

# Redefining dynamic glass

According to Ryan Park, SageGlass Harmony is redefining dynamic glass, enhancing the occupant experience by maximising visual and thermal comfort, while maintaining a seamless connection to the outdoors.

As architects and building owners increase their focus on creating sustainable buildings that enhance occupant comfort and wellbeing, dynamic glass will assume a more important role due to its ability to provide occupants with access to natural daylight and unobstructed outdoor views, while blocking glare and saving energy. According to a 2012 survey<sup>(1)</sup>, 99% of US architects either agreed or strongly agreed that people perform better in buildings when exposed to natural light. Findings were nearly identical when asked about the benefit of preserving views to the outdoors<sup>(2)</sup>.

Based on this information, there is clearly a demand for products, like dynamic glass, that can provide these benefits, especially since people currently spend 90% of their time indoors<sup>(3)</sup>, causing buildings to play a crucial role in their overall health and wellbeing.

## SageGlass evolution

As the pioneer of the world's smartest electrochromic glass, backed by Saint-Gobain's 353 years of building science expertise, SageGlass is constantly innovating to evolve its suite of products to meet architects' design challenges and demands. The company's flagship product dynamically tints in response to the sun to increase occupant comfort, while maintaining a connection to the outdoors without the need for traditional solar control solutions like blinds or shades.

While this product blocks 99% of glare-producing light and 91% of

solar heat, helping buildings achieve their sustainability goals, the company understood that it may not necessarily be the strongest fit for all project types because people do not always want to tint the entire pane of glass. Doing so can needlessly sacrifice daylight and compromise interior colour rendering.

As a result, the company added another product offering, SageGlass LightZone, in 2015. This product was the first dynamic glazing to allow for in-pane tinting to precisely control the source of uncomfortable heat and glare, while providing optimal lighting conditions. However, LightZone has defined lines between the tinted and clear areas of the glass.

SageGlass needed to create a product offering gradient tint without lines for specific project demands. This led to the creation of SageGlass Harmony, a special glazing solution and the most elegant dynamic glass product on the market, which the company unveiled at glasstec 2018 in Düsseldorf, Germany.



SageGlass Harmony will be installed in Millennium Center, a state-of-the-art office building in Switzerland.

Harmony seeks to enhance the occupant experience by maximising visual and thermal comfort, while maintaining a seamless connection to the outdoors. It improves on LightZone's capabilities by delivering a gradual in-pane tint transition from fully clear to fully tinted. The result is a glazing that affords a more seamless connection with the outdoors,



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Harmony improves on LightZone's capabilities by delivering a gradual in-pane tint transition from fully clear to fully tinted.

while still providing optimised daylight, colour rendering, heat and glare control.

Furthermore, like all SageGlass products, Harmony can be controlled automatically through its integration into building management systems or can be manually overridden by occupants and building staff.

### Millennium Center installation

Although full production of Harmony will not begin until the third quarter of 2019, Harmony has been purchased by Millennium, a state-of-the-art office building in Switzerland, motivated by a very bold goal: To empower occupants by providing them with the best place to create, share and live their lives and work.

Millennium, which is still under construction and is expected to open in 2020, will provide all 1500 workplaces with sweeping views of the Geneva lakeside along its curved facade. Everything at Millennium will be connected to the Cloud and managed via smartphone apps - from conference rooms to concierge services. In this smart building, the elevators will even know when occupants have entered the building and be ready to take them to their floors. The Millennium team wanted the project's glazing to be just as smart.

As Martin Schlienger of the Millennium team noted: "Harmony is integrated into our Cloud service as an Internet of Things (IoT) device and is also driven by Siemens Building Management System, allowing us to ensure we're consistently delivering an optimised indoor environment for a superior occupant experience."

Along with the high-tech nature of the product, Millennium chose Harmony for its ability to deliver the singular, innovative occupant experience that is at the heart of its mission. Specifically, the team's reason for selecting Harmony was three-fold. They liked Harmony's ability to offer a seamless connection to the outdoors without the need for blinds or shades and wanted a product that could be integrated into their Siemens Building Management System, part of a broader smart building strategy to enhance the occupant experience. Additionally, the project team felt that Harmony helped enhance Millennium's ability to market itself to prospective tenants and enhance their rent premiums as a result.

SageGlass is constantly speaking with architects and building owners to learn more about their challenges and pain points, in order to develop dynamic glass offerings that enhance occupant comfort and sustainability. The creation of Harmony speaks to SageGlass' ongoing commitment to innovation, as well as the company's deep understanding of architects' needs. ●

*SageGlass, SageGlass LightZone and SageGlass Harmony are registered SAGE Electrochromics products.*

#### References:

1. 2012 study commissioned by SageGlass and performed by Hanley Wood, surveying 479 architects across the USA.
2. Ibid.
3. US Environmental Protection Agency, 1989, Report to Congress on indoor air quality: Vol 2 EPA/400/1-89/001C, Washington DC.

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