

RADIAL GAS COOLER

The reliable, efficient, and sustainable cooling solution for industrial and commercial applications, with radial fans for indoor use

KGR

Cooling capacity from 20 kW to 525 kW
PS 130 bar



ENEX TECHNOLOGIES presents the **Radial Gas Cooler** range for industrial and commercial applications. This product line is designed to meet or exceed customer needs including energy efficiency, ergonomics, space, etc.

All ENEX TECHNOLOGIES products are designed and conceived with levels of excellence in food preservation, robustly built to ensure long life.

Ready to use in CO₂ transcritical installations, our Radial Gas Cooler line consists of more than 50 models for industrial applications, available in cooling capacities between 20 and 525 KW.

ENEX TECHNOLOGIES radial gas coolers are fitted with EC fan motors as standard, delivering a minimum energy consumption up to 200 Pa available air pressure. Fan speed can be controlled electronically to increase energy savings.

Our complete portfolio offers a large range of configurations and accessories to meet any specification, and can be customized according to the application.

LEADING PROFESSIONAL SOLUTIONS IN HEAT REJECTION

ENEX TECHNOLOGIES' assessment of Radial Gas Coolers performance parameters under different conditions and control strategies is essential to designing and optimizing the units for specific applications.

Our RADIAL GAS COOLERS range which can be segmented into two main types ranges:

RANGE	RATED CONDITIONS (kW)	STANDARD CONDITIONS SC20 (kW)
KGR400	15 - 80	20 - 107
KGR630	90 - 380	120 - 525

Rated Conditions: Pressure 100bar, CO₂ Inlet 120°C, CO₂ Outlet 40°C, Air inlet T° 38, Available air pressure 150Pa

Standard Conditions SC20: Pressure 90bar, CO₂ Inlet 110°C, CO₂ Outlet 35°C, Air inlet T° 30, Available air pressure 150Pa

MAIN FEATURES

With more than 400 years of combined experience in design, production and distribution and doing business in over 125 countries, ENEX TECHNOLOGIES radial gas cooler line offers to customers a wide spectrum of benefits including, but not limited to:

HIGH PERFORMANCE FOR INDOOR USE

- With RADIAL EC fans up to 200 Pa available pressure.
- Optional EC fans adapt to the needs of the application with minimal energy consumption (30% savings compared to an AC fan).
- Copper tubes are staggered across self-spaced louvered fins to achieve high performance.

LONG PRODUCT LIFE

- Strong and robust design includes high quality components to meet all thermodynamic and product life cycle requirements.
- 10 surface treatments available to increase product life cycle in challenging environments.

SAVING FOOTPRINT

- "V" configuration offers high performance in minimal space, reducing footprint in machinery rooms.

CUSTOMIZATION ON DEMAND

- Highest level of customization available to meet application requirements.

SELECTION SOFTWARE

- Transcritical CO₂ calculations are included, allowing customers flexibility in adjusting settings as parameters of the application change.

SAFETY & RELIABILITY

- Operating pressures up to 130 bar
- Resistance and leaks tests up to 186 bar
- Burst tests up to 390 bar
- Equipment pressurized with nitrogen at 2bar

SUSTAINABILITY

- With a GWP of 1, CO₂ is widely and effectively used in commercial and industrial refrigeration systems.

TECHNICAL FEATURES

NOMENCLATURE

K G R 63 05 L 5G 04EC VS

Technology

G = Gas cooler

Typology

R = Radial fan

Fan Diameter

63 = 630 mm

40 = 400 mm

N° of fans

01 = 1 fan

05 = 5 fans

Fan arrangement

L = In line

P = In parallel

Size of coil

Type of fan

Type of air outlet

VS = Vertical Simple

VD = Vertical Double

H = Horizontal

FINNED COILS

- K65 copper tubes Ø 3/8" are built in compliance with CUPROCLIMA specifications.
- The staggered arrangement of copper tubes across self-spaced corrugated fins accurately links tubes and fins for higher coil performance.
- FLOATING PACK SYSTEM allows coils to levitate to avoid leaks.
- All coils are subjected to resistance and leakage testing under a rated pressure of 186 bar and pressurized using nitrogen at 2 bar to avoid inner surface corrosion of the copper tubes ensuring peak operating condition.
- Stainless steel headers with K65 finish can be sectioned using the most suitable material for each application.

CASING

- Manufactured in galvanized steel (painted as optional).
- Interchangeable air outlet panels.
- Internal separators avoid the "by-pass" effect during sequential operation of fans.
- Metallic protection on connections and return bends.

FAN MOTORS

- Available fans' diameters: Ø 400/630 mm.
- Equipped as standard with EC fan motors that modulate rotation speed depending on requirements, delivering peak operation.
- Radial fans: 230V I @ 50/60Hz (for Ø 400 mm) and 400V III @ 50/60Hz (for Ø 630 mm).
- All motors have class B insulation, grade IP-55 protection, a thermal protection device and working operate on at a temperature range from -25° C up to +55° C.
- Up to 200 Pa available air pressure.
- Motors are housed inside an easy-access metallic support.

OPTIONS & ACCESORIES

COIL

- Copper Fins
- Coated Fins
- AquaAero treatment
- Blygold treatment
- Other material

CASING

- Painted Casing
- Excessive Pressure Dampers
- Acoustic Isolation
- Silent blocks

ELECTRICAL OPTIONS

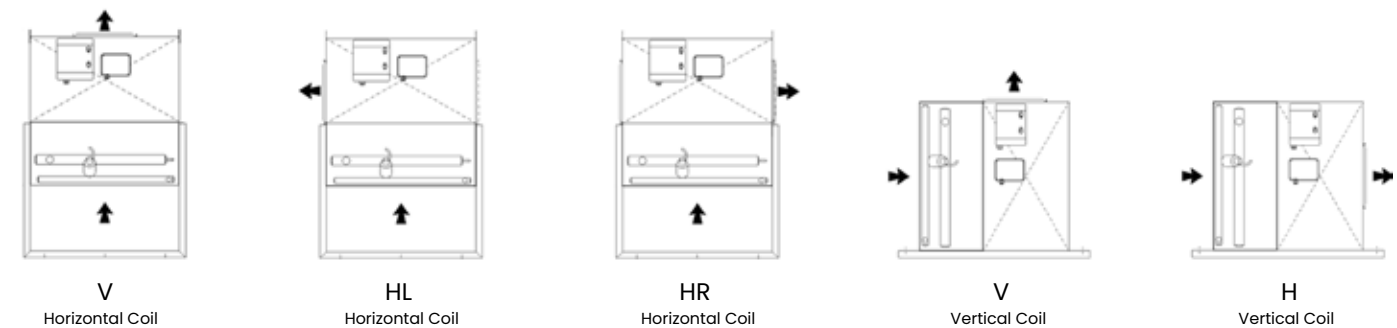
- Shielded Wiring
- Individual service switch by fan

OTHER

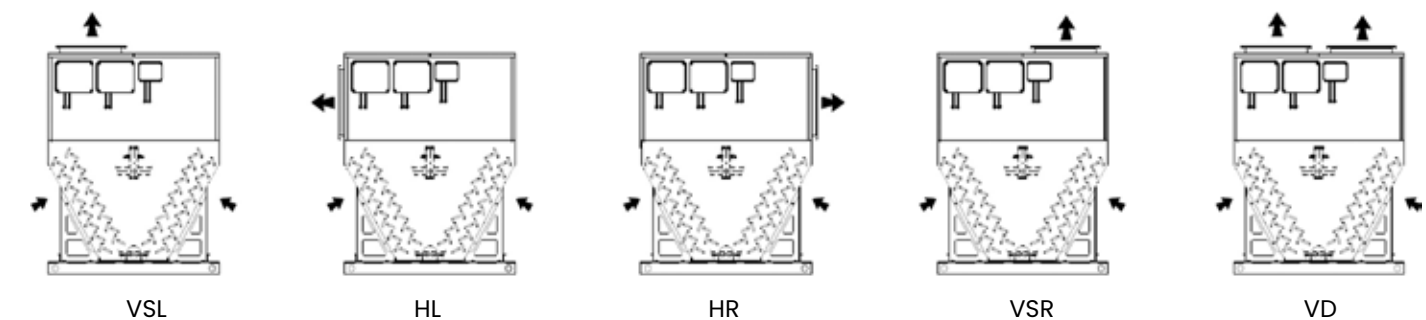
- Adiabatic spray system

AIR DIRECTION POSSIBILITIES

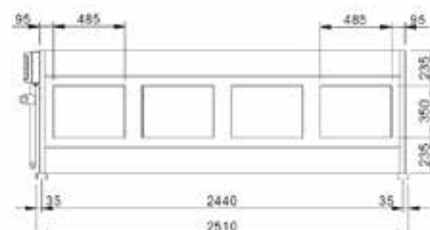
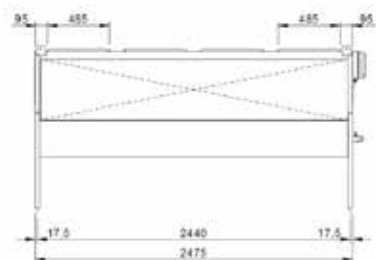
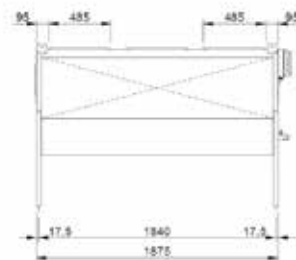
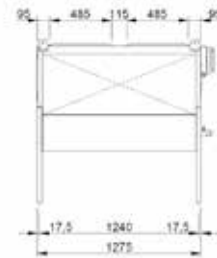
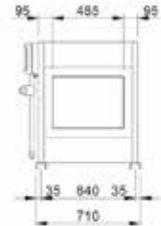
KGR40



KGR63

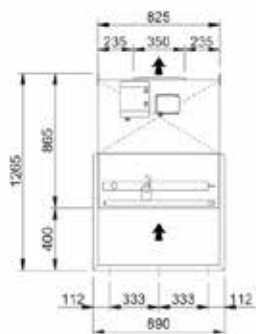


PRODUCT RANGE OVERVIEW · KGR40

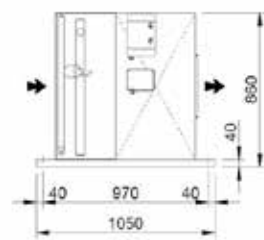


Frontal view · Horizontal coil

Frontal view · Vertical coil

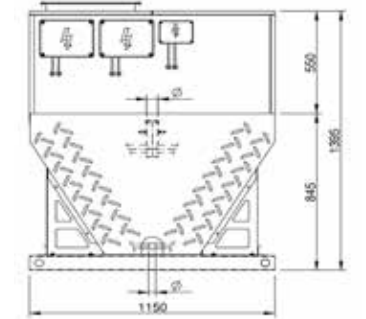
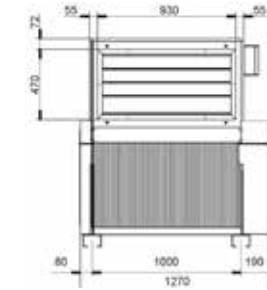


Lateral view · Horizontal coil

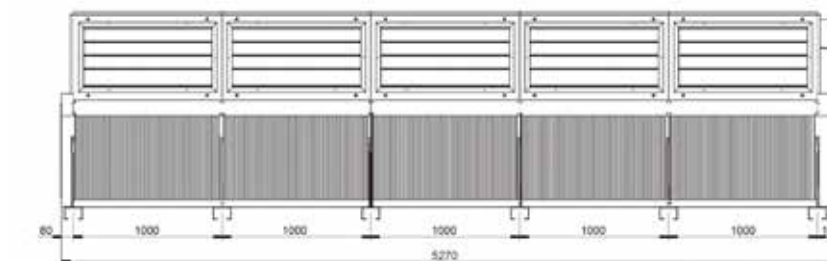
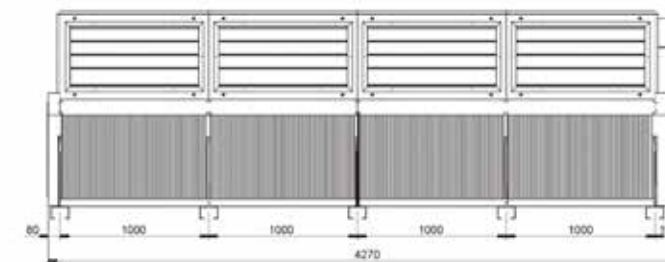
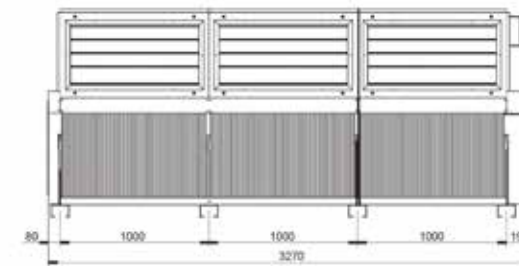
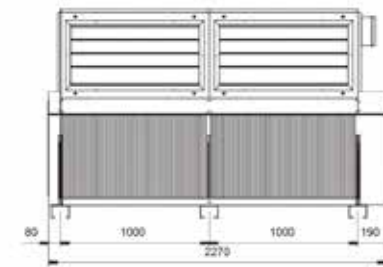


Lateral view · Vertical coil

PRODUCT RANGE OVERVIEW · KR63



Lateral view



TECHNICAL DATA

Fan ø = 400 mm

Fin pitch = 2,5 mm, RPM = 1.700

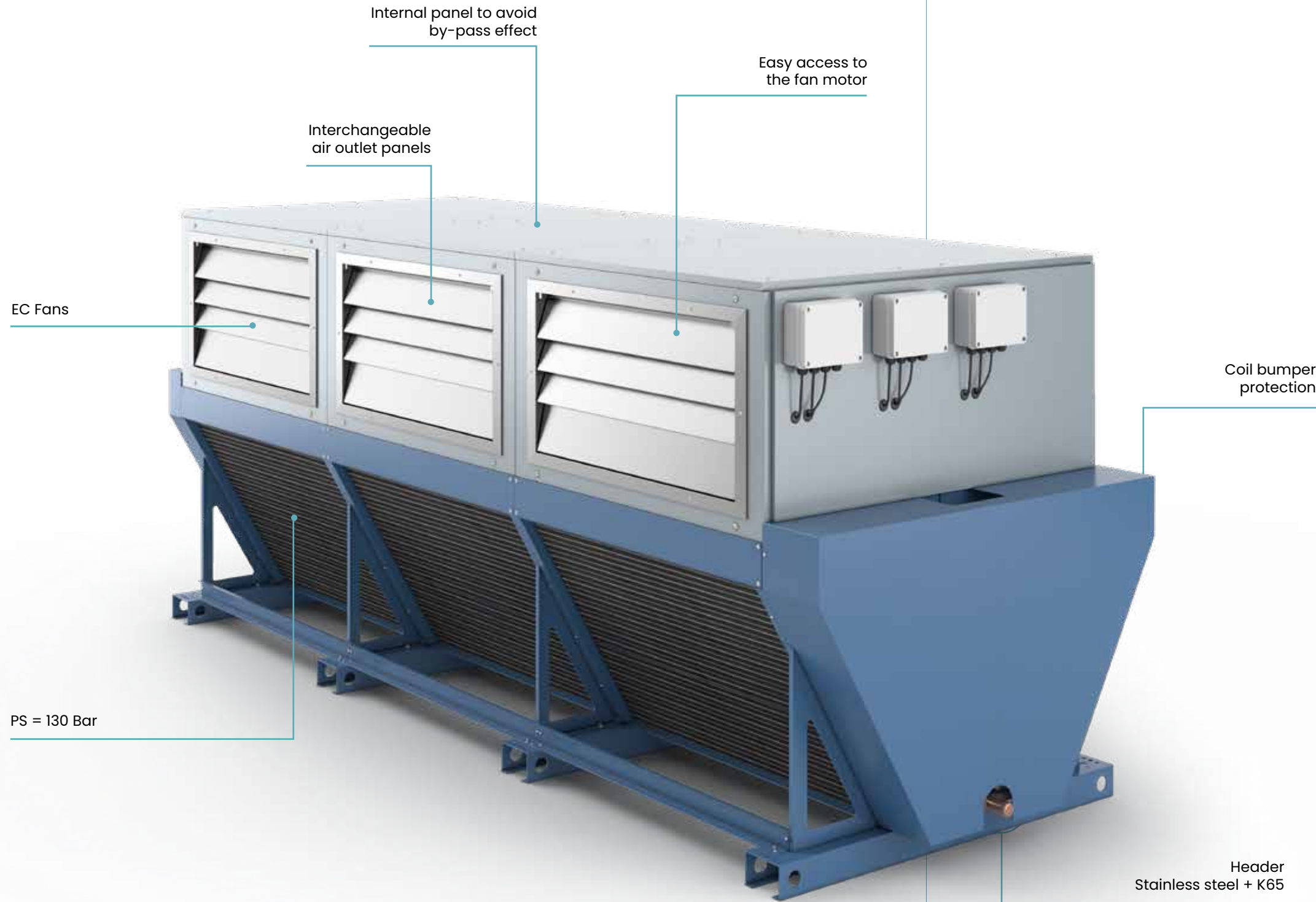
Model	Capacity (kW)	Surface m ²	Internal Volume dm ³	Air Flow m ³ /h	Noise Level dBA (10m)	Fans Data			Inlet Ø mm	Outlet Ø mm	Weight kg
	SC20					N°	kW	A			
KGR-4001L 3C 02EC V	23,0	29,7	4,4	4.750	53	1	0,8	3,3	SS 21,3	SS 21,3	95
KGR-4001L 3C 02EC H	24,2	29,7	4,4	5.100	55	1	0,8	3,3	SS 21,3	SS 21,3	95
KGR-4001L 3E 02EC V	27,0	44,6	6,6	4.500	53	1	0,8	3,3	SS 21,3	SS 21,3	105
KGR-4001L 3E 02EC H	28,9	44,6	6,6	4.900	55	1	0,8	3,3	SS 21,3	SS 21,3	105
KGR-4002L 3C 02EC V	43,6	59,5	8,7	9.500	56	2	1,5	6,6	SS 26,9	SS 21,3	165
KGR-4002L 3C 02EC H	45,9	59,5	8,7	10.200	58	2	1,5	6,6	SS 26,9	SS 21,3	165
KGR-4002L 3E 02EC V	51,9	89,2	13,1	9.000	56	2	1,5	6,6	SS 26,9	SS 21,3	180
KGR-4002L 3E 02EC H	55,3	89,2	13,1	9.800	58	2	1,5	6,6	SS 26,9	SS 21,3	180
KGR-4003L 3C 02EC V	63,3	89,2	13,1	14.250	58	3	2,3	9,9	SS 26,9	SS 21,3	235
KGR-4003L 3C 02EC H	66,6	89,2	13,1	15.300	60	3	2,3	9,9	SS 26,9	SS 21,3	235
KGR-4003L 3E 02EC V	76,2	133,9	19,7	13.500	58	3	2,3	9,9	SS 33,7	SS 26,9	260
KGR-4003L 3E 02EC H	81,2	133,9	19,7	14.700	60	3	2,3	9,9	SS 33,7	SS 26,9	260
KGR-4004L 3C 02EC V	84,2	119,0	17,5	19.000	59	4	3,0	13,2	SS 33,7	SS 26,9	305
KGR-4004L 3C 02EC H	88,5	119,0	17,5	20.400	61	4	3,0	13,2	SS 33,7	SS 26,9	305
KGR-4004L 3E 02EC V	100,0	178,5	26,2	18.000	59	4	3,0	13,2	SS 33,7	SS 26,9	335
KGR-4004L 3E 02EC H	106,6	178,5	26,2	19.600	61	4	3,0	13,2	SS 33,7	SS 26,9	335

Fan ø = 630 mm

Fin pitch = 2,1 mm, RPM = 1.330

Model	Capacity (kW)	Surface m ²	Internal Volume dm ³	Air Flow m ³ /h	Noise Level dBA (10m)	Fans Data			Inlet Ø mm	Outlet Ø mm	Weight kg
	SC20					N°	kW	A			
KGR-6302L 5B 04EC H	128,1	163,2	20,4	31.900	57	2	5,9	9,2	SS 2 x 26,9	SS 2 x 21,3	445
KGR-6302L 5B 04EC VS	120,2	163,2	20,4	29.100	56	2	6,4	9,8	SS 2 x 26,9	SS 2 x 21,3	445
KGR-6302L 5C 04EC H	153,4	217,6	27,2	31.700	57	2	6,0	9,2	SS 2 x 33,7	SS 2 x 26,9	475
KGR-6302L 5C 04EC VS	143,2	217,6	27,2	28.800	56	2	6,4	9,8	SS 2 x 33,7	SS 2 x 26,9	475
KGR-6302L 5D 04EC H	172,5	272,0	34,0	31.600	57	2	6,0	9,2	SS 2 x 33,7	SS 2 x 26,9	500
KGR-6302L 5D 04EC VS	160,2	272,0	34,0	28.600	56	2	6,4	9,8	SS 2 x 33,7	SS 2 x 26,9	500
KGR-6302L 5E 04EC H	185,7	326,4	40,8	31.550	57	2	6,0	9,4	SS 2 x 33,7	SS 2 x 26,9	530
KGR-6302L 5E 04EC VS	171,5	326,4	40,8	28.400	56	2	6,4	9,8	SS 2 x 33,7	SS 2 x 26,9	530
KGR-6302L 5G 04EC H	213,3	435,1	54,4	31.150	57	2	6,1	9,4	SS 2 x 33,7	SS 2 x 26,9	585
KGR-6302L 5G 04EC VS	195,7	435,1	54,4	27.900	56	2	6,4	9,8	SS 2 x 33,7	SS 2 x 26,9	585
KGR-6303L 5B 04EC H	190,2	244,8	30,6	47.850	59	3	8,9	13,8	SS 2 x 33,7	SS 2 x 26,9	635
KGR-6303L 5B 04EC VS	178,5	244,8	30,6	43.650	58	3	9,6	14,7	SS 2 x 33,7	SS 2 x 26,9	635
KGR-6303L 5C 04EC H	226,9	326,4	40,8	47.550	59	3	9,0	13,8	SS 2 x 33,7	SS 2 x 26,9	675
KGR-6303L 5C 04EC VS	211,8	326,4	40,8	43.200	58	3	9,6	14,7	SS 2 x 33,7	SS 2 x 26,9	675
KGR-6303L 5D 04EC H	256,5	407,9	51,0	47.400	59	3	9,0	13,8	SS 2 x 42,4	SS 2 x 33,7	715
KGR-6303L 5D 04EC VS	238,3	407,9	51,0	42.900	58	3	9,6	14,7	SS 2 x 42,4	SS 2 x 33,7	715
KGR-6303L 5E 04EC H	277,9	489,5	61,2	47.325	59	3	9,0	14,1	SS 2 x 42,4	SS 2 x 33,7	755
KGR-6303L 5E 04EC VS	256,7	489,5	61,2	42.600	58	3	9,6	14,7	SS 2 x 42,4	SS 2 x 33,7	755
KGR-6303L 5G 04EC H	316,7	652,7	81,6	46.725	59	3	9,1	14,1	SS 2 x 42,4	SS 2 x 33,7	835
KGR-6303L 5G 04EC VS	290,7	652,7	81,6	41.850	58	3	9,6	14,7	SS 2 x 42,4	SS 2 x 33,7	835
KGR-6304L 5B 04EC H	254,0	326,4	40,8	63.800	60	4	11,9	18,4	SS 2 x 42,4	SS 2 x 33,7	830
KGR-6304L 5B 04EC VS	237,2	326,4	40,8	58.200	59	4	12,8	19,6	SS 2 x 42,4	SS 2 x 33,7	830
KGR-6304L 5C 04EC H	303,5	435,1	54,4	63.400	60	4	12,0	18,4	SS 2 x 42,4	SS 2 x 33,7	885
KGR-6304L 5C 04EC VS	281,1	435,1	54,4	57.600	59	4	12,8	19,6	SS 2 x 42,4	SS 2 x 33,7	885
KGR-6304L 5D 04EC H	343,4	543,9	68,0	63.200	60	4	12,0	18,4	SS 2 x 42,4	SS 2 x 33,7	940
KGR-6304L 5D 04EC VS	316,8	543,9	68,0	57.200	59	4	12,8	19,6	SS 2 x 42,4	SS 2 x 33,7	940
KGR-6304L 5E 04EC H	369,6	652,7	81,6	63.100	60	4	12,0	18,8	SS 2 x 42,4	SS 2 x 33,7	990
KGR-6304L 5E 04EC VS	339,2	652,7	81,6	56.800	59	4	12,8	19,6	SS 2 x 42,4	SS 2 x 33,7	990
KGR-6304L 5G 04EC H	420,6	870,3	108,7	62.300	60	4	12,2	18,8	SS 2 x 48,3	SS 2 x 42,4	1100
KGR-6304L 5G 04EC VS	384,0	870,3	108,7	55.800	59	4	12,8	19,6	SS 2 x 48,3	SS 2 x 42,4	1100
KGR-6305L 5B 04EC H	311,9	407,9	51,0	79.750	61	5	14,9	23,0	SS 2 x 42,4	SS 2 x 33,7	1030
KGR-6305L 5B 04EC H	311,9	407,9	51,0	79.750	61	5	14,9	23,0	SS 2 x 42,4	SS 2 x 33,7	1030
KGR-6305L 5C 04EC H	373,0	543,9	68,0	79.250	61	5	15,0	23,0	SS 2 x 42,4	SS 2 x 33,7	1100
KGR-6305L 5C 04EC H	373,0	543,9	68,0	79.250	61	5	15,0	23,0	SS 2 x 42,4	SS 2 x 33,7	1100
KGR-6305L 5D 04EC H	421,9	679,9	85,0	79.000	61	5	15,0	23,0	SS 2 x 42,4	SS 2 x 33,7	1170
KGR-6305L 5D 04EC H	421,9	679,9	85,0	79.000	61	5	15,0	23,0	SS 2 x 42,4	SS 2 x 33,7	1170
KGR-6305L 5E 04EC H	454,6	815,9	101,9	78.875	61	5	15,1	23,5	SS 2 x 48,3	SS 2 x 42,4	1240
KGR-6305L 5E 04EC H	454,6	815,9	101,9	78.875	61	5	15,1	23,5	SS 2 x 48,3	SS 2 x 42,4	1240

DISTINCTIVE TECHNOLOGICAL CHOICES OF THE RANGE



Standard EC fans



Interchangeable air outlet panels



Internal panel to avoid the by-pass effect

