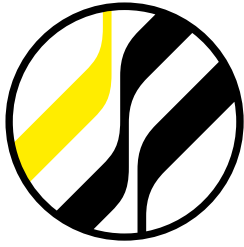


Kelvion



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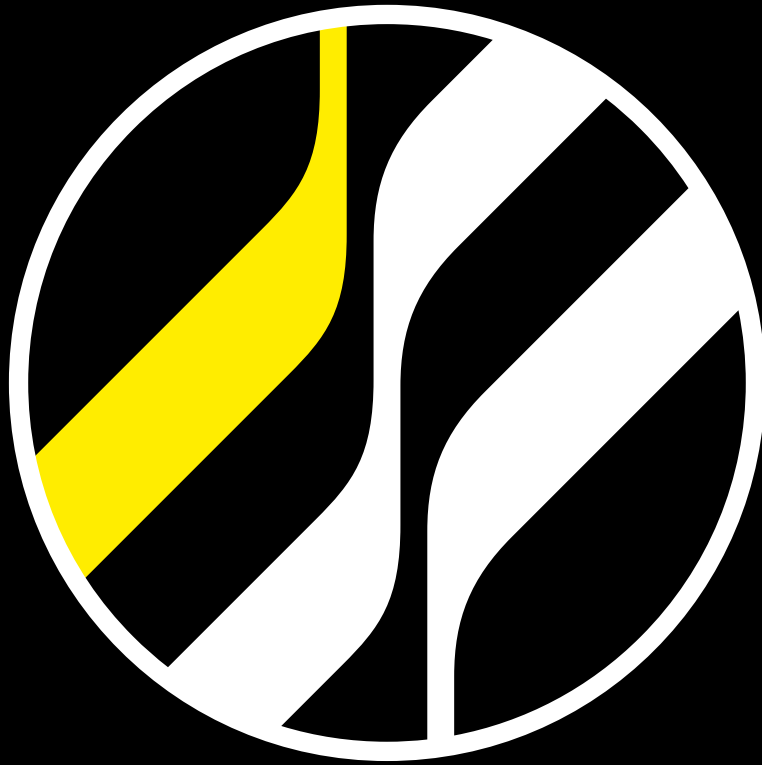
Commercial Air Coolers

Kelvion KCB/KCC

CEILING MOUNTED AIR COOLER, FULLY COATED FOR HYGIENE



Kelvion



EXPERTS IN HEAT EXCHANGE – SINCE 1920

Welcome to Kelvion! Where Heat Exchange is our Business. We are one of the leading global manufacturers of heat exchangers and have been providing solutions for almost every industrial application imaginable since the 1920s, specializing in customized solutions suitable for extreme environmental conditions - as of 2015 under the name of Kelvion.

With one of the most extensive selections of heat exchangers in the world, we are a well-known partner in many industries, including transportation, energy, oil and gas, the heavy industry, chemical and marine as well as sugar, food and beverage and the HVAC and refrigeration technology sector. Our products include Compact Fin Heat Exchangers, Plate Heat Exchangers, Single Tube Heat Exchangers, Transformer Cooling Systems, Cooling Towers and Shell & Tube Heat Exchangers.

Our many years of experience and in-depth expertise have made us specialists in this field. Our heat exchangers are designed specifically to meet the needs of the respective machine or equipment system, ensuring outstanding energy efficiency and reliability in any market segment. This gives our customers a cutting-edge over their competitors while also reducing operating costs over the long term.

As your heat exchange partner, we understand that outstanding and reliable after-sales services are critical for you, our customer, and we work alongside with you in close partnership supporting you throughout the full life cycle of your plant and equipment to ensure lasting business success.

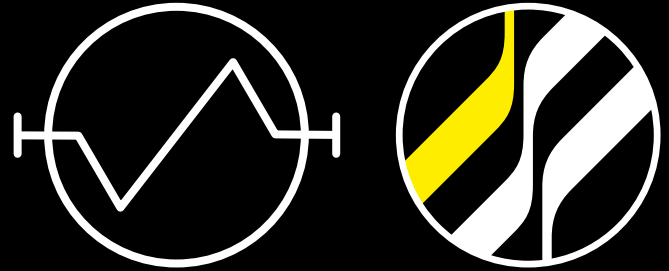
Kelvion – Experts in Heat Exchange.

KELVION – A TRIBUTE TO LORD KELVIN (1824 - 1907)

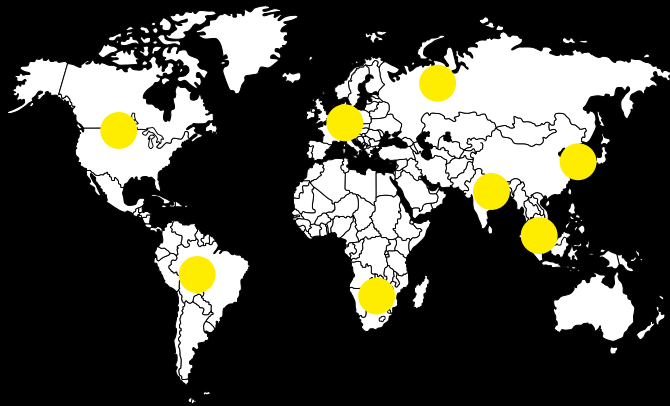


Lord Kelvin formulated the laws of thermodynamics and absolute units of temperature are stated in kelvin, in his honor.

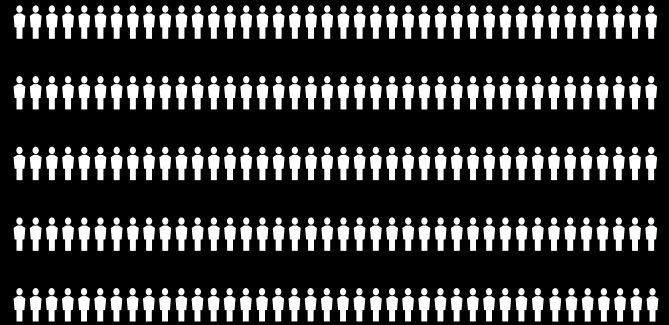
OUR LOGO – INSPIRED FROM THE SCHEMATIC FOR HEAT EXCHANGER



67 BRANCHES AND SALES PARTNERS WORLDWIDE



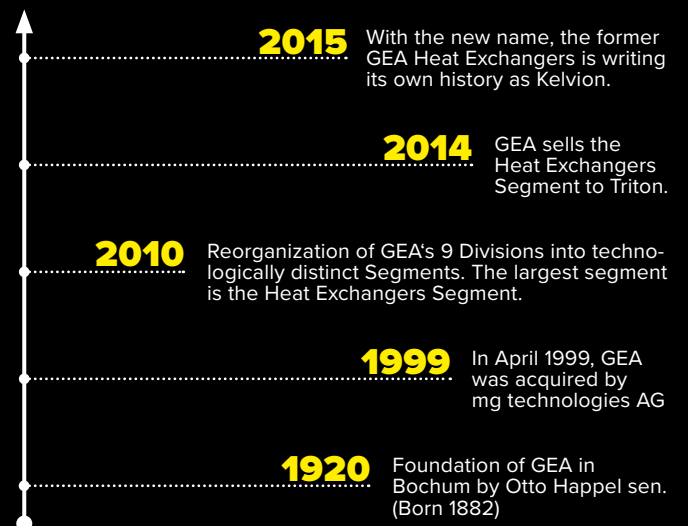
5,000 EMPLOYEES WORLDWIDE



YOUR MARKETS ARE OUR MARKETS



KELVION HAS A LONG HISTORY



Kelvion KCB/KCC

CEILING MOUNTED AIR COOLER, FULLY POWDER PAINTED FOR HYGIENE



CAPACITY RANGE (for SC2)

0.4 kW



2.0 kW

TEMPERATURE RANGE (t_L)

-25°C



+20°C

TYPE DESIGNATION CODE

1 2 3 4 5 6 7 8 9

K

C

B

-20

2

-4

A

E

- | | | | |
|---|-----------------------|---|------------------------|
| 1 | Size of product | 6 | Number of rows deep |
| 2 | Case style of product | 7 | Fin spacing |
| 3 | Coil block system | 8 | Defrost system |
| 4 | Fan diameter | 9 | Additional information |
| 5 | Number of fans | | |

Refrigerant & max.
operating pressure (Box 9)

HX32	HFC 32 bar
GL16	Glycol 16 bar
CX45	CO ₂ 45 bar
CX60	CO ₂ 60 bar



Kelvion KCB/KCC

APPLICATION BENEFITS FOR CONTRACTORS AND OPERATORS

Applications

- ▶ Cooling of bottles
- ▶ Storage of fast and frozen food
- ▶ Cooling of packaged and open products

THE SMART WAY OF SAVING ENERGY.

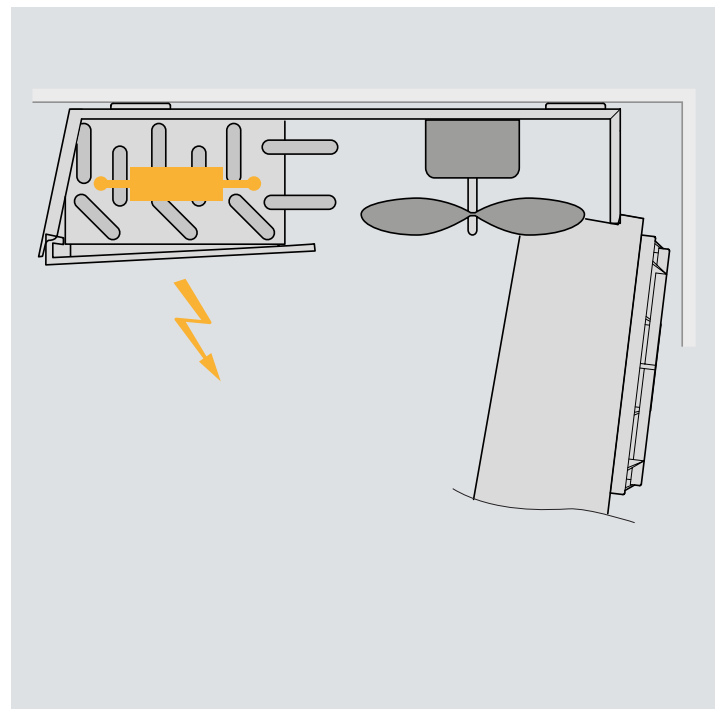
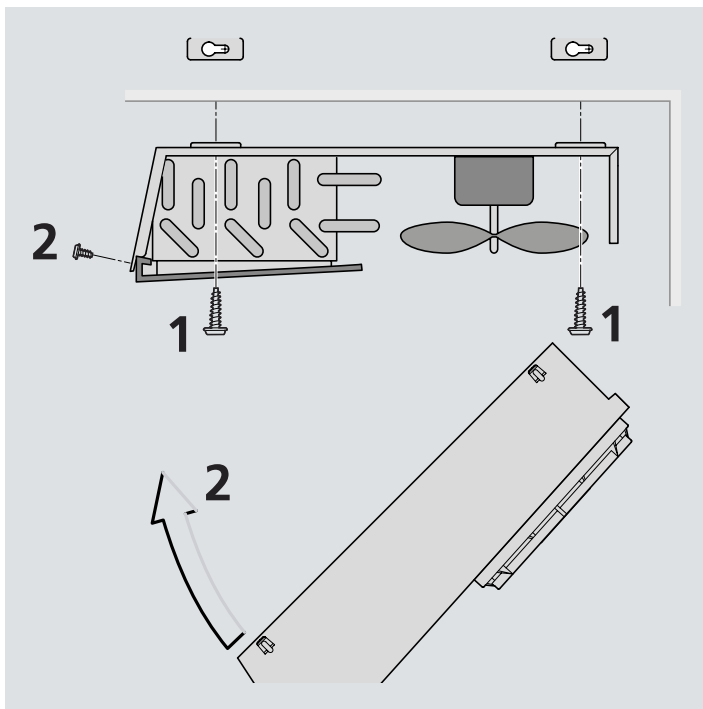
No more filling up: Gas stations have long since turned into well sorted convenience stores with fresh food, open 24/7.

Takeaway operators and kiosk owners are reporting a rising demand for beverages and food. This is why they are constantly increasing their stockpiling. This requires short-term storage of prepared food by qualified professionals – Conventional refrigerators or freezers cannot meet those requirements as regards both refrigeration and energy technology. Beverages, dairy products and packaged food have varying requirements – in terms of storage temperature.

Only in small cold rooms it is economically feasible to hygienically store fresh produce.

The Kelvion KCB/KCC is the 1st choice for keeping salad, fruit, vegetable, meat and sausages fresh in kitchens, canteens and the retail trade. Its all surface, hygienic powder coated parts are primarily designed for areas with exacting hygiene requirements.

The Kelvion KCB/KCC is a star in small cold rooms – for cooling packaged as well unpacked chilled goods.



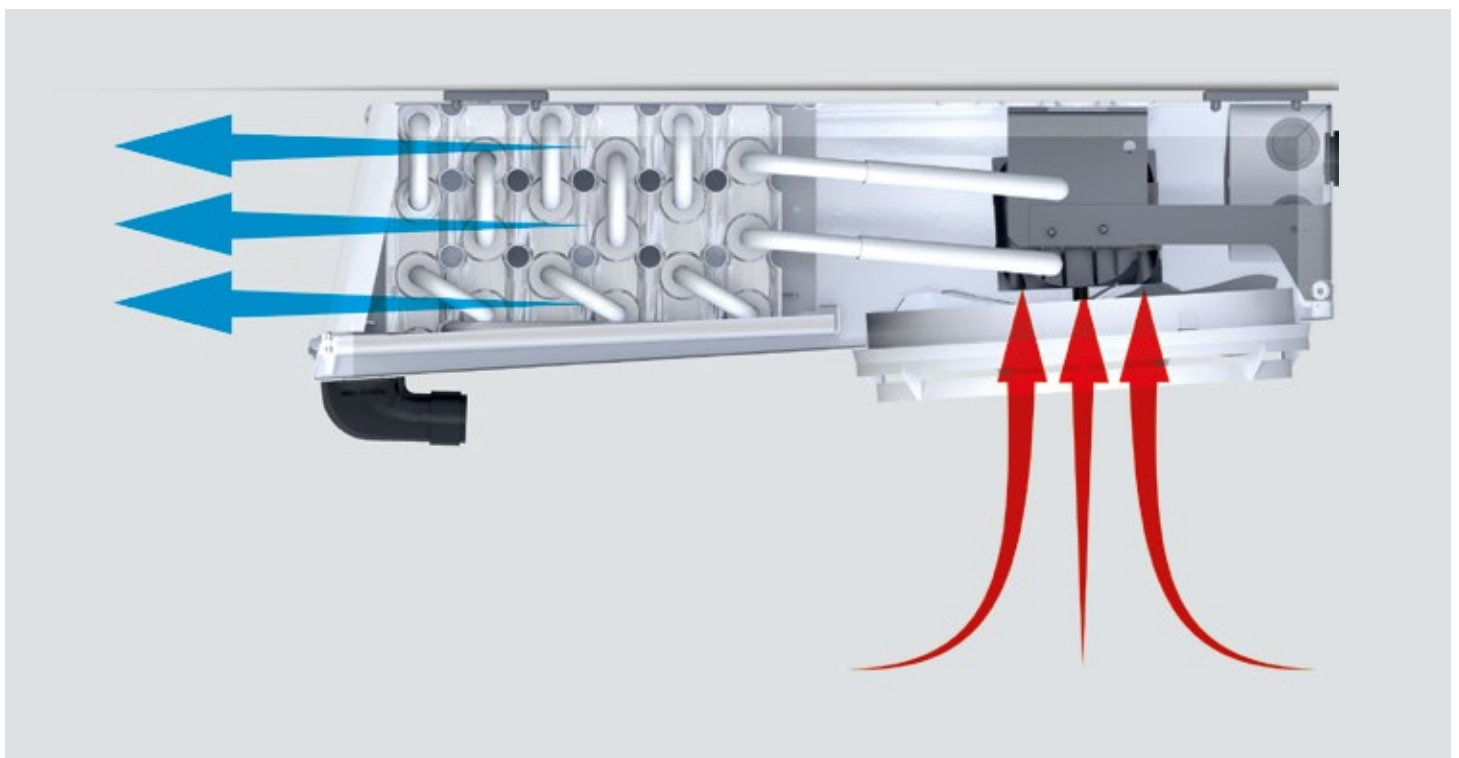
RELIABLE REFRIGERATION

The compact Kelvion KCB/ KCC is primarily designed for ensuring the quality cooling of foodstuffs:

- ▶ Drip trays can be specified with horizontal or vertical drain.
- ▶ High-grade powder coated aluminum caseworks offer best corrosion protection.
 - An integrated air baffle plate ensures optimal airflow.
- ▶ Drip trays can be swung down to give access to the bottom for cleaning or maintenance.
- ▶ With its low silhouette and the horizontal condensate drain you get the most out of your cold room space.

Although small in size, is not the unit cooler is capable of a lot more: It maintains the required cold room temperature by its optimal distribution of cold air. Heat pockets are eliminated to retain the quality and freshness of the goods for as long as possible.

Large cooling surfaces and short defrosting times offer maximum cooling quality. If the units are used in deep-freeze rooms with adjacent kitchen or if the traffic in and out of the deep-freezer is high, additional electrical defrosting is recommended.



Kelvion KCB/KCC

BASIC VERSION

CASING

- ▶ Aluminum, Sendzimir zinc-plated steel
- ▶ Best quality powder coated edges thanks to high-grade powder coating, RAL 9010 pure white
- ▶ Food-safe
- ▶ Smooth surfaces: Easy to clean
- ▶ Hinged drip tray, removable
- ▶ Drip tray: additional integrated splash pan
Height only 180 mm (incl. 90° drain)

ELECTRIC DEFROST

- ▶ Tubular heater: Stainless steel
- ▶ Connections: steam-proof
- ▶ Mains voltage: 1/N/PE 230V 50/60Hz
- ▶ Readily wired for connection box
- ▶ Optimized tubular heater configurations ensure fast and even defrosting
- ▶ Aluminum tube sleeves: Ensure excellent heat transfer to the fins and thus effective defrosting cycles with optimized service life

HEAT EXCHANGER

- ▶ Tube: Copper, inner finned, Ø 10 mm (1-2 fans) & Ø 12 mm (3 fans)
- ▶ Fins: Aluminum HFE® fins
- ▶ End plates: Aluminum
- ▶ Staggered tube system
- ▶ Fin spacing:
A = 4,5 mm
B = 7 mm
- ▶ Fins flared to form-fit the core tube
- ▶ Highly effective heat transfer and compact design
- ▶ Internal cleanliness according to DIN 14276
- ▶ Connection Inlet: Copper pipe for solder connection, sealed
- ▶ Connection Outlet: Copper pipe for solder connection, sealed
- ▶ Completely powder-coated (hygienic paint), RAL 9010 pure white



FAN UNIT

- ▶ EC technology
- ▶ Blow-through axial fan
- ▶ Fan diameter: 200 mm
- ▶ Available ambient temperatures: -40° C up to +50° C
- ▶ Supply voltage: 1/N/PE 230V 50/60Hz
- ▶ Motor protection: via engine electronics
- ▶ Fans are wired to an internal distribution box
- ▶ Electronic motor protection
- ▶ Protection: IP54
- ▶ Protection class: II
- ▶ Isolation class: I.Cl.H
- ▶ Fans are wired to one internal distribution box
- ▶ Motor Control:
 - Phase control
 - Transformer
 - Delta/star
 - Frequency converter

Please observe the manufacturer's information!

MOTOR LABEL DATA

Type	50 Hz				60 Hz		
	Ø mm	rpm	W	A	rpm	W	A
KCB/KCC	200	1,300	25	0.23	1,300	25	0.23

Motor data per fan

Data provided by the manufacturer

TECHNICAL DATA KCB/KCC A (E)

Kelvion KCB/KCC | Fin spacing 4.5 mm

Type	Rating Q _o at 50 Hz, DT1, R404 A		Cooling surface	Air flow	Air throw ***	Tube volume	Connections		Sound	Fans (Operational values at 50 Hz)					
	SC2	SC3					Inlet	Outlet		L _{WA}	Blade	Current	Per fan		
	kW	kW											Ø mm	Ø mm	dB (A)
KCB-201-SA	0.46	0.37	2.1	250	5	0.3	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-201-4A	0.56	0.45	2.8	290	5	0.4	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-201-6A	0.67	0.54	4.1	260	5	0.6	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-202-4A	1.12	0.89	5.6	580	6	0.8	10 x1.0*	10 x1.0*	65	200	230 V -1	1,310	9	0.07	
KCB-202-6A	1.34	1.07	8.2	520	6	1.2	10 x1.0*	10 x1.0*	65	200	230 V -1	1,310	9	0.07	
KCC-203-4A	1.68	1.34	8.4	870	9	1.2	10 x1.0*	10 x1.0*	67	200	230 V -1	1,310	9	0.07	
KCC-203-6A	2.01	1.61	12.3	780	9	1.8	10 x1.0*	10 x1.0*	67	200	230 V -1	1,310	9	0.07	

Standard condition t_L t_o DT1 * Single injection
 NB 2/SC 2 0°C -8°C 8K ** Multiple injection
 NB 3/SC 3 -18°C -25°C 7K *** Throw limit at 0.5 m/s

Subject to modification.

TECHNICAL DATA KCB/KCC B (E)

Kelvion KCB/KCC | Fin spacing 7 mm

Type	Rating Q _o at 50 Hz, DT1, R404 A		Cooling surface	Air flow	Air throw ***	Tube volume	Connections		Sound	Fans (Operational values at 50 Hz)					
	SC2	SC3					Inlet	Outlet		L _{WA}	Blade	Current	Per fan		
	kW	kW											Ø mm	Ø mm	dB (A)
KCB-201-SB	0.40	0.32	1.4	280	5	0.3	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-201-4B	0.48	0.38	1.8	320	5	0.4	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-201-6B	0.61	0.49	2.7	290	5	0.6	10 x1.0*	10 x1.0*	62	200	230 V -1	1,310	9	0.07	
KCB-202-4B	0.96	0.77	3.6	640	6	0.8	10 x1.0*	10 x1.0*	65	200	230 V -1	1,310	9	0.07	
KCB-202-6B	1.22	0.97	5.4	580	6	1.2	10 x1.0*	10 x1.0*	65	200	230 V -1	1,310	9	0.07	
KCC-203-4B	1.44	1.15	5.4	960	9	1.2	10 x1.0*	10 x1.0*	67	200	230 V -1	1,310	9	0.07	
KCC-203-6B	1.83	1.46	8.1	870	9	1.8	10 x1.0*	10 x1.0*	67	200	230 V -1	1,310	9	0.07	

Standard condition t_L t_o DT1 * Single injection
 NB 2/SC 2 0°C -8°C 8K ** Multiple injection
 NB 3/SC 3 -18°C -25°C 7K *** Throw limit at 0.5 m/s

Subject to modification.

DIMENSIONS, WEIGHTS, ELECTRIC DEFROST

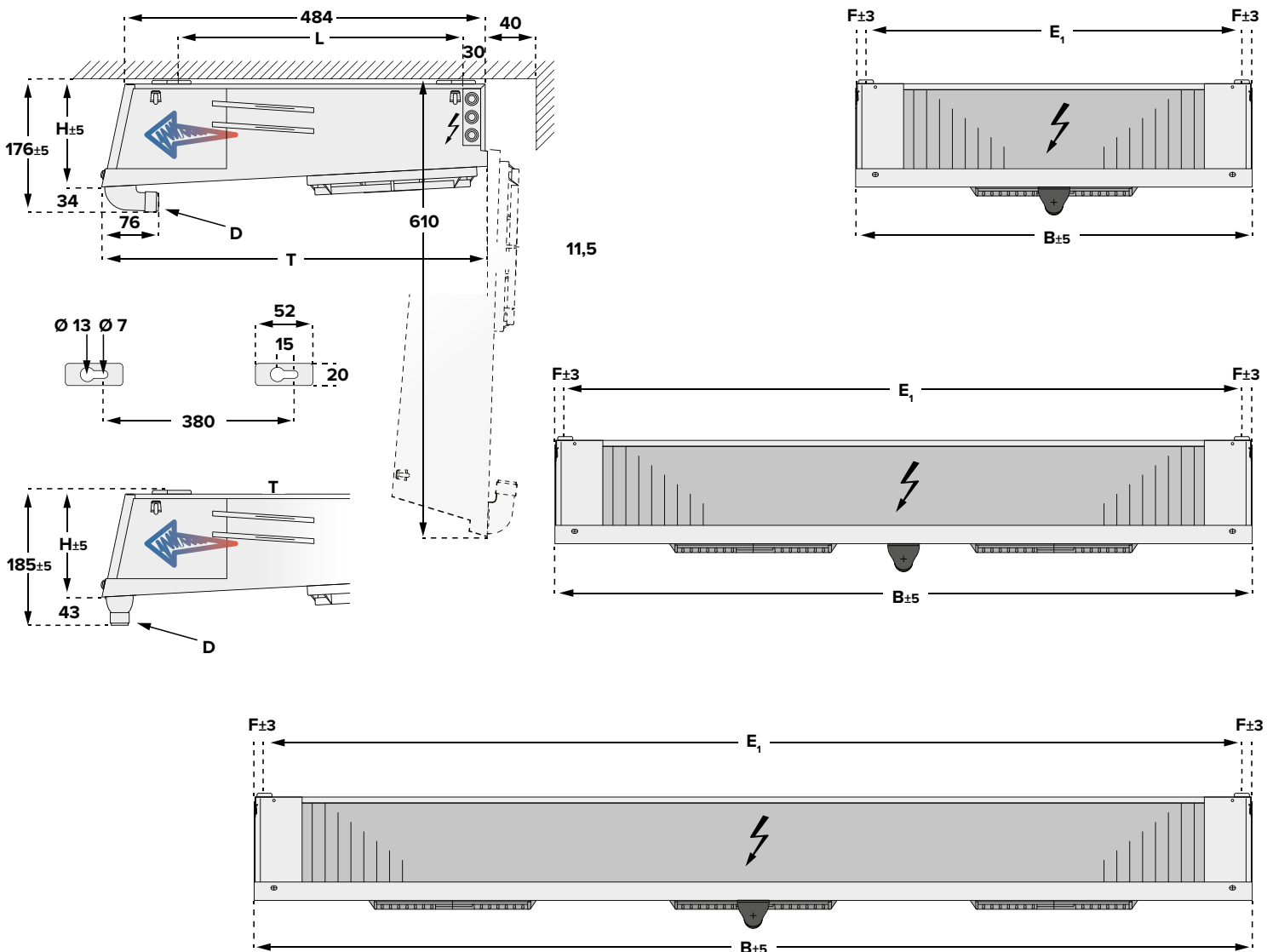
Kelvion KCB/KCC

Type	Dimensions							Electric Defrost 230 V-1 / 400 V-3-Y	Weights (net) Unpacked		Weights (gross) Packed		Drain D
	H	B	T	L	E ₁	E ₂	F		Coil	KCx N	KCx E	KCx N	
	mm	mm	mm	mm	mm	mm	mm	kW	kg	kg	kg	kg	inch
KCB-201-S	143	428	515	380	400	-	14	0.4	8	9	9	10	G ¾
KCB-201-4	143	528	515	380	500	-	14	0.4	9	10	10	11	G ¾
KCB-201-6	143	528	515	380	500	-	14	0.4	9	10	10	11	G ¾
KCB-202-4	143	928	515	380	900	-	14	0.7	14	15	16	17	G ¾
KCB-202-6	143	928	515	380	900	-	14	0.7	16	17	18	19	G ¾
KCC-203-4	143	1,328	515	380	1,300	-	14	1.0	21	22	23	24	G ¾
KCC-203-6	143	1,328	515	380	1,300	-	14	1.0	23	24	25	26	G ¾

The dimensions are only valid for the standard model design!
Note the differences in dimension among versions and accessories.

DIMENSIONAL DRAWINGS

Kelvion KCB/KCC



Kelvion KCB/KCC

VARIANTS

CO₂ - VARIANTS

010.18 CO₂-DIRECT EXPANSION

up to 60 bar operating pressure

KELVION KCB | FIN SPACING 7 MM

Type	Rating Q0 at NB2, R 744 (CO ₂) up to 60 bar	Cooling Surface	Air Flow	Air Throw *	Tube Volume	Connections (up to 60 bar)		Sound L _{WA} dB (A)	Fans (Operational Values at 50 Hz)				
						Inlet Ø mm	Outlet Ø mm		Blade Ø mm	Current 230 ± 10% V-1 50 Hz	Per Fan		
	kW	m ²	m ³ /h	m	dm ³						rpm	W	A
KCB-201-6BE	0,61	2,7	290	5	0,6	10 x1.0	10 x1.0	62	200	230 V -1	1.310	9	0,07
KCB-202-6BE	1,22	5,4	580	6	1,2	10 x1.0	10 x1.0	65	200	230 V -1	1.310	9	0,07
KCB-203-6BE	1,83	8,1	870	9	1,8	10 x1.0	10 x1.0	67	200	230 V -1	1.310	9	0,07

Standard condition t_{L1} t_0 DT1
NB2/SC2 0 -8 8

* Throw limit at 0.5 m/s

Subject to modification.



Kelvion KCB/KCC

CHANGES TO THE PREVIOUS MODEL KÜBA JUNIOR DF.E

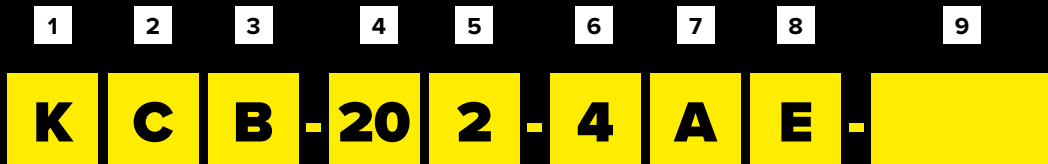


Küba junior DF.E

Kelvion KCB/KCC

	NO CHANGE	CHANGE
Product name		<input checked="" type="checkbox"/>
Type Designation		<input checked="" type="checkbox"/>
Type Designation Code		<input checked="" type="checkbox"/>
Number of Types	<input checked="" type="checkbox"/>	
Cooling Capacity	<input checked="" type="checkbox"/>	
Electric Defrost	<input checked="" type="checkbox"/>	
Dimensions incl Fixing Points	<input checked="" type="checkbox"/>	
Connections	<input checked="" type="checkbox"/>	
Accessories	<input checked="" type="checkbox"/>	
Fan		<input checked="" type="checkbox"/>
Fan Mounting	<input checked="" type="checkbox"/>	
Spare Parts: Casing	<input checked="" type="checkbox"/>	
Spare Part: Fan		<input checked="" type="checkbox"/>
Packaging: Type and Size	<input checked="" type="checkbox"/>	
Packaging: Printing		<input checked="" type="checkbox"/>

TYPE DESIGNATION CODE **KCB/KCC**



- | | | | |
|---|-----------------------|---|------------------------|
| 1 | Size of product | 6 | Number of rows deep |
| 2 | Case style of product | 7 | Fin spacing |
| 3 | Coil block system | 8 | Defrost system |
| 4 | Fan diameter | 9 | Additional information |
| 5 | Number of fans | | |

Refrigerant & max. operating pressure (Box 9)

HX32	HFC 32 bar
GL16	Glycol 16 bar
CX45	CO ₂ 45 bar
CX60	CO ₂ 60 bar

TYPE DESIGNATION CODE **KÜBA JUNIOR DF.E**



- | | | | |
|---|-------------------------|---|-----------------|
| 1 | Model range designation | 4 | Size |
| 2 | Fin spacing | 5 | Number of fans |
| 3 | Electric defrost | 6 | Generation Code |

NEW FAN **KCB/KCC**



Type	Ø mm	50 Hz		60 Hz		Temperature Range	Protection class	Direction of rotation motor		
		rpm	W	rpm	W					
KCB/KCC	200	1.300	25	0,23	1.300	25	0,23	-40°C to +50°C	IP 54	Left
junior DF.E	200	1.300	24	0,20	1.300	24	0,20	-40°C to +50°C	IP 54	Left

Motor data per fan

Data provided by the manufacturer

SPARE PART: FAN



The fan of the Küba junior DF.E series can still be used in the new Kelvion KCB / KCC series!