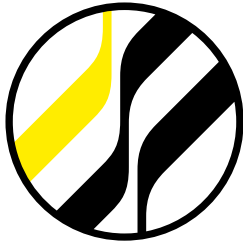


Kelvion



Küba Green Line Aircoolers

Küba market plus SP

THE STANDARD FOR BASIC REFRIGERATION APPLICATIONS



Kelvion



EXPERTS IN HEAT EXCHANGE – SINCE 1920

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

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

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

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

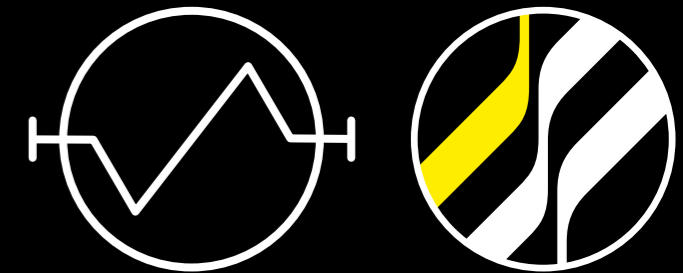
Kelvion – Experts in Heat Exchange.

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

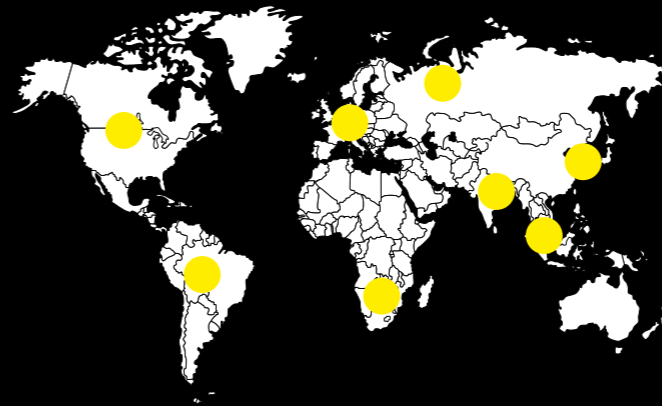


Lord Kelvin formulated the laws of thermodynamics and absolute units of temperature are stated in kelvin, in his honor.

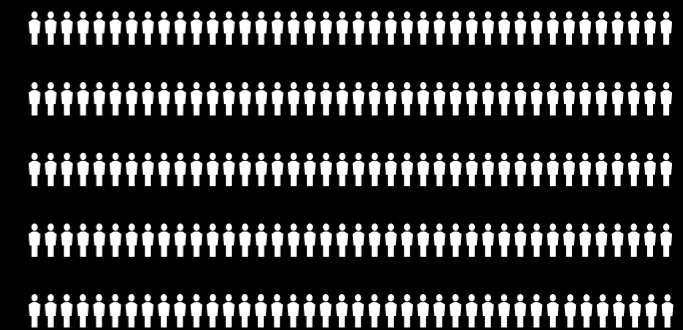
OUR LOGO – INSPIRED FROM THE SCHEMATIC FOR HEAT EXCHANGER



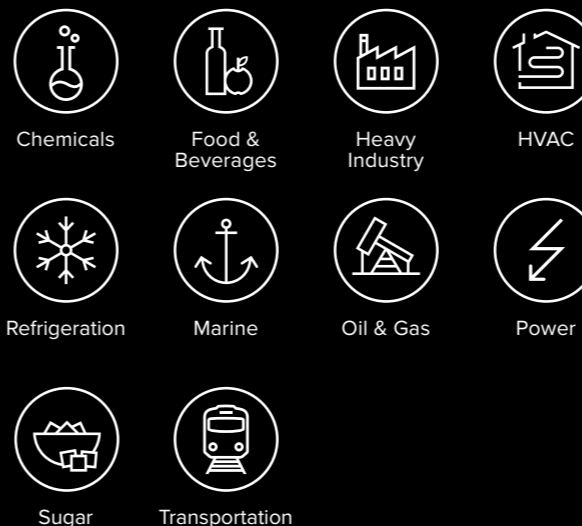
67 BRANCHES AND SALES PARTNERS WORLDWIDE



5,000 EMPLOYEES WORLDWIDE



YOUR MARKETS ARE OUR MARKETS



KELVION HAS A LONG HISTORY



Küba market plus SP

THE STANDARD FOR **BASIC** REFRIGERATION **APPLICATIONS**



Capacity range (for SC2)

1.2 kW    52 kW

Temperature range (t_{L1})

-25°C     +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



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	1350	565	1,13	1450	830	1,5

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 _o 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 (Operational values at 50 Hz)					
	SC1 kW	SC2 kW					Inlet Ømm	Outlet Ømm		L _{WA} dB(A)	Blade Ømm	Current 230±10% V-1 50Hz	Per fan		
													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	16,8	11,3	36,3	5800	17	7,6	15*	35	83	1 x 500	400V -3	1362	560	1,01	
SPA 081D	19,3	13,1	54,2	5270	16	11,1	15*	35	83	1 x 500	400V -3	1362	560	1,01	
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	31,9	21,7	72,7	11600	22	14,3	15*	42	86	2 x 500	400V -3	1362	560	1,01	
SPA 082D	37,9	25,7	108,3	10540	21	21,5	22*	42	86	2 x 500	400V -3	1362	560	1,01	
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	49,5	33,4	109,2	17400	26	21,3	22*	54	88	3 x 500	400V -3	1362	560	1,01	
SPA 083D	56,3	38,3	162,7	15810	24	32,2	22*	54	88	3 x 500	400V -3	1362	560	1,01	
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	64,1	43,5	145,5	23200	28	28,6	22*	54	89	4 x 500	400V -3	1362	560	1,01	
SPA 084D	76,1	51,6	216,9	21080	26	41	28**	54	89	4 x 500	400V -3	1362	560	1,01	
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_i t_o 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 m ²	Air flow m ³ /h	Air throw *** m	Tube volume dm ³	Connections		Sound L _{WA} dB(A)	Fans (Operational values at 50 Hz)					
	SC2 kW	SC3 kW					Inlet Ømm	Outlet Ømm		L _{WA} dB(A)	Blade Ømm	Current 230±10% V-1 50Hz	Per fan		
													rpm	W	A
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	8,8	6,9	24,3	6250	18	7,6	15*	35	83	1 x 500	400V -3	1362	560	1,01	
SPB 081D	11,1	8,8	36,3	5880	17	11,1	15*	35	83	1 x 500	400V -3	1362	560	1,01	
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	17,1	13,5	48,6	12500	23	14,3	15*	42	86	2 x 500	400V -3	1362	560	1,01	
SPB 082D	21,9	17,4	72,5	11760	22	21,5	22*	42	86	2 x 500	400V -3	1362	560	1,01	
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	26,0	20,6	73,0	18750	27	21,3	22*	54	88	3 x 500	400V -3	1362	560	1,01	
SPB 083D	32,6	25,9	108,8	17640	25	32,2	22*	54	88	3 x 500	400V -3	1362	560	1,01	
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	34,2	27,1	97,1	25000	30	28,6	22*	54	89	4 x 500	400V -3	1362	560	1,01	
SPB 084D	43,8	34,7	144,8	23520	28	41,0	28*	54	89	4 x 500	400V -3	1362	560	1,01	
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_i t_o DT1
 NB2/SC2 0°C -8°C 8K
 NB3/SC3 -18°C -25°C 7K
 * Single injection
 ** Multiple injection
 *** Throw limit at 0.5 m/s

Subject to modification.

DIMENSIONS, WEIGHTS, ELECTRIC DEFROST

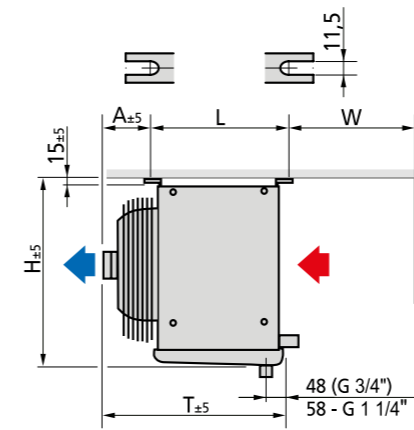
Küba market plus SP

Type	Dimensions										Electrical defrost 230 V-1 / 400 V-3-Y			Weight (net)		Weight (gross)		Drain D
	H	B	T	L	E ₁	E ₂	E ₃	F	A	W _{min}	Coil	Tray	Total	SPA/B	SPA/B E	SPA/B	SPA/B E	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kW	kW	kW	kg	kg	kg	kg	inch
SP. 011D	354	810	424	350	530	-	-	140	92	200	1,07	0,58	1,65	14	13,5	17	16,5	G ¾
SP. 021D	354	810	424	350	530	-	-	140	92	200	1,07	0,58	1,65	15	14,5	18	17,5	G ¾
SP. 031D	430	970	421	350	630	-	-	170	90	200	1,23	0,69	1,92	18,5	18	22,5	22	G ¾
SP. 041D	430	970	421	350	630	-	-	170	90	200	1,23	0,69	1,92	21	20,5	25	24,5	G ¾
SP. 051D	509	1180	501	420	780	-	-	200	100	300	2,07	0,88	2,95	31,5	30,5	37	36	G ¾
SP. 061D	509	1180	501	420	780	-	-	200	100	300	2,90	0,88	3,78	36,5	35,5	42	41	G ¾
SP. 071D	661	1430	592	500	1030	-	-	200	110	400	3,52	0,50	4,02	55	53	75	73	G ¾
SP. 081D	661	1430	592	500	1030	-	-	200	110	400	5,52	0,50	6,02	65	63	85	83	G ¾
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 ¾
SP. 032D	430	1570	421	350	1230	-	-	170	90	200	2,14	1,15	3,29	33,5	32,5	51	50	G ¾
SP. 042D	430	1570	421	350	1230	-	-	170	90	200	2,14	1,15	3,29	36,5	35,5	54	53	G ¾
SP. 052D	509	1930	501	420	1530	-	-	200	100	300	3,90	1,44	5,34	56	54	76	74	G 1¼
SP. 062D	509	1930	501	420	1530	-	-	200	100	300	5,20	1,44	6,64	65	63	85	83	G 1¼
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 1¼
SP. 082D	661	2430	592	500	2030	-	-	200	110	400	10,11	0,86	10,97	117	114	201	198	G 1¼
SP. 023D	354	1810	424	350	1530	-	-	140	92	200	2,60	1,30	3,90	37,5	36	56,5	55	G ¾
SP. 043D	430	2170	421	350	1830	-	-	170	90	200	3,18	1,59	4,77	51,5	50	72	70,5	G ¾
SP. 053D	509	2680	501	420	2280	750	-	200	100	300	5,63	1,95	7,58	78,5	77	137,5	136	G 1¼
SP. 063D	509	2680	501	420	2280	750	-	200	100	300	7,50	1,95	9,45	96	93	155	152	G 1¼
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 1¼
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 1¼
SP. 024D	354	2310	424	350	2030	1000	-	140	92	200	3,37	1,72	5,09	48,5	46,5	73	71	G ¾
SP. 044D	430	2770	421	350	2430	1200	-	170	90	200	4,00	2,00	6,00	67	65	127	125	G 1¼
SP. 064D	509	3430	501	420	3030	1500	-	200	100	300	9,20	1,82	11,02	125	121	229	225	G 1¼
SP. 074D	661	4430	592	500	4030	2000	-	200	110	400	12,72	2,39	15,11	183	178	293	288	G 1¼
SP. 084D	661	4430	592	500	4030	2000	-	200	110	400	19,08	2,39	21,47	221	216	331	326	G 1¼
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 1¼

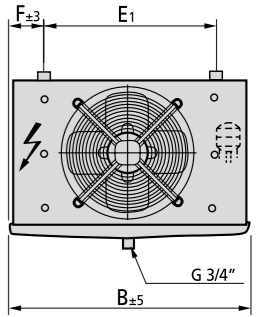
The dimensions are only valid for the standard model design!
Note the differences in dimension among versions and accessories.

DIMENSIONAL DRAWINGS

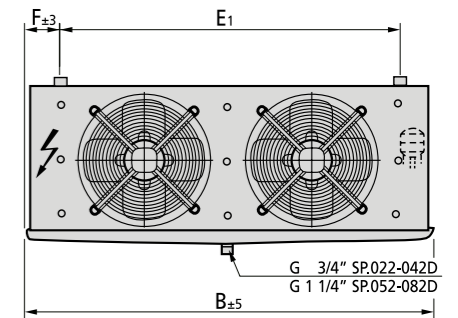
Küba market plus SP



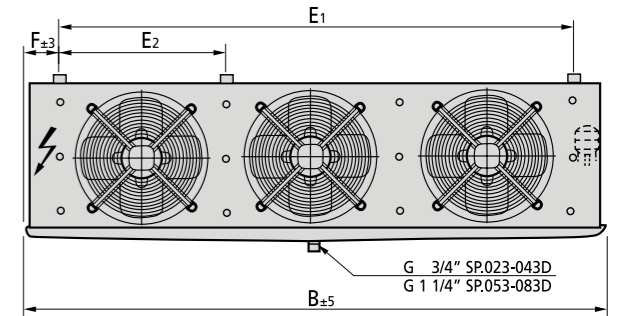
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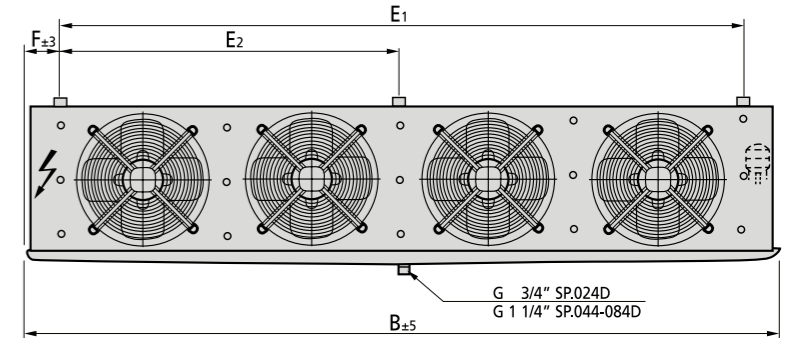
SP.(E) 022, 032, 042, 052, 062, 072, 082 D



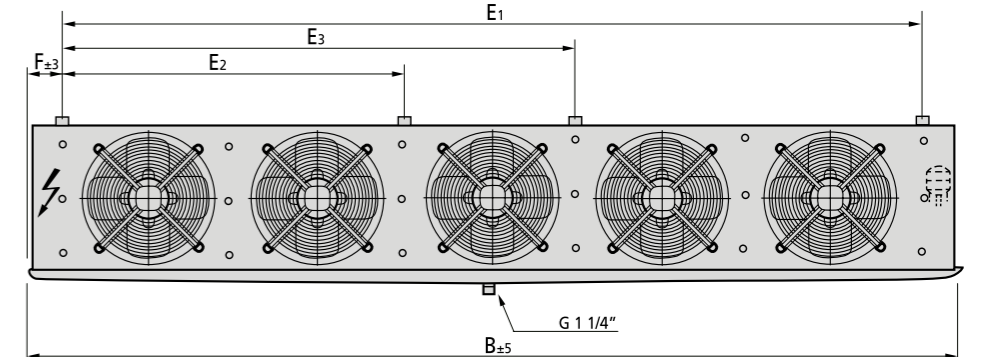
SP.(E) 023, 043, 053, 063, 073, 083 D



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



SP.(E) 065 D



VARIANTS



PROTECTION AGAINST CORROSION

V 6.01 CORROSION PROTECTION 1

- Tubing: Copper
- Fins: Aluminum, epoxy-resin-coated
- End plates: Aluminum protective coating
- Casing: Aluminum/zinc coated steel, protective coating on both sides

V 6.04 CORROSION PROTECTION 4

- Tubing: Copper
- Fins: Aluminum, epoxy-resin-coated
- End plates: Aluminum
- Casing: Aluminum/zinc coated steel, protective coating on on one side

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

ACCESSORIES

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



ADAPTER FOR TEXTILE HOSE CONN.

Advantages of the textile hose operation

- ▶ Even cooling without draughts
- ▶ Even temperature distribution
- ▶ Best possible comfort in workrooms of all kinds

Information:

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

For Model	Adapter
	Ø mm
SP. 031D-044D	320
SP. 051D-065D	420
SP. 071D-084D	520



NOTE:

Using a textile hose reduces the air volume and performance.

SHUT-UP® WITH KÜBA AIR JET

Advantages of the textile hose operation

- ▶ Reduces defrosting time by more than 40%
- ▶ With Shut-Up®, the defrosting heat is kept where it should be – in the Air Cooler
- ▶ For electrical defrosting and hot gas defrosting

For Model	Shut-Up
	Ø mm
SP. 031D-044D	320
SP. 051D-065D	420
SP. 071D-084D	520



Information:

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

NOTE:

1. Using a textile hose as well as a Shup-Up® reduces the air volume and performance.
2. Using a textile hose as well as a Shup-Up® requires the use of the Küba AIR JET and an adapter (see above), and performance.

ACCESSORIES

FINNED-TUBE HEATERS SPHR/SPHRZ

For air coolers with draw-through fans.
– self installation required

Note:

Do not operate unless Air Cooler fans are running, to prevent the fans and cold room ceiling from overheating!
Only use in conjunction with a standard fan guard!

Included in delivery:

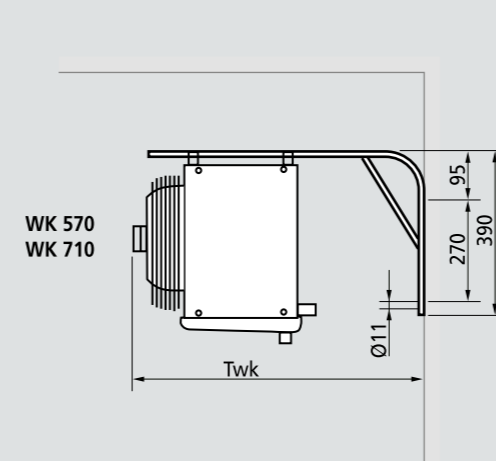
- ▶ Electrical finned tube radiator CrNi steel Ø 28 mm
- ▶ Connection ends 1000 mm long
- ▶ Al and Nirosta for fastening
- ▶ Branching box acc. to VDE, ÖVE, SEV

Model	For Blade	Nominal power	Weight	Dimensions
	Ø mm	at 230V kW	kg	mm
SPHR25	250	1,4	0,7	245
SPHR30	300	1,8	0,8	300
SPHR40	400	2,5	0,9	400
SPHR50	500	3,2	1,1	500

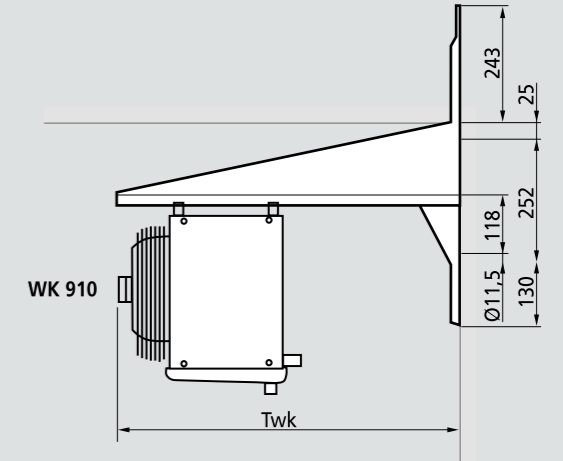


Model	Order quantity	Rated power
		at 230V kW
SP. 011D	1x SPHR25	1,36
SP. 021D	1x SPHR25	1,36
SP. 031D	1x SPHR30	1,75
SP. 041D	1x SPHR30	1,75
SP. 051D	1x SPHR40	2,47
SP. 061D	1x SPHR40	2,47
SP. 071D	1x SPHR50	3,19
SP. 081D	1x SPHR50	3,19
SP. 022D	2x SPHR25	2,72
SP. 032D	2x SPHR30	3,50
SP. 042D	2x SPHR30	3,50
SP. 052D	2x SPHR40	4,94
SP. 062D	2x SPHR40	4,94
SP. 072D	2x SPHR50	6,38
SP. 082D	2x SPHR50	6,38
SP. 023D	3x SPHR25	4,08
SP. 043D	3x SPHR30	5,25
SP. 053D	3x SPHR40	7,41
SP. 063D	3x SPHR40	7,41
SP. 073D	3x SPHR50	9,57
SP. 083D	3x SPHR50	9,57
SP. 024D	4x SPHR25	5,44
SP. 044D	4x SPHR30	7,00
SP. 064D	4x SPHR40	9,88
SP. 074D	4x SPHR50	12,76
SP. 084D	4x SPHR50	12,76
SP. 065D	5x SPHR40	12,35

WALL BRACKET



For Aircooler	Model	Dimensions Twk	Weight/pc
		mm	kg
SP. 011-044D	WK 570	570	1,8
SP. 051-065D	WK 710	700	2,1
SP. 071-084D	WK 910	910	4,6



Model	Order quantity
SP. 011D-041D	2x WK 570
SP. 051D-061D	2x WK 710
SP. 071D-081D	2x WK 910
SP. 022D-042D	2x WK 570
SP. 052D-062D	2x WK 710
SP. 072D-082D	2x WK 910
SP. 023D-043D	2x WK 570
SP. 053D-063D	3x WK 710
SP. 073D-083D	3x WK 910
SP. 024D-044D	3x WK 570
SP. 064D	3x WK 710
SP. 074D-084D	3x WK 910
SP. 065D	4x WK 710

MOUNTING SET FOR THE HINGE DOWN DRIP TRAY

The standard drip tray can be easily converted to a fold-down version using the mounting set.

For Air Cooler	Order quantity
SP. 011-081D	2x Set
SP. 022-082D	3x Set
SP. 023-083D	4x Set
SP. 024-084D	5x Set
SP. 065D	6x Set

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