

Article group
2.42



07/2008
GB

Katherm QE

**Innovative,
professional,
international**

In over 35 years, Kampmann GmbH has grown from being a family-led company to become an internationally

renowned group of companies. Kampmann systems for heating, cooling and ventilation are today market leaders in a number of different market sectors. Innovation and the highest standards of quality guarantee this success into the future.

We have an "ear on the market" and the knowledge and expertise gained from 35 years of experience in development, production and sales. This, combined with a professionally-manned research and development department, is the basis for our continuous product development. This is what allows us to provide our customers with the best technical product at any time.

Traditionally, Kampmann's skills and expertise have been in the production of standard products with an extraordinary range of adapted products, as well as in the production of technically and visually high-quality tailor-made design solutions. Our specialist staff deal with the building in its entirety and develop unique and efficient system solutions. Our entire range is reflected in mix of standard, non-standard and tailor-made products for project-orientated solutions.

We set ourselves very high standards in production. Today an exceptionally well-trained specialist workforce manufactures high-quality Kampmann products in three plants for customers throughout the world. A number of different certificates are evidence of our high standards of quality, which have become the standard at Kampmann. Our products are characterised by the high guaranteed DIN EN-tested heat outputs. In terms of quality management the requirements of TÜV certification according to DIN EN ISO 9001 have been met since 1996.

For decades, Kampmann customers have valued our excellent service. Local external engineers and technicians, in-house measuring engineers and the Kampmann customer service team are available to customers. Kampmann good air quality is now to be found across the globe. Our sales engineers now cover the whole of Germany and Europe.

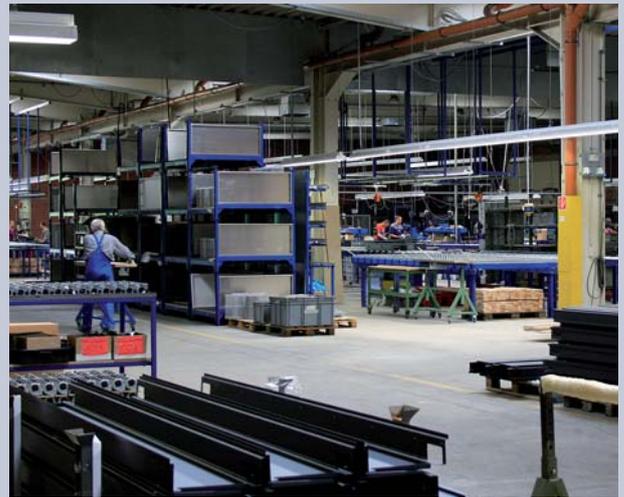
This **Katherm QE** brochure provides you with an insight into our wide product range. Take a look and make up your own mind – do not hesitate to arrange a personal visit with us. It is our aim to meet your high quality expectations, right down to the last detail.

Well-being is our product - Quality is our benchmark!

Hendrik Kampmann
Managing Director



Peter Kaß
Managing Director



Katherm QE Manufactured in the Kampmann plant in Lingen

Friedrich-Ebert-Straße 128-130
49811 Lingen (Ems)
Tel. +49 591 7108-0
Fax +49 591 7108-300

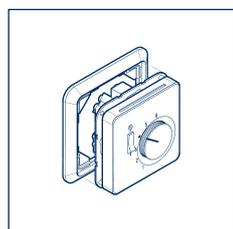




Product description/Accessories

Katherm QE – Crossflow fan-assisted convection with electric heating element 4-5
 Overview of models 6
 Optional accessories: height adjustable raised floor feet, installation covers.. . . . 7

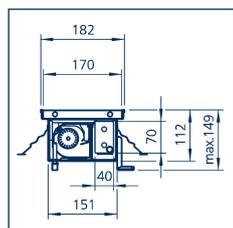
Product description/
Accessories



Controls

Switches and controllers 8
 Controls combinations. 9

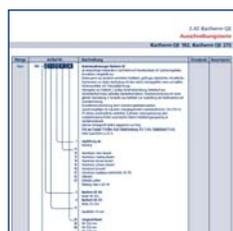
Controls



Technical data

Katherm QE 182 10
Katherm QE 272 11

Technical data



Specifications

Katherm QE 182, Katherm QE 272 12
 Accessories 13
 Controls accessories 14
 Your KAMPMANN contacts 15

Specifications /
Ordering



Katherm QE – Crossflow fan-assisted convection with electric heating element

Katherm QE units are the ideal solution wherever the use of an LPHW convector is not possible or not intended. They are noted for their extremely quiet operation by means of energy-saving external rotor motors and their high heat outputs.

Katherm QE units are ideal for installing under full-height glazing. The room warms up quickly, yet the noise level is very low and non-intrusive. The extended dimensions of the unit ensure that electric floor duct heaters have low surface temperatures.

Katherm QE units are supplied as ready-to-install heating ducts and are ideal for installation in screeded floors. Once in position, all that is visible are the attractive roll-up grilles, available in a range of finishes.

- Sendzimir galvanised sheet steel duct with all visible internal surfaces painted graphite grey
- Internal and lateral height adjustment feet and anchoring lugs
- Stainless steel heating element, 40 x 70 mm fins with protective sensor pipe
- 0 - 100% output control by means of leaving air temp. sensor
- Room temperature- or BMS-based control is also possible
- Pre-fitted safety thermostats and temperature safety device
- Duct widths of 182 and 272 mm
- Duct height 112 mm
- Duct lengths 1250, 1750 und 2250 mm

Crossflow fan-assisted convection with electric heating element

Operation

Cold air, forming on the glazing or entering a room through joints, falls into the floor duct heater, is drawn in by the crossflow fan and passes through the electric heating element. The fans, arranged parallel to the heating element, provide fan-assisted convection over the entire length of the duct.

Asynchronous external rotor motor

The output performance of Kampmann **Katherm QE** units has been further enhanced by the incorporation of asynchronous external rotor motors in all models:

- Lower noise pressure level
- Approx. 50 % energy savings by the use of superior quality motor engineering
- Improved efficiency

Noise levels

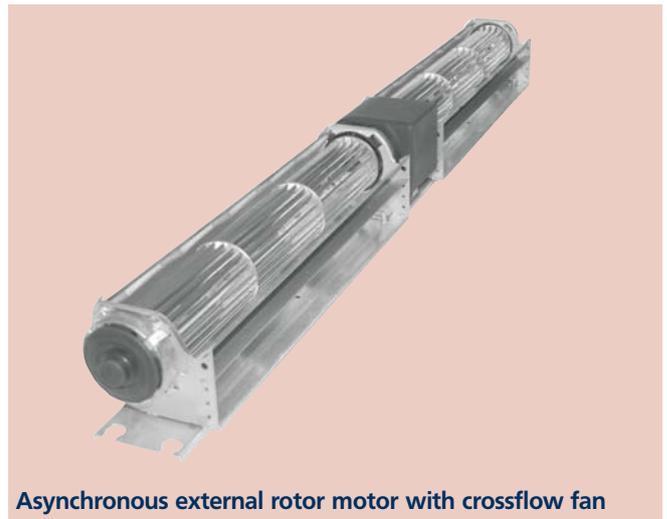
It should be noted at the design stage that intrusive noise may occur at higher fan levels. The respective sound pressure and sound power levels are listed in the performance tables. It is recommended that **Katherm QE** units are designed to operate at medium fan speed, taking into consideration the respective sound levels.

The sound pressure level taken at a distance of 2 m from the unit is calculated on the basis of a hemispherical model (sound source at floor level). If a half-hemispherical model is used, then an increase in the sound pressure level of 3 dB(A) has to be assumed.

As the noise level is not only affected by the **Katherm QE** units, but also to a greater extent by the acoustic properties of the room, the actual figures may deviate in practice.

An Overview of Katherm QE engineering

- Energy-optimised 0 - 100% output regulation via leaving air sensor
- Crossflow fan with asynchronous external rotor motor for quiet and energy-saving operation
- Self-supporting design with height adjustment feet and screed anchoring lugs
- Low sound pressure level
- Standard electronic fan speed control, continually adjustable, fan speed can be set at one of 5 speeds via an integral transformer, computer-controlled
- Fan speed electronics controlled by manual fan speed switch or GLT/ZLT (continuous 0 - 10 V signal output required)
- 2-stage overheat protection for improper or incorrect operation
- Self-activating shut-down thermal safety switch at 70 °C
- Shut-down switch acting as a second safety back-up
- Potential-free fault alarm contact
- Separate mains supply to each **Katherm QE**



Asynchronous external rotor motor with crossflow fan

Control

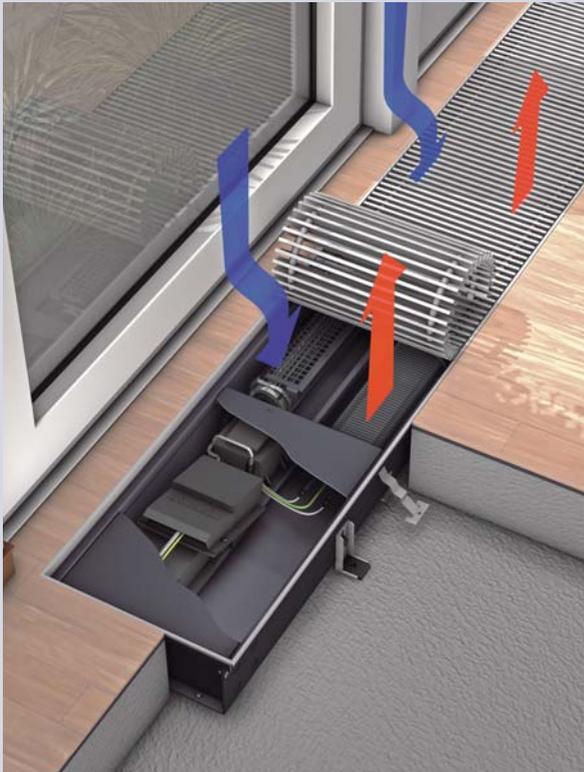
When the fans are switched off, the heating element is also switched off. As soon as the fans are switched on at any fan stage, the 0 - 100% controller for the heating element becomes operational. This only switches on and off or regulates the control signal via room thermostats or even BMS systems. Every **Katherm QE** has a separate mains supply.

When the fan speed changes, the required electrical heat output is automatically continuously adjusted accordingly. A temperature sensor in the leaving air outlet, combined with the electric output controller, ensures that the leaving air temperature remains constant. The continuous adjustment of the electrical heat output to the heat demand in the room ensures that the heating system operates energy-efficiently.

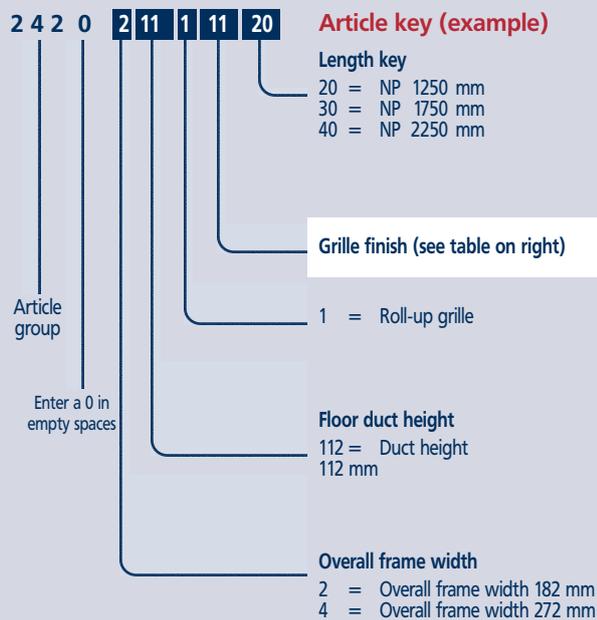
Safety functions

The electric heating elements are fitted with a 2-stage safety switch. Should the units be operated incorrectly, if the grilles are covered for example, and should the temperature of the grille surface exceed 70 °C, then the heating element is switched off by a safety thermostat. As soon as the heating element has cooled down again and the reason for the overheating has been eliminated, the temperature switch automatically switches it back on again.

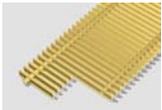
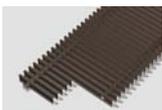
If the temperature within the floor duct continues to rise for some unknown reason, then a temperature fuse disables the unit and it can then only be made operational **by an authorised member of staff**. If one of the two fuses has been activated, this is indicated by a potential-free alarm contact.



Article key (example)



Grille finishes

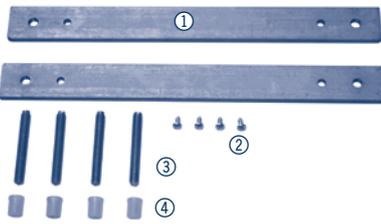
11 = aluminium, natural anodised	
12 = aluminium, brass anodised	
13 = aluminium, bronze anodised	
14 = aluminium, black anodised	
15 = aluminium, bronze effect	
16 = aluminium, basalt grey painted, DB 703	
31 = stainless steel	
32 = stainless steel polished	
33 = natural brass, CuZn 44	

Other grille finishes (colours) are available on request

The grille finishes shown here are printed using a four-colour printing process and so may not replicate the original colours exactly.

Optional accessories: Raised floor height adjustment feet • Installation cover

Raised floor height adjustment feet • Installation cover



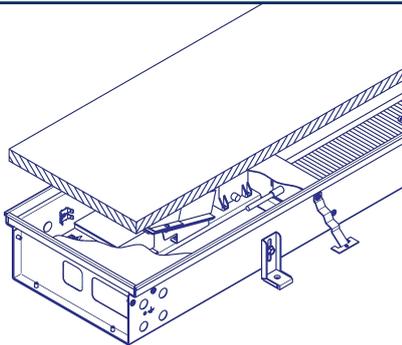
Shown for 1250 mm long unit (2 sets)

Raised floor height adjustment feet

for use with *Katherm QE*, comprising (per set):

- 1 Flat iron bar ①,
- 2 Screws ②,
- 2 M8 adjustment screws ③ complete with insulation ④ ;

<i>Katherm model</i>	QE 182	QE 272
Type	14231	14251



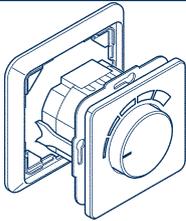
Installation cover

If required, all *Katherm QE* can also be supplied with grilles packed separately in order to prevent them from becoming damaged on site. The floor duct is then supplied with a non-reusable wooden installation cover.

<i>Katherm model</i>	QE 182	QE 272
Type	100982	100984

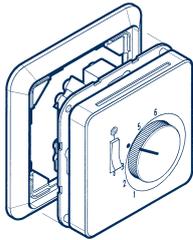
Article no. for DataNorm/EDV entry: 194 000 (Insert type)
194 0000 (Insert type)

Accessories: Switches and controllers

**Speed controller, type 146936**

Switching dial for the 5-speed parallel control of up to a maximum of 10 Katherm QE units

Housing	Jung, flush-mounted, Alpine white
Voltage	230 V/50 Hz
Protection class	IP 20
Dimensions W x H x D	65 x 65 x 42 mm

**Room thermostat, type 146927**

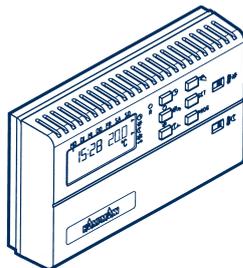
For the setting of temperature setpoints; main on/off switch with control indicator, thermal feedback and additional input for night setback (4 K) via an external time switch.

Housing	Jung, flush-mounted, Alpine white
Voltage	230 V/50 Hz
Temperature setting range	5 - 30 °C
Max. power consumption	4 A
Protection class	IP 20
Dimensions W x H x D	65 x 65 x 42 mm

See top of p 9 for illustration

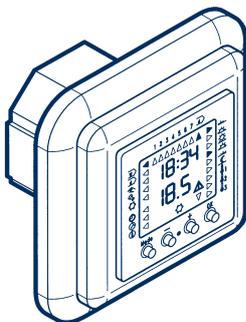
Double frame, type 146929

Jung, Alpine white; for the combined assembly of types 146936 and 146927

**Clock thermostat, type 146910**

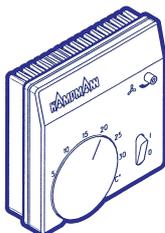
Combined clock/room thermostat; precise digital clock for day/week programme; used to set the room temperature and setback temperature; optional override function (override a setback interval); used to set the day or night temperature

Voltage	230 V/50 Hz
Temperature setting range	5 - 40 °C
Maximum power consumption	4 A
Protection class	IP 20
Dimensions W x H x D	132 x 82 x 32 mm

**Clock thermostat, type 146932**

Combined digital clock/room thermostat; with electronic 2-point control; display showing preset and actual temperatures, simple 4-key operation; day/week programmes can be set; override function and frost protection

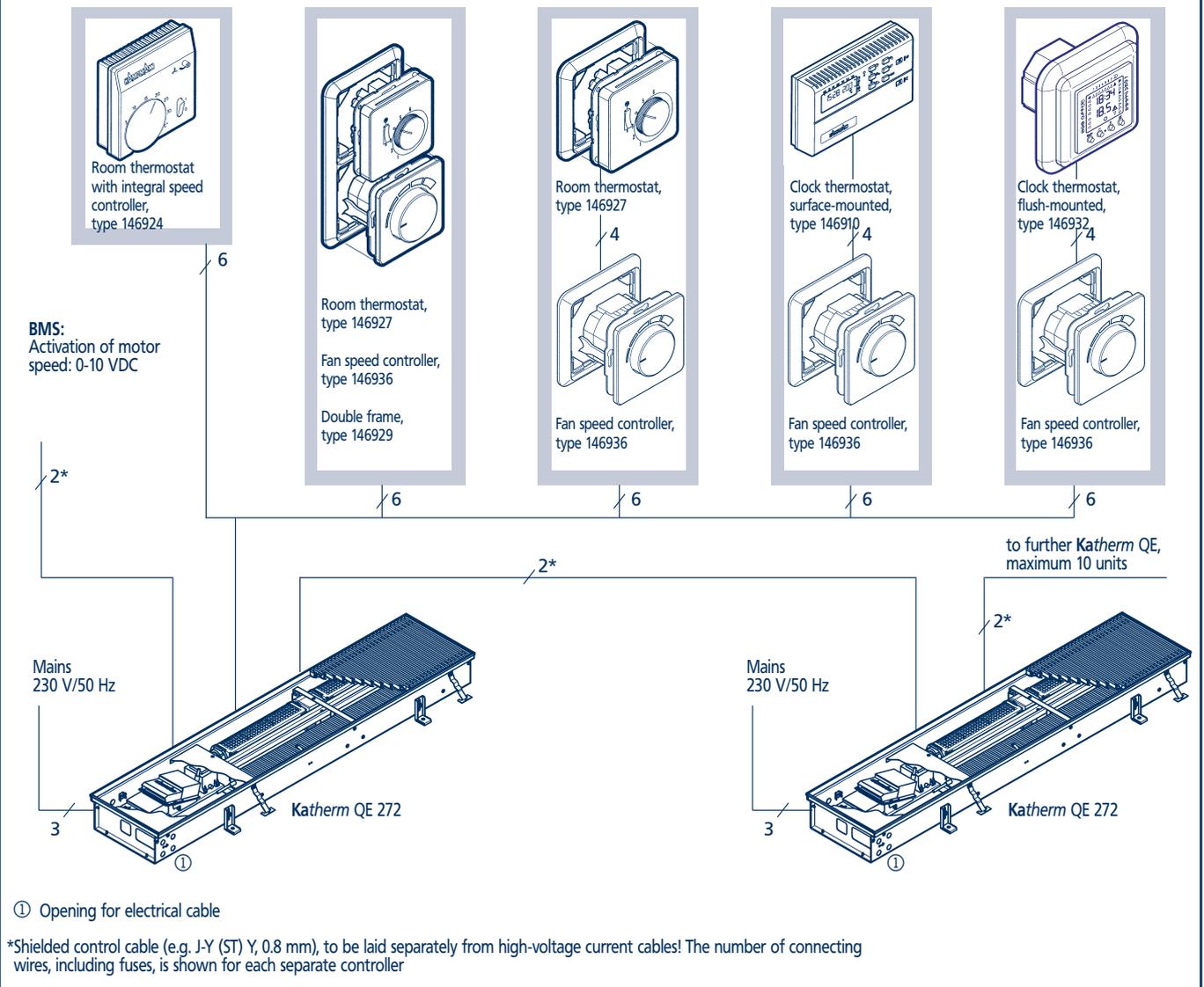
Housing	flush-mounted, white
Voltage	230 V/50 Hz
Temperature setting range	5 - 40 °C
Protection class	IP 40
Power reserve	approx. 4 hours
Contact	single ended changeover contact
Maximum power consumption	2 A
Dimensions W x H x D	84 x 84 x 18 mm (height above wall)

**Room thermostat with integral speed controller, type 146924**

With thermal feedback and on/off fan switch; combined room thermostat and fan speed controller for 0-100% control of the fan speed electronics

Housing	surface-mounted, white
Voltage	230 V/50 Hz
Temperature setting range	5 - 30 °C
Maximum power consumption	4 A
Switching differential/Protection class	approx.. 0.6 K/IP 30
Dimensions W x H x D	74 x 74 x 29 mm

Possible controls combinations



Controls

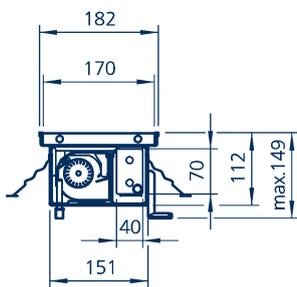
Maximum number of Katherm QE units that can be connected to a single BMS contact or thermostat

The maximum switching current of a BMS contact, room thermostat or clock thermostat may not be less than the total power consumption of the motors in all the units connected up.

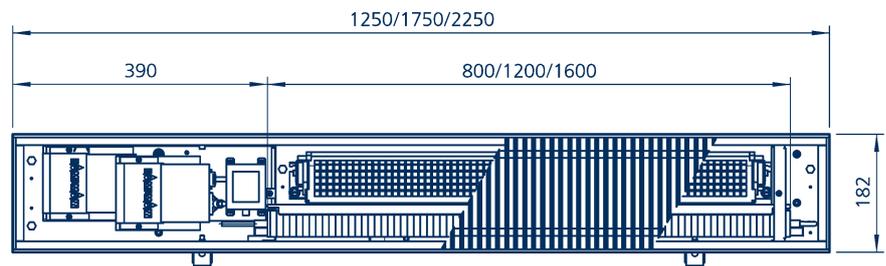
The sum is calculated from the:

- Σ power consumption
- = number of Katherm QE 1250 • 0.11 A
- + number of Katherm QE 1750 • 0.17 A
- + number of Katherm QE 2250 • 0.22 A

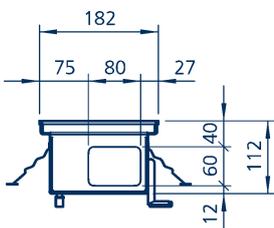
Article no. for DataNorm/EDV entry: 194 000 (Insert type)

Katherm QE 182 dimensions

Katherm QE 182, cross-section showing roll-up grille



Katherm QE 182, plan view showing roll-up grille



Katherm QE 182, end view



Katherm QE 182, side view

Katherm QE 182 dimensions

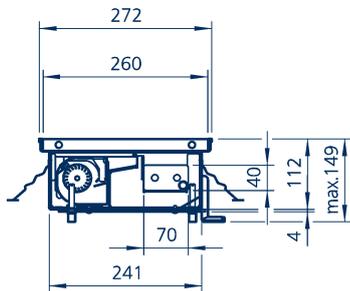
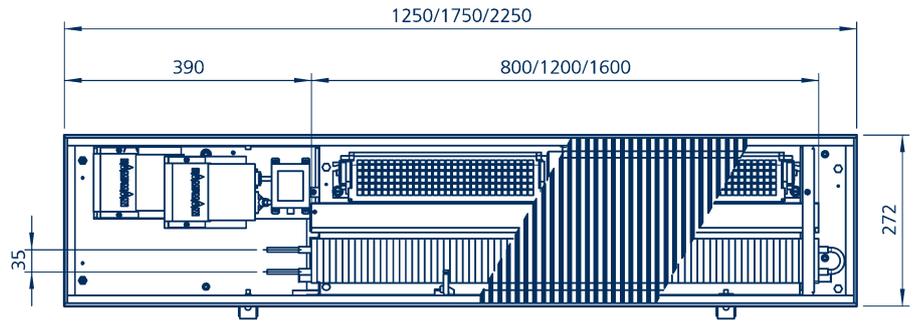
Overall frame width	mm	182		
Floor duct width	mm	151		
Grille width	mm	170		
Maximum adjustment height	mm	149		
Floor duct height	mm	112		
Convector height	mm	70		
Convector depth	mm	40		
Floor duct length	mm	1250	1750	2250
Finned convector length	mm	800	1200	1600
Fan motor(s)		1	2	2
Fan impellers		2	3	4
Current consumption of motor	A	0.11	0.17	0.22
Power consumption of motor	W	20	32	40

Heat outputs - Katherm QE 182

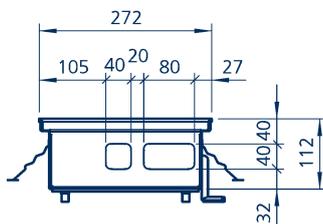
Fan speed	max. fan speed			medium fan speed								minimum fan speed			
	5			4			3			2		1			
Duct length NP = standard programme	1250	1750	2250	1250	1750	2250	1250	1750	2250	1250	1750	2250	1250	1750	2250
Air volume m ³ /h	240	375	480	180	280	360	140	220	280	110	175	220	90	140	180
Sound pressure level ¹⁾ dB(A)	40	41	42	30	31	32	25	26	27	22	23	24	21	22	23
Sound power level ²⁾ dB(A)	54	55	56	44	45	46	39	40	41	36	37	38	35	36	37
Heat output W	1100	1650	2200	990	1485	1980	957	1435	1914	924	1386	1848	847	1270	1694

¹⁾ Calculated using the hemispherical model based on the free field method at a distance of 2 m; refer to page 5 for calculations based on the half-hemispherical model

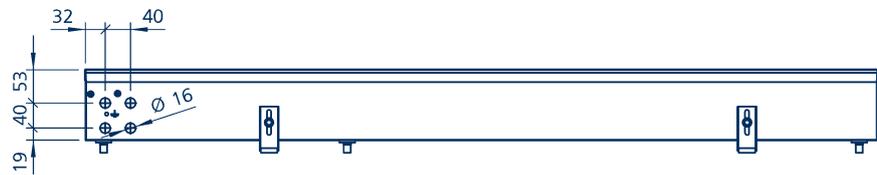
²⁾ Measured according to DIN EN 23741 in an echo chamber with a volume of 200 m³

Katherm QE 272 dimensionsKatherm QE 272, cross-section showing roll-up grille¹⁾

Katherm QE 272, plan view showing roll-up grille



Katherm QE 272, end view



Katherm QE 272, side view

Katherm QE 272 dimensions

Overall frame width	mm	272		
Floor duct width	mm	241		
Grille width	mm	260		
Maximum adjustment height	mm	149		
Floor duct height	mm	112		
Convector height	mm	40		
Convector depth	mm	70		
Floor duct length	mm	1250	1750	2250
Finned convector length	mm	800	1200	1600
Fan motor(s)		1	2	2
Fan impellers		2	3	4
Current consumption of motor	A	0.11	0.17	0.22
Power consumption of motor	W	20	32	40

¹⁾Unit shown with raised floor height adjustment feet

Heat outputs - Katherm QE 272

Fan speed	max. fan speed			medium fan speed									min. fan speed		
	5			4			3			2			1		
Duct length NP = standard programme	1250	1750	2250	1250	1750	2250	1250	1750	2250	1250	1750	2250	1250	1750	2250
Air volume m ³ /h	240	375	480	180	280	360	140	220	280	110	175	220	90	140	180
Sound pressure level ¹⁾ dB(A)	40	41	42	30	31	32	25	26	27	22	23	24	21	22	23
Sound power level ²⁾ dB(A)	54	55	56	44	45	46	39	40	41	36	37	38	35	36	37
Heat output W	1500	2250	3000	1350	2025	2700	1305	1957	2610	1260	1890	2520	1155	1732	2310

¹⁾Calculated using the hemispherical model based on the free field method at a distance of 2 m; refer to page 5 for calculations based on the half-hemispherical model

²⁾Measured according to DIN EN 23741 in an echo chamber with a volume of 200 m³

Qty.	Article no.	Description	Price / each	Total price
pc.	242 0 2 1 1 1 1 20	<p>Katherm QE floor duct heaters ready-to-install convector-based shallow heating ducts with crossflow fan-assisted convection, manufactured from: sendzimir galvanised steel floor duct, painted graphite grey, with lateral screed anchoring lugs to ensure that the duct sits rigidly within the screed; internal height adjustment feet complete with sound insulation; stainless steel heating element; 2-stage safety switch comprising safety thermostat that switches itself on again automatically, temperature safety switch with shut-down switch; with steel internal brackets to reinforce the floor duct; convection is enhanced with crossflow fan-assisted convection; crossflow fan with robust energy-saving external rotor motor 230 V/50 Hz; ITC module, factory-wired; 0-100% output control via leaving air temperature sensor, automatic electric heat output adjustment to fan speed; frame profile to match grille finish; grille made of double T-profiles; grille bar dimensions 18 x 5 mm, bar spacing 9 mm; free area approx. 65 %</p> <p>Supplied with: 1 roll-up grille</p> <p>11 Aluminium, natural anodised 12 Aluminium, brass anodised 13 Aluminium, bronze anodised 14 Aluminium, black anodised 15 Aluminium bronze effect 16 Aluminium, basalt grey painted, DB 703 31 Stainless steel 32 Stainless steel, polished 33 Natural brass CuZn 44</p> <p>Katherm QE 182 width 182 mm Katherm QE 272 width 272 mm</p> <p>4 Duct height 112 mm</p> <p>Length key: 20 NP 1250 mm 30 NP 1750 mm 40 NP 2250 mm</p> <p>Technical data: Duct length _____ mm Heat output _____ w</p> <p>Article group 2.42, Manufacturer Kampmann, Article no. 242 0 _____ Type _____</p>		
	Required to complete article no. for DataNorm/EDV			

Specifications

Qty.	Article no.	Description	Price / each	Total price
pc.	194 0 0 0 1 0 0 9 8 2	<p>Installation cover to protect the floor duct during installation for <i>Katherm</i> QE 182 for <i>Katherm</i> QE 272 Article group 1.94, Manufacturer Kampmann, Article no. 19400010098_, Type 10098_</p>		
pc.	194 0 0 0 0 1 4 2 3 1	<p>Surcharge for raised floor height adjustment feet for fitting to <i>Katherm</i> QE units; each set comprising: 1 no. flat iron bar, 2 no. steel screws, 2 no. M8 adjustable screws fitted with sound insulation for <i>Katherm</i> QE 182 for <i>Katherm</i> QE 272 Article group 1.94, Manufacturer Kampmann, Article no. 1940000142_1, Type 142_1</p>		
	Required to complete article no. for DataNorm/EDV			

Specifications

Qty.	Article no.	Description	Price / each	Total price
pc.	194 0 0 0 1 4 6 9 3 6	Speed controller flush-mounted, Jung, 5-speed; dial with 0-1-2-3-4-5 switching positions, central panel, cover plate and frame in Alpine white Voltage 230 V/50 Hz Protection class IP 20 Dimensions W x H x D 65 x 65 x 42 mm Article group 1.94, Manufacturer Kampmann, Article no. 194000146936, type 146936		
pc.	194 0 0 0 1 4 6 9 2 7	Room thermostat flush-mounted, Jung, setpoint is set using dial on front panel, main switch with control light, with thermal feedback and separate input for night setback, Alpine white central panel and frame Temperature setting range 5-30 °C Switching difference 0.5 K Night setback 4 K Protection class IP 20 Voltage 230 V/50 Hz Maximum power consumption 4 A Dimensions W x H x D 65 x 65 x 42 mm Article group 1.94, Manufacturer Kampmann, Article no. 194000146927, type 146927		
pc.	194 0 0 0 1 4 6 9 2 9	Double frame Jung, Alpine white; for the combined fitting of speed controller type 146936 and room thermostat type 146927 Article group 1.94, Manufacturer Kampmann, Article no. 194000146929, type 146929		
pc.	194 0 0 0 1 4 6 9 2 4	Room thermostat with speed controller in a flat, slimline surface-mounted casing, white, with thermal feedback, temperature range limitation, on/off fan switch with integral speed control for the 0-100% parallel control of up to a maximum of 10 Katherm QE units Temperature setting range 5-30 °C Protection class IP 30 Voltage 230 V/50 Hz Max. power consumption 4 A Dimensions W x H x D 74 x 74 x 39 mm Article group 1.94, Manufacturer Kampmann, Article no. 194000146924, type 146924		
pc.	194 0 0 0 1 4 6 9 1 0	Clock thermostat in an attractive white surface-mounted casing, with electronic 2-point room temperature control and digital week time switch, power reserve of approx. 4 h, override function, mode indicator with Automatic/Day/Night/Off operating switch, settable switching differential Temperature setting range 5-40 °C Night setback 2-10 K Protection class IP 20 Voltage 230 V/50 Hz Max. power consumption 4 A Dimensions W x H x D 132 x 82 x 32 mm Article group 1.94, Manufacturer Kampmann, Article no. 194000146910, type 146910		
pc.	194 0 0 0 1 4 6 9 3 2	Clock thermostat flush-mounted, white frame and front panel; large-scale display with preset and actual temperature indicator, 4-key operating panel, day/week programme setting, override function, frost protection Temperature setting range 5-40 °C Protection class IP 40 Voltage 230 V/50 Hz Power reserve approx. 4 hours Contact single-ended changeover contact Max. power consumption 2 A Dimensions 84 x 84 mm, 18 mm (height from wall) Article group 1.94, Manufacturer Kampmann, Article no. 194000146932, type 146932		

Required to complete article no. for DataNorm/EDV

Specifications

National

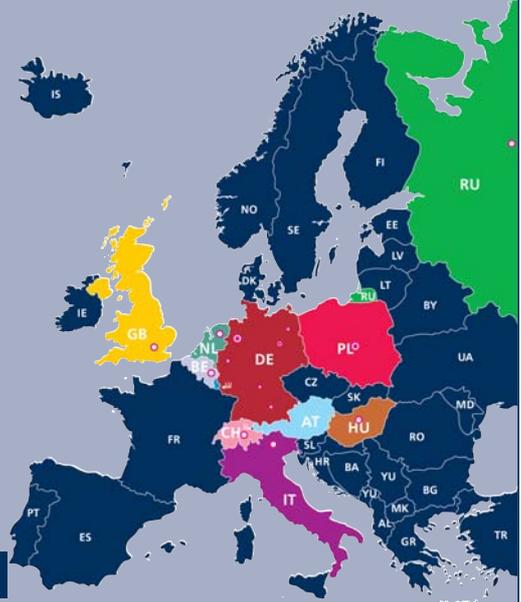
KAMPMANN GmbH • Friedrich-Ebert-Straße 128-130 • 49811 Lingen (Ems)

Tel. +49 591 7108-0 • Fax +49 591 7108-300 • www.kampmann.de • info@kampmann.de

KAMPMANN GmbH Niederlassung Nord und West 1 Friedrich-Ebert-Straße 128-130 49811 Lingen (Ems)	Tel. +49 591 7108-0 Fax +49 591 7108-300		KAMPMANN GmbH Niederlassung Ost Johann-Gutenberg-Platz 1 06773 Gräfenhainichen	Tel. +49 34953 31-3 Fax +49 34953 31-494
KAMPMANN GmbH Niederlassung West 2 Altenberger-Dom-Straße 113 51467 Bergisch Gladbach	Tel. +49 2202 98892-0 Fax +49 2202 98892-16		KAMPMANN GmbH Niederlassung Süd 1 Liebigstraße 13 97080 Würzburg	Tel. +49 931 98087-0 Fax +49 931 98087-16
KAMPMANN GmbH Niederlassung Berlin Hauptstraße 132 16547 Birkenwerder	Tel. +49 3303 5375-0 Fax +49 3303 5375-16		KAMPMANN GmbH Niederlassung Süd 2 Bahnhofstraße 1 82216 Maisach	Tel. +49 8141 3991-0 Fax +49 8141 3991-16



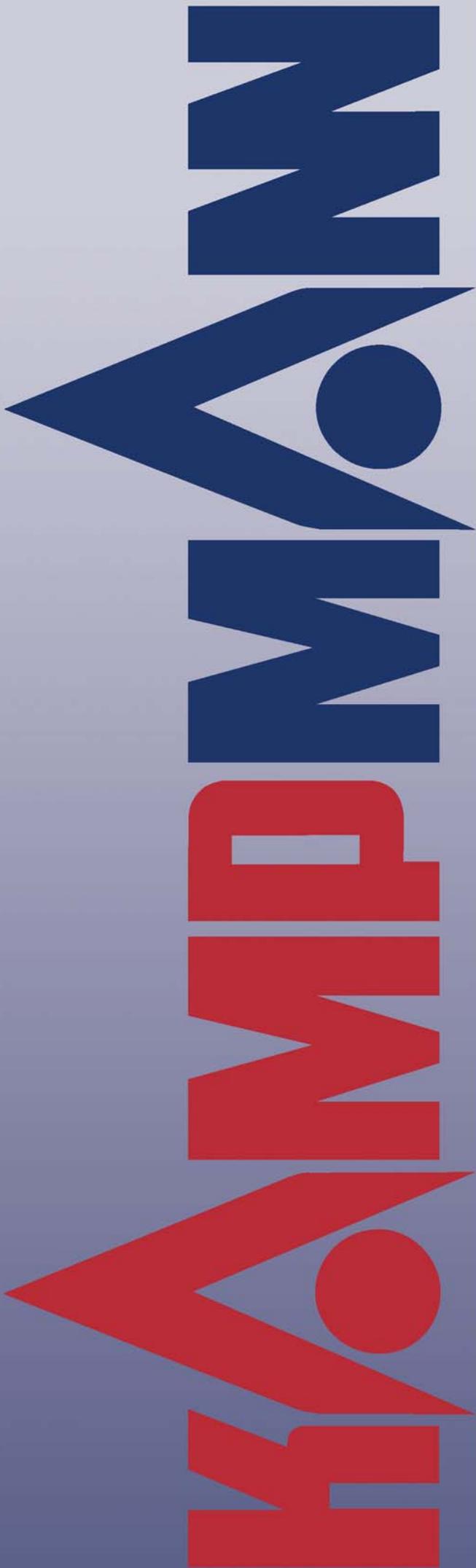
International



AT	KAMPMANN GmbH Austria Office Bahnhofstraße 1 82216 Maisach – Germany	Tel. +49 8141 3991-0 Fax +49 8141 3991-16 www.kampmann.at	IT	KAMPMANN GmbH Italy Office Tecnoprisma S.R.L. Via del Vigneto, 19 Il piano 39100 Bolzano	Tel. +39 0471 930158 Fax +39 0471 513078 www.kampmann.it
BE	KAMPMANN GmbH Belgium Office Godsheidestraat 1 3600 Genk	Tel. +32 11 378467 Fax +32 11 378468 www.kampmann.be	LU	KAMPMANN GmbH Luxemburg Office Godsheidestraat 1 3600 Genk – Belgium	Tel. +32 11 378467 Fax +32 11 378468 www.kampmann.be
CH	KAMPMANN GmbH Repräsentanz Schweiz Tödisstraße 60 8002 Zürich	Tel. +41 44 2836-185 Fax +41 44 2836-186 www.kampmann.ch	NL	KAMPMANN GmbH Netherlands Office Boeierstraat 10 A 8102 HS Raalte	Tel. +31 572 393214 Fax +31 572 382048 www.kampmann.nl
CN	KAMPMANN (Beijing) Co., Ltd. 1102, Block A, Gateway Plaza No. 18, Xia Guang Li, North Road, Chaoyang District 100027 Beijing	Tel. +86 10 59231278 Fax +86 10 59231248 www.kampmann.cn	PL	KAMPMANN Polska Sp. z o. o. ul. Lotnicza 21f 99-100 Łęczycza	Tel. +48 24 7219100 Fax +48 24 7219190 www.kampmann.pl
GB	KAMPMANN GmbH UK Office Dial House Govett Avenue, Shepperton, Middlesex, TW17 8AG	Tel. +44 1932 228592 Fax +44 1932 228949 www.kampmann-uk.co.uk	PL	KAMPMANN Polska Sp. z o. o. ul. Słowackiego 1 85-008 Bydgoszcz	Tel. +48 52 5836536 Fax +48 52 3406511 www.kampmann.pl
HU	KAMPMANN GmbH Hungary Office 1031 Budapest Órló u. 30	Tel. +36 1 2426830 Fax +36 1 4532416 www.kampmann.hu	RU	KAMPMANN GmbH Representative Office Moscow ul. 4 Magistralnaya, dom 11, stroenie 2 123007 Moscow	Tel. +7 495 3630244 Fax +7 495 3630244 www.kampmann-rus.ru

all other
countries

KAMPMANN GmbH • Friedrich-Ebert-Straße 128-130 • 49811 Lingen (Ems) – Germany
Tel. +49 591 7108-660 • Fax +49 591 7108-173 • www.kampmann.de



KAMPMANN GmbH

UK Office

Dial House

Govett Avenue • Shepperton, Middlesex TW17 8AG

Tel. +44 1932 228592 • Fax +44 1932 228949

info@kampmann-uk.co.uk • www.kampmann-uk.co.uk

Keane Environmental Ltd

Kilkenny Office • Kilcross • Inistioge • Co. Kilkenny

Tel. +353 56 7758524 • Fax +353 56 7758737

keaneenv@iol.ie • www.kampmann.de



SYSTEMS FOR HEATING • COOLING • VENTILATING

KAMPMANN GMBH • Germany

Friedrich-Ebert-Straße 128 - 130 • 49811 Lingen (Ems)

Telefon: +49 591 7108-0 • Telefax +49 591 7108-300

info@kampmann.de • www.kampmann.de