



► **Products**
Overview

Products

For Heating, Cooling and Ventilation

► **Overview**

Applications



Hotels



Offices and Commercial Buildings



Showrooms and Sales Floors



Retail Chains



Commercial and Industrial Buildings



Warehouses and Logistics Buildings



Sports Halls and Indoor Riding Arenas



Churches and Historical Buildings



Nursery Schools and Schools



Residential Buildings

Functions



Heating



Cooling



Ventilation

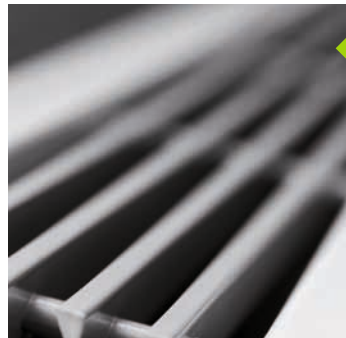
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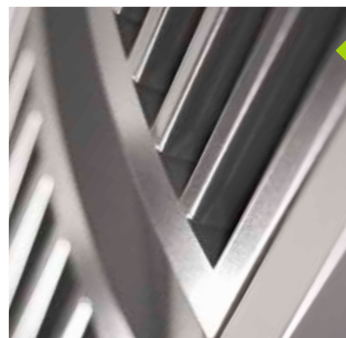
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1

Trench Technology



Trench Technology

Indoor climate from the floor



Often heating and cooling units are visually unacceptable in front of the windows of modern commercial buildings. At the same time, demands are growing on the part of the users for improved air conditioning.

The wide range of products from the Katherm trench technology product line always offers the perfect solution. As the market leader in this segment, Kampmann offers a wide range of designs: from natural convection, different fan-assisted designs to special solutions, like displacement ventilation.

Kampmann offers a trench system with outdoor supply air/recirculating air function for use in raised floors. An integrated secondary air fan enables the room air to be rapidly heated and cooled in addition to the supply of heated and cooled outdoor supply air.

With the Katherm QK nano, Kampmann offers a trench convector unit with smallest dimensions. The product group takes into account installations that impact on the design of the building, for instance by offering an extensive range of design grilles with different bar profiles, colours and materials. Moreover, the most diverse trench shapes are also possible. Thanks to the Katherm modular system, this can largely be adjusted directly on site.

In terms of control, the trench technology system can easily be integrated into modern BMS systems.

EC technology guarantees maximum energy efficiency. EC fans can be operated on-demand infinitely variably within a low fan speed range, even at low air volumes, with intelligent, integrated electronics and thus energy-efficiently. Low fan speeds have a positive effect on noise levels in areas, like offices, where the noise levels lie far below the audible threshold or the usual measuring range.

Overview



- ❶ Katherm NK
- ❷ Katherm QK
- ❸ Katherm QK nano
- ❹ Katherm HK
- ❺ Katherm QL
- ❻ Katherm QE

Discrete HVAC Solutions for Modern Building Design:

Today's Trench Heating, Cooling, Ventilation Technology.

Kampmann UK. Ltd offers a new architectural CPD seminar, approved by RIBA, as part of the RIBA core curriculum.

This seminar ensures participating architects credits for their further qualifications. This CPD Seminar provides an overview of the applications of modern trench heating, cooling, ventilation technology. It will show available solutions, how to integrate trench systems into modern architectural design in a discrete and aesthetic form and looks at legislative and environmental issues around modern trench products.

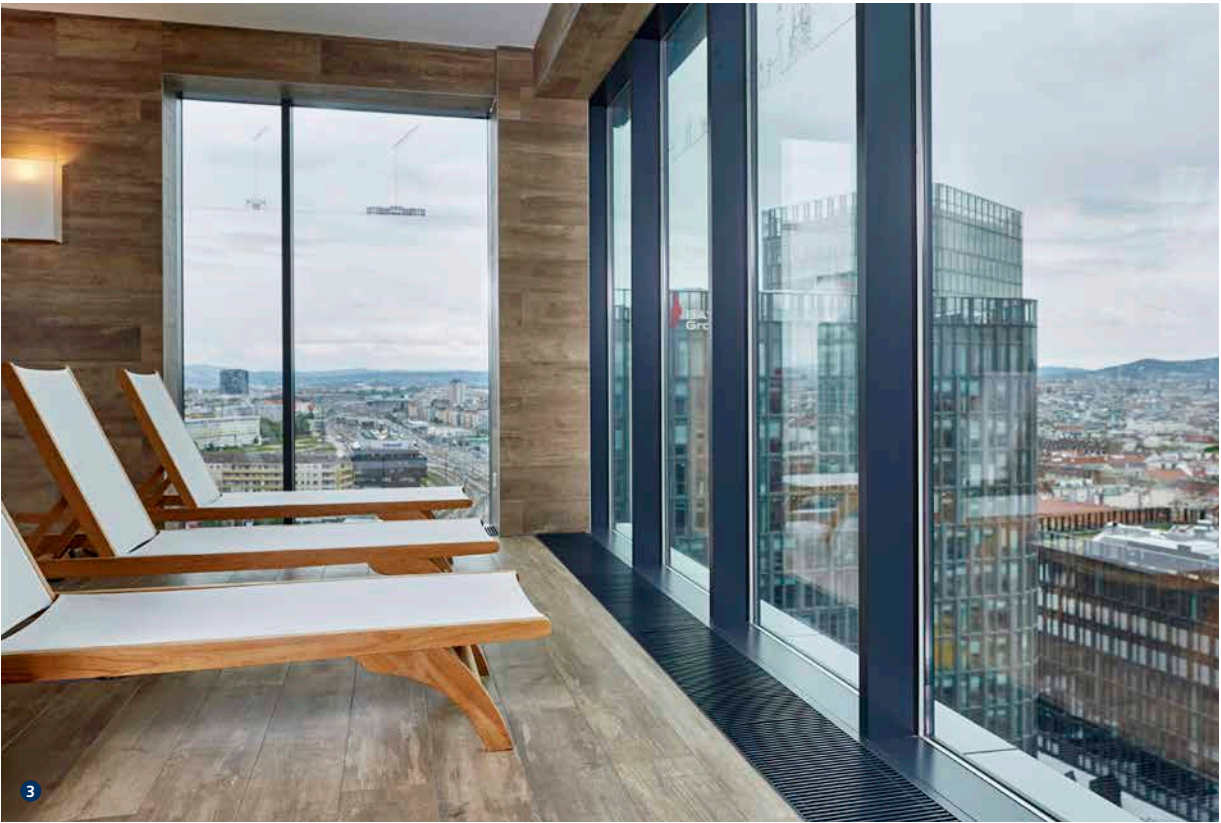
Topics:

- ▶ Overview about latest Trench Heating/Cooling/Ventilation Products and Applications
- ▶ Legislative and Environmental Background of modern Trench Systems
- ▶ Solutions for architectural requirements with regards to Trench Products

Learning outcomes:

- ▶ The delegates should be able to identify if modern trench technology is an option/can be used on their individual projects to cover the requirements with regards to comfort in the space, they design.
- ▶ The delegates should be able to identify how modern trench products can be integrated within their projects from an architectural perspective.





- 1 Hotel Lido Palace, Riva del Garda TN
- 2 Hotel Roomers, Baden-Baden
- 3 Quartier Belvedere Central, Vienna

BS EN 16430

An introduction

Current Testing Standard for Trench Heating and Trench Cooling.

The advances in technology within trench heating and cooling has allowed consultants to design more sophisticated heating and cooling systems within modern buildings. With this in mind, it has become necessary to formulate a new testing standard aimed at trench heating and cooling.

The new testing standard is the BS EN 16430 "Fan assisted radiators, convectors and trench convectors". This standard has far reaching implications for the building services industry. Finally trench heating and trench cooling systems of different manufacturers are comparable with each other. This standard will provide planning security for these systems to consultants and architects.

This standard consists of the three parts:

- ▶ **Part 1:** Technical specifications and requirements,
- ▶ **Part 2:** Test method and rating for thermal output,
- ▶ **Part 3:** Test method and rating for cooling capacity,

and should have been given the status of a national standard in all EU-member states by June 2015 latest.

The aim of the BS EN 16430 is to determine

- ▶ performance data, to allow a like for like comparison between different products of different manufacturers.
- ▶ provide technical data for the design of the systems according to the project-specific requirements.

The standard not only deals with the thermal performance of a unit. Also the quality of the products itself will be looked at. This includes e.g. the requirement of pressure testing of all coils/ convectors and electrical and mechanical safety of the units according to the EN 60335-2-80 and EN ISO 12499.

For fan assisted units, the manufacturers have to test and publish noise power data at various fan speeds. This is a significant information, as units should be selected against the thermal requirements of the project, not exceeding the noise criteria in this project. Latest EC-fan-technology allows the use of fan assisted units, even in residential buildings with strictest noise requirements.

The thermal performance test will be carried out in a test chamber, known from the BS EN 442, dealing with radiators and convectors.

As with the BS EN 442 the new BS EN 16430 for trench systems bases all thermal performances on the reference air temperature.

This is a temperature measured 2 metres away from the perimeter, in a height of 750 mm above finished floor level. This makes sure that the products provide the performance in the area occupied by persons. Do not mix the reference air temperature with the entering air temperature into the coil. Specially in cooling mode, there can be a significant difference between these two temperatures, ending with the conditions in the occupied area being very different from what expected from your client.

To make sure, the products you selected are in line with the BS EN 16430, the actual testing standard for trench heating and trench cooling systems, please ask the manufacturer for the CE Declaration of conformity for the product. The BS EN 16430 should be mentioned in this document, if the units are tested in accordance.

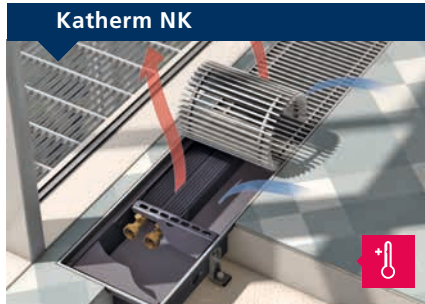




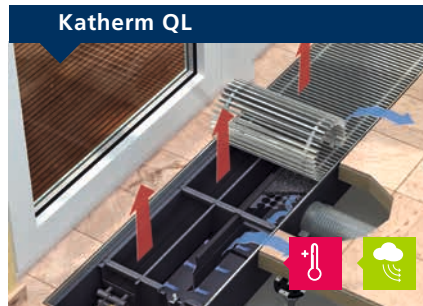
- 1 "Kristall" Holzhafen, Hamburg
- 2 ADAC Headquarters, Munich
- 3 Schloss Elmau Retreat, Elmau

Trench Technology

Overview



	Article Group 1.45	Article Group 1.42	Article Group 4.42
Operation	▶ natural convection ▶ heating with LPHW	▶ EC cross-flow fan convection ▶ heating with LPHW ▶ BMS interface	▶ heating with LPHW ▶ EC cross-flow fan convection ▶ BMS interface
Properties	Trench height 92, 120, 150, 200 mm Trench length 800–5,000 mm Trench width 137, 182, 232, 300, 380 mm	Trench height 112 mm Trench length 1,000–3,200 mm Trench width 190, 215 mm	Trench height 70 mm Trench length 900–2,700 mm Trench width 165 mm
Product features	▶ performance-optimised ▶ shallower depths combined with high outputs ▶ fully adaptable to the building contours ▶ accessory Katherm modular system ▶ optional supply air trench can be added for various sizes	▶ whisper-quiet EC technology ▶ shallower depths and high outputs ▶ fully adaptable to the building contours ▶ accessory Katherm modular system ▶ optional supply air trench can be added for various sizes	▶ highly reduced dimensions ▶ with the usual whisper-quiet EC technology and high outputs ▶ new FineLine grille

**Article Group 1.43**

- ▶ EC cross-flow fan convection
- ▶ heating with LPHW
- ▶ cooling with CHW
- ▶ 2 or 4-pipe system
- ▶ BMS interface

Trench height

130, 160 , 210 mm

Trench length

Height 130/160: 915 (height 130 mm),
950 (height 160 mm), 1,200, 1,700,
2,000, 2,500, 3,000 mm

Trench width

Height 130: 320 mm
Height 160: 290 mm
Height 210: 360 mm

- ▶ EC tangential fan, whisper-quiet and energy-efficient, optimised air flow and cascaded in the form of a continuous line of fans
- ▶ tangential fan is easy to remove
- ▶ condensate tray can be removed for ease of cleaning
- ▶ Eurokonus valve connection for fast installation
- ▶ optional supply air trench can be added for various sizes

Article Group 1.41

- ▶ targeted supply of conditioned air (displacement air)
- ▶ low-turbulence room ventilation with low discharge speed
- ▶ additional heating with LPHW

Trench height

130, 180, 230 mm

Trench length

project-related;
minimum length 1,100 mm

Trench width

272, 310, 340, 400, 420 mm

- ▶ high-output convector for screening external glazing
- ▶ for the targeted supply of conditioned displacement air
- ▶ effective and low-turbulence stratified ventilation

Article Group 2.42

- ▶ heating with electrical element and fan convection
- ▶ EC tangential fans
- ▶ high heat output at low sound pressure level
- ▶ for full space heating
- ▶ BMS interface

Trench height

112 mm

Trench length

825, 1,250, 1,700 mm

Trench width

207 mm

- ▶ 2-stage safety switch comprising safety thermostat and temperature fuse as protection against incorrect operation
- ▶ integral 0–100 % output control
- ▶ low surface temperatures
- ▶ easy control via room thermostat or BMS at 0–10 V
- ▶ fast warm-up of the room

Trench Technology

At a glance

HK

Trench convector for heating or cooling. EC cross-flow fan convection, whisper-quiet and energy-efficient.

QE

EC tangential fan convection with electrical heating element.

NK

Natural convection all-purpose, individual, made-to-measure.

NK

Minimal dimensions, maximum output.

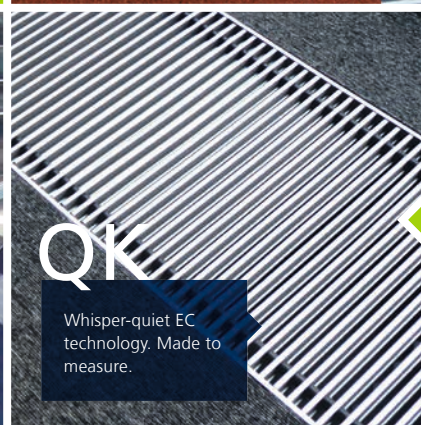


QK_{nano}

Top performance from smallest dimensions, with filigree FineLine grille.

HK

Heating and cooling as a 2-pipe and 4-pipe system.

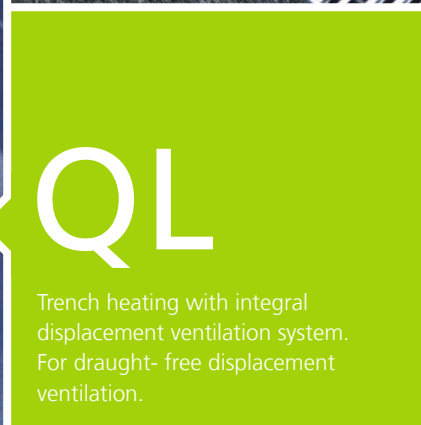


QK

Whisper-quiet EC technology. Made to measure.

QK

Trench convector with EC cross-flow fan convection. Optimised for ultra low water temperatures.



QL

Trench heating with integral displacement ventilation system. For draught-free displacement ventilation.





Perimeter Heating

Multi-functional, durable, highly responsive



Uncased or cased, wall-mounted or free-standing encased convectors: Kampmann convectors meet the most exacting design requirements. They blend seamlessly into the interior style both in residential and commercial buildings.

Kampmann convectors emit their high heat output when encased, with the additional benefit of blending harmoniously into the interior design.

PowerKon + W and PowerKon + F encased convectors with PowerKon copper/aluminium heat exchangers are the functional and value-for-money alternative for

effective heating. They stand out on account of their consistent design and compact construction with minimal heights and widths. The low water content ensures short heating-up times and precise controllability.

The PowerKon + ST is ideal for the education, healthcare and residential care sectors. Casing and bracketry coated with an anti-bacterial and scratch resistant epoxy powder, colored in RAL 9016, pure white. There are no joints in the casing to gather dirt, dust and potential bacteria.

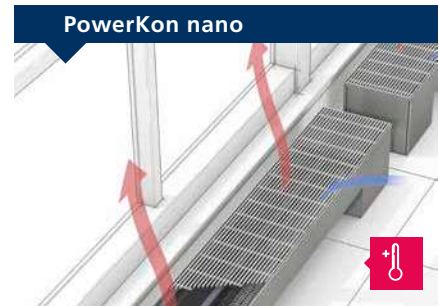
There are two floor mounted and two wall mounted models of the PowerKon + ST. The unit is flexible to use, thanks to its various heights, depths and lengths.

Overview



Perimeter Heating

Overview



	Article Group 1.26	Article Group 1.26	Article Group 1.34
Operation	▶ heating with LPHW ▶ natural convection	▶ heating with LPHW ▶ natural convection	▶ heating with LPHW ▶ EC cross-flow fan convection ▶ BMS interface
Properties	Height 80, 130 mm Length 600–2,600 mm Depth 130, 180, 230 mm Air outlet ▶ linear grille with C-shaped profile Colour ▶ standard RAL 9016, ▶ other colours on request	Height 250, 400, 550, 700 mm Length 600–2,600 mm (2,400 mm to depth 220 mm) Depth 70, 120, 170, 220 mm Air outlet ▶ perforated profile ▶ linear grille with C-shaped profile Colour ▶ Standard RAL 9016, ▶ other colours on request	Height 150 mm Length 800–2,000 mm Depth 160 mm Air outlet ▶ linear grille ▶ façade-side air outlet Colour ▶ standard DB 703 ▶ other colours on request
Applications	▶ functional, value-for-money model for the visually appealing use of convectors, for instance for installation along the façade of the building ▶ free-standing installation	▶ for the encased use of convectors ▶ available in two different design models ▶ wall-mounted	▶ for residential use, commercial refurbishment or new-build applications and hotels ▶ ideal for installation in front of full-height glazing ▶ free-standing installation ▶ new FineLine grille



Steel Convector



PowerKon + ST



Article Group 1.10

- ▶ heating with LPHW
- ▶ natural convection

Height

70, 150 mm

Length

500–5,000 mm

Depth

50, 100, 150, 200, 250, 300 mm

Air outlet

- ▶ individual air outlet

Colour

- ▶ galvanised

- ▶ for use in convector casings or for installation in a trench: the professional solution!

Article Group 1.26

- ▶ low surface temperature convector
- ▶ heating with LPHW
- ▶ natural convection

Height

500, 650, 800 mm

Length

650, 850, 1,050, 1,250, 1,450, 1,650, 1,850, 2,050 mm

Depth

120, 170, 220 mm

Air outlet

- ▶ pencil proof linear bar grille with 7.1 mm bar spacing

Colour

- ▶ standard RAL 9016
- ▶ other colours on request

- ▶ for low water content and energy savings
- ▶ ideal for the education, healthcare and residential care sectors
- ▶ available in two different design models: floor-standing and wall-mounted
- ▶ quick and easy to install

Perimeter Heating

At a glance



PowerKon + W

Wall-mounted convector for low water temperatures.



PowerKon nano

The free-standing convector for a perfect view in front of glazing.



PowerKon + F

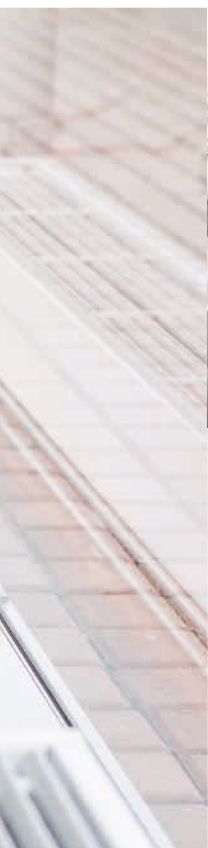
Free-standing convector for use with low water temperatures.





Steel Convector

Multifunctional, concealed heaters, galvanised steel. High-outputs in customer casings.



PowerKon +ST

"Safe Touch" low surface temperature convector.



3

Design Grilles



Design Grilles

For modern buildings



For some years now, the trend in modern architecture has been to actively incorporate required operating systems into the overall interior design. Kampmann design grilles take this development into account.

The wide range of materials and colours open up numerous design options. In terms of metal, the available finishes range from aluminium to brass and stainless steel. Oak, beech, maple and merbau offer four wooden grilles to create an individual homely impression.

Thanks to the many projects that Kampmann has already completed, we are able to call on an extensive stock of special solutions, like different angles, curves, adjustments to pass around columns and polygonal connections, recesses, mitred corners and many more.

Kampmann will take care of everything, from site measurements to delivery.

Overview



- 1 Optiline Roll-up Grilles
- 2 Wooden Roll-up Grilles

Design Grilles

Overview

Optiline Roll-up Grilles



Wooden Roll-up Grilles



Article Group 1.30

Aluminium

- ▶ natural anodised E6/EV1
- ▶ brass anodised E6/EV3
- ▶ bronze anodised E6/C34
- ▶ black anodised E6/C35
- ▶ light bronze finish E6/C31
- ▶ basalt grey coated (DB 703)

Stainless Steel

- ▶ natural
- ▶ polished
- ▶ brushed

Brass

- ▶ natural CuZn 44

Profiles

- ▶ double T-profile in aluminium, brass bar spacing 9/12 mm
- ▶ double T-profile, stainless steel bar spacing 10.5 mm

Free area

- ▶ approx. 65 % and 70 %

- ▶ Optiline grilles stand out on account of their slim bar profiles whilst retaining a narrow bar spacing. This creates an attractive appearance whilst ensuring the correct free area in terms of air flow.
- ▶ both sides of the grille can be used

Article Group 1.30

Oak

- ▶ natural lacquered
- ▶ oiled

Beech

- ▶ natural lacquered
- ▶ oiled

Maple

- ▶ natural lacquered
- ▶ oiled

Merbau

- ▶ natural lacquered
- ▶ oiled

Profiles

- ▶ solid wooden profile bar spacing 15 mm
- ▶ bar height: 18 mm

Free area

- ▶ approx. 60 %

- ▶ wooden roll-up grilles accentuate a warm and homely atmosphere indoors

Colours *)

Properties

Special features



Optiline Roll-up Grilles

Ultra-elegant narrow-spaced
air outlets.



Wood

The natural
alternative for office
and residential use.

Wooden Roll-up Grilles

Warm and homely – decorative
wooden covers.

* The colours of the grilles shown here may be distorted in printing and thus do not represent an exact reproduction of the original colour.