FINDING THE PERFECT MATCH
SPANDREL GLASS SOLUTIONS

The beauty of a fully glazed transparent façade of a building can sometimes be spoilt by the spandrel glass, which simply may not match up in terms of its colour and reflections. Rather than creating a stunning, uniform glass façade, the architect may have to compromise on an inferior solution

Why do we need spandrel glass?

Spandrel glass is the opaque glass that conceals structural building components such as columns, floors, HVAC systems, vents, electrical wiring and plumbing, preventing these from being visible from the exterior of the building.

Curtain wall and structurally glazed designs often require the use of spandrel glass to achieve an architect's vision of the finished project. Typically located between vision glasses on each floor of a building, spandrel glass can be either complementary or contrasting in colour when compared to the appearance of the vision glass.

The challenge

Where architects desire a uniform appearance of a glass fronted building, precisely matching the spandrel glass with the vision glass – in terms of colour, reflectivity and durability – can be a challenge.

When vision glass is specified with a high light transmission or low external reflection, finding an exact colour match between spandrel and vision glass is challenging. Daylight conditions can have a dramatic effect on the perception of vision-to-spandrel appearance.

Guardian has a wealth of experience in spandrel glass applications and can help architects and building owners achieve the desired appearance while minimising the risk of thermal stress breakage.

TYPES OF SPANDREL

Spandrel glass can consist of an opacified uncoated or coated glass, a coated glass in a shadow box construction or can be an insulating glass unit comprising of a solar control glass as the exterior pane and an opaque uncoated interior pane.

1. The most common type of spandrel glass solution consists of a monolithic float glass with enamel applied to surface #2 (picture 1). Although this solution is relatively low cost, the problem is that the colour of the paint does not precisely match the colour and reflection of the coating on the vision glass, which makes a uniform appearance between spandrel and vision glass almost impossible to achieve.

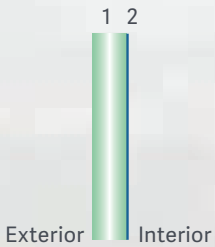
2. An alternative is to use Insulated Glass Unit (IGU) spandrels, where coated glass can be selected that precisely matches the aesthetics of the glazed façade. Here, the coating is applied to surface #2 and paint is applied to surface #4. Although this type of solution has the advantage of providing a good colour matching with the rest of the façade, the cost is relatively high compared to monolithic float glass solutions (picture 2).

3. A selection of Guardian SunGuard® HD (High Durable) or Guardian SunGuard® Solar reflective coated glass allows for the application of enamel directly to the coated surface for a monolithic spandrel (picture 3). This provides an economical, cost effective and aesthetically matching solution that is suitable for many applications.

4. The shadow box construction using a monolithic Guardian SunGuard® HD coated glass (picture 4).

Picture 1

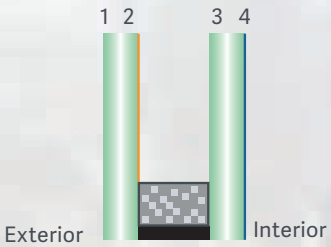
Monolithic



Clear float glass

Picture 2

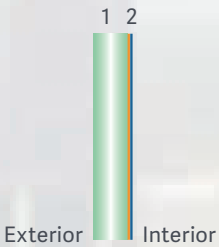
Insulating glass unit



All SunGuard types

Picture 3

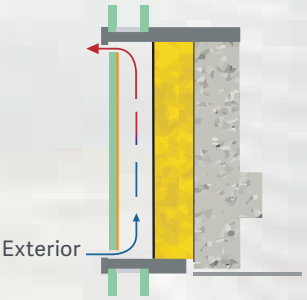
Monolithic



Coated float glass with SunGuard HD & Solar

Picture 4

Shadow box (black background)



Coated float glass with SunGuard HD

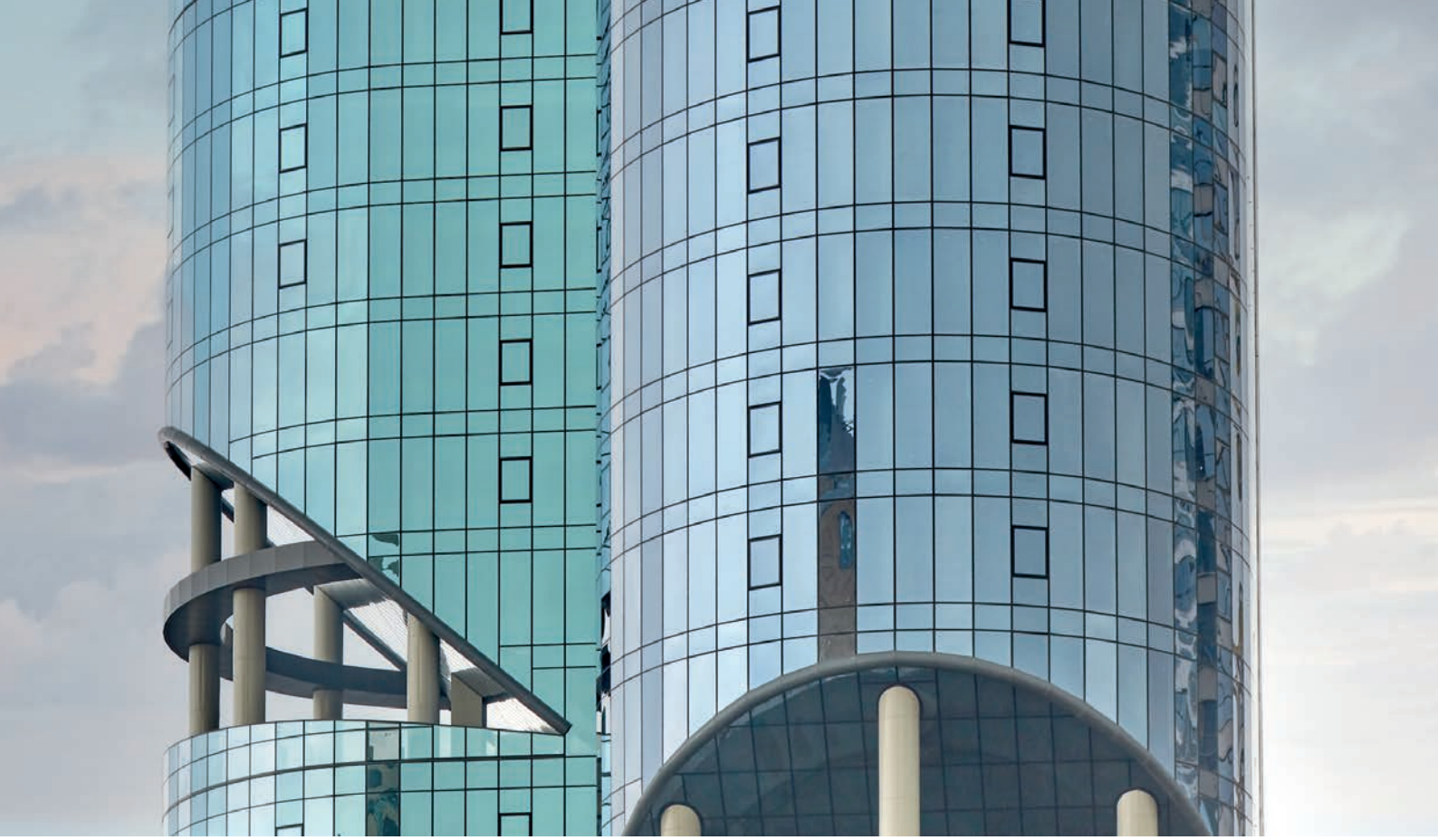
Guardian Glass Coatings for monolithic spandrels*

Guardian Glass offers its most durable coatings, Guardian SunGuard® HD and Guardian SunGuard® Solar RB 20, for monolithic spandrels. These can be matched closely to a range of Guardian SunGuard® coated solar control glasses, including SunGuard® eXtra Selective (SNX), SunGuard® SuperNeutral (SN), SunGuard® High Durable (HD), and SunGuard® High Performance (HP).

Benefits:

- A monolithic spandrel application is less complex than an IGU spandrel solution.
- The use of a highly durable coating applied on surface 2 means that the coating is not directly facing the weather conditions, resulting in a reliable and long lasting product.
- Improved matching aesthetics with the transparent vision glass areas of the building.
- Cost savings by using a monolithic spandrel solution compared to a solar control coated IGU spandrel solution.
- An approved and reliable solution. Compatibility with paint is approved by tests at IFO (Institut für Oberflächentechnik) in Germany

* Please contact Guardian for information about suitable coatings for monolitic spandrel applications and refer to the Product Application Information "CERAMIC PRINT - SPANDREL GLASS"



5 FACTORS TO CONSIDER WHEN DESIGNING WITH SPANDREL GLASS

When designing buildings with spandrel glass, a number of factors should be considered:

1. Do you design buildings with fully glazed facades? If so, are there only transparent areas on the façade, or are there any non-transparent areas too?

2. What aesthetics are you looking to achieve? Should the transparent and non-transparent parts of the façade have exactly the same appearance?

3. Spandrels can be used in monolithic or insulated glass unit (IGU) format.

4. You can match the aesthetics of transparent areas with the non-transparent parts of your façade by using spandrels. Speak to one of our team members to find out more details about available solutions, allowing you to make a choice as to the one that will best meet the needs of your project.

5. Mono-spandrel solutions with Guardian glass that achieve close matching aesthetics with the transparent parts of your façade are now available. These solutions are a lower cost options compared to IGU spandrel solutions. In order to ensure a reliable mono-spandrel solution, always check whether the supplier of the mono-spandrel solution can provide the necessary compatibility tests and approval certificates.

Further help

We recognise that the needs and requirements of every project are unique. If you are interested in learning more about the mono-spandrel solution with Guardian glass or if you would like to discuss the requirements of your project, please contact your local Guardian Glass expert. Guardian recommends that a full-size outdoor mock-up would help you to evaluate and make a choice as to the most desirable spandrel option for your specific project.