



# State of the art glass

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New Zealand's  
leading double-glazing  
technology



# New Zealand's all-round best performing double-glazing

Your windows and doors are a complete system with each component contributing to the overall performance and comfort of your home. At AGP, we're committed to ensuring each component performs at the highest level which is essential for a warm, comfortable, healthy home. That's why we've introduced two internationally proven double-glazed products to New Zealand homes, The AGP System and Solux-E.

## The AGP System

Our insulated, high-performance system, The AGP System, uses the best components and technology available in New Zealand. The system features argon gas and ATS - Architectural Thermal Spacer® for New Zealand's all-round best performing double-glazing. It can be enhanced further with our cutting edge Solux-E technology, a low emissivity (Low-E) coating, improving the level of insulation in your home.

### What is The AGP System?

The AGP System is a double-glazed unit which is made using world class components and industry leading technology. The panes of glass are made using a highly automated, precision process to ensure their high quality.

#### ATS – Architectural Thermal Spacer®

A warm-edge spacer that bonds the two glass panes of your double-glazed windows together. ATS - Architectural Thermal Spacer® creates an airtight bond to ensure the best gas retention of argon gas used in The AGP System.

#### Argon gas

An inert gas which is used as an insulator to create an additional barrier to heat loss in winter and heat gain in summer, improving thermal performance.

Argon gas



#### Bonded to glass and secondary sealant

A continually evolving formulation used to ensure durable bonding between glass panes. This creates an airtight seal for the space between panes, providing additional protection for the primary seal.





## What does The AGP System do?

### Reduces heat transfer

The AGP System uses ATS - Architectural Thermal Spacer® to keep warm and cold areas separated, and an argon gas fill to act as an insulator. These components work together to reduce heat loss in winter and heat gain in summer through your glazing.

### Replaces the traditional aluminium spacer system

The AGP System has replaced the traditional aluminium spacer system with ATS - Architectural Thermal Spacer® which is a better performing, single component thermoplastic spacer that is bonded to the glass. This technology outperforms existing spacers and edge seal systems available in New Zealand.

## What are the benefits?



### Healthier home

The internal and external glass panes in The AGP System are separated with ATS - Architectural Thermal Spacer® to reduce the likelihood of condensation forming on the glass inside the home, reducing the risk of mould growth, and increasing the health and wellbeing of you and your family. This can be further improved with a thermally broken frame.



### Thermal efficiency

The AGP System pairs ATS - Architectural Thermal Spacer® with argon gas to reduce heat transfer through the glass, contributing to an improvement in your window systems' overall thermal performance.



### Longevity

ATS - Architectural Thermal Spacer® is made to flex with changes in pressure and tension on the window edge seal, improving The AGP System's longevity. ATS - Architectural Thermal Spacer® offers better reliability by replacing traditional rigid spacer systems, which have multiple parts, with an innovative single-component system.



### Aesthetics

Our double-glazed units use ATS - Architectural Thermal Spacer® - a smooth, matt black spacer which is robotically extruded for a uniform appearance. The AGP System has a single join, unlike other spacers which can have multiple joins. The matt black finish also reduces the reflectance of the frame colour.



### Gas retention

The superior seal integrity of ATS - Architectural Thermal Spacer® improves The AGP System's argon gas retention and reduces the risk of moisture vapour leaking into the unit. This is why we back our double-glazed products with an extended 12-year warranty.





# Solux-E®

Low-E coating for year-round comfort and energy savings

## Finding the right glass is simple

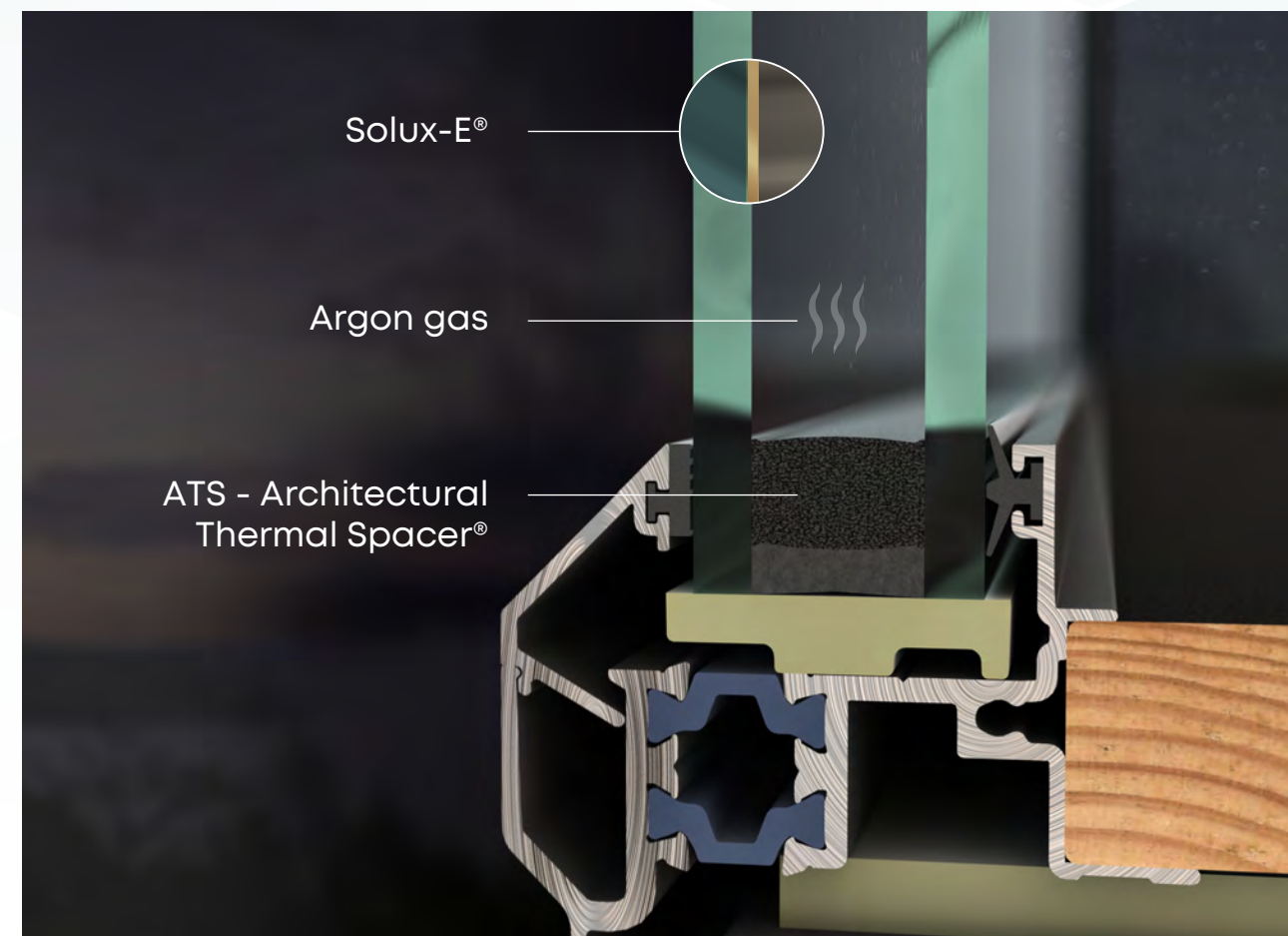
Your glazing plays a crucial role in the way your home feels and functions, so we've made finding the right glass as simple as it should be. We've created a cutting-edge low emissivity (Low-E) upgrade to The AGP System called Solux-E.

Solux-E reduces the amount of heat that passes through the glass while still letting natural light through, improving the thermal efficiency of a home. It offers year-round comfort and a warmer, drier and healthier home. Solux-E with The AGP System is the all-in-one option to help you get the most out of your glazing.

## What is Solux-E?

Solux-E is a low emissivity (Low-E) coating on the glass, which is virtually invisible. It is incorporated into The AGP System, improving the level of insulation in the home. Solux-E is applied to the inside surface of the exterior glass pane, protecting it from the elements. Solux-E coating reflects the heat back to the inside, reducing winter heat loss through the glass. The reverse happens during the summer helping to limit overheating.

We developed this state-of-the-art product using the latest global technology, optimised for New Zealand conditions.



## What does Solux-E do?

### Blocks excessive heat

Solux-E lets the sun's visible light pass through but reflects the 'sun's heat' back out 34% better\* than standard double glazing. With less heat entering the home, there's less need for air-conditioning to keep your home cool.

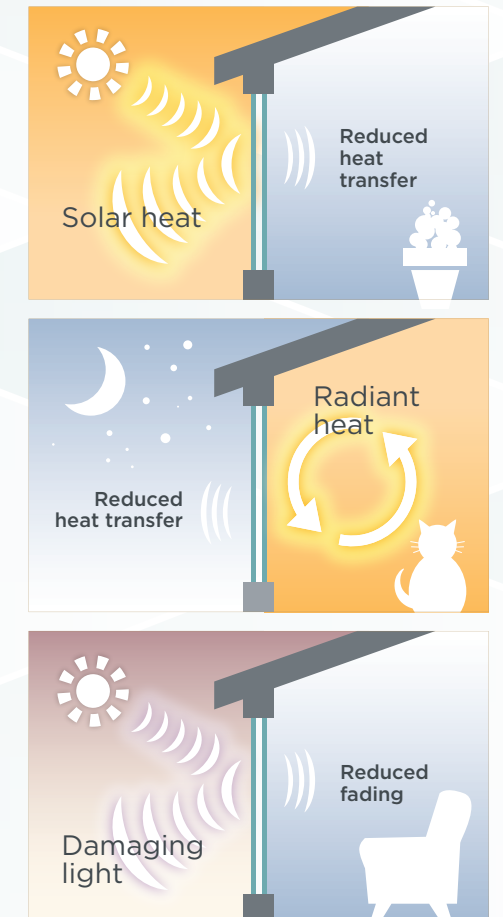
### Retains heat

Solux-E reflects the warm air in the home back into your house rather than escaping through the glass. This reduces winter heat loss by 59% better\* when compared to standard double glazing.

### Controls fading

Solux-E helps protect furnishings in your home from fading by reducing the amount of damaging light that enters through the glass 19% better\* than standard double glazing.

\* Solux-E in a unit compared to standard double-glazing as described on the Comparison Data Chart (pg 9)





How does Solux-E compare?

	Standard double-glazing	The AGP System	The AGP System + Solux-E®	Performance improvement
	4mm clear / 16mm air / 4mm clear	4mm clear / 16mm ATS with argon gas / 4mm clear	4mm Solux-E #2 / 16mm ATS with argon gas / 4mm clear	Single-glazed 3mm clear glass compared with The AGP System + Solux-E
Warmth within home	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	↑81%
Control of overheating	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	↑41%
Reduction in fading	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	↑28%
Condensation control	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div> +	↑137%

Compared to single glazed 3mm clear glass. Data is indicative of performance and is not a guarantee of in-service performance.

What are the benefits?



Year-round comfort

Solux-E works to minimise heat flow allowing you to stay warmer through winter and cooler through summer. You'll have less warm air escaping in the winter and less heat entering through the glass in summer without the need to use tinted glass, also known as Shading Coefficient (SC). Solux-E helps to retain heat in the home, up to 35% better\* than other comparable Low-E products available in New Zealand, and 59% better\*\* than standard double glazing, achieving a more stable home temperature and year-round comfort.



Healthier home

Solux-E reduces the likelihood of condensation forming on the glass inside the home, reducing the risk of mould growth, and increasing the overall health and wellbeing of you and your family. This can be further improved with a thermally broken frame.



Smaller energy bills

A more constant temperature means less energy used to heat and cool the home, providing energy savings year-round. Reduced energy consumption (U-value) puts less demand on New Zealand's power grid, reducing the environmental footprint of your home.



Better performance

Solux-E outperforms comparable existing options and creates a more thermally efficient home, resulting in ongoing savings.



Clear view

Solux-E provides excellent light transfer (VLT) and clarity (VLR), keeping the view crystal clear and the rooms in the home light and bright.



Reduced fading

Solux-E minimises the amount of damaging light (Tdw-ISO) coming through the glass, up to 15% better\*\*\* than other comparable Low-E products in New Zealand and 19% better\*\* than clear double glazing, reducing fading in soft furnishings and fabrics.

\* Solux-E in a unit comprising of 4mm Solux-E/16mm ATS with argon gas/4mm clear float has a U-value (CoG) of 1.1 (EN 673)  
\*\* Solux-E in a unit compared to standard double glazing as described on the comparison data chart on the following page  
\*\*\* Tdw-ISO damage weighted UV transmission is 0.60 for a Solux-E unit comprising of 4mm Solux-E/16mm ATS with argon gas/4mm clear float





## Care and maintenance

- After house construction, remove any stickers or cork/foam pads and rinse the glass thoroughly with clean water
- Regular cleaning of your glazing is recommended every three months
- Soak the glass to loosen dirt and debris, then wash using water, glass squeegee or clean cloth with one of the recommended cleaning products listed below
- Rinse with water and wipe dry ensuring water droplets are removed to avoid marking
- Recommended products for cleaning glass are:
  - 10-parts clean water, 1-part white vinegar
  - Or 9-parts clean water, 1-part Methylated Spirits
  - Or Glasscorp Universal Glass & Mirror Cleaner

See [agpl.co.nz/resources](https://agpl.co.nz/resources) for full care and maintenance instructions.



### Warranty

We back our world-class double-glazed products with an extended 12-year warranty – two years longer than the current industry standard. All AGP products meet or exceed requirements of the New Zealand Building Code.

See [agpl.co.nz/terms](https://agpl.co.nz/terms) to see the terms and conditions of this warranty.

## Comparison data

		Standard double-glazing	The AGP System	The AGP System + <i>Solux-E</i> ®
		4mm clear / 16mm air / 4mm clear	4mm clear / 16mm ATS with argon gas / 4mm clear	4mm Solux-E #2 / 16mm ATS with argon gas / 4mm clear
Light properties	Visible light transmission (VLT)	81%	81%	76%
	External visible light reflection (VLR)	15%	15%	15%
Energy properties	Fading control (Tdw-ISO) Damage weighted UV transmission	0.74	0.73	0.60
	Shading coefficient (SC)	0.89	0.87	0.59
	U-value (Centre of glass)	2.7	2.6	1.1

Data is indicative only. Data is for glazing placed vertically. Data is not a guarantee of in service performance. Tdw-ISO is a damage-weighted transmittance from the International Standards Organisation (ISO) based on the contribution to fading at each wavelength from 300nm to 700nm that include the UV and Visible parts of the solar spectrum. U-value calculated using CEN conditions, balance of data calculated using NFRC conditions.

## Glossary

- **VLT – Visible light transmission**  
The percentage of visible light that passes through the Insulated Glass Unit (IGU) from the total visible light outside.
- **VLR – External visible light reflection**  
The percentage of visible light that is directly reflected from the exterior surface of the IGU.
- **Tdw-ISO - Fading control**  
A damaged weighted measure of the solar energy that causes fading which is transmitted through the IGU. A lower Tdw-ISO ratio refers to better fading control by the IGU.
- **SC – Shading coefficient**  
The ratio of the total solar heat gain through the IGU compared to the total solar heat gain of 3mm clear glass, under standard conditions. The lower the SC, the more the solar heat is rejected. Solux-E offers a balanced solution.
- **U-value**  
The transfer of heat through the glass. A lower U-value refers to lower heat transmission by the glass.





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*AGP products are available in the North  
Island from selected Altherm, First and  
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