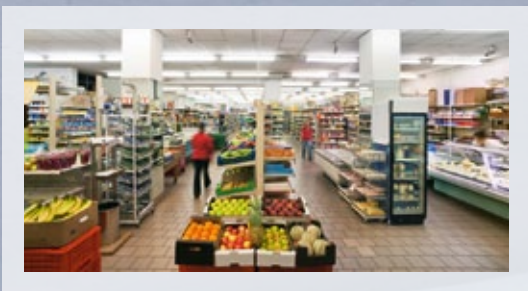
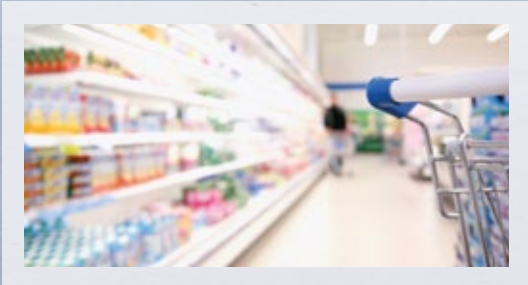


Just cool with green: GEA Küba *market SP*
The new standard for basic refrigeration applications

GEA Küba *market SP*

The new standard for basic refrigeration applications



Hinged, integrated fan system

Integrated electrical terminal box



Type designation code

1	2	3	4	5	6	7
SP	A	E	35	-	F	2 3

- 1 Model range designation
- 2 Fin spacing (A=4 mm, B=7 mm)
- 3 Electric defrosting
- 4 Fan diameter
- 5 Refrigerant (F=FC/CO₂, G=Glycol)
- 6 Depth of tube rows
- 7 Number of fans (1-5 Fans)



Küba HFE® fin-tube system

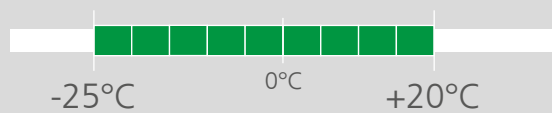
Output range (for NB2)

0,9 kW  34,9 kW

Number of fans

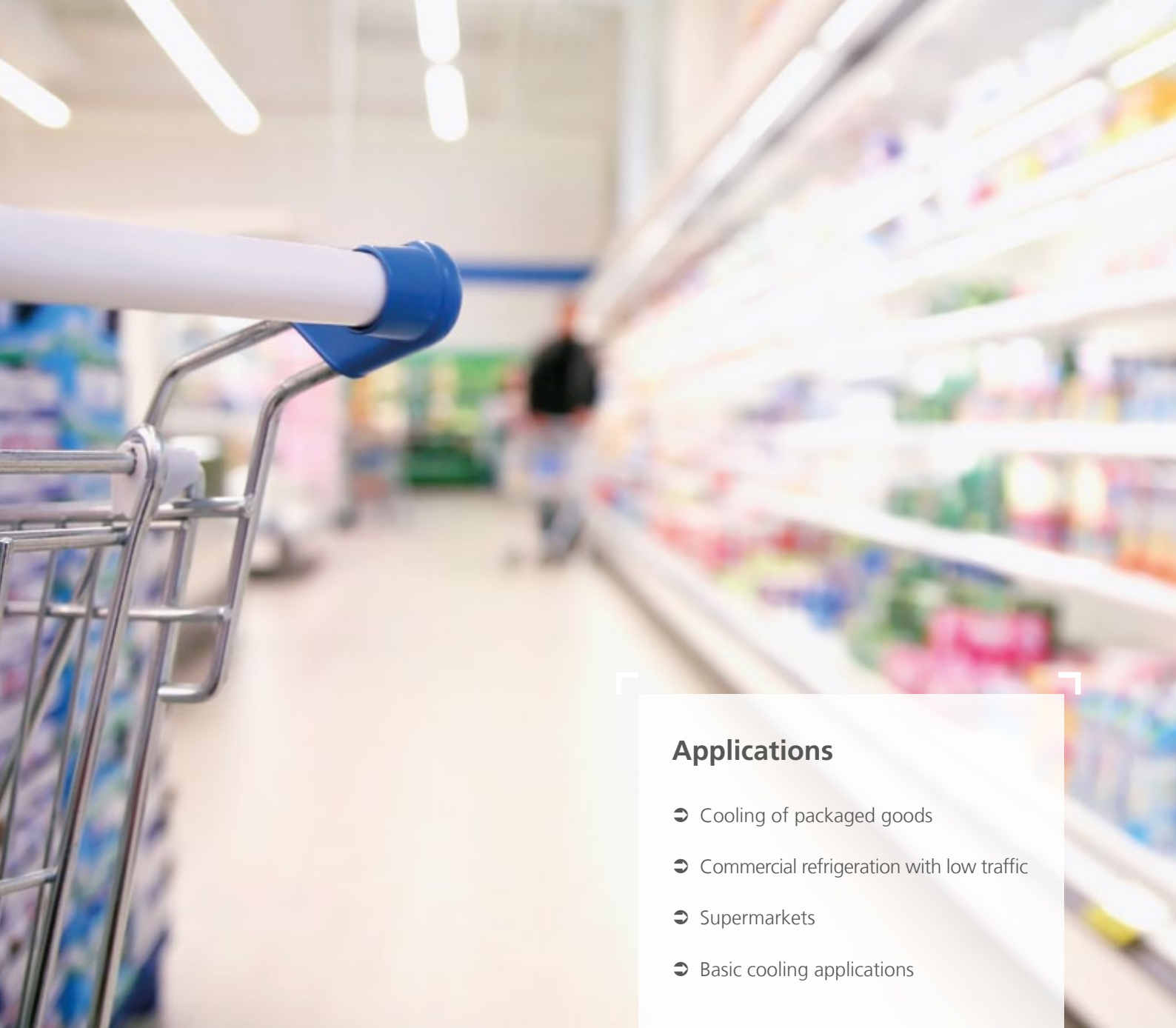
 to 

Application range (t_{L1})



Fan diameter

230 mm, 300 mm, 350 mm, 450 mm



Applications

- ➔ Cooling of packaged goods
- ➔ Commercial refrigeration with low traffic
- ➔ Supermarkets
- ➔ Basic cooling applications

GEA Küba *market* SP

Application Benefits for Contractors and Operators

The decisive factor in a refrigeration plant is the energy balance. We have radically redesigned the complete GEA Küba *market* SP system, perfecting the interaction between individual components. With a significant increase in energy efficiency.

Küba in this way sustainably counters constantly rising operating costs, whilst also consistently meeting increasingly stringent legislative requirements (e.g. ErP 2015).

The result: The best GEA Küba *market* SP that there ever was.

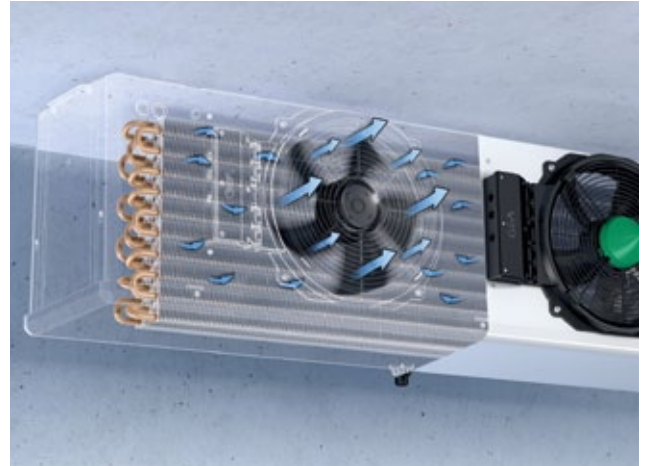
- Maximum energy efficiency, due to low power consumption and high system efficiency.
- Performance optimised heat exchanger featuring today's top fan system.
- Novel Hygienic Design guarantees thorough cleaning of heat exchanger and fan.
- Corrosion resistance maximised through high-grade powder coating and fan technology based on composite fibre materials.
- Excellent connection to the tube network based on larger connection area in the side box.

GEA Küba *market* SP

from the GEA Küba Green Line production range

Maximum energy efficiency

- The Küba HFE® system combines the dynamic thermal and fluidic interaction of components with optimal fin structures and newly developed heat exchanger designs to ensure stable regulation even with minimal differences in temperature.
- The GEA Küba defrosting system guarantees quick and energy efficient defrosting after long cooling cycles.
- The system of motors with blades and full bell mouth are aerodynamically optimised and are available with AC or EC technology.



Without a doubt hygienic

- The hinged fan system makes thorough cleaning of the heat exchanger and the fan very easy.
- The casing has easy to clean, smooth surfaces powder coated to be food-safe and environmentally friendly.
- Reliable water-spray protection for the new fan system. The new GEA Küba *market* SP is manufactured to comply with protection classes IP54 (EC motor) and IP 44 (AC motor).



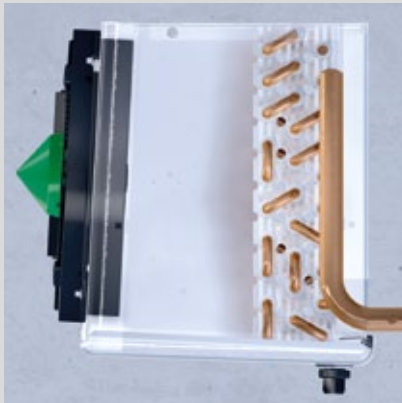
Simple installation

- The proven rugged and sophisticated casing is easily mounted. The round corners and the smooth edges of the casing parts mean no danger of injury for installation and cleaning staff.
- The integrated terminal box for electrical wiring of the fans is also a novelty. Standard spring-loaded terminals enable fast and sure connections.
- The connection space is generous to enable simple maintenance.



GEA Küba *market SP*

Standard types and variants

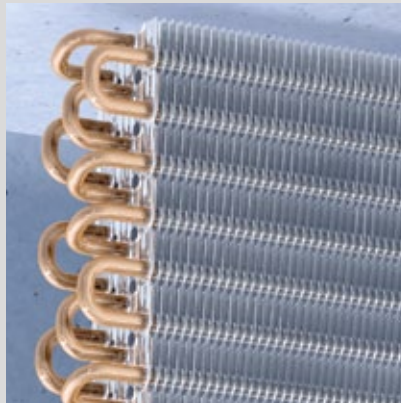


Casing

- Aluminum, smooth
- High-grade powder coating provides top edge-covering corrosion protection
- RAL 9018 papyrus white
- Fan plate inclined at 3° to the drip tray
- Food safe
- Easy to clean
- Excellent corrosion protection

Electric defroster

- Wired ready to connect in junction boxes
- Optimised tubular heater configurations ensure fast and even defrosting
- Aluminium heat pipes guarantee excellent heat transfer to the fins and thus effective defrosting cycles with optimised service life.
- Mains voltage: 230 V-1/400V-3-Y



Heat exchanger for direct expansion

- Heat exchanger with offset tubing, special copper tube drawn oxygen-free and internally ribbed pursuant to DIN EN 12735-1,2 with 12 mm Ø and closed pure aluminum HFE fins
- Fins flared to form-fit the core tube
- Top heat transfer and compact design
- Fin spacing:
A = 4,0 mm
B = 7,0 mm
- Inlet connections:
With single injection:
Copper pipe for solder connection, tightly sealed
With multiple injection SPA and SPB:
Flow distributor, with copper solder connection
- Outlet connections:
Copper pipe for solder connection with Schrader valve UNF 7/16"



Fan system

- Fan system with integrated terminal box and water-spray protection
- Permissible motor operating temperatures from -30°C to +20°C (EC), and -40°C to +20°C (AC)
- Built-in protector (AC) and connection box integrated in the hinge
- Pre-wired on spring type terminals, including thermistor leads (AC)
- 230 Volt, 50/60 Hz, 1-phase in AC- or optionally EC-technology
- Optional EC motor with integrated motor management for protection of the fan system units, monitoring over-current, over-temperature and under-voltage parameters
- Motor available with AC and EC fan

Variants und Accessories

Motor variants

V 1.50 EC fan,
SP 23:
ESM Motor with 2 speeds
from SP 30:
EC motor – fixed speed

V 1.52 EC fan, variable, 0-10V

Heat exchanger

V 6.01 Corrosion protection 1 *

V 6.04 Corrosion protection 4 **

V 2.xx Brine

V 7.45 CO₂, 45 bar

V 7.60 CO₂, 60 bar

V 4.01 Hot gas defrost (tray)

Accessories

+ Shut-Up® including adapter

+ Fold-down drip tray

* Tube: copper · Fin: aluminum-gold varnish · Casing: Al / steel Sendzimir, protective coating both sides
** Tube: copper · Fin: aluminum-gold varnish · Casing: Al / steel Sendzimir, protective coating one side

Label data *

Type	Ø mm	50 Hz			60 Hz		
		min ⁻¹	W	A	min ⁻¹	W	A
SP23 F21-34	230	1600	30	0.24	1600	30	0.24
SP30 F21-34	300	1320	72	0.32	1500	90	0.40
SP35 F21-45	350	1400	180	0.81	1600	250	1.10
SP45 F31-44	450	1400	245	1.10	1600	355	1.55

*Manufacturer's specifications

GEA Küba market SP

Technical data – SPA (E)



Output range (at NB2)

1,3 kW 35 kW

Application range (t_{L1})



Type	Rating Q_0 at 50 Hz, DT1, R404A		Cooling surface m ²	Air flow m ³ /h	Air throw *** m	Tube volume dm ³	Connections		Sound L_{WA} db (A)	Fans (Operating values at 50 Hz)				
	NB1	NB2					Inlet Ø mm	Outlet Ø mm		Blade Ø mm	Current 230 ± 10% V-1 50 Hz	Per Fan		
	kW	kW										min ⁻¹	W	A
SPA 23-F21	1.9	1.3	4.7	900	7	0.84	10x1.0*	12x1.0	67	230	230 V-1	1,580	30	0.25
SPA 23-F31	2.4	1.6	6.9	870	6	1.26	10x1.0*	12x1.0	67	230	230 V-1	1,580	30	0.25
SPA 30-F21	3.1	2.1	7.8	1,540	10	1.34	10x1.0*	12x1.0	65	300	230 V-1	1,360	65	0.30
SPA 30-F31	3.9	2.6	11.5	1,410	10	2.16	10x1.0*	18x1.0	65	300	230 V-1	1,360	65	0.30
SPA 35-F21	5.2	3.5	11.0	2,860	18	2.06	12x1.0**	18x1.0	72	350	230 V-1	1,430	145	0.68
SPA 35-F31	6.5	4.3	16.3	2,630	17	3.01	12x1.0**	22x1.0	72	350	230 V-1	1,430	145	0.68
SPA 35-F41	7.4	5.0	21.6	2,460	16	4.06	12x1.0**	22x1.0	72	350	230 V-1	1,430	145	0.68
SPA 45-F31	11.4	7.6	28.0	4,650	24	5.17	15x1.0**	28x1.5	81	450	230 V-1	1,360	270	1.20
SPA 45-F41	12.9	8.7	37.0	4,420	23	6.77	15x1.0**	28x1.5	81	450	230 V-1	1,360	270	1.20
SPA 23-F32	4.7	3.1	14.0	1,740	12	2.51	10x1.0*	18x1.0	70	230	230 V-1	1,580	30	0.25
SPA 30-F22	6.3	4.2	15.5	3,080	16	2.73	12x1.0**	22x1.0	68	300	230 V-1	1,360	65	0.30
SPA 30-F32	7.8	5.2	22.9	2,820	15	4.11	12x1.0**	22x1.0	68	300	230 V-1	1,360	65	0.30
SPA 35-F22	10.5	7.0	22.1	5,720	24	3.94	15x1.0**	22x1.0	75	350	230 V-1	1,430	145	0.68
SPA 35-F32	13.2	8.9	32.6	5,260	22	5.93	15x1.0**	28x1.5	75	350	230 V-1	1,430	145	0.68
SPA 35-F42	14.9	10.0	43.2	4,920	21	7.76	15x1.0**	28x1.5	75	350	230 V-1	1,430	145	0.68
SPA 45-F32	22.8	15.3	55.9	9,300	30	9.93	15x1.0**	35x1.5	84	450	230 V-1	1,360	270	1.20
SPA 45-F42	25.9	17.4	74.0	8,840	29	13.31	15x1.0**	35x1.5	84	450	230 V-1	1,360	270	1.20
SPA 23-F33	7.2	4.8	21.0	2,610	15	3.65	12x1.0**	22x1.0	72	230	230 V-1	1,580	30	0.25
SPA 30-F23	9.6	6.4	23.3	4,620	19	4.06	15x1.0**	22x1.0	70	300	230 V-1	1,360	65	0.30
SPA 30-F33	11.7	7.9	34.4	4,230	19	5.98	15x1.0**	28x1.5	70	300	230 V-1	1,360	65	0.30
SPA 35-F23	15.3	10.2	33.1	8,580	27	5.87	15x1.0**	28x1.5	77	350	230 V-1	1,430	145	0.68
SPA 35-F33	19.4	13.0	48.9	7,890	26	8.59	15x1.0**	35x1.5	77	350	230 V-1	1,430	145	0.68
SPA 35-F43	22.2	14.9	64.8	7,380	25	11.31	15x1.0**	35x1.5	77	350	230 V-1	1,430	145	0.68
SPA 45-F33	34.3	22.9	83.9	13,950	33	14.74	22x1.0**	42x1.5	86	450	230 V-1	1,360	270	1.20
SPA 45-F43	39.5	26.6	111.0	13,260	32	19.92	22x1.0**	42x1.5	86	450	230 V-1	1,360	270	1.20
SPA 23-F34	9.4	6.3	28.0	3,480	18	4.86	15x1.0**	22x1.0	73	230	230 V-1	1,580	30	0.25
SPA 30-F24	12.7	8.5	31.0	6,160	22	5.44	15x1.0**	28x1.5	71	300	230 V-1	1,360	65	0.30
SPA 30-F34	15.4	10.3	45.8	5,640	21	7.98	15x1.0**	28x1.5	71	300	230 V-1	1,360	65	0.30
SPA 35-F24	20.6	13.7	44.1	11,440	30	7.64	15x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPA 35-F34	26.1	17.5	65.2	10,520	28	11.44	15x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPA 35-F44	29.8	20.0	86.4	9,840	27	15.04	22x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPA 45-F34	44.8	30.0	111.9	18,600	36	19.86	22x1.0**	42x1.5	87	450	230 V-1	1,360	270	1.20
SPA 45-F44	51.9	34.9	148.0	17,680	35	26.01	28x1.5**	42x1.5	87	450	230 V-1	1,360	270	1.20
SPA 35-F45	36.8	24.7	107.9	12,300	29	18.59	22x1.0**	42x1.5	79	350	230 V-1	1,430	145	0.68

NB1 = $t_{L1} + 10^\circ\text{C}$ | DT1 = 10K
NB2 = $t_{L1} \pm 0^\circ\text{C}$ | DT1 = 8K

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

The technical data are also given in the product selection software.
Technical changes reserved.

GEA Küba *market* SP

Technical data – SPB(E)



Output range (at NB2)

0,9 kW 27 kW

Application range (t_{L1})



Type	Rating Q_0 at 50 Hz, DT1, R404A		Cooling surface m ²	Air flow m ³ /h	Air throw *** m	Tube volume dm ³	Connections		Sound L_{WA} db (A)	Fans (Operating values at 50 Hz)				
	NB2	NB3					Inlet Ø mm	Outlet Ø mm		Blade Ø mm	Current 230 ± 10% V-1 50 Hz	Per Fan		
	kW	kW										min ⁻¹	W	A
SPB 23-F21	0.9	0.6	2.8	980	7	0.84	10x1.0*	12x1.0	67	230	230 V-1	1,580	30	0.25
SPB 23-F31	1.2	0.8	4.2	890	7	1.26	10x1.0*	12x1.0	67	230	230 V-1	1,580	30	0.25
SPB 30-F21	1.5	1.1	4.3	1.660	11	1.34	10x1.0*	12x1.0	65	300	230 V-1	1,360	65	0.30
SPB 30-F31	2.0	1.4	6.4	1.590	11	2.16	10x1.0*	18x1.0	65	300	230 V-1	1,360	65	0.30
SPB 35-F21	2.4	1.6	6.6	3.040	19	2.06	12x1.0**	18x1.0	72	350	230 V-1	1,430	145	0.68
SPB 35-F31	3.3	2.4	9.8	2.940	19	3.01	12x1.0**	22x1.0	72	350	230 V-1	1,430	145	0.68
SPB 35-F41	4.0	2.9	12.9	2.820	18	4.06	12x1.0**	22x1.0	72	350	230 V-1	1,430	145	0.68
SPB 45-F31	5.6	4.0	16.7	5.010	26	5.17	15x1.0**	28x1.5	81	450	230 V-1	1,360	270	1.20
SPB 45-F41	6.8	5.1	22.1	4.870	25	6.77	15x1.0**	28x1.5	81	450	230 V-1	1,360	270	1.20
SPB 23-F32	2.3	1.7	8.4	1.780	12	2.51	10x1.0*	18x1.0	70	230	230 V-1	1,580	30	0.25
SPB 30-F22	3.0	2.1	8.6	3.320	17	2.73	12x1.0**	22x1.0	68	300	230 V-1	1,360	65	0.30
SPB 30-F32	4.0	2.9	12.8	3.180	16	4.11	12x1.0**	22x1.0	68	300	230 V-1	1,360	65	0.30
SPB 35-F22	4.9	3.3	13.2	6.080	25	3.94	15x1.0**	22x1.0	75	350	230 V-1	1,430	145	0.68
SPB 35-F32	6.6	4.5	19.5	5.880	24	5.93	15x1.0**	28x1.5	75	350	230 V-1	1,430	145	0.68
SPB 35-F42	8.0	5.8	25.8	5.640	24	7.76	15x1.0**	28x1.5	75	350	230 V-1	1,430	145	0.68
SPB 45-F32	11.3	8.0	33.4	10.020	32	9.93	15x1.0**	35x1.5	84	450	230 V-1	1,360	270	1.20
SPB 45-F42	13.6	10.3	44.3	9.740	31	13.31	15x1.0**	35x1.5	84	450	230 V-1	1,360	270	1.20
SPB 23-F33	3.5	2.5	12.5	2.670	16	3.65	12x1.0**	22x1.0	72	230	230 V-1	1,580	30	0.25
SPB 30-F23	4.5	3.0	13.0	4.980	20	4.06	15x1.0**	22x1.0	70	300	230 V-1	1,360	65	0.30
SPB 30-F33	6.0	4.3	19.2	4.770	20	5.98	15x1.0**	28x1.5	70	300	230 V-1	1,360	65	0.30
SPB 35-F23	7.2	5.3	19.8	9.120	28	5.87	15x1.0**	28x1.5	77	350	230 V-1	1,430	145	0.68
SPB 35-F33	9.8	7.2	29.3	8.820	28	8.59	15x1.0**	35x1.5	77	350	230 V-1	1,430	145	0.68
SPB 35-F43	11.9	8.8	38.7	8.460	27	11.31	15x1.0**	35x1.5	77	350	230 V-1	1,430	145	0.68
SPB 45-F33	16.9	12.1	50.2	15.030	35	14.74	22x1.0**	42x1.5	86	450	230 V-1	1,360	270	1.20
SPB 45-F43	20.6	14.9	66.4	14.610	34	19.92	22x1.0**	42x1.5	86	450	230 V-1	1,360	270	1.20
SPB 23-F34	4.6	3.5	16.7	3.560	18	4.86	15x1.0**	22x1.0	73	230	230 V-1	1,580	30	0.25
SPB 30-F24	6.0	4.2	17.3	6.640	23	5.44	15x1.0**	28x1.5	71	300	230 V-1	1,360	65	0.30
SPB 30-F34	7.9	6.0	25.5	6.360	22	7.98	15x1.0**	28x1.5	71	300	230 V-1	1,360	65	0.30
SPB 35-F24	9.7	6.9	26.4	12.160	31	7.64	15x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPB 35-F34	13.2	9.5	39.0	11.760	30	11.44	15x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPB 35-F44	16.0	11.6	51.7	11.280	30	15.04	22x1.0**	35x1.5	78	350	230 V-1	1,430	145	0.68
SPB 45-F34	22.3	16.7	66.9	20.040	38	19.86	22x1.0**	42x1.5	87	450	230 V-1	1,360	270	1.20
SPB 45-F44	27.2	20.6	88.6	19.480	37	26.01	28x1.5**	42x1.5	87	450	230 V-1	1,360	270	1.20
SPB 35-F45	19.8	14.9	64.6	14.100	31	18.59	22x1.0**	42x1.5	79	350	230 V-1	1,430	145	0.68














NB2 = $t_{L1} \pm 0^\circ\text{C}$ | DT1= 8K
NB3 = $t_{L1} - 18^\circ\text{C}$ | DT1= 7K

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

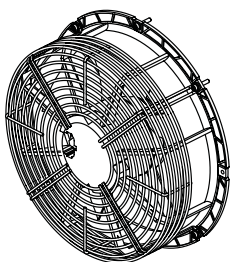
The technical data are also given in the product selection software.
Technical changes reserved.

GEA Küba market SP

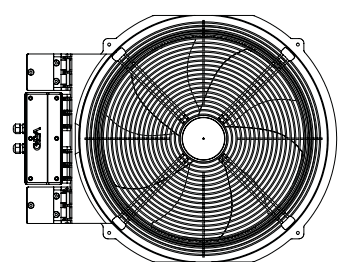
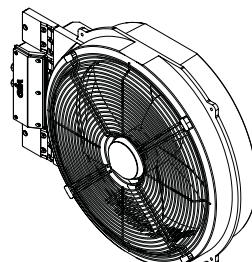
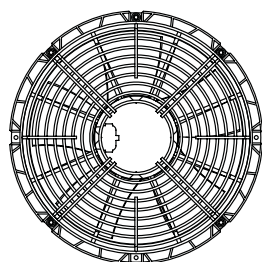
Dimensions, Weights, Electric defrosting

Type	Dimensions										Electric defrost 230 V-1 / 400 V-3-Y			Weight (net)		Weight (gross)		Drain
	H	B	T	L	E ₁	E ₂	E ₃	F	A	W	Coil	Tray	Total	SPA/B	SPA/B E	SPA/B	SPA/B E	D
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kW	kW	kW	kg	kg	kg	kg	"
 SP 23-F21	351	760	400	335	480	-	-	140	79	200	0.5	0.4	0.9	11	12	15	16	G ¾
SP 23-F31	351	760	400	335	480	-	-	140	79	200	0.5	0.4	0.9	12	13	16	17	G ¾
SP 30-F21	427	960	425	360	620	-	-	170	78	200	0.6	0.6	1.2	18	19	23	24	G ¾
SP 30-F31	427	960	425	360	620	-	-	170	78	200	0.6	0.6	1.2	20	21	25	26	G ¾
SP 35-F21	505	1,130	607	515	730	-	-	200	105	300	0.7	0.8	1.5	28	29	35	36	G ¾
SP 35-F31	505	1,130	607	515	730	-	-	200	105	300	1.4	0.8	2.2	31	32	38	39	G ¾
SP 35-F41	505	1,130	607	515	730	-	-	200	105	300	1.4	0.8	2.2	34	35	41	42	G ¾
SP 45-F31	657	1,330	613	510	930	-	-	200	120	400	1.7	0.9	2.6	45	47	79	81	G ¾
SP 45-F41	657	1,330	613	510	930	-	-	200	120	400	2.6	0.9	3.5	50	52	83	86	G ¾
 SP 23-F32	351	1,210	400	335	930	-	-	140	79	200	0.9	0.8	1.7	20	21	25	26	G ¾
 SP 30-F22	427	1,550	425	360	1,210	-	-	170	78	200	1.0	1.0	2.0	30	32	57	58	G ¾
SP 30-F32	427	1,550	425	360	1,210	-	-	170	78	200	1.0	1.0	2.0	33	35	60	61	G ¾
SP 35-F22	505	1,830	607	515	1,430	-	-	200	105	300	1.3	1.3	2.6	48	50	85	87	G 1¼
SP 35-F32	505	1,830	607	515	1,430	-	-	200	105	300	2.6	1.3	3.9	53	56	90	92	G 1¼
SP 35-F42	505	1,830	607	515	1,430	-	-	200	105	300	2.4	1.3	3.7	58	61	95	97	G 1¼
SP 45-F32	657	2,230	613	510	1,830	-	-	200	120	400	3.2	1.6	4.8	82	86	165	169	G 1¼
SP 45-F42	657	2,230	613	510	1,830	-	-	200	120	400	4.5	1.6	6.1	88	93	171	175	G 1¼
 SP 23-F33	351	1,660	400	335	1,380	450	-	140	79	200	1.2	1.1	2.3	28	29	60	62	G ¾
 SP 30-F23	427	2,140	425	360	1,800	590	-	170	78	200	1.5	1.5	3.0	43	45	81	83	G ¾
 SP 30-F33	427	2,140	425	360	1,800	590	-	170	78	200	1.5	1.5	3.0	47	49	84	86	G ¾
 SP 35-F23	505	2,530	607	515	2,130	700	-	200	105	300	1.8	1.8	3.6	68	70	150	153	G 1¼
SP 35-F33	505	2,530	607	515	2,130	700	-	200	105	300	3.6	1.8	5.4	74	78	157	161	G 1¼
SP 35-F43	505	2,530	607	515	2,130	700	-	200	105	300	3.4	1.8	5.2	82	86	165	168	G 1¼
SP 45-F33	657	3,130	613	510	2,730	900	-	200	120	400	4.4	2.2	6.6	123	128	258	263	G 1¼
SP 45-F43	657	3,130	613	510	2,730	900	-	200	120	400	6.5	2.2	8.7	132	138	267	273	G 1¼
 SP 23-F34	351	2,110	400	335	1,830	900	-	140	79	200	1.5	1.5	3.0	35	38	103	105	G ¾
 SP 30-F24	427	2,730	425	360	2,390	1,180	-	170	78	200	2.0	2.0	4.0	57	59	147	150	G 1¼
 SP 30-F34	427	2,730	425	360	2,390	1,180	-	170	78	200	2.0	2.0	4.0	60	63	151	153	G 1¼
 SP 35-F24	505	3,230	607	515	2,830	1,400	-	200	105	300	2.3	2.3	4.6	90	93	217	220	G 1¼
 SP 35-F34	505	3,230	607	515	2,830	1,400	-	200	105	300	4.5	2.3	6.8	98	103	226	231	G 1¼
SP 35-F44	505	3,230	607	515	2,830	1,400	-	200	105	300	4.4	2.2	6.6	109	114	237	241	G 1¼
SP 45-F34	657	4,030	613	510	3,630	1,800	-	200	120	400	7.2	0.7	7.9	158	166	323	331	G 1¼
SP 45-F44	657	4,030	613	510	3,630	1,800	-	200	120	400	8.6	0.7	9.3	171	179	336	345	G 1¼
 SP 35-F45	505	3,930	607	515	3,530	1,400	2,100	200	105	300	5.8	0.7	6.5	137	143	294	301	G 1¼

GEA Küba market SP fan units



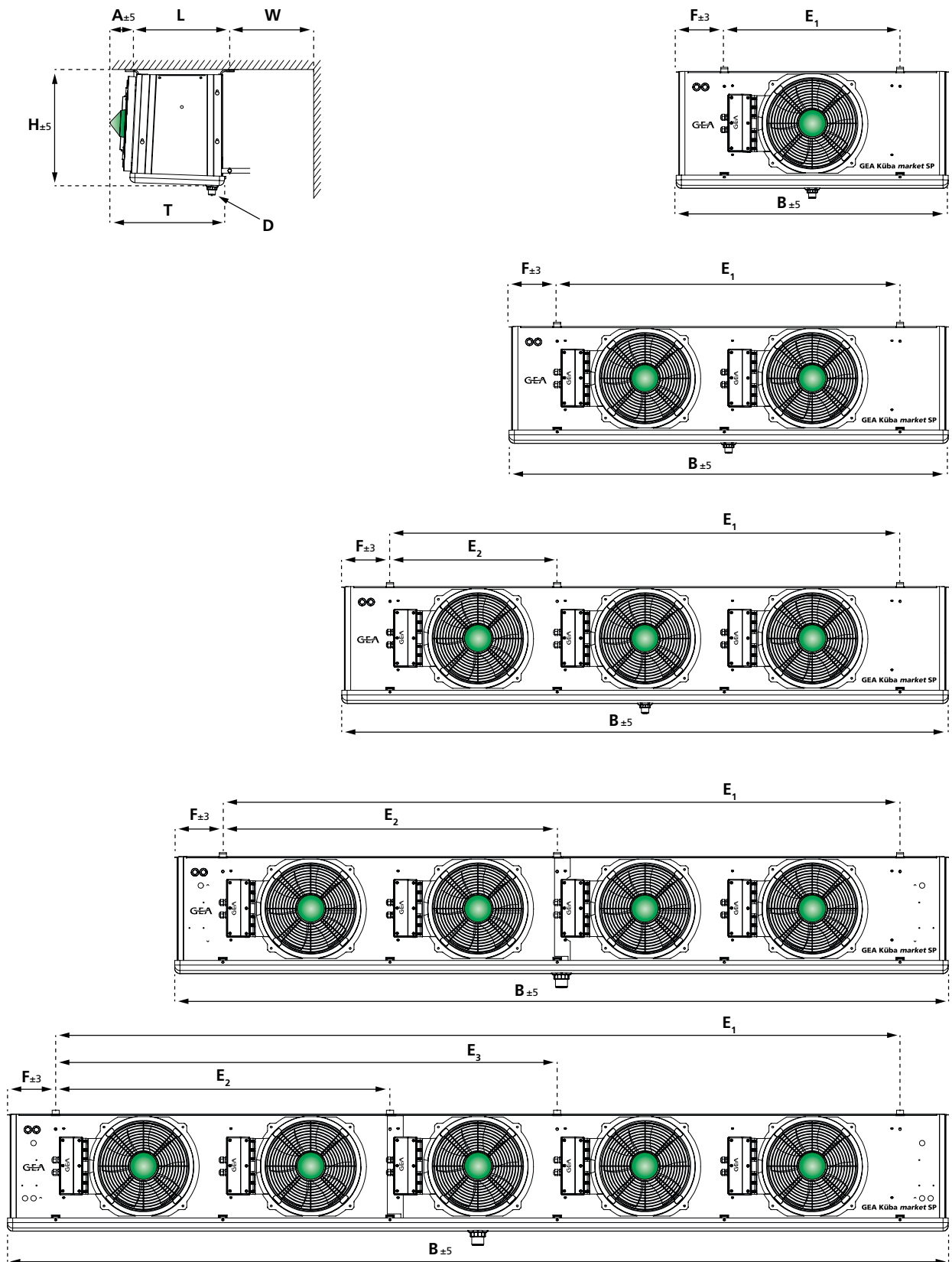
SP23: Standard = ESM motor



SP30, SP35, SP45: Standard AC, type EC (V1.50, V1.52)

Dimensional drawings GEA Küba *market SP* (1-5 motors)

Example showing GEA Küba *market SP* with 300 mm blade diameter





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