

KE Low Impulse Textile Ducts (GreenWeave)

- Round (\varnothing) textile duct for even and draft-free distribution of air.
- KE Low Impulse® ventilation system from KE Fibertec or equivalent approved system, with woven polyester material in a suitable permeability to allow the air to diffuse through the fabric with a low turbulence intensity. The cold air will slowly drop below the duct and will displace the warm air in the occupied zone.
- The fully woven solution will ensure uniform air distribution without entrainment. Entrainment: The air travels along the textile duct instead of moving away from it. For this reason, products with micro-perforations should not be authorised.
- The textile ducts must be classified according to the European fire protection code EN13501-1. The classification must be B-s1, d0 (flame spread / smoke spread).
- The textile material must be permeability-stable and have a maximum shrinkage of 0.5% after washing.
- The textile material must be Cradle to Cradle certified (min. Bronze) as documentation of its sustainability.
- The textile material must be approved according to the Oeko-Tex 100 standard.
- The textile material must have a filtration efficiency classification of PM10 (M6) with a documented minimum dust holding capacity of 25 g/m² in accordance with ISO 16890.
- The textile ducts are supplied in the colour xxx RAL xxxx. The final choice of colour must be approved by the site management before the order is placed.

Suspension system

- KE Fibertec SafeTrack® mounting material system (single or double row). Mounting rails made of extruded aluminium with a 10-micron anodized finish. 25-microns optional for swimming pools and other taxing environments.
- The length of the rails must correspond to the drawings or be adapted for the installation of textile ducts. The supplier must cut the rails to the required length.
- The textile ducts are suspended in the rails by means of an integrated flexible bulb that slides into the extruded aluminium rails. The rail are mounted to the ceiling using vertical strap-ups (either galvanised M6/M8 threaded rod or steel cable). The strap-ups are clicked onto the rails with an aluminium suspension profile.
- Ducts with a diameter of more than \varnothing 1000 mm must be suspended in a double safety track, with the bulb sewn into the textile duct at 3:00 and 9:00.

Points for BREEAM

- The textile duct works as an additional filter (PM10/M6) that holds dust and dirt from the ventilation system (Dust Holding Capacity of 25 g/m² textile surface according to ISO 16890), providing the rooms and their users with clean and fresh air. Complies with the requirements of the BREEAM according to the criterion Hea 02, Indoor air quality.

- The air velocity in the occupied zone must be provided for the technical documentation with a 2D or 3D flow chart representation in relation to the room temperature. Complies with the requirements of BREEAM according to criterion Hea 04, Thermal comfort.
- The sound power levels should be calculated for all systems and displayed graphically according to frequencies. Complies with the requirements of BREEAM according to criterion Hea 05, Acoustic performance.
- Environmental Product Declaration: A fully dynamic EPD (to be verified by a 3rd party) should be presented for the complete textile air distribution system. This EPD data shall cover as far as possible all impacts that the manufacture, installation, dismantling and reuse of the air distribution system may have on its environment. Supports the requirements of BREEAM according to the Mat 02 criteria of BREEAM: Environmental impacts from construction products – Environmental Product Declarations (EPD).
- Life cycle assessment: The basis for the EPD is a "cradle to grave" LCA (Life Cycle Assessment). Documentation for this must also be presented. Supports the requirements of the DGNB according to the Mat 01 criteria of BREEAM: Environmental impacts from construction products – Building life cycle assessment (LCA).

Requirements for the supplier

- Quality assurance: The supplier must be certified according to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.
- Warranty 1: The supplier must provide a 10-year warranty on products supplied for the fabric portion of this system (including accessories such as zips, clips, nozzles, etc.). For extreme indoor conditions such as swimming pools and other taxing environments, a 5-year warranty applies.
- Warranty 2: The supplier must provide a functional warranty of 1 year on the technical properties of the textile ventilation system (cooling/heating).
- Submissions: The supplier must submit performance data for each textile duct, including air flow rate, inlet velocity, indoor air/supply air temperature differential, static pressure, total inlet pressure and thermal air velocity in the occupied zone. In addition, the ESP (External Static Pressure), which is important for the commissioning of the entire ventilation system.
- Maintenance data: The supplier must provide maintenance data, including washing instructions for the textile ducts. A complete washing service may be offered as an option depending on location.
- The supplier must be able to provide a dynamically calculated life cycle assessment (LCA) in accordance with ISO 14044 for the entire textile ventilation system.

Supplier

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