

# COMPANY PRESENTATION



**COMPANY  
ACTIVITIES**

# GLASSBEL – ADVISORY, ENGINEERING & MANUFACTURING GROUP

## SOLUTIONS

- Advisory on Façade & Interior Project set-up
- Finding best “value for money proposition” for developer/ investor
- Evaluation of proposed design solutions
- Value engineering
- Façade and glass procurement assessment & management

## PROJECTS

- Turn-key Project delivery
- Project Design & manufacturing
- BIPV project design and delivery
- Heatable glass design, manufacturing & installation
- Dynamic façade solutions design, manufacture and installation

## MANUFACTURING

- Glass processing plant
- Bonding & unitized facade plant
- BIPV manufacturing
- Heatable glass manufacturing
- Testing facilities
- R&D facilities

## **15+ YEARS**

2001 – Facade projects division  
2007 – Glass processing division  
2012 – Solutions & advisory division

## **10 000+ PROJECTS**

6 Sochi Olympics stadiums  
Musée des Confluences in Lyon  
Dubai Opera  
KAFD Skywalks in Riyadh  
Tottenham Hotspur Stadium  
Tower in Manhattan

## **SPECIALTY SOLUTIONS**

BIPV projects  
HEATABLE glass projects  
DYNAMIC facades

## **29 COUNTRIES**

Completed and ongoing projects  
all over the world  
Work in different time zones  
Online and onsite support

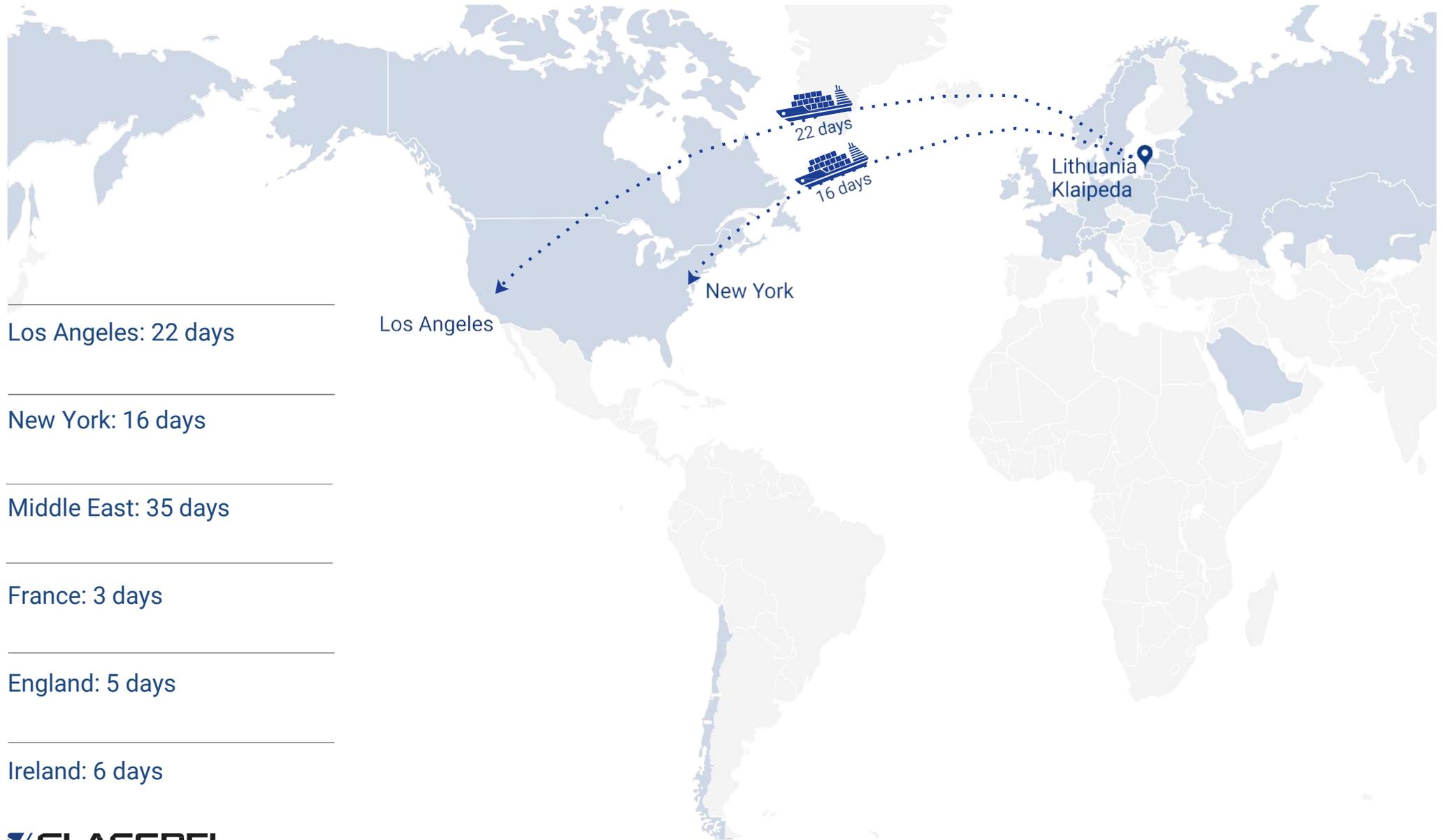
## **BY SEA, AIR, LAND**

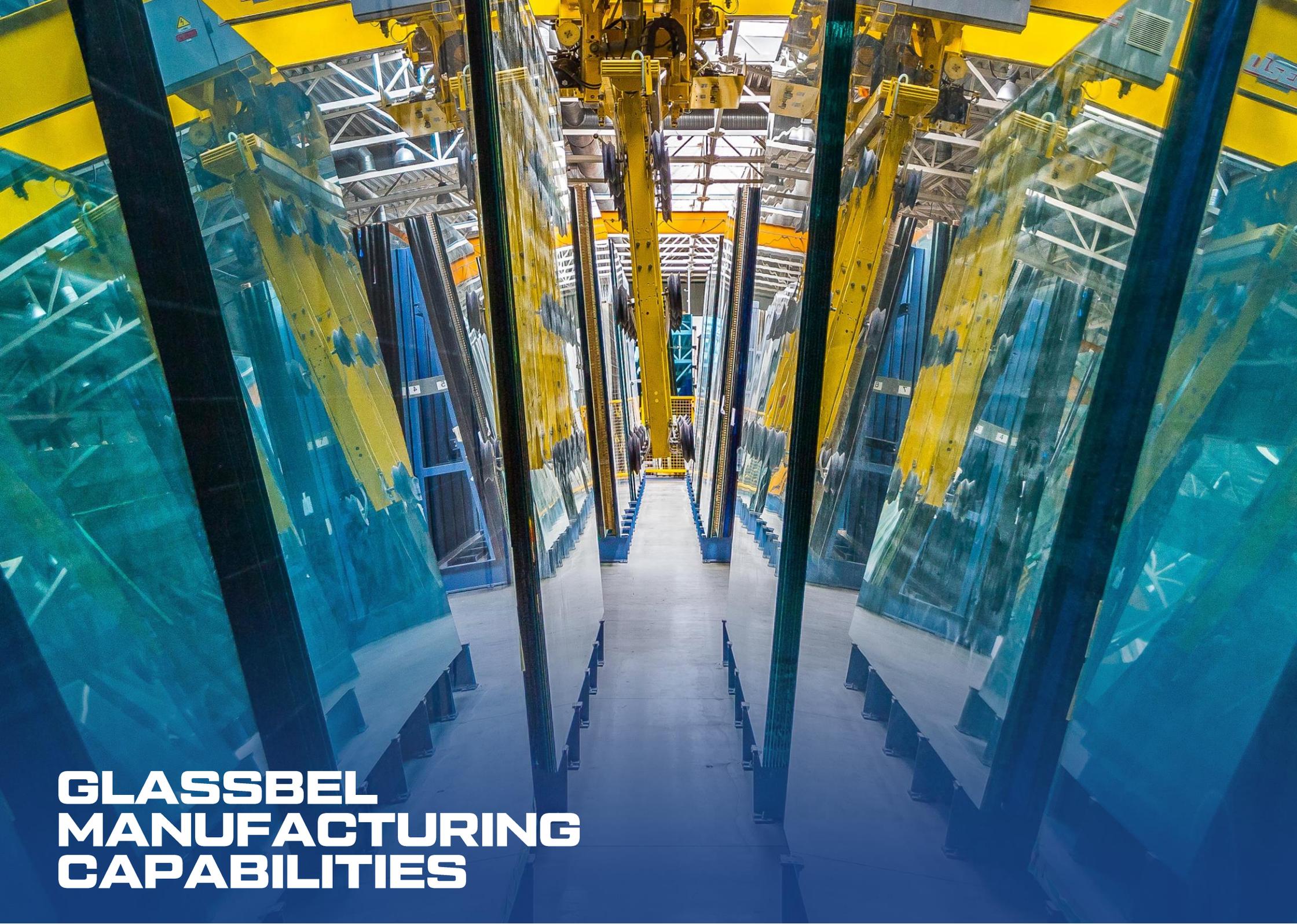
Customized packing and  
logistics solutions

## **UP TO 3.2 X 7.0 M**

Facade & Glass products of various  
sizes including over jumbo size under  
one roof at GLASSBEL

# WORLDWIDE PRESENCE





**GLASSBEL  
MANUFACTURING  
CAPABILITIES**

# GLASS CUTTING



3 210 x 7 000 mm  
126,3" x 275,6"

- Thickness up to 19 mm
- Preprogrammed decoating
- Cutting of complex shapes
- Decoating for spiders

# EDGE TREATMENT



3 210 x 7 000 mm  
126,3" x 275,6"

- Grinding, polishing, arising
- Beveling
- Edge treatment of complex shapes
- Three machinery centers

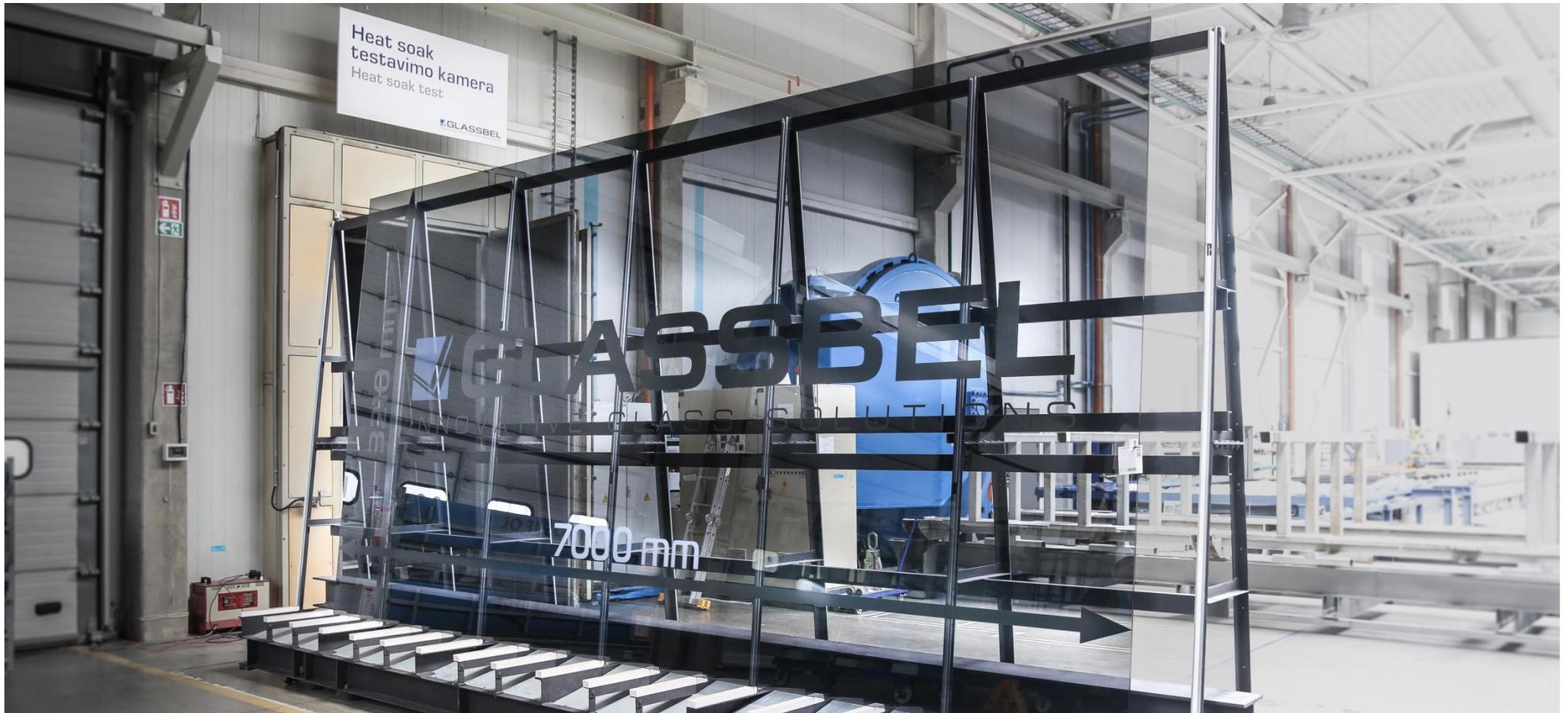
# WATER JET



3 210 x 7 000 mm  
126,3" x 275,6"

- Glasses up to 25 mm thickness
- Cutting and edge treating of intricate shapes
- Holes and cut-outs of high precision

# HEAT SOAK TEST



3 210 x 7 000 mm  
126,3" x 275,6"

- Traceability of raw materials batch numbers
- Special ink marking for each pane
- Calibrated according EN 14179
- Reports availability

# TEMPERING FURNACE



3 210 x 7 000 mm  
126,3" x 275,6"

- Glass up to 25 mm thickness
- Convectional type of furnace
- Preheating chamber allows minimal distortions
- Heat treatment of magnetron, pyrolytic and double sided coatings
- Roller wave <math>< 0.15\text{ mm}</math> (6 mm and thicker glass)

# SILK PRINTING & ENAMELING



2 650 x 5 100 mm  
104,3" x 200,7"

- Usage of ceramic paints
- Any RAL and NCS color
- Specialty inks
- Multiple layer fritting

# DIGITAL PRINTING



3 210 x 6 000 mm  
126,3" x 236,2"

- Printing resolution up to 720 dpi
- "Drop fix" technology
- Double vision printing
- Opacity and colour density control

# LAMINATION



3 210 x 7 000 mm  
126,3" x 275,6"

- Unlimited thickness
- Vacuum bags process availability
- Numerous in-house testing and R&D activities
- Lamination with PVB, SC+, SGP, EVA, DG41, coloured PVB
- Lamination of specialty materials: Sefar Mesh, textile, PET materials and natural stone

# INSULATED GLASS UNITS



3 210 x 7 000 mm  
126,3" x 275,6"

- Double and triple glazed units up to 58 mm thickness
- Weight of one unit up to 1.5 tons
- Any geometric shape
- Stepped edges up to 1 500 mm



**GLASSBEL IS APPROVED  
PROCESSOR BY THE MAIN  
GLOBAL SUPPLIERS**

## GLASS SUPPLIERS



PILKINGTON



## SPECIALTY MATERIALS



# CERTIFICATES

**BUREAU VERITAS**  
Certification

**Certification**  
Awarded to

**GLASSBEL BALTIC, UAB**  
Pramonės g. 11, LT-94102 Klaipėda, Lithuania

**GLASSBEL**  
MULTIPLY GLASS SOLUTIONS

Bureau Veritas Certification Holding SAS – UK Branch certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

**STANDARD**  
**ISO 9001:2015 / LST EN ISO 9001:2015**

**SCOPE OF CERTIFICATION**  
Processing of architectural glass. Design and manufacturing of insulating glass units, glass for furniture and domestic devices.

Certification cycle start date: 21 June 2016  
Subject to the continued satisfactory operation of the organisation's Management System, the certificate expires on: 20 June 2019  
Original certification date: 21 June 2016  
To check the validity of this certificate please call +475 3 201 79 75. Further conditions regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by contacting the registration.

Certificate No. **LT16160**  
Version No. 2  
Issuing date: 03 July 2017

Certification Authority of Bureau Veritas, 11, rue de Valenciennes, 93500 La Plaine St-Denis, France  
Office in Lithuania: UAB "Bureau Veritas Certification", Pramonės g. 11A, LT-01101 Vilnius, Lithuania

**BUREAU VERITAS**  
1828

**UKAS**  
9001

**GUARDIAN**  
Heat-treatable coating technology  
**CERTIFIED CUSTOMER PROGRAM**  
FOR HEAT TREATABLE COATINGS

**CERTIFICATE**

GUARDIAN LuxGuard I.S.A. is pleased to confirm that the company

**GLASSBEL**  
**GLASSBEL BALTIC UAB**

Pramonės 11, Klaipėdos LEZ  
94102 Klaipėda (LT)

Has demonstrated the capability to successfully process the following products in terms of mechanical treatment, heat treatment and insulating glass production:

**SUNGUARD® HP / HIGH SELECTIVE HT WITH TPF**  
**CLIMAGUARD® PREMIUM T**

It is the sole responsibility of the processor to adequately inspect the heat treatable coated glass before each step of fabrication and prior to installation. Failure to apply all professional standards, customary instructions and processing instructions will automatically void any warranty regarding heat treatable glass of GUARDIAN. The processor has the full responsibility for the quality of the final product. By this certificate GUARDIAN is not granting any warranty regarding the processor's continuing capability to adequately process GUARDIAN products.

Issued: Monday, 06 December 2008

*Justas Hedic*  
Justas Hedic  
Technical Advisory Center  
Guardian LuxGuard I.S.A.

**GUARDIAN**  
SUNGUARD

BUILD WITH LIGHT™

**EUROGLAS**

**CERTIFICATE**  
**SILVERSTAR®**

Concerns product:

**Silverstar® EN2plus T**  
**Silverstar® Combi Neutral 70/40 T**  
**Silverstar® Combi Neutral 70/35 T**  
**Silverstar® Combi Neutral 61/32 T**

Euroglas Polska Sp. z o.o. is pleased to confirm, that

**UAB «GLASSBEL BALTIC»**  
11, Pramonės str., LT-94102 Klaipėda, Lithuania

Fulfills the necessary requirements for efficient processing of the above-named heat-treatable coated product.

The correct choice of the parameters and the process control have an important influence on the final product quality. The processing conditions should correspond with the rules for coated glass processing, which are described in: \* Handling and processing instructions for temperable thermal insulation glass from the Silverstar® product family\* prepared by Euroglas Polska.

Euroglas Polska Sp. z o.o.  
*Marek Popelarczyk*  
Marek Popelarczyk

Ujazd, 27.01.2016

**SAINT-GOBAIN GLASS**  
Is pleased to confirm that the company

**Glassbel**  
Klaipėda, Lithuania

**GLASSBEL**

has successfully passed a Saint-Gobain Glass inspection on the heat treatment, insulating and laminating glass process qualifying it for the

**DATE**  
March 05<sup>th</sup>, 2018

**SGG COOL-LITE® SKN II (EasyPro)**

This processor's site has been visited on **01 Mar 2018**  
This certificate is valid until **05 Mar 2019** so long as your manufacturing process remains as it is on the date of the inspection.  
After such date, its renewal is subject to a new inspection.

For Saint-Gobain Glass:

In performing this certification, Saint-Gobain Glass does not assume or undertake to discharge any responsibility of the inspected company, which is the sole party responsible for the processing of its products in conformity with applicable laws, regulations, norms and the Guidelines for Use of Coated Glass of Saint-Gobain Glass.

**SAINT-GOBAIN**

**BUREAU VERITAS**  
Certification

**Certification**  
Awarded to

**GLASSBEL BALTIC, UAB**  
Pramonės g. 11, LT-94102 Klaipėda, Lithuania

**GLASSBEL**  
MULTIPLY GLASS SOLUTIONS

Bureau Veritas Certification Holding SAS – UK Branch certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

**STANDARD**  
**ISO 14001:2015 / LST EN ISO 14001:2015**

**SCOPE OF CERTIFICATION**  
Processing of architectural glass. Design and manufacturing of insulating glass units, glass for furniture and domestic devices.

Certification cycle start date: 21 June 2016  
Subject to the continued satisfactory operation of the organisation's Management System, the certificate expires on: 20 June 2019  
Original certification date: 21 June 2016  
To check the validity of this certificate please call +475 3 201 79 75. Further conditions regarding the scope of this certificate and the applicability of the Management System requirements may be obtained by contacting the registration.

Certificate No. **LT16161E**  
Version No. 2  
Issuing date: 03 July 2017

Certification Authority of Bureau Veritas, 11, rue de Valenciennes, 93500 La Plaine St-Denis, France  
Office in Lithuania: UAB "Bureau Veritas Certification", Pramonės g. 11A, LT-01101 Vilnius, Lithuania

**BUREAU VERITAS**  
1828

**UKAS**  
14001

**GUARDIAN**  
Heat-treatable coating technology  
**CERTIFIED CUSTOMER PROGRAM**  
FOR HEAT TREATABLE COATINGS

**CERTIFICATE**

GUARDIAN Częstochowa Sp. z o.o. is pleased to confirm that the company

**GLASSBEL**  
**GLASSBEL BALTIC UAB**

Pramonės g 11, LT-94102 Klaipėda

has demonstrated the capability to successfully process the following product in terms of manipulation and heat treatment:

**SUNGUARD® SUPERNEUTRAL**

- SN 70/41 HT
- SN 70/37 HT
- SN 70/35 HT
- SN 65/34 HT
- SN 51/28 HT
- SN 40/23 HT
- SN 29/18 HT
- SNX 60/28 HT
- SNX 50/28 HT

6, 8, 10, 12mm  
(TEMPERED, HEAT STRENGTHENING)

It is the sole responsibility of the processor to adequately inspect the heat treatable coated glass before each step of fabrication and prior to installation. Failure to apply all professional standards, customary instructions and processing instructions will automatically void any warranty regarding heat treatable glass of GUARDIAN. The processor has the full responsibility for the quality of the final product. By this certificate GUARDIAN is not granting any warranty regarding the processor's continuing capability to adequately process GUARDIAN products. In case of non-compliance with the provisions of the certified processor program, this certificate can be withdrawn at any time. This certificate is valid until 31 January 2017.

Issued: Monday, 30 January 2017

*Korolaj Kluczniewicz*  
Korolaj Kluczniewicz  
Technical Advisory Center

**GUARDIAN**  
SUNGUARD

BUILD WITH LIGHT™

**AGC Flat Glass Europe**  
This is to certify that the company

**Glassbel Baltic**

has successfully passed the validation tests set by AGC and is able to process the following product in terms of pre-processing, heat treatment, laminating and insulating glass production of

« Energy NT 4,6,8 and 10 mm »  
« Stopyra T 6,8 and 10mm »

January, 2010

**AGC**  
AGC FLAT GLASS EUROPE

It is the sole responsibility of the processor to adequately inspect the heat treatable coated glass before each step of fabrication and prior to installation. Failure to apply all professional standards, customary instructions and processing instructions (available on www.agc-flatglass.com) will automatically void any warranty regarding heat treatable glass of AGC. The processor has the full responsibility for the quality of the final product.

**SAINT-GOBAIN GLASS**  
Is pleased to confirm that the company

**Glassbel**  
Klaipėda, Lithuania

**GLASSBEL**

has successfully passed a Saint-Gobain Glass inspection on the heat treatment, insulating and laminating glass process qualifying it for the

**DATE**  
March 05<sup>th</sup>, 2018

**SGG COOL-LITE® XTREME II (EasyPro)**

This processor's site has been visited on **01 Mar 2018**  
This certificate is valid until **05 Mar 2019** so long as your manufacturing process remains as it is on the date of the inspection.  
After such date, its renewal is subject to a new inspection.

For Saint-Gobain Glass:

In performing this certification, Saint-Gobain Glass does not assume or undertake to discharge any responsibility of the inspected company, which is the sole party responsible for the processing of its products in conformity with applicable laws, regulations, norms and the Guidelines for Use of Coated Glass of Saint-Gobain Glass.

**SAINT-GOBAIN**

# USA CERTIFICATES



safety glazing certification council

Administrative Office, AMS, Inc.  
205 West Main Street, PO Box 730  
Sackets Harbor, NY 13685  
Phone: (315) 646-2234  
E-mail: staff@amscert.com

## ACKNOWLEDGEMENT OF CERTIFICATION

THIS IS TO ACKNOWLEDGE THAT AS OF THIS DATE

**Glassbel Baltic JSC**  
**Klaipeda, Lithuania**

IS A CURRENT LICENSEE AND HAS MET ALL GUIDELINES AND REQUIREMENTS FOR THE SGCC® CERTIFICATION PROGRAM AND AS SUCH IS ELIGIBLE TO LABEL THE BELOW INDICATED PRODUCT(S) AS SGCC® CERTIFIED. REPRESENTATION SAMPLES OF THE BELOW PRODUCTS HAVE BEEN FOUND TO BE IN COMPLIANCE WITH ANSI Z97.1-2009 OR 2015 AS INDICATED, CPSC 16 CFR 1201 STANDARDS, OR BOTH STANDARDS, KNOWN AS COMPOSITE CERTIFICATION (COMP), OR BOTH STANDARDS WITH CAN/CSB 12.1 KNOWN AS COMP+CAN.

SGCC#	IN	MM	Attributes	INT	Type Code	Max Size	ANSI Class	Test Std	ANSI Z97 Year
6704	5/32	4			TTG	U	A	COMP	2015
6705	3/16	5			TTG	U	A	COMP	2015
6706	1/4	6			TTG	U	A	COMP	2015
6707	5/16	8			TTG	U	A	COMP	2015
6708	3/8	10			TTG	U	A	COMP	2015
6709	1/2	12			TTG	U	A	COMP	2015
6710	(H)	8-16+	(b)(A)	(.030)	LTG	U	A	COMP	2015

THIS SGCC® PROGRAM CERTIFICATION IS CURRENT AND IN FULL EFFECT AS OF THIS ISSUE DATE. CERTIFICATION IN THE SGCC® PROGRAM IS SUBJECT TO SEMI-ANNUAL RENEWAL. PLEASE CHECK THE SGCC WEBSITE AT WWW.SGCC.ORG OR THIS OFFICE FOR MOST CURRENT INFORMATION.

Tuesday, September 12, 2017  
DATE OF ISSUE

L17  
CERTIFICATION PERIOD

ADMINISTRATIVE MANAGER

SD-13 Last Revised By: KS 4/11/16 Last Approved By: XK 4/11/16



Administrative Management Systems, Inc.  
205 West Main Street, PO Box 730  
Sackets Harbor, NY 13685  
Phone: (315) 646-2234  
Fax: (315) 646-2297  
E-mail: staff@amscert.com



## ACKNOWLEDGEMENT OF CERTIFICATION

THIS IS TO ACKNOWLEDGE THAT AS OF THIS DATE

**Glassbel Baltic**  
**Klaipeda, Lithuania**

IS A CURRENT LICENSEE AND HAS MET ALL GUIDELINES AND REQUIREMENTS FOR THE IGCC®/IGMA® CERTIFICATION PROGRAM AND AS SUCH IS ELIGIBLE TO LABEL THE BELOW INDICATED PRODUCT(S) AS IGCC®/IGMA® CERTIFIED. THE FOLLOWING ARE IN COMPLIANCE WITH ASTM E2190 FOR SEAL DURABILITY OF INSULATING GLASS UNITS AND PASSING GAS CONTENT INITIAL AND AFTER WEATHERING (GCIA) CERTIFICATION REQUIREMENTS AS INDICATED.

CERT #	GLASS	SPACER	FRAME CONST.	DESICCANT	SEALANT	GCIA
4730	U/C2/U	PHSS/PHSS	BC4/GSLC/AP	LF/LF	PIB/S2	Yes
4729	U/C2/U	SS/SS	BC4/SLLC/AP	LF/LF	PIB/S2	Yes
4728	U/C2/U	MA/MA	BC4/GSLC/AP	LF/LF	PIB/S2	Yes

THIS IGCC®/IGMA® PROGRAM CERTIFICATION IS CURRENT AND IN FULL EFFECT AS OF THIS ISSUE DATE. CERTIFICATION IN THE IGCC®/IGMA® PROGRAM IS SUBJECT TO SEMI-ANNUAL RENEWAL. PLEASE CHECK THE CURRENT CERTIFIED PRODUCTS DIRECTORY OR THIS OFFICE FOR MOST CURRENT INFORMATION.

Friday, May 18, 2018  
DATE OF ISSUE

February 1, 2018 - January 31, 2019  
CERTIFICATION PERIOD

ADMINISTRATIVE MANAGER

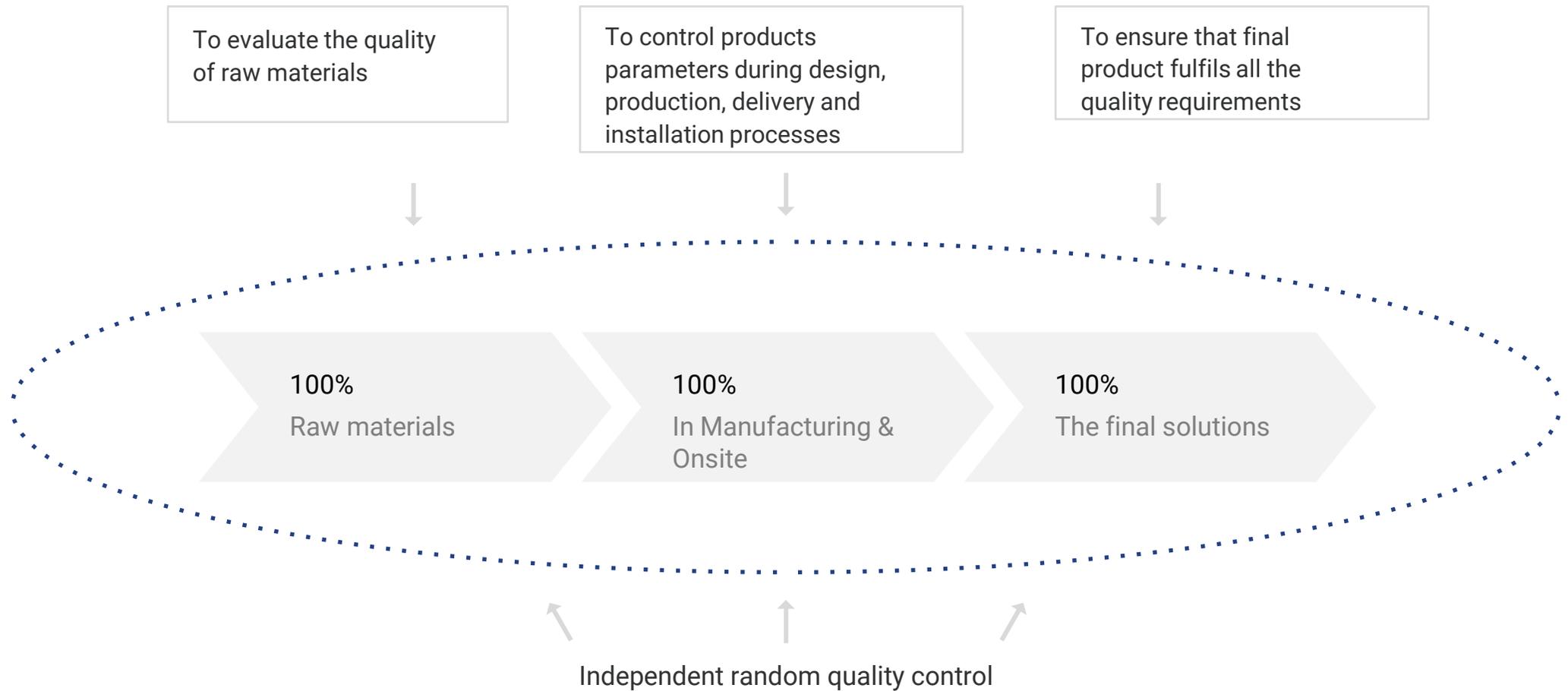
ID-14 Last Revised By: TDS 6/1/16 Last Approved By: EMA 6/1/16

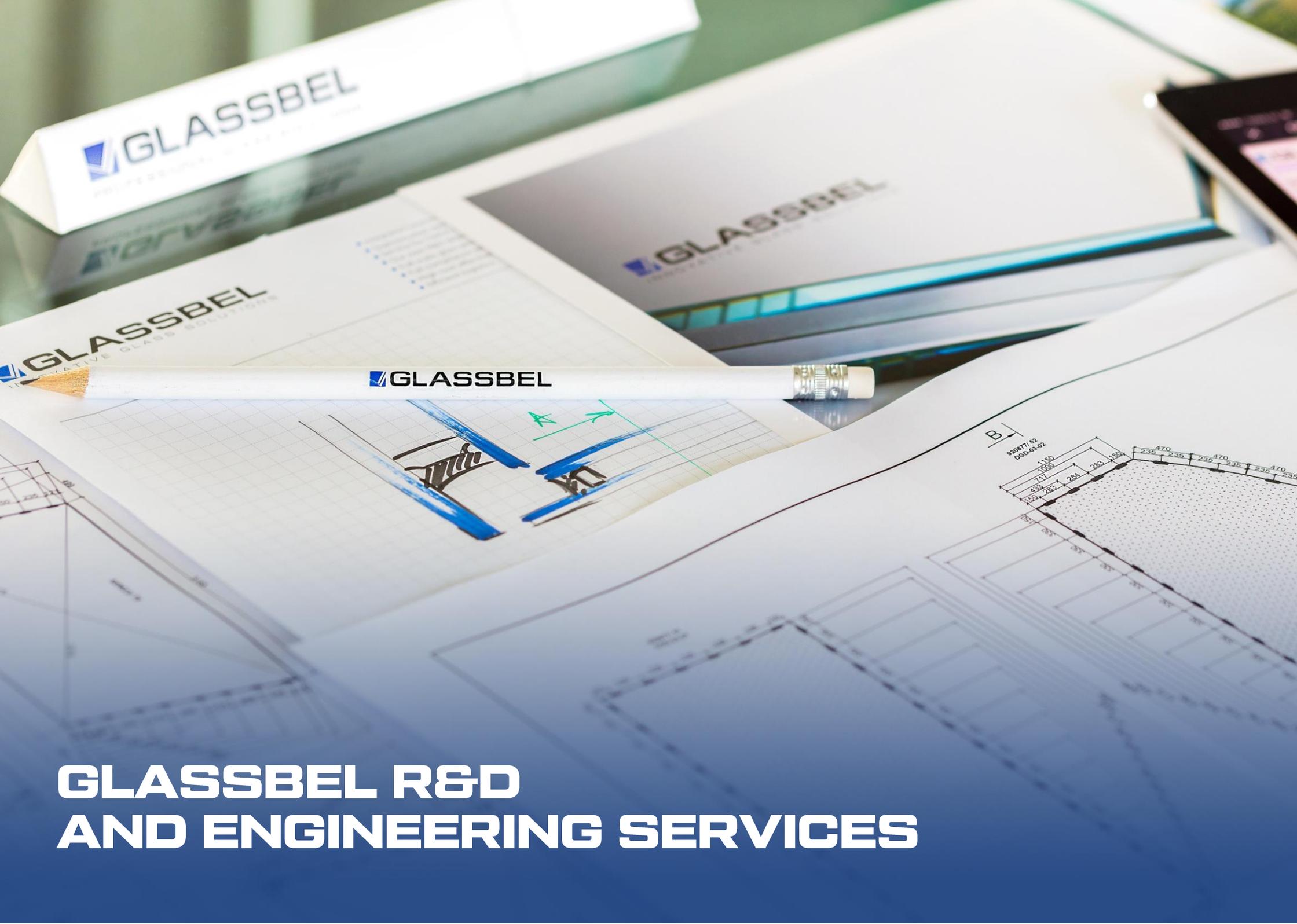


**GLASSBEL  
QUALITY ASSURANCE**

# MULTILAYER QUALITY SYSTEM

- LEAN manufacturing
- GLASSBEL overall QA standard  
< 0.4% Client rejection rate





# GLASSBEL R&D AND ENGINEERING SERVICES

# Glass-FINS – INNOVATIVE PROTOTYPE



- Max Length: 7 000 mm
- Max width: 3 210 mm
- Max thickness: 150 mm\* (if not exceeding 2.0 tons weight)

## Possible interlayers:

PVB  
EVA  
SGP

## Possible inserts:

Stainless Steel  
Aluminum  
Titanium  
Polycarbonate  
Others



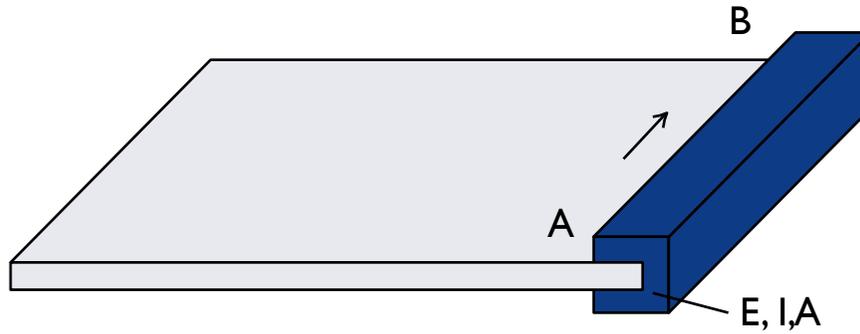
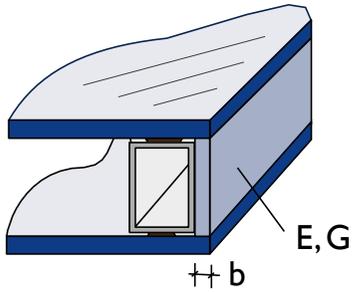
# INNOVATIVE PRODUCT PROTOTYPE



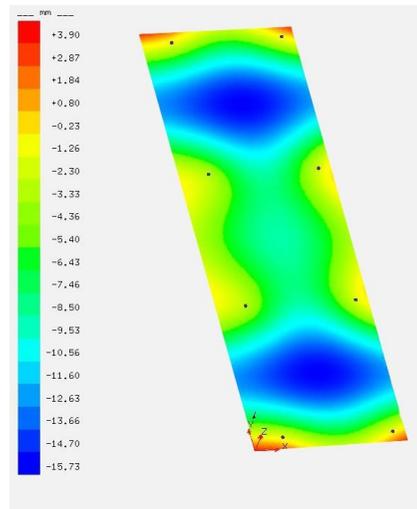
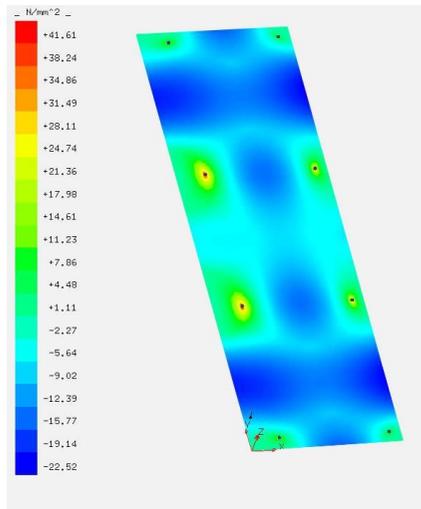
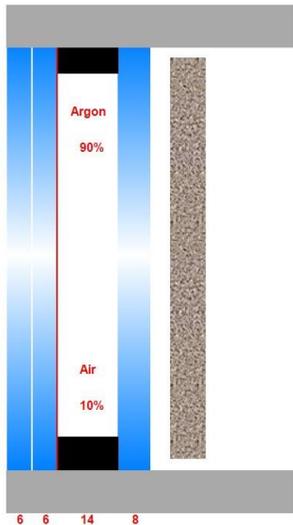
Two glasses which are laminated in 90 degrees without any bonding materials such as UV glue or silicon. It is purely made by lamination.

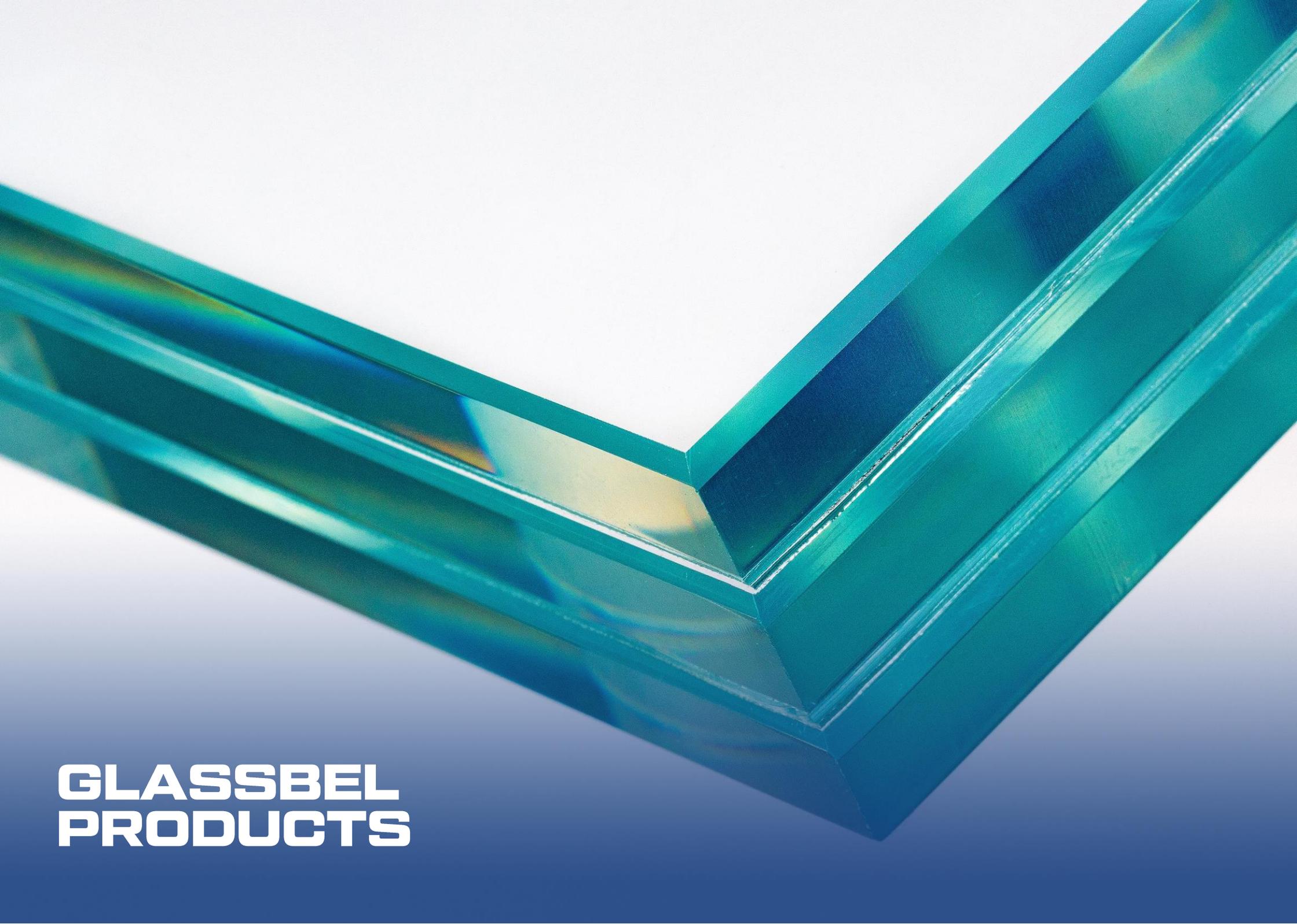
Could be assembled in IGUs.

# R&D SERVICES



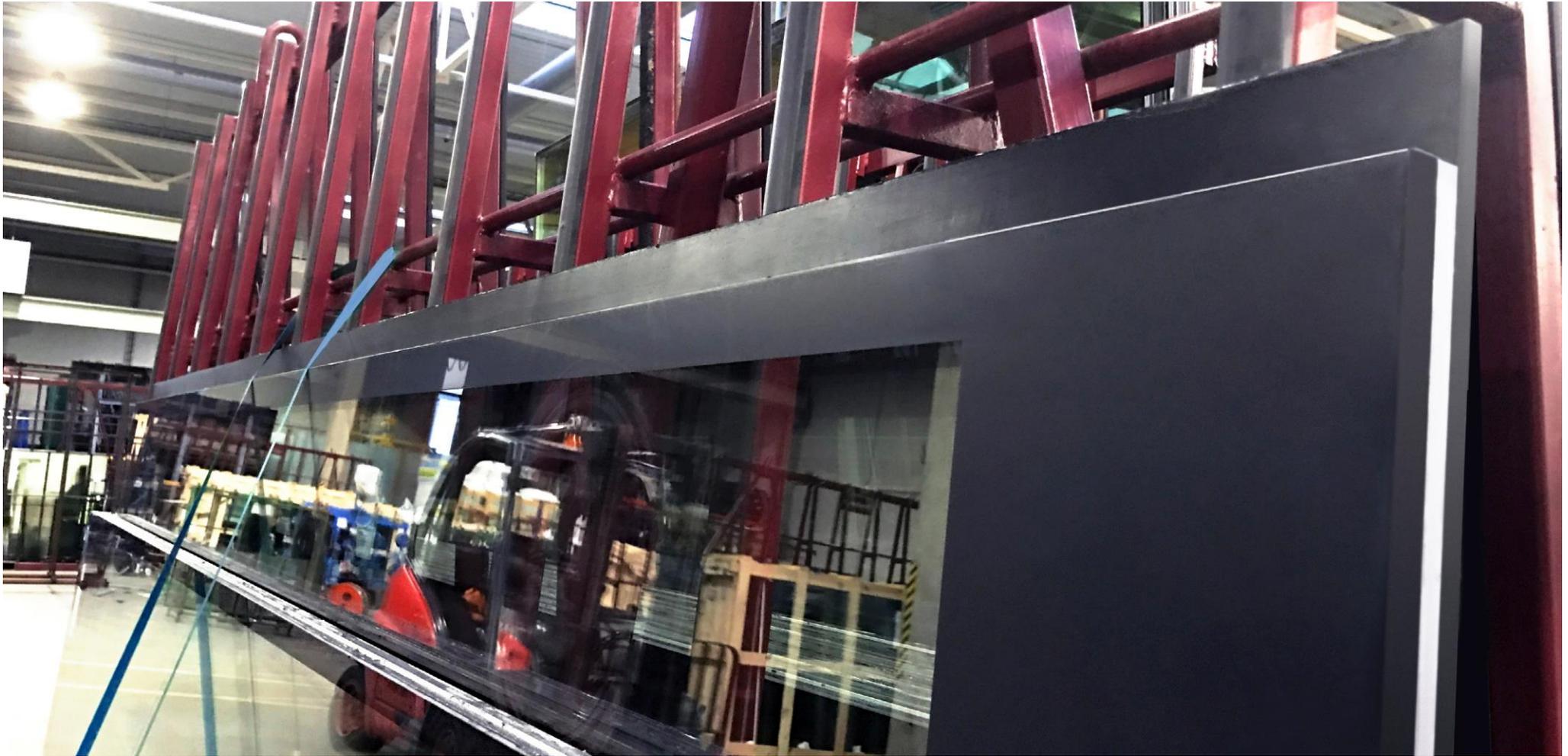
- Photometric calculations
- Build up recommendations according to acoustic requirements
- Sealing depth calculations
- U-value calculations for IGUs
- Thermal stress analysis
- Product development according to specific project requirements





**GLASSBEL  
PRODUCTS**

# INSULATED PRODUCTS



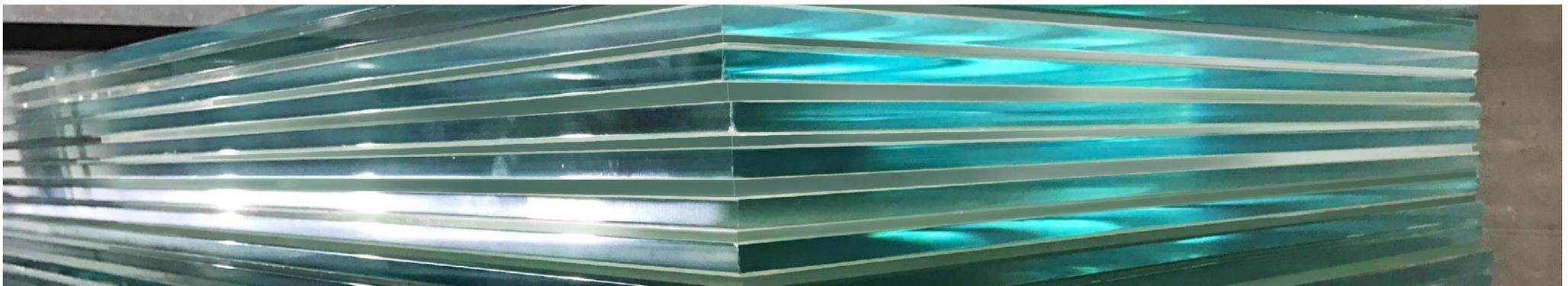
- DGU, TGU
- Oversized
- Energy efficiency
- Shaped
- Transparency
- Structural glazing
- Stepped

# GLASS FINS



- Fins with laminated titanium plates
- Fins with glass fixing
- Fins with Sefar
- Fins with 3D printing

# LAMINATED PRODUCTS



- Multilayer
- SGP Lami
- EVA Lami
- PVB Lami

# BONDING SOLUTIONS



Bonding of thin aluminum frames  
(Keller, Vitroksa, Hi-Finity)

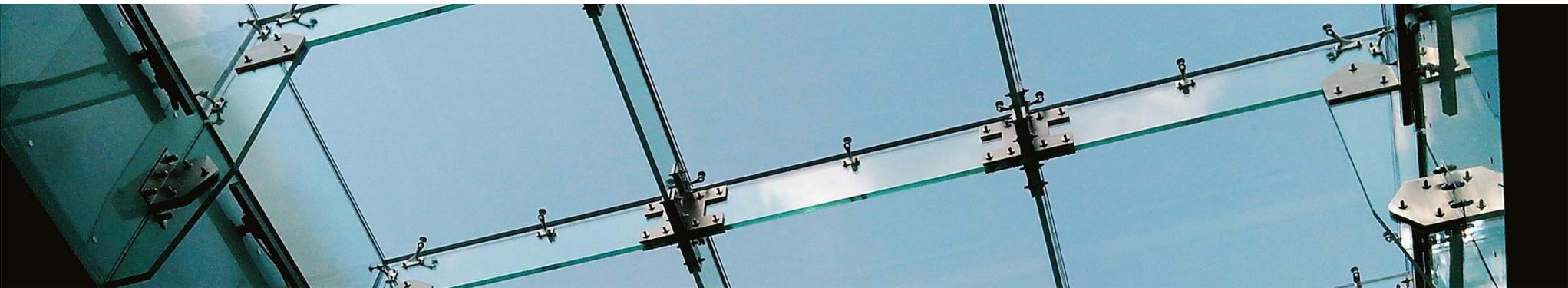


Bonding of specialty frames



Bonding of insulation (ROCKWOOL)

# SPECIALTY APPLICATIONS



Glass – SPIDER



Glass – HURRICANE



Glass – BULLETPROOF



Glass – FIRE

# SELF-ENGINEERED



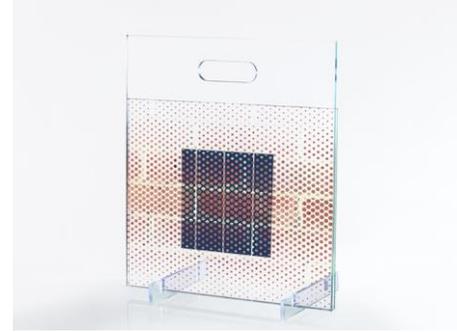
## Glass – HEAT

Glass product with the function of electrical heating, completed with control system including precipitation and temperature sensors



## Glass – BIPV

Facade glass panels with integrated PV modules



## Glass – HEAT&BIPV

Glass-HEAT&SUN is a product combined two GLASSBEL developments: Glass-HEAT and Glass-BIPV



## Glass – LED

HD video display incorporated into facade glazing units

# SHADING SOLUTIONS



## Glass – MESH

Laminated glass with a special metalized fabric providing any color and design to the outside with visibility and a natural appearance to the inside



## Glass – DUALPRINT

Digital in-glass printing with controlled density of pattern for solar shading improvement



## Glass – MET

Glass units with expanded mesh inside for solar control and indescribable appearance



## Glass – BLIND

Integral blinds within double glazing and a manual or automatic control system

# DESIGN SOLUTIONS



 Glass – PRINT



 Glass – SILK



 Glass – ENAMELE



 Glass – MONOLITHIC



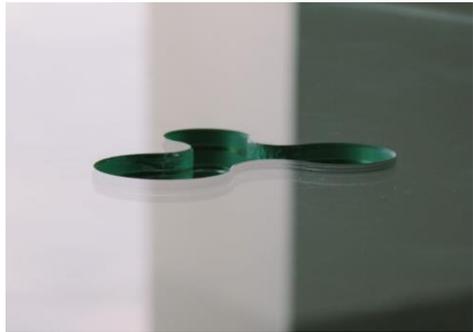
 Glass – MESH



 Glass – DECOR



 Glass – CURVE



 Glass – CUTOUT



**GLASS-BIPV**

# GLASS-BIPV FACADE GUIDELINE

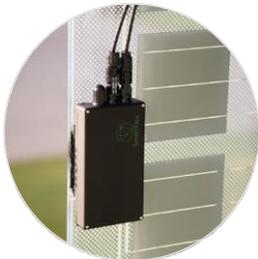


- Design strategy
- Environmental variables
- Multifunctionality
- Construction system
- Installation situation
- Glass structures
- Module design
- Electrical components
- Economic aspects

# GLASSBEL OFFICE FACADE, GLASS-BIPV PRODUCT



Junction box



Micro inverter

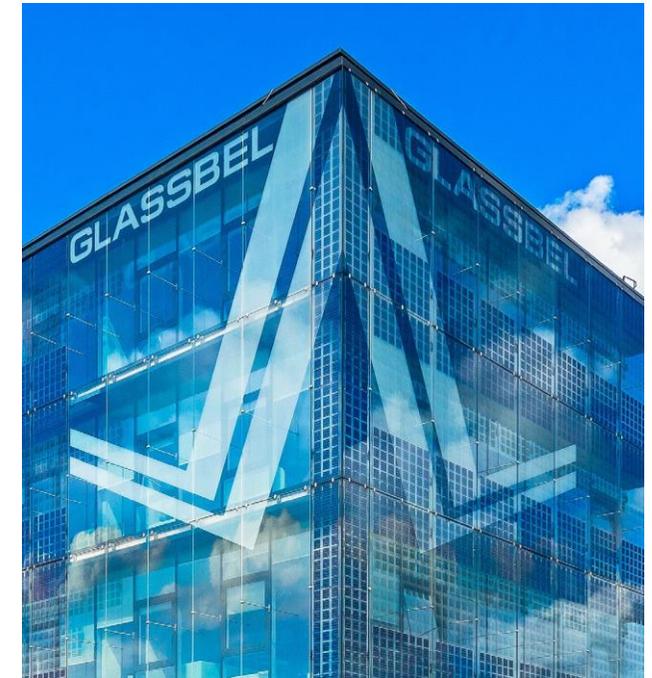
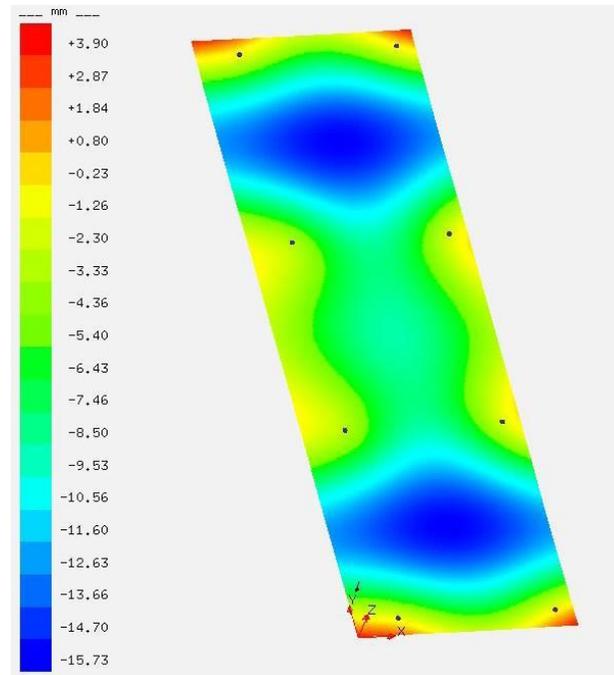
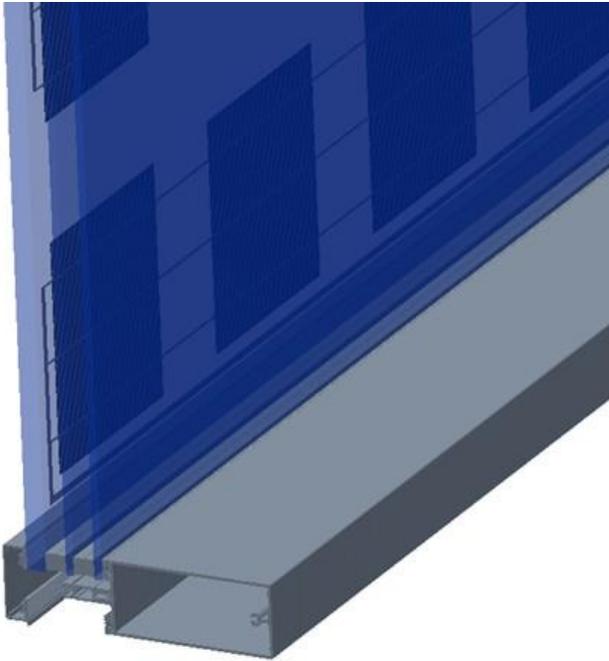


Distribution board



# GLASS-BIPV PRODUCT IS BOTH STRUCTURAL ELEMENT & ELECTRICAL DEVICE

As structural element BIPV must fulfill:



- Weather resistance level and long lifetime (35 years)

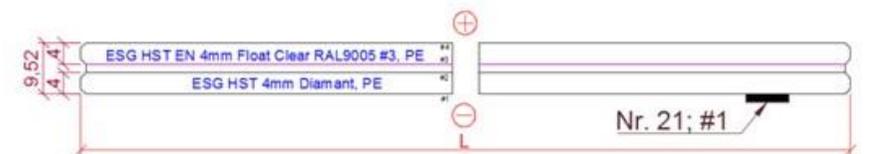
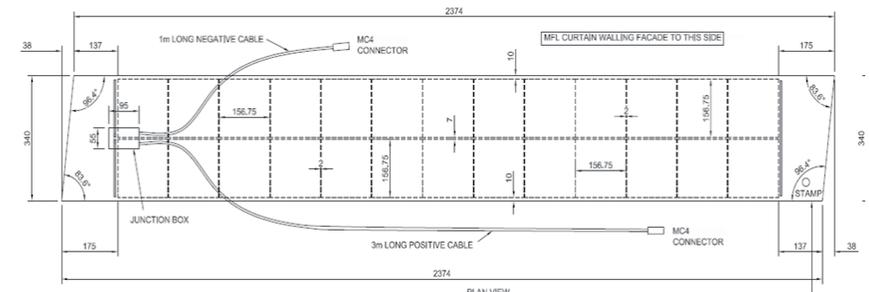
- Structural strength

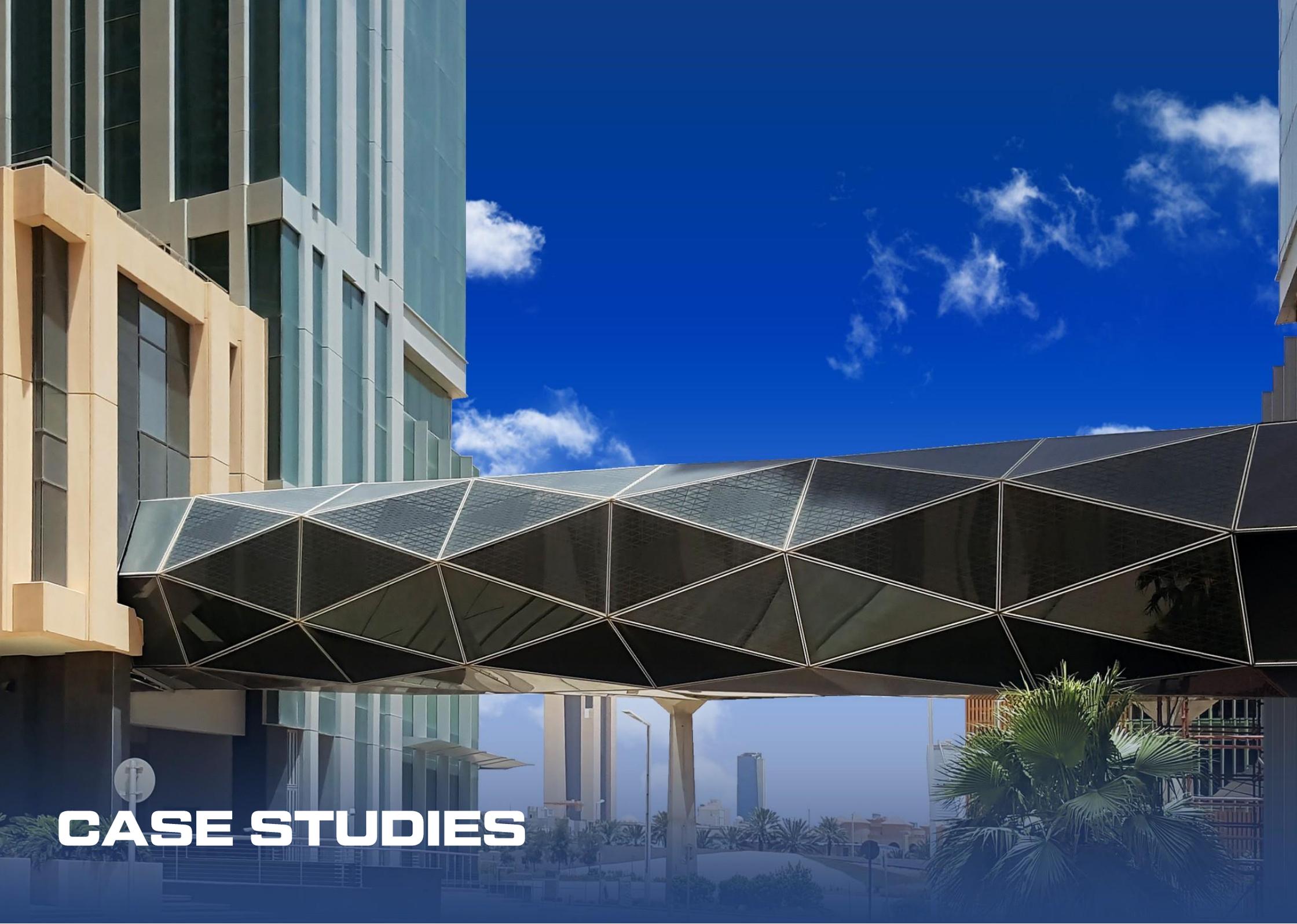
- High aesthetic

# EILEEN HOUSE LONDON, GLASS-BIPV PRODUCT



- In total there were 490 modules installed on roof
- Average output from single module is 115W
- So in total there are about 56.35 kWp installed on this power plant
- Bespoke appearance was achieved by tailor made bus bars which was covered by black 3M tape and become virtually invisible on completely homogeneous black modules





# CASE STUDIES



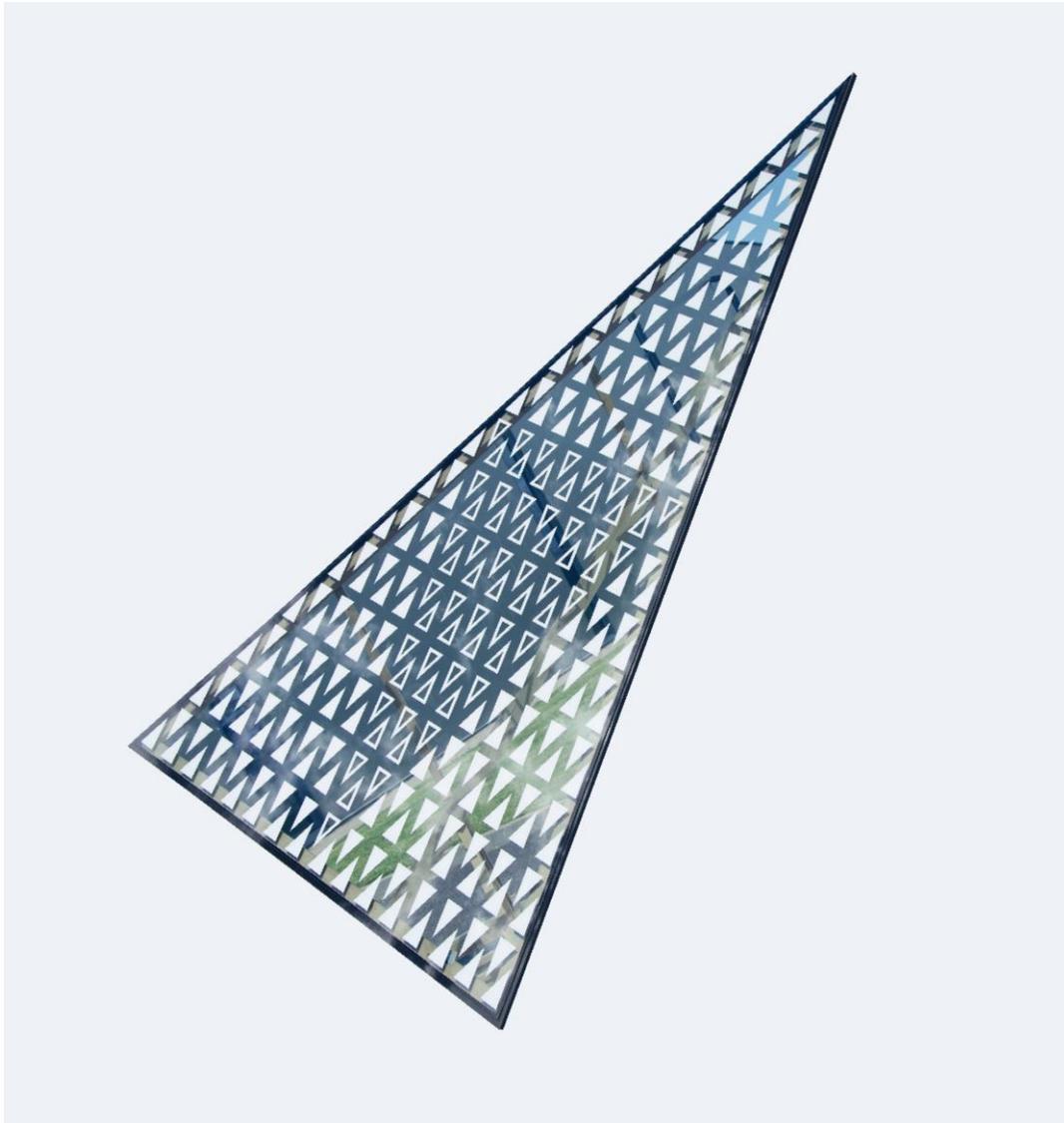
Location: Riyadh, Saudi Arabia

48 000 sq.m.

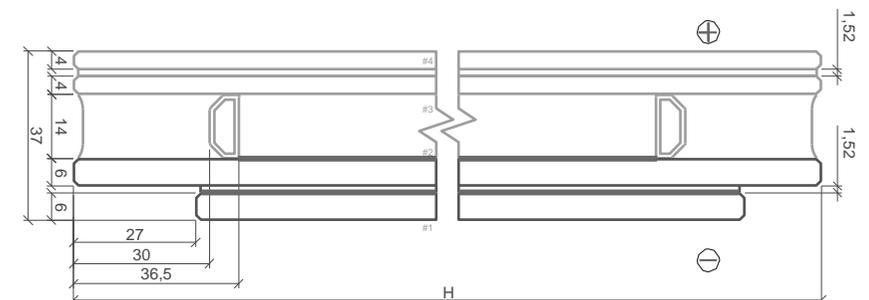
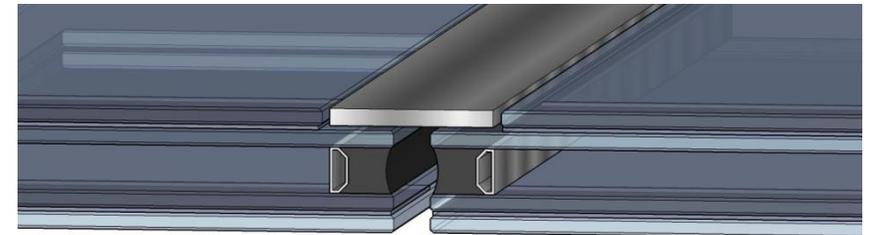
KAFD Skywalks is an outstanding project with double glazing units with extra large dimensions and triangular shapes of 2.4x4.6 m, silk printed and stepped laminated glass (step on outer pane of laminated glass) around the perimeter. Roller wave distortion even for sharp edges <0,15 mm.

- Outer pane: Laminated and heat strengthened 66.4 with silk printing and Stopray Titanium coating
- Spacer: 14 mm
- Inner pane: Heat strengthened 8 mm

# KAFD SKYWALKS



- The challenge was to make the external glass of the outer laminate by 27 mm smaller around the perimeter
- Precise positioning and a special lamination process to prevent glass from misalignment
- High requirements of quality tolerances: the dimension deviations for complex large triangular shapes of no more than 2 mm and the level of optical distortions for tempered glass to be less than 0,15 mm



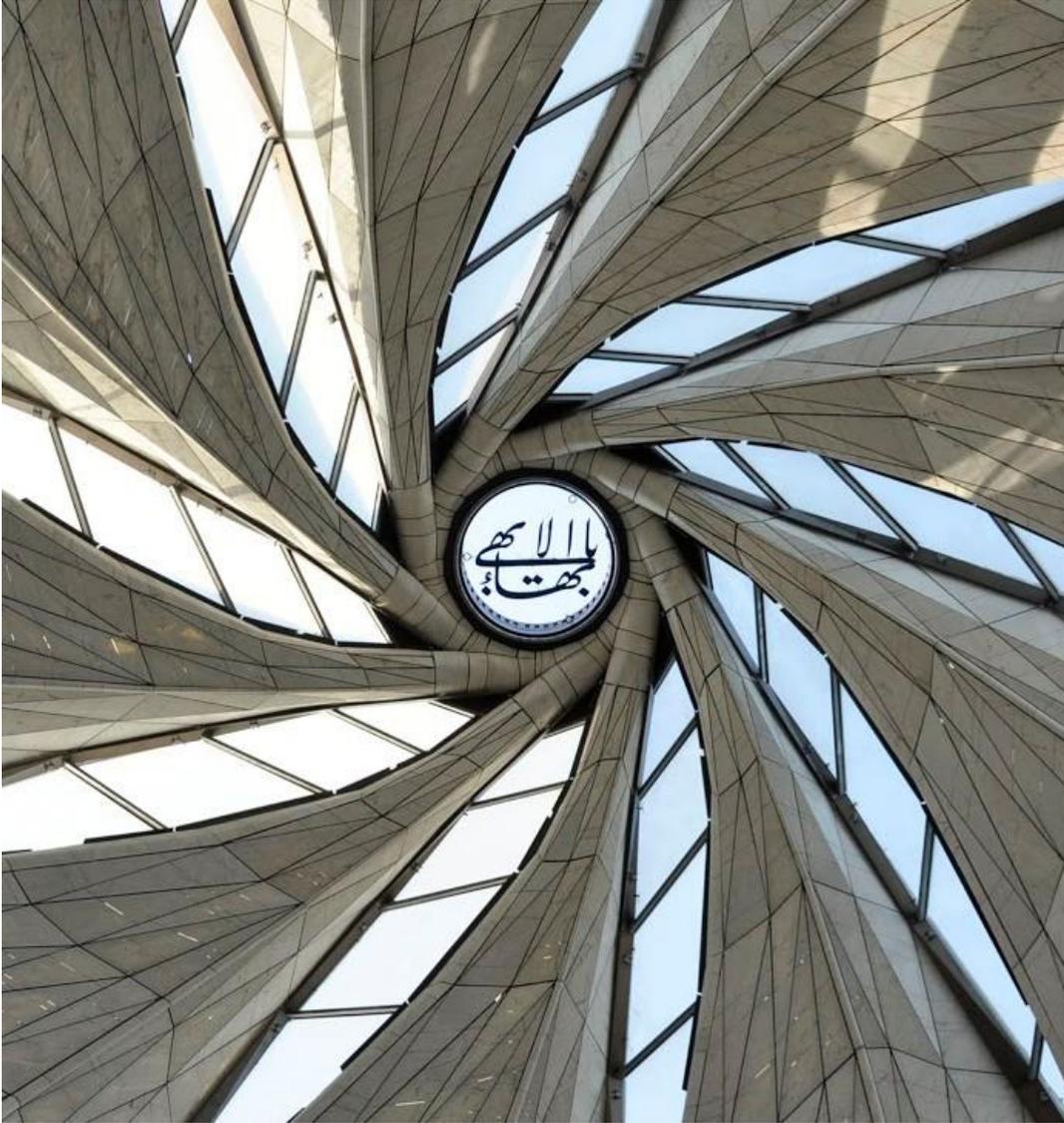


Location: Santiago, Chile      349 sq.m.

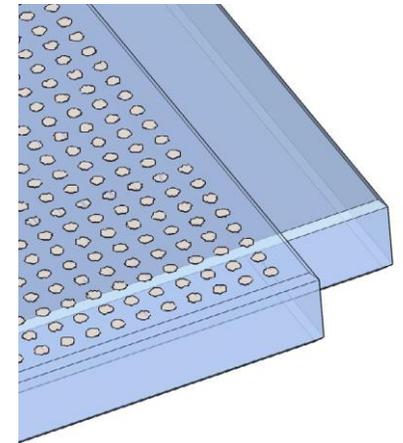
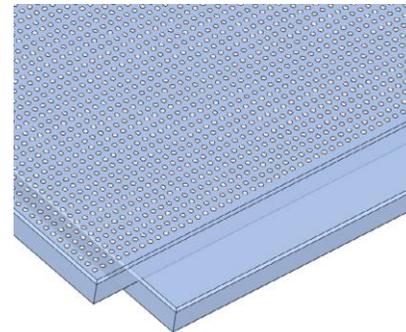
Bahai Temple, a unique architectural masterpiece, features laminated glass units comprising out of low iron glass with a dot gradient digital frit in white color. Main sizes are 2.5x3.5 m, all units have totally 112 different shapes.

- Laminated and heat strengthened 10.10.4 low iron with digital print

# BAHAI TEMPLE



- Low-iron panes with dot-matrix gradient digital printing
- White dot pattern reflects the sun's rays preventing overheating, whilst providing sufficient daylight levels inside the building and diffusing the light making it softer and more expressive
- All the panes have different shapes treated by water jet
- Logistics experience to deliver in South America





Location: Riga, Latvia      30 000 sq.m.

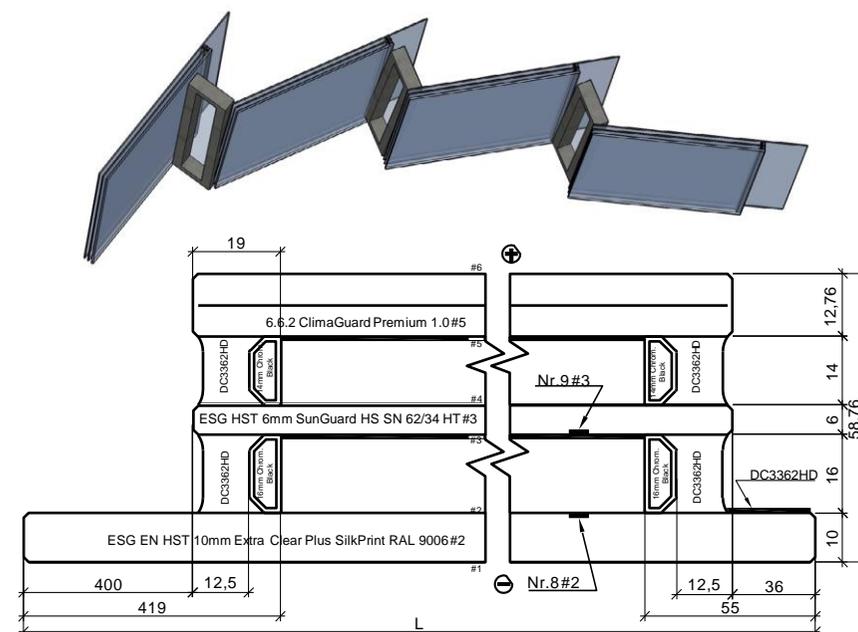
Z-Towers project has outstanding features of triple glazing units with silk printing on outer pane and high selective coating HS SN 62/34 on middle pane. The glass units of almost 60 mm thickness and weight up to 1 tonn per unit and extra large dimensions of 2.5x4.1 m.

- Outer pane: Fully tempered with heat soak test 10 mm silk printed;  
Spacer: 16 mm
- Middle pane: Fully tempered with heat soak test 6 mm Sun-Guard HS SN 62/34;  
Spacer: 14 mm;
- Inner pane: Laminated 66.2 Low E

# Z-TOWERS



- 400 mm step to one vertical side that was used to create a faceted facade
- The stepped edge of one insulated glass unit overlaps with next pane close to it and creates an effect of scales
- GLASSBEL used MEPLA calculations for the optimal construction of insulated glass units, taking into account wind loads and climate stresses



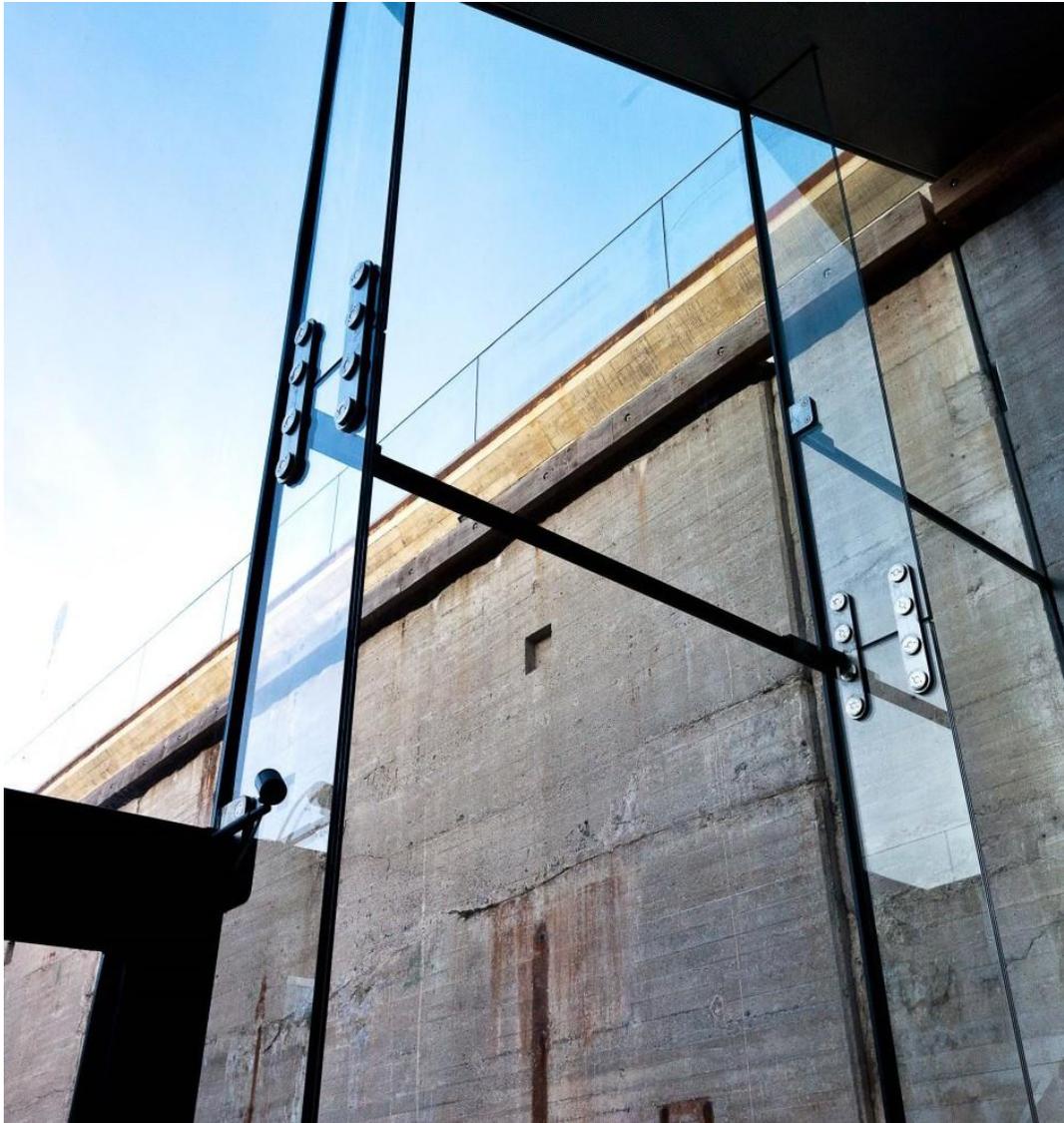


Location: Helsingor, Denmark      1 120 sq.m.

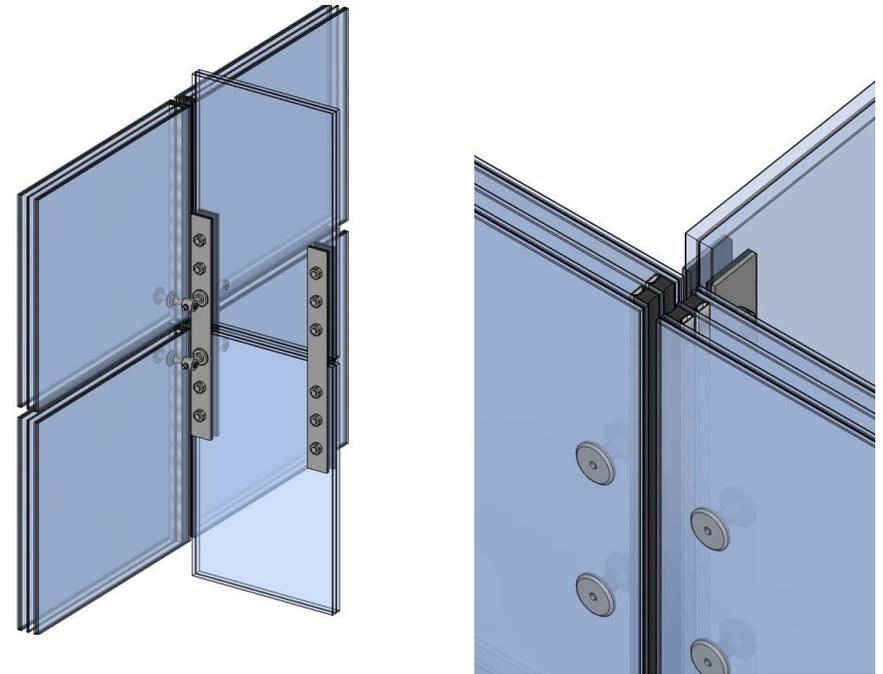
The project features oversized double glazing units with sizes up to 1.9x5.0 m for structural glazing. Extra transparency was achieved by using high selective coating on the outer pane and extra tempering flatness. Won RIBA award in 2014.

- Outer pane: Fully tempered 10 mm SunGuard HS SN 70/41
- Spacer: 15 mm warm edge
- Inner pane: Laminated fully tempered 66.4

# DANISH MARITIME MUSEUM



- Huge sizes up to 1.9x5.0 m and “easy” appearance was reached by using only top and bottom supports for insulated glasses
- Internal glass fins with metal fixings
- Tight requirements for edge tolerances and misalignments





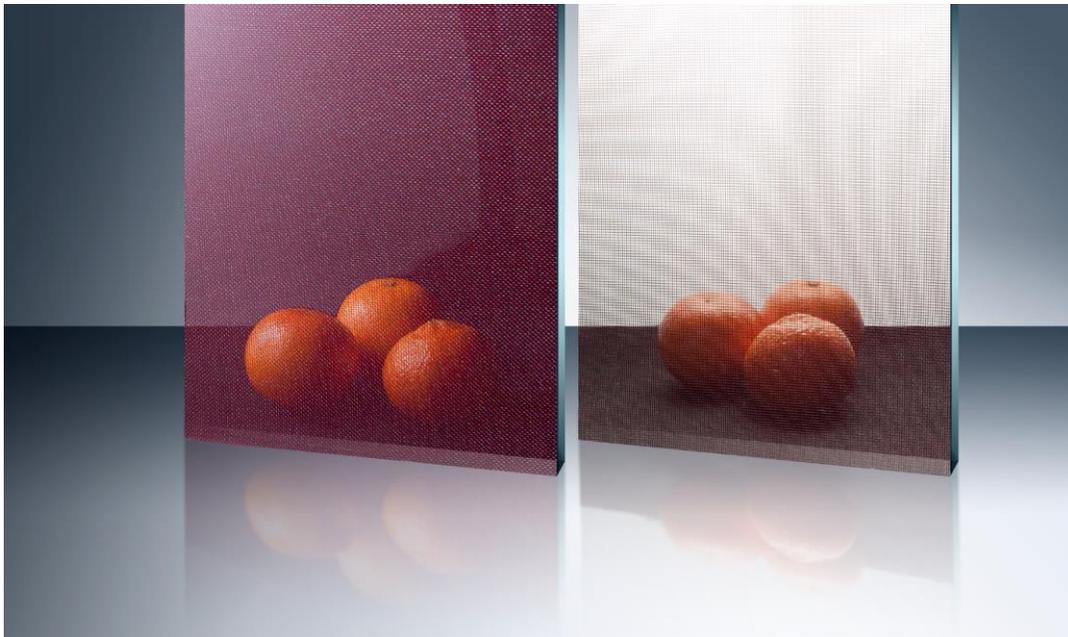
Location: Minsk, Belarus

6 800 sq.m.

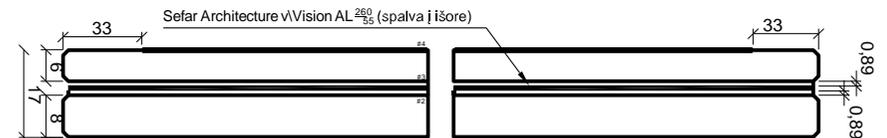
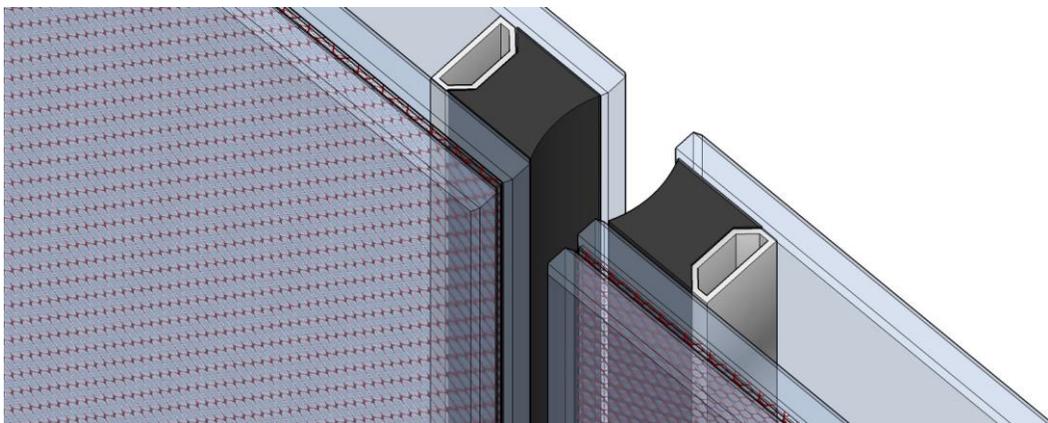
Innovative & complex glazing solution with Sefar mesh printed in customized red color – imitating the red sylvinit crystal. Intense red color highlights the outside, at the same time providing natural visibility from the inside without the color irritation on eyes. Complex irregular shapes, structural glazing.

- Outer pane: Laminated fully tempered with heat soak test 8.6.4 with Sefar mesh and SunGuard HS SN 70/37 coating
- Spacer: 18 mm warm edge with U-profile
- Inner pane: Fully tempered with heat soak test 8 mm Low E

# RRB BANK



- To have big reddish crystal appearance traditional options were considered: enameling – which couldn't provide shiny effect, colored interlayers – which made all the light coming inside red and unbearable
- Red Sefar mesh was the only option, because it is red from outside and neutral inside
- All glasses in this project were shaped and some of them had sharp corners
- Laminated glass with Sefar mesh is not only a decorative element, it also provides high energy performance due to its solar reflection. The IGU build up also had multifunctional and Low-E coatings



# DUN LAOGHAIRE CENTRAL LIBRARY

Glass-FINS



Glass-MESH



Location: Dublin, Ireland

1 600 sq.m.

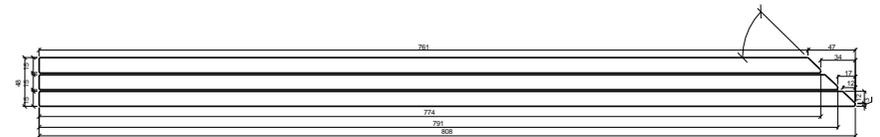
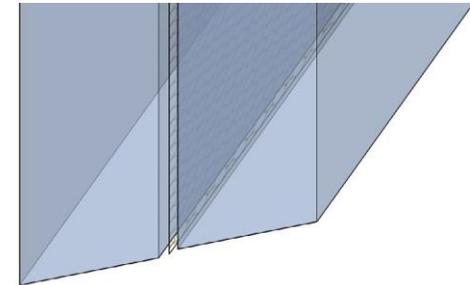
Oversized double glazing units with size up to 5.7 m with high selective coating and stepped edge around perimeter distinguish this project. In addition, laminated glass fins with beveled edges and double sided golden Sefar Mesh. The project won RIBA award of International Excellence in 2016.

- Outer pane: Fully tempered and heat soak tested 8 mm with SunGuard HS SN 51/28 coating  
Spacer: 20 mm black warm edge with U-profile
- Inner pane: Laminated 4.6.2  
Fins: Laminated fully tempered with heat soak test low iron 1515.4 with Sefar Gold Mesh coated both sides and Sentry-Glas interlayer, beveled edges

# DUN LAOGHAIRE CENTRAL LIBRARY



- Glass-FINS for library is main accent of the façade
- Shiny gold fins are not only eye catching but also functional solar protection.
- The main challenge for glass processing was 45 degrees bevel for toughened and laminated glass consisting of two 15mm glasses
- Glasses needed to be beveled separately and then laminated together leaving no deviation for edge misalignment





Location: Dublin, Ireland

1 600 sq.m.

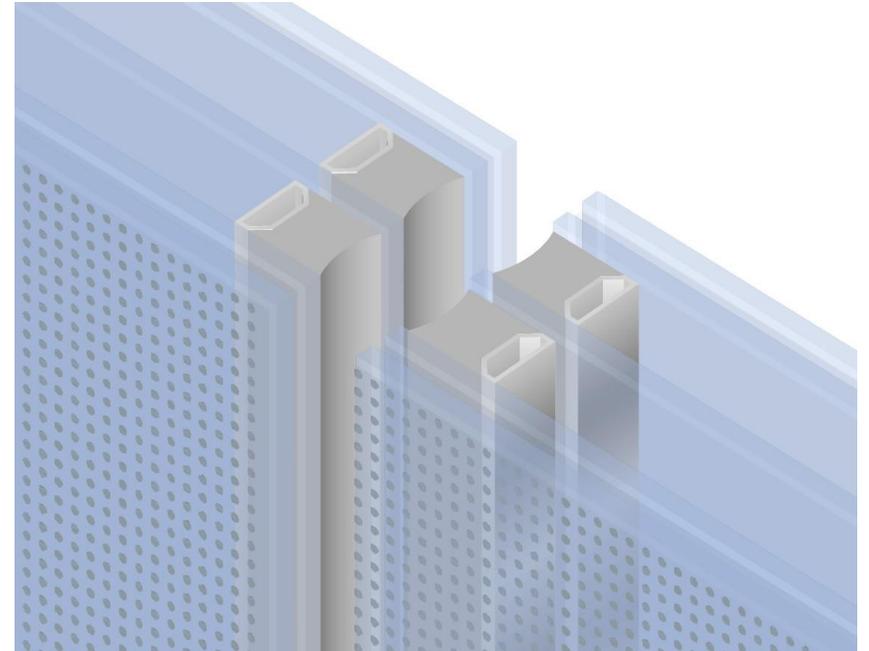
The project features double glazing units with digital printing both on inner and outer (on position #1) panes created «haze effect» of the facade and provided additional solar control performances. Grey silicone and butyl were used to emphasize the design idea.

- Outer pane: Heat strengthened 12 mm with digital printing #1
- Spacer: 20 mm grey warm edge with U-profile, grey silicone
- Inner pane: Laminated and heat strengthened low iron with Low E coating and digital printing 6.5.4 with Sentry Glas

# ROYAL COLLEGE OF SURGEONS



- Digital printing both on inner and outer (on position #1) panes created «haze effect» of the facade
- Solar control performances
- Grey silicone and butyl were used to emphasize the light and homogeneous design idea



# ONE MOLESWORTH STREET

Glass-Fins



Glass-PRINT



Location: Dublin, Ireland

3 100 sq.m.

The project is remarkable for its complicated build up of highly transparent oversized double glazing units with high selective coating and digital printing. Second skin of the facade features thick glass fins with complex digital printed pattern creating 3D effect.

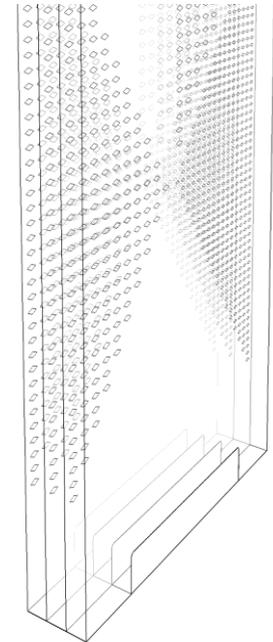
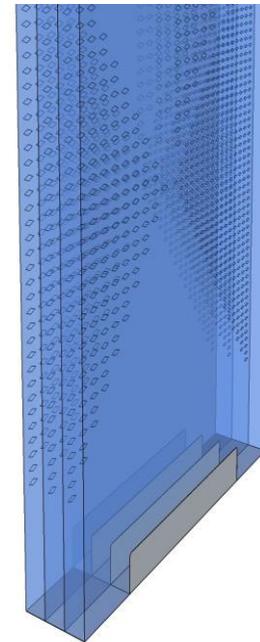
 GLASSBEL

- Outer pane: Laminated and heat strengthened with low iron glass and SunGuard HS SN 70/35 coating 10.8.4;  
Spacer: 22 mm warm edge with U-profile;  
Inner pane: Laminated and heat strengthened with digital printing on low iron glass 88.4
- Fins: Laminated and heat strengthened low iron 12.12.12.4 with Evasafe, digital printing 3D effect and polished edges

# ONE MOLESWORTH STREET



- Second skin of the facade features thick Glass-FINS with complex digital printed pattern creating 3D effect
- Laminated and heat strengthened low iron 12.12.12.4 with Evasafe and polished edges





Location: St. Petersburg, Russia

170 sq.m.

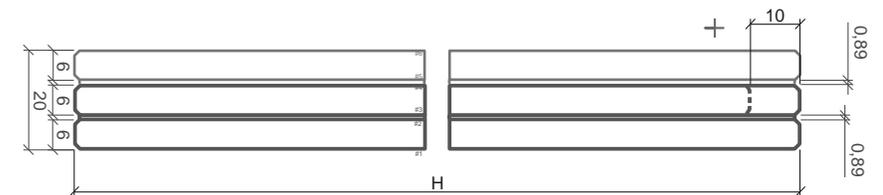
Large laminated glass with electrical heating for point fixing system of canopies, with SentryGlas interlayer and low-iron glasses. Perimeter printing. Complex shapes. Fully automated intelligent control system designed individually for the project.

- Outer pane: Laminated fully tempered low iron 6.6.6.2 with electrical heating and SentryGlas interlayer

# MARIINSKY THEATRE



- GLASS-HEAT product with holes through all glasses in the laminates was used to have snow and ice melting option
  - The project features large sizes of laminated glass with heating, as well as point fixing system and the requirement of open edges
- Turnkey “ solution – from project design for the given requirements to installed glasses with fully automated control system
- 





Location: Sochi, Russia      4 000 sq.m.

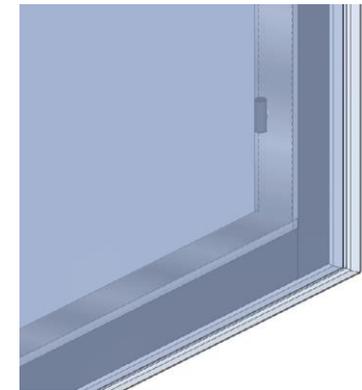
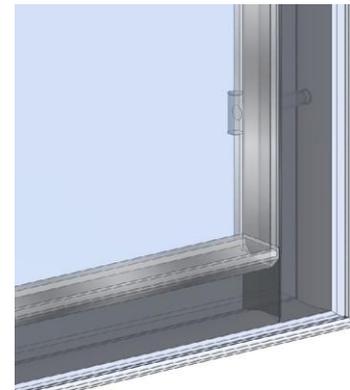
This combined complex for cross-country skiing and biathlon was built in 2011 on the ridge Psekha-ko in the village Krasnaya Polyana, at a height of about 1 800 metres. It is one of the largest and most comfortable buildings for its purpose in the world.

- Outer pane: Fully tempered 8 mm SunGuard HP Neutral
- Spacer: 16 mm warm edge, pressure valves
- Inner pane: Laminated and fully tempered 44.4 with Sentry-Glas interlayer

# LAURA



- Height of installation – 1 800 meters above sea level, therefore pressure equalization valves were used.
- P4A shock proof protection level was required, but the thickness of DGUs were limited. The solution was to use SentryGlas interlayer, which made it possible to reduce the thickness of inner laminated glass, reduce weight of construction and improved the light transmission.
- Curved DGUs with the same glass build-up





# GLASSBEL REFERENCES

# DUBAI OPERA



Location: Dubai, UAE      9 630 sq.m.

Opera House features oversized double glazing units with the largest pane size of 2.7x3.9 m, 43.52 mm thickness low iron glass, heat strengthened using both sides coated antireflective coating.

- Outer pane: Low Iron laminated and heat strengthened 88.4 with SunGuard HS SN 70/37 coating
- Spacer: 18 mm warm edge
- Inner pane: Heat strengthened 8 mm low iron with both sides antireflective coating

# FOSTER + PARTNERS OFFICE



Location: London, UK      1 200 sq.m.

Oversized glass units meeting highest quality standard for one of the most well-known architectural bureaus in the world. Double glazing units with high selective coating HS SN 51/28 from Guardian, dimensions of 3.0x3.3 m and minimal roller wave distortion. The feature of this project is the special requirement of 3 mm step to ensure that the edge gasket seals against the outer pane.

- Outer pane: Fully tempered with heat soak test 12 mm
- Spacer: 16 mm
- Inner pane: Laminated 66.4 with SentryGlas interlayer

# 30 CANNON STREET



Location: London, UK      1 400 sq.m.

30 Cannon Street features double glazing units with double silver solar control glass HS SN 62/34 from Guardian. All of the units have complex shapes: arched with a maximum dimensions of 1.5x3.3 m with step 22 mm.

- Outer pane: Heat strengthened 8 mm SunGuard HS SN 62/34
- Spacer: 12 mm black warm edge
- Inner pane: Laminated and heat strengthened 55.4 low iron

# LONDON BRIDGE STATION



Location: London, UK      1 600 sq.m.

London bridge station refurbishment project in the heart of London is distinguished with oversized double glazing units with outstanding safety requirements using both inner and outer laminated tempered panes.

- Outer pane: Laminated fully tempered with heat soak test 66.4 with SunGuard HS SN 70/41 coating
- Spacer: 16 mm black warm edge
- Inner pane: Laminated fully tempered with heat soak test 66.4



Location: London, UK      2 300 sq.m.

Double glazing units consist of outer heat strengthened laminated glass with high selective coating and sound reduction film and inner fully tempered silk-printed glass with heat soak test.

- Outer pane: Laminated and heat strengthened 66.4 with Sun-Guard HS SN 70/37 coating and sound control film
- Spacer: 15 mm
- Inner pane: Fully tempered with heat soak test 10 mm silk printed

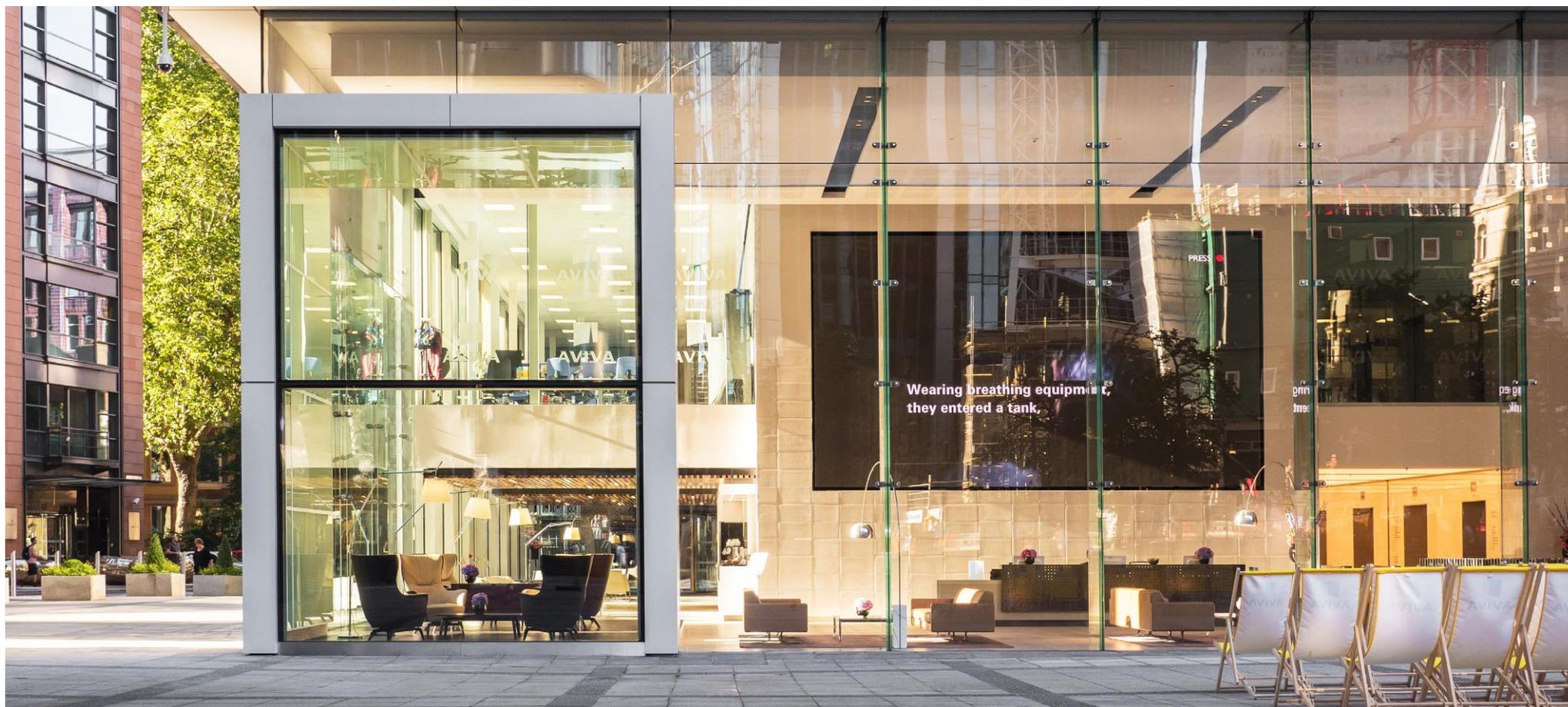
# LACON HOUSE



Location: London, UK      465 sq.m.

Project features double glazing units with all panes being low iron and solar coating . Insulated glass units were structurally glazed with Raico profiles. Maximum sizes of 1.3x2.9 m with minimal roller wave distortion.

- Outer pane: Fully tempered with heat soak test 10 mm low iron
- Spacer: 20 mm with U-profile
- Inner pane: Laminated and heat strengthened 66.4 low iron with Low E coating

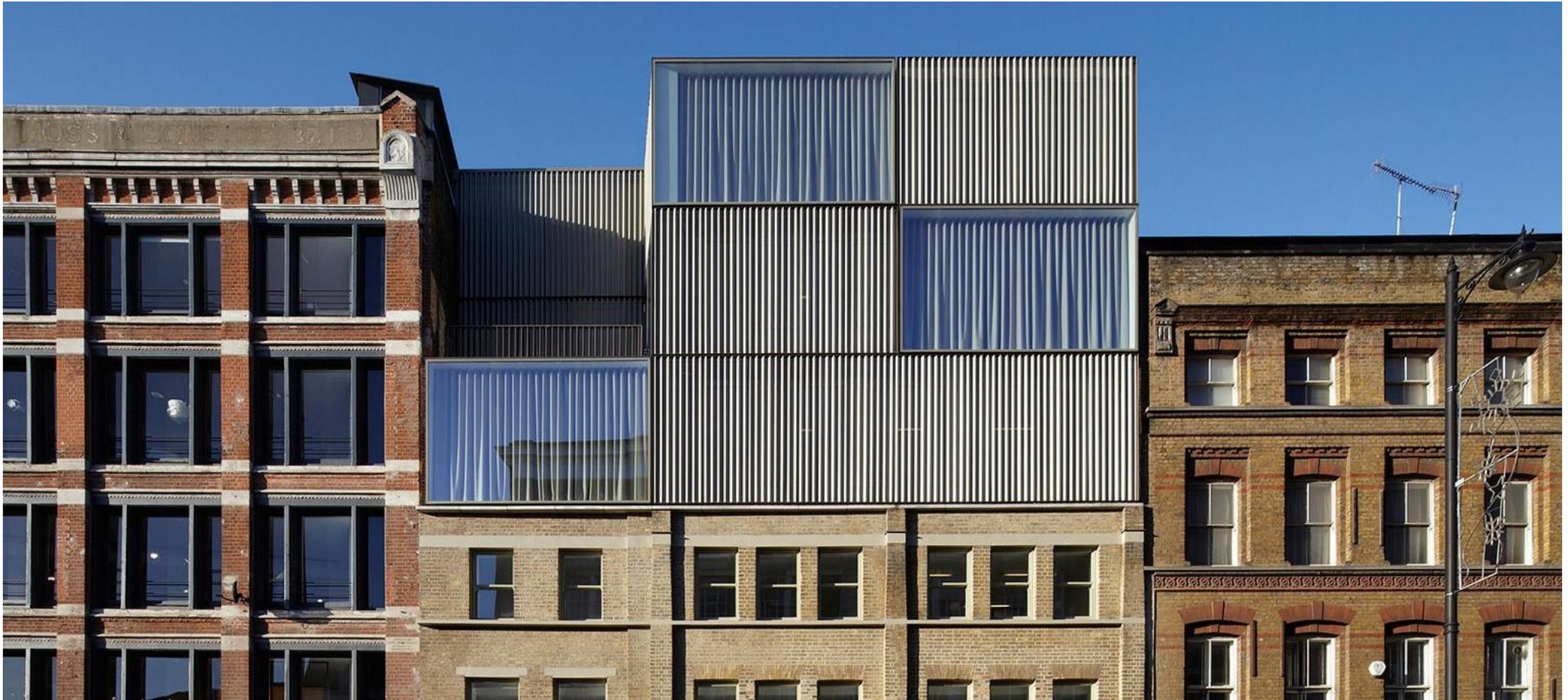


Location: London, UK    800 sq.m.

Swan features extra transparent double glazing units that can be outlined by their big sizes of 2.3x2.7 m. Double silver coating on low iron substrate to increase light transmission and to reduce glares of a facade. Both outer and inner panes are laminated for safety issues and allowed to result in best thermal insulation figures.

- Outer pane: Laminated fully tempered with heat soak test 66.4 low iron with SKN 074 coating
- Spacer: 24 mm black warm edge with U-profile
- Inner pane: Laminated fully tempered with heat soak test 66.4 low iron

# CURTAIN ROAD



Location: London, UK      147 sq.m.

Oversized extra transparent double glazing units with outstanding tempering flatness.

- Outer pane: Fully tempered with heat soak test 12 mm low iron
- Spacer: 16 mm
- Inner pane: Laminated 66.2 with Low E coating



Location: London, UK      390 sq.m.

Complicated double glass units with unique design: SEFAR mesh in the outer laminated glass and Mirastar inner glass to achieve maximum reflection.

- Outer pane: Laminated fully tempered with heat soak test 66.4 low iron with Sefar mesh and border digital printing
- Spacer: 18 mm black warm edge with U-profile
- Inner pane: Fully tempered with heat soak test 8 mm Mirastar



Location: London, UK      3 700 sq.m.

For Lombard Road project we supplied laminated panes of different types: for balustrades, shaped canopies with color Vanceva foil, digitally printed decorative panels. All panes are low iron, some with SentryGlas interlayer.

- Outer pane: Laminated and heat strengthened 10.10.4 low iron with digital printing pattern

# BUPA REGENT BUILDING



Location: Manchester, UK      4 500 sq.m.

Double glazing units with high safety requirements: both outer and inner panes are laminated.  
Extra selective coating by Saint-Gobain, sound reduction properties.

- Outer pane: Laminated and heat strengthened 66.4 with Cool-Lite Xtreme 60 coating
- Spacer: 20 mm black warm edge
- Inner pane: Laminated and heat strengthened 66.4 with sound control film

# MICROSOFT OFFICE



Location: Dublin, Ireland      7 000 sq.m.

The key features are double glazing units with triple silver coating SNX60/28 and SNX 50/23 from Guardian and laminated inside. Structurally glazed system with toggles and sizes of 1.5x3.2 m.

- Outer pane: Fully tempered and heat soak tested 6 mm Sun-Guard SNX 50/23
- Spacer: 20 mm/16 mm black warm edge with U-profile
- Inner pane: Laminated 44.2

# CAPITAL DOCK



Location: Dublin, Ireland

11 500 sq.m.

Project feature is extra transparent double glazing units with high selective coating Guardian SN 70/37.

- Outer pane: Heat strengthened 6 mm SunGuard HS SN 70/35
- Spacer: 18 mm warm edge
- Inner pane: Laminated low iron 44.2

## 26-27 GRAFTON STREET



Location: Dublin, Ireland      700 sq.m.

The project's feature is double clear and spandrel glass units with stepped edges and sizes up to 2.3x2.5 m

- Outer pane: Heat strengthened 8 mm Low E
- Spacer: 20 mm black warm edge with U-profile
- Inner pane: Laminated 44.2 with step and polished edges

# BALLSBRIDGE NO.1



Location: Dublin, Ireland      3 500 sq.m.

Oversized IGUs (jumbo size) with outstanding safety due to both outer and inner laminated panes and high energy performances because of using HS 70/37 coating.

- Outer pane: Laminated and heat strengthened 66.4 with Sun-Guard HS SN 70/37 coating
- Spacer: 20 mm black warm edge with U-profile
- Inner pane: Laminated 88.4



Location: Dublin, Ireland      4 900 sq.m.

Projects feature is oversized double glazing units with average size of 2.9x3.4 m in combination with super neutral HS SN 70/37 Guardian coating. White pattern on the facade and glass fins provides additional solar control properties and creates unique modern and vibrant facade appearance.

- Outer pane: Heat strengthened 10 mm SunGuard HS SN 70/37  
Spacer: 22 mm black warm edge with U-profile  
Inner pane: Laminated and heat strengthened with silk printing 55.4
- Fins: Laminated fully tempered with heat soak test low iron66.4 with SentryGlas interlayer and white pattern

# HANOVER QUAY NO.5



Location: Dublin, Ireland      5 200 sq.m.

The facade solution is distinguished by energy efficient DGUs with high selective coating HS SN 70/35 and inner pane laminated for acoustic comfort and safety.

- Outer pane: Heat strengthened 6 mm SunGuard HS SN 70/35 coating
- Spacer: 18 mm black warm edge
- Inner pane: Laminated 44.2

# HANOVER QUAY NO.8



Location: Dublin, Ireland      4 000 sq.m.

Oversized double glazing units up to 1,7x5 m with a complex composition: both outer and inner panes are laminated and heat strengthened. HS SN 51/28 coating on the outer pane, silk-printed pattern on the inner pane. Inserted U-profiles for structurally glazed facade system.

- Outer pane: Laminated and heat strengthened 66.4 with Sun-Guard HS SN 51/28 coating
- Spacer: 20 mm black warm edge with U-profile
- Inner pane: Laminated and heat strengthened 55.4 with silk printing

# SOUTH KING STREET (ZARA)

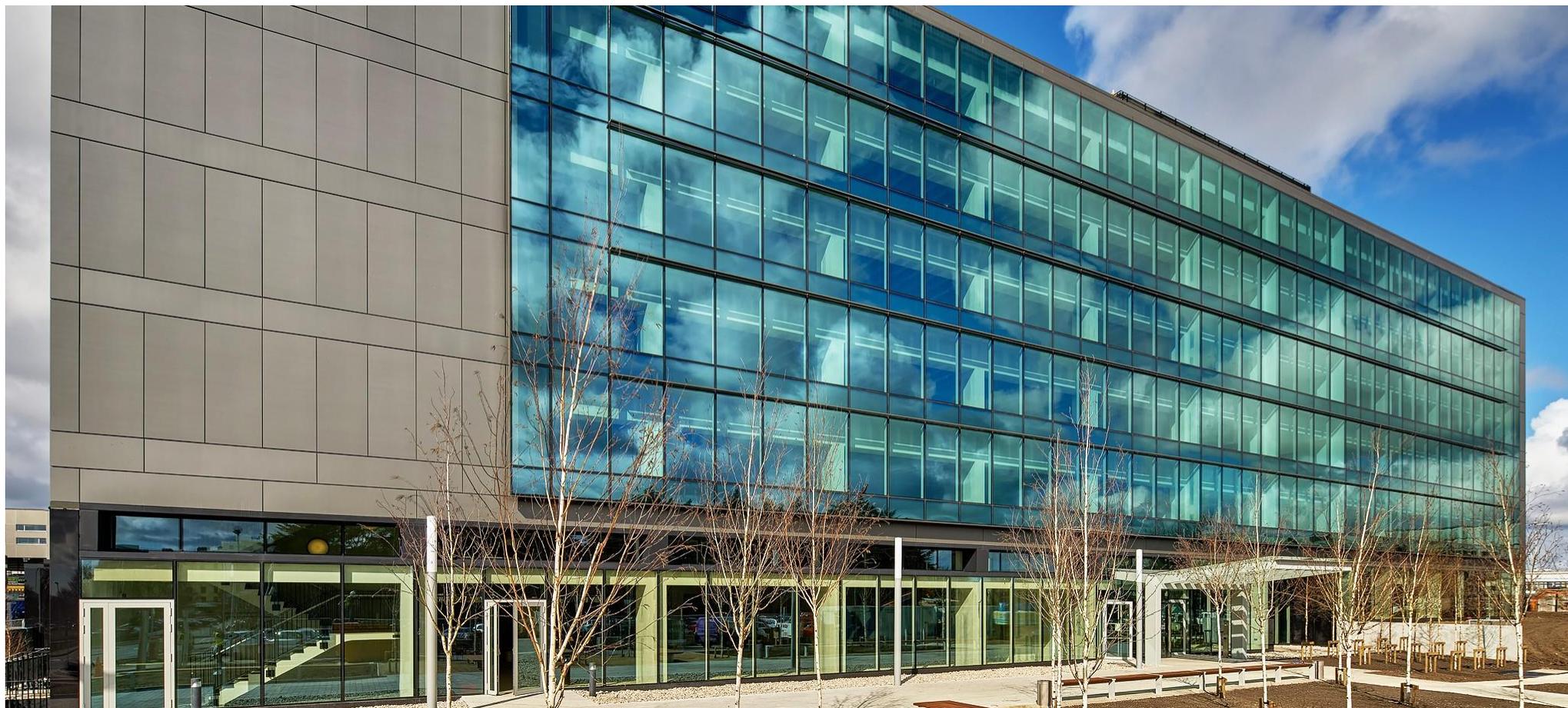


Location: Dublin, Ireland      1 350 sq.m.

Project is distinguished with high security stepped double glazing units with both laminated outer and inner panes. High performance coating 60/40 from Guardian with dimensions of 2.1x4.3 m, structurally glazed system and U-profile inserts.

- Outer pane: Laminated and heat strengthened 5.6.4 with Sun-Guard HP Neutral 60/40
- Spacer: 16 mm black warm edge with U-profile
- Inner pane: Laminated and heat strengthened 55.4

# DAA HOB



Location: Dublin, Ireland    2 100 sq.m.

DAA HOB details are stepped double glazing units (clear and spandrel) with extra selective triple silver coating SNX 50/23 from Guardian and maximum sizes of 1.5x2.8 m with toggle channels. The highest quality of tempering creates perfectly smooth facade.

- Outer pane: Heat strengthened 8 mm SunGuard SNX 50/23
- Spacer: 20 mm with U-profile
- Inner pane: Laminated 44.2

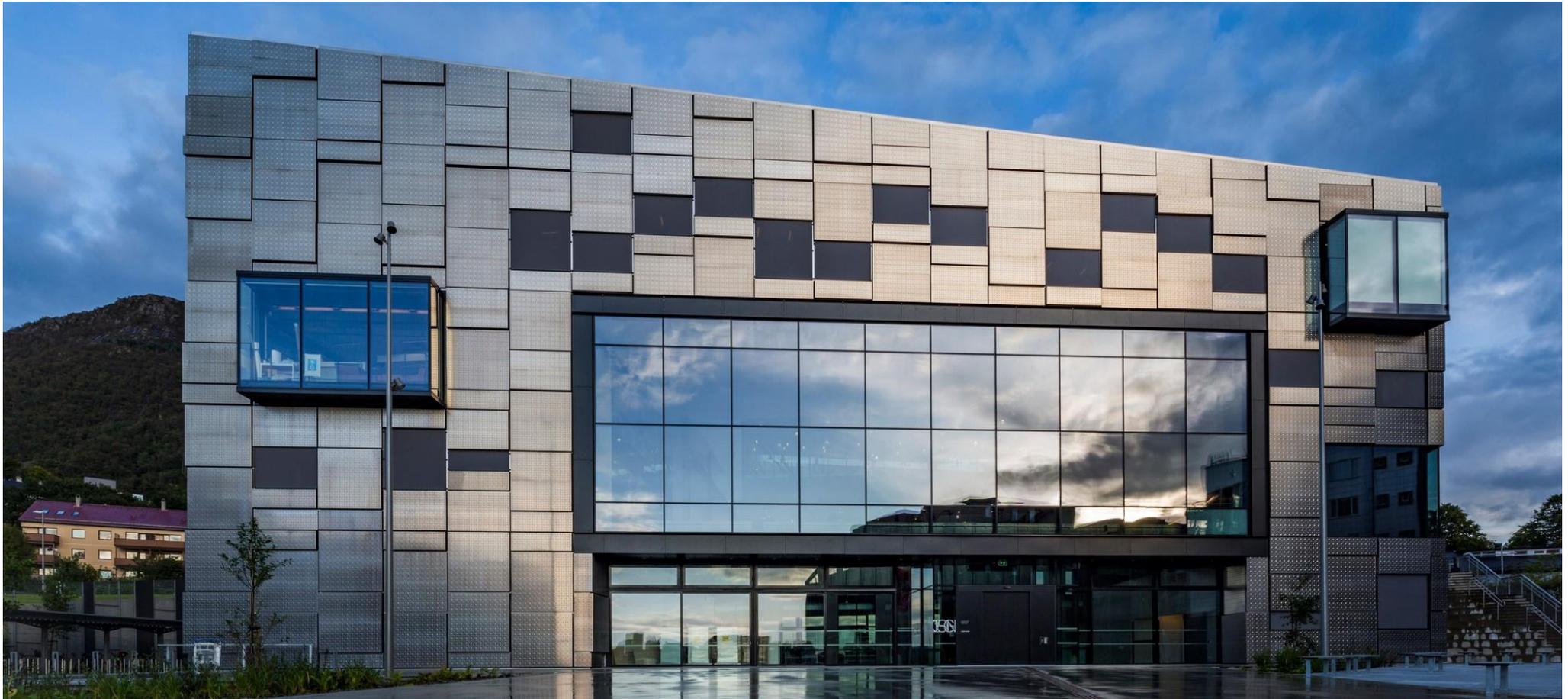


Location: Lyon, France      120 sq.m.

2 years of intensive R&D activities finally were realized with successfully developed solution of heatable, safe to walk and highly durable glass for Museum in France.

- Outer pane: Laminated fully tempered with heat soak test 15.6.19.19.4 heatable with low iron glasses

# KHiB NATIONAL ACADEMY OF THE ARTS



Location: Bergen, Norway      1 900 sq.m.

KHiB features oversized triple glazing units with maximum energy efficiency. General glass sizes of 1.3x3.2 m with a total insulated glass thickness of 58 mm.

- Outer pane: Fully tempered with heat soak test 12 mm Low E, polished edges  
Spacer: 15 mm black warm edge, U-profile
- Middle pane: Fully tempered with heat soak test 6 mm with silk printing  
Spacer: 15 mm black warm edge
- Inner pane: Fully tempered with heat soak test 10 mm Low E

# FORNEBUPORTEN



Location: Oslo, Norway      3 130 sq.m.

Project main figures are triple glazing units with big dimensions of 1.2x5.1 m and high energy efficiency with a U-value of 0.5 W/m<sup>2</sup>K. Unitized curtain walling system.

- Outer pane: Fully tempered with heat soak test 8 mm Low E
- Spacer: 16 mm
- Middle pane: 6 mm clear glass
- Spacer: 14 mm
- Inner pane: Laminated 66.2 Low E

# LILLEHAUGEN



Location: Oslo, Norway      136 sq.m.

Triple glazing units with special feature: 972 mm step on the outer pane, which required manual assembling. Low iron laminated outer pane and big dimensions up to 1.7x4.7 m.

- Outer pane: Laminated 88.4 low iron with polished edges
- Spacer: 12 mm black warm edge
- Middle pane: 6 mm SunGuard HS SN 70/41
- Spacer: 14 mm black warm edge with U-profile
- Inner pane: Laminated 44.2 Low E

# BESTSELLER



Location: Aarhus, Denmark     380 sq.m.

Oversized triple glazing units with dimensions up to 3.0x4.0 m for structural system and with high energy performances due to using of high selective outer pane and low e coating on the inner pane. Acoustic comfort inside the building provided by sound control inner laminated glass.

- Outer pane: Fully tempered with heat soak test 10 mm Sun-Guard HS SN 40/23;  
Spacer: 14 mm with U-profile;
- Middle pane: 6 mm clear glass  
Spacer: 14 mm;
- Inner pane: Laminated 66.4 with Low E coating and sound control film



Location: Gothenburg, Sweden      1 650 sq.m.

Notkarnan Bergsjon is a distinguishing project with digitally printed double glazing units that consist of low iron glass. An interesting and complicated pattern design create a 3D effect which is layered through all the building. The glass surface changes color depends of the viewing angle.

- Outer pane: Fully tempered 6 mm low iron with digital print
- Spacer: 24 mm black warm edge with U-profile
- Inner pane: Fully tempered 6 mm low iron with digital print



Location: Keflavik, Iceland      1 100 sq.m.

Keflavik Airport features double glazing units with both Aluminium and Copper Sefar mesh combining with double silver coating HSSN70/41 from Guardian range. Maximum sizes of 1.7x 4.0m.

- Outer pane: Laminated fully tempered 55.4 with Sefar mesh
- Spacer: 16 mm steel spacer
- Inner pane: Fully tempered 10 mm SunGuard HS SN 70/41



Location: Doha, Qatar      410 sq.m.

National Museum of Qatar is distinguished by its complexity not only in design, but in implementation as well. Laminated toughened and heat soak tested glass of 24 mm with a maximum dimensions of 2.7x5.7 m and digitally printed.

- Outer pane: Laminated and fully tempered 12.12.4 with digital printing



Location: Doha, Qatar      14 000 sq.m.

Heart of Doha facades involve plenty of formulas and sizes, but the main product is double glazing unit with outer pane with solar control coating specially produced by AGC and inside laminated glass with sound control properties. Taking into account extremely hot climate, this glazing solution creates comfortable living and working space with solar control functions.

- Outer pane: Fully tempered with heat soak test 10 mm Sto-pray Vision 40T
- Spacer: 16 mm stainless steel
- Inner pane: Laminated and heat strengthened 44.4 with Sound Control film

# PRIVATE HOUSE



Location: New York, USA

600 sq.m.

Oversized extra transparency double glazing units with outstanding tempering flatness and all low iron glasses. Grey silicone and butyle. Inner pane is laminated with Sentry Glas interlayer for higher transparency and protection.

- Outer pane: Fully tempered 6 mm low iron
- Spacer: 14 mm grey silicone and grey butyle
- Inner pane: Laminated and heat strengthened 66.4 with SentryGlas interlayer

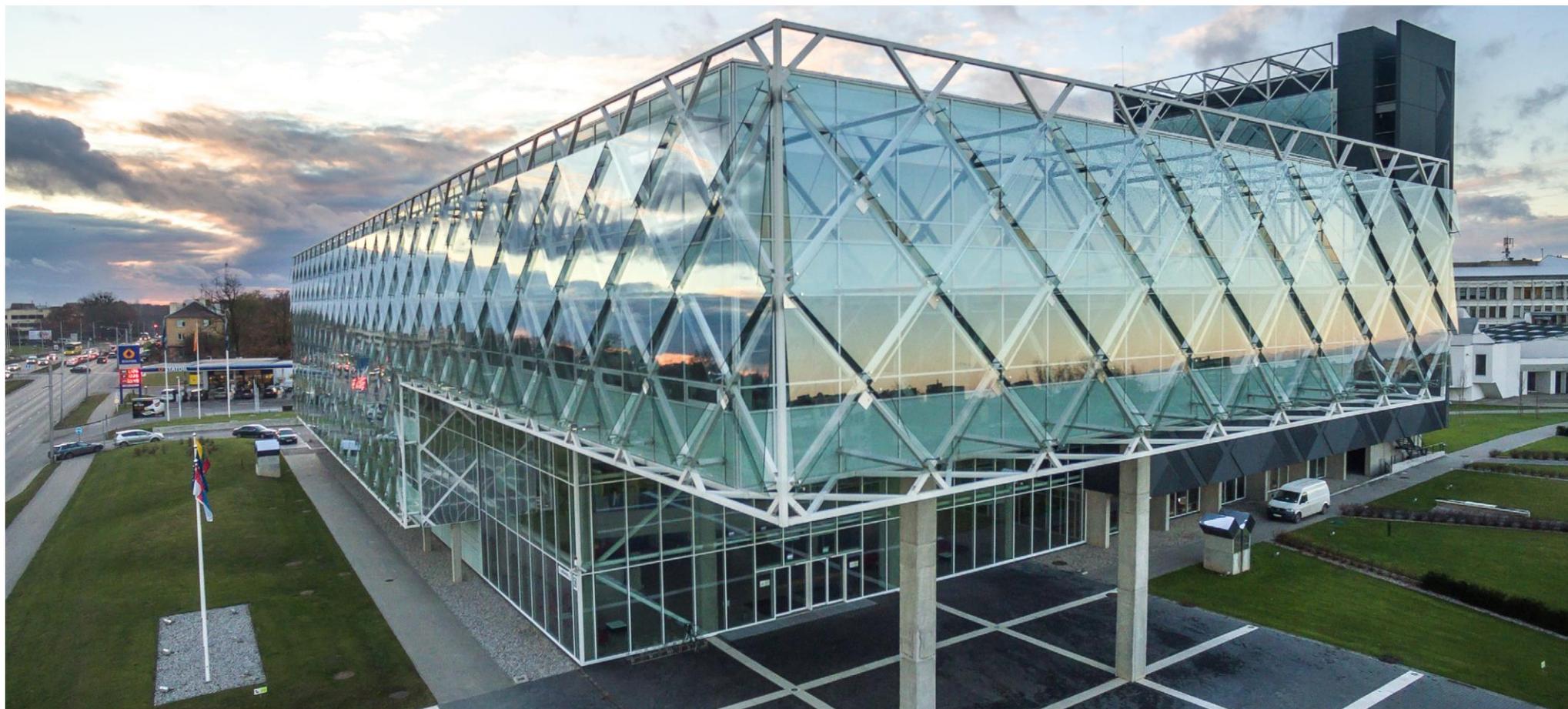
# APARTMENT COMPLEX K15



Location: Vilnius, Lithuania      8 700 sq.m.

Triple glazing units with high energy performance with a U-value of 0.5 W/m<sup>2</sup>K. Unitized curtain walling system.

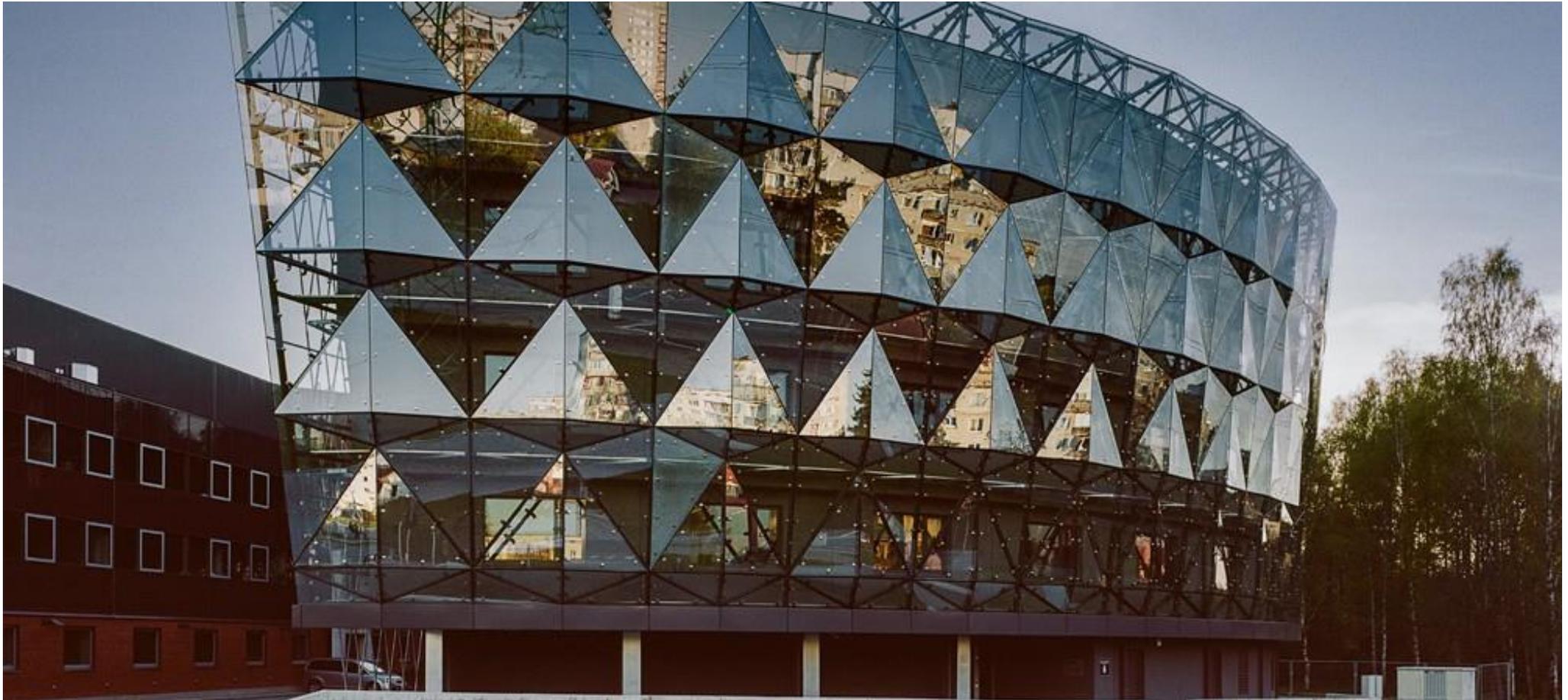
- Outer pane: 8 mm SunGuard HS SN 62/34
- Spacer: 16 mm black warm edge
- Middle pane: 6 mm clear glass
- Spacer: 16 mm black warm edge
- Inner pane: Laminated 55.2 Low E



Location: Kaunas, Lithuania      1 600 sq.m.

«Second skin» point fixed facade with shaped laminated glass.

- Outer pane: Laminated fully tempered 88.4 with SunGuard Solar Neutral 67



Location: Riga, Latvia

800 sq.m.

“Second skin” facade is performed by triangles of different dimensions made from tempered laminated panes contain Stopsol Supersilver reflective coating. All panes are with holes for point fixing system.

- Outer pane: Laminated and Fully tempered 66.4 with Stopsol Supersilver Clear with holes

# LATVIAN NATIONAL MUSEUM OF ARTS

Glass-  
SILK



Glass-  
FIRE



Location: Riga, Latvia      250 sq.m.

Walkable IGUs of complex build up: with anti-slip coating, stepped, with the function of electrical heating, border digital print. Also walkable fire-resistant IGUs. It's great example how to realize ambitious architectural idea and meet all safety and functional requirements of public spaces.

- Outer pane: Fully tempered laminated 6.6.15.15.4 with Mate-lux and anti-slip frit #1, electrical heating and border print
- Spacer: 16 mm black warm edge
- Inner pane: Laminated and heat strengthened 66.4 Low E



Location: Moscow, Russia      12 820 sq.m.

Unique appearance of Spartak Arena is created by oversized complex shapes of enameled glass. Complexity of the project is a variety of nonrectangular shapes including irregular hexagons. For high accuracy edge treatment BAZ Water Jet was used.

- Outer pane: Laminated fully tempered with heat soak test low iron 66.4 with roller painting

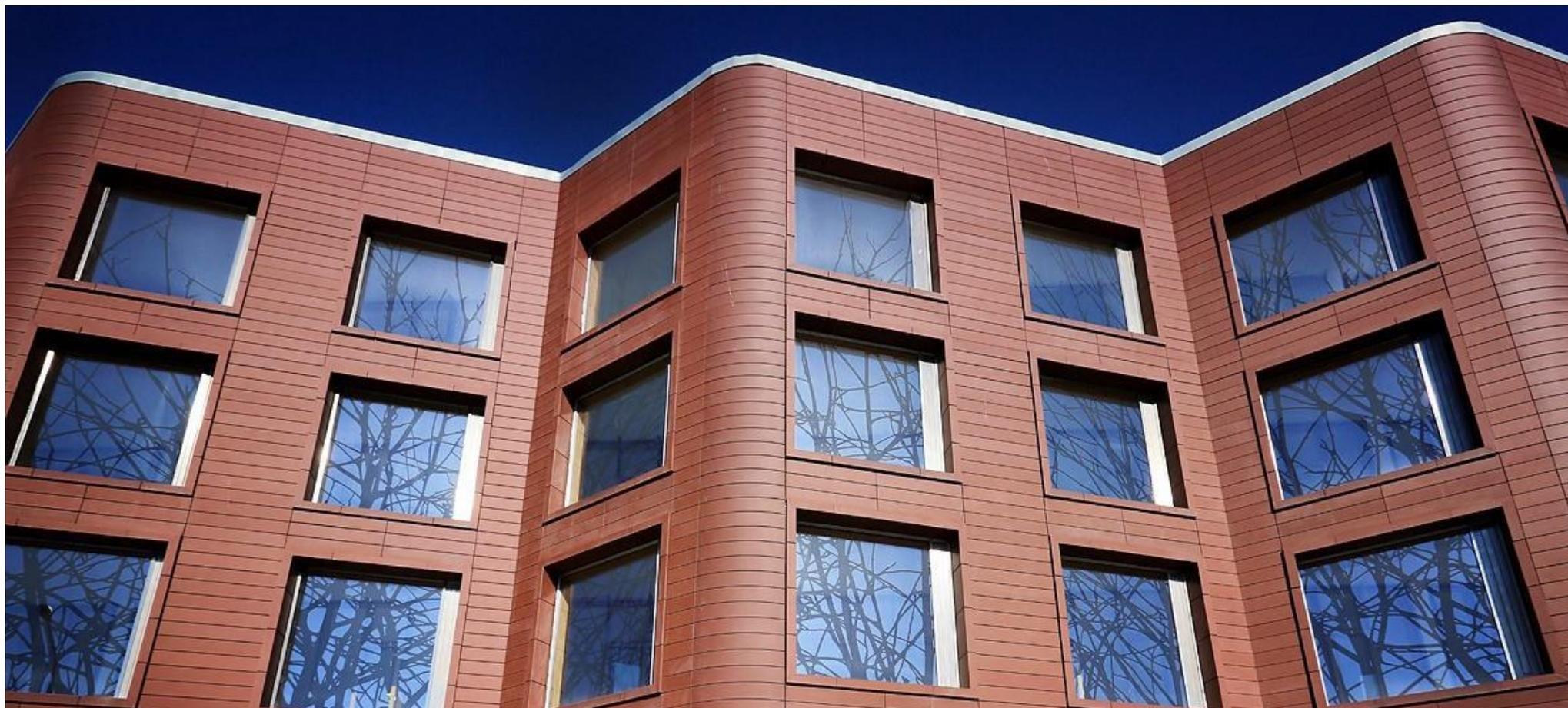


Location: St. Petersburg, Russia

9 900 sq.m.

The facade glazing is a combination of extremely complicated flat and curved IGUs in JUMBO size with a high performance coated glass, laminated glass, and graduated silk-printing with a dot diameter of 1mm. The curved IGUs are both concave and convex and have stepped edges for structural bonding to the frame.

- Outer pane: Fully tempered 10 mm SunGuard HP Neutral 60/40
- Spacer: 20 mm with U-profile
- Inner pane: Laminated fully tempered 66.4 with silk printing



Location: Moscow, Russia      900 sq.m.

Distinctive design of double glazing units was created by silk printed pattern using special metallized Ferro paint. Its feature is combination of reflectivity and translucency.

- Outer pane: Fully tempered 10 mm low iron with silk printing
- Spacer: 18 mm
- Inner pane: Laminated 66.2 Low E



**ONGOING**

# COAL DROPS



Location: London, UK      2 000 sq.m.

Project is distinguished with oversized extra transparent double glazing units of complex arc shapes.

- Outer pane: Fully tempered with heat soak test 8 mm low iron
- Spacer: 16 mm black warm edge
- Inner pane: Laminated and heat strengthened low iron 66.4 with Low E coating

# BISHOPSGATE



Location: London, UK

1 000 sq.m.

- Outer pane: Laminated and heat strengthened 66.4 low iron with SunGuard SNX 60 coating
- Spacer: 20 mm black warm edge
- Inner pane: Laminated and heat strengthened 66.4 low iron

# ANGELS GARDEN



Location: Manchester, UK

3 500 sq.m.

- Outer pane: Heat strengthened 6 mm Cool-lite SKN 176
- Spacer: 16 mm black warm edge
- Inner pane: Laminated and heat strengthened 44.4

# DUBLIN LANDINGS



Location: Dublin, Ireland      5 000 sq.m.

The project is distinguished by oversized double glazing units with triple silver coating SNX 50/23, silk printed pattern and both outer and inner laminated panes for structural glazing. Acoustic comfort inside is provided by using of sound control film.

- Outer pane: Laminated and heat strengthened with SunGuard SNX 50/23 coating and silk printing 55.4
- Spacer: 22 mm black warm edge with U-profile
- Inner pane: Laminated and heat strengthened 55.4 with Sound Control film

# ONE SOUTH COUNTY



Location: Dublin, Ireland

5 600 sq.m.

- Outer pane: Heat strengthened 10 mm SunGuard HP Silver 43/31
- Spacer: 18 mm warm edge, U-profile
- Inner pane: Laminated and heat strengthened 55.4 with silk printing

# CURRAGH RACE



Location: Kildare, Ireland

4 500 sq.m.

- Outer pane: Laminated and heat strengthened 55.4 with Sun-Guard HS SN 70/41 coating
- Spacer: 20 mm warm edge, U-profile
- Inner pane: Laminated and heat strengthened 55.4.

# WEST 36TH STREET



Location: New York, USA      11 000 sq.m.

This is the first big GLASSBEL project in the USA. The glazing is performed by double glazing units, both clear and spandrel with Sound Control properties. Some units are with border frit.

- Outer pane: Laminated and heat strengthened 66.4 with Sun-Guard HP Silver 43/31 coating and Sound control inerlayer
- Spacer: 16 mm
- Inner pane: Fully tempered 10 mm

# THANK YOU!

Pramones str. 11, LT-94102 Klaipeda, Lithuania

Fax: +370 (46) 416 389

[solutions@glassbel.com](mailto:solutions@glassbel.com)

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