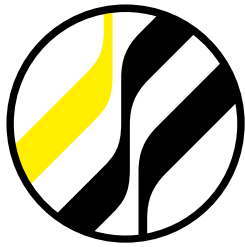


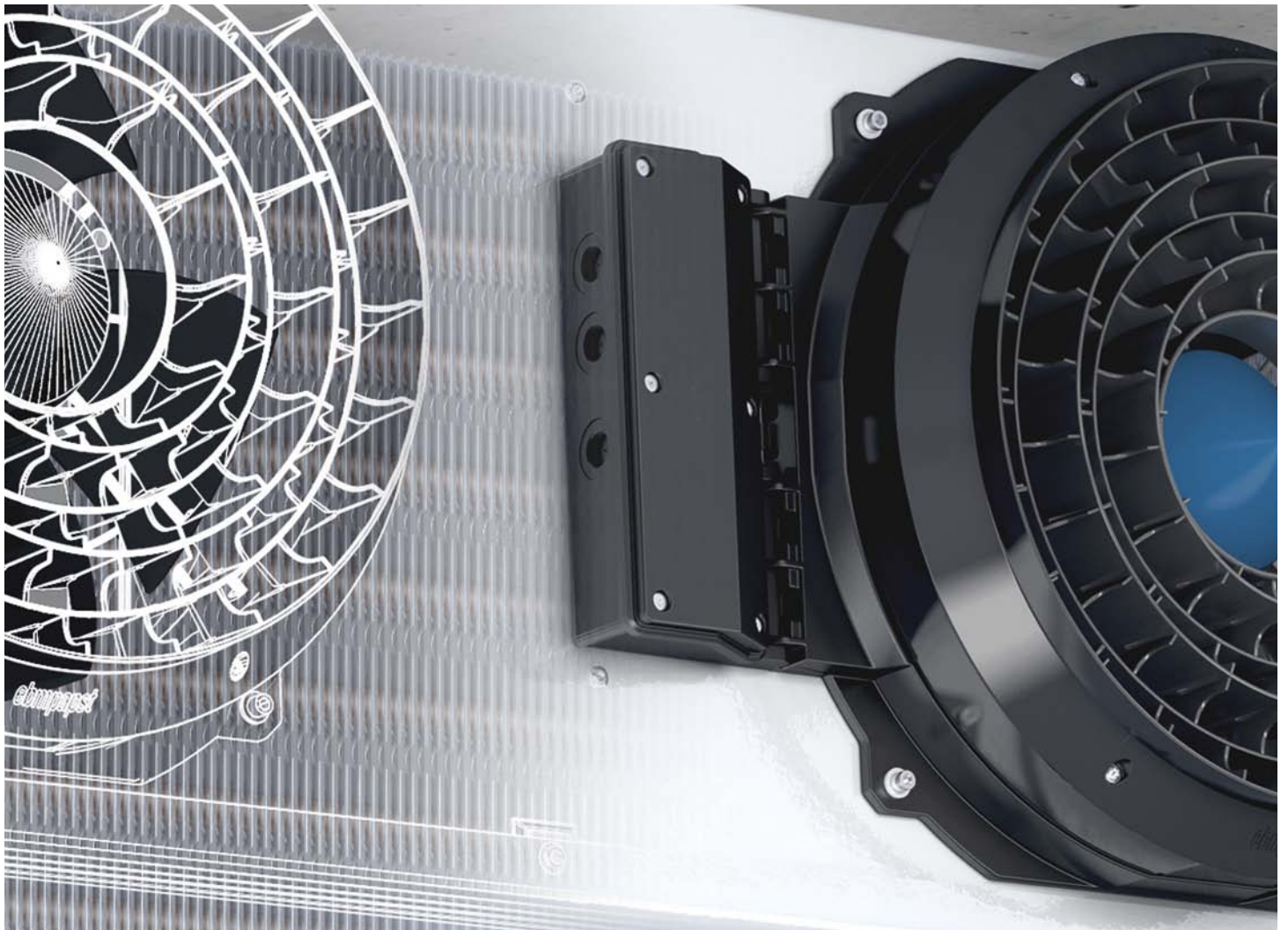
Kelvion



Küba Blue Line Aircoolers

Küba SG commercial

# VERSATILE SOLUTIONS FOR STANDARD COOLING ROOMS



Küba SG commercial

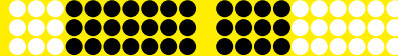
# THE **FLEXIBLE** SOLUTION FOR **COMPLEX** REFRIGERATION APPLICATIONS



**Capacity range** (for SC2)

0.6 kW  46 kW

**Temperature range** ( $t_{L1}$ )

-35°C  +20°C

## Type designation code

1 2 3 4 5 6 7

**SG A E 35 - F 2 3**

- 1 Model range designation
- 2 Fin spacing
- 3 Electric defrost
- 4 Fan diameter

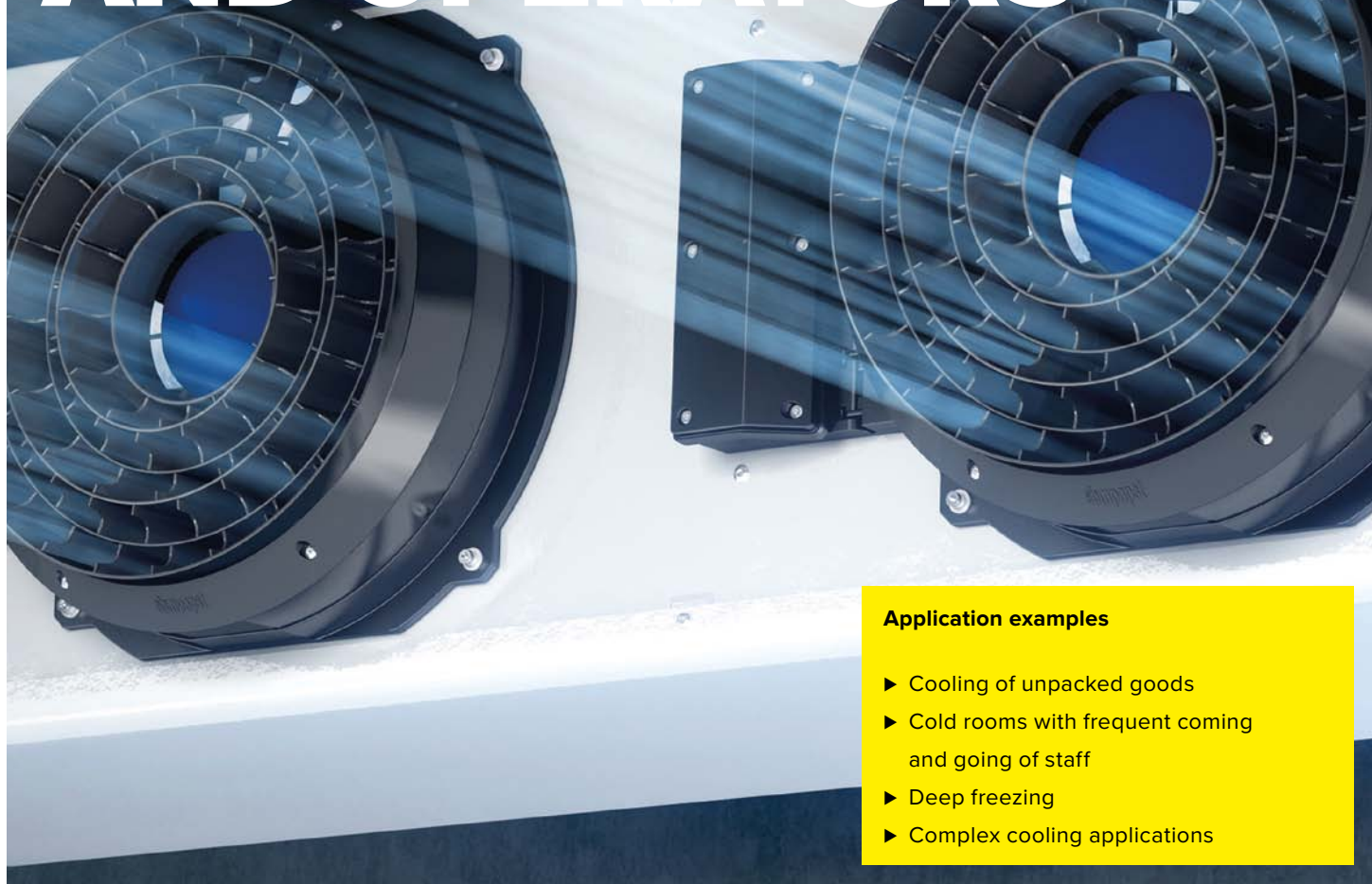
- 5 Refrigerant
- 6 Number of rows deep
- 7 Number of fans

**Refrigerant** (Box 5)

- F HFC / CO<sub>2</sub>
- G Glycol
- N Pump operation, NH<sub>3</sub>

Küba SG commercial

# APPLICATION BENEFITS FOR CONTRACTORS AND OPERATORS



## Application examples

- ▶ Cooling of unpacked goods
- ▶ Cold rooms with frequent coming and going of staff
- ▶ Deep freezing
- ▶ Complex cooling applications

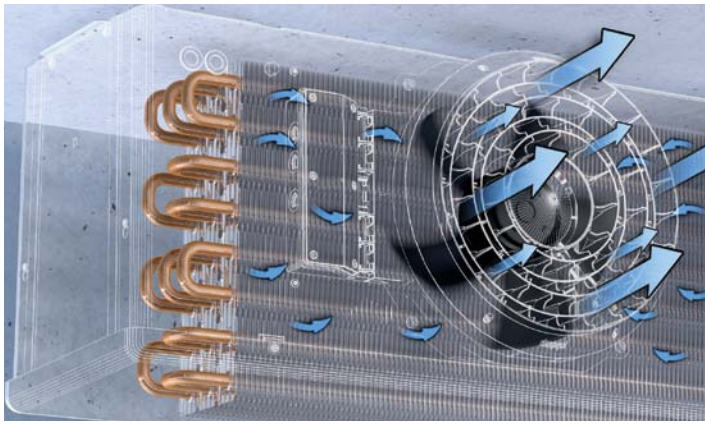
## A GENUINE KELVION HIGH-PERFORMANCE AIR COOLER

Complex cooling and refrigeration applications have demanding requirements, particularly on system components. Kelvion has thoroughly reworked its high-performance cooler SG commercial and has further optimized the matching of its individual components such as the heat exchanger and the fan system.

As a result, Kelvion has responded to ever increasing operating costs with sustainable solutions that comply with increasingly strict legal regulations. This means long-term investment security for you.

Whether you have extreme storage conditions or need long-term food freshness – the Küba SG commercial is the answer to your requirements and ensures the long term value of your chilled goods. The focus of our engineering design is on your requirements and is primarily directed to long cooling times between defrost cycles.

The SG commercial also means low fan power consumption – while maintaining good control characteristics at minimal temperature differences. This results in compressor output as low as possible for the required cooling load.



## MAXIMUM ENERGY EFFICIENCY

Aerodynamically integrated fan system with air straightener. The benefit in the cold room is strong, focused flow of air with more flow volume and longer air throw.

Thanks to the optimal fin structure of the Küba HFE® system, the optimized design of the heat exchanger enables stable control functions with minimum temperature differences, also during part-load operation.

The EC fans reduce energy consumption by up to 67%, and on an average by approx. 30%. The fan unit is additionally hinged and heated (except SG 23), and it features a new condensate drain.



## HYGIENIC WITHOUT A DOUBT

All component parts are easy to access and simple to clean. The hinge-down drip tray and the hinged fans (except SG 23) are already included in the basic version.

The food-safe and environmentally friendly powdercoating finish means that the surface of the casing is resistant to scratches, impacts, and corrosion.

The air straightener can be removed with a few simple manual operations and can be easily cleaned. Condensate drainage is integrated into the full bellmouth, which assures effective draining into the drip tray.

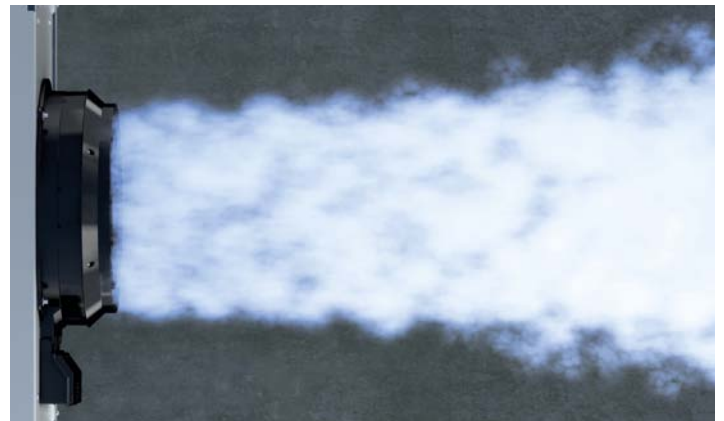


## SIMPLE INSTALLATION

The integrated terminal box with spring-clamp terminals (provided in the standard version, except SG 23) enables fast and sure connections. The thermistor of the fan motor is delivered on terminals.

The spacious connection areas enable simple handling. This applies especially to the connection to the refrigerant piping and to installation of the expansion valve.

The round corners and the smooth edges of the casing parts mean no danger of injury for installation and cleaning staff.



## PROTECTION OF YOUR GOODS

The new fan system with air straightener – precisely matched to the heat exchanger – provides up to 15% greater air throw at lower air resistance and higher air volume.

The many models and options mean that the SG commercial – especially for complex refrigeration applications – can be perfectly matched to individual customer requirements.

Latest technologies and high heat transfer values produce a minimum of temperature differences. Optimal configuration of the air cooler is therefore critical for minimal moisture removal from the product.

Küba SG commercial

# BASIC VERSION

## CASING

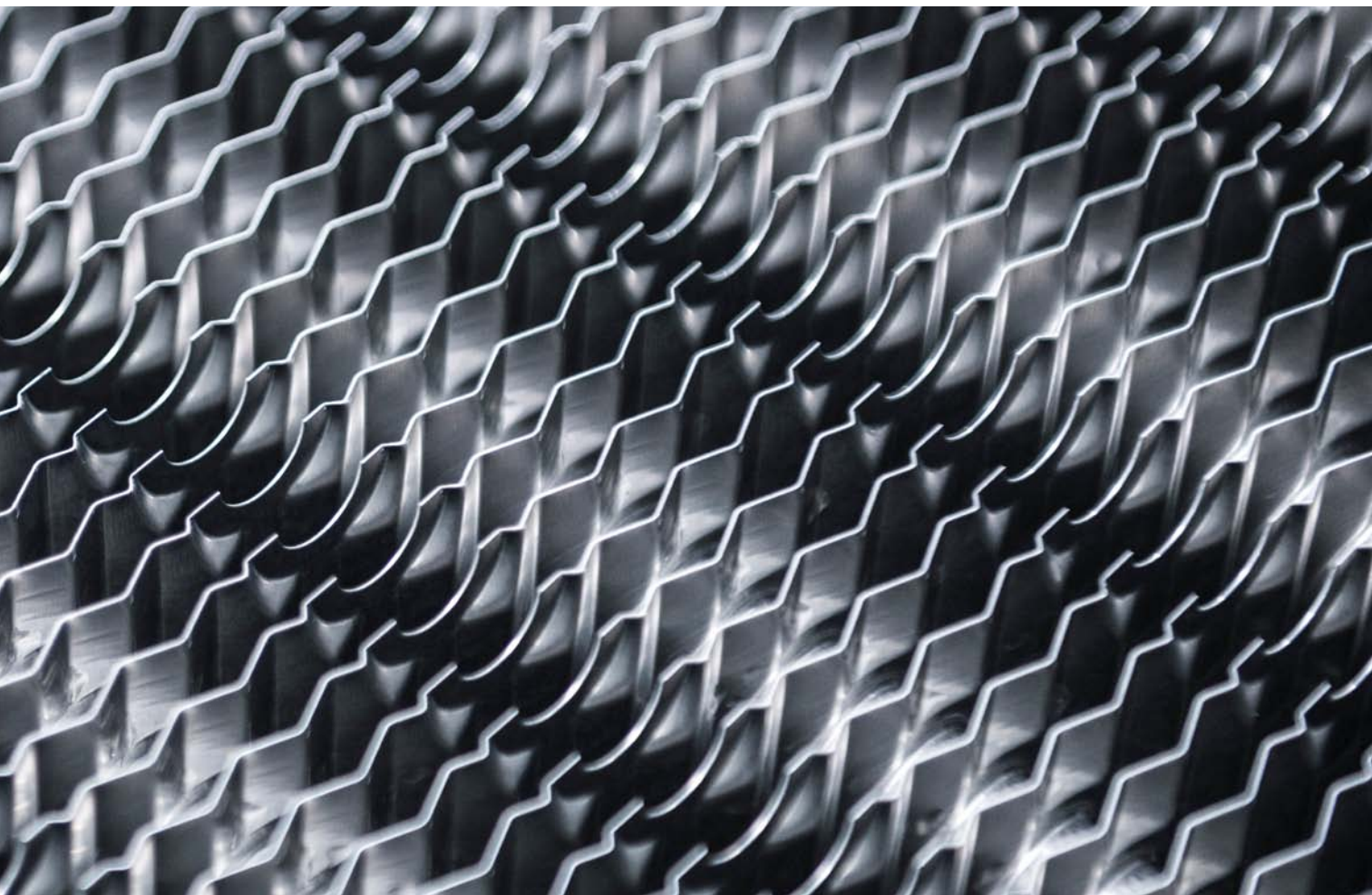
- ▶ Aluminum, Sendzimir zinc-plated steel
- ▶ Best quality powder coated edges thanks to high-grade powder coating, RAL 9010 pure white
- ▶ Food-safe
- ▶ Smooth surfaces: Easy to clean
- ▶ Hinged drip tray
- ▶ Removable side panels
- ▶ Drip tray: additional integrated splash pan
- ▶ 3° inclined fan plate

## 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
- ▶ Thanks to those tube sleeves electric defrost can be refitted later on

## HEAT EXCHANGER

- ▶ Tube: Copper, inner finned,  $\varnothing$  15 mm
- ▶ Fins: Aluminum HFE® fins
- ▶ End plates: Aluminum
- ▶ Aligned tube system
- ▶ Fin spacing:  
A = 4.5 mm  
B = 7.0 mm  
L = 12.0 mm
- ▶ Fins flared to form-fit the core tube
- ▶ Internal cleanliness according to DIN 14276
- ▶ Connection Inlet:  
SGA/B 23-21,31,32 / 30-21,31 / 35-21,31 Single injection via copper pipe for solder connection, sealed  
SGA/B: Küba CAL® distributor with multiple injection, sealed
- ▶ Connection Outlet:  
Copper pipe for solder connection with schrader valve UNF 7/16", sealed
- ▶ **Series SG-G: Glycol**  
Tube: Cu smooth  
Fins: Aluminum  
End plates: Aluminum
- ▶ **Series SG-N: with pump /NH<sub>3</sub>**  
Tube: VA  
Fins: Aluminum  
End plates: Aluminum



## FAN UNIT

- ▶ AC technology
- ▶ Draw-through axial fan
- ▶ Fan diameter: 230 (ESM Motor), 300, 350, 450 mm
- ▶ Permissible motor ambient temperatures (50 Hz)  
 SG23: -30°C up to +50°C | SG30: -40°C up to +50°C  
 SG35: -40°C up to +55°C | SG45: -40°C up to +50°C  
 SG45-61,62,63: -40°C up to +45°C
- ▶ Supply voltage: 1/N/PE 230V 50/60Hz
- ▶ Motor protection:  
 Built-in thermal contact (inaccessible)  
 SP45-61,62,63: Built-in thermal contact (accessible)
- ▶ Protection class: SG23: IP 54 | SG30-45: IP 44
- ▶ Insulation class:  
 SG23: B | SG30: B | SG35: F | SG45: F | SG45-61,62,63: F
- ▶ Fans hinged (except SG23)
- ▶ Fan blade, wallring and mounted parts are made of fiber-reinforced composite material
- ▶ Condensate drain grooves integrated in the wall ring
- ▶ Wall ring ready for an integrated wall ring heating (Accessory) from Ø 300mm
- ▶ Air straightener provides greater air throw at lower air resistance and higher air volume
- ▶ Adapter for textile socks and Shut-Up® integrated in the fan
- ▶ Controller:
 

	<b>SG 23</b>	<b>SG 30,35,45</b>
Phase control	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transformer	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Delta/star	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency converter	<input type="checkbox"/>	<input checked="" type="checkbox"/>



SG 23 = ESM-Motor  
[EC Technology]



SG 30, 35, 45 = Fan system  
[AC Technology]

## MOTOR LABEL DATA

Type	Ø mm	50 Hz		60 Hz			
		rpm	W	A	rpm	W	A
<b>SG 23 21-35</b>	230	1.600	30	0,24	1.600	30	0,24
<b>SG 23 21-35</b>	230	1.000	14	0,11	1.000	14	0,11
<b>SG 30 21-35</b>	300	1.320	72	0,32	1.500	90	0,40
<b>SG 35 21-45</b>	350	1.400	180	0,81	1.600	250	1,10
<b>SG 45 31-45</b>	450	1.400	245	1,10	1.600	355	1,55
<b>SG 45 61,62,63</b>	450	1.390	510	2,75	1.600	710	3,11

Please observe the manufacturer's information!

Motor data per fan

Data provided by the manufacturer

# TECHNICAL DATA SGA (E)

## Küba SG commercial | Fin spacing 4,5 mm

Type	Rating Q <sub>o</sub> at 50 Hz, DT1, R404A		Cooling surface	Air flow	Air throw	Tube volume	Connections		Sound	Fans (Operational values at 50 Hz)				
	SC2	SC3					Inlet	Outlet		L <sub>WA</sub>	Blade	Current	Per fan	
	kW	kW	m <sup>2</sup>	m <sup>3</sup> /h	m	dm <sup>3</sup>	Ømm	Ømm	dB(A)				Ømm	230±10% V-1 50Hz
SGA 23-F21	1,3	0,7	6,2	930	11	1,1	10x1,0*	15x1,0	68	230	230 V-1	1.580	30	0,25
SGA 23-F31	1,7	1,0	9,3	900	11	1,6	10x1,0*	15x1,0	68	230	230 V-1	1.580	30	0,25
SGA 30-F21	2,1	1,3	10,9	1.490	16	1,8	10x1,0*	15x1,0	66	300	230 V-1	1.360	65	0,30
SGA 30-F31	2,6	1,7	16,3	1.430	15	2,7	10x1,0*	15x1,0	66	300	230 V-1	1.360	65	0,30
SGA 35-F21	3,6	2,2	16,2	2.900	30	2,7	10x1,0*	22x1,0	73	350	230 V-1	1.430	150	0,70
SGA 35-F31	4,4	2,9	24,1	2.790	29	4,0	12x1,0*	22x1,0	73	350	230 V-1	1.430	150	0,70
SGA 35-F41	5,2	3,5	32,1	2.700	28	5,4	12x1,0**	28x1,5	73	350	230 V-1	1.430	150	0,70
SGA 35-F61	6,2	4,4	47,9	2.510	26	8,0	12x1,0**	28x1,5	73	350	230 V-1	1.430	150	0,70
SGA 45-F31	7,6	4,8	37,2	4.750	40	6,2	12x1,0**	28x1,5	82	450	230 V-1	1.360	275	1,25
SGA 45-F41	8,5	5,7	49,5	4.570	38	8,1	12x1,0**	28x1,5	82	450	230 V-1	1.360	275	1,25
SGA 45-F51	9,8	6,6	61,7	4.420	37	10,3	15x1,0**	35x1,5	82	450	230 V-1	1.360	275	1,25
SGA 45-F61	11,0	7,7	73,9	5.030	44	12,2	12x1,0**	35x1,5	82	450	230 V-1	1.370	500	2,65
SGA 23-F22	2,5	1,6	12,5	1.860	17	2,0	10x1,0*	15x1,0	71	230	230 V-1	1.580	30	0,25
SGA 23-F32	3,0	2,1	18,6	1.800	16	3,0	10x1,0*	15x1,0	71	230	230 V-1	1.580	30	0,25
SGA 30-F22	4,3	2,7	21,8	2.980	22	3,5	12x1,0**	22x1,0	69	300	230 V-1	1.360	65	0,30
SGA 30-F32	5,2	3,5	32,5	2.860	21	5,3	12x1,0**	28x1,5	69	300	230 V-1	1.360	65	0,30
SGA 35-F22	6,8	4,4	32,4	5.800	35	5,2	12x1,0**	28x1,5	76	350	230 V-1	1.430	150	0,70
SGA 35-F32	8,9	6,0	48,3	5.580	34	7,7	12x1,0**	28x1,5	76	350	230 V-1	1.430	150	0,70
SGA 35-F42	10,6	7,2	64,1	5.400	33	10,3	12x1,0**	35x1,5	76	350	230 V-1	1.430	150	0,70
SGA 35-F62	12,4	8,9	95,8	5.020	31	15,2	15x1,0**	35x1,5	76	350	230 V-1	1.430	150	0,70
SGA 45-F32	15,2	9,8	74,5	9.500	45	11,8	15x1,0**	35x1,5	85	450	230 V-1	1.360	275	1,25
SGA 45-F42	17,1	11,7	98,9	9.140	44	15,6	15x1,0**	35x1,5	85	450	230 V-1	1.360	275	1,25
SGA 45-F52	19,8	13,4	123,4	8.840	42	19,6	22x1,0**	42x1,5	85	450	230 V-1	1.360	275	1,25
SGA 45-F62	22,7	16,0	147,8	10.060	50	23,4	22x1,0**	42x1,5	85	450	230 V-1	1.370	500	2,65
SGA 23-F23	3,8	2,4	18,7	2.790	20	3,0	12x1,0**	22x1,0	73	230	230 V-1	1.580	30	0,25
SGA 23-F33	4,6	3,1	27,9	2.700	20	4,4	12x1,0**	22x1,0	73	230	230 V-1	1.580	30	0,25
SGA 30-F23	6,1	4,0	32,8	4.470	25	5,2	12x1,0**	28x1,5	71	300	230 V-1	1.360	65	0,30
SGA 30-F33	7,8	5,4	48,8	4.290	24	7,6	12x1,0**	28x1,5	71	300	230 V-1	1.360	65	0,30
SGA 35-F23	11,0	6,6	48,6	8.700	39	7,7	15x1,0**	35x1,5	78	350	230 V-1	1.430	150	0,70
SGA 35-F33	13,7	9,1	72,4	8.370	38	11,4	15x1,0**	35x1,5	78	350	230 V-1	1.430	150	0,70
SGA 35-F43	15,3	10,6	96,2	8.100	37	15,0	15x1,0**	35x1,5	78	350	230 V-1	1.430	150	0,70
SGA 35-F63	17,3	12,6	143,7	7.530	35	22,5	15x1,0**	42x1,5	78	350	230 V-1	1.430	150	0,70
SGA 45-F33	22,9	14,7	111,7	14.250	49	17,6	22x1,0**	42x1,5	87	450	230 V-1	1.360	275	1,25
SGA 45-F43	26,9	17,7	148,4	13.710	47	23,1	22x1,0**	42x1,5	87	450	230 V-1	1.360	275	1,25
SGA 45-F53	28,1	19,8	185,1	13.260	46	28,7	22x1,0**	42x1,5	87	450	230 V-1	1.360	275	1,25
SGA 45-F63	30,8	29,2	221,8	15.090	53	34,9	22x1,0**	54x2,0	87	450	230 V-1	1.370	500	2,65
SGA 23-F24	5,0	3,2	25,0	3.720	23	3,9	12x1,0**	22x1,0	74	230	230 V-1	1.580	30	0,25
SGA 23-F34	6,5	4,3	37,2	3.600	22	5,8	12x1,0**	28x1,5	74	230	230 V-1	1.580	30	0,25
SGA 30-F24	8,6	5,4	43,7	5.960	28	6,8	12x1,0**	28x1,5	72	300	230 V-1	1.360	65	0,30
SGA 30-F34	10,9	7,1	65,1	5.720	27	10,2	15x1,0**	35x1,5	72	300	230 V-1	1.360	65	0,30
SGA 35-F24	14,3	9,1	64,8	11.600	41	10,1	15x1,0**	35x1,5	79	350	230 V-1	1.430	150	0,70
SGA 35-F34	17,3	11,7	96,5	11.160	40	14,9	15x1,0**	35x1,5	79	350	230 V-1	1.430	150	0,70
SGA 35-F44	21,9	14,6	128,2	10.800	39	20,0	22x1,0**	42x1,5	79	350	230 V-1	1.430	150	0,70
SGA 35-F64	24,3	17,8	191,6	10.040	37	29,6	22x1,0**	42x1,5	79	350	230 V-1	1.430	150	0,70
SGA 45-F34	29,1	19,5	148,9	19.000	51	23,0	22x1,0**	42x1,5	88	450	230 V-1	1.360	275	1,25
SGA 45-F44	34,4	23,6	197,8	18.280	50	31,0	22x1,0**	54x2,0	88	450	230 V-1	1.360	275	1,25
SGA 45-F54	38,3	26,9	246,8	17.680	48	38,4	22x1,0**	54x2,0	88	450	230 V-1	1.360	275	1,25
SGA 23-F25	6,4	4,0	31,2	4.650	24	4,8	12x1,0**	28x1,5	75	230	230 V-1	1.580	30	0,25
SGA 23-F35	7,9	5,4	46,5	4.500	24	7,2	12x1,0**	28x1,5	75	230	230 V-1	1.580	30	0,25
SGA 30-F25	10,4	6,8	54,6	7.450	29	8,5	12x1,0**	35x1,5	73	300	230 V-1	1.360	65	0,30
SGA 30-F35	13,4	9,0	81,3	7.150	28	12,5	15x1,0**	35x1,5	73	300	230 V-1	1.360	65	0,30
SGA 35-F25	18,6	10,9	81,0	14.500	43	12,4	22x1,0**	35x1,5	80	350	230 V-1	1.430	150	0,70
SGA 35-F35	24,2	14,6	120,6	13.950	42	18,6	22x1,0**	42x1,5	80	350	230 V-1	1.430	150	0,70
SGA 35-F45	26,6	18,3	160,3	13.500	41	24,7	22x1,0**	42x1,5	80	350	230 V-1	1.430	150	0,70
SGA 35-F65	31,2	22,6	239,6	12.550	39	37,1	22x1,0**	54x2,0	80	350	230 V-1	1.430	150	0,70
SGA 45-F35	38,9	24,2	186,1	23.750	53	29,0	22x1,0**	54x2,0	89	450	230 V-1	1.360	275	1,25
SGA 45-F45	45,5	29,1	247,3	22.850	51	38,2	28x1,5**	54x2,0	89	450	230 V-1	1.360	275	1,25

Standard condition t<sub>1</sub> t<sub>2</sub> DT1  
 NB2/SC2 0°C -8°C 8K  
 NB3/SC3 -18°C -25°C 7K

Correction factors for other refrigerants

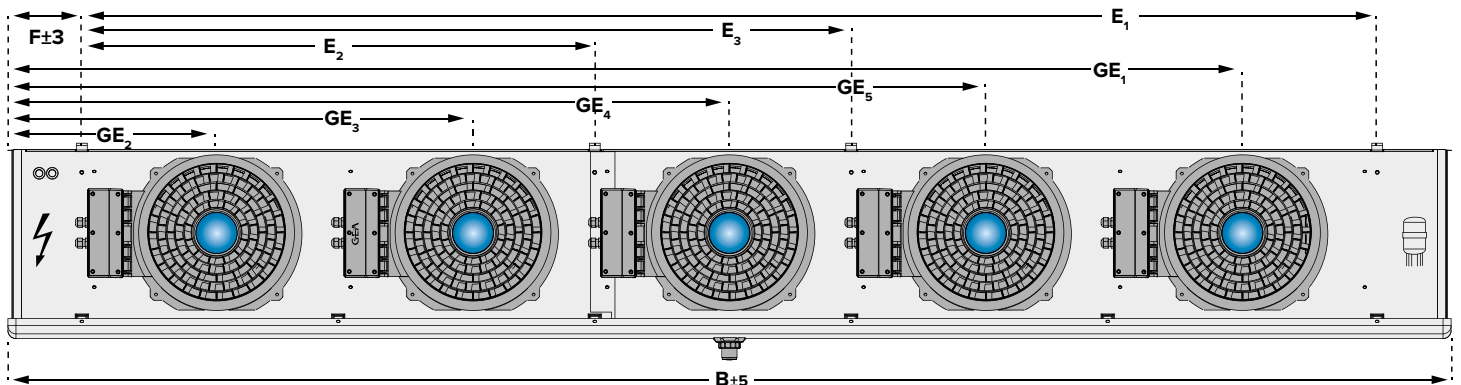
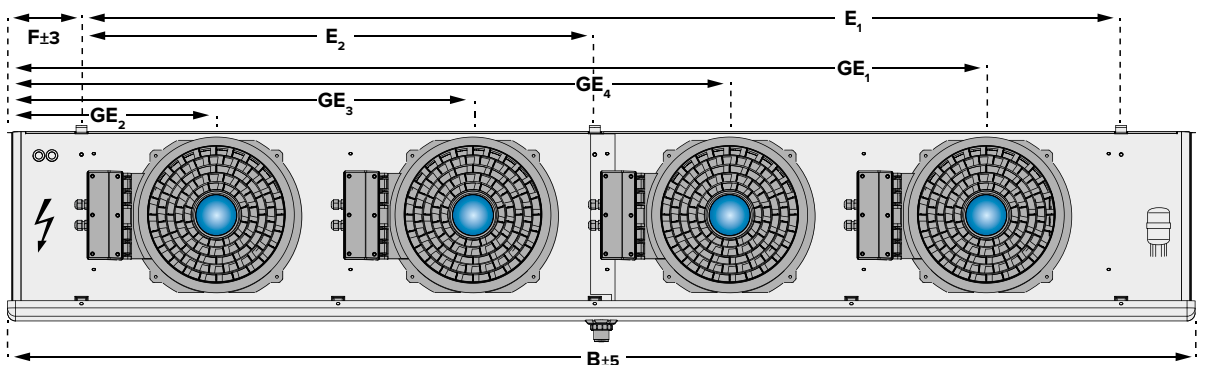
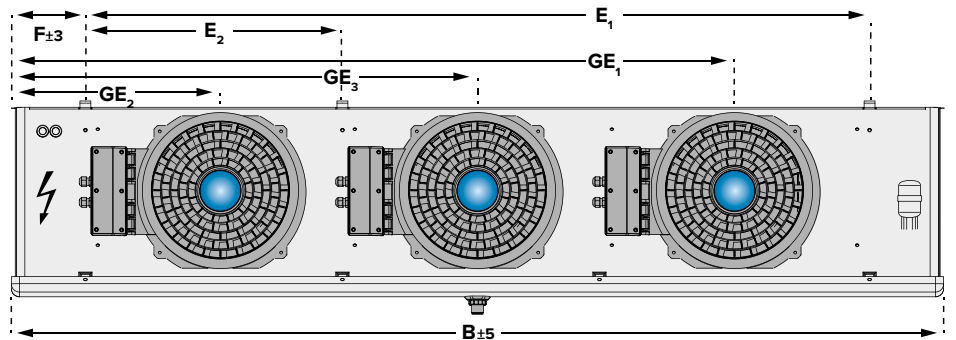
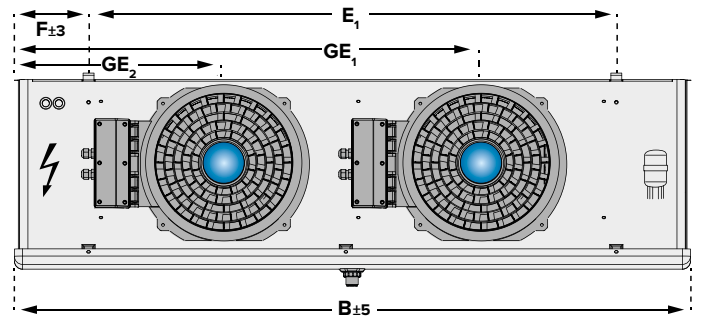
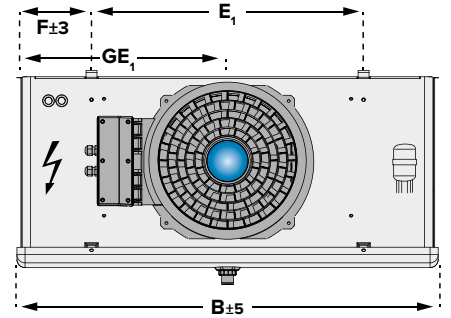
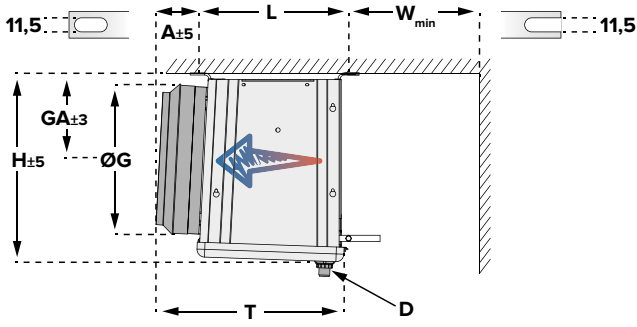
Refrigerant NB2/SC2 NB3/SC3  
 R134a 1,00 0,91  
 R507 0,97 0,97  
 R22 0,95 0,95

\* Single injection  
 \*\* Multiple injection through Küba CAL® distributor  
 \*\*\* Throw limit at 0.5 m/s

Subject to modification.

# DIMENSIONAL DRAWINGS

## Küba SG commercial





# VARIANTS



## MOTOR - VARIANTS

### V 1.07 FAN GUARD

Fans with contact safety guard

### V 1.50 EC FANS WITH FIXED SPEEDS

SG 23: ESM motor with 2 speeds (standard)  
ab SG 30: EC motor with fixed speed

### V 1.52 EC FAN WITH CONTROLLABLE SPEED

Controllable fan, 0-10 V, for Ø 300, 350, and 450

## CONSTRUCTION - VARIANTS

### V 3.09 DOUBLE-WALLED, INSULATED DRIP TRAY

Prevents condensed water from forming on the bottom side of the tray, 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

## PROTECTION AGAINST CORROSION

### V 3.12 STAINLESS STEEL CASING

Special protection from salts (no chlorine) and organic acids in the cold room air

### V 6.01 CORROSION PROTECTION 1

Tubing: Copper (NH<sub>3</sub> units = stainless steel)

Fins: Aluminum, epoxy-resin-coated

End plates: Aluminum protective coating

Casing: Al/zinc coated steel, prot. coating on both sides

### V 6.02 CORROSION PROTECTION 2

Tubing: Stainless steel (V2A)

Fins: Aluminum, epoxy-resin-coated

End plates: Stainless steel

Casing: Al/zinc coated steel, prot. coating on both sides

Stainless steel CAL® distributor upon request

### V 6.03 CORROSION PROTECTION 3

Tubing: Stainless steel (V2A)

Fins: Aluminum

End plates: Aluminum

Casing: Al/zinc coated steel, prot. coating on one side

Stainless steel CAL® distributor upon request

### V 6.04 CORROSION PROTECTION 4

Tubing: Copper (NH<sub>3</sub> units = stainless steel)

Fins: Aluminum, epoxy-resin-coated

End plates: Aluminum

Casing: Al/zinc coated steel, prot. coating on one side



## DEFROST - VARIANTS

- V 4.01 HOT-GAS COIL IN THE DRIP TRAY (CU)**  
Hot-gas connection on both sides; copper
  - V 4.02 HOT-GAS COIL IN THE DRIP TRAY (VA)**  
Hot-gas connection on both sides; stainless steel
  - V 4.06 DRIP TRAY WITH ELECTRIC HEATING**
  - V 6.05 HOT GAS IN HEAT EXCHANGER AND DRIP TRAY**  
Hot-gas circuitry for coolers, without non-return valve
  - V 6.07 HOT GAS IN HEAT EXCHANGER AND DRIP TRAY**  
Hot-gas connection in coils; hot-gas coil in the drip tray, with non-return valve
  - V 6.08 COLD GAS IN COIL AND DRIP TRAY, COPPER**  
Cold-gas connection in coils; Cold-gas coil in the drip tray, without non-return valve
- BRINE DEFROST WITH A SEPARATE CIRCUIT**  
Upon request

## CO<sub>2</sub> - VARIANTS

- V 7.10 CO<sub>2</sub>-PUMP**  
up to 60 bar operating pressure
- V 7.45 CO<sub>2</sub>-DIRECT EXPANSION**  
up to 45 bar operating pressure
- V 7.60 CO<sub>2</sub>-DIRECT EXPANSION**  
up to 60 bar operating pressure

# ACCESSORIES

## KÜBA SHUT-UP®

The Shut-Up® optimises the defrosting procedure, especially in deep-freeze applications.

Shut-Up® is suspended over the fan unit, closing the Air Cooler.

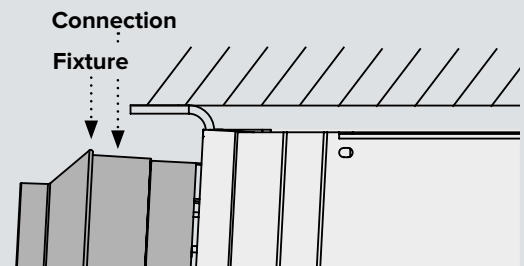
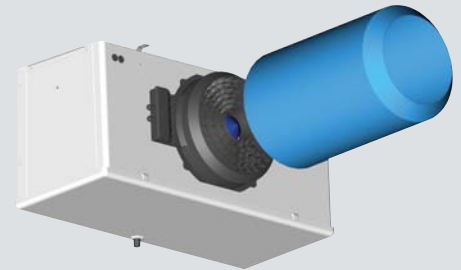
Hot air cannot escape.

### Construction:

High-tech microfiber, tearproof, UV-resistant, form- and temperature resistant, rot-proof, food-safe, washable at 30°C, chemical purification P

### Selection table & Dimensions:

Typ	Küba SG commercial			Küba Shut-Up®	
	Fan blade Ø mm	Connections Ø mm	Fixture Ø mm	Air outlet Ø mm	Length mm
SG 23	230	253	259	149	390
SG 30	300	353	359	254	490
SG 35	350	421	427	344	610
SG 45	450	550	556	430	684



### NOTE:

Due to the additional external pressure, the air quantity and Air Cooler capacity change: With using Shut-Up®: Air volume reduces by 10% (-5% cooling capacity)

With using von Shut-Up® & Defrost hood: Air volume reduces by 20% (-10% cooling capacity)

1 Shut-Up® per fan unit required. Delivery not mounted.

## WALL RING HEATING WH

Wall ring heating prevents formation of ice between fan blade and the wall ring.

### Construction:

- ▶ Maximum energy efficiency, optimal control behavior, and reduced power consumption (up to 87 % less).
- ▶ Heat retention in the wall ring, no vapor formation, no overheating.
- ▶ Protection from human contact by complete integration of the heating element.

### Selection table & Technical data:

Type	Description	Current	Capacity
		A	W
SG 23		not available	
SG 30	WH 30	0,5	118
SG 35	WH 35	0,9	209
SG 45	WH 45	1,2	266



### NOTE:

Küba wall ring heating WH is only available for SG 30, SG 35, SG 45. 1 wall ring heating WH per fan unit required.

# DEFROST HOOD

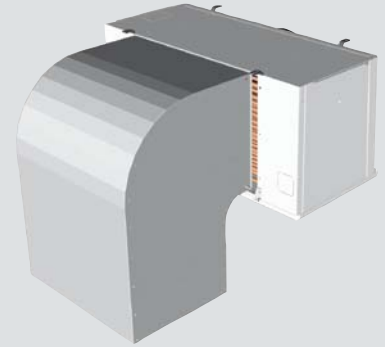
Applications: Frozen storage starting at -18 °C. Alternating defrosting of the Air Coolers in one room. The double wall drip tray has 16 mm of insulation.

The casing is made of aluminum, coated (RAL 9010).

**Advantages** (in connection with Shut-Up®):

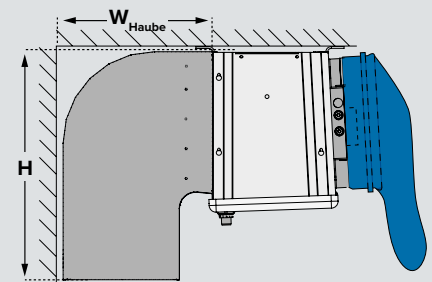
With the defrost hood and Shut-Up®, a positive accumulation of heat occurs in the Air Cooler during the defrost process. The heat remains in the cooler, which means:

- ▶ Defrost times are reduced by more than 50%
- ▶ Considerable energy savings
- ▶ No frost build up on the ceiling of the storage room or on the goods due to minimal steam build-up



**Selection table & Dimensions:**

Type	Dimensions			Weights
	H mm	B mm	W <sub>Haube</sub> mm	
SG 23	665	450	460	9
SG 30	815	590	560	13
SG 35	915	700	660	17
SG 45	1.010	900	810	24



**NOTE:**

Due to the additional external pressure, the air quantity and Air Cooler capacity change: With using Shut-Up®: Air volume reduces by 10% (approx. -5% cooling capacity).  
 With using von Shut-Up® & Defrost hood: Air volume reduces by 20% (approx. -10% cooling capacity).  
 1 Shut-Up® per fan unit required. Delivery not mounted.

# AIR HOSES (MUST BE PROVIDED ON SITE)

Ventilation can be optimised with textile / PVC air hoses.

Applications in work rooms and production areas with cooled goods that are sensitive to draft (i.e. flowers, ripening cheeses)

**Advantages:**

The air hoses make uniform air distribution possible at very low air speeds.

- ▶ Working in a draft-free environment yields low illness rates
- ▶ Maximum protection for sensitive cooled goods
- ▶ No condensation water: temperatures do not fall below the dew point because air can penetrate the woven material



**Dimensions (Connection):**

Type	Küba SG commercial		
	Blade Ø mm	Connection Ø mm	Fixture Ø mm
SG 23	230	253	259
SG 30	300	353	359
SG 35	350	421	427
SG 45	450	550	556

