

# Element Façade 7

The element that  
builds the future



Reynaers  
Aluminium

Windows.  
Doors.  
Curtain Walls.

Together for better

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

# Urbanisation requires new building solutions



Urbanisation is rapidly shaping tomorrow's world. Half of the earth's population can be found within city limits. Predictions show that this number will increase to two out of three people by 2050. Cities are becoming hubs for technology and service-based economies, with direct links to transport and other infrastructure. The most energy-efficient and cost-effective way to accommodate the growing amount of people is vertically.

And as buildings are getting taller, advances in construction materials and design software push building limits to new heights, along with an increasing focus on energy efficiency and sustainability.

Real estate is shifting from merely selling assets to truly thinking from a customer's point of view. With buildings that drive communities and experiences, it is all about serving people. The real high-rise future is not just a standard office building, but a multi-use of offices in combination with residential and hotel functions. Next to this, the increasing density of cities brings with it the fact that

people will not accept the disturbances of construction sites anymore – such as traffic problems, noise and other kinds of pollution. More efficiency will therefore be required to drastically reduce construction times.

At Reynaers Aluminium, we cope with growing urbanisation by developing systems for accommodations, buildings for sports, arts, culture, infrastructure and offices. At the same time, we contribute to the possibilities of prefabricated building, bringing complete modules on-site. All our solutions have a strong focus on comfort, design and ceaseless attention to sustainability.

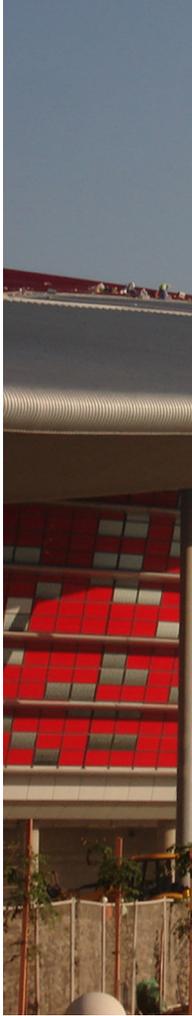
## An element façade is the outer skin of buildings that contributes towards creating unique urban silhouettes and exciting views.

While some buildings need to stand out in the city skyline, others need to blend in with the environment. Whatever the architectural requirements for tomorrow's buildings, every project must have a flexible and adaptable façade system.

As a concept, an element façade offers endless possibilities in design freedom whilst guaranteeing a high-quality finished product. It is composed out of pre-fabricated elements, which results in fast and economic installation with limited use of manpower and tooling – certainly compared to traditional curtain walls. This construction approach is extremely suitable for high-rise constructions, allowing for the necessary tolerances with regards to the building's movement. It also creates the opportunity to finish the construction of the building floor by floor, while enabling parallel construction inside the building.

With over 20 years of experience in element façades, Reynaers Aluminium offers a wide range of standard solutions. However, sometimes 'standard' isn't good enough. Sometimes your projects need a specific solution to suit the needs and requirements of that particular construction. Element façades can easily be tuned to suit those requirements, which will enable you to get the required result combined with ease of installation.

Element façades provide architects with an almost unlimited freedom of design by enabling the integration of different finishings and by incorporating different techniques. Possibilities include highly insulated structures, ventilated façades, double-skin façades with automatic sun shading and automatically opening windows. Moreover, the techniques can also be linked to a building's maintenance system.





*Ferrari world, Abu Dhabi — Architect: Benoy Architects —  
bespoke solution*



*Ferrari world, Abu Dhabi — Architect: Benoy Architects —  
bespoke solution*



*MPL Passenger Terminal, Wrocław — Architect: JSK Architektoci —  
bespoke solution*

Reynaers  
Aluminium's  
20 years of  
experience  
in element  
façade



*Crystal, Prague — Architect: Radek Lampa —  
bespoke solution*

## Key benefits of ElementFaçade 7

1

**Free to build the façade  
of the future**

2

**Intelligent design**

3

**Exceptional  
performances**

4

**Efficient and versatile  
assembly**

5

**Compatible with  
standard  
opening elements**

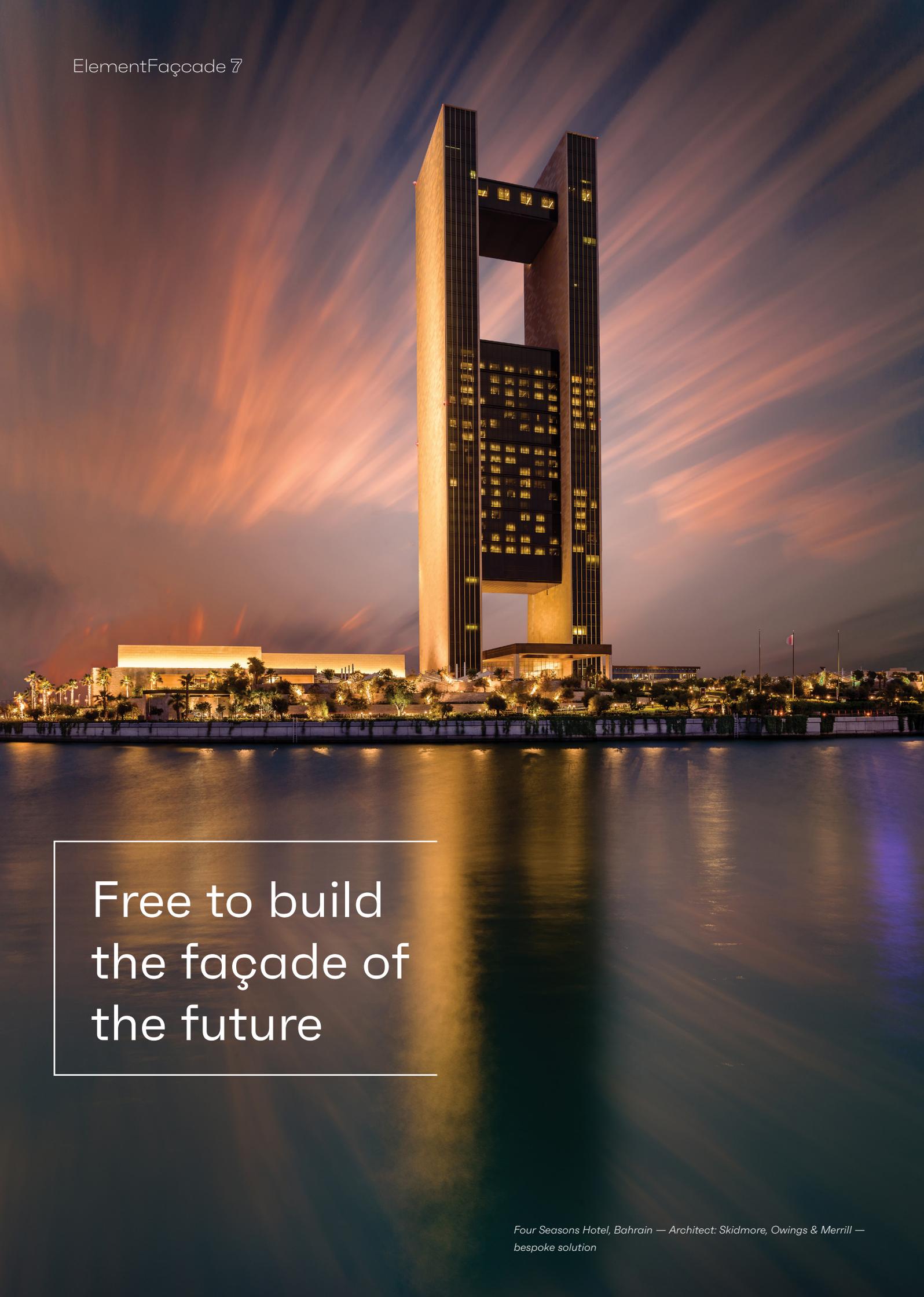
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**Supported from design  
to delivery**



# Element Façade 7

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the future



Free to build  
the façade of  
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## **Future proof performance values**

Future cities - and the buildings that will occupy them - are already being designed today. As cities become denser, buildings need more acoustic attenuation. Limited floor area pushes structures higher and higher, which requires better wind and water performances. With standards and legislation growing more and more strict, energy efficiency and insulation levels of today will no longer serve the building of tomorrow. That's why Reynaers Aluminium aims to deliver products that are ready for the future, today.

## **Higher and bigger dimensions**

Whether it be a skyscraper in a capital, an office building with an exceptional architectural look or a renovation of a residential high-rise: every urban development project searches for products that makes it stand out. At the same time, these projects aim to move fast and remain within the budget linked to standard products. In search of that ultimate combination, we dug deeper and came up with a remarkable result.

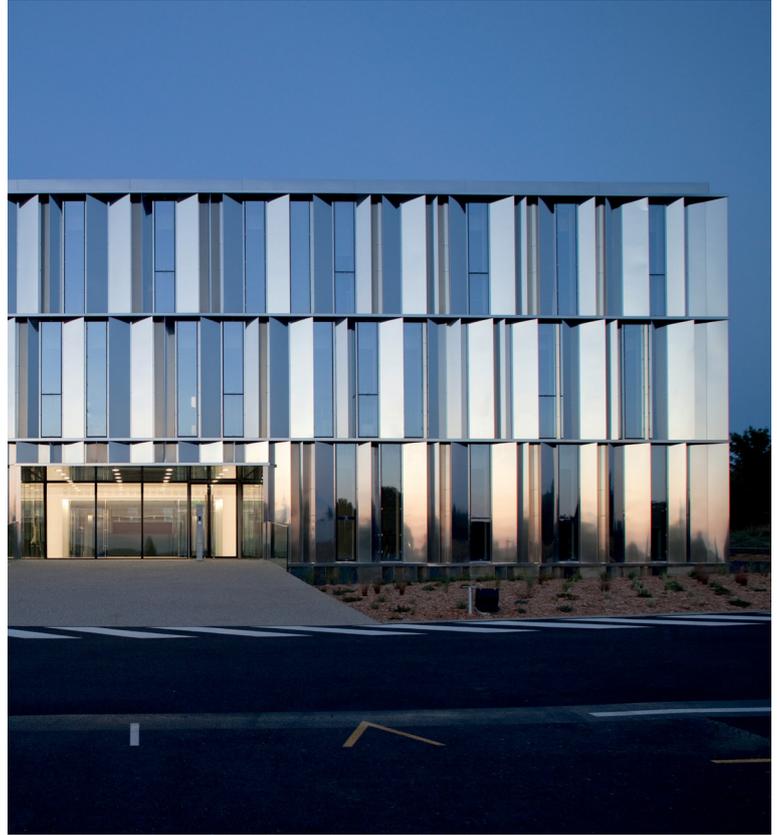
With Element Façade 7, Reynaers Aluminium provides you with an off-the-shelf product answer. It is a tested and certified solution that meets a high level of architectural imagination. However, with Reynaers Aluminium's expertise it can also be tailored exactly to your needs, when necessary. Element Façade 7 allows bigger dimensions and sustains heavier glass weights. Its future-proof performance values also allow to further increase the height of façades, whilst meeting the strictest thermal and acoustic insulation, as well as sustainability requirements.

# Intelligent design

## 2

Today's buildings are designed to meet ecological, technical, functional, aesthetic and financial requirements. Construction environments are stretching existing systems to their limits, which is why our newest ElementFaçade 7 goes beyond the needs of today. Reynaers Aluminium's Development team distilled years of experience and extensive know-how into an intelligent design.

ElementFaçade 7 has a completely redesigned anchor to allow easy and fast installation and adjustment, as well as increased tolerances to compensate ever-growing live loads. It also optimises industrialised fabrication by introducing the straight-cut corner connection, and further increases



*Fiteco office building, Changé — Architect: Colboc Franzen & Associés — bespoke solution*

installation speed by enabling even larger double-element assemblies, offers Female-Female connection in glazing bead and structural glued variants and Male-Female in structural glued. Next to that, ElementFaçade 7 enables easy glass pane replacement in both structural glazing and glazing bead solutions, for both the element and the spandrel area.

The sum of all this emphasises is that this system is ready for the buildings of the future.

# Exceptional performance



# 3

Construction projects often require bespoke solutions, which take more time to design, calculate and test.

Our ElementFaçade 7 test results show impressive performances and just like a standard system, it delivers predictable and reliable performances for variations. With its exceptional performance, it is the most optimal façade system for projects with extra high requirements.

## EN standard test results\*

<b>Thermal</b>	Standard: Uf between 1.3 and 3.7W/m <sup>2</sup> K Structural Glazed: Utj between 1.9 and 7.4 W/m <sup>2</sup> K
<b>Acoustic</b>	45 (-2;-6) dB
<b>Air</b>	AE 1200Pa
<b>Wind</b>	2400Pa
<b>Water static</b>	RE 1200 (1200Pa)
<b>Water dynamic/cyclic</b>	900 Pa – 300 Pa 2l/m <sup>2</sup>
<b>Impact resistance</b>	I5 + E5

*Our project team can design for higher performances or according to other standards.  
For more information visit [reynaers.com](https://reynaers.com) or contact your Reynaers representative.*



Time is money in every construction project. Shortening project lead times, reducing risk of delays and keeping complexity under control are on every owner's and developer's mind, as it can have significant implications concerning the cost. This requires efficient production and installation processes.

With Reynaers Aluminium's new ElementFaçade 7, we aim to be fast from design to calculation, production and installation. Throughout the development process, the speed of every step in the building process was taken into consideration.

Already in an early project stage, we think about efficiency and make standard BIM models (Building Information Modelling) available that help speed up the design process. Moreover, our ReynaPro calculation software helps you calculate exactly what you need, as it allows you to run technical calculations with our product's standard technical specifications. This way, there's no need for the time-consuming creation of specific tools, usually involved in projects. It is during the construction

stage that the enormous increase in fabrication speed becomes apparent. ElementFaçade 7 can be prefabricated in any controlled workshop, which removes disturbing and uncertain factors like cold or wet weather. The prefabrication not only improves speed but also brings high process reliability and product quality.

Fabricating the system in a centralized location, rather than sending off all necessary materials and labour to the building site greatly reduces the carbon footprint of a building. Moreover, this prefabricated building will limit on-site traffic disturbance as well as reduce pollution (light pollution, noise pollution, dust pollution), especially in densely populated cities. More efficient production and reduced on-site construction will therefore benefit all stakeholders.

Additionally, by introducing a straight-cut corner connection and male-female connections (in SG), we bring the much-needed certainty of accuracy and execution time. This way, our ElementFaçade 7 becomes available for a wide range of partners and for buildings of all sizes.

Any type of fabricator can set up their workshop in a highly flexible way. Anything is possible, from a basic machine setup, up to an industrialized production unit for massive projects of 100.000m<sup>2</sup> or more. ElementFaçade 7 is a versatile system, as next to the clear benefits of the straight cut, the traditional mitre cut remains available as an option.



Efficient  
and versatile  
assembly



Reynaers Campus— Architect: Jaspers-Eyers — Standard CW86-EF

Reynaers Aluminium does not only offer closed façade systems. As a system house, we offer the full range of joinery solutions, from a simple tilt window to a folding door.

Our standard offer includes opening elements specifically designed to fit curtain wall products. However, our in-house project team can also draw on our extensive range of standard (standalone) systems for a more complex and customized integration, like a hotel with balconies that wants to integrate sliding doors into the façade.

Compatible  
with standard  
opening  
elements

# Supported from design to delivery



## Design solutions

True to our motto Together for better, we believe in alleviating building industry stakeholders. Not only do we offer you state-of-the-art doors, windows, sliding systems, conservatories, curtain walls and so much more. We also have a whole ecosystem of services to support you in every step of the building process.

BIM (Building Information Modelling) can be integrated very early in the design phase, and the project can be discussed with investors, developers, architects and contractors during a virtual walkthrough in our AVALON cave.

## Production solutions

As a fabricator, you will have multiple tools to help you realise the project. Our customer portal holds



*The Quad, Malta— Architect: DeMicoli & Associates — bespoke solution*

all relevant technical information. Calculation, ordering and machine programming are fully integrated in - or linked to - our ReynaPro software. ReynaFlow creates a visual dashboard to monitor and manage your logistics and fabrication flow. In-house and even on-site training programs make sure that everyone knows what to do prior to the building phase, while technical support is available throughout the project phases.

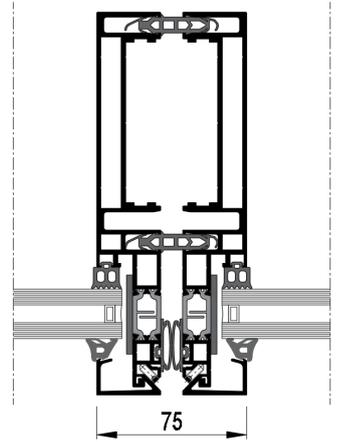
## Testing facility

Finally yet importantly, our testing facility is one of the largest private test facilities in the world. With the help of independent notified bodies, it allows us to do most testing in-house, using and increasing our system expertise, and creating an efficient and fast workflow for our clients.

This wide variety of tools and services makes sure that our customers perceive Reynaers Aluminium as a reliable, flexible partner, that offers a robust, certified system, tailored to your project's requirements.

# ElementFaçade 7-GB

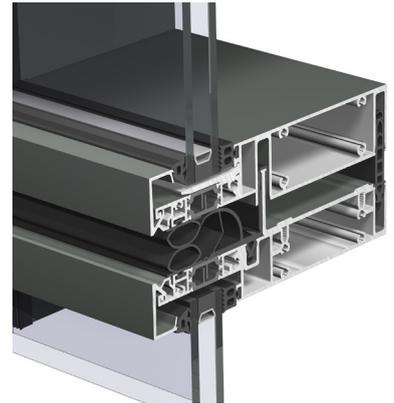
## Glazing Bead



### The element that builds the future

ElementFaçade 7 meets all contemporary architectural needs by offering an aesthetic, fast-to-produce and easy-to-install façade solution. The off-the-shelf unitised aluminium system combines intelligent design and reliable performance. The standard ElementFaçade 7 is a female-female concept works with symmetrical elements and linking gaskets, and features glazing beads.

- Intelligent and versatile design
- Exceptional, predictable and reliable performance
- Fast in calculation, offering, assembly and installation

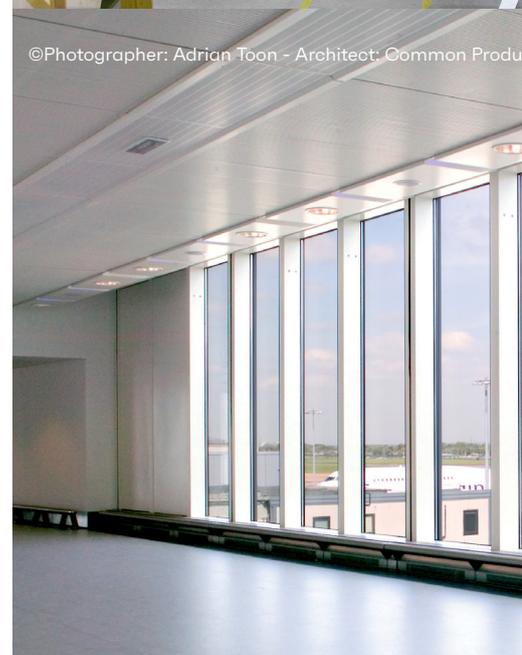


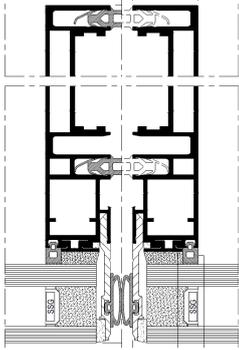
PROPERTIES	GLAZING BEAD
Max. dimensions W x H	2700 x 3700 mm
Interior visible width	75 mm
Exterior visible width	75 mm
Glass thickness	26 - 63 mm
Glass weight	300 kg
Types of vent	All Reynaers Aluminium systems, top hung window, POW window
PERFORMANCE	
 Thermal insulation	Uf down to 1.3 W/m²K
 Acoustic performance (Rw (C; Ctr))	43 (-2; -4) dB
 Air tightness	1200 Pa (class AE1200)
 Wind load resistance	2400 Pa
 Water tightness	1200 Pa (class RE1200)



Example of an industrial production line.  
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©Photographer: Adrian Toon - Architect: Common Produ





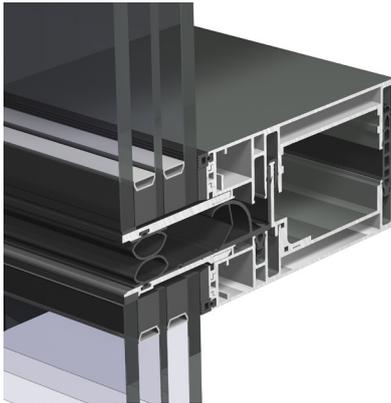
# ElementFaçade 7-SG

## Structural Glazed

### The element that builds the future

ElementFaçade 7 meets all contemporary architectural needs by offering an aesthetic, fast-to-produce and easy-to-install façade solution. The off-the-shelf unitised aluminium system combines intelligent design and reliable performance. The Structural Glazed variant of the ElementFaçade 7 features structurally sealed glass panels, glass supports as a mechanical safety, and finishing profiles for additional aesthetics. Can be combined with male-female connections.

- Intelligent, glassfaçade design
- Exceptional, predictable and reliable performance
- Fast in calculation, offering, assembly and installation



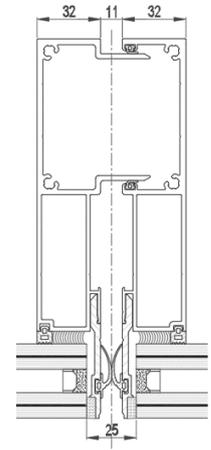
PROPERTIES	STRUCTURAL GLAZED
Max. dimensions W x H	2700 x 3700 mm
Interior visible width	75 mm
Exterior visible width	11 mm joint between glass
Glass thickness	36 - 60 mm
Glass weight	300 kg
Types of vent	All Reynaers Aluminium systems, top hung window, POW window

PERFORMANCE	
 Thermal insulation	$U_{ij}$ down to 3.3 W/m <sup>2</sup> K
 Acoustic performance (Rw (C; Ctr))	42 (-2; -4) dB
 Air tightness	1200 Pa (class AE1200)
 Wind load resistance	2400 Pa
 Water tightness	1200 Pa (class RE1200)

Performances and properties depend on size, profile combinations, hardware and infill choices.

# ElementFaçade 7-MF

## Male-Female

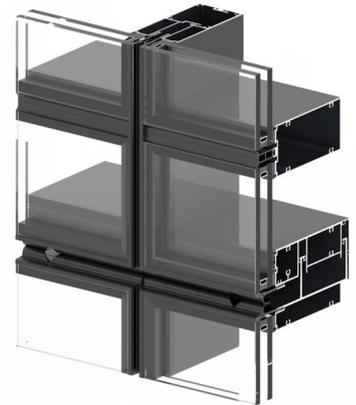


### Even broader range of construction methods

The ElementFaçade 7 already offers several ways of constructing the elements and the building with straight cuts or mitre cuts, and glazing beads or structural glued panels, or a combination of all of them.

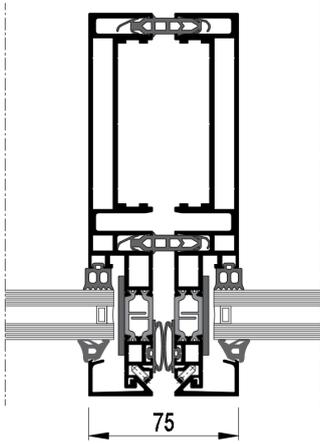
The Male Female variant (SG only) of the EF 7 expands this offer, enables even faster installation times than the standard EF 7. Thanks to its simplified fabrication process, minimal number of components and clean finishing, this system offers an efficient, high-performance and aesthetical solution for any high-rise building project.

- Structurally glued, male-female element façade system
- Simplified production process, reducing errors on site and installation times
- High performance at competitive pricing



PROPERTIES	MALE - FEMALE
Max. dimensions W x H	2200 x 3700 mm
Interior visible width	75 mm
Exterior visible width	25 mm
Glass thickness	26 - 60 mm
Glass weight	300 kg
Life load	-20 mm to +20 mm
Types of opening elements	Inward opening Hidden Vent & Outward opening POW / Top Hung

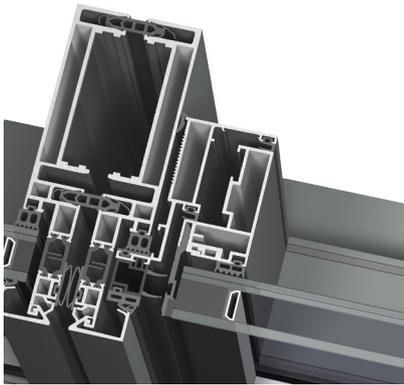
PERFORMANCE	
 Thermal insulation	$U_{ti}$ down to 3.2 W/m <sup>2</sup> K (triple glazing)
 Air tightness	1200 Pa (class AE1200)
 Wind load resistance	2400 Pa
 Water tightness	1200 Pa (class RE1200)



# ElementFaçade 7- Opening Elements

## The element that builds the future

ElementFaçade 7 meets all contemporary architectural needs by offering an aesthetic, fast-to-produce and easy-to-install façade solution. The off-the-shelf unitised aluminium system combines intelligent design and reliable performance. The opening elements have been developed to have a seamless fit with the fixed parts, both functionally and aesthetically.



- Easy to integrate opening elements
- Glass surface in line with fixed parts, without the need for stepped glass
- Fast in calculation, offering, assembly and installation

PROPERTIES	OPENING ELEMENTS
Max. dimensions W x H	2000 x 2500 mm
Interior visible width	58 mm
Exterior visible width	58 mm (Fu) 20 mm joint (SG)
Glass thickness	23 - 62 mm
Glass weight	-
Element weight	180 kg
Types of vent	GB or SG

PERFORMANCE	
 Thermal insulation	U <sub>f</sub> down to 1.5 W/m <sup>2</sup> K (GB) U <sub>g</sub> down to 2.1 W/m <sup>2</sup> K (SG)
 Acoustic performance (R <sub>w</sub> (C; C <sub>tr</sub> ))	41 (-2; -4) dB
 Air tightness	600 Pa
 Wind load resistance	2000 Pa
 Water tightness	1500 Pa (class RE1500)

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## Reynaers Aluminium

Reynaers Aluminium is a leading European specialist in the development and marketing of innovative and sustainable aluminium solutions for windows, doors, curtain walls, sliding systems, sun screening and conservatories.

Founded in 1965, Reynaers Aluminium has over 55 years of experience. What started out as a small family business, has grown into a successful and ever-expanding international company active in more than 70 countries and employing over 2300 colleagues. Thanks to our broad network, which is made up of over 5000 partners, our solutions are made available worldwide.

Our goal is to increase the value of buildings and to enhance the living and working environment of people worldwide. We achieve this together with our partners by providing innovative and sustainable aluminum solutions for the building envelope. This mission is highlighted by our baseline, Together for better, which underlines the strength of all our colleagues and partners worldwide.



**Reynaers  
Aluminium**

Oude Liersebaan 266  
B-2570 Duffel

T +32 (0)15 30 88 10  
F +32 (0)15 30 88 80

[info@reynaers.com](mailto:info@reynaers.com)  
[www.reynaers.com](http://www.reynaers.com)