

Duct Fans

- direct driven
- EC Motor

Fan type code

E K H S 315-4 EC

	EC Motor
	Number of poles
	Impeller diameter
	S = Sound insulation
	Type
	R = Rotor-motor type
	H = Standard motor
	Duct fan
	Motor type
	E = Single phase, D = Three phase



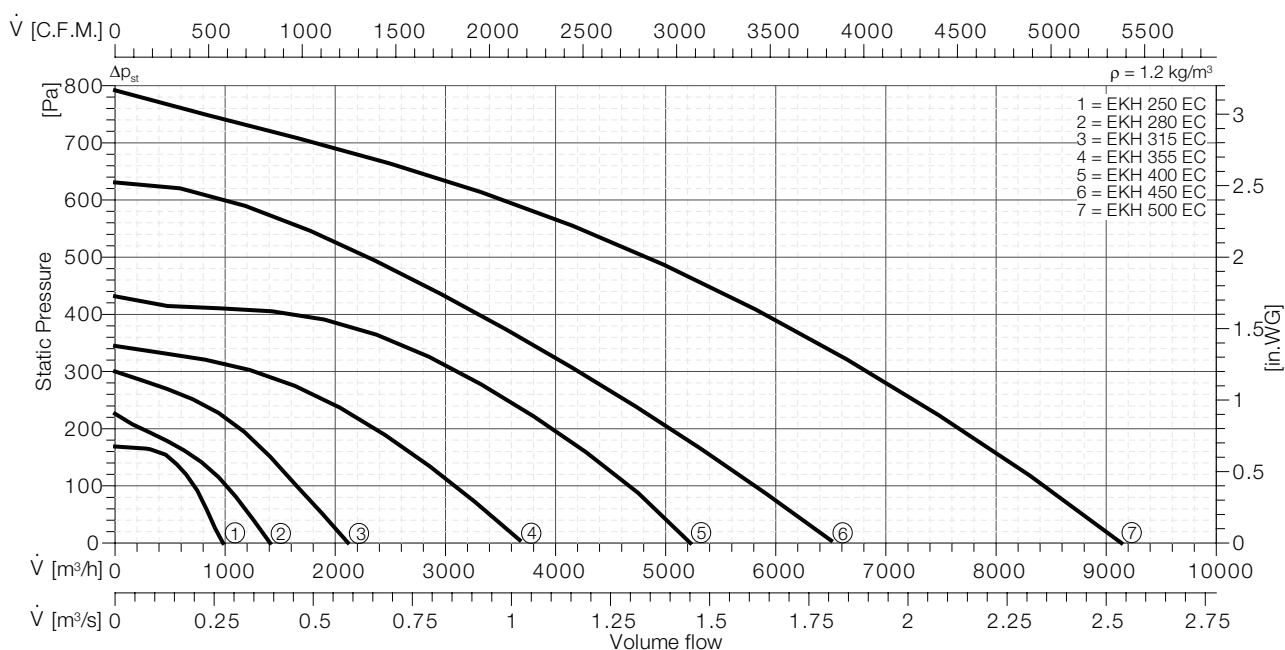
Relative octave sound power level A-weighted

Size	f_m [Hz]		L _{WA}	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
250 ~ 355	L _{WA6rel} [dB]	Outlet side	0	-20	-11	-6	-4	-7	-13	-19
	L _{WA5rel} [dB]	Inlet side	-3	-16	-10	-10	-7	-8	-14	-21
	L _{WA2rel} [dB]	Casing EKH	-17	-26	-21	-24	-23	-30	-40	-43
	L _{WA2rel} [dB]	Casing EKHS	-25	-34	-29	-32	-31	-38	-48	-51
400 ~ 450	L _{WA6rel} [dB]	Outlet side	0	-16	-10	-6	-5	-6	-13	-22
	L _{WA5rel} [dB]	Inlet side	-3	-18	-13	-12	-9	-7	-14	-21
	L _{WA2rel} [dB]	Casing EKH	-17	-22	-20	-24	-24	-29	-40	-46
	L _{WA2rel} [dB]	Casing EKHS	-25	-30	-28	-32	-32	-37	-48	-54
500	L _{WA6rel} [dB]	Outlet side	0	-16	-8	-6	-5	-8	-14	-23
	L _{WA5rel} [dB]	Inlet side	-3	-17	-11	-11	-8	-9	-15	-21
	L _{WA2rel} [dB]	Casing EKH	-17	-22	-18	-24	-24	-31	-41	-47
	L _{WA2rel} [dB]	Casing EKHS	-25	-30	-26	-32	-32	-39	-49	-55

Schnellauswahl

220 V, 1AC, 4 pole

Quick selection





EKH, EKHS



Advantages:

- easy installation via 20 mm standard flange
- fans can be installed in any position
- simple electrical connection via terminal box fitted to the outside, terminal box in protection class IP 54 (explosion-proof executions with wires led to the outside)
- 100% speed controllable by auto transformer or electronic controller
- motor protection by thermal contacts as standard (Explosion-proof motors with PTC thermistors)
- extremely low starting currents
- compact design

Design features:

Duct fans combine the advantages of axial fans, straight airflow and easy installation, with those of centrifugal fans, such as high pressure stability, low noise level and high efficiency.

Casing:

- EKH - Casing made of galvanised sheet steel formed as a rectangular air duct, with standard tube flanges (20 mm width) at inlet and outlet sides.
- EKHS - Panels are made from galvanised sheet steel insulated with sound absorbing elastomeric foam.

Impeller

EKH - Backward-curved radial centrifugal made of sheet steel.

All impellers are balanced at two levels according to G 2.5 (DIN ISO 1940).

Motor

- Permanent Magnet, Electronically Commutated Motor
- Single phase, 220 to 277VAC, 50/60Hz input
- IEC80, aluminum frame, IP54 solution
- Total efficiency (motor + drive) - IE5
- Vibration Grade A

Continuous speed adjustment (200 to 1800rpm) by:

- Tact buttons (local)
- DC voltage (remote): 2 to 10VDC
- DC current (remote): 4 to 20mA DC
- Frequency (remote): 10 to 95%



Fan Performance Curves

The performance curves of these fans have been established using a test chamber according to AMCA 210, installation type D (ducted inlet, ducted outlet). The curves indicate the static pressure increase Δp_s as a function of the volume flow. The outlet velocity increase c [(m/s)] shown in the performance curves refers to the flange cross-sectional area of the fan housing.

Sound levels

The figures given in the performance curves represent the A-weighted sound power levels L_{WA6} in decibel at the outlet side in duct systems. The A-weighted sound power level at the inlet side L_{WA5} , according to AMCA 300, can be calculated via the relative sound power levels or can be obtained by the following approximation calculation:

$$L_{WA5} \approx L_{WA6} - 3 \text{ dB(A)}$$

The A-weighted sound power level radiated from the casing L_{WA2} , according to DIN 45 635, part 38, can be calculated via the relative sound power levels (see below) or is obtained approximately as follows:

$$L_{WA2} \approx L_{WA6} - 17 \text{ dB(A)} \text{ - for EKH}$$

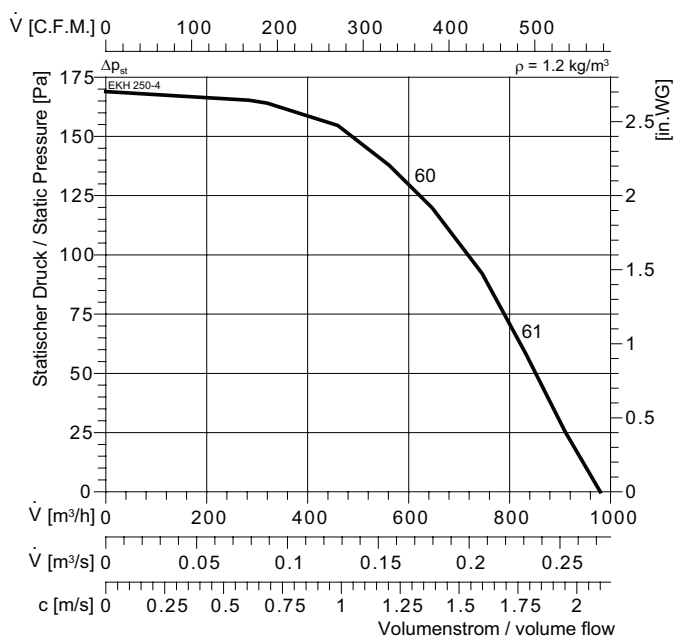
$$L_{WA2} \approx L_{WA6} - 25 \text{ dB(A)} \text{ - for EKHS}$$

The A-weighted sound pressure level L_{PA} at a distance of 1 metre is obtained approximately by deducting 7 dB(A) from the A-weighted sound power level:

$$L_{PA(1m)} \approx L_{WA2} - 7 \text{ dB(A)}$$

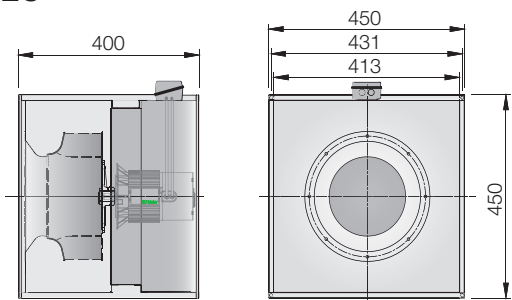
It is important to note that reflexion and environmental characteristics as well as resonant frequencies influence the sound pressure levels in different ways.

EKH / EKHS 250-4 EC

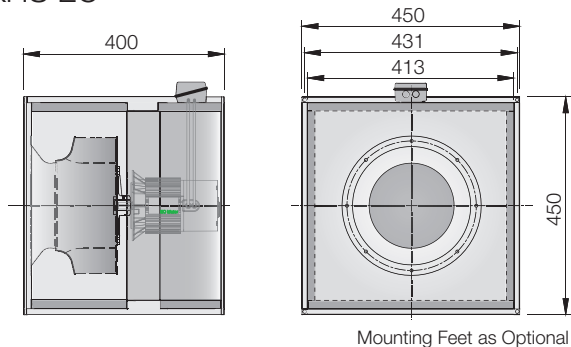


Typ :	EKH 250-4 EC		IP54
	EKHS 250-4 EC		-
	24 kg		-
U :	230 V 50 Hz		-
P ₁ :	0,12 kW		RPE 02 A
I _N :	1,1 A		
n :	1392 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

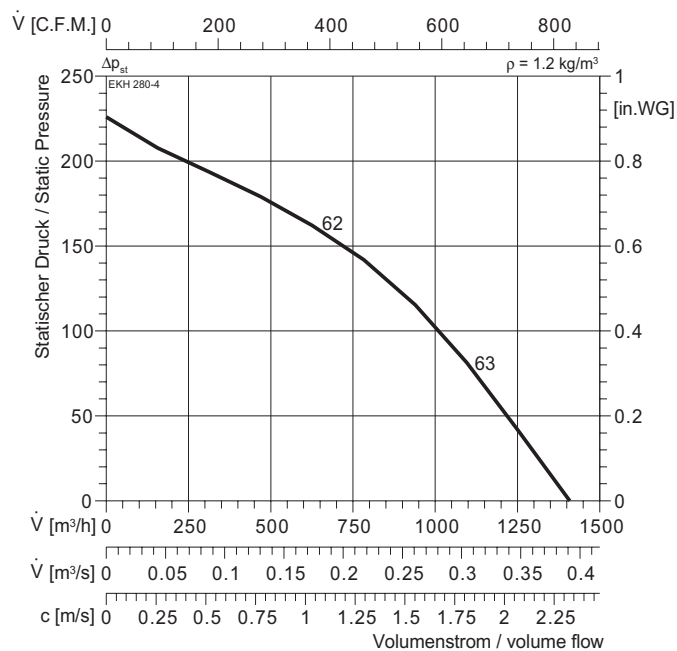
EKH EC



EKHS EC

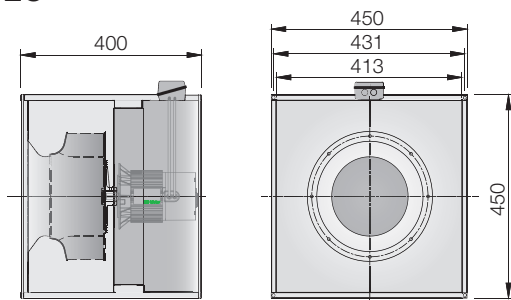


EKH / EKHS 280-4 EC

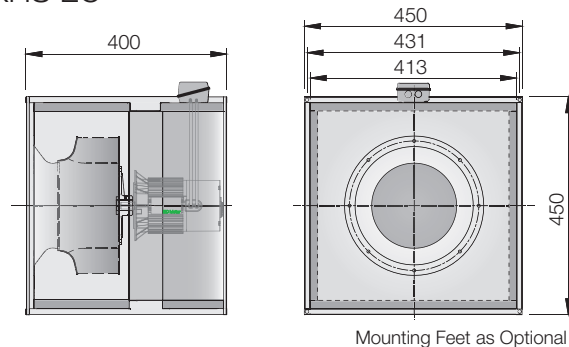


Typ :	EKH 280-4 EC		IP54
	EKHS 280-4 EC		-
	24/25 kg		-
U :	220 V 50 Hz		-
P ₁ :	0,12 kW		RPE 02 A
I _N :	1,1 A		
n :	1360 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

EKH EC



EKHS EC

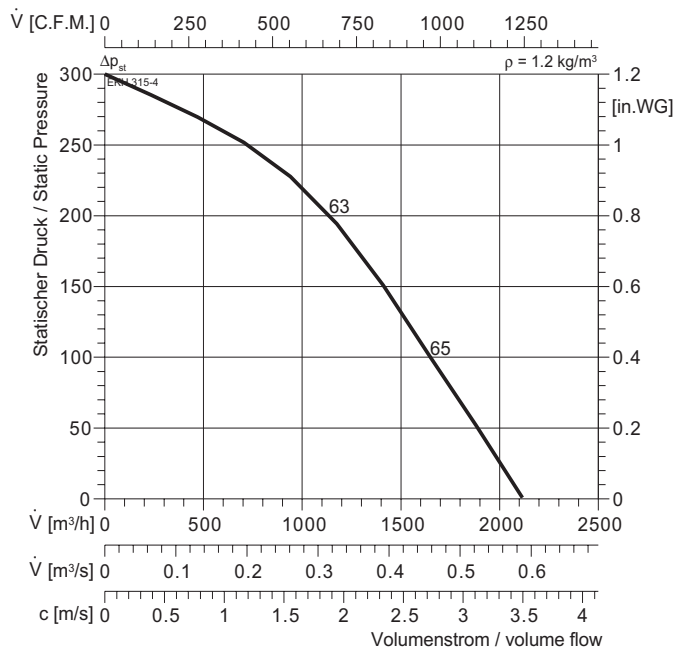




EKH, EKHS

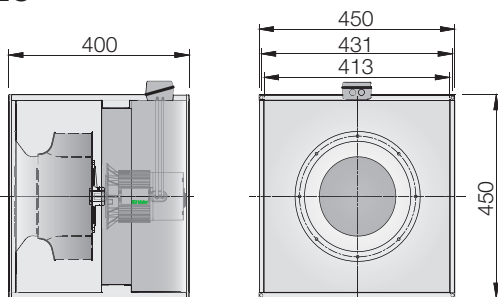


EKH / EKHS 315-4 EC

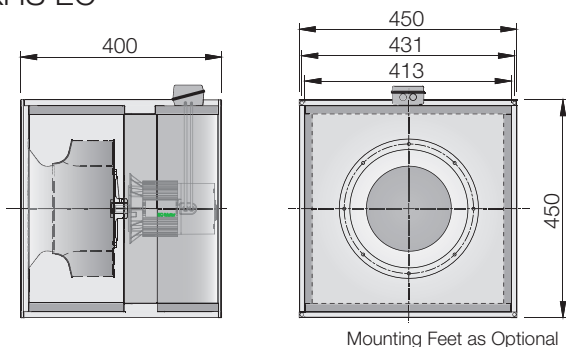


Typ :	EKH 315-4 EC	⚠	IP54
	EKHS 315-4 EC	★	-
■ :	28/29 kg	⚠	-
U :	220 V 50 Hz	⚠	-
P ₁ :	0,12 kW	⚠	RPE 02 A
I _N :	1,1 A		
n :	1370 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

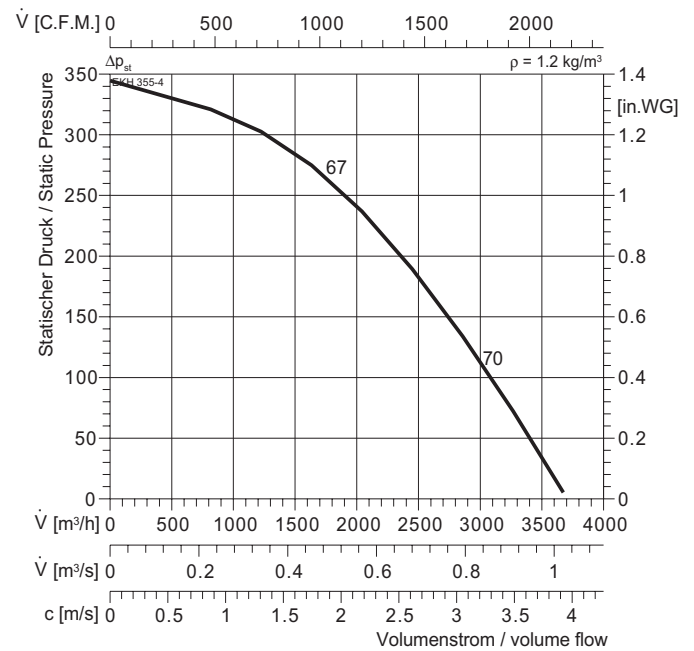
EKH EC



EKHS EC

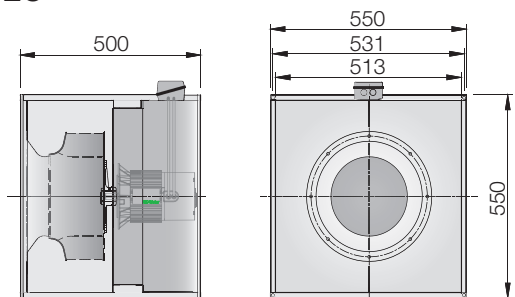


EKH / EKHS 355-4 EC

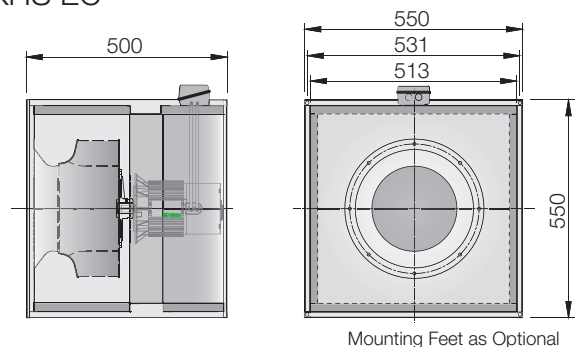


Typ :	EKH 355-4 EC	⚠	IP54
ArtNr :	EKHS 355-4 EC	★	-
■ :	30/31 kg	⚠	-
U :	220 V 50 Hz	⚠	-
P ₁ :	0,25 kW	⚠	RPE 02 A
I _N :	1,9 A		
n :	1370 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

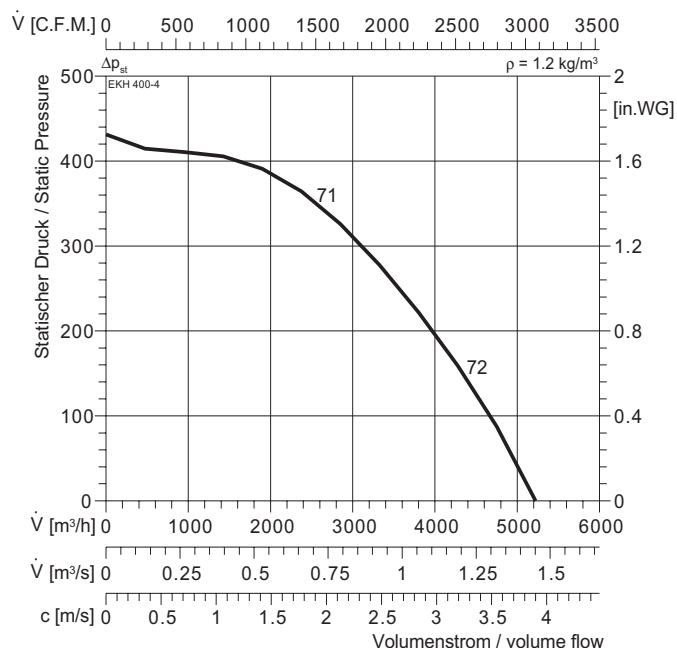
EKH EC



EKHS EC

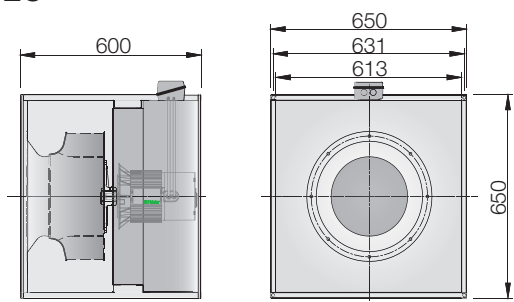


EKH / EKHS 400-4 EC

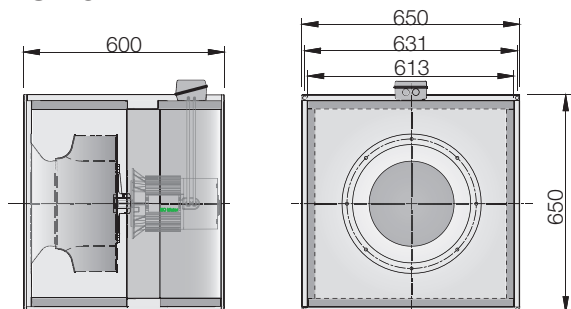


Typ :	EKH 400-4 EC	⚠	IP54
	EKHS 400-4 EC	★	-
⚙ :	38/40 kg	⚙	-
U :	220 V 50 Hz	⚙	-
P ₁ :	0,37 kW	⚙	RPE 02 A
I _N :	3,5 A		
n :	1380 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

EKH EC

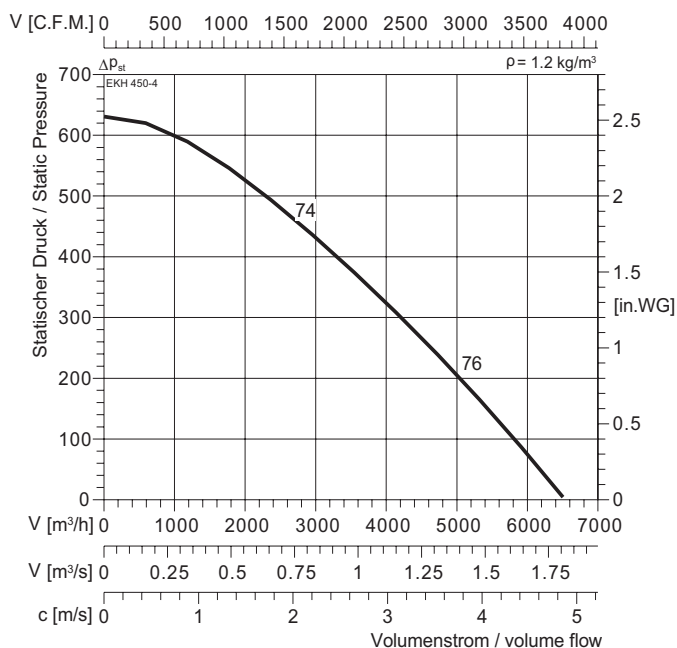


EKHS EC



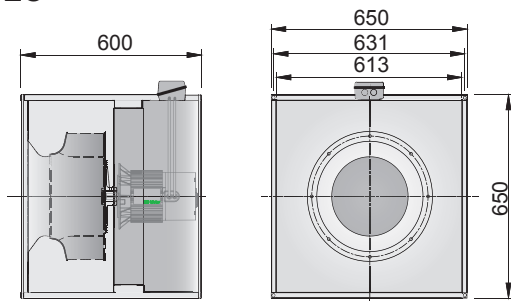
Mounting Feet as Optional

EKH / EKHS 450-4 EC

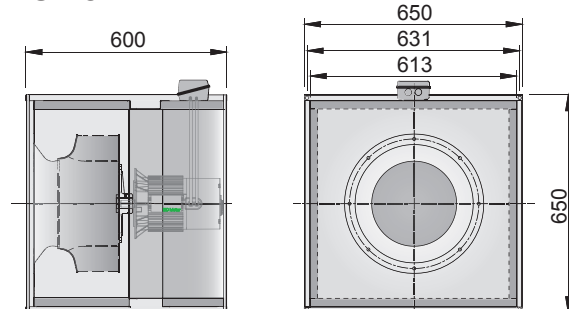


Typ :	EKH 450-4 EC	⚠	IP54
	EKHS 450-4 EC	★	-
⚙ :	42/44 kg	⚙	-
U :	220 V 50 Hz	⚙	-
P ₁ :	0,55 kW	⚙	RPE 02 A
I _N :	4,8 A		
n :	1380 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

EKH EC



EKHS EC

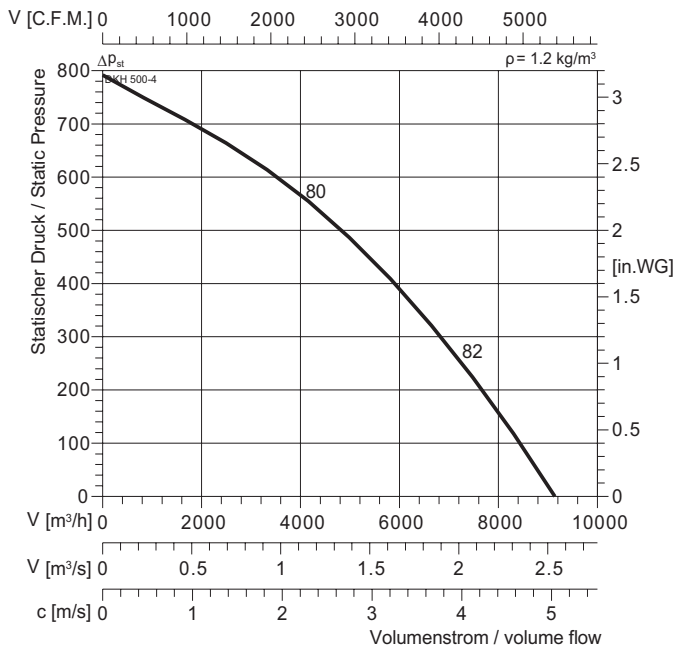


Mounting Feet as Optional



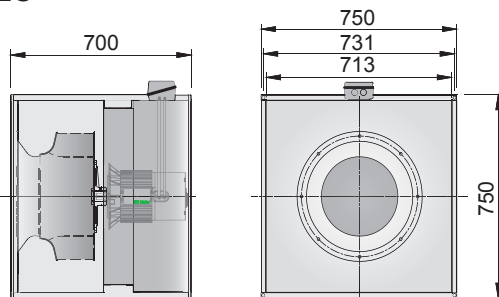
EKH, EKHS

EKH / EKHS 500-4 EC

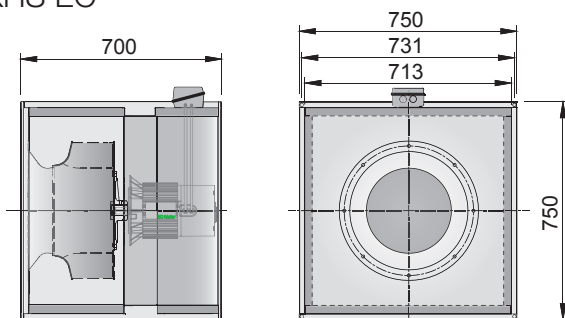


Typ :	EKH 500-4 EC		IP54
	EKHS 500-4 EC		-
	62/65 kg		-
U :	220 V 50 Hz		-
P ₁ :	1,1 kW		RPE 02 A
I _N :	8,3 A		
n :	1390 min ⁻¹		
C _{450V} :	- μF		
t _R :	40 °C		

EKH EC



EKHS EC



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