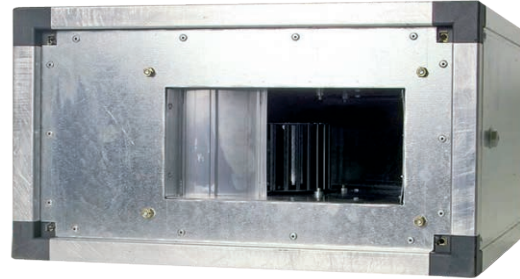
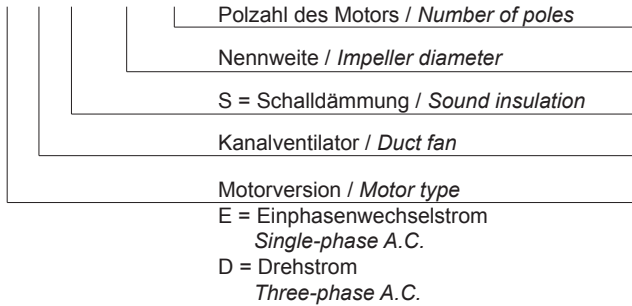


Typenschlüssel

Fan type code

D K N S 225 - 4



Relativer A-bewerteter OktavSchalleistungspegel

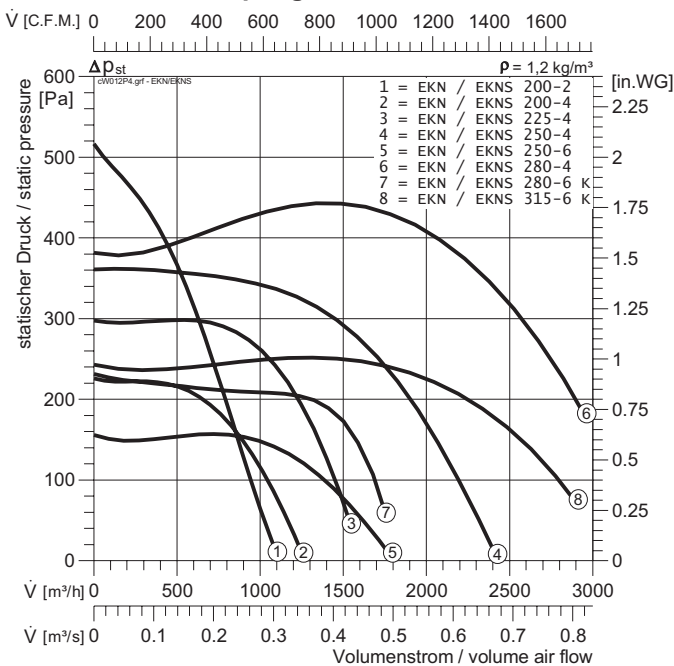
Relative octave sound power level A-weighted

f _M [Hz]		L _{WA}	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
4-pol	L _{WA6rel} [dB(A)] Ausblasseite Outlet side	0	-16	-14	-8	-5	-6	-7	-17
	L _{WA5rel} [dB(A)] Ansaugseite Inlet side	-6	-13	-15	-6	-5	-7	-9	-18
	L _{WA2rel} [dB(A)] Gehäuseabstr. EKN/DKN Casing EKN/DKN	-17	-5	-7	-9	-7	-12	-17	-24
	L _{WA2rel} [dB(A)] Gehäuseabstr. EKNS/DKNS Casing EKNS/DKNS	-25	-30	-32	-34	-32	-37	-42	-49
6-pol	L _{WA6rel} [dB(A)] Ausblasseite Outlet side	0	-22	-13	-7	-6	-5	-7	-15
	L _{WA5rel} [dB(A)] Ansaugseite Inlet side	-6	-17	-15	-7	-6	-6	-7	-14
	L _{WA2rel} [dB(A)] Gehäuseabstr. EKN/DKN Casing EKN/DKN	-17	-10	-9	-4	-7	-9	-14	-21
	L _{WA2rel} [dB(A)] Gehäuseabstr. EKNS/DKNS Casing EKNS/DKNS	-25	-34	-34	-29	-32	-34	-39	-46

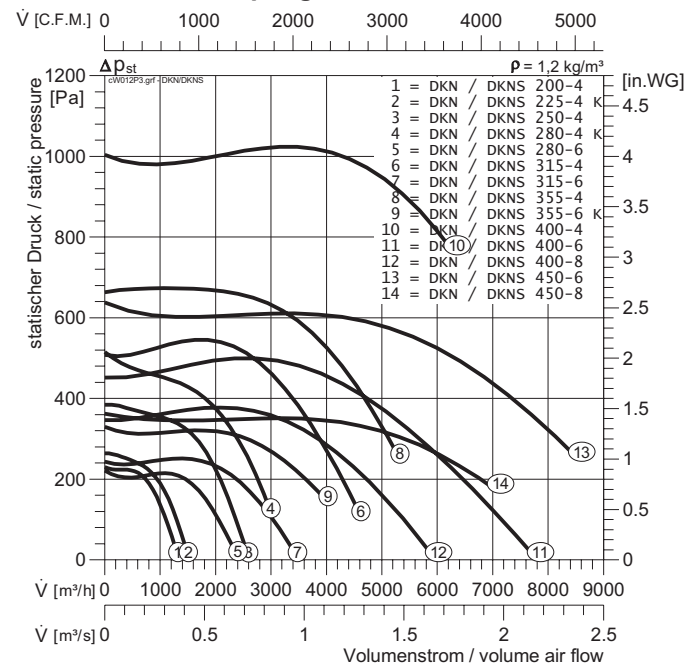
Schnellauswahl

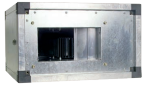
Quick selection

230 V, 1AC, 2- 4- 6-polig



400 V, 3AC, 4- 6- 8-polig





EKNS/DKNS



EKN/DKN

Vorteile

- > schnelle Montage an 20 mm-Normflansch
- > in allen Einbaulagen einsetzbar
- > transformatorisch und elektronisch stufenlos regelbar
- > serienmäßig mit Motorvollschutz durch Thermokontakte ausgerüstet (bei Ex-Motoren mit Kaltleitern)
- > extrem niedriger Anlaufstrom
- > kompakte, raumsparende Bauart

Eigenschaften und Ausführung

Der Kanalventilator vereint die Vorteile des Axialventilators - die gerade Durchströmung - mit der hohen Druckstabilität, dem niedrigen Schallniveau und dem ausgezeichneten Wirkungsgrad des Radialventilators.

Gehäuse

- > EKN, DKN - Gehäuse aus verzinktem Stahlblech als rechteckiger Luftkanal ausgebildet, mit Norm-Luftkanalflanschen (20 mm breit) druck- und saugseitig.
- > EKNS, DKNS - mit Gehäuserahmen aus Aluminiumstrangpreßprofil und Kunststoffecken aus glasfaserverstärktem Polyamid. Abdeckungen aus verzinktem Blech mit innenliegenden Schalldämmatten aus Elastomerschaum.

Lauftrad

Vorwärts gekrümmte Radiallaufräder aus Stahlblech.

Die Laufräder sind direkt auf die Rotoren der Außenläufermotoren aufgebaut und zusammen mit diesen entsprechend Gütestufe G 2,5 nach DIN ISO 1940 auf zwei Ebenen gewuchtet.

Elektrischer Anschluss

Die Motoren sind auf einen außen am Gehäuse angebrachten Klemmkasten verdrahtet.

Luftleistungskennlinien

Die Kennlinien für diese Typenreihe wurden mit einem saugseitigen Kammerprüfstand entsprechend der DIN 24 163 in Einbauart D (saug- und druckseitig angeschlossen) gemessen und zeigen die statische Druckerhöhung Δp_{st} als Funktion des Volumenstroms. Die dynamische Druckerhöhung Δp_{d2} ist auf den Flanschquerschnitt des Ventilatorgehäuses bezogen.

Schallentwicklung

In den Luftleistungskennlinien ist der A-bewertete Freiausblas-Schalleistungspegel L_{WA6} angegeben.

Der A-bewertete Freiansaug-Schalleistungspegel L_{WA5} nach DIN 45 635, Teil 38 kann über die relativen Schalleistungspegel genau ermittelt werden, oder nach folgender Berechnung näherungsweise bestimmt werden:

$$L_{WA5} \approx L_{WA6} - 6 \text{ dB(A)}$$

Der A-bewertete Gehäuse-Schalleistungspegel L_{WA2} nach DIN 45 635, Teil 38 kann über die relativen Schalleistungspegel genau ermittelt werden, oder nach folgender Berechnung näherungsweise bestimmt werden:

$$L_{WA2} \approx L_{WA6} - 17 \text{ dB(A)} \text{ - für EKN oder DKN}$$

$$L_{WA2} \approx L_{WA6} - 25 \text{ dB(A)} \text{ - für EKNS oder DKNS}$$

Den A-bewerteten Schalldruckpegel L_{PA} in 1m Abstand erhält man annähernd, indem man vom A-Schalleistungspegel 7 dB(A) abzieht:

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

Um Körperschallübertragungen auf ein angeschlossenes Kanalsystem zu vermeiden empfehlen wir den Einsatz unserer flexiblen Kanalverbindungsstücke EVK/EVKN (siehe Seite 28). Für genauere Berechnungen bei Schallschutzmaßnahmen ist der Schalleistungspegel der Oktavbänder (A-bewertet) von Bedeutung, welcher wie folgt ermittelt wird:

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

Die relativen A-bewerteten Oktav-Schalleistungspegel L_{WArel} bei den Oktav-Mittelfrequenzen sind der Tabelle auf der vorhergehenden Seite zu entnehmen, sie sind bei $0,5 \times V_{max}$ ermittelt worden.

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

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

- > EKN, DKN - Casing made of galvanised sheet steel formed as a rectangular air duct, with standard tube flanges (20 mm width) at inlet and outlet sides.
- > EKNS, DKNS - aluminium profile and plastic corners made from reinforced polyamide. Panels are made from galvanised sheet steel with sound absorbing insulation made of elastomeric foam.

Impeller

Forward-curved centrifugal impellers made of sheet steel or plastic.

The impellers are fitted directly onto the rotor of the external rotor motor. The motorized impellers are balanced at two levels according to G 2.5 (DIN ISO 1940).

Electrical connection

The motors are wired to an external terminal box.

Fan performance curves

The performance curves of these fans have been established using a test chamber according to DIN 24 163, mounting position D (connected at both sides). The curves indicate the static pressure increase Δp_{st} 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 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:

$$L_{WA5} \approx L_{WA6} - 6 \text{ dB(A)}$$

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:

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

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

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.:

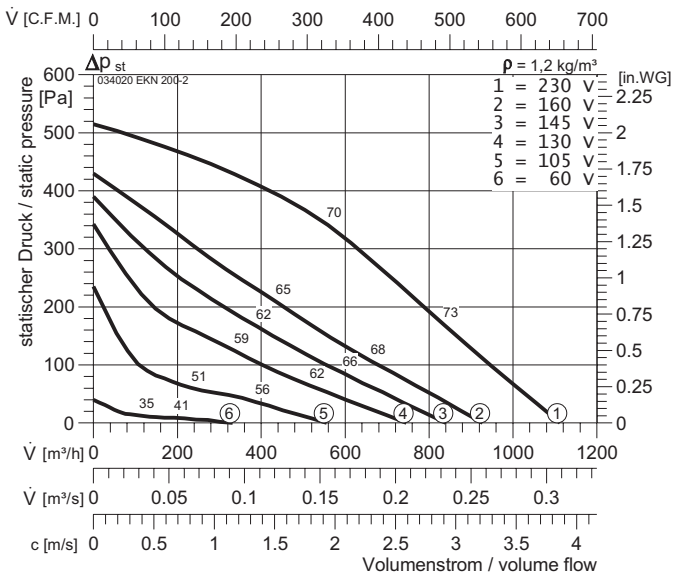
$$L_{PA(1m)} \approx L_{WA2} - 7 \text{ dB(A)}$$

It is important to note that reflexion and environmental characteristics as well as resonant frequencies influence the sound pressure levels in different ways. In order to avoid structure-borne noise transfer to a connected duct system we recommend the use of flexible connections EVK/EVKN (see page 28). The A-weighted octave sound power level is important for the choice of suitable sound attenuators. It is obtained as follows:

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

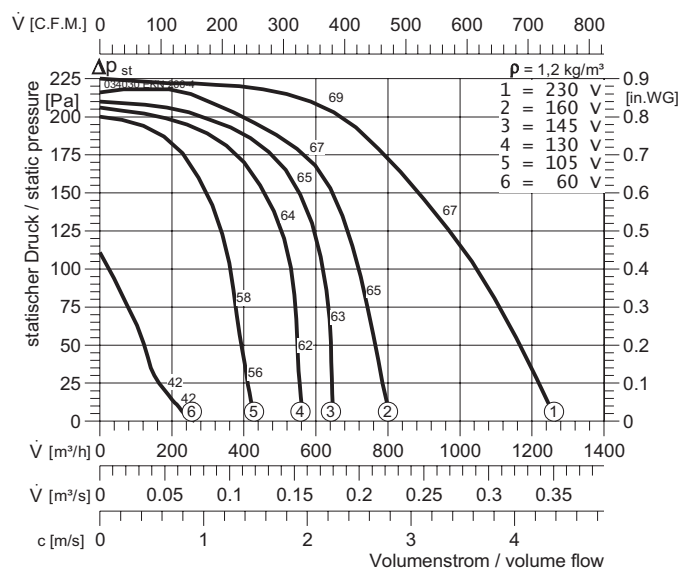
The relative A-weighted octave sound power level L_{WArel} at octave medium frequency can be taken from the table on the preceding page. These levels have been established at $0,5 \times V_{max}$.

EKN / EKNS 200-2



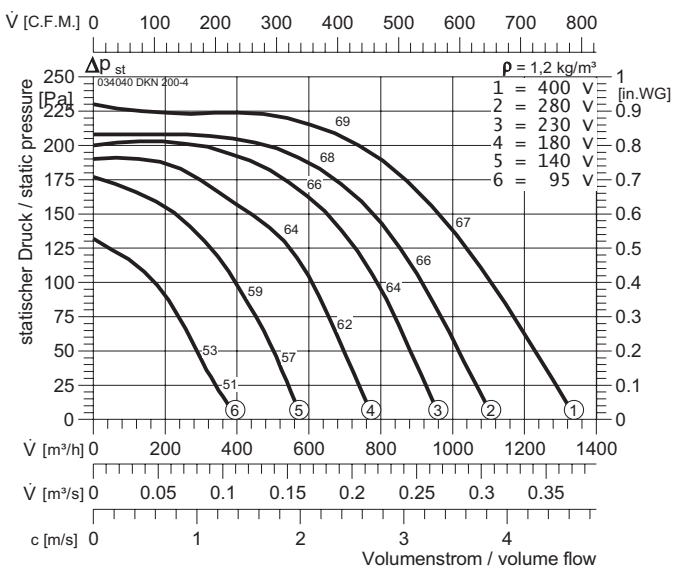
Typ	EKN 200-2	Art. Nr.	034020	11,9 kg
	EKNS 200-2	Art. Nr.	035020	
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,17 kW	Δ p _{fa min} :	0	E13
I _N :	0,76 A	Δ I :	-	GS 1
n :	2530 min ⁻¹	I _A / I _N :	1,8	NE 1,5
C _{400V} :	5 μF			RPE 02

EKN / EKNS 200-4



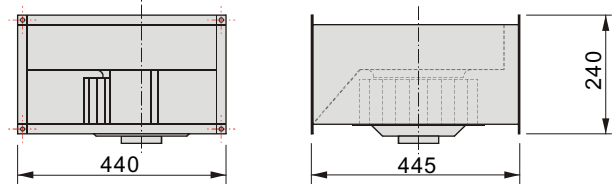
Typ	EKN 200-4	Art. Nr.	034030	13,2 kg
	EKNS 200-4	Art. Nr.	035030	
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,33 kW	Δ p _{fa min} :	0	E13
I _N :	1,52 A	Δ I :	-	GS 1
n :	1350 min ⁻¹	I _A / I _N :	2,1	NE 1,5
C _{400V} :	6 μF			RPE 06

DKN / DKNS 200-4

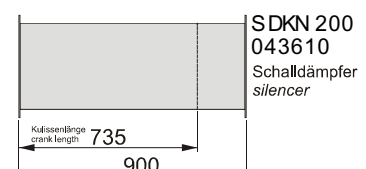
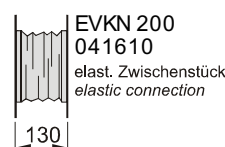
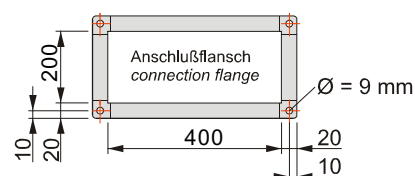
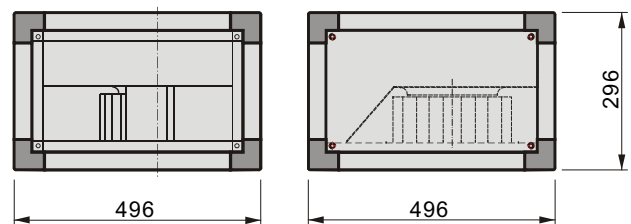


Typ	DKN 200-4	Art. Nr.	034040	13,2 kg
	DKNS 200-4	Art. Nr.	035040	
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,33 kW	Δ p _{fa min} :	0	DD0b
I _N :	0,63 A	Δ I :	-	GS 2
n :	1340 min ⁻¹	I _A / I _N :	2	RTD 1,2
C _{400V} :	- μF			SAD 9

EKN / DKN



EKNS / DKNS





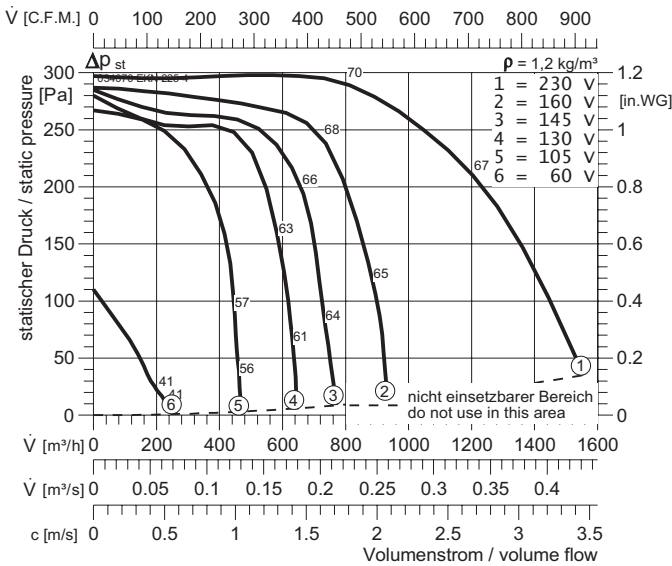
EKN/DKNS



EKN/DKN

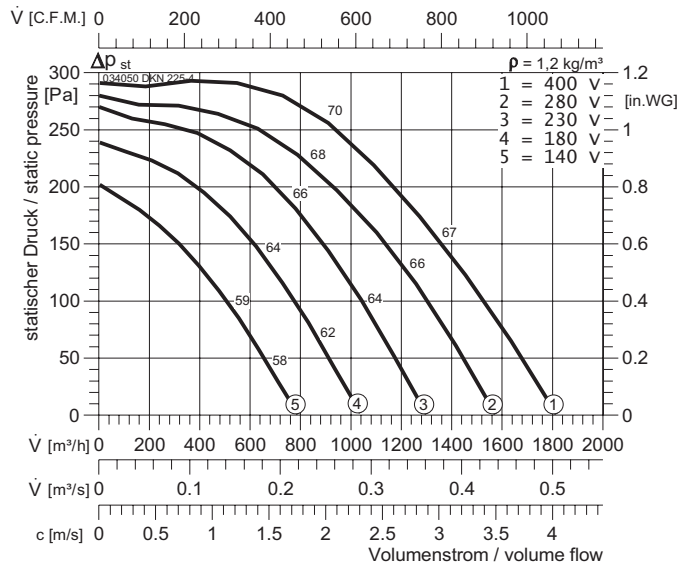


EKN / EKNS 225-4



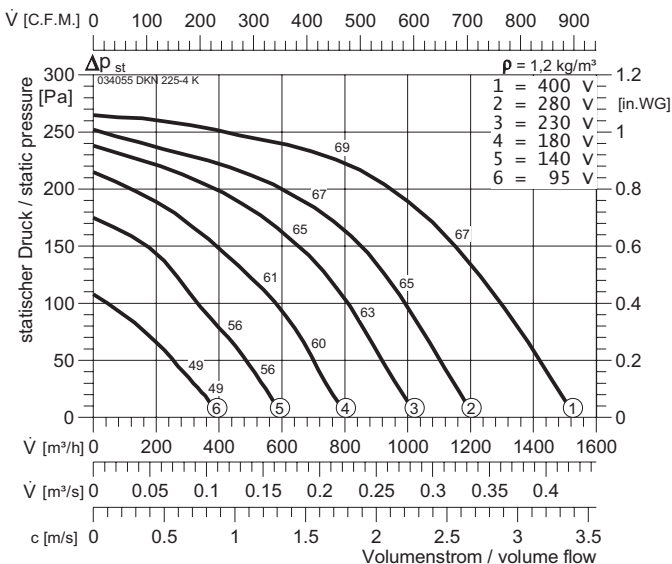
Typ	EKN 225-4	Art. Nr.	034070	19,5 kg
	EKNS 225-4	Art. Nr.	035070	
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,51 kW	Δ p _{fa min} :	35	E13
I _N :	2,3 A	Δ I :	-	GS 2
n :	1331 min ⁻¹	I _A / I _N :	1,7	NE 3,2
C _{400V} :	8 μF			RPE 06

DKN / DKNS 225-4



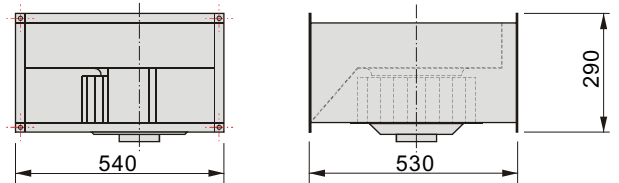
Typ	DKN 225-4	Art. Nr.	034050	19,35 kg
	DKNS 225-4	Art. Nr.	035050	
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,49 kW	Δ p _{fa min} :	0	DS1
I _N :	0,82 A	Δ I :	-	GS 2
n :	1253 min ⁻¹	I _A / I _N :	2,9	RTD 1,2
C _{400V} :	- μF			SAD 9

DKN / DKNS 225-4 K

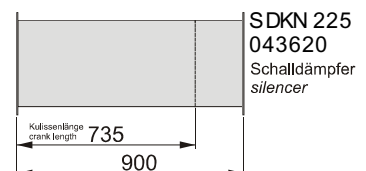
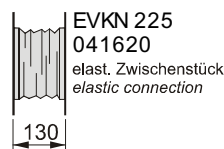
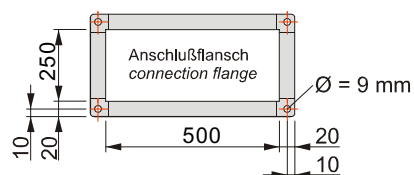
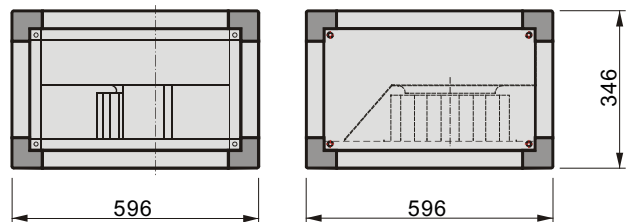


Typ	DKN 225-4 K	Art. Nr.	034055	18 kg
	DKNS 225-4 K	Art. Nr.	035055	
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,36 kW	Δ p _{fa min} :	0	DD0b
I _N :	0,68 A	Δ I :	-	GS 2
n :	1140 min ⁻¹	I _A / I _N :	1,8	RTD 1,2
C _{400V} :	- μF			SAD 9

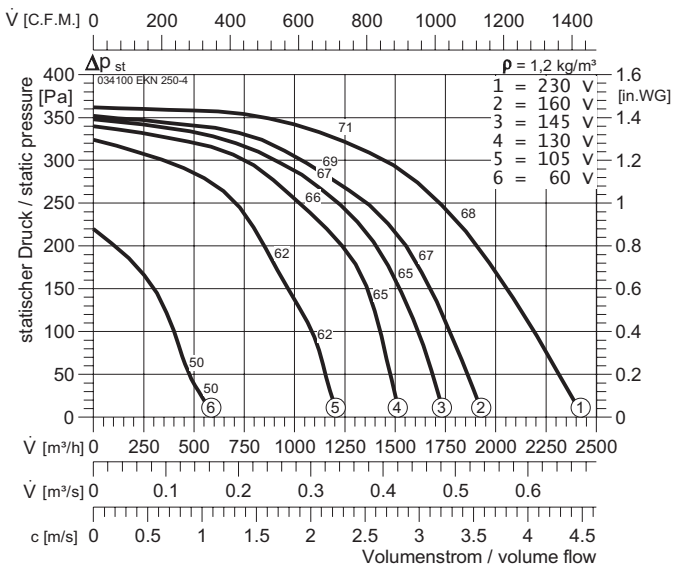
EKN / DKN



EKNS / DKNS

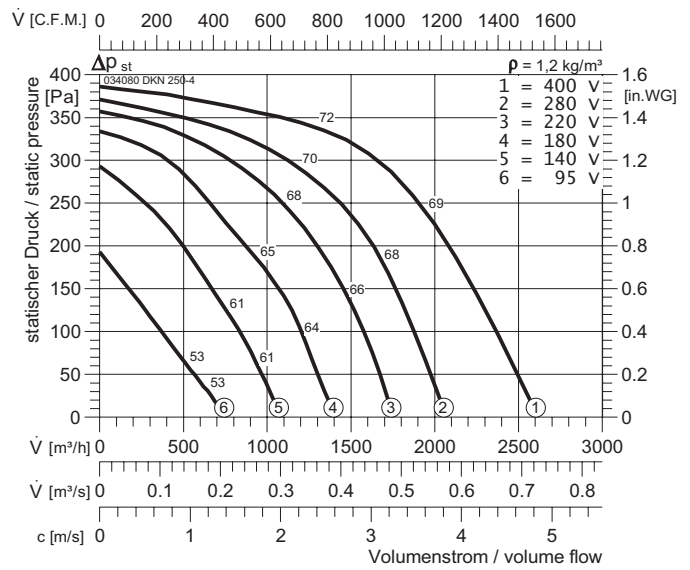


EKN / EKNS 250-4



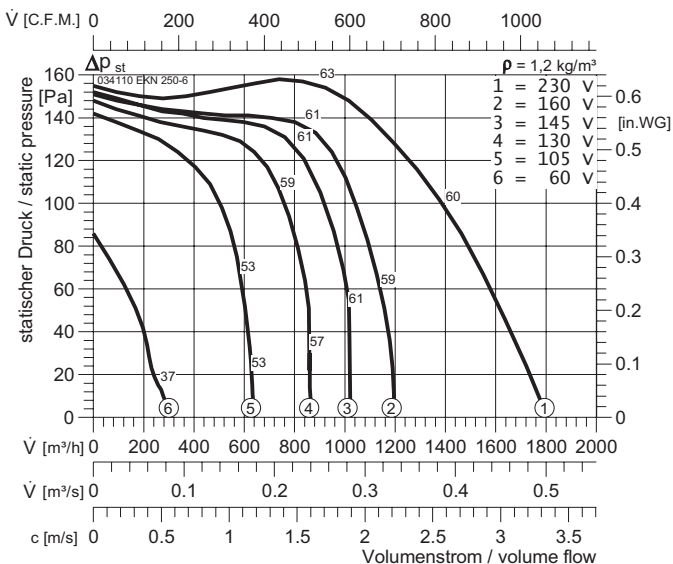
Typ	EKN 250-4	Art. Nr.	034100	25,5 kg
	EKNS 250-4	Art. Nr.	035100	32 kg
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,9 kW	Δ p _{fa min} :	0	E13
I _N :	4,1 A	Δ I :	-	GS 2
n :	1289 min ⁻¹	I _A / I _N :	2	NE 5
C _{400V} :	16 μF			RPE 09 A

DKN / DKNS 250-4



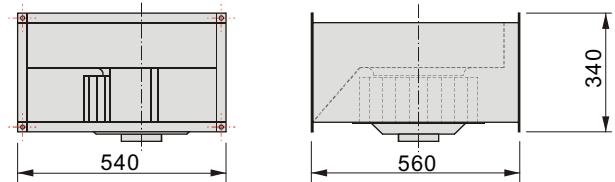
Typ	DKN 250-4	Art. Nr.	034080	23,5 kg
	DKNS 250-4	Art. Nr.	035080	30,5 kg
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,87 kW	Δ p _{fa min} :	0	DD0b
I _N :	1,8 A	Δ I :	-	GS 2
n :	1386 min ⁻¹	I _A / I _N :	2,2	RTD 2,5
C _{400V} :	- μF			SAD 9

EKN / EKNS 250-6

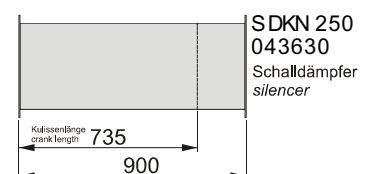
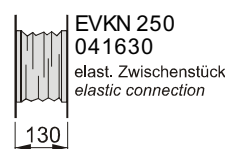
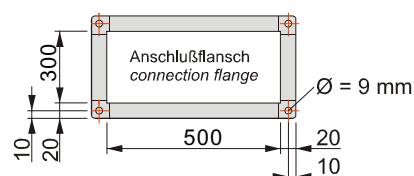
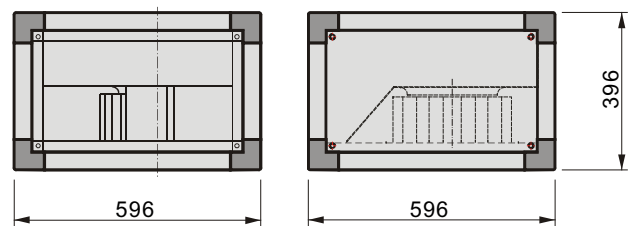


Typ	EKN 250-6	Art. Nr.	034110	22 kg
	EKNS 250-6	Art. Nr.	035110	28,8 kg
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,32 kW	Δ p _{fa min} :	0	E13
I _N :	1,6 A	Δ I :	-	GS 2
n :	898 min ⁻¹	I _A / I _N :	1,6	NE 1,5
C _{400V} :	5 μF			RPE 06

EKN / DKN



EKNS / DKNS





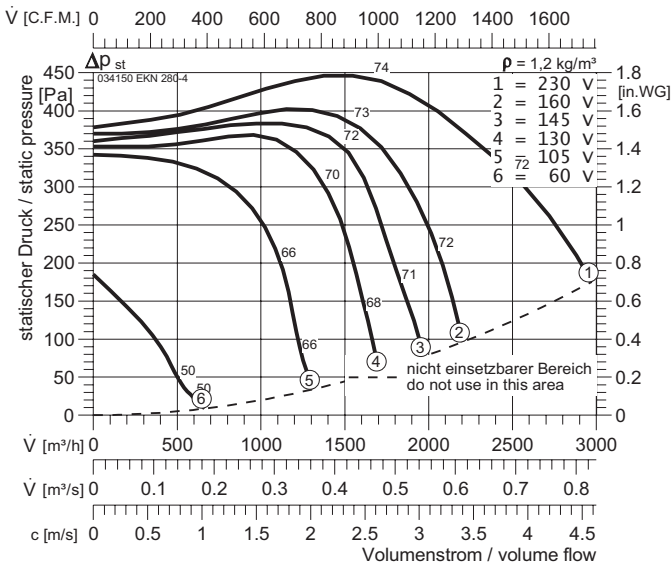
EKN/DKNS



EKN/DKN

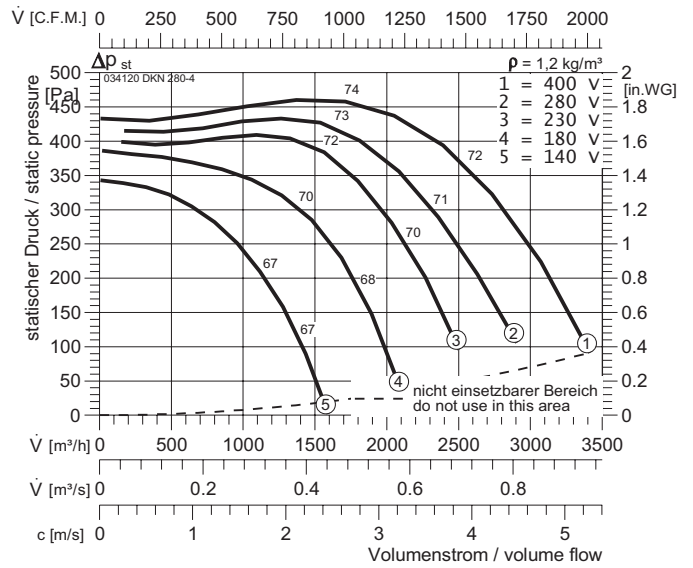


EKN / EKNS 280-4



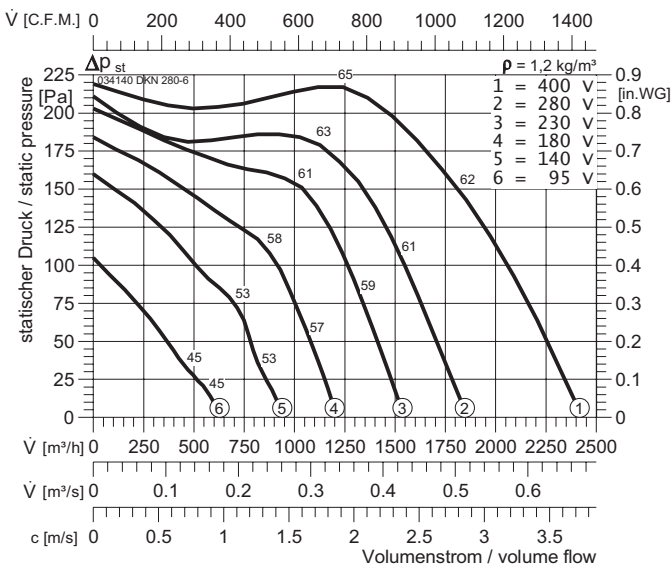
Typ	EKN 280-4	Art. Nr.	034150	28 kg
	EKNS 280-4		035150	44 kg
U :	230 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	1,6 kW	Δ p _{fa min} :	175	E13
I _N :	7,3 A	Δ I :	-	GS 2
n :	1393 min ⁻¹	I _A / I _N :	1,9	NE 7,5
C _{400V} :	31 μF			SAE 7

DKN / DKNS 280-4



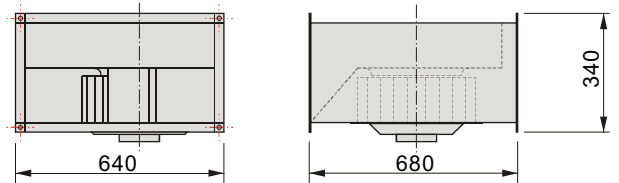
Typ	DKN 280-4	Art. Nr.	034120	38 kg
	DKNS 280-4		035120	41,4 kg
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	1,7 kW	Δ p _{fa min} :		DD0
I _N :	3,2 A	Δ I :		GS 2
n :	1393 min ⁻¹	I _A / I _N :		RTD 2,5
C _{400V} :	- μF			SAD 9

DKN / DKNS 280-6

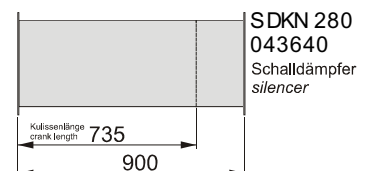
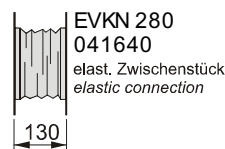
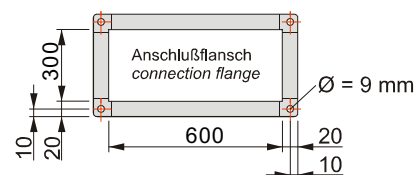
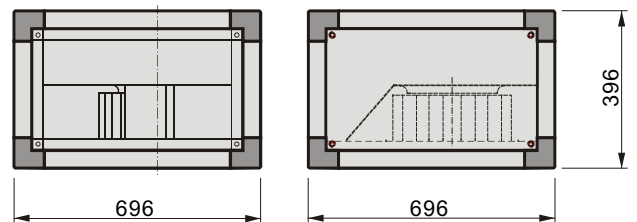


Typ	DKN 280-6	Art. Nr.	034140	28 kg
	DKNS 280-6		035140	40 kg
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	0,45 kW	Δ p _{fa min} :	0	DD0b
I _N :	0,85 A	Δ I :	-	GS 2
n :	898 min ⁻¹	I _A / I _N :	1,75	RTD 1,2
C _{400V} :	- μF			SAD 9

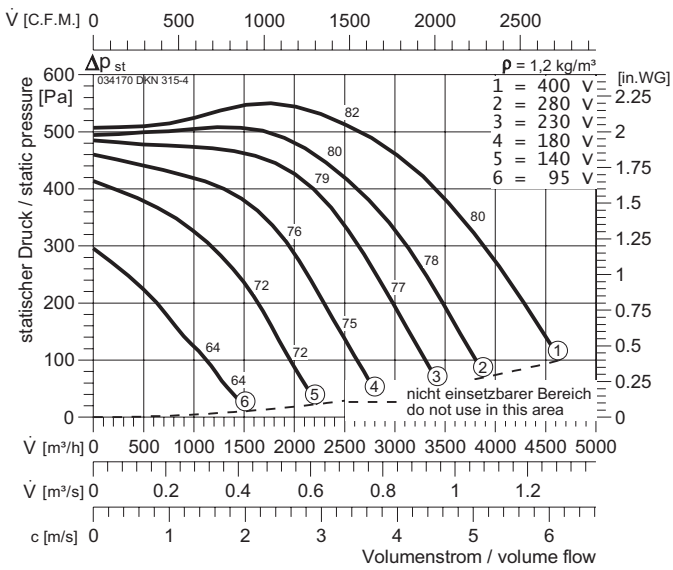
EKN / DKN



EKNS / DKNS

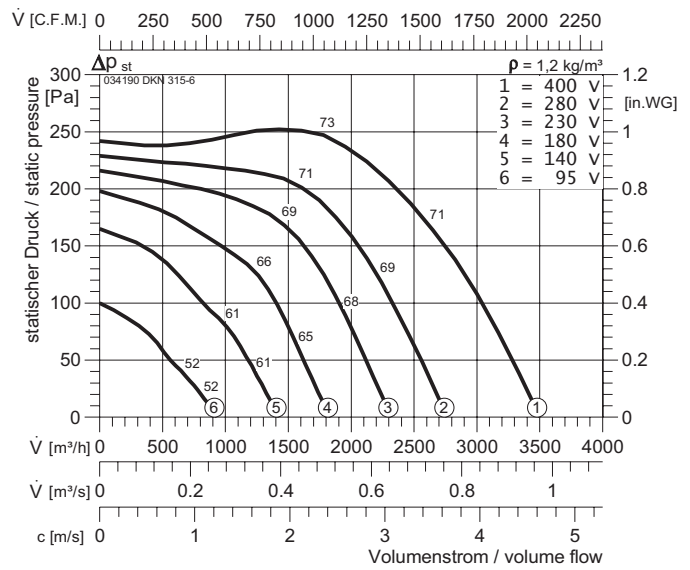


DKN / DKNS 315-4



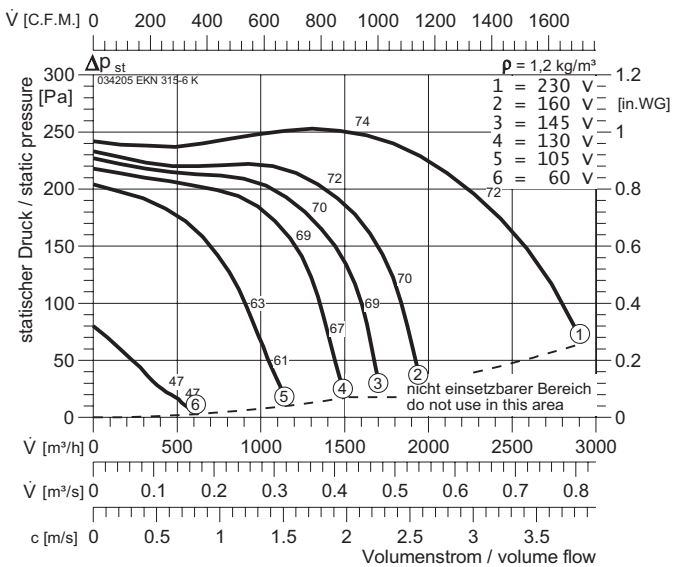
Typ	DKN 315-4	Art. Nr.	034170	48 kg
	DKNS 315-4		035170	49,8 kg
U :	400 V 50 Hz	t_R :	40 °C	IP 54
P_1 :	2,2 kW	$\Delta p_{fa \text{ min}}$:	100	DD0b
I_N :	4,0 A	ΔI :	-	GS 2
n :	1369 min^{-1}	I_A / I_N :	2,9	RTD 3,8
C_{400V} :	- μF			SAD 9

DKN / DKNS 315-6



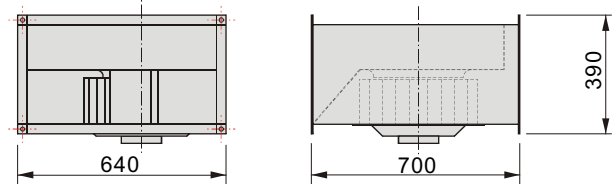
Typ	DKN 315-6	Art. Nr.	034190	36 kg
	DKNS 315-6		035190	66 kg
U :	400 V 50 Hz	t_R :	40 °C	IP 54
P_1 :	0,78 kW	$\Delta p_{fa \text{ min}}$:	0	DD0b
I_N :	1,5 A	ΔI :	-	GS 2
n :	885 min^{-1}	I_A / I_N :	2,1	RTD 2,5
C_{400V} :	- μF			SAD 9

EKN / EKNS 315-6 K

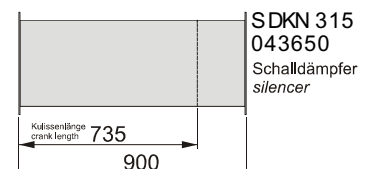
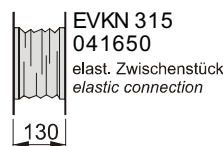
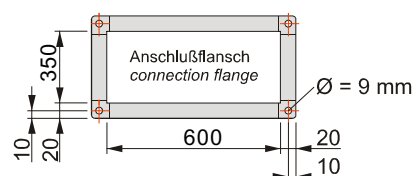
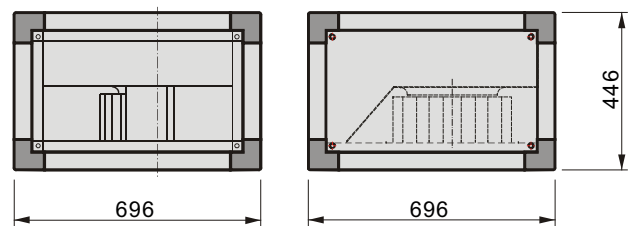


Typ	EKN 315-6 K	Art. Nr.	034205	34 kg
	EKNS 315-6 K		035205	42 kg
U :	230 V 50 Hz	t_R :	40 °C	IP 54
P_1 :	0,72 kW	$\Delta p_{fa \text{ min}}$:	65	E13
I_N :	3,6 A	ΔI :	-	GS 1
n :	927 min^{-1}	I_A / I_N :	1,5	NE 5
C_{400V} :	12 μF			RPE 09

EKN / DKN



EKNS / DKNS



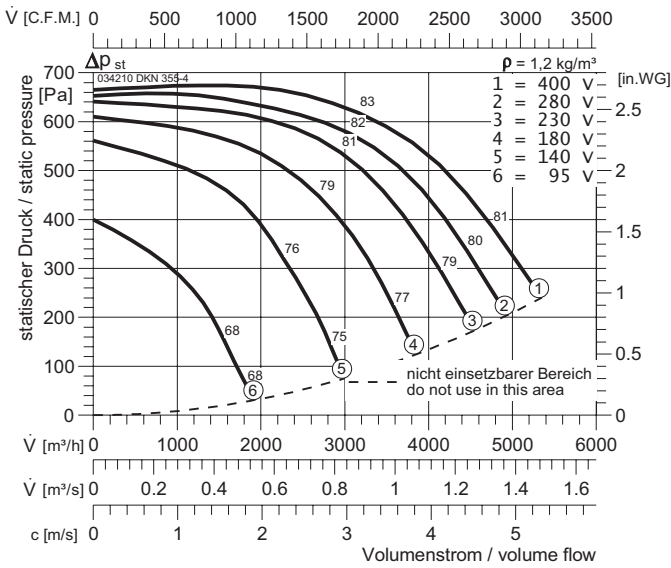


EKNS/DKNS



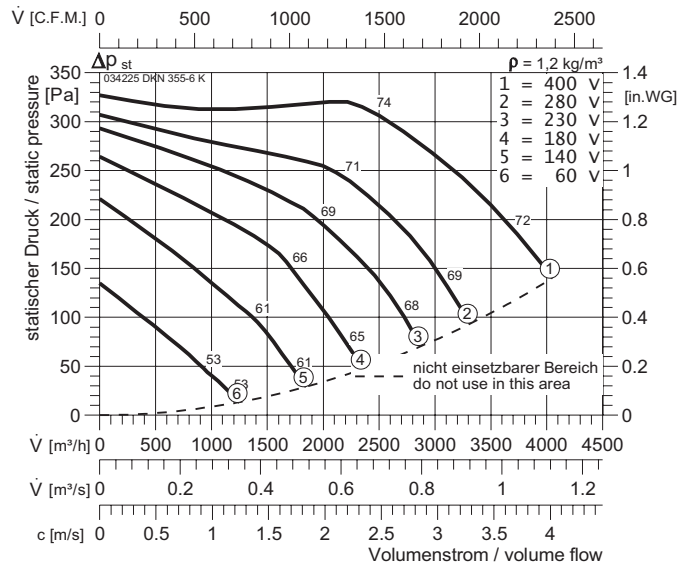
EKN/DKN

DKN / DKNS 355-4



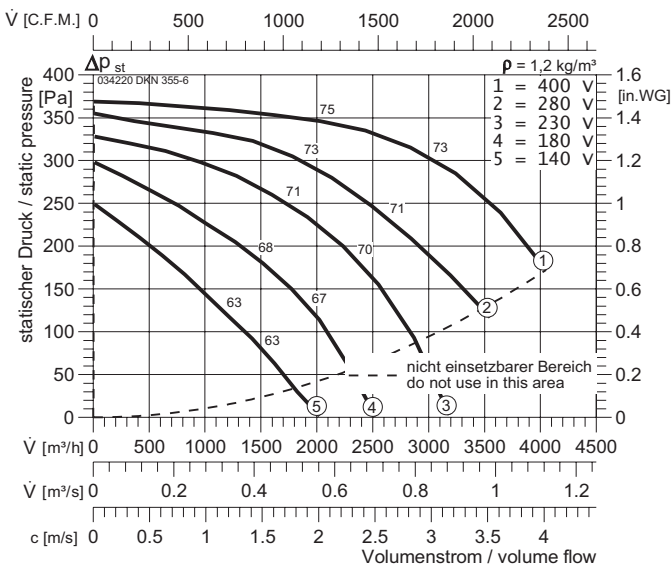
Typ	DKN 355-4	Art. Nr.	034210	58 kg
	DKNS 355-4		035210	72,5 kg
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	3,5 kW	$\Delta p_{fa \text{ min}}$:	240	DD0b
I _N :	5,9 A	ΔI :	12	GS 2
n :	1368 min ⁻¹	I _A / I _N :	5,2	RTD 7
C _{400V} :	- μF			SAD 9

DKN / DKNS 355-6 K



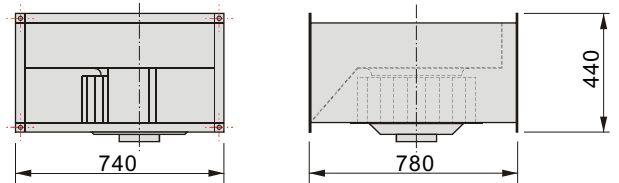
Typ	DKN 355-6 K	Art. Nr.	034225	50 kg
	DKNS 355-6 K		035225	58,5 kg
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	1,15 kW	$\Delta p_{fa \text{ min}}$:	140	DD0b
I _N :	2,3 A	ΔI :	-	GS 2
n :	906 min ⁻¹	I _A / I _N :	2,4	RTD 2,5
C _{400V} :	- μF			SAD 9

DKN / DKNS 355-6

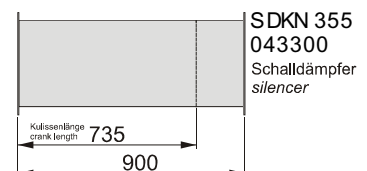
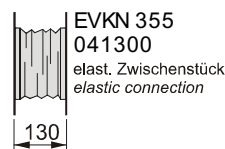
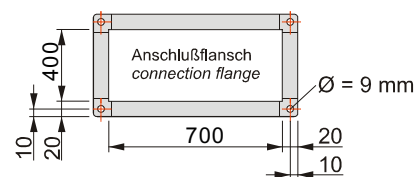
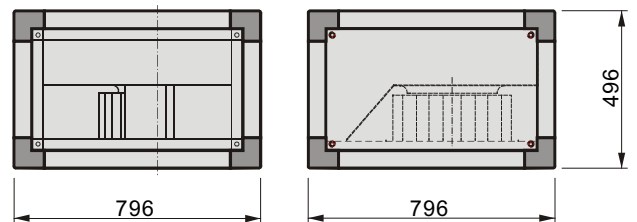


Typ	DKN 355-6	Art. Nr.	034220	55 kg
	DKNS 355-6		035220	58,5 kg
U :	400 V 50 Hz	t _R :	40 °C	IP54
P ₁ :	1,1 kW	$\Delta p_{fa \text{ min}}$:	180	DD0
I _N :	2 A	ΔI :	-	GS 2
n :	790 min ⁻¹	I _A / I _N :	2,5	RTD 2,5
C _{400V} :	- μF			SAD 9

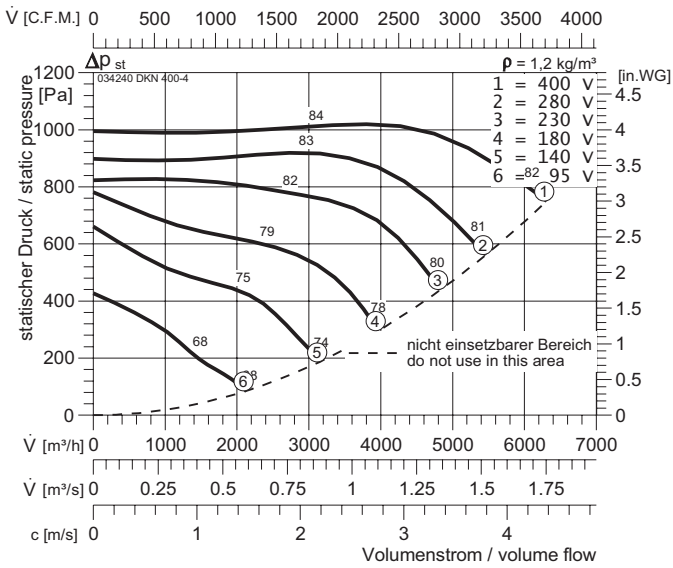
EKN / DKN



EKNS / DKNS

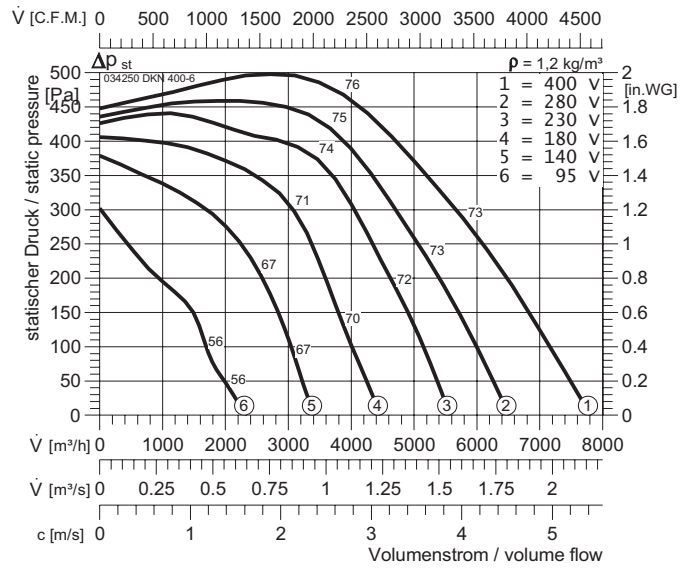


DKN / DKNS 400-4



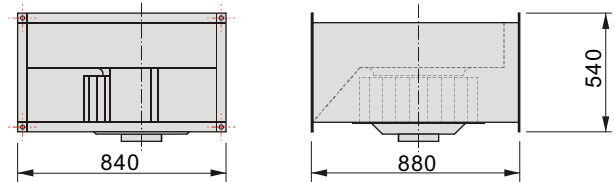
Typ	DKN 400-4	Art. Nr.	034240	86	kg
	DKNS 400-4		035240	96	kg
U :	400 V 50 Hz	t _R :	40 °C		IP 54
P ₁ :	4,8 kW	$\Delta p_{fa \text{ min}}$:	750		DD0b
I _N :	8 A	ΔI :	15		GS 2
n :	1407 min ⁻¹	I _A / I _N :	4		RTD 14
C _{400V} :	- μF				SAD 9

DKN / DKNS 400-6

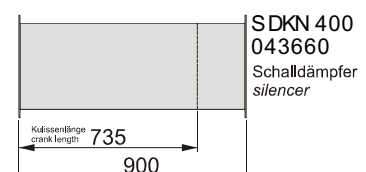
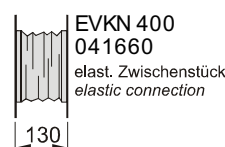
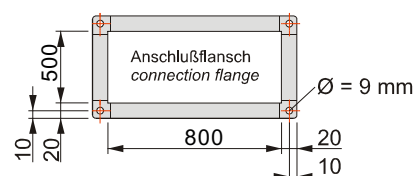
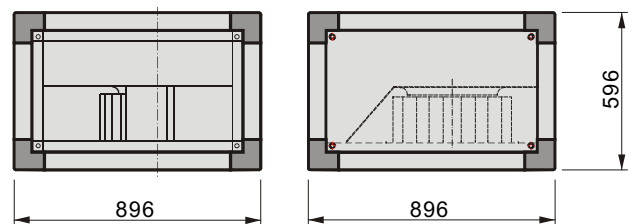


Typ	DKN 400-6	Art. Nr.	034250	82	kg
	DKNS 400-6		035250	88,6	kg
U :	400 V 50 Hz	t _R :	40 °C		IP 54
P ₁ :	2,8 kW	$\Delta p_{fa \text{ min}}$:	50		DD0b
I _N :	4,85 A	ΔI :	10		GS 2
n :	907 min ⁻¹	I _A / I _N :	3,3		RTD 5
C _{400V} :	- μF				SAD 9

EKN / DKN



EKNS / DKNS



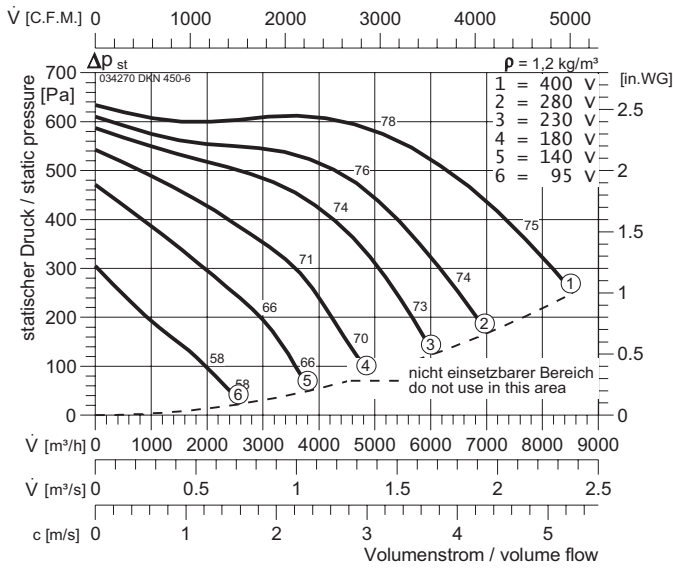


EKNS/DKNS



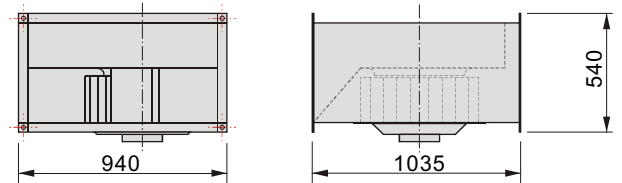
EKN/DKN

DKN / DKNS 450-6



Typ	DKN 450-6	Art. Nr.	034270	97 kg
	DKNS 450-6	Art. Nr.	035270	
U :	400 V 50 Hz	t _R :	40 °C	IP 54
P ₁ :	3,5 kW	$\Delta p_{fa \text{ min}}$:	250	DD0b
I _N :	6 A	ΔI :	-	GS 2
n :	907 min ⁻¹	I _A / I _N :	3,2	RTD 7,0
C _{400V} :	- µF			SAD 9

EKN / DKN



EKNS / DKNS

