



# HIFEK ECO

High-efficiency  
roof extractor



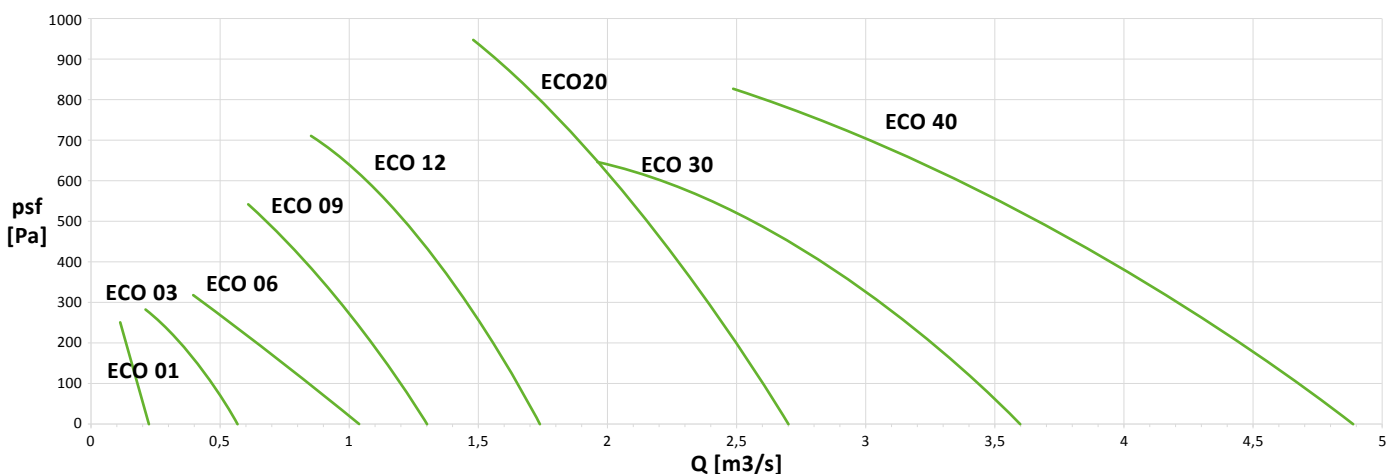
# HiFEK ECO

**Energy-efficient and silent extractor for office, commercial, public and residential buildings.**



The airflow ranges of the **HiFEK ECO** roof extractor are divided more evenly compared to previous models. Our wide range of roof extractors covers every need, so you can produce better conditions to your site while saving energy – not forgetting a lower carbon footprint.

**Airflow graphs of the HiFEK ECO range**



## Air volume up to 4.5 m<sup>3</sup>/s

Permanent magnet technology with an integrated frequency converter has been applied in the motor design of the **HiFEK ECO** roof extractor. Excellent efficiency is achieved with EC motors, and the rotational speed is controlled effortlessly.

- The motors are reliable and user-friendly.
- The enclosure rating is IP54.
- The output of the roof extractors varies from 0.1 kW to 4.4 kW. The basic model is wired and connected at the factory. The control line has a junction box to which all motor connectors are brought for easy access.
- The rotational speed can be controlled via the bus (Modbus) or using a voltage signal (0–10 V) from building automation. The roof extractor is designed to be user-friendly and easy to attach.
- The roof extractor models ECO 06–40 feature Modbus and the option for status information indication as standard.
- The ECO 01–03 models offer impulse data of the rotational speed as standard.

Thanks to the structure of **HiFEK ECO** roof extractors, the duct and the extractor are easy to clean and service. Installation accessories are included in the standard delivery. Standard models are manufactured from hot galvanised steel sheet. The best way to install the roof extractor is to use an HiFEP installation chimney, the standard casing of which is manufactured from a hot

galvanised steel sheet. Thermal insulation is mineral wool. The fire rating of the HiFEP installation chimneys is EI60 or EI120. The low-pressure dampers and feedthrough pipes for electric cables are installed at the factory.

## Compact accessories for various needs and sites

- **Speed controller:** The HiFEK EC speed controller is used to adjust the desired fan speed simply with a potentiometer. If required, an external 230 V control can be used to select another speed. This accessory does not include a service switch.
- **Retrofit controller:** The HiFEK EC retrofit controller can be used to replace the existing 2-speed roof extractor with an energy-efficient EC fan using the old cables. This accessory includes a service switch.
- **Static pressure controller:** The controller enables pressure regulation in the duct of the roof extractor without external control. The pressure controller is used to set two duct pressure levels, and the integrated static controller is used to set the desired pressure level. This accessory includes a service switch.
- **Retrofit pressure controller:** The HiFEK EC retrofit pressure controller can be used to replace the existing 2-speed roof extractor with an energy-efficient EC fan and duct pressure control using the old cables. This accessory includes a service switch.

## HiFEK ECO quick selection guide

HiFEK ECO	LVI-code	qv1, m <sup>3</sup> /s															Motor data				Max. Flowrate IEC-60034-1	
		psF, Pa															n rpm	P Kw	I 400 V A	I 230 V A		
		50	75	100	125	150	175	200	225	250	275	300	350	400	450	500						
Uninsulated	ECO 01	7805032	0.2	0.19	0.18	0.17	0.16	0.15	0.14	0.13	0.11	0.1	0.1	0.08				2,580	0.085		0.7	0.7
	ECO 03	7805033	0.52	0.5	0.47	0.44	0.42	0.38	0.35	0.31	0.27	0.23	0.18	0.06				1,525	0.15		1.2	1.2
	ECO 06	7805034	0.64	0.61	0.58	0.54	0.51	0.47	0.44	0.41	0.37	0.34	0.3					1,450	0.25		1.1	1.1
	ECO 09	7805035	1.25	1.22	1.2	1.17	1.14	1.11	1.09	1.06	1.03	1	0.97	0.9	0.83	75	0.68	2,100	0.75		3.3	3.3
	ECO 12	7805036	1.69	1.67	1.65	1.63	1.6	1.58	1.56	1.54	1.52	1.49	1.47	1.41	1.34	1.28	1.2	2,060	1.32	2.1		2.1
	ECO 20	7805037	2.65	2.62	2.59	2.57	2.54	2.51	2.49	2.46	2.44	2.41	2.38	2.33	2.27	2.21	2.15	2,450	2.5	3.8		3.8
Insulated	ECO 03	7805038	0.52	0.5	0.47	0.44	0.42	0.38	0.35	0.31	0.27	0.23	0.18	0.06				1,525	0.15		1.2	1.2
	ECO 06	7805039	0.64	0.61	0.58	0.54	0.51	0.47	0.44	0.41	0.37	0.34	0.3					1,450	0.25		1.1	1.1
	ECO 09	7805040	1.25	1.22	1.2	1.17	1.14	1.11	1.09	1.06	1.03	1	0.97	0.9	0.83	75	0.68	2,100	0.75		3.3	3.3
	ECO 12	7805041	1.69	1.67	1.65	1.63	1.6	1.58	1.56	1.54	1.52	1.49	1.47	1.41	1.34	1.28	1.2	2,060	1.32	2.1		2.1
	ECO 20	7805042	2.65	2.62	2.59	2.57	2.54	2.51	2.49	2.46	2.44	2.41	2.38	2.33	2.27	2.21	2.15	2,450	2.5	3.8		3.8
	ECO 30	7805043	3.51	3.47	3.43	3.38	3.34	3.29	3.25	3.2	3.15	3.1	3.05	2.94	2.83	2.72	2.54	1,750	3.5	5.4		5.4
	ECO 40	7805044	4.78	4.71	4.65	4.58	4.52	4.45	4.4	4.34	4.29	4.23	4.17	4.06	3.95	3.83	3.68	1,700	4.4	6.6		6.6



# HiFEK ECO 01

**LVI number** 7805032

**LVI number (soundproof)** -

**HiFEP LVI number\*** 7805102

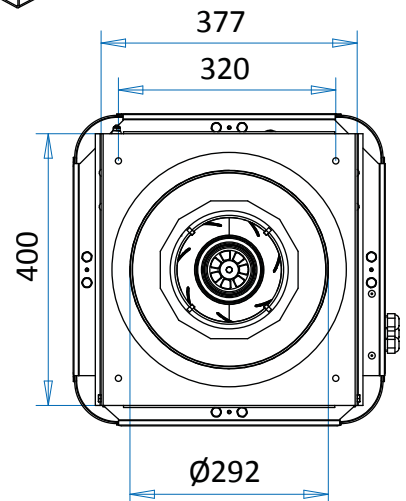
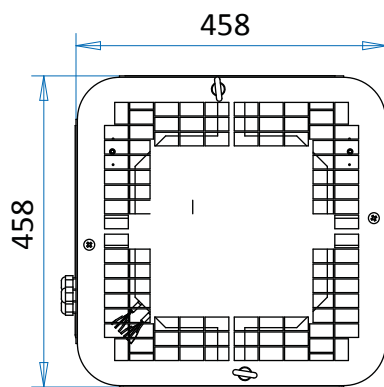
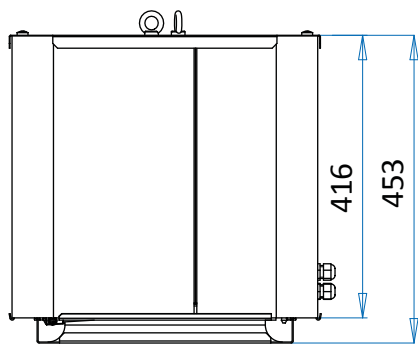
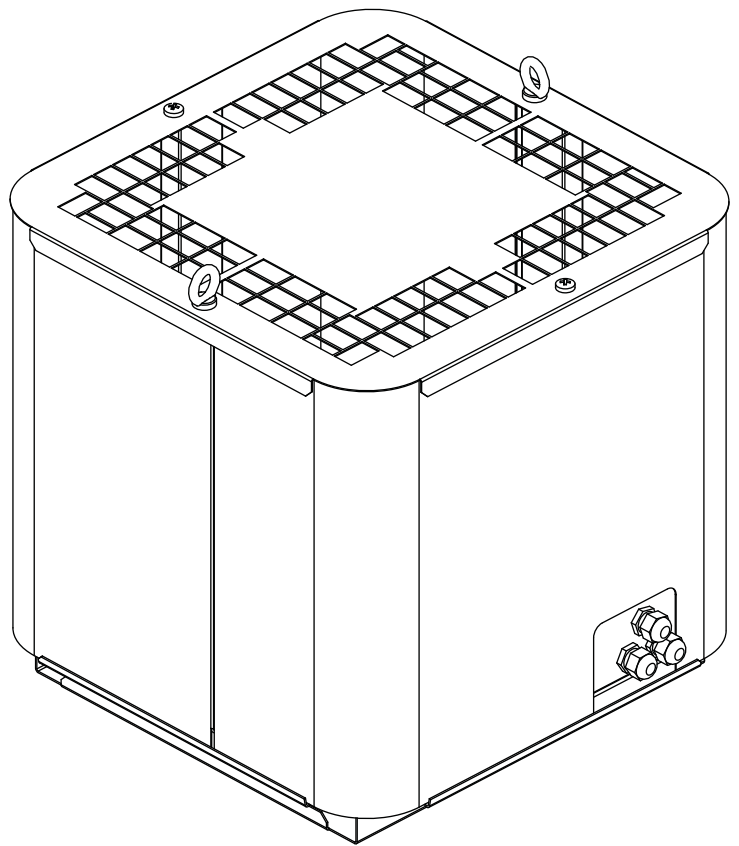
\*A support duct EI60, EI120 also available

**Nominal values:**

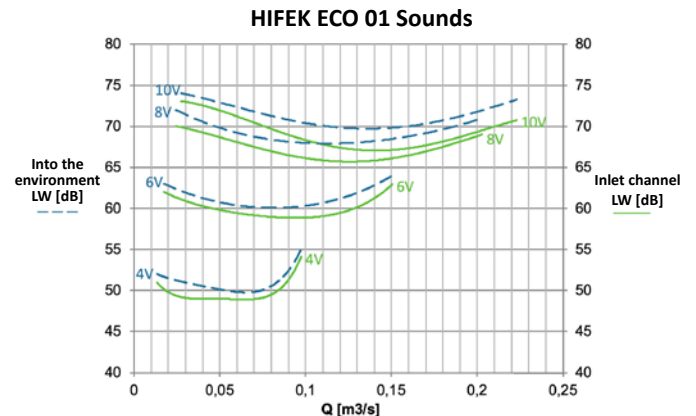
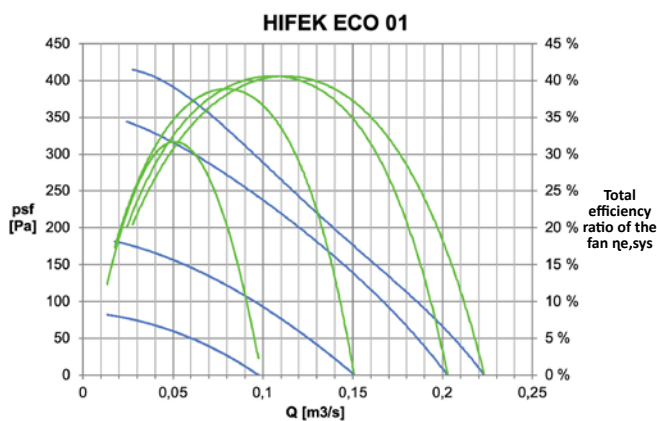
Rotational speed 2,580 rpm  
 Power 85 W  
 Current 0.7 A  
 Voltage 1 ~ 230 V  
 k value 54  
 Mass 13.6 kg

**Attachment points:**

HiFEK ECO 01 (gap 320 mm)  
 → EC 03 / AC 03 / FEK 25



The sounds in the chart for the environment and suction duct are A-weighted total power levels.



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 03

**LVI number** 7805033  
**LVI number (soundproof)** 7805038  
**HiFEP LVI number\*** 7805102

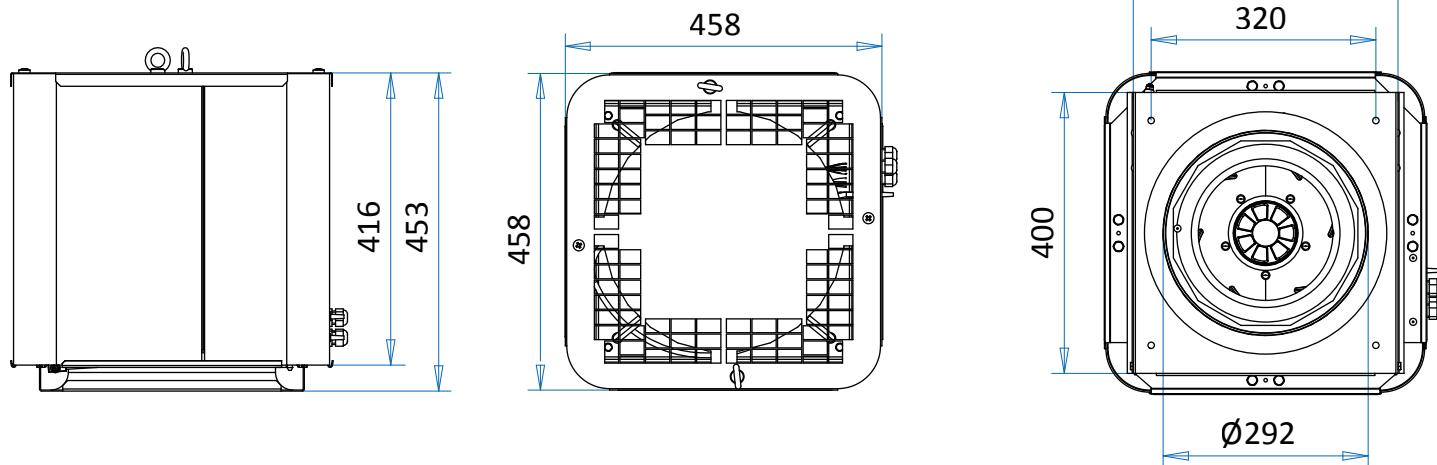
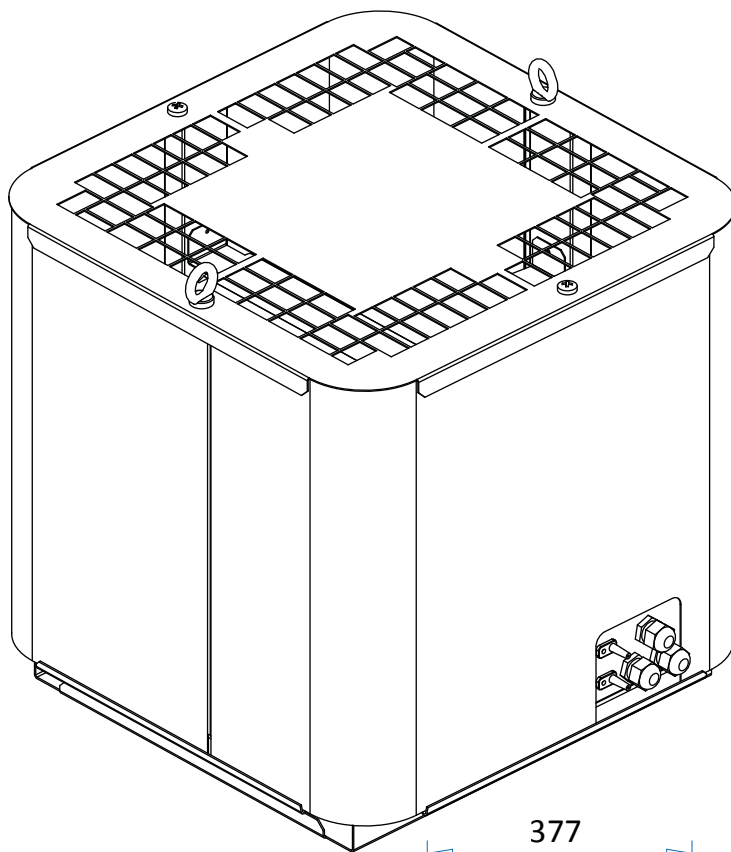
\*A support duct EI60, EI120 also available

**Nominal values:**

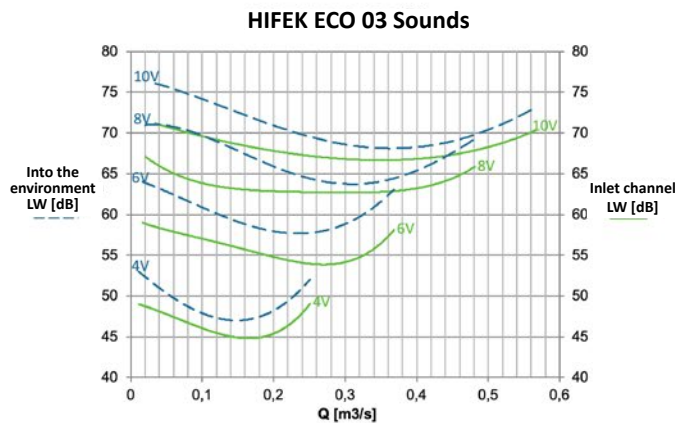
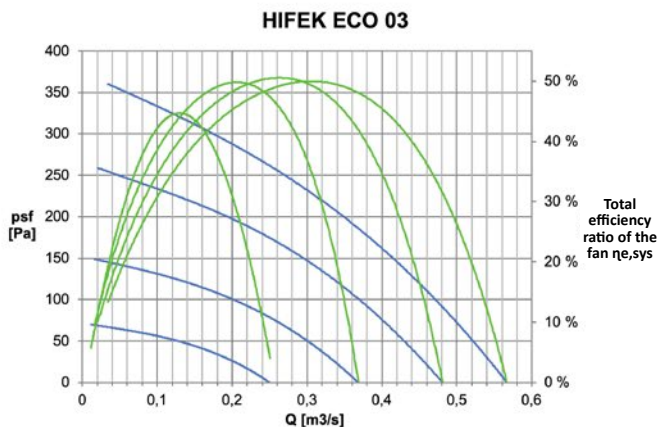
Rotational speed 1,525 rpm  
 Power 150 W  
 Current 1.2 A  
 Voltage 1 ~ 230 V  
 k value 93  
 Mass (soundproof) 20.6 kg (26.6 kg)

**Attachment points:**

HiFEK ECO 03 (gap 320 mm)  
 → EC 03 / AC 03 / FEK 25



The sounds in the chart for the environment and suction duct are A-weighted total power levels. The sound-insulated model can reduce the sound power level to the environment by 5dB (A).



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 06

**LVI number** 7805034  
**LVI number (soundproof)** 7805039  
**HiFEP LVI number\*** 7805104

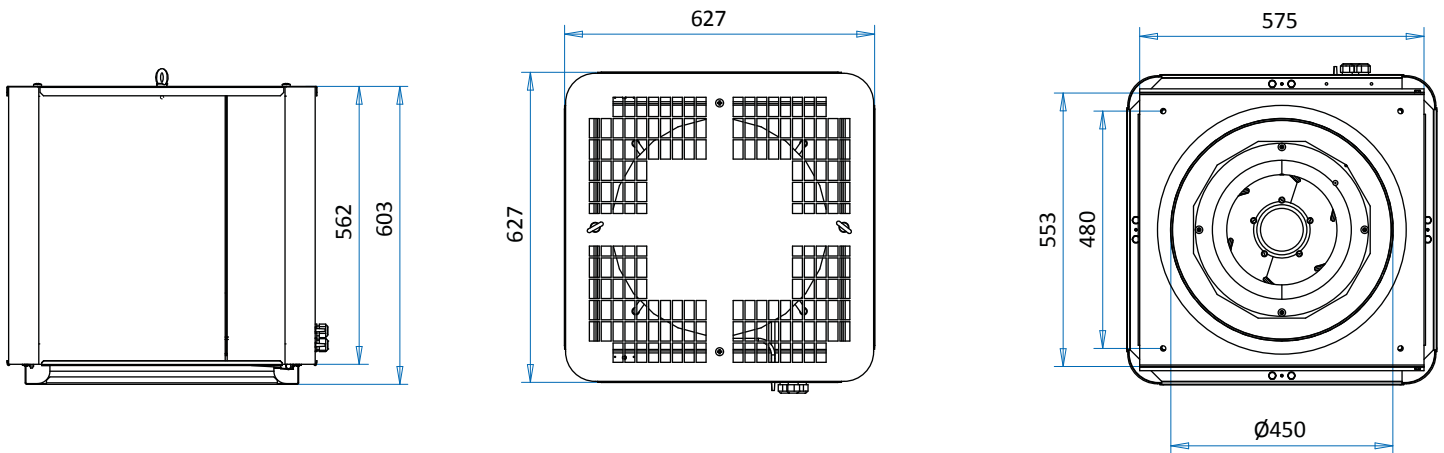
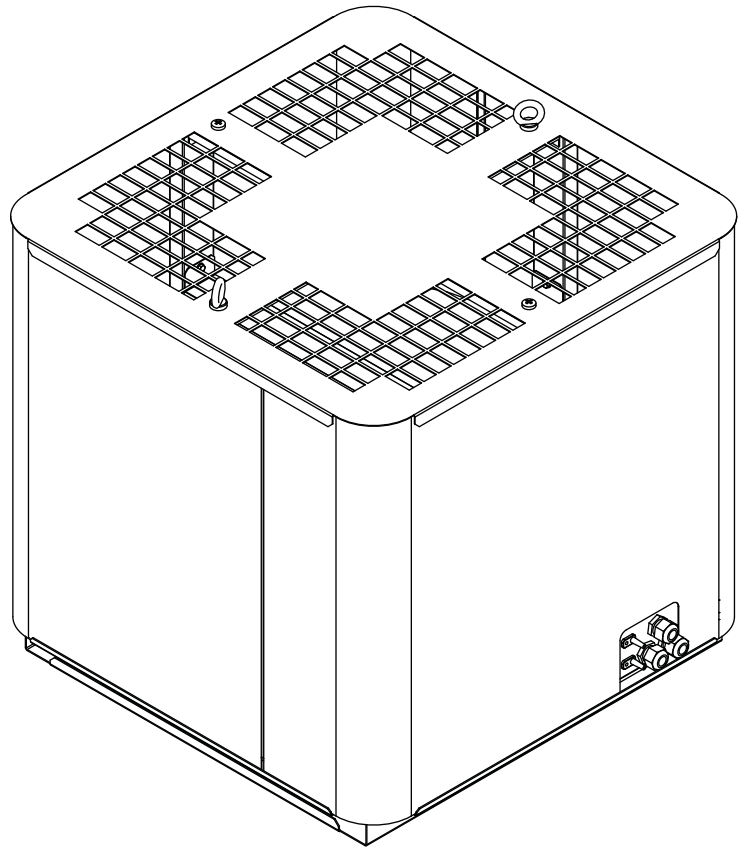
\*A support duct EI60, EI120 also available

**Nominal values:**

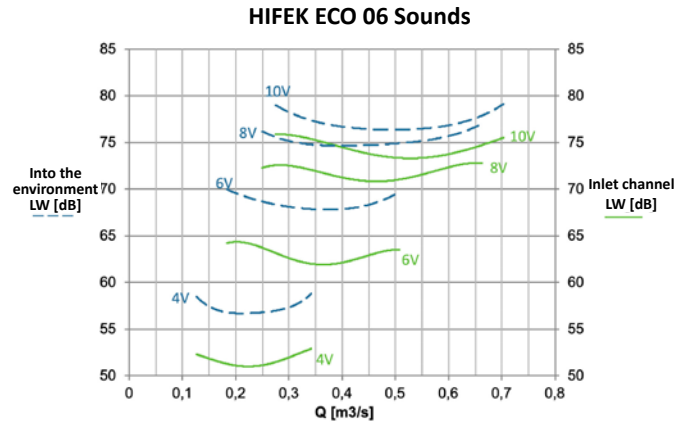
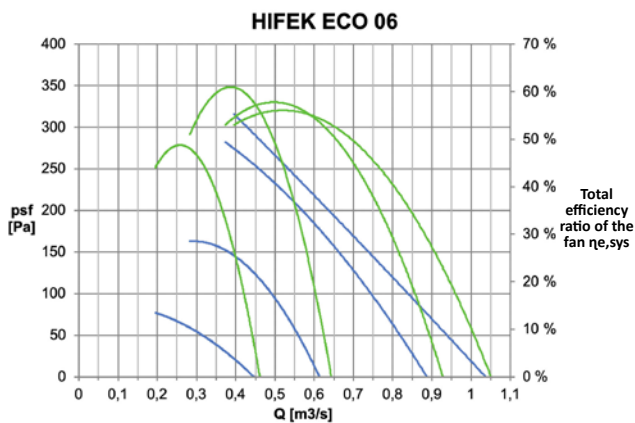
Rotational speed 1,450 rpm  
 Power 250 W  
 Current 1.1 A  
 Voltage 1 ~ 230 V  
 k value 128  
 Mass (soundproof) 33.0 kg (45.0 kg)

**Attachment points:**

HiFEK ECO 06 (gap 480 mm)  
 → EC 06 / AC 06 / FEK 31



The sounds in the chart for the environment and suction duct are A-weighted total power levels. The sound-insulated model can reduce the sound power level to the environment by 5dB (A).



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 09

**LVI number** 7805035  
**LVI number (soundproof)** 7805040  
**HiFEP LVI number\*** 7805104

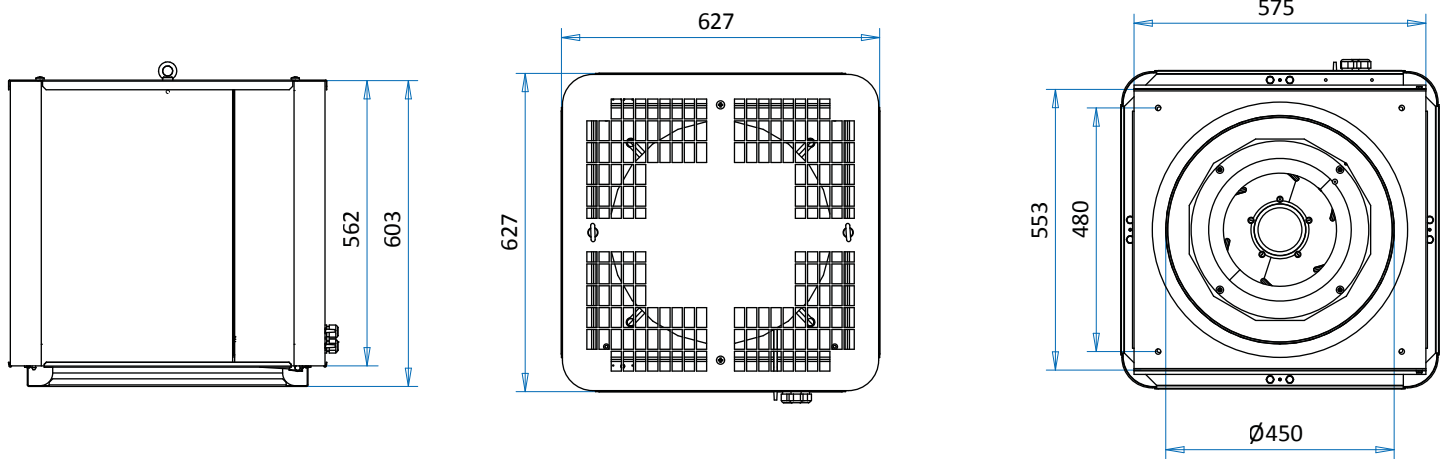
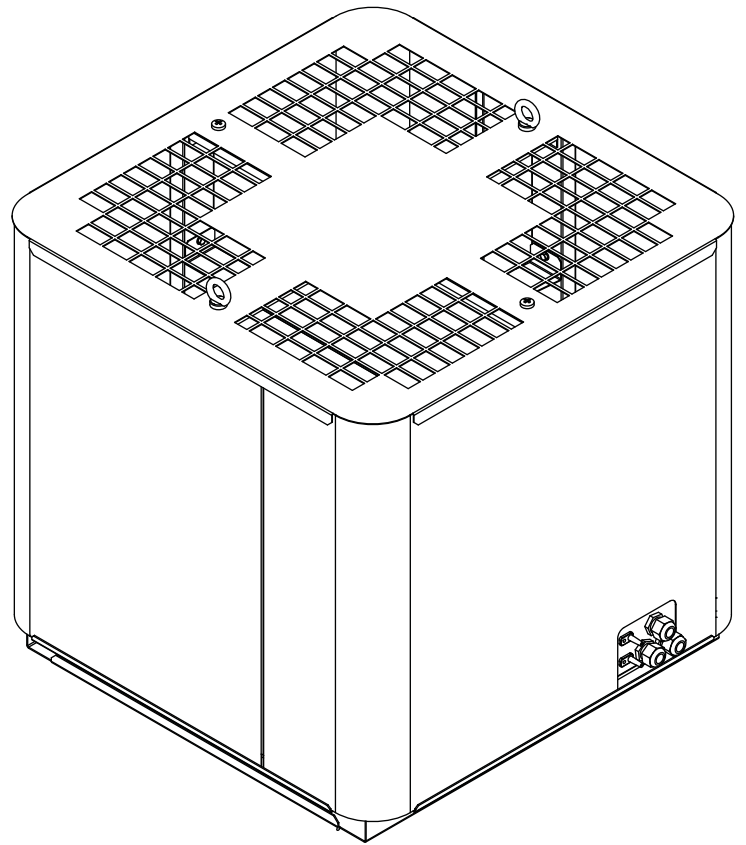
\*A support duct EI60, EI120 also available

**Nominal values:**

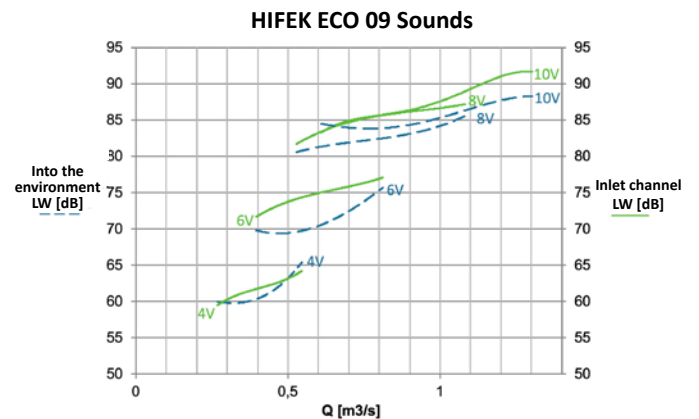
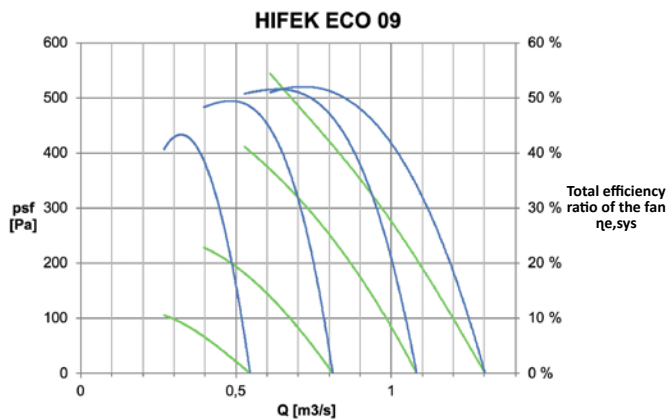
Rotational speed 2,100 rpm  
 Power 750 W  
 Current 3.3 A  
 Voltage 1 ~ 230 V  
 k value 128  
 Mass (soundproof) 37.2 kg (49.2 kg)

**Attachment points:**

HiFEK ECO 09 (gap 480 mm)  
 → EC 09 / AC 09 / FEK 31



The sounds in the chart for the environment and suction duct are A-weighted total power levels. The sound-insulated model can reduce the sound power level to the environment by 5dB (A).



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 12

**LVI number** 7805036  
**LVI number (soundproof)** 7805041  
**HiFEP LVI number\*** 7805104

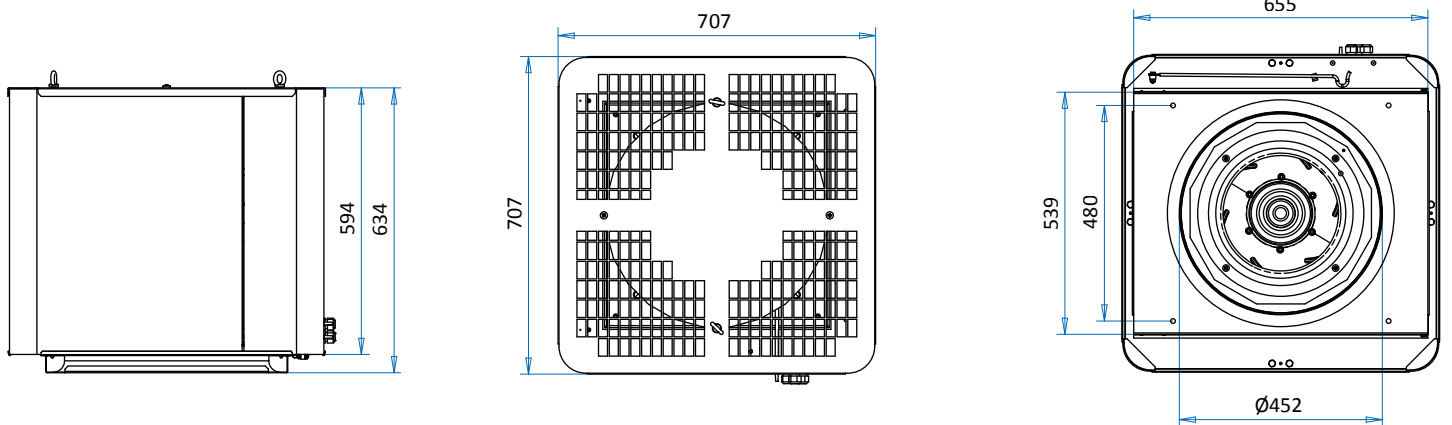
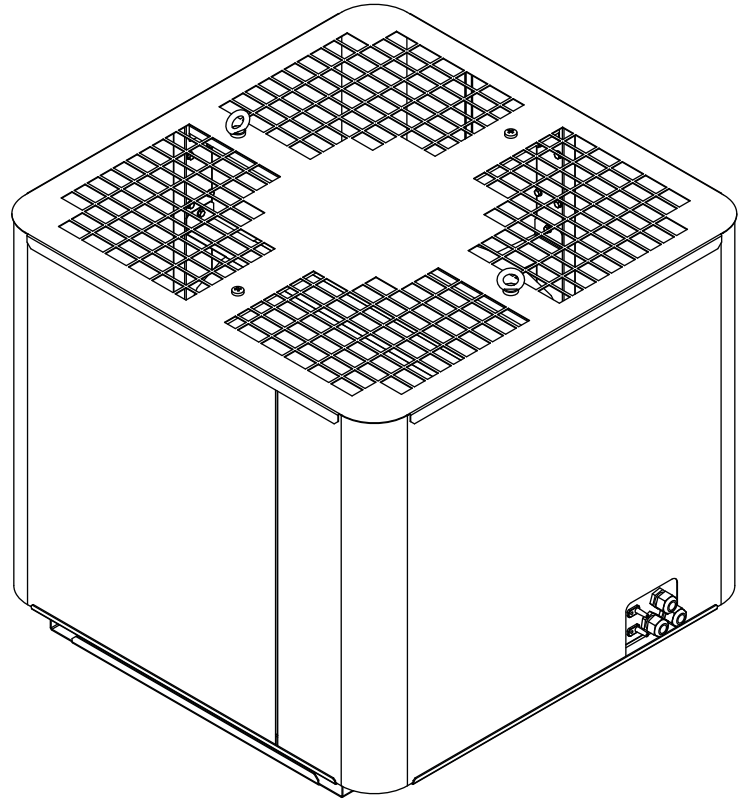
\*A support duct EI60, EI120 also available

## Nominal values:

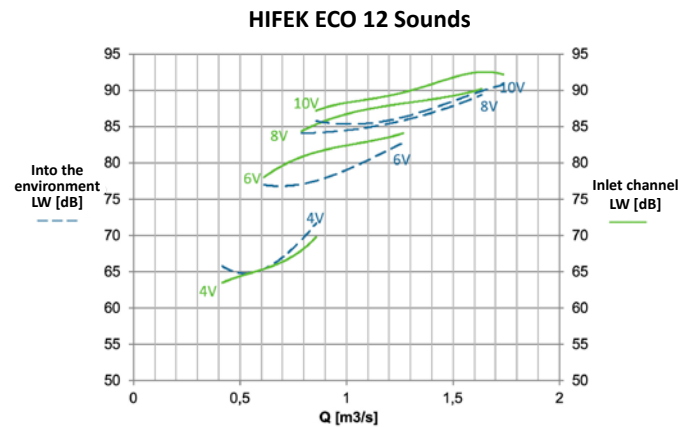
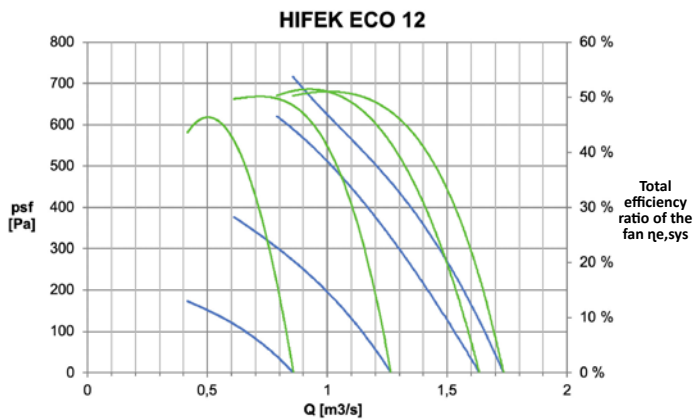
Rotational speed 2,060 rpm  
 Power 1,320 W  
 Current 2.1 A  
 Voltage 3 ~ 400 V  
 k value 180  
 Mass (soundproof) 47.2 kg (62.2 kg)

## Attachment points:

HiFEK ECO 12 (gap 480 mm)  
 → EC 12 / AC 12 / FEK 35



The sounds in the chart for the environment and suction duct are A-weighted total power levels.  
 The sound-insulated model can reduce the sound power level to the environment by 5dB (A).



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)



# HiFEK ECO 20

**LVI number** 7805037  
**LVI number (soundproof)** 7805042  
**HiFEP LVI number\*** 7805104

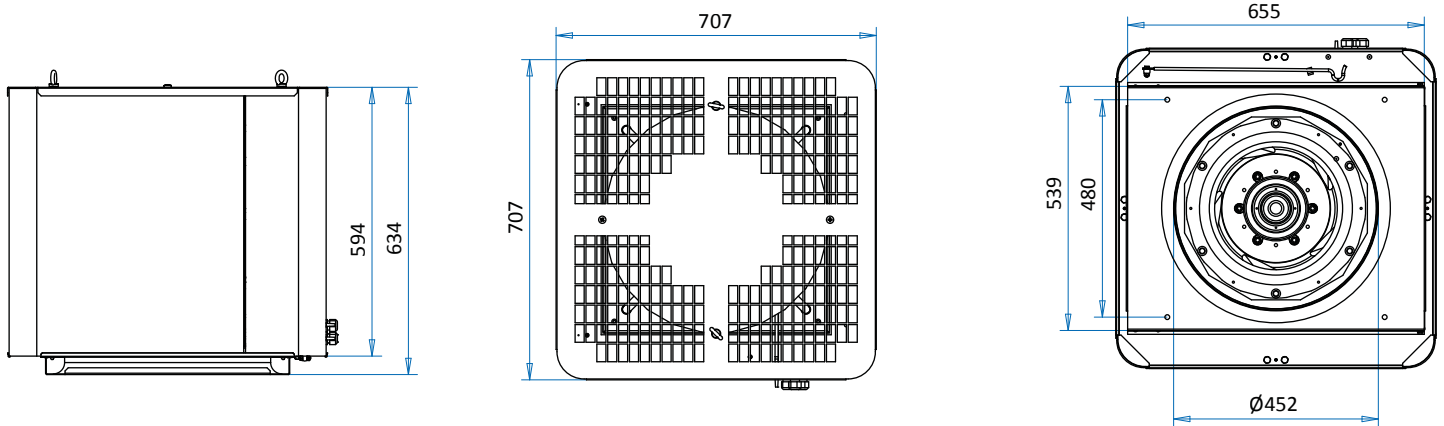
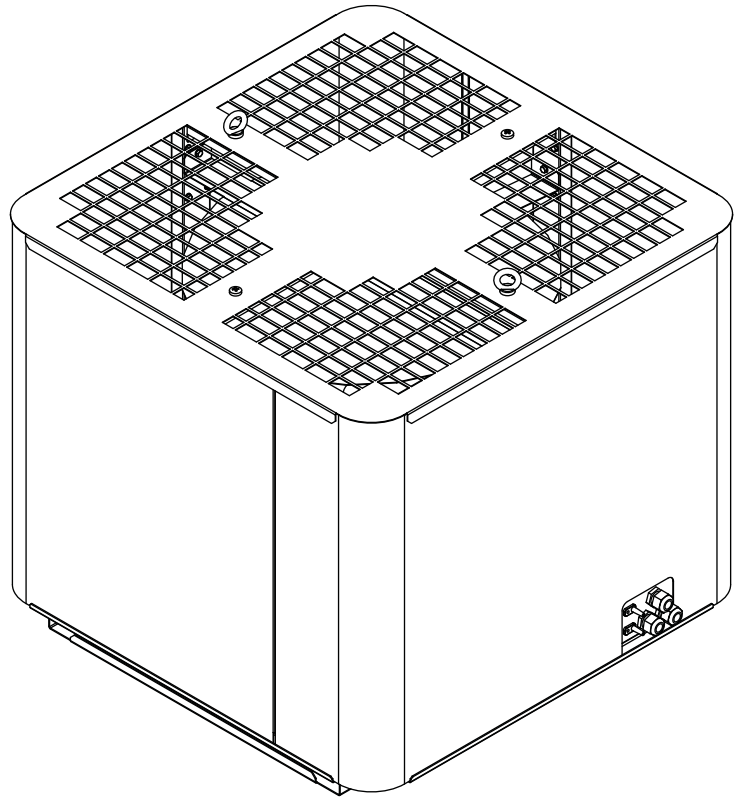
\*A support duct EI60, EI120 also available

## Nominal values:

Rotational speed 2,450 rpm  
 Power 2,500 W  
 Current 3.8 A  
 Voltage 3 ~ 400 V  
 k value 188  
 Mass (soundproof) 59.4 kg (74.4 kg)

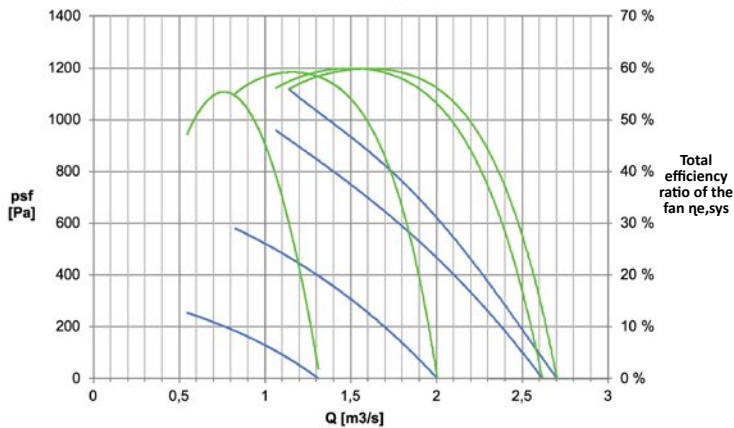
## Attachment points:

HiFEK ECO 20 (gap 480 mm)  
 → EC 12 / AC 12 / FEK 40

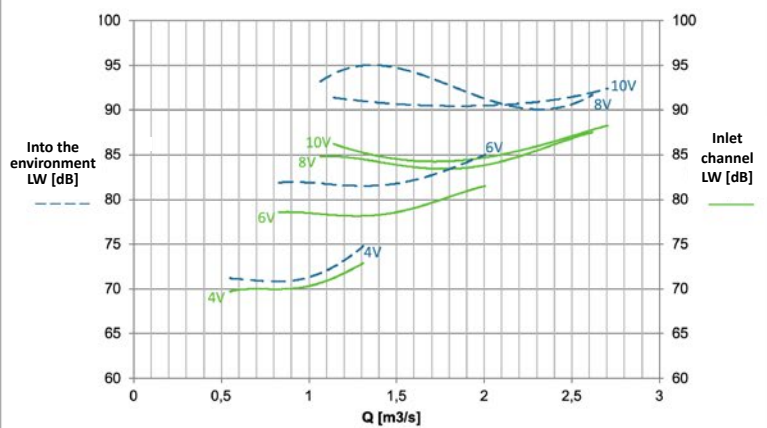


The sounds in the chart for the environment and suction duct are A-weighted total power levels.  
 The sound-insulated model can reduce the sound power level to the environment by 5dB (A).

**HiFEK ECO 20**



**HiFEK ECO 20 Sounds**



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 30

**LVI number** —  
**LVI number (soundproof)** 7805043  
**HiFEP LVI number\*** 7805106

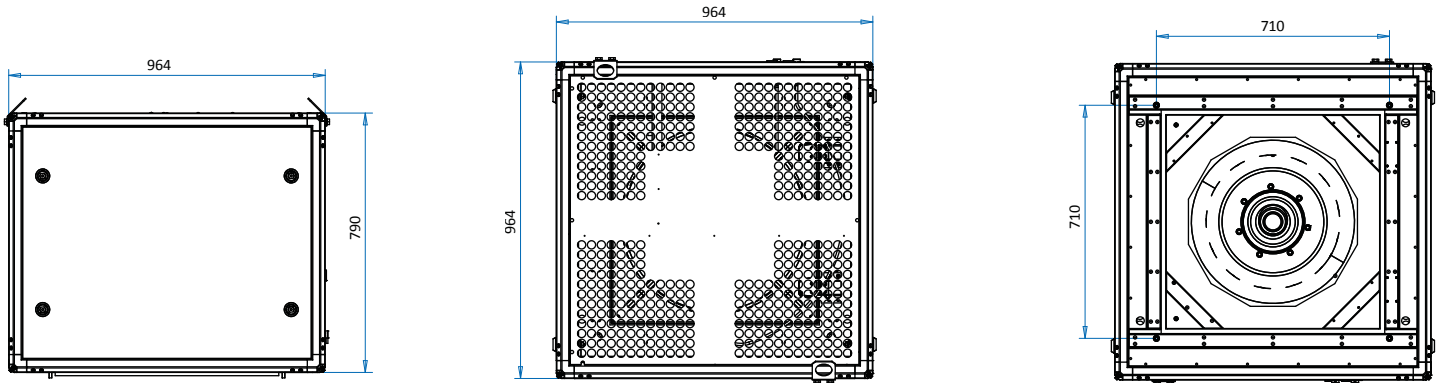
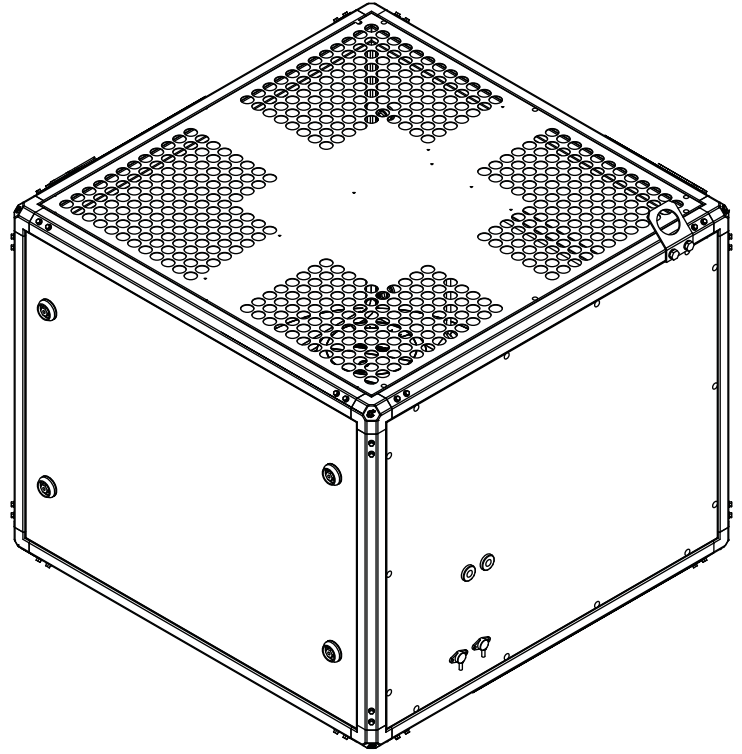
\*A support duct EI60, EI120 also available

**Nominal values:**

Rotational speed 1,750 rpm  
 Power 3,500 W  
 Current 5.4 A  
 Voltage 3 ~ 400 V  
 k value 405  
 Mass 150.0 kg

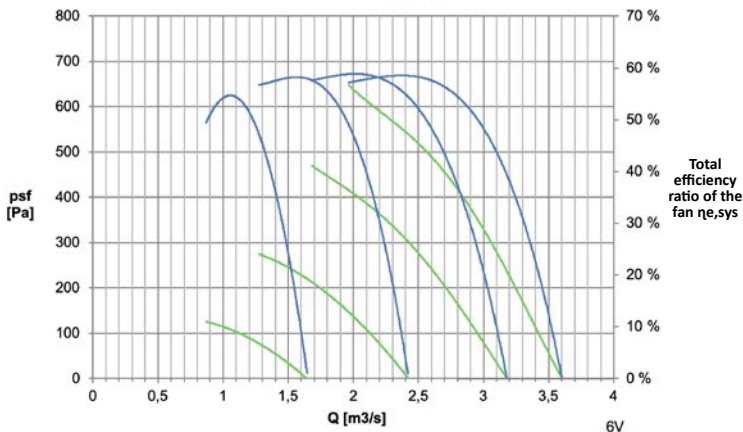
**Attachment points:**

HiFEK ECO 30 (gap 710 mm)  
 → EC 18 / AC 18 / FEK 50

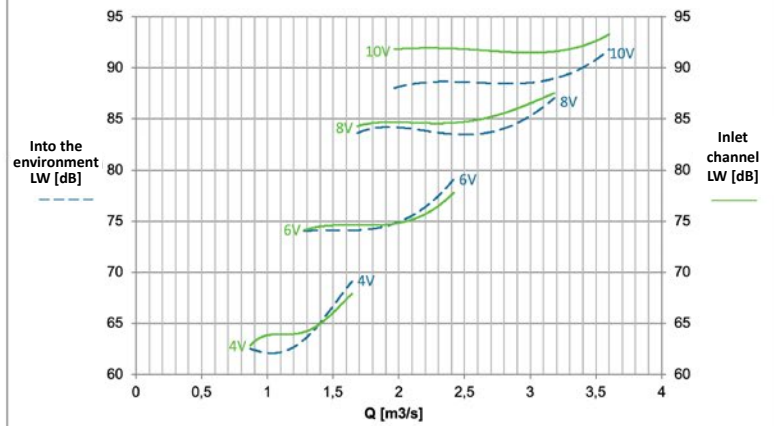


The sounds in the chart for the environment and suction duct are A-weighted total power levels.

**HIFEK ECO 30**



**HIFEK ECO 30 Sounds**



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# HiFEK ECO 40

**LVI number** —  
**LVI number (soundproof)** 7805044  
**HiFEP LVI number\*** 7805106

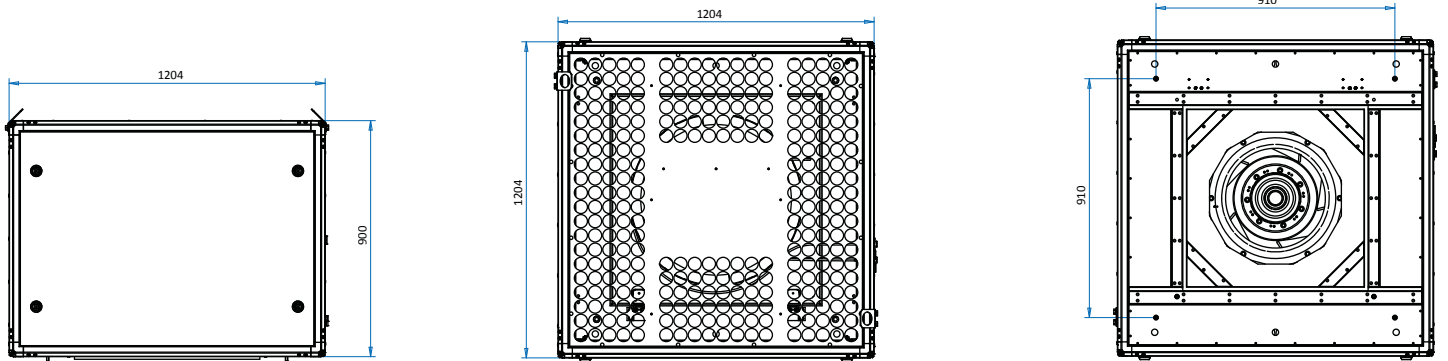
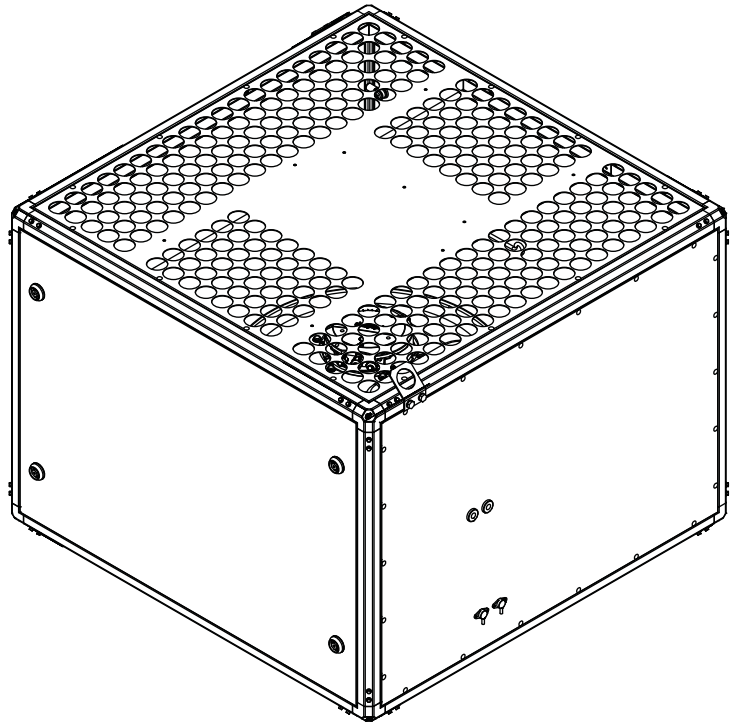
\*A support duct EI60, EI120 also available

**Nominal values:**

Rotational speed 1,700 rpm  
 Power 4,400 W  
 Current 6.6 A  
 Voltage 3 ~ 400 V  
 k value 348  
 Mass 177.0 kg

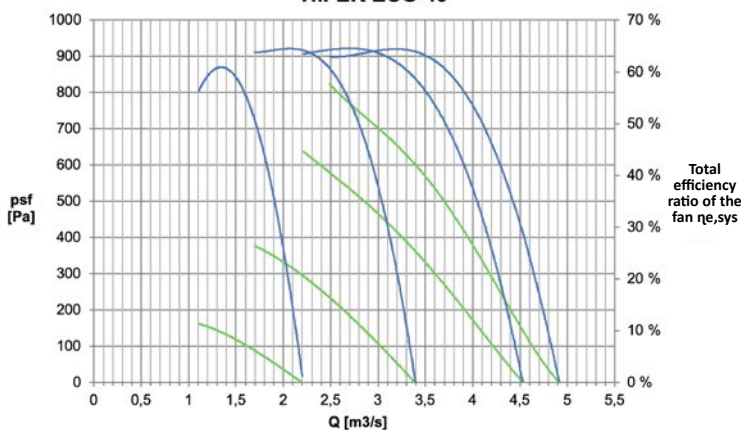
**Attachment points:**

HiFEK ECO 40 (gap 910 mm)  
 → EC 24 / EC 36 / AC 24 / AC 36 / FEK 63

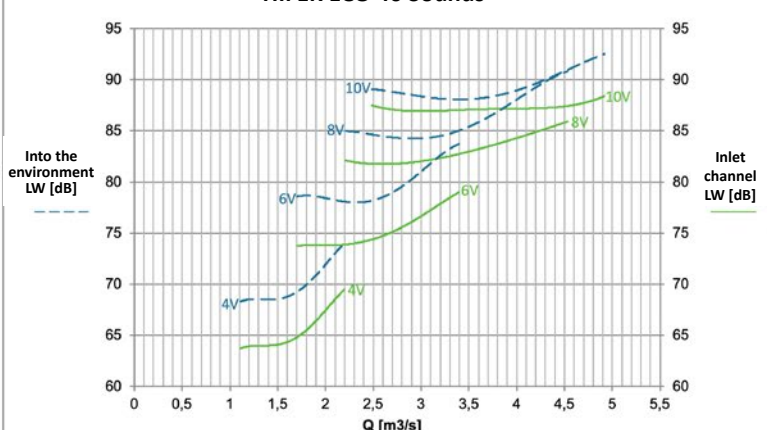


The sounds in the chart for the environment and suction duct are A-weighted total power levels.

**HIFEK ECO 40**



**HIFEK ECO 40 Sounds**



Formula for the k value:  $\frac{k \cdot \sqrt{\Delta p}}{1000} = [m^3/s]$ , where  $\Delta p$  = differential pressure from the measuring nozzles of the fan (Pa)

# Accessories

## Support duct – low pressure damper installed

LVI code	Product
7805102	HiFEP-01/02/03-1 EI60
7805104	HiFEP-06/09/12-1 EI60
7805106	HiFEP-18/24/36-1 EI60
7805103	HiFEP-01/02/03-1 EI120
7805105	HiFEP-06/09/12-1 EI120 SAFEP 35-40
7805107	HiFEP-18/24/36-1 EI120 SAFEP 50-63

## Service switch

LVI code	Product
7805911	HiFEK service switch, not installed (230 V)
7805912	HiFEK service switch, not installed (400 V)
7805010	HiFEK service switch, installed (230 V)
7805011	HiFEK service switch, installed (400 V)

## HiFEK EC controllers

LVI code	Product
7805024	HiFEK EC retrofit controller 01–36
7805029	HiFEK EC speed controller 01–36
7805030	HiFEK EC static pressure switch 02–09
7805031	HiFEK EC retrofit pressure controller 02–36

## Example order

HiFEK EC-03 - a - b - c  
HiFEP - 02 / 03 - a

a: 1 = hot galvanised steel sheet

2 = epoxy painted, exterior surface 60 µm\*

3 = epoxy painted, exterior/interior surface 60 µm\*

4 = stainless steel

b: 1 = uninsulated

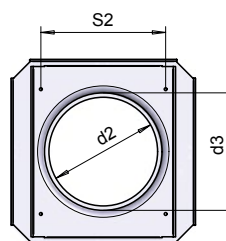
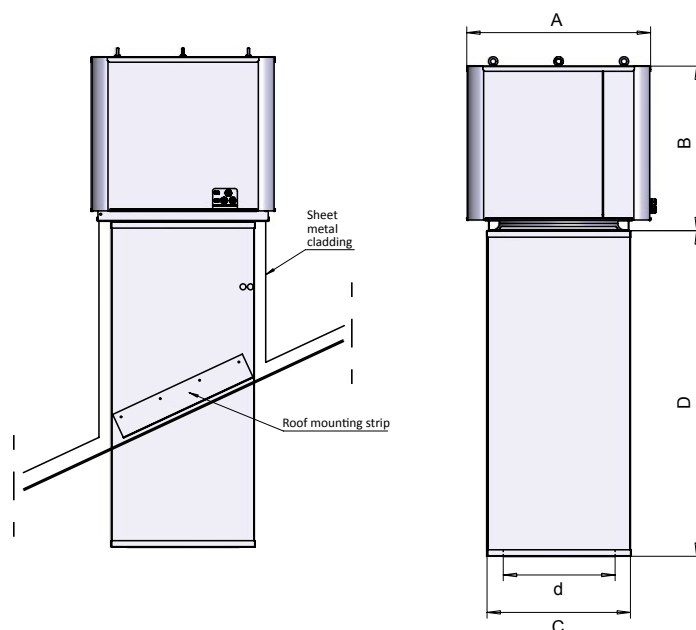
2 = soundproof

c: 1 = without a service switch

2 = with a service switch (not installed)

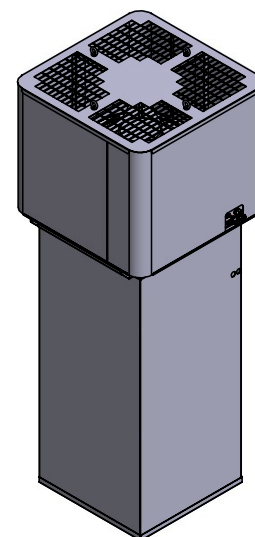
3 = with a service switch (installed)

\* in accordance with RAL Classic basic colour chart



HiFEK base plate

- \*d2= Diameter of inlet opening
- \*\*d3= Diameter of mounting frame opening  
Sizes 18, 24 and 36 with angular frame opening
- d= Diameter of support duct opening



# HiFEP support ducts

HiFEK ECO	A (mm)	B (mm)	HiFEK m (kg)	HiFEP	HiFEP m (kg)	C (mm)	D (mm)	d (mm)	S2 (mm)	d2 (mm)	d3 (mm)	HiFEP	HiFEP m (kg)	C (mm)	D (mm)	d (mm)	FEK
01	458	453	13.6	01/02/03 EI60	26	374	1,252	250	320	153	295	01/02/03 EI120	37	374	1,252	250	25
03	458	453	20.6	01/02/03 EI60	26	374	1,252	250	320	192	295	01/02/03 EI120	37	374	1,252	250	25
06	627	602	33	06/09/12 EI60	60	554	1,252	400	480	223	455	06/09/12 EI120	75	554	1,252	400	31
09	627	602	37.2	06/09/12 EI60	60	554	1,252	400	480	223	455	06/09/12 EI120	75	554	1,252	400	31
12	707	634	47.2	06/09/12 EI60	60	554	1,252	400	480	257	455	06/09/12 EI120	75	554	1,252	400	35
20	707	634	59.4	06/09/12 EI60	60	554	1,252	400	480	271	455	06/09/12 EI120	75	554	1,252	400	40
30	964	790	150	18/24/36 EI60	108	1,024	1,252	630	710	407	630	18/24/36 EI120	132	108	1,252	630	50
40	1,204	900	177	18/24/36 EI60	108	1,024	1,252	630	910	380	630	18/24/36 EI120	132	108	1,252	630	63