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# An installation case

**228 VELUX Modular Skylights made wind and weather resistant in only seven days**

*Bringing light to life™*

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## Modularity means speed

Siemens quickly made the building watertight

In November 2012, the construction of Siemens' new headquarters in Ballerup, west of Copenhagen, turned an important corner. With the help of a large mobile crane, the 228 modules were lifted up onto the roof and mounted in six ridgetight combinations, each measuring 17 metres. The entire installation took just seven days, after which the interior of the building was protected from the elements.



VELUX Modular Skylights

Siemens

Ballerup, Denmark

Modular system  
A modular system





# Logical and easy to work with

All elements are clearly marked with numbers and letters

When a large consignment of building elements arrives on site, it can become confusing. This is why VELUX Modular Skylights are marked with numbers and letters that clearly show the order in which the various components should be installed.

Master carpenter John Wulff of John Wulff Tømrerfirmaet A/S (John Wulff, Carpenters A/S) was respon-

sible for the installation and uses the term "idiot-proof" to describe the way everything is packed.

"It's all packed as A, B and C and 1, 2 and 3. You open the installation manual and off you go. You just can't go wrong."



Everything is packed in the right order at the factory. This makes handling easier when it reaches the site.



Master carpenter John Wulff receives the modular skylights as an assembly set, clearly marked with letters and numbers.



The installation should, of course, start with box "A".

# Bad weather is no problem

With prefabricated modules installers can carry on whatever the weather

Wet weather is never great for a construction site. It can destroy building materials and makes it difficult to work with electrical equipment. And a wet and cold worker seldom works quickly.

The rain also tried to interfere with the installation of the many VELUX Modular Skylights in Ballerup, but these problems were easily overcome, says master carpenter Wulff:

"The modular skylight itself is made from a composite material, so it doesn't matter if it gets a bit wet. If it had been a wooden window we'd have had to be a bit more careful. But VELUX minimise the number of screws we need to use, so installation is really easy. It's just a question of getting on with it."



The modular skylights are lifted into place in the self-supporting ridgetlights by crane. The modules rest on steel profiles on either side.



The modular skylights are fastened to the steel profiles with patented clamps.



# Installation on track

A modular system, a specially developed rolling platform and a fast crane made all the difference

It's important that the roof is closed up as quickly as possible to protect the building from the elements and the builders could get on with the interior. In Ballerup, it took five men to install the modular skylights: a crane driver, a rigger to unpack and prepare and three for the actual installation.

"We got extra hooks so we could lift twice as quickly and extra clamps so the rigger could go on ahead and prepare the clamps for the others. That meant that time spent waiting for the crane was cut down to a minimum," says Wulff, adding:

"It took us seven days to install all the modules, but we could easily have done it quicker. On the final day we fitted 76 modules and it just went faster and faster. People just went for it because it was fun. You really felt like you were achieving something."

Wulff and his team work in the module openings using a rolling platform developed by the KPC construction company. The rolling platform and the large mobile crane that can reach all the way round the 18 x 40 metre installation contributed to the installation being completed in record time.



The modular skylights are assembled 25 metres above the ground using a rolling platform. According to John Wulff, it takes on average 7-8 minutes to install each modular skylight.



“ It probably takes about 2-3 times longer with a traditional installation. And then there’s all the other roofing work as well.

John Wulff,  
John Wulff Tømrerfirmaet A/S

## Simple installation

Despite bad weather VELUX Modular Skylights are easy to install

Conventional modular skylights can be difficult to manage for installers because they are largely dependent on the construction of the building and the engineer’s experience with ridgelights. For Wulff, there’s no contest when it comes to the new VELUX modular skylights.

“There are always quick-fix solutions with the old-fashioned installations. There’s always something unpredictable, unless the engineer has worked with ridgelights before, which he usually hasn’t. This is a finished concept. And quality control is always excellent because the VELUX Group ensure that.”

Wulff emphasises that as with every other new system, you have to get used to it, but the general impression is definitely positive.

“The finished goods are hoisted up by the crane and the building is covered over by the time we leave. It doesn’t need painting or anything. It’s all done and it’s brilliant.”



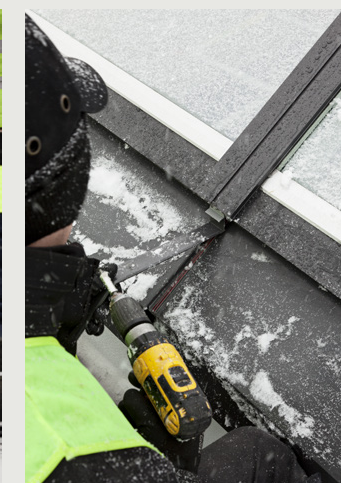
When winter weather arrives, it’s doubly important to complete the roofing work as quickly as possible. Constituent elements of the enterprise can be completed later on, because the six ridgelights are easy to access from the roof.



The modules are connected to the building’s electrical supply.



Once the insulation is cut to shape, the flashing is put in place.



A specially made aluminium strip fastens the flashing at the top.

Master carpenter John Wulff and his son Jørgen were responsible for installing the 228 VELUX modular skylights in Ballerup.





## Seven days after the first skylight module was mounted the interior work begins

Fast installation minimizes the risk of delay due to bad weather. While the last elements are finished on the outside the workers inside have dropped their jackets and started working on the interior of the building.