

prio 160EC circ. duct fan

Axial circular duct fan, <125W

Item Number: 78185

Variant: 230V 1~ 50/60Hz



EC-motors, high level of efficiency

Low SFP values

100% speed controllable

Integrated motor protection

Can be installed in any position

Compact design

Low sound level

Potentiometer included for ease of commissioning

EC fans are intelligent devices using integrated motor electronics, ensuring that the motor always runs at optimal load. With EC motors the proportion of energy utilized effectively is higher, which as a result reduces the energy usage considerably, compared with AC motors.

Another special feature of EC fans is their energy-saving potential not only at full load, but especially when speed controlled, i.e. at part load. When operating at part-load, the energy used is much lower than with an asynchronous motor of equivalent output.

Reduced energy usage guarantees a drop in operating costs.

The prioAir series is designed for installation in ducts. The prioAir models have 25 mm long spigot connections in acc. with EN 1506:1997. The fans have aerodynamically optimized impellers and guide vanes. Motor protection is integrated in the electronics of the motor. The air tight casing (tightness class C in acc. with EN12237:2003) is manufactured from special composite material.

The mounting clamp facilitates easy installation and removal, and prevents the transfer of vibrations to the duct. Mounting bracket to the wall or ceiling as accessory.

For installation in damp locations we recommend to use a run-on timer. The fans are delivered with a pre-wired potentiometer (0-10 V) that allows you to easily find the required working point.



Technical parameters

Nominal data		
Voltage (Nominal)	230	V
Frequency	50; 60	Hz
Phase(s)	1~	
Input power	77	W
Input current	0.659	A
Impeller speed	4,304	r.p.m.
Air flow	max 0.224	m ³ /s
Temperature of transported air	max 55	°C
Max temperature of transported air, when speed controlled	55	°C
Sound data		
Sound pressure level at 3m (20m ² Sabin)	47	dB(A)

Protection/Classification

Enclosure class, motor	IP44
Insulation class	B

Data according to ErP

ErP ready	Not ErP relevant
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Dimensions and weights

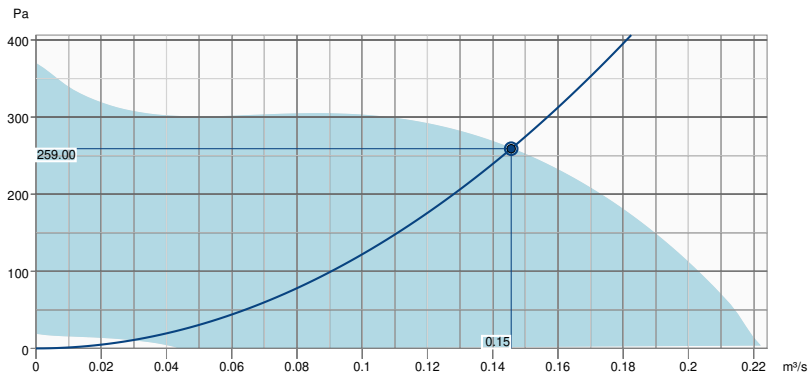
Duct dimension; Circular, inlet	160	mm
Duct dimension; Circular, outlet	160	mm
Weight	1.6	kg

Others

Duct connection type	Circular
Motor type	EC

Performance

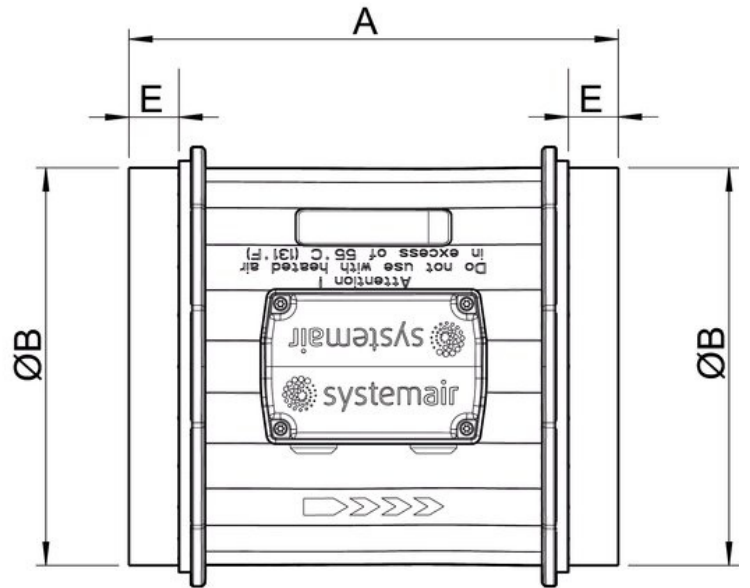
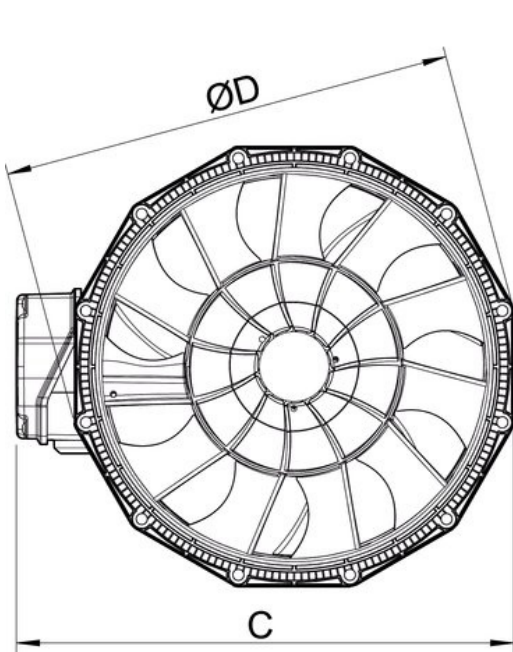
Performance curve



Hydraulic data

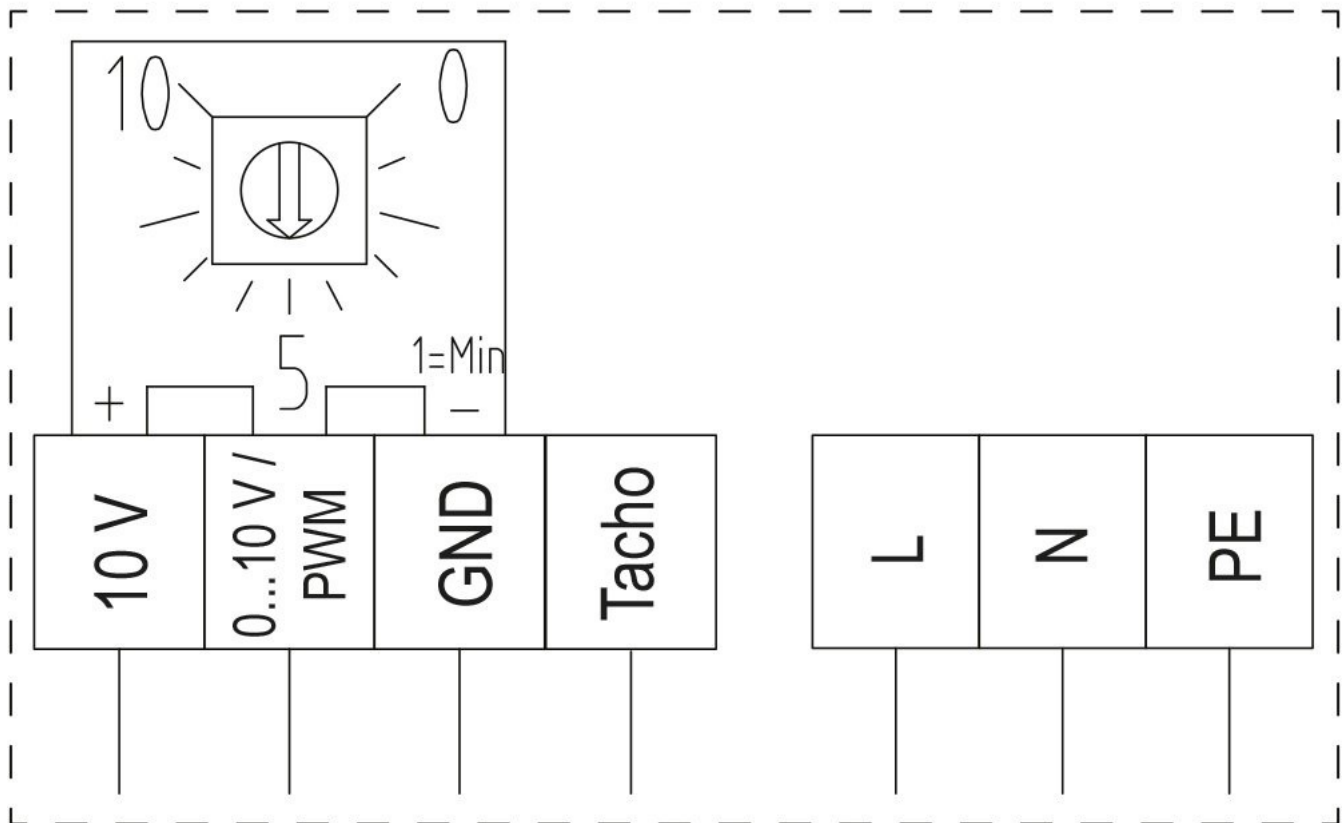
Required air flow	0.15 m³/s
Required static pressure	259 Pa
Working air flow	0.15 m³/s
Working static pressure	259 Pa
Air density	1.204 kg/m³
Power	74.7 W
Fan control - RPM	4338 rpm
Current	0.64 A
SFP	0.513 kW/m³/s
Control voltage	230.0 V
Supply voltage	230 V

Dimension



	A	ØB	C	ØD	E
prio 160	220	159	211	187	25

Wiring



Function / assignment

L	Power supply 230V AC, 50...60 Hz, see name plate for voltage range
N	Neutral conductor
PE	Protective conductor
0...10V / PWM	Controller input 0...10V or PWM
10V	Voltage output 10V / Short-circuit-proof power supply for external devices (e.g. poti) prio 150EC, prio 160EC → I max=1.1mA prio 200EC, prio 250EC → I max=10mA
GND	GND-connection of the controller interface
Tacho	Speed output: Open Collector, 1 impulse per revolution, electrically isolated, I _{sink_max} =10mA

Acoustic

	Hz	Tot	63	125	250	500	1k	2k	4k	8k
LwA Inlet	dB(A)	74	43	53	67	67	70	67	62	53
LwA Outlet	dB(A)	70	41	53	59	64	65	62	59	53
LwA Surrounding	dB(A)	56	10	26	37	50	53	50	42	28
Measuring point: $q_v = 0,146 \text{ m}^3/\text{s}$, $P_s = 259 \text{ Pa}$										

Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Vent control board (3115)
- IGK-160 Wall Grid (1632)
- MTP 20, on/off, 3-step (310220)
- SG 160 Protection guard (5608)
- CO2RT-R-D Transmitter (6993)
- Presence detector/IR24-P (6995)
- RT 0-30 Room Thermostat (5151)
- CB 160-2,1 230V/1 Duct heater (5292)
- CB 160-5,0 400V/2 Duct heater (5383)
- CBMF 160-2,1 230V/1 Duct heater (12244)
- FFR 160 Filter cassette (1770)
- FK 160 Fast clamp (1610)
- LDC 160-600 Silencer (5192)
- RSK-160 Back draft damper (5601)
- THB 160 Hood w.cover pl. black (1764)
- THS 160 Hood w.cover pl. black (1839)
- VBC 160-3 Water heating batt (9840)
- IGC-160 Intake grille (76876)
- DMD-C Pressure controller (15793)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent Room Unit (3018)
- MTP 10, 10K, Speed control (32731)
- MTV-1/010 Controller 0..10V+ (30650)
- VKK-160 Back draft damper (1625)
- HR1 Room Humidistat (215150)
- prio 150/160 mount. br. compl. (79314)
- CB 160-1,2 230V/1 Duct heater (5291)
- CB 160-2,7 230V/1 Duct heater (5382)
- CBM 160-2,1 230V/1 Duct heater (5482)
- CWK 160-3-2,5 Duct cooler,circ (30022)
- FGR 160 Filter cassette (1809)
- LDC 160-300 Silencer (53108)
- LDC 160-900 Silencer (5193)
- THB 160 Hood w. cover pl. Red (2034)
- THS 160 Hood w. cover pl. Red (2044)
- VBC 160-2 Water heating batt (5458)
- VBF 160 Water heating battery (1731)

Documents

- imo_prioair_en_002
- prioair160_o_rahmen.dxf
- UKCA DECLARATION OF CONFORMITY_PRIO_PRIO-XP_EN_001.PDF