Unit Coolers

SKB

4 kW 30,5 kW

EUROVENT CERTIFIED PERFORMANCE

CERTIFY ALL DX AIR COOLERS

FRIGA-BOHN

www.friga-bohn.com

SKB range unit coolers are suitable for chilling or low temperature storage applications.
24 basic models with capacities ranging from 4 to 30.5 kW.

NOMENCLATURE

SKB 19 R *OPTIONAL FEATURES*

Model — 19 R

OPTIONAL FEATURES — See "OPTIONAL FEATURES"

DESCRIPTION

• APPROVAL

The **SKB** unit cooler line is EUROVENT approved. The ratings indicated are certified compliant to European standard EN328.

• HIGH PERFORMANCE HEAT EXCHANGER

The highly efficient and compact **SKB** range finned coils are designed with corrugated surface aluminium fins (fin spacing 4.23 or 6.35 mm) and grooved internal structure copper tubes.

The refrigerant distributors are nozzle type (nozzle factory fitted).

• DEFROST

The tubular electric heaters are fitted into pipes expanded in the finned block. One of these heaters is fixed under the intermediate drain pan, thus insuring equal heat distribution for a quick and efficient defrost.

The heaters are factory wired to a terminal block and coupled 400 V 3 phase.

Possibility of coupling 230 V 3 phase or 230 V 1 phase.

Defrost water is collected in the intermediate drain pan then drained through a large drain fitting (Ø 1" G).

• VENTILATION

The **SKB** unit cooler line is equipped with propeller type fan assemblies, Ø 450 mm, 4 P = 1500 r.p.m., 230-400 V, 3 phase, 50 Hz, IP 54, class F, requiring no routine maintenance, with built-in thermal-overload protection ***which must be connected externally to effect warranty***.

The high-output, profiled blades operate at a very low noise level.

The fan guards conform to NF E51 190 standard.

• CASING

An aesthetic white enamelled galvanized steel sheet casing allows for easy cleaning of the unit.

SKB-E and **SKB- C** are equipped with an internal drain pan which limits condensation.

The easily removable side panels and the hinged external drain pan allow for easy access to the components of the evaporator (coil, fan assemblies, heater elements, connections…).

The hinging system allows the drain pan to be taken off.

OPTIONAL FEATURES

- Coil:

BYP	Polual Blygold coating of the fins: **SKB-R** and **SKB-L**
BAE	Coating of the fins: **SKB-R** and **SKB-L** (except 4 fan units)
WCO	glycol water and brine
DCF	Dual circuit hot/cold

- Motorfans:

RFA	Streamer
2V5	2 speed 400 V 50 Hz fan assembly
MM5	Single phase 230 V 50 Hz fan assembly *
MP5	400 V 50 Hz aerofoil fan *
M60	230/400 V 60 Hz three phase fan assembly
CMU	Factory wiring

- Defrost:

RVU	Peripheral heaters
HG1	Hot gas (coil: hot gas, drain pan: electrical heaters)
HGT	Hot gas (coil and drain pan)

- Miscellanous:

RCS	Electrical heaters on air discharge *
VGT	Flange of textile duct with guard for aerofoil fan *

- Kit:

RVK	Peripheral heaters
ELK	**SKB-R** and **SKB-L**: full electrical defrosting (5 coil heaters + 1 drain pan heater)
E1K	• **SKB-R** and **SKB-L**: light electrical defrosting (3 coil heaters) • **SKB-E** and **SKB-C**: renforced electrical defrosting (3 additional heaters in the coil)
THD	Defrost control thermostat (5709L)
THS	Safety thermostat (5708L)
2TH	Defrost control and safety thermostat (5709L + 5708L)

- Other options:
  Consult us

* Specific casing and fan guard(s)

APPLICATION

SKB .. R

4,23 mm

Models			SKB .. R	06	10	12	16	19	24
R404A **DT1 = 8 K** **SC 2 (1)**	Nominal capacity	Q_{0m}	**kW**	**7,62**	**13,17**	**15,77**	**19,87**	**23,51**	**30,48**
Surface			**m²**	28,5	38	57	57	86	105
Circuit vol.			**dm³**	4,85	6,57	9,69	9,58	14,36	17,48
Air flow			**m³/h**	3800	8200	7600	12300	11400	14800
Fan 400 V/3/50 Hz 1500 r.p.m.	Air throw		**m**	16	18	18	20	20	22
	Ø 450 mm		**No**	1	2	2	3	3	4
	400V/3/50Hz		**W max**	1 x 540	2 x 540	2 x 540	3 x 540	3 x 540	4 x 540
			A max (2)	1 x 1	2 x 1	2 x 1	3 x 1	3 x 1	4 x 1
Electric defrost 400 V/3	**ELK (3)**	**Total**	**W**	2100	3000	4200	4200	6000	7200
			A	3,19	4,56	6,38	6,38	9,12	10,94
	E1K (3)	**Total**	**W**	1050	1500	2100	2100	3000	3600
			A	1,56	2,28	3,19	3,19	4,56	5,47
Net weight			**kg**	54	92	102	118	135	152

(1) See pages "APPENDIX"
(2) Setting of overload protections.
For room temperatures ‘t_i’ other than +20 °C, multiply the given amperage by the ratio 293/(273 + ‘t_i’) so as to obtain the approximate amperage after the room pull down.
(3) Electric defrost option.

SKB .. L

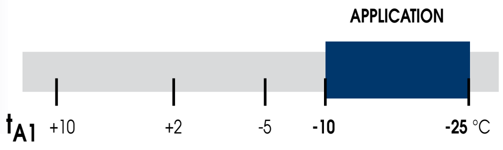
6,35 mm

Models			SKB .. L	06	09	11	14	18	22
R404A **DT1 = 8 K** **SC 2 (1)**	Nominal capacity	Q_{0m}	**kW**	**6,56**	**10,42**	**13,43**	**15,54**	**20,14**	**25,92**
	Glycol water		**kW**	**-**	**-**	**13,04**	**-**	**17,07**	**26,21**
Surface			**m²**	19,5	26	39	39	60	73
Circuit vol.			**dm³**	4,85	6,57	9,69	9,58	14,36	17,48
Air flow			**m³/h**	4000	8600	8000	12900	12000	15600
Fan 400 V/3/50 Hz 1500 r.p.m.	Air throw		**m**	16	18	18	20	20	22
	Ø 450 mm		**No**	1	2	2	3	3	4
	400V/3/50Hz		**W max**	1 x 540	2 x 540	2 x 540	3 x 540	3 x 540	4 x 540
			A max (2)	1 x 1	2 x 1	2 x 1	3 x 1	3 x 1	4 x 1
Electric defrost 400 V/3	**ELK (3)**	**Total**	**W**	2100	3000	4200	4200	6000	7200
			A	3,19	4,56	6,38	6,38	9,12	10,94
	E1K (3)	**Total**	**W**	1050	1500	2100	2100	3000	3600
			A	1,56	2,28	3,19	3,19	4,56	5,47
Net weight			**kg**	53	92	102	118	135	152

(1) See pages "APPENDIX"
(2) Setting of overload protections.
For room temperatures ‘t_i’ other than +20 °C, multiply the given amperage by the ratio 293/(273 + ‘t_i’) so as to obtain the approximate amperage after the room pull down.
(3) Electric defrost option.

Glycol water:
Fluid: Percentage of glycol = 30 % - Fluid inlet temperature = - 8° C - Fluid outlet temperature = - 4° C
Air : Dry airinlet temperature = + 2° C - Relative humidity = 85 %
Other conditions: please consult us.

SKB



SKB .. E

4,23 mm

Models		SKB .. E	06	09	11	13	16	21
R404A **DT1 = 7 K** **SC 3 (1)**	Nominal capacity	Q_{0m} kW	**6,15**	**10,11**	**12,56**	**15,29**	**18,95**	**23,47**
R404A **DT1 = 6 K** **SC 4 (1)**	Nominal capacity	Q_{0m} kW	**4,86**	**8,00**	**10,00**	**12,09**	**15,13**	**18,59**
Surface		m^2	28,5	38	57	57	86	105
Circuit vol.		dm^3	4,92	6,71	9,84	9,92	14,55	18,83
Air flow		m^3/h	3800	8200	7600	12300	11400	14800
Fan 400 V/3/50 Hz 1500 r.p.m.	Air throw	m	16	18	18	20	20	22
	Ø 450 mm	No	1	2	2	3	3	4
	400V/3/50Hz	W max A max (2)	1 x 540 1 x 1	2 x 540 2 x 1	2 x 540 2 x 1	3 x 540 3 x 1	3 x 540 3 x 1	4 x 540 4 x 1
⎍⎍ **No**	Coil Drain pan		5 1	5 1	5 1	5 1	5 1	5 1
Electric defrost 400 V/3	**Total**	**W** **A**	2100 3,19	3000 4,56	4200 6,38	4200 6,38	6000 9,12	7200 10,94
	E1K (3) **Total**	**W** **A**	1050 1,56	1500 2,28	2100 3,19	2100 3,19	3000 4,56	3600 5,47
Net weight		kg	55	93	103	119	136	157

(1) See pages "APPENDIX"
(2) Setting of overload protections.
For room temperatures 't_i' other than +20 °C, multiply the given amperage by the ratio 293/(273 + 't_i') so as to obtain the approximate amperage after the room pull down.
(3) Electric defrost option.

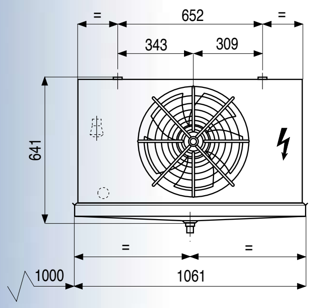
SKB .. C

6,35 mm

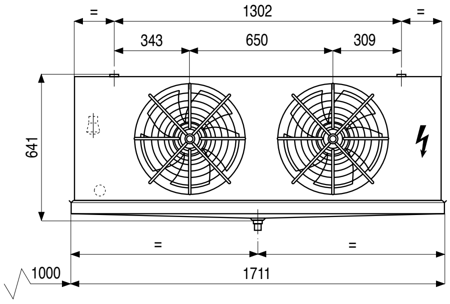
Models		SKB .. C	05	08	10	12	15	19
R404A **DT1 = 7 K** **SC 3 (1)**	Nominal capacity	Q_{0m} kW	**5,24**	**8,05**	**10,65**	**12,38**	**16,09**	**20,17**
R404A **DT1 = 6 K** **SC 4 (1)**	Nominal capacity	Q_{0m} kW	**4,17**	**6,63**	**8,53**	**9,87**	**12,89**	**16,07**
Surface		m^2	19,5	26	39	39	60	73
Circuit vol.		dm^3	4,92	6,71	9,84	9,92	14,55	18,83
Air flow		m^3/h	4000	8600	8000	12900	12000	15600
Fan 400 V/3/50 Hz 1500 r.p.m.	Air throw	m	16	18	18	20	20	22
	Ø 450 mm	No	1	2	2	3	3	4
	400V/3/50Hz	W max A max (2)	1 x 540 1 x 1	2 x 540 2 x 1	2 x 540 2 x 1	3 x 540 3 x 1	3 x 540 3 x 1	4 x 540 4 x 1
⎍⎍ **No**	Coil Drain pan		5 1	5 1	5 1	5 1	5 1	5 1
Electric defrost 400 V/3	**Total**	**W** **A**	2100 3,19	3000 4,56	4200 6,38	4200 6,38	6000 9,12	7200 10,94
	E1K (3) **Total**	**W** **A**	1050 1,56	1500 2,28	2100 3,19	2100 3,19	3000 4,56	3600 5,47
Net weight		kg	54	93	103	119	136	157

(1) See pages "APPENDIX"
(2) Setting of overload protections.
For room temperatures 't_i' other than +20 °C, multiply the given amperage by the ratio 293/(273 + 't_i') so as to obtain the approximate amperage after the room pull down.
(3) Electric defrost option.

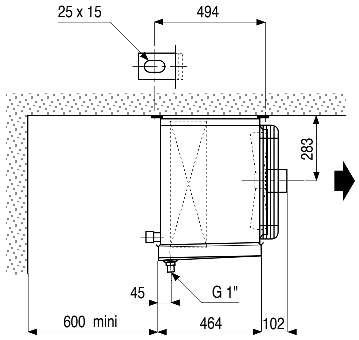
DIMENSIONAL DATA



SKB 06 R **SKB 06 E**
SKB 06 L **SKB 05 C**



SKB 10 R **SKB 09 L** **SKB 09 E** **SKB 08 C**
SKB 12 R **SKB 11 L** **SKB 11 E** **SKB 10 C**



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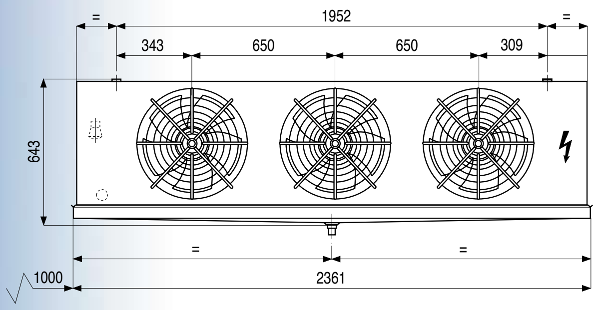
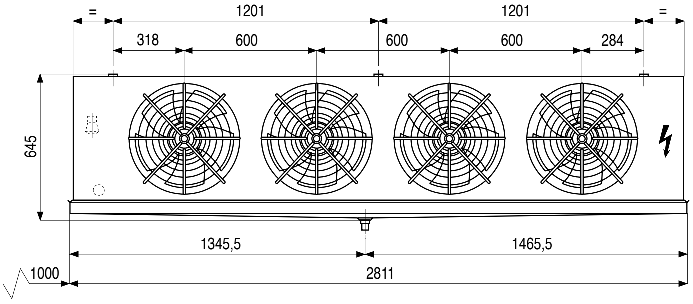


SKB 16 R **SKB 14 L** **SKB 13 E** **SKB 12 C**
SKB 19 R **SKB 18 L** **SKB 16 E** **SKB 15 C**



SKB 24 R **SKB 21 E**
SKB 22 L **SKB 19 C**

Models	**SKB .. R**	**06**	**10**	**12**	**16**	**19**	**24**
Inlet	**Ø (1)**	D 5/8″	D 1 1/8"	D 1 1/8"	D 1 1/8"	D 1 1/8"	D 1 5/8"
Outlet	**Ø ODF (2)**	7/8″	1 3/8"	1 3/8"	1 5/8"	1 5/8"	1 5/8"

(1) Liquid distributor: male to be brazed
(2) ODF: female sweat type connection

Models	**SKB .. L**	**06**	**09**	**11**	**14**	**18**	**22**
Inlet	**Ø (1)**	D 5/8"	D 7/8"	D 1 1/8"	D 1 1/8"	D 1 1/8"	D 1 5/8"
Outlet	**Ø ODF (2)**	7/8″	1 1/8"	1 3/8"	1 3/8"	1 5/8"	1 5/8"

(1) Liquid distributor: male to be brazed
(2) ODF: female sweat type connection

Models	**SKB .. E**	**06**	**09**	**11**	**13**	**16**	**21**
Inlet	**Ø (1)**	D 7/8″	D 1 1/8"	D 1 1/8"	D 1 1/8"	D 1 5/8"	D 1 5/8"
Outlet	**Ø ODF (2)**	1 1/8"	1 3/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"

(1) Liquid distributor: male to be brazed
(2) ODF: female sweat type connection

Models	**SKB .. C**	**05**	**08**	**10**	**12**	**15**	**19**
Inlet	**Ø (1)**	D 7/8″	D 1 1/8"	D 1 1/8"	D 1 1/8"	D 1 5/8"	D 1 5/8"
Outlet	**Ø ODF (2)**	1 1/8"	1 3/8"	1 5/8"	1 5/8"	1 5/8"	2 1/8"

(1) Liquid distributor: male to be brazed
(2) ODF: female sweat type connection