

EC- FANS FOR CLEAN ROOMS



The Rosenberg Group

Air conditioning and ventilation technology
is our world



Air is our element – **moving it intelligently and efficiently** is our passion.

Since 1981 we have been developing and producing adjustable external rotor motors, fans and air handling units.

Established

1981

Employees

350 in Germany
Approx. 1,400 worldwide

Production sites

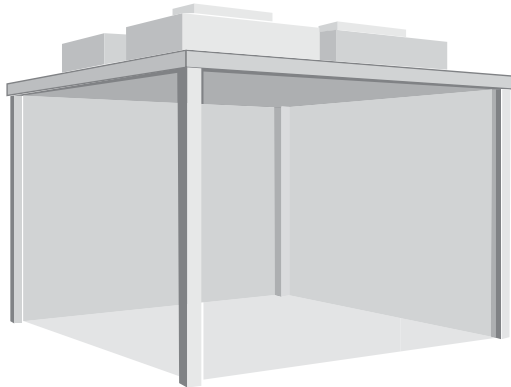
Germany, Hungary, Czech Republic,
Italy, France, China, Slovakia

**Development centres
(certified laboratory)**

Germany, France,
Hungary and China

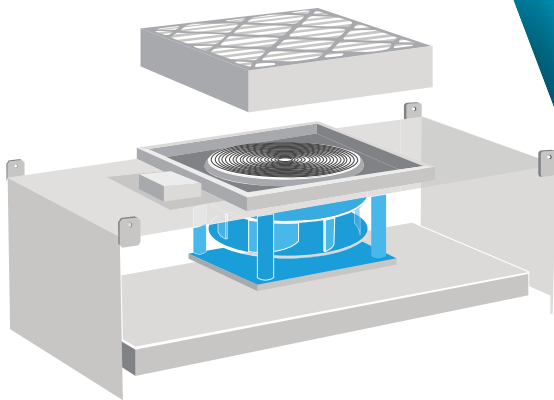
**Subsidiaries
and Partners**

ROX Klimatechnik GmbH,
ECOFIT, ETRI, Airtècnics



Clean room technology

Cleanroom technology has experienced a continuous upswing over the last 20 years. Modern and trend-setting manufacturing processes, especially for semiconductor manufacturing, optics and laser technology, aerospace technology and even Research facilities include clean rooms with constant temperature, humidity and pressure conditions. Demand-driven, controllable and energy-saving EC fans are ideal for maintaining constant environmental conditions.



FAN-Filter-Unit (FFU)

A fan filter unit serves to generate a uniform, particle-free airflow in the clean room. Multi-stage filter systems are required for this. Rosenberg EC fans will generate the airflow required and will work against the increasing resistances of the filters to deliver a constant volume of air. There are often a large number of FFU's installed in the ceiling of a clean room. Energy-saving EC fans are an important component and help to reduce energy consumption and costs.

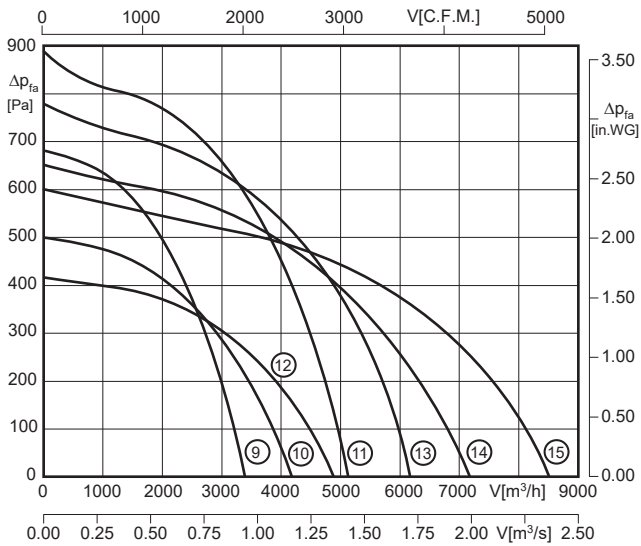
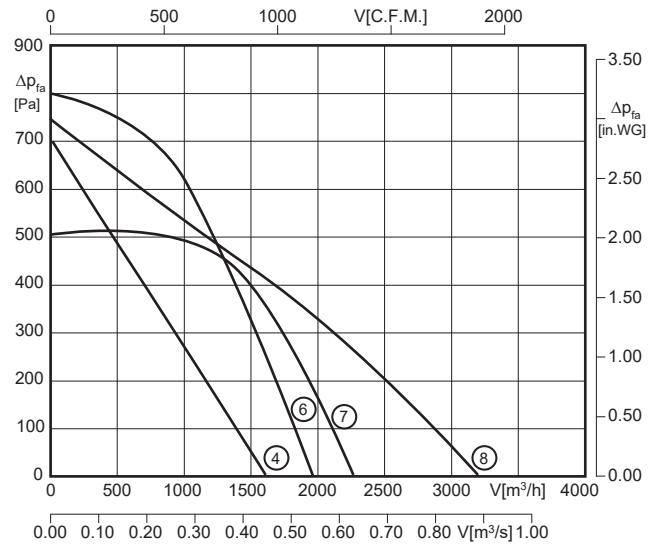
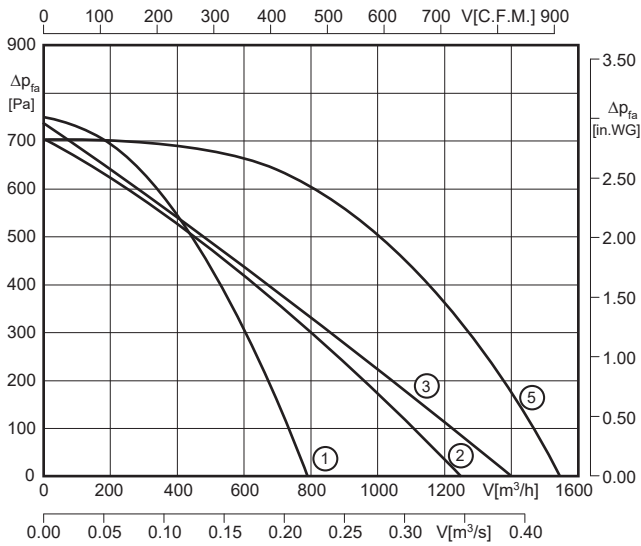


Laminar Flow Box

Mobile or permanently installed clean room workstations are used for product and personal protection. Free-running wheels or double-inlet centrifugal fans with EC technology draw in the air via a pre-filter and convey it through a high-performance HEPA filter. This creates a vertical or horizontal airflow that protects the workspace / process from the environment.

EC Fans with free running impeller

Type: RR_EC / GKH_

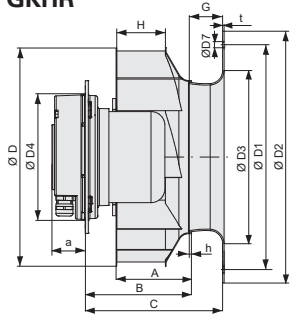


RR_EC / GKH_

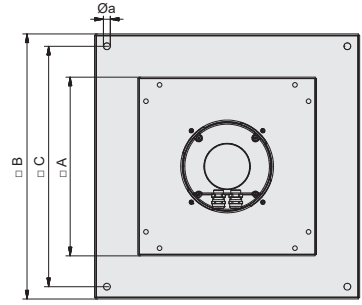
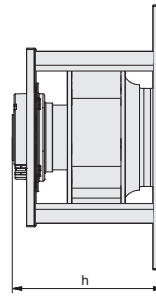
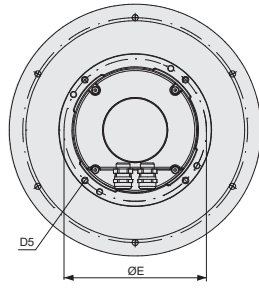
No.	Size	Fan Type	U [V]	f [Hz]	P _e [kW]	n _N [min ⁻¹]	I _N [A]	L _{wA} [dB(A)]	t _R [°C]
1	192	RR_G9 192 x 40R	1~230	50 / 60	0,14	3990	1,15	74	50
2	220	RR_G9 220 x 45R	1~230	50 / 60	0,145	3395	1,19	70,5	50
3	225	RR_G9 225 x 63R	1~230	50 / 60	0,15	2780	1,19	70,8	50
4	250	RR_G9 250 x 50R	1~230	50 / 60	0,15	2965	1,19	-	50
5	250	RR_V8 250 x 50R	1~200-277	50 / 60	0,187	3015	0,84*	-	60
6	250	RR_V8 250 x 50R	1~200-277	50 / 60	0,266	3390	1,19*	-	50
7	280	RR_V8 280 x 80R	1~200-277	50 / 60	0,17	2305	0,77*	-	60
8	337	RR_V8 337 x 88R	1~200-277	50 / 60	0,3	2200	1,35*	-	60
9	315	GKH_ 315.088.4EA	1~200-277	50 / 60	0,53	2265	2,35*	74	40
10	355	GKH_ 355.112.4EA	1~200-277	50 / 60	0,5	1715	2,2*	72	40
11	355	GKH_ 355.112.5FA	1~200-277	50 / 60	1,12	2250	5,0*	81	45
12	400	GKH_ 400.125.4FF	1~200-277	50 / 60	0,52	1400	2,3*	71	40
13	400	GKH_ 400.125.5FA	1~200-277	50 / 60	1,15	1875	5,1*	78	40
14	450	GKH_ 450.136.5FA	1~200-277	50 / 60	1,15	1550	5,1*	77	40
15	500	GKH_ 500.154.5HF	1~200-277	50 / 60	1,15	1300	5,1*	76	40

Notice: *230V/50Hz, Measurement according to ISO 13347-3. The free-outlet sound power level L_{w(A)B} is depicted.

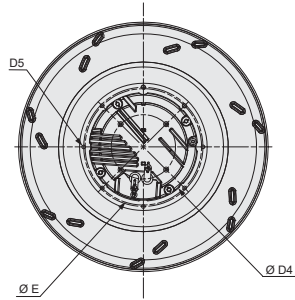
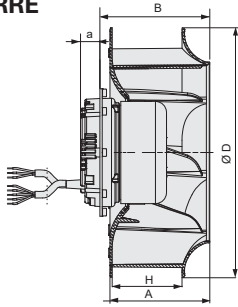
GKHR



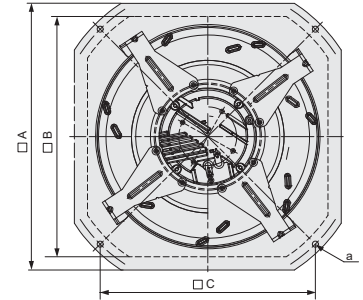
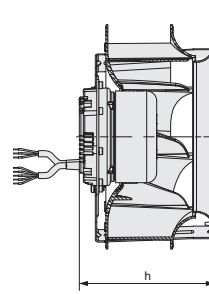
GKHM



RRE



RRM



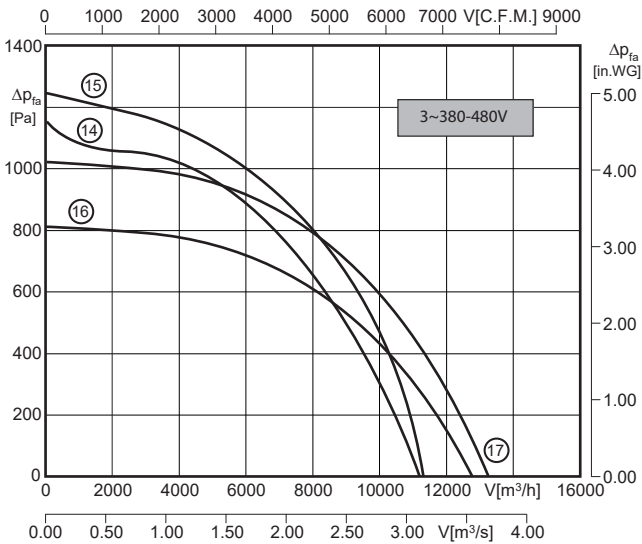
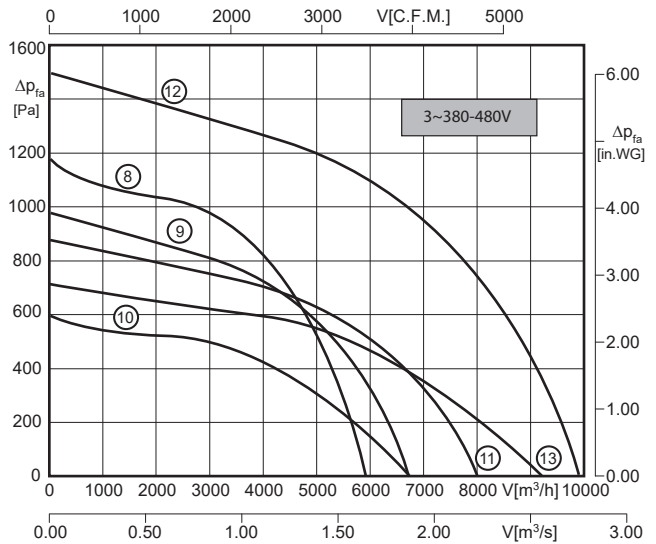
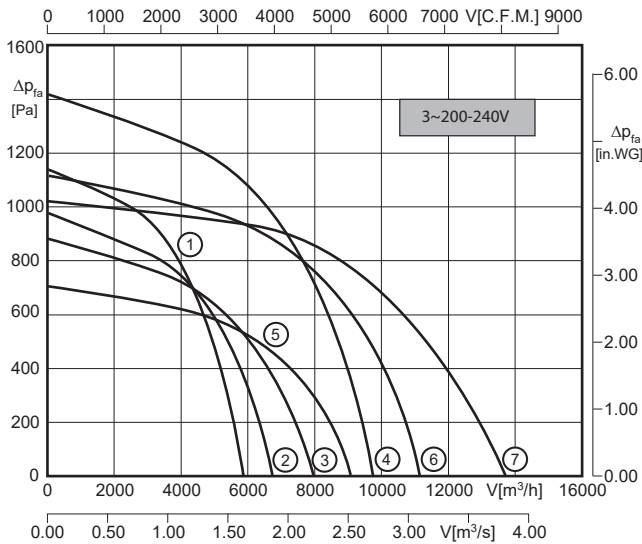
No.	Fan Type	A	B	C	H	D	a	D4	D5	E	h	D3	D2	D1	D7	G	t
1	RREG9 192 x 40R	60	70	-	40	192	17,5	97,7	M4 x 6***	107,5	-	-	-	-	-	-	-
1	RRMG9 192 x 40R	267,5	202				6				112,5						
2	RREG9 220 x 45R	63	71	-	45	220	17,5	97,7	M4 x 6***	107,5	-	-	-	-	-	-	-
2	RRMG9 220 x 45R	267,5	241				6				122						
3	RREG9 225 x 63R	90	99	-	63	225	17,5	97,7	M4 x 6***	107,5	-	-	-	-	-	-	-
3	RRMG9 225 x 63R	267,5	241				6				135,5						
4	RREG9 250 x 50R	81,7	99	-	50,7	252	17,5	97,7	M4 x 6***	107,5	-	-	-	-	-	-	-
4	RRMG9 250 x 50R	296	265				6				156						
5	RREV8 250 x 50R	80,8	99	-	50	252	41	110,1	M5 x 10***	125	-	-	-	-	-	-	-
6	RREV8 250 x 50R	81,7	99	-	50,7	252	41	110,1	M5 x 10***	125	-	-	-	-	-	-	-
7	RREV8 280 x 80R	114,8	128		80	281	41	110,1	M5 x 10***	125	-	-	-	-	-	-	-
8	RREV8 337 x 88R	142,5	152,5		88	337	41	110,1	M5 x 10***	125	-	-	-	-	-	-	-
9	GKHR 315.088.4EA	142,5	167	207	88	337	38	150	M6 x 10***	164	3,1	265	307	286	7*	43	1,5
9	GKHM 315.088.4EA	500	360	450			11				222						23,5
10	GKHR 355.112.4EA	173	200,5	245	112	377	38	150	M6 x 10***	164	3,5	296	348	320	10*	48	1,5
10	GKHM 355.112.4EA	500	395	450			11				260						23,5
11	GKHR 355.112.5FA	173	207	251	112	377	58	180	M6 x 13***	202	3,5	296	348	320	10*	48	1,5
11	GKHM 355.112.5FA	500	395	450			11				267						43
12	GKHR 400.125.4FF	194	219,5	269	125	424	38	150	M6 x 10***	164	4	326	382	356	9**	53	1,5
12	GKHM 400.125.4FF	500	420	450			11				283						23
13	GKHR 400.125.5FA	194	226	275	125	424	58	180	M6 x 13***	202	4	326	382	356	9**	53	1,5
13	GKHM 400.125.5FA	500	420	450			11				290						43
14	GKHR 450.136.5FA	213	241	294	136	477	58	180	M6 x 13***	202	4,5	372	422	395	9**	57,5	1,5
14	GKHM 450.136.5FA	630	470	580			14				309						43
15	GKHR 500.154.5HF	240	264	323	154	534	58	180	M6 x 13***	202	5	411	464	440	10,5**	64	1,5
15	GKHM 500.154.5HF	630	535	580			14				338						43

*6 x 60° / **8 x 45° / ***4 x 90°

All dimensions in mm / individual adjustment possible / RR_V8 only as Motor-Impeller-Unit available

EC Fans with free running impeller

Type: RR_EC / GKH_

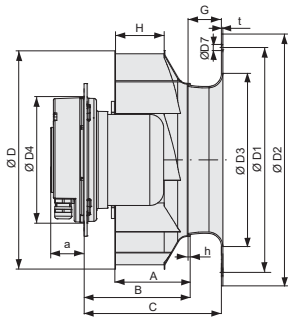


RR_EC / GKH_

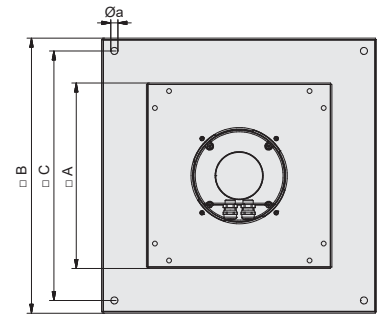
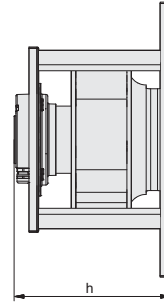
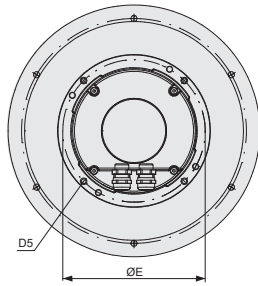
No.	Size	Fan Type	U [V]	f [Hz]	P _e [kW]	n [min ⁻¹]	I _N [A]	L _{wA} [dB(A)]	t _R [°C]
1	355	GKH_ 355.112.5FA	3~200-240	50 / 60	1,7	2600	4,6*	84	40
2	400	GKH_ 400.125.5HF	3~200-240	50 / 60	1,6	2100	4,2*	83	40
3	450	GKH_ 450.136.5HF	3~200-240	50 / 60	1,7	1775	4,6*	81	40
4	450	GKH_ 450.136.6FF	3~200-240	50 / 60	3,5	2250	9,0*	88	40
5	500	GKH_ 500.154.5HF	3~200-240	50 / 60	1,5	1425	4,0*	77	40
6	500	GKH_ 500.154.6FF	3~200-240	50 / 60	3,0	1800	7,7*	86	55
7	560	GKH_ 560.175.6IF	3~200-240	50 / 60	3,35	1550	8,5*	86	40
8	355	GKH_ 355.112.5FA	3~380-480	50 / 60	1,7	2600	2,8**	84	40
9	400	GKH_ 400.125.5HF	3~380-480	50 / 60	1,6	2100	2,5**	83	40
10	450	GKH_ 450.136.5FA	3~380-480	50 / 60	0,95	1450	1,5**	76	50
11	450	GKH_ 450.136.5HF	3~380-480	50 / 60	1,65	1775	2,7**	81	40
12	450	GKH_ 450.136.6FF	3~380-480	50 / 60	3,5	2300	5,1**	89	40
13	500	GKH_ 500.154.5HF	3~380-480	50 / 60	1,5	1425	2,4**	77	45
14	500	GKH_ 500.154.6FF	3~380-480	50 / 60	2,9	1800	4,4**	86	60
15	500	GKH_ 500.154.6IF	3~380-480	50 / 60	3,45	1900	5,1**	87	40
16	560	GKH_ 560.175.6FF	3~380-480	50 / 60	2,5	1400	3,8**	85	40
17	560	GKH_ 560.175.6IF	3~380-480	50 / 60	3,26	1550	5,0**	86	50

Notice: *230V/50Hz, **400V/50Hz, Measurement according to ISO 13347-3. The free-outlet sound power level L_{w(A)B} is depicted.

GKHR



GKHM



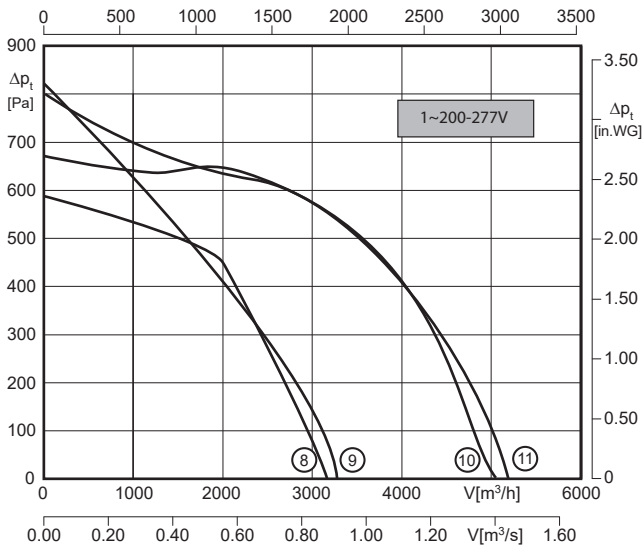
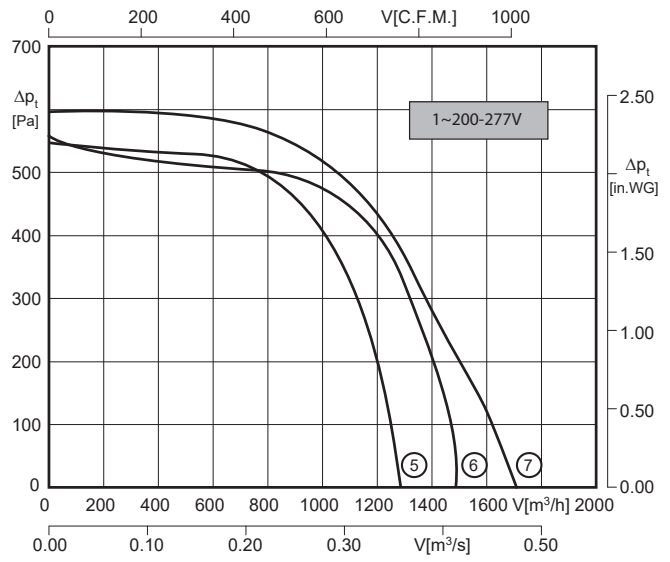
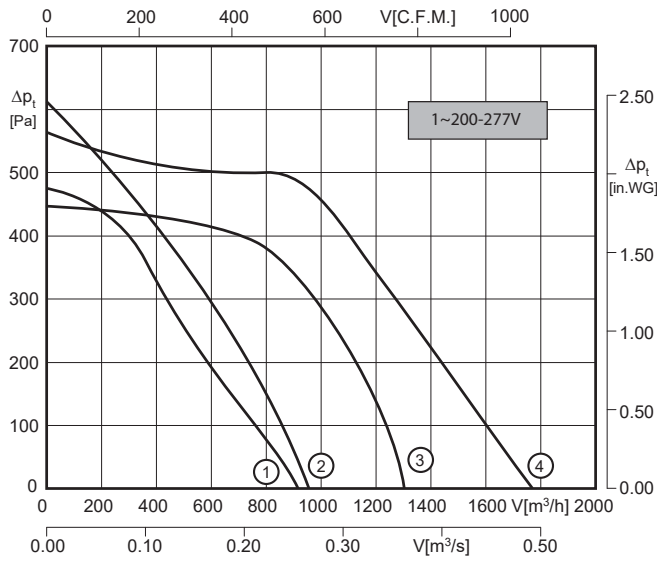
No.	Fan Type	A	B	C	H	D	a	D4	D5	E	h	D3	D2	D1	D7	G	t
1	GKHR 355.112.5FA	173	207	251	112	377	63	180	M6 x 22***	202	3,5	297	348	320	10*	48	1,5
1	GKHM 355.112.5FA	500	395	450			11				266,5						48
2	GKHR 400.125.5HF	194	226	275	125	424	63	180	M6 x 22***	202	4	325,5	382	356	9**	53	1,5
2	GKHM 400.125.5HF	500	500	420	450		11				289,7						48
3	GKHR 450.136.5HF	213	241	294	136	477	63	180	M6 x 22***	202	4,5	372	422	395	9**	57,5	1,5
3	GKHM 450.136.5HF	630	470	580			14				309						48
4	GKHR 450.136.6FF	213	255	308	136	477	70	235	M10 x 28**	252	4,5	372	422	395	9**	57,5	1,5
4	GKHM 450.136.6FF	630	535	580			14				323						55
5	GKHR 500.154.5HF	240	264	323	154	534	63	180	M6 x 22***	202	5	411	464	440	10,5**	64	1,5
5	GKHM 500.154.5HF	630	535	580			14				337,7						48
6	GKHR 500.154.6FF	240	278	337	154	534	70	235	M10 x 28**	252	5	411	464	440	10,5**	64	1,5
6	GKHM 500.154.6FF	630	535	580			14				352						55
7	GKHR 560.175.6IF	270	311	375	175	594	70	235	M10 x 28**	252	5,6	458	519	490	9**	70	1,5
7	GKHM 560.175.6IF	800	585	750			14				391						55
8	GKHR 355.112.5FA	173	207	251	112	377	63	180	M6 x 22***	202	3,5	297	348	320	10*	48	1,5
8	GKHM 355.112.5FA	500	395	450			11				266,5						48
9	GKHR 400.125.5HF	194	226	275	125	424	63	180	M6 x 22***	202	4	325,5	382	356	9**	53	1,5
9	GKHM 400.125.5HF	500	420	450			11				289,7						48
10	GKHR 450.136.5FA	213	241	294	136	477	63	180	M6 x 22***	202	4,5	372	422	395	9**	57,5	1,5
10	GKHM 450.136.5FA	630	470	580			14				309						43
11	GKHR 450.136.5HF	213	241	294	136	477	63	180	M6 x 22***	202	4,5	372	422	395	9**	57,5	1,5
11	GKHM 450.136.5HF	630	470	580			14				309						48
12	GKHR 450.136.6FF	213	255	308	136	477	70	235	M10 x 28**	252	4,5	372	422	395	9**	57,5	1,5
12	GKHM 450.136.6FF	630	535	580			14				323						55
13	GKHR 500.154.5HF	240	264	323	154	534	63	180	M6 x 22***	202	5	411	464	440	10,5**	64	1,5
13	GKHM 500.154.5HF	630	535	580			14				337,7						48
14	GKHR 500.154.6FF	240	278	337	154	534	70	235	M10 x 28**	252	5	411	464	440	10,5**	64	1,5
14	GKHM 500.154.6FF	630	535	580			14				352						55
15	GKHR 500.154.6IF	240	278	337	154	534	70	235	M10 x 28**	252	5	410	464	440	10,5**	64	1,5
15	GKHM 500.154.6IF	630	535	580			14				352						55
16	GKHR 560.175.6FF	270	311	375	175	594	70	235	M10 x 28**	252	5,6	458	519	490	9**	70	1,5
16	GKHM 560.175.6FF	800	585	750			14				391						55
17	GKHR 560.175.6IF	270	311	375	175	594	70	235	M10 x 28**	252	5,6	458	519	490	9**	70	1,5
17	GKHM 560.175.6IF	800	585	750			14				391						55

*6 x 60° / **8 x 45° / ***4 x 90°

All dimensions in mm / individual adjustment possible.

Double inlet centrifugal fan in scroll casing with EC technology

Type: DRAG / GDS

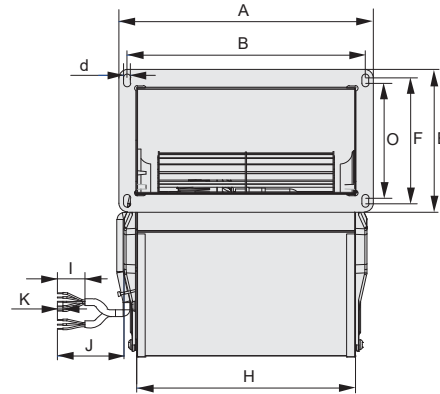
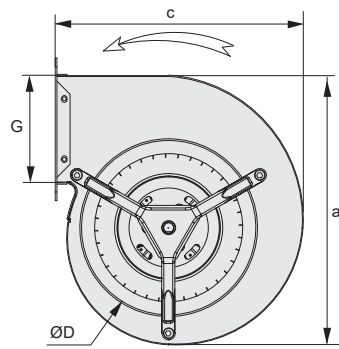


DRAG / GDS

No.	Size	Fan Type	U [V]	f [Hz]	P _e [kW]	n _N [min ⁻¹]	I _N [A]	L _{wA} [dB(A)]	t _R [°C]
1	133	GDSG9 133 x190 R	1~200-277	50/60	0,098	1485	0,79	60	50
2	146	GDSG9 146 x188 R	1~200-277	50/60	0,098	1230	0,86	59	50
3	160	GDSV8 160 x160 L	1~200-277	50/60	0,30	2025	1,32	-	60
4	160	GDSV8 160 x 242 L	1~200-277	50/60	0,30	1620	1,33	-	60
5	146	GDSV8 146 x 188 L	1~200-277	50/60	0,30	2205	1,32	-	60
6	160	GDSV8 160 x 242 L	1~200-277	50/60	0,18	1390	0,81	-	60
7	180	GDSV8 180 x 180 L	1~200-277	50/60	0,285	1445	1,26	-	60
8	249	DRAG 249 x 4FF	1~200-277	50/60	0,52	1700	2,3	76	40
9	251	DRAG 251 x 4FF	1~200-277	50/60	0,52	1700	2,3	76	40
10	279	DRAG 279 x 5FA	1~200-277	50/60	1,1	1550	4,8	80	40
11	281	DRAG 281 x 5FA	1~200-277	50/60	1,11	1550	4,9	80	40

Notice:
 DRAG: Measurement according to ISO 13347-3. The free-outlet sound power level L_{WA10} is depicted.
 GDS: Measurement according to ISO 3744. The A-weighted sound pressure level is given.

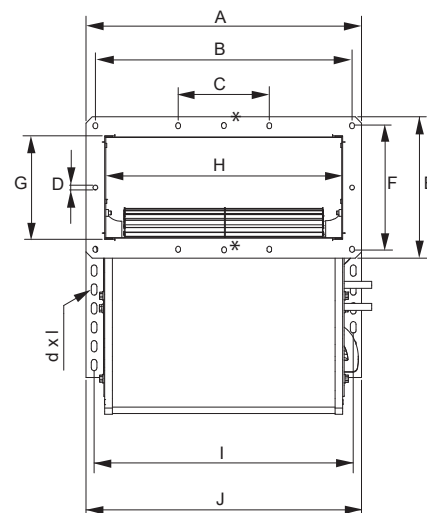
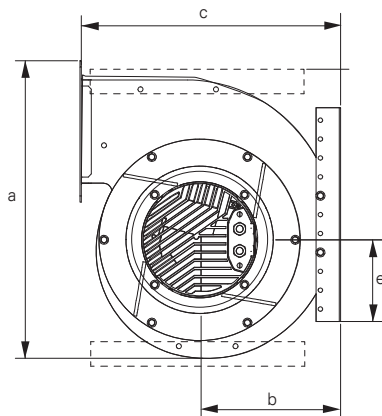
GDS



No.	Fan Type	A	B	H	D	I	J	K	F	E	G	O	d**	c	a
1	GDS G9 133x190 R	270	254	231,5	-	80	780	6	126	142	104	-	4 x Ø7	205	218
2	GDS G9 146x188 R	270	254	231,5	-	80	780	6	126	142	104	-	4 x Ø7	205	218
3	GDS V8 160x160 L	232	217	200	135	80	780	6	115	130	98	105	6,3	226	246
4	GDS V8 160x242 L	308	293	275,5	135	80	780	6	115	130	98	105	6,3	226	246
5	GDS V8 146x188 L	270	254	231,5	117	80	780	6	126	142	104	-	4 x Ø7	205	218
6	GDS V8 160x242 L	308	293	275,5	135	80	780	6	115	130	98	105	6,3	226	246
7	GDS V8 180x180 L	262	242	223,5	150	80	780	6	120	145	-	-	6,3	270	300

** Slot or round hole varies

DRAG



*249/251 Center hole

No.	Fan Type	A	B	C	H	D	E	F	G	J	I	d x l	a	b	c	e
8	DRAG 249	354	322	-	292	7,5	212	180	153	352	326	18 x 9	431	197	376	142
9	DRAG 251	352	322	-	292	7,5	228	198	164	352	326	18 x 9	474	238	414	129
10	DRAG 279	438	408	145	378	7,5	225	198	164,5	438	412	18 x 9	473	224	412	130
11	DRAG 281	438	408	145	378	7,5	256	226	196	438	412	18 x 9	553	271	474	220

Railway Technology

Rosenberg is one of the world's in railway technology. Rosenberg OEM Products are not only installed to air-condition driver's cabins and passenger compartments but also to cool switchboards, drive inverters and many other components.



Compressor cooling

Knowledge and experience - Rosenberg has been active in the compressor cooling sector for many years. Due to the close cooperation with well-known manufacturers, numerous fans have already been adapted to the needs of the industry.



Transformer Cooling

Efficient cooling plays an important role in the lifetime and constantly high operation safety of transformers. Customized fans assume this task for many years and are characterized by reliability and high quality.





Data Centers

Protecting data centers from overheating and humidity is one of the main tasks of fans within this application. Rosenberg OEM products with AC or EC drive guarantee a smooth and failsafe operation of the computer systems in an efficient manner.



Marine

Cruise Ships have a wide range of ventilation needs. Rosenberg OEM Products offer solutions for exhaust ventilation of elevators, restrooms, laundries or battery compartments as well as solutions for the use in HVAC applications dedicated to yachts and cruise ships cabins.



Packaging Industry

In highly complex packaging processes, it is essential to prevent a failure of the entire system. Therefore Rosenberg OEM products are used for cooling to ensure a trouble-free operation of various machines in industrial packaging processes.

Since its foundation in 1981 by Karl Rosenberg the Rosenberg Ventilatoren GmbH has emerged through its development and production of adjustable external rotor motors, fans, air handling units and control technology as an important center for Europe for the ventilation and air conditioning industry in Europe.

Customer-oriented and high-quality production is our top priority. The continuous information flow and a good cooperation between customers and our employees is very important to us to ensure quality and product innovation. Modern perfor-

mance testing, computer-controlled production machines and self-directed work groups are also included as well as the integration of measures for higher quality and environment protection.

At the headquarters in Künzelsau, Rosenberg employ 240 members of staff, with over 1.400 employees worldwide. Further Rosenberg production plants are located in Glaubitz (Germany), Waldmünchen (Germany), Hungary, Czech Republic, Italy, France, Slovakia, Turkey, Mexico and in China.



Weiterführende Informationen finden Sie auch unter /
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Airbox

RLT Units according to VDI 6022,
Easily access, inspect, and clean.

Quality characteristics:

- Rosenberg – • Rosenberg - Hygienic AHU's meet the highest hygienic requirements in accordance with VDI 6022.
- Trouble-free cleaning and inspection of the air conveying components
- Condensate drains for fast and complete emptying
- Tested and certified by TÜV Nord
- According to DIN 1946-4 filter stages are adapted to the required room classes.



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