

## FREE YOUR MIND ON THE FUTURE OF BUILDING WITH REYNAERS AT BAU 2017

The Reynaers Aluminium's brand-new stand at the BAU 2017 exhibition in München from 16 to 21 January 2017, sets free the minds of architects, fabricators and other stakeholders in building design and construction. Designed to liberate the creative mind and to entice creative freedom, many of their innovations are integrated into the stand to do justice to the show's theme, *The Future of Building*.

The impressive range of Reynaers' products and solutions on display demonstrates the extent to which they have creatively tailored designs and technology to address worldwide building and construction trends. These include unique regional challenges flowing from climate and weather conditions.

### A New Window on the Future

BAU 2017 highlights Reynaers' ground-breaking new **MasterLine 8** aluminium window system. It is the successor of the internationally successful Reynaers Concept System, offering end-users enhanced levels of comfort and security. MasterLine 8 gives designers exceptional architectural freedom with 4 unique design variants, each available in 3 different insulation levels, to achieve made-to-measure performance in terms of energy-efficiency.

In designing the MasterLine platform, special attention was given to the manufacturing and installation of the windows. It provides an optimized production process that includes time- and cost-efficient assembly of its components and simplified installation of the finished elements. The latest additions to MasterLine 8 include a high-end balcony door to combine comfort and improved weather performance, a hidden vent solution and a ventilation vent for an optimal flow of fresh air with excellent water tightness.

### Window and Door Solutions of Distinction

Besides MasterLine 8, the Reynaers stand also presents a wide range of other window and door solutions, representing the new advanced extensions and innovative enhancements in terms of superior insulation, ventilation, fire proofing, air and wind resistance, offering new possibilities in architectural design.

The highly insulated **Concept System® 86-HI** offers a solution for an aesthetically pleasing double panelled entrance door. The flush door, typically used as main entrance, uses panels on both the interior and exterior of the door to give it a unique character.

**Sensity**, a highly insulated aluminium system for windows, combines the technologically refined aluminium system with high quality wood finishing at the inside. The thermally insulated aluminium frame ensures durability, low maintenance, wind-water tightness and acoustic performance, while the wood finish at the inside provides a warm aesthetical appearance.

**SlimLine 38**, a highly insulated system that combines comfort with the elegance of a unique slender steel look design, is the perfect solution for modern architecture and for renovation of steel-framed windows. At BAU 2017, the SlimLine 38 Classic double casement door variant and the SlimLine 38 Ferro design variant, demonstrate the possibilities of the minimalistic design appearance of the system.

The brand new **SlimLine 68** outward opening windows allow for maximum daylight exposure and feature excellent weather resistance combined with optimal insulation properties. The slim sight lines ensure that even in small windows daylight access isn't compromised in favour of performance.

The **CS 77-FP EI30** door on display is a high-quality flush door solution, certified with fire resistance class EI<sub>2</sub>30. It comes with an innovative glass corner solution: a full glass connection without a corner profile or fixed corner element. This provides an answer to current architectural demands for large glass surfaces with optimal safety.

#### Sliding and Folding Doors to open up your view

The sliding and folding solutions meet the growing architectural trend towards optimal daylight access and unobstructed views. Further innovative solutions such as zero threshold, a pocket solution and glass corners make sure boundaries completely disappear and seamlessly combine the inside with the outside.

The ultra-slim design of the **Hi-Finity sliding door** creates large transparent surfaces, with a light, sleek and elegant appearance to seamlessly extend the building's interior to the outside. The motorised Hi-Finity three-rail sliding door on display allows users to open up the space even further. The combination with a glass corner solution ensures an infinite view to the outside.

**Concept Patio® 155** is a premium insulating slide and lift-slide system, designed to create maximal glass areas, combined with increased comfort. The 2-rail door on display presents the possibility to open up the corner and slide the door panels in-between a wall, making the elements literally disappear. These type of solutions answers to the growing demand for contemporary living spaces with high performance sliding doors, offering ultimate accessibility and design features.

**Concept Patio® 45Pa** is a non-insulated sliding system offering a wide range of solutions ideal for applications in warm climates, winter gardens or the partitioning of indoor office spaces. The 2-rail variant on display addresses the increasing demand for the use of large sliding systems in high rise buildings. Such applications require high resistance to wind loads, in addition to comfort and security.

To guarantee full safety in the high rise applications without interfering with the transparency and design, the add-on **RB glass balustrade** is integrated on the CP 45 Pa sliding door. This answers to the architectural trend for high rise buildings without balconies.

The **Concept Folding 68** door combines design, comfort and space efficiency. The folding principle of this high-quality system allows users to combine thermal comfort and transparency. The wide range of possibilities to unfold up to seven glass panes, either to the inside or to the outside, helps to fade the borders between in- and exterior.

#### Opening the Curtains on Transparency

The ideal curtain wall solution combines performance and maximum daylight with design freedom. The solutions on display at BAU 2017 meet these demands head on.

**Concept Wall® 50** is a façade and roof system that offers unlimited design freedom and maximum transparency. The composition on display demonstrates its versatility and shows how an endless range of profile angles can be created without creating drainage problems. Throughout it retains a sleek inner and outer appearance and supports large and heavy glass elements perfectly.

The bespoke **Element Façade solution** on the stand was specially designed for Reynaers' new head office building in Duffel. To address all the needs of the building, this new system boasts aesthetical parallel opening windows that do not interrupt the reflection of the glass when opened. An intelligent design of cassette glazing and frame profile the insulation ensures the insulation without risk of condensation.

#### Services on Display

Next to high quality aluminium window, door, sliding, folding and curtain wall systems, Reynaers offers a wide range of added value services. These include among others dedicated research and development, testing and certification, bespoke solutions, support and training and automatization – all designed to make the life of their different partners, such as fabricators and architects, easier.

With **ReynaFlow** Reynaers offers fabricators an intelligent control system and workflow manager that optimizes production processes in the realm of 'smart manufacturing', also known as Industry 4.0. While most production processes are still manually driven, ReynaFlow digitally links the full manufacturing process, from preparation (cutting, machining), through connection and sealing to the final assembly and finishing. By providing on the spot information, tracking errors and monitoring each phase in real time, both quality and production times are vastly improved.

Reynaers also features its **Building Information Modelling (BIM)** libraries, which enables building project teams and their stakeholders to enhance their combined creative ability. The BIM libraries, which are Autodesk® Revit compliant, include a huge array of Reynaers' windows, doors, sliding doors and sliding/folding doors solutions.

### Living the Legend

The new Reynaers stand effectively integrates innovative solutions and technology, being more open and accessible, and featuring higher slim designs to emphasize its *'Together for Better'* philosophy. It creates a hospitable interactive space where creative partnerships can flourish and where stakeholders in the building process can team up to run the extra mile and to deliver superior state of the art architectural results.

This aligns well with its extensions to the head office in Duffel, Belgium, which features a high-tech experience and technology centre. The experience centre has a strong focus on virtual reality, offering digital services to the stakeholders. The extensions to the technology centre host new and state-of-the-art capabilities, both for testing and prototyping. Through a 3D animation model, visitors will already be able to bring a visit to this new Reynaers head office.

### Free your Mind

With more than 50 years of experience, Reynaers' display of innovative solutions confirms its thought and technological leadership and its ability to free the mind to fit the needs of market demands. Higher and more transparent designs, coupled with high insulation values and increased home automation enables designers to bring end-users tailor-made solutions with substantially more options and freedom of choice.

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#### More information:

[www.reynaers.com](http://www.reynaers.com)

<http://reynaers-international.prezly.com/>

#### About Reynaers Aluminium

Reynaers Aluminium is a leading European provider of innovative and sustainable architectural aluminium solutions. These include a wide variety of window and door systems, curtain walling, sliding systems, sun screening, conservatories, skylights, screens and systems to incorporate blinds and ventilation grids. Established in 1965 and with its headquarters in Duffel, Belgium, Reynaers Aluminium has offices in more than 35 countries worldwide. [www.reynaers.com](http://www.reynaers.com)

More detailed press releases are available for the main highlights of the Reynaers stand at BAU München 2017:

- **MasterLine 8:** the new generation of aluminium windows
- **Slim Line 38:** combining Ultra-Slim Profiles with High Energy Efficiency
- **Slim Line 68:** excellence in comfort
- **CS 86-HI doors:** Highly energy efficient CS 86-HI doors
- **Sensity:** Combining the Best of Aluminium and Wood
- **CS 77-FP:** Fire resistance for great designs

- **Hi-Finity Sliding Door with a new motor for ultimate comfort**
- **CP 155 Sliding Door:** Sophistication for quality and insulation
- **CP 45Pa Sliding Systems:** Aesthetic performance
- **RB Glass:** the add-on glass balustrade for optimal safety
- **CF 68 Folding Doors:** Open New Windows to Efficiency and Design Freedom
- **Concept Wall 50:** Unlimited creative freedom with maximum natural light
- **Highly insulated bespoke element facade**
- **ReynaFlow:** Reynaers brings Smart Manufacturing Solutions to the Window and Door Industry
- **Reynaers' BIM Models Available on Different Online Platforms**

## MasterLine 8: the new generation of aluminium windows

The ground-breaking MasterLine 8 aluminium window system is the successor to Reynaers' internationally successful Concept System. MasterLine 8 means again an important key moment in the 50 years of history of the company. With the launch of the Thermo System in the '70s and the current Concept System in the '90s, Reynaers Aluminium has grown, both nationally and internationally, into a leading company.

MasterLine 8 stands for maximum comfort and security for the end user, offering substantial architectural freedom with numerous design variants and scoring high on energy-efficiency. In terms of thermal insulation, Uf-values down to 1.0 W/m<sup>2</sup>K are achieved, depending on frame/vent combination and glass thickness.

Special attention was given to the manufacturing and installation of the windows. MasterLine 8 provides an optimized production process that includes time- and cost-efficient assembly of the components and simplified installation of the finished elements.

With MasterLine 8 Reynaers confirms its reputation as a pioneering developer of high technology and innovative solutions. New extensions to MasterLine 8 system are systematically launched.

### New Extensions to MasterLine 8

The MasterLine 8 **balcony door** is a high-end window-door with a low threshold of 20mm to combine comfort and improved weather performance. The balcony door is available as a single or double casement door and has both in- and outward opening solutions. Due to its large dimensions, the balcony door opens up the living space and guarantees optimal accessibility.

The door features numerous operating variants, including standard window or dedicated door hinges, locks and handles, both on the inside and outside of the element. The door is available in 3 different insulation levels for high insulated, low energy and even passive houses. It can be combined with top lights, creating even larger glass surfaces. MasterLine 8 can be motorized for ease of use.

Secondly, MasterLine 8 offers a new design variant. The **hidden vent** design ties in well with the minimalist architectural style. This special vent profile is invisible from the outside, concealed behind the outer frame which keeps the visible lining to a minimum.

A final extension provides for optimal flow of fresh air through the use of a unique **ventilation vent** solution. These ventilation vents are limited in width to ensure sufficient fresh air while ensuring full safety. The solution delivers both excellent water tightness and high insulation (Uf-Uw value of 1,1 W/m<sup>2</sup>K). Simple millings and adjustable end pieces ensure easy production and installation. The ventilation vents can be used with visible or invisible hinges.

### **SlimLine 38: combining Ultra-Slim Profiles with High Energy Efficiency**

With its ultra slim profiles and improved energy efficiency, the SlimLine 38 and SlimLine 38-HI combine elegance and comfort, resulting in the perfect solution for modern architecture and for renovation of steel-framed windows.

The highly insulated SlimLine 38 has a ‘steel’ look, available in three unique design variants (Classic, Cubic and Ferro). The windows are perfectly suited for contemporary buildings, where the unique slim lines allow for an abundance of light. Besides this, SL 38 is perfectly suited for the retention of existing structures - for example an older conservatory, allowing users to preserve the vintage appearance - or for renovation projects where steel frames have to be replaced. The system is well suited for floor to ceiling configurations, where the Georgian bars add to the architectural design. The profiles’ appearance gives a strong industrial and minimalistic architectural appeal to buildings.

#### **Highly insulated**

The SlimLine 38 series is characterised by highly insulated ultra-slim profiles, allowing both double and triple glazing without losing the sleek look. The solution is available in fixed, turn, and turn-tilt variations with  $U_f$  values down to  $1.7 \text{ W/m}^2\text{K}$  depending on frame/vent combination and glass thickness.  $U_w$  of less than  $1.4 \text{ W/m}^2\text{K}$  are achieved on a standard window section.

#### **Three unique design variants**

The *Classic design* variant of SlimLine 38 is inspired by the industrial appearance of “steel” windows, combined with improved thermal characteristics. In addition to the different window configurations, the SlimLine 38 Classic system includes single and double casement doors to suit the need for an entrance or a balcony door.

The SlimLine 38 *Ferro design* variant provides the additional steel bar shape, which is creating extra dimensions to the vents. The SlimLine 38 *Cubic design* is designed to reinforce the minimalistic design appearance of the window.

All windows and window-doors are available with hidden hinges to further add to the system’s excellent design.

In combination with its superior insulation capabilities, the system provides perfect harmony between durable material, timeless design and demanding architectural challenges.

### **SlimLine 68 - Excellence in comfort**

The new SlimLine 68 outward opening windows allow for maximum daylight access and feature excellent weather resistance and optimal insulation properties. The ultra slim sight lines ensure that even in small openings daylight access isn't compromised in favour of performance. This makes SlimLine 68 windows the ideal solution for renovation purposes in both domestic buildings and new buildings as well.

The SlimLine 68 windows can be equipped with different types of outward opening gear and can be glazed from both inside as well as the outside without compromising design and performance.

Thermal insulation delivers Uf-values down to 2.6 W/m<sup>2</sup>K depending on frame/vent combination and glass thickness. Air tightness up to 600 Pa (class 4), water tightness up to 600 Pa (class 9A) and wind load resistance up to 2400 Pa (class E2400) are achieved. The SlimLine 68 windows are PAS 24 certified.

### **Highly energy efficient CS 86-HI doors**

Concept System® 86-HI includes a highly insulated door system, which meets the highest requirements concerning safety and stability. The system is perfectly suited for triple glass applications. The overall insulation value (Ud) of the CS 86-HI panel door goes down to 0.8 W/m<sup>2</sup>K, making it one of the most energy-efficient systems available. With regard to safety, CS 86-HI can comply with burglar resistance classes 2 and 3, offering an ultimate level of security of building concepts.

The CS 86-HI door offers a solution for an aesthetical double panelled entrance door. The flush door, typically used as main entrance, integrates panels on both the interior and exterior of the door to give it a unique character. The system allows for extra thickness of the insulation material, resulting in a door with improved insulation values. The use of asymmetric thicknesses of insulation material for the door panel can guarantee an exceptional acoustic insulation.

The fully integrated hinges and door closing system increase the design appeal. The door can be equipped with a spy window of 63 mm glass without visible seams, or with other glass thicknesses in combination with glazing beads. For access control, a finger scanner or other key paths can be integrated into the panel.

### **Sensity: Combining the Best of Aluminium and Wood**

Sensity is a highly insulated aluminium system for windows, combining the technologically refined aluminium system with high quality wood finishing at the inside. The thermally insulated aluminium frame ensures durability, low maintenance, wind-water tightness and acoustic performance, while the wood finish at the inside provides a warm aesthetical appearance.

Due to the combination of wood and aluminium, this system is perfectly suited for different architectural designs.

To perfectly match the interior design, different types of high quality natural wood are available in different colour schemes. The aluminium at the outside allows users to personalize their windows by selecting from over 100 possible RAL colours, and from 60 structural Coatex surfaces. Users can also give it a wood-look finish, while maintaining the ultimate low maintenance properties of aluminium.

The combination of the aluminium and the wood is realised by the specially designed connection which eliminates the risk of wood distortion due to temperature and humidity fluctuations.

Sensity is beautifully complemented by Reynaers' specially designed PURITY accessories. These handles make windows come to life, giving them a unique touch of style and making them a true pleasure to use.

### **CS 77-FP: Fire resistance for great designs**

Concept System® 77-Fire Proof is a high-quality flush door and partitioning system that combines elevated requirements regarding aesthetics, safety and fire compartmentation and resistance. This Fire Proof solution has been developed as an extension to the standard CS 77 system, to benefit from the availability of an extensive range of profiles, hardware, solutions and functionalities. This includes e.g. the availability of burglar resistance, access control, panic and emergency exit functionalities and smoke leakage control.

CS 77-FP offers fire resistance classes EW 30, EI 30 & EI 60. To ensure proper compliance with the EN standards and acceptance by the different national approval bodies, the Reynaers' CS 77-FP system has been tested throughout Europe in various internationally recognized laboratories. These tests have been performed with different glass and hardware suppliers, resulting in the widest range of approved solutions.

The fire resistance class is tested by directly exposing the construction to a controlled fire in order to determine the performance related to stability, thermal insulation and radiation insulation over a certain amount of time. The fire resistance of CS 77-FP is achieved by adding specific materials and accessories to the standard CS 77 profiles in combination with the use of fire rated glass.

The extended range of approved CS 77-FP flush doors is available for all inward and outward opening types. This is realised with a full range of door locks and hinges to meet every kind of demand, from standard locks up to fully integrated solutions in building management systems, sleek barrel hinges and integrated door closers.

Both single and double leaf doors are available up to a maximum door leaf size of 1.32 by 2.75m. Glazed partition walls are available with a height up to 4.7m for EI 60 and up to 3.8m for EI60. Large glass surfaces up to 6.8m<sup>2</sup> and 5.5m<sup>2</sup> for EI 30 & EI 60 respectively allow to create a transparent feeling.

As an answer to the current architectural need for large glass surfaces, the CS 77-FP application is also available with an innovative glass wall and corner solution that provides supreme safety while creating large transparent surfaces. This glass corner is characterized by a full glass connection without a corner profile.

### **Hi-Finity Sliding Door with a new motor for ultimate comfort**

The ultra-slim design of the Hi-Finity sliding door creates large transparent surfaces, with a light, sleek and elegant appearance. This fully transparent and accessible sliding door seamlessly extends the house's interior to the outside.

As triple glazing demand and the need for larger panes is growing, the weight of the sliding elements is increasing, and thus the need for solutions to ensure the ease of use. To address this, Reynaers offers a new, stronger motor to drive the full-glass Hi-Finity sliding door conveniently and safely, offering panoramic views with ultimate comfort.

This new fully concealed motor ensures that the Hi-Finity sliding door opens and closes automatically by the use of a switch or by connecting the motor to a home automation system. This high performance motor guarantees optimum convenience in a safe and reliable solution. This motor can be configured to be combined with other motors, to operate multiple vents, such as a three-rail sliding configuration. This three-rail sliding door creates the possibility to open the space even further. In combination with a glass corner or open corner solution, Hi-Finity ensures an infinite view to the outside.

Despite the minimal visual side-lines, the system's high strength allows Hi-Finity to carry the weight of a large sliding glass pane up to 750 kilograms and fixed panels up to 1200 kg, with a maximum element height of 3.5 meters. This in combination with its high energy performance and minimalistic look makes Hi-Finity the best solution for low-energy contemporary architecture.

### **CP 155 Sliding door: Sophistication for quality and insulation**

Concept Patio® 155 is a premium insulating slide and lift-slide system, designed to create maximal glass areas combined with increased comfort. In order to achieve even improved Uf values, the CP 155 can be upgraded to High Insulation (HI). This makes the system suitable for low energy buildings. A specific variant of CP 155 monorail has achieved the Swiss Minergie® component label.

CP 155 is available with various opening possibilities and the low threshold option offers a solution to improve a building's accessibility. Optional automatic opening solutions guarantee a maximum of comfort. CP 155 can also comply with burglar resistance class 2, offering a safe and secure solution.

The lift-slide variant allows for the creation of triple glazed doors with extreme dimensions and weights up to 400 kg. Large-sized elements with heights up to 3 metres can be accommodated thanks to extension pieces that enlarge the outer frame. It also offers an aesthetical minimalistic middle section.

#### **Zero thresholds**

For easy, unobstructed access, CP 155 offers an optional zero threshold solution that can be applied to ensure an uninterrupted floor finishing. The dedicated rail profiles are available in different heights depending on the floor finish. To enhance the aesthetics of the floor finish in the multi-rail solution, and to achieve a cleaner look, rail profiles can be stopped where the element movement stops. The zero threshold option also includes a built-in draining system (cascade-system) to evacuate water.

#### **Open corner**

Having ultimate flexibility between protecting against the outdoor climate and opening up at any moment is the key ingredient of contemporary living spaces. The CP 155-Lift & Slide corner solutions allow to open both in- and outward corners, without compromising the systems' known benefits of comfort and insulation. A solution for fixed glass corners to provide optimal daylight and visibility completes the offer.

The open corner is applicable on CP 155-LS 2-rail and outside glazed monorail, achieving elevated performance classes for air- wind- and water tightness (3 – C2 – 7A) . The fixed glass corner can be applied on all CP 155-LS outside glazed monorails.

#### **The pocket option**

A modular pocket solution allows up to eight vents to be slid into an integrated wall cavity, thereby creating an open space without visible elements when the window is open. Optimal flush aesthetics in the open position are realized by applying the colour of the wall to the finishing profile.

### **CP 45Pa Sliding Systems for aesthetic performance**

Concept Patio® 45Pa is a non-insulated sliding system offering a wide range of solutions ideal for applications in warm climates, winter gardens or the partitioning of indoor office spaces. CP 45Pa applies the latest techniques, designed according to the highest European quality standards.

The sliding door offers solutions to the increasing demand for the use of large size sliding systems in high rise buildings. Such applications require high resistance to wind loads in addition to comfort and security. The additional reinforcements on the CP 45Pa, in combination with glued envelop glazing, make the system particularly suitable for high rise applications in warm climates.

To give architects all design freedom, the CP 45Pa sliding system offers the complete range of opening possibilities: from monorail to 2-, 3- to even 4-rail solutions, and pocket solutions, where the vents slide into the wall.

Moreover CP 45Pa realises an aesthetic solution for your building, with the minimalistic designs variants, Functional and Soft line.

### **RB Glass: the add-on glass balustrade for optimal safety**

Worldwide high rise residential buildings with full glass solutions without balconies are trending in architecture. As safety cannot be jeopardized by transparency and design, Reynaers developed its new balustrade RB Glass.

RB Glass is an add-on glass balustrade for window areas in high rise buildings. Even without balconies, users can now safely open their windows or sliding doors to enjoy an unobstructed view. The RB Glass solution is very flexible and is applicable to a wide range of Reynaers window and door systems (Concept System and MasterLine 8), and its sliding systems (Concept Patio and Hi-Finity).

Dedicated test results prove that RB Glass can hold glass panes up to 21,5 mm thick, with a maximum span of 2000 mm. Different assembly possibilities are fully documented to be compatible with building connections from all around the world.

## **CF 68 Folding Doors Open New Windows to Efficiency and Design Freedom**

Reynaers' Concept Folding 68 system comprises a competitive versatile bi-folding door and window solution that allows up to seven leaves to fold either to the inside or to the outside in 38 possible configurations and across four different threshold solutions. These options provide architects and builders all necessary diversity to connect building interiors innovatively with the external environment.

The CF 68 comes with dedicated and rationalized profiles, gaskets and gear combinations, designed to assemble and install much easier, faster and more efficiently. A relatively low number of profiles offers a maximum number of configurations; all allowing in- and outward opening types with the same profiles and accessories.

This unique concept, featuring an innovative adjustable frame profile, makes it possible to install the complete folding wall on site in one visit. It allows fabricators to adjust tolerances resulting from installing deviances easily to deliver optimal performances in air- and water tightness.

Slim vent profiles minimize the visible width of the midsection to 131 mm and the frame to 100 mm allowing users to create an element of up to 7 meters wide with a maximum height of 2,5m. All vents have the identical profiles and can be equipped with the same accessories and Reynaers handles. A main door entrance can be created by adding door gear to the first vent.

### **Sustainable comfort, elegance and safety**

The CF 68 offers a price competitive solution that answers the needs of sophisticated contemporary architecture, offering creative design, comfort, safety and space efficiency. It is designed to be opened and closed smoothly within seconds and with comfort and ease.

The system is available in four different threshold solutions, varying from a wheel-chair friendly flush threshold to three other options with different levels of high to low performance in terms of air- and water tightness and wind resistance.

Glass thicknesses up to 55 mm can be accommodated to allow triple glazing. All options offer very high insulation U-values meeting the most recent and near future market demands, with the CF 68-HI (high insulation) version being particularly well suited for high energy efficiency requirements.

The system's CF 68-AP (burglary resistance) version is classified as burglar resistant class RC 2, offering high levels of safety and peace of mind to building owners and occupiers.

### **Concept Wall 50 - Unlimited creative freedom with maximum natural light**

Concept Wall® 50 is a façade and roof system that offers unlimited design freedom and allows maximum transparency. Innovative solutions contribute towards the tendency to use big, heavy and thick glass panes. The standard CW 50 offers different glass support configurations to support glass with weights up to 150, 310 and 700 kg. Special bespoke solutions are available for even heavier glass weights.

The CW 50 system is available in several design and glazing variants. The design variants offer solutions for both the exterior and the interior of the building. The glazing variants range from using standard pressure plates, to structurally glazed and structurally clamped solutions.

Besides this, CW 50 includes different technical variants to comply with specified levels of fire-resistance and thermal insulation, delivering  $U_{cw}$  from 0.99 W/m<sup>2</sup>K up to 1.5 W/m<sup>2</sup>K depending on the selected profile combination.

#### **CW 50's multi-level drainage**

The Concept Wall 50 composition proves the unlimited freedom in façade design. It demonstrates its versatility and shows how an almost endless range of profile angles can be created without causing problems to water drainage, while keeping the sleek inner and outer appearance and supporting the glass effectively. The profiles can be connected to each other in various overlapping levels, whilst providing perfect performance in terms of water and air tightness.

#### **Larger elements and triple glazing**

A second extension to the CW 50 system makes the system perfectly suited for much larger glass panes and for the use of triple glazing. The maximum glass thickness can measure up to 62 mm and the system can carry a maximum weight of 700 kg thanks to a special glass support. With this addition in the CW 50 system, the system answers to most of the extra-large glass requirements. For even higher glass weights, specific bespoke solutions are available.

### **Highly insulated bespoke element facade**

A bespoke solution for element facade systems was specially designed for Reynaers' new head office building in Duffel. To address all the needs of the building, this new system boasts aesthetical parallel opening windows that do not interrupt the reflection of the glass when opened. This is achieved as a result of the different levels of the outer glass surface. In addition to the aesthetical benefit, it also produces a special vertical ventilation draft that assures more efficient ventilation.

The main challenge within this project was to maintain the insulation zone throughout the side walls of the recessed glass surfaces. With an intelligent design of cassette glazing and frame profile the insulation continues from the outer to the inner glass surface without loss of heat and without risk of condensation.

The new element facade concept meets the high requirements in water- and air tightness, wind load resistance and thermal insulation. It also offers the possibility to integrate heavy weight triple glazing, with weight of up to 845 kg for the fixed glass panels and 150 kg for the parallel opening windows.

***ReynaFlow: Reynaers brings Smart Manufacturing Solutions to Window and Door Industry***

With its ReynaFlow IT solution, Reynaers offers an intelligent control system and workflow manager that optimizes production processes in the realm of *smart manufacturing*, also known as Industry 4.0. This takes Reynaers' into Industry 4.0 implementation, achieving significant time and cost savings for its customers in the manufacturing of window and door solutions.

While many production processes still are mainly manually driven, ReynaFlow now offers a solution that digitally links the full manufacturing process, from preparation (cutting, machining), through connection and sealing to the final assembly and finishing. This enhanced communication capability is designed to improve the integration of production functions by tracking errors and monitoring each phase in real time, ensuring vastly improves production time.

In the current production process, as much as 90% of the total time required to manufacture an item is spent queueing. This represents the amount of time a person, signal or thing spends before being attended to or before value adding work is performed on it. Only 10% of production time is spent on physical touch; i.e. manufacturing the product in order to add value for the end consumer. Yet this where the management focus is.

**Enter Smart Manufacturing**

ReynaFlow achieves this in combination with ReynaPro; Reynaers' software developed by Orgadata, including a database of all profiles and accessories which allows the calculation and manufacturing of projects. True to the creed of Smart Manufacturing, ReynaFlow uses barcode tracking and tracing to better monitor production efficiency in the flow of work, including material, machines and manpower, from factory floor to final delivery.

Information is processed in real time providing the actual status of all running projects, tracking selected issues that affect the outcomes and setting production priorities. A digital manufacturing environment creates a paperless work floor on the back of ReynaPro data. This is fully integrated with articles on the Reynaers website and its regularly updated catalogues.

ReynaFlow has the capacity to provide analysis reporting on demand – also in real time. Pre-defined reports or export files cover all relevant data per project, workstation, operator, or per timeframe. This shifts the constructor's focus away from the 10% touch time to where it belongs: the 90% queueing time.

**Advantages for fabricators**

For *operators* this means less errors and improved comfort levels as a result of clearer instructions and access to the right information at the right time and place. It enables him to manage his location better through direct feedback in real time. *Supervisors* can look forward to vastly improved real time overviews, easy day to day monitoring, the ability to react immediately to critical issues and better quality management. The system provides improved and timely planning and support.

For *Management* ReynaFlow offers reliable production data in real time, providing accurate Key Performance Indicators on the utilisation of people, machines and projects.

## Reynaers' BIM Models Available on Different Online Platforms

Reynaers demonstrates its mission of providing support for architects, contractors and other building professionals with their projects by providing all information necessary to design and realize their projects. This is realised by the availability of the BIM (Building Information Modelling) models of the Reynaers systems on different online platforms.

BIM enables building project teams and their stakeholders to enhance their combined creative ability and manages the complete process during a building's design, construction and lifecycle from the earliest conceptual design right through to eventual demolition. The Reynaers BIM libraries, which are Autodesk® Revit compliant, include a huge array of Reynaers' windows, doors, sliding doors and sliding/folding doors solutions.

The models can be used to integrate different designs, plans and simulations into the total building project. This in turn enables much improved simulations and calculations on the complete building. The outer shape of the model is a realistic reproduction of the profile, displaying design variants of a system accurately when rendered. As a result, clear comparisons can be made between different product design variants to facilitate realistic decision-making.

Reynaers' BIM models are available on the corporate website and are also offered on BIMobject®, a library platform for BIM objects. This platform enables it to reach more actors in the building sector with their BIM models. These models can be downloaded using the BIMobject® App within Revit, or directly via the BIMobject® website ([www.BIMobject.com/Reynaers](http://www.BIMobject.com/Reynaers)). Within its first two weeks, the Reynaers BIMobject® page reached more than 10 000 visitors and more than 8000 models were downloaded.

Besides this, Reynaers is developing a BIM model configurator (*Simple as BIM*) to generate all possible configurations of the Reynaers systems. This configurator is linked to Reynaers' calculation and designing software, *ReynaPro*, to better meet the needs of architects and fabricators. Additional info, like U<sub>f</sub>-values, accessories, approved dimensions and more can also be added to the BIM models.