Commercial skylights
2008 edition

Bringing light to life
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*Photo depicts installation with eighteen VSE skylights with SageGlass®.*
VELUX®

Technological developments have revolutionized the window and skylight industry. Since 1941, VELUX has lead the skylight industry throughout the world and is now the world’s largest manufacturer of skylights. Today, with offices in more than 40 countries, we manufacture and sell energy efficient, durable skylights on all five continents from the United States to China and from Norway to Australia!

Quality

After more then 60 years, VELUX continues to be a leader in the roof window and skylight industry.

• VELUX is the preferred brand for American contractors according to every national survey of building industry professionals.
• VELUX holds more than 300 patents in roof window and skylight design.

Leakproof

VELUX has been engineering and manufacturing skylights to withstand the harshest of elements. Each product is subjected to rigorous air, water, and pressure testing before ever being brought to market. Each skylight is then combined with a custom tailored flashing system. That’s why VELUX is the world leader and the preferred skylight brand worldwide.

Flexible and Reliable

VELUX offers the full range of commercial skylights that you’d expect from the #1 brand of skylights in the world.

• Acrylic and glass skylights
• Skylights for flat roof and sloped roof applications
• Numerous standard sizes with short lead times
• Custom sizes available

With modern improvements in skylight energy efficiency, this building was built with more than 240 skylights in the roof and still met the minimum building code requirements for energy efficiency. Case study at: www.veluxusa.com/commercialcasestudy
VELUX skylights affect the environment in the most positive ways

Daylighting through the roofs of commercial buildings provides many benefits that no other light source can offer. With VELUX commercial skylights you can provide optimal light distribution at the building’s core while minimizing glare and enhancing your architectural designs.

Leed rating
The US Green Building Council, in an effort to promote buildings that are environmentally responsible, profitable and healthy places to live and work, has created the LEED rating system. LEED is one of the tools used to develop design guidelines, policy positions and industry standards for the promotion of sustainable designs for commercial buildings. Because they provide natural lighting, skylights are by nature a good element for a sustainable design. VELUX skylights can contribute to LEED credits in any commercial design. VELUX skylights, most of which meet the ENERGY STAR® guidelines nationwide, can be a great source of LEED credit in the following categories:
• Energy and atmosphere --- optimization of energy performance (ENERGY STAR).
• Materials and resources.
• Indoor environmental quality --- controllability of systems (electric skylights and blinds).
• Indoor environmental quality --- daylight and views (75% of daylit space requirement and outdoor view from 90% of the space).

Achieve energy savings with skylights
Artificial lighting is one of the largest sources of energy consumption in commercial and industrial applications. Skylights have been shown to significantly reduce these energy costs through the benefits of daylighting.

Environmental certification: ISO 14001
This is an environmental management model written to provide organizations with the elements of an effective environmental management system. As a result, VELUX maintains and supports each of the following:
• Environmental policy
• Planning and implementation
• Environmental goals
• Management review and corrective action
• Continual environmental improvement
**Consumer health**

The need for the body to absorb acceptable amounts of light throughout a lifespan is well documented. Skylights help to balance light, and the benefits received from them may have a dramatic benefit to consumers. As a result, people living in well-lit homes are healthier, creating less of a burden on our medical resources. This, in turn, reduces the burden on our environment and is especially beneficial for our children and seniors.

Studies suggest:

- Falls among the elderly are less likely to happen in well-lit areas. 90% of hip fractures are the result of falling. Falls are the leading cause of accidental death in the elderly population.
- Proper lighting helps to keep our circadian rhythm (internal clock) on schedule. Sleep disorders caused by circadian rhythm imbalance can cause medical problems.
- Students in well-lit classrooms show signs of growing faster, better attendance, and healthier teeth. These benefits transfer to the home as well.
- Students also do better in school when learning in a well-lit environment; 26% better in reading, one study confirms.
This type of daylighting is common in buildings with large open spaces and where uniform light distribution is key. VELUX commercial skylights are the ideal products to be installed on flat roofs in commercial and industrial buildings.

### Dura-lite series

- Curb mounted or self flashed installation
- Welded aluminum insulated polyisocyanurate curbs.
- Weep holes and polyurethane thermal break options.
- Custom colors available.
- Custom sizes available up to 8.5’ x 12.5’.
- Curb sizes between 4” and 15” available on CAP models.
- Acrylic glazings available in clear over clear, clear over white, white over clear, or bronze over clear.
- Polycarbonate glazing available.
- Vented curb – When ventilation without opening is required, louvered aluminum vents can be installed in the insulated curb wall.
- Termination trim available on CAP models.
Flat roof patterned toplighting

Metro-lite fixed series
- Heavy-duty welded aluminum frame.
- Weathertight double dome seal.
- Fast and easy installation.
- Bronze finished frame and thermal break standard.
- Acrylic glazings available in clear over clear, clear over white, white over clear, or bronze over clear.
- Custom sizes available up to 8.5’ x 12.5’.
- No designated top, bottom or sides so you can install it in whatever direction you want.
- Polycarbonate glazing available

Size code
- 2525
- 2533
- 2537
- 2549
- 3333
- 3725
- 3737
- 3749
- 4933
- 4949

Outside curb
- 25½ x 25½
- 25½ x 33½
- 25½ x 37½
- 25½ x 49½
- 33½ x 33½
- 37½ x 25½
- 37½ x 37½
- 37½ x 49½
- 49½ x 33½
- 49½ x 49½

Metro-lite venting series
- Heavy-duty welded aluminum hatch.
- Chains hold the dome open for better access as well as to prevent dome from hitting the roof.
- Weathertight double dome seal.
- Fast and easy installation.
- Egress hardware allows easy access to roof.
- Acrylic glazings available in clear over clear, clear over white, white over clear, or bronze over clear.

Size code
- 2549
- 3333
- 3725
- 4949

Outside curb
- 25½ x 49½
- 33½ x 33½
- 37½ x 25½
- 49½ x 49½
In many commercial buildings, drop ceilings are used to save space for services (e.g., cables, recessed lighting and piping) to reduce the cost of heating in a room, to improve the acoustics, or to produce more aesthetically pleasing proportions. VELUX understands this and has designed a skylight that will work with suspended ceilings to bring daylight into the room.

**VELUX COMMERCIAL SUN TUNNEL™ skylight**

- Tunnel has a 22” diameter.
- Curb mount installation.
- Highly reflective tunnel.
- 36” rigid top elbow, 30° offset.
- Flexible bottom elbow, 24” fully extended (doubles as expansion joint).
- 9” tall round-to-square adapter box.
- Prismatic diffuser.
- Fast adjustment of tunnel length thanks to 60” telescopic design.
- No vertical seam assembly required.
- Compatible with hard ceiling applications.
- Modular system can be purchased in three separate components (see chart below).

<table>
<thead>
<tr>
<th>Model TCR combinations</th>
<th>Run Length</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>3 ft</td>
<td>P1 + P2</td>
</tr>
<tr>
<td>P2</td>
<td>4 - 5 ft</td>
<td>P1 + P2 + Coupler</td>
</tr>
<tr>
<td>P3</td>
<td>6 - 8 ft</td>
<td>P1 + P2 + P3</td>
</tr>
<tr>
<td>P1</td>
<td>9 ft</td>
<td>P1 + P2 + P3 + Coupler</td>
</tr>
<tr>
<td>(2) P3</td>
<td>10 - 13 ft</td>
<td>P1 + P2 + (2)P3</td>
</tr>
<tr>
<td>P1</td>
<td>14 ft</td>
<td>P1 + P2 + (2)P3 + Coupler</td>
</tr>
<tr>
<td>(3) P3</td>
<td>15 - 18 ft</td>
<td>P1 + P2 + (3)P3</td>
</tr>
<tr>
<td>P1</td>
<td>19 ft</td>
<td>P1 + P2 + (3)P3 + Coupler</td>
</tr>
<tr>
<td>(2) Coupler</td>
<td>20 ft</td>
<td>P1 + P2 + (3)P3 + (2)Coupler</td>
</tr>
</tbody>
</table>
VELUX structural skylight roof monitors are high-end architectural skylights for roof openings up to 12’ in span and 22’ in length. These monitors have a short installation time (estimate 5 hours for 8’ x 22’ skylight). The modular components allow for easy assembly. There is limited on-site glazing required (only gable ends). The roofer provides the base curb. Using this monitor does allow the use of VELUX blinds and controls. Ventilation options are available for this type of monitor.

Easy installation
- Component system provides easy rooftop placement.
- Pre-assembled A-frames set on curb.
- Pre-glazed VELUX FCM skylights set on A-frames.
- Gable-end glazing.
- Exterior electric lightblock awnings available.
- Cellular blinds available.

<table>
<thead>
<tr>
<th>Structural skylight combinations</th>
<th>Skylight lens</th>
<th>Pitch</th>
<th>Span</th>
</tr>
</thead>
<tbody>
<tr>
<td>4646 (Models FCM, VCM, or VCE)</td>
<td>12/12</td>
<td>6' 4/&quot;</td>
<td></td>
</tr>
<tr>
<td>4646 (Models FCM, VCM, or VCE)</td>
<td>8/12</td>
<td>7' 5/&quot;</td>
<td></td>
</tr>
<tr>
<td>4646 (Models FCM, VCM, or VCE)</td>
<td>7/12</td>
<td>7' 9/&quot;</td>
<td></td>
</tr>
<tr>
<td>4646 (Models FCM, VCM, or VCE)</td>
<td>6/12</td>
<td>8'</td>
<td></td>
</tr>
<tr>
<td>4646 (Models FCM, VCM, or VCE)</td>
<td>4/12</td>
<td>8' 6/&quot;</td>
<td></td>
</tr>
<tr>
<td>4667 (Model FCM)</td>
<td>12/12</td>
<td>8' 9/&quot;</td>
<td></td>
</tr>
<tr>
<td>4667 (Model FCM)</td>
<td>8/12</td>
<td>10' 4/&quot;</td>
<td></td>
</tr>
<tr>
<td>4667 (Model FCM)</td>
<td>7/12</td>
<td>10' 9/&quot;</td>
<td></td>
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<td>4667 (Model FCM)</td>
<td>6/12</td>
<td>11' 1/&quot;</td>
<td></td>
</tr>
<tr>
<td>4667 (Model FCM)</td>
<td>4/12</td>
<td>11' 9/&quot;</td>
<td></td>
</tr>
</tbody>
</table>
Photos depict installation with ten FCM 4646 skylights.

Curb mounted fixed glass skylight
- Designed for curb mounted installations.
- Can be installed completely flat.
- Meets ENERGY STAR® approval guidelines.
- Choice of tempered, laminated, impact, Miami-Dade, SageGlass®, snow load and white laminated glass.
- FHG cellular shade and ZST control rod available.
- Exterior lightblock awnings available.
- Custom sizes are available.

<table>
<thead>
<tr>
<th>Size code</th>
<th>1430</th>
<th>1446</th>
<th>2222</th>
<th>2230</th>
<th>2234</th>
<th>2246</th>
<th>2270</th>
<th>3030</th>
<th>3046</th>
<th>3434</th>
<th>4646</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside curb in.</td>
<td>14⅛ x 30⅛</td>
<td>14⅛ x 46⅛</td>
<td>22⅛ x 22⅛</td>
<td>22⅛ x 30⅛</td>
<td>22⅛ x 34⅛</td>
<td>22⅛ x 46⅛</td>
<td>22⅛ x 70⅛</td>
<td>30⅛ x 30⅛</td>
<td>30⅛ x 46⅛</td>
<td>34⅛ x 34⅛</td>
<td>46⅛ x 46⅛</td>
</tr>
<tr>
<td>Outside curb in.</td>
<td>17⅛ x 33⅛</td>
<td>17⅛ x 49⅛</td>
<td>25⅛ x 25⅛</td>
<td>25⅛ x 33⅛</td>
<td>25⅛ x 37⅛</td>
<td>25⅛ x 49⅛</td>
<td>25⅛ x 73⅛</td>
<td>33⅛ x 33⅛</td>
<td>33⅛ x 49⅛</td>
<td>37⅛ x 37⅛</td>
<td>49⅛ x 49⅛</td>
</tr>
<tr>
<td>Max. skylight in.</td>
<td>18⅛ x 34⅛</td>
<td>18⅛ x 50⅛</td>
<td>26⅛ x 26⅛</td>
<td>26⅛ x 34⅛</td>
<td>26⅛ x 38⅛</td>
<td>26⅛ x 50⅛</td>
<td>26⅛ x 74⅛</td>
<td>34⅛ x 34⅛</td>
<td>34⅛ x 50⅛</td>
<td>38⅛ x 38⅛</td>
<td>50⅛ x 50⅛</td>
</tr>
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</table>
Commercial skylights with electronically tintable glass

The revolutionary new technology called electrochromic glass in electronically tintable skylights allows control of the amount of light and heat that enters a space, developed after more than 15 years of thorough research and development in glass technology by SAGE Electrochromics, Inc. SageGlass® is the only electrochromic glass to have conclusively passed extensive testing by the US Government, some of the world’s largest glass companies and market leading fenestration companies — including VELUX.

The benefits of solar control though SageGlass® include:

- Light control at the touch of a button without losing a view to the sky, even in the darkened state.
- Energy savings and elimination of uncomfortable heat gain, even on the brightest and hottest days.
- Maximum protection from fading and glare at task level.
- An automatic timer mode can be set to darken the glass at a specified time each day.

How SageGlass® glazing works

SageGlass glazing is produced by coating glass at the factory with multiple layers of thin ceramic films that in total are less than 1/50th the thickness of a human hair. Applying a low DC voltage causes the active electrochromic layers to darken. Reversing the voltage polarity causes the layers to lighten. It takes less energy to operate a house full of SageGlass® products than it does to run a single 40-watt incandescent light bulb.

Availability

- Deck mounted fixed skylight (FS) – Sizes 106, 306 and 606.
- Curb mounted electric venting skylight (VCE) – Sizes 2222 and 2246.
- Curb mounted fixed skylight (FCM) – Sizes 2222 and 2246.

Photo depicts installation with eighteen VSE skylights with SageGlass®.
The VELUX commercial curb system provides a practical and affordable solution for roof monitor applications. The curb is pre-manufactured and pre-assembled by a VELUX approved vendor, so you can be sure that it is a premium quality product. It uses pre-glazed VELUX FCM skylights, so on-site glazing is unnecessary.

Due to its modular construction, this system has no size limitations, and can be assembled in only a few hours. Single and double-sloped applications are possible. A select range of VELUX blinds and controls are available, and white laminated glass is an option for those applications where privacy is an issue. VELUX commercial curb systems can also be painted, lined and insulated.
The framed-in concept involves a customized standard approach, using standard products in a custom configuration to achieve a structural glazing look—with standard skylight pricing. It is constructed as deck mounted skylights are installed on top of a framed-in structure that is built on-site. There are no size limitations with this system, and using VELUX combi-flashing, skylights can be installed as close as 2½ inches apart from each other. Light controls, ventilation and electric systems are available. If privacy is needed, white laminated glass is also available.
Daylighting through sloped roofs

Toplighting through the sloped roof is ideal for achieving optimal light distribution throughout a space, for reducing or eliminating glare issues, and for maximizing glazing surface efficiency. Regardless of application or roofing material, VELUX has a product that will fulfill virtually any need. From our model VSE electric venting skylight to our roof window line designed for within-reach applications to our full line of blinds and controls, VELUX has the most versatile and diversified line of products in the skylight industry. Please refer to the residential product catalog for details on these skylights and roof windows.

Additional resources
In addition to our residential product catalog, you may find the following resources to be helpful. These and other resources are available on our web site, www.veluxusa.com. You can also call customer service at 1-888-878-3589 for help.

Find a local dealer to purchase VELUX products.
www.veluxusa.com/dealer

Find an installer near you.
www.veluxusa.com/installer

Download product information from our literature library.
www.veluxusa.com/literature

VELUX America Inc.
Sales and Marketing Headquarters
Fort Mill, South Carolina
www.veluxusa.com/commercialcasestudy