

Technical data

THE PRODUCT – TROLDTEKT VENTILATION

Troldtekt ventilation is a system solution that comprises active and passive Troldtekt ventilation panels which can be combined with most comfort ventilation systems.

Troldtekt active ventilation panels: The active panels are specially produced, permeable cement-bonded wood wool panels which have been tested for air flow. The product comprises wood (spruce), which is shredded into wood wool and

mixed with cement. We use certified FSC® wood, which guarantees that the wood can be traced back to responsible forestry operations. Troldtekt can be surface-treated, but is often used untreated (natural wood and natural grey). Due to the composition of the materials, colour variations may occur. These colour variations are most evident in grey panels, as the grey colour stems solely from the cement.

Factors which may have a bearing on any colour variations include the water/cement ratio, the moisture content of the wood, the speed at which the product has dried, steam curing and curing moisture.

Troldtekt passive ventilation panels: The passive panels are double-layer panels, comprising a layer of Troldtekt with a layer of fully sealed mineral wool, Rockfon, glued to the rear side.

PRODUCT STANDARDS, LABELLING AND CERTIFICATION

MK approval

Troldtekt products are MK-approved and affiliated to the recognised inspection scheme, which ensures that the products live up to the fire class certification. The approval is based on the screws and fittings which are used in connection with fire testing. Therefore, the approval is only valid when Troldtekt screws or fittings are also used.

CE marking

Within the EU, all construction materials are legally required to be CE marked. The CE marking indicates that it is legal to sell the construction product, and that the product complies with the product standard to which the marking refers. Troldtekt products are CE-marked, and together with the marking we state:

Name of manufacturer:
Troldtekt A/S

Certificate number:
0615 - CPD - 804474G

Number of the product standard:
EN 13964

Declaration:
See product data on page 2.

Other approvals

Indoor climate labelling: Troldtekt panels are indoor climate labelled in accordance with Danish Indoor Climate Labelling.

Certified to withstand ball impact: A wide range of structures with Troldtekt acoustic panels have been tested and approved for use as ceiling and wall cladding in sports facilities in accordance with "Prüfung der Ballwurfsicherheit, DIN 18032 Teil 3, Sporthallen für Turnen und Spiele". EN 13964 also includes ball impact resistance certification as a parameter, and here Troldtekt is classified as Class 1A.

Light reflection

Light reflection for different types of Troldtekt panels (measured by DELTA Lys og Optik):

Troldtekt white 101	70.8%
Troldtekt natural wood	55.2%
Troldtekt natural grey	26.3%

USE AND MAINTENANCE

Troldtekt panels usually require no subsequent care. However, we recommend regular cleaning along with other surfaces – and otherwise as required. The panels are easy to clean using a vacuum cleaner with a brush nozzle. If vacuum-cleaning is not sufficient, the panels can be wiped

with a slightly damp cloth. If you want to paint the Troldtekt ceiling, use a long-haired paint roller or a hand sprayer. Water-based paint will not reduce the sound-absorbing properties of the panels.

RECYCLING

All Troldtekt cement-bonded wood wool products can be composted and returned to nature as a soil conditioner. The cement in Troldtekt's acoustic panels boosts oxygen levels during the composting process, while the wood adds organic material to the compost.

Production waste from our factory in Troldhede is delivered to, for example, HedeDanmark a/s, which receives, treats and refines waste products to make soil conditioners.

Like production waste, clean Troldtekt waste from building sites can be safely returned to nature as soil conditioner. HedeDanmark a/s receives clean Troldtekt construction waste at collection points on Zealand, Funen and in Jutland. Troldtekt demolition waste can also be used in the production of new cement, where the wood contributes to the combustion process, while the cement is used as an ingredient in new cement.

Together with Aalborg Portland, local authorities and demolition firms, by 2019 we will be offering a take-back scheme for Troldtekt demolition waste. Until then, Troldtekt waste can be burned in recycling centres' incineration plants.

Download recycling instructions from www.troldtekt.com

TOLERANCES

It is important to note that Troldtekt is a natural material, and the very nature of the material composition – wood wool and cement – will result in minor variations in the panels. Panel dimensions and weights

remain within the stated tolerances at $23 \pm 2^\circ\text{C}$ and $50 \pm 5\%$ relative humidity. However, inappropriate storage and lack of acclimatisation can affect the dimensions and weight of the panels. It is therefore

important that you observe the installation, storage and acclimatisation instructions carefully.

PRODUCT DATA

The table below indicates the tolerances which we declare in accordance with EN 13964, which is the standard for suspended ceilings.

Properties:

DIMENSIONS	Active panels	Passive panels
Thickness (mm)	25/35	50/60
Width (mm)	600	600
Length (mm)	600/1200	600/1200
Weight (kg/m ²)		
- Coarse	9.7/12.0	11.7/14.0
- Fine	9.7/12.0	11.7/14.0
- Ultrafine	10.6/13.3	12.6/15.3
- Extreme fine	11.7/14.2	13.7/16.2
TOLERANCES		
Length (mm)	$\geq 1.250 : \pm 2.0$ $\leq 1.250 : \pm 1.0$	$\geq 1.250 : \pm 2.0$ $\leq 1.250 : \pm 1.0$
Width (mm)	± 1.0	± 1.0
Thickness (mm)	Length $\geq 1.250 : \pm 2.0$ Length $\leq 1.250 : \pm 1.0$	Length $\geq 1.250 : \pm 2.0$ Length $\leq 1.250 : \pm 1.0$
Weight %	± 10	± 10
Perpendicularity (mm)	$\pm \leq 2$	$\pm \leq 2$
Planeness (mm)	$\pm \leq 3$	$\pm \leq 3$
HEAT		
Lambda value W/m.K	0.076	0.049 (50 mm) 0.052 (60 mm)

FIRE	Active panels	Passive panels
Reaction to fire	B/s1/d0	B/s1/d0
Cladding class	1	1
Material class	A	A
IMPACT RESISTANCE		
Certified to withstand ball	1A	1A
SUBSTANCES		
Chloride Cl 1%	≤ 0.06	≤ 0.06
Formaldehyde	E1*	E1*
INDOOR CLIMATE		
Degassing	10 days	10 days
Particle release	Low	Low
STANDARD		
Declaration in accordance with	EN 13964	EN 13964

* No measurable formaldehyde emission %

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