

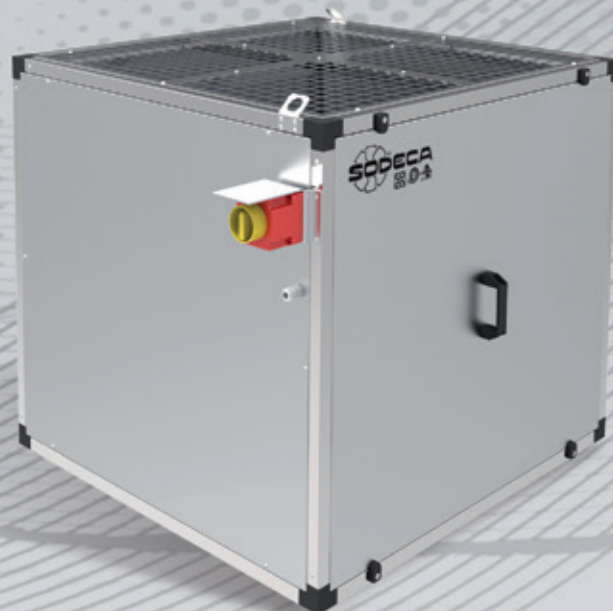
FRF

- EXTERNAL ROTOR MOTOR
- ALUMINIUM STRUCTURE AND BOX
- THERMAL AND ACOUSTIC INSULATION
- BUILT-IN SAFETY SWITCH
- BUILT-IN WATER OUTLET DRAIN



FRF/EW

- HIGH EFFICIENCY FAN
- E.C. BRUSHLESS INDUSTRIAL MOTOR
- ALUMINIUM STRUCTURE AND BOX
- THERMAL AND ACOUSTIC INSULATION
- BUILT-IN WATER OUTLET DRAIN



According ErP		CE	
FAN TYPE	MOTOR TYPE	ENERGY REQUIRED	ENERGY SAVE
FRF EW	EC+VSD	+++	45%
FRF	AC + VSD	++	35%
FRF	AC	+	0%

FRF FRF/EW

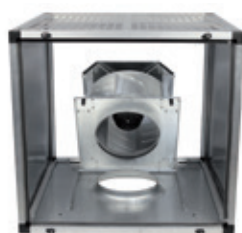
ROOF-MOUNTED CENTRIFUGAL EXTRACTOR FAN WITH VERTICAL AIR OUTLET



FRF



Roof-mounted centrifugal extractor fans, with vertical air outlet



Fan:

- Backward-curved impeller with external rotor motor.
- Aluminium profile structure and box with thermal and acoustic insulation, and aluminium sheet metal finish.
- Folding impeller-motor unit to facilitate maintenance and cleaning.
- Built-in safety switch.
- Built-in water outlet drain.

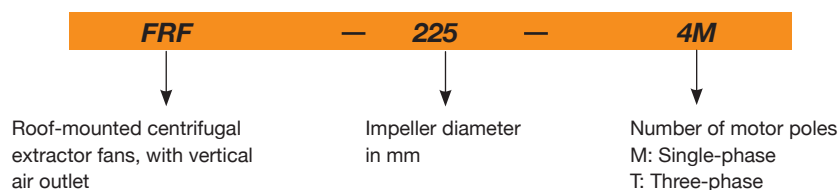
Motor:

- Class F motors, external rotor and IP54 protection.
- Single-phase 230V-50Hz and three-phase 230/400V-50Hz.
- Maximum temperature of air to be carried: -25 °C+ 50 °C.

Finish:

- Corrosion-proof and made of sheet aluminium.

Order code



Technical characteristics

Model	Speed (r/min)	Maximum admissible current (A)		Max. electric power (kW)	Maximum flow rate (m ³ /h)	Sound pressure ¹ level at 2/3 of Qmax dB(A)		Approx. weight (Kg)	According ErP
		230V	400V			Inlet	Discharge		
FRF-225-4M	1420	0.20		0.04	650	31	37	20.7	2018
FRF-250-4M	1440	0.31		0.06	950	32	38	20.8	2018
FRF-315-4T	1430		0.35	0.14	2000	39	45	30.4	2018
FRF-315-4M	1400	0.60		0.14	2000	39	45	30.4	2018
FRF-315-6T	900		0.20	0.07	1280	28	34	30.1	2016
FRF-315-6M	940	0.38		0.08	1280	28	34	30.1	2016
FRF-355-4T	1400		0.45	0.18	2500	43	48	32.6	2018
FRF-355-4M	1400	0.75		0.17	2500	43	48	32.6	2018
FRF-355-6T	950		0.32	0.10	1800	31	38	32.2	2018
FRF-355-6M	930	0.46		0.10	1800	31	38	32.2	2018
FRF-400-4T	1380		0.60	0.27	2850	46	52	42.7	2018
FRF-400-4M	1350	1.20		0.26	2850	46	52	42.7	2018
FRF-400-6T	900		0.40	0.15	2400	35	41	42.4	2018
FRF-400-6M	940	0.72		0.14	2400	35	41	42.4	2018
FRF-450-4T	1340		1.00	0.55	5400	53	59	73.6	2018
FRF-450-4M	1400	3.20		0.55	5400	53	59	73.6	2018
FRF-450-6T	920		1.00	0.30	3700	42	48	72.9	2018
FRF-450-6M	930	1.30		0.26	3700	42	48	72.9	2018
FRF-500-4T	1400		2.50	1.10	7600	57	62	75.1	2018
FRF-500-6T	950		1.25	0.45	5200	45	52	74.5	2018
FRF-500-6M	920	1.80		0.40	5200	45	52	74.5	2018

(1) The noise level values are pressures in dB(A) measured at a distance of 6 metres and at 2/3 of the maximum flow rate (2/3 Qmax).

Acoustic characteristics

Sound power spectrum Lw(A) in dB(A) per Hz frequency band.

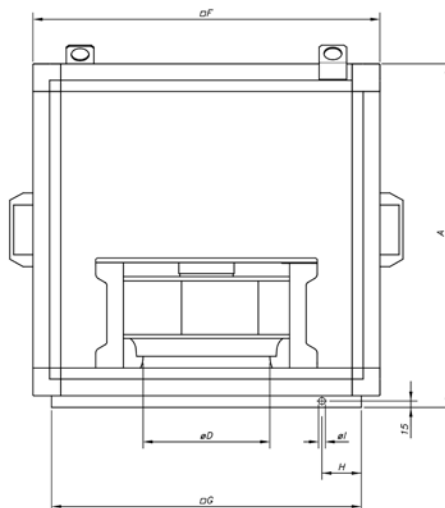
Values taken during aspiration with 2/3 maximum flow rate (2/3Qmax).

Model	63	125	250	500	1000	2000	4000	8000
225	29	35	46	49	50	46	44	38
250	30	36	47	50	51	47	45	39
315-4	40	49	54	54	58	57	50	44
315-6	29	38	43	43	47	46	39	33
355-4	44	53	58	58	62	61	54	48
355-6	32	41	46	46	50	49	42	36
400-4	48	54	60	60	63	66	57	51
400-6	37	43	49	49	52	55	46	40
450-4	55	61	67	67	70	73	64	58
450-6	44	50	56	56	59	62	53	47
500-4	60	67	72	72	76	75	68	63
500-6	48	55	60	60	64	63	56	51

Values taken during discharge with 2/3 maximum flow rate (2/3Qmax).

Model	63	125	250	500	1000	2000	4000	8000
225	33	38	52	54	55	55	50	45
250	34	39	53	55	56	56	51	46
315-4	39	48	58	62	65	62	55	49
315-6	28	37	47	51	54	51	44	38
355-4	42	51	61	65	68	65	58	52
355-6	32	41	51	55	58	55	48	42
400-4	47	59	67	69	70	70	62	54
400-6	36	48	56	58	59	59	51	43
450-4	54	66	74	76	77	77	69	61
450-6	43	55	63	65	66	66	58	50
500-4	58	70	78	80	81	78	71	63
500-6	48	60	68	70	71	68	61	53

Dimensions mm



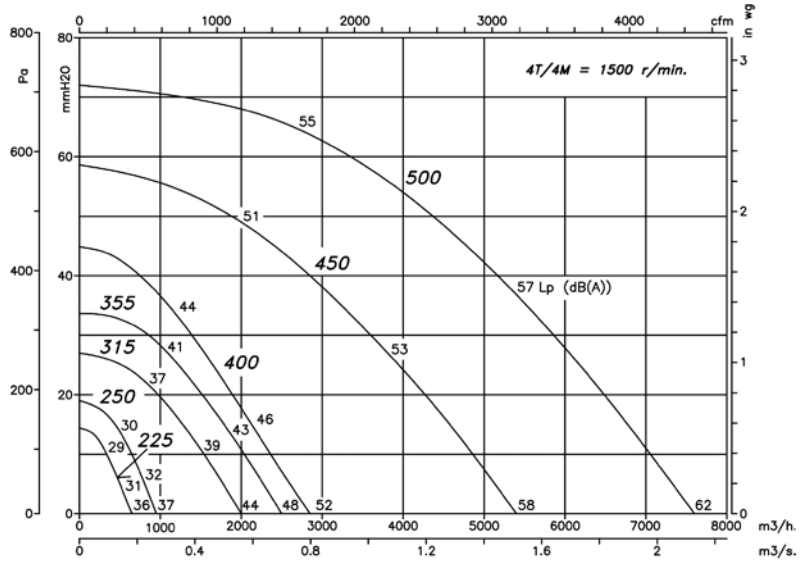
Model	A	ØD*	F	G	H	ØI
FRF-225	480	200	470	400	50	12
FRF-250	480	250	470	400	50	12
FRF-315	630	250	630	560	50	12
FRF-355	630	355	630	560	100	15
FRF-400	670	355	700	630	100	15
FRF-450	930	500	970	900	100	15
FRF-500	930	500	970	900	100	15

(*) Recommended pipe nominal diameter

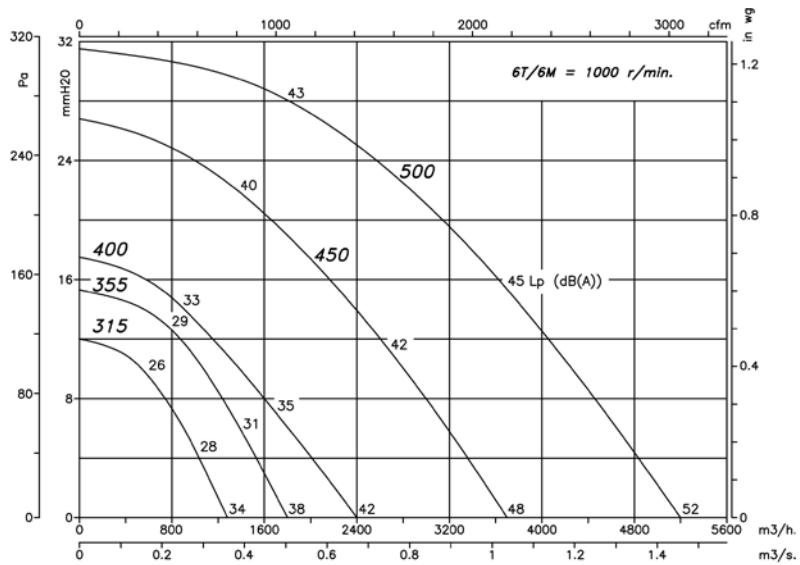
Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm.

Pe= Static pressure in mm H₂O, Pa and inwg.



The Lp noise levels (dB(A)) indicated in the curves are pressures measured in a free field during aspiration, at 6 metres.



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FRF/EW



**BRUSHLESS
MOTOR, WITH
BUILT-IN VSD**



EC roof-mounted centrifugal extractor fans, with vertical air outlet

Fan:

- Backward-curved impeller with EC external rotor motor.
- Aluminium profile structure and box with thermal and acoustic insulation, and aluminium sheet metal finish.
- Folding impeller-motor unit to facilitate maintenance and cleaning.
- Built-in safety switch.
- Built-in water outlet drain.
- Adjustable speed by means of an external 0-10 V signal.

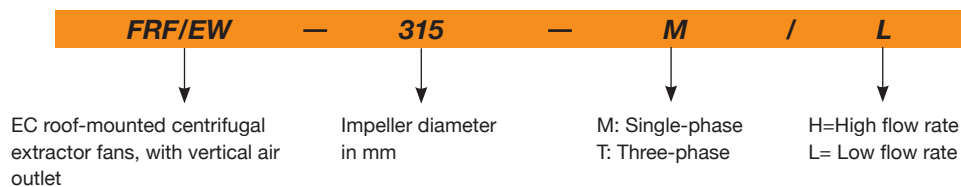
Motor:

- EC brushless external rotor motors with high efficiency and built-in variable speed drive controlled by 0-10 V signal.
- Single-phase 200-277V 50/60 Hz. Except models 225, 250 and 315-M/L 200-240V 50/60 Hz. IP54 protection.
- Three-phase 380-480 V 50/60 Hz. IP54 protection.
- Maximum temperature of air to be carried: -25 °C +50 °C.

Finish:

- Corrosion-proof and made of sheet aluminium.

Order code



Technical characteristics

Model	Speed (rpm)	Maximum current (A)		Max. electric power (kW)	Maximum flow rate (m ³ /h)	Sound pressure level at maximum speed (dBA)*		Approx. weight (Kg)	According ErP
		230V	400V			Inlet	Discharge		
FRF/EW-225-M	3230	1.4		0.17	1010	40	43	20	2018
FRF/EW-250-M	2510	1.4		0.17	1200	42	45	20	2018
FRF/EW-315-M/L	1524	1.2		0.15	1880	32	35	30	2018
FRF/EW-315-M/H	2360	2.2		0.5	2940	46	49	32	2018
FRF/EW-315-T/H	2700		1.25	0.79	3200	50	53	33	2018
FRF/EW-400-M/L	1170	1.1		0.25	3360	37	40	40	2018
FRF/EW-400-M/H	1700	3.3		0.75	5100	47	50	41	2018
FRF/EW-400-T/H	2060		2.1	1.32	5520	49	56	43	2018
FRF/EW-450-M/L	1260	2.2		0.5	5190	47	52	71	2018
FRF/EW-500-M/L	1100	3.3		0.75	6880	41	47	76	2018
FRF/EW-500-T/H	1700		4	2.65	9360	51	58	84	2018

* The noise level values are pressures in dB(A) measured at a distance of 6 metres and at 2/3 of the maximum flow rate (2/3Qmax).

Acoustic characteristics

Sound power spectrum Lw(A) in dB(A) per Hz frequency band.

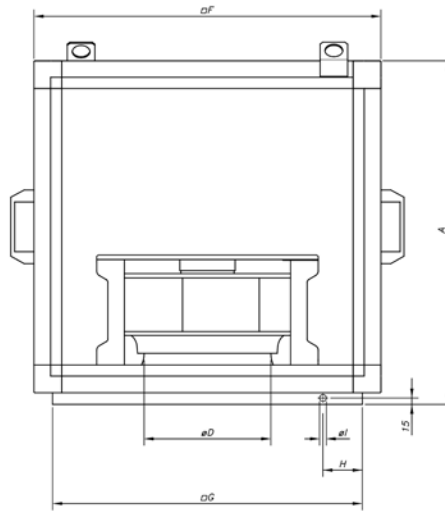
Values taken during aspiration with 2/3 maximum flow rate (2/3Qmax).

Model	63	125	250	500	1000	2000	4000	8000
FRF/EW-225-M	26	43	49	56	58	59	55	50
FRF/EW-250-M	32	47	53	58	60	59	57	48
FRF/EW-315-M/L	26	48	45	50	50	48	44	37
FRF/EW-315-M/H	43	58	60	63	62	63	58	52
FRF/EW-315-T/H	49	59	63	68	68	67	62	57
FRF/EW-400-M/L	33	53	50	55	53	51	49	51
FRF/EW-400-M/H	37	61	60	66	63	61	56	58
FRF/EW-400-T/H	38	51	63	69	66	66	61	61
FRF/EW-450-M/L	36	56	59	65	62	65	61	60
FRF/EW-500-M/L	39	53	54	58	60	59	55	48
FRF/EW-500-T/H	48	61	64	68	69	69	66	60

Values taken during discharge with 2/3 maximum flow rate (2/3Qmax).

Model	63	125	250	500	1000	2000	4000	8000
FRF/EW-225-M	29	46	52	59	61	62	58	53
FRF/EW-250-M	35	50	56	61	63	62	60	51
FRF/EW-315-M/L	29	51	48	53	53	51	47	40
FRF/EW-315-M/H	46	61	63	66	65	66	61	55
FRF/EW-315-T/H	52	62	66	71	71	70	64	60
FRF/EW-400-M/L	36	56	53	58	56	54	52	54
FRF/EW-400-M/H	40	64	63	69	66	64	59	61
FRF/EW-400-T/H	43	54	66	71	76	74	68	64
FRF/EW-450-M/L	38	58	59	67	73	70	63	50
FRF/EW-500-M/L	41	54	57	65	67	63	57	51
FRF/EW-500-T/H	50	63	67	75	79	73	69	63

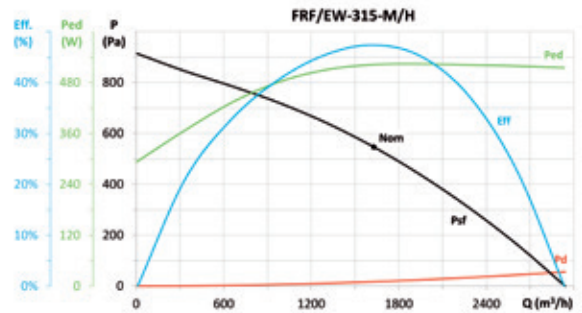
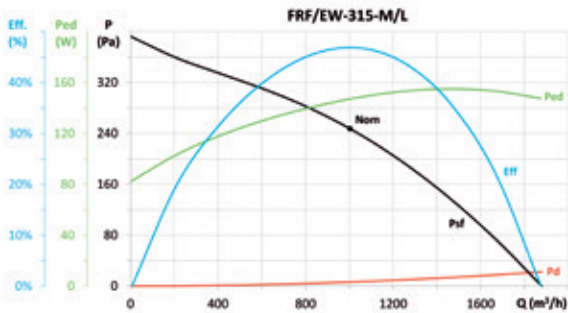
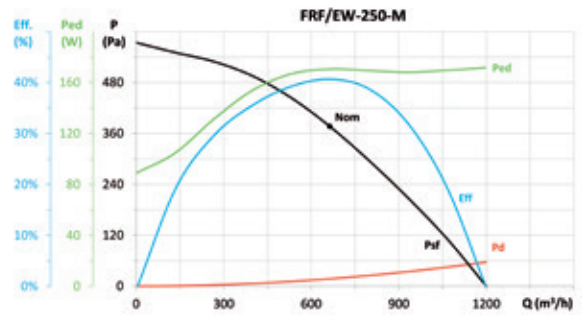
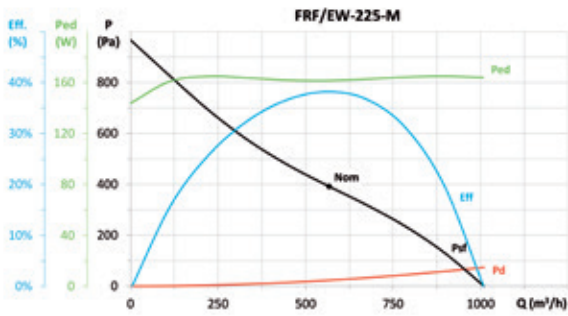
Dimensions mm



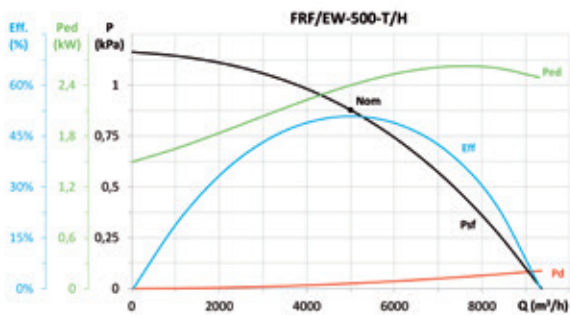
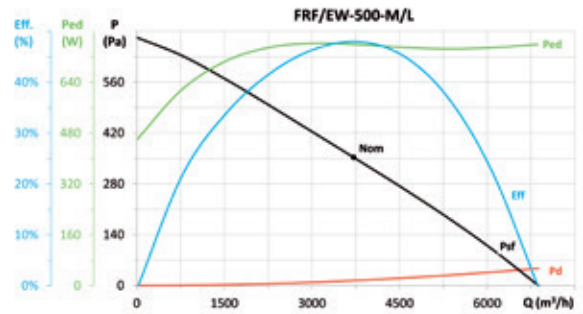
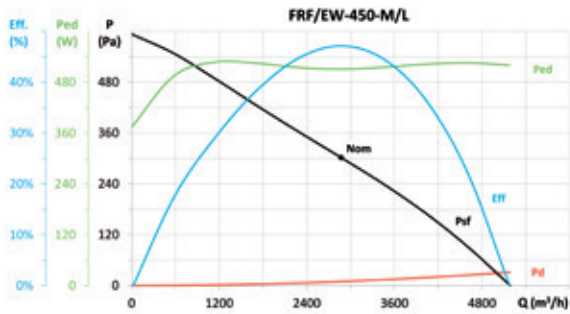
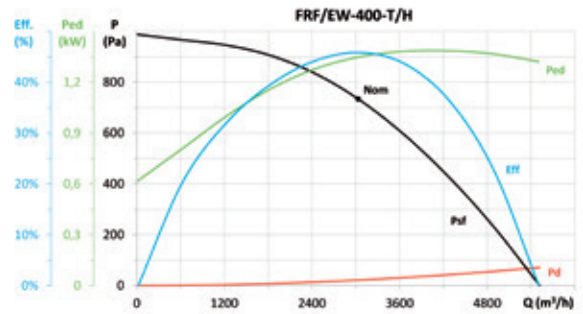
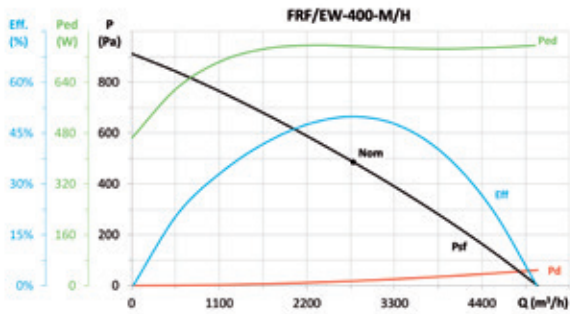
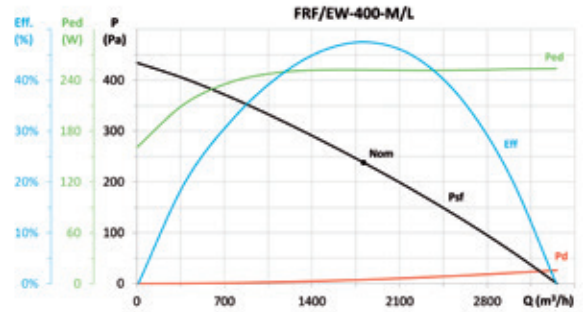
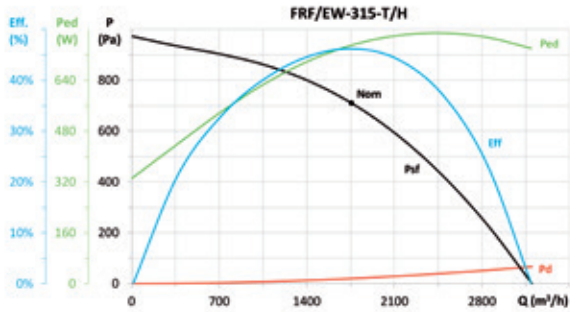
Model	A	ØD*	F	G	H	ØI
FRF/EW-225	480	200	470	400	50	12
FRF/EW-250	480	250	470	400	50	12
FRF/EW-315	630	250	630	560	50	12
FRF/EW-400	670	355	700	630	100	15
FRF/EW-450	930	500	970	900	100	15
FRF/EW-500	930	500	970	900	100	15

(*) Recommended pipe nominal diameter

Characteristic curves



Characteristic curves



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