

# Iso-B EC

## Sound-insulated inline centrifugal fans

### Use

- Supply and extract ventilation systems installed in premises with high requirements to the noise level.
- Suitable for limited mounting space.
- Unit design includes a possibility of space-restricted installation above suspended ceilings.
- Compatible with Ø 100 up to 315 mm round air ducts.



**Air flow:**  
up to 1260 m<sup>3</sup>/h  
350 l/s



**Power:**  
from 92.6 W



**Noise level:**  
from 32 dBA



### Design

- Galvanized steel casing internally filled thermal- and sound-insulating layer.
- The connection spigots are equipped with rubber seals.
- Fixing brackets for easy mounting.

### 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.

### 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.

- 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

- The fans are intended for installation in round air ducts. They are installed between the air ducts.
- The use of flexible connectors requires fixation of the fan on the building structure by means of supports, mounts or fixing brackets.
- The fan can be fixed in any position, taking into account the air flow direction indicated by the arrow on the fan casing.
- While mounting the fan provide enough access for servicing and repair operations.
- Electrical connection and installation must be performed in accordance with the instruction manual and the electrical connections diagram applied to the terminal box.

### Modifications and options

- FR1:** smooth speed controller adjustable from 0 to 100 % and power cable with mains plug.
- W1:** power cable with mains plug.

#### Designation key

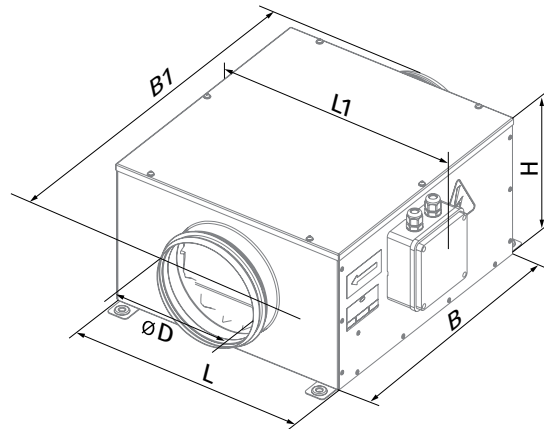
Series	Motor	Spigot diameter [mm]	Options
Iso-B	EC: electronically commutated motor	100; 125; 150; 160; 200; 250; 315	FR1: smooth speed controller adjustable from 0 to 100 % and power cable with mains plug W1: power cable with mains plug

#### Accessories

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

**Overall dimensions [mm]**

Type	Ø D	L	L1	B	B1	H
Iso-B EC 100 (FR1)	99	325	375 (388)	355	447	200
Iso-B EC 125 (FR1)	124	325	375 (388)	355	447	200
Iso-B EC 150 (FR1)	149	325	405 (418)	385	447	220
Iso-B EC 160 (FR1)	159	325	405 (418)	385	447	220
Iso-B EC 200 (FR1)	199	435	490 (503)	485	590	295
Iso-B EC 250 (FR1)	249	435	490 (503)	485	590	295
Iso-B EC 315 (FR1)	314	435	560 (663)	545	650	405



**Technical data**

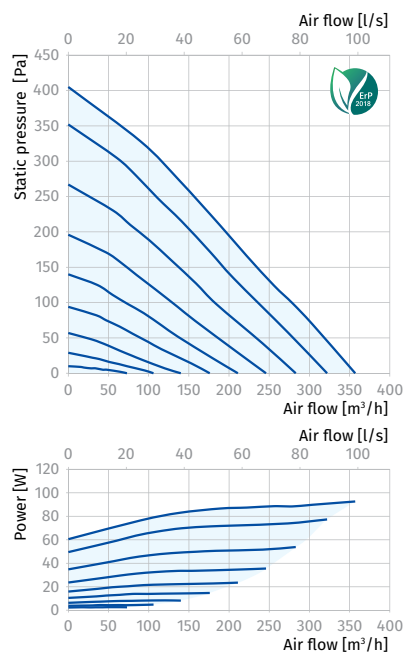
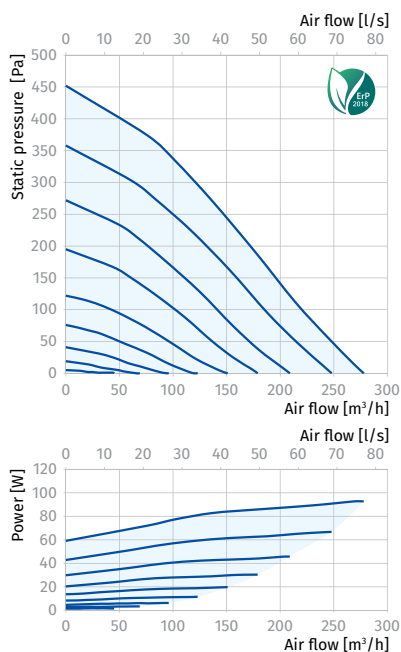
Parameters	Iso-B EC 100	Iso-B EC 125	Iso-B EC 150 Iso-B EC 160	Iso-B EC 200	Iso-B EC 250	Iso-B EC 315
Voltage [V]	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230
Frequency [Hz]	50/60	50/60	50/60	50/60	50/60	50/60
Power [W]	92.7	92.6	94.8	101.6	163.7	164.3
Current [A]	0.75	0.75	0.77	0.83	1.34	1.35
Maximum air capacity [m <sup>3</sup> /h (l/s)]	278 (77)	357 (99)	425 (118)	700 (194)	1145 (318)	1260 (350)
RPM [min <sup>-1</sup> ]	3200	3200	3200	2580	2510	2620
Sound pressure level at 3 m distance [dBA]	32	34	35	37	40	42
Max. transported air temperature [°C]	-25...+60	-25...+60	-25...+60	-25...+60	-25...+60	-25...+60
Energy efficiency class	C	C	B	B	B	-
IP rating	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Motor IP rating	IP55	IP55	IP55	IP55	IP55	IP55
ErP	2018	2018	2018	2018	2018	2018

**ISO-B 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]	61	47	55	59	51	47	41	41	32	41	51
LWA to outlet [dBA]	64	52	59	60	57	47	41	42	36	44	54
LWA to environment [dBA]	53	42	49	49	41	36	31	27	23	32	42

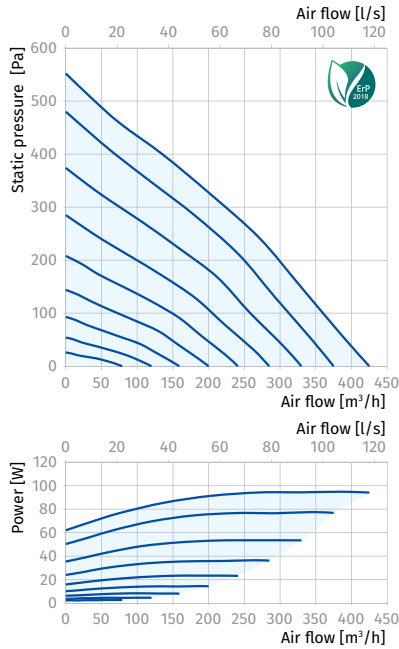
**ISO-B EC 125**

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]	60	46	54	58	50	46	40	40	31	40	50
LWA to outlet [dBA]	63	51	58	59	56	46	40	41	35	43	53
LWA to environment [dBA]	55	44	51	51	43	38	32	28	24	34	44



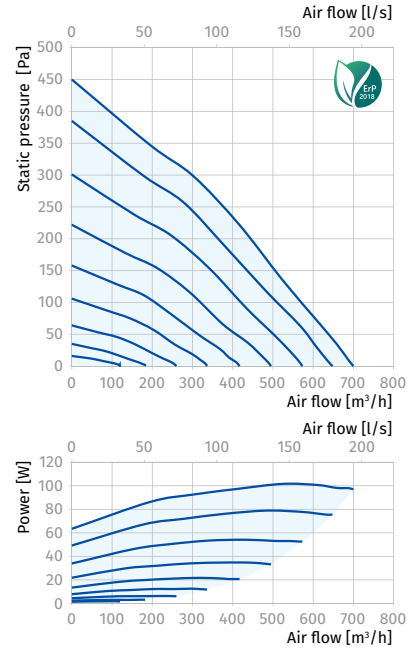
**ISO-B EC 150 / ISO-B EC 160**

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]	63	48	56	60	52	48	42	42	32	42	52
LWA to outlet [dBA]	65	53	60	61	58	48	42	43	36	45	55
LWA to environment [dBA]	56	45	52	52	44	39	33	29	24	35	45



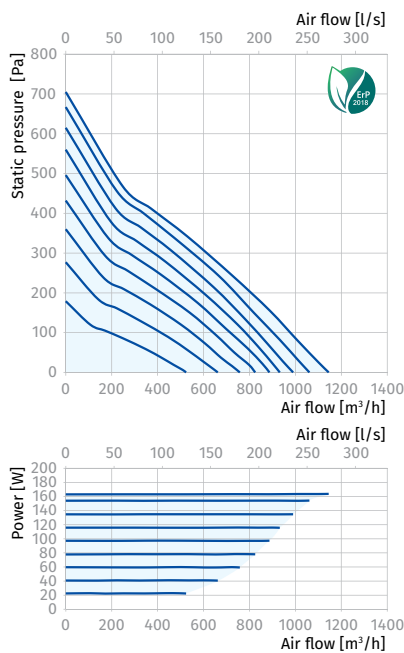
**ISO-B EC 200**

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]	62	46	59	59	41	37	34	30	23	41	51
LWA to outlet [dBA]	65	52	64	51	47	43	35	29	22	44	54
LWA to environment [dBA]	57	46	53	54	45	40	33	30	25	37	47



**ISO-B 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]	66	49	62	62	44	39	36	32	24	45	55
LWA to outlet [dBA]	68	55	68	54	50	45	37	31	24	48	58
LWA to environment [dBA]	61	49	57	57	48	43	36	32	27	40	50



**ISO-B 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]	67	52	61	65	56	51	45	45	35	46	56
LWA to outlet [dBA]	70	56	65	66	62	51	44	46	39	49	59
LWA to environment [dBA]	62	51	58	59	50	44	37	32	28	42	52

