

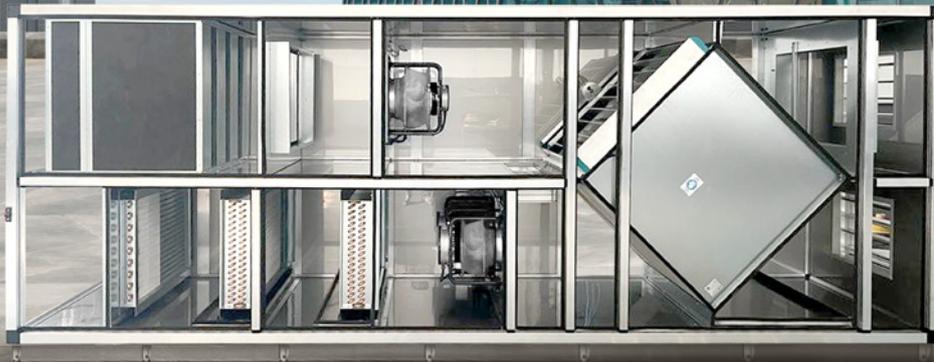


Plug Fan type high efficiency centrifugal fans



PFA/EC

-  Energy efficiency
-  Compact design
-  High performance
-  Easy installation and maintenance





Efficient solutions for ventilation systems



Energy efficiency



High performance



Optimised operation



Easy installation and maintenance

Energy efficiency is an important factor to be considered in the design of ventilation systems. Reducing power consumption, optimising system performance and ensuring reliable operation are essential aspects.

SODECA's PFA/EC Plug Fans have been developed to offer maximum aerodynamic performance with minimum energy consumption.

Their advanced design makes them an efficient and reliable solution, especially in applications that require high performance, energy efficiency and optimised operation.



What are EC TECHNOLOGY solutions?

SODECA's EC technology guarantees maximum performance with minimum energy consumption by offering precise flow control, quiet operation and superior efficiency in all working conditions.

EC TECHNOLOGY solutions

They are designed to deliver high energy performance and to actively contribute to reducing energy consumption and CO₂ emissions, in line with global environmental targets.

EC TECHNOLOGY motors meet the highest IE5 efficiency levels, therefore guaranteeing optimised operation in all working conditions.

The electronics integrated in the motors allow precise, efficient and adaptable control to the real needs of an installation.



Energy saving of up to 70% thanks to the EC technology and the built-in control



Reduction of energy costs



Balanced ventilation at all times



Lower environmental impact



Centralised installation and easy maintenance



Low noise level



Construction aspects

SODECA's PFA/EC has been designed following the criteria of maximum robustness, efficiency and durability. Each of its structural components has been carefully optimised to ensure reliable operation, high aerodynamic performance and a long service life, even in demanding industrial applications.



High-performance reaction impeller

SODECA's PFA/EC Plug Fan incorporates an advanced impeller design that optimises aerodynamic performance and reduces energy losses. The improved blade profile ensures efficient and stable airflow, delivering high performance even in demanding applications with high flow rates and pressures.



EC TECHNOLOGY IE5 external rotor motor with IP55 protection

The EC TECHNOLOGY IE5 external rotor motor offers maximum energy efficiency and precise operational control. Its advanced electronics adapt the power consumption to actual demand, thereby reducing energy consumption and ensuring reliable, quiet and long-lasting operation, even in demanding environments.

Compact design

The compact, streamlined design makes it easy to install in a wide variety of equipment and applications, consequently reducing space requirements and simplifying assembly without compromising performance or efficiency.



Galvanised sheet steel structure

The galvanised sheet steel structure provides high mechanical strength and excellent corrosion protection, thereby ensuring a long service life and reliable operation of the equipment.

Easy installation and maintenance

The modular and compact design of the assembly allows for quick and easy installation, reducing assembly times. Optimised access to components facilitates maintenance work, minimising downtime and intervention costs.

The compact design allows **maximum use of the available space inside the unit**

The built-in EC technology allows precise airflow control, **thereby optimising energy consumption** at any operating point



The motor, impeller, inlet and support structure are **precisely aligned and assembled into a single unit**

This configuration **reduces assembly times, minimises installation errors and facilitates maintenance tasks**

PFA/EC



High-efficiency centrifugal fans, Plug Fan type, equipped with IE5 EC Technology motor, compact size and high performance



High-efficiency centrifugal fans, Plug Fan type, equipped with IE5 external rotor EC Technology motor, compact size and high performance, specially designed for air treatment applications.

- Three-phase 380-480 V 50/60 Hz.
- Maintenance-free ball bearings.
- Working temperature: -25 °C +40 °C.
- Modbus RTU and built-in alarm relay.

Fan:

- Galvanised sheet steel structure.
- High performance aluminum alloy backward curved impeller.
- Equipped with pressure tapping point for automatic flow control.

Motor:

- High efficiency external rotor EC Technology motors, adjustable via 0-10 V, 4-20 mA and PWM signals.
- IE5 efficiency motors, class F and IP55 protection.



Order code

PFA/EC – 450 – M – IE5

PFA/EC: High-efficiency centrifugal fans, Plug Fan type, equipped with IE5 EC Technology motor, compact size and high performance

Size

M: Medium pressure
H: High pressure

IE5 motor

Technical characteristics

Model	Speed	Max. admissible current (A)	Max. electric power (kW)	Maximum flow rate (m ³ /h)	Sound pressure level ¹ dB(A)		Approx. weight (Kg)
	(r/min)				Inlet	Exhaust	
PFA/EC-315-H IE5	4000	5.90	3.70	6790	66	77	23
PFA/EC-400-H IE5	2750	5.80	3.70	11325	75	86	34
PFA/EC-450-M IE5	1800	3.50	2.10	10635	70	79	33
PFA/EC-500-H IE5	2000	6.30	4.00	16305	74	86	46
PFA/EC-560-M IE5	1400	4.30	2.73	16815	73	78	55
PFA/EC-560-H IE5	1760	8.60	5.60	20675	76	84	70
PFA/EC-630-M IE5	1275	5.60	3.60	20095	72	80	60

¹. The noise level values are pressures in dB(A) measured at a distance of 3 metres in a free field.



Erp. (Energy Related Products)

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

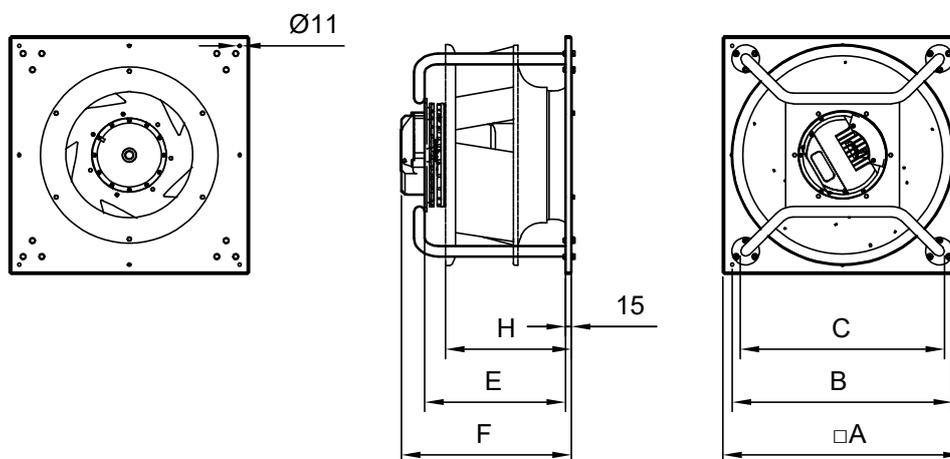
Acoustic characteristics

The values given are obtained under laboratory conditions according to ISO 3744.

Sound power spectrum Lw(A) in dB(A) per Hz frequency band
Irradiated values with maximum velocity and flow rate

	63	125	250	500	1000	2000	4000	8000		63	125	250	500	1000	2000	4000	8000
PFA/EC-315-H IE5	67	69	78	84	89	96	87	85	PFA/EC-560-M IE5	95	93	90	88	85	83	82	78
PFA/EC-400-H IE5	105	98	95	93	92	90	87	85	PFA/EC-560-H IE5	102	97	95	94	91	88	86	84
PFA/EC-450-M IE5	97	91	89	89	87	83	82	76	PFA/EC-630-M IE5	98	94	91	90	86	83	83	75
PFA/EC-500-H IE5	103	98	95	97	94	90	87	86									

Dimensions mm



	A	B	C	F	E	H
PFA/EC-315-H	500	450	427	354	265	320
PFA/EC-400-H	500	450	427	441	361	298
PFA/EC-450-M	600	550	478	482	387	311
PFA/EC-500-H	631	581	538	471	376	329
PFA/EC-560-M	800	750	579	636	493	376
PFA/EC-560-H	800	750	579	520	425	376
PFA/EC-630-M	800	750	626	549	459	410

Accessories

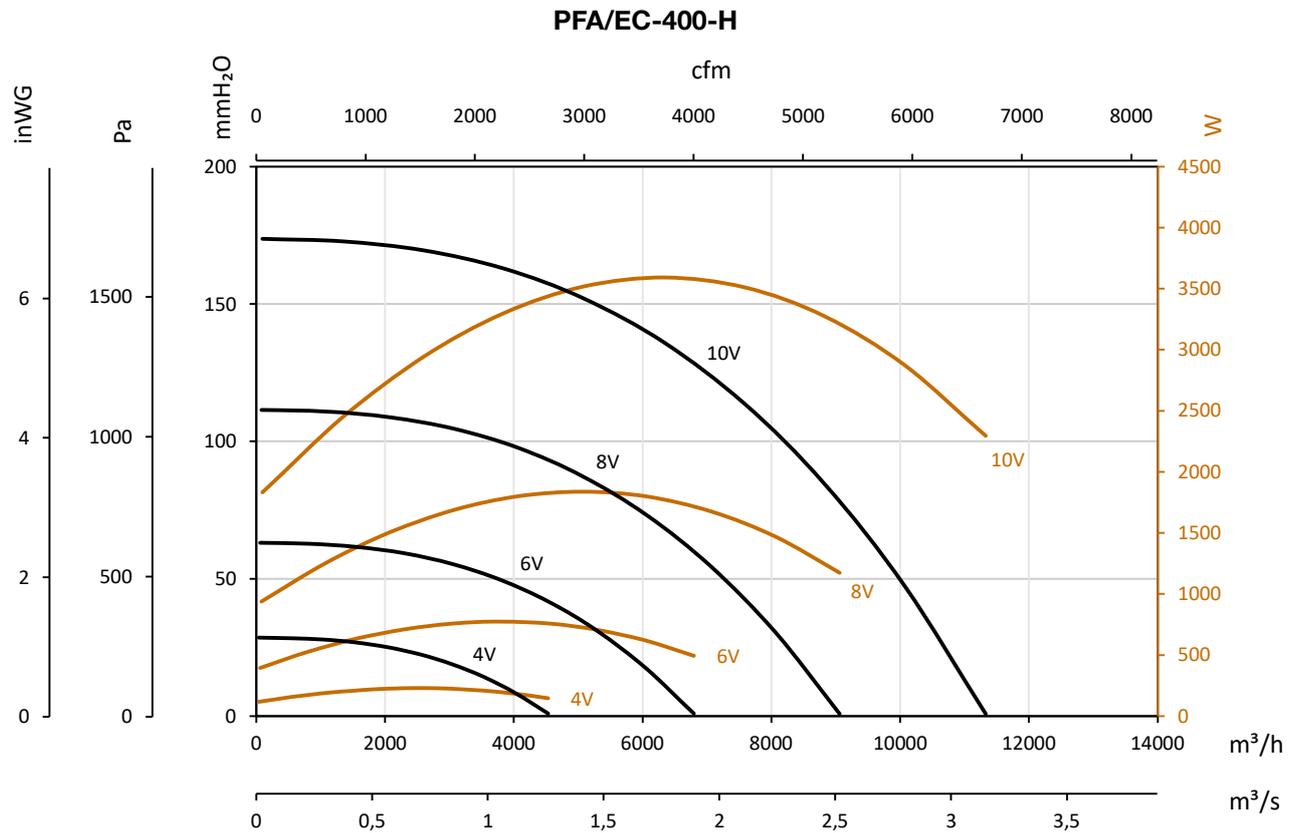
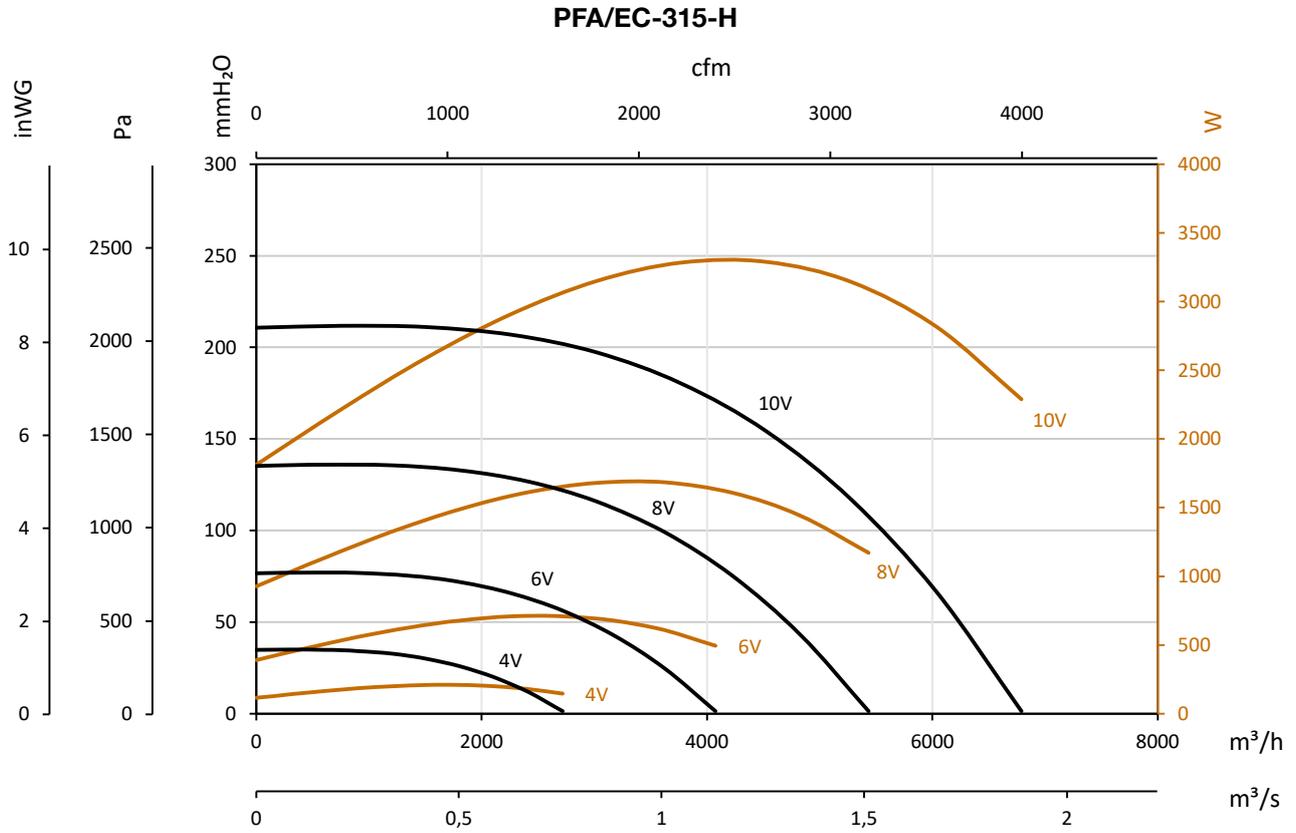


Characteristic curves

Q= Flow rate in m³/h, m³/s and cfm

Pe= Static pressure in mm H₂O, Pa and inWG

W= Electrical power

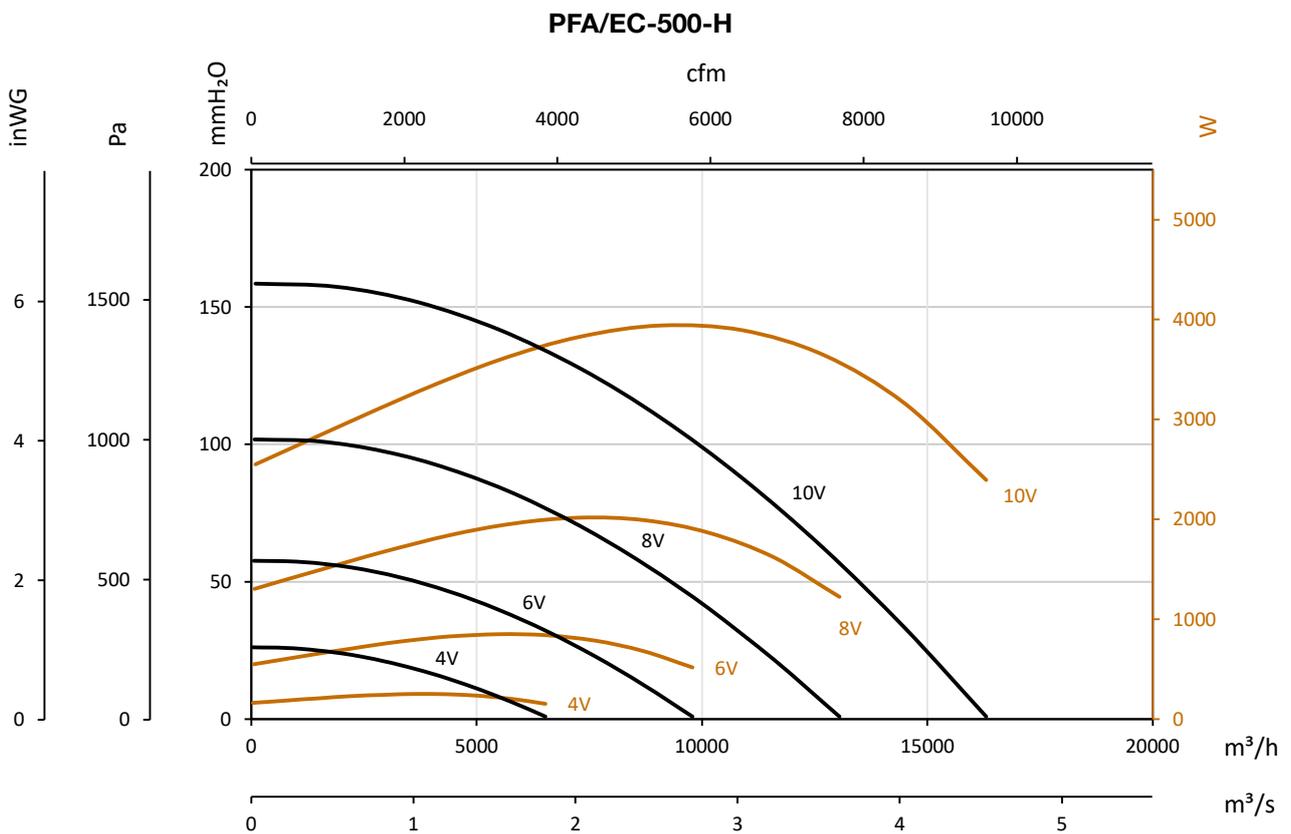
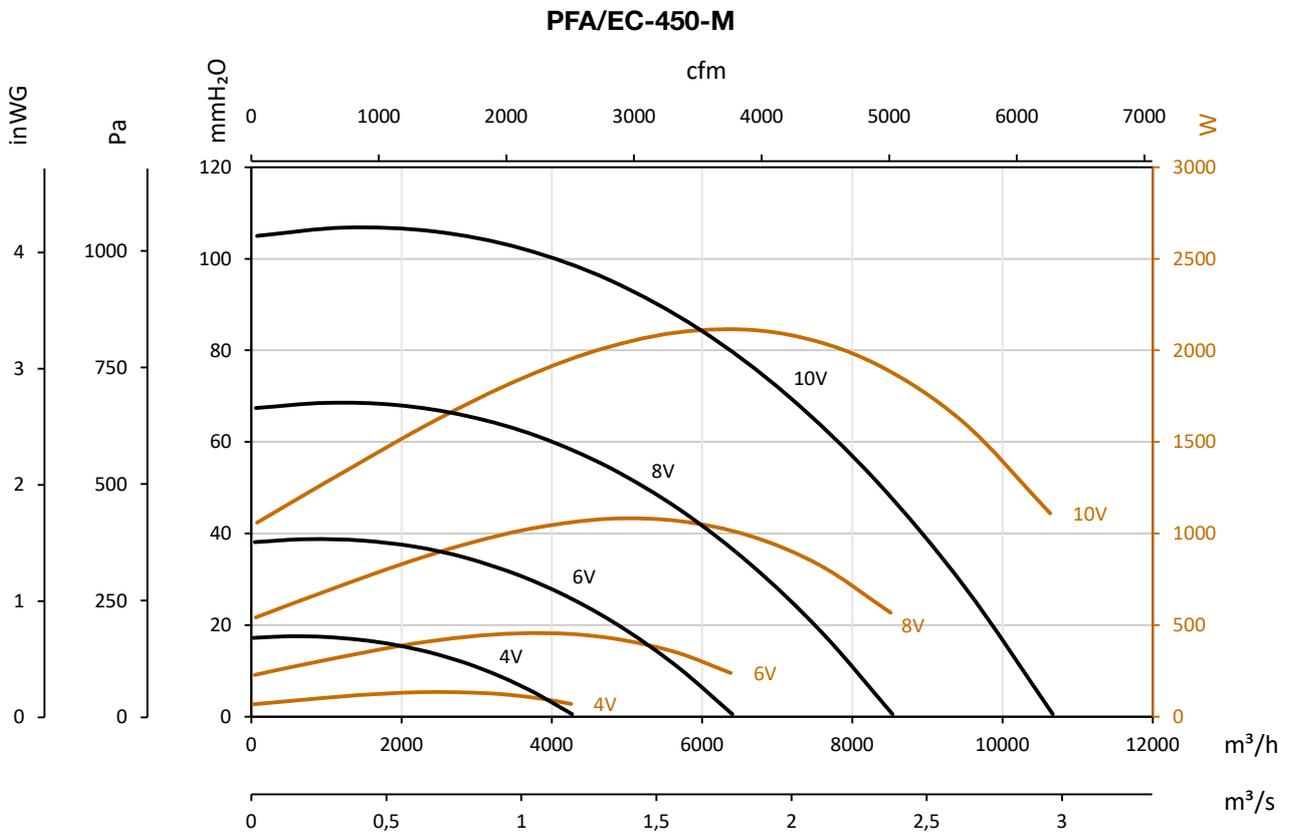


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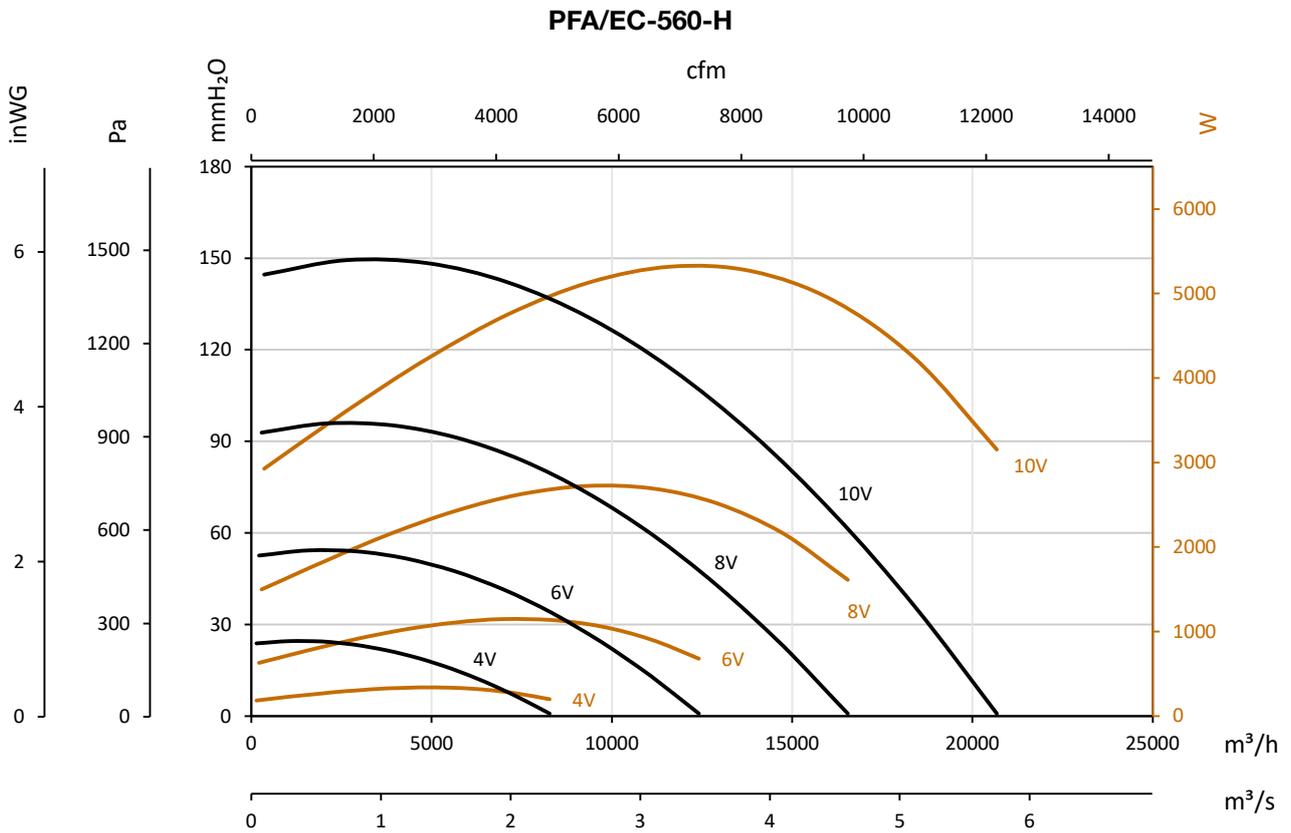
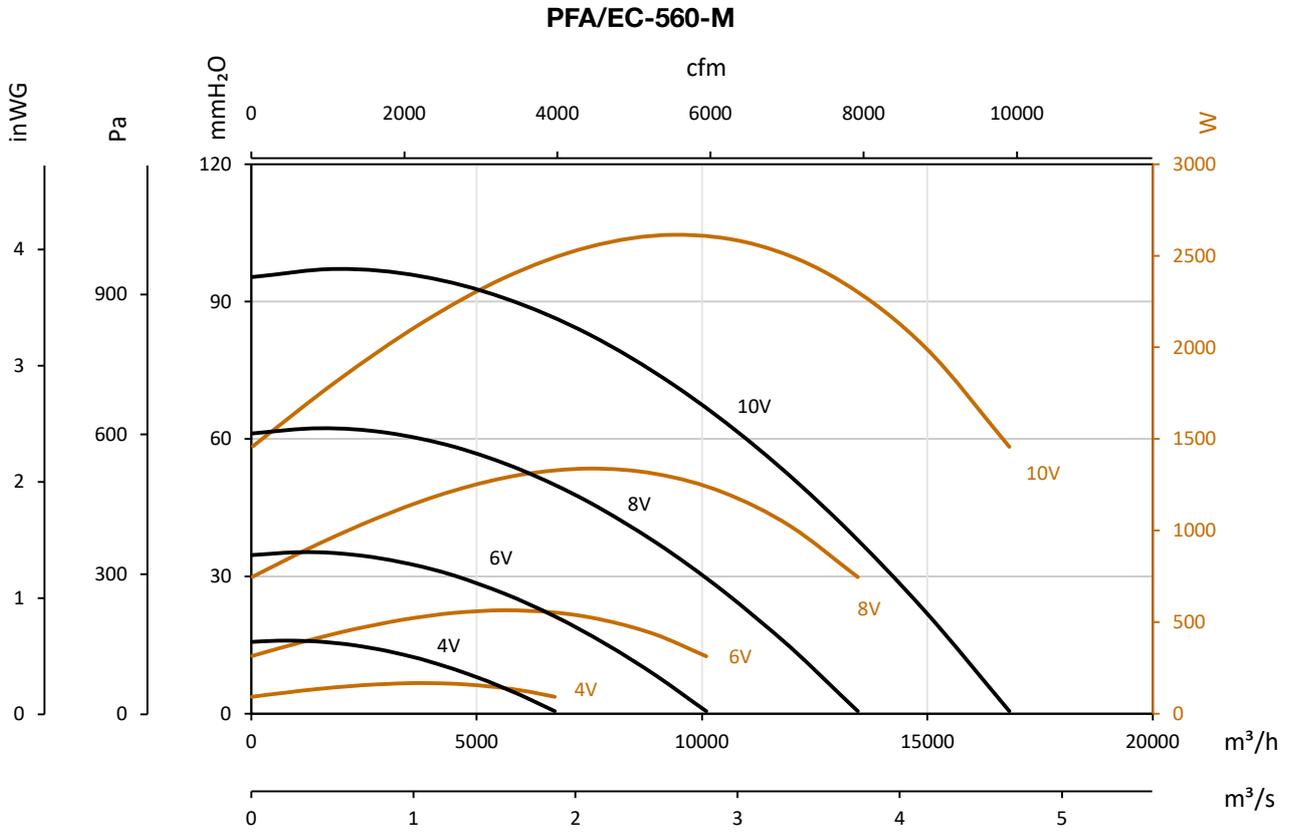


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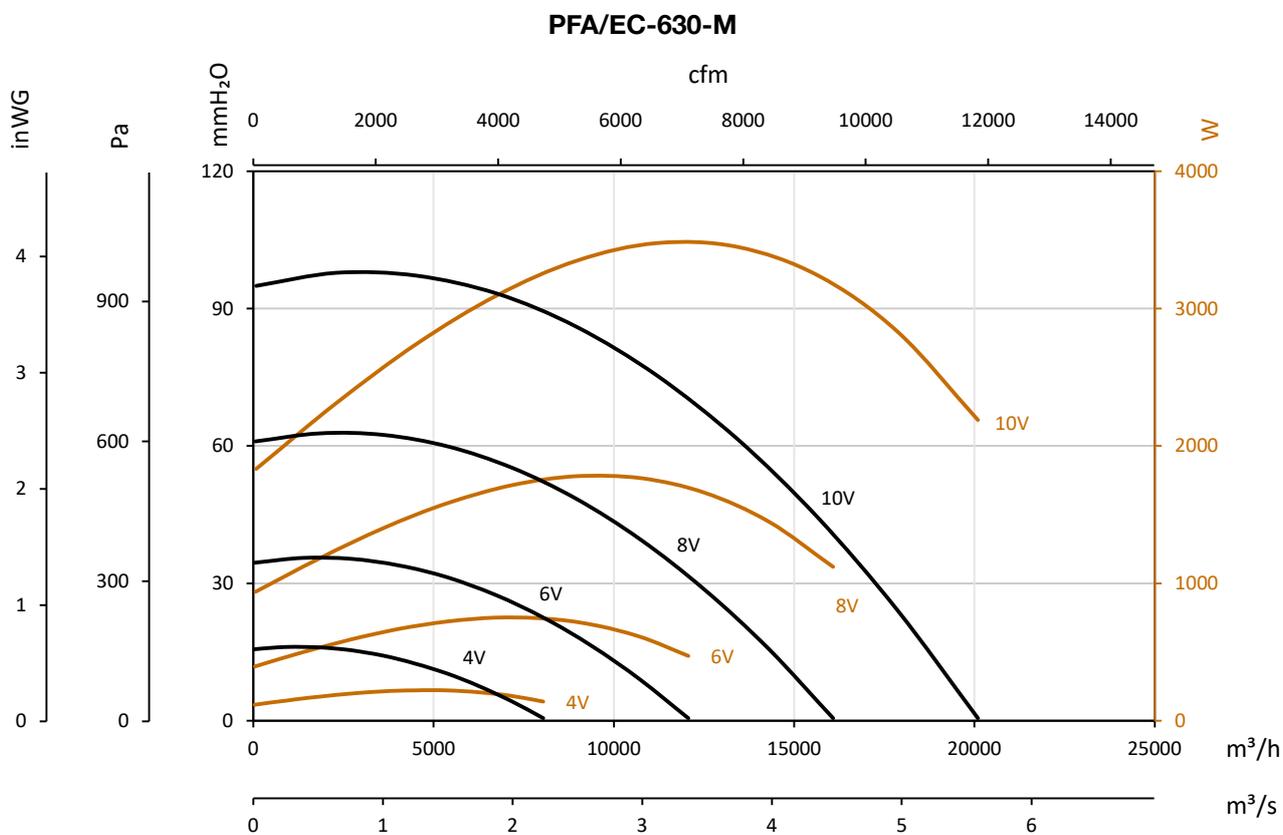


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