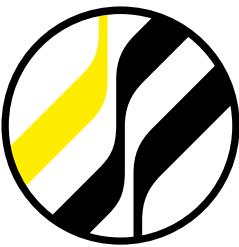


Kelvion

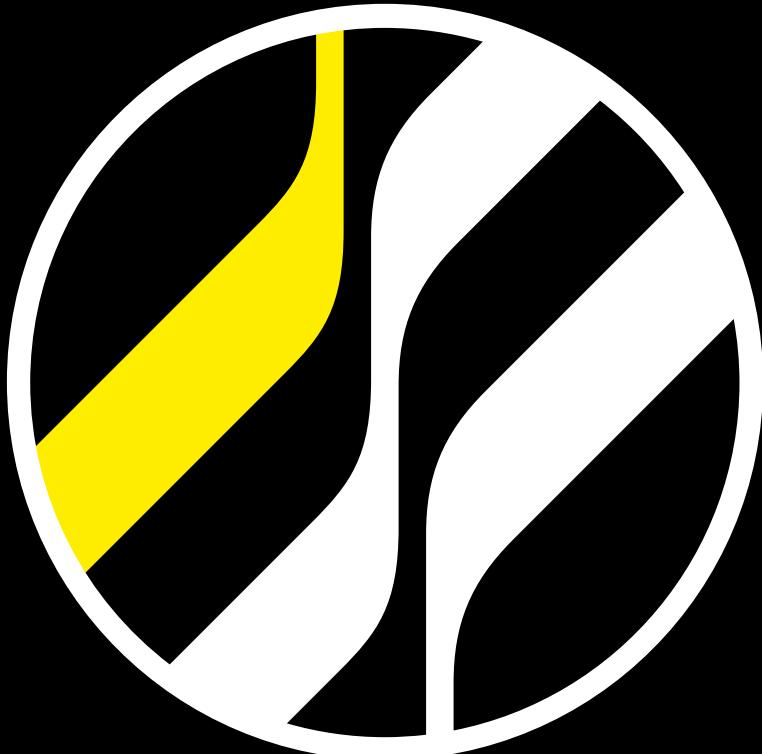


Commercial air coolers

Kelvion Commercial Air Coolers

TAKING HEAT OFF AROUND THE WORLD





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, chemical, marine as well as food and beverage, data center 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.

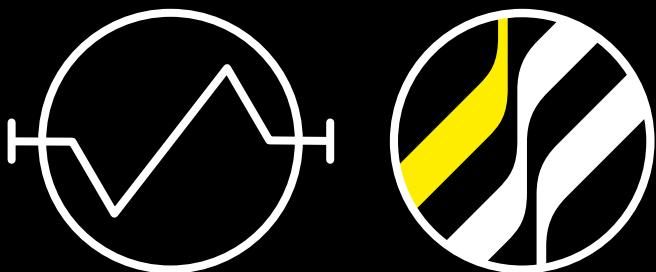
As your heat exchange partner, we understand that outstanding and reliable after-sales services are critical for you, our customer, and we work alongside with you in close partnership supporting you throughout the full life cycle of your plant and equipment to ensure lasting business success.

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

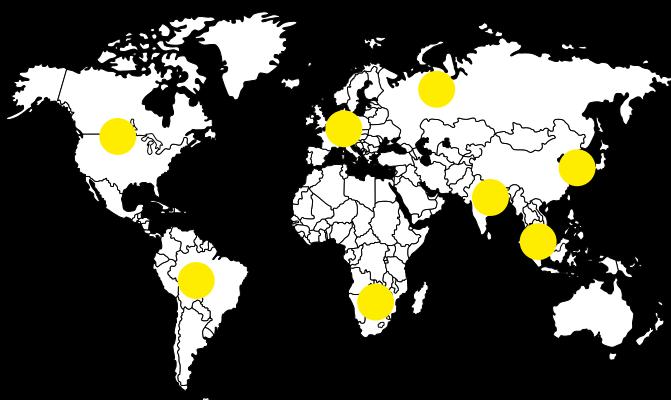


Lord Kelvin formulated the laws of thermodynamics and absolute units of temperature are stated in kelvin, in his honor.

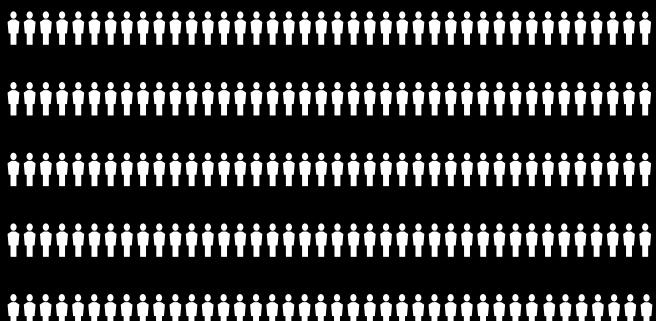
OUR LOGO – INSPIRED FROM THE SCHEMATIC FOR HEAT EXCHANGER



67 BRANCHES AND SALES PARTNERS WORLDWIDE



5,000 EMPLOYEES WORLDWIDE



YOUR MARKETS ARE OUR MARKETS



Chemicals



Data Center



Food & Beverage



HVAC



Refrigeration



Marine



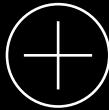
Oil & Gas



Power



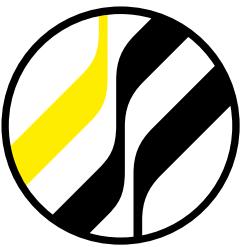
Transportation



... and more

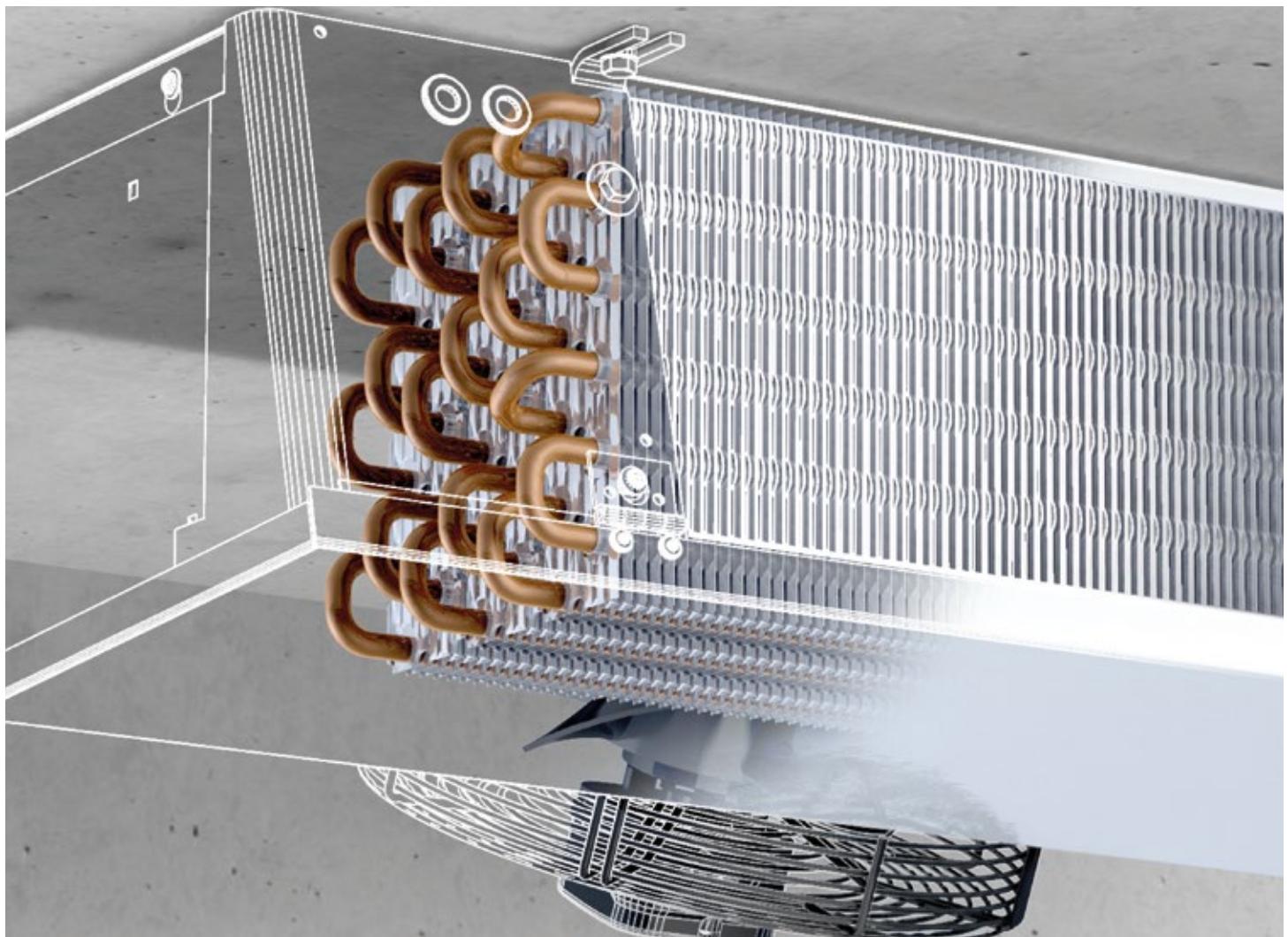
KELVION HAS A LONG HISTORY

- ↑
- 2015** With the new name, the former GEA Heat Exchangers is writing its own history as Kelvion.
 - 2014** GEA sells the Heat Exchangers Segment to Triton.
 - 2010** Reorganization of GEA's 9 Divisions into technologically distinct Segments. The largest segment is the Heat Exchangers Segment.
 - 1999** In April 1999, GEA was acquired by mg technologies AG
 - 1920** Foundation of GEA in Bochum by Otto Happel sen. (Born 1882)



Küba compact DF

CEILING MOUNTED COOLER FOR CATERING & RETAIL



Küba compact DF

THE SPACE-SAVING HELPER IN COLD ROOMS, FOOD STORAGE, FOOD PREPARATION COOL CABINETS.



Capacity range (for SC2)

1,5 kW 10 kW

The capacity scale is represented by a series of dots arranged in three columns. The first column has 3 dots, the second has 3 dots, and the third has 4 dots, with the text "1,5 kW" to the left and "10 kW" to the right.

Temperature range (t_{l_1})

-25°C +20°C

The temperature scale is represented by a series of dots arranged in three columns. The first column has 5 white dots, the second has 5 black dots, and the third has 5 white dots, with the text "-25°C" to the left and "+20°C" to the right.

Type Designation Code

1 2 3 4 5 6

| | | | | | |
|----|---|---|----|---|---|
| DF | B | E | 07 | 1 | C |
|----|---|---|----|---|---|

1 Model range designation

2 Fin spacing

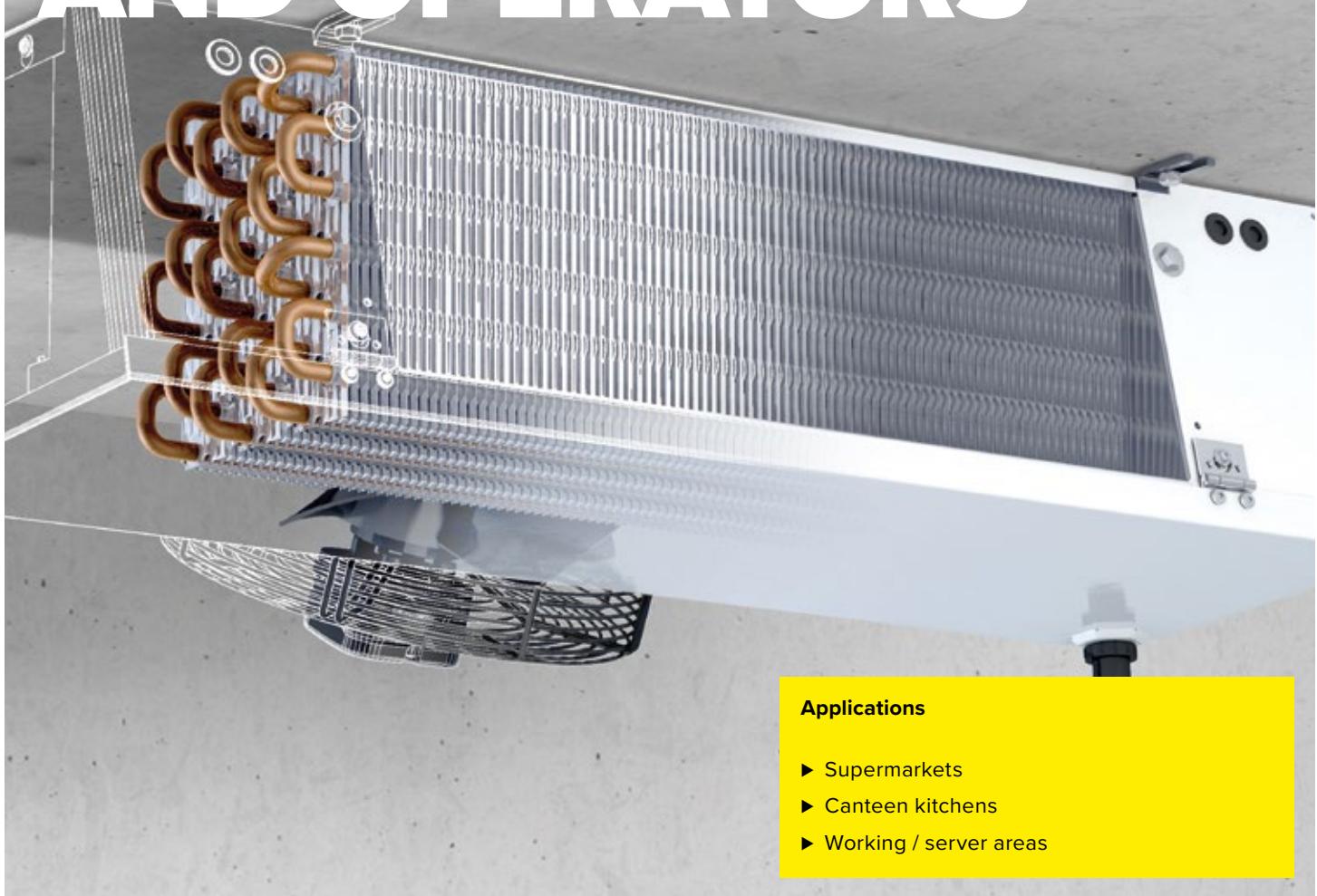
3 Electric defrost

4 Size

5 Number of fans

6 Generation Code

APPLICATION BENEFITS FOR CONTRACTORS AND OPERATORS



Applications

- ▶ Supermarkets
- ▶ Canteen kitchens
- ▶ Working / server areas

FOR HIGH TURNOVER OF GOODS

Apart from fruit, vegetables and dairy products, packaged deep frozen products are part of the standard range of products of food retailers. It is essential that the required cold chain temperatures are maintained constantly during storage.

To determine which unit cooler fits to a cold storage, size and the chilled goods stored have to be considered. Food retailers are characterised by a frequent movement of goods and storage times as short as 1 - 3 days.

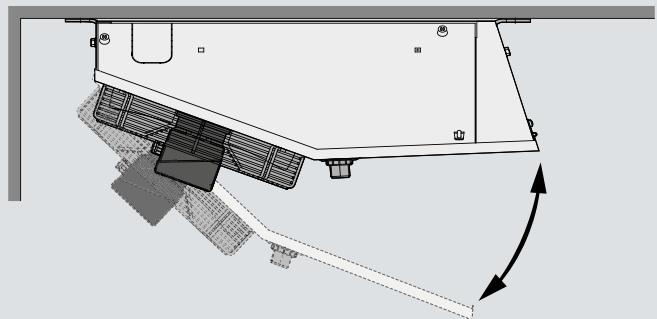
The evaporator's cooling capacity has to be dimensioned accordingly to ensure that the indoor temperature remains constant.

The Küba compact DF (especially for small rooms) is the first choice for these applications. The compact evaporator has the appropriate cooling capacity to ensure the uniform distribution of air even in the corners.

HYGIENE IN THE COLD ROOM

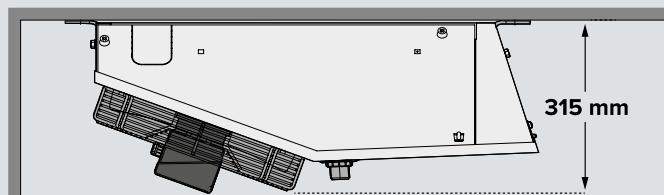
The Küba compact DF air cooler pursues a major objective: Keeping goods hygienically fresh in a cold room.

The food service specialist compact DF ensures best conditions right from the start – Hygiene and protection of chilled goods are priority: All component parts are easy to access and simple to clean.



LOW-SILHOUETTE DESIGN

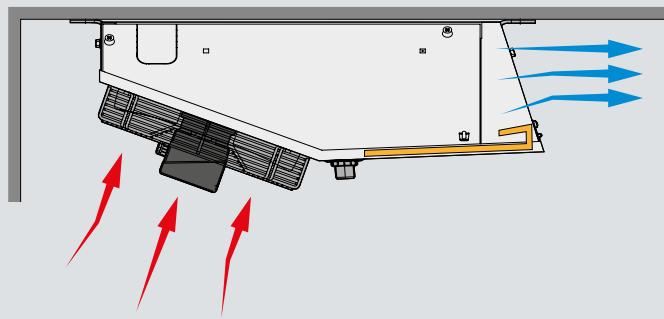
The Küba compact DF fully lives up to its name and is a power pack in small spaces. The compact DF provides reliable cooling power in temperature ranges both below and above zero, due to our Kelvion temperature security.



BEST AIR GUIDANCE THROUGH BUILT-IN BAFFLE PLATE

The integrated baffle-plates guide the cold air across the ceiling and thereby far into the room.

Even distribution of cold air guarantees chilled goods natural appearance and their taste.
Retention of their full value is therefore ensured.





Küba compact DF

BASIC VERSION

CASING

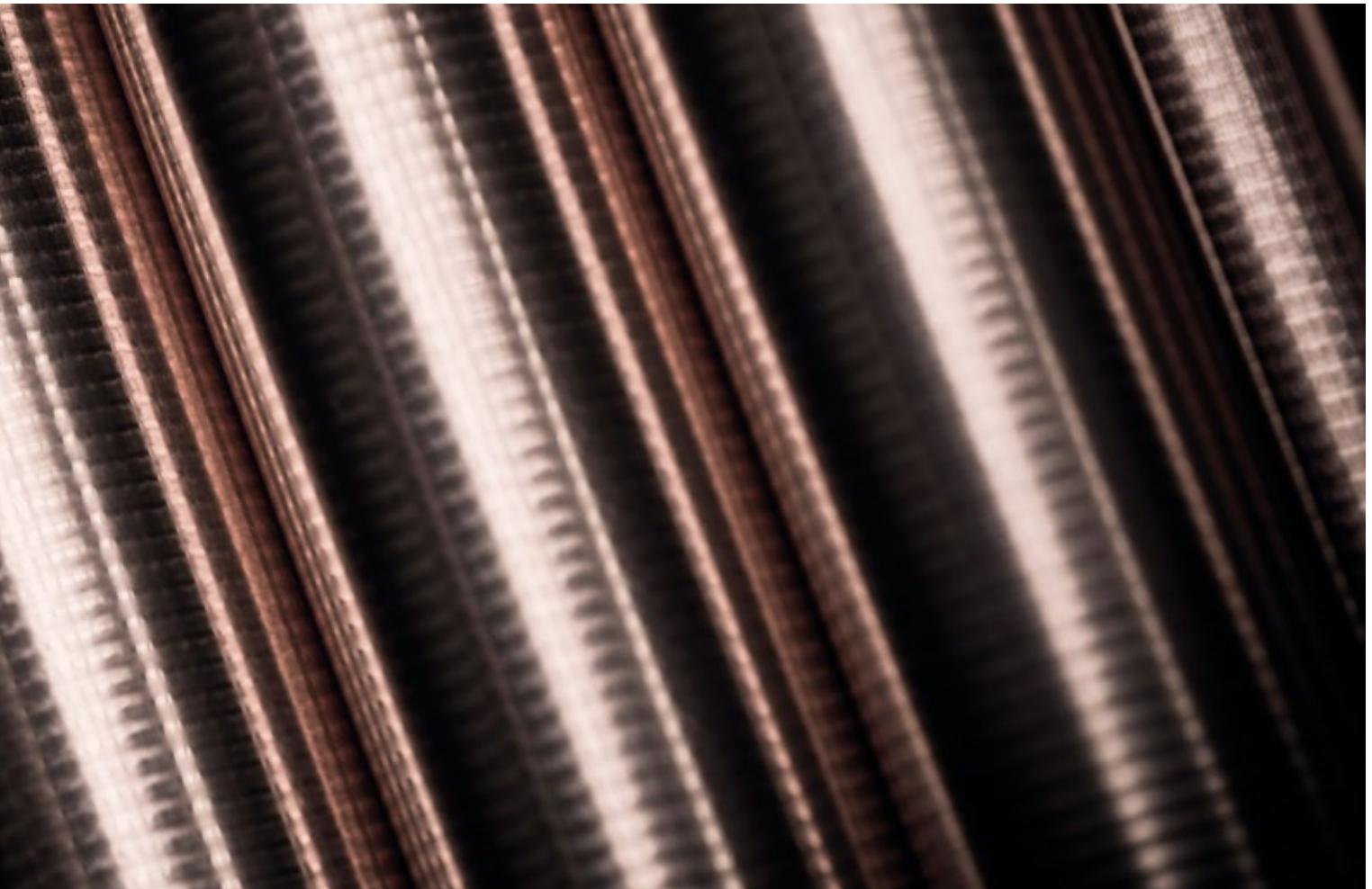
- ▶ Aluminum, Sendzimir zinc-plated steel, smooth
- ▶ Best quality powder coated edges thanks to high-grade powder coating, RAL 9010 pure white
- ▶ Food-safe
- ▶ Smooth surfaces: Easy to clean
- ▶ Drip tray and side pieces are removable
- ▶ Low height
- ▶ Quick and easy installation

HEAT EXCHANGER

- ▶ Tube: Copper, inner finned, Ø 12 mm
- ▶ 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
- ▶ Internal cleanliness according to DIN 14276
- ▶ Connection Inlet:
DFA C: Flow distributor with multiple injection
DFB C: Küba-CAL® distributor with multiple injection
- ▶ Connection Outlet:
Copper pipe for solder connection with schrader valve UNF 7/16“, sealed

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



FAN UNIT

- ▶ Fans are pre-wired to an internal terminal box
- ▶ Ø 254mm | Ø 300mm
- ▶ With built-in protector, according to VDE provisions
- ▶ Application range: RT: -30°C to +50°C
- ▶ Voltage 230 V ±10 %, V-1, 50/60 Hz:
- ▶ Ø 254 mm, non-adj usable | Ø 300 mm, adjustable
- ▶ Index of protection IP44
 - DF.051, 052C = IP42
 - DF.061 - 074C = IP 44
- ▶ Insulation class B
- ▶ Operating values are t he values of the built-in motor at +20 °C, with an unobstructed air flow and a dry surface, as required for refrigeration load calculation

Please observe the manufacturer's information!

MOTOR LABEL DATA

| Type | Ø mm | 50 Hz | | | 60 Hz | | |
|-----------------------|------|-------|----|------|-------|----|------|
| | | rpm | W | A | rpm | W | A |
| DF 051 - 052 C | 254 | 1,300 | 90 | 0.62 | 1,550 | 80 | 0.55 |
| DF 061 - 074C | 300 | 1,350 | 70 | 0.32 | 1,500 | 90 | 0.40 |

Motor data per fan

Data provided by the manufacturer

TECHNICAL DATA DFA (E)

Küba compact DF | 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 L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|----------|------------------------------------|------|-----------------|----------|--------------|-------------|-------------|--------|----------------|------------------------------------|---------------------------|------|----|------|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade Ø mm | Current 230±10% V-1 50 Hz | rpm | W | A |
| | kW | kW | m² | m³/h | m | dm³ | Ø mm | Ø mm | dB(A) | Ø mm | 230V-1 | 1347 | 85 | 0,59 |
| DFA 051C | 2,4 | 1,7 | 7,2 | 630 | 7 | 1,7 | 10 | 12 | 62 | 1x254 | 230V-1 | 1347 | 85 | 0,59 |
| DFA 061C | 3,1 | 2,1 | 8,2 | 1100 | 9 | 2,1 | 10 | 12 | 68 | 1x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 071C | 3,7 | 2,5 | 12,2 | 1035 | 9 | 2,5 | 10 | 18 | 68 | 1x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 052C | 4,9 | 3,3 | 13,7 | 1260 | 9 | 3,4 | 10 | 18 | 65 | 2x254 | 230V-1 | 1347 | 85 | 0,59 |
| DFA 062C | 6,3 | 4,3 | 16,4 | 2200 | 11 | 4,2 | 12* | 22 | 71 | 2x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 072C | 7,4 | 5,1 | 24,4 | 2070 | 11 | 5 | 12* | 22 | 71 | 2x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 063C | 9,4 | 6,4 | 24,6 | 3300 | 12 | 5,1 | 12* | 22 | 73 | 3x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 073C | 11,1 | 7,6 | 36,6 | 3105 | 12 | 7,5 | 12' | 28 | 73 | 3x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 064C | 12,6 | 8,6 | 32,8 | 4400 | 16 | 6,8 | 12* | 28 | 74 | 4x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFA 074C | 14,9 | 10,1 | 48,8 | 4140 | 16 | 10 | 15* | 28 | 74 | 4x300 | 230V-1 | 1350 | 75 | 0,35 |

Standard condition t_{L1} t_0 DT1 * Multiple injection via flow distributor
 NB1/SC1 +10°C 0°C 10K ** Throw limit at 0.5 m/s
 NB2/SC2 0°C -8°C 8K

Subject to modification.

TECHNICAL DATA DFB (E)

Küba compact DF | Fin spacing 7 mm

| Type | Rating Q_o at 50 Hz, DT1, R404 A | | Cooling surface | Air flow | Air throw ** | Tube volume | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|----------|------------------------------------|-----|-----------------|----------|--------------|-------------|-------------|--------|----------------|------------------------------------|---------------------------|------|----|------|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade Ø mm | Current 230±10% V-1 50 Hz | rpm | W | A |
| | kW | kW | m² | m³/h | m | dm³ | Ø mm | Ø mm | dB(A) | Ø mm | 230V-1 | 1347 | 85 | 0,59 |
| DFB 051C | 1,5 | 1,2 | 4,8 | 730 | 7 | 1,7 | 10 | 12 | 62 | 1x254 | 230V-1 | 1347 | 85 | 0,59 |
| DFB 061C | 1,8 | 1,5 | 5,5 | 1300 | 9 | 2,1 | 10 | 12 | 68 | 1x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 071C | 2,2 | 1,8 | 8,2 | 1130 | 9 | 2,5 | 10 | 18 | 68 | 1x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 052C | 3,0 | 2,4 | 9,1 | 1460 | 9 | 3,4 | 10 | 18 | 65 | 2x254 | 230V-1 | 1347 | 85 | 0,59 |
| DFB 062C | 3,6 | 2,9 | 11,0 | 2600 | 11 | 4,2 | 10* | 22 | 71 | 2x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 072C | 4,4 | 3,5 | 16,4 | 2260 | 11 | 5 | 10* | 22 | 71 | 2x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 063C | 5,4 | 4,3 | 16,5 | 3900 | 12 | 5,1 | 10* | 22 | 73 | 3x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 073C | 6,6 | 5,3 | 24,6 | 3390 | 12 | 7,5 | 10* | 28 | 73 | 3x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 064C | 7,2 | 5,8 | 22,0 | 5200 | 16 | 6,8 | 10* | 28 | 74 | 4x300 | 230V-1 | 1350 | 75 | 0,35 |
| DFB 074C | 8,8 | 7,0 | 32,8 | 4520 | 16 | 10 | 15* | 28 | 74 | 4x300 | 230V-1 | 1350 | 75 | 0,35 |

Standard condition t_{L1} t_0 DT1 * Multiple injection via flow distributor
 NB2/SC2 +10°C 0°C 10K ** Throw limit at 0.5 m/s

Subject to modification.

DIMENSIONS, WEIGHTS, ELECTRIC DEFROST

Küba compact DF

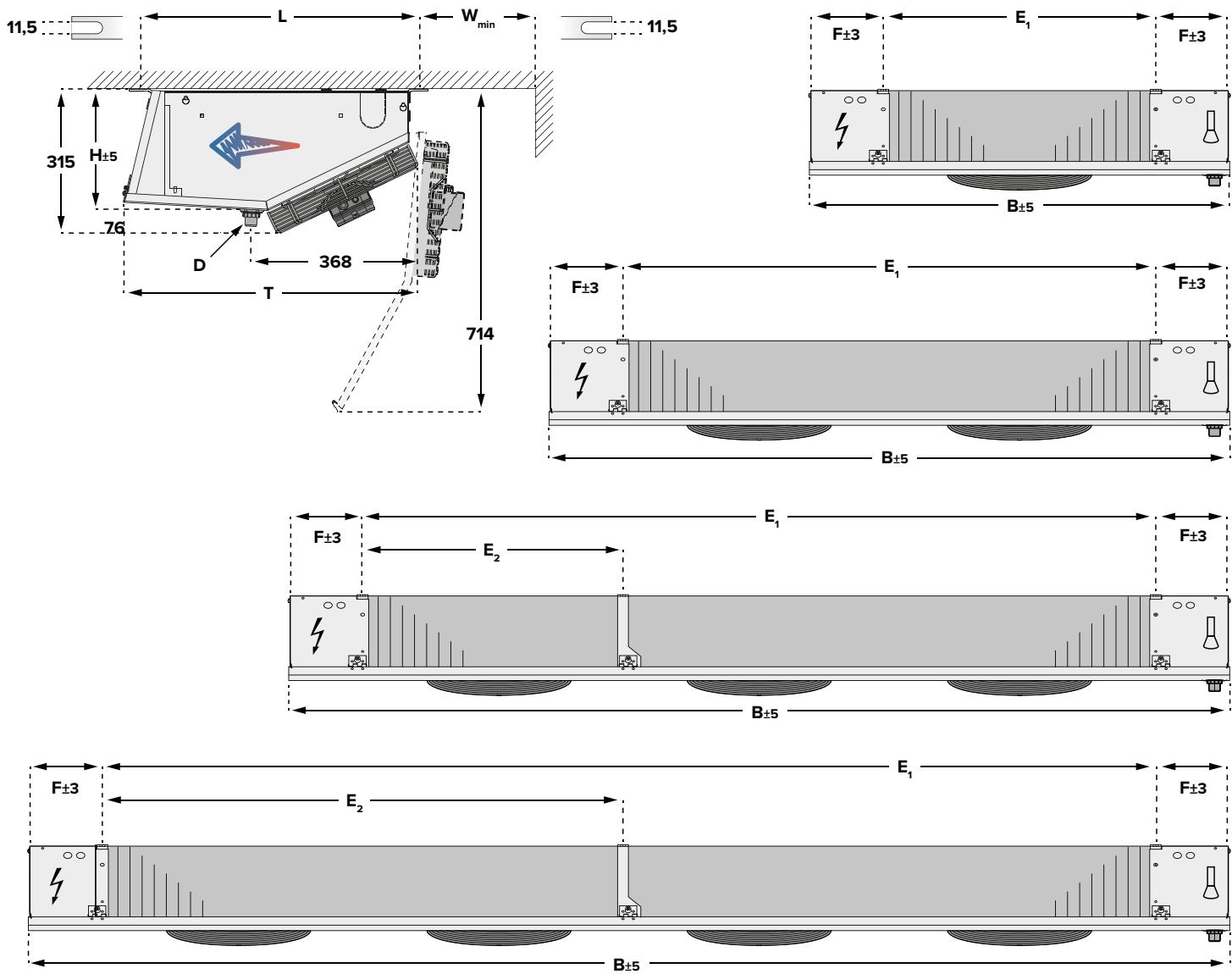
| Type | Dimensions | | | | | | | | Electric Defrost 230 V-1 / 400 V-3-Y | Weight (net) Unpacked | | Weight (gross) Packed | | Drain | |
|----------|------------|---------|---------|---------|----------------------|----------------------|---------|------------------------|---|--------------------------|-------------|--------------------------|-------------|---------------|-----|
| | H mm | B mm | T mm | L mm | E ₁ mm | E ₂ mm | F mm | W _{min} mm | | kW | DFA/B kg | DFA/B E kg | DFA/B kg | DFA/B E kg | |
| DF 051 C | 268 | 872 | 626 | 612 | 530 | - | 171 | 100 | | 1,07 | 20,0 | 19,5 | 22,5 | 22 | G ¾ |
| DF 061 C | 268 | 972 | 626 | 612 | 630 | - | 171 | 100 | | 1,15 | 22,5 | 22,0 | 25,5 | 25 | G ¾ |
| DF 071 C | 268 | 972 | 626 | 612 | 630 | - | 171 | 100 | | 1,15 | 24,5 | 24,0 | 27,5 | 27 | G ¾ |
| DF 052 C | 268 | 1372 | 626 | 612 | 1030 | - | 171 | 100 | | 1,76 | 32,0 | 31,0 | 54,0 | 53 | G ¾ |
| DF 062 C | 268 | 1572 | 626 | 612 | 1230 | - | 171 | 100 | | 2,07 | 37,0 | 36,0 | 60,0 | 59 | G ¾ |
| DF 072 C | 268 | 1572 | 626 | 612 | 1230 | - | 171 | 100 | | 2,07 | 40,0 | 39,0 | 63,0 | 62 | G ¾ |
| DF 063 C | 268 | 2172 | 626 | 612 | 1830 | 629 | 171 | 100 | | 2,98 | 51,5 | 50,0 | 87,5 | 86 | G ¾ |
| DF 073 C | 268 | 2172 | 626 | 612 | 1830 | 629 | 171 | 100 | | 2,98 | 55,5 | 54,0 | 91,5 | 90 | G ¾ |
| DF 064 C | 268 | 2772 | 626 | 612 | 2430 | 1229 | 171 | 100 | | 3,92 | 67,5 | 65,5 | 108,0 | 106 | G ¾ |
| DF 074 C | 268 | 2772 | 626 | 612 | 2430 | 1229 | 171 | 100 | | 3,92 | 74,5 | 72,5 | 115,0 | 113 | G ¾ |

The dimensions are only valid for the standard model design!

Note the differences in dimension among versions and accessories.

DIMENSIONAL DRAWINGS

Küba compact DF





Küba compact DF

VARIANTS

MOTOR - VARIANTS

V 1.33 FANS, SILENT VERSION

Fans 230V±10% V-1~
Reduced air volume flow
Lower sound power level

PROTECTION AGAINST CORROSION

STAINLESS STEEL 304 CASING

GOLDLACK PRE-COATED FIN

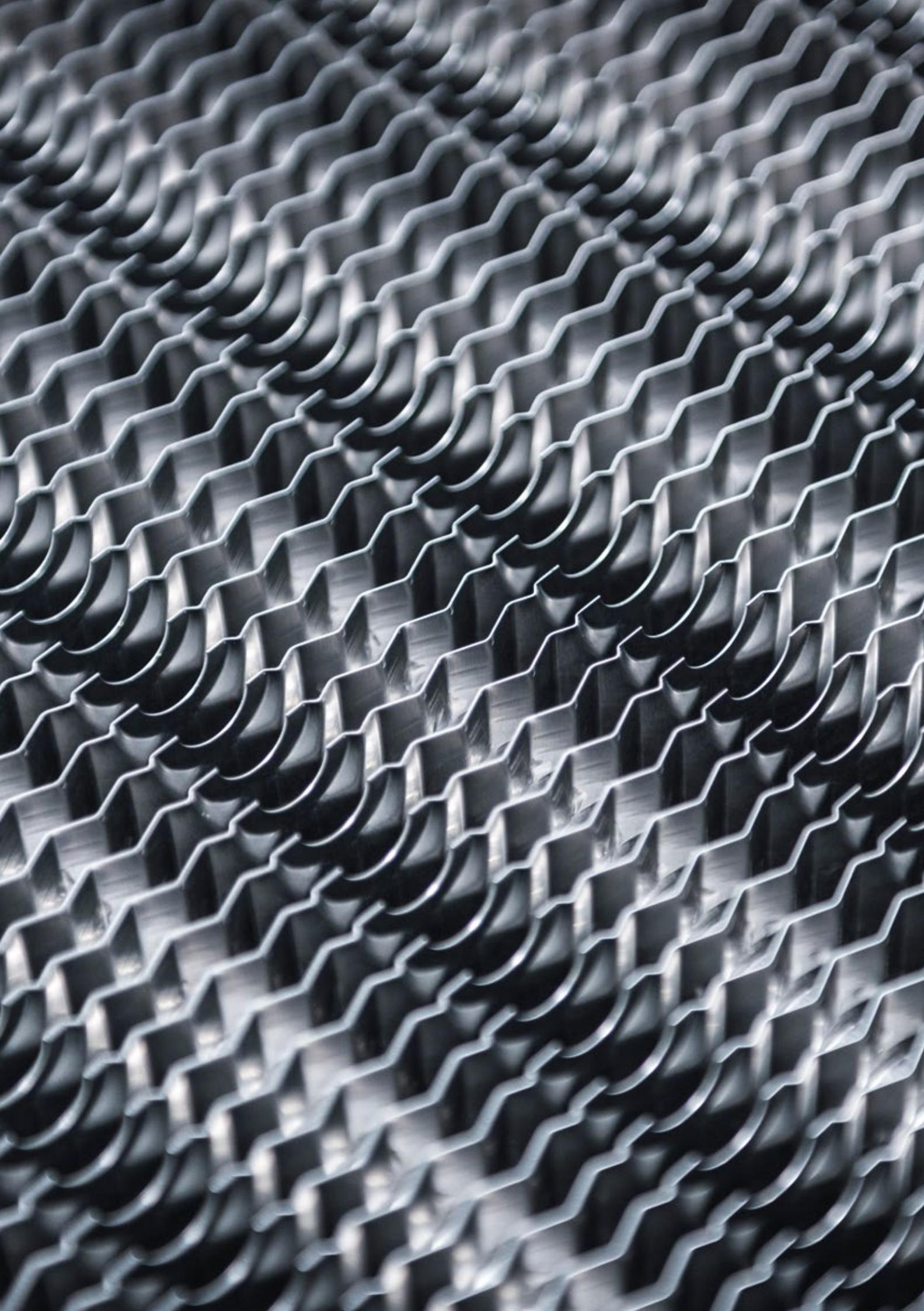
CONSTRUCTION - VARIANTS

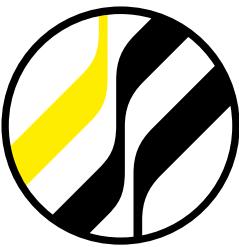
V 2.05 WATER / BRINE CIRCULATION

With a large number of circuits
(small pressure drop)

V 2.06 WATER / BRINE CIRCULATION

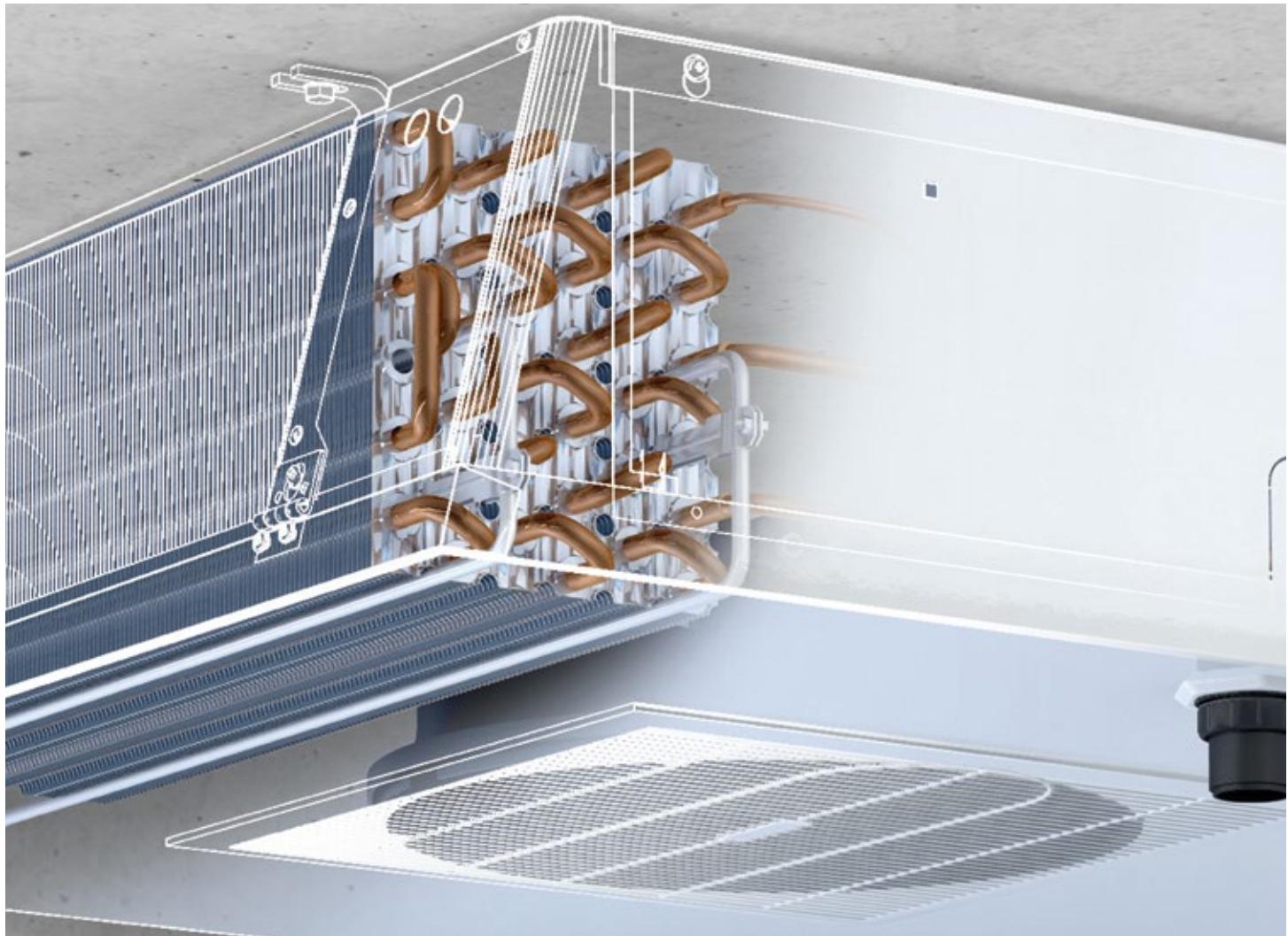
With a small number of circuits
(large pressure drop)





Küba comfort DP

DRAUGHT-FREE VENTILATION AND QUIET OPERATION



Küba comfort DP

DRAUGHT-FREE VENTILATION AND EXTREMELY QUIET OPERATION



Capacity range (for SC2)

1.8 kW 17 kW

Temperature range (t_{L1})

0°C +20°C

Type Designation Code

1 2 3 4 5 6

DP B E 04 4 C

1 Model range designation

2 Fin spacing

3 Electric defrost

4 Size

5 Number of fans

6 Generation Code

Küba comfort DP

APPLICATION BENEFITS FOR CONTRACTORS AND OPERATORS



Application examples

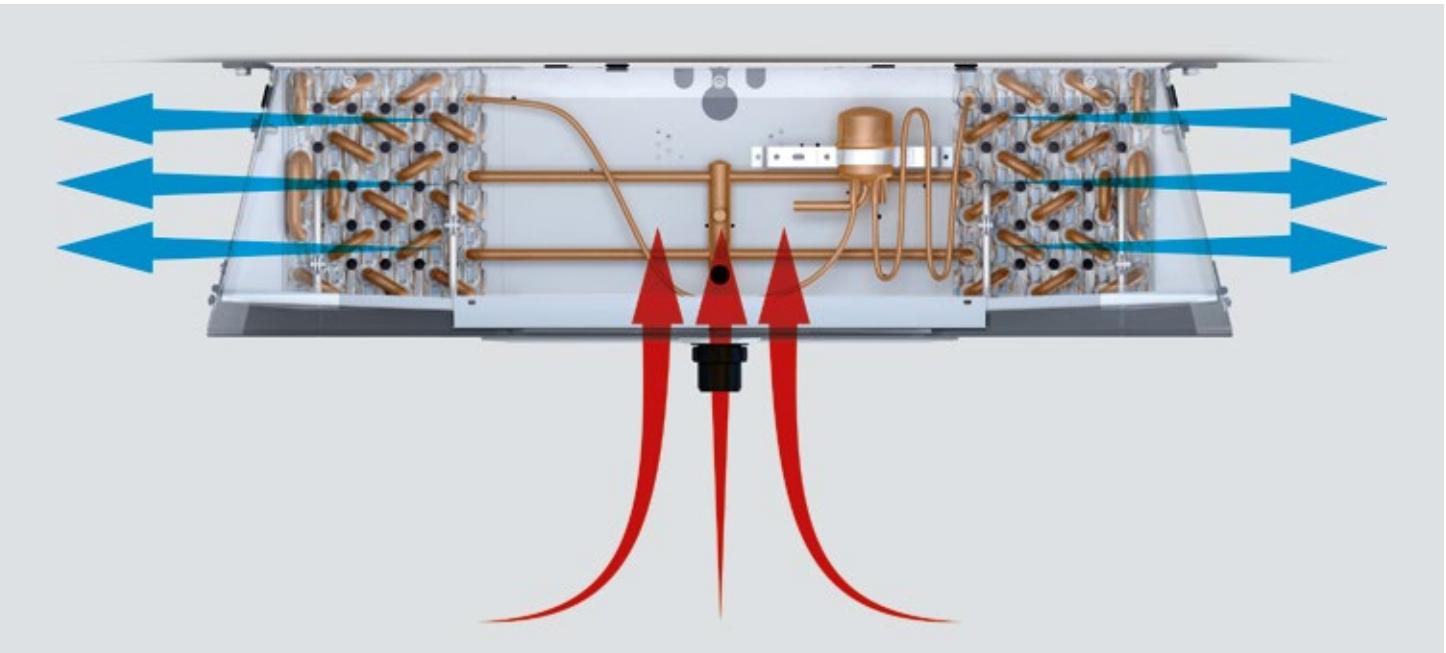
- ▶ Cold Rooms
- ▶ Laboratories
- ▶ Food Preparation areas

COOLING WHERE PEOPLE ARE WORKING

Our Küba comfort DP is the gentle one in the Küba Green Line, cooling where people are working.

Low-velocity bladed fans bring draught-free cold air to the working zone. The Küba comfort DP creates best conditions for processing goods. Drain trays can be swung down to give access to the bottom for cleaning or maintenance.

- ▶ Air baffles ensure low air speeds (up to 0.8 m/s) in the cold room, guiding the air across the ceiling and far into the room.
- ▶ Both 50 Hz and 60 Hz bladed fans can be fitted with a choice of high or low speed (normal speed "N", silent speed "L").
- ▶ Extremely silent operation "S", with accessories (capacitor or speed switch).
- ▶ Saves space: Low profile of only 303 mm.



DRAUGHT-FREE AIR MOVEMENT AND SILENT OPERATION

The technical cooling demands and spatial conditions are only one aspect. Safety and health are top priority as soon as people need to work in cold rooms. For staff to perform their work without adverse effects their wellbeing must be assured.

Reduced noise and comfortable air movement are significant contributing factors to a pleasant indoor climate.

The demands made on equipment to ensure a constant temperature in rooms where sensitive goods such as cut flowers are exhibited for sale and where people also need to work are, of course, correspondingly high.

Draught-free air movement and silent operation create a pleasant indoor climate for the people and excellent conditions for the processing and short-time storage of sensitive products.

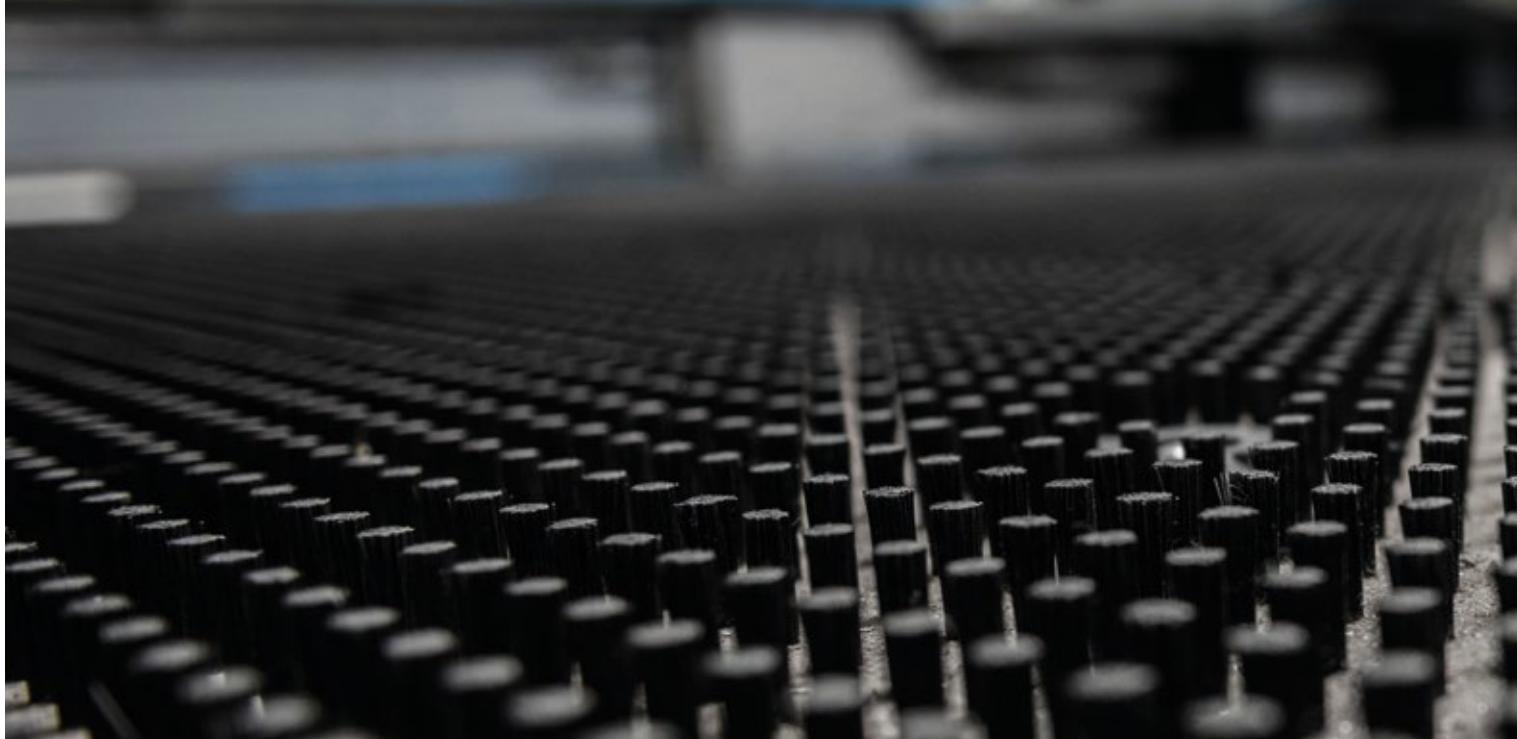
The air in the room is drawn in by the fans and exhausted via the heat exchangers on both sides. The integrated air baffle of the Küba comfort DP guides the air towards the ceiling where the Coanda effect carries it far into the room.

The Küba comfort DP in this way creates optimal air flow at very low air velocity.

Power ratings range from 2.2 kW to 28 kW. Low frame height saves space and allows its use even in rooms with low ceilings. In addition, the drip tray hinges down to facilitate comfortable cleaning.

Küba comfort DP

BASIC VERSION



CASING

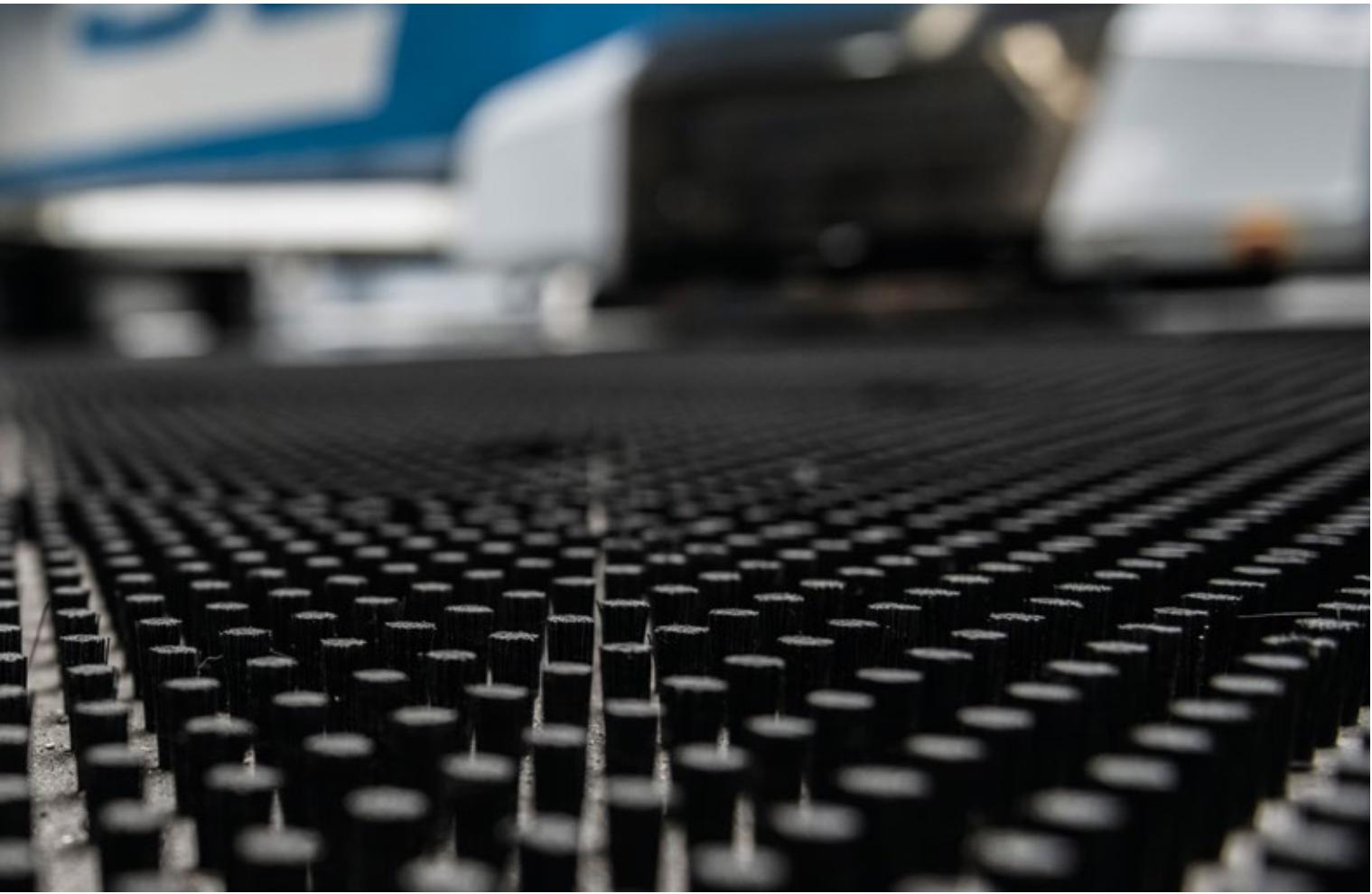
- ▶ Aluminum, Sendzimir zinc-plated steel
- ▶ Best quality powder coated edges thanks to high-grade powder coating, RAL 9010 pure white
- ▶ Food-safe
- ▶ Smooth surfaces: Easy to clean
- ▶ Hinged drip tray on both sides, removable
- ▶ Removable side panels
- ▶ Drip tray: additional integrated splash pan

HEAT EXCHANGER

- ▶ Tube: Copper, inner finned, Ø 12 mm
- ▶ 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
- ▶ Internal cleanliness according to DIN 14276
- ▶ Connection Inlet:
Küba-CAL® refrigerant distributor with multiple injection, sealed
- ▶ Connection Outlet:
Copper pipe for solder connection with schrader valve UNF 7/16“, sealed

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



FAN UNIT

- ▶ AC technology
- ▶ Blow-through axial fan
- ▶ Fan diameter: 350 mm
- ▶ Permissible motor ambient temperatures: -30° C bis +60° C
- ▶ Supply voltage: 1/N/PE 230V 50/60Hz
- ▶ Motor protection: Built-in thermal contact (inaccessible)
- ▶ Protection class: IP44
- ▶ Insulation class: F
- ▶ Fans are wired to 1 internal distribution box
- ▶ Plug connection on motor
- ▶ Minimum Voltage = 100 V
- ▶ Motor Control:
 - Phase control
 - Transformer (50Hz only)
 - Delta/Star
 - Frequency converter

MOTOR LABEL DATA

| Type | Ø mm | 50 Hz | | | 60 Hz | | |
|---------------------|------|-------|-----|------|-------|-----|------|
| | | rpm | W | A | rpm | W | A |
| DP 031-044 C | 350 | 1,390 | 140 | 0.62 | 1,550 | 195 | 0.86 |

Motor data per fan

Data provided by the manufacturer

Please observe the manufacturer's information!

TECHNICAL DATA DPA (E)

[SPEED N NORMAL]

Küba comfort DP | 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 L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|------------------------------------|------|-----------------|-------------------|---------------|-----------------|-------------|----------|----------------|------------------------------------|-------------------|---------|-----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m ² | m ³ /h | m | dm ³ | Ø mm | Ø mm | dB(A) | Ø mm | 230±10% V-1 50 Hz | rpm | W | A |
| DPA 031 C | 5.4 | 3.8 | 16.3 | 1,720 | 2 x 11 | 3.4 | 10 x 1.0** | 22 x 1.0 | 74 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 041 C | 6.3 | 4.4 | 24.3 | 1,620 | 2 x 9 | 5.1 | 10 x 1.0** | 22 x 1.0 | 74 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 032 C | 10.8 | 7.6 | 32.6 | 3,440 | 2 x 12 | 6.8 | 10 x 1.0** | 28 x 1.5 | 77 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 042 C | 12.5 | 8.6 | 48.6 | 3,240 | 2 x 10 | 10.2 | 10 x 1.0** | 28 x 1.5 | 77 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 033 C | 16.3 | 11.0 | 48.9 | 5,160 | 2 x 13 | 10.2 | 10 x 1.0** | 28 x 1.5 | 79 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 043 C | 18.8 | 12.9 | 72.9 | 4,860 | 2 x 11 | 15.3 | 15 x 1.0** | 35 x 1.5 | 79 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 034 C | 21.7 | 14.9 | 65.2 | 6,880 | 2 x 14 | 13.6 | 15 x 1.0** | 35 x 1.5 | 80 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPA 044 C | 25.0 | 17.2 | 97.2 | 6,480 | 2 x 12 | 20.4 | 22 x 1.0** | 35 x 1.5 | 80 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |

[SPEED L QUIET]

| Type | Rating Q_o at 50 Hz, DT1, R404 A | | Cooling surface | Air flow | Air throw *** | Tube volume | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|------------------------------------|------|-----------------|-------------------|---------------|-----------------|-------------|----------|----------------|------------------------------------|-------------------|---------|-----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m ² | m ³ /h | m | dm ³ | Ø mm | Ø mm | dB(A) | Ø mm | 230±10% V-1 50 Hz | rpm | W | A |
| DPA 031 C | 3.7 | 2.7 | 16.3 | 1,064 | 2 x 8 | 3.4 | 10 x 1.0** | 22 x 1.0 | 64 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 041 C | 4.0 | 2.9 | 24.3 | 950 | 2 x 5 | 5.1 | 10 x 1.0** | 22 x 1.0 | 64 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 032 C | 7.4 | 5.5 | 32.6 | 2,128 | 2 x 9 | 6.8 | 10 x 1.0** | 28 x 1.5 | 67 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 042 C | 7.9 | 5.7 | 48.6 | 1,900 | 2 x 6 | 10.2 | 10 x 1.0** | 28 x 1.5 | 67 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 033 C | 11.1 | 8.1 | 48.9 | 3,192 | 2 x 10 | 10.2 | 10 x 1.0** | 28 x 1.5 | 69 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 043 C | 11.9 | 8.6 | 72.9 | 2,850 | 2 x 7 | 15.3 | 15 x 1.0** | 35 x 1.5 | 69 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 034 C | 14.9 | 10.9 | 65.2 | 4,256 | 2 x 11 | 13.6 | 15 x 1.0** | 35 x 1.5 | 70 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPA 044 C | 15.9 | 11.4 | 97.2 | 3,800 | 2 x 8 | 20.4 | 22 x 1.0** | 35 x 1.5 | 70 | 350 | 230 V-1 | 935 | 112 | 0.8 |

[SPEED S VERY QUIET]

| Type | Rating Q_o at 50 Hz, DT1, R404 A | | Cooling surface | Air flow | Air throw *** | Tube volume | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|------------------------------------|-----|-----------------|-------------------|---------------|-----------------|-------------|----------|----------------|------------------------------------|-------------------|---------|----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m ² | m ³ /h | m | dm ³ | Ø mm | Ø mm | dB(A) | Ø mm | 230±10% V-1 50 Hz | rpm | W | A |
| DPA 031 C | 3.0 | 2.1 | 16.3 | 760 | 2 x 5 | 3.4 | 10 x 1.0** | 22 x 1.0 | 56 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 041 C | 3.1 | 2.2 | 24.3 | 670 | 2 x 4 | 5.1 | 10 x 1.0** | 22 x 1.0 | 56 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 032 C | 6.1 | 4.3 | 32.6 | 1,520 | 2 x 6 | 6.8 | 10 x 1.0** | 28 x 1.5 | 59 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 042 C | 6.3 | 4.1 | 48.6 | 1,340 | 2 x 5 | 10.2 | 10 x 1.0** | 28 x 1.5 | 59 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 033 C | 9.1 | 6.3 | 48.9 | 2,280 | 2 x 7 | 10.2 | 10 x 1.0** | 28 x 1.5 | 61 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 043 C | 9.4 | 6.4 | 72.9 | 2,010 | 2 x 6 | 15.3 | 15 x 1.0** | 35 x 1.5 | 61 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 034 C | 12.2 | 8.5 | 65.2 | 3,040 | 2 x 8 | 13.6 | 15 x 1.0** | 35 x 1.5 | 62 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPA 044 C | 12.5 | 8.4 | 97.2 | 2,680 | 2 x 7 | 20.4 | 22 x 1.0** | 35 x 1.5 | 62 | 350 | 230 V-1 | 715 | 85 | 0.7 |

Standard condition
NB1/SC1 +10°C 0°C 10K
NB2/SC2 0°C -8°C 8K

* Single injection
** Multiple injection via Küba-CAL® distributor
*** Throw limit at 0.5 m/s

Subject to modification.

TECHNICAL DATA DPB (E)

[SPEED N NORMAL]

Küba comfort DP | Fin spacing 7 mm

| Type | Rating Q_o at 50 Hz, DT1, R404A | | Cooling surface m^2 | Air flow *** | Air throw m | Tube volume dm^3 | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|-----------------------------------|------|--------------------------|-----------------|----------------|-----------------------|----------------|----------------|-------------------|------------------------------------|-----------------------------|---------|-----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m^2 | m^3/h | m | dm^3 | \emptyset mm | \emptyset mm | dB(A) | \emptyset mm | $230 \pm 10\%$ V-1 50 Hz | rpm | W | A |
| DPB 031 C | 4.4 | 3.1 | 11.0 | 1,850 | 2 x 11 | 3.4 | 10 x 1.0** | 22 x 1.0 | 74 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 041 C | 5.5 | 3.8 | 16.4 | 1,770 | 2 x 9 | 5.1 | 10 x 1.0** | 22 x 1.0 | 74 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 032 C | 8.8 | 6.2 | 22.0 | 3,700 | 2 x 12 | 6.8 | 10 x 1.0** | 28 x 1.5 | 77 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 042 C | 10.9 | 7.5 | 32.8 | 3,540 | 2 x 10 | 10.2 | 10 x 1.0** | 28 x 1.5 | 77 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 033 C | 13.1 | 9.0 | 33.0 | 5,550 | 2 x 13 | 10.2 | 10 x 1.0** | 28 x 1.5 | 79 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 043 C | 16.4 | 11.3 | 49.2 | 5,310 | 2 x 11 | 15.3 | 15 x 1.0** | 35 x 1.5 | 79 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 034 C | 17.5 | 12.2 | 44.0 | 7,400 | 2 x 14 | 13.6 | 15 x 1.0** | 35 x 1.5 | 80 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |
| DPB 044 C | 21.8 | 15.1 | 65.6 | 7,080 | 2 x 12 | 20.4 | 22 x 1.0** | 35 x 1.5 | 80 | 350 | 230 V-1 | 1,335 | 158 | 0.7 |

[SPEED L QUIET]

| Type | Rating Q_o at 50 Hz, DT1, R404A | | Cooling surface m^2 | Air flow *** | Air throw m | Tube volume dm^3 | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|-----------------------------------|------|--------------------------|-----------------|----------------|-----------------------|----------------|----------------|-------------------|------------------------------------|-----------------------------|---------|-----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m^2 | m^3/h | m | dm^3 | \emptyset mm | \emptyset mm | dB(A) | \emptyset mm | $230 \pm 10\%$ V-1 50 Hz | rpm | W | A |
| DPB 031 C | 3.5 | 2.5 | 11.0 | 1,300 | 2 x 8 | 3.4 | 10 x 1.0** | 22 x 1.0 | 64 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 041 C | 4.0 | 2.8 | 16.4 | 1,140 | 2 x 5 | 5.1 | 10 x 1.0** | 22 x 1.0 | 64 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 032 C | 7.0 | 5.0 | 22.0 | 2,600 | 2 x 9 | 6.8 | 10 x 1.0** | 28 x 1.5 | 67 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 042 C | 8.0 | 5.6 | 32.8 | 2,280 | 2 x 6 | 10.2 | 10 x 1.0** | 28 x 1.5 | 67 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 033 C | 10.6 | 7.3 | 33.0 | 3,900 | 2 x 10 | 10.2 | 10 x 1.0** | 28 x 1.5 | 69 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 043 C | 12.1 | 8.4 | 49.2 | 3,420 | 2 x 7 | 15.3 | 15 x 1.0** | 35 x 1.5 | 69 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 034 C | 14.1 | 9.8 | 44.0 | 5,200 | 2 x 11 | 13.6 | 15 x 1.0** | 35 x 1.5 | 70 | 350 | 230 V-1 | 935 | 112 | 0.8 |
| DPB 044 C | 16.1 | 11.2 | 65.6 | 4,560 | 2 x 8 | 20.4 | 22 x 1.0** | 35 x 1.5 | 70 | 350 | 230 V-1 | 935 | 112 | 0.8 |

[SPEED S VERY QUIET]

| Type | Rating Q_o at 50 Hz, DT1, R404A | | Cooling surface m^2 | Air flow *** | Air throw m | Tube volume dm^3 | Connections | | Sound L_{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------|-----------------------------------|-----|--------------------------|-----------------|----------------|-----------------------|----------------|----------------|-------------------|------------------------------------|-----------------------------|---------|----|-----|
| | SC1 | SC2 | | | | | Inlet | Outlet | | Blade | Current | Per fan | | |
| | kW | kW | m^2 | m^3/h | m | dm^3 | \emptyset mm | \emptyset mm | dB(A) | \emptyset mm | $230 \pm 10\%$ V-1 50 Hz | rpm | W | A |
| DPB 031 C | 2.6 | 1.8 | 11.0 | 810 | 2 x 5 | 3.4 | 10 x 1.0** | 22 x 1.0 | 56 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 041 C | 3.1 | 2.2 | 16.4 | 800 | 2 x 4 | 5.1 | 10 x 1.0** | 22 x 1.0 | 56 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 032 C | 5.1 | 3.6 | 22.0 | 1,620 | 2 x 6 | 6.8 | 10 x 1.0** | 28 x 1.5 | 59 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 042 C | 6.3 | 4.4 | 32.8 | 1,600 | 2 x 5 | 10.2 | 10 x 1.0** | 28 x 1.5 | 59 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 033 C | 7.7 | 5.4 | 33.0 | 2,430 | 2 x 7 | 10.2 | 10 x 1.0** | 28 x 1.5 | 61 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 043 C | 9.4 | 6.5 | 49.2 | 2,400 | 2 x 6 | 15.3 | 15 x 1.0** | 35 x 1.5 | 61 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 034 C | 10.3 | 7.2 | 44.0 | 3,240 | 2 x 8 | 13.6 | 15 x 1.0** | 35 x 1.5 | 62 | 350 | 230 V-1 | 715 | 85 | 0.7 |
| DPB 044 C | 12.5 | 8.7 | 65.6 | 3,200 | 2 x 7 | 20.4 | 22 x 1.0** | 35 x 1.5 | 62 | 350 | 230 V-1 | 715 | 85 | 0.7 |

DIMENSIONS, WEIGHTS, ELECTRIC DEFROST

Küba comfort DP

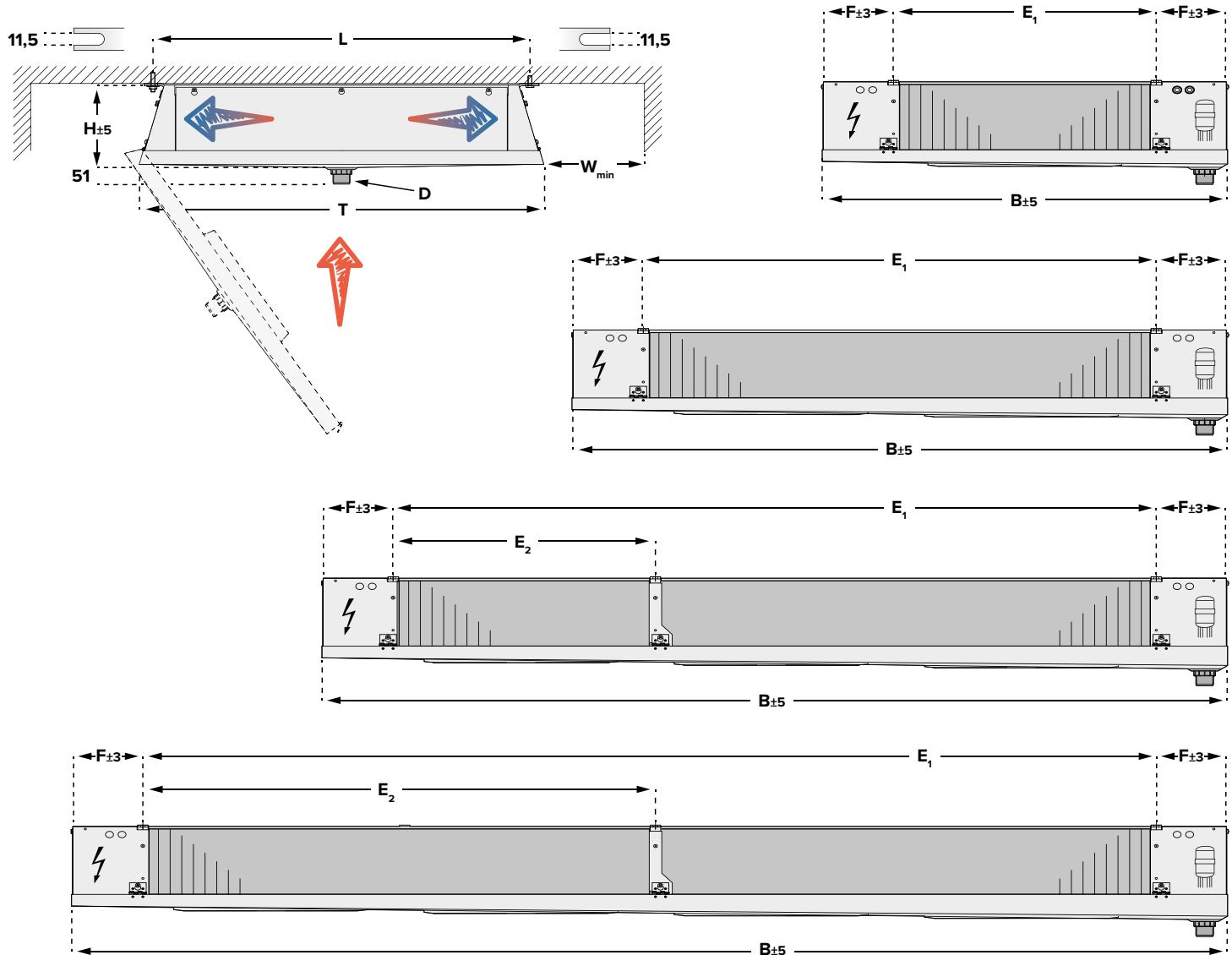
| Type | Dimensions | | | | | | | | | Electrical defrost 230 V-1 / 400 V-3-Y | | | Weight (net) Unpacked | | Weight (gross) Packed | | Drain |
|----------|------------|---------|---------|---------|----------------------|----------------------|---------|------------------------|------------|---|-------------|-------------|--------------------------|-------------|--------------------------|------|-------|
| | H mm | B mm | T mm | L mm | E ₁ mm | E ₂ mm | F mm | W _{min} mm | Coil kW | Tray kW | Total kW | DPA/B kg | DPA/B E kg | DPA/B kg | DPA/B E kg | | |
| DP 031 C | 281 | 972 | 1,010 | 930 | 630 | - | 171 | 1,200 | 2.3 | - | 2.3 | 44 | 47 | 74 | 78 | G 1¼ | |
| DP 041 C | 281 | 972 | 1,010 | 930 | 630 | - | 171 | 1,200 | 2.3 | - | 2.3 | 46 | 49 | 76 | 80 | G 1¼ | |
| DP 032 C | 288 | 1,572 | 1,010 | 930 | 1,230 | - | 171 | 1,200 | 4.1 | - | 4.1 | 68 | 72 | 105 | 109 | G 1¼ | |
| DP 042 C | 288 | 1,572 | 1,010 | 930 | 1,230 | - | 171 | 1,200 | 4.1 | - | 4.1 | 72 | 76 | 109 | 113 | G 1¼ | |
| DP 033 C | 296 | 2,172 | 1,010 | 930 | 1,830 | 629 | 171 | 1,200 | 6.0 | - | 6.0 | 96 | 101 | 150 | 155 | G 1¼ | |
| DP 043 C | 296 | 2,172 | 1,010 | 930 | 1,830 | 629 | 171 | 1,200 | 6.0 | - | 6.0 | 102 | 107 | 156 | 161 | G 1¼ | |
| DP 034 C | 303 | 2,772 | 1,010 | 930 | 2,430 | 1,229 | 171 | 1,200 | 7.8 | - | 7.8 | 120 | 126 | 182 | 188 | G 1¼ | |
| DP 044 C | 303 | 2,772 | 1,010 | 930 | 2,430 | 1,229 | 171 | 1,200 | 7.8 | - | 7.8 | 128 | 134 | 188 | 194 | G 1¼ | |

The dimensions are only valid for the standard model design!

Note the differences in dimension among versions and accessories.

DIMENSIONAL DRAWINGS

Küba comfort DP





Küba comfort DP

VARIANTS

MOTOR - VARIANTS

V 1.52 EC FAN WITH CONTROLLABLE SPEED

PROTECTION AGAINST CORROSION

STAINLESS STEEL 304 CASING

GOLDLACK PRE-COATED FIN

CASING - VARIANTS

V 3.09 DOUBLE-WALLED, INSULATED DRIP TRAY

Prevents condensed water from forming on the bottom side of the pan, and it reduces the transfer of defrost heat into the cold rooms.

The following dimensions are changed:

Width B: +60 mm

Height H: +30 mm

Depth T: +30 mm

CO₂ - VARIANTS

V 7.45 CO₂ - DIRECT EXPANSION

up to 45 bar operating pressure

CONSTRUCTION - VARIANTS

V 2.05 WATER / BRINE CIRCULATION

With a large number of distributors
(small pressure drop)

V 2.06 WATER / BRINE CIRCULATION

With a small number of distributors
(large pressure drop)

ACCESSORIES

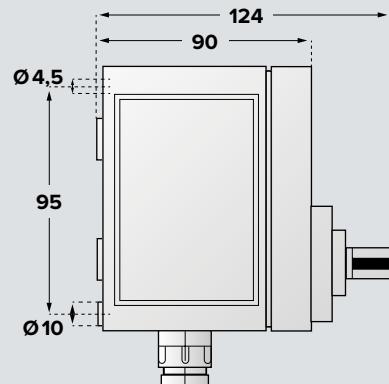
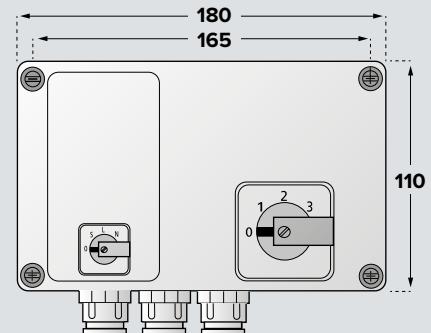
SPEED SWITCH OPERATION N, L, S

Construction:

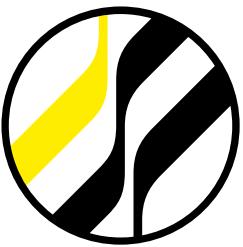
- With floating change-over at fan ON/OFF, contact open in switch position 0
- Floating drag switch contacts on terminals 11/12
- Capacitor (C) for level S included

Selection table & Dimensions:

| For Type | Description | Description | Protection class | μF |
|----------|--------------|---------------|------------------|---------------|
| | Speed switch | Capacitor (S) | | |
| DP 031 C | SC - 10 | C - 10 | IP 54 | 10 |
| DP 041 C | SC - 10 | C - 10 | IP 54 | 10 |
| DP 032 C | SC - 20 | C - 20 | IP 54 | 20 |
| DP 042 C | SC - 20 | C - 20 | IP 54 | 20 |
| DP 033 C | SC - 30 | C - 30 | IP 54 | 30 |
| DP 043 C | SC - 30 | C - 30 | IP 54 | 30 |
| DP 034 C | SC - 40 | C - 40 | IP 54 | 40 |
| DP 044 C | SC - 40 | C - 40 | IP 54 | 40 |







Küba market plus SP

THE STANDARD FOR BASIC REFRIGERATION APPLICATIONS



Küba market plus SP

THE STANDARD FOR BASIC REFRIGERATION APPLICATIONS



Capacity range (for SC2)

1.2 kW 52 kW

The capacity scale is represented by a series of 12 dots arranged in three rows of four. The first dot is labeled '1.2 kW' and the last dot is labeled '52 kW'.

Temperature range (t_{L1})

-25°C +10°C

The temperature scale is represented by a series of 12 dots arranged in three rows of four. The first dot is labeled '-25°C' and the last dot is labeled '+10°C'.

Type Designation Code

1 2 3 4 5 6

| | | | | | |
|----|---|---|----|---|---|
| SP | A | E | 01 | 1 | D |
|----|---|---|----|---|---|

1 Model range designation

2 Fin spacing

3 Electric defrost

4 Size

5 Number of fans

6 Generation Code

Küba market plus SP

BASIC VERSION



CASING

- ▶ Aluminium, smooth
- ▶ High-quality powder coating
- ▶ papyrus white RAL 9010
- ▶ Food-safe
- ▶ Easy to clean
- ▶ Best corrosion protection
- ▶ Removable side pieces

HEAT EXCHANGER

- ▶ Internal cleanliness acc. to DIN 8964
- ▶ Fin spacing: SPA.D: 4,5 mm, SPB.D: 7,0 mm
- ▶ Refrigerant distributor:
SPA.D: Flow distributor / SPB.D: Küba-CAL®
- ▶ Tubing Cu-Special, Fins Al, End plates Al

ELECTRIC DEFROST

- ▶ Wired-up, ready to connect in terminal box
- ▶ To prevent steam build-up and to accomplish heat exchange with almost no loss, the heaters are located in special expanded tube sleeves
- ▶ 230 V/1/400 V-3-Y
- ▶ With splash pan



FAN UNIT

- ▶ Fans are wired to an internal terminal box:
Ø 250 mm/Ø 300 mm/Ø 400 mm
- ▶ With built-in protector according to VDE provisions
(Ø 500 mm: Led-out protector)
- ▶ Application range: RT: -30 °C to +50 °C
- ▶ Voltage:
SP. 011 – 065D = 230 V ±10 %, V-1 50/60 Hz:
Ø 250 mm, non-adjustable; Ø 300 mm, adjustable;
Ø 400 mm, adjustable
- ▶ SP. 071 – 084D = 400 V ±10 %, V-3 50/60 Hz:
Ø 500 mm, adjustable
- ▶ Index of protection
SP. 011 – 024D = IP42
SP. 031 – 065D = IP44
SP. 071 – 084D = IP54
- ▶ Insulation class
SP. 011 – 065D = Insulation class B
SP. 071 – 084D = Insulation class F
- ▶ Operating values are the values of the built-in
motor at +20 °C, with an unobstructed air flow
and a dry surface, as required for the refrigeration
load calculation

Please observe the manufacturer's information!

MOTOR LABEL DATA

| Type | Ø mm | 50 Hz | | | 60 Hz | | |
|-------------------|------|-------|-----|------|-------|-----|------|
| | | rpm | W | A | rpm | W | A |
| SP.01-02.D | 250 | 1300 | 90 | 0,62 | 1550 | 80 | 0,55 |
| SP.03-04.D | 300 | 1400 | 65 | 0,3 | 1500 | 90 | 0,4 |
| SP.05-06.D | 400 | 1365 | 214 | 0,96 | 1630 | 270 | 1,2 |
| SP.07-08.D | 500 | 1082 | 544 | 0,95 | 1170 | 770 | 1,13 |

Motor data per fan

Data provided by the manufacturer

TECHNICAL DATA SPA (E)

Küba market plus SP | Fin spacing 4.5 mm

| Type | Rating Q _c at 50 Hz, DT1, R404 A | | Cooling surface | Air flow | Air throw *** | Tube volume | Connections | | Sound | Fans (Operational values at 50 Hz) | | | | |
|-----------------|---|-------|-----------------|-------------------|---------------|-----------------|-------------|-------------|-----------------------|------------------------------------|---------------------------|------|-----|------|
| | SC1 | SC2 | m ² | m ³ /h | m | dm ³ | Inlet Ø mm | Outlet Ø mm | L _{WA} dB(A) | Blade Ø mm | Current 230±10% V-1 50 Hz | rpm | W | A |
| | kW | kW | m ² | m ³ /h | m | dm ³ | Ø mm | Ø mm | dB(A) | Ø mm | 230±10% V-1 50 Hz | rpm | W | A |
| SPA 011D | 2,4 | 1,7 | 6,9 | 820 | 4 | 1,4 | 10 | 12 | 63 | 1 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPA 021D | 2,7 | 1,8 | 9,1 | 760 | 4 | 1,9 | 10 | 12 | 63 | 1 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPA 031D | 3,9 | 2,7 | 10,3 | 1380 | 6 | 2,1 | 10 | 18 | 70 | 1 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 041D | 4,4 | 3,0 | 13,6 | 1300 | 5 | 2,8 | 12* | 22 | 70 | 1 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 051D | 9,0 | 6,1 | 20,5 | 3020 | 8 | 4,2 | 12* | 28 | 77 | 1 x 400 | 230V -1 | 1365 | 214 | 0,96 |
| SPA 061D | 10,1 | 6,8 | 30,6 | 2720 | 7 | 6,3 | 12* | 28 | 77 | 1 x 400 | 230V -1 | 1365 | 214 | 0,96 |
| SPA 071D | 13,12 | 9,66 | 36,8 | 5740 | 18 | 7,6 | 15 | 35 | 78 | 1x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 081D | 15,67 | 11,42 | 54,9 | 4950 | 16 | 11,1 | 15 | 35 | 78 | 1x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 022D | 5,3 | 3,6 | 18,2 | 1520 | 6 | 3,6 | 12* | 22 | 66 | 2 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPA 032D | 7,9 | 5,3 | 20,6 | 2760 | 8 | 4,1 | 12* | 28 | 73 | 2 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 042D | 8,9 | 6,0 | 27,3 | 2600 | 7 | 5,5 | 12* | 28 | 73 | 2 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 052D | 17,7 | 11,9 | 40,9 | 6040 | 12 | 8,2 | 15* | 35 | 80 | 2 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPA 062D | 19,7 | 13,4 | 60,9 | 5440 | 11 | 12,1 | 15* | 35 | 80 | 2 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPA 072D | 28,15 | 21,08 | 73,7 | 11480 | 22 | 14,3 | 15 | 42 | 81 | 2x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 082D | 32,65 | 24,74 | 109,7 | 9900 | 19 | 21,5 | 22 | 42 | 81 | 2x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 023D | 8,2 | 5,5 | 27,3 | 2280 | 8 | 5,3 | 12* | 28 | 68 | 3 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPA 043D | 13,3 | 9,0 | 40,9 | 3900 | 10 | 8 | 15* | 35 | 75 | 3 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 053D | 27,0 | 18,2 | 61,4 | 9060 | 15 | 12 | 22* | 42 | 82 | 3 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPA 063D | 30,4 | 20,6 | 91,5 | 8160 | 13 | 18 | 22* | 42 | 82 | 3 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPA 073D | 44,29 | 33,28 | 110,5 | 17220 | 25 | 21,3 | 22 | 54 | 83 | 3x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 083D | 48,12 | 36,39 | 164,6 | 14850 | 23 | 32,2 | 22 | 54 | 83 | 3x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 024D | 10,7 | 7,3 | 36,3 | 3040 | 9 | 7,1 | 12* | 28 | 69 | 4 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPA 044D | 17,2 | 11,7 | 54,5 | 5200 | 12 | 10,6 | 15* | 35 | 76 | 4 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPA 064D | 39,6 | 26,9 | 122 | 10880 | 16 | 23,7 | 22* | 42 | 83 | 4 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPA 074D | 56,64 | 42,50 | 147,4 | 22960 | 27 | 28,6 | 22 | 54 | 84 | 4x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 084D | 65,57 | 49,78 | 219,4 | 19800 | 24 | 41,0 | 28 | 54 | 84 | 4x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPA 065D | 50,4 | 34,1 | 152,4 | 13600 | 18 | 28,9 | 22* | 54 | 84 | 5 x 400 | 230V -1 | 1420 | 188 | 0,83 |

Standard condition t_{l1} t₀ DT1
 NB1/SC1 +10°C 0°C 10K
 NB2/SC2 0°C -8°C 8K

* Single injection
 ** Multiple injection
 *** Throw limit at 0.5 m/s

Subject to modification.

TECHNICAL DATA SPB (E)

Küba market plus SP | Fin spacing 7 mm

| Type | Rating Q _o at 50 Hz, DT1, R404A | | Cooling surface | Air flow | Air throw *** | Tube volume | Connections | | Sound L _{WA} | Fans (Operational values at 50 Hz) | | | | |
|-----------------|--|-------|-----------------|-------------------|---------------|-----------------|-------------|--------|-----------------------|------------------------------------|---------------------------|------|-----|------|
| | SC2 | SC3 | | | | | Inlet | Outlet | | Blade Ø mm | Current 230±10% V-1 50 Hz | rpm | W | A |
| | kW | kW | m ² | m ³ /h | m | dm ³ | Ø mm | Ø mm | dB(A) | Ø mm | 230V -1 | 1347 | 85 | 0,59 |
| SPB 011D | 1,3 | 1,0 | 4,6 | 880 | 4 | 1,4 | 10 | 12 | 63 | 1 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPB 021D | 1,5 | 1,2 | 6,0 | 850 | 4 | 1,9 | 10 | 12 | 63 | 1 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPB 031D | 2,0 | 1,6 | 6,9 | 1450 | 7 | 2,1 | 10 | 18 | 70 | 1 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 041D | 2,5 | 1,9 | 9,1 | 1420 | 6 | 2,8 | 12* | 22 | 70 | 1 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 051D | 4,8 | 3,8 | 13,7 | 3320 | 9 | 4,2 | 12* | 28 | 77 | 1 x 400 | 230V -1 | 1365 | 214 | 0,96 |
| SPB 061D | 5,9 | 4,7 | 20,4 | 3080 | 8 | 6,3 | 12* | 28 | 77 | 1 x 400 | 230V -1 | 1365 | 214 | 0,96 |
| SPB 071D | 8,18 | 6,22 | 24,6 | 6530 | 20 | 7,6 | 15 | 35 | 78 | 1x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 081D | 10,46 | 8,01 | 36,6 | 5880 | 18 | 11,1 | 15 | 35 | 78 | 1x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 022D | 3,0 | 2,4 | 12,2 | 1700 | 6 | 3,6 | 12* | 22 | 66 | 2 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPB 032D | 4,1 | 3,2 | 13,7 | 2900 | 9 | 4,1 | 12* | 28 | 73 | 2 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 042D | 4,9 | 3,9 | 18,2 | 2840 | 8 | 5,5 | 12* | 28 | 73 | 2 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 052D | 9,5 | 7,5 | 27,3 | 6640 | 13 | 8,2 | 15* | 35 | 80 | 2 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPB 062D | 11,7 | 9,3 | 40,7 | 6160 | 12 | 12,1 | 15* | 35 | 80 | 2 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPB 072D | 18,20 | 12,62 | 49,2 | 13060 | 24 | 14,3 | 15 | 42 | 81 | 2x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 082D | 22,04 | 15,56 | 73,3 | 11760 | 23 | 21,5 | 22 | 42 | 81 | 2x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 023D | 4,6 | 3,6 | 18,2 | 2550 | 8 | 5,3 | 12* | 28 | 68 | 3 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPB 043D | 7,3 | 5,8 | 27,3 | 4260 | 11 | 8,0 | 15* | 35 | 75 | 3 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 053D | 14,4 | 11,4 | 41,0 | 9960 | 16 | 12,0 | 22* | 42 | 82 | 3 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPB 063D | 17,8 | 14,1 | 61,1 | 9240 | 14 | 18,0 | 22* | 42 | 82 | 3 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPB 073D | 25,13 | 18,94 | 73,8 | 19590 | 27 | 21,3 | 22 | 54 | 83 | 3x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 083D | 33,77 | 22,69 | 109,9 | 17640 | 25 | 32,2 | 22 | 54 | 83 | 3x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 024D | 6,1 | 4,8 | 24,3 | 3400 | 9 | 7,1 | 12* | 28 | 69 | 4 x 250 | 230V -1 | 1347 | 85 | 0,59 |
| SPB 044D | 9,6 | 7,7 | 36,5 | 5680 | 13 | 10,6 | 15* | 35 | 76 | 4 x 300 | 230V -1 | 1340 | 80 | 0,36 |
| SPB 064D | 23,5 | 18,7 | 81,6 | 12320 | 17 | 23,7 | 22* | 42 | 83 | 4 x 400 | 230V -1 | 1420 | 188 | 0,83 |
| SPB 074D | 36,61 | 25,52 | 98,4 | 26120 | 29 | 28,6 | 22 | 54 | 84 | 4x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 084D | 44,28 | 31,40 | 146,6 | 23520 | 28 | 41,0 | 28 | 54 | 84 | 4x500 | 400V-3 | 1082 | 544 | 0,95 |
| SPB 065D | 29,7 | 23,5 | 101,9 | 15400 | 19 | 28,9 | 22* | 54 | 84 | 5 x 400 | 230V -1 | 1420 | 188 | 0,83 |

Standard condition t_{l1} t₀ DT1 * Single injection
 NB2/SC2 0°C -8°C 8K ** Multiple injection
 NB3/SC3 -18°C -25°C 7K *** Throw limit at 0.5 m/s

Subject to modification.

DIMENSIONS, WEIGHTS, ELECTRIC DEFROST

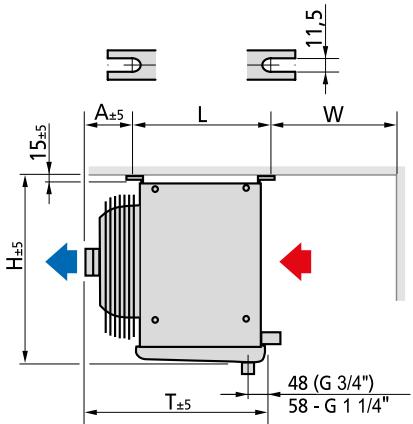
Küba market plus SP

| Type | Dimensions | | | | | | | | | | | | Electrical defrost 230 V-1 / 400 V-3-Y | | | Weight (net) | | Weight (gross) | | Drain |
|----------|------------|---------|---------|---------|----------------------|----------------------|----------------------|---------|---------|------------------------|------------|------------|---|-------------|---------------|-----------------|---------------|-------------------|--|-------|
| | H mm | B mm | T mm | L mm | E ₁ mm | E ₂ mm | E ₃ mm | F mm | A mm | W _{min} mm | kW Coil | kW Tray | kW Total | kg SPA/B | kg SPA/B E | kg SPA/B | kg SPA/B E | | | |
| SP. 011D | 354 | 810 | 424 | 350 | 530 | - | - | 140 | 92 | 200 | 1,07 | 0,58 | 1,65 | 14 | 13,5 | 17 | 16,5 | G 3/4 | | |
| SP. 021D | 354 | 810 | 424 | 350 | 530 | - | - | 140 | 92 | 200 | 1,07 | 0,58 | 1,65 | 15 | 14,5 | 18 | 17,5 | G 3/4 | | |
| SP. 031D | 430 | 970 | 421 | 350 | 630 | - | - | 170 | 90 | 200 | 1,23 | 0,69 | 1,92 | 18,5 | 18 | 22,5 | 22 | G 3/4 | | |
| SP. 041D | 430 | 970 | 421 | 350 | 630 | - | - | 170 | 90 | 200 | 1,23 | 0,69 | 1,92 | 21 | 20,5 | 25 | 24,5 | G 3/4 | | |
| SP. 051D | 509 | 1180 | 501 | 420 | 780 | - | - | 200 | 100 | 300 | 2,07 | 0,88 | 2,95 | 31,5 | 30,5 | 37 | 36 | G 3/4 | | |
| SP. 061D | 509 | 1180 | 501 | 420 | 780 | - | - | 200 | 100 | 300 | 2,90 | 0,88 | 3,78 | 36,5 | 35,5 | 42 | 41 | G 3/4 | | |
| SP. 071D | 661 | 1430 | 592 | 500 | 1030 | - | - | 200 | 110 | 400 | 3,52 | 0,50 | 4,02 | 55 | 53 | 75 | 73 | G 3/4 | | |
| SP. 081D | 661 | 1430 | 592 | 500 | 1030 | - | - | 200 | 110 | 400 | 5,52 | 0,50 | 6,02 | 65 | 63 | 85 | 83 | G 3/4 | | |
| SP. 022D | 354 | 1310 | 424 | 350 | 1030 | - | - | 140 | 92 | 200 | 1,84 | 0,96 | 2,80 | 26,5 | 25,5 | 30,5 | 29,5 | G 3/4 | | |
| SP. 032D | 430 | 1570 | 421 | 350 | 1230 | - | - | 170 | 90 | 200 | 2,14 | 1,15 | 3,29 | 33,5 | 32,5 | 51 | 50 | G 3/4 | | |
| SP. 042D | 430 | 1570 | 421 | 350 | 1230 | - | - | 170 | 90 | 200 | 2,14 | 1,15 | 3,29 | 36,5 | 35,5 | 54 | 53 | G 3/4 | | |
| SP. 052D | 509 | 1930 | 501 | 420 | 1530 | - | - | 200 | 100 | 300 | 3,90 | 1,44 | 5,34 | 56 | 54 | 76 | 74 | G 1 1/4 | | |
| SP. 062D | 509 | 1930 | 501 | 420 | 1530 | - | - | 200 | 100 | 300 | 5,20 | 1,44 | 6,64 | 65 | 63 | 85 | 83 | G 1 1/4 | | |
| SP. 072D | 661 | 2430 | 592 | 500 | 2030 | - | - | 200 | 110 | 400 | 6,74 | 0,86 | 7,60 | 96,5 | 93,5 | 180,5 | 177,5 | G 1 1/4 | | |
| SP. 082D | 661 | 2430 | 592 | 500 | 2030 | - | - | 200 | 110 | 400 | 10,11 | 0,86 | 10,97 | 117 | 114 | 201 | 198 | G 1 1/4 | | |
| SP. 023D | 354 | 1810 | 424 | 350 | 1530 | - | - | 140 | 92 | 200 | 2,60 | 1,30 | 3,90 | 37,5 | 36 | 56,5 | 55 | G 3/4 | | |
| SP. 043D | 430 | 2170 | 421 | 350 | 1830 | - | - | 170 | 90 | 200 | 3,18 | 1,59 | 4,77 | 51,5 | 50 | 72 | 70,5 | G 3/4 | | |
| SP. 053D | 509 | 2680 | 501 | 420 | 2280 | 750 | - | 200 | 100 | 300 | 5,63 | 1,95 | 7,58 | 78,5 | 77 | 137,5 | 136 | G 1 1/4 | | |
| SP. 063D | 509 | 2680 | 501 | 420 | 2280 | 750 | - | 200 | 100 | 300 | 7,50 | 1,95 | 9,45 | 96 | 93 | 155 | 152 | G 1 1/4 | | |
| SP. 073D | 661 | 3430 | 592 | 500 | 3030 | 1000 | - | 200 | 110 | 400 | 9,20 | 1,82 | 11,02 | 139,5 | 135,5 | 244,5 | 240,5 | G 1 1/4 | | |
| SP. 083D | 661 | 3430 | 592 | 500 | 3030 | 1000 | - | 200 | 110 | 400 | 13,80 | 1,82 | 15,62 | 168,5 | 164,5 | 273,5 | 269,5 | G 1 1/4 | | |
| SP. 024D | 354 | 2310 | 424 | 350 | 2030 | 1000 | - | 140 | 92 | 200 | 3,37 | 1,72 | 5,09 | 48,5 | 46,5 | 73 | 71 | G 3/4 | | |
| SP. 044D | 430 | 2770 | 421 | 350 | 2430 | 1200 | - | 170 | 90 | 200 | 4,00 | 2,00 | 6,00 | 67 | 65 | 127 | 125 | G 1 1/4 | | |
| SP. 064D | 509 | 3430 | 501 | 420 | 3030 | 1500 | - | 200 | 100 | 300 | 9,20 | 1,82 | 11,02 | 125 | 121 | 229 | 225 | G 1 1/4 | | |
| SP. 074D | 661 | 4430 | 592 | 500 | 4030 | 2000 | - | 200 | 110 | 400 | 12,72 | 2,39 | 15,11 | 183 | 178 | 293 | 288 | G 1 1/4 | | |
| SP. 084D | 661 | 4430 | 592 | 500 | 4030 | 2000 | - | 200 | 110 | 400 | 19,08 | 2,39 | 21,47 | 221 | 216 | 331 | 326 | G 1 1/4 | | |
| SP. 065D | 509 | 4180 | 501 | 420 | 3780 | 1500 | 2250 | 200 | 100 | 300 | 11,92 | 2,24 | 14,16 | 156,5 | 150,5 | 252,5 | 246,5 | G 1 1/4 | | |

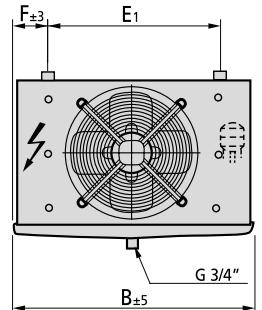
The dimensions are only valid for the standard model design!
Note the differences in dimension among versions and accessories.

DIMENSIONAL DRAWINGS

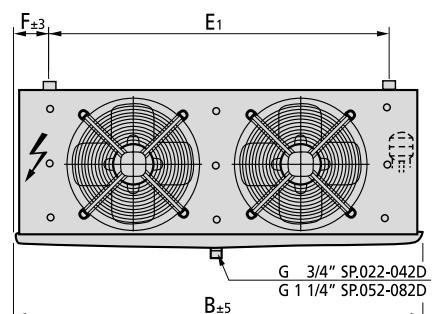
Küba market plus SP



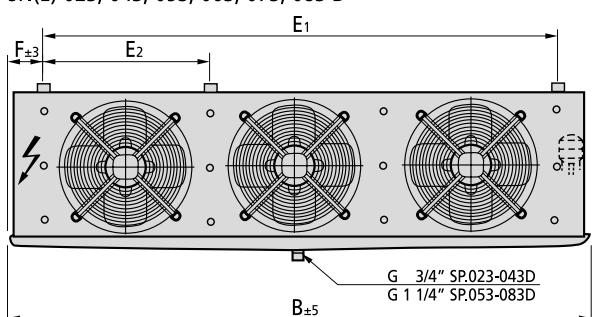
SP.(E) 011, 021, 031, 041, 051, 061, 071, 081 D



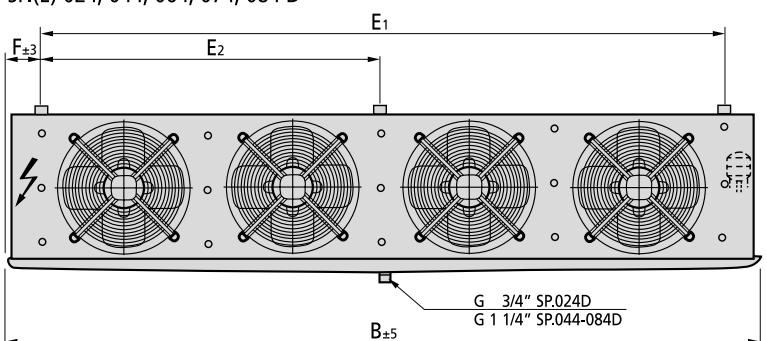
SP.(E) 022, 032, 042, 052, 062, 072, 082 D



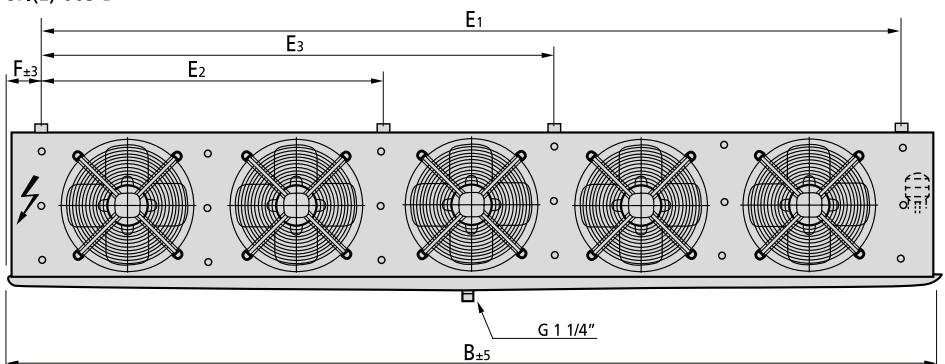
SP.(E) 023, 043, 053, 063, 073, 083 D



SP.(E) 024, 044, 064, 074, 084 D



SP.(E) 065 D



Küba market plus SP

VARIANTS



PROTECTION AGAINST CORROSION

STAINLESS STEEL 304 CASING

GOLDLACK PRE-COATED FIN

WATER/BRINE OPERATION

Please use our Küba selection software for configuring the brine Air Coolers. Do not hesitate to contact us if you have any further questions.

Configuration

- Soldered connections
- Ventilation and drainage

OTHER VARIANTS

INSULATED DRIPTRAY

FAN RING HEATER (300/400/500MM FAN ONLY)

DEFROST VARIANTS

HOT-GAS COIL IN THE DRIP TRAY (CU)

Hot-gas coil without connection; copper

KÜBA AIR JET

Advantages

- Longer air throw
- Even temperature distribution in the cold room

Information:

Unassembled upon delivery
(Cannot be used in conjunction with electrical radiator SPHR)

| For Model | Air Jet |
|---------------|---------|
| | Ø mm |
| SP. 031D-044D | 300 |
| SP. 051D-065D | 400 |
| SP. 071D-084D | 500 |





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