



## Inline centrifugal fans with EC motor

# Centro-M EC

Air capacity - up to 1460 m<sup>3</sup>/h



### ■ Use

- ❑ Supply and exhaust ventilation systems installed in various premises.
- ❑ Direct mounting inside air ductworks.
- ❑ For arranging energy-saving and controllable ventilation systems.
- ❑ Compatible with Ø 160 to 315 mm round air ducts.

### ■ Design

- ❑ The casing is made of steel with a special polymer coating.
- ❑ Aerodynamically shaped casing.
- ❑ External terminal box for connection to power mains.

### ■ Motor

- ❑ High-efficient direct current EC motor with external rotor and backward curved blades.
- ❑ EC technologies meet the latest requirements to arrange high-efficient energy saving ventilation.
- ❑ EC motors have energy demand by 35 % less as compared to standard motors and have efficiency up to 90 %.
- ❑ EC motors are featured with high performance, low noise level and well controllable total speed range.
- ❑ Overheating protection by built-in thermal switches with automatic restart.
- ❑ Dynamically balanced turbine.

### ■ Operation and speed control





- ❑ The fan is controlled with a 0-10 V external control signal, e.g. CDT E/0-10 speed controller for EC motors.
- ❑ The fan capacity is regulated by various parameters, including temperature level, pressure, smoke, etc.
- ❑ EC motor changes its rotation speed synchronously with the fluctuation of the control parameter to ensure the best suitable air flow.
- ❑ The fan is compatible with 50 and 60 Hz power mains with the same maximum speed.
- ❑ The parameters may be set and controlled due to data exchange between a PC and the fan.
- ❑ The fans can be integrated into a unified decentralized computerized network to adjust ventilation system with respect to specific user's demands.

### ■ Mounting

- ❑ Any mounting position.
- ❑ Fans are fixed to wall or ceiling with mounting brackets supplied as a standard.
- ❑ Flexible air ducts are fixed on the fan spigots with clamps.

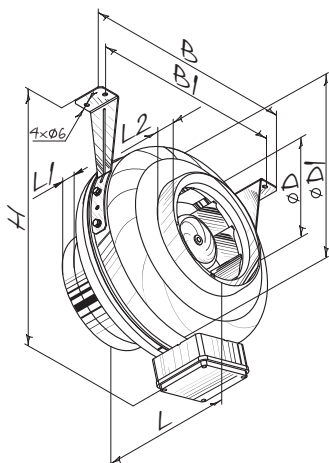
ErP data	
Overall efficiency	η, (%)
Measurement category	MC
Efficiency category	EC
Efficiency grade	N
Variable speed drive	VSD
Power	[kW]
Current	[A]
Air flow	[m <sup>3</sup> /h]
Static pressure	[Pa]
Speed	[n/min <sup>-1</sup> ]
Specific ratio	SR

## Specifications

Parameters	Centro-M EC 160* 	Centro-M EC 200* 	Centro-M EC 250 	Centro-M EC 315 
Voltage [V / 50 /60 Hz]	230	230	230	230
Power [W]	80	84	161	160
Current [A]	0.58	0.49	0.94	0.94
Maximum air capacity [m <sup>3</sup> /h]	660	840	1275	1460
RPM [min <sup>-1</sup> ]	3250	2490	2700	2780
Sound pressure level at 3 m distance [dBA]	45	50	46	48
Max. operating temperature [°C]	-25 +60	-25 +60	-25 +60	-25 +60
SEC class	B		-	-
Ingress protection rating	IPX4	IPX4	IPX4	IPX4

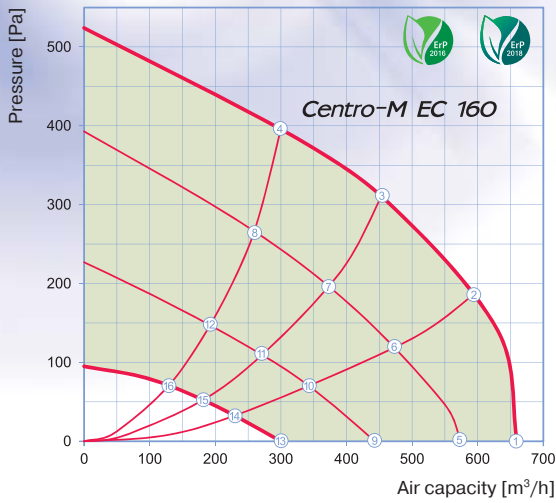
\* Compliant to the ErP-regulation (EC) 327/2011, the power consumption at optimum efficiency is < 125W.

## Overall dimensions



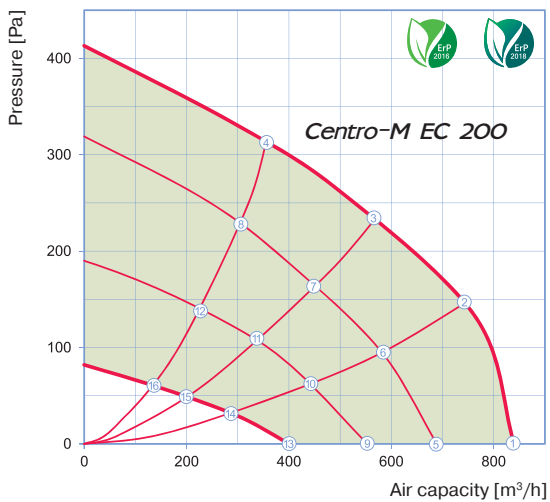
Type	Dimensions [mm]									Weight [kg]
	ØD	ØD1	H	B	B1	L	L1	L2	L3	
Centro-M EC 160	159	304	360	351	311	200	25	25	30	5.9
Centro-M EC 200	198	344	437	390	350	238	25	25	40	7.1
Centro-M EC 250	248	344	437	390	350	249	30	25	40	8.0
Centro-M EC 315	313	404	466	450	410	259	30	30	40	8.5

## Specifications



Sound-power level	Octave-frequency band [Hz]								
	Gen	63	125	250	500	1000	2000	4000	8000
L <sub>wA</sub> to inlet, [dBA]	68	42	61	58	64	56	56	46	37
L <sub>wA</sub> to outlet, [dBA]	70	40	65	60	67	60	56	47	35
L <sub>wA</sub> to environment, [dBA]	58	39	56	52	37	18	16	27	21

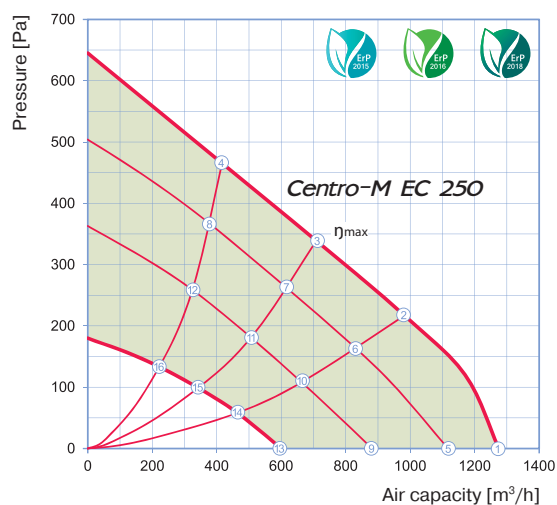
point	n, (min <sup>-1</sup> )	P, (W)
1	3260	70
2	3190	77
3	3130	80
4	3170	77
5	2610	36
6	2560	40
7	2500	41
8	2530	40
9	1960	15
10	1910	16
11	1880	17
12	1890	16
13	1310	4
14	1280	5
15	1250	5
16	1280	5



Sound-power level	Octave-frequency band [Hz]								
	Gen	63	125	250	500	1000	2000	4000	8000
L <sub>wA</sub> to inlet, [dBA]	71	44	64	61	68	61	57	56	46
L <sub>wA</sub> to outlet, [dBA]	71	48	68	64	71	63	61	56	47
L <sub>wA</sub> to environment, [dBA]	61	43	57	56	44	29	26	43	39

point	n, (min <sup>-1</sup> )	P, (W)
1	2780	64
2	2630	75
3	2510	84
4	2520	83
5	2220	33
6	2090	39
7	2000	43
8	2010	42
9	1670	14
10	1560	16
11	1500	18
12	1510	18
13	1110	4
14	1060	5
15	1000	6
16	1010	6

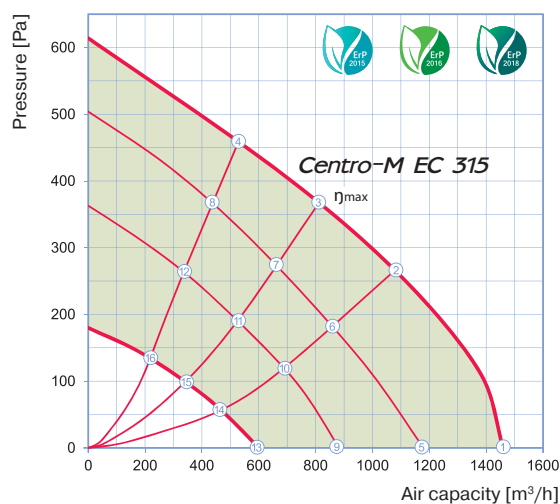
## Specifications



Sound-power level	Octave-frequency band [Hz]								
	Gen	63	125	250	500	1000	2000	4000	8000
L <sub>wA</sub> to inlet, [dBA]	71	57	64	61	63	62	57	50	45
L <sub>wA</sub> to outlet, [dBA]	73	58	67	70	66	67	65	56	47
L <sub>wA</sub> to environment, [dBA]	61	54	58	57	47	40	35	42	36

η <sub>v</sub> (%)	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
48.1	A	Static	67	Yes	0.161	0.94	708	338	2610	1

point	n, (min <sup>-1</sup> )	P, (W)
1	2760	123
2	2670	146
3	2610	161
4	2680	146
5	2460	88
6	2380	106
7	2340	116
8	2400	105
9	2000	53
10	1960	62
11	1940	69
12	1965	61
13	1380	22
14	1360	25
15	1350	28
16	1360	25



Sound-power level	Octave-frequency band [Hz]								
	Gen	63	125	250	500	1000	2000	4000	8000
L <sub>wA</sub> to inlet, [dBA]	67	33	48	57	65	62	58	56	53
L <sub>wA</sub> to outlet, [dBA]	71	40	55	58	67	65	63	56	55
L <sub>wA</sub> to environment, [dBA]	57	32	46	53	47	41	46	50	47

η <sub>v</sub> (%)	MC	EC	N	VSD	[kW]	[A]	[m³/h]	[Pa]	[RPM]	SR
48.1	A	Static	67	Yes	0.161	0.94	708	338	2610	1

point	n, (min <sup>-1</sup> )	P, (W)
1	2750	121
2	2660	145
3	2600	160
4	2670	145
5	2450	85
6	2370	103
7	2330	112
8	2390	101
9	1990	49
10	1950	61
11	1930	65
12	1955	60
13	1370	21
14	1350	22
15	1340	25
16	1350	24