

# Iso-Mix EC

## Sound-insulated inline mixed-flow fans

### Use

- Combined supply and exhaust ventilation systems of various commercial and industrial spaces with stringent noise requirements (such as libraries, conference halls, classrooms, kindergarten playrooms etc.).
- For ventilation air ducts requiring high pressure, powerful air flow and low noise level.
- Compatible with Ø100 up to Ø315 mm air ducts.



**Air flow:**  
up to 1995 m<sup>3</sup>/h  
554 l/s



**Power:**  
from 32 W



**Noise level:**  
from 37 dBA



### Features

- The new series of **Iso-Mix EC** duct fan series is provided with a special noise-insulated casing which ensures silent operation and excellent aerodynamic characteristics.
- **Iso-Mix EC** fans combine the versatility and outstanding performance of both axial and centrifugal fans producing a powerful air flow and high pressure while retaining the signature energy-efficiency and response of EC motors.
- Several fans can be integrated into a single computer-controlled system with sensor feedback combined with speed control across the entire dynamic range.

### Design

- The external casing is made of steel with a polymer coating.
- The internal casing perforations conduct sound waves and direct them at the noise-absorbing material at a specific angle. Noise and heat insulation is ensured by a mineral wool layer 50 mm in thickness. Wideband noise control is achieved by means of special casing perforation and the use of noise-absorbing material.
- The inner casing and the impeller are made of durable high-quality plastic.
- Conical impellers with specially profiled blades help boost angular velocity of the air flow resulting in higher pressure and air capacity compared to the conventional designs. The combination of a diffuser, a specially designed impeller and flow straightener vanes at the fan outlet allow for an optimum flow distribution to achieve high capacity and increased air pressure without generating excessive noise.
- The fan casing is equipped with an external water-tight terminal box for electrical connections.

### Motor

- The fans feature high-efficiency electronically commutated (EC) direct current motors. These state-of-the-art units offer excellent energy efficiency.
- EC motors combine high performance and optimum control across the entire speed range. The performance efficiency of the electronically commutated motors reaches 90%.

### Speed control

- The fans are controlled by means of a 0-10 V control signal while the performance regulation is based on the feedback from the temperature, smoke and other sensors as well as other vital parameter settings.
- As the control signal changes the EC fan adjusts the speed to supply the exact amount of air required by the ventilation system. The maximum fan speed does not depend on the electric mains frequency enabling compatibility with both 50 Hz and 60 Hz networks.
- The fans can be easily combined into a single computer-controlled network. Special software allows for precise control over the operating parameters of the network units. All the system parameters can be monitored from a computer screen allowing to program operating parameters for each fan on the network individually.

### Mounting

- The fans are designed to be used with round air ducts.
- The fan casing has mounting brackets for convenient installation onto the floor, walls or ceiling. The ducts can be fitted at any angle relative to the fan axis.
- Make sure to provide sufficient maintenance access during fan installation. Electrical connection and installation must be performed in accordance with the instruction manual and the electrical connections diagram applied to the terminal box.
- A single system may have several fans installed in parallel to boost the output capacity or in series to boost the working pressure.

#### Designation key

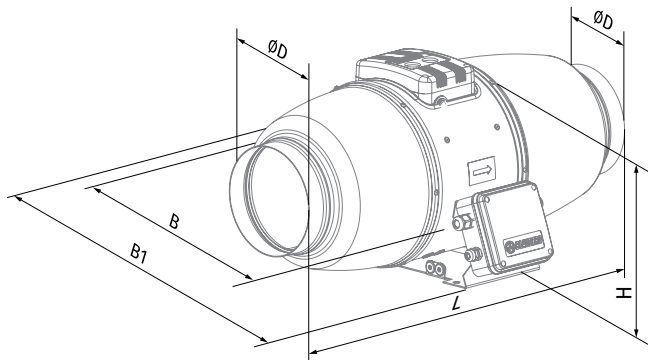
Series	Motor type	Spigot diameter [mm]
Iso-Mix	EC: electronically commutated motor	100; 125; 150; 160; 200; 250; 315

#### Accessories

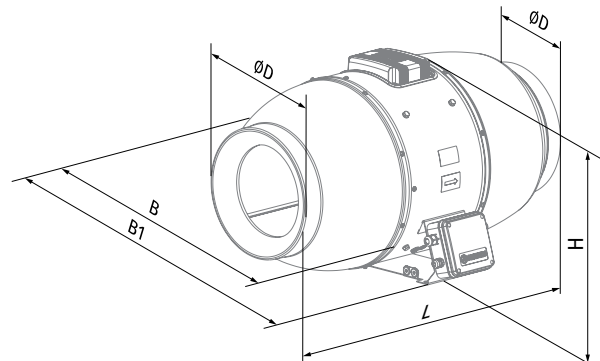
Silencer	Filter boxes	Heaters	Flexible anti-vibration connectors	Air dampers	Clamps	Speed controllers
SD	KFBK KFBT	EKH WKH	VRV	VK	K	CDT E/0-10

**Overall dimensions [mm]**

Type	ØD	B	B1	L	H	Weight, [kg]
Iso-Mix EC 100	98	214	243	505	251	4.6
Iso-Mix EC 125	123	214	243	474	251	4.6
Iso-Mix EC 150	148	247	273	579	263	6.1
Iso-Mix EC 160	159	281	327	566	284	6.3
Iso-Mix EC 200	198	293	386	550	295	8.0
Iso-Mix EC 250	248	358	445	658	360	15.0
Iso-Mix EC 315	313	432	520	780	434	25.0



Iso-Mix EC 100 – Iso-Mix EC 150



Iso-Mix EC 160 – Iso-Mix EC 315

**Technical data**

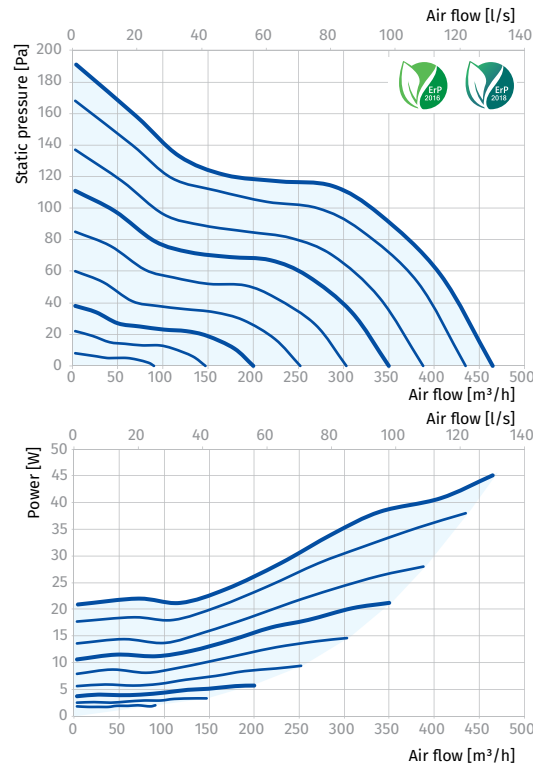
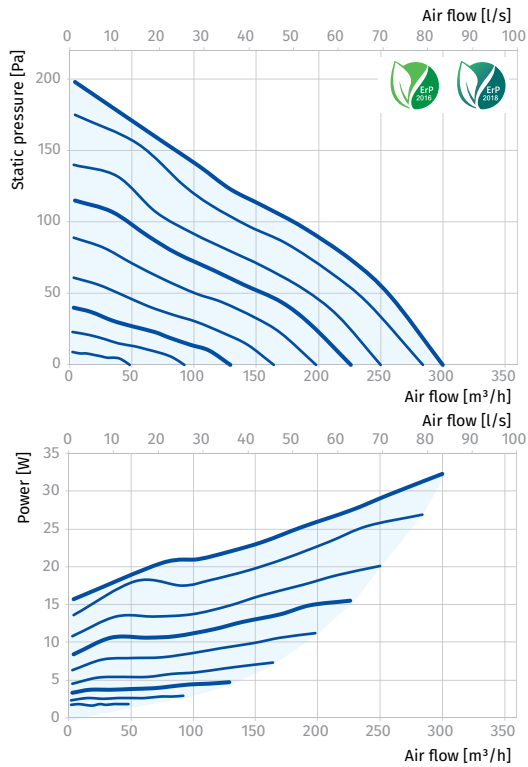
Parameters	Iso-Mix EC 100	Iso-Mix EC 125	Iso-Mix EC 150 (160)	Iso-Mix EC 200	Iso-Mix EC 250	Iso-Mix EC 315
Voltage [V / 50 / 60 Hz]	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230	1 ~ 230
Power [kW]	32	45	65	140	197	306
Current [A]	0.29	0.39	0.53	0.99	1.35	2.00
Maximum air flow [m <sup>3</sup> /h (l/s)]	300 (83)	465 (129)	602 (167)	1095 (304)	1500 (417)	1995 (554)
RPM [min <sup>-1</sup> ]	3018	3036	3018	2880	2784	2508
Sound pressure at 3 m [dBA]	37	43	38	43	43	46
Transported air temperature [°C]	-25...+55	-25...+55	-25...+55	-25...+55	-25...+55	-25...+55
Ingress protection rating	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4
Motor IP rating	IP54	IP54	IP54	IP54	IP54	IP54
ErP	2016, 2018	2016, 2018	2016, 2018	2016, 2018	2016, 2018	2016, 2018

**ISO-MIX EC 100**

Sound power level, A-weighted	Octave frequency bands [Hz]								LpA, 3 m [dBA]	LpA, 1 m [dBA]	
	Gen.	63	125	250	500	1000	2000	4000			8000
L <sub>WA</sub> to inlet [dBA]	62	46	59	59	42	37	34	31	23	42	52
L <sub>WA</sub> to outlet [dBA]	57	46	57	45	42	38	31	26	20	37	47
L <sub>WA</sub> to environment [dBA]	57	39	45	51	55	43	42	32	23	37	47

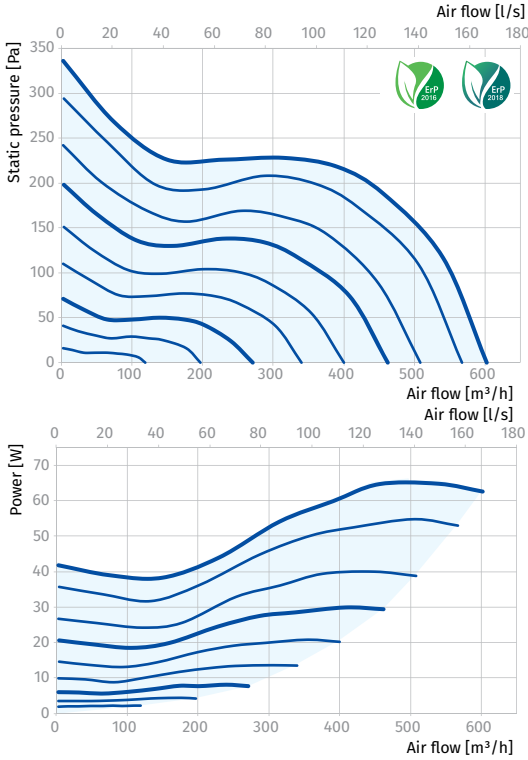
**ISO-MIX EC 125**

Sound power level, A-weighted	Octave frequency bands [Hz]								LpA, 3 m [dBA]	LpA, 1 m [dBA]	
	Gen.	63	125	250	500	1000	2000	4000			8000
L <sub>WA</sub> to inlet [dBA]	68	51	65	65	46	41	38	34	25	48	58
L <sub>WA</sub> to outlet [dBA]	65	52	65	51	48	43	35	30	23	45	55
L <sub>WA</sub> to environment [dBA]	63	50	53	57	61	50	49	38	29	43	53



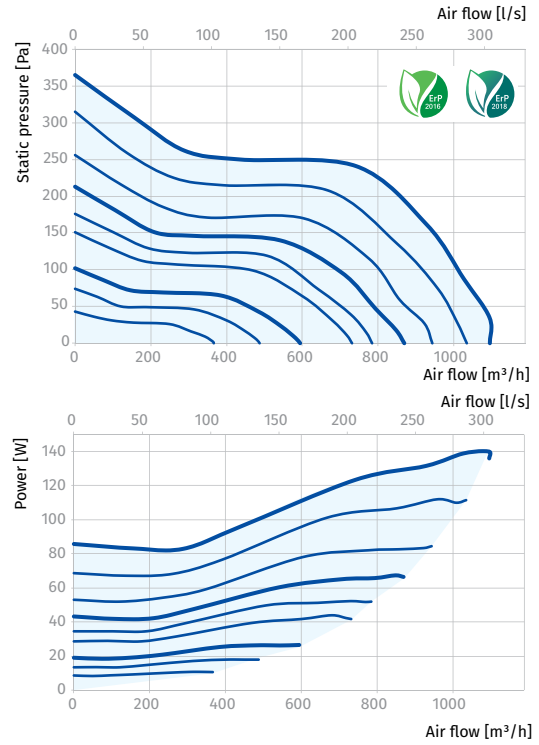
### ISO-MIX EC 150 (160)

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to inlet [dBA]	61	45	58	58	41	37	33	30	23	41	51
L <sub>WA</sub> to outlet [dBA]	58	47	58	46	43	39	32	27	20	38	48
L <sub>WA</sub> to environment [dBA]	58	48	48	50	57	45	43	36	30	38	48



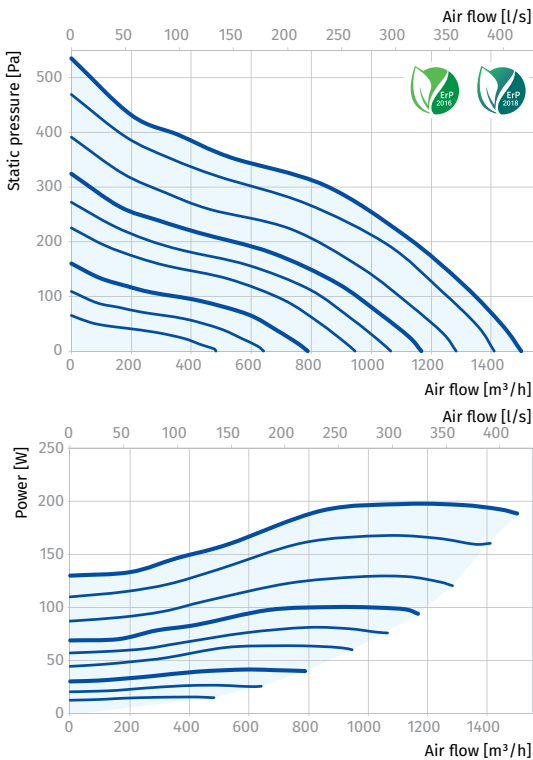
### ISO-MIX EC 200

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to inlet [dBA]	68	37	47	57	63	63	62	61	55	48	58
L <sub>WA</sub> to outlet [dBA]	70	42	50	59	64	66	64	63	58	50	60
L <sub>WA</sub> to environment [dBA]	63	31	43	53	61	56	53	47	37	43	52



### ISO-MIX EC 250

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to inlet [dBA]	71	46	49	61	67	66	64	59	53	51	60
L <sub>WA</sub> to outlet [dBA]	75	47	55	64	72	70	67	64	57	55	64
L <sub>WA</sub> to environment [dBA]	63	41	46	53	61	59	52	43	32	43	53



### ISO-MIX EC 315

Sound power level, A-weighted	Octave frequency bands [Hz]									LpA, 3 m [dBA]	LpA, 1 m [dBA]
	Gen.	63	125	250	500	1000	2000	4000	8000		
L <sub>WA</sub> to inlet [dBA]	72	41	55	64	65	70	65	63	55	52	62
L <sub>WA</sub> to outlet [dBA]	77	52	61	67	74	71	69	67	62	57	66
L <sub>WA</sub> to environment [dBA]	66	33	48	58	60	63	57	50	38	46	55

