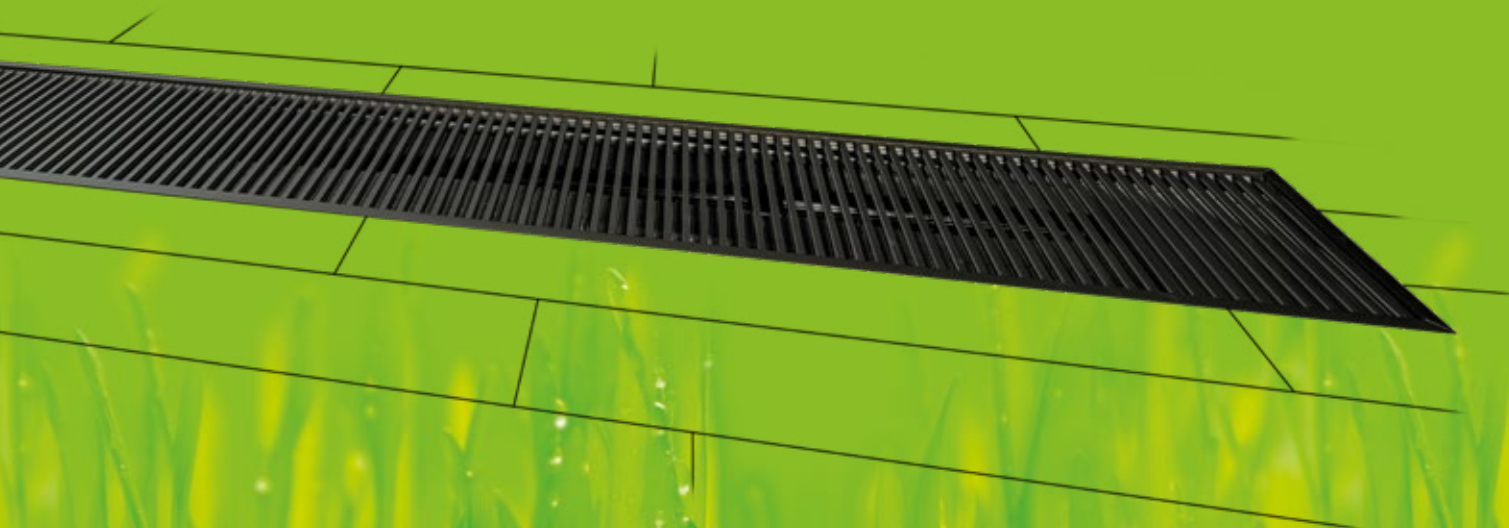


MINIB[®] 

●●● more than just heat

**HEATING AND
COOLING UNITS**



WHY MINIB?

We are a leading European manufacturer of heating and cooling units, exporting to 50+ countries across Europe, Asia, and America. With 25+ years of experience, MINIB is a trusted industry partner.

Our product portfolio includes ultra-silent convectors, fan-coils, and chilled beams for heating, cooling, and ventilation. Take advantage of our expertise and involve us in your project today.



Quality

- Excellence is our priority
- 3-level quality control system
- Independently certified product



Reliability

- More than 25 years of experience
- In-house design and production
- Made in Czech Republic



Customer orientation

- Providing customized solutions
- Flexibility in production
- Short delivery time



Innovations & Development

- Awards and patents
- ISO 9001 certification
- Collaboration with universities



Consultation services

- Our priority is proper system installation
- Personal consultation for optimal solutions



Ecology and Sustainability

- Products suitable for ecological low-heat sources
- 98 % recyclable components
- Enhancing energy efficiency in buildings

Reference projects



Smíchov City
Prague, Czech Republic



The Lindis Lodge
Ahuriri Valley, New Zealand



Mondadori
Italy

As a part of the product development, MINIB, a.s. reserves the right of construction and price adjustments. Copying of catalogue texts or images is possible only with the consent of MINIB, a.s.

KEY BENEFITS OF MINIB CONVECTORS:

Economic and stylish solution for heating, cooling and ventilation



Quality Assurance

- Spot Welding for Strong and Discreet Connections of the stainless steel part
- In house Designed and produced Heat Exchanger
- **High pressure Water Inflation to 180 Bar and Multiple Leak Tests**



Performance, Ultra Silence and Cooling option

- High quality EC motors and own new fan design with optimized airflow **completely eliminate unwanted operating noise**
- Provides a unique cooling option, providing flexible climate control solutions.
- Microprocessor controlled Controller for Simple Speed Control
- Performance Tested According to EN16430



Customization and Adaptability

- Variable Controller Adjustment for Tailored Fan Speed
- Consultation already during the projecting phase to receive an optimal product in terms of space, function, appearance and price



Trendsetting with Cost-Effective Solutions

- Energy-efficient EC motors
- Maximized Performance Using a Minimal Amount of Heating/Cooling Medium
- Low Operational Costs
- Suitable for Low Temperature Heating Systems

up to **33%***
up to **higher performance efficiency** in glazed areas than radiators

up to **5x***
up to **lighter and 3x smaller** than traditional radiators at the same power output

up to **50%***
up to **lower annual heating costs** using heat pump when compared to panel radiators

up to **10x***
up to **faster convector response** when controlled by thermostat compared to radiators

* source: MINIB laboratory / Study performed on selected types of heating units. It is always necessary to compare specific projects.



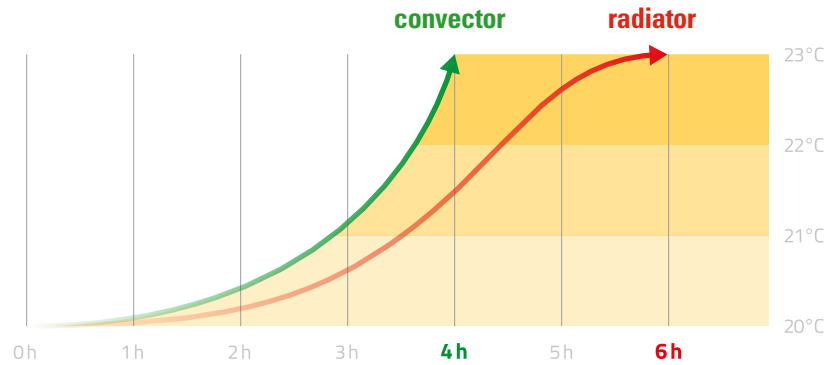
WHY TO USE CONVECTORS FOR HEATING?

Maximally efficient customized heating solutions for particular interiors

Convectors use airflow for the heating process. Contrary to other heating systems, they are easy to install. They maintain and offer a great shape variability. Some convector models can be also used for cooling.

Faster heating up of any room

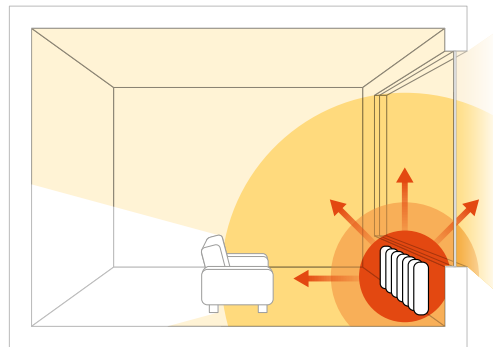
Convectors contain only a small volume of water. Compared to radiators, they can heat up rooms significantly faster, with less energy.



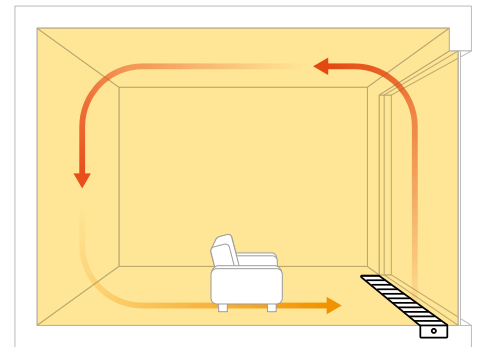
Example of the room heating process: convector vs. radiator

Optimal heat distribution

Contrary to radiators, convectors do not radiate heat into walls, thus allowing for its efficient distribution throughout the room. Thanks to their design and operation mode, they are ideal for use under French windows and large glazed areas.



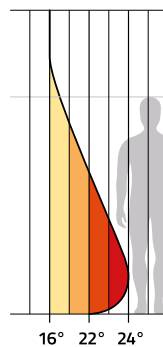
Airflow - radiator



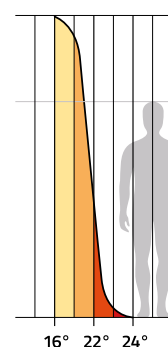
Airflow - convector

Natural heat circulation

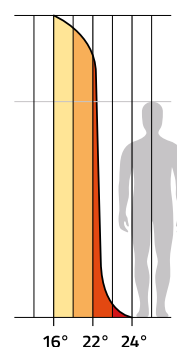
Floor heaters radiate heat from the bottom, thus preventing natural airflow. On the other hand, convectors support natural air circulation, thus contributing to a more even heat distribution in any given space.



Floor heaters

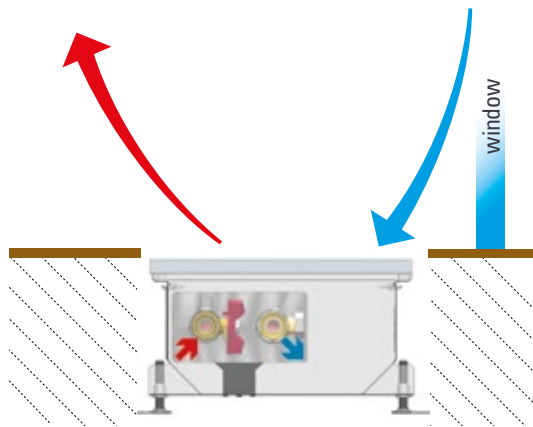


Ideal vertical heat distribution

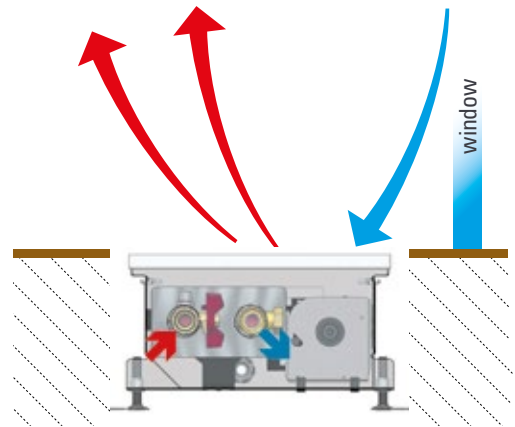


Convector

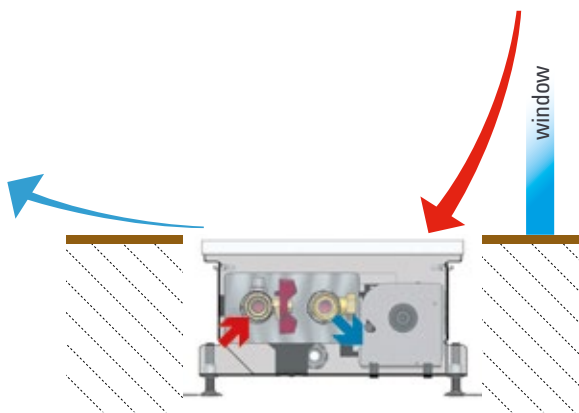
EXAMPLES OF AIRFLOW IN THE INTERIOR



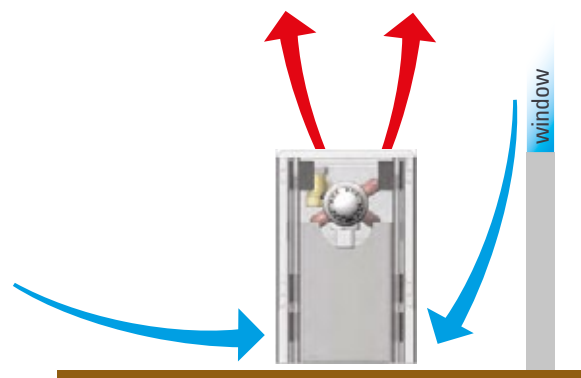
trench heater without fan



trench heater with fan - HEATING function



trench heater with fan - COOLING function



free-standing and wall-mounted convector



OVERVIEW OF CONVECTORS AND TABLE OF CONTENTS

Type	Fan	Function	Env.	Material	Convector							
					Convector	Width [mm]	Height [mm]	Output [W/m]				
TRENCH HEATERS	without fan	heating	dry	Ss	P	243	80	221				
						243	125	297				
						303	80	227				
						303	120	346				
						303	125	392				
					Ss / (E)-Zn	PB / PB E	200	90	194			
							200	110	215			
							200	140	329			
							260	90	242			
				wet	PO	260	110	286				
						260	140	412				
						340	90	322				
						340	110	383				
						340	140	491				
						420	90	334				
						420	110	455				
						420	140	576				
						with fan	heating	dry	Ss	TE - elect.	303	125
	T	165	50	461								
		164	125	545								
		243	65	897								
		243	80	916								
	HT	185	90	1239								
		225	90	1798								
	KT	243	90	967								
		243	110	1024								
		243	125	1336								
		303	110	1141								
		303	125	1484								
	TO	243	85	1159								
		303	125	1484								
	with fan	heating and cooling	dry	Ss	HC						H	C
										200	110	1252
					260					110	1816	472
					340	110	2401	792				
340					150	3383	932					
340					185	3860	1228					
HC 4P					260	110	1032	357				
					340	110	1589	754				
					340	150	1398	816				
					340	185	1442	1204				
HC AIR					356	110	2401	792				
HC 4P AIR					356	110	1589	754				

Ss - Stainless steel
Zn - Galvanized steel
Al - Aluminium

H - Heating
C - Cooling



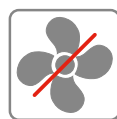
heating



cooling



with fan



without fan



dry environment



wet environment



heat pump

Type	Fan	Function	Env.	Material	Convector							
					Convector	Width [mm]	Height [mm]	Output [W/m]				
FREE-STANDING	without fan	heating	dry or wet	Ss	SPB	120	260	558				
							360	636				
							460	705				
						160	160	408				
							260	864				
							360	985				
						205	260	1117				
							360	1272				
							460	1410				
					230	260	1296					
						360	1477					
						460	1637					
					SKB	120	260	1565				
						160	260	2507				
						205	260	2817				
WALL-MOUNTED	without fan	heating	dry or wet	Ss	NPB	100	185	558				
							285	636				
							385	705				
						140	185	864				
							285	985				
							385	1092				
						185	185	1117				
							285	1272				
							385	1410				
					210	185	1296					
						285	1477					
						385	1637					
					with fan	heating/cooling	dry	Ss	NKB	100	205	1565
										140	165	2507
										185	205	2817
			H	C								
	NC	150	395	3553					1012			
	NC 4P	150	395	1502					885			
	SPECIAL	with fan	heating	dry	see datasheet	ST	330	190	1084			
						SKF PTG	150	318	1961			
						NKF PTG	150	256	1289			
SD						180	270	1961				
ND						115	500	1366				
KP						272	135	1322				
KZ						91	328	1358				
SK						286	80	693 / 600 mm				
CHC						592	216	5046 / 1200 mm	1032 / 1200 mm			
IJ-2P / 4P						592	186	see datasheet				

heating output with heat gradient: 75/65/20 °C - fan speed 2nd
 cooling output with heat gradient: 7/12/27 °C - fan speed 2nd (sens.)

Our products are subject to continuous development and innovation, ensuring you get the latest in efficiency and performance. For the most up-to-date technical data, always refer to the Toolbox application at mmb.minib.cz or the calculator on our website minib.com.

TRENCH HEATERS WITHOUT FAN

Example of order code

KPSA P 243 09 080 21A



INDIVIDUAL CALCULATION
of technical data
can be found on our website



P LINE ► TRENCH HEATER WITH NATURAL CONVECTION



CHARACTERISTICS

- body made from high quality stainless steel
- convector without a fan for dry environment
- high natural convection efficiency
- short response time

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
heating output with heat gradient 75/65/20°C [W]															
KPSA	P	L / P	243	080	190	221	300	379	458	537	616	695	774	853	21A
		L / P	243	125	255	297	403	509	615	721	827	933	1039	1145	21A
		L / P	303	080	195	227	308	389	470	551	632	713	794	875	21A
		L / P	303	120	296	346	469	592	716	839	963	1086	1209	1333	21A
		L / P	303	125	336	392	532	672	812	952	1092	1232	1372	1512	41A

PB LINE ► UNIVERSAL CONSTRUCTION SOLUTION



CHARACTERISTICS

- high natural convection heating power
- stainless steel (PB) body or black coated galvanized steel (PBE) body
- universal right/left design
- wide range of standard widths and heights
- convectors can be connected to joints of any length

Orientation: U = universal left-right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
heating output with heat gradient 75/65/20°C [W]															
KPSA	PB / PB E	U	200	090	166	194	263	332	401	470	539	609	678	747	21A
		U	200	110	197	230	312	394	476	558	640	722	804	886	21A
		U	200	140	273	319	433	546	660	774	888	1002	1115	1229	41A
		U	260	090	207	242	328	415	501	588	674	761	847	934	21A
		U	260	110	245	286	388	490	592	695	797	899	1001	1103	21A
		U	260	140	353	412	559	706	853	1000	1147	1294	1441	1588	41A
		U	340	090	276	322	437	552	667	782	897	1012	1127	1242	41A
		U	340	110	328	383	519	656	792	929	1066	1202	1339	1475	41A
		U	340	140	421	491	667	842	1017	1193	1368	1544	1719	1895	81A
		U	420	090	286	334	453	572	691	811	930	1049	1168	1288	41A
		U	420	110	390	455	618	781	943	1106	1268	1431	1594	1756	41A
		U	420	140	544	634	861	1087	1314	1540	1766	1993	2219	2446	81A

The grilles are not part of the convectors, they must be ordered separately. For the grilles see page 13.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the covering grille, the connection type.

PO LINE ► FOR WET ENVIRONMENT



CHARACTERISTICS

- the body of the convector is made from a high quality stainless steel
- convector without a fan for dry environment
- high natural convection efficiency
- short response time
- for use in humid / wet environments
- the convector cannot be installed for a swimming pool with salty or otherwise corrosive water

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
					heating output with heat gradient 75/65/20°C [W]										
KPMA	PO	L / P	303	125	336	392	532	672	812	952	1092	1232	1372	1512	41A

⚠ Convector placed in humid environment can not come into direct contact with water.

TRENCH HEATERS WITH FAN

TE ► DIRECT ELECTRICITY CONVECTOR WITH A FAN



CHARACTERISTICS

- direct electricity convector with a fan for 230 V
- high output
- very short response time
- suitable for interior applications with no hot water supply
- suitable for wooden interiors and wooden constructions

Orientation: L = left electricity connection / P = right electricity connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]					Type
					05 = 500 [mm]	10 = 1000 [mm]	15 = 1500 [mm]	20 = 2000 [mm]	25 = 2500 [mm]	
► Heating output [W]										
KPSD	TE	L / P	303	125	750	1500	2250	3000	3750	01A
► Other technical data										
Equivalent acoustic pressure level LAeq, 2m [dB]		TE	303	125	25,3	26,4	27,5	29,5	30,6	

230 V

The grilles are not part of the convectors, they must be ordered separately. For the grilles see page 13.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the covering grille, the connection type.

T LINE ▶



CHARACTERISTICS

- forced convection unit (heats also when the fan is off)
- high quality stainless steel body
- for installations within limited space
- electronically commutated (EC) motor
- safe voltage 12/24 V DC
- own microprocessor-controlled unit with a wide range of settings
- suitable for heat pumps and other renewable energy sources

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2															
KPSD	T	L / P	165	065	395	461	626	791	956	1121	1285	1450	1615	1780	21A
		L / P	165	125	487	568	771	974	1177	1380	1582	1785	1988	2191	21A
		L / P	243	065	769	897	1217	1537	1858	2178	2498	2819	3139	3459	21A
		L / P	243	080	785	916	1244	1571	1898	2226	2553	2880	3207	3535	21A
▶ Other technical data															
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	T		165	065	23,7	23,8	24,1	24,3	24,6	24,8	25	25,1	26,1	27,1	
			165	125	23,6	23,9	24,7	25,4	26	26,6	27,1	27,6	28,1	28,6	
			243	065	25,9	26	26,2	26,3	26,7	27	27,1	27,2	28,2	29,2	
			243	080	25,4	25,8	26,8	27,9	28,7	29,8	30,8	31,9	32,7	33,8	
Input power - EC motor [W]	T	165/243	065/125	6	8	8	12	13	20	20	24	24	32		

HT LINE ▶



CHARACTERISTICS

- **minimal dimensions with very high performance**
- forced convection (heats even without the fan on)
- ultra-silent fan - our advanced fan construction and new setting of the microprocessor control unit effectively eliminate operating noise
- body made from high quality stainless steel
- electronically commutated (EC) fan optimized for high performance and low vibration
- safe voltage 24 V DC
- control unit with its own microprocessor enabling a wide range of settings
- ideal for low-temperature energy sources

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	27 = 2750 [mm]	30 = 3000 [mm]		
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2															
KPSD	HT	L / P	185	90	1062	1239	1682	2125	2567	3010	3453	4338	4781	41A	
		L / P	225	90	1541	1798	2440	3082	3724	4366	5008	6292	6934	61A	
▶ Other technical data															
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	HT	185 / 225	090	22,4	22,6	23,1	23,6	23,8	23,9	24,7	26,3	27,1			
Input power - EC motor [W]	HT	185 / 225	090	5	5	7	11	13	13	17	21	24			

The grilles are not part of the convectors, they must be ordered separately. For the grilles see page 13.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the covering grille, the connection type.

KT LINE ▶



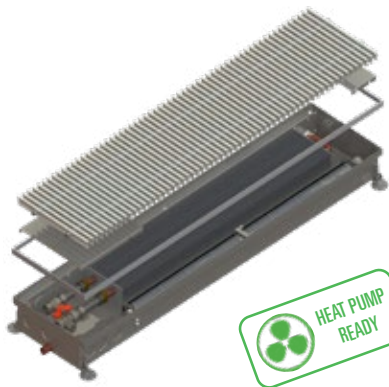
CHARACTERISTICS

- **high heating performance of forced convection**
- forced convection (heats even without the fan on)
- ultra-silent fan - our advanced fan construction and new setting of the microprocessor control unit effectively eliminate operating noise
- body made from high quality stainless steel
- electronically commutated (EC) fan optimized for high performance and low vibration
- safe voltage 24 V DC
- control unit with its own microprocessor
- enabling a wide range of settings
- suitable for heat pumps and other renewable sources energy sources

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2															
KPSD	KT	L / P	243	90	828	967	1312	1657	2002	2347	2692	3038	3383	3728	21A
		L / P	243	110	881	1028	1395	1763	2130	2497	2864	3231	3599	3966	21A
		L / P	243	125	1145	1336	1813	2290	2767	3244	3721	4199	4676	5153	41A
		L / P	303	110	979	1142	1550	1958	2366	2775	3183	3591	3999	4407	21A
		L / P	303	125	1272	1484	2014	2545	3075	3605	4135	4665	5195	5725	41A
▶ Other technical data															
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	KT		243	090	22,4	22,6	23,1	23,6	23,8	23,9	24,7	25,5	26,3	27,1	
			243	110 / 125	22,1	22,2	22,5	22,8	23	23,2	24,8	26,3	26,6	26,8	
			303	110 / 125	22,1	22,2	22,5	22,8	23	23,2	24,8	26,3	26,6	26,8	
Input power - EC motor [W]	KT	243	090/110/125	6	6	10	11	12	16	17	17	22	22		

TO LINE ▶ FOR WET ENVIRONMENT



CHARACTERISTICS

- can be used in humid / wet environments
- body made from high quality stainless steel
- high forced convection output, heating also when the fan is off
- safe 12 AC voltage
- does not serve as a drain trough
- it is not possible to install it with salt or otherwise aggressive water pools

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2															
KPMD	TO	L / P	243	085	993	1159	1572	1986	2400	2814	3228	3641	4055	4469	21A
		L / P	303	125	1272	1484	2014	2545	3075	3605	4135	4665	5195	5725	41A
▶ Other technical data															
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	TO		243	085	25,4	25,8	26,8	27,9	28,7	29,8	30,8	31,9	32,7	33,8	
			303	125	22,1	22,2	22,5	22,8	23	23,2	24,8	26,3	26,6	26,8	
Input power - EC motor [W]	TO		243	085	34	34	34	69	69	69	103	103	103	137	
			303	125	39	39	53	78	92	106	119	133	145	159	

⚠ Convectors placed in a humid environment can not come into direct contact with water.

The grilles are not part of the convectors, they must be ordered separately. For the grilles see page 13.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the covering grille, the connection type.

TRENCH HEATERS WITH FAN AND COOLING OPTION

HC LINE ▶



CHARACTERISTICS

- for cooling and heating
- high performance of forced convection (heats even when fan is off)
- stainless steel body
- available in many variants to suit your exact needs
- electronically commutated (EC) fan optimized for
- high performance and low vibration
- safe voltage 24 V DC
- control unit with its own microprocessor enabling a wide range of settings
- suitable for heat pumps and other renewable energy sources
- **4P** - double-circuit connection - the heating and cooling circuit can be used separately
- **AIR** - with connection to HVAC



Orientation: L = left water connection / P = right water connection

Category	Convactor	Orientation	Width [mm]	Height [mm]	Length [mm]										Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]	

▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2
 ▶ Cooling output with heat gradient 7/12/27 °C [W]-fan speed 2 (sens.)

single-circuit convactor with heating OR cooling function																	
KPSF	HC	L / P	200	110	1073	1252	1699	2146	2593	3040	3487	3934	4382	4829	41A		
					302	352	477	603	729	854	980	1106	1231	1357			
		L / P	260	110	1556	1816	2464	3113	3761	4410	5058	5707	6355	7004	41A		
					405	472	641	809	978	1147	1315	1484	1652	1821			
		L / P	340	110	2058	2401	3258	4116	4973	5831	6688	7546	8403	9261	81A		
					679	792	1075	1357	1640	1923	2206	2488	2771	3054			
		L / P	340	150	2900	3383	4592	5800	7008	8217	9425	10633	11842	13050	C1A		
					799	932	1265	1598	1931	2264	2596	2929	3262	3595			
		L / P	340	185	3309	3860	5239	6618	7997	9375	10756	12133	13512	14890	G1A		
					1052	1228	1666	2105	2543	2982	3420	3859	4297	4736			
double-circuit convactor with heating AND cooling function																	
KPSE	HC 4P	L / P	260	110	884	1032	1400	1769	2137	2506	2874	3243	3611	3980	61A		
					306	357	485	613	740	868	996	1123	1251	1378			
		L / P	340	110	1362	1589	2156	2723	3291	3858	4425	4993	5560	6128	81A		
					646	754	1023	1293	1562	1831	2101	2370	2639	2908			
		L / P	340	150	1198	1398	1898	2397	2896	3396	3895	4394	4894	5393	C1A		
					699	816	1107	1398	1689	1981	2272	2563	2854	3146			
		L / P	340	185	1236	1442	1957	2472	2987	3502	4017	4532	5047	5562	G1A		
					1032	1204	1633	2063	2493	2923	3353	3783	4213	4642			
		single-circuit convactor with heating OR cooling function AND ventilation															
		KPSH	HC AIR	L / P	356	110	2058	2401	3259	4116	4974	5831	6689	7546	8404	9261	81A
679	792						1075	1357	1640	1923	2206	2488	2771	3054			
double-circuit convactor with heating AND cooling function AND ventilation																	
KPSG	HC 4P AIR	L / P	356	110	1362	1589	2156	2723	3291	3858	4425	4993	5560	6128	81A		
					646	754	1023	1293	1562	1831	2101	2370	2639	2908			

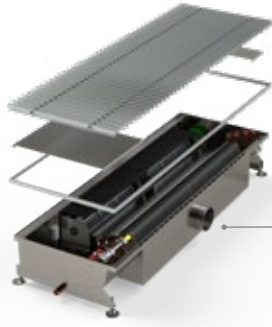
Other technical data

Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	HC / HC 4P / AIR version	200/260	110	22,4	22,6	23,1	23,6	23,8	23,9	24,7	25,5	26,3	27,1
		340/356 (AIR)	110/150	32,6	33,2	34,7	34,8	35,9	36,1	36,3	36,5	36,7	36,9
		340	185	34,8	35,0	35,5	36,0	37,0	38,0	38,3	38,5	38,8	39,0
Input power - EC motor [W]	HC / HC 4P / AIR version	200/260	110	6	7	8	11	13	15	18	20	22	24
		340	110/150	16	27	24	40	54	48	72	81	77	99
		340	185	17	18	50	75	84	90	93	102	150	168

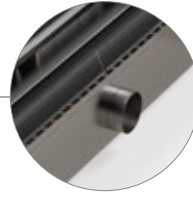
The grilles are not part of the convectors, they must be ordered separately. For the grilles see page 13.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convactor, the covering grille, the connection type.

TRENCH HEATERS WITH AIR SPIGOT FOR CONNECTION TO HVAC



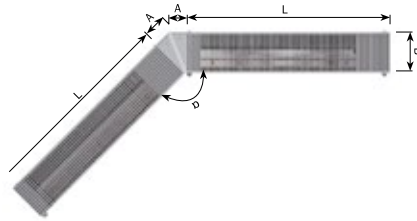
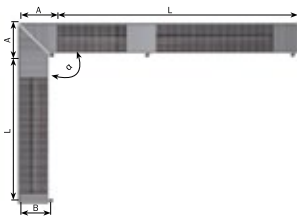
We are able to produce air spigot of **any shape and dimensions** according to customer requirements for most of our standard convectors, ensuring fresh air supply and healthy ventilation.



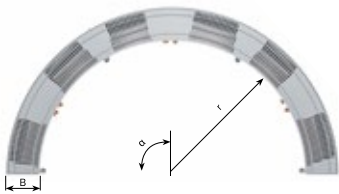
illustrative picture about possible design of air spigot

POSSIBLE ANGLES AND ARCS OF TRENCH HEATERS

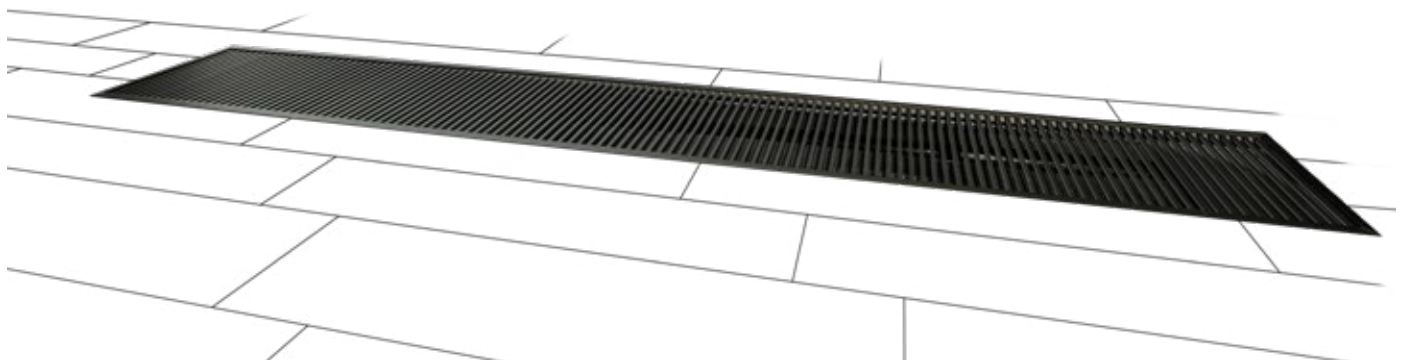
ANGLE TYPE OF CONNECTION



ARC TYPE OF CONNECTION

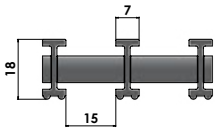


For atypical convectors please contact your sales representative

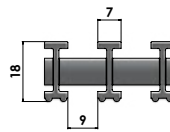


GRILLES ► PROFILES

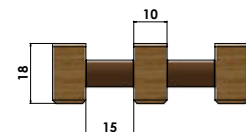
- AL - ROLLING / STABLE* - SPARSE



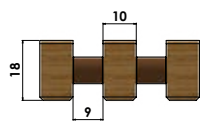
- AL - ROLLING / STABLE* - DENSE



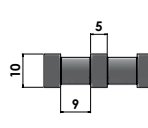
- WOOD - ROLLING / STABLE* - SPARSE



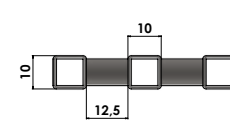
- WOOD - ROLLING / STABLE* - DENSE



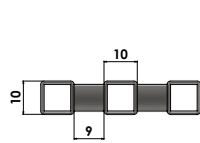
- AL - ROLLING / STABLE* - DENSE - 10mm



- ST.STEEL - ROLLING - SPARSE**



- ST.STEEL - ROLLING - DENSE**



* ROLLING and STABLE grilles do not differ visually. The STABLE grille is more rigid by the means of reinforced rod. It can not be rolled up. The ROLLING grille can be rolled up.

** the grille must be ordered with the convector due to the modification of the convector construction

In case of wet environment, please let us know when you order.

Standard grilles are transverse. If you are interested in LONGITUDINAL GRILLES, please contact your sales representative.

GRILLES ► MATERIALS AND COLOURS

WOOD*	oak	maple	beech
	silver	bronze	black
ALUMINIUM			
ST.STEEL	stainless steel	(shades of the grilles are only illustrative)	



The standard delivery of trench heaters includes convector, standard frame and anchoring accessories. The type and colour of the frame and grille must be specified. The grille must be ordered separately.

* Wooden grilles are supplied in an unfinished, untreated state. We recommend treating them prior to use for both heating and cooling.

FRAMES FOR TRENCH HEATERS

- Standard frame (AL-aluminium)



example with wooden grille

- Covering frame (AL-aluminium)



example with AL grille

* width of the convector = width of the frame / length of the convector = length of the frame

FREE-STANDING CONVECTORS

Example of order code



INDIVIDUAL CALCULATION
of technical data
can be found on our website.



SPB ► FREE-STANDING CONVECTORS WITHOUT A FAN



CHARACTERISTICS

- convector with natural convection for floor installation
- clean, timeless design in any RAL colour shade
- high heating power of natural convection (compared to conventional heaters)
- construction in stainless steel or galvanised sheet metal with internal black paintwork
- wide range of dimensions
- installation possible without construction preparation
- higher efficiency than floor convectors
- suitable for use in front of glazed areas due to low height
- environmentally friendly alternative to a radiator

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]						Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]-	17 = 1750 [mm]	20 = 2000 [mm]	
► Heating output with heat gradient 75/65/20°C [W]											
KSSA	SPB	L / P	120	260	492	558	722	886	1050	1214	21C4XA 1) 21C4XD
				360	561	636	823	1010	1197	1384	
				460	622	705	913	1120	1327	1535	
			160	160	360	408	528	648	768	888	21C4XA 1) 21C4XD
				260	762	864	1118	1372	1626	1880	
				360	869	985	1274	1564	1853	2143	
			205	460	963	1092	1413	1734	2055	2376	41C4XA 1) 41C4XD
				260	986	1117	1445	1774	2102	2431	
				360	1122	1272	1646	2020	2394	2768	
			230	460	1244	1410	1825	2240	2655	3069	81C4XA 1) 81C4XD
				260	1143	1296	1677	2058	2439	2820	
				360	1303	1477	1911	2346	2780	3215	
			460	1444	1637	2118	2600	3081	3563	61C4XA 1) 61C4XD	

1) A = convector ready for ELECTROTHERMIC HEAD inside or WITHOUT HEAD
D/O = convector ready for THERMOSTATIC HEAD outside at the front of convector.
CUSTOMER HEAD - must always be approved in advance!

The decorative grille must not be exposed to weight load or covered.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.



CHARACTERISTICS

- high heating power of forced convection (heats even without fan on)
- stainless steel body
- minimalist design with a focus on high reliability
- electronically commutated (EC) fan optimised for quiet operation
- safe voltage 12 V DC
- proprietary microprocessor-based control unit allowing a wide range of settings
- suitable for heat pumps and other renewable energy sources

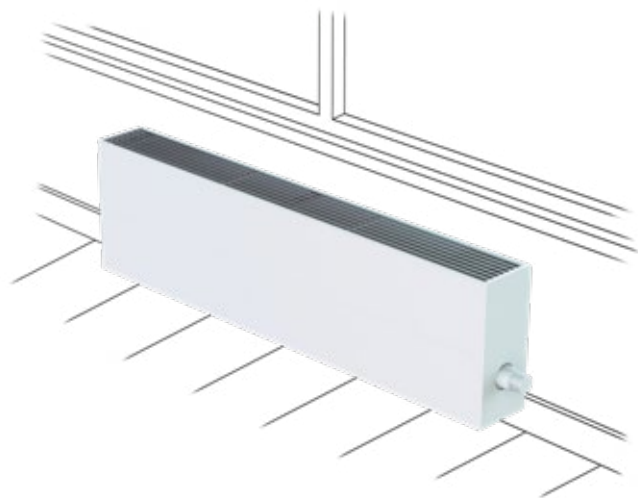
Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]						Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	
Heating output with heat gradient 75/65/20°C [W]-fan speed 2											
KSSD	SKB	L / P	120	260	1345	1565	2116	2667	3218	3769	41C4XA
			160	260	2153	2507	3389	4272	5154	6037	41C4XA
			205	260	2420	2792	3723	4653	5584	6515	81C4XA
Other technical data											
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	SKB	120	260	32,1	32,5	33,5	34,5	35	35,5		
		160/205	260	27	27,4	28,4	29,4	29,9	30,4		
Input power - EC motor [W]	SKB	120	260	3	3	4	5	7	8		
		160/205	260	3	3	4	6	7	8		

COLOUR OPTIONS

Standard colour combinations:

Anodized grille		Painted body	
Code	Colour	Code	Colour
2G	Black - elox	4A	Black
2A	Siler - elox	4C	Silver
2B	Light bronze - elox	4D	Light bronze
2F	White - RAL	4B	White
2X	any other - RAL	4X	any other - RAL



The decorative grille must not be exposed to weight load or covered.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.

WALL MOUNTED CONVECTORS

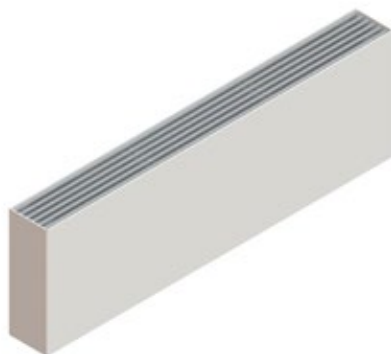
Example of order code



INDIVIDUAL CALCULATION
of technical data
can be found on our website.



NPB ► WALL MOUNTED CONVECTORS WITHOUT FAN



CHARACTERISTICS

- convector with natural convection for wall mounting
- clean, timeless design in any RAL colour shade
- high heating power of natural convection (compared to conventional heaters)
- stainless steel construction
- wide size range
- can be installed without construction preparation
- higher efficiency than floor convectors
- environmentally friendly alternative to a radiator

Orientation: L = left water connection / P = right water connection

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]						Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	
► Heating output with heat gradient 75/65/20°C [W]											
KNSA	NPB	L / P	100	185	492	558	722	886	1050	1214	21C4XA 1) 21C4XD
				285	561	636	823	1010	1197	1384	
				385	622	705	913	1120	1327	1535	
			140	185	762	864	1118	1372	1626	1880	41C4XA 1) 41C4XD
				285	869	985	1274	1564	1853	2143	
				385	963	1092	1413	1734	2055	2376	
			185	185	986	1117	1445	1774	2102	2431	81C4XA 1) 81C4XD
				285	1122	1272	1646	2020	2394	2768	
				385	1244	1410	1825	2240	2655	3069	
			210	185	1143	1296	1677	2058	2439	2820	61C4XA 1) 61C4XD
				285	1303	1477	1911	2346	2780	3215	
				385	1444	1637	2118	2600	3081	3563	

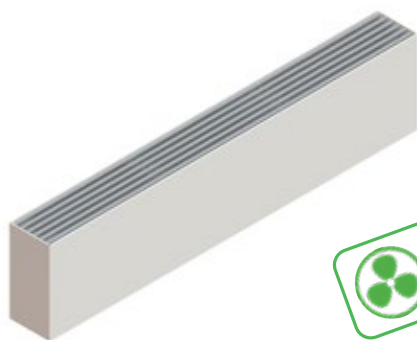
1) A = convector ready for ELECTROTHERMIC HEAD inside or WITHOUT HEAD

D/O = convector ready for THERMOSTATIC HEAD outside at the front of convector.
CUSTOMER HEAD - must always be approved in advance!

The decorative grille must not be exposed to weight load or covered.

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.

NKB ► WALL MOUNTED CONVECTORS WITH A FAN

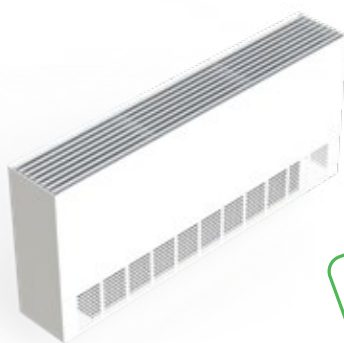


CHARACTERISTICS

- high heating power of forced convection (heats even without fan on)
- stainless steel body
- minimalist design with a focus on high reliability
- electronically commutated (EC) fan optimised for quiet operation
- safe voltage 12 V DC
- proprietary microprocessor-based control unit allowing
- a wide range of settings
- suitable for heat pump and other renewable energy sources

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]						Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	
Heating output with heat gradient 75/65/20°C [W]-fan speed 2											
KNSD	NKB	L / P	100	205	1345	1565	2116	2667	3218	3769	41C4XA
			140	165	2153	2507	3389	4272	5154	6037	41C4XA
			185	205	2420	2792	3723	4653	5584	6515	81C4XA
Other technical data											
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	NKB	100	205	32,1	32,5	33,5	34,5	35	35,5		
		140/185	165/205	27,0	27,4	28,4	29,4	29,9	30,4		
Input power - EC motor [W]	NKB	100	205	3	3	4	5	7	8		
		140/185	165/205	3	3	4	6	7	8		

NC ► WALL MOUNTED CONVECTORS WITH A FAN AND COOLING OPTION



CHARACTERISTICS

- for heating and cooling
- high forced convection performance (heats even without the fan on)
- stainless steel construction
- safe voltage 24 V DC
- microprocessor-controlled unit allowing a wide range of settings
- suitable for heat pump and other renewable energy sources
- electronically commutated (EC) fan optimized for quiet operation
- modern design, any RAL colour
- quiet operation
- easy installation without complicated construction preparations
- with aluminium or integrated grille
- ideal replacement for a radiator

Category	Convector	Orientation	Width [mm]	Height [mm]	Length [mm]						Type
					09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	
single-circuit convector with a function of heating OR cooling											
Heating output with heat gradient 75/65/20°C [W]-fan speed 2											
Cooling output with heat gradient 7/12/27 °C [W]-fan speed 2 (sens.)											
KNSF	NC	L / P	150	395	3086	3553	4722	5891	7060	8228	81C4XA
					879	1012	1345	1678	2011	2343	
double-circuit convector with a function of heating AND cooling											
Heating output with heat gradient 75/65/20°C [W]-fan speed 2											
Cooling output with heat gradient 7/12/27 °C [W]-fan speed 2 (sens.)											
KNSE	NC 4P	L / P	150	395	1305	1502	1996	2491	2985	3479	81C4XA
					769	885	1177	1468	1759	2051	
Other technical data											
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	NC / NC 4P	150	395	32,5	33,1	34,6	34,7	35,7	35,7		
Input power - EC motor [W]	NC / NC 4P	150	395	24	27	32	36	54	50		

SPECIAL CONVECTORS

BASED ON OUR CUSTOMERS' INDIVIDUAL PREFERENCES, WE CAN MANUFACTURE A WIDE RANGE OF CUSTOM PRODUCTS TO MEET ANY SPECIFIC NEEDS.

**WHATEVER SHAPE YOU ARE LOOKING FOR...
...WE CAN PROVIDE SOLUTION!**

delivery time as agreed with your sales representative

EXAMPLES OF SPECIAL REQUEST CONVECTORS



ST ▶ STEP CONVECTORS WITH ROBUST STEEL CONSTRUCTION



CHARACTERISTICS

- convector with easy installation and possibility to be placed under window
- benefits of high output due to optimal natural airflow
- robust steel construction

Convector	Orientation	Width [mm]	Height [mm]	Length [mm]									
				09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]	22 = 2250 [mm]	25 = 2500 [mm]	27 = 2750 [mm]	30 = 3000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]													
ST	L / P	330	190	949	1084	1423	1762	2101	2440	2779	3117	3456	3795

delivery time as agreed with your sales representative

SKF/ NKF PTG ▶ CONVECTORS WITH THERMOELECTRIC GENERATOR



CHARACTERISTICS

- WITHOUT THE NEED OF A POWER SUPPLY
- electronically commutated (EC) motor
- suitable for interior applications where no power supply is available
- silent operation
- high forced convection output
- rapid room heating
- suitable for heat pump and other renewable energy sources

SKF PTG - FREE-STANDING CONVECTOR WITH A FAN AND THERMOELECTRIC GENERATOR



Convector	Orientation	Width [mm]	Height [mm]	Length [mm]					
				09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2									
SKF PTG	L / P	150	318	1112	1289	1730	2172	2613	3054
▶ Other technical data									
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	SKF PTG	150	318	22,4	22,6	23,1	23,6	23,8	23,9

delivery time as agreed with your sales representative

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.

NKF PTG - WALL-MOUNTED CONVECTOR WITH A FAN AND THERMOELECTRIC GENERATOR



Convector	Orientation	Width [mm]	Height [mm]	Length [mm]					
				09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2									
NKF PTG	L / P	150	256	1112	1289	1730	2172	2613	3054
▶ Other technical data									
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	NKF PTG	150	256	22,4	22,6	23,1	23,6	23,8	23,9

delivery time as agreed with your sales representative

SD / ND ▶ DESIGN CONVECTORS WITH HIGH OUTPUT & TIMELESS DESIGN



CHARACTERISTICS

- the front panel is made of brushed stainless steel or painted in high gloss, placed in a solid wood frame
- electronically commutated (EC) motor
- high forced convection output
- heating unit with short response time
- rapid room heating
- heating also when the fan is off
- low electricity consumption
- safe 12V DC voltage
- contains own microprocessor controlled unit
- suitable for heat pump and other renewable energy sources

SD - DESIGN FREE-STANDING CONVECTOR



Convector	Orientation	Width [mm]	Height [mm]	Length [mm]				
				10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2								
SD	L / P	180	270	1961	2662	3363	4063	4764
▶ Other technical data								
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	SD	180	270	27,4	28,4	29,4	29,9	30,4
Input power - EC motor [W]	SD	120	260	3	4	6	7	8

delivery time as agreed with your sales representative

ND - DESIGN WALL-MOUNTED CONVECTOR

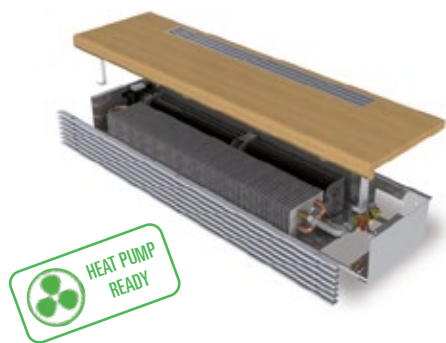


Convector	Orientation	Width [mm]	Height [mm]	Length [mm]				
				10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2								
ND	L / P	115	500	1542	2059	2577	3094	3612
▶ Other technical data								
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	ND	115	500	33,1	34,6	34,7	35,7	35,9
Input power - EC motor [W]	ND	115	500	27	32	36	54	54

delivery time as agreed with your sales representative

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.

KP ► WINDOWSILL CONVECTOR WITH A FAN



CHARACTERISTICS

- suitable for use in windowsills according to the given dimensions
- high heating output of the forced convection
- rapid room heating
- heating also when the fan is off
- low electricity consumption
- safe 24V DC voltage
- contains own microprocessor-controlled unit
- suitable for heat pump and other renewable energy sources
- electronically commutated (EC) motor

Convector	Orientation	Width [mm]	Height [mm]	Length [mm]			
				09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2							
KP	L / P	272	135	1133	1322	1794	2267
▶ Other technical data							
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	KP	272	135	22,7	22,9	23,4	23,9
▶							
Input power - EC motor [W]	KP	272	135	4	4	6	8

delivery time as agreed with your sales representative

KZ ► BUILT-IN CONVECTOR FOR INSTALLATION IN WALLS WITH FACE PANEL



CHARACTERISTICS

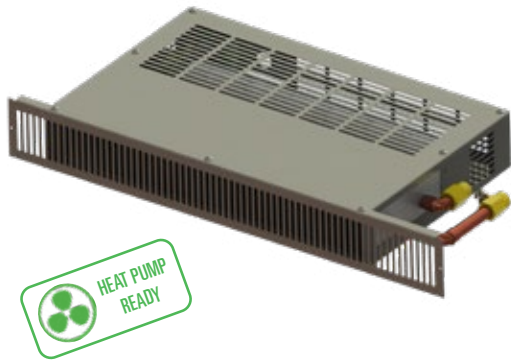
- for use in spaces with low build-in depth
- suitable for interiors with increased esthetic demands
- provides increased user comfort
- high heating output of the forced convection
- rapid room heating
- heating also when the fan is off
- low electricity consumption
- safe 12V DC voltage
- contains own microprocessor-controlled unit
- suitable for heat pump and other renewable energy sources
- electronically commutated (EC) motor

Convector	Orientation	Width [mm]	Height [mm]	Length [mm]					
				09 = 900 [mm]	10 = 1000 [mm]	12 = 1250 [mm]	15 = 1500 [mm]	17 = 1750 [mm]	20 = 2000 [mm]
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2									
KZ	L / P	91	328	1164	1358	1843	2328	2813	3298
▶ Other technical data									
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	KZ	91	328	22,7	22,9	23,4	23,9	24,1	24,3
▶									
Input power - EC motor [W]	KZ	91	328	4	4	6	8	9	10

delivery time as agreed with your sales representative

The technical parameters are set according to the standards EN 442 and EN16430. In fact, they may vary depending on the location of the convector, the cover grille, the connection type.

SK ► PLINTH CONVECTOR WITH A FAN WITH A HIGHT OF 80 MM



CHARACTERISTICS

- for multi-purpose use in kitchen counters, steps, wainscoting in bathrooms, hall, closets and other similar areas
- high forced convection output
- rapid room heating
- low electricity consumption
- safe 24V DC voltage
- inlet/outlet are at the front of unit
- contains own microprocessor-controlled unit
- suitable for heat pump and other renewable energy sources
- electronically commutated (EC) motor

Convector	Orientation	Width [mm]	Height [mm]	Length [mm]	
				600	
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2					
SK	L / P	286	80	693	
▶ Other technical data					
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	SK	286	80	22,7	
▶					
Input power - EC motor [W]	SK	286	80	4	

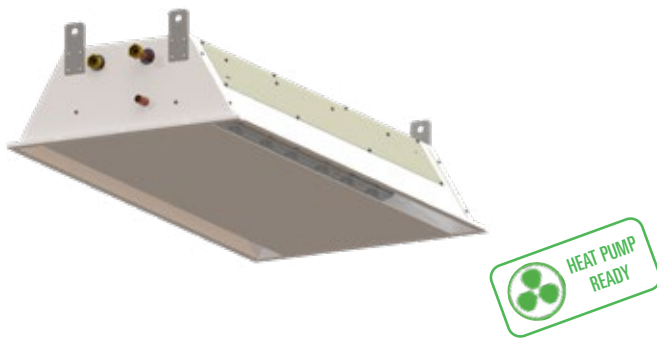
delivery time as agreed with your sales representative



illustrative photo of SK convector

CEILING CONVECTORS

CHC ► SPECIAL CEILING CONVECTOR WITH A FAN FOR HEATING AND COOLING



CHARACTERISTICS

- high forced convection output
- rapid room heating and cooling
- low electricity consumption
- safe 12V DC voltage
- designed also for cooling
- electronically commutated (EC) motor
- suitable for wet cooling

Convector	Orientation	Width [mm]	Height [mm]	Length [mm]			
				600	1200	1800	2400
▶ Heating output with heat gradient 75/65/20°C [W]-fan speed 2							
▶ Cooling output with heat gradient 7/12/27 °C [W]-fan speed 2 (sens.)							
CHC	L / P	592	216	2190	5046	7902	10758
				448	1032	1616	2200
▶ Other technical data							
Equivalent acoustic pressure level LAeq, 2m [dB] fan speed 2	CHC	592	216	36,4	37,8	39,3	40,2
▶							
Input power - EC motor [W]	CHC	592	216	4	12	18	25

delivery time as agreed with your sales representative

The technical parameters are set according to the standard EN 15116. In fact, they may vary depending on the location of the unit and the connection type.

CHILLED BEAM



IJ-2pipe / IJ-4pipe suspended ceilings / visible installation



suspended ceiling



visible installation

Download chilled beam catalogue



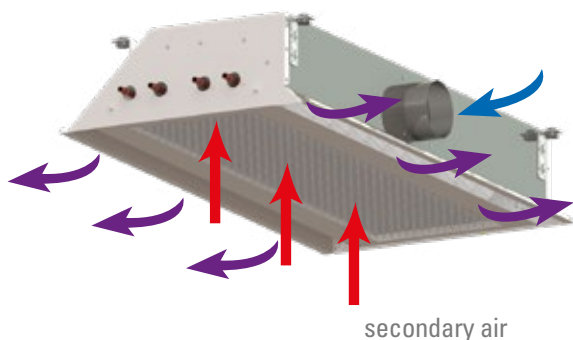
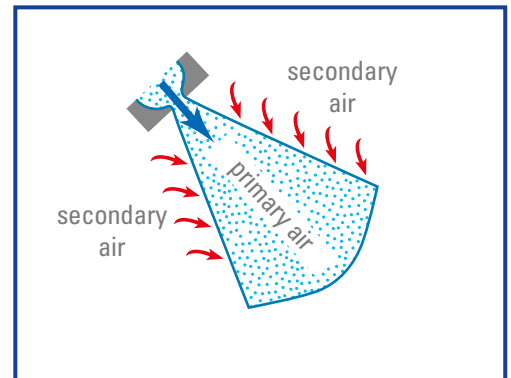
DIMENSIONS

	suspended ceiling	visible installation
width	592 mm	444mm
height	207 mm	228 mm
length	600 - 3000 mm	

CHARACTERISTICS

- specially developed for high cooling and heating outputs
- very high level of comfort
- does not contain fan, silent operation
- ideal for installation in ceiling
- optimisation of air flow by adjustable slats
- minimum maintenance requirements
- low operating cost
- allows for non-standard design according to the customer's requirements

close-up view of the nozzle position



primary air

secondary air

delivery time as agreed with your sales representative

Unit	Nozzle	Vpri [m ³ /h]	Δp [Pa]	Cooling output			Heating output		
				Qctot	Qpri [W]	Qc [W]	Qhtot	Qpri [W]	Qh [W]
IJ-2pipe	2F	91	200	2002	369	1633	4620	369	4251
	3F	191	200	4120	773	3348	11673	773	10901
	4B	218	200	3773	880	2893	8659	880	7779
	4I	296	200	4456	1196	3260	9683	1196	8487
	5A	378	200	4699	1526	3173	11438	1526	9912
IJ-4pipe	2F	91	200	1692	369	1323	4218	369	3849
	3F	191	200	3485	773	2713	10613	773	9840
	4B	218	200	3238	880	2358	7750	880	6870
	4I	296	200	3823	1196	2627	8899	1196	7703
	5A	378	200	4119	1526	2593	9998	1526	8473

Qctot / Qhtot - Total output

Qpri - Output on the primary air side (cooling or heating)

Qc - Cooling output on the water side (cooling output of the secondary air)

Qh - Heating output on the water side (heating output of the secondary air)

L (length) = 3000 mm

Vpri - Volume flow of the primary air

Δp - Air pressure drop

The technical parameters are set according to the standard EN 15116. In fact, they may vary depending on the location of the unit and the connection type.

OVERVIEW OF REGULATION METHODS FOR CONVECTORS WITH FAN

Type of regulation	Function of the convector	Control	Switched sources	
EB-A ¹⁾ manual	heating	thermostat UT15 customer thermostat for 12V or 230V + ADA converter	for DIN rail: PSD 55W PSD 90W	
	heating cooling	BMS superior system thermostat UT15		
EB-B automatic	heating	thermostat UT15 thermostat CH110 thermostat TH343 customer thermostat for 12V or 230V + ADA converter		
		heating cooling		thermostat UT15
		heating		customer thermostat for 12V or 230V + ADA converter

IT IS POSSIBLE TO USE YOUR OWN REGULATION.

1) it is necessary to reset the control unit-EB-block (by default it is set to EB-B / EB-C)

REGULATION ELEMENTS



thermostat CH 110
regulation EB-B
(RKST110B2)



UT15 thermostat
(RKST150B2)



electrothermic head
(M30x1,5;12V,NO)
(VVRE057703012V000000)



thermostatic head
IVAR.T 3000 (M30 x 1,5)
(VVRTVT3003000000005A)



switched source PSD 55W
for DIN rail
regulation EB-A/B/C
(RZUD055S2)



switched source PSD 90W
for DIN rail
regulation EB-A/B/C
(RZUD090S2)



power supply E2B200W
12V in mounting box
(RZMB200E4)

More information and detailed description of each type of regulation can be found on our website



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