RF/EC roof fan

APPLICATION

Roof fans, exhaust RF/EC are designed for ventilation systems of buildings with low levels of air pollution.
They are used:

- in exhaust systems of residential buildings,
- supermarkets, industrial halls, workshops, warehouses,
- toilets, garages, parking lots, outhouse.

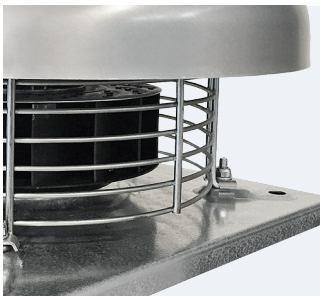
CONSTRUCTION

- rotors with backward blades are made of plastic,
- the base, upper bowl and other components are made of aluminum sheet,
- the protective mesh is galvanized,
- the fans are designed for vertical work,
- suitable for mounting on flat roofs,
- working temperature to +60°C, depending on model.

MOTOR

- power supply - single-phase 230V, 50Hz or three-phase 400V,
- EC motor,
- 0-10VDC control input, which enables smooth rotation control,
- insulation class B (models 125/L, 125/H, 160/L and 250/L),
- insulation class F (models 125/E, 160/H, 200, 250/H, 315S and 315T),
- degree of protection IP44 (models 125/L, 125/H, 160/L and 250/L),
- degree of protection IP54 (models 125/E, 160/H, 200, 250/H, 315S and 315T).

NOWOŚĆ



Protective mesh

Easy access to the terminal box

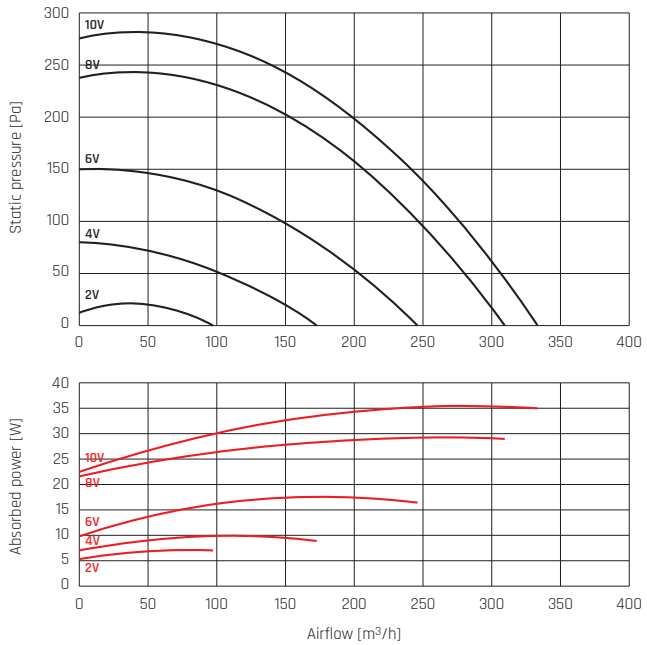
TECHNICAL CHARACTERISTICS

Type	airflow max	pressure max	speed	voltage	current	max absorbed power	sound pressure level*	operating temp. max	weight	regulator	ErP	article number
	[m³/h]	[Pa]	[r.p.m.]	[V]	[A]	[W]	[dB(A)]	[°C]	[kg]			
RF/EC-125/L	330	270	2979	230	0,3	34	66	60	3,5	REB ECOWATT	2018	43522910
RF/EC-125/H	560	380	2973	230	0,5	67	67	60	3,5	REB ECOWATT	2018	43522912
RF/EC-125/E	840	1080	4240	230	1,5	170	76	60	3,6	REB ECOWATT	2018	43522914
RF/EC-160/L	940	420	2830	230	0,8	113	69	40	3,5	REB ECOWATT	2018	43522915
RF/EC-160/H	1320	830	2860	230	1,5	170	73	60	4	REB ECOWATT	2018	43522918
RF/EC-200	1500	700	2680	230	1,55	170	70	60	5,5	REB ECOWATT	2018	43522921
RF/EC-250/L	2050	410	2060	230	1,1	249	72	60	9	REB ECOWATT	2018	43522922
RF/EC-250/H	2700	780	2580	230	2,3	460	78	60	10	REB ECOWATT	2018	43522925
RF/EC-315	3400	530	2010	230	1,58	368	66	60	11	REB ECOWATT	2018	43522931
RF/EC-315T	5400	1020	2500	400	2,1	1100	77	60	12,7	REB ECOWATT	2018	43522932
RF/EC-355T	6000	860	2100	400	2,4	1350	75	60	19	REB ECOWATT	2018	43522936
RF/EC-400T	7200	850	1800	400	2,5	1450	76	60	20	REB ECOWATT	2018	43522941
RF/EC-450T	8000	650	1400	400	2,1	1250	73	60	22	REB ECOWATT	2018	43522946
RF/EC-500T	10000	600	1230	400	2,6	1500	72	40	39	REB ECOWATT	2018	43522951

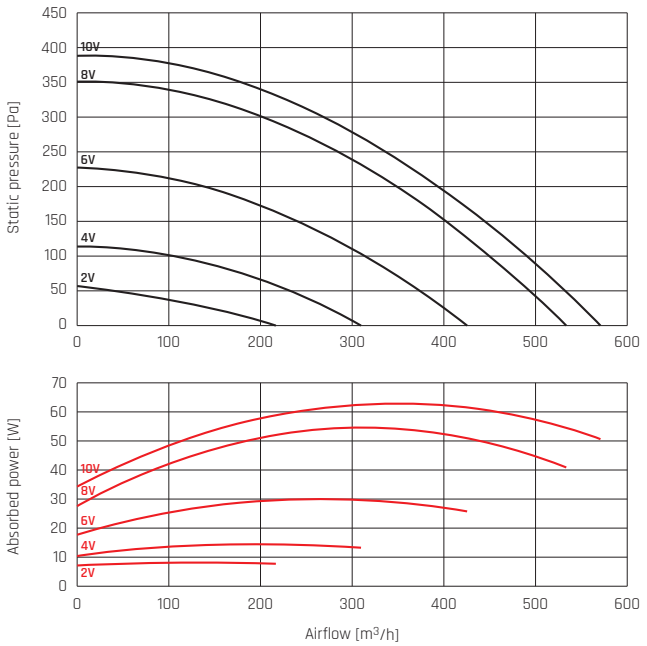
* measurement made a ta distance of 1.5m from the outlet, for Q = 1/2 qmax.

PERFORMANCE CURVES

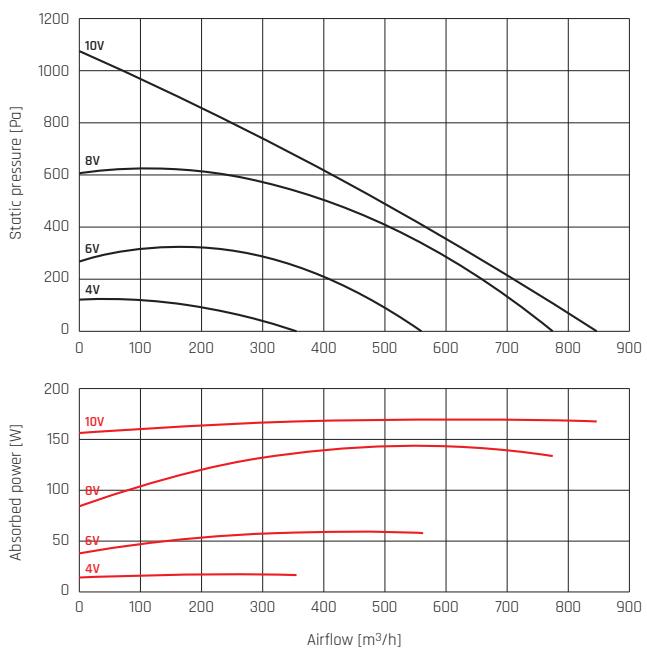
RF/EC-125/L



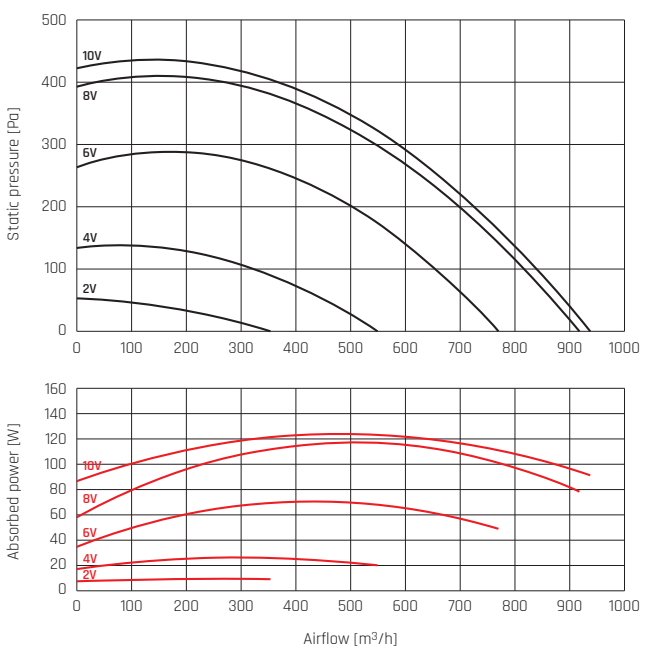
RF/EC-125/H



RF/EC-125/E

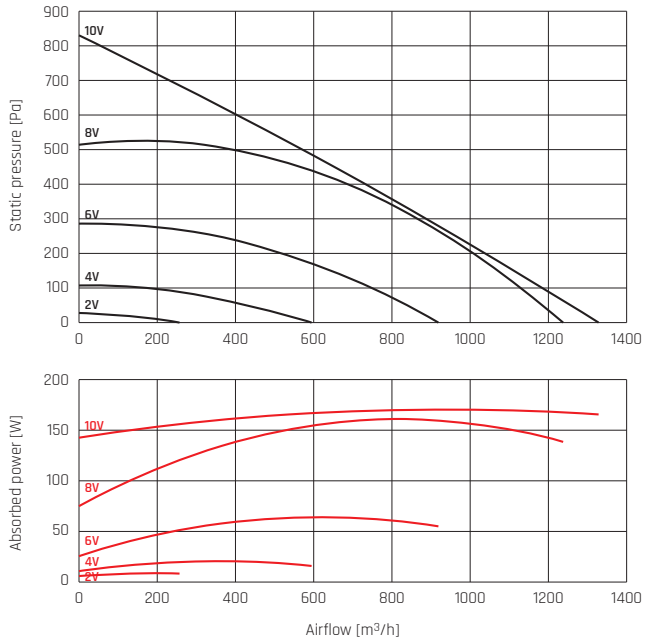


RF/EC-160/L

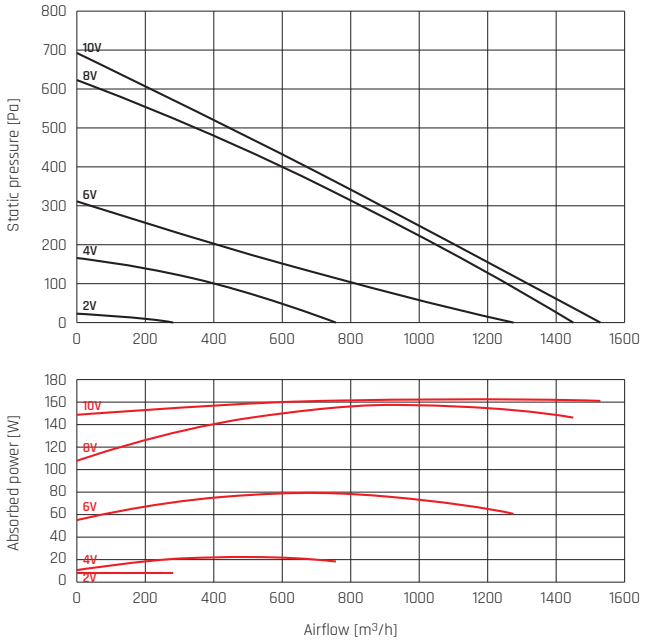


PERFORMANCE CURVES

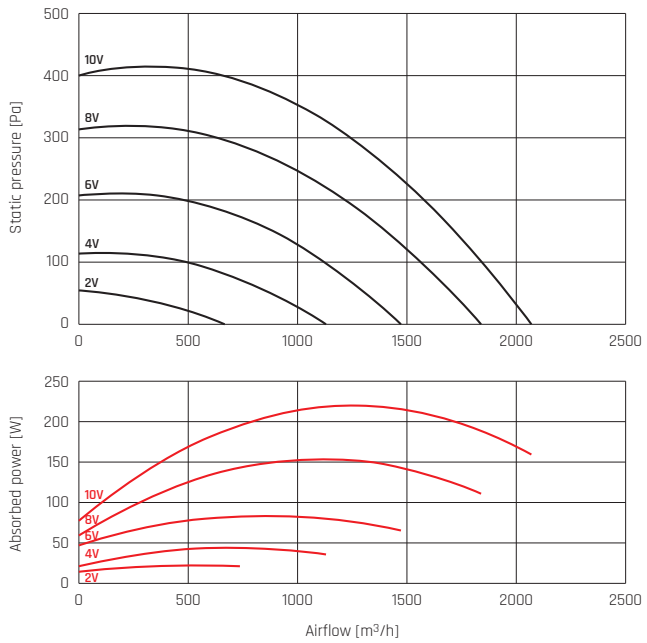
RF/EC-160/H



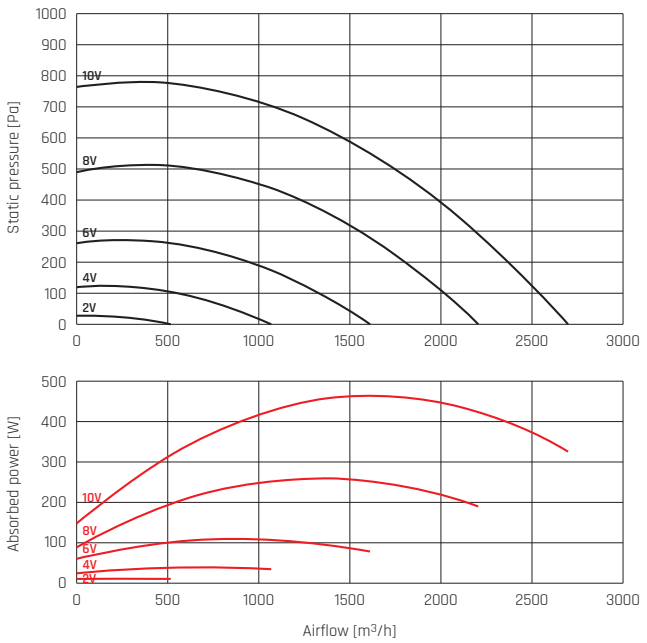
RF/EC-200



RF/EC-250/L

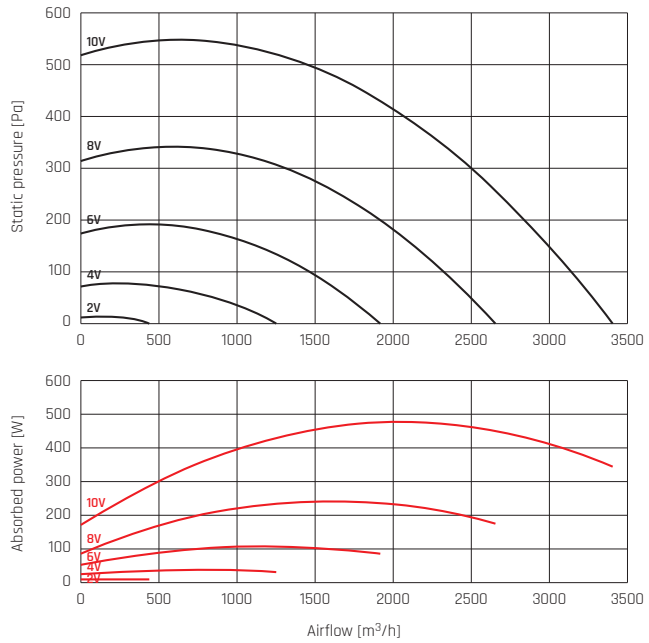


RF/EC-250/H

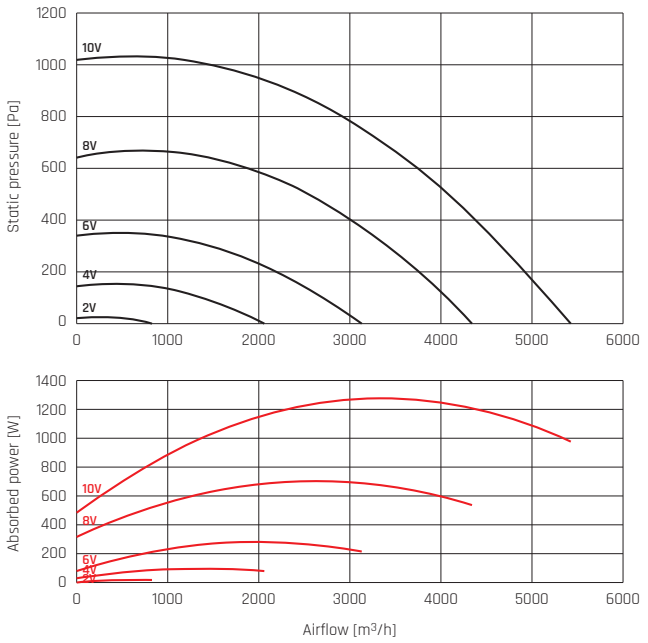


PERFORMANCE CURVES

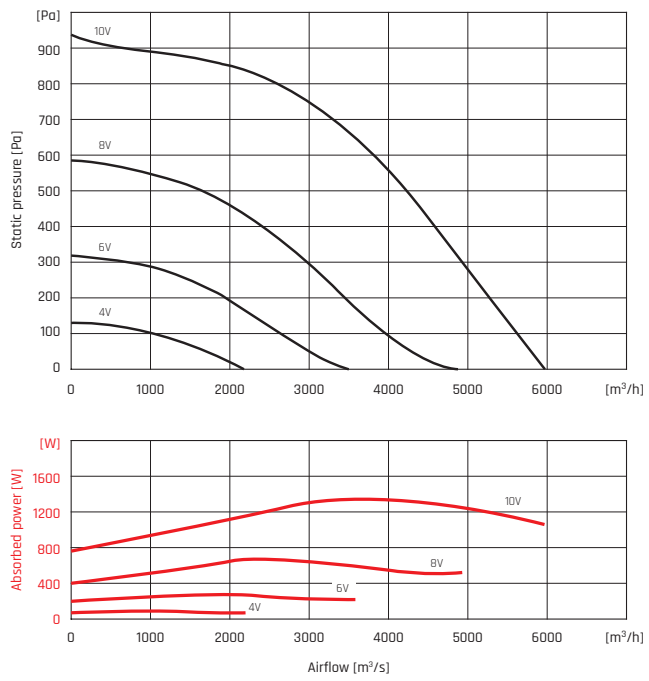
RF/EC-315



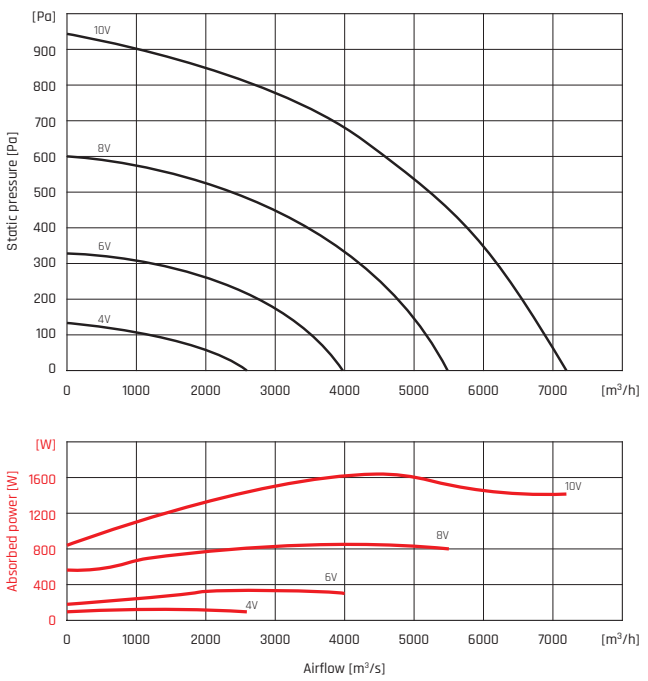
RF/EC-315/T



RF/EC-355

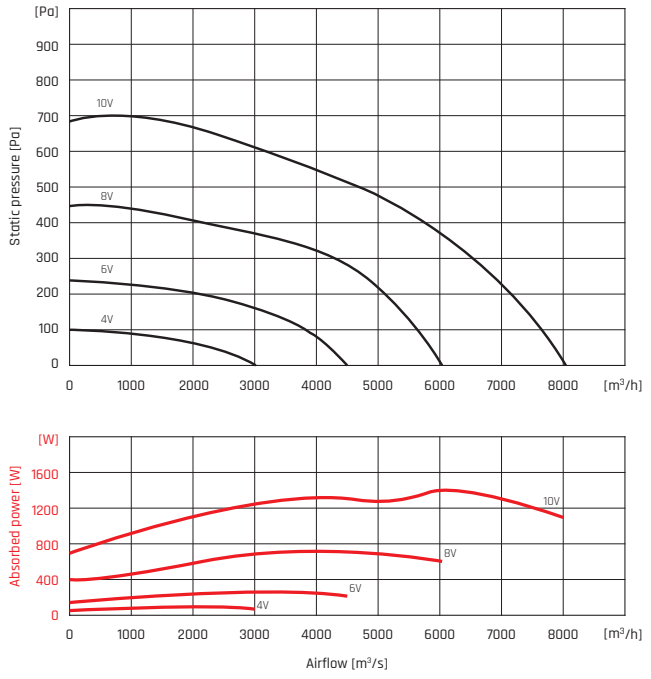


RF/EC-400

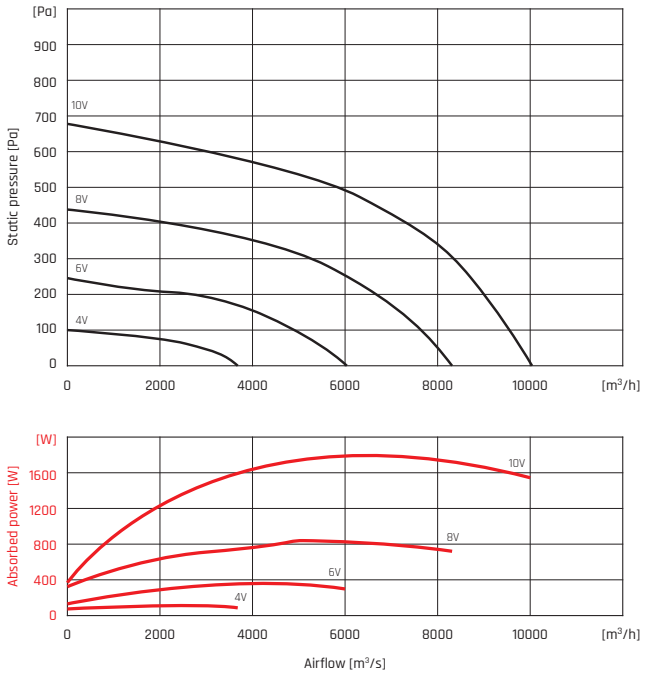


PERFORMANCE CURVES

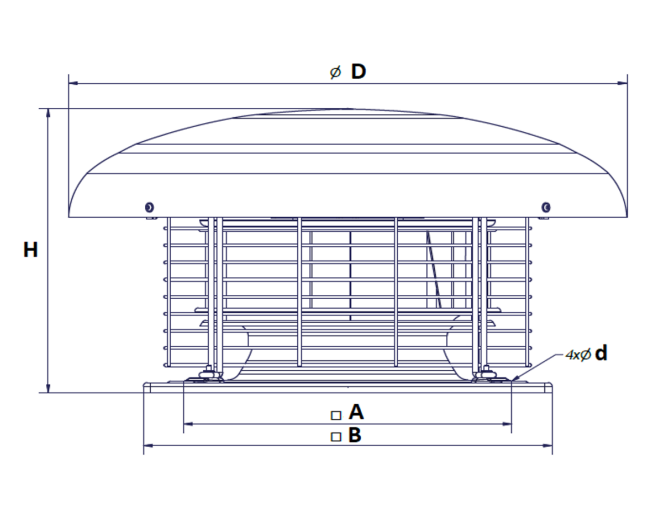
RF/EC-450



RF/EC-500



DIMENSIONS [mm]



Type	□A	□B	ØD	Ød	H
125	245	300	355	10	191
160	245	300	355	10	191
200	330	435	457	12	246
250	330	435	552	12	316
315	330	435	552	12	316
400	450	560	765	12	416
450	535	630	765	12	421
500	590	710	1000	12	535

ACOUSTIC CHARACTERISTICS

Sound power level at the fan inlet in dB (A) for different frequency ranges at three characteristic points:

Type	Airflow	63	125	250	500	1000	2000	4000	8000	L_{WA}
	Qmax	33	48	60	61	64	65	59	55	70
RF/EC-125/L	2/3 Qmax	34	44	53	57	58	59	55	47	64
	1/3 Qmax	35	46	57	59	59	57	52	45	65
	Qmax	38	51	61	64	68	68	66	59	73
RF/EC-125/H	2/3 Qmax	37	48	59	61	64	64	63	52	70
	1/3 Qmax	39	51	63	64	65	64	58	50	70
	Qmax	46	51	62	69	74	75	68	67	79
RF/EC-125/E	2/3 Qmax	40	44	59	66	71	72	66	64	76
	1/3 Qmax	47	49	61	65	69	69	62	59	74
	Qmax	51	55	66	71	75	72	70	71	79
RF/EC-160/L	2/3 Qmax	51	54	65	70	72	70	68	68	77
	1/3 Qmax	51	54	65	69	70	68	66	61	75
	Qmax	41	49	63	70	75	75	72	70	80
RF/EC-160/H	RF/EC-500T	31	40	60	67	73	73	71	66	78
	1/3 Qmax	37	47	58	66	72	72	70	62	77
	Qmax	41	48	59	63	66	66	66	72	75
RF/EC-200	2/3 Qmax	33	43	54	58	61	61	62	63	68
	1/3 Qmax	38	48	55	58	60	58	57	51	65
	Qmax	51	55	66	71	75	72	70	71	79
RF/EC-250/L	2/3 Qmax	51	54	65	70	72	70	68	68	77
	1/3 Qmax	51	54	65	69	70	68	66	61	75
	Qmax	42	52	69	71	74	73	71	67	79
RF/EC-250/H	2/3 Qmax	43	51	64	67	70	69	65	59	75
	1/3 Qmax	46	49	71	69	68	68	65	57	76
	Qmax	40	52	59	64	61	59	58	59	68
RF/EC-315	2/3 Qmax	39	48	54	59	56	54	51	50	63
	1/3 Qmax	53	60	64	64	60	58	54	48	69
	Qmax	49	60	74	79	76	73	73	68	83
RF/EC-315T	2/3 Qmax	51	62	72	77	73	68	65	59	80
	1/3 Qmax	53	61	68	75	70	67	63	58	78
	Qmax	47	61	72	76	72	71	71	63	80
RF/EC-355T	2/3 Qmax	46	57	67	71	67	64	61	56	74
	1/3 Qmax	53	63	70	72	68	66	62	56	76
	Qmax	48	63	73	76	72	72	69	62	80
RF/EC-400T	2/3 Qmax	49	62	73	72	68	65	61	58	77
	1/3 Qmax	52	64	73	72	68	65	61	56	77
	Qmax	46	62	69	71	67	68	66	67	76
RF/EC-450T	2/3 Qmax	45	62	67	67	64	62	58	61	72
	1/3 Qmax	51	63	69	68	66	63	59	55	74
	Qmax	46	65	69	69	67	68	66	72	77
RF/EC-500T	2/3 Qmax	44	61	65	64	64	59	56	61	71
	1/3 Qmax	53	62	68	64	65	60	56	54	72

ACOUSTIC CHARACTERISTICS

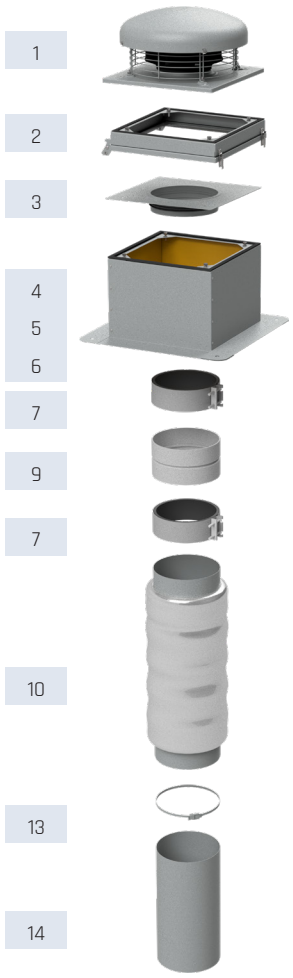
Sound power level at the fan inlet in dB (A) for different frequency ranges at three characteristic points:

Type	Airflow	63	125	250	500	1000	2000	4000	8000	L_{WA}
	Qmax	36	44	60	63	66	70	67	58	74
RF/EC-125/L	2/3 Qmax	35	43	54	58	59	64	60	48	67
	1/3 Qmax	36	46	58	61	60	63	57	44	67
	Qmax	41	48	63	65	70	75	70	62	78
RF/EC-125/H	2/3 Qmax	38	48	60	62	66	70	68	55	74
	1/3 Qmax	39	51	63	65	67	70	63	53	74
	Qmax	45	51	62	69	73	77	73	69	80
RF/EC-125/E	2/3 Qmax	41	46	56	63	68	73	69	63	76
	1/3 Qmax	50	51	61	67	71	73	69	63	77
	Qmax	50	58	74	77	81	79	73	72	85
RF/EC-160/L	2/3 Qmax	51	57	74	75	79	76	70	68	83
	1/3 Qmax	48	56	72	73	77	73	68	62	81
	Qmax	46	51	64	78	82	81	75	72	86
RF/EC-160/H	RF/EC-500T	40	45	60	72	80	79	74	63	83
	1/3 Qmax	37	48	57	60	77	79	74	57	82
	Qmax	39	50	60	65	70	72	68	72	77
RF/EC-200	2/3 Qmax	33	45	55	60	65	68	64	64	72
	1/3 Qmax	37	49	56	60	64	66	60	54	70
	Qmax	50	58	74	77	81	79	73	72	85
RF/EC-250/L	2/3 Qmax	51	57	74	75	79	76	70	68	83
	1/3 Qmax	48	56	72	79	77	73	68	62	82
	Qmax	40	51	69	78	81	81	79	70	86
RF/EC-250/H	2/3 Qmax	43	53	65	76	78	77	75	67	83
	1/3 Qmax	46	52	77	75	77	76	74	65	83
	Qmax	39	55	61	67	68	68	63	60	73
RF/EC-315	2/3 Qmax	38	51	56	62	63	62	56	51	68
	1/3 Qmax	53	62	66	67	67	64	57	50	73
	Qmax	49	62	77	82	86	83	78	73	89
RF/EC-315T	2/3 Qmax	52	64	73	80	83	80	73	65	86
	1/3 Qmax	52	63	72	78	79	79	72	63	84
	Qmax	47	64	74	80	82	78	76	68	86
RF/EC-355T	2/3 Qmax	46	59	69	75	77	73	68	60	81
	1/3 Qmax	54	66	73	76	77	74	69	61	82
	Qmax	49	68	76	81	83	78	74	65	87
RF/EC-400T	2/3 Qmax	49	63	75	78	79	73	67	60	83
	1/3 Qmax	53	66	76	77	77	71	66	59	82
	Qmax	47	64	72	77	77	74	72	66	82
RF/EC-450T	2/3 Qmax	45	62	70	73	73	67	63	59	78
	1/3 Qmax	51	64	74	74	73	68	63	56	79
	Qmax	49	65	73	76	77	74	71	70	82
RF/EC-500T	2/3 Qmax	45	60	68	71	71	65	60	60	76
	1/3 Qmax	54	64	71	72	71	66	61	55	77

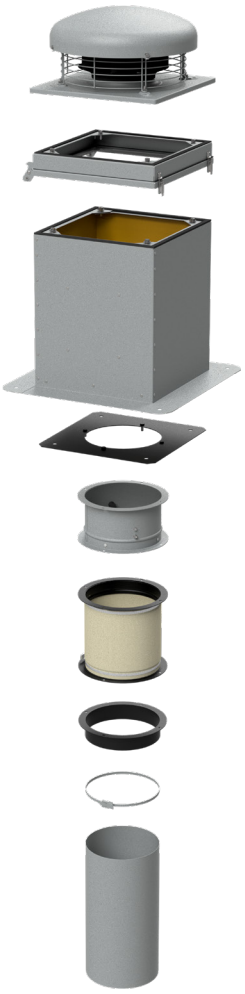
MOUNTING ACCESSORIES

NOTE! DESIGN CHANGES
The connector PZK is avaible as a separate accessory:
(PZK 125, PZK 160, PZK 200, PZK 250, PZK 315).
When using PZK plate:
the method of assembly "TYPE-A".
If you don't use the PZK plate:
the method of assembly "TYPE-B".

Rodzaj montażu A



Rodzaj montażu B



MOUNTING ACCESSORIES

Type of assembly	1	2	3	4	5	6	7
	Type	swing module	plate with stub	flat roof up stand	flat roof up stand	flat roof up stand	anti-vibration bandage
				RSS	RS	RSA	
A	RF/x-125	U 300	PZK 100	RSS 300	RS 300	RSA 300	ACOP PL 125
B			-				-
A	RF/x-160	U 300	PZK 160	RSS 300	RS 300	RSA 300	ACOP PL 160
B			-				-
A	RF/x-200	U 435	PZK 200	RSS 435	RS 435	RSA 435	ACOP PL 200
B			-				-
A	RF/x-250	U 435	PZK 250	RSS 435	RS 435	RSA 435	ACOP PL 250
B			-				-
A	RF/x-315	U 435	PZK 315	RSS 435	RS 435	RSA 435	ACOP PL 315
B			-				-
B	RF/EC-355	U 560	-	RSS 560	RS 560	RSA 560	ZDPO 560
B	RF/EC-400	U 560	-	RSS 560	RS 560	RSA 560	ZDPO 560
B	RF/EC-450	U 630	-	RSS 630	RS 630	RSA 630	ZDPO 630
B	RF/EC-500	U 710	-	RSS 710	RS 710	RSA 710	ZDPO 710

MOUNTING ACCESSORIES

Type of assembly	1	8	9	10	11	12	13	14
	Type	mounting plate	backflow preventer	duct silencer	connector anti-vibration	stub-pipe	duct clips	ventilation duct
A	RF/x-125	-	CAR-PL 125	AKU-COMP 125	-	-	SBF 60-135	VENTAL 127
B		P 300	KZD 300	-	ZDPO 300	K 300	SBF 60-135	VENTAL 185
A	RF/x-160	-	CAR-PL 160	AKU-COMP 160	-	-	SBF 60-165	VENTAL 165
B		P 300	KZD 300	-	ZDPO 300	K 300	SBF 60-165	VENTAL 185
A	RF/x-200	-	CAR-PL 200	AKU-COMP 200	-	-	SBF 60-215	VENTAL 203
B		P 435	KZD 435	-	ZDPO 435	K 435	SBF 60-215	VENTAL 254
A	RF/x-250	-	CAR-PL 250	AKU-COMP 250	-	-	SBF 60-325	VENTAL 254
B		P 435	KZD 435	-	ZDPO 435	K 435	SBF 60-325	VENTAL 254
A	RF/x-315	-	CAR-PL 315	AKU-COMP 315	-	-	SBF 60-325	VENTAL 315
B		P 435	KZD 435	-	ZDPO 435	K 435	SBF 60-325	VENTAL 254
B	RF/EC-450	P 560	KZD 560-N	-	ZDPO 560	K 560	-	-
B	RF/EC-400	P 560	KZD 560-N	-	ZDPO 560	K 560	-	-
B	RF/EC-450	P 630	KZD 630-N	-	ZDPO 630	K 630	-	-
B	RF/EC-500	P 710	KZD 710-N	-	ZDPO 710	K 710	-	-

Article numbers

ACOP PL 125	40521815	**CAR-PL 250**	40521050-01	**RS 300**	43526010	**SBF 60-215**	18520215	**VENTAL 127**	11027127
ACOP PL 160	40521820	**CAR-PL 315**	40521060-01	**RS 435**	43526020	**SBF 60-325**	18520325	**VENTAL 165**	11027165
ACOP PL 200	40521825	**K 300**	43526400	**RSA 300**	43526110	**U 300**	43527200	**VENTAL 203**	11027203
ACOP PL 250	40521830	**K 435**	43526410	**RSA 435**	43526120	**U 435**	43527210	**VENTAL 254**	11027254
ACOP PL 315	40521835	**KZD 300**	43527300	**RSS 300**	43526510	**U 560**	43527220	**VENTAL 315**	11027315
CAR-PL 125	40521020-01	**KZD 435**	43527310	**RSS 435**	43526520	**U 630**	43527230	**ZDPO 300**	43527400
CAR-PL 160	40521030-01	**P 300**	43526300	**SBF 60-135**	18520135	**U 710**	43527240	**ZDPO 435**	43527410
CAR-PL 200	40521040-01	**P 435**	43526310	**SBF 60-165**	18520165	**U 905**	43527230		

flat roof up stand **RS**

flat roof up stand **RSA**

flat roof up stand **RSS**

backflow preventer **KZD**

backflow preventer **CAR-PL**

duct silencer **AKU-COMP**

duct clips **SBF**

line **VENTAL**

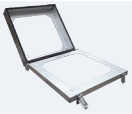
connector **P**

stub-pipe **K**

connector anti-vibration **ZPD**

anti-vibration bandage **ACOP PL**

plate with stub



swing module **U**

ELECTRICAL ACCESSORIES

Type	wall thermostat	duct thermostat	thermostat	air quality sensor	humidistat	regulator
	TS	TK-1	TK-21	SQA	HIG-2	REB ECOWATT
RF/EC-125/L	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-125/H	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-125/E	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-160/L	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-160/H	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-200	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-250/L	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-250/H	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-315	TS	TK-1	TK-21	SQA	HIG-2	REB-ECOWATT
RF/EC-315T	TS + DILM7-10	TK-1 + DILM7-10	TK-21 + DILM7-10	SQA + DILM7-10	HIG-2 + DILM7-10	REB-ECOWATT
RF/EC-355	TS + DILM7-10	-	TK-21 + DILM7-10	SQA + DILM7-10	HIG-2 + DILM7-10	REB ECOWATT
RF/EC-400	TS + DILM7-10	-	TK-21 + DILM7-10	SQA + DILM7-10	HIG-2 + DILM7-10	REB ECOWATT
RF/EC-450	TS + DILM7-10	-	TK-21 + DILM7-10	SQA + DILM7-10	HIG-2 + DILM7-10	REB ECOWATT
RF/EC-500	TS + DILM7-10	-	TK-21 + DILM7-10	SQA + DILM7-10	HIG-2 + DILM7-10	REB ECOWATT

Article numbers

DILM-7-10	91040666-47	HIG-2	40025150	REB-ECOWATT	40025005	SQA	40025140	TK-1	40025330
TK-21	40025320	TS	40025345						


wall thermostat **TS**


duct thermostat **TK-1**


thermostat **TK-21**


air quality sensor **SQA**


humidistat **HIG-2**


regulator **REB ECOWATT**


contactor **DILM**

ERP CHARACTERISTICS

	NRVU*					
	Name	RF/EC-125/L	RF/EC-125/H	RF/EC-125/E	RF/EC-160/L	RF/EC-160/H
a	supplier name	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES
b	article number	43522910	43522912	43522914	43522915	43522918
c	device category	NRVU	NRVU	NRVU	NRVU	NRVU
c	device type	UVU	UVU	UVU	UVU	UVU
d	type of drive	variable speed drive	variable speed drive	variable speed drive	variable speed drive	variable speed drive
e	type of heat recovery system	not applicable	not applicable	not applicable	not applicable	not applicable
f	thermal efficiency of heat recovery [%]	not applicable	not applicable	not applicable	not applicable	not applicable
g	reference flow rate in NRVU [m^3/s]	0,06	0,1	0,13	0,17	0,19
h	electric power input (w kW)	0,03	0,06	0,17	0,13	0,17
i	SFPint W/(m^3/s)	585	644	1247	763	880
j	face velocity m/s	0,38	0,64	0,9	0,94	1,08
k	Δps, ext (Pa)	198	245	516	317	423
l	Δps,int (Pa)	not applicable	not applicable	not applicable	not applicable	not applicable
m	Δps,add (Pa)	not applicable	not applicable	not applicable	not applicable	not applicable
n	static efficiency of fans [%]	33,00%	38,00%	41,00%	39,00%	47,00%
o	Maximum external leakage rate [%]	0	0	0	0	0
p	energy performance	not applicable	not applicable	not applicable	not applicable	not applicable
q	visual filter warning	not applicable	not applicable	not applicable	not applicable	not applicable
r	L_{WA} dB(A)	66	67	76	69	73
s	internet address	www.ventur.eu	www.ventur.eu	www.ventur.eu	www.ventur.eu	www.ventur.eu

* NRVU - "non-residential ventilation unit" - according to COMMISSION REGULATION (EU) No 1254/2014.

ERP CHARACTERISTICS

NRVU*						
	Name	RF/EC-200	RF/EC-250/L	RF/EC-250/H	RF/EC-315	RF/EC-315T
a	supplier name	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES
b	article number	43522921	43522922	43522925	43522931	43522932
c	device category	NRVU	NRVU	NRVU	NRVU	NRVU
c	device type	UVU	UVU	UVU	UVU	UVU
d	type of drive	variable speed drive	variable speed drive	variable speed drive	variable speed drive	variable speed drive
e	type of heat recovery system	not applicable	not applicable	not applicable	not applicable	not applicable
f	thermal efficiency of heat recovery [%]	not applicable	not applicable	not applicable	not applicable	not applicable
g	reference flow rate in NRVU [m^3/s]	0,25	0,33	0,44	0,83	0,85
h	electric power input (w kW)	0,15	0,22	0,44	1,24	1,24
i	SFPint W/(m^3/s)	617	673	1017	1491	1468
j	face velocity m/s	1,13	1,42	1,91	3,24	3,29
k	Δps, ext (Pa)	299	320	569	783	771
l	Δps,int (Pa)	not applicable	not applicable	not applicable	not applicable	not applicable
m	Δps,add (Pa)	not applicable	not applicable	not applicable	not applicable	not applicable
n	static efficiency of fans [%]	48,00%	48,00%	55,00%	53,00%	53,00%
o	Maximum external leakage rate [%]	0	0	0	0	0
p	energy performance	not applicable	not applicable	not applicable	not applicable	not applicable
q	visual filter warning	not applicable	not applicable	not applicable	not applicable	not applicable
r	L_{WA} dB(A)	70	72	78	66	77
s	internet address	www.ventur.eu	www.ventur.eu	www.ventur.eu	www.ventur.eu	www.ventur.eu

* NRVU - "non-residential ventilation unit" - according to COMMISSION REGULATION (EU) No 1254/2014.

NRVU*					
	Name	RF/EC-355T	RF/EC-400T	RF/EC-450T	RF/EC-500T
a	supplier name	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES	VENTURE INDUSTRIES
b	article number	43522936	43522941	43522946	43522951
c	device category	NRVU	NRVU	NRVU	NRVU
c	device type	UVU	UVU	UVU	UVU
d	type of drive	variable speed drive	variable speed drive	variable speed drive	variable speed drive
e	type of heat recovery system	not applicable	not applicable	not applicable	not applicable
f	thermal efficiency of heat recovery [%]	not applicable	not applicable	not applicable	not applicable
g	reference flow rate in NRVU [m^3/s]	0,97	1,31	1,43	1,99
h	electric power input (w kW)	1,27	1,62	1,35	1,61
i	SFPint W/(m^3/s)	1310	1231	943	808
j	face velocity m/s	3,08	3,67	3,65	4,52
k	Δps, ext (Pa)	649	592	467	427
l	Δps,int (Pa)	not applicable	not applicable	not applicable	not applicable
m	Δps,add (Pa)	not applicable	not applicable	not applicable	not applicable
n	static efficiency of fans [%]	49,5%	48,1%	49,5%	52,8%
o	Maximum external leakage rate [%]	0	0	0	0
p	energy performance	not applicable	not applicable	not applicable	not applicable
q	visual filter warning	not applicable	not applicable	not applicable	not applicable
r	L_{WA} dB(A)	75	76	72	72
s	internet address	www.ventur.eu	www.ventur.eu	www.ventur.eu	www.ventur.eu

* NRVU - "non-residential ventilation unit" - according to COMMISSION REGULATION (EU) No 1254/2014.