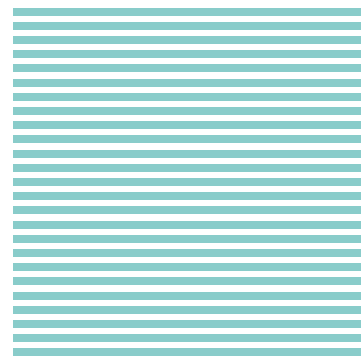


Project architecture

# The ScreenLine<sup>®</sup> façade system



ScreenLine<sup>®</sup>



**“Snow Hill”** - Birmingham, UK  
Project by Sidell Gibson Architects

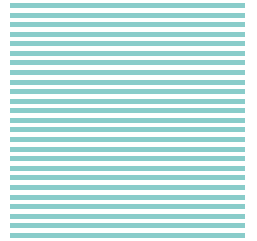


**“CAMG”** - Belo Horizonte, Brazil  
Project by Architect Oscar Niemeyer

# The ScreenLine<sup>®</sup> façade system

Pellini's ScreenLine<sup>®</sup> is a shading system integrated within insulating glass that allows the latter's solar gain (g value) to be optimised according to the year's seasons and its transmittance value (U-value) to be improved.

It also enables the user to reduce undesired solar heat gain during summertime, resulting in savings on air conditioning costs and to increase heat gain during wintertime, thus cutting heating costs.



ScreenLine<sup>®</sup>

## 4 major benefits of the ScreenLine<sup>®</sup> façade system

- **reliability**
- **optimised management of light and heat**
- **solar shading performance comparable to awnings**
- **maintenance free**

In order to attain the best energy performances by means of the ScreenLine<sup>®</sup> façade system, Pellini has introduced some significant product innovations:

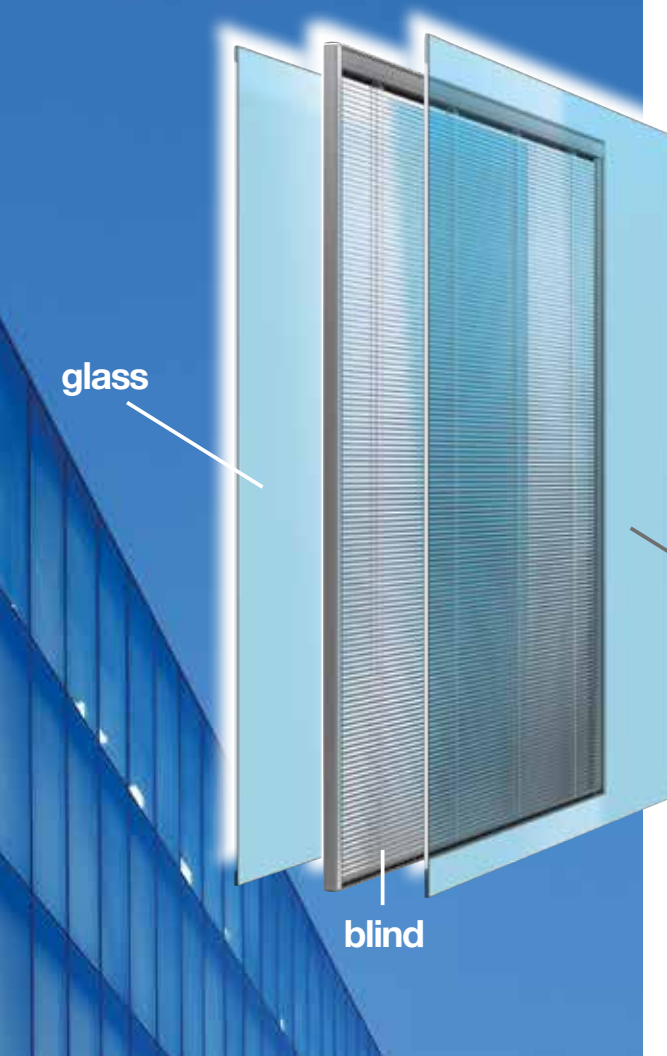
- **façade-specific coated slat V95**
- **brushless motor inside or outside the insulating glass**
- **warm edge spacer bar with low thermal conductivity**

Façades using an integrated ScreenLine<sup>®</sup> blind are able to meet the requirements of the Italian regulations for energy-saving buildings (Italy's Decree No. 311/2006 and Lombardy's resolution No. VIII/8745). The ScreenLine<sup>®</sup> façade system has been assessed as CENED\* compliant in one of Milan's first energy class A commercial buildings, Parallelo, designed by Mario Cucinella Architects.

glass

glass

blind



# ScreenLine® V95

## Energy Performance

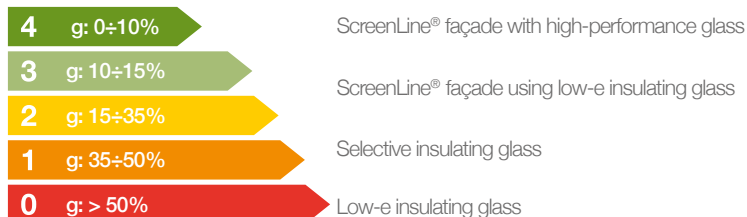
Pellini, in co-operation with the most renowned European research institutes on nanotechnology, has developed the patented coated slat V95 designed for façade applications, which has the following benefits:

- **Reduced g value**
- **Improved  $U_g$  value**
- **Reduced glass temperature**

The slat is coated with an interference film that is designed to reflect the most critical solar radiation; the coating also results in low emissivity slat thus affecting the long wave infra-red radiation characteristics.

### Solar gain characteristics

In accordance with EN14501



Glass only  $g: 34\%$  → Glass + blind  $8\%$

In Reference conditions according to EN13363-2



Glass only  $U_g: 1,2$  → Glass + blind  $1,1 \text{ W/m}^2\text{K}$

DG unit with standard low-e glass



# Reliability

Thanks to their 25-year expertise, the ScreenLine® blinds have been patented at international level and pass even the strictest life tests, achieving significant certifications issued by the major independent European test centres.



The world's main glass manufacturers' insulating units incorporating ScreenLine® have been tested and approved by CSTB (Avis Technique of the French Institute).



### Brushless internal motor

May be connected to BMS networks; certified by IFT for Endurance Test exceeding 216,000 complete cycles (VE 07/2 standard)



### Brushless external motor

May be retrofit for utmost reliability and excellent slat alignment. Certified by the French Institute CSTB for Endurance Test exceeding 20,000 complete cycles

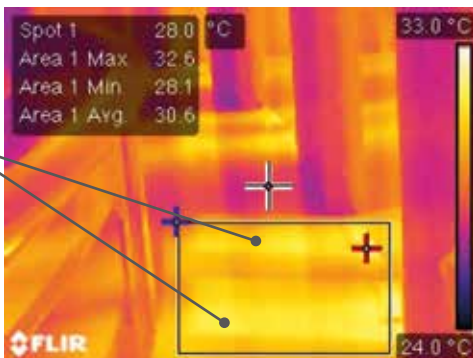
# Comparison of two twin rooms

## Selective glass (g=37%)

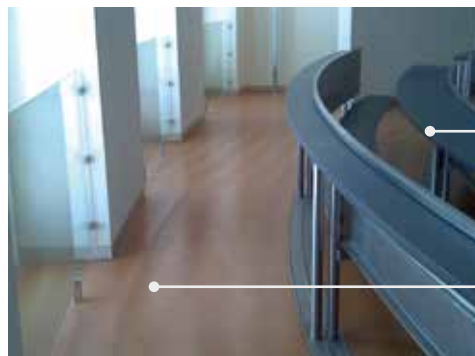


Direct Light  
Transmission = 60%  
No light diffusion

Heat island near the  
façade (30.6 °C)

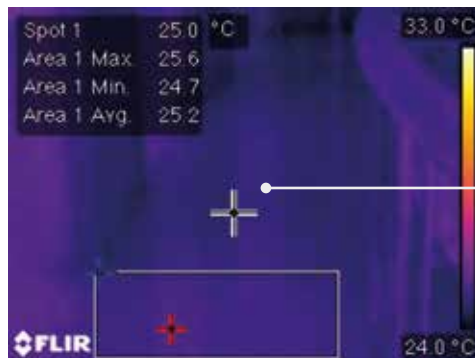


## ScreenLine® V95



Light Transmission  
= 25%, widely  
diffused  
Daylighting

Visual comfort  
No direct light



Even room  
temperature (25°C)

N.B.: The above thermal images were taken at very short time distance and with the same emissivity applied to surfaces.



Compared to an insulating glass unit with selective glass g = 37%, the ScreenLine® façade with V95 slat achieves:

- Even room temperature
- Ideal light diffusion (daylighting effect)
- No glare effect
- Lower temperature on the internal glass pane

# The *Parallelo* Project



This project incorporates over 400 glazed ScreenLine® integral blind modules measuring some 4.2 metres in height and located on the South-West façade, which has considerable exposure to the solar radiation. The system is primarily designed for manual operation, however retro-fit motorisation at the user's discretion is available by means of the new external motor.

Designed by Mario Cucinella Architects, it is **one of Milan's first CENED A-energy class commercial buildings.**

CENED Compliant



Standard building *Parallelo*



**-100% HVAC CO<sub>2</sub>**  
**0 Kg CO<sub>2</sub>/m<sup>2</sup> a**

TL: 60%

TL: 18%

g: 15%

g: 10%



# Visual Optimisation

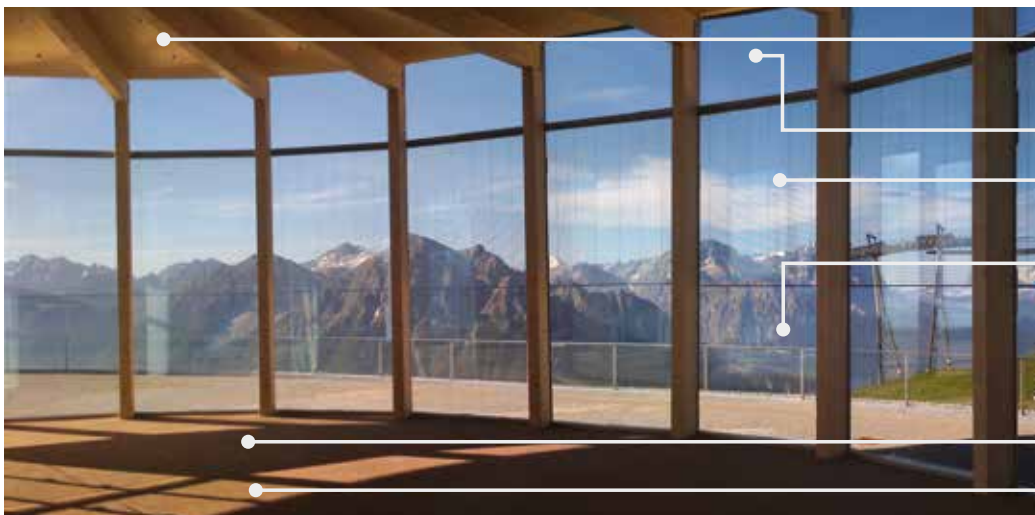


Slats in horizontal position ensure optimal through vision

Shadow projected by slats in horizontal position

Sunlight entering directly with a high risk of glare effect

Since the ScreenLine® façade system is fully encapsulated and protected from external contamination and from misuse, the blind slats can be very thin and light, thus ensuring full through vision.



Area of reflected light creating a "light shelf" effect on the ceiling and at the back of the room

Glazing only

ScreenLine® with slats in horizontal position

Glazing only

Shadow projected by horizontally-tilted slats

Direct solar radiation

The company is certified by

ISO 9001: 2008 Certification No. ISO 2351/4

Our products are certified

Printed in Italy, 02 - 2018  
ET 04.00

Find out more on our case histories



## Some projects by Pellinindustrie

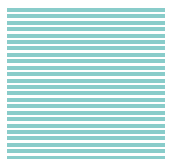
**Cidade Administrativa Minas Gerais (CAMG)**, Belo Horizonte  
**Allianz Isozaki Tower**, Milan  
**Fiera Milano**, Rho-Pero  
**Lega Calcio**, Milan  
**Campari**, Sesto S. Giovanni  
**Forth Valley Hospital**, Falkirk  
**Axa**, Köln  
**Toha**, Tel Aviv  
**Apple**, Milan  
**Gruppo Ferretti**  
**European Parliament**, Strasbourg  
**Parallelo**, Milan  
**Ferrari Product Development Centre**, Maranello  
**Centre Hospitalier**, Roanne  
**Sky**, Milan  
**Chelsea Football Club**, London  
**Manifattura Bulgari**, Valenza  
**Alstom**, Milan  
**Banca Popolare Di Lodi**, Lodi  
**Airport**, Dubai  
**Agusta Westland**, Varese  
**Snowhill**, Birmingham  
**Policlinico – Padiglione Monteggia**, Milan  
**Lubasa**, Castellón  
**Snam**, Milan  
**Acute Hospital**, Enniskillen  
**Coca Cola**, Zagreb  
**Unipol**, Bologna  
**Rabobank**, De Lier  
**Microsoft**, Rome/Milan  
**Jaguar House**, Liverpool  
**Palazzo Grimaldi**, Montecarlo  
**Hôpital Riviera-Chablais**, Rennaz  
**University**, Trento

**Citizen M Hotels worldwide**  
**Addenbrooks Hospital**, Cambridge  
**Schüco**, Padua  
**Ospedale S. Orsola**, Bologna  
**Hadassah Hospital**, Jerusalem  
**Pirelli**, Milan  
**Duravit**, Hornberg  
**University**, Oxford  
**Natexis**, Paris  
**Metro**, Düsseldorf  
**Pembury Hospital**, Tunbridge Wells  
**Mercedes-Benz**, Parma  
**Municipal Offices**, Merthyr Tydfil  
**Aéroport**, Algiers  
**Accenture**, Milan  
**Ceramiche Refin**, Casalgrande  
**Railway Station**, Geneva  
**Sanofi-Aventis**, Vitry-Sur-Seine  
**West 4**, Munich  
**Zucchetti Tower**, Lodi  
**Royal Air Force**, Lakenheath  
**Prada**, Milan  
**Hospital Santa Catarina**, São Paulo  
**University**, Vienna  
**Fedex**, Paris  
**Instituto Nacional De La Seguridad Social**, Alicante  
**Queen Elizabeth Super Hospital**, Birmingham  
**Blue Pool Road**, Hong Kong  
**Novacoop**, Vercelli  
**General Hospital**, Vienna  
**ESEO**, Angers  
**Axis**, Frankfurt  
**Arlozorov Tower**, Tel Aviv

pellinindustrie



PelliniNautica

Pellini  
TENDE E SISTEMI

ScreenLine®

A brand of

pellinindustrie

www.pellini.net

Pellini S.p.A. - 26845 Codogno (LO) ITALY • via Fusari, 19 • Ph. +39 0377 466411 • F. +39 0377 436001 - 437635 • info@pellini.net

ScreenLine Benelux | ScreenLine BR | ScreenLine CZ | ScreenLine France | ScreenLine GmbH | ScreenLine Nordic | ScreenLine UK | ScreenLine Africa | ScreenLine India | ScreenLine Ibérica