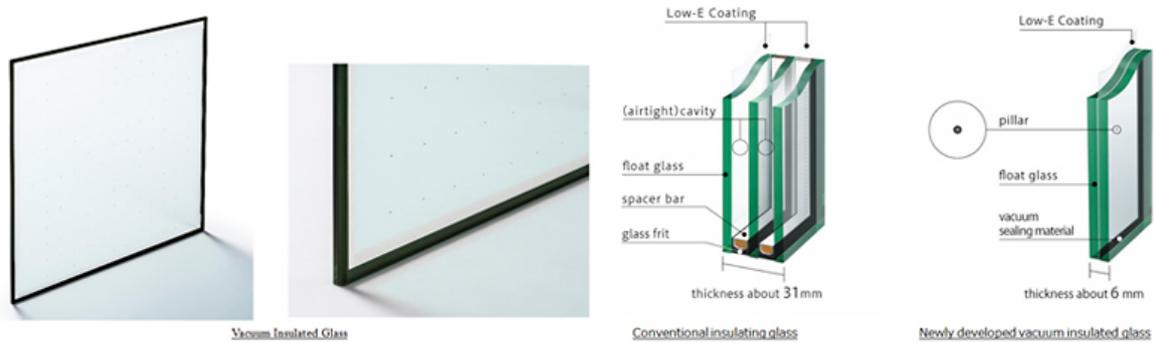


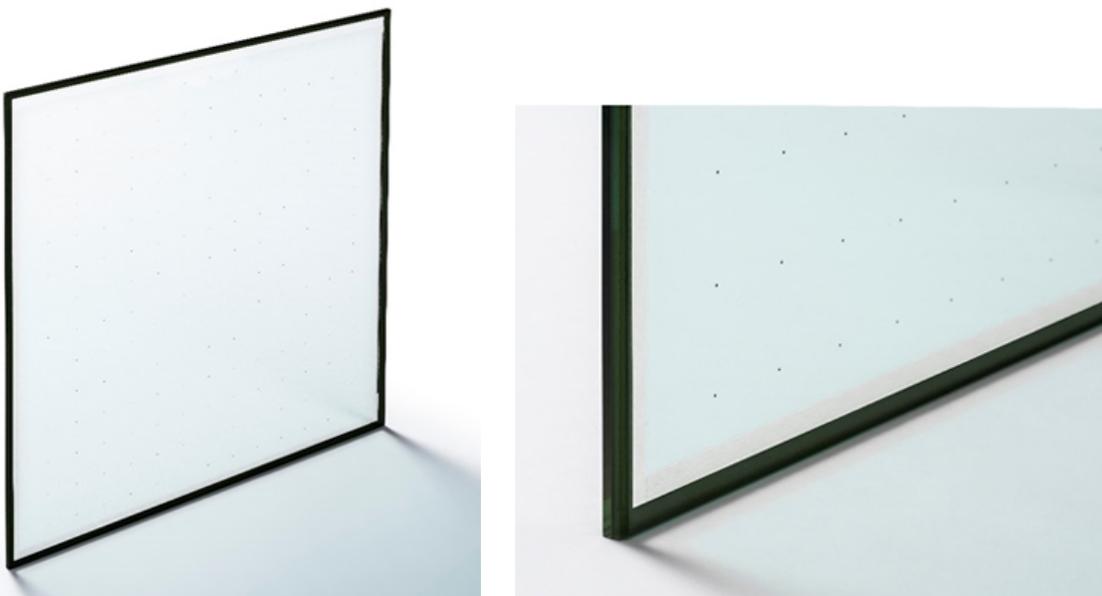
## AGC and Panasonic to Jointly Develop "Vacuum Insulated Glass" of the Highest Class in Industry for the European Market



Tokyo/Osaka, Japan - AGC (Headquarters: Tokyo; President: Takuya Shimamura) and Panasonic (Headquarters: Osaka; President: Kazuhiro Tsuga) have agreed to partner in developing vacuum insulated glass with the industry's highest class of insulation performance\*1, and releasing the product for sale in the European market.

AGC will install a new production line for producing vacuum insulated glass at its plant in Belgium, with a scheduled sales launch in the European housing market of March 2019. The planned investment for this endeavor is roughly 10 million euros and is expected to add 20 new employees.

There is a growing need for soundly insulated residential replacement windows in Europe due to the common practice of homeowners renovating older houses to live in for several years or even decades. In response, AGC and Panasonic have decided to jointly develop the highest class 'vacuum insulated glass' in the industry for release into the European market. More specifically, this effort will combine AGC's Low-E glass technology and glass processing techniques with Panasonic's plasma display panel development and manufacturing technology. This vacuum insulated glass delivers thermal insulating performance equivalent to the industry's highest insulation glass\*2 with about 1/4 to 1/5 the thickness, making it possible to install into existing sashes when replacing glass windows.



Vacuum Insulated Glass

Panasonic will provide the support necessary for rapid manufacturing start-up, while AGC will draw on the strengths of its own market information, sales network and established architectural glass product brands with the aim of deploying the product for multiple applications.

By taking advantage of both companies' competitive advantages, AGC and Panasonic will contribute to improving the living environment in Europe, which is also world's largest market in terms of insulated glass.

The two companies are considering launching sales into the refrigerator/freezer showcase equipment market as well. Also related, AGC plans to sell the product in Japan for use in buildings, including residential homes, while Panasonic has plans to use the product to expand its own business and product material lineup.

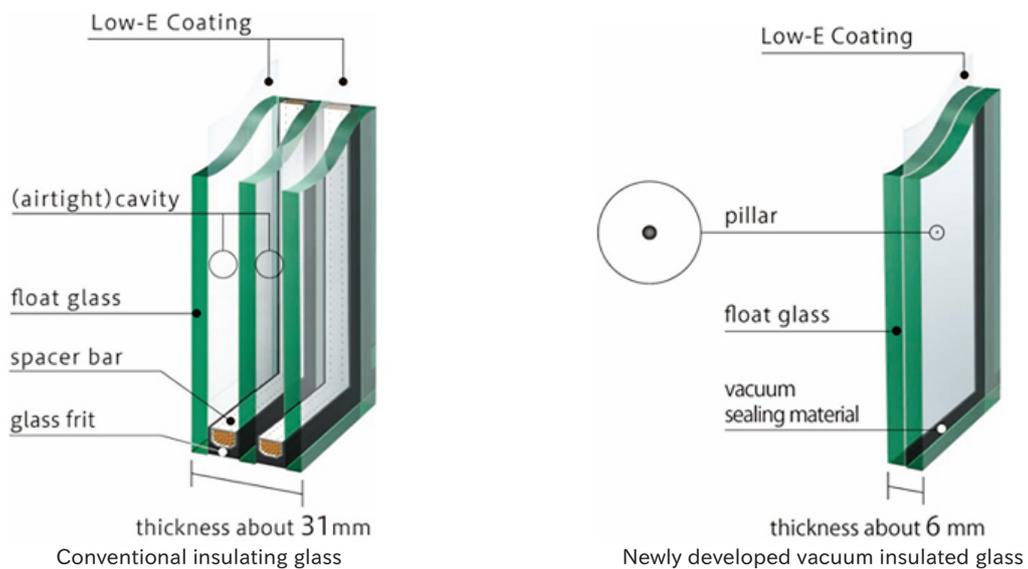
#### NOTES

\*1: Heat transfer coefficient of a single vacuum insulated glass unit of approx. 6 mm thickness is 0.7 W/ (m<sup>2</sup>K).  
As of October 15, 2018, based on AGC research.

\*2: Three-layered Low-E multi-paned glazing (argon gas used in the hollow layer)

## REFERENCE

### Comparison image



## Information on both companies

### About AGC

AGC (Registered company name: AGC Inc.) is the parent company of the AGC Group, a world-leading glass solution provider and supplier of architectural, automotive and display glass, electronic materials, chemicals, ceramics and other high-tech materials and components. Based on more than a century of technical innovation, the AGC Group has developed a wide range of cutting-edge products. The AGC Group employs some 50,000 people worldwide and generates annual sales of approximately 1.5 trillion Japanese yen through business in about 30 countries. For more information, please visit: [www.agc.com/en/](http://www.agc.com/en/).

### About Panasonic

Panasonic Corporation is a worldwide leader in the development of diverse electronics technologies and solutions for customers in the consumer electronics, housing, automotive, and B2B businesses. Celebrating its 100<sup>th</sup> anniversary in 2018, the company has expanded globally and now operates 591 subsidiaries and 88 associated companies worldwide, recording consolidated net sales of 7.982 trillion yen for the year ended March 31, 2018. Committed to pursuing new value through innovation across divisional lines, the company uses its technologies to create a better life and a better world for its customers. To learn more about Panasonic: <https://www.panasonic.com/global>.

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*\*The content in the following news releases is accurate at the time of publication but may be subject to change without notice. Please note therefore that these documents may not always contain the most up-to-date information.*