Axial Flow Fans
EC Motor

Fan type code

AEQ 450 EC

- EC Motor
- Impeller diameter
- Type
  - Q = Square wall plate
  - R = Duct flange
- Motor type
  - E = Single-phase
  - D = Three-phase
- Axial flow fan

Advantages

- low installation depth
- ideal for many applications in air-conditioning and cooling
- 100 % speed controllable by potentiometer or electronic controls
- motor protection by thermal contacts as standard
- easy installation in any position

Design features

The high efficiency axial fans are used where large air volumes must be conveyed against low to medium pressures.

There are two housing versions available:

- Fans mounted on a square plate with inlet cone (AEQ/ADQ) are used for general ventilation, air-conditioning and cooling applications
- Fans with round casings (AER/ADR) are used in ducted systems of air conditioning, cooling and drying applications

Casing

The casings are made of powder-coated sheet steel.

Impeller

The axial fans have aerodynamically moulded blades made from galvanised and painted sheet steel. The blades are mounted directly onto the external rotor motor. The motorised impeller is balanced in two planes according to quality level G 2.5 (DIN ISO 1940).

Motor

The EC (Electronically Commutation) Motors with die cast aluminium enclosure have maintenance free ball bearings & are capable of continuous operation (S1). The EC fan motor is capable of variable speed control. The motor speed can be pre-set by the user to operate at a certain maximum fan speed and the fan speed can also be adjusted automatically according to the cooling demand of the room to provide energy savings during period of partial load. A minimum fan speed can be preset by the user to avoid lower fan speeds than the requirement which is required in order to maintain sufficient airflow in the room. The fan motor is variable speed and totally enclosed fan cooled type with Class F insulation, IP54 standard. Motor assembly conforms to standards: EN60034-1, EN60335-1& EN62233.

Fan performance curves

The performance curves for these fans have been established in mounting position A (free inlet, free outlet) and indicate the static pressure increase Δp_{fa} as a function of the volume flow (measured with inlet cone and without protection guards).

Noise levels

The fan curve gives the A-weighted sound power level L_{WA6} on the outlet side in decibel. The A-weighted sound power level at the inlet side L_{WA5} is identical to L_{WA6}.

The A-weighted sound power level radiated from the casing (L_{WA2}) according to DIN 45 635, part 38, is obtained approximately as follows: $L_{WA2} \approx L_{WA6}$ **- 8 dB** (for AER or ADR).

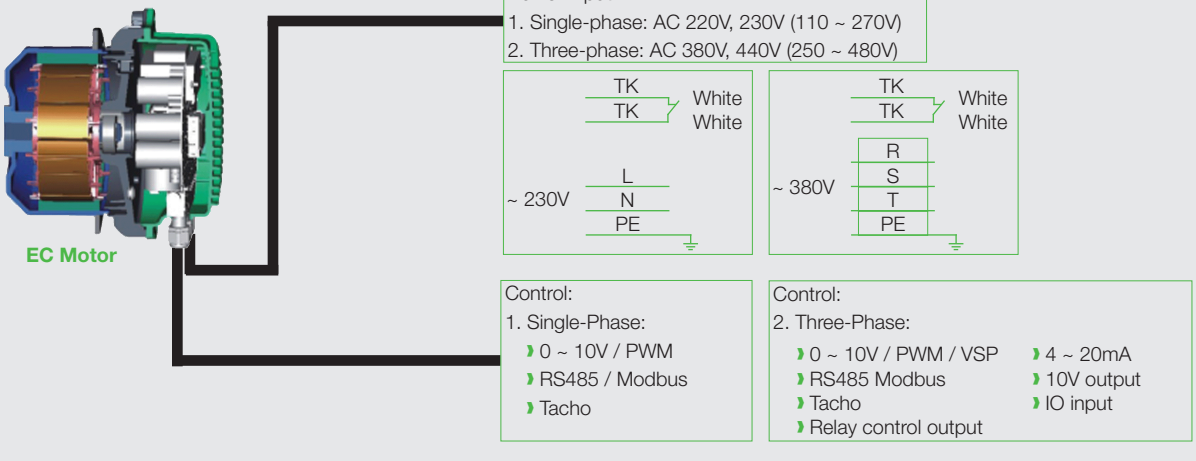
The A-weighted sound pressure level L_{PA} at a distance of 1 metre is obtained approximately by deducting 7 dB(A) from the A-weighted sound power level:

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

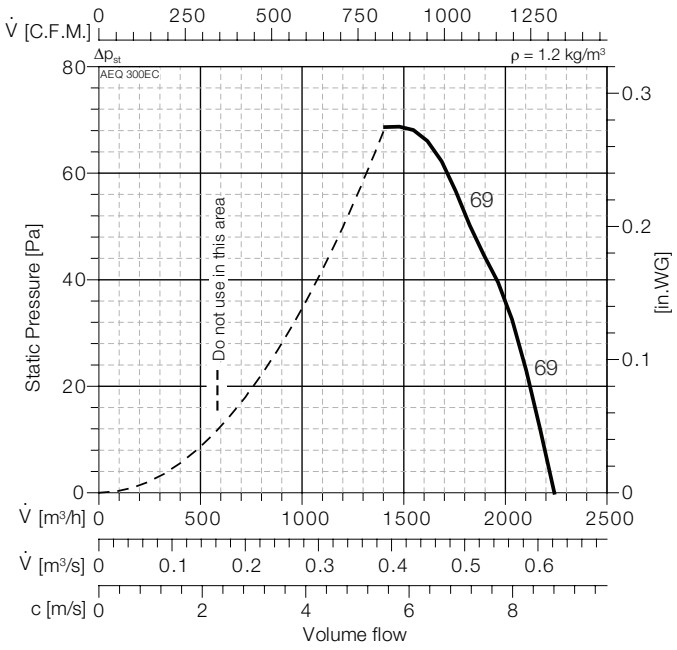
It is important to note that reflexion and environmental characteristics as well as resonant frequencies influence the sound pressure levels in different ways. The A-weighted octave sound power level is important for the choice of suitable sound attenuators. It is obtained as follows:

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

The relative A-weighted octave sound power level L_{WArel} at octave medium frequency can be taken from the following tables. These levels have been established at 0.8 x Vmax.

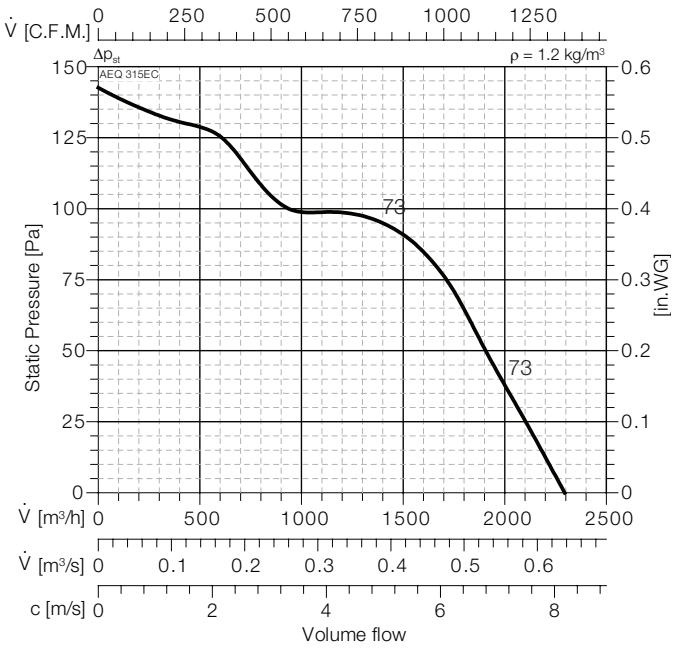


AEQ / AER 300 EC

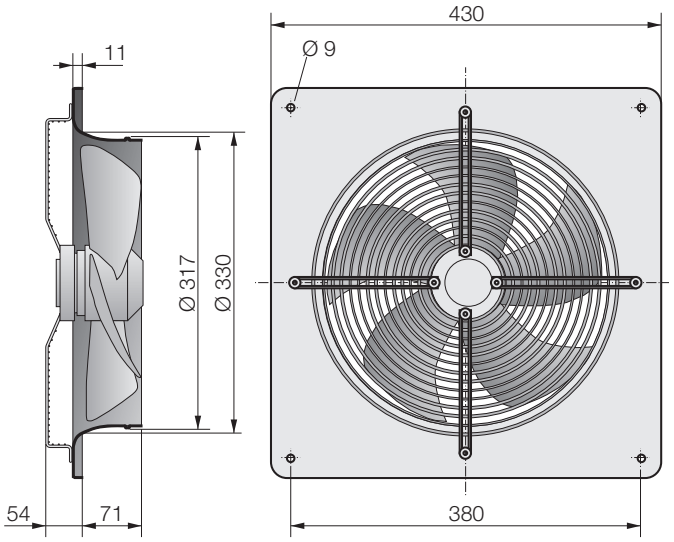


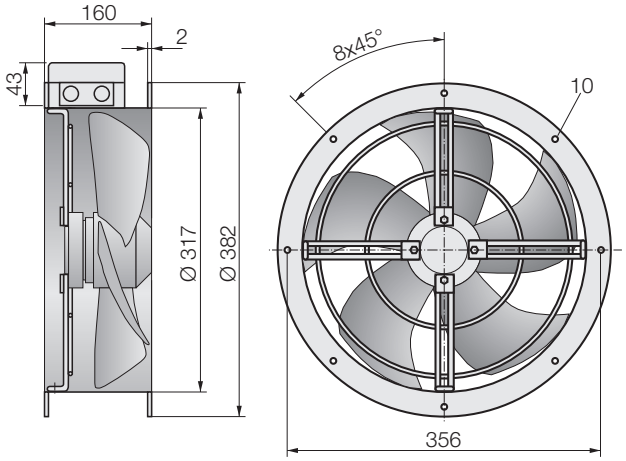
Typ : AEQ / AER 300 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\,tot}$	0	0
:	6,5/5,3	kg		E13	125 Hz	-36	-36
U :	230 V 50/60 Hz			-	250 Hz	-17	-17
P_1 :	0,1	kW		-	500 Hz	-8	-8
I_N :	0,85	A		-	1 kHz	-7	-7
n :	1600	min^{-1}			2 kHz	-6	-6
C_{400V} :	-	µF			4 kHz	-9	-9
t_R :	50	°C			8 kHz	-19	-19

AEQ / AER 315 EC



Typ : AEQ / AER 315-4A			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\,tot}$	0	0
:	6,8/5,6	kg		E13	125 Hz	-36	-36
U :	380 V 50/60 Hz			-	250 Hz	-17	-17
P_1 :	0,12	kW		-	500 Hz	-8	-8
I_N :	0,95	A		-	1 kHz	-7	-7
n :	1800	min^{-1}			2 kHz	-6	-6
C_{400V} :	-	µF			4 kHz	-9	-9
t_R :	50	°C			8 kHz	-19	-19





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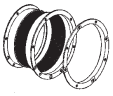
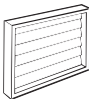
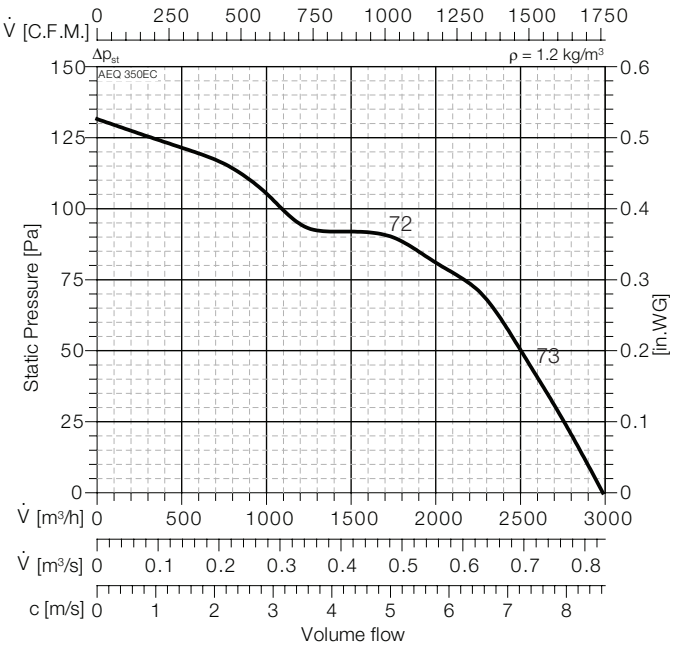
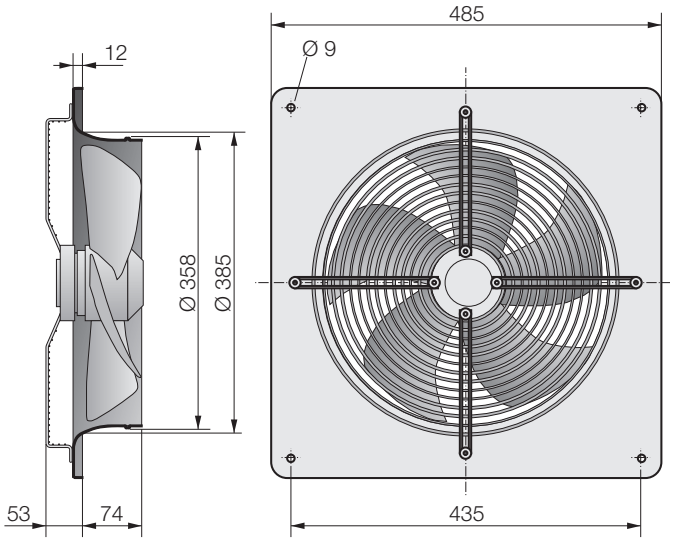

EV-AXR
GL-AXR

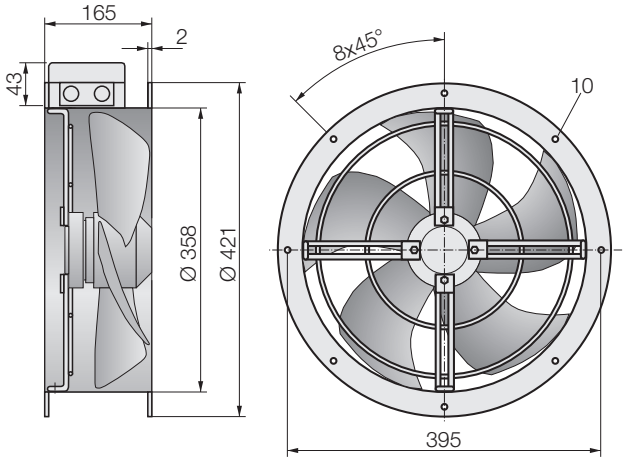

WVK

AEQ / AER 350 EC



Typ : AEQ / AER 350 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\ tot}$	0	0
:	8,5/7,8	kg		E13	125 Hz	-38	-38
U :	230 V 50/60 Hz			-	250 Hz	-23	-23
P_1 :	0,15	kW		-	500 Hz	-11	-11
I_N :	1,27	A		-	1 kHz	-6	-6
n :	1600	min^{-1}			2 kHz	-4	-4
C_{400V} :	-	µF			4 kHz	-6	-6
t_R :	50	°C			8 kHz	-17	-17





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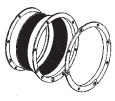
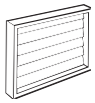

EV-AXR
GL-AXR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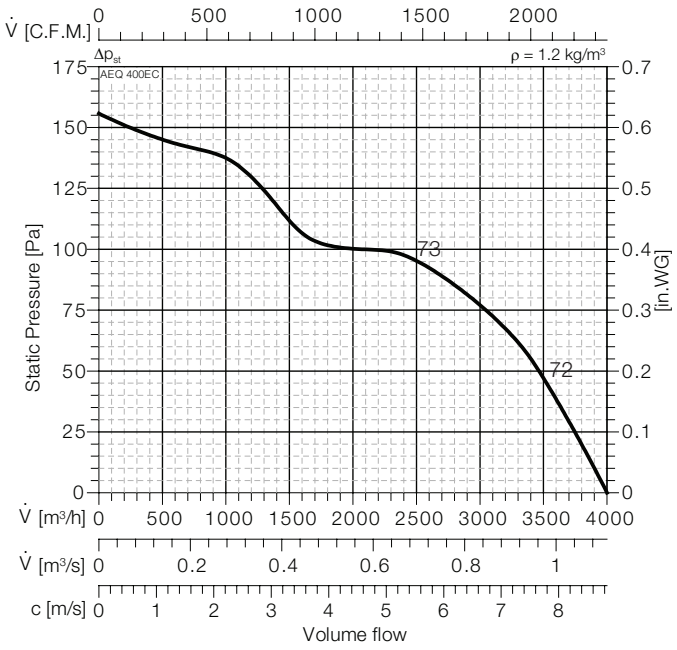
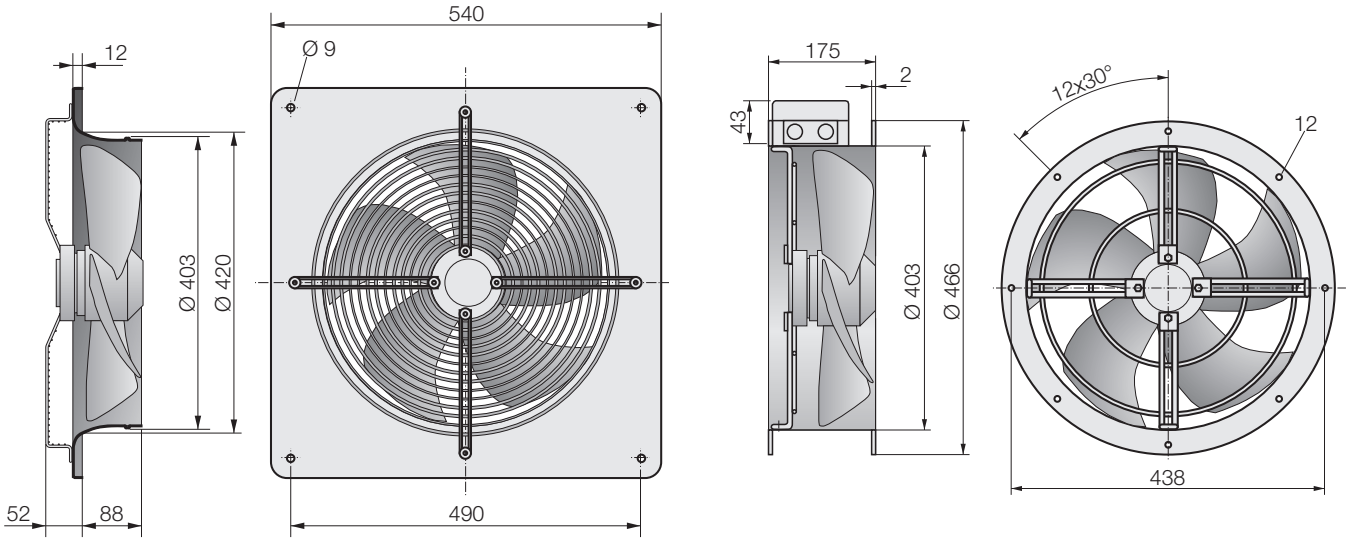
AEQ / AER 400 EC



Typ : AEQ / AER 400 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\,tot}$	0	0
:	9,4/8,8	kg		E13	125 Hz	-36	-36
U :	230 V 50/60 Hz			-	250 Hz	-24	-24
P_1 :	0,2	kW		-	500 Hz	-9	-9
I_N :	1,65	A		-	1 kHz	-6	-6
n :	1410	min^{-1}			2 kHz	-4	-4
C_{400V} :	-	µF			4 kHz	-8	-8
t_R :	50	°C			8 kHz	-19	-19



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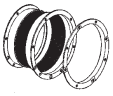
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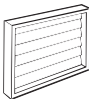
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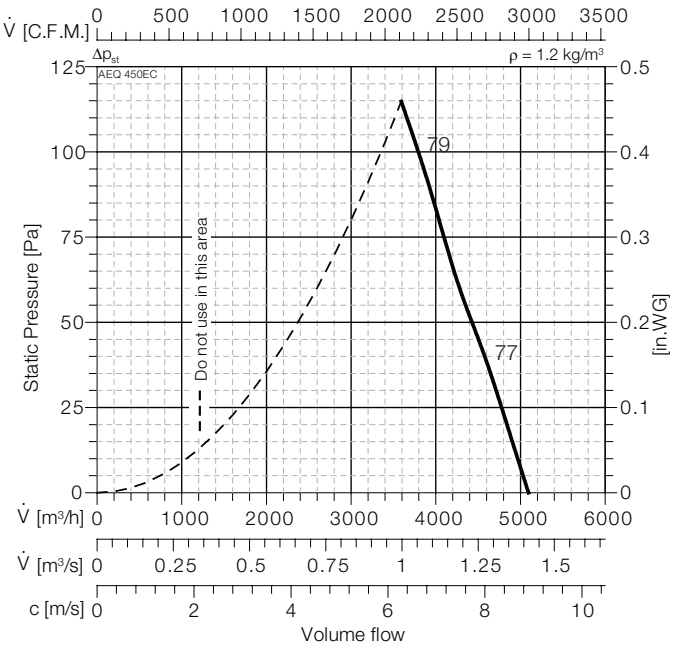
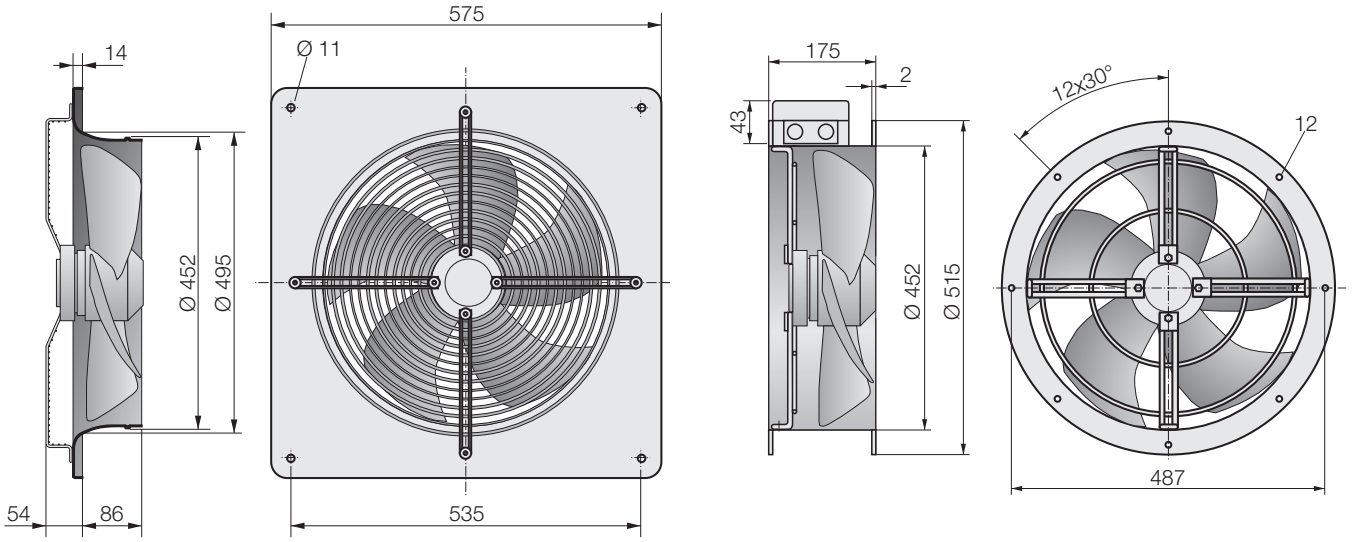
AEQ / AER 450 EC



Typ : AEQ / AER 450 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\ tot}$	0	0
:	10,5/12	**kg**		E13	**125 Hz**	-21	-21
U :	230 V 50/60 Hz			-	**250 Hz**	-11	-11
P_1 :	0,332	**kW**		-	**500 Hz**	-8	-8
I_N :	2,79	**A**		-	**1 kHz**	-6	-6
n :	1500	**min⁻¹**			**2 kHz**	-5	-5
C_{400V} :	-	**µF**			**4 kHz**	-8	-8
t_R :	50	**°C**			**8 kHz**	-15	-15



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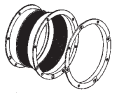
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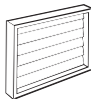
GL-AXR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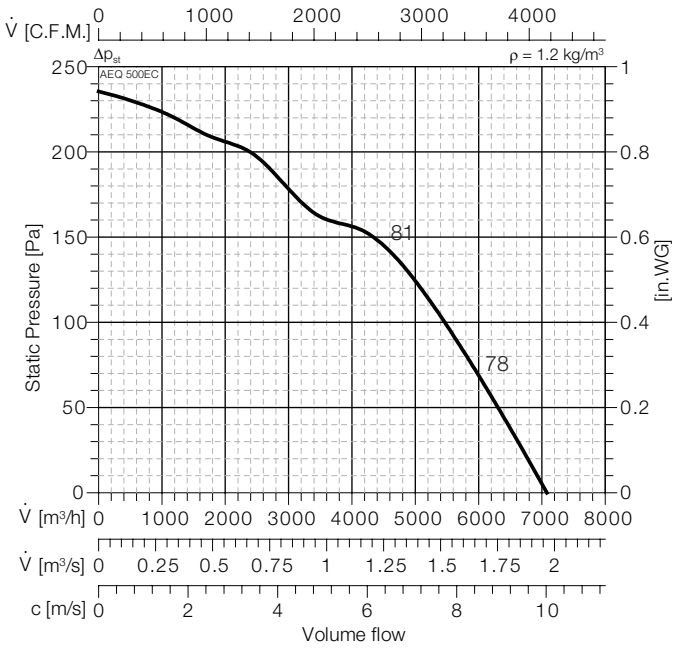
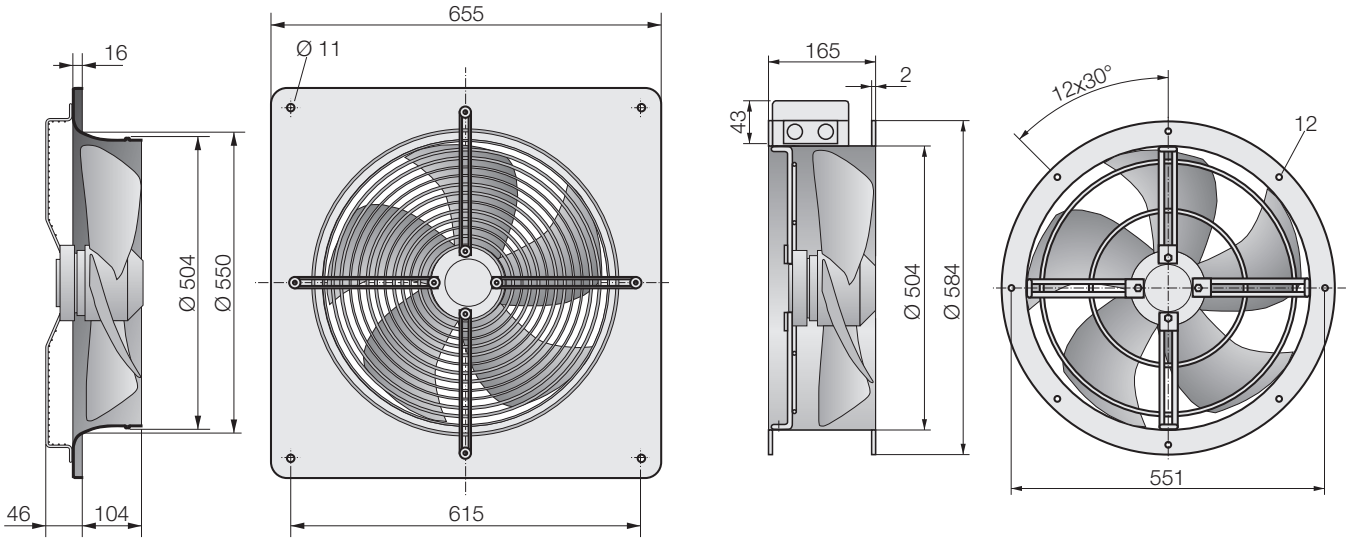
AEQ / AER 500 EC



Typ : AEQ / AER 500 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\,tot}$	0	0
:	16,2/16,2	kg		E13	125 Hz	-37	-37
U :	230 V 50/60 Hz			-	250 Hz	-20	-20
P_1 :	0,45	kW		-	500 Hz	-9	-9
I_N :	3,5	A		-	1 kHz	-6	-6
n :	1400	min^{-1}			2 kHz	-5	-5
C_{400V} :	-	µF			4 kHz	-8	-8
t_R :	50	°C			8 kHz	-16	-16



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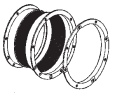
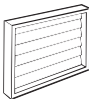
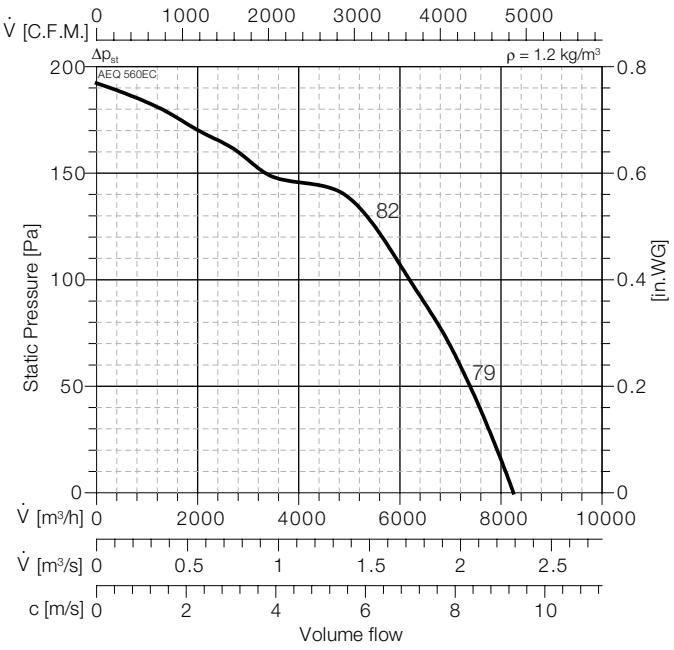
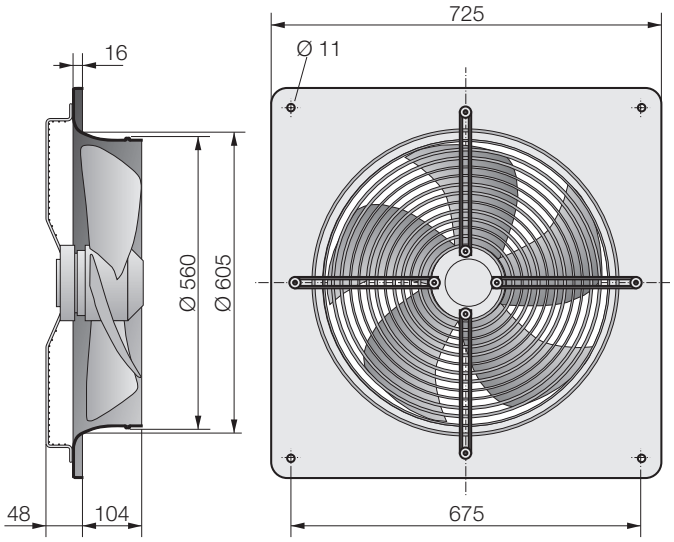

EV-AXR
GL-AXR

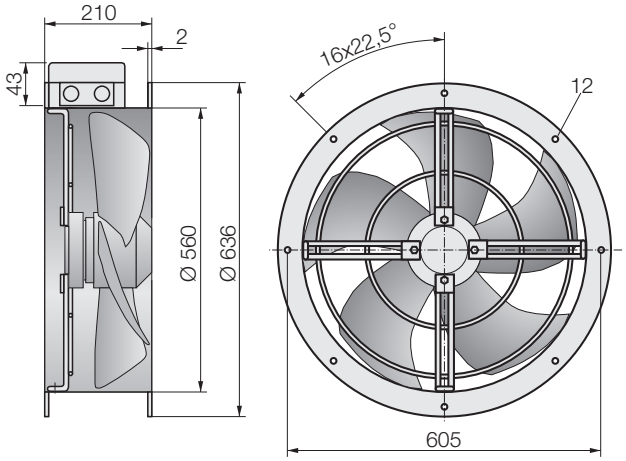

WVK

AEQ / AER 560 EC



Typ : AEQ / AER 560 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\ tot}$	0	0
:	20,6/19	kg		E13	125 Hz	-37	-37
U :	230 V 50/60 Hz			-	250 Hz	-19	-19
P_1 :	0,52	kW		-	500 Hz	-9	-9
I_N :	3,9	A		-	1 kHz	-6	-6
n :	1400	min^{-1}			2 kHz	-8	-8
C_{400V} :	-	µF			4 kHz	-12	-12
t_R :	50	°C			8 kHz	-21	-21





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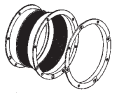
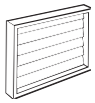


EV-AXR
GL-AXR



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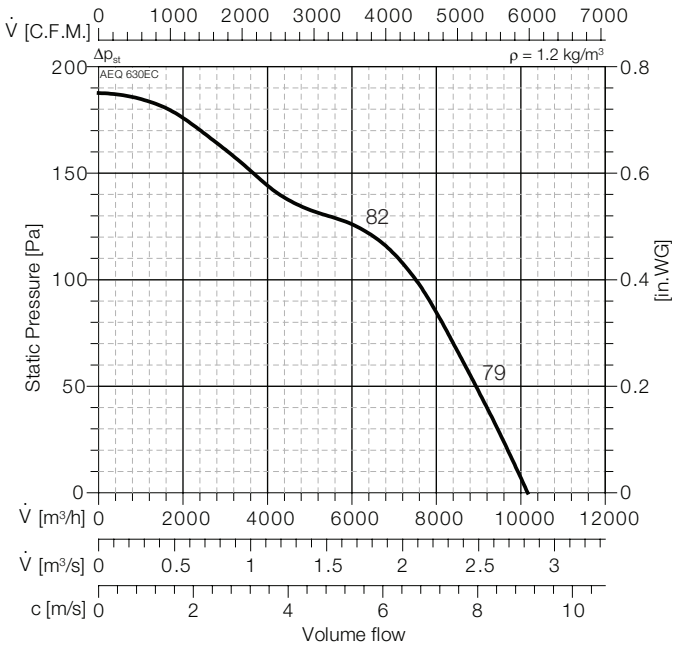
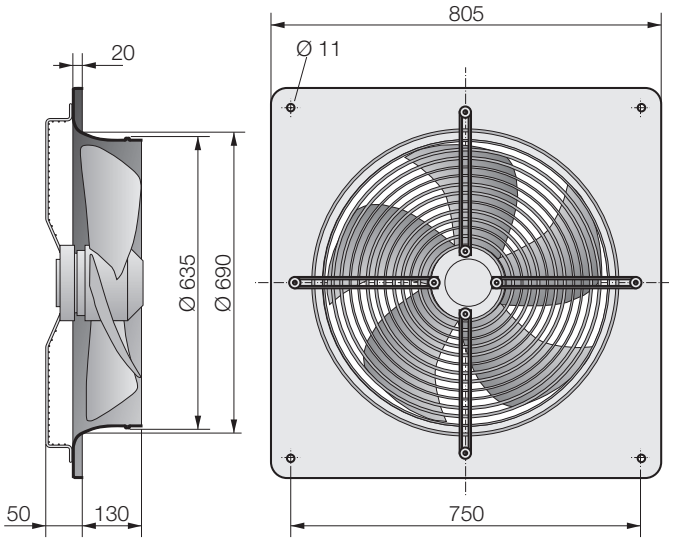
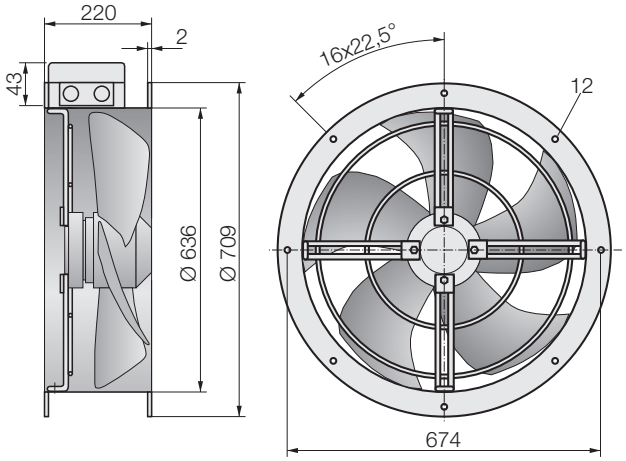
AEQ / AER 630 EC



Typ : AEQ / AER 630 EC			I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	- / -			IP 54	$L_{WA\,tot}$	0	0
:	25,2/26	kg		E13	125 Hz	-35	-35
U :	230 V 50/60 Hz			-	250 Hz	-20	-20
P_1 :	0,528	kW		-	500 Hz	-10	-10
I_N :	4,07	A		-	1 kHz	-5	-5
n :	1215	min^{-1}			2 kHz	-5	-5
C_{400V} :	-	µF			4 kHz	-8	-8
t_R :	50	°C			8 kHz	-19	-19





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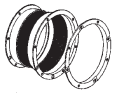
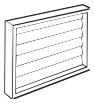
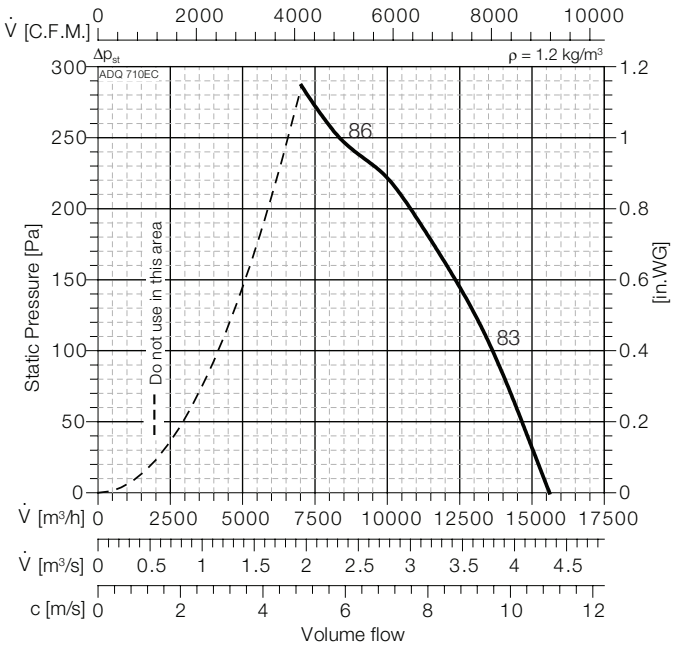
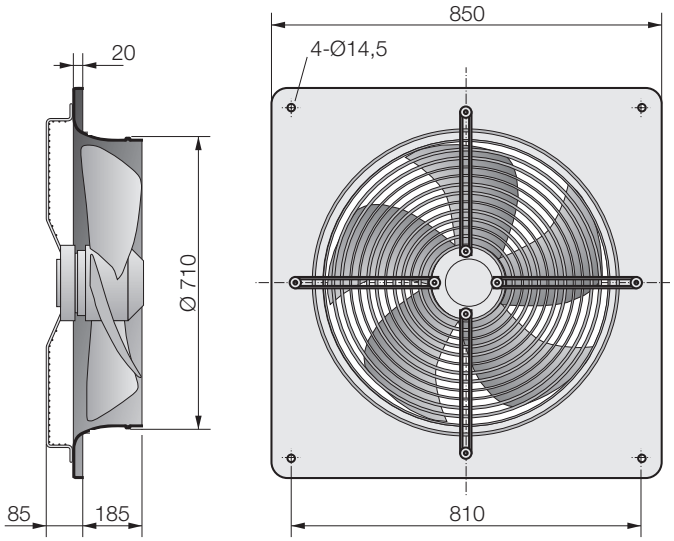

EV-AXR
GL-AXR


WVK

ADQ 710 EC



Typ :	ADQ 710 EC		I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	-			IP 54	$L_{WA\ tot}$	0	0
:	45	kg		DD0b	125 Hz	-39	-39
U :	400 V 50/60 Hz			-	250 Hz	-21	-21
P_1 :	1,44	kW		-	500 Hz	-11	-11
I_N :	2,7	A		-	1 kHz	-7	-7
n :	1250	min^{-1}			2 kHz	-3	-3
C_{400V} :	-	µF			4 kHz	-7	-7
t_R :	50	°C			8 kHz	-18	-18



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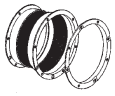
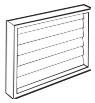


EV-AXR
GL-AXR



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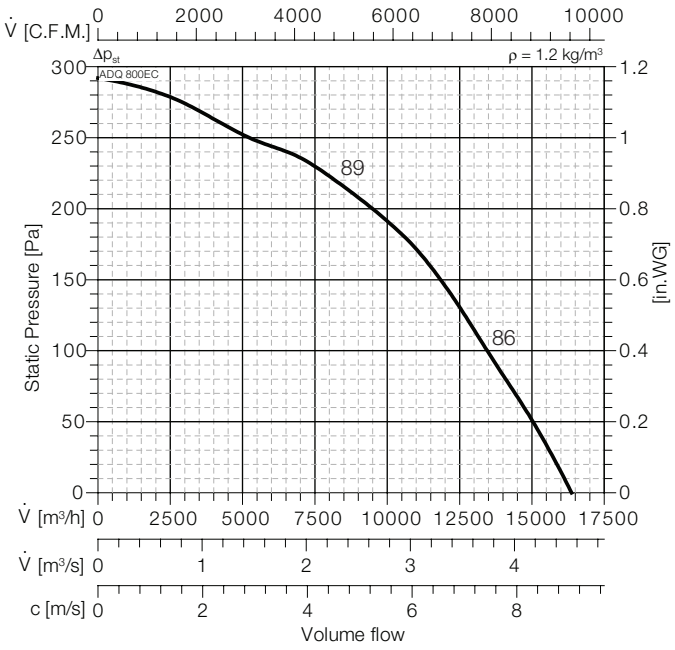
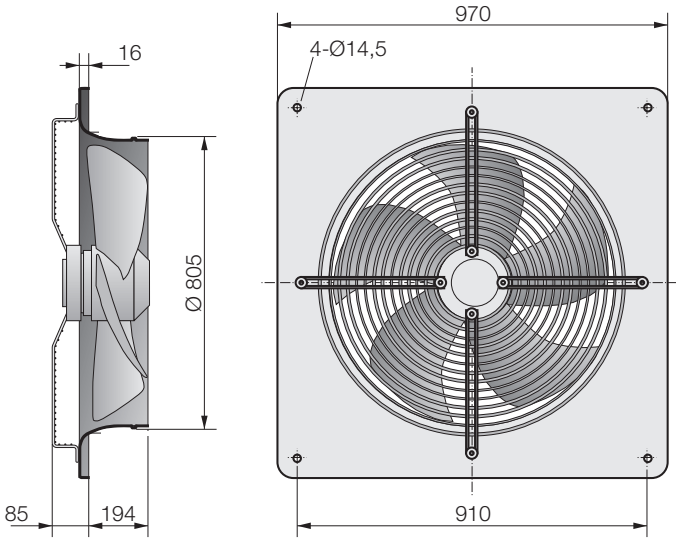
ADQ 800 EC



Typ :	ADQ 800 EC		I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	-			IP 54	$L_{WA\ tot}$	0	0
:	49	kg		DD0b	125 Hz	-39	-39
U :	400 V 50/60 Hz			-	250 Hz	-21	-21
P_1 :	1,65	kW		-	500 Hz	-11	-11
I_N :	3,3	A		-	1 kHz	-7	-7
n :	1165	min^{-1}			2 kHz	-3	-3
C_{400V} :	-	µF			4 kHz	-7	-7
t_R :	50	°C			8 kHz	-18	-18



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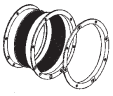
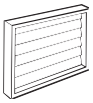
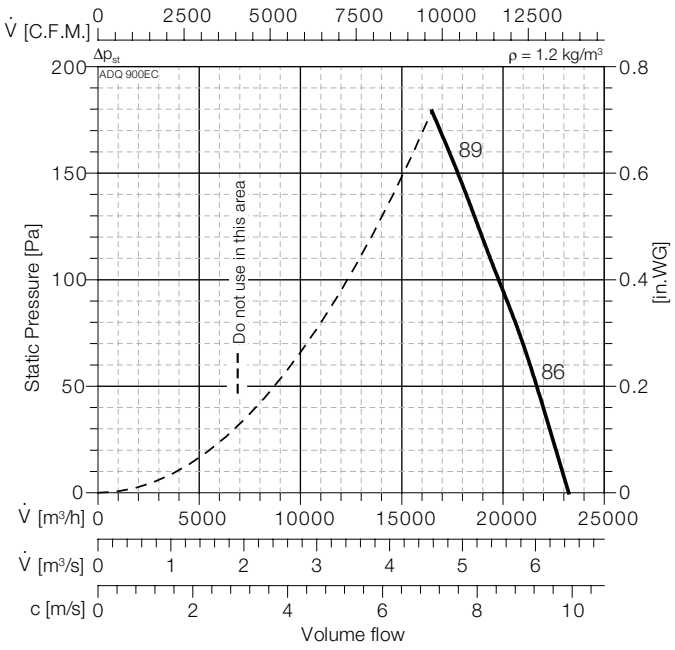
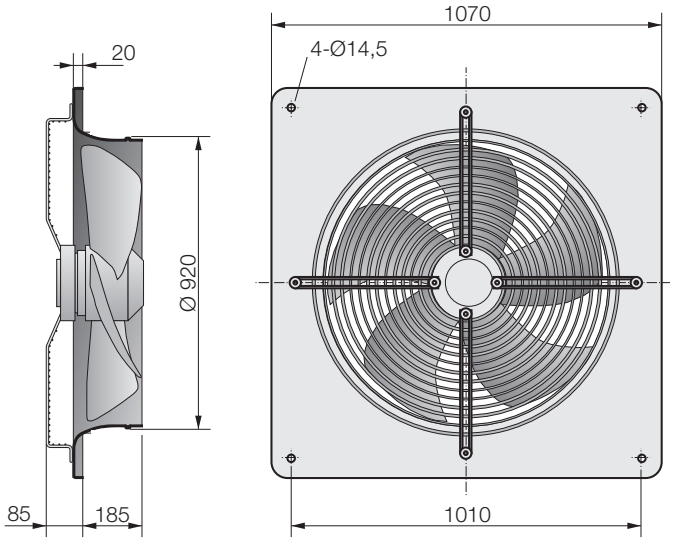

EV-AXR
GL-AXR


WVK

ADQ 900 EC



Typ :	ADQ 900 EC		I_A/I_N :	-	ΔdB	L_{WA5}	L_{WA6}
ArtNr :	117821			IP 54	$L_{WA\ tot}$	0	0
:	71	kg		DD0b	125 Hz	-39	-39
U :	400 V 50/60 Hz			-	250 Hz	-21	-21
P_1 :	2,0	kW		-	500 Hz	-11	-11
I_N :	3,65	A		-	1 kHz	-7	-7
n :	1000	min^{-1}			2 kHz	-3	-3
C_{400V} :	-	µF			4 kHz	-7	-7
t_R :	50	°C			8 kHz	-18	-18



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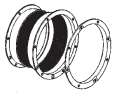
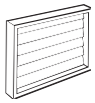


EV-AXR
GL-AXR



WVK