Air in Motion - Wolter Fans.

Duct Fans

- EKB, DKB Series
- EKBS, DKBS Series







K01.B

wolter

Duct Fan

EKB, DKB, EKBS, DKBS Series

Fan type code

E K B S 315 - 4

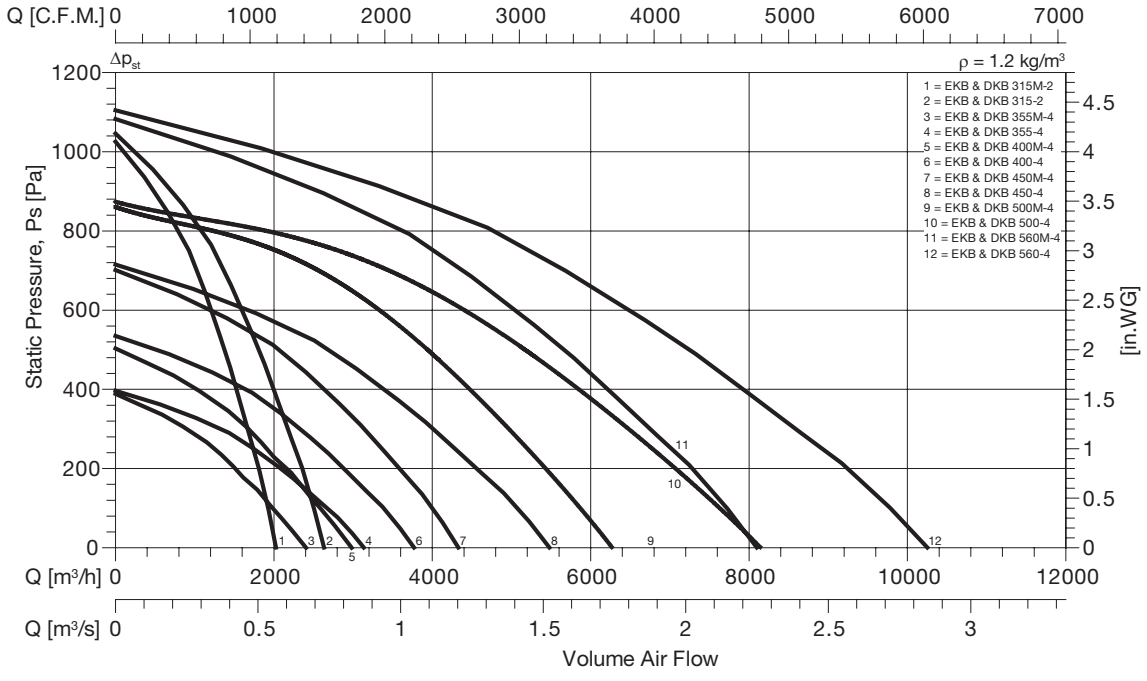
- 315 - 4 — Number of poles
- 315 - 4 — Impeller size
- S — Sound insulation
- B — Impeller type
- K — Duct fan
- E — Motor type
  - E = Single-phase A.C.
  - D = Three-phase A.C.

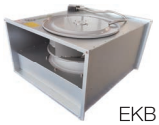


Estimate relative octave sound power level in ΔdB

	f_M [Hz]		LwA	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
2-pol	L_{WA6rel} [dB]	Outlet side	0	-16	-16	-1	-9	-16	-18	-19	-21
	L_{WA5rel} [dB]	Inlet side	-2	-17	-16	-2	-11	-18	-20	-21	-23
	L_{WA2rel} [dB]	Casing EKB/DKB	-12	-26	-24	-12	-21	-30	-30	-31	-32
	L_{WA2rel} [dB]	Casing EKBS/DKBS	-20	-34	-32	-20	-29	-38	-38	-39	-40
4-pol	L_{WA6rel} [dB]	Outlet side	0	-16	-1	-11	-17	-18	-21	-24	-26
	L_{WA5rel} [dB]	Inlet side	-2	-17	-2	-11	-18	-20	-23	-26	-28
	L_{WA2rel} [dB]	Casing EKB/DKB	-12	-26	-12	-23	-28	-30	-33	-36	-38
	L_{WA2rel} [dB]	Casing EKBS/DKBS	-20	-34	-20	-31	-36	-38	-41	-44	-46

Quick selection





EKB / DKB



EKBS / DKBS

Advantages

- easy installation via 20 mm standard flange
- fans can be installed in any position
- 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

Wolter duct fans benefit from the characteristic advantages of centrifugal impellers that produce high pressures at good efficiencies and relatively low noise levels while maintaining a stable fan curve. Due to their compact design and axial airflow direction, Wolter duct fans are ideally suited for direct installation into rectangular duct systems in residential as well as commercial buildings, or for use in light industrial applications.

Casing

- EKB, DKB - Casing made of galvanised sheet steel formed as a rectangular air duct, with standard tube flanges (20 mm width) at inlet and outlet sides.
- EKBS, DKBS - Panels are made from galvanised sheet steel with sound absorbing insulation made of clad fibre glass.

Impeller

Fans are fitted with backward curved centrifugal impellers manufactured from sheet metal or plastic. Impellers are directly fitted onto the external rotor motor and dynamically balanced together with the motor in two planes to quality grade G 2,5 / G 6,3 (ISO 21940-11), ensuring low vibration levels and longevity of the motor-impeller unit due to minimised motor bearing loads.

Electrical connection

For easy installation, the motors are pre-wired to an external terminal box, fitted to the fan casing.

Fan performance curves

The performance curves of these fans have been established using an AMCA accredited test chamber according to AMCA 210, installation type D (connected at both sides). The curves indicate the static pressure increase Δp_s as a function of the volume flow. The dynamic pressure increase Δp_{d2} shown in the performance curves refers to the flange cross-sectional area of the fan housing.

Sound levels

The ascertaining of the sound level follows the reverberant room method according to AMCA 300.

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 DIN 45 635, part 38, can be calculated via the relative sound power levels or can be obtained by the following approximation calculation:

$L_{WA5} \approx L_{WA6}$ **- 2 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:

$L_{WA2} \approx L_{WA6}$ **- 12 dB(A)** - for EKB or DKB

$L_{WA2} \approx L_{WA6}$ **- 18 dB(A)** - for EKBS or DKBS

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:

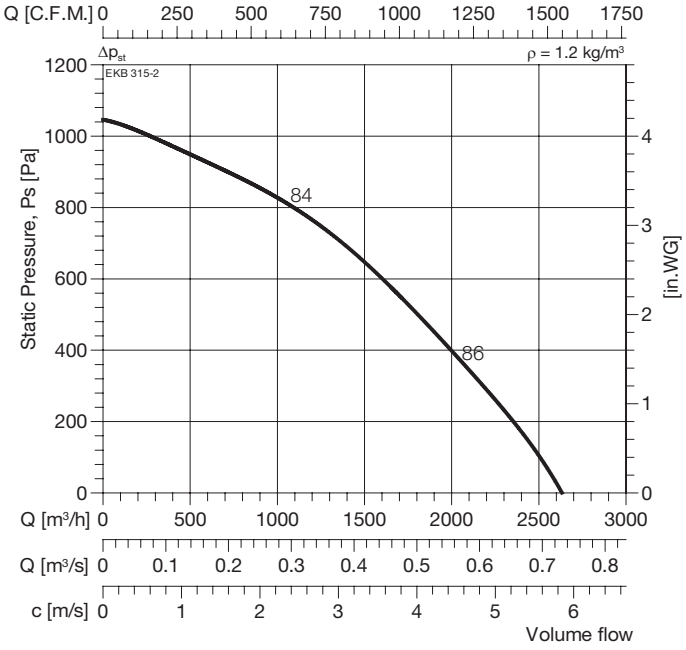
$L_{PA(1m)} \approx L_{WA2}$ **- 7 dB(A)**

It is important to note that reflexion and environmental characteristics as well as resonant frequencies influence the sound pressure levels in different ways. In order to avoid structure-borne noise transfer to a connected duct system we recommend the use of flexible connections EVK/EVKN. The A-weighted octave sound power level is important for the choice of suitable sound attenuators. It is obtained as follows:

$L_{WAokt} = L_{WA6} + L_{WArel}$

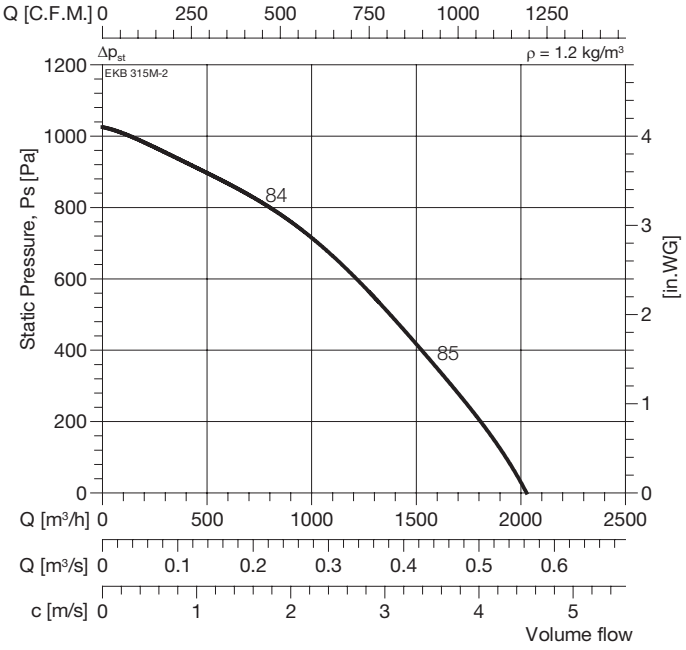
The relative A-weighted octave sound power level L_{WArel} at octave medium frequency can be taken from the table on the preceding page. These levels have been established at 0.5 x Vmax.

EKB / EKBS 315-2



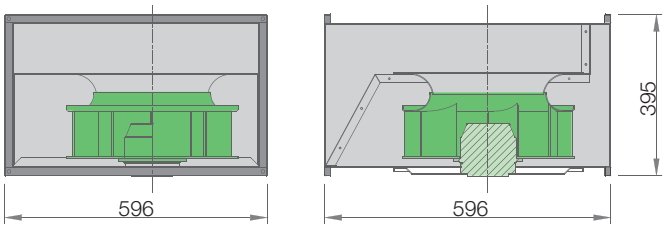
Typ	EKB 315-2 / EKBS 315-2		Art. Nr.			27.4 kg / 37.4 kg
U :	230 V 50 Hz		t_R :	65	°C	IP 54
P_1 :	0.795	**kW**	$\Delta p_{fa\,min}$:	0		E 13
I_N :	3.55	**A**				GS 2
n :	2680	**min⁻¹**				NE 5
C_{400V} :	25	**µF**				RPE 09A

EKB / EKBS 315M-2

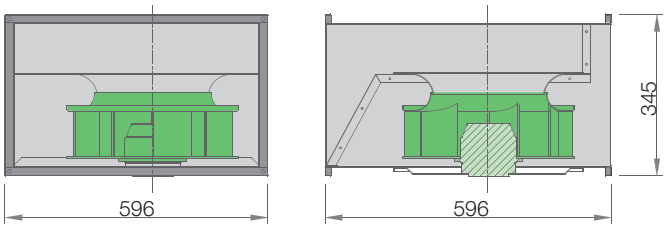


Typ	EKB 315M-2 / EKBS 315M-2		Art. Nr.			23.7 kg / 32.3 kg
U :	230 V 50 Hz		t_R :	65	°C	IP 54
P_1 :	0.795	**kW**	$\Delta p_{fa\,min}$:	0		E 13
I_N :	3.55	**A**				GS 2
n :	2680	**min⁻¹**				NE 5
C_{400V} :	25	**µF**				RPE 09A

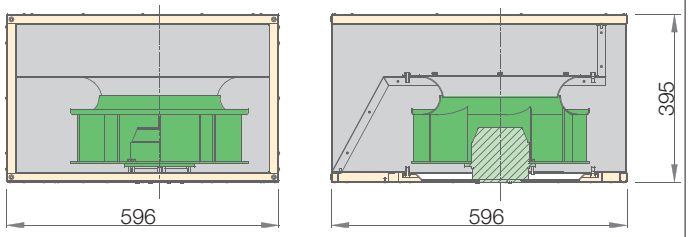
EKB / DKB



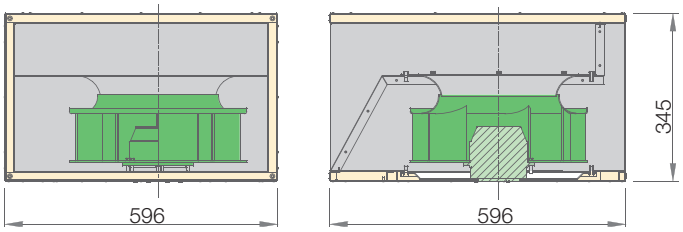
EKB / DKB

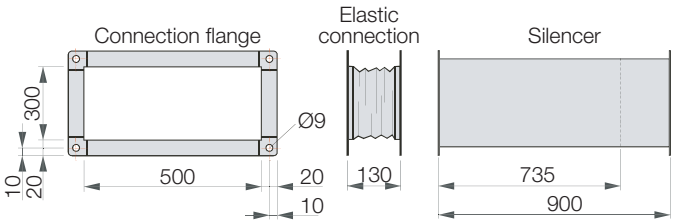


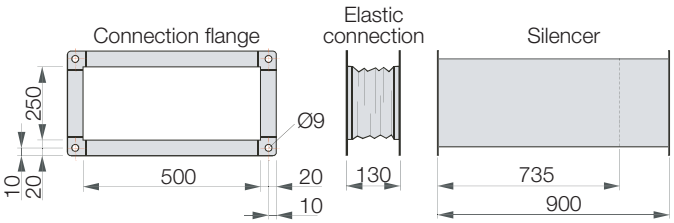
EKBS / DKBS



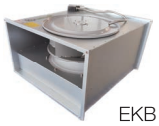
EKBS / DKBS







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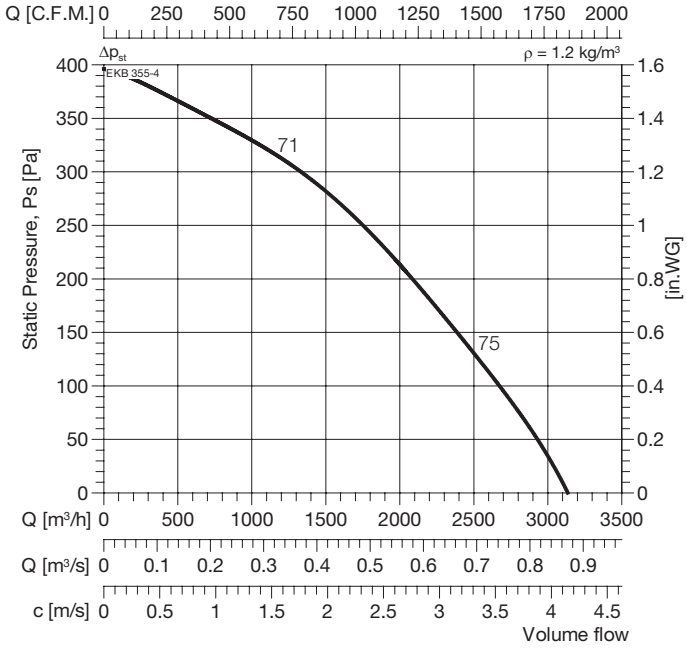


EKB / DKB



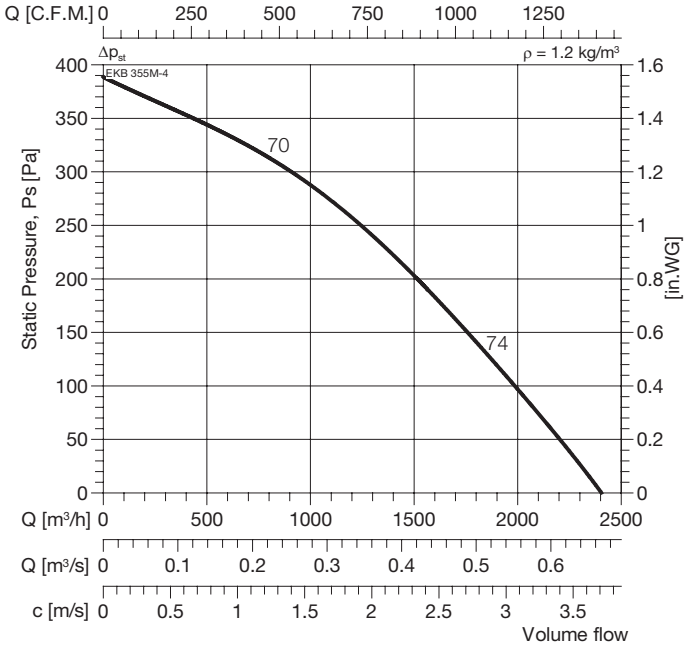
EKBS / DKBS

EKB / EKBS 355-4



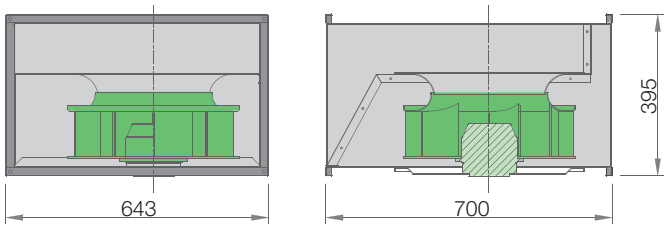
Typ	EKB 355-4 / EKBS 355-4	Art. Nr.				30.1 kg / 41.0 kg
U :	230 V 50 Hz	t_R :	60	°C		IP 54
P_1 :	0.33 **kW**	$\Delta p_{fa\,min}$:	0			E 13
I_N :	1.52 **A**					GS 1
n :	1350 **min⁻¹**					NE 1.5
C_{400V} :	6 **µF**					RPE 06

EKB / EKBS 355M-4

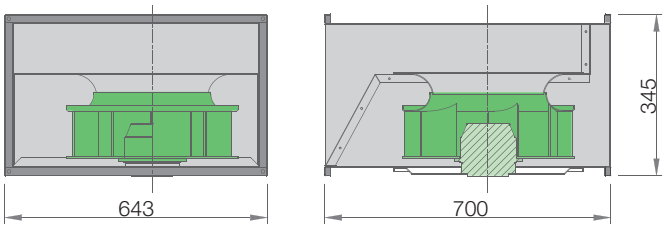


Typ	EKB 355M-4 / EKBS 355M-4	Art. Nr.				26.0 kg / 35.5 kg
U :	230 V 50 Hz	t_R :	60	°C		IP 54
P_1 :	0.33 **kW**	$\Delta p_{fa\,min}$:	0			E 13
I_N :	1.52 **A**					GS 1
n :	1350 **min⁻¹**					NE 1.5
C_{400V} :	6 **µF**					RPE 06

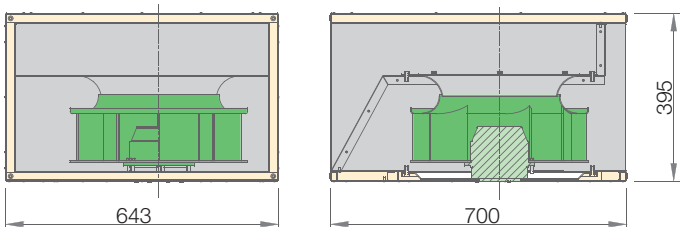
EKB / DKB



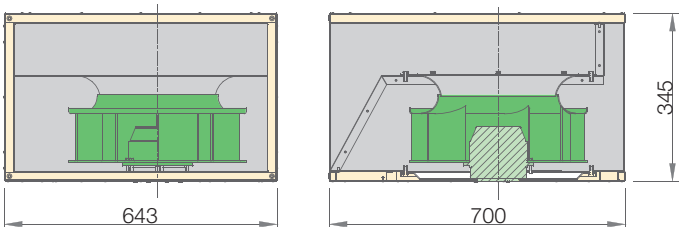
EKB / DKB

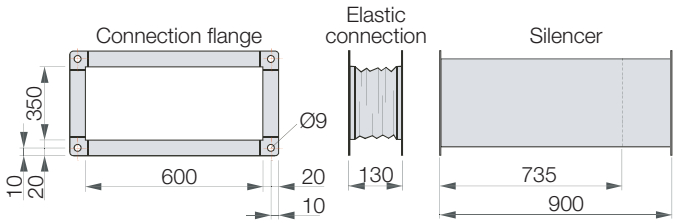


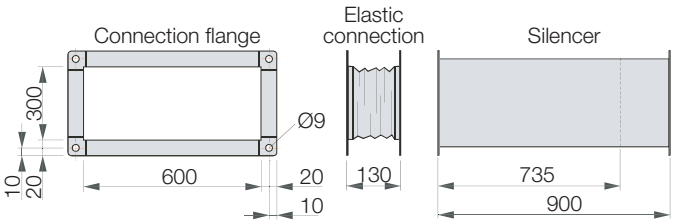
EKBS / DKBS



EKBS / DKBS

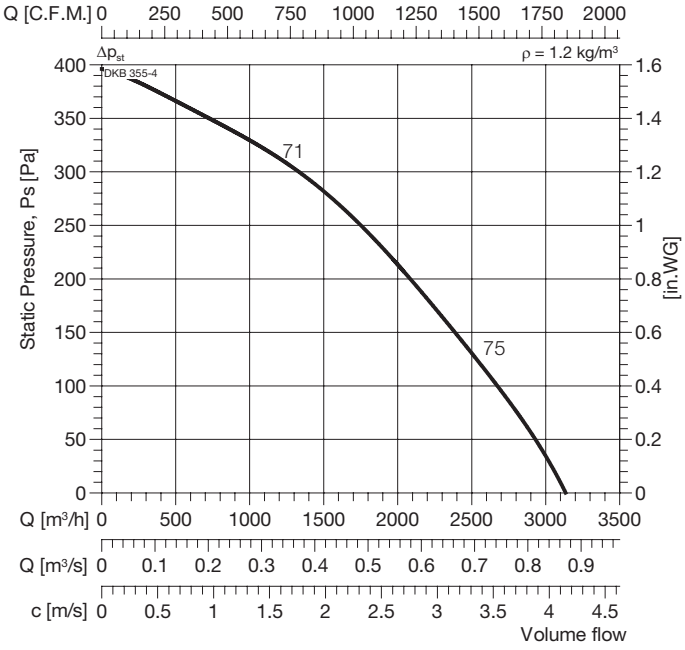






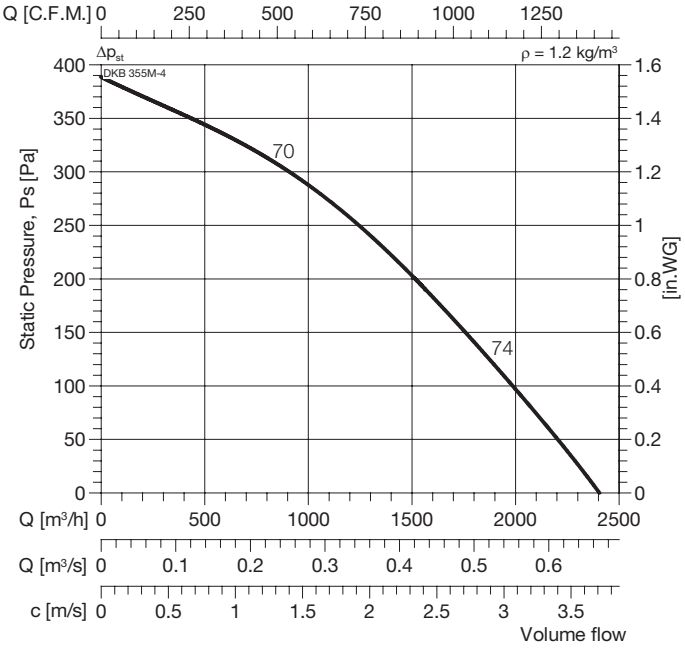
We reserve the right to alter measurements without notice in case of technical improvements

DKB / DKBS 355-4



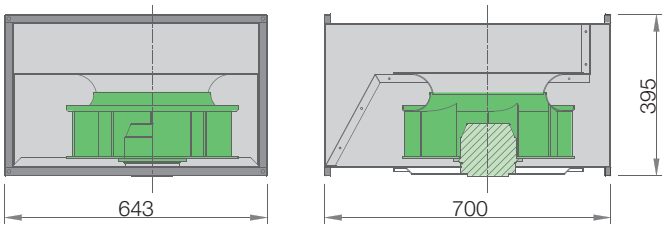
Typ	DKB 355-4 / DKBS 355-4		Art. Nr.			30.4 kg / 41.4 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	0.33	**kW**	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	0.63	**A**				GS 2
n :	1340	**min⁻¹**				RTD 1.2
C_{400V} :	6	**µF**				SAD 9

DKB / DKBS 355M-4

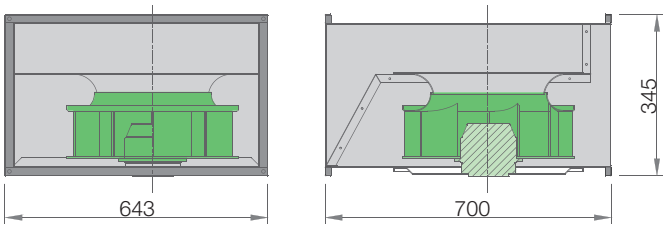


Typ	DKB 355M-4 / DKBS 355M-4		Art. Nr.			26.3 kg / 35.9 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	0.33	**kW**	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	0.63	**A**				GS 2
n :	1340	**min⁻¹**				RTD 1.2
C_{400V} :	6	**µF**				SAD 9

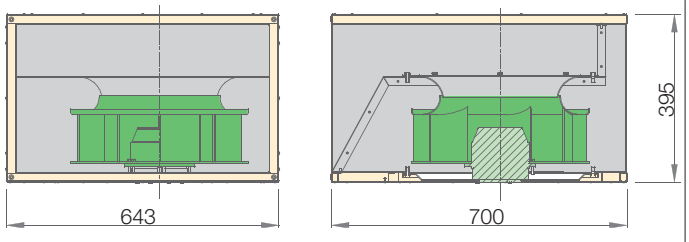
EKB / DKB



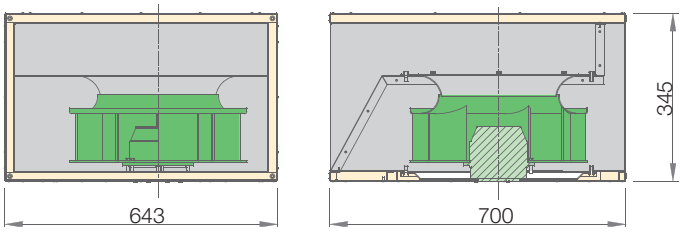
EKB / DKB

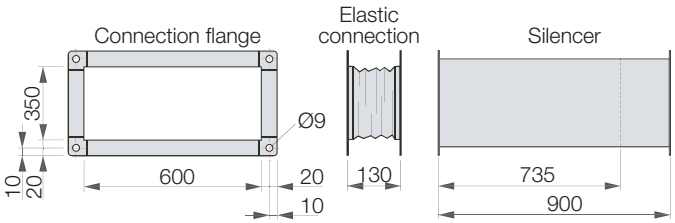


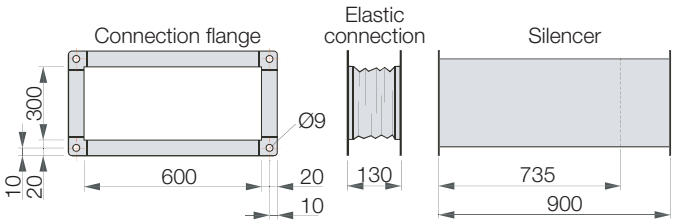
EKBS / DKBS



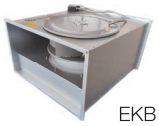
EKBS / DKBS







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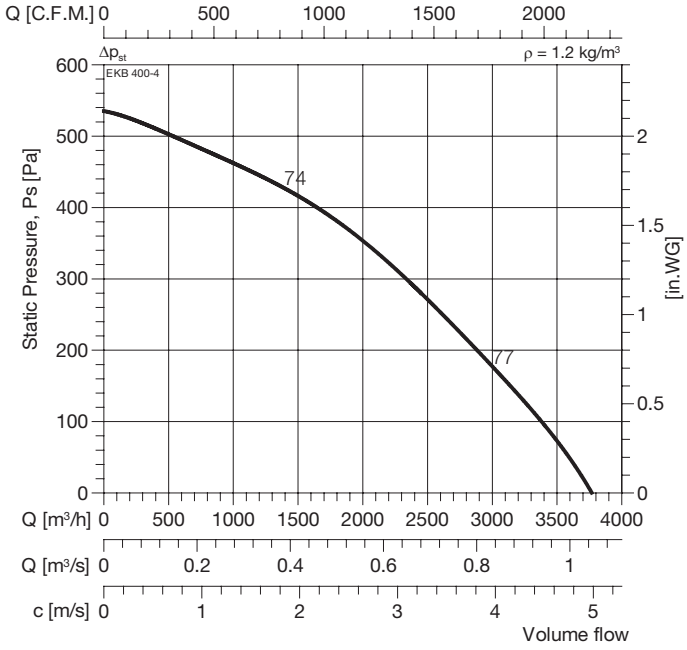


EKB / DKB



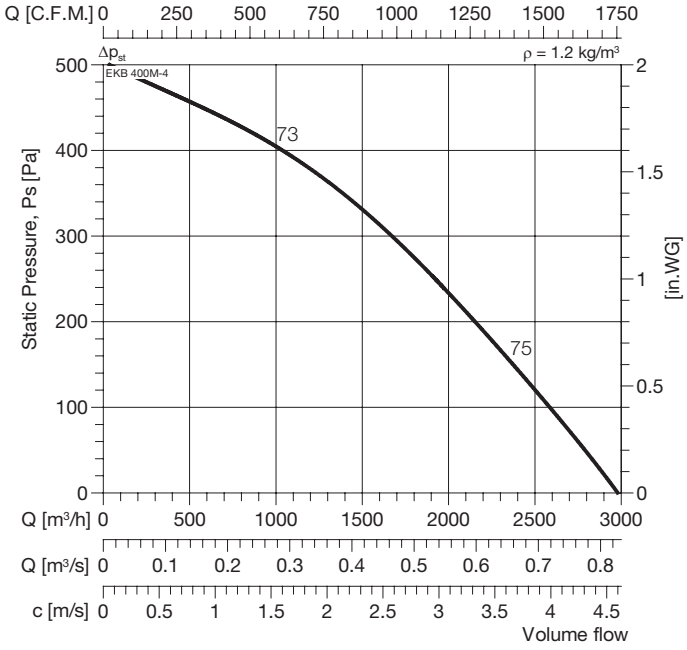
EKBS / DKBS

EKB / EKBS 400-4



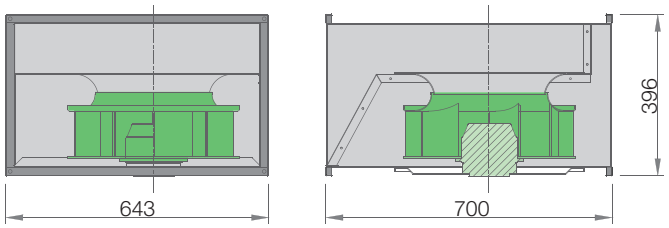
Typ	EKB 400-4 / EKBS 400-4	Art. Nr.				
					33 / 45	kg
U :	230 V 50 Hz	t_R :	50	°C	IP 54	
P_1 :	0.51 **kW**	$\Delta p_{fa\ min}$:	0		E 13	
I_N :	2.3 **A**				GS 2	
n :	1331 **min⁻¹**				NE 3.2	
C_{400V} :	8 **µF**				RPE 06	

EKB / EKBS 400M-4

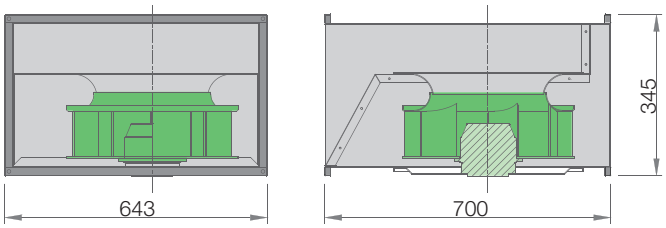


Typ	EKB 400M-4 / EKBS 400M-4	Art. Nr.				
					28.5 / 38.9	kg
U :	230 V 50 Hz	t_R :	50	°C	IP 54	
P_1 :	0.51 **kW**	$\Delta p_{fa\ min}$:	0		E 13	
I_N :	2.3 **A**				GS 2	
n :	1331 **min⁻¹**				NE 3.2	
C_{400V} :	8 **µF**				RPE 06	

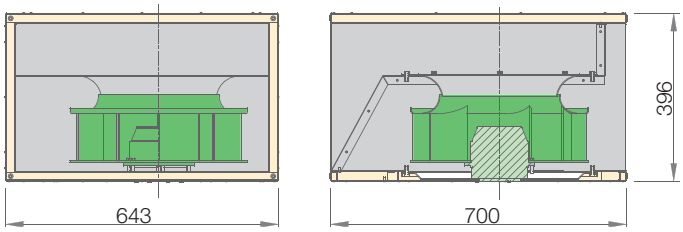
EKB / DKB



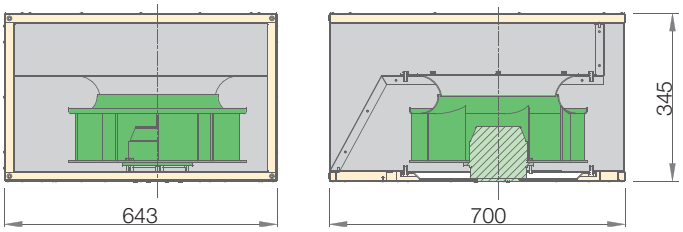
EKB / DKB

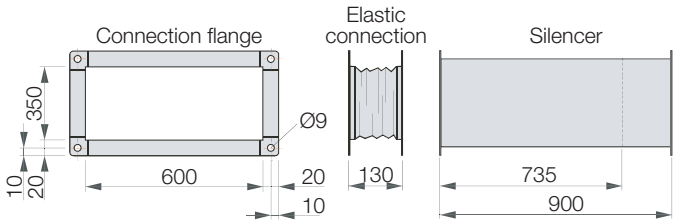


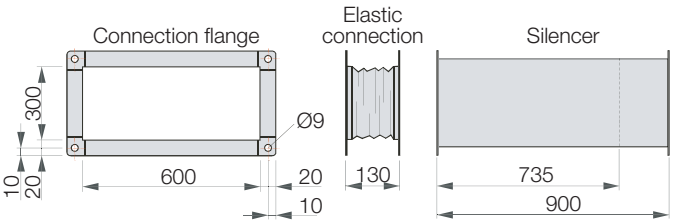
EKBS / DKBS



EKBS / DKBS

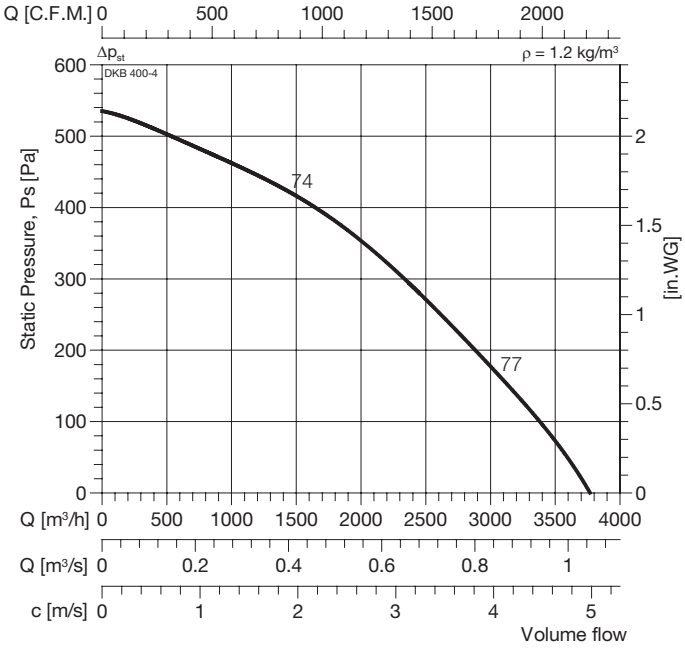






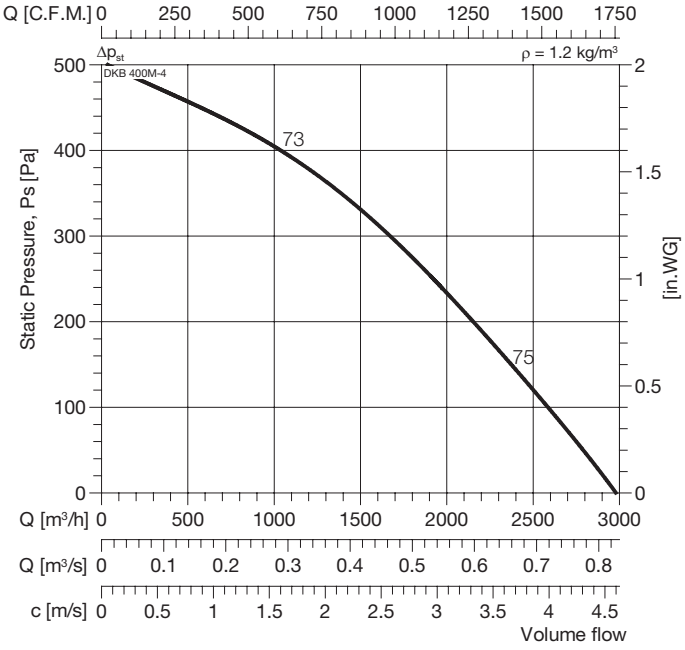
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DKB / DKBS 400-4



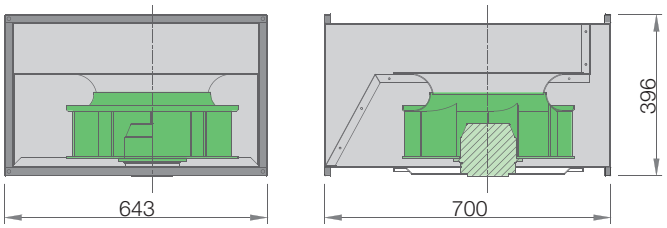
Typ	DKB 400-4 / DKBS 400-4		Art. Nr.			33.5 kg / 45.7 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	0.49	**kW**	$\Delta p_{fa\,min}$:	0		DS1
I_N :	0.82	**A**				GS 2
n :	1253	**min⁻¹**				RTD 1.2
C_{400V} :	-	**µF**				SAD 9

DKB / DKBS 400M-4

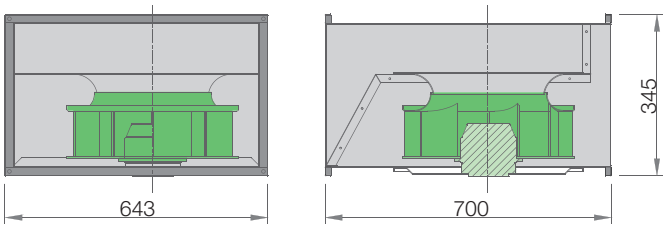


Typ	DKB 400M-4 / DKBS 400M-4		Art. Nr.			29.0 kg / 39.5 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	0.49	**kW**	$\Delta p_{fa\,min}$:	0		DS1
I_N :	0.82	**A**				GS 2
n :	1253	**min⁻¹**				RTD 1.2
C_{400V} :	-	**µF**				SAD 9

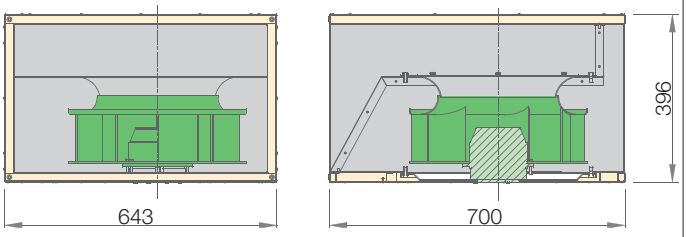
EKB / DKB



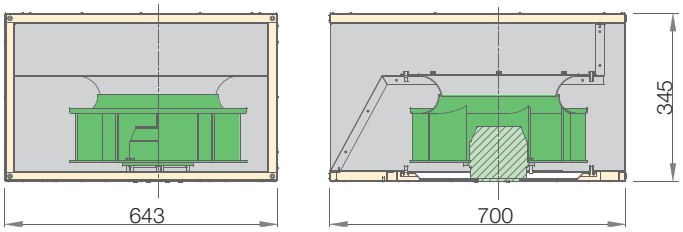
EKB / DKB

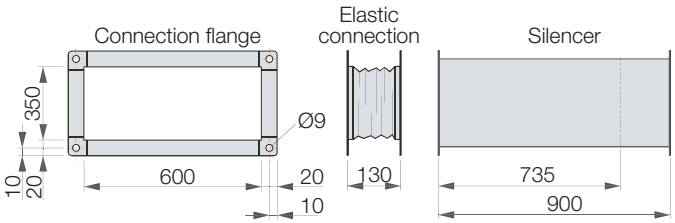


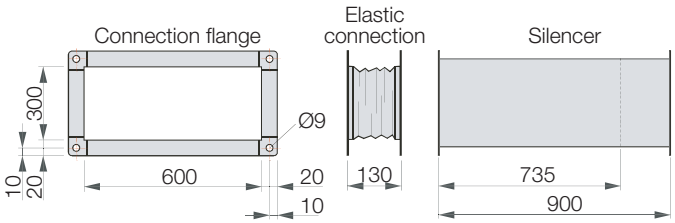
EKBS / DKBS



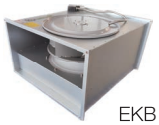
EKBS / DKBS







We reserve the right to alter measurements without notice in case of technical improvements

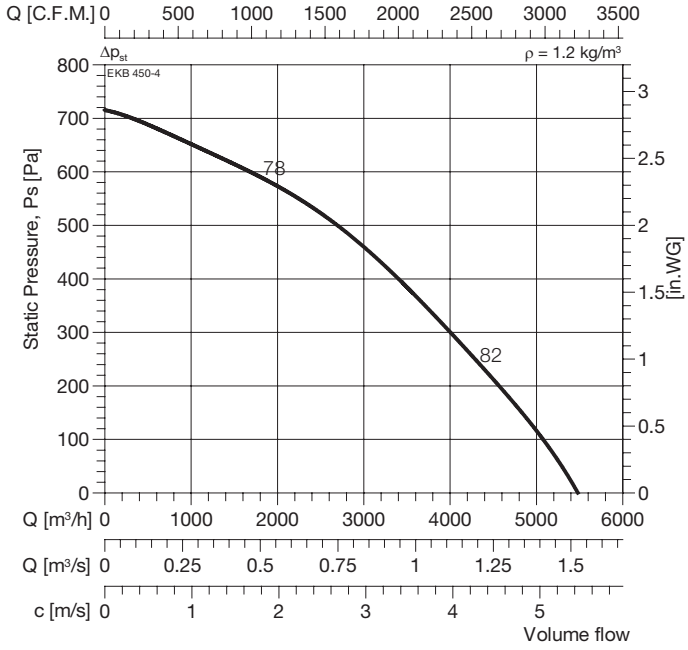


EKB / DKB



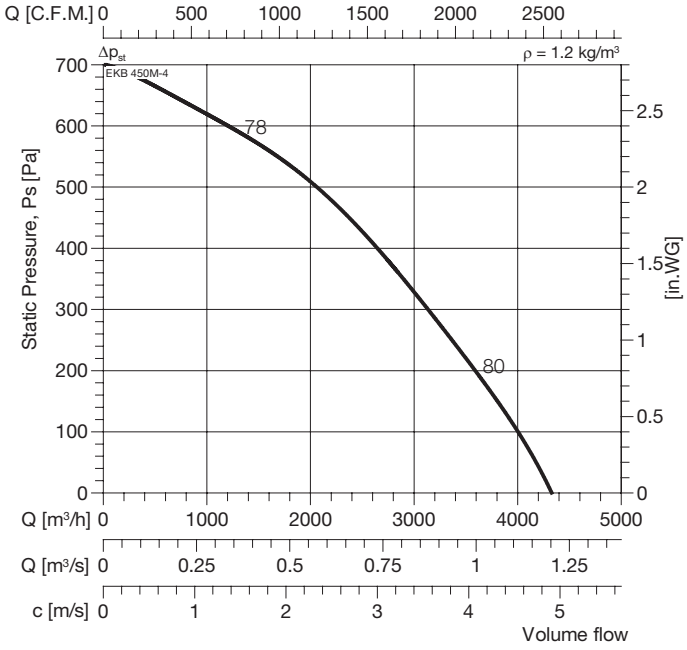
EKBS / DKBS

EKB / EKBS 450-4



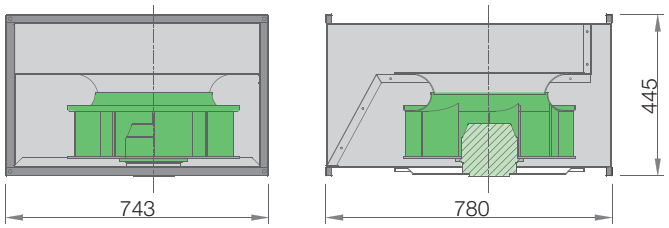
Typ	EKB 450-4 / EKBS 450-4	Art. Nr.			43.0 kg / 60.0 kg
U :	230 V 50 Hz	t_R :	60	°C	IP 54
P_1 :	0.9 **kW**	$\Delta p_{fa\,min}$:	0		E 13
I_N :	4.1 **A**				GS 2
n :	1289 **min⁻¹**				NE 5
C_{400V} :	16 **µF**				RPE 09A

EKB / EKBS 450M-4

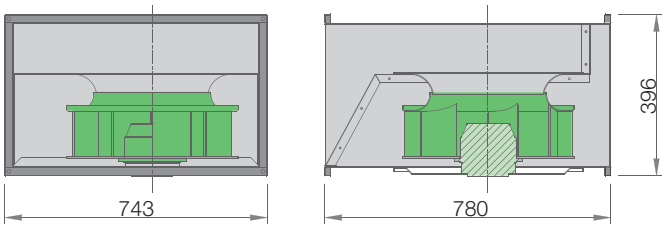


Typ	EKB 450M-4 / EKBS 450M-4	Art. Nr.			37.2 kg / 51.9 kg
U :	230 V 50 Hz	t_R :	60	°C	IP 54
P_1 :	0.9 **kW**	$\Delta p_{fa\,min}$:	0		E 13
I_N :	4.1 **A**				GS 2
n :	1289 **min⁻¹**				NE 5
C_{400V} :	16 **µF**				RPE 09A

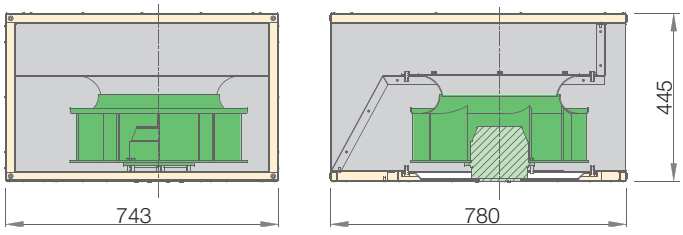
EKB / DKB

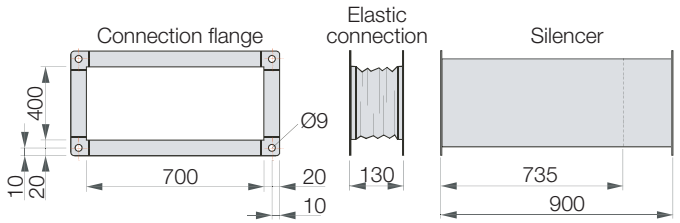


EKB / DKB

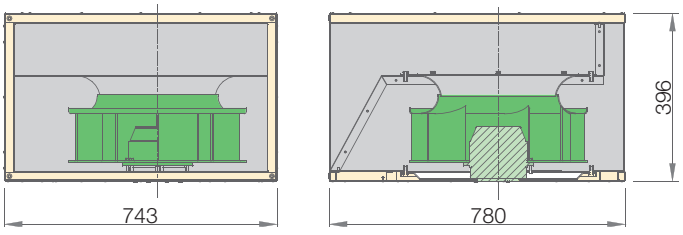


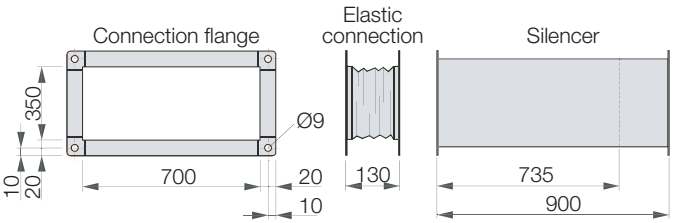
EKBS / DKBS





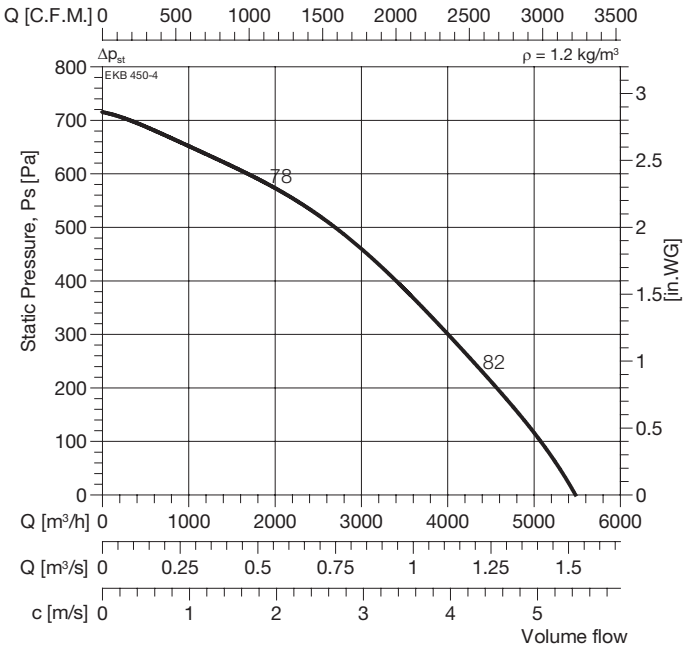
EKBS / DKBS





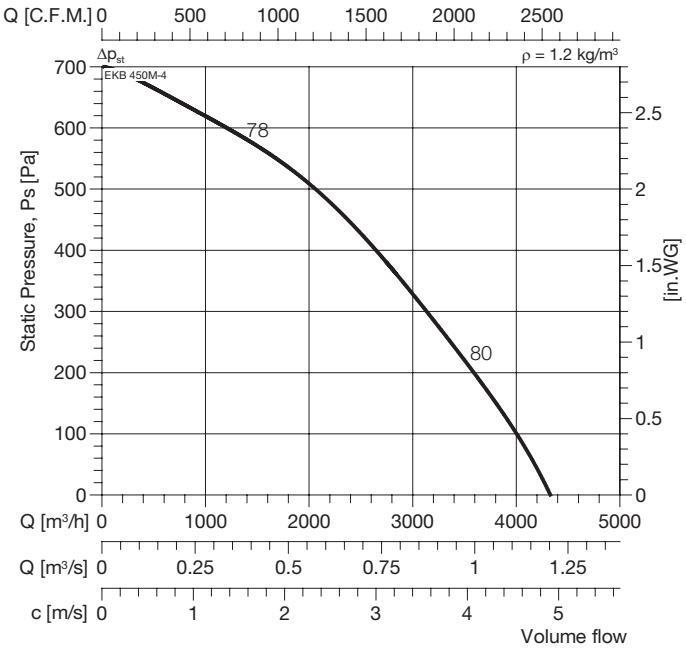
We reserve the right to alter measurements without notice in case of technical improvements

DKB / DKBS 450-4



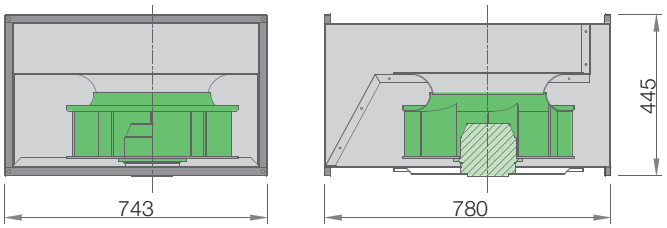
Typ	DKB 450-4 / DKBS 450-4		Art. Nr.			44.0 kg / 61.4 kg
U :	400 V 50 Hz		t_R :	70	°C	IP 54
P_1 :	0.87	**kW**	$\Delta p_{fa\ min}$:	0		DD0b
I_N :	1.8	**A**				GS 2
n :	1386	**min⁻¹**				RTD 2.5
C_{400V} :	-	**µF**				SAD 9

DKB / DKBS 450M-4

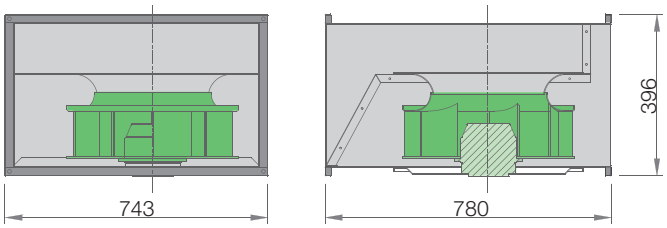


Typ	DKB 450M-4 / DKBS 450M-4		Art. Nr.			38.0 kg / 53.1 kg
U :	400 V 50 Hz		t_R :	70	°C	IP 54
P_1 :	0.87	**kW**	$\Delta p_{fa\ min}$:	0		DD0b
I_N :	1.8	**A**				GS 2
n :	1386	**min⁻¹**				RTD 2.5
C_{400V} :	-	**µF**				SAD 9

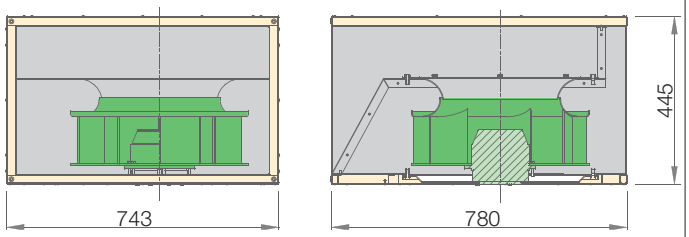
EKB / DKB



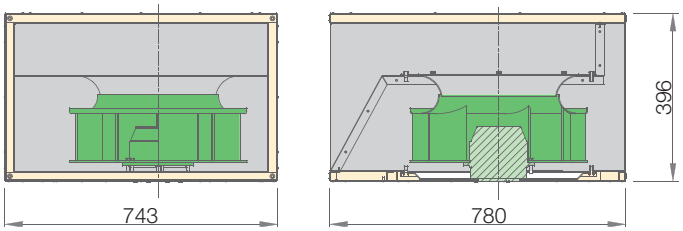
EKB / DKB

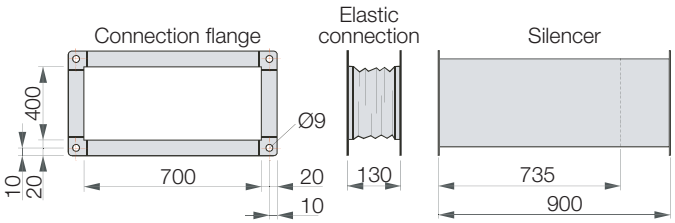


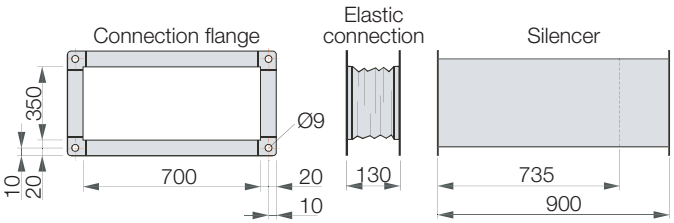
EKBS / DKBS



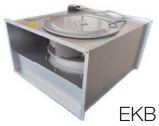
EKBS / DKBS







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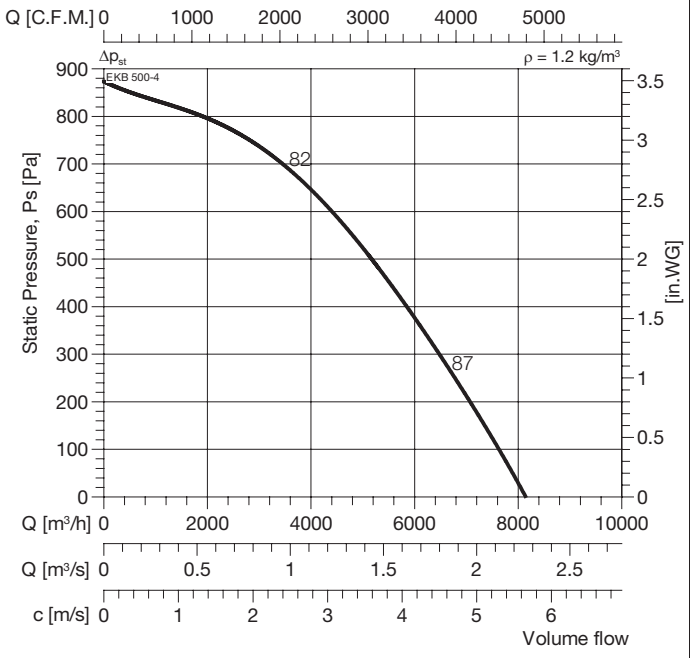


EKB / DKB



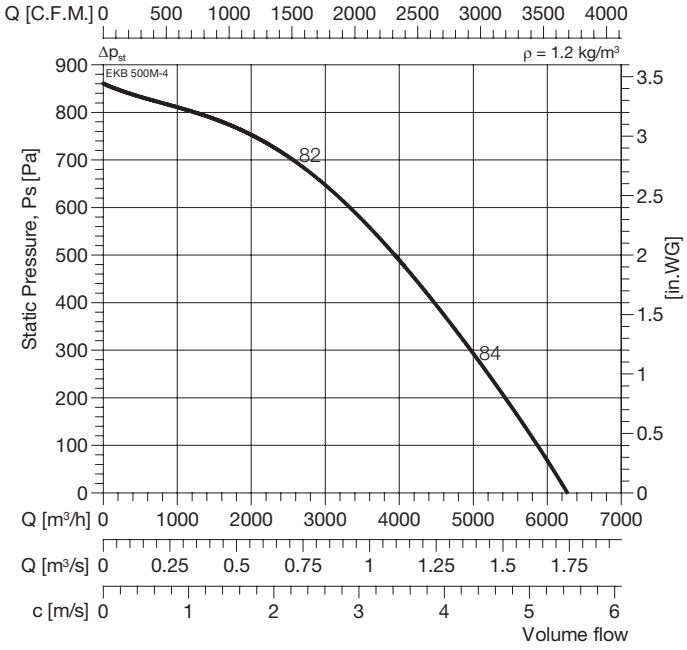
EKBS / DKBS

EKB / EKBS 500-4



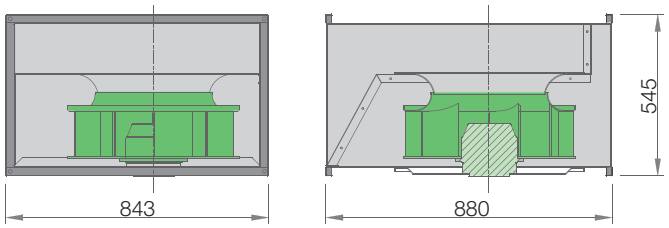
Typ	EKB 500-4 / EKBS 500-4	Art. Nr.				
					62.0 kg	
					83.0 kg	
U :	230 V 50 Hz	t_R :	50	°C	IP 54	
P_1 :	1.6 kW	$\Delta p_{fa\,min}$:	0		E 13	
I_N :	7.3 A				GS 2	
n :	1393 min^{-1}				NE 7.5	
C_{400V} :	31 µF				SAE 7	

EKB / EKBS 500M-4

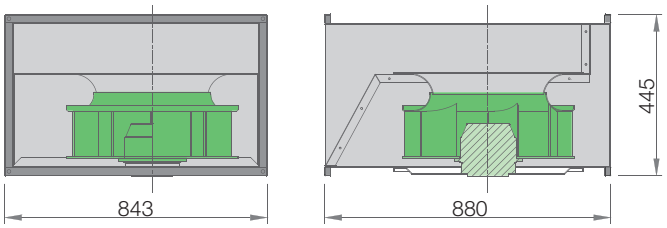


Typ	EKB 500M-4 / EKBS 500M-4	Art. Nr.				
					53.6 kg	
					71.8 kg	
U :	230 V 50 Hz	t_R :	50	°C	IP 54	
P_1 :	1.6 kW	$\Delta p_{fa\,min}$:	0		E 13	
I_N :	7.3 A				GS 2	
n :	1393 min^{-1}				NE 7.5	
C_{400V} :	31 µF				SAE 7	

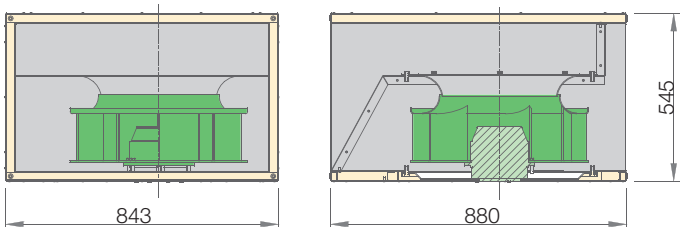
EKB / DKB



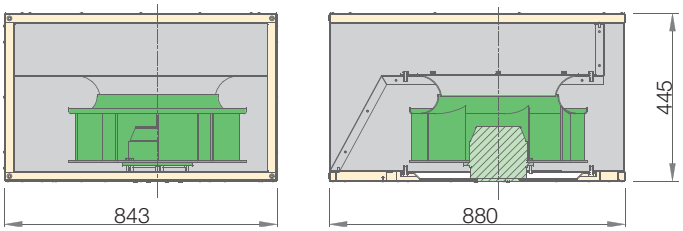
EKB / DKB

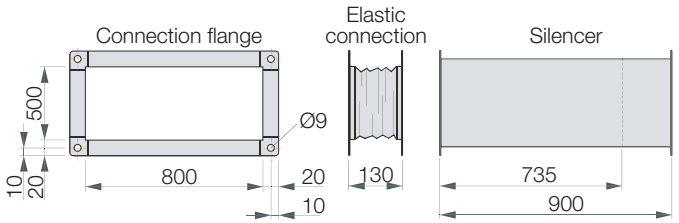


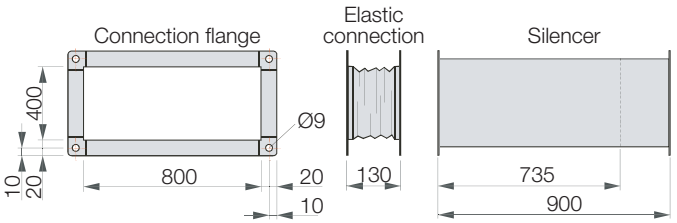
EKBS / DKBS



EKBS / DKBS

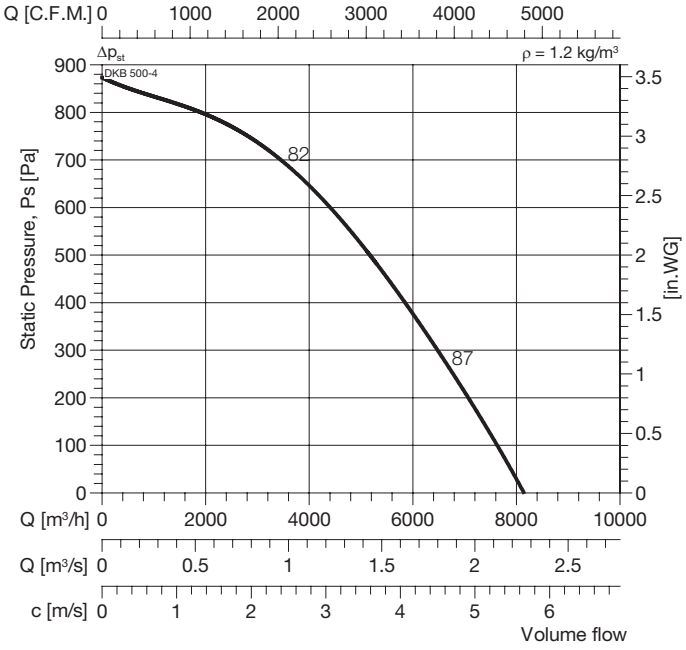






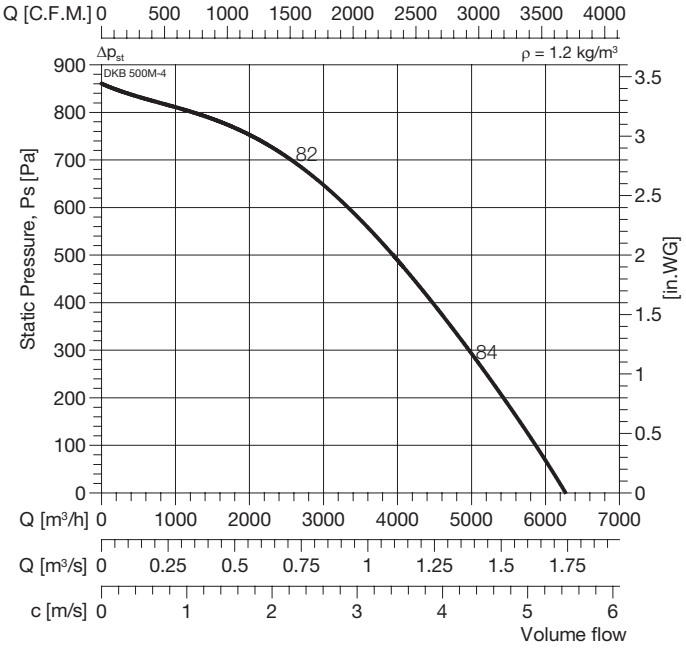
We reserve the right to alter measurements without notice in case of technical improvements

DKB / DKBS 500-4



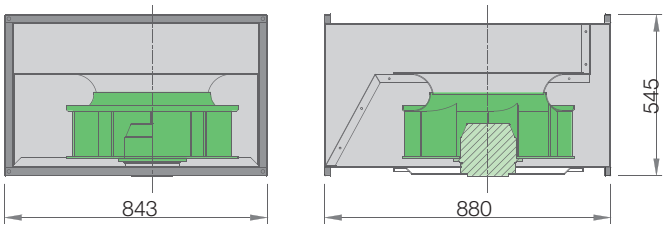
Typ	DKB 500-4 / DKBS 500-4		Art. Nr.			63.5 kg / 85.0 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	1.7	**kW**	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	3.2	**A**				GS 2
n :	1393	**min⁻¹**				RTD 3.8
C_{400V} :	-	**µF**				SAD 9

DKB / DKBS 500M-4

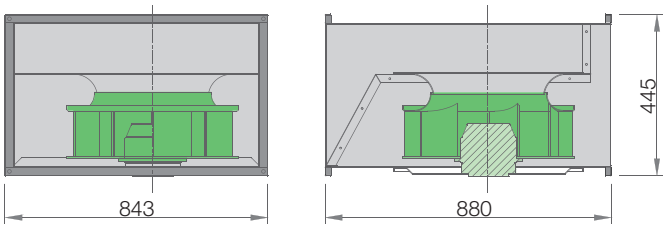


Typ	DKB 500M-4 / DKBS 500M-4		Art. Nr.			54.9 kg / 73.5 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	1.7	**kW**	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	3.2	**A**				GS 2
n :	1393	**min⁻¹**				RTD 3.8
C_{400V} :	-	**µF**				SAD 9

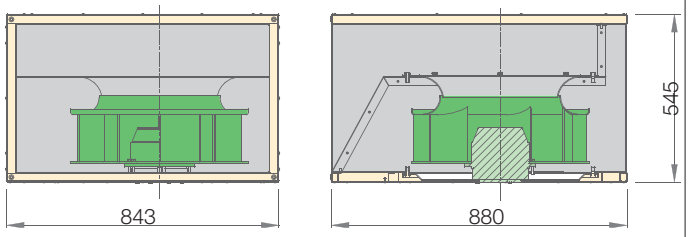
EKB / DKB



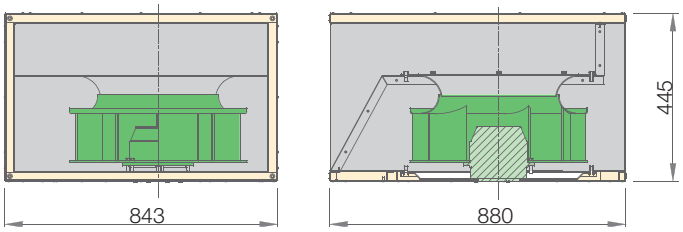
EKB / DKB

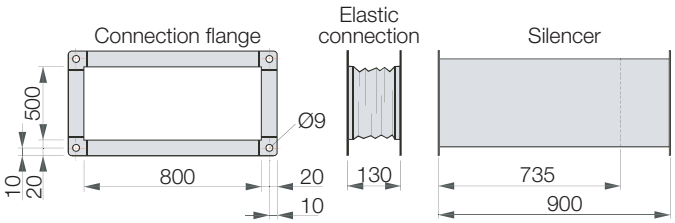


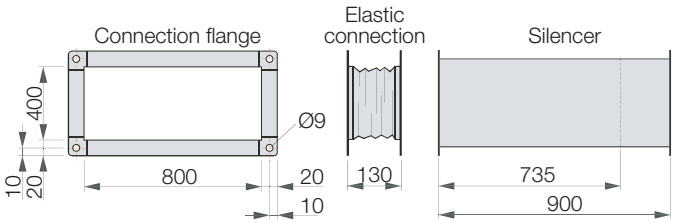
EKBS / DKBS



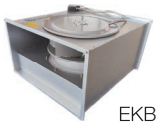
EKBS / DKBS







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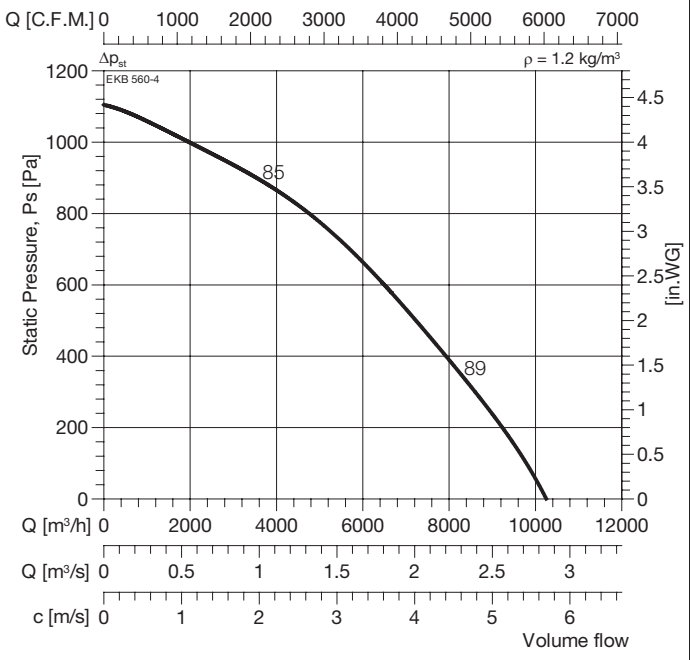


EKB / DKB



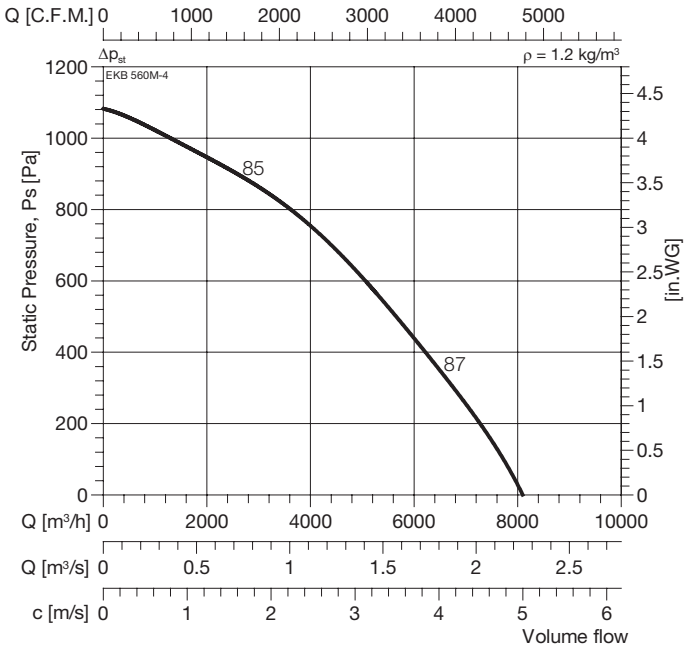
EKBS / DKBS

EKB / EKBS 560-4



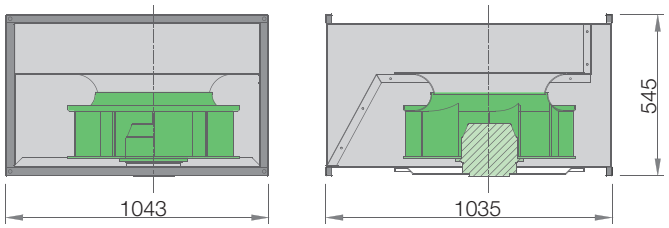
Typ	EKB 560-4 / EKBS 560-4		Art. Nr.				79.0 kg / 108 kg
U :	230 V 50 Hz		t_R :	40	°C		IP 54
P_1 :	2.3	**kW**	$\Delta p_{fa\,min}$:	0			E 13
I_N :	10.0	**A**					GS 2
n :	1386	**min⁻¹**					NE 10
C_{400V} :	50	**µF**					SSE 10

EKB / EKBS 560M-4

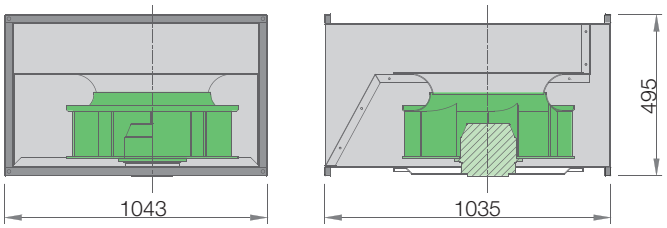


Typ	EKB 560M-4 / EKBS 560M-4		Art. Nr.				68.3 kg / 93.4 kg
U :	230 V 50 Hz		t_R :	40	°C		IP 54
P_1 :	2.3	**kW**	$\Delta p_{fa\,min}$:	0			E 13
I_N :	10.0	**A**					GS 2
n :	1386	**min⁻¹**					NE 10
C_{400V} :	50	**µF**					SSE10

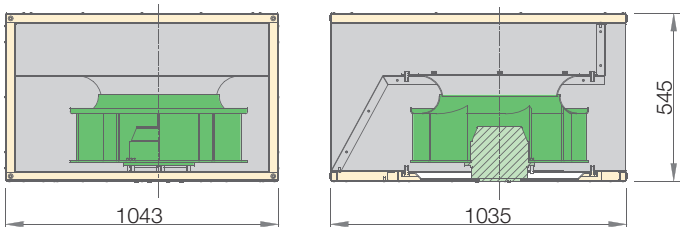
EKB / DKB



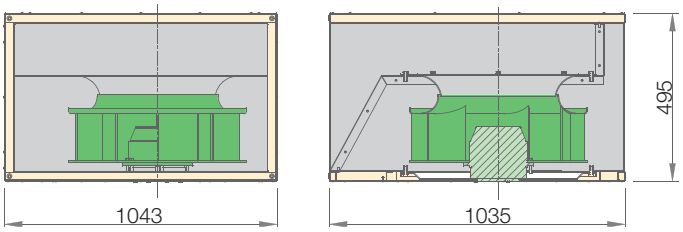
EKB / DKB

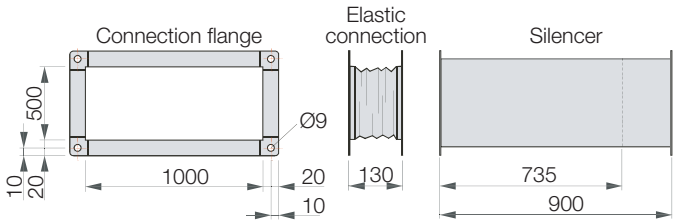


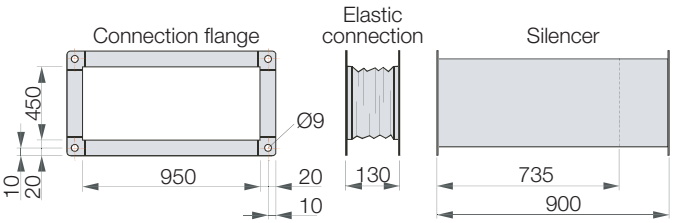
EKBS / DKBS



EKBS / DKBS

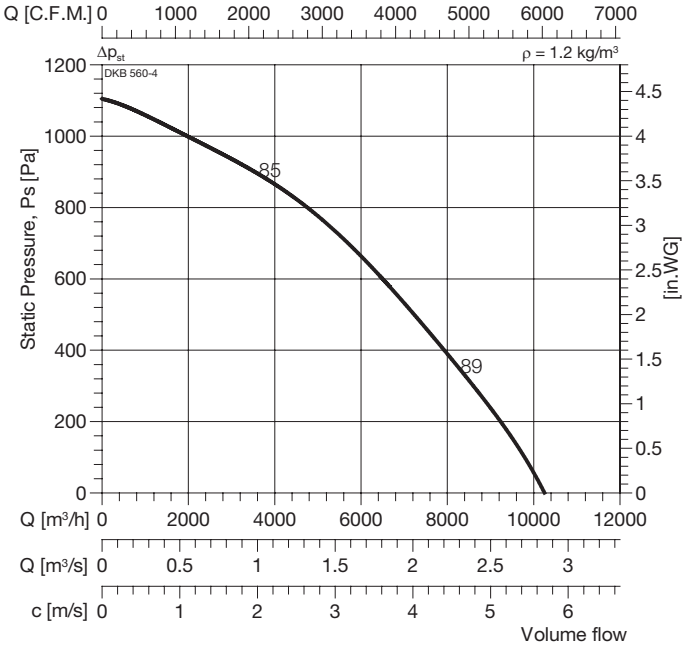






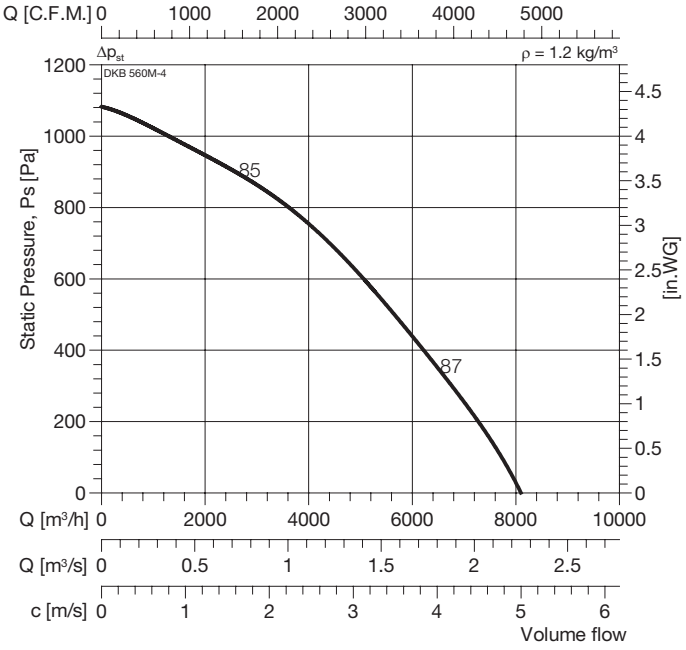
We reserve the right to alter measurements without notice in case of technical improvements

DKB / DKBS 560-4



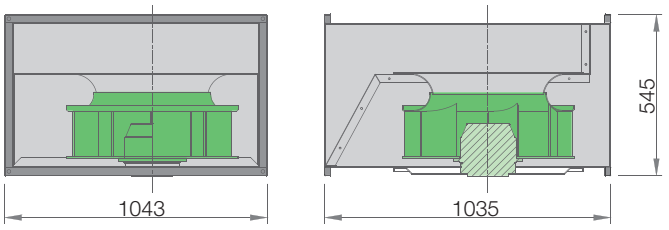
Typ	DKB 560-4 / DKBS 560-4		Art. Nr.			81.0 kg / 111 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	2.2	kW	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	4.0	A				GS 2
n :	1369	min^{-1}				RTD 3.8
C_{400V} :	-	µF				SAD 9

DKB / DKBS 560M-4

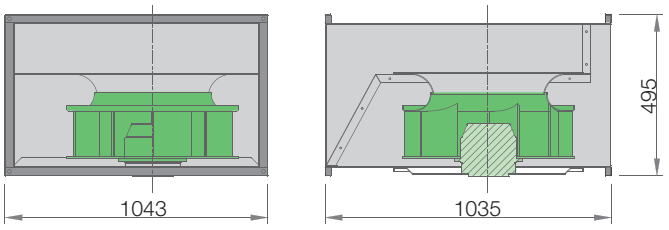


Typ	DKB 560M-4 / DKBS 560M-4		Art. Nr.			70.0 kg / 95.8 kg
U :	400 V 50 Hz		t_R :	60	°C	IP 54
P_1 :	2.2	kW	$\Delta p_{fa\,min}$:	0		DD0b
I_N :	4.0	A				GS 2
n :	1369	min^{-1}				RTD 3.8
C_{400V} :	-	µF				SAD 9

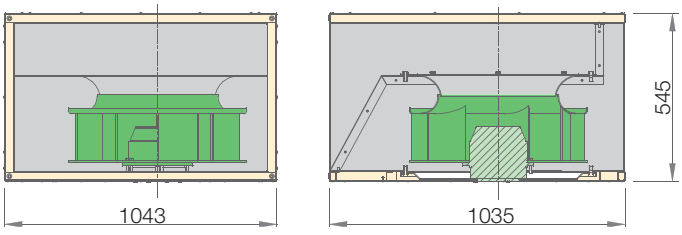
EKB / DKB



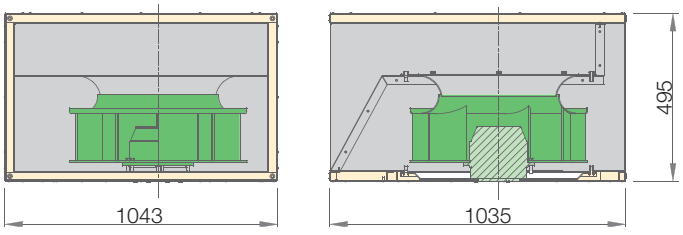
EKB / DKB

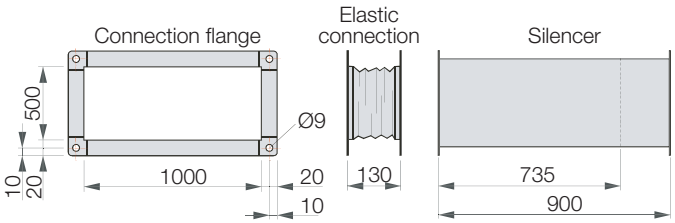


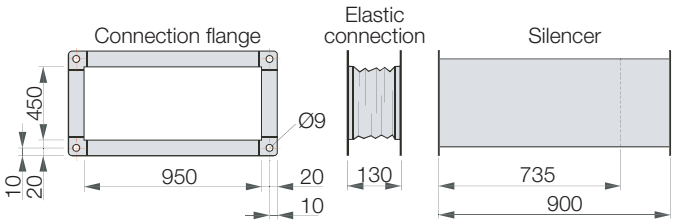
EKBS / DKBS



EKBS / DKBS







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Air in Motion

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