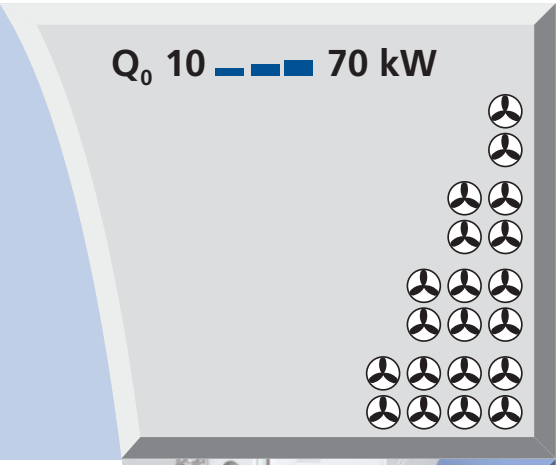
Küba SF *blastfreezer*

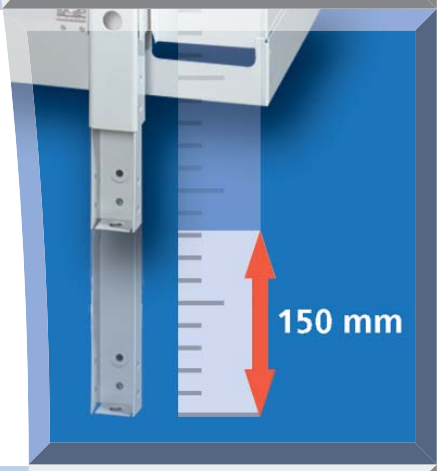
Küba SF *blastfreezer*: Specific advantages

High performance Air Cooler for shock cooling and freezing meat and sausage products, baked goods, pizza and frozen vegetables.

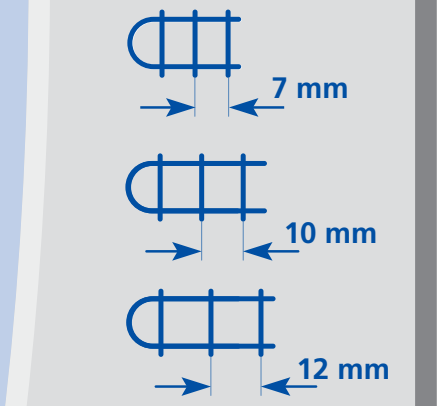
Blow-through fans guide the air flow horizontally through the heat exchanger. This achieves optimum air speeds.



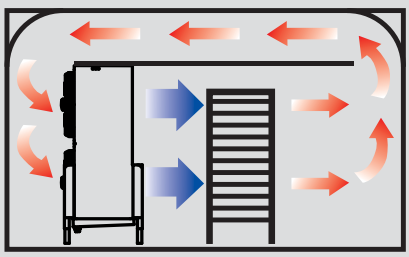
Adjustable floor brackets: can be perfectly adapted to on site conditions.



Large fin spacing guarantees quick cooling process and long evaporator operating periods.



High air circulation rate with indirect air flow over the cooled goods: more cost-effective, the products retain their quality and reach the proper core temperature as quickly as possible.



Küba SF *blastfreezer*: Specific advantages

- Optimum air flowrate for blast freezing: maximum air speed for the cooled goods located in the air flow
- Dimensions correspond with standard tray carts: perfect cool air distribution directly over the cooled goods
- Outstanding Küba quality: with HFE® tube / fin system and CAL® refrigerant distributor
- Adjustable floor mounting brackets: can be perfectly adapted to on site conditions
- Hinge-down drip tray on both sides: standard

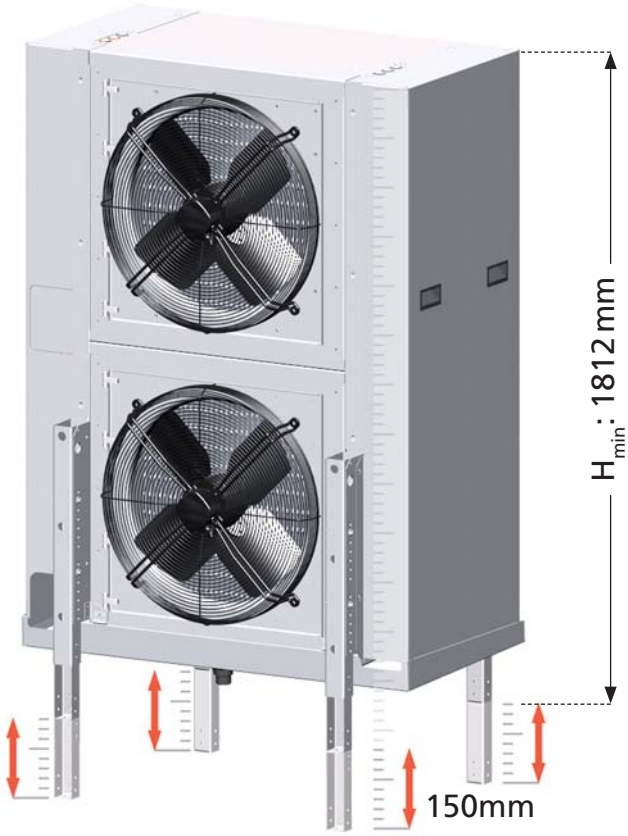
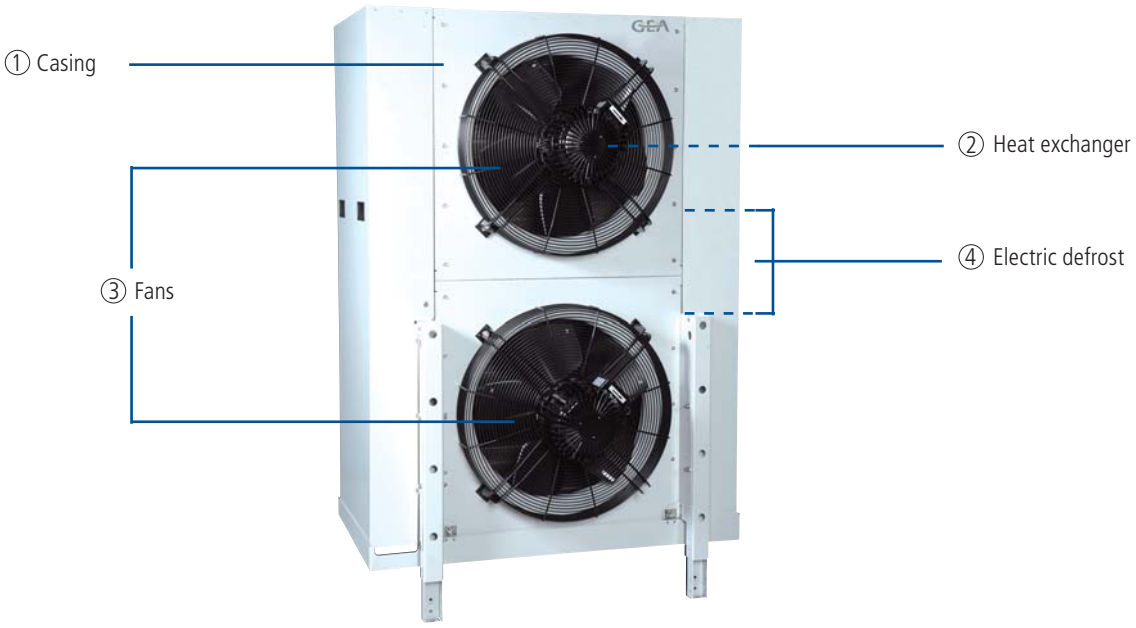


Illustration shows accessories: cover hoods on the sides for the connection and frame return bends side.

Construction



1. Casing

- Smooth Sendzimir galvanised steel
- High-grade powder coating, papyrus white RAL 9018
  - Food quality
  - Easy to clean
  - Optimum corrosion protection
- Fold-down drip tray
- Floor mounting brackets on both sides adjustable in 25 mm increments to 150 mm
- Drain: plastic

2. Heat exchanger

- Fin spacing
  SFB: 7 mm
  SFK: 10 mm
  SFL: 12 mm
- Tube arrangement aligned, spacing 50 x 50 mm
- HFE® tube / fin system
- Multiple injection with Küba CAL® refrigerant distributor
- Tubing: Cu-special
  Fins: Al
  End plates: Al

3. Fans

- Ø 560 mm
- With built-in protector to be connected on site
- Application range: - 50 °C to + 60 °C
- 400 ±10%V-3~,50 Hz
- Protection class IP 54 in accordance with EN 60034
- Insulation class F in accordance with EN 60034
- Standard: 50 Pa external pressure
- Version V1.60: 100 Pa external pressure

- Operating data can be found with Küba Select or in the technical data

• Controller:	Standard 50 Pa	V1.60 100 Pa
Phase control	☑	☐
Transformer	☑	☐
Delta / star	☑	☐
Frequency converter	☐	☑

⚠ Please observe the manufacturer's information.

Motor label data (max. allowable value +40 °C)

	Standard (Δp ext.=50 Pa)			V1.60 (Δp ext.=100 Pa)		
	min^{-1}	W	A	min^{-1}	W	A
SF 56 – F42-F68 Y	1130	450	0,73	not possible		
SF 56 – F42-F68 Δ	1360	670	1,30	1400	2500	4,45

4. Electric defrost

- 230 ±10% ~ oder 400 ±10% V-3~ -Y
- Heaters with CrNi steel sleeve
- Vapour-tight connections
- Connector cable 1.5 mm^2 x 1000 mm
- Designed to defrost the fin package quickly and evenly
- To prevent vapour build-up and to accomplish heat exchange with almost no loss, the heaters are mounted in special expanded tube sleeves
- Wired ready for connection to the connection box in accordance with VDE specifications

Refrigerant / coolant

- Can be used with all HFC refrigerants, performance data can be found with Küba Select
- For use with water / brine circulation please contact our sales team
- For CO_2-operation please contact our sales team
- For NH_3-applications please contact our sales team

! The ratings in the Q_V chart refer to the combination of materials as follows: tubes, Cu / fins, Al.

Küba Blue Line
Freshness that lasts longer

Technical data (R404A) SF...C 7 / 10 / 12 mm

Standard (50Pa external pressure)

SF	L	E	56	-	F	6	6	C

- Generation model
- Line designation
- Fin spacing: B = 7 mm, K = 10 mm, L = 12 mm
- Electric defrost: E = with electric defrost
- Number of fans: 2-8
- Coil depth: 4 tubes, 6 tubes
- Refrigerant: F = FKW/CO_2
- Fan diameter: 56 = 560 mm

SFB(E)-F Standard design [50Pa external pressure] 7 mm

Model SF.C	Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
	kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42	14,0	11,3	77	13000	2,82	19,8	15	35	560	1360	710	1,41
56-F62	18,0	14,5	115	12320	2,67	29,7	22	42	560	1360	710	1,41
56-F44	28,1	22,6	154	26000	2,82	37,7	22	42	560	1360	710	1,41
56-F64	36,0	29,0	231	24640	2,67	56,8	28	54	560	1360	710	1,41
56-F66	53,8	43,3	346	36950	2,67	82,7	2x22	2x42	560	1360	710	1,41
56-F68	70,3	56,8	462	49270	2,67	110,1	2x22	2x54	560	1360	710	1,41

SFK(E)-F Standard design [50Pa external pressure] 10 mm

Model SF.C	Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
	kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42	11,7	9,4	56	13300	2,89	19,8	15	35	560	1360	710	1,41
56-F62	15,7	12,7	83	13060	2,83	29,7	22	42	560	1360	710	1,41
56-F44	23,5	18,9	111	26600	2,89	37,7	22	42	560	1360	710	1,41
56-F64	31,6	25,4	166	26120	2,83	56,8	28	54	560	1360	710	1,41
56-F66	47,1	38,0	249	39180	2,83	82,7	2x22	2x42	560	1360	710	1,41
56-F68	62,0	50,0	332	52240	2,83	110,1	2x22	2x54	560	1360	710	1,41

SFL(E)-F Standard design [50Pa external pressure] 12 mm

Model SF.C	Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
	kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42	10,3	8,3	47	13520	2,93	19,8	15	35	560	1360	710	1,41
56-F62	14,0	11,3	71	13260	2,88	29,7	22	42	560	1360	710	1,41
56-F44	20,7	16,6	94	27040	2,93	37,7	22	42	560	1360	710	1,41
56-F64	28,1	22,6	141	26520	2,88	56,8	28	54	560	1360	710	1,41
56-F66	42,0	33,9	212	39780	2,88	82,7	2x22	2x42	560	1360	710	1,41
56-F68	55,4	44,7	282	53040	2,88	110,1	2x22	2x54	560	1360	710	1,41

Technical data (R404A) SF...C 7 / 10 / 12 mm

SFB(E)-F Version V1.60 [100Pa external pressure]

7 mm

Model SF.C		Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
		kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42		16,9	13,6	77	17430	3,78	19,8	15	35	560	1400	2570	4,30
56-F62		22,2	17,8	115	16730	3,63	29,7	22	42	560	1400	2570	4,30
56-F44		34,0	27,2	154	34860	3,78	37,7	22	42	560	1400	2570	4,30
56-F64		44,6	35,7	231	33460	3,63	56,8	28	54	560	1400	2570	4,30
56-F66		66,5	53,2	346	50190	3,63	82,7	2x22	2x42	560	1400	2570	4,30
56-F68		85,9	68,7	462	66920	3,63	110,1	2x22	2x54	560	1400	2570	4,30

SFK(E)-F Version V1.60 [100Pa external pressure]

10 mm

Model SF.C		Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
		kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42		13,5	10,8	56	18010	3,91	19,8	15	35	560	1400	2570	4,30
56-F62		19,3	15,5	83	17360	3,77	29,7	22	42	560	1400	2570	4,30
56-F44		27,0	21,6	111	36020	3,91	37,7	22	42	560	1400	2570	4,30
56-F64		38,8	31,1	166	34720	3,77	56,8	28	54	560	1400	2570	4,30
56-F66		57,9	46,3	249	52080	3,77	82,7	2x22	2x42	560	1400	2570	4,30
56-F68		75,3	60,3	332	69440	3,77	110,1	2x22	2x54	560	1400	2570	4,30

SFL(E)-F Version V1.60 [100Pa external pressure]

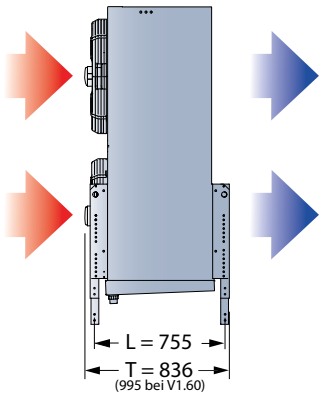
12 mm

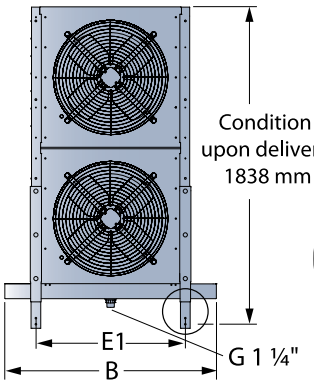
Model SF.C		Rating Q_0 at 50 Hz t_{L1}=-18 °C DT1 = 7K NB 3	Rating Q_0 at 50 Hz t_{L1}=-25°C DT1 = 6K NB 4	Surface	Air flow rate	Air speed	Tube volume	Connections Inlet	Connections Outlet	Fans (operating values at 50 Hz) Blade	Fans (operating values at 50 Hz) Fan 400 ± 10% V-3~ 50Hz		
		kW	kW	m²	m³/h	m/s	dm³	ø mm	ø mm	ø mm	min-1	W	A
56-F42		11,9	9,5	47	18390	3,99	19,8	15	35	560	1400	2570	4,30
56-F62		17,3	13,8	71	17800	3,86	29,7	22	42	560	1400	2570	4,30
56-F44		23,9	19,1	94	36780	3,99	37,7	22	42	560	1400	2570	4,30
56-F64		34,7	27,8	141	35600	3,86	56,8	28	54	560	1400	2570	4,30
56-F66		51,7	41,4	212	53400	3,86	82,7	2x22	2x42	560	1400	2570	4,30
56-F68		67,8	54,2	282	71200	3,86	110,1	2x22	2x54	560	1400	2570	4,30

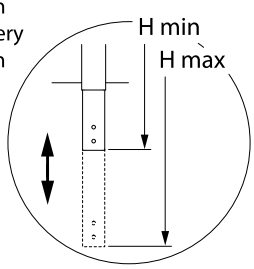
Dimensional drawings, dimensions, electric defrost, weights

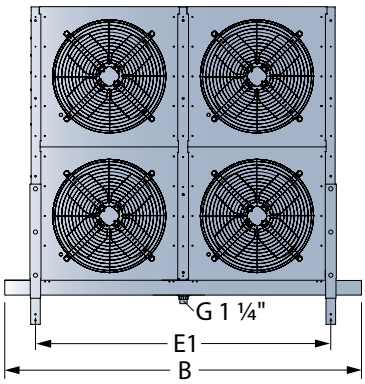
Model							Electrical defrost			Weight [Net]		
	Adjustable in 25 mm increments						230V-1~ / 400V-3~ -Y					
SF.C	H_{min}	H_{max}	B	E1	E2	E3	Coil	Tray	Total	SFB.C	SFK.C	SFL.C
	mm	mm	mm	mm	mm	mm	kW	kW	kW / *	kg	kg	kg
56-F42	1813	1963	1210	854	-	-	8,60	1,72	10,32 / 3	168	163	159
56-F62	1813	1963	1210	854	-	-	12,90	1,72	14,62 / 3	200	192	187
56-F44	1813	1963	2010	1654	-	-	14,35	2,87	17,22 / 3	287	276	269
56-F64	1813	1963	2010	1654	-	-	21,53	2,87	24,40 / 3	346	330	320
56-F66	1813	1963	2810	2454	800	-	30,00	4,00	34,00 / 3	497	473	457
56-F68	1813	1963	3610	3254	800	2400	39,00	5,20	44,20 / 3	669	637	616

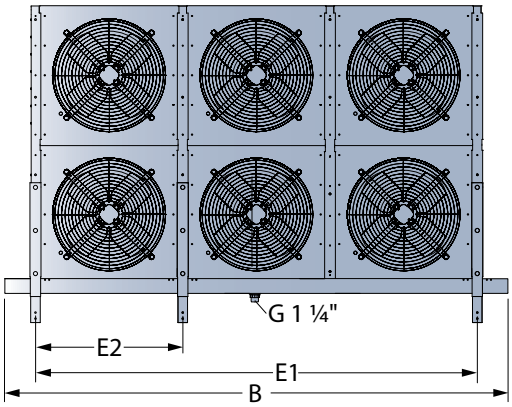
* Electric defrost divided in /n circuits

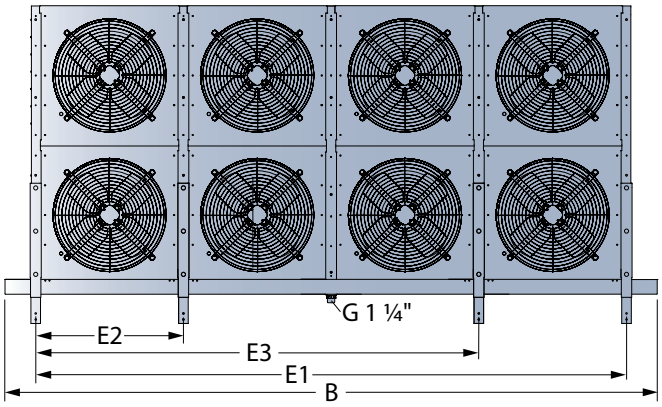


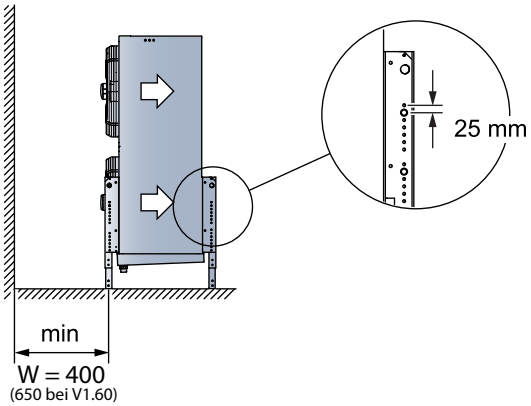




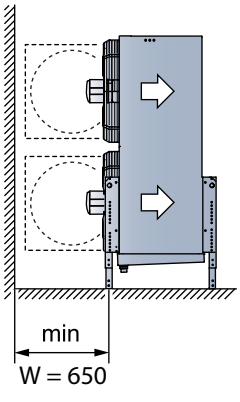








Wall clearance: Standard



Wall clearance: Model with hinged fans (V3.10)

Versions

Motor versions

Fans with high external pressure (100 Pa)
- **V1.60**

For other alternative motor versions, see Küba Select or version overview, p. 130

Alternative casing versions

Hinged fans
- **V3.10**

To make the devices easy to clean, the fans are mounted with stainless steel hinges.

Defrost versions

All Küba Air Coolers are available with electric defrosting. See nomenclature, p. 103

Hot gas defrost in the drip tray
- Hot gas connection on both sides
- V4.01 Copper
- V4.02 Stainless steel

Hot gas in the heat exchanger
- V6.05 Hot gas connection on the heat exchanger

Protection against corrosion

Stainless steel casing
- **V3.12**

For protection in aggressive cold storage air, e.g. in smokehouses and curing areas, all casing components are stainless steel. Industrial quality.

- **V6.01**

Heat exchanger:
Tubing: Cu
Fins: Al „goldlack“ coating
End plates: Al protective coating

Casing: Sendzimir galvanised steel, protective coating on both sides

- **V6.02**

Heat exchanger:
Tubing: Stainless steel
Fins: Al „goldlack“ coating
End plates: Stainless steel

Casing: Sendzimir galvanised steel protective coating on both sides
Refrigerant distributor: Standard Venturi
Stainless steel CAL® distributor on request

- **V6.03**

Heat exchanger:
Tubing: Stainless steel
Fins: Al
End plates: Al protective coating

Casing: Sendzimir galvanised steel, protective coating on one side
Refrigerant distributor: Standard Venturi
Stainless steel CAL® distributor on request

- **V6.04**

Heat exchanger:
Tubing: Cu
Fins: Al „goldlack“ coating
End plates: Al

Casing: Sendzimir galvanised steel, protective coating on one side

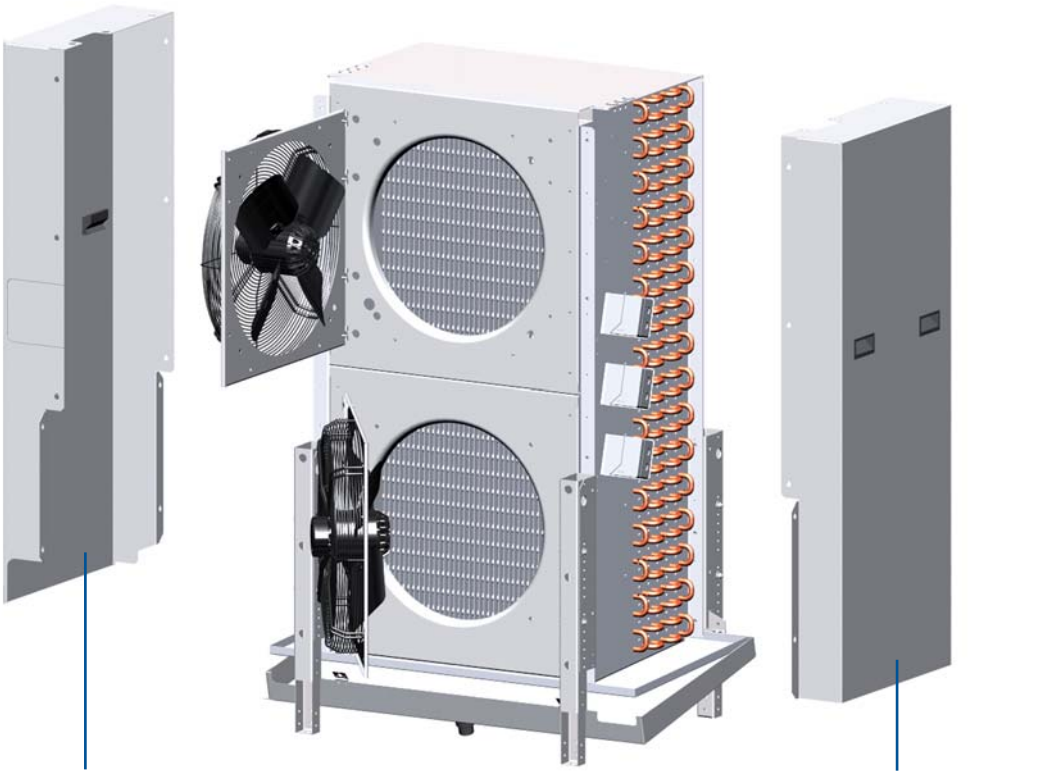
Accessories

Side cover hoods

The cover hoods can be used with all models.

Construction

- Sendzimir galvanised steel
- High-grade powder coating, papyrus white RAL 9018



Connection side (AS)

Return bends site (BS)