

Centro-M EC

Inline centrifugal fans with EC motor

Use

- Supply and extract ventilation systems installed in various premises.
- Direct mounting inside air ductworks.
- For arranging energy-saving and controllable ventilation systems.
- Compatible with Ø 100 to 400 mm round air ducts.



Air flow:
up to 4790 m³/h
1331 l/s



Design

- The casing is made of polymer-coated steel, with the exception of models Centro-M EC 100, 125, 150, 160, and 200, which are made of painted galvanized steel.
- 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 technology meets the up-to-date requirements to energy-saving and controllable ventilation and provides up to 35 % energy saving as compared to asynchronous motors.
- EC motor ensures totally controllable speed range for the fan and has integrated overheating protection with automatic restart.
- EC motor has no friction and wearing parts as capacitor and brushes. Instead a maintenance-free EC controller electronic circuit board is used.
- The impeller is dynamically balanced.
- The fan is compatible with 50 Hz and 60 Hz power mains and the maximum speed does not depend on power mains frequency.

- The control signal value changes depending on air temperature, pressure, smoke concentration and other parameters.
- During signal value change the fan with EC motor correspondingly changes the rotations speed and delivers required air volume to the ventilation system.
- The computer central building management systems (BMS) enable integration of several EC motors in network and precise individual operation control for each fan.

Mounting

- Any mounting position.
- The fans with the connecting diameter from 100 up to 315 mm are fixed to wall or ceiling with mounting brackets supplied as a standard.
- The fans with the connecting diameter 355 and 400 mm are fixed with mounting brackets fixed on the casing.
- Flexible air ducts are fixed on the fan spigots with clamps.

Operation and speed control

- The fan speed is controlled with a 0–10 V control signal from the following sources:
 - integrated or external speed controller
 - controller with sensors
 - central BMS system.



Centro-M EC 100 – Centro-M EC 315



Centro-M EC 315 max, Centro-M EC 355, Centro-M EC 400

Designation key

Series	Motor type	Duct diameter [mm]	Options
Centro-M	EC: electronically commutated motor	100; 125; 150; 160; 200; 250; 315; 355; 400	max: high-powered motor FR1: smooth speed controller adjustable from 0 to 100 % and power cable with mains plug G1: speed controller, temperature controller with external temperature sensor, power cable with mains plug W1: power cable with mains plug

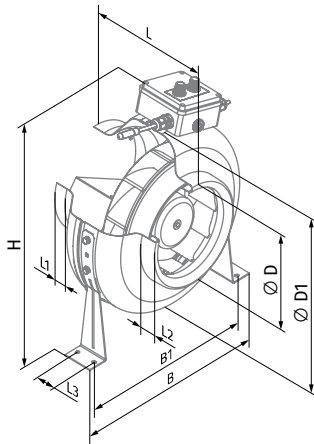
Accessories

Silencers	Filter boxes	Electric heaters	Water heaters	Backdraft air dampers	Air dampers	Clamps	Speed controllers	
SD	KFBK	KFBT	EKH	WKH	VRV	VK / VKA	K	CDT E/0-10

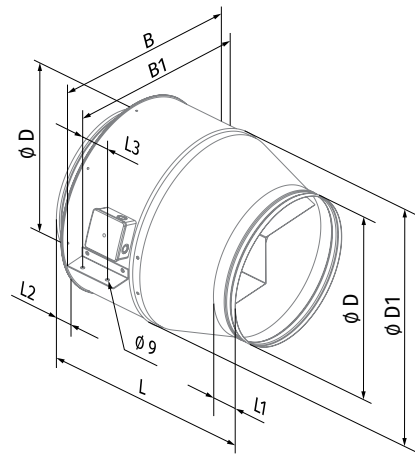
INLINE FANS

Dimensions [mm]

Type	Ø D	Ø D1	H	B	B1	L	L1	L2	L3	Weight [kg]
Centro-M EC 100	99	245	330	300	260	195	20	20	30	2,7
Centro-M EC 125	124	245	330	300	260	190	20	20	30	2,7
Centro-M EC 150	149	275	345	330	290	170	20	20	30	3,0
Centro-M EC 160	159	275	345	330	290	170	20	20	30	3,0
Centro-M EC 200	198	345	430	395	355	245	25	25	40	4,3
Centro-M EC 200 max	198	345	435	395	355	255	25	30	40	5.4
Centro-M EC 250	248	345	435	395	355	250	25	30	40	5.8
Centro-M EC 315	314	405	465	455	415	260	30	30	40	7.3
Centro-M EC 315 max	313	409		502	472	462	60	60	50	9.4
Centro-M EC 355	353	459		552	522	562	60	60	70	15.1
Centro-M EC 400	398	568		663	634	599	60	60	70	18.6



Centro-M EC 100 – Centro-M EC 315



Centro-M EC 315 max, Centro-M EC 355, Centro-M EC 400

Technical data

Parameters	Centro-M EC 100	Centro-M EC 125	Centro-M EC 150	Centro-M EC 160
Voltage [V / 50/60 Hz]	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230
Power [W]	90	95	123	123
Current [A]	0.70	0.78	1.02	1.02
Maximum air flow [m³/h (l/s)]	345 (96)	480 (133)	720 (200)	735 (204)
RPM [min ⁻¹]	3600	3642	4936	5060
Sound pressure at 3 m [dBA]	44	45	48	48
Transported air temperature [°C]	-25...+60	-25...+60	-25...+60	-25...+60
SEC class	B	NRVU	NRVU	NRVU
IP rating	IPX4	IPX4	IPX4	IPX4
ErP compliance	2018	2018	2018	2018

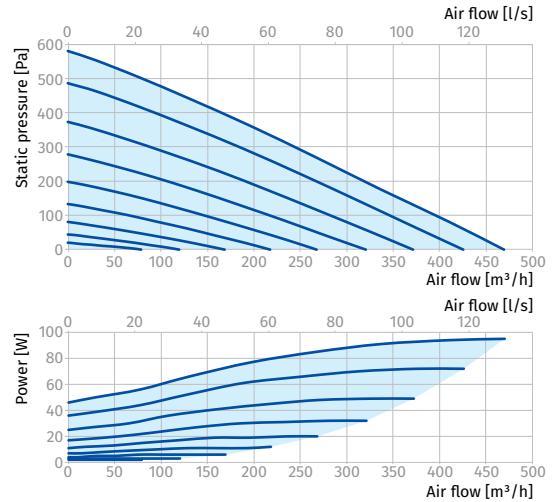
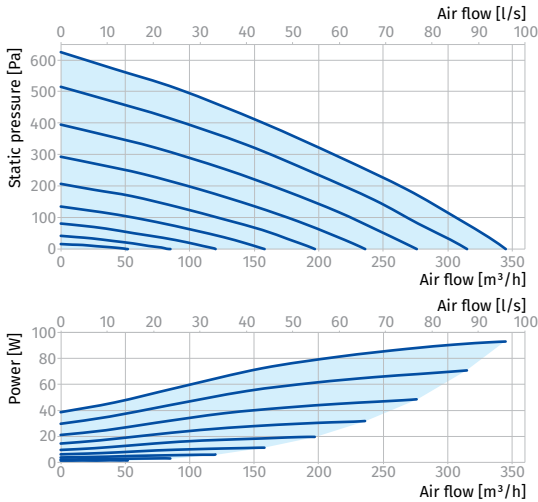
To comply with ErP 2018 it is necessary to use a local demand control typology (connect the sensor).

CENTRO-M EC 100

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	90	66	82	89	80	74	70	63	51	70	80
LWA to outlet [dBA]	89	73	82	88	79	70	66	61	49	69	79
LWA to environment [dBA]	65	31	47	56	60	59	58	47	33	44	54

CENTRO-M EC 125

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	91	62	83	90	79	74	71	65	54	71	81
LWA to outlet [dBA]	90	69	83	89	78	71	68	63	52	70	80
LWA to environment [dBA]	65	27	48	58	59	60	60	49	37	45	55

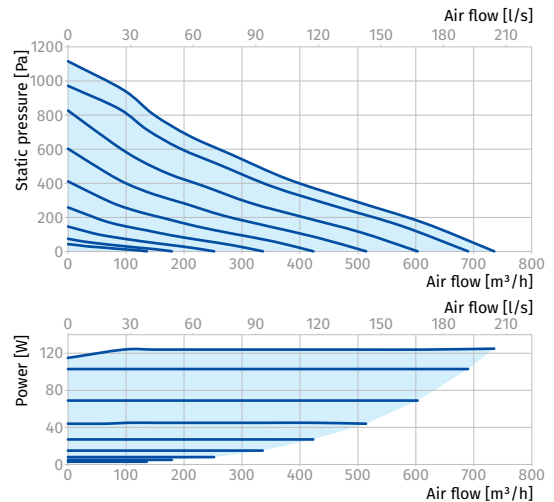
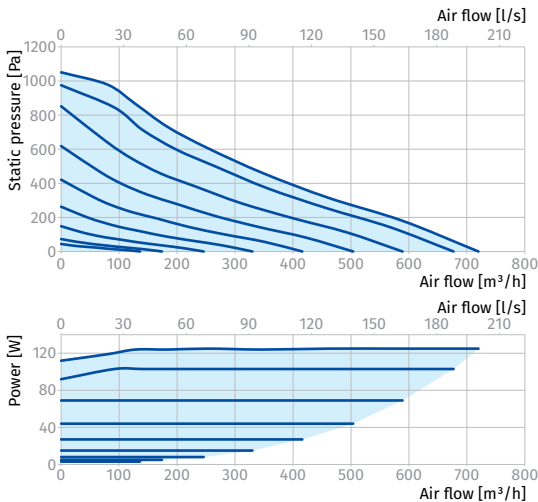


CENTRO-M EC 150

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	89	52	86	85	74	72	70	67	54	68	78
LWA to outlet [dBA]	87	51	85	82	70	68	64	63	51	66	76
LWA to environment [dBA]	69	28	50	61	64	63	62	54	41	48	58

CENTRO-M EC 160

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	89	81	87	79	72	68	62	50	54	68	78
LWA to outlet [dBA]	88	81	86	78	69	65	60	48	51	67	77
LWA to environment [dBA]	69	50	59	64	63	61	50	36	41	48	58



Parameters	Centro-M EC 200	Centro-M EC 200 max	Centro-M EC 250
Voltage [V / 50/60 Hz]	1 ~ 230	1 ~ 230	1 ~ 230
Power [W]	116	100	161
Current [A]	0.95	0.74	1.25
Maximum air flow [m³/h (l/s)]	900 (250)	1010 (281)	1300
RPM [min⁻¹]	3959	2400	3820
Sound pressure at 3 m [dBA]	49	48	49
Transported air temperature [°C]	-25...+60	-25...+60	-25...+60
SEC class	NRVU	B	-
IP rating	IPX4	IPX4	IPX4
ErP compliance	2018	2018	2018

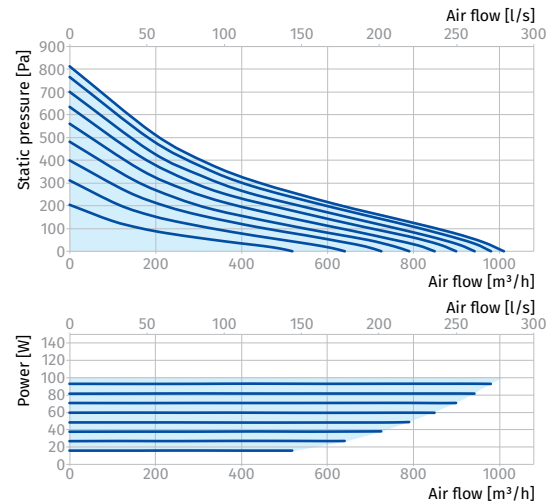
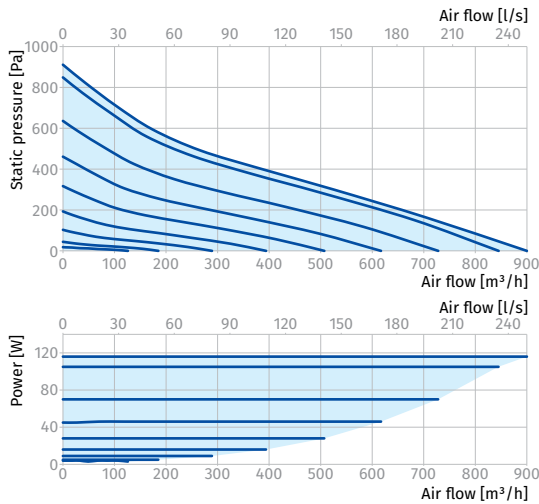
To comply with ErP 2018 it is necessary to use a local demand control typology (connect the sensor).

CENTRO-M EC 200

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	87	48	76	84	79	79	80	72	61	67	77
LWA to outlet [dBA]	85	45	75	79	77	77	80	72	62	64	74
LWA to environment [dBA]	67	27	49	60	62	61	60	52	39	47	57

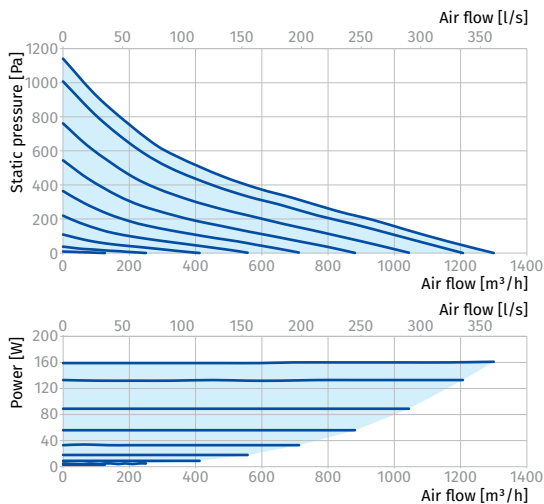
CENTRO-M EC 200 MAX

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	93	63	80	88	85	87	84	79	67	72	82
LWA to outlet [dBA]	89	65	77	74	83	84	83	77	64	68	78
LWA to environment [dBA]	68	30	49	58	62	65	61	52	38	48	58



CENTRO-M EC 250

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	91	72	87	89	80	74	67	56	46	71	80
LWA to outlet [dBA]	91	65	80	90	81	66	63	56	45	71	80
LWA to environment [dBA]	70	54	67	65	59	57	49	37	31	49	59



Parameters	Centro-M EC 315	Centro-M EC 315 max	Centro-M EC 355	Centro-M EC 400
Voltage [V / 50/60 Hz]	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230
Power [W]	164	183	693	704
Current [A]	1.15	1.44	3.07	3.13
Maximum air flow [m ³ /h (l/s)]	1370 (381)	1820 (506)	3450 (958)	4790 (1331)
RPM [min ⁻¹]	2900	2780	2768	2206
Sound pressure at 3 m [dBA]	49	49	62	67
Transported air temperature [°C]	-25...+60	-25...+60	-25...+60	-25...+60
SEC class	-	-	-	-
IP rating	IPX4	IPX4	IPX4	IPX4
ErP compliance	2018	2018	2018	2018

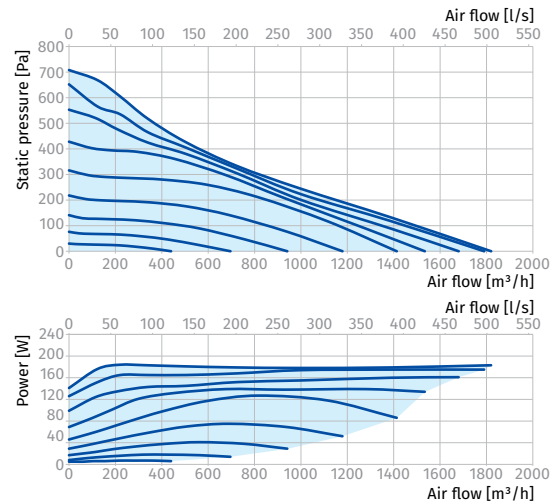
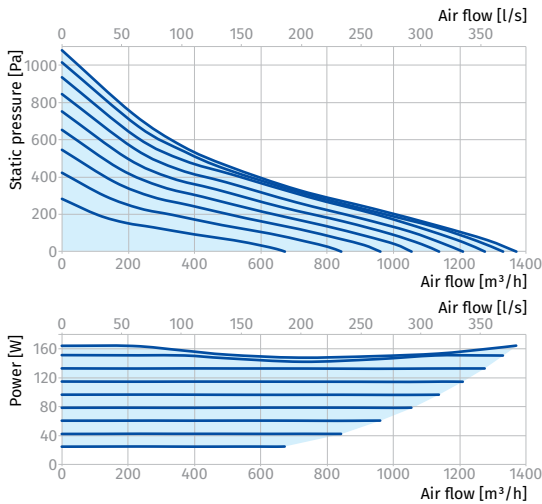
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CENTRO-M EC 315

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	93	74	89	90	81	75	68	57	47	72	82
LWA to outlet [dBA]	92	65	81	91	82	67	64	57	45	72	81
LWA to environment [dBA]	70	55	67	65	59	57	49	37	31	49	59

CENTRO-M EC 315 MAX

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	92	62	79	87	85	86	83	78	66	71	81
LWA to outlet [dBA]	90	65	78	74	84	85	84	78	64	69	79
LWA to environment [dBA]	69	31	49	59	63	66	62	53	39	49	59



CENTRO-M EC 355

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	90	59	67	79	84	85	83	80	64	69	79
LWA to outlet [dBA]	88	61	70	75	83	84	78	72	57	67	77
LWA to environment [dBA]	83	69	75	70	73	79	72	73	49	62	72

CENTRO-M EC 400

Sound power level, A-weighted	Total	Octave frequency bands [Hz]								LpA 3 m	LpA 1 m
		63	125	250	500	1000	2000	4000	8000		
LWA to inlet [dBA]	98	62	73	84	91	94	91	86	73	77	87
LWA to outlet [dBA]	94	62	73	79	85	91	86	80	68	73	83
LWA to environment [dBA]	87	45	63	81	81	82	80	71	58	67	77

