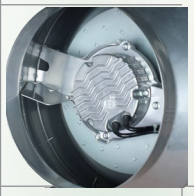
Wolter In-Line Tube Fans.

- RS Series
- EC Motor



Air in Motion.

Wolter Fans.

K01.RS

wolter

Fan type code

R S - EC 160

- 160 — Fan Size Number: 100...315
- EC — Motor Type: EC = Electronically Commutation
- S — Casing: S = Steel
- R — Inline tube fan

Design features

Tube fans combine the advantages of the axial fan - straight airflow and easy installation - with the high pressure stability, low noise level and high efficiency of centrifugal fans. The highly efficient EC motor consumes little power like DC type, without a “rippling effect” that DC motor has.

With much lower heat dissipation than conventional AC motors, our EC motors are built to run for years of service life. The advantages of these EC motors are maintenance free operation combined with high efficiency.

Casing

Casings of sizes RS 100-315 are made of powder coated sheet metal.

Impeller

Backward-curved centrifugal impellers made of sheet steel or plastic. The impellers are fitted directly onto the external rotor motor. The motorized impeller unit is balanced in two planes to quality level G 2.5 (DIN ISO 1940).

Motor

Electronically commutated DC-motors commonly referred to as “EC motors” – are DC motors with a characteristic similar to shunt motors. The commutation is done electronically and therefore without wear. The impeller integrated onto the EC motor, allows for extremely compact designs allows for extremely compact designs and high performance density. The high efficiency helps to keep the energy costs at a low level. Temperature rise is low since an EC motor generates approximately 1/3 only of the heat loss known from conventional AC single and three-phase motors.

The motors are class F with IP 54 protection class is fitted within the radial impeller.

Fan performance curves

The performance curves for these fan types have been established installation type D (ducted inlet, ducted outlet) accoring to AMCA 210 and show the static pressure rise Δp_{st} in reference to the volume air flow. The given outlet velocity c refers to the flange cross-sectional area at the outlet side of the fan.

Sound levels

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

The data tables show the A-weighted sound power level L_{WA6}, at the outlet side, unducted, in decibel figures.

The A-weighted sound power level at the inlet side L_{WA5} according to DIN 45 635, part 38, is obtained as follows:

$$\mathbf{L_{WA5} = L_{WA6} - 3\ dB(A)}$$

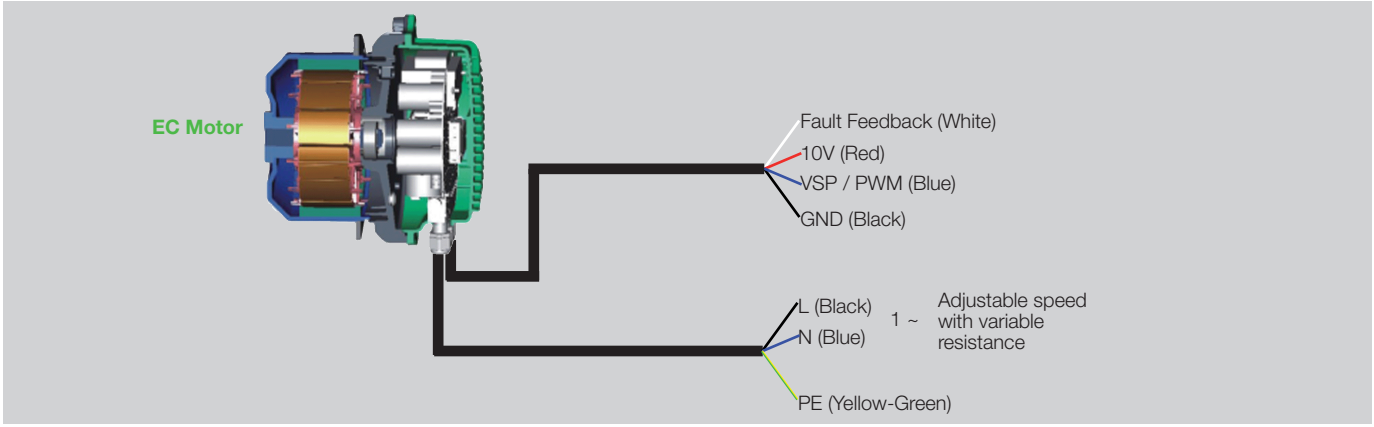
The octave sound power level is important for the choice of suitable sound attenuators. It is obtained as follows.

$$\mathbf{L_{WAOkt} = L_{WA6} + L_{WArel}}$$

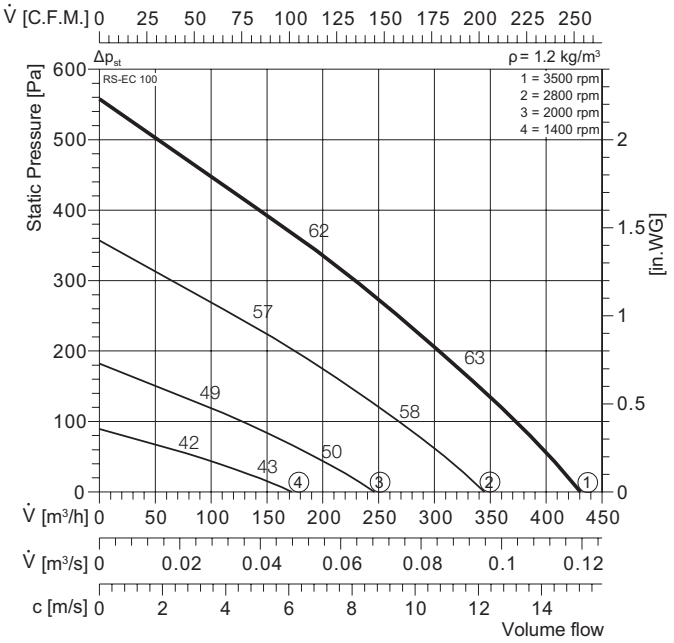
The relative octave sound power level L_{WArel} at octave medium frequency can be taken from the tables at respective fan. These levels has been established at 0.5 x Vmax.

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_{WA}.

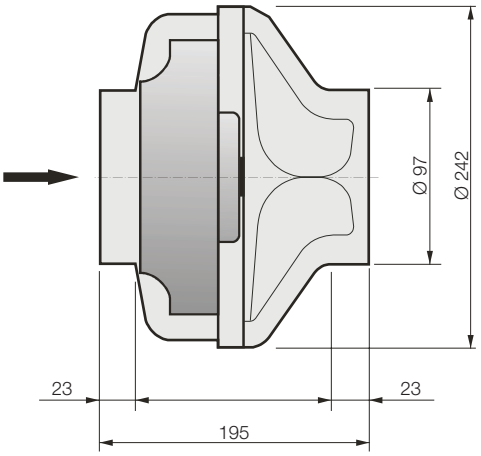
It is important to note that reflexion and room characteristics as well as natural frequencies differently influence the sound pressure levels.



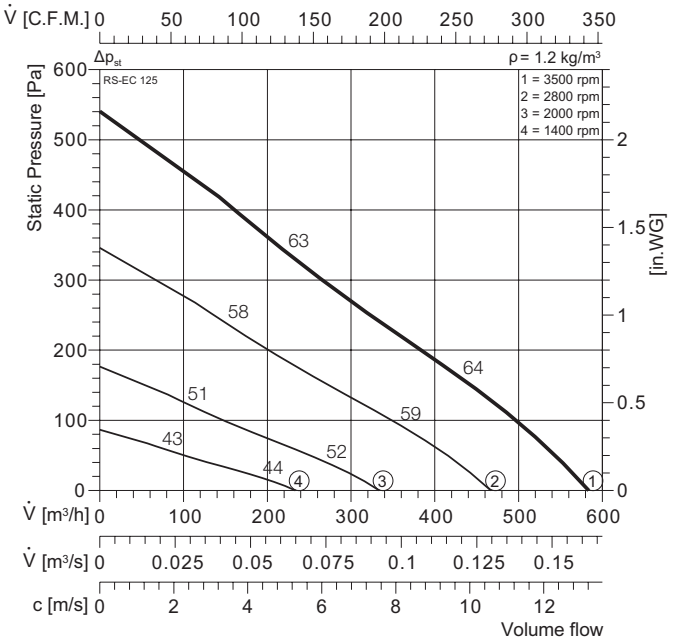
RS-EC 100



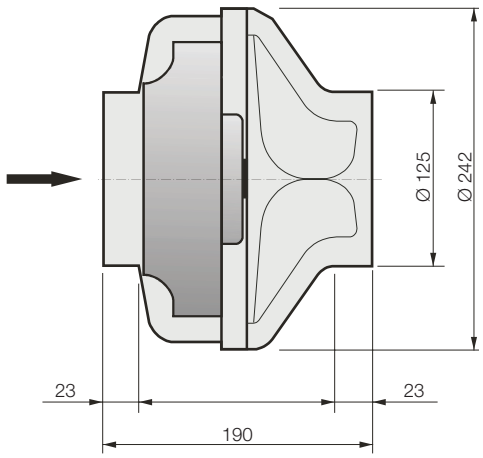
Typ :	RS-EC 100		IP 54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051056		E15	$L_{WA\,tot}$	-14	0	0
:	3,5	kg	GS 1	125 Hz	-26	-17	-18
U :	230 V 50/60 Hz		-	250 Hz	-20	-9	-8
P_1 :	0,1	kW	-	500 Hz	-21	-6	-6
I_N :	0,85	A		1 kHz	-20	-5	-5
n :	3500	min^{-1}		2 kHz	-21	-8	-7
C_{400V} :	-	µF		4 kHz	-29	-11	-12
t_R :	60	°C		8 kHz	-36	-21	-22



RS-EC 125



Typ :	RS-EC 125		IP 54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051106		E15	$L_{WA\,tot}$	-14	0	0
:	3,5	kg	GS 1	125 Hz	-27	-15	-16
U :	230 V 50/60 Hz		-	250 Hz	-21	-10	-8
P_1 :	0,115	kW	-	500 Hz	-21	-7	-7
I_N :	1,2	A		1 kHz	-20	-4	-5
n :	3500	min^{-1}		2 kHz	-20	-7	-7
C_{400V} :	-	µF		4 kHz	-27	-11	-10
t_R :	60	°C		8 kHz	-35	-20	-21



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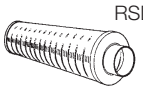
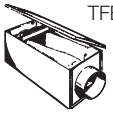
RSV


RSD


RVK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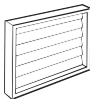
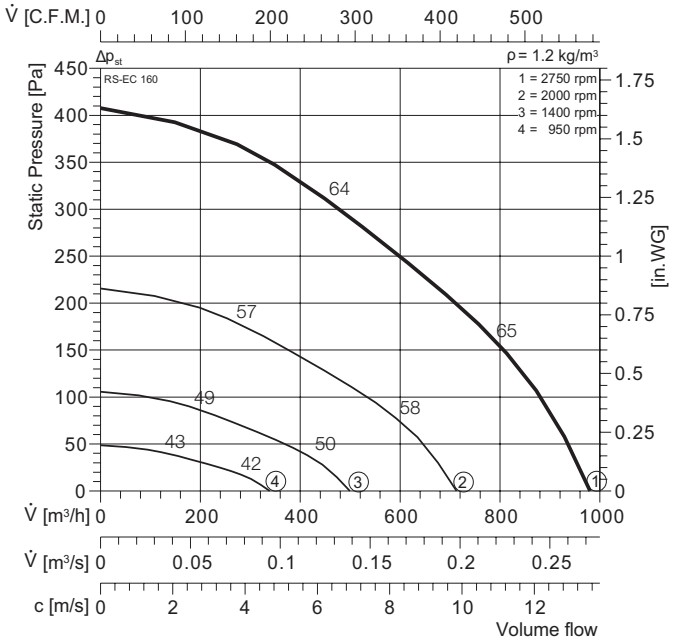
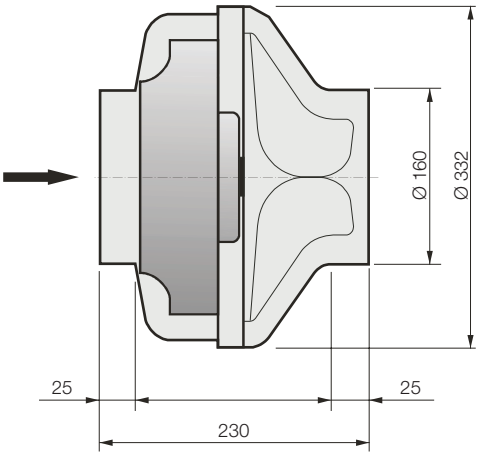

WVK

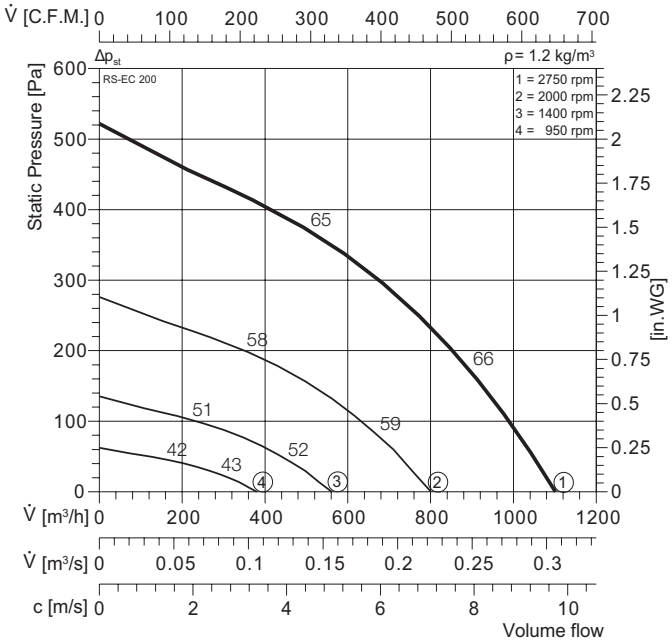
RS-EC 160



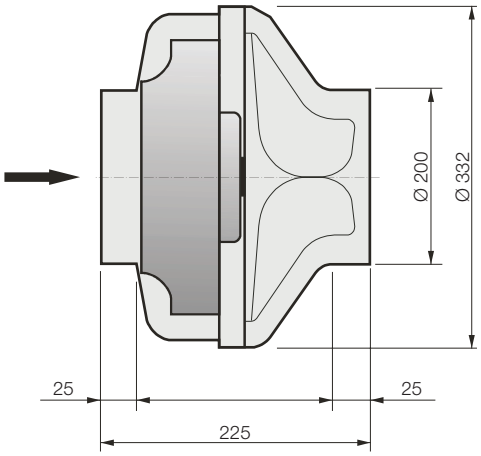
Typ :	RS-EC 160		IP 54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051206		E15	$L_{WA\,tot}$	-13	0	0
:	5,0	kg	GS 1	125 Hz	-21	-15	-15
U :	230 V 50/60 Hz		-	250 Hz	-19	-7	-7
P_1 :	0,125	kW	-	500 Hz	-19	-3	-7
I_N :	1,1	A		1 kHz	-20	-4	-5
n :	2750	min^{-1}		2 kHz	-23	-4	-7
C_{400V} :	-	µF		4 kHz	-27	-12	-13
t_R :	60	°C		8 kHz	-36	-20	-22



RS-EC 200



Typ :	RS-EC 200		IP 54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051256		E15	$L_{WA\,tot}$	-17	-1	0
:	5,2	kg	GS 1	125 Hz	-35	-15	-14
U :	230 V 50/60 Hz		-	250 Hz	-27	-3	-2
P_1 :	0,120	kW	-	500 Hz	-22	-7	-6
I_N :	1,2	A		1 kHz	-24	-10	-9
n :	2750	min^{-1}		2 kHz	-25	-16	-15
C_{400V} :	-	µF		4 kHz	-29	-23	-22
t_R :	60	°C		8 kHz	-34	-31	-30



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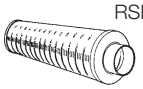
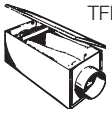
RSV


RSD


RVK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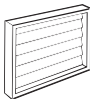
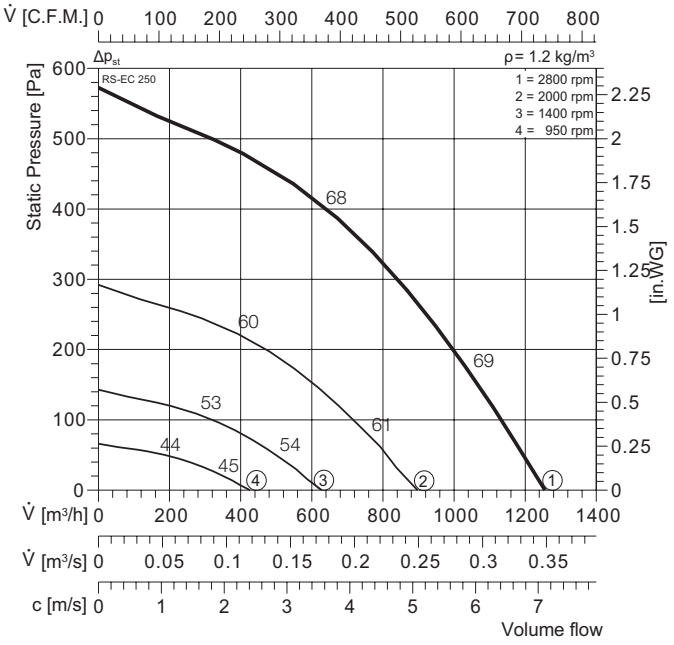
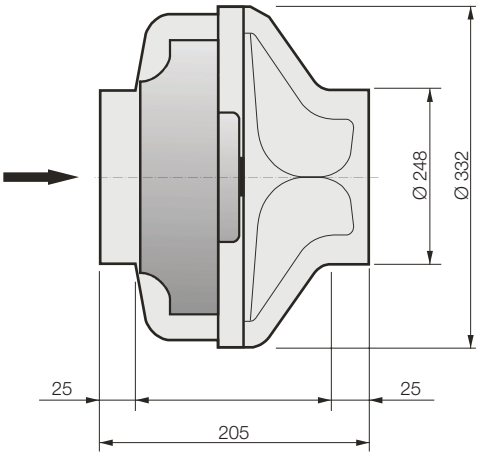

WVK

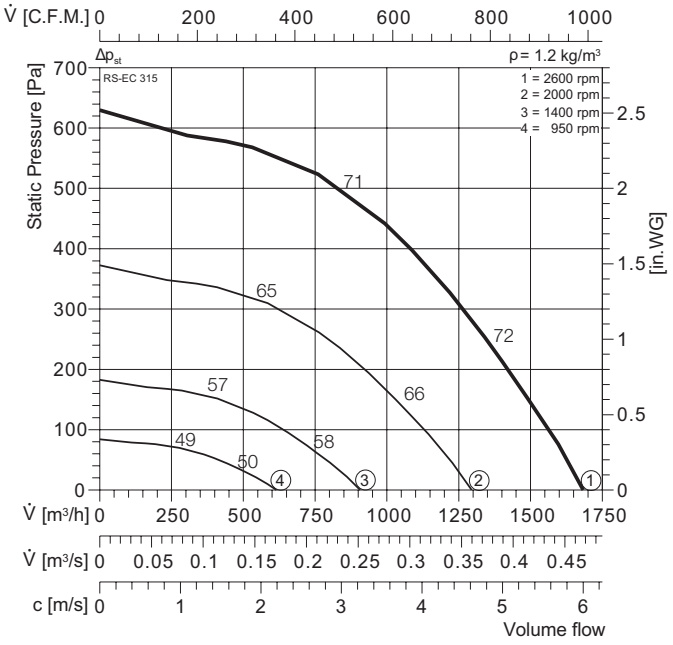
RS-EC 250



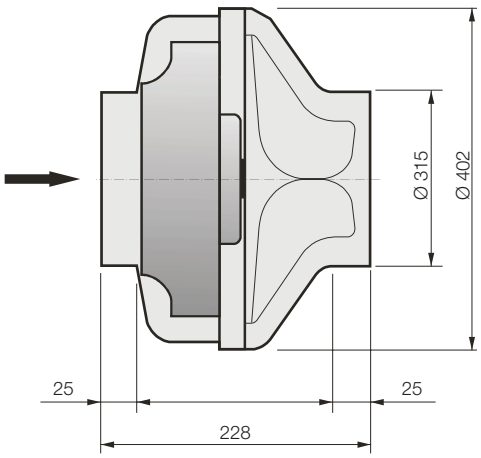
Typ :	RS-EC 250		IP 54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051306		E15	$L_{WA\,tot}$	-14	0	0
:	5,5	kg	GS 1	125 Hz	-27	-15	-16
U :	230 V 50/60 Hz		-	250 Hz	-21	-10	-8
P_1 :	0,19	kW	-	500 Hz	-21	-7	-7
I_N :	1,65	A		1 kHz	-20	-4	-5
n :	2800	min^{-1}		2 kHz	-20	-7	-7
C_{400V} :	-	µF		4 kHz	-27	-11	-10
t_R :	60	°C		8 kHz	-35	-20	-21



RS-EC 315



Typ :	RS-EC 315		IP54	$L_{WA\,rel}$ ΔdB	L_{WA2}	L_{WA5}	L_{WA6}
ArtNr :	051356		E15	$L_{WA\,tot}$	-20	-1	0
:	6,5	kg	GS 1	125 Hz	-28	-13	-12
U :	230 V 50/60 Hz		-	250 Hz	-31	-5	-4
P_1 :	0,23	kW	-	500 Hz	-27	-6	-5
I_N :	2,1	A		1 kHz	-27	-13	-12
n :	2600	min^{-1}		2 kHz	-26	-10	-9
C_{400V} :	-	µF		4 kHz	-31	-21	-20
t_R :	60	°C		8 kHz	-37	-27	-26



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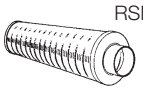
RSV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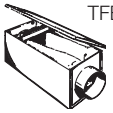
RVK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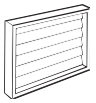
WVK

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