

VENTS DuoVent EC Series



Centrifugal fans in a metal casing for round air ducts. Air flow up to **4410 m³/h**.

Application

Exhaust ventilation systems for commercial, office and other public or industrial premises with limited installation space.

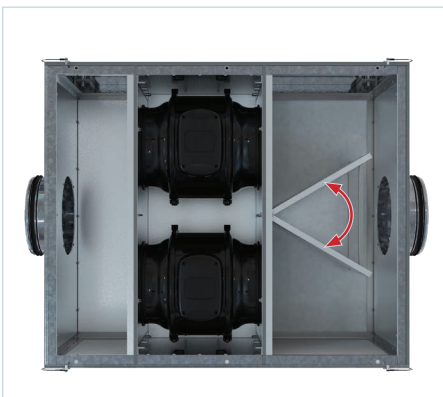
The DuoVent EC fan ensures uninterrupted ventilation operation: if one fan fails, the second fan automatically switches on.

The modes are controlled by the controller, which is not included in the delivery set and must be ordered separately.

Designed for connection to round air ducts with a diameter of 150 to 400 mm.

Design

The fan casing is made of galvanized sheet steel using heat- and sound-insulation material. The air damper allows adjusting the direction of air flow.



Controlled by the air flow. The round connecting spigots are rubber sealed.

The hinged cover gives free access to the motors, simplifies installation and maintenance of the fans and ducts without dismantling.

Electric motors

The unit is equipped with high-efficient electronically commutated (EC) DC motors with mixed-type impellers. These state-of-the-art motors are the most advanced solution in energy efficiency today.

The motors are equipped with built-in overheating protection. Ball bearings in the motor ensure long service life (40 000 hours).

To achieve accurate performance, low noise levels and safe fan operation, each turbine is dynamically balanced during assembly.

The motor ingress protection rating is IP44.

Impeller

Thanks to the improved mixed-type impeller, which is a hybrid of axial and centrifugal impeller, the DuoVent EC unit has low power consumption and noise level with high performance.

The diffuser, the specially profiled impeller and the directing vanes at the outlet of the fan casing distribute air flow in such a way as to attain the best combination of high performance and high pressure at low noise level.



Controller

Allows tracking the motor failures and signalling them, as well as automatically switching the unit to work with a functioning motor. The controller is not included in the delivery set and must be ordered separately.

Controller functions:

- Automatic alternation of the active fan with preset switching period.
- Forced constant operation of the fan A.
- Forced constant operation of the fan B.
- Fan alarm. The failed fan is switched off, the second fan is switched on. The controller generates an error signal and corresponding indication.
- Fan speed control.
- Boost mode increases the performance of the fan. It is possible to set the time during which the fan will run in this mode.
- Test mode. Automatic alternation of the active fan with a period from 1 to 12 min.
- Checking motors at start-up.
- Possibility of connection to BMS.
- Possibility of connecting an external 0-10 V sensor.
- Possibility of connecting external devices (10 V and 24 V).

Mounting

The duct fans are intended for mounting to round air ducts. The fans are installed between the air ducts. While mounting the fan provide enough access for servicing and repair operations.

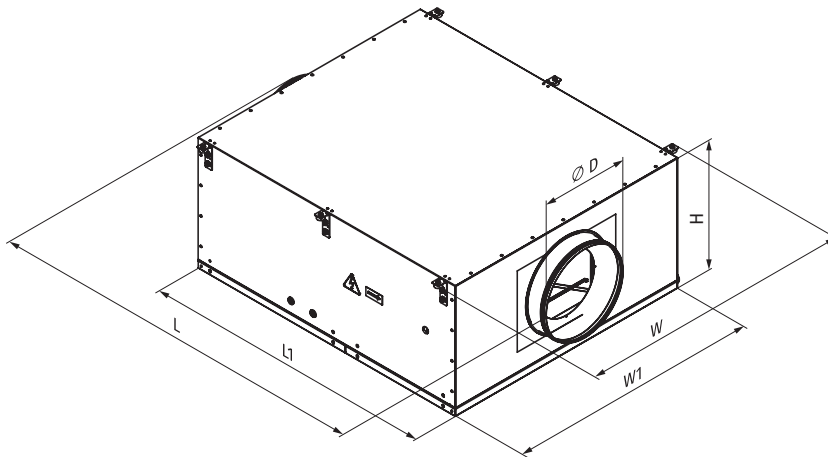


Designation key

Series	Spigot diameter [mm]	Motor type
VENTS DuoVent: sound-insulated fan for round air ducts with two motors	150; 200; 250; 315; 350; 400	EC: synchronous electronically commutated motor

Overall dimensions of fans

Model	Dimensions [mm]						Weight [kg]
	ØD	L	L1	H	W	W1	
DuoVent 150 EC	149	975	850	321	621	540	28
DuoVent 200 EC	199	975	850	375	791	710	39
DuoVent 250 EC	249	1062	939	417	887	806	47
DuoVent 315 EC	314	1293	1170	520	1092	1010	97
DuoVent 355 EC	354	1334	1170	520	1092	1010	97
DuoVent 400 EC	399	1358	1194	551	1182	1101	129

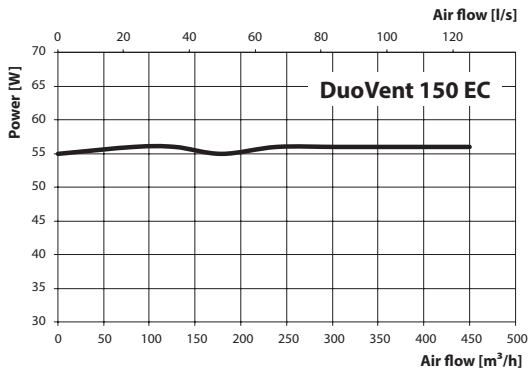
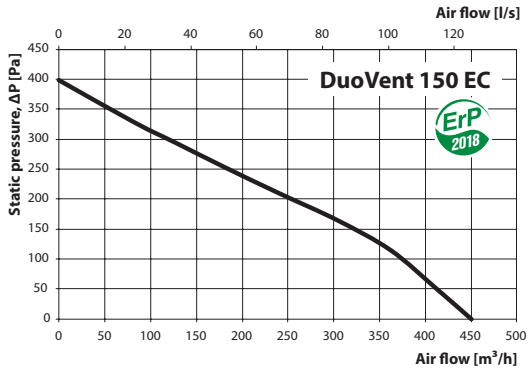


Technical data

	DuoVent 150 EC	DuoVent 200 EC	DuoVent 250 EC	DuoVent 315 EC	DuoVent 355 EC	DuoVent 400 EC
Voltage [V]	1~220-240					
Frequency [Hz]	50/60					
Power [W]	56	117	170	535	354	737
Current [A]	0.48	0.94	1.29	1.56	1.57	4.65
Maximum air flow [m ³ /h]	450	910	1390	2780	3060	4410
Maximum air flow [l/s]	125	253	386	772	850	1225
RPM [min ⁻¹]	3390	3404	3282	2474	2470	2370
Sound pressure level at 3 m distance [dBA]	37.5	43	49	45	45	48
Transported air temperature [°C]	-25...+55					
Protection class	IPX4					
Motor protection	IP44	IP44	IP54	IP54	IP44	IP44

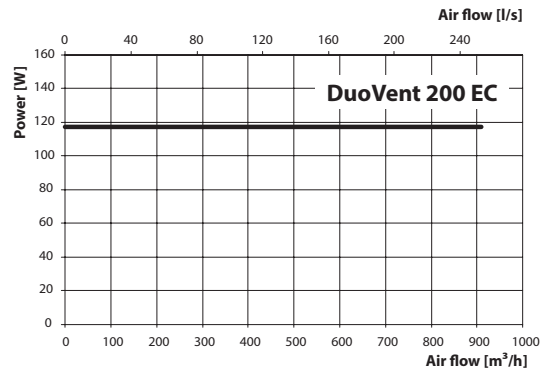
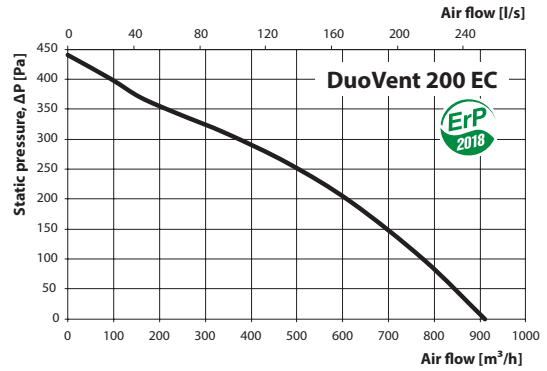
SOUND-INSULATED FANS

VENTS DuoVent EC



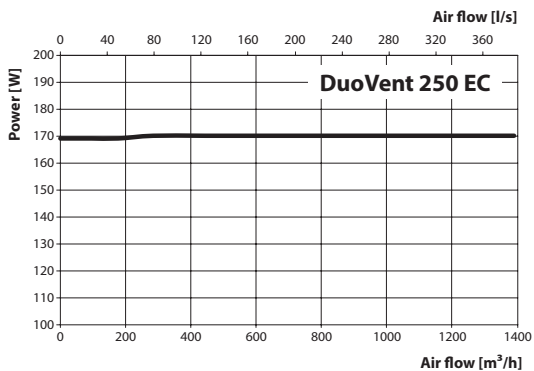
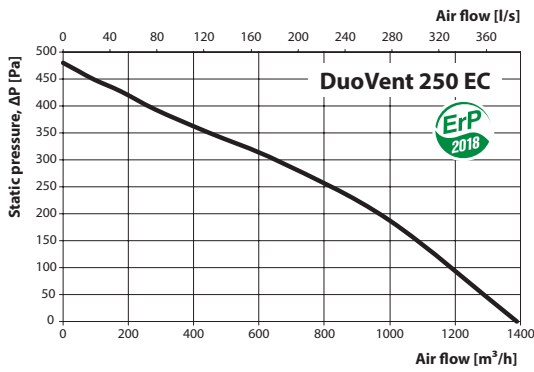
A-weighted sound power level		Octave frequency band [Hz]								LpA, 3 m	LpA, 1 m		
		Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA
L _{WA} to inlet	dBA	63	39	58	61	49	42	39	42	35	35	42	52
L _{WA} to outlet	dBA	62	34	54	60	48	38	37	43	37	37	41	51
L _{WA} to environment	dBA	58	38	56	54	44	38	33	32	26	26	37.5	47.5

VENTS DuoVent EC



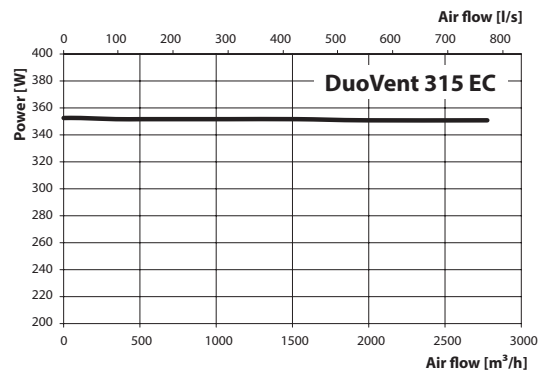
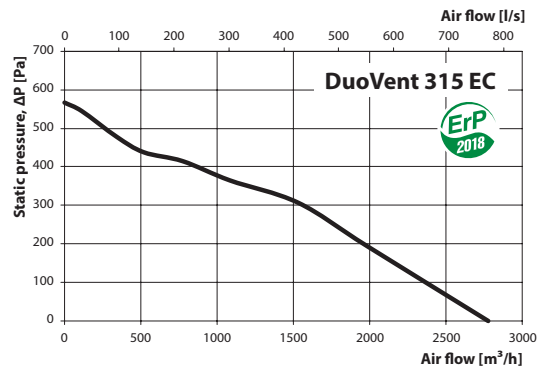
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		Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA
L _{WA} to inlet	dBA	69	44	64	67	54	46	42	46	38	38	48	58
L _{WA} to outlet	dBA	67	39	60	66	53	41	40	46	40	40	47	57
L _{WA} to environment	dBA	64	43	61	59	48	41	35	35	29	29	43	53

VENTS DuoVent EC



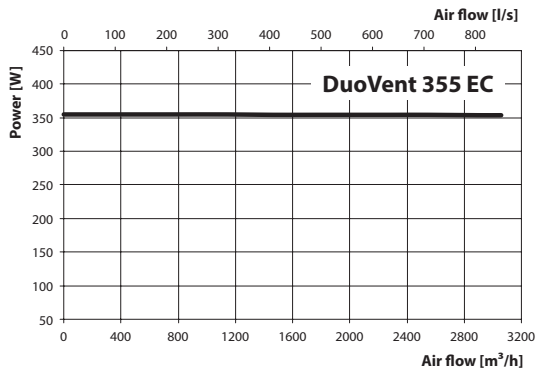
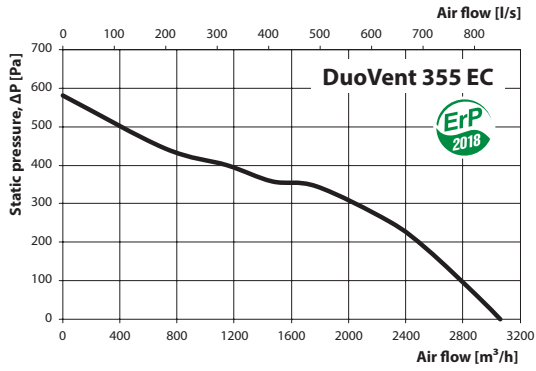
A-weighted sound power level		Octave frequency band [Hz]								LpA, 3 m	LpA, 1 m		
		Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA
L _{WA} to inlet	dBA	72	47	67	69	56	47	44	48	39	39	51	61
L _{WA} to outlet	dBA	73	44	65	72	57	44	42	49	43	43	52	62
L _{WA} to environment	dBA	70	49	68	65	52	44	38	38	31	31	49	59

VENTS DuoVent EC



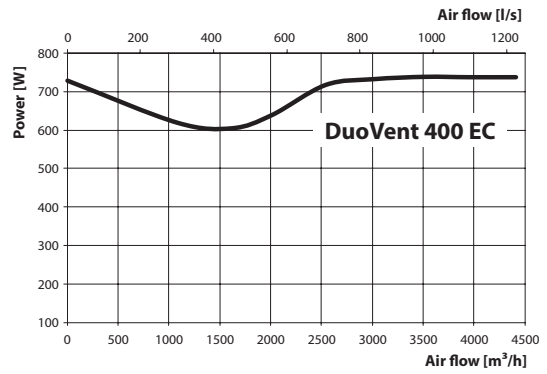
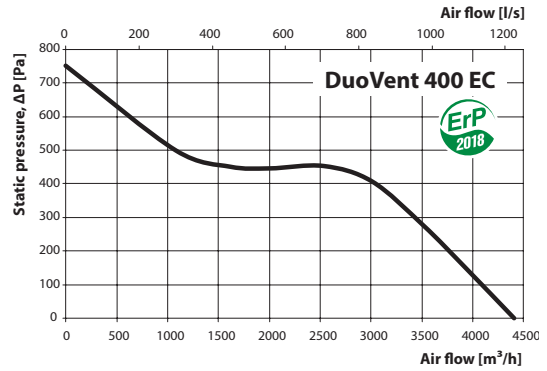
A-weighted sound power level		Octave frequency band [Hz]								LpA, 3 m	LpA, 1 m		
		Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA
L _{WA} to inlet	dBA	70	46	66	68	55	47	43	47	39	39	50	60
L _{WA} to outlet	dBA	68	40	61	67	53	42	40	47	40	40	48	58
L _{WA} to environment	dBA	66	45	64	61	49	42	36	36	29	29	45	55

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A-weighted sound power level		Octave frequency band [Hz]										LpA, 3 m	LpA, 1 m
	Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA	
L _{WA} to inlet	dBA	72	47	68	70	56	48	44	48	39	52	62	
L _{WA} to outlet	dBA	71	42	63	70	55	43	41	48	42	50	60	
L _{WA} to environment	dBA	66	45	64	61	49	42	36	36	29	45	55	

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A-weighted sound power level		Octave frequency band [Hz]										LpA, 3 m	LpA, 1 m
	Hz	Gen.	63	125	250	500	1000	2000	4000	8000	dBA	dBA	
L _{WA} to inlet	dBA	76	50	71	74	59	50	46	50	41	55	65	
L _{WA} to outlet	dBA	75	46	68	74	58	45	43	51	44	54	64	
L _{WA} to environment	dBA	68	47	66	63	51	44	37	37	30	48	58	