

HCA EVO EEC



SHORT CASE VARIABLE PITCH BLADES WITH EEC MOTOR

MANUFACTURING FEATURES

- Short case axial fan with reinforced body, with double flange, made of rolling steel sheet.
- Pad mounted motor support system with guide vanes.
- Polyester powder finishing coat.
- Low sound level and high performance.
- PM brushless motor (permanent magnets), synchronous, electronically commutated, high efficiency and low sound level. Specially designed for fans with electronic operation and control in deported box IP65.
- Working range: from 400 to 1200-2000rpm (depending on the models)
- Motor with IP54 protection and class F insulation. IP 65 drive case
- Power: 220V $\pm$ 10% single phase
- Power frequency: 50 / 60Hz
- Operating temperature range (electronical box): -20°C to 50°C
- Speed control through signal 0-10V or PWM
- Cast aluminium impeller with variable pitch angle (Stopped and in origin).

Accessories



AC



BA-400



BAD



INT



KIT TE



KIT TM



PO



REGC



RP



**SIL-C /
SIL-CN**

APPLICATIONS

Designed for inline installation, they are suitable for

- Air renewal in buildings and industries.
- Smoke extraction.
- Maximum transported air temperature: 50°C.

UNDER REQUEST

- Casing in hot galvanized sheet or stainless steel.

Technical data

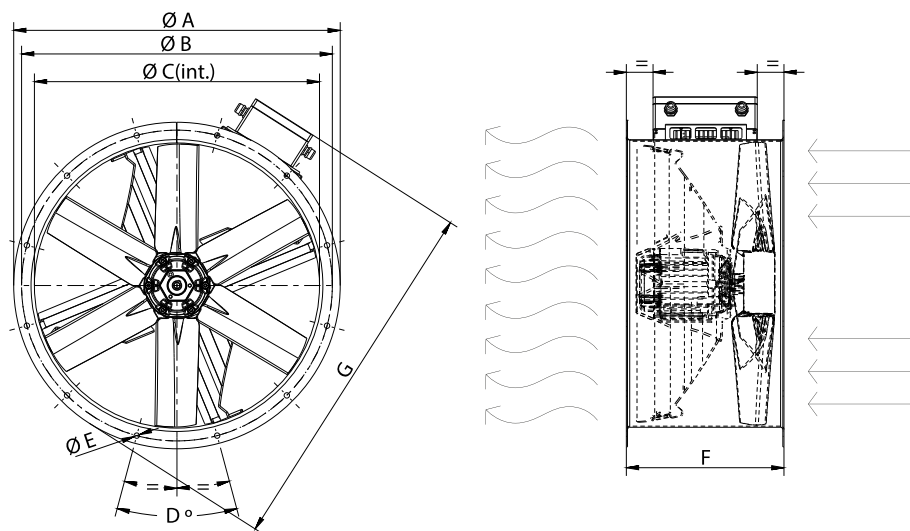
Single-phase motor

Code	Model	R.P.M.	Rated I. A 230V	Rated power kW	Max. Airflow m ³ /h	Sound db (A)**	Weight kg	Connect. diagram
277359040AEC	HCA EVO 35 EEC	2000	5,00	0,37	4.620	55	17	1
277409040AECV2	HCA EVO 40 EEC	2000	5,8	0,75	6.140	57	21,50	1
277459040AECV2	HCA EVO 45 EEC	2000	5,8	0,75	8.860	61	25,50	1
277509040AECV2	HCA EVO 50 EEC	1500	5,8	0,75	10.290	59	37	1
277569540AEC	HCA EVO 56 EEC	1500	10,00	1,50	13.970	62	43,50	1
277639535AEC	HCA EVO 63 EEC	1500	10,00	1,50	18.910	65	53,50	1

Notes:

** Total sound pressure level at the point of maximum flow measured in dB(A) in the suction measured in free field at a distance of 6m from the source

Dimensions



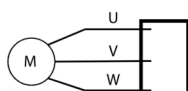
Model	A	B	C	D	E	F	G
HCA EVO 35 EEC	434	395	365	8x45	10	350	521
HCA EVO 40 EEC	472	450	403	8x45	12	350	563
HCA EVO 45 EEC	525	500	452	8x45	12	350	617
HCA EVO 50 EEC	600	560	504	12x30	12	350	675
HCA EVO 56 EEC	646	620	559	12x30	12	350	727
HCA EVO 63 EEC	725	690	633	12x30	12	350	806

Wiring diagram

Wiring diagram Nº 1

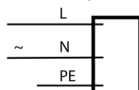
MOTOR OUTPUT SALIDA MOTOR

The EC motor is three phase and the output of three phases is connected in this connection terminal.
El motor EC es trifásico y la salida de las 3 fases del mismo se conectan a este terminal de conexión.



POWER INPUT (230V) ENTRADA DE ALIMENTACIÓN (230V)

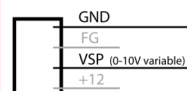
In this other terminal, the power input must be connected with the L (line), N (neutral) and single phase PE (ground).
En este otro terminal se debe conectar la entrada de alimentación con la L (línea), N (neutro) y PE (tierra) monofásica.



CONTROL: 0-10 INPUT CONTROL: 0-10 ENTRADA

The fan is adjustable in rpm and has a variable input from 0 to 10V.
You can connect any accessory or external device that gives this variable signal (for example: temperature sensor, inverter, etc.). In case you want to operate the fan at maximum revolutions, you should connect VSP (0-10V) and +12 directly.

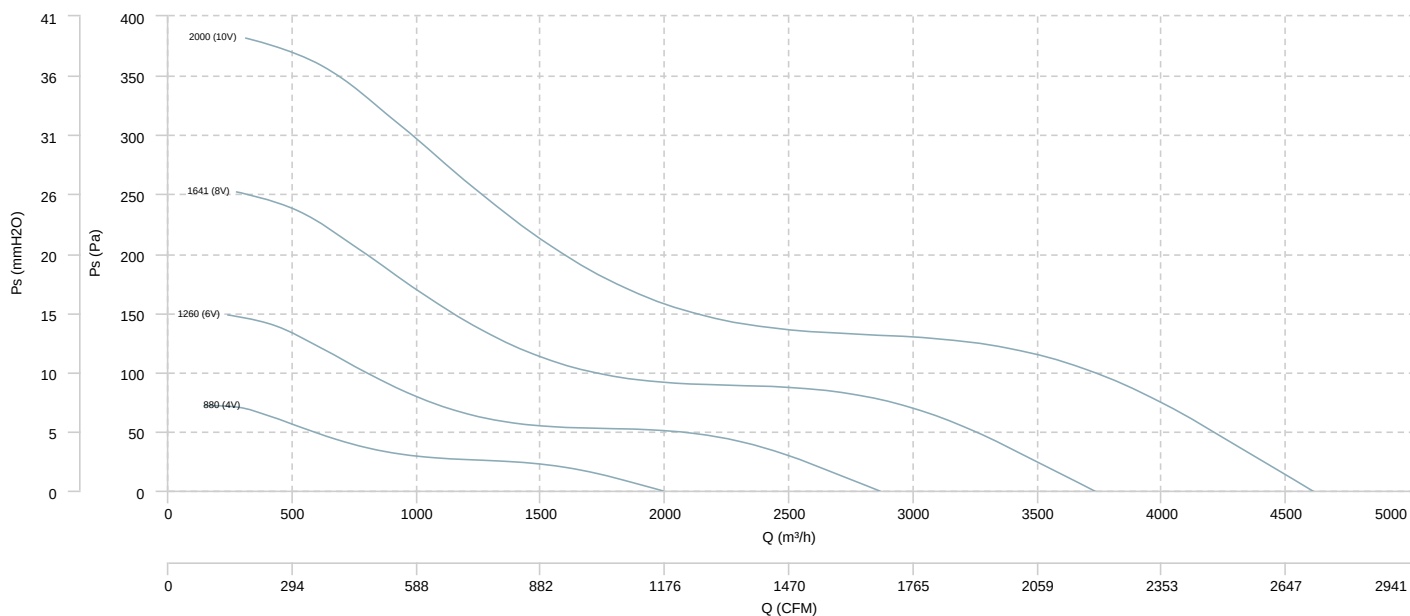
El ventilador es regulable en RPM y tiene una entrada variable de 0 a 10V.
Se puede conectar algún accesorio o dispositivo externo que dé esta señal variable (por ejemplo, sensor de temperatura, variador, etc.). En caso de que se quiera hacer funcionar el ventilador a máximas revoluciones se debe conectar directamente VSP (0-10V) y +12.



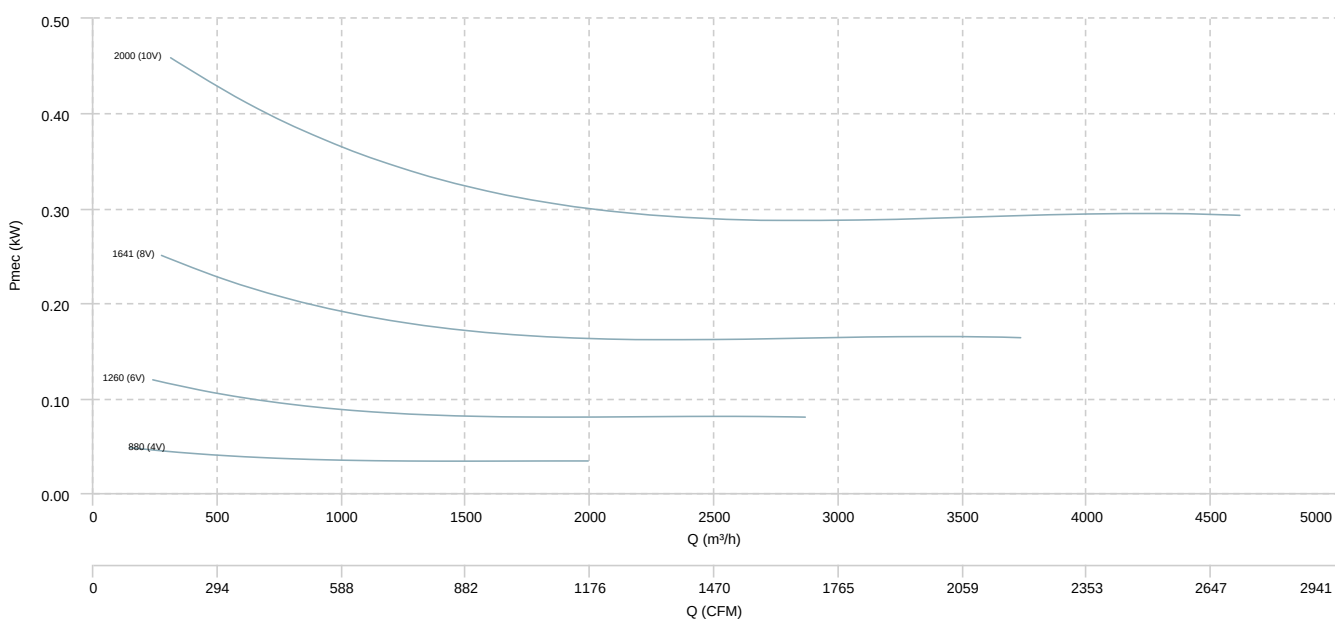
CHARACTERISCTIC CURVE

HCA EVO 35 EEC

AIR FLOW - PRESSURE

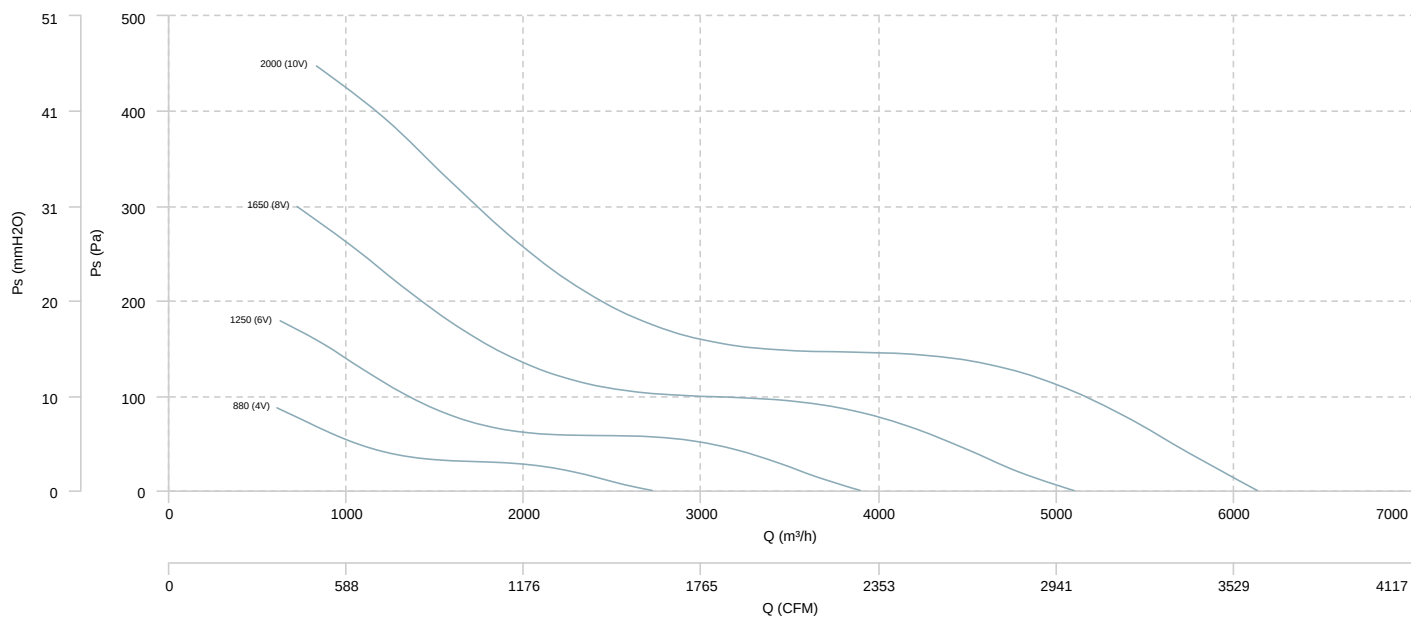


AIR FLOW - MECHANICAL POWER

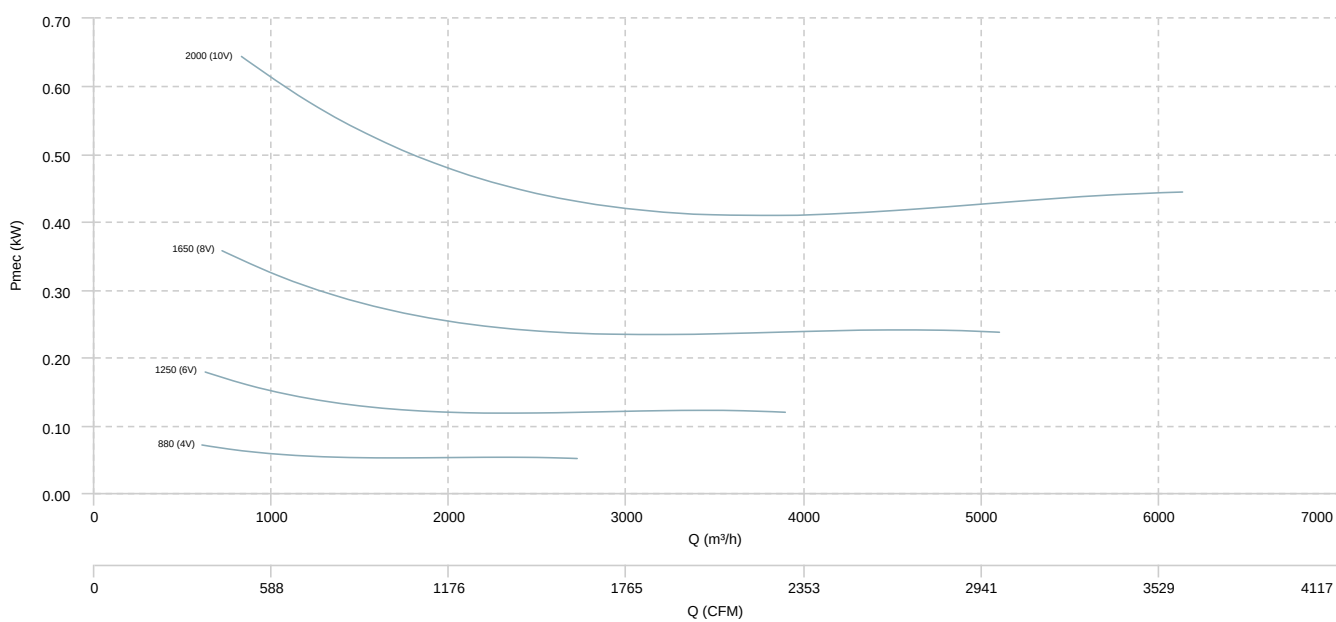


HCA EVO 40 EEC

AIR FLOW - PRESSURE

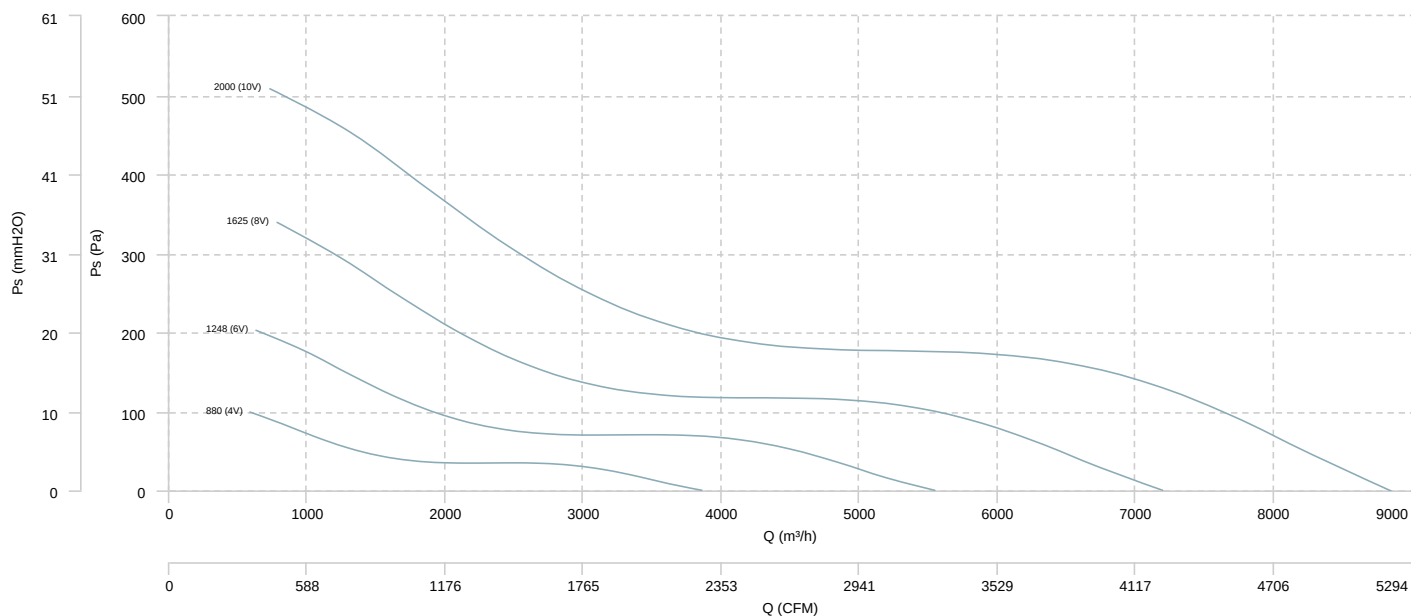


AIR FLOW - MECHANICAL POWER

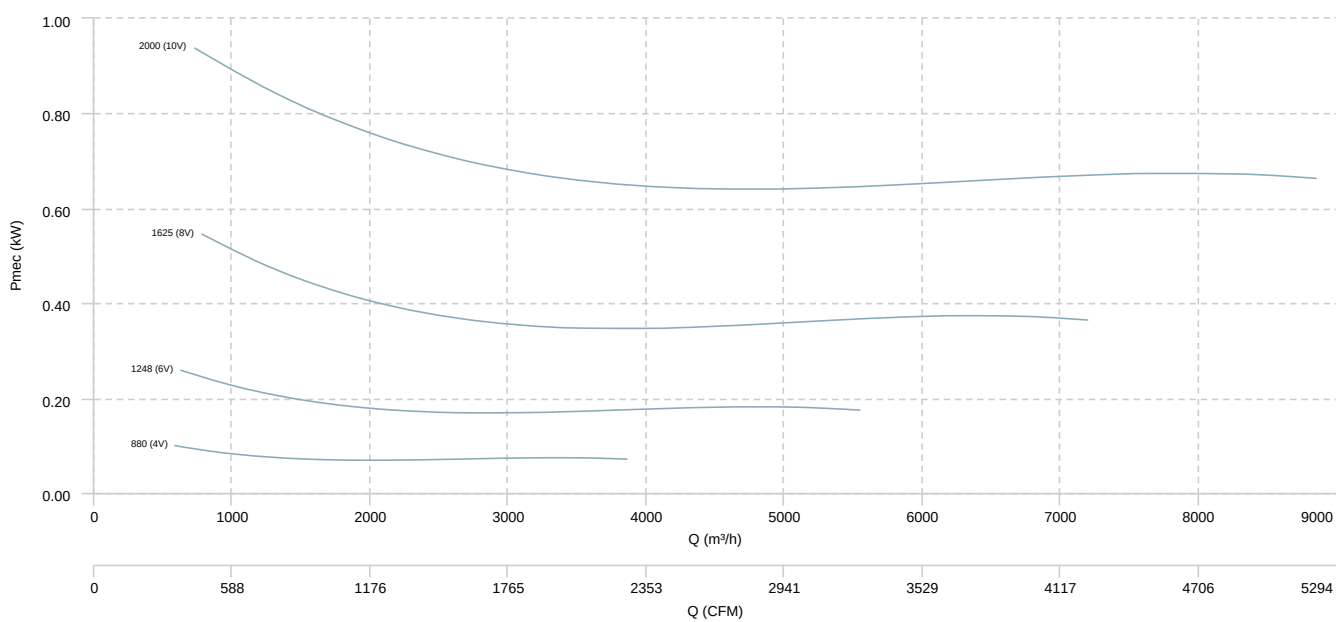


HCA EVO 45 EEC

AIR FLOW - PRESSURE

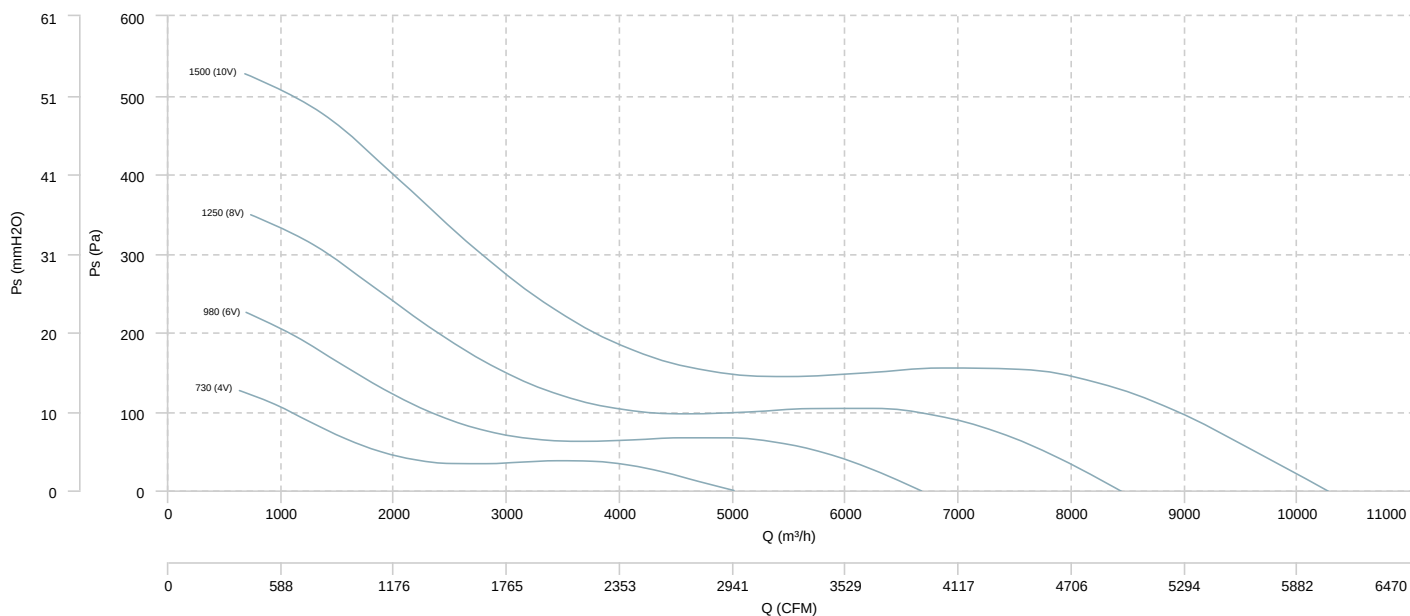


AIR FLOW - MECHANICAL POWER

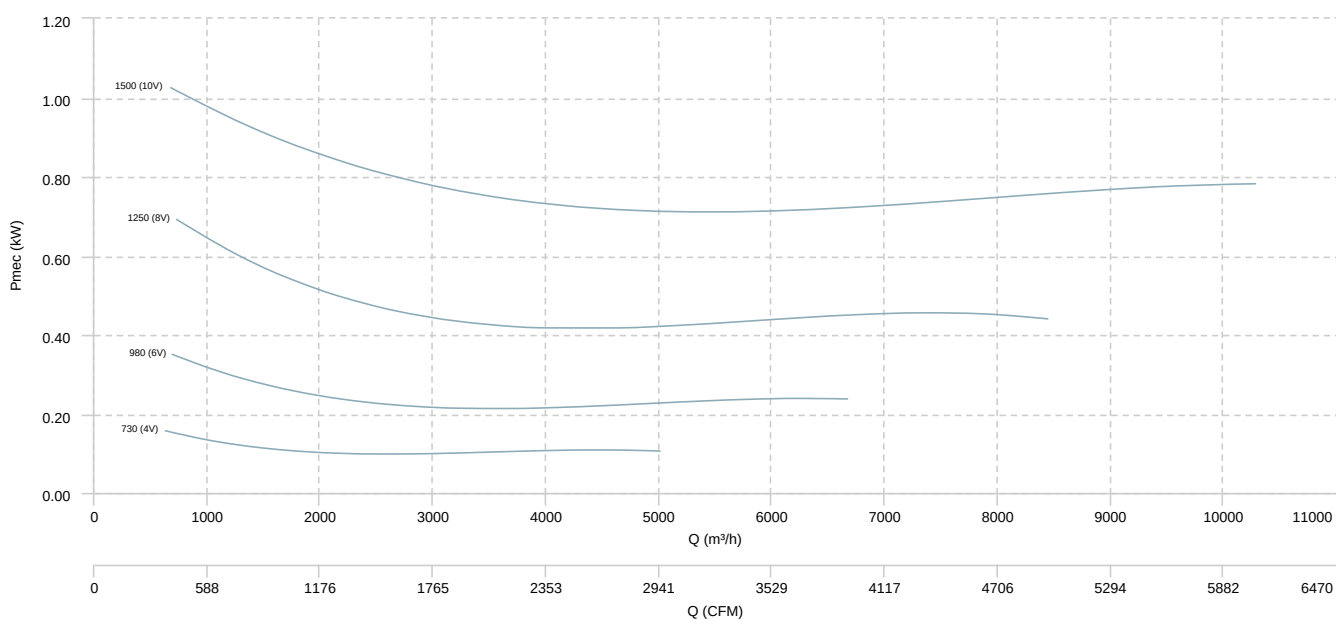


HCA EVO 50 EEC

AIR FLOW - PRESSURE

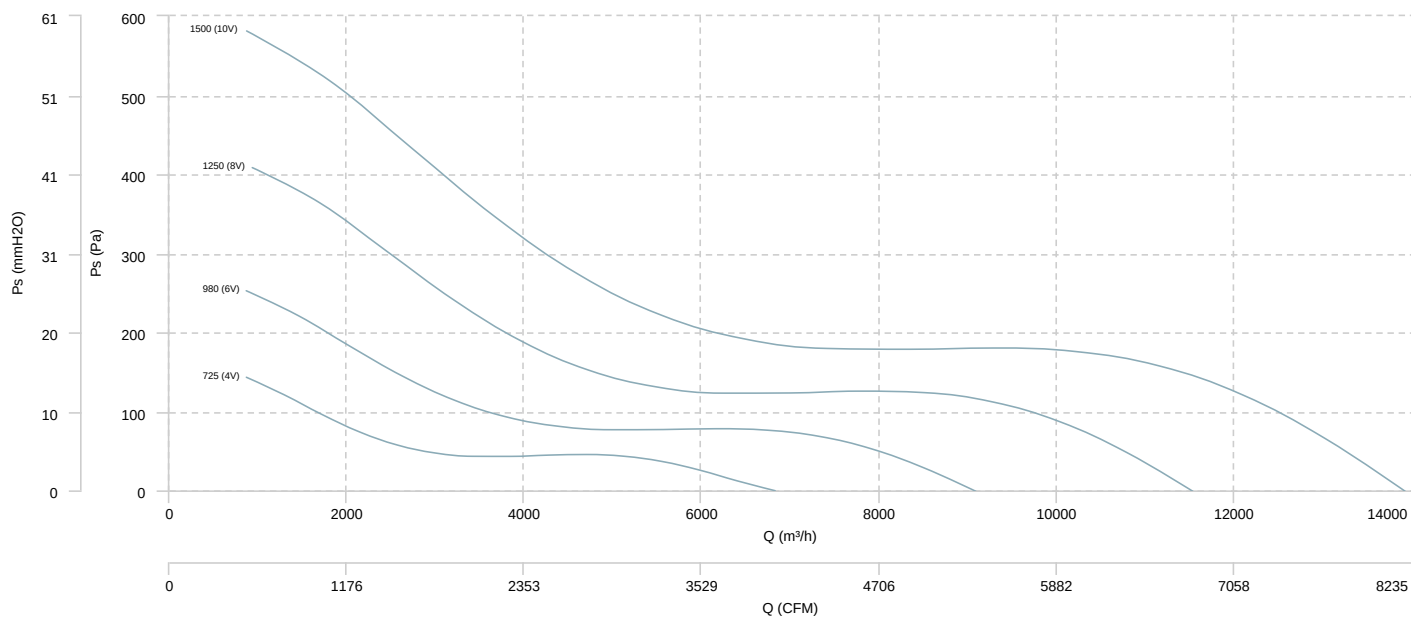


AIR FLOW - MECHANICAL POWER

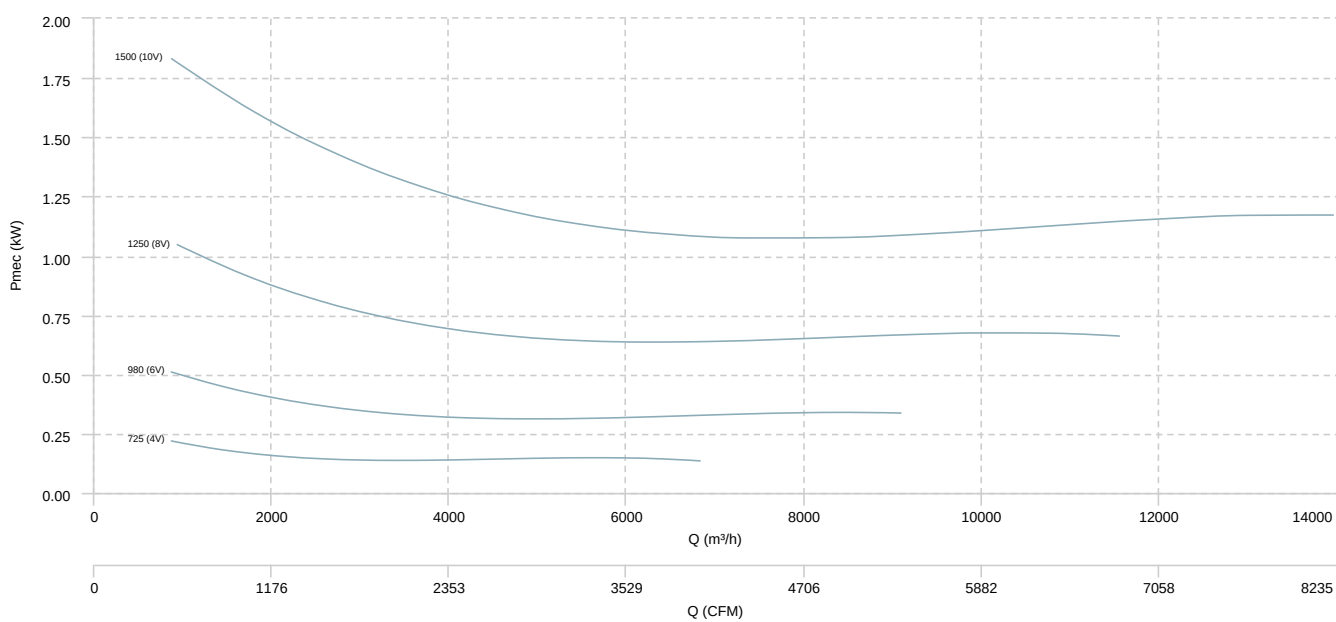


HCA EVO 56 EEC

AIR FLOW - PRESSURE

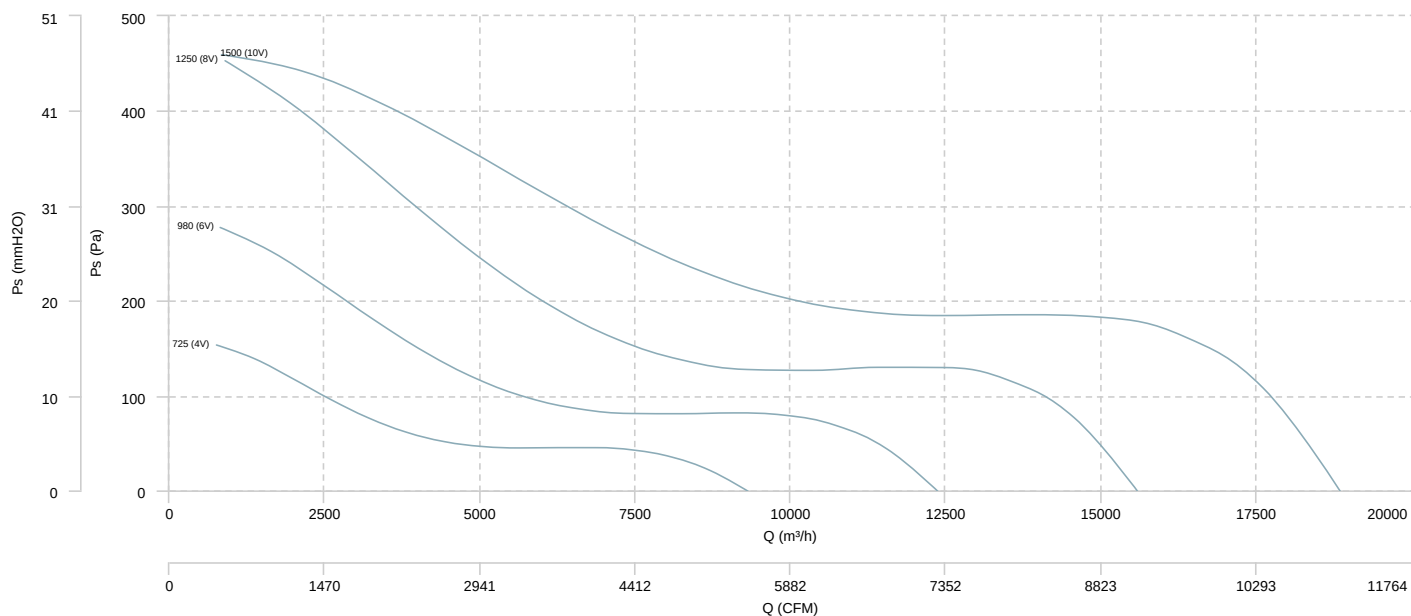


AIR FLOW - MECHANICAL POWER

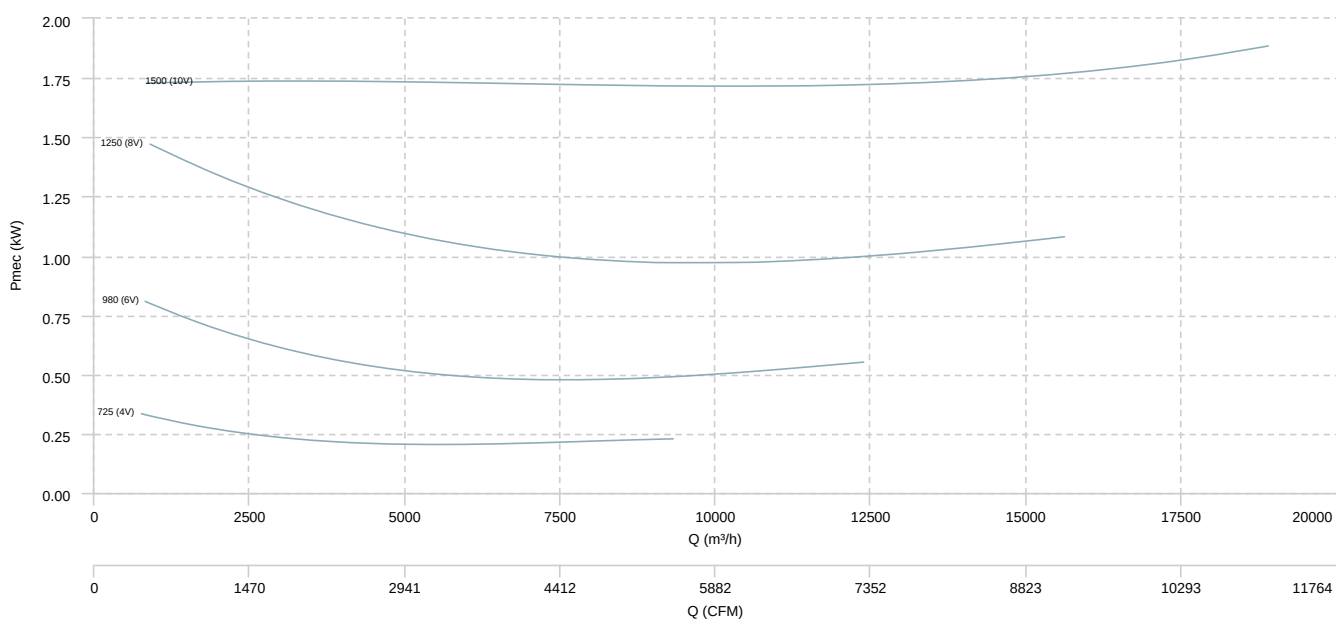


HCA EVO 63 EEC

AIR FLOW - PRESSURE



AIR FLOW - MECHANICAL POWER



Sound data

Sound power Lw dB (A)										
Model		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
HCA EVO 35 EEC (880 (4V))	Inlet	55	60	59	54	51	45	40	35	64
HCA EVO 40 EEC (880 (4V))	Inlet	65	61	54	49	48	45	42	37	66
HCA EVO 45 EEC (880 (4V))	Inlet	60	65	64	59	56	50	45	40	69
HCA EVO 50 EEC (730 (4V))	Inlet	68	64	57	52	51	48	45	40	70
HCA EVO 56 EEC (725 (4V))	Inlet	71	67	60	55	54	51	48	43	73
HCA EVO 63 EEC (725 (4V))	Inlet	73	69	62	57	56	53	50	45	75

Notes:

* To calculate the sound power level at different rpm from those indicated above, use the following formula:

$$Lw \text{ dB(A)}_{rpmA} = Lw \text{ dB(A)}_{rpmB} + 52.5 \cdot \log_{10} \frac{rpmA}{rpmB}$$

erp data

ERP	
Fan type	Axial fan
Installation category	A
Efficiency category	Static
The fan has to be installed with FSC	No

Model	Motor power (kW)	Maximum efficiency point data						
		Max. efficiency (%)	Efficiency grade (N) (N)	Air Flow (m³/h)	Ps (Pa)	Pabs (kW)	speed (rpm)	Specific ratio
HCA EVO 35 EEC	0,37	53,51	64,79	3.032,45	67,18	0,16	1641 (8V)	1,00
HCA EVO 35 EEC	0,37	55,25	64,95	3.773,24	95,92	0,29	2000 (10V)	1,00
HCA EVO 40 EEC	0,75	54,53	64,78	4.114,89	70,67	0,24	1650 (8V)	1,00
HCA EVO 40 EEC	0,75	56,30	64,99	4.839,37	122	0,42	2000 (10V)	1,00
HCA EVO 45 EEC	0,75	58,61	69,63	4.525,35	51,10	0,18	1248 (6V)	1,00
HCA EVO 45 EEC	0,75	61,97	71,02	5.859,67	86,34	0,37	1625 (8V)	1,00
HCA EVO 45 EEC	0,75	62,74	70,17	7.245,64	126,69	0,67	2000 (10V)	1,00
HCA EVO 50 EEC	0,75	55,08	65,41	5.370,37	61,02	0,23	980 (6V)	1,00
HCA EVO 50 EEC	0,75	56,17	64,66	6.976,42	89,19	0,45	1250 (8V)	1,00
HCA EVO 50 EEC	0,75	58,45	65,55	8.322,23	132,43	0,76	1500 (10V)	1,00
HCA EVO 56 EEC	1,50	58,16	69,72	5.693,52	33,36	0,15	725 (4V)	1,00
HCA EVO 56 EEC	1,50	60,59	69,93	7.326,14	68,31	0,33	980 (6V)	1,00
HCA EVO 56 EEC	1,50	61,75	69,17	9.438,36	107,84	0,67	1250 (8V)	1,00
HCA EVO 56 EEC	1,50	62,36	68,34	11.245,88	154,89	1,14	1500 (10V)	1,00
HCA EVO 63 EEC	1,50	59,96	70,51	7.610,09	41,34	0,22	725 (4V)	1,00
HCA EVO 63 EEC	1,50	61,54	69,77	9.948,49	78,95	0,50	980 (6V)	1,00
HCA EVO 63 EEC	1,50	61,90	68,22	12.713,61	127,97	1	1250 (8V)	1,00
HCA EVO 63 EEC	1,50	61,44	66,22	15.456,03	178,67	1,77	1500 (10V)	1,00