



Building & Industry

NOVENCOR

SCHAKO Group



Energy efficient ZerAx® fans
Contribute to DGNB certification

How NOVENCO contributes to DGNB certification

Clear documentation from Rambøll shows how NOVENCO® fans support DGNB-certified design. The documentation is based on the Danish DGNB standards from 2016.

Green impact

In collaboration with leading Danish engineering consultancy Rambøll, we have documented how NOVENCO's products contribute to the DGNB certification of office and residential buildings.

ZerAx® axial fans have the strongest effect on environmental, economic and technical criteria. Their impact on process criteria is limited, and they do not influence social criteria, which are mainly determined by building design and construction.

The table on the next page lists the DGNB criteria in categories and shows the total possible points per category, as well as the points where ZerAx fans can make an impact for each building type. Overall, NOVENCO's products can influence up to 39.1% of the total certification.

Energy in focus

ZerAx fans have a positive impact on building energy consumption. The environmentally responsible EC+ concept, developed with Danfoss, responds to the growing demand for energy efficiency.

With overall efficiencies of up to 85%, the EC+ solution is one of the most efficient and cost-effective on the market. Designed to optimize HVAC systems, it reduces energy use in both new and existing installations.

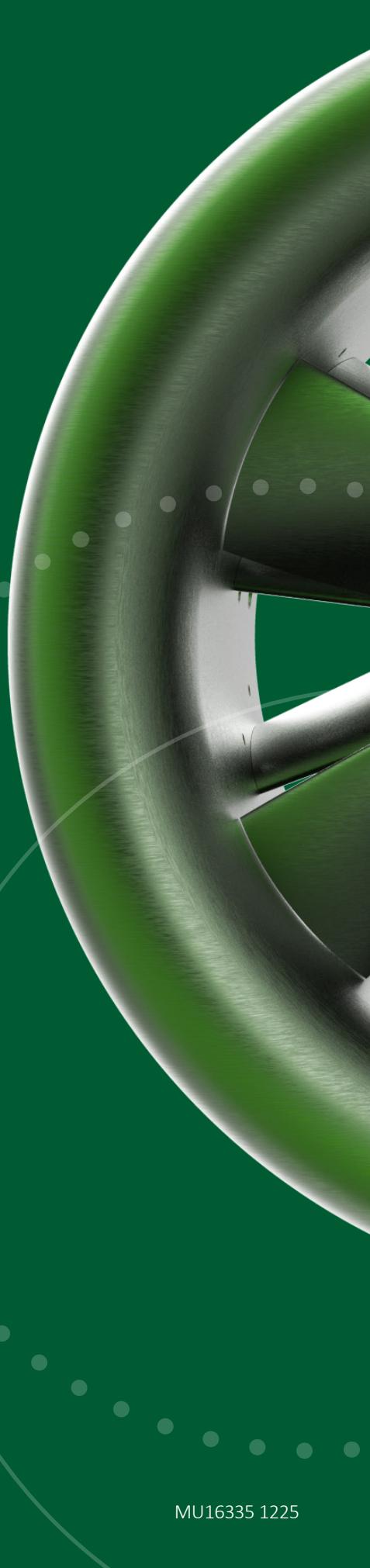
At the same time, CO₂ emissions and environmental impact are significantly lowered. All these benefits make EC+ solutions a strong choice for maximizing energy efficiency in ventilation systems - for the benefit of both operators and the environment.

Credit overview

The table below shows the DGNB credits in five categories where NOVENCO® ZerAx® fans can help earn credits.

NOVENCO ZerAx fans can have positive impact on all the criteria listed in the table below. They may account for up to 39.1 % of DGNB certification. It is not NOVENCO's products alone that ensure the 39.1% of the percentage points, but the percentages describe the criteria by which NOVENCO's products can contribute positively to the point allocation in a particular project.

DGNB criteria	Description
Environment	
ENV 1.1 Building Life Cycle Assessment	NOVENCO's ZerAx® fans contribute to credits by improving building energy performance. The EC+ concept achieves up to 85% efficiency, optimizing systems, reducing energy use, CO ₂ emissions, and environmental impact, supporting both operators and the environment
Economy	
ECO 1.1 Life Cycle Cost	This criterion ensures life cycle costs are calculated during early design and for the final building. NOVENCO's documentation supports these calculations. Using the Smart Client Application, AirBox, designers can simulate costs and technical measures for specific fan solutions.
ECO 2.1 Flexibility and Adaptability	This criterion ensures technical installations can adapt to changes in room functions or distribution systems. Details on modular or adjustable components and disassembly of NOVENCO's fans are provided in the installation and maintenance guide.
Social costs	
SOC 1.1 Thermal Comfort	This criterion addresses thermal comfort through building simulations. NOVENCO's documentation supports these simulations but does not verify thermal conditions alone. The fans circulate air, with cooling achieved via indoor air recirculation or fresh air introduction.
SOC 1.2 Indoor Air Quality	This criterion evaluates the building's ventilation rate. NOVENCO's documentation supports this assessment but does not provide the rate itself. The fans cover a wide range of applications, and performance data can be found in the Technical Datasheet, AMCA report Etc.
SOC 1.3 Acoustic Comfort	NOVENCO's documentation does not provide detailed acoustic measures, but the fans affect sound levels. Noise depends on installation and system setup, and data in the DoP, Technical Datasheet, and AMCA report can be used to assess overall acoustic impact.
Technical	
TEC 1.1 Fire safety	NOVENCO's fans can serve as smoke exhaust fans, operating under normal and high temperatures to protect lives and assets. They are typically used in buildings, stairwells, car parks, tunnels, and similar locations to ensure effective smoke ventilation during fires.
TEC 1.6 Ease of Recovery and Recycling	NOVENCO supports the UN 2030 Agenda through responsible production and waste reduction. ZerAx fans, made of ~95% aluminum and steel, are easy to disassemble, with 90% of materials recycled and 10% landfilled, supported by a recyclability report with Stena Recycling.
TEC 1.7 Immissions Control	The goal is to minimize disruption to the building's surroundings from sound and light, preventing negative impacts on people and nature. NOVENCO's documentation can support noise assessments, and ZerAx fans feature a design to reduce sound, with data provided in the DoP, Technical Datasheet, and AMCA Report.
Protect soil and groundwater	
PRO 1.5 Documentation for Sustainable Management	NOVENCO's fans, made of metal, are durable with a 12-month warranty and 20-year lifetime, requiring minimal maintenance. Installation, operation, and cleaning guidance are provided in the manual.
PRO 2.1 Construction Site / Construction Process	The goal is to minimize environmental impact during construction by informing and training contractors. This includes managing all site waste. NOVENCO's fans are packaged in plastic, which is easy to sort and recycle on-site, with packaging details available in the EPD and via NOVENCO's EPD generator.
PRO 2.2 Quality Assurance of the Construction	NOVENCO's fans come with an Installation and Maintenance guide, plus the Control and Configuration Guides, providing instructions for installation, operation, and maintenance to support efficient use and compliance with requirements.
PRO 2.3 Systematic Quality Assurance	While NOVENCO's documentation does not directly support commissioning, the Installation and Maintenance guide, along with the Control and Configuration Guides, provide instructions for cleaning, maintenance, testing, and operation that can inform the commissioning process.
PRO 2.4 User Communication	NOVENCO's Installation and Maintenance guide, plus the Control and Configuration User Guides, can serve as input for a technical user manual supporting building operation for occupants and facility management.
PRO 2.5 FM-Compliant Planning	NOVENCO's fans, designed for variable speed control, support energy efficiency, with guides and datasheets detailing performance and maintenance. The EC+ concept with a high-efficiency PM motor achieves up to 85% system efficiency.



Are you a DGNB auditor?

If you are a DGNB auditor on a specific project, you can receive Rambøll's detailed report and additional documentation package for NOVENCO's contribution to the building certification.

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