



## IPLUS THERMAL INSULATION GLASS

Enhanced thermal comfort in  
residential buildings and homes

**AGC**

Your Dreams, Our Challenge

# AGC Glass Europe presents...



# ...the broadest range of thermal insulation products



## IPLUS

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# Improving energy efficiency in homes

## THANKS TO INNOVATIVE LOW-E GLASS COATINGS

iplus products deliver high thermal insulation, high solar heat gains and high light transmission. The iplus range comprises a variety of low-emissivity products focusing on thermal insulation that result in a more comfortable living space while saving money and energy.

Using advanced magnetron technology, our low-emissivity coatings are not only the most effective and efficient on the market, but have also been certified by the rigorous Cradle to Cradle programme for safer and more sustainable products.

In addition, the durable coating surface resists scratches and handling, making it easy to process – something glass processors and architects will appreciate.

## WIDE RANGE OF FEATURES

Whatever your needs we have a product that has been engineered to meet each specific requirement:

	protection from the cold
	protection from the cold + solar protection
	additional safety functions
	enhanced acoustic insulation
	double or triple glazing

# Making the most of natural light and solar energy

— IPLUS 1.1 AND IPLUS 1.1T\* —

Striking the right balance between quantity and quality of light greatly impacts the comfort level of any living space. When used in double and triple glazing, iplus 1.1 and iplus 1.1T ensure that as much natural light and solar energy as possible enter the building, while simultaneously providing excellent thermal insulation.

\* iplus 1.1T is the version of iplus 1.1 which requires heat treatment.

What's so special about it	What does this mean for you?
----------------------------	------------------------------

- |  |   |
|--|---|
| Very high solar factor   | — Free solar gain means less heating required   |
| High light transmission  | — Generously distributes natural light in the home                                    |
| Good thermal insulation  | — Enhances thermal comfort  |
| Neutral colour   | — In line with trends on the residential market                                       |
| For use in double or triple glazing                            | — Delivers additional functions when combined with other AGC glass products           |
| After heat treatment, iplus 1.1T looks like iplus 1.1          | — These two coatings can be used on the same glazed surface                           |
| Also available in Stratobel and Stratophone laminated versions | — Provides protection from injury and burglary, as well as excellent acoustic comfort |



# Advanced protection from the cold

## IPLUS 1.0 AND IPLUS 1.0T\*

As their names suggest, these products – boasting a Ug-value of 1.0 – deliver superb protection from the cold, ensuring optimum occupant comfort. Users also benefit from their outstandingly low solar factor and high light transmission for this level of insulating performance. Iplus 1.0T is AGC’s first low-emissivity coating with a thermal insulation of 1.0 to provide a safety function thanks to the heat treatment it undergoes.

\* iplus 1.0T is the version of iplus 1.0 which requires heat treatment.

What’s so special about it	What does this mean for you?
----------------------------	------------------------------

- |  |  |
|--|--|
| Enhanced thermal insulation                                    | – Superb thermal comfort   |
| High light transmission  | – Generously distributes natural light in the home   |
| For use in double or triple glazing                            | – Delivers additional functions when combined with other AGC glass products                |
| iplus 1.0T: heat-treated glass with a Ug-value of 1.0          | – Benefit from this innovative glass product’s optimal Ug-value, even after heat treatment |
| After heat treatment, iplus 1.0T looks like iplus 1.0          | – iplus 1.0 and iplus 1.0T can be used on the same glazed surface                          |
| Also available in Stratobel and Stratophone laminated versions | – Provides protection from injury and burglary, as well as excellent acoustic comfort      |





# Let the sunshine in – even with triple glazing!

IPLUS LS

Triple pane structures deliver excellent insulation but generally compromise on the amount of light and free solar energy that the glazing lets through. Specially developed for use in triple glazing, this low-emissivity coating maximises solar energy gains, delivering good thermal insulation. This is the ideal solution when extremely low energy consumption levels are required and the best solution for energy-efficient homes, such as passive houses, where every source of energy – and every energy wastage – needs to be considered.

What's so special about it	What does this mean for you?
Specially designed to ensure a high solar factor in triple glazing	– Incoming solar energy helps to reduce heating requirements
High light transmission	– Delivers maximum amount of natural light
Good thermal insulation	– Keeps energy costs under control
Specially designed for use in triple glazing	– Delivers additional functions when combined with other AGC glass products
Also available in Stratobel and Stratophone laminated versions	– Provides protection from injury and burglary, as well as excellent acoustic comfort





# Need solar protection too?

— ENERGY 72/38, ENERGY 72/38T\* —  
AND ENERGY 65/42S

The Energy range has been specially designed for use in double and triple glazing in residential applications. With their high light transmission, these coated glazings let in maximum natural light while delivering excellent solar protection.

Energy range products deliver the perfect combination of solar control and thermal insulation, ensuring optimal indoor comfort. They are suitable for all weather conditions, efficiently reducing overheating in summer, yet keeping warmth inside the home in winter.

\*Energy 72/38 T is the version of Energy 72/38 which requires heat treatment.

What's so special about it	What does this mean for you?
Excellent solar protection	— Prevents overheating while maintaining a pleasant temperature; ideal for large windows, houses and apartments located in hot climates
Enhanced thermal insulation	— Optimal comfort
A neutral appearance	— In line with trends on the residential market
For use in double or triple glazing	— Delivers additional functions when combined with other AGC glass products
After heat treatment, Energy 72/38 T looks like Energy 72/38	— Together, they can be combined as desired in the same facade
Also available in Stratobel and Stratophone laminated versions	— Provides protection from injury and burglary, as well as excellent acoustic comfort





# Say no to condensation!

IPLUS AF, IPLUS 1.1-AF  
AND ENERGY 72/38-AF

While highly insulated windows deliver comfort and energy savings, the more we insulate our homes and windows, the greater the possibility of external condensation forming. Capitalising on our years of know-how in coating technologies, AGC has succeeded in combining a special pyrolytic anti-condensation coating and magnetron thermal insulation coating in a single pane of glass – the only product of this kind on the market. This two-in-one solution provides good insulation and prevents condensation from forming. In addition to ensuring a clear view of the outside world, these three Anti-Fog products will make your living space more comfortable.

What's so special about it	What does this mean for you?
Applying a pyrolytic coating in position 1 increases the temperature of the outer glass sheet and prevents condensation from forming	Delivers a strikingly clear view of the outside world since the glass does not fog up
Also available in Stratobel and Stratophone laminated versions	Provides protection from injury and burglary, as well as excellent acoustic comfort



CHOOSE FROM MULTIPLE OPTIONS  
TO FIND THE RIGHT SOLUTION FOR YOUR NEEDS  
Three products with anti-condensation properties

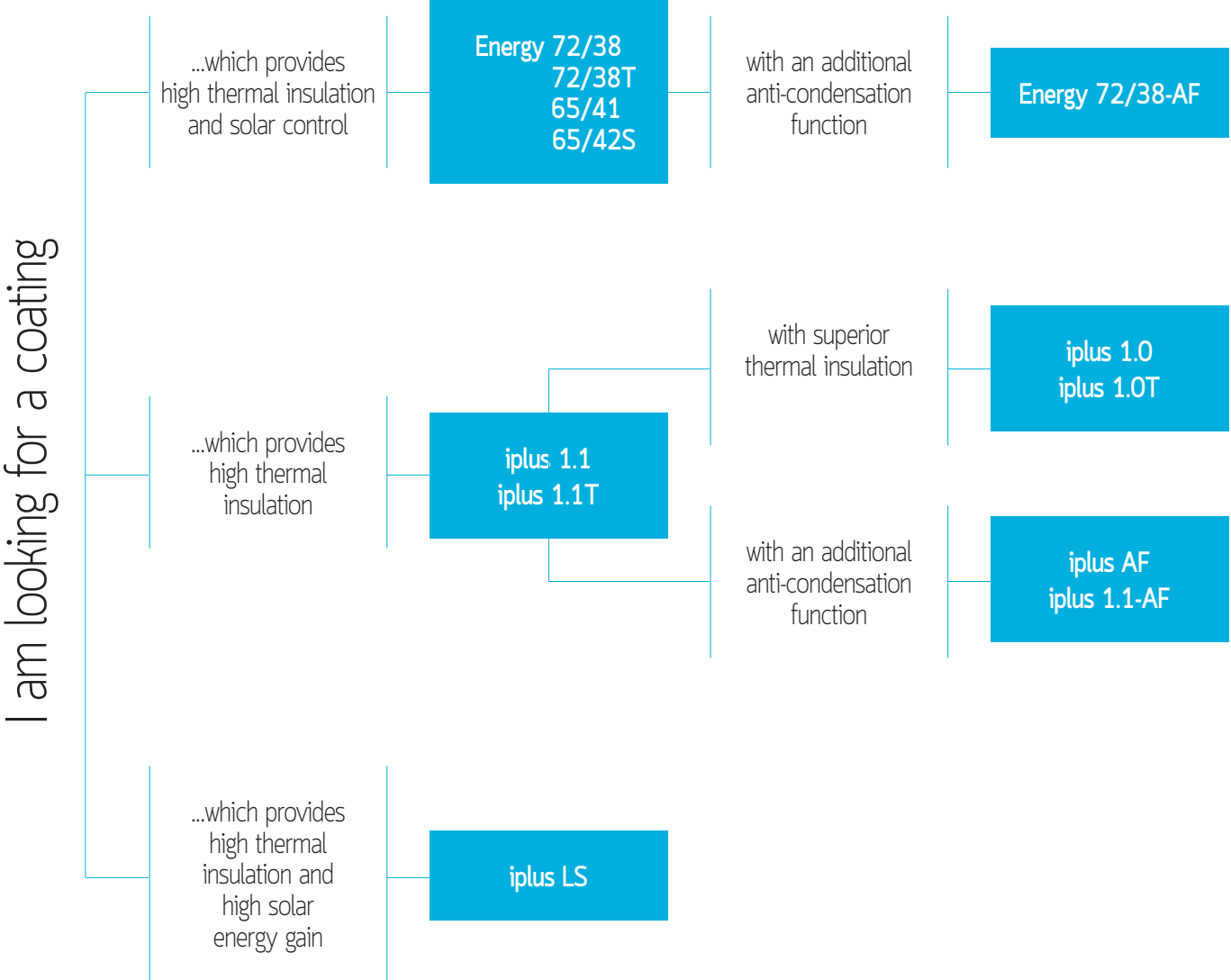
**iplus AF**  
glass with an anti-  
condensation pyrolytic  
coating in position 1

**iplus 1.1-AF**  
double-coated glass (iplus AF  
in position 1 and iplus 1.1 in  
position 2), combining anti-  
condensation with thermal  
insulation

**Energy 72/38-AF**  
double-coated glass (iplus  
AF in position 1 and  
Energy 72/38 in position 2),  
combining anti-condensation  
with thermal insulation and  
solar control



# How to choose the right coating for your project



# Comparative product table

	iplus 1.1 iplus 1.1T	iplus 1.0 iplus 1.0T	iplus LS	Energy 65/41 - Energy 65/42S Energy 72/38 - Energy 72/38T Energy 72/38-AF	iplus AF iplus 1.1-AF
Performance					
High light transmission	*****	****	*****	****	****
High thermal insulation	****	*****	***	*****	****
Free solar gain	****	***	*****	***	****
Solar control	***	***	**	*****	***
Anti-condensation	No	No	No	No	Yes
Processing options					
Lamination	iplus 1.1	iplus 1.0	iplus LS	Energy 65/41 - Energy 65/42S Energy 72/38	iplus AF
Heat treatment	iplus 1.1T	iplus 1.0T	-	Energy 65/42S - Energy 72/38T	iplus AF
Bending <sup>(1)</sup>	iplus 1.1T	iplus 1.0T	-	Energy 65/42S - Energy 72/38T	iplus AF
Screen printing <sup>(1)</sup>	iplus 1.1T	iplus 1.0T	-	Energy 65/42S - Energy 72/38T	iplus AF
Position(s) of the coating in the double glazing unit	2 or 3	2 or 3	-	Energy 72/38: 2 - Energy 72/38T: 2 Energy 72/38-AF: 1 and 2	iplus AF: 1 iplus 1.1-AF: 1 and 2
Position(s) of the coating in the triple glazing unit	2 and 5	2 and 5	2 and 5	Energy 72/38: 2 - Energy 72/38T: 2 Energy 72/38-AF: 1 and 2	iplus AF: 1 iplus 1.1-AF: 1 and 2

<sup>(1)</sup> More information can be found in our *Processing Guide*, available on [www.agc-yourglass.com](http://www.agc-yourglass.com).



Learn more about AGC’s thermal insulation brands and products on [www.agc-yourglass.com](http://www.agc-yourglass.com)





POLAND | WARSAW, CARBON TOWER - ARCHITECT: CAVATINA ARCHITECTURAL DESIGN

# Low-e glass in custom lengths for your projects

## — TAILOR-MADE SIZES —

The carbon footprint of every renovation and newbuild project is now a central concern for architects and investors. To address these concerns, AGC has further pushed the boundaries of its commitment to sustainable manufacturing by introducing the option of producing glass in custom sizes.

With our Tailor-Made Sizes service customers can now order glass in the exact length required for their project, resulting in better production yield, faster processing and cost savings.

The Tailor-Made Sizes service delivers a sustainable approach for every project. When ordering glass that is exactly the right size, only the necessary amount of glass is produced, which in turn prevents waste and reduces the project's environmental footprint.

For example, in a 10,000 m<sup>2</sup> project where the windows measure 3800 x 1600 mm, Tailor-Made Sizes production could lead to a 144.5-tonne reduction in CO<sub>2</sub> emissions\*.

\*Calculation based on the following glazing unit composition:  
66.2 Stratobel – 16 mm space filled with 90% argon – 44.2 Stratobel

What's so special about it	What does this mean for you?
The glass is produced at exactly the right length	— Better production yield, faster processing and cost savings for glass processors and their end customers
Less glass waste	— Less CO <sub>2</sub> is consumed during production and recycling, thus reducing the project's carbon footprint
Custom glass in lengths ranging from 3500 to 7000 mm	— Glass can be produced in the exact length required
Available for float glass, laminated glass, magnetron coatings and decorative glass	— Total freedom of design in many types of features



Explore the many benefits of Tailor-Made Sizes!



# Our commitment to producing sustainable products...

— CRADLE TO CRADLE —



The Cradle to Cradle certification system is a globally recognised measure of safer and more sustainable products made for the circular economy. It evaluates a product's sustainability across its entire life cycle. To achieve certification, a product must meet strict standards in five categories linked to health and the environment: Material Health, Material Reutilisation, Renewable Energy, Water Stewardship and Social Fairness.

AGC was the first European glassmaker to obtain C2C certification for its float glass and magnetron-coated glass. Now, about 75% of its entire product portfolio is Cradle to Cradle Certified®. Iplus products are certified Cradle to Cradle Bronze.

**By committing to C2C standards, AGC can deliver high-quality products while protecting people and the environment, and while supporting its customers in their socially and environmentally responsible purchasing decisions.**

## ... for certified sustainable buildings

AGC's Cradle to Cradle Certified® products also enable extra credits to be gained for LEED and some national BREEAM schemes. AGC's thermal insulation glass products deliver excellent insulation performance that reduces the cold emanating from windows while their solar factor reduces overheating, helping prevent occupant discomfort.

Find out more by downloading the AGC LEED and BREEAM brochures from [www.agc-yourglass.com](http://www.agc-yourglass.com)



# Harness AGC's comprehensive services to bring your vision to life

## — ONE-STOP-SHOP —

### Your one-stop-shop for top technological performance

AGC Glass Europe boasts one of the world's most comprehensive and diverse ranges of solar control glass products, giving architects, specifiers, facade consultants and glass processors the freedom to unleash their imagination and realise their vision.

AGC is your one-stop-shop, providing everything you need to create the aesthetically and technically perfect solution: research, consultancy and technical advice, production and logistics. We provide support via our dedicated teams and expert services throughout every stage of your project, from initial planning to completed construction.

### IBP: International Building Projects

International Building Projects (IBP) is a team of AGC experts who help decision-makers to find the best glass solutions for their projects and applications.

### TAS: Technical Advisory Service

The AGC Technical Advisory Service is a team of highly qualified specialists who provide our customers with technical information based on different types of analysis (structural, thermal, safety, security, acoustics, processing, etc).

### [www.agc-yourglass.com](http://www.agc-yourglass.com)

AGCs comprehensive product website is a source of key information for all architectural and renovation construction projects. It provides commercial and technical documentation for all AGC products as well as a number of useful tools.

### AGC Glass Configurator

The AGC Glass Configurator module can be used to calculate the light, energy and thermal performance of any glass composition to help you find the best performing glass that meets your needs. It also allows users to customise important parameters such as acoustics, safety, security, weight and thickness. Both European and NFRC standards are available. This fast, smart, user-friendly tool will make your life easier. Go to: [www.agc-yourglass.com/configurator](http://www.agc-yourglass.com/configurator).

**iplus**  
Glass for insulation





#### AGC GLASS EUROPE, A EUROPEAN LEADER IN FLAT GLASS

Based in Louvain-la-Neuve (Belgium), AGC Glass Europe produces, processes and markets flat glass for the construction industry (external glazing and interior decoration), car manufacture and other industrial sectors (transport, solar power and high-tech). It is the European branch of AGC, a world leader in flat glass. It has over 100 sites throughout Europe.  
More information on [www.agc-yourglass.com](http://www.agc-yourglass.com).

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