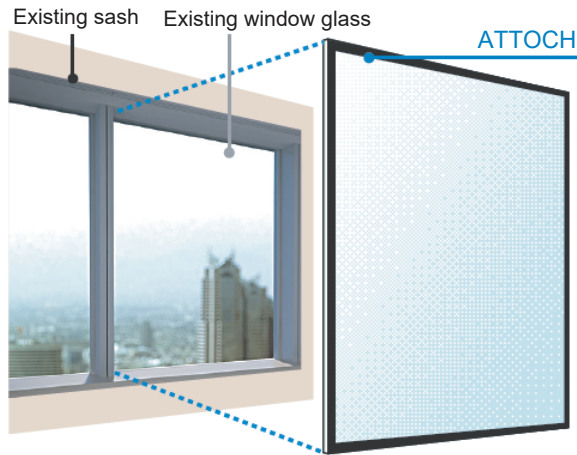


Low-E Glass Applicable to Existing Window Panes on the site

Features

“ATTOCH” is a window renovation product which enables achievement of energy-saving performance equivalent to that of the Low-E Pairglass units with attachment to existing window panes of office buildings and stores. It is effective in heat shielding and insulation, energy saving and prevention of dew condensation and realizes a comfortable indoor space.

Energy conservation and improvement of the indoor environment with renovation of openings of office buildings and stores which has been considered difficult



A measure against summer heat

A measure for power saving and against the heat in summer

A measure against winter cold

Excellent heat insulation in winter

No need for scaffolding for the installation

A short installation period and low cost with the indoor installation

Energy saving

Environment-friendly and energy saving throughout the year

Easy maintenance

No need for regular replacement of membrane

Reduction in dew condensation

Significant reduction in dew condensation

Easy to clean

Simple maintenance of a glass product

Basic specifications

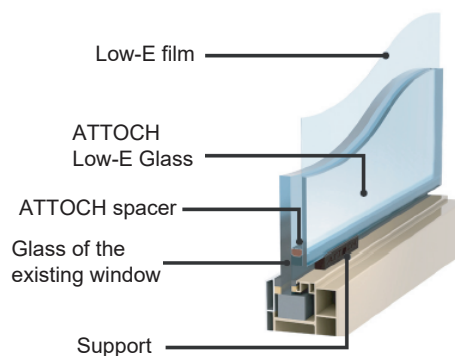
Glass type and thickness: Low-E; 5, 6, 8, 10 and 12 mm
 Color variations*: Classic, Clear and Cool
 Thickness of the air layer: 12 mm
 Standard weight: 80 kg/sheet or less

*This is the color of the glass. Cool glass is a specially ordered product.

- ATTOCH offers five-year warranty against internal condensation (condensation between the existing glass and ATTOCH glass).
- If you wish to remove ATTOCH, it can be removed with fees.
- Cannot be attached to tempered glass. May not be able to be attached to wired plate glass.

Basic Concept or Summary

On-site conversion of existing window glass to Low-E Pairglass

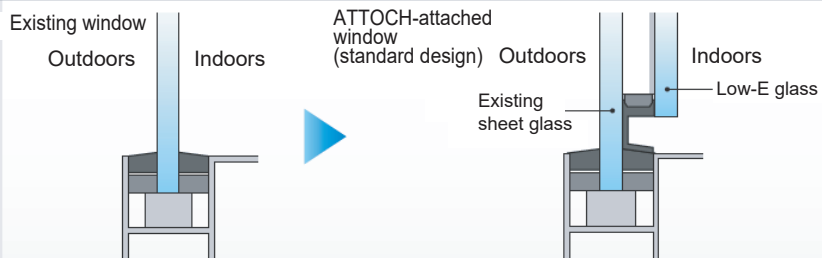


What is Low-E glass?

Low-E glass is glass coated with a special Low-E film which prevents heat radiation. It passes the light but reflects far-infrared radiation from solar radiation and heating and, thus, improves indoor thermal insulation.

ATTOCH enables achievement of the performance equivalent to Low-E multiple glass by attaching a pane of Low-E glass to the existing window pane from inside.

ATTOCH may have to be designed for a specific shape of the existing window. In such a case, we will ask confirmation of a client on the design.



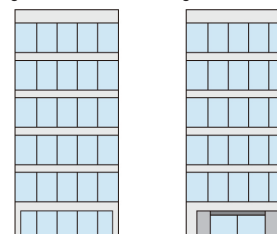
*Please be aware that the basic specifications and design may be changed for improvement without prior notice.

Comparison of energy conservation performance (Air conditioning energy reduction rate)

Energy reduction ratio (in Tokyo)	6mm glass + heat shielding film <small>(manufactured by another company)</small>	6mm glass + insulation film <small>(manufactured by another company)</small>	6 mm-thick glass + 5 mm-thick ATTOCH
Energy reduction ratio in the summer	24.4%	27.5%	32.7%
Energy reduction ratio in the winter	▲11.2%	▲1.5%	32.7%
Energy reduction ratio in a year	2.7%	9.9%	32.7%

Specifications of a building used in the simulation

Width and depth of the building: 15 m, Number of stories: six
Standard floor area on each floor: 225 m²,
the side of the building with the largest glass area: south
Floor height of the standard floor: 3.6 m,
total glass area on the building: 432 m²



Side of the building

Front of the building

* The reduction rate is based on a comparison of the 6mm glass air conditioning cost.

* In this simulation, the reduction in the air-conditioning cost at the time of the renovation with ATTOCH is estimated. This simulation is for a simple mathematic evaluation and its result does not guarantee the energy saving effect of the window renovation.

* The reduction ratios mentioned above were obtained in the simulation with Classic color ATTOCH.

Installation in Practice or Schedule

Domestic For examples of our products and more information, please see the following website.
<https://www.asahiglassplaza.net/products/attoch/>

Contact: **AGC Inc.** Architectural Glass Asia Pacific Company
Manufactured and retailed by New Markets Sales Group, AGC Glass Products Co., Ltd.
Tel: +81-3-6802-7632
URL : <http://www.asahiglassplaza.net/products/attoch/>