

# Iso-Primo EC

## Sound-insulated inline mixed-flow fans with EC motor

### 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 Ø 200 up to Ø 250 mm air ducts.



**Air flow:**  
up to 1750 m³/h  
486 l/s



**Power:**  
from 121 W



**Noise level:**  
from 44 dBA

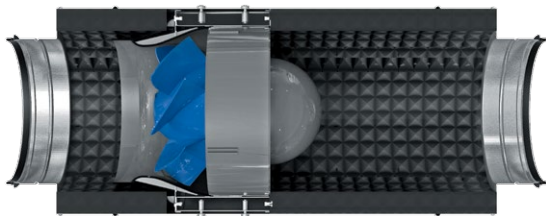


### Features

- The new series of **Iso-Primo EC** duct fan series is provided with a special sound-insulated casing which ensures silent operation and excellent aerodynamic characteristics.
- Iso-Primo 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 galvanized steel.
- Noise and heat insulation is ensured by a acoustic foam layer 30 mm in thickness.
- The inner casing and the impeller are made of durable high-quality plastic.
- Due to the conically shaped polymer impeller with specially profiled blades, the air stream circular velocity increases, which results in higher air flow and pressure, as compared to characteristics of standard axial fans. The specially designed diffuser, impeller and airflow rectifier at the fan outlet provide smooth air flow distribution and enable the best combination of high capacity, powerful pressure and low noise.
- The fan casing is equipped with an external water-tight terminal box for electrical connections.



### Motor

- High-efficient direct current EC motor.
- 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 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.

### 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 designed to be used with round air ducts.
- The fan casing has mounting brackets for convenient installation to the 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.

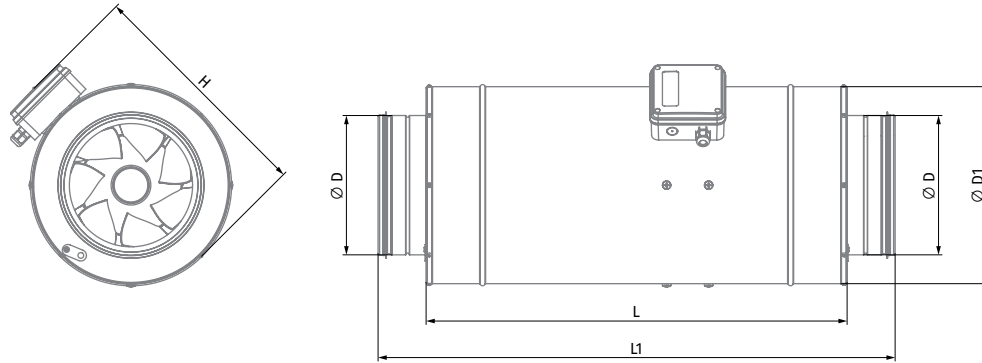
Designation key		
Series	Motor type	Spigot diameter [mm]
Iso-Primo	EC: electronically commutated motor	200; 250

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

SOUND-INSULATED INLINE FANS

**Overall dimensions [mm]**

Type	Ø D	Ø D1	H	L	L1	Weight [kg]
Iso-Primo EC 200 (G1, G1, W, FR1)	198	281	339	601	739	8.2
Iso-Primo EC 250 (G1, G1, W, FR1)	249	337	389	601	739	9.5



**Technical data**

Parameters	Iso-Primo EC 200	Iso-Primo EC 250
Voltage [V / 50(60) Hz]	1~ 230	1~ 230
Power [W]	121	168
Current [A]	0,96	1,34
Maximum air flow [m³/h (l/s)]	1210 (336)	1750 (486)
RPM [min <sup>-1</sup> ]	3100	3282
Sound pressure at 3 m [dBA]	47	48
Transported air temperature [°C]	-25...+55	-25...+55
IP rating	IPX4	IPX4
Motor IP rating	IP44	IP44
ErP	2018	2018

SOUND-INSULATED INLINE FANS

**ISO-PRIMO 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]	71	67	67	63	59	50	45	44	40	51	61
LWA to outlet [dBA]	72	68	68	63	61	52	48	47	38	52	62
LWA to environment [dBA]	68	58	54	64	63	42	42	30	23	47	57

**ISO-PRIMO 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]	72	68	68	64	60	51	45	45	40	52	62
LWA to outlet [dBA]	73	70	69	64	62	52	49	48	39	53	63
LWA to environment [dBA]	69	59	55	66	65	43	43	30	24	48	58

