HSHansen and Sustainability

There are many good reasons to choose HS**Hansen** as contractor, if you are applying for a sustainability certification to according one of the sustainability certifications used in Denmark.
We have listed the five main reasons to the right – one for each main quality in the DK-DGNB-certification.

To achieve a high rating, sustainability has to be taken into consideration from the very first sketches and thoughts. To make the best choices it is necessary to have access to validated knowledge of the different products. In that case, we have made an overview of the contribution from HS**Hansen** systems to achieve points for the certification.
Also, it is always possible to have a talk to one of our salespeople to clarify how HS**Hansen** contributes to a high rating according to the sustainability certifications.

On the following pages is a general overview of how HS**Hansen** systems contributes to a DK-DGNB rating, which presently is the "official" sustainability certification scheme in Denmark. If a similar overview is needed with respect to BREEAM or LEED, we can assess the contribution for this as well.

HS**Hansen** environmentally declared products contributes with points for 21 of the 40 criteria concerning DK-DGNB.

Why choose HS**Hansen**	
#1 Process Quality	We develop, design, manufacture and mount our systems ourselves. This means we are hands on the product all the way. If you choose HS**Hansen** UnitAl you will have prefabricated elements, which reduces the needed time for construction on site and increases the level of tightness.
#2 Environmental Quality	Around 99% of a window or facade from HS**Hansen** is made of renewable material. Of this up to 80% is glass.
#3 Economic Quality	When we develop, design and mount our systems long lifetime and robustness is our major concern.
#4 Sociocultural / Functional Quality	Our systems are thermally broken which in combination with a good spacer in the glazing gives us high internal surface temperatures. Thus, low risk of condensation and mold growth is achieved.
#5 Technical Quality	When working on a project we always calculated the U-values for the entire façade based on the specific chosen materials.

HSHansen a/s
Lem, Aarhus, Esbjerg
København, Oslo
www.hsh.dk
Tlf: +45 9675 1100

Revision 02.05.2021

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Below you will find an overview of the criteria within the DK-DGNB-certification with relevance for systems of HS**Hansen**. For each of the listed criterium there is a short description of how our systems may contribute to achieving points. In projects aiming for a certification this overview can be made specifically according to the solutions in the project.

Quality	Criterium	Subcategory	Contribution from HSHansen
Process quality	PRO1.3	Design concept	HS**Hansen** have EPD's for our systems. These can be used for the early project screening to assess the environmental impact of the project.
	PRO1.5	Documentation of facility management	When handing over a project HS**Hansen** prepares a report of quality assurance during construction and a handbook for operation and maintenance as well as all drawing of our facades are prepared as built.
	PRO2.2	Construction quality assurance	All our systems are CE-marked in accordance with the respective product standards. Our declarations of performance are available on our website.
Environmental quality	ENV1.1	Life cycle impact assessment	The life cycle assessment of the building used for the DK-DGNB-certification is made in the tool LCA-Byg. When designing a project, we can make accurate BOMs for all concluded material. This input can be used in LCA-Byg for making the LCA of the building. Further, our EPDs can be used to include the exact impact of our systems in the calculation.
	ENV1.2	Local environmental impact	HS**Hansen** complies with the current regulation regarding chemicals. Concerning the criterium within the DK-DGNB-certification we have made a matrix, which illustrates the quality levels of the various components in our systems. The matrix is available on our website.
	ENV1.3	Responsible procurement	At the moment the criterium is exclusively related to procurement of timber and natural stones. The criterium is therefore always fulfilled for HS**Hansen** systems as we do not used timber in our façade constructions.
	ENV2.1	Life cycle assessment – primary energy	The life cycle assessment is made over the entire life cycle from extracting raw materials, production of construction products, use of the building, demolition and recycling of materials. The contribution from HS**Hansen** systems can be found in our EPDs which are available on our website.
Economical quality	ECO1.1	Life cycle cost	Life cycle cost are calculated as a percentage of the construction costs. The costs are calculated over an estimated lifetime of the building of 50 years. Systems from HS**Hansen** have an expected lifetime of minimum 50 years.

	ECO2.2	Commercial viability	We aim to deliver unimpaired constructions of high quality. We manufacture as much as possible of the facades in our production facility to increase the level of tightness and quality. Durability and lifetimes are closely connected to the correct choice of material from the beginning and correct maintenance during use. We use *Byggeriet Evalueringscenter* as evaluator for our projects. You can find our current rating on our website.
Sociocultural and functional quality	SOC1.1	Thermal comfort	HS**Hansen** can supply relevant technical data used for simulation of the thermal indoor climate. This accounts for glazing, sun shading and profiles.
	SOC1.2	Indoor air quality (knockout criterium)	Our profiles are surface treated to ensure a long lifetime. The surface treatment takes place before machining and production and mounting. This gives a long period between surface treatment and entry into service of the building where degasification of potential VOCs may happen. Likewise, HS**Hansen** systems do not consist of materials that naturally contain formaldehyde. Thus, this knockout criterium is easily complied by our systems.
	SOC1.4	Visual comfort	HS**Hansen** Millennium® is developed with slim profiles which ensures a high level of daylight in the room. For simulation of the daylight factor and visual comfort we can contribute with relevant technical data for the glazing.
	SOC1.5	Users' options for managing the indoor climate	HS**Hansen** projects are always carried out project-specifically, this entails sun and glare protection can be integrated into the facade design by request.
	SOC1.7	Safety and security	HS**Hansen** Millennium® is tested and approved according to EN 1627 Class RC2 regarding burglar resistance.
	SOC2.1	Accessibility (Knockout criterium)	Doors from HS**Hansen** fulfils the Danish requirement of a maximum threshold of 25mm for doorsteps and a minimum free opening of 0,77m.
	SOC2.2	Public access	Doors from HS**Hansen** fulfils the Danish requirement of a maximum threshold of 25mm for doorsteps and a minimum free opening of 0,77m.

Technical quality	TEC1.1	Fire safety	HS**Hansen** UnitAl is tested and approved EI60 (i<--> u), which gives us the only façade system in the world to be able to withstand fire from both inside and outside for minimum 60 minutes. Apart from that we can make CE-marked smoke ventilation within the HS**Hansen** Millennium® system.
	TEC1.2	Sound insulation	HS**Hansen** have made a large number of external measurements of sound insulations for our systems. For glazing outside our tested range, we refer to Annex B of EN 14351-1.
	TEC1.3	Building envelope quality	For all projects we calculate the Ucw-values of our facades/Uw value of our windows specifically. We always ensure that requirements concerning linear thermal loss is fulfil both in our systems and when mounting them. We can on request document this by thermal simulation. All our systems are tested in terms of air permeability. HS**Hansen** Millennium® windows fulfil Class 4 and HS**Hansen** Fasad® and HS**Hansen** UnitAl fulfil Class E1200. The surface temperature of the window/façade is mainly determined by the choice of glazing and spacer. The lowest surface temperature on HS**Hansen** systems is 12°C.
	TEC1.6	Deconstruction and disassembly	A façade or window from HS**Hansen** can be dismantled and disassembled in the different components in order to reuse the components individually. All our systems consist of min. 99% of reusable material.
	TEC1.8	Documentation of environmental product declarations	At HS**Hansen**, we have prepared environmental product declarations on our most used facade systems: - HS**Hansen** Millennium - HS**Hansen** UnitAl - HS**Hansen** Fasad