

For further information please contact a sales office in your vicinity!

Sales Offices Germany

Berlin
Nommendammallee 42-43
D-13599 Berlin
Tel. (030) 355309-12
Fax (030) 355309-20
eMail: berlin@siteco.de

Frankfurt/Main
Rödelheimer Landstraße 13
D-60487 Frankfurt/Main
Tel. (069) 970974-10
Fax (069) 970974-11
eMail: frankfurt-main@siteco.de

Hamburg
Valvo Park, Gebäude K
Esener Straße 4
D-22419 Hamburg
Tel. (040) 537120-50
Fax (040) 537120-77
eMail: hansen@siteco.de

Hannover
Dorffstraße 17
D-30519 Hannover
Tel. (0511) 874152-50
Fax (0511) 874152-40
eMail: hannover@siteco.de

Leipzig
Fugistraße 1A
D-04153 Leipzig
Tel. (0341) 52677-72
Fax (0341) 52677-20
eMail: leipzig@siteco.de

Lünen
Am der Wehrhahnheide 34
D-44336 Lünen
Tel. (02306) 2004-0
Fax (02306) 2004-20
eMail: lue@siteco.de

Mannheim
Josef-Meyer-Straße 13-15
D-68167 Mannheim
Tel. (0621) 39701-0
Fax (0621) 39701-30
eMail: mannheim@siteco.de

München
Neumarkter Straße 80
D-81673 München
Tel. (089) 454296-0
Fax (089) 454296-77
eMail: muenchen@siteco.de

Nürnberg
Gebaude C/1, OC
Altenberger Straße 185
D-90461 Nürnberg
Tel. (0911) 94178-0
Fax (0911) 94178-31
eMail: nuermberg@siteco.de

Stuttgart
Rutesheimer Straße 24
D-70499 Stuttgart
Tel. (0711) 880237-0
Fax (0711) 880237-30
eMail: stuttgart@siteco.de

Sales Offices Austria

Graz
Straßganger Straße 315
A-8054 Graz
Tel. +43 (316) 28 45 03
Fax +43 (316) 28 64 77
eMail: graz@siteco.at

Imstbruck
Tiergartenstraße 37
A-6023 Imstbruck
Tel. +43 (512) 39 43 43
Fax +43 (512) 39 43 45
eMail: imstbruck@siteco.at

Klagenfurt
Spitalbergweg 20
A-9020 Klagenfurt
Tel. +43 (463) 48 18 80
Fax +43 (463) 48 18 80-5
eMail: klagenfurt@siteco.at

Linz
Pfluegnerstraße 30
A-4020 Linz
Tel. +43 (732) 60 70 80
Fax +43 (732) 60 60 40
eMail: linz@siteco.at

Sales Offices Europe

Belgium
CIT R. s.a.
Rue J.B. Deckockstraat, 99-101
B-1080 Bruxelles
Tel. +32 2 410 50 10
Fax +32 2 410 02 46
eMail: mschayer@ctr.be

Bosnia and Herzegovina
Siteco d.o.o.
Prestavinstvo u BiH
Ul. Hamdije Cemerica 2
BH-71000 Sarajevo
Tel. +387 33 718 640
Fax +387 33 654 814
eMail: siteco@bih.net.ba

Croatia
Siteco d.o.o.
Prestavinstvo u Republici
Hrvatskoj
Trg Drazena Petrovica 3
CRO-10000 Zagreb
Tel. +385 1 48 12 417
Fax +385 1 48 43 588
eMail: sasadac@siteco.hr

Czech Republic
Siteco Lighting spol.sr.o.
U Nibolajky 1085/15
CZ-15000 Praha 5, Smichov
Tel. +420 251 013 800
Fax +420 251 560 772
eMail: info@siteco.cz

Hungary
Siteco Lighting spol.sr.o.
U Nibolajky 1085/15
CZ-15000 Praha 5, Smichov
Tel. +420 251 013 800
Fax +420 251 560 772
eMail: info@siteco.cz

Ireland
Siteco Ltd
Siteco House
150A Holland Street
Denton
Manchester M34 3QG
Tel. +44 161 304 5620
Fax +44 161 335 9008
eMail: info@siteco.co.uk

Italy
Siteco Lighting Systems S.r.l.
Via Pollini 8
I-20126 Milano
Tel. +39-02-66-11-7107
Fax +39-02-66-11-3056
eMail: info@sitecoitalia.it

Luxembourg
MUNUSIMUS S.A
8 rue Hogenberg
L-10721 Luxembourg
Tel. +352 49 58 58
Fax +352 49 58 66
eMail: info@munusimus.lu

Sweden
Ammeli Ljus + Form AB
Sutbrunnsgatan 14
SE-11421 Stockholm
Tel. +46 8 442 90 00
Fax +46 8 442 90 25
eMail: info@anneli.se

Serbia and Montenegro
Siteco d.o.o. Prestavinstvo
Palmoticeva 16 A
SCG-11000 Beograd
Srbija / Crna Gora
Tel. +381 11 309 31 35/36
Fax +381 11 309 31 37
eMail: godjevac@siteco.co.yu

Slovenia
Siteco d.o.o.
Trzaska C23
SI-2000 Maribor
Tel. +386 2 300 4277
Fax +386 2 332 5295
eMail: prodaja@siteco.si

China
Siteco Prosperity Lighting
(Langfang) Co Ltd
Beijing Branch Office
Room B2503 Eagle Plaza
No. 26 Xiao Yun Road
Chaoyang District
Beijing P.R. China, 100016
Tel. +86 10 84 58 01 58
Fax +86 10 84 58 02 98
eMail: info@siteco.cn

Dubai
ARASCA Arabian Scandinavian
General Trading Co.
P.O. Box 86637 Dubai, U.A.E.
Fon +971 50 692 813
Fax +971 4 339 1335
eMail: arascaemirates.net.ae

Gulf Area
Siteco Lighting Systems
(Representative Office)
Dubai Airport Free Zone
BW 308 Dubai
United Arab Emirates
Tel. +971 4 299 69 51
Fax +971 4 299 69 52
eMail: info@emirates@siteco.de

South Korea
Green Korea Co. Ltd
301 Fl. Ke-Sung Bldg. 150-30
Samjung-dong, Kangnam-ku
Seoul (155-090)
Tel. +82 2 554 112
Fax +82 2 556 1644
eMail: info@siteco.de

Kuwait
NCECO National & German
Electrical and Electronic Services
Company
P.O. Box 6642, 32041 Hawalli
Tel. +965 241 8888
Fax +965 246 3722
eMail: info@siemens.com.kw

Malaysia
Siteco Lighting (M) Sdn. Bhd
No 3A-15, IOI Business Park,
No. 1, Persiaran Puchong Jaya
Selatan, Bandar Puchong Jaya
MAL-47100 Puchong
Selangor Darul Ehsan
Tel. +603 8070-4722
Fax: +603 8070-8845
eMail: info@siteco.com.my

Oman
Waleed Associates LLC
P. O. Box 437 Muscat, PC 113
Tel. +968 713313
Fax +968 715042
eMail: sales-wass@omzest.com

Sales Offices Worldwide

Denmark
Siteco Belysning AS
Oie Deviks Vej 4
N-0666 Oslo
Tel. +47 23 37 32-50
Fax +47 23 37 32-60
eMail: info@andela.nl

Norway
Siteco Belysning AS
Oie Deviks Vej 4
N-0666 Oslo
Tel. +47 23 37 32-50
Fax +47 23 37 32-60
eMail: info@andela.nl

Ukraine
AZ Design LLC
Znilyanskaya str. 30/32, r. 42
UA-01033 Kiev
Tel.: +38 044 4619288
Fax: +38 044 4619287
eMail: info@az2.com.ua

Poland
Siteco Lighting Poland Sp.z o.o
Silux Oy Ab
Ulaparkatu 1
FIN-02320 Espoo
Tel. +358 9 80 22 077
Fax +358 9 80 21 890
eMail: info@silux.fi

France
ANDDOMIA Sari
Parc Club des Tanneeries BPT7
FR-67832 Lingolsheim
Tel. +33 3 88 76 55 75
Fax +33 3 88 76 08 72
eMail: andomia@wanadoo.fr

Greece
Siemens A.E.
Atemidos 8 - P.O. Box 61011
GR-15110 Amaraoussio/Athen
Tel. +30 210 6864 578
Fax +30 210 6864 562
eMail: info@siteco.de

Portugal
Siemens S.A.
A. & D. Iluminação
Rua Imados Siemens, I
PT-2720-093 Amadora
Tel. +351 21 417 82 69
Fax +351 21 417 80 89
eMail: info@siteco.de

Russia
Siteco Lighting Systems
Office 607, Tverskoy Bulvar,4/1
RUS-103000 Moscow
Tel. +7 501 792 5374
Fax +7 095 792 5302
eMail: info@siteco.dol.ru

Turkey
Siteco Aydınlatma Teknikçi
Candela Lehtechnik ek. BY.
Postdu 8
NL-2950 AA Alblassterdam
Tel. +31 78 69 20 92 9
Fax +31 78 69 20 92 0
eMail: info@andela.nl

Turkey
Siteco Aydınlatma Teknikçi
Candela Lehtechnik ek. BY.
Postdu 8
NL-2950 AA Alblassterdam
Tel. +31 78 69 20 92 9
Fax +31 78 69 20 92 0
eMail: info@andela.nl

Spain
Siemens S. A. P.S. 8
Ronda de Europa 5
E-28760 Torre Cantos (Madrid)
Tel. +34 91 514 7060
Fax +34 91 514 7066
eMail: info@siteco.de

Ukraine
AZ Design LLC
Znilyanskaya str. 30/32, r. 42
UA-01033 Kiev
Tel.: +38 044 4619288
Fax: +38 044 4619287
eMail: info@az2.com.ua

United Kingdom
Siteco Ltd
Siteco House
150A Holland Street
Denton
Manchester M34 3QG
Tel. +44 161 304 5620
Fax +44 161 335 9008
eMail: info@siteco.co.uk

Sales Offices Austria

Graz
Straßganger Straße 315
A-8054 Graz
Tel. +43 (316) 28 45 03
Fax +43 (316) 28 64 77
eMail: graz@siteco.at

Imstbruck
Tiergartenstraße 37
A-6023 Imstbruck
Tel. +43 (512) 39 43 43
Fax +43 (512) 39 43 45
eMail: imstbruck@siteco.at

Klagenfurt
Spitalbergweg 20
A-9020 Klagenfurt
Tel. +43 (463) 48 18 80
Fax +43 (463) 48 18 80-5
eMail: klagenfurt@siteco.at

Linz
Pfluegnerstraße 30
A-4020 Linz
Tel. +43 (732) 60 70 80
Fax +43 (732) 60 60 40
eMail: linz@siteco.at

Sales Offices Europe

Belgium
CIT R. s.a.
Rue J.B. Deckockstraat, 99-101
B-1080 Bruxelles
Tel. +32 2 410 50 10
Fax +32 2 410 02 46
eMail: mschayer@ctr.be

Bosnia and Herzegovina
Siteco d.o.o.
Prestavinstvo u BiH
Ul. Hamdije Cemerica 2
BH-71000 Sarajevo
Tel. +387 33 718 640
Fax +387 33 654 814
eMail: siteco@bih.net.ba

Croatia
Siteco d.o.o.
Prestavinstvo u Republici
Hrvatskoj
Trg Drazena Petrovica 3
CRO-10000 Zagreb
Tel. +385 1 48 12 417
Fax +385 1 48 43 588
eMail: sasadac@siteco.hr

Czech Republic
Siteco Lighting spol.sr.o.
U Nibolajky 1085/15
CZ-15000 Praha 5, Smichov
Tel. +420 251 013 800
Fax +420 251 560 772
eMail: info@siteco.cz

Hungary
Siteco Lighting spol.sr.o.
U Nibolajky 1085/15
CZ-15000 Praha 5, Smichov
Tel. +420 251 013 800
Fax +420 251 560 772
eMail: info@siteco.cz

Ireland
Siteco Ltd
Siteco House
150A Holland Street
Denton
Manchester M34 3QG
Tel. +44 161 304 5620
Fax +44 161 335 9008
eMail: info@siteco.co.uk

Italy
Siteco Lighting Systems S.r.l.
Via Pollini 8
I-20126 Milano
Tel. +39-02-66-11-7107
Fax +39-02-66-11-3056
eMail: info@sitecoitalia.it

Luxembourg
MUNUSIMUS S.A
8 rue Hogenberg
L-10721 Luxembourg
Tel. +352 49 58 58
Fax +352 49 58 66
eMail: info@munusimus.lu

Sweden
Ammeli Ljus + Form AB
Sutbrunnsgatan 14
SE-11421 Stockholm
Tel. +46 8 442 90 00
Fax +46 8 442 90 25
eMail: info@anneli.se

Serbia and Montenegro
Siteco d.o.o. Prestavinstvo
Palmoticeva 16 A
SCG-11000 Beograd
Srbija / Crna Gora
Tel. +381 11 309 31 35/36
Fax +381 11 309 31 37
eMail: godjevac@siteco.co.yu

Slovenia
Siteco d.o.o.
Trzaska C23
SI-2000 Maribor
Tel. +386 2 300 4277
Fax +386 2 332 5295
eMail: prodaja@siteco.si

China
Siteco Prosperity Lighting
(Langfang) Co Ltd
Beijing Branch Office
Room B2503 Eagle Plaza
No. 26 Xiao Yun Road
Chaoyang District
Beijing P.R. China, 100016
Tel. +86 10 84 58 01 58
Fax +86 10 84 58 02 98
eMail: info@siteco.cn

Dubai
ARASCA Arabian Scandinavian
General Trading Co.
P.O. Box 86637 Dubai, U.A.E.
Fon +971 50 692 813
Fax +971 4 339 1335
eMail: arascaemirates.net.ae

Gulf Area
Siteco Lighting Systems
(Representative Office)
Dubai Airport Free Zone
BW 308 Dubai
United Arab Emirates
Tel. +971 4 299 69 51
Fax +971 4 299 69 52
eMail: info@emirates@siteco.de

South Korea
Green Korea Co. Ltd
301 Fl. Ke-Sung Bldg. 150-30
Samjung-dong, Kangnam-ku
Seoul (155-090)
Tel. +82 2 554 112
Fax +82 2 556 1644
eMail: info@siteco.de

Kuwait
NCECO National & German
Electrical and Electronic Services
Company
P.O. Box 6642, 32041 Hawalli
Tel. +965 241 8888
Fax +965 246 3722
eMail: info@siemens.com.kw

Malaysia
Siteco Lighting (M) Sdn. Bhd
No 3A-15, IOI Business Park,
No. 1, Persiaran Puchong Jaya
Selatan, Bandar Puchong Jaya
MAL-47100 Puchong
Selangor Darul Ehsan
Tel. +603 8070-4722
Fax: +603 8070-8845
eMail: info@siteco.com.my

Oman
Waleed Associates LLC
P. O. Box 437 Muscat, PC 113
Tel. +968 713313
Fax +968 715042
eMail: sales-wass@omzest.com



Get informed about innovative lighting concepts and attractive lighting instruments for your projects. Please request our free 44p page Book of Light.

Order number: 1045
Subject to change without notice.
© Siteco Marketing 07/2005
2/000 DUS

Siteco You will see.

Siteco Lighting Systems
Headquarters: Georg-Simon-Ohmstraße 50 | D - 83301 Traunreut
Fon: +49 (0)8669 33-822 | Fax: +49 (0)8669 33-397
eMail: info@siteco.de · Web: www.siteco.net



Showing daylight the way.

Stay cool and not blinded by the light.

- office
- industry
- traffic
- shopping
- public
- sports

Daylight Systems.

We can't improve the sun, but we can improve its light.

Siteco You will see.



Daylight from the sun.

2

“The sun is a ball of fire, slightly larger than Greece.”
Anaxagoras,
Greek philosopher,
499–428 B.C.

Shedding some light on the matter	
Introduction	3
Product overview	6
Movable systems	
Movable prism panels	8
Venetian blinds	12
Static systems	
Static prism systems	16
• Sun protection prism systems	
• Light control prism systems	
Micro sun shielding louvers	20
CombiSol	24
Design/Fabrication	
Guarantee	26
Planning	28
Reference installations	29
	30

The bright side of light ...

Sunlight is one of the essential elements for all life forms. It determines our natural cycles and promotes our well-being.

Daylight provides us with important information. Changes in light intensity signal changes in climate, time and space. Windows, skylights and glass roofs let daylight – and therefore life – into our homes and workplaces, creating a unique atmosphere, allowing us to see our environment in its natural colors.

Sunlight is a free source of energy, but unfortunately, it is not always available in sufficient quantity. We must therefore supplement it with artificial light sources.

... the dark side of light ...

However, sometimes too much light enters a room, creating direct or reflected glare and overheating. As a consequence, the atmosphere and energy balance of the building is disrupted; the people inside feel uncomfortable, tire easily and lose their ability to concentrate.

... and Siteco Daylight Systems

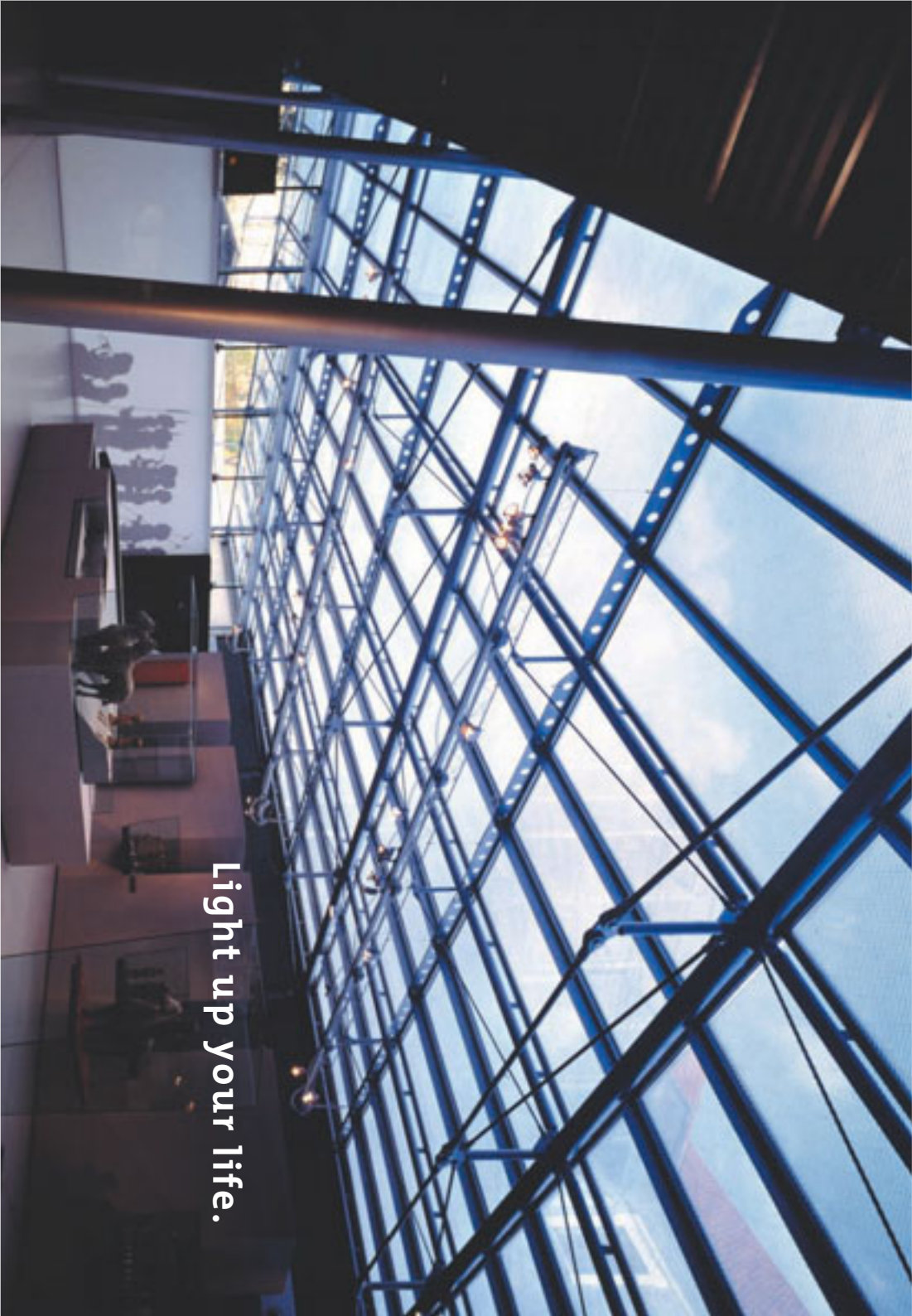
This is why we developed Daylight Systems which regulate the incident angle and amount of sunlight to create optimal visual conditions, a comfortable indoor temperature and a pleasant atmosphere, while incorporating the fascinating interplay of natural light.

Siteco Daylight Systems: making daylight a welcome guest.

3

Evenly balanced.

“All things are poison,” wrote Paracelsus over 500 years ago “... and nothing is without poison. Only the dosage determines what is or is not poisonous.” This quotation by the famous German scientist is also applicable to light. A lack of light can affect us just as negatively as too much light. Siteco’s Daylight Systems direct the correct dosage of sunlight into every room. Siteco Daylight Systems: the optimal amount of light.



Art gallery, Leoben
Architects: Domenig +
Eisenköck, Graz, Austria

Light up your life.

Experience, Expertise, Esprit

Siteco is one of the leading manufacturers of Daylight Systems. For more than 20 years, we have been researching, developing and producing systems for controlling natural light. As experienced manufacturers of luminaires, we know how to achieve the perfect balance between natural and artificial light. We provide high quality customised solutions for our client's needs – all from a single source.

Siteco.
You will see.

Some like it hot ...

Take tropical plants, for example. That's why they thrive in hot and humid greenhouses. People, on the other hand, prefer a less extreme climate at work – unless, of course, they are used to the tropics.

Why do offices turn into greenhouses when the sun shines?

The radiant energy which penetrates window glass is converted to long wave (heat) radiation when it comes into contact with objects. This so called "remote infrared" energy is then no longer able to penetrate glass, i.e. to escape. The energy remains in the room, increasing the ambient temperature.

... others prefer Siteco.

When sunlight strikes high quality reflectors made from the purest aluminium, only a small portion of the short wave radiation is converted to long wave radiation. The lion's share of radiant energy can exit the room.

Conventional insulated glass has an overall transmission value (g) of 72 %. Our prism and louver systems coated with purest aluminium have a transmission value of less than 20 %.

In addition, prisms and louvers direct the sun's rays into a room via the ceiling, providing optimal lighting and maintaining a pleasant indoor climate without impairing the view outside.

Orchestrated light ...
... is our term for designing light with the goal of optimising functionality, aesthetics and emotional well-being. An important instrument in this concept is the management of both natural and artificial light sources. Siteco Daylight Systems let natural light into a room while filtering out the glare. In combination with artificial light, this creates a new visual atmosphere – pleasant, comfortable and energy-saving.

Siteco light management will light up your life.



Siteco Daylight Systems:

- reduce indoor temperature gain in summer, thereby cutting air conditioning costs,
- direct natural light further into the room and distribute it more evenly,
- reduce glare without darkening the room,
- enable more flexible positioning of workstations,
- do not cut you off from the outside world.



The full daylight spectrum.



Let there be light!

Optimal light for every room and building. Siteco not only outfits offices with movable and stationary Daylight Systems, but also schools, museums, government buildings and many other establishments. We offer a tailor-made solution for every building on the basis of the following product groups:

Movable prism systems

These are mounted either vertically or horizontally in front of or behind transparent sections of the building. They are particularly suited for façade integration, but they also regulate the irradiation of covered courtyards.

Movable prism systems are most commonly used in newly constructed buildings. In old buildings that have been renovated, designers must consider whether these lighting systems harmonise with the overall design.

Venetian blinds

Siteco's venetian blinds can be easily installed in the interiors of either new buildings or historical sites with protected buildings, and provide an ideal solution for sun protection and glare reduction in rented or leased facilities.

Static prism and louver systems

These are fitted into panes of insulated glass, and are especially suited for use in glass roofing and covered courtyards, as well as vertical glass surfaces. The unique functionality and pleasing design of these systems make them ideal for interiors in which demanding visual tasks are performed, as well as for decorative illumination applications.

Because prism and louver systems are fitted into panes of insulated glass, they are

- easy to install,
- protected against moisture and impurities,
- and completely maintenance free.

Siteco Daylight Systems.

Because light is what you make it.

Applications of our systems

	Facade	Roof	New building	Renovated building	Sun protection	Glare reduction
Movable large panel prisms	++	+	++	o	++	o
Venetian blinds	++	-	+	++	o	++
Sun protect. prisms	o	++	++	o	++	o
light contr. prisms	+	++	++	o	-	++
Micro sun shielding louvers	o	++	++	o	++	o
CombiSol	-	++	++	o	++	++

++ optimally suited + well suited o suitable under certain conditions - unsuitable



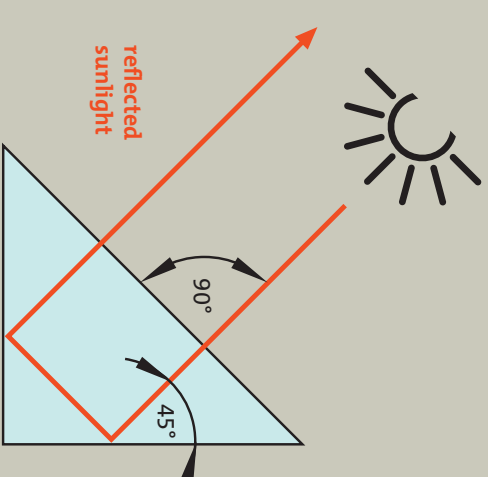
Mirror, Mirror ...

Plenary building, Bonn
Architects: Behmisch & Partner, Stuttgart
Lighting consultant: Bartenbach Lichtlabor, Innsbruck

What's your point of view?

Our movable large panel prisms change position according to the position of the sun, reflecting only those rays which strike the prism panel at a 90° angle. Light rays with other incident angles illuminate the entire interior area, thus generating a dynamic visual environment. The view out of doors is unimpaired, and the interior appears in a clear and friendly light.

Movable large panel prisms from Siteco: let the sun shine in.



The prism panels are fabricated from highly transparent 8N acrylic glass. They are not mirrored, and are resistant to ultraviolet rays and inclement weather conditions. They measure 750 x 310 x 12 mm, and their g-value is extremely low. With Siteco's movable large panel prisms, less than 15 % of the total radiant energy enters the building's interior.

The basics of optics

When light strikes a boundary layer between a high density and a low density material at less than the maximum incident angle, it will be reflected.

We applied this law of total reflection optics in the development of our movable prism systems.

These systems consist of translucent acrylic glass panels with an extremely precise prism structure. The movable panels are adjusted to ensure that light always strikes the back wall of the prism at a 45° angle, i.e. the critical angle for total reflection at the transition point between acrylic glass and air. This enables direct radiation to be reflected, while diffuse daylight is allowed to enter the room.

Efficient and attractive

Our movable large panel prisms direct light rays precisely and also offer protection from the sun – all in one attractive solution. These top quality prism panels are eye-catching design elements for modern buildings.

Horizontal and vertical

The translucent sun protection systems can be implemented both vertically on building facades, as well as horizontally for enclosed glass courtyards.

Good for you and your wallet

Our prism panels reduce the high concentration of luminance in the vicinity of windows, creating an ergonomic illumination of the workplace, as well as a beneficial indoor atmosphere – for offices, conference rooms, exhibition halls or courtyards.

What's especially important is that people indoors don't feel closed in, rather they enjoy the view through the translucent panels – contact to the outside world.

And the sun protection makes sense, financially too, for expensive air conditioning systems can usually be dispensed with.



Redirecting light.



A roof over your head. Panes of insulated glass with integrated prisms are extremely effective and give your roof a completely new look. The photograph shows such panes at Bonn's Haus der Geschichte (Museum of Contemporary German History). Siteco prism systems put things in a good light.

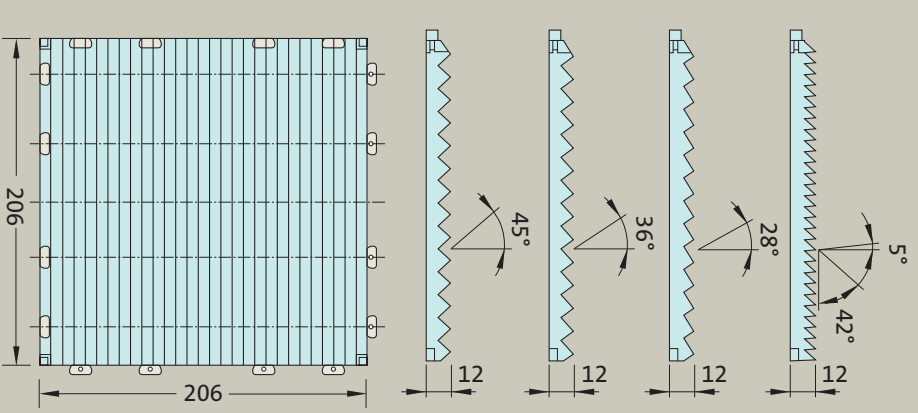
We "covered" everything ...
At Siteco, we have developed various types of prism panels manufactured from 8N acrylic glass, so that you can see each room in its best light.

... to provide complete solutions.

In order to protect the mirror coating from moisture and impurities, the prism panels are always mounted between panes of double glazing. We deliver only entire functional units, so that we can provide an allround guarantee on our products. We assemble the prism elements, cut them to the required size and integrate them into the double glazing.

A few details ...

Siteco prism panels are injection molded from 8N acrylic glass (made by Röhm GmbH). Alternate flanks are coated with an extremely thin layer of purest aluminium (AL 99.99). As is the case with metal coated double glazing, colour variations may arise.



Exemplary:

Haus der Geschichte, Bonn.*

Retrospective, introspective, circumspetive, perspective:

The building's architecture reflects the "open space" concept in Bonn's Haus der Geschichte. Three barrel vaults, covered entirely in glass, form the main design element and supply the exhibition rooms with daylight.

The glass elements contain two prism systems. Sun protection prisms regulate the indoor atmosphere, preventing the rooms from heating up – even on hot days. Deflection prisms ensure evenly distributed, glare free illumination. The effect is light flooded interiors with a pleasant temperature, and perfect illumination of the exhibits from all sides.

Siteco prism systems – and history appears in a new light.



* Architects: Rüdiger & Rüdiger Brunschwick
Lighting consultants: Bartenbach Lichtlabor, Innsbruck





Getting the best out of light.

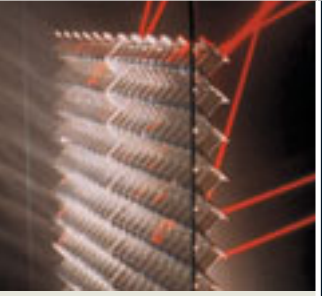
Keep cool.

Glass roofing is attractive. Less attractive, on the other hand, are those who must work in the heat beneath one. Micro sun shielding louvers by Siteco reflect direct sunlight, thereby maintaining a mild, comfortable atmosphere – even beneath a glass roof.

Siteco micro sun shielding louvers. Because people who work in glass houses should enjoy the summer sun!

Exemplary: Presentation hall, DaimlerChrysler AG, Sindelfingen.*

Not only inner beauty is important, even for cars. They should be presented in their best light, both indoors and out.



Only the best light is good enough

Our micro sun shielding louvers are integrated between double glazing panes, just like our static sun shielding prisms. The only difference is the way they work: with our sun protection louvers, the sun's rays strike vertical and horizontal lamellae, which are coated with vaporised top grade aluminium.

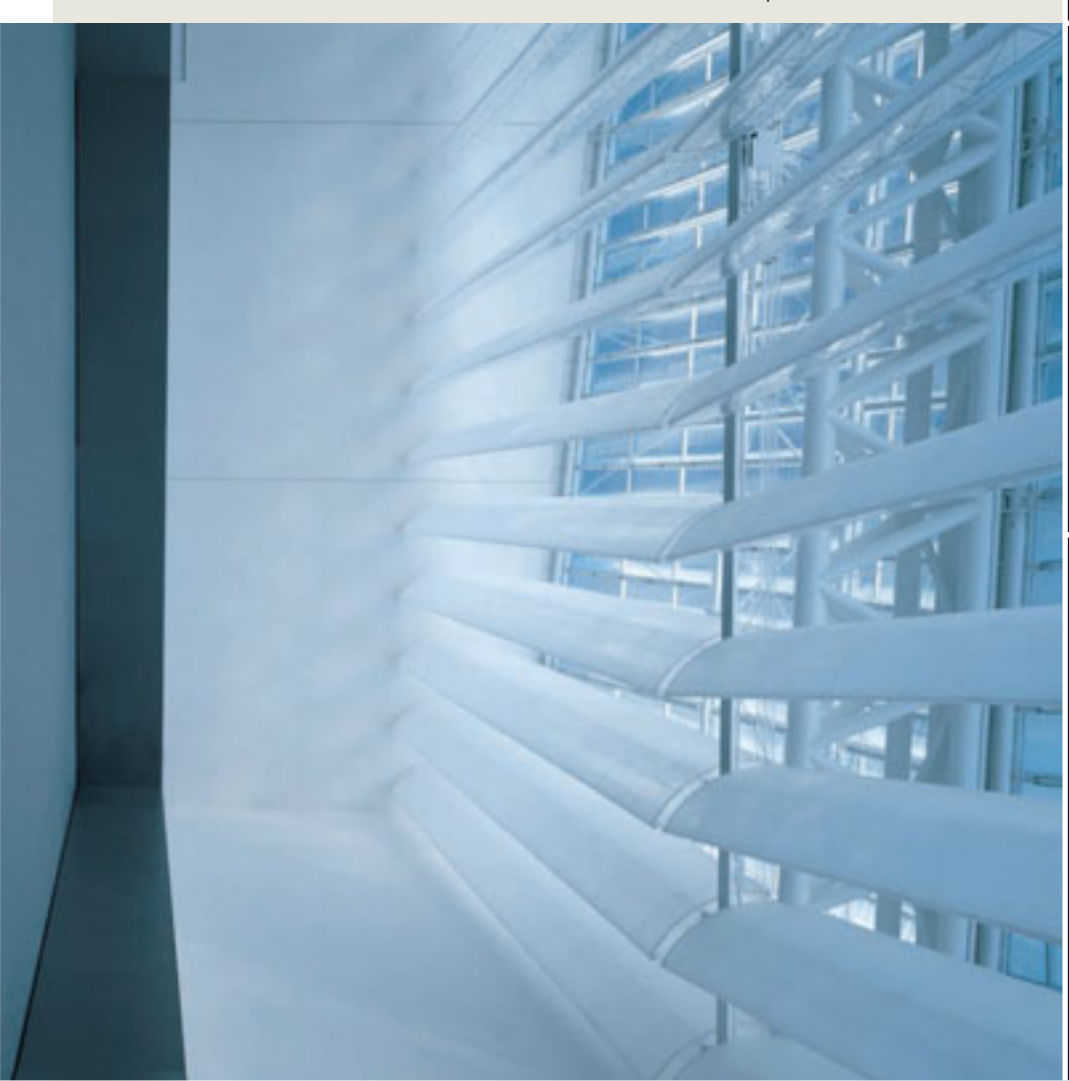
The louver is closed to reflect direct sunlight when facing south. Diffuse light passes through the north facing louver, supplying the room with pleasant, ergonomic light.

Like the aforementioned stationary sun protection prism systems, our micro sun shielding louvers were developed especially for installation in slightly sloped glass roofing.

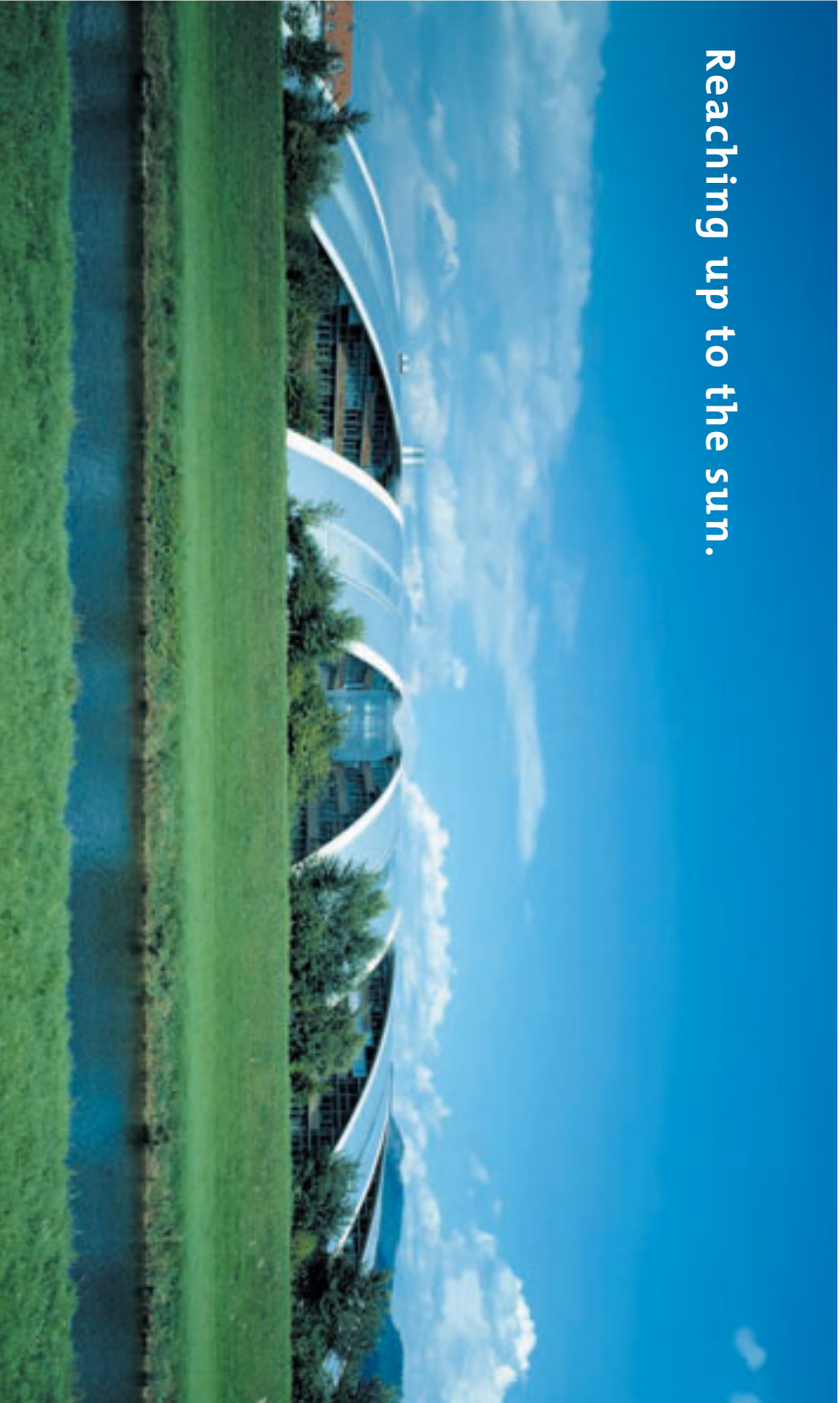
This is why DaimlerChrysler AG emphasised the synthesis of artificial and natural light when planning the construction of their special design building. The presentation hall was to be outfitted with a glass roof to provide plenty of natural light. The challenge was to distribute the daylight evenly, and to minimize glare and heavy shadows. After analysing simulations, lighting consultant Roland Greule chose Siteco's micro sun shielding louvers. The advantages they offer are high light transmission, precise colour rendering, and a pleasant indoor atmosphere. In addition, movable sails were mounted beneath the glass roof, to prevent reflective glare of the cars' surface. Narrow and wide beam luminaries, mounted on the supports of the glass roof, supplement the natural light when necessary.

Siteco micro sun shielding louvers: light to work and display by.

* Architect: Renzo Piano, Genoa
Lighting consultant: Roland Greule, Norderstedt



Reaching up to the sun.



22

Burda Media Park,
Offenburg.*

Striking “fingers of light”: the vaulted roofs of the six semi-circular arches in the administrative building elements have integrated skylight strips. Together with the large window frontage, these strips create a bright, friendly atmosphere. Solar heat gain is prevented by Siteco’s micro sun shielding louvers, which are integrated into the skylight.

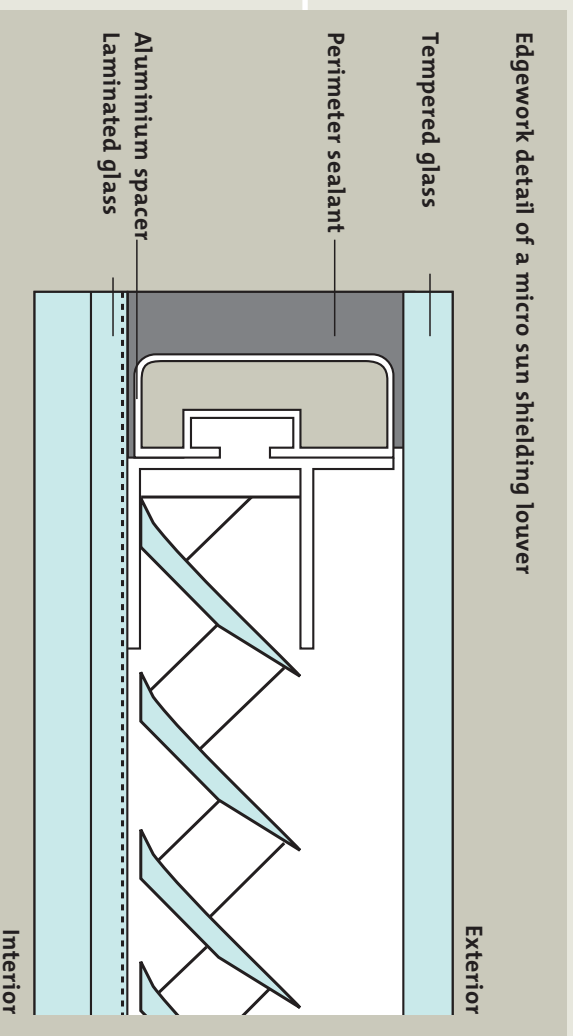
*Architects: Ingenhoven, Overdiek & Partners, Düsseldorf; lighting consultants: HL-Technik, Munich; Werring, Topp & Schmidt, Feldafing.

Top notch quality from a single source.

In order to ensure optimal sun protection independent of a building’s construction type and geographic position, Siteco has developed micro louver panels with differently pitched main lamellae.

As is the case with the stationary prism panels, our micro sun shielding louver system is only part of a wider concept. The louvers are coated with an extremely thin layer of vaporised top-grade aluminium and are extremely sensitive optical elements. To protect them from ambient influences such as dust or moisture, they are integrated into double glazing units. We deliver only entire functional units, so that we can provide an allround guarantee.

A few details ...
Siteco micro sun shielding louvers are injection molded from ASA (BASF AG). They are coated with an extremely thin layer of purest aluminium (Al 99.99). As is the case with metal coated insulated glass, colour variations may arise.

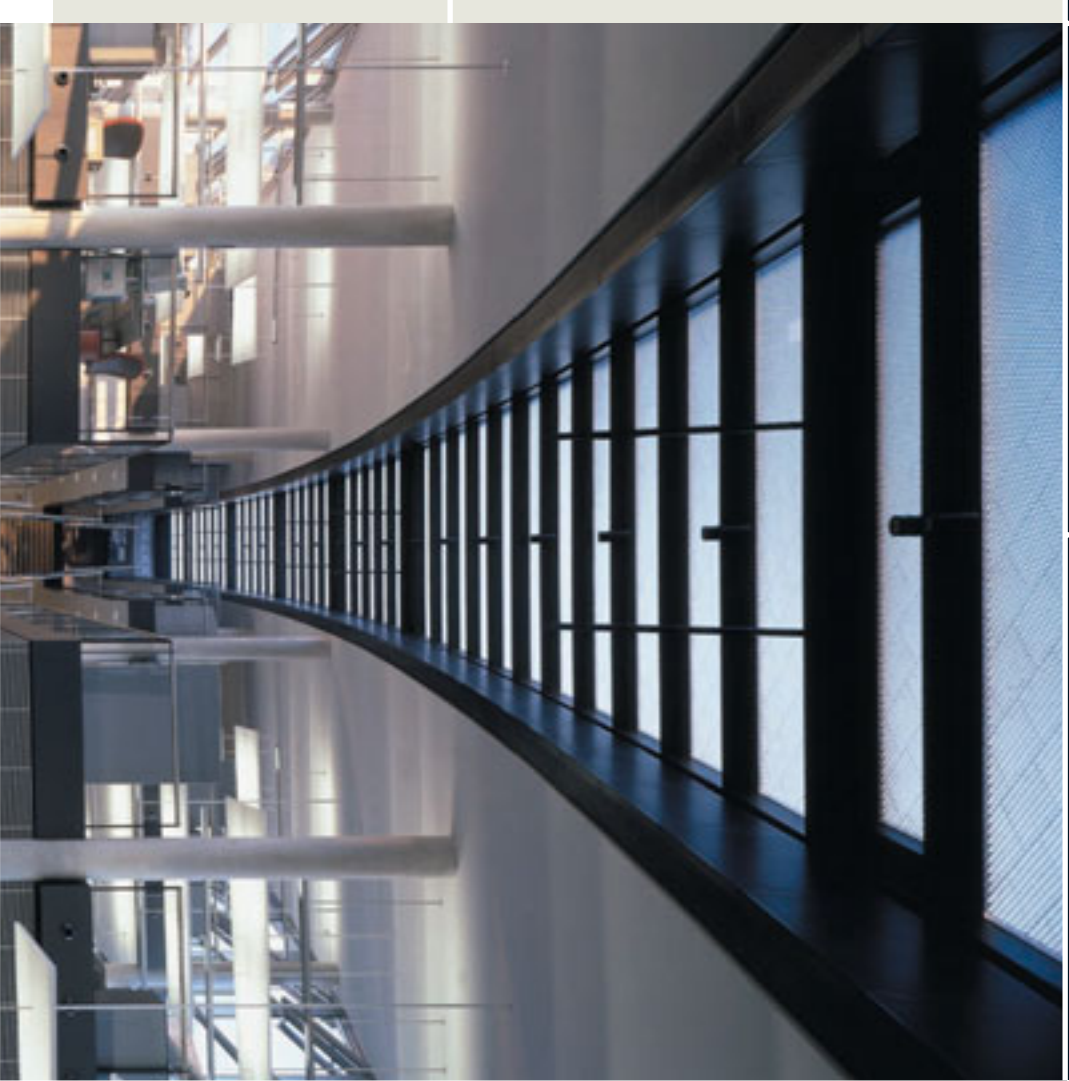


23

For stargazers.

Skylight strip in a wing of Burda’s Media Park: the micro sun shielding louvers are discernible as a fine fishnet structure in the glass. Immovable perforations give an unimpaired view outside.

Siteco micro sun shielding louvers. Cool prospects.





Sun and glare protection in a single system.

24

A real eye-opener.
Working in a nice atmosphere no longer has to mean forfeiting comfort. Siteco's CombiSol creates a healthy atmosphere in interiors with glass roofing or sloped glass facades – without expending any energy. And CombiSol eliminates glare so well that even computer users can stop squinting and open their eyes.

CombiSol by Siteco: we combine practicality with comfort.

Two in one.
CombiSol is an enhancement of our tried and true micro sun shielding louvers. It is the first louver system to combine high-quality sun protection with reliable glare protection.

CombiSol reduces the solar heat gain to a minimum and creates an excellent indoor climate. In addition, CombiSol completely eliminates glare from direct sunlight, making it ideal for demanding lighting tasks, e.g. in offices with computer workstations, museums and exhibition rooms.

Nothing but blue skies.

We developed CombiSol especially for glass roofs and sloped glazing installed in buildings with demanding air and illumination requirements.

Like all other stationary daylight systems from Siteco, CombiSol is mounted inside a double glazing pane.

- CombiSol is therefore:
- easy to install,
 - protected from moisture and impurities,
 - completely maintenance free.

Although CombiSol completely filters out direct sunlight, the louvers still permit an outdoor view. People in the room can see the blue sky and passing clouds, and can enjoy the changes in weather and light conditions in a comfortable environment.

With CombiSol, the sky's the limit.

Combines high quality sun shielding with reliable glare protection in a single system: the outer half is for sun shielding, the inner half for glare protection.



25

Effective honeycombs.

CombiSol's sun and glare protection louver system is double layered. In the upper layer, the honeycomb shape forms an entry and an exclusion area. The louvers are open facing north, and closed facing south. Direct sunlight is completely reflected off the mirrored surface, which is coated with pure aluminium.

The second layer directs the light to defined areas, thereby reducing glare and distributing diffuse light evenly throughout the room.

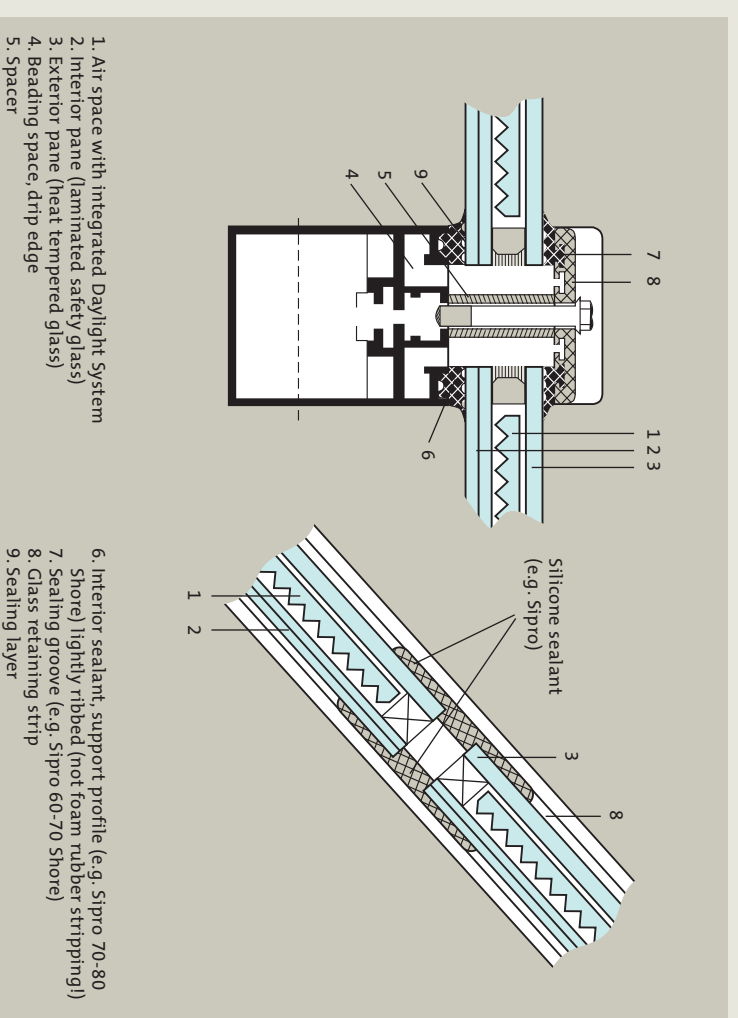
An allrounder.

CombiSol offers the following advantages:

- sun and glare protection in a single system,
- excellent protection from the sun – all day long and all year long ($g^* < 15\%$),
- good light transmission (53 % directed transmission, approx. 13 % diffuse transmission, including double glazing pane),
- allround glare limitation,
- non linear structure,
- very good colour rendering,
- simple installation and no maintenance necessary.



Fittings and installation of stationary Daylight Systems



1. Air space with integrated Daylight System
2. Interior pane (laminated safety glass)
3. Exterior pane (heat tempered glass)
4. Beading space, drip edge
5. Spacer

6. Interior sealant, support profile (e.g. Sipro 70-80 Shore) lightly ribbed (not foam rubber striping!)
7. Sealing groove (e.g. Sipro 60-70 Shore)
8. Glass retaining strip
9. Sealing layer

Fundamentals.

Stationary Daylight Systems are always mounted in between double glazing layers to protect them from the elements. These glass layers are fabricated just like conventional double glazing panes.

For the construction of glass roofs and the installation of these elements, the latest versions of the glazing guidelines issued by St. Gobain Germany and specific technical guidelines on glazing published by the Deutsches Institut für Bautechnik (DIBT) have to be followed.

The insulated glass panes must bear all interior and exterior loads and fulfill all construction requirements.

To guarantee the load-bearing capability of the glazing elements, external static loads must be calculated according to DIN 1055 standards. If local building authorities publish their own standards, then these should be used.

To prevent thermal culetts, heat accumulation and temperature variance within the multi layered pane must be avoided.

Inclined glazing.

Stationary Daylight Systems are generally installed in roofs. Since inclined glazing is subject to greater thermal stress, the exterior pane is fabricated from heat-tempered glass, and the interior pane is made of laminated safety glass.

A pitch of less than 10 degrees is not recommended, since water runoff must be ensured. This applies to both the glass element and the frame construction. When installing such a system, special attention should be paid to ambient influences, e.g. excessive amounts of impurities, falling leaves, etc. Constant exposure to moisture can cause material fatigue in the pane's surface.

Mounting area.

The mounting area of the panes should not exceed DIN 18545 guidelines, to prevent variations in temperature between the perimeter and the rest of the pane.

In roof glazing, glass retaining strips should always be mounted on the exterior, since interior mounted strips form the drip edge in a sloped element, making sealing nearly impossible.

The drip edge and the sealing layer must be separated from one another, and the drip edge should be below the sealing layer. The exterior glass retaining strips must hold the glass securely to withstand suction effects.

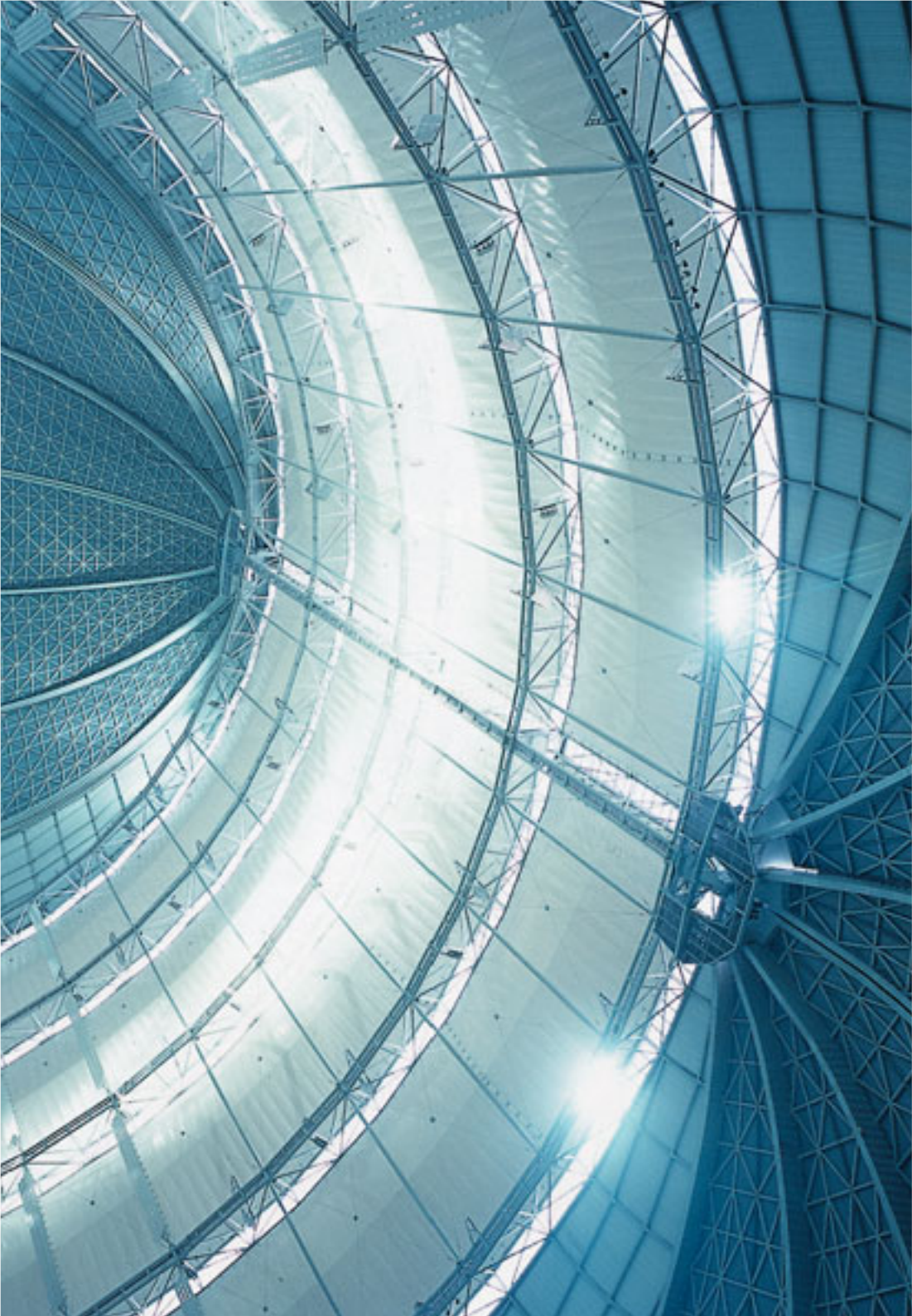
Perimeter seal.

Standard sealants for multi layered double glazing must not be exposed to direct sunlight, because ultraviolet radiation will damage them. The perimeter sealing can be protected by cover plates, strips, silicone tape or a UV-shielding film.

We recommend the use of specially fabricated silicone perimeter sealants, which provide sufficient protection even when exposed to direct irradiation. They are, however, gas-permeable and therefore unsuited for use in gas filled glazing elements.

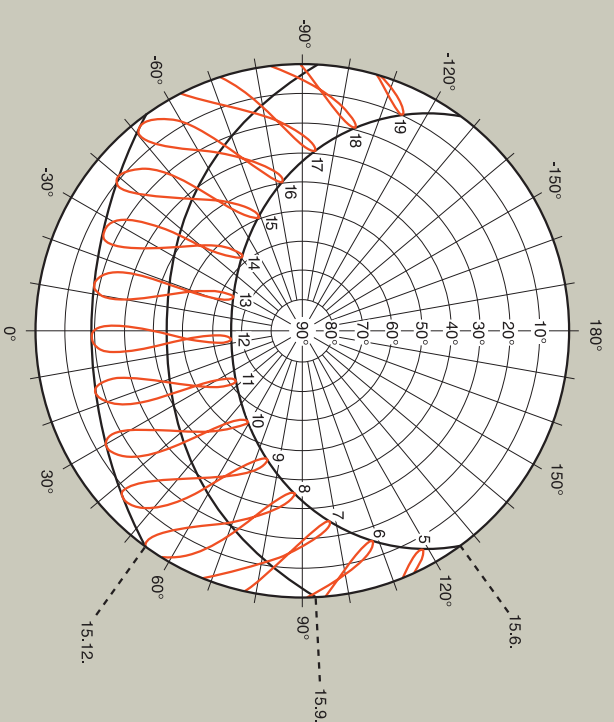
Beading space.

Metal contacts in the beading space (e.g. studs, angle brackets, etc.), as well as contact between the insulated glass panes and the frame construction must be prevented by spacing blocks. The blocks must not hinder condensation discharge or vapour pressure compensation.



Heliotropic Diagram

Siteco's Traunreut site:
latitude 47.9 °, longitude 12.6 °



Planning.

Top quality lighting solutions cannot be purchased "off the rack". Every building and every room has different optical properties and different lighting requirements – particularly in terms of natural light. This is why we develop an individual, customised Siteco daylight solution for each site.

For planning purposes, we use results from theoretical calculations, as well as actual measurements. When calculating complex requirements – e.g. when the interior decoration elements and surface texture have to be taken into consideration – we utilise lighting simulations in addition to computer aided design.



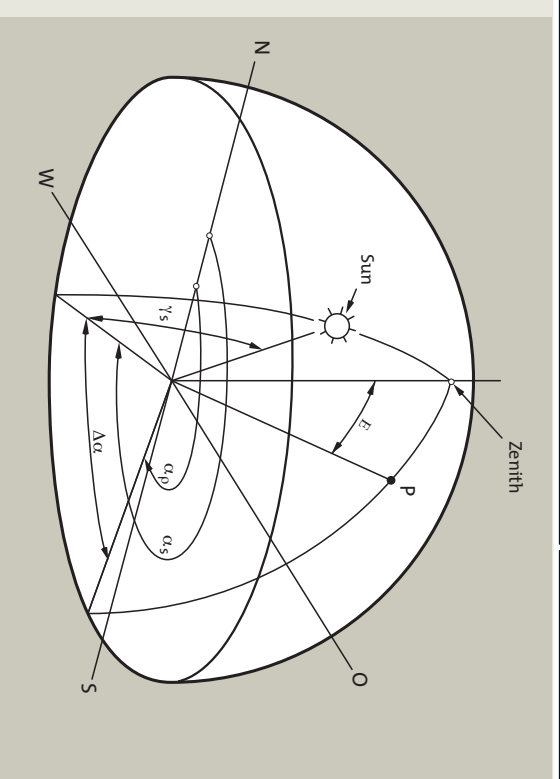
Our guarantee.

Siteco Daylight Systems are top notch products which undergo stringent quality control checks.

We believe in the quality of our products, and guarantee their functionality and durability.

The technical data quoted in this brochure were gathered by independent testing authorities in accordance with the respective applicable norms. The test results are documented in test certificates, which are available upon request from Siteco. The measured values may be subject to variance for different pane formats and material combinations, different installation techniques and external influences.

Siteco Daylight Systems: quality is our goal.

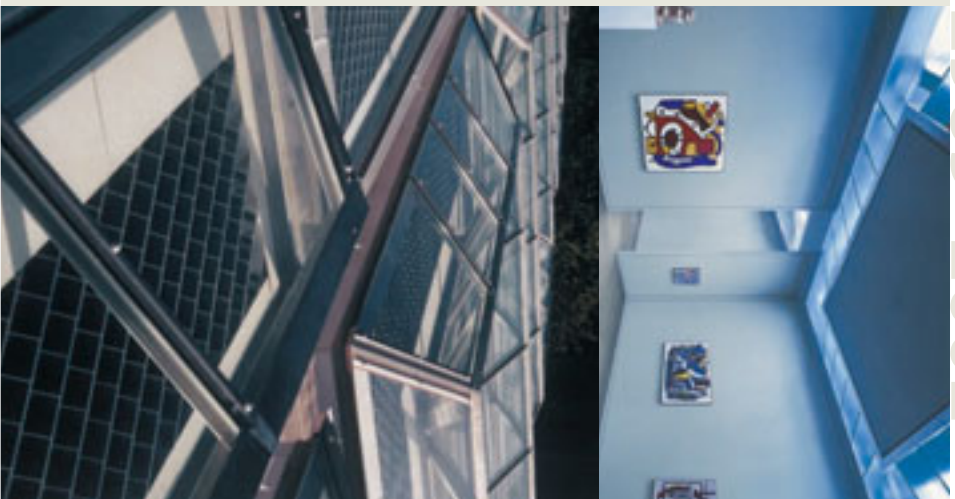


When designing a Daylight System, you have to bear in mind natural and architectural aspects and meet technical requirements relating to light, materials and structures.

Consultants use models to demonstrate and visualise the interplay of all interior and lighting components. "Artificial skies" act as a light source for this process, simulating changes in the amount of daylight and the position of the sun. This allows innumerable luminance variations to be tested in quick succession.

Comprehensive calculations, precise measurements and exhaustive simulations guarantee the best possible planning – and the perfect lighting solution for each individual client.

Siteco Daylight Systems: to each his own.



Bern Art Museum
1983
500 m² of aluminium sun-protection louvers and deflective reflectors
Architects: Atelier 5, Bern
Lighting consultants: Bartenbach Lichtlabor, Innsbruck



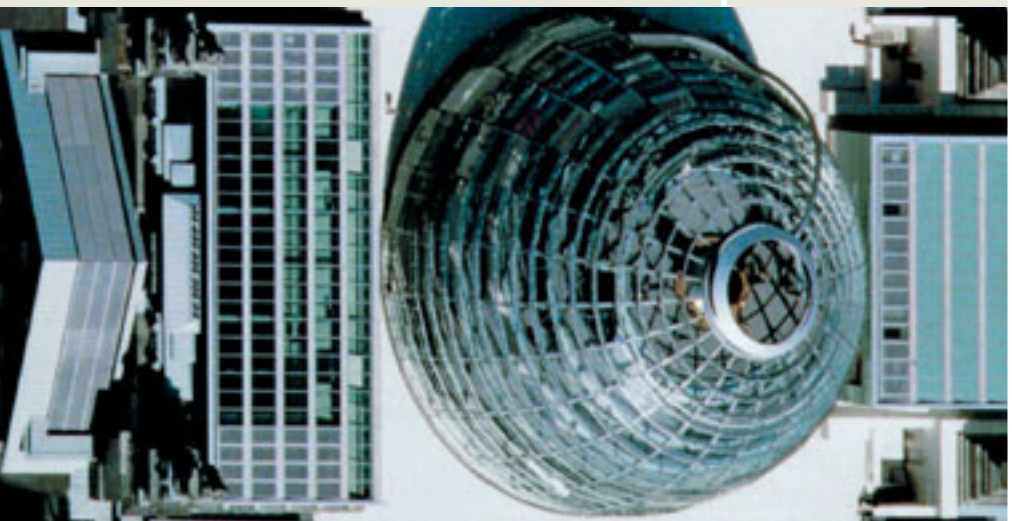
Wolfsburg Art Museum
1992
1500 m² of micro louvers in pyramid roofing
Architects: Schwieger & Partner, Hamburg
Lighting consultants: Bartenbach Lichtlabor, Innsbruck



Procter & Gamble, Schwalbach
2000
600 m² of micro louvers
Architects: Aukett & Heese, Berlin
Lighting consultants: von Kardorff, Berlin



Stuttgart Airport
1989
600 m² of prism systems
Architects: Von Gerkan, Marg & Partner, Hamburg
Lighting consultants: Bartenbach Lichtlabor, Innsbruck



Reichstag, Berlin
1997
600 m² of micro louvers
Architects: Lord N. Foster & Partners, London
Lighting consultants: C. Engel, Washington, D.C.



Korean National Museum, Seoul
2002
920 m² static prism systems
Architects: Junglim Architecture, Seoul
Lighting consultants: Bartenbach Lichtlabor, Innsbruck