

# Iso-V EC

## Sound-insulated inline fans with EC motor

### Use

- Supply and extract ventilation systems installed in premises with high requirements to the noise level.
- A perfect solution for various ventilation system configurations due to a special transformable casing design.
- Suitable for use as a component of a modular air handling unit.
- For arranging energy-saving and controllable ventilation systems.
- Compatible with Ø 315 up to 630 mm round air ducts or 500x500 up to 800x800 mm rectangular air ducts.



**Air flow:**  
up to 16740 m³/h  
4650 l/s



**Power:**  
from 150 W



**Noise level:**  
from 35 dBA



### Design

- Casing made of aluminium frame and removable aluzinc thermal and sound-insulated double-skinned sandwich panels.
- Casing internally filled with 20 mm non-flammable mineral wool.
- Position of the removable panels can be adjusted to inline air flow or 90° angle air flow.
- Due to corrosion-resistant and thermally insulated casing the fan is suitable for external use.
- The fan is compatible with square to square vibration absorbing connectors (AKV series) or square to round connector-reducers (ARV series), both available upon separate order.
- The round spigot of the ARV connector-reducer is rubber sealed for air tight connection.

### 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 und 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.

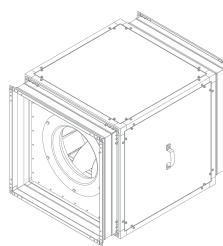
### Operation and speed control

- 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.

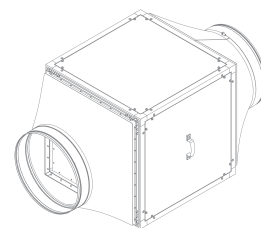
- The control signal value changes depending on air temperature, pressure, smoke concentration and other parameters.
- During signal value change the fan with EC motor correspondingly changes the rotations speed and delivers required air volume to the ventilation system.
- The computer central building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

### Mounting

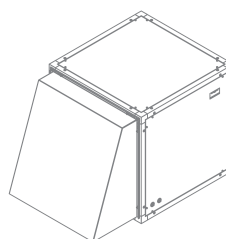
- Compatible both with square and round air ducts.
- Connection to air ducts through flexible vibration absorbing connectors or connector-reducers of a matching section.
- External terminal box for connection to power mains.
- Mounting in any position in compliance with the air flow direction. Maintenance space must be provided.
- In case of outdoor mounting the fan may be equipped with the upper protecting cover (RSD-IV series) or the outer hood (AH-IV series) to be installed at air inlet/outlet.



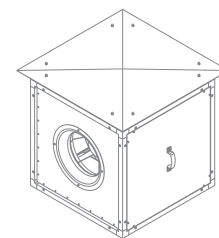
Iso-V EC fan with vibration-absorbing flexible connectors AKV series



Iso-V EC fan with connecting reducers ARV series



Iso-V EC fans with AH-IV outer hood



Iso-V EC fans with RSD-IV protecting cover

#### Designation key

Series	Motor type	Spigot diameter [mm]
Iso-V	EC: electronically commutated motor	315; 355; 400; 450; 500; 560; 630

#### Accessories

Connecting reducers

Flexible connectors

Outer hoods

Protecting cover

Speed controllers



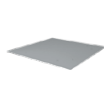
ARV



AKV



AH-IV



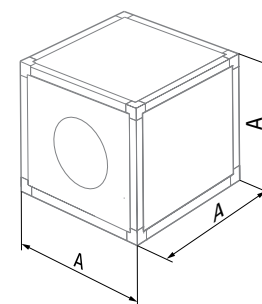
RSD-IV



CDT E/0-10

## Fan and accessories Dimensions

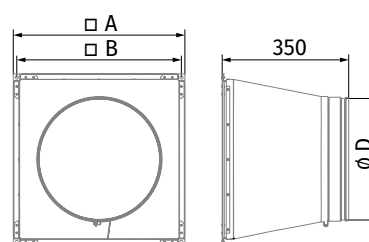
Type	Dimensions [mm]		Options		RSD-IV protecting cover	AH-IV outer hood
	A	Weight [kg]	ARV connector-reducer	AKV vibration absorbing connector		
Iso-V EC 315	500	25	ARV 315	AKV 500	RSD-IV 315-355	AH-IV 315-355
Iso-V EC 355	500	29	ARV 355	AKV 500	RSD-IV 315-355	AH-IV 315-355
Iso-V EC 400	670	42	ARV 400	AKV 670	RSD-IV 400-500	AH-IV 400-500
Iso-V EC 450	670	46	ARV 450	AKV 670	RSD-IV 400-500	AH-IV 400-500
Iso-V EC 500	670	50	ARV 500	AKV 670	RSD-IV 400-500	AH-IV 400-500
Iso-V EC 560	800	60	ARV 560	AKV 800	RSD-IV 560-630	AH-IV 560-630
Iso-V EC 630	800	69	ARV 630	AKV 800	RSD-IV 560-630	AH-IV 560-630



Iso-V EC

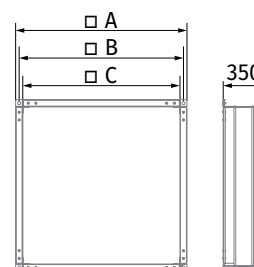
### ARV

Type	Dimensions [mm]		
	A	B	Ø D
ARV 315	490	470	315
ARV 355	490	470	355
ARV 400	660	640	400
ARV 450	660	640	450
ARV 500	660	640	500
ARV 560	790	770	560
ARV 630	790	770	630



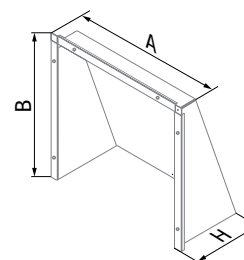
### AKV

Type	Dimensions [mm]		
	A	B	C
AKV 500	490	470	445
AKV 670	660	640	615
AKV 800	790	770	745



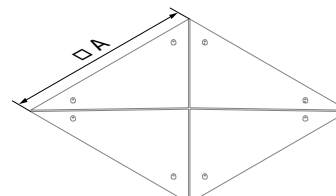
### AH-IV

Type	Dimensions [mm]			Weight [kg]
	A	B	H	
AH-IV 315-355	478	458	225	3.2
AH-IV 400-500	648	628	321	6
AH-IV 560-630	778	758	421	9.1



### RSD-IV

Type	Dimensions [mm]		Weight [kg]
	A		
RSD-IV 315-355	600		2.3
RSD-IV 400-500	770		4.65
RSD-IV 560-630	900		7.65



## Technical data

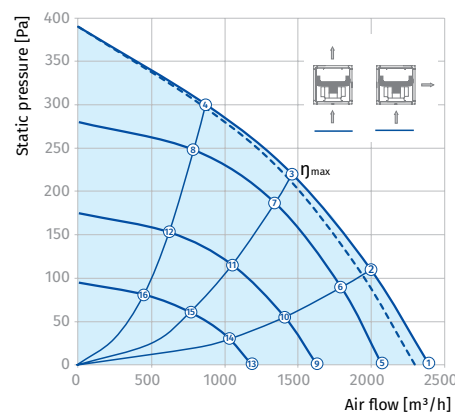
Parameters	Iso-V EC 315	Iso-V EC 355	Iso-V EC 400
Voltage [V]	1 ~ 230	1 ~ 230	1 ~ 230
Frequency [Hz]	50/60	50/60	50/60
Power [W]	150	250	500
Current [A]	1.23	1.1	2.2
Max. air flow at air flow direction [m³/h (l/s)]: – perpendicular air flow – direct air flow	2370 (658) 2252 (626)	3830 (1064) 3639 (1011)	5660 (1572) 5377 (1494)
RPM [min⁻¹]	1600	1450	1500
Sound pressure level at 3 m [dBA]	35	44	39
Transported air temperature [°C]	-40...+80	-25...+60	-25...+50
IP rating	IPX4	IPX4	IPX4
Motor IP rating	IP54	IP54	IP54
ErP	2018	2018	2018

### Power [W]

Point	Iso-V EC 315	Iso-V EC 355	Iso-V EC 400	Iso-V EC 450	Iso-V EC 500	Iso-V EC 560	Iso-V EC 630
1	115	250	500	574	1215	1840	1779
2	137	250	500	750	1320	2296	2509
3	150	250	500	750	1320	2360	2750
4	137	250	500	750	1320	2313	2651
5	77	121	277	337	630	1240	1060
6	102	164	383	458	823	1672	1495
7	118	185	424	557	929	1736	1648
8	102	158	382	502	795	1669	1584
9	37	73	153	178	364	601	581
10	50	99	212	242	476	811	819
11	57	112	235	294	538	842	902
12	50	96	212	265	460	810	868
13	14	40	74	79	187	231	273
14	19	54	102	107	244	312	385
15	22	61	113	130	275	324	425
16	19	53	102	117	236	311	408

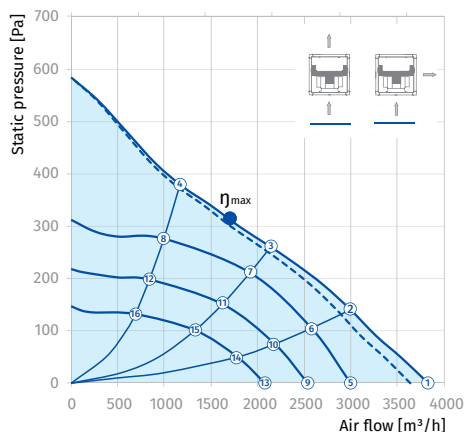
### Iso-V EC 315

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
L <sub>WA</sub> to inlet [dBA]	69	37	64	58	64	62	57	56	48
L <sub>WA</sub> to outlet [dBA]	73	49	71	62	65	65	60	56	47
L <sub>WA</sub> to environment [dBA]	56	29	52	46	49	49	45	34	27



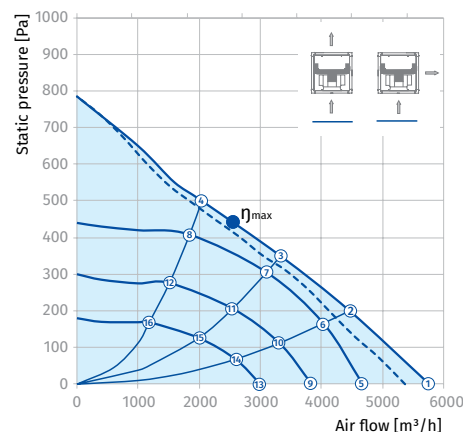
### Iso-V EC 355

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
L <sub>WA</sub> to inlet [dBA]	76	44	65	66	71	67	69	67	58
L <sub>WA</sub> to outlet [dBA]	77	44	70	67	71	71	70	67	59
L <sub>WA</sub> to environment [dBA]	64	61	54	53	55	52	54	51	36



### Iso-V EC 400

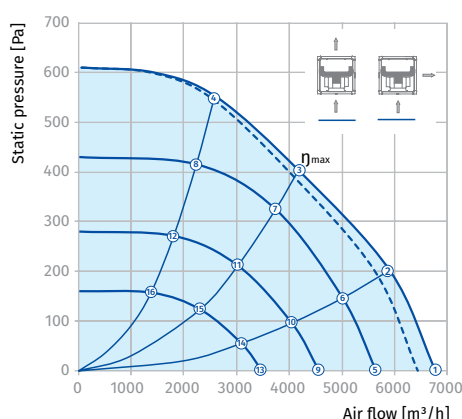
Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
L <sub>WA</sub> to inlet [dBA]	71	42	61	62	66	66	63	60	51
L <sub>WA</sub> to outlet [dBA]	75	50	68	64	68	69	66	61	53
L <sub>WA</sub> to environment [dBA]	60	32	52	53	49	55	52	44	31



Parameters	Iso-V EC 450	Iso-V EC 500	Iso-V EC 560	Iso-V EC 630
Voltage [V]	1 ~ 230	3 ~ 400	3 ~ 400	3 ~ 400
Frequency [Hz]	50/60	50/60	50/60	50/60
Power [W]	750	1320	2360	2750
Current [A]	3.3	2.1	3.65	4.3
Max. air flow at air flow direction [m³/h (l/s)]: – perpendicular air flow – direct air flow	6800 (1889) 6460 (1795)	10450 (2903) 9928 (2758)	13600 (3778) 12920 (3589)	16740 (4650) 15903 (4418)
RPM [min⁻¹]	1440	1350	1540	1300
Sound pressure level at 3 m [dBA]	50	45	50	50
Transported air temperature [°C]	-25...+60	-25...+50	-25...+60	-25...+55
IP rating	IPX4	IPX4	IPX4	IPX4
Motor IP rating	IP54	IP54	IP54	IP54
ErP	2018	2018	2018	2018

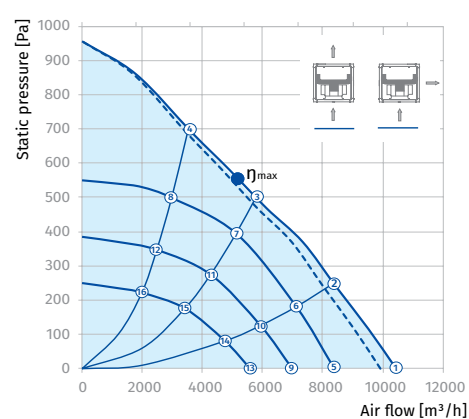
### ISO-V EC 450

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
LWA to inlet [dBA]	79	48	70	71	73	72	70	65	62
LWA to outlet [dBA]	83	70	76	72	76	78	75	69	64
LWA to environment [dBA]	71	33	68	63	61	61	58	53	44



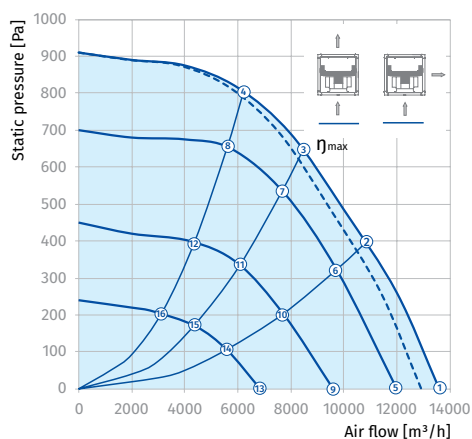
### ISO-V EC 500

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
LWA to inlet [dBA]	78	49	71	69	73	70	70	66	61
LWA to outlet [dBA]	81	51	70	71	76	75	72	68	64
LWA to environment [dBA]	66	36	54	62	60	57	57	52	40



### ISO-V EC 560

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
LWA to inlet [dBA]	82	52	72	77	74	77	73	68	64
LWA to outlet [dBA]	78	58	70	71	72	72	67	65	59
LWA to environment [dBA]	71	41	67	63	63	61	60	50	40



### ISO-V EC 630

Sound power level, A-weighted	Total	Octave frequency bands [Hz]							
		63	125	250	500	1000	2000	4000	8000
LWA to inlet [dBA]	82	52	72	77	74	77	73	68	64
LWA to outlet [dBA]	78	58	70	71	72	72	67	65	59
LWA to environment [dBA]	71	41	67	63	63	61	60	50	40

