

DA 820 LPC -3

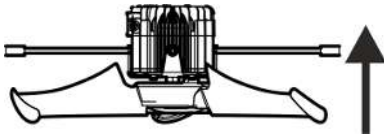
Fans

Technical Info



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1 Product description

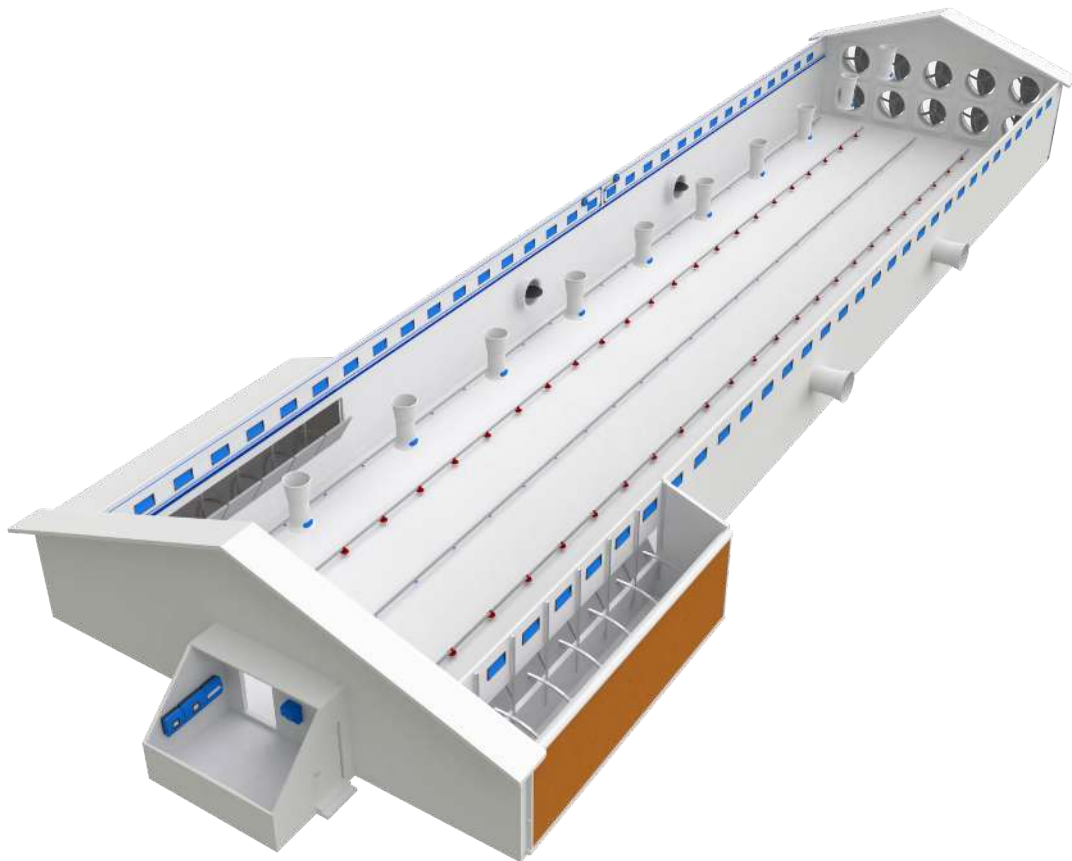


An LPC (Low Power Consumption) fan is an energy efficient fan unit consisting of a PM (Permanent Magnet) motor with matching motor control and optimized fan blade design for LPC and Dynamic MultiStep systems.

All variants of LPC fans are completed at the factory, so both the motor and fan blade match the current application.

The fans are designed for mounting in exhaust units and wall exhaustion in livestock houses where the ventilation system operates in the low-pressure range, i.e. in LPV, diffuse livestock houses and Combi-Tunnel livestock houses.

The fans bear a CE marking and have a sturdy four-point suspension.



2 Product survey

2.1 DA 820 LPC -3



445126 DA 820 LPC 10-3 fan 230V1 50/60Hz

445128 DA 820 LPC 12-3 fan 230V1 50/60Hz

The motor controller is to receive a 10-0 V signal.

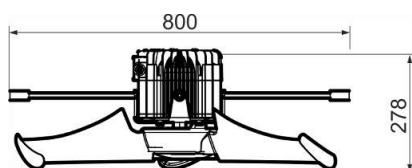
The fan comes with a 2-meter cable for the wiring between motor and motor controller.

445983 DA 820 PM motor cable 230V LPC 5 m can be ordered, if 2 m is insufficient.

The power supply to the motor controller does not require a shielded cable.

It comes with motor controller, fan blades and fan suspension.

3-blade, 230 V adjustable fan.



To be applied if you require a low energy consumption, both at partial and full load.

ErP 2015 approved.

DA 820 LPC 10-3 should not be used for negative pressure higher than 90 Pa.

DA 820 LPC 12-3 should not be used for negative pressure higher than 130 Pa.



445127 DA 820 LPC 10-3 fan 400V3 50/60Hz

445129 DA 820 LPC 12-3 fan 400V3 50/60Hz

The motor controller is to receive a 10-0 V signal

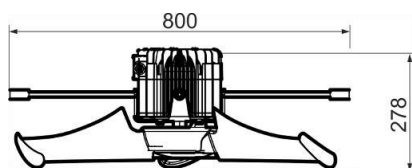
Motor 1.2 kW.

The fan comes with a 2-meter cable for the wiring between motor and motor controller.

The power supply to the motor controller does not require a shielded cable.

It comes with motor controller, fan blades and fan suspension.

3-blade, 400 V adjustable fan.



To be applied if you require a low energy consumption, both at partial and full load.

ErP 2015 approved.

DA 820 LPC 10-3 should not be used for negative pressure higher than 90 Pa.

DA 820 LPC 12-3 should not be used for negative pressure higher than 130 Pa.



445136 DA 820 LPC 10-3 fan 230V1 50/60Hz TH

The fan is the same as part no. 445126, but includes a thermal cutout.

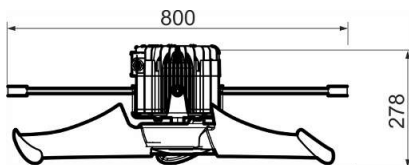
445139 DA 820 LPC 12-3 fan 230V1 50/60Hz TH

The fan is the same as part no. 445129, but includes a thermal cutout.

The thermal circuit breaker ensures that the motor disconnects if it gets too hot. For safety reasons, the fan must be connected manually before it can be activated again.

Fans with thermal circuit breakers are normally only used in places where this is a legal requirement, e.g. in Sweden.

ErP 2015 approved.



2.2 LPC accessories



409145 Thermal protection for fan 230 V with alarm contact

409147 Thermal protection for fan 400 V with alarm contact

For the protection of a LPC fan with thermal cutout.

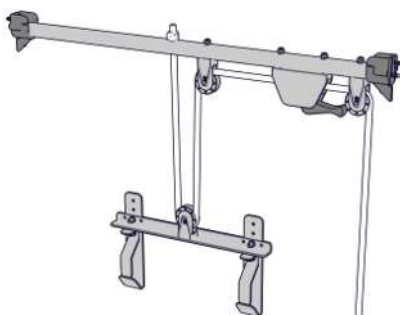


445983 DA 820 PM motor cable 230V LPC 5m

Is used for LPV fan 1x230 V in cases where 2 m cable is insufficient.

445968 DA 820 PM motor cable 400 V LPC 5m

Is used for LPV fan 1x400 V in cases where 2 m cable is insufficient.



445993 DA 820 lifting kit

Is used when mounting DA 820 fans.

3 Technical data

3.1 DA 820 LPC -3 1x230 V

		445126/445136 DA 820 LPC-10-3	445128/445139 DA 820 LPC-12-3
Electrical			
Rated voltage	V AC	230 ± 10 %	
Operating voltage	V AC	180 – 253 For supply voltages below the rated voltage range, a reduction of the fan's RPM may occur depending on the load and ambient temperature.	
RCD		To be installed in accordance with applicable laws and standards. RCD 300 mA (type B) may be used in front of the supply voltage for LPC regulated fans.	
Frequency	Hz	50/60	
Leakage current to ground	mA	Max. 9.10 Pay attention to other leakage current sources in the house.	
Max. ballast fuse	A	16	
Max. current consumption At 230 V AC supply	A	5.99	9.86
Max. input power (P1)	W	876	1462
CosPhi [Φ]	Factor	0.63	
Regulation ability		10 to 100% / 9 - 0 V	
Motor protection		Built-in current limiter in LPC motor control. Use fuse in front of LPC motor control.	
Thermal cutout (PTO) 445126, 445136		-	
Thermal cutout (PTO) 445128, 445139		Thermik S01.120.05 Separate cable	
Interface			
Inputs			
A1: Analog fan speed	V DC	10 – 0 (default)	
D1: Start / Stop	V DC	0 / 24 with internal pull-up	
D3: Reversal	V DC	0 - 24 with internal pull-up	
R1: Alarm relay		1 A, 30 V DC, 24 V AC	
Mechanical			
Cable length	m	2 shielded	
Min. duct diameter	mm	820	
The diameter of the fan blade	mm	800	
Number of fan blades	pcs.	3	
Fan blade pitch	°	50	
Fan output			
Revolutions (rated current) per minute	RPM	1000	1170
Air output at 0 Pa	m ³ /h	24300	29000

		445126/445136 DA 820 LPC-10-3	445128/445139 DA 820 LPC-12-3
Air output at -10 Pa	m ³ /h	23600	28200
Air output at -20 Pa	m ³ /h	22800	27600
Air output at -30 Pa	m ³ /h	21900	27000
Air output at -40 Pa	m ³ /h	21000	26200
Air output at -50 Pa	m ³ /h	20200	25500
Air output at -60 Pa	m ³ /h	19300	24900
Air output at -70 Pa	m ³ /h	18400	24100
Air output at -80 Pa	m ³ /h	17200	23400
Air output at -90 Pa	m ³ /h	16000	22700
Air output at -100 Pa	m ³ /h	-	21700
Air output at -110 Pa	m ³ /h	-	20800
Air output at -120 Pa	m ³ /h	-	19800
Air output at -130 Pa		-	19000
Power consumption at -10 Pa	W	754	1257
Specific output at -10 Pa	m ³ /kWh	31300	22400
Specific energy at -10 Pa	Watt/1000 m ³ /h	32	45
Testing body		SKOV A/S	
Environment			
Temperature, operation	°C	- 20 to +40	
Start temperature	°C	- 15 to +40	
Storage temperature	°C	- 40 to +60	
Ambient humidity, operation	% RH	10-95	
Protection class	IP	Motor controller: IP 66 Fan motor: IP 55	
Fan noise, outside (2 m, 45 degrees)	dB (A)	69	73
Shipment			
Motor controller dimensions HxWxD	mm	305x201x201	
Fan dimensions HxWxD	mm	278x800x800	
Weight	g	21444	21761
Shipping weight	g	26297	26637

3.1.1 ErP/Ecodesign DA 820 LPC -3 1x230 V

Fan type		DA 820 LPC-10-3	DA 820 LPC-10-3 w/thermal cutout	DA 820 LPC-12-3	DA 820 LPC-12-3 w/thermal cutout
Ecodesign		ErP 2015 (58)			
Efficiency classification	N	79.2		77.4	
Efficiency (η)	%	72.4		72.0	
Measurement setup		D			
Efficiency category		Total			
VSD required		Yes			
Year of production		2021			
Name of manufacturer		SKOV A/S			
Item number		445126	445136	445128	445139
Motor power input	kW	0.838		1.411	
Flow rate	m ³ /s	5.61		6.64	
Optimum pressure	Pa	50		74	
Total pressure	Pa	169		142	
Revolutions per minute	RPM	995		1172	
Pressure conditions		1.0			
Recycling/Disposal		The product is designed to be recycled and customers will be able to deliver their used products to SKOV A/S or their local collection points/recycling centers in accordance with local instructions.			
Environmental impact		-			
Components used for determining the energy efficiency of the fan.		Bell mouth, flap, air direction baffle, 0.75 m DA 820 duct and outlet cone.			

3.2 DA 820 LPC -3 3x400 V

		445127 DA 820 LPC 10-3 3x400 V	445129 DA 820 LPC 12-3 3x400 V
Electrical			
Rated voltage	V AC	3x400 +/- 10%	
Operating voltage	V AC	310 – 480	
		For supply voltages below the rated voltage range, a reduction of the fan's RPM may occur depending on the load and ambient temperature.	
RCD		To be installed in accordance with applicable laws and standards. RCD 300 mA (type B) may be used in front of the supply voltage to LPC regulated fans.	
Frequency	Hz	50 / 60	
Leakage current to ground	mA	Max. 50	
Max. ballast fuse	A	10	
Max. power consumption At 400 V AC supply	A	2.25	3.2
Max. input power (P1)	W	868	1368
CosPhi [Φ]	Factor	0.6	
Regulation ability		10 to 100% / 9 - 0 V	
Motor protection		Built-in current limiter in LPC motor control. Use fuse in front of LPC motor control.	
Thermal cutout (PTO)		-	
Interface			
Inputs			
A1: Analog fan speed	V DC	10 – 0 (default)	
D1: Start / Stop	V DC	0 / 24 with internal pull-up	
D3: Reversal	V DC	0 - 24 with internal pull-up	
R1: Alarm relay		1 A, 30 V DC, 24 V AC	
Mechanical			
Cable length	m	2 m shielded	
Min. duct diameter	mm	820	
The diameter of the fan blade	mm	800	
Number of fan blades	pcs.	3	
Fan blade pitch	°	50	
Fan output			
Revolutions per minute	RPM	1000	1170
Air output at 0 Pa	m ³ /h	24100	28300
Air output at -10 Pa	m ³ /h	23500	27700
Air output at -20 Pa	m ³ /h	22700	27000
Air output at -30 Pa	m ³ /h	21900	26400
Air output at -40 Pa	m ³ /h	21100	25800
Air output at -50 Pa	m ³ /h	20400	25100

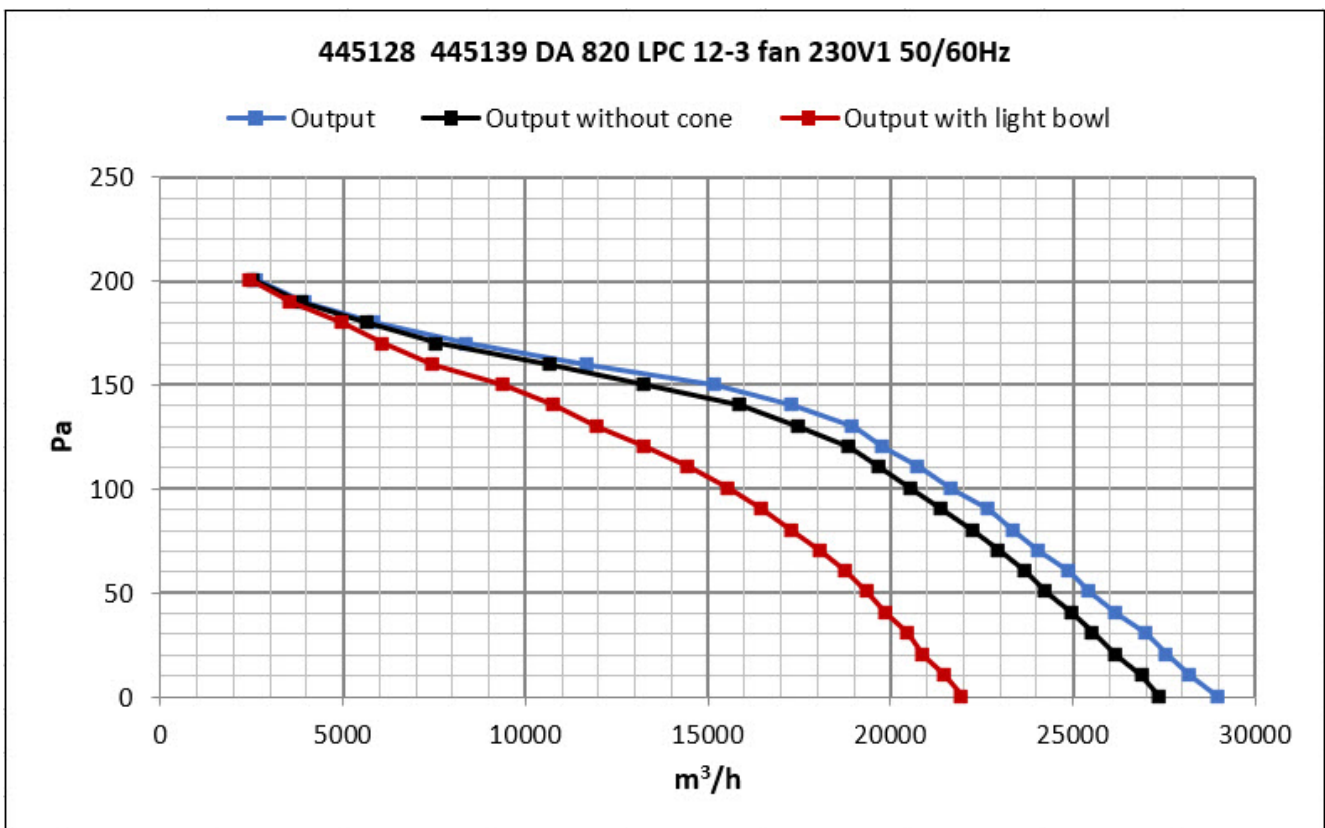
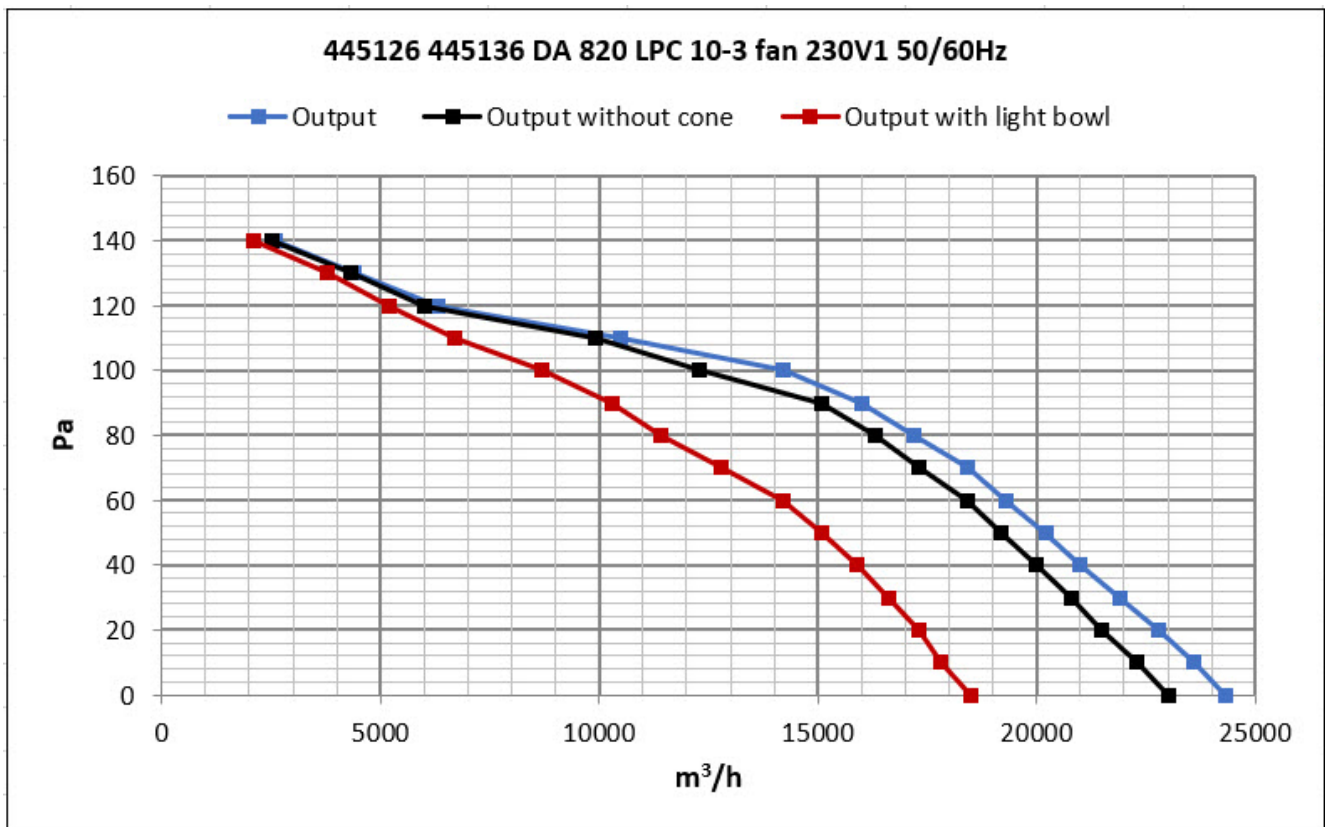
		445127 DA 820 LPC 10-3 3x400 V	445129 DA 820 LPC 12-3 3x400 V
Air output at -60 Pa	m ³ /h	19500	24300
Air output at 70 Pa	m ³ /h	18500	23500
Air output at -80 Pa	m ³ /h	17300	22900
Air output at -90 Pa	m ³ /h	16100	22100
Air output at -100 Pa	m ³ /h	-	21200
Air output at -110 Pa	m ³ /h	-	20300
Air output at -120 Pa	m ³ /h	-	19200
Air output at -130 Pa	m ³ /h	-	17900
Power consumption at -10 Pa	W	759	1184
Specific output at -10 Pa	m ³ /kWh	31000	23400
Specific energy at -10 Pa	Watt/1000 m ³ /h	32	43
Testing body		SKOV A/S	
Environment			
Temperature, operation	°C	÷ 20 to + 40	
Start temperature	°C	÷ 15 to + 50	
Storage temperature	°C	÷ 40 to + 60	
Ambient humidity, operation	% RH	10 - 95	
Protection class	IP	Motor controller: IP 66. Fan motor: IP 55	
Fan noise, outside (2 m, 45 degrees)	dB (A)	69	73
Shipment			
Motor controller - dimensions HxWxD	mm	305x201x201	
Fan - dimensions HxWxD	mm	278x800x800	
Weight	g	21432	
Shipping weight	g	26117	

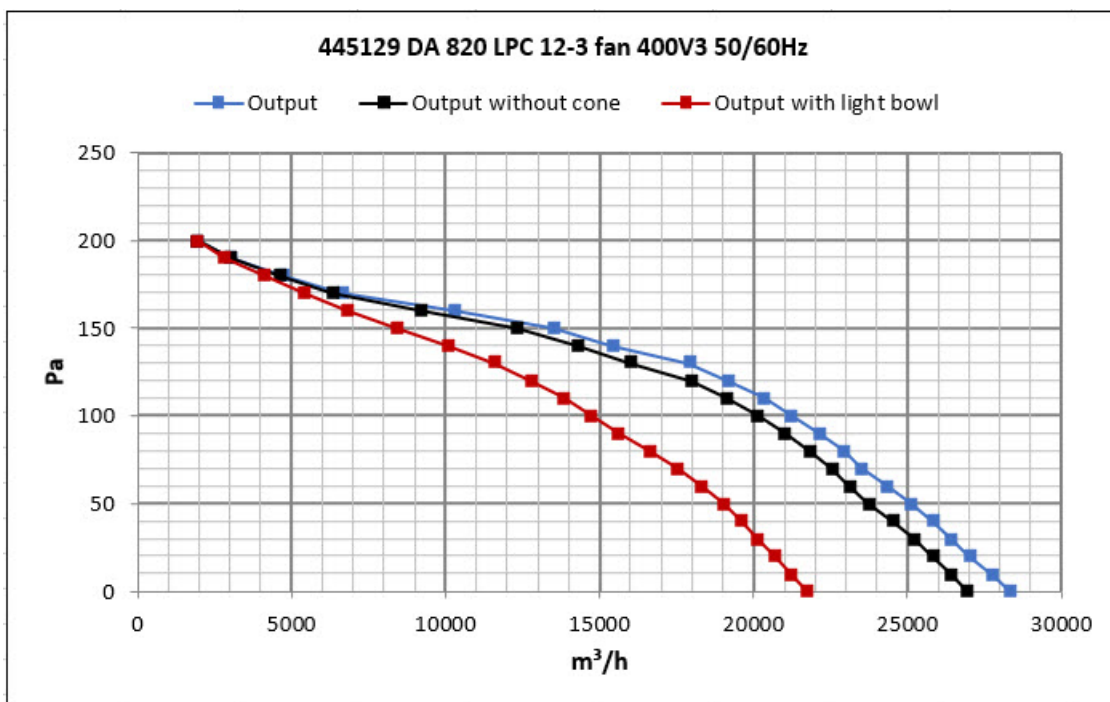
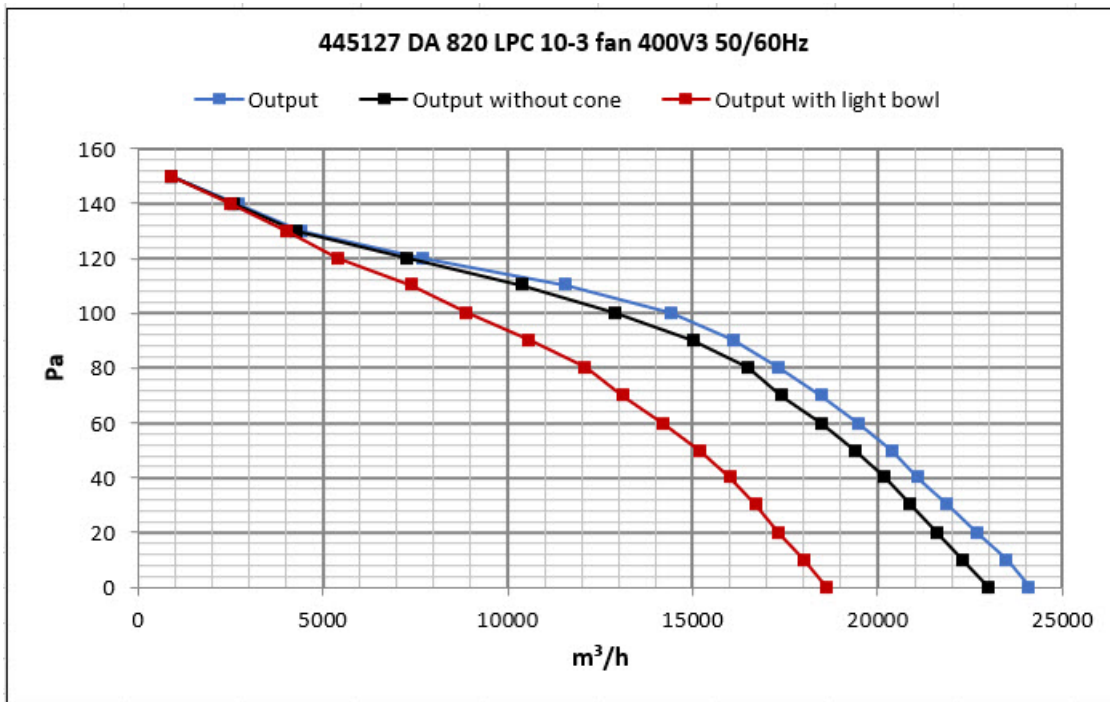
3.2.1 Erp/Ecodesign DA 820 LPC -3 3x400 V

Fan type		DA 820 LPC 10-3 3x400 V	DA 820 LPC 12-3 3x400 V
Ecodesign		ErP 2015 (N58)	
Efficiency classification	N	81.2	79.3
Efficiency (η)	%	74.4	73.6
Measurement setup		D	
Efficiency category		Total	
VSD required		YES	
Year of production		2022	
Name of manufacturer		SKOV A/S	
Item number		445127	445129
Motor power input	kW	0.833	1.252
Flow rate	m ³ /s	5.66	7.18
Optimum pressure	Pa	50	40
Total pressure	Pa	100	119
Revolutions per minute	RPM	999	1169
Pressure conditions		1	
Recycling/Disposal		The product is designed to be recycled and customers will be able to deliver their used products to their local collection points/recycling centers in accordance with local instructions	
Environmental impact		-	
Components used for determining the energy efficiency of the fan.		Bell mouth, flap, air direction baffle, 0.75 m DA 820 duct and outlet cone.	

3.3 Performance diagrams

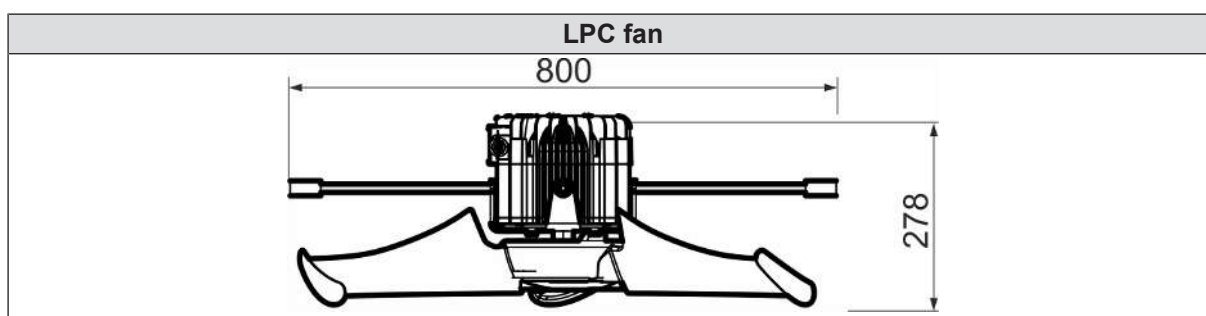
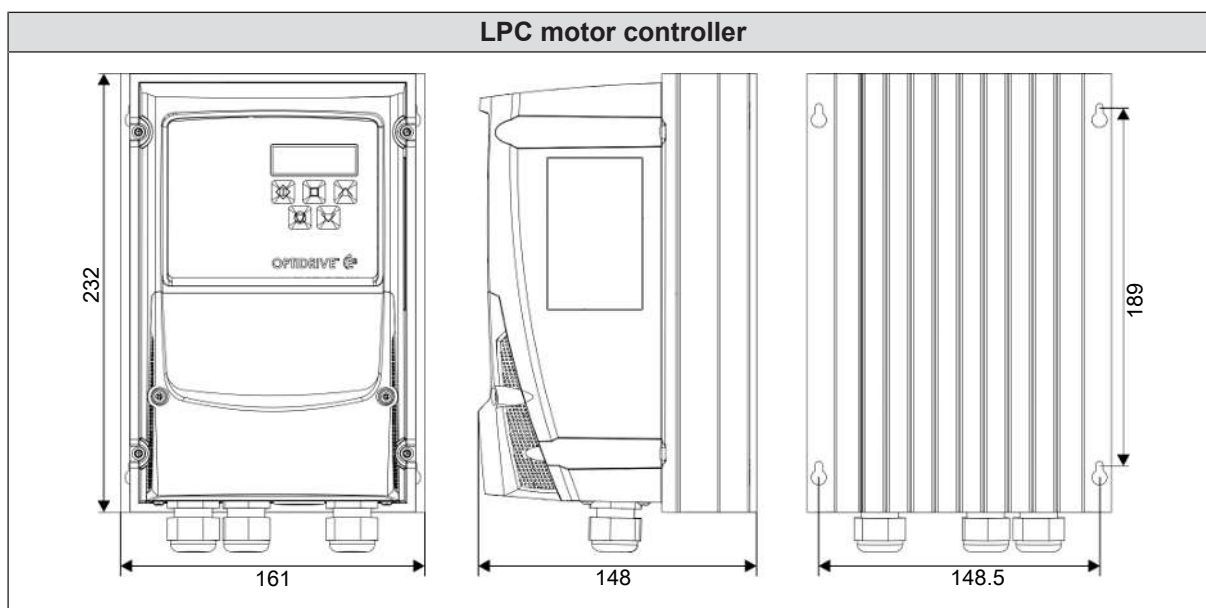
3.3.1 DA 820 LPC -3





3.4 Dimensioned sketch

3.4.1 DA 820 LPC -3



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