, cold at night, high humidity and strong winds – was taken into account by the architects when designing the property. This can be seen, for example, in the extra-high ceilings, the steep gabled roofs and the VISS pivot doors on the impressive glass fronts, which are up to five metres in height and therefore provide generous ventilation. In order to protect the indoor climate from becoming too hot due to the large glass surfaces in the summer months, Solarban 60 sun protection glass with a 19-mm air cavity and laminated glass was used. This blocks 99% of UV rays.

## Huge window – huge opening

The large window fronts of the cubic buildings and floor-to-ceiling pivot doors on the fronts of the buildings with gabled roofs are prominent features of the Rancho 6 complex. When closed, the pivot doors have the appearance of a glass wall surrounded by streamlined profiles.

The dimensions and the resulting weight of these pivot doors presented the metalworkers with major challenges: Each panel is five meters tall and 2.5 meters wide, which means each panel weighs around one tonne. The VISS façade system was used to ensure smooth and reliable operation for the customer in the coming years.

## For the most exacting design requirements

The VISS steel profile system offers a unique system solution for large façade openings that can be visually integrated into the building envelope without compromising the aesthetics. The thermally separated VISS profiles used in Rancho 6 had to be reinforced for safety reasons in order to withstand extreme wind loads or break-ins. To meet this requirement, Jansen offers a sophisticated complete solution for high-spec façade designs, by combining new additions to its range of profiles, such as the high-performance structural VISS steel profiles and the heavy-duty T-cleats.

This combination of building aesthetics, structural safety and efficient workmanship is evident throughout the Rancho 6 project. The grand scale of this property allows the VISS façade profile system to show its strengths as a floor-to-ceiling, modular pivot door. VISS combines the

highest design standards, simple elegance, technical skill and economic efficiency, and turns the opening of a five-metre-high pivot door into a real spectacle. The slender design of the window and pivot doors underlines the contours of the clear-cut architecture. The profiles become a frame for the magnificent view, while the pine forest becomes a framed painting. The indoor and outdoor environment meld into one when the huge fronts are opened and a pleasant air stream carries the scent of the pine forest through the house. Whenever there is heavy tropical rain, however, you can safely watch the raindrops patter against the large glass surfaces. If it's hot and humid outside, the high-ceilinged interior spaces become a place of refuge, while at night, when it's cold, the glass fronts protect against wind, cold and would-be intruders. (GB) ■

## PROJECT DETAILS

### Client:

Private

### Architects:

PSA Pablo Sepulveda Arquitectos, Mexico City

### Metalwork:

Venster Puertas y Ventanas, Mexico City

### Steel profile system:

VISS façade



QR code: more images

# Design as a Factor

**What exactly is it – good product design? Even as a manufacturer of steel profile systems with almost one hundred years of expertise, we have to face this question again and again.**

After the last issue of the architect magazine SCALE focused on the topic of safety, this issue is all about good design. It is not at all easy to describe what constitutes ‘good’ design in a steel profile system. Depending on the perspective from which you look at it – whether as a manufacturer, as a planner and fabricator or as a user – the aspects are completely different.

As a manufacturer of steel profile systems for windows and doors, façades and fixed glazing, we understand ‘good’ design to mean the interaction of form and function in the sense that they promote or complement each other. For example, the highly resilient material steel can be used to reduce the face widths of window and façade profiles to a minimum and thus increase daylight intake – without jeopardising their primary function as a component of the thermal building envelope. Highly insulating steel systems help to reduce the operating costs of buildings – not only because windows and doors made of high-precision steel profiles reliably close tightly, but also because the associated hinges and fittings function reliably for a long time. Long functional reliability, in turn, is an essential criterion for greater sustainability in the building industry.

In addition, steel is the most recycled construction material in the world. Its high level of disposal safety and the recycling economy that has been practised for decades are positive factors in the environmental balance of steel profile systems – an aspect that we want to take into account even more strongly than before in product developments in the future.

But no matter how sophisticated our steel systems for windows and doors, façades and fixed glazing may be, it is only when they are used in construction, i.e. in combination with other products, that they become ‘good’ architecture in the best case. The path from the individual product to the finished building is a long one and not always smooth: system providers, architects and planners and last but not least the metalworkers, must aim for the same goal in order to create ‘good’ architecture. Users intuitively sense whether a design is aesthetically pleasing or not: If the first impression touches them pleasantly, we at Jansen have also achieved our goal. ■

# OUTLOOK

## The Historic and Magnificent Whiteleys Building London, GB



Whiteleys, one of the most traditional department stores in London, was built in 1911 and was considered in its heyday to be an ‘immense symposium of the arts and industries of the nation and of the world.’ According to the plans of the architects Foster + Partners, the building is to be transformed into 139 flats, 20 new shops and restaurants, a cinema, a large gym and a Six Senses Hotel with 110 rooms as well as a social wellness club by 2023. Jansen has been awarded the contract for the exterior elements of the building’s listed façade. The tall window elements of the column-lined upper floor are to be finished in Janisol Arte 66.

## KANAL Centre Pompidou Brussels, B

The former Citroën Yser car factory built in 1934, is currently undergoing a transformation to a multifunctional art and cultural centre. In the process the old usage structure of the car production by the architects’ collective Atelier Kanal, consisting of NoAarchitecten Brussels, EM2N Zurich and Sergison Bates architects London, have skilfully reinterpreted it. The striking, column-free hall with a filigree glass-steel truss construction was designed like a church with a nave in the middle and side aisles. Today, this ‘Cathedral of Modernity’ is to become a symbol for the future art and cultural centre. Completion is scheduled for the first quarter of 2023. All Jansen systems will be used.

## Emperor’s Spa, Karlovy Vary CZ

The Emperor’s Spa in Karlovy Vary was one of the most modern and luxurious spa facilities of its time. Its complete reconstruction is currently in preparation, and will trans-

form the dilapidated building into a modern cultural centre. The filigree Janisol 2 window system and large windows from the VISS façade system in the fire protection version will be used. The construction project is scheduled from 2022 to 2023.

## Culture House Ceske Budejovice, CZ

The listed building, one of the first in the neo-Renaissance style in the Czech city of Budejovice in South Bohemia, was built in 1871 – 1872. During the refurbishment of the culture house VISS pivot doors were used, which are based on the proven VISS façade door, are being used. The planned completion is 2023.

## Yangtze River International Conference Center Nanjing, CHN

The Jansen systems VISS 60 and VISS 60 SG systems are being used, the high-tech façade in the structural glazing construction method. Completion is planned for 2022.

## Museo del Prado Madrid, E

The ‘Hall of the Rich’ is a noble building and one of the few remaining from the former 17th century palace ‘Buen Retiro’. Under the direction of the architectural firm Rafael Moneo, the magnificent interiors from the past are being renovated and given a new lease of life. New, state-of-the-art galleries and public spaces give the transformed hall a high degree of permeability. A new public walkway through the building with terrace cafés on the north side invites visitors to linger. Janisol Arte windows are used.

## Estadio Santiago Bernabéu Madrid, E

The world-famous football club Real Madrid is having its stadium rebuilt. Completion is planned for the end of 2022. Janisol Economy 50 doors have been installed.

# IMPRINT

**Publisher:**

Jansen AG, Communications  
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**Layout:**

Concept-B, Zurich: Daniel Bieri

**Translation:**

Apostroph Zurich AG

**Printing:**

Athesia-Tyrolia Druck GmbH (Paper: Papyrus Plano Art)

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