Centrifugal roof-mounted extract fans, with low noise levels and high efficiency

Efficient solutions
for air extraction in buildings

VTV/EC

- Acoustic insulation that ensures low noise levels
- Energy efficiency through EC Technology motors
- Easy installation and maintenance
- Resistant to corrosion C5 according to ISO 12944

EC TECHNOLOGY

CE ACCORDING ErP 2018

Efficient solutions for air extraction in buildings

SODECA's VTV/EC centrifugal roof-mounted extract fans guarantee efficient and quiet ventilation, while optimising comfort and air quality in interior spaces using the most advanced technology

Low noise level

Acoustic insulation using high-quality materials that reduce noise.

Resistant to corrosion

Magnelis® is a metal coating that is three times more resistant than galvanised steel, thereby offering exceptional anti-corrosion protection, even in the most aggressive environments.

Energy savings

The high-performance EC Technology electric motor is a key element in reducing electricity consumption, in addition to being easy to regulate with any 0-10 V sensor.

Straightforward installation and maintenance

Designed for easy installation and access in order to perform cleaning and maintenance.

APPLICATIONS

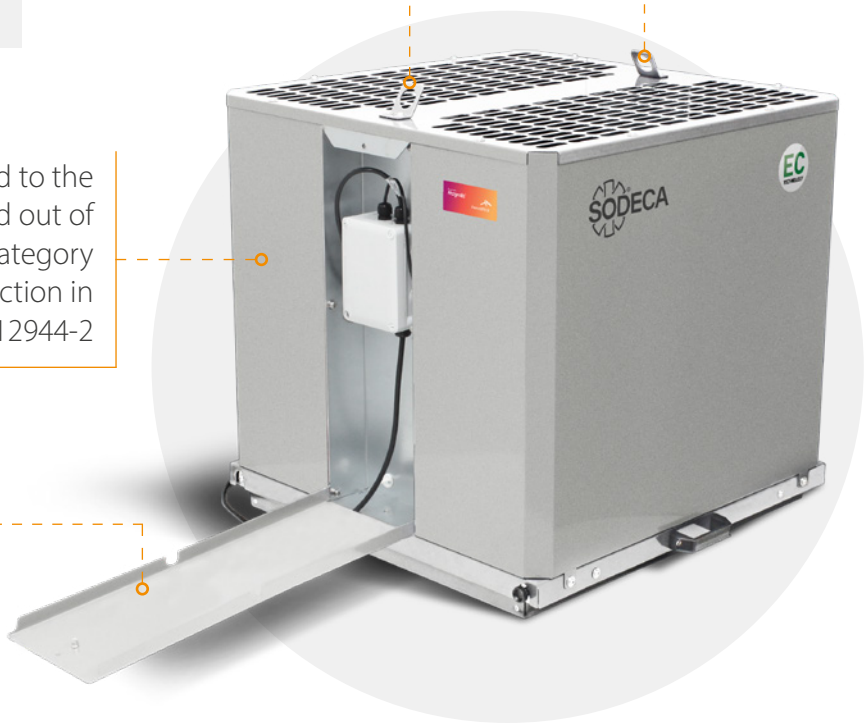
Shopping centres, residential buildings, offices, hotels and buildings that require efficient ventilation and minimal sound emission.

Construction aspects

Hoisting lugs to facilitate transport and installation

Parts exposed to the elements are manufactured out of **Magnelis® steel sheet**. C5 category anti-corrosion protection in accordance with EN ISO 12944-2

Cover for **easy access** to the junction box



Acoustic insulation of 25-mm thick mineral wool installed around the entire perimeter of the housing

Motor protection to prevent entry by water or snow

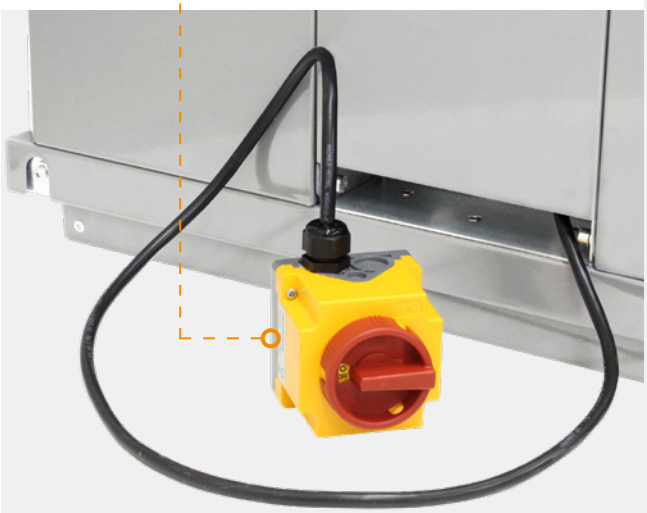
High-efficiency, **EC Technology** motor

Completely **detachable** equipment

Easy to install

The equipment is fastened to the roof by an opening mechanism that takes 4 bolts.

It includes a **maintenance switch**



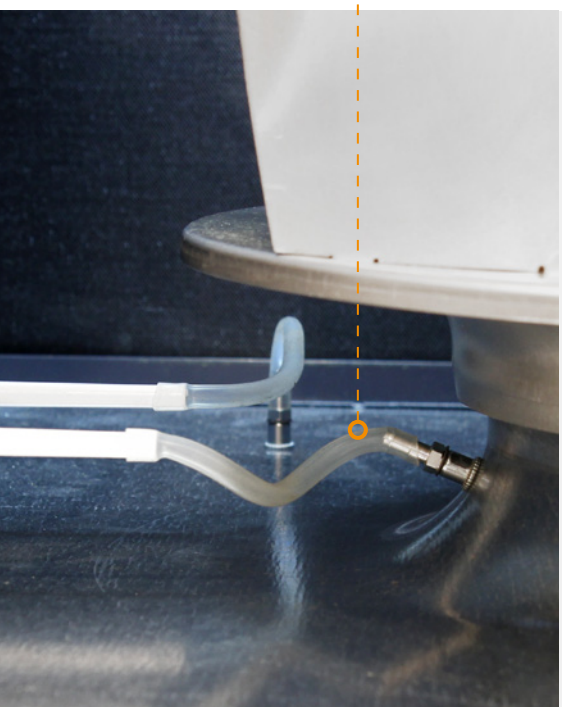
Easy to maintain

Opening mechanism with access to the inlet duct and the impeller in order to **maintain and clean the unit**.

EC TECHNOLOGY motors

The VTV/EC has a **high-efficiency, EC Technology, external rotor motor** designed to offer optimal operation with reduced electricity consumption.

It allows precise regulation of the speed through 0-10 V and PWM signals, thereby ensuring reliable and stable control that is perfectly adapted to the needs of each application.



Airflow measurement

Equipped with pressure connections for **automatic control** of the flow rate or constant pressure

Accessories

The unit can be fastened to a base if it cannot be fastened directly to a roof.

VTV/EC

Centrifugal roof exhaust fans, sound insulated and equipped with EC Technology motor

Centrifugal roof exhaust fans, sound insulated and equipped with EC Technology motor and folding casing for easy maintenance.

Fan:
- Backward curved impeller in aluminum sheet, except models 190 and 250 in plastic.
- Foldable casing for ease of inspection and maintenance.
- Vertical discharge.
- Prepared with pressure taps for automatic flow or pressure control.
- Mineral wool insulation with high acoustic attenuation performance.
- Safety switch included, with 1.5 metre cable.
- Motor cover to prevent water and snow to enter the duct.

Motor:
- EC Technology external rotor motors, controllable via PWM and 0-10 V signals.
- IP54 protection.
- Single-phase 230 V 50/60 Hz and three-phase 400 V 50/60 Hz.
- Maximum temperature of air to be carried: -25 ºC +50 ºC.

Finish:
- The parts exposed to the elements are made of Magnelis sheet. Corrosion protection category C5 according to EN ISO 12944-2.

Order code

VTV/EC	***–***	***310***	***–***	***M***	***/***	***L***
VTV/EC: Centrifugal roof exhaust fans, sound insulated and equipped with EC Technology motor		Size		T = Three-phase M = Single-phase		L: Low flow rate H: High flow rate

Technical characteristics

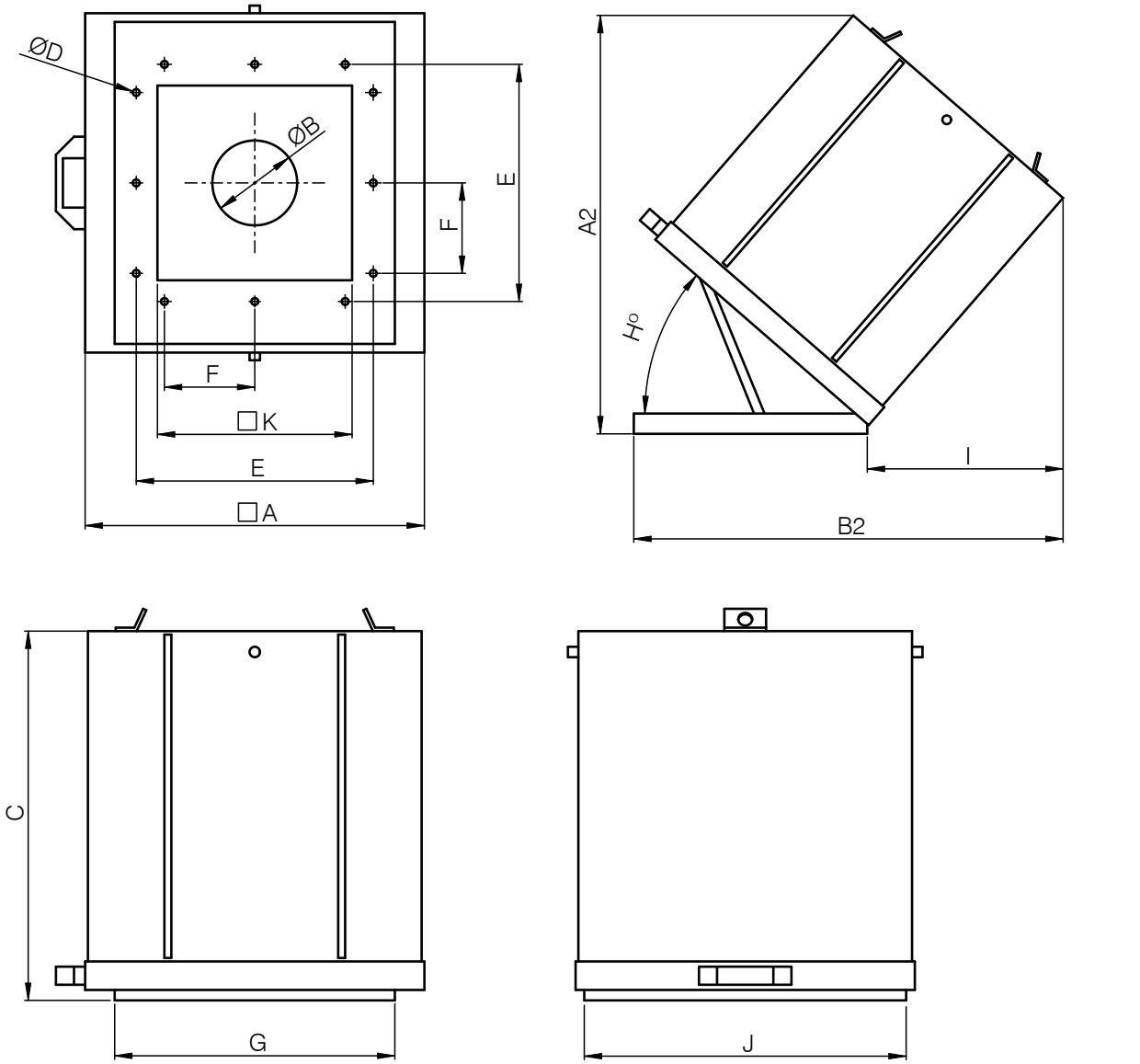
Model	Speed (r/min)	Maximum admissible current (A)		Max. electric power	Maximum flow rate	Sound pressure level[1]	Approx. weight
	min.	230V	400V	(W)	(m^3/h)	dB(A)	(Kg)
VTV/EC-190-M	3540	0.97		122	675	41	18
VTV/EC-250-M	2420	0.98		129	1190	42	21
VTV/EC-310-M/L	1920	1.35		187	2110	44	31
VTV/EC-310-M/H	2320	2.00		480	2780	48	33
VTV/EC-355-M	1460	1.45		226	2605	49	30
VTV/EC-400-M/L	1680	2.00		423	3760	45	42
VTV/EC-400-M/H	1700	4.70		762	5070	47	47
VTV/EC-400-T	2000		1.68	939	5540	48	46
VTV/EC-500-T	1250		2.00	1005	7790	53	54

1. Irradiated sound pressure level in dB(A) at a distance of 5 m and at maximum flow rate.

Erp. (Energy Related Products)

Information on Directive 2009/125/EC can be downloaded from the SODECA website or the QuickFan selector programme.

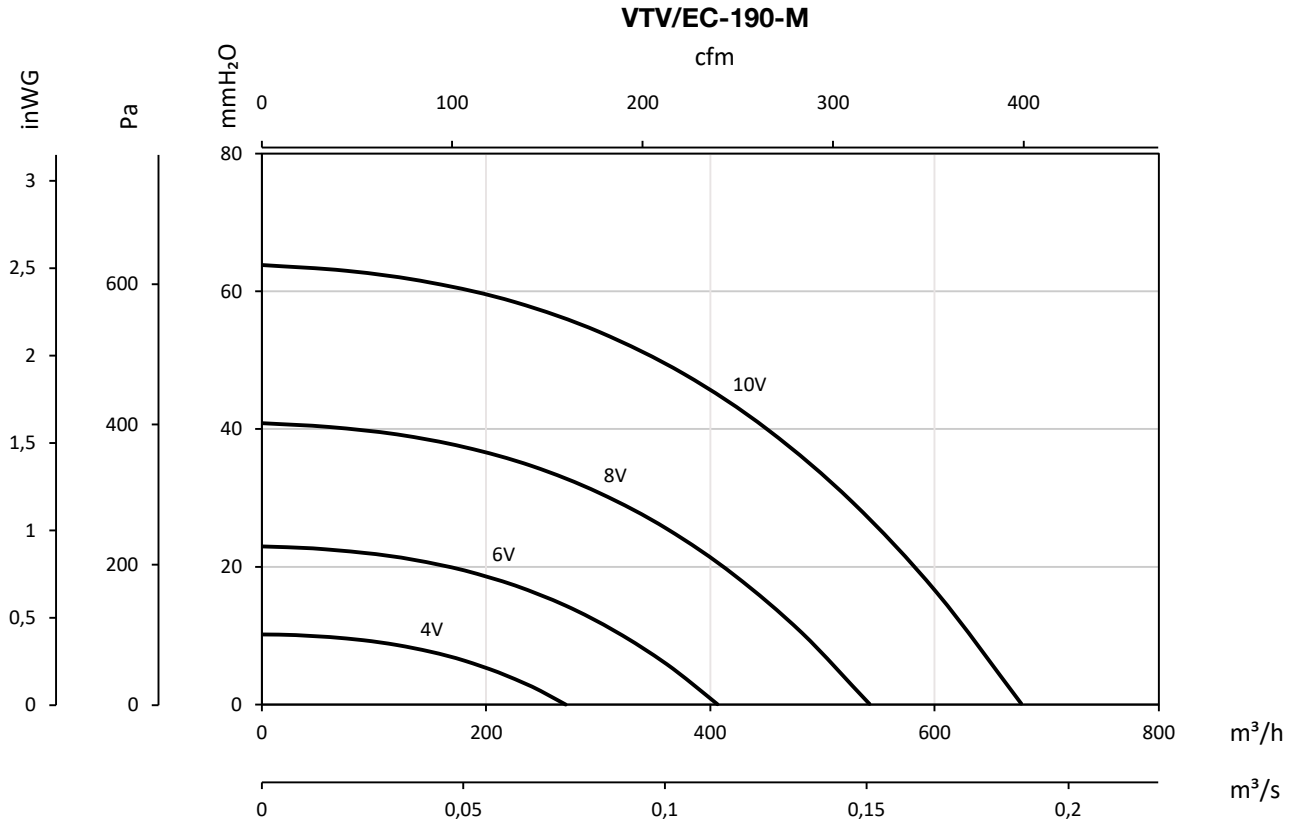
Dimensions mm

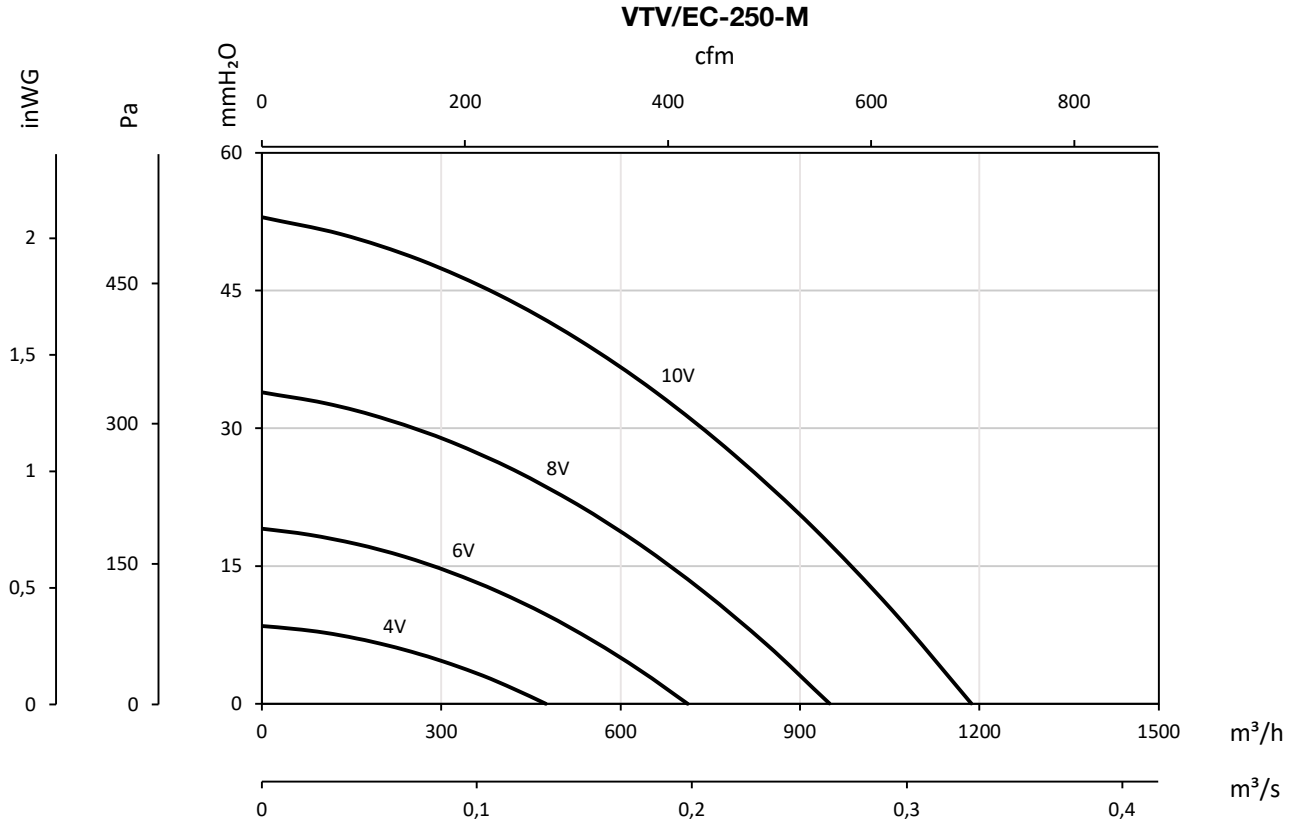


	A	ØB	C	D	E	F	G	J	Hº	I	K	A2	B2
VTV/EC-190-M	488	122	551	10	341	130	403	463	41	358	280	728	789
VTV/EC-250-M	488	162	551	10	341	130	403	463	41	358	280	728	789
VTV/EC-310-M/L	598	202	602	10	448	154	510	570	43	405	384	839.5	944
VTV/EC-310-M/H	598	202	602	10	448	154	510	570	43	405	384	839.5	944
VTV/EC-355-M	598	236	602	10	448	154	510	570	43	405	384	839.5	944
VTV/EC-400-M/L	688	253	727	10	538	217	600	660	44	500	475	992	1128
VTV/EC-400-M/H	688	253	727	10	538	217	600	660	44	500	475	992	1128
VTV/EC-400-T	688	253	727	10	538	217	600	660	44	500	475	992	1128
VTV/EC-500-T	778	323	751	10	628	264	690	750	47	541	564	1073	1258

Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm Pe= Static pressure in mm H_2O, Pa and inwg





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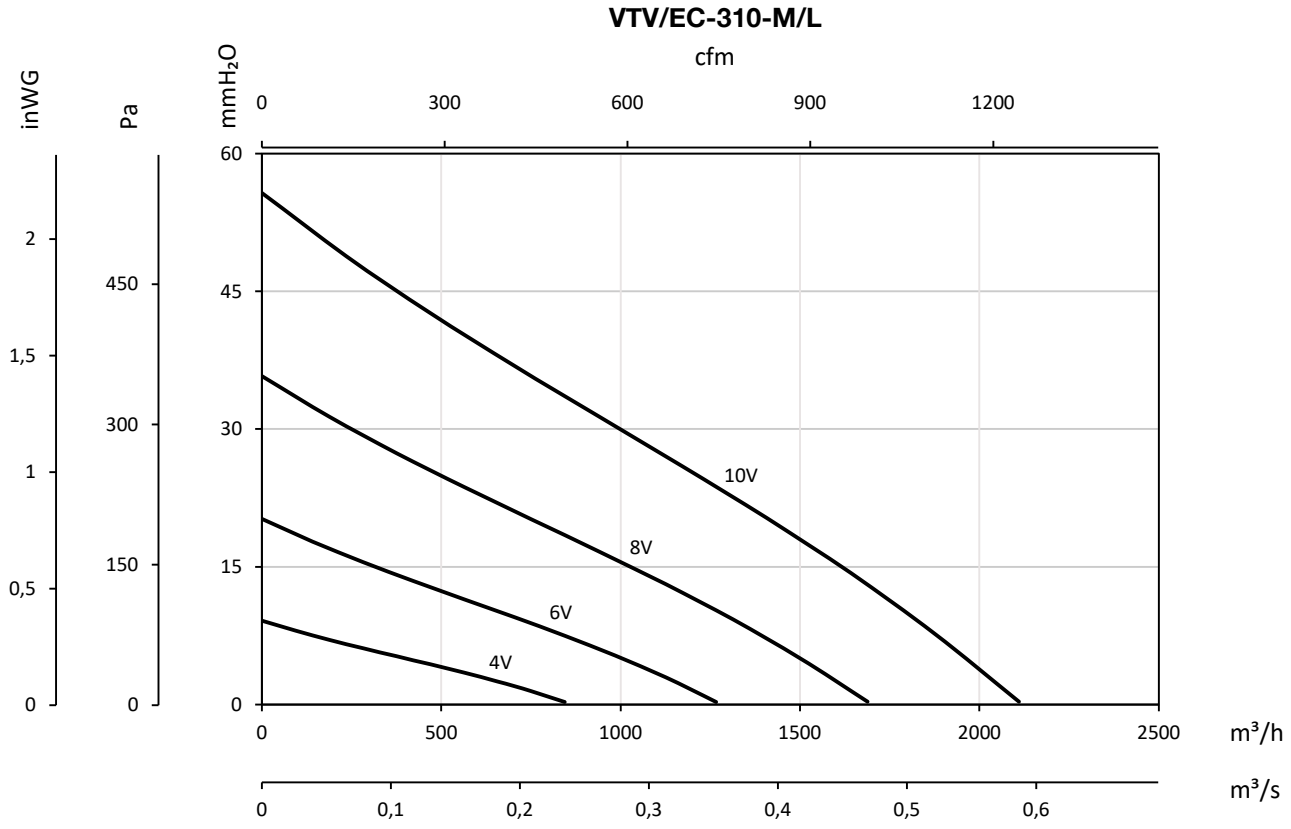

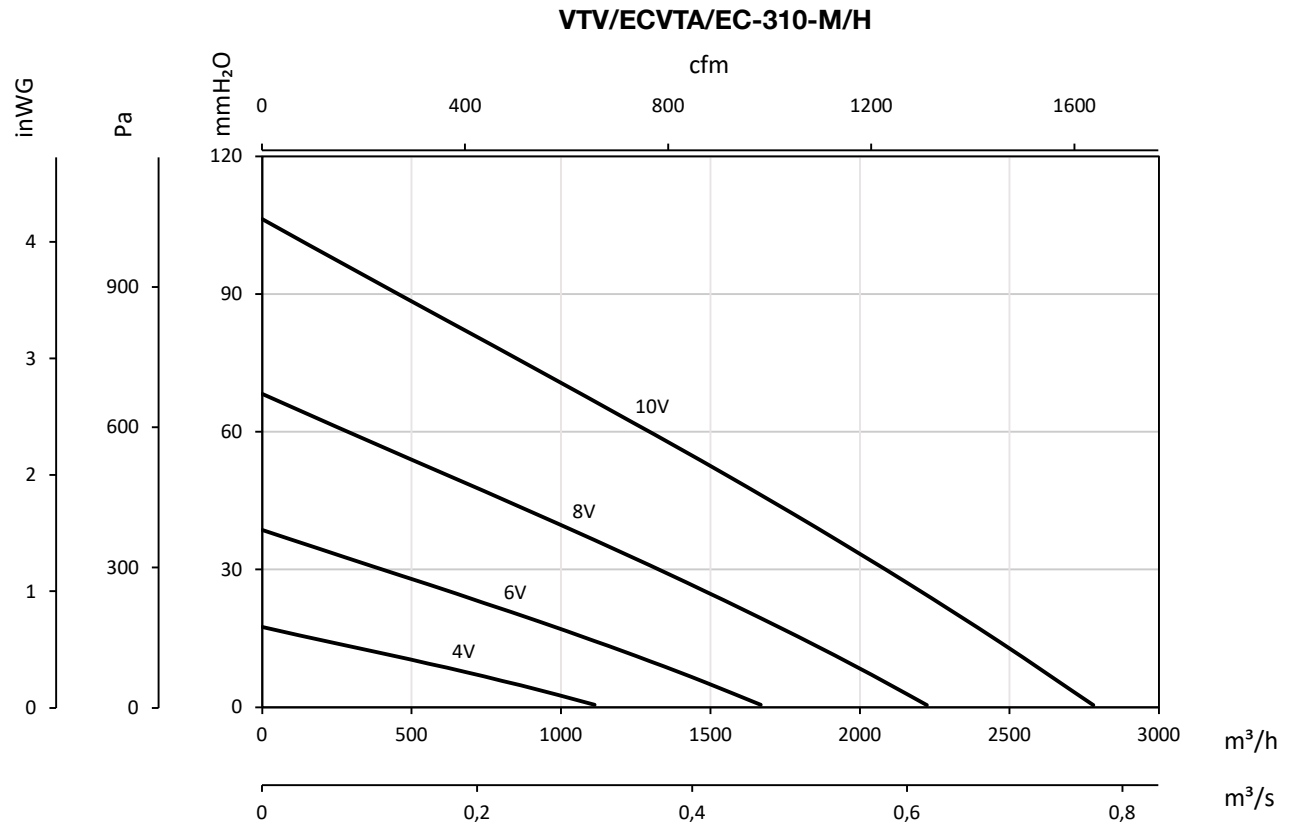

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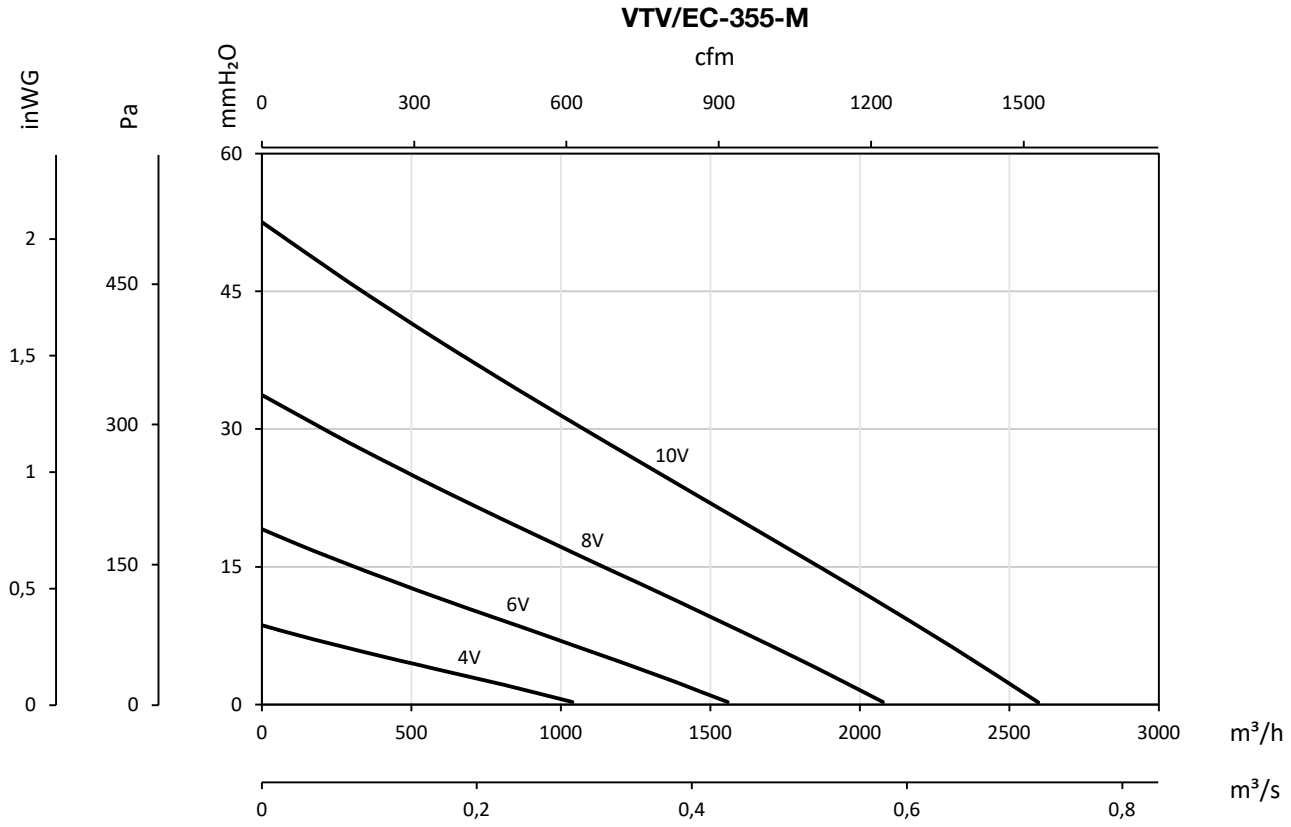

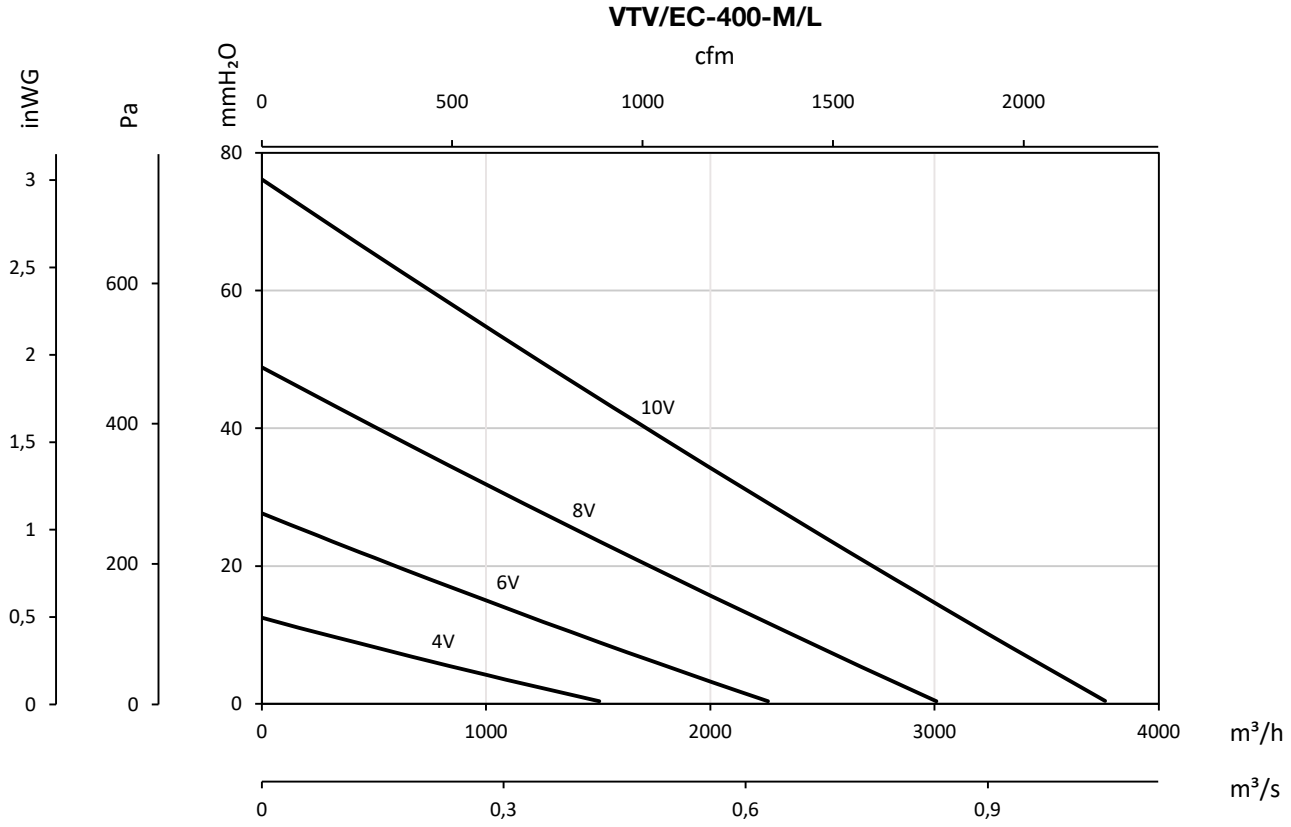

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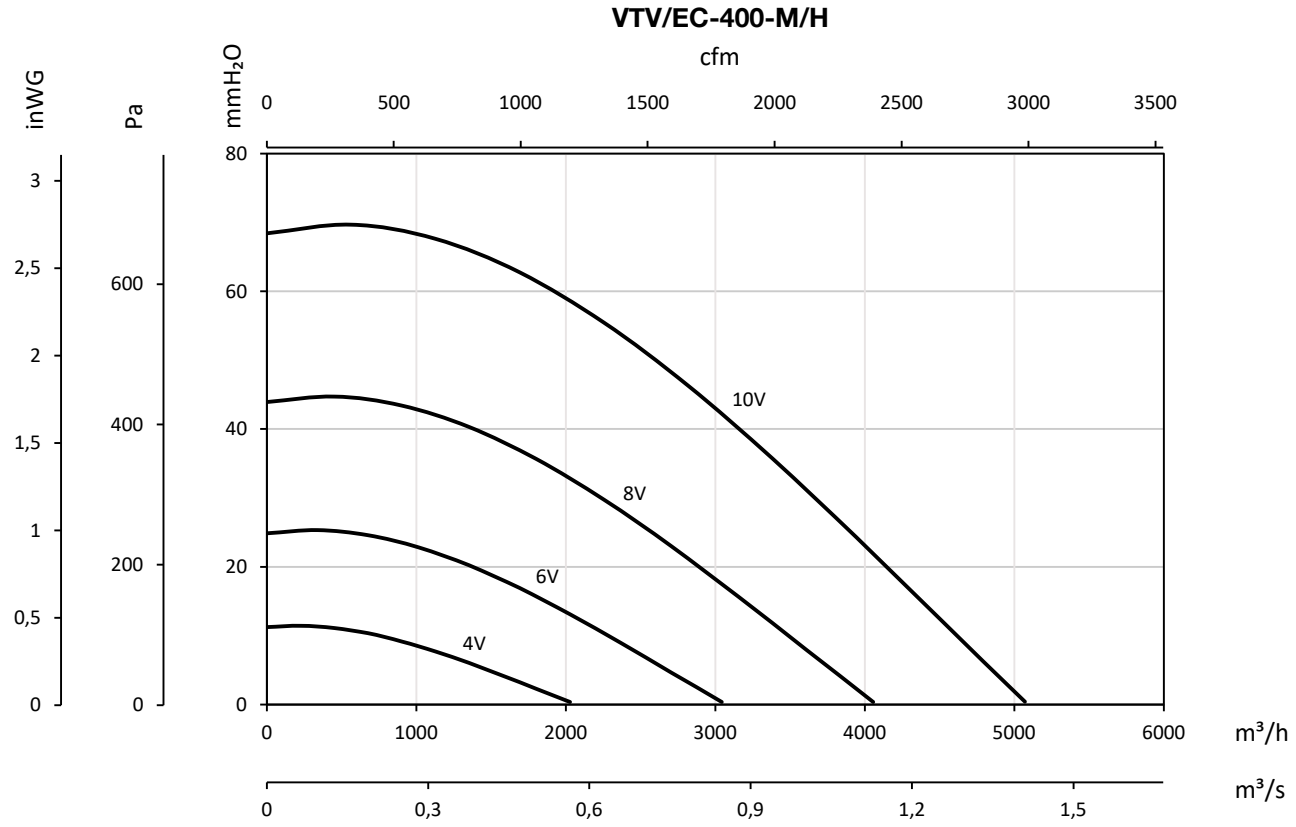

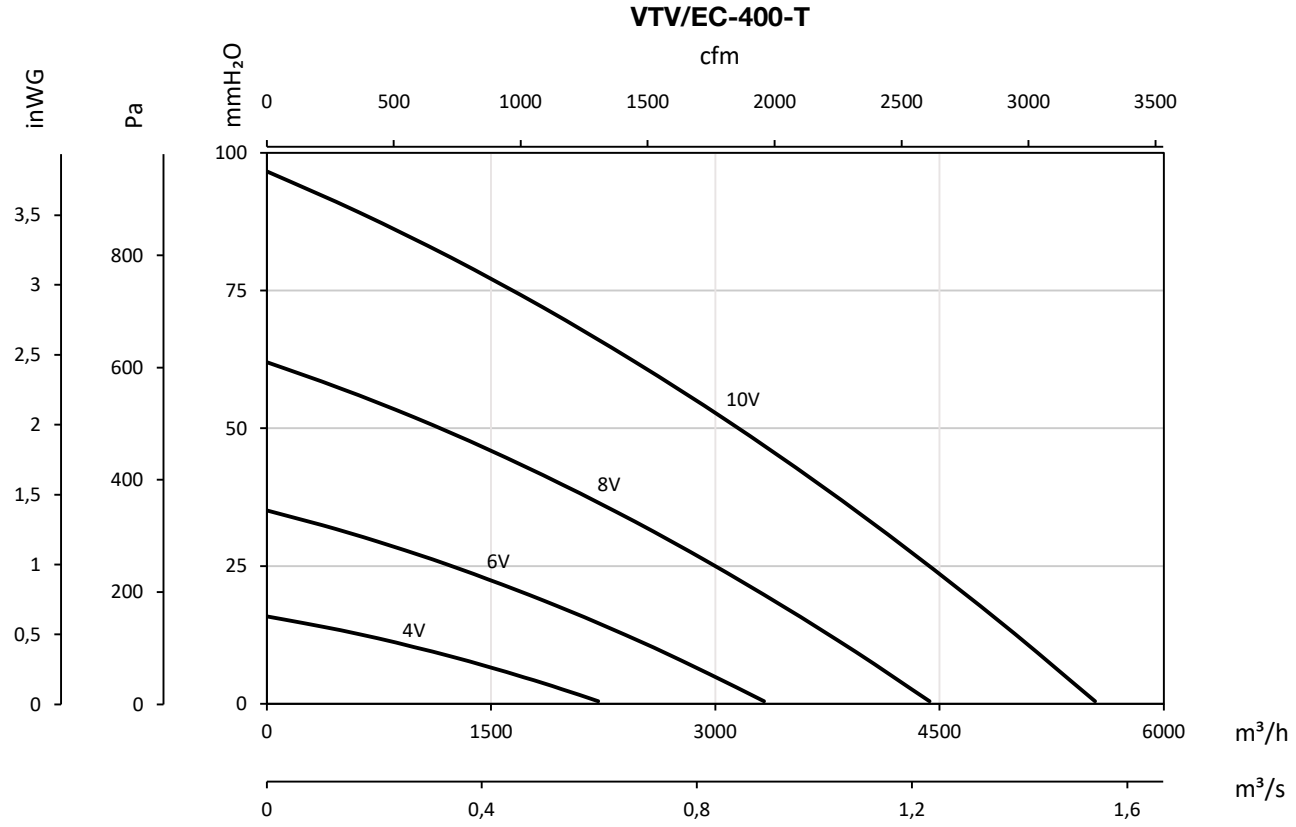

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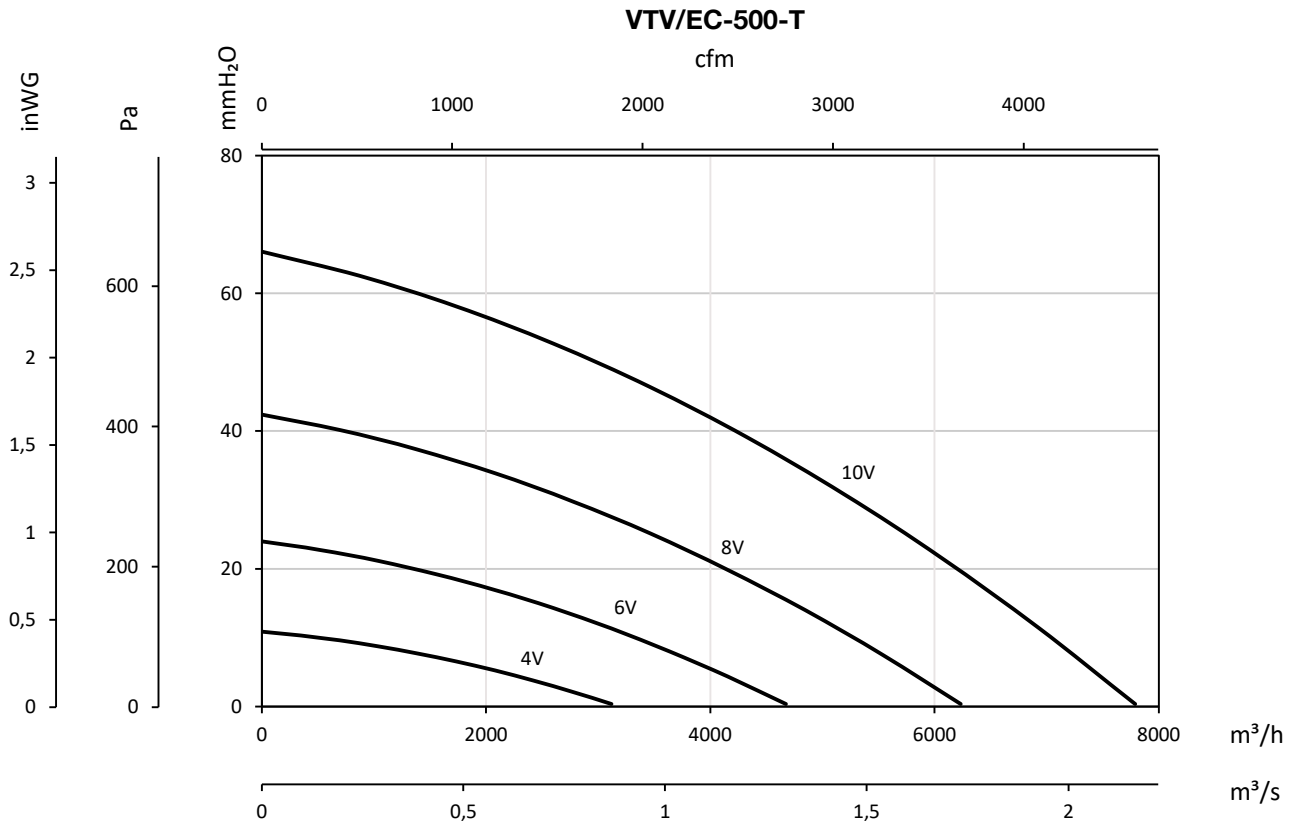


Pressure connection

Air flow rate → Q [m³/h]
Calibration factor → K
Difference in pressure → Δp [(Pa)]

$$Q = K \, x \sqrt{\Delta p}$$

	K Factor*
VTV/EC-190-M	33
VTV/EC-250-M	35
VTV/EC-310-M/L	100
VTV/EC-310-M/H	102
VTV/EC-355-M	124
VTV/EC-400-M/L	165
VTV/EC-400-M/H	154
VTV/EC-400-T	181
VTV/EC-500-T	250

* Values given for ρ = 1.2 kg/m3 and at 20 ºC.

Accessories

EC CONTROL

OP

PVT

BTI

SI-FUENTE DE ALIMENTACIÓN

SI-PRESIÓN

CAP/EC

MTP

Acoustic characteristics

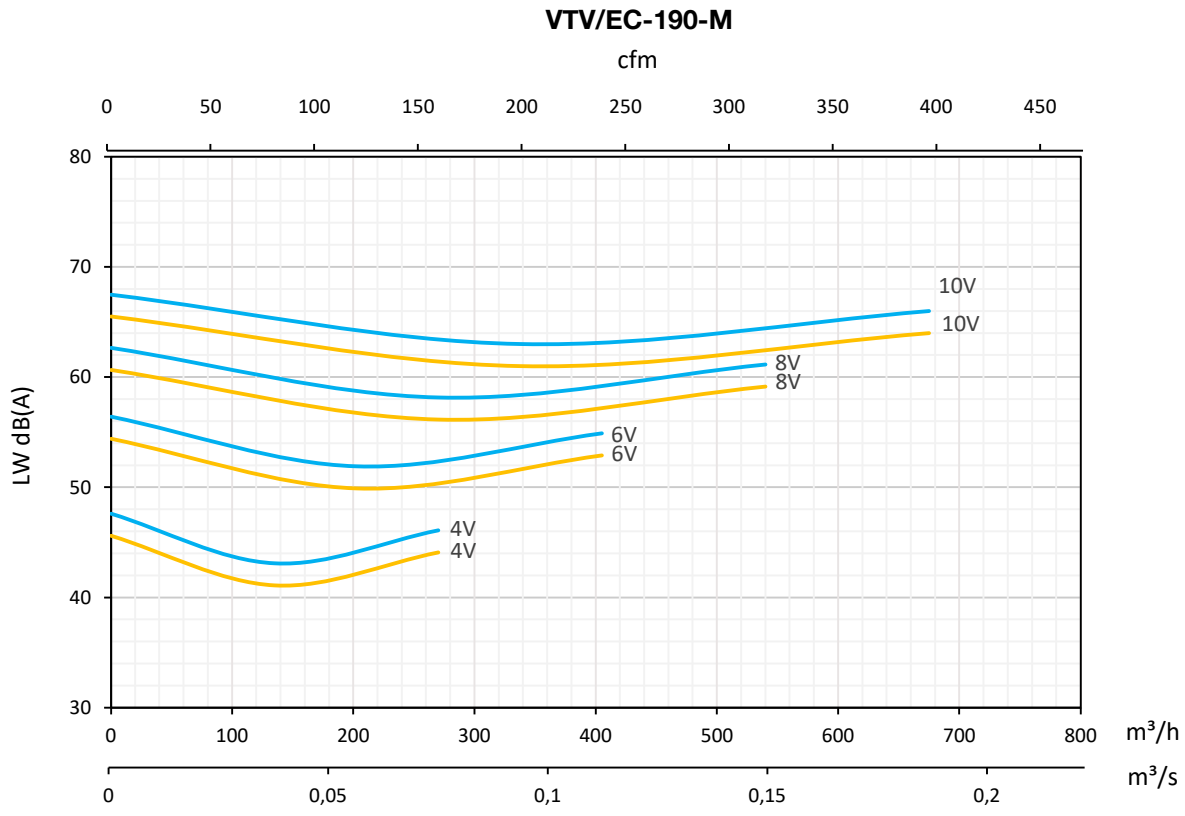
Q= Flow rate in m³/h, m³/s and cfm — Inlet — Irradiated

The total sound pressure level in the surroundings at different distances can be estimated using the following formula:

$$L_{pA} = L_{WA} - \Delta L$$

Lw = Sound power level dB(A)
ΔL = Acoustic attenuation dB

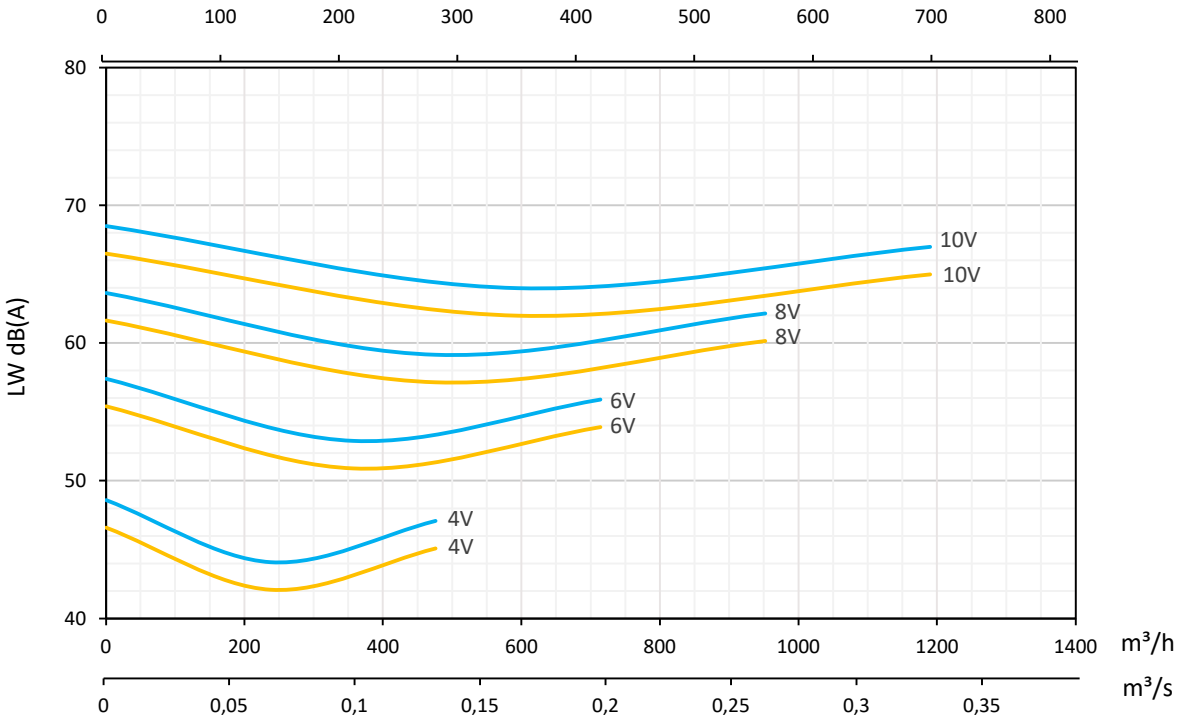
Distance (m)	1	3	10	20	30	40
Acoustic attenuation (ΔL)	11	20.5	31	37	40.5	43



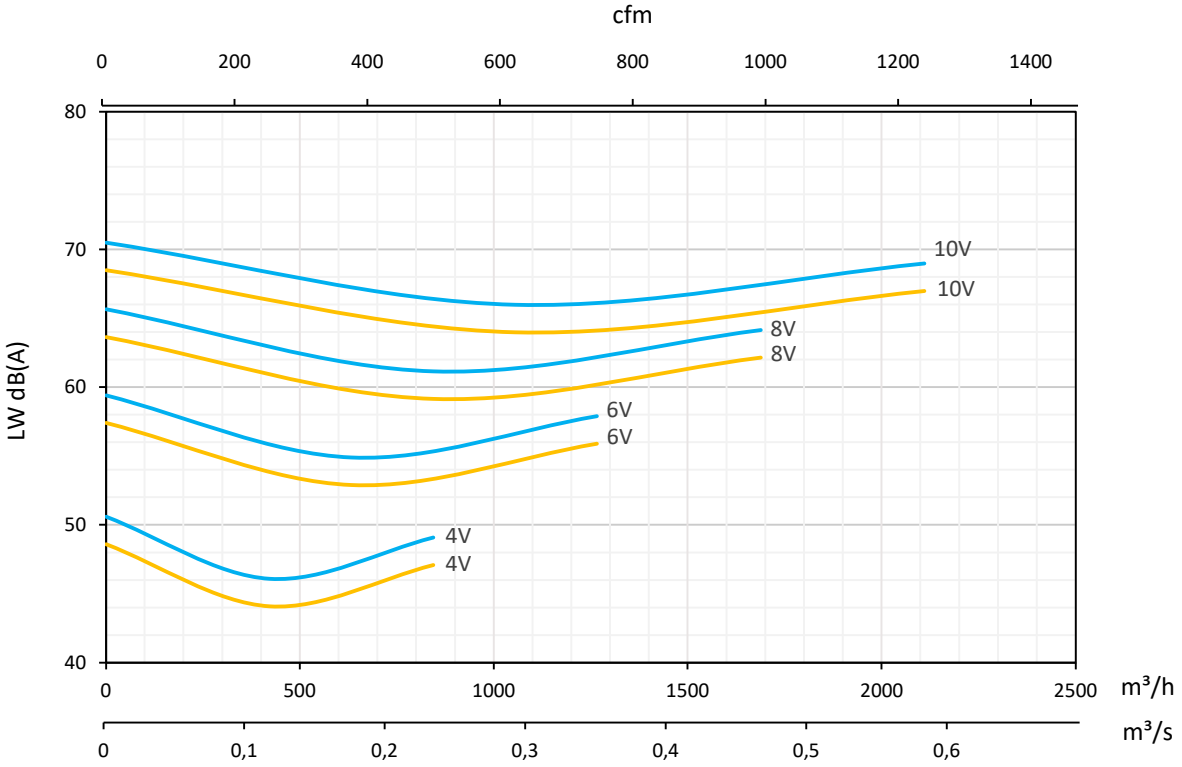
Acoustic characteristics

Q= Flow rate in m³/h, m³/s and cfm — Inlet — Irradiated

VTV/EC-250-M

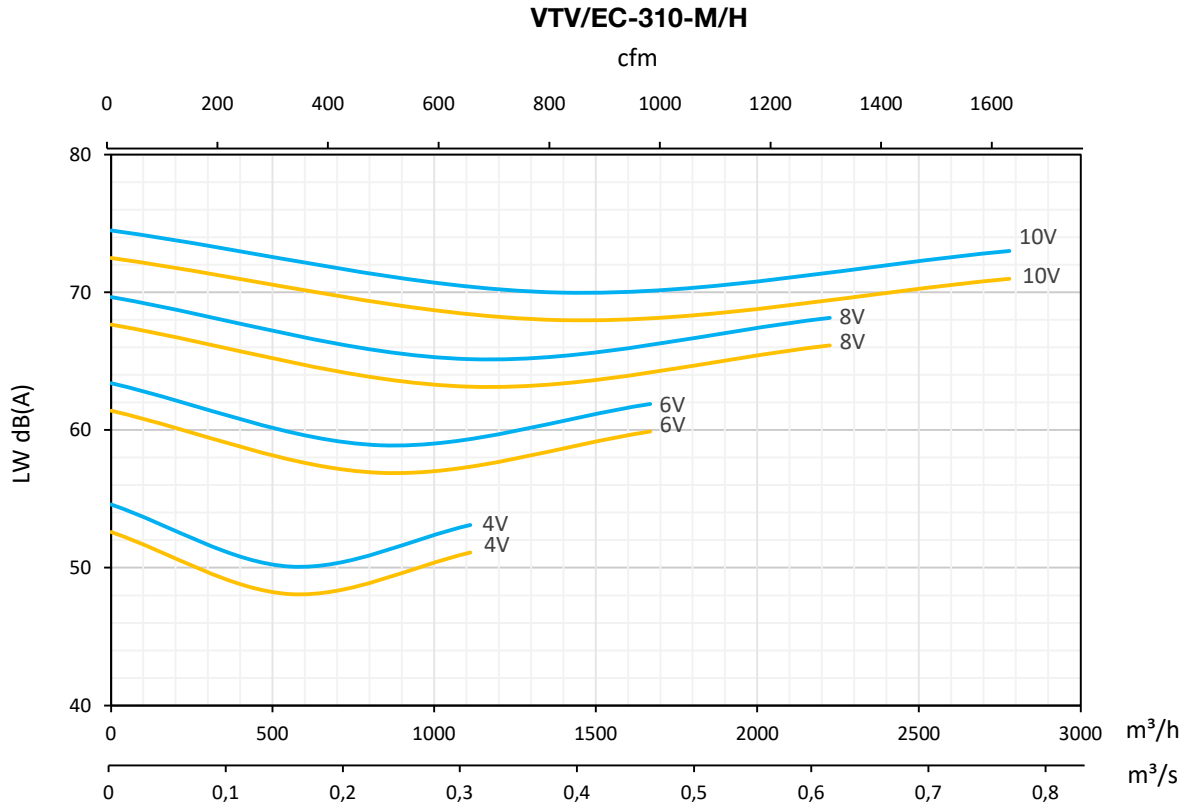


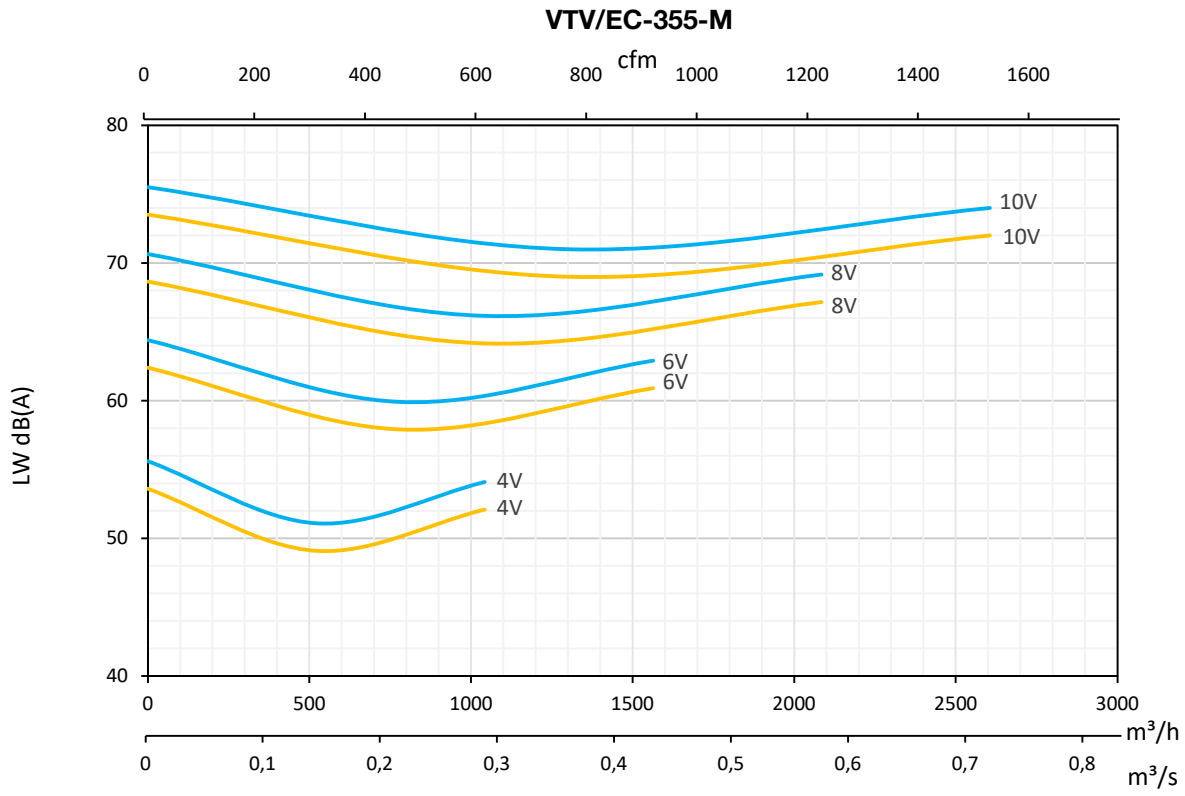
VTV/EC-310-M/L



Acoustic characteristics

Q= Flow rate in m³/h, m³/s and cfm — Inlet — Irradiated

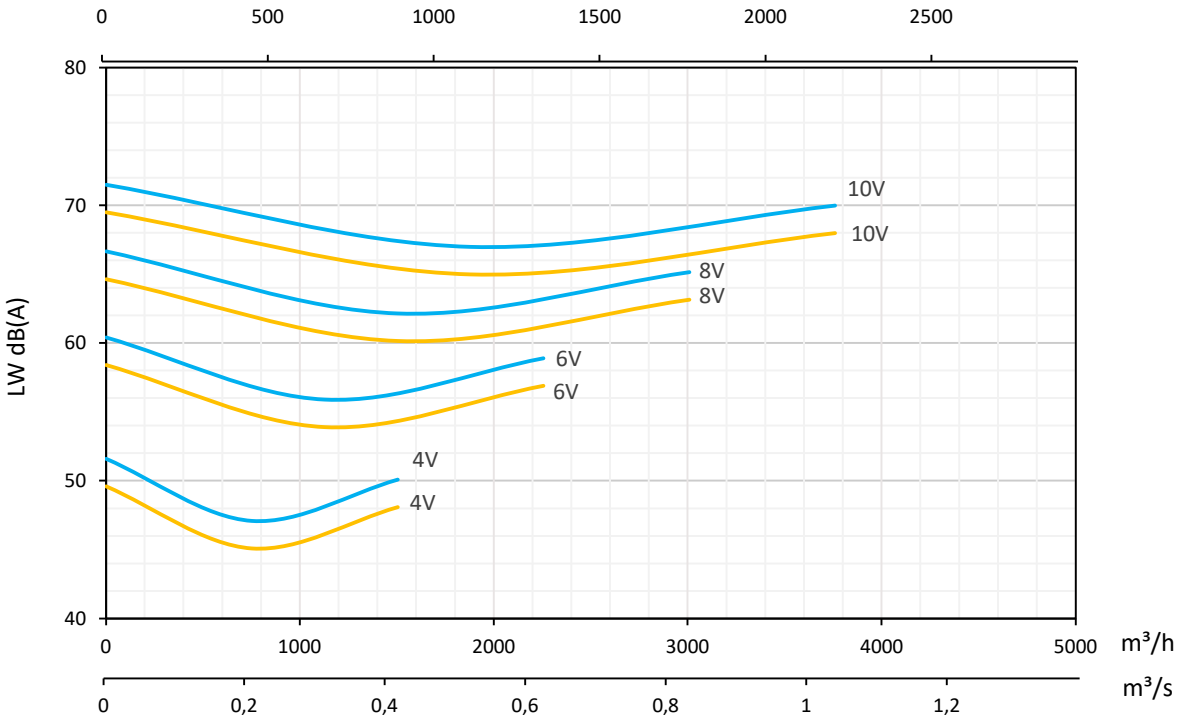




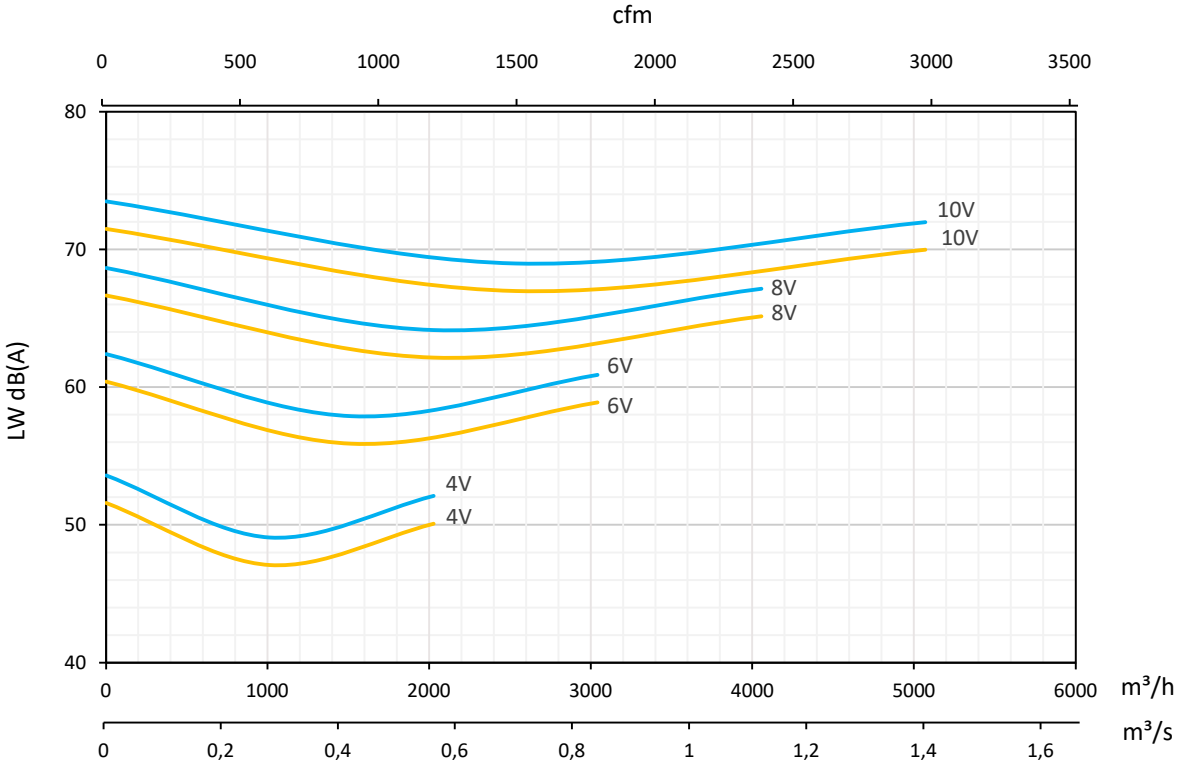
Acoustic characteristics

Q= Flow rate in m³/h, m³/s and cfm — Inlet — Irradiated

VTV/EC-400-M/L



VTV/EC-400-M/H



Acoustic characteristics

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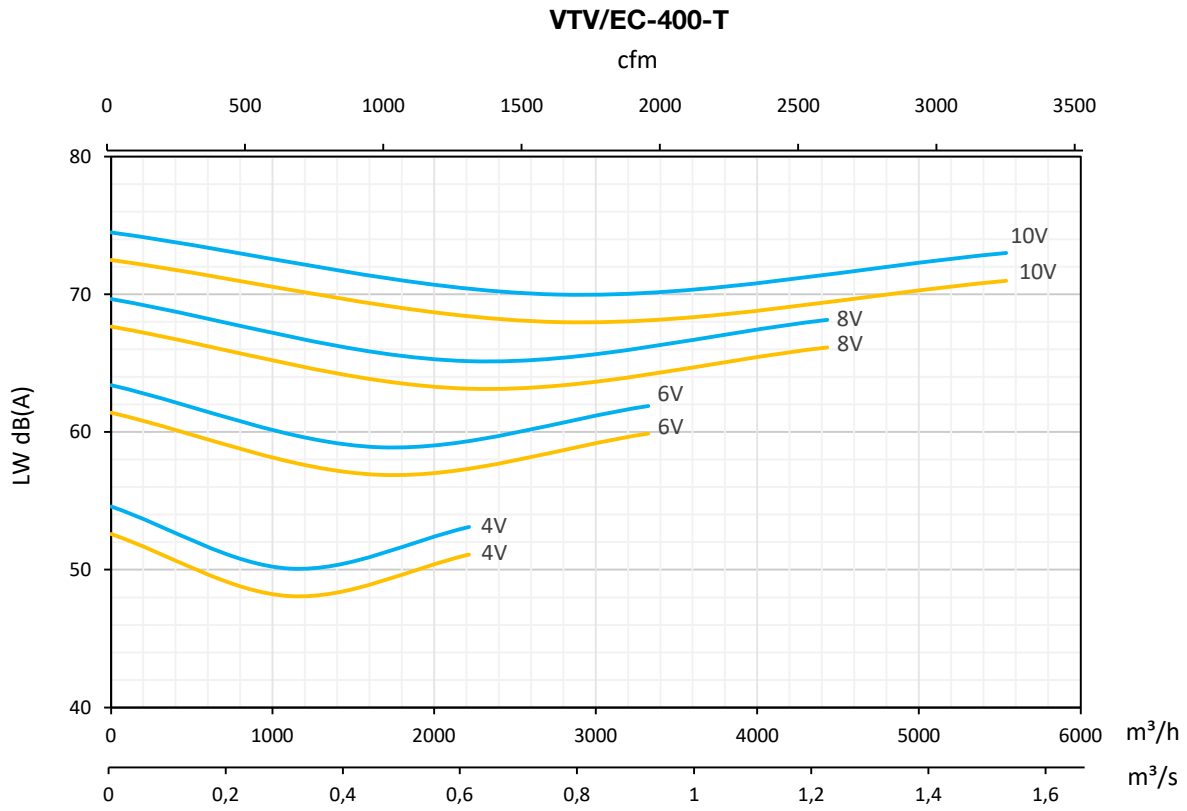

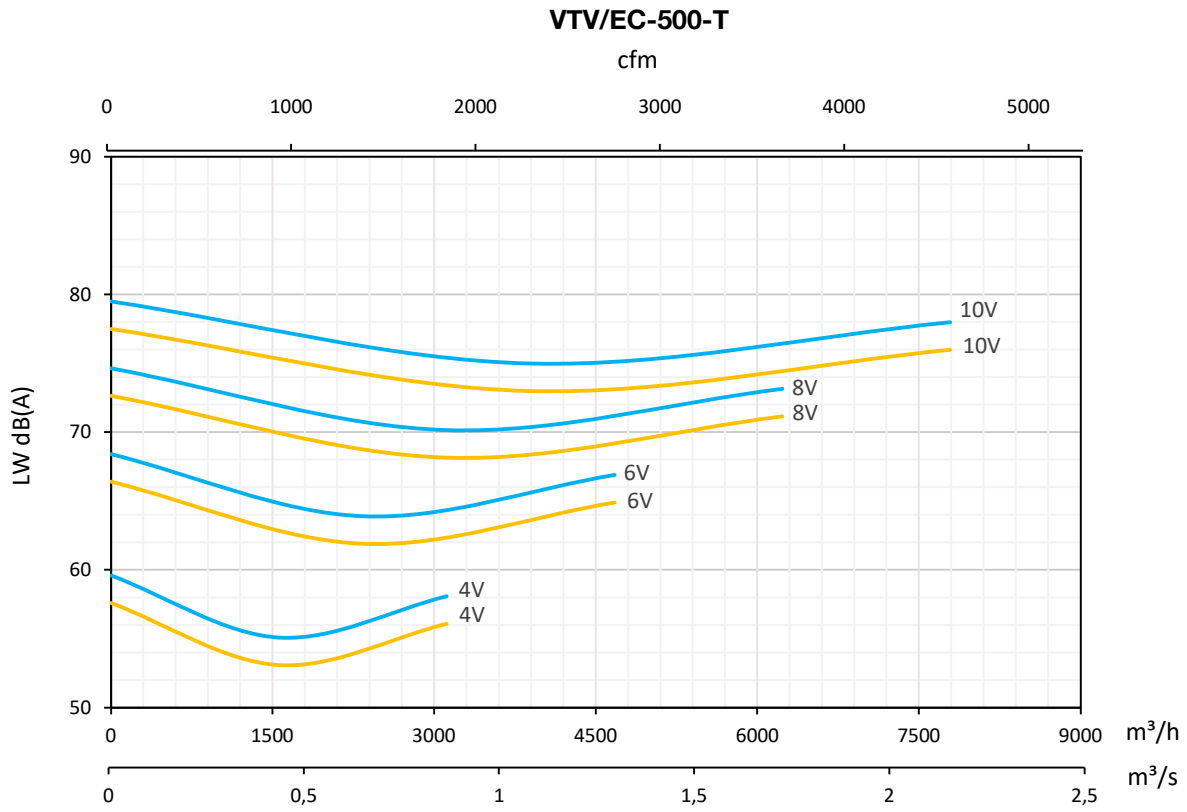

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