

## PRIO Circular Duct Fans

### Quiet and compact mixed-flow fan

- Available with AC and EC motors for 50 and 60Hz
- Easy to install
- Sound and energy optimized impellers

[Find more details in our online catalogue.](#)



### Flexibility

The Prio fans are intended to use for **supply** or **extract** air and designed to be installed in **any position**. This ensures that the fans can be used in a variety of **commercial** and **domestic** applications.

### Reliability

The unit's **airtight casing** and corrosion resistance allows to use indoors and in damp areas. The combination of a reliable casing and motor construction ensures to minimise the need for maintenance of the fans and allows long **continuous operation**.

### Performance

The **sound-optimised** impellers together with **highly efficient** external rotor motors are designed to ensure high-level performance to **minimise power consumption** and **maximise efficiency**.

### Accessories

Prio fan can be selected together with variety types of **accessories** as fast clamps, heaters, filters, dampers, etc.

## Certifications



Green Ventilation



Ecodesign (ErP) compliant

## Features

### Construction

Casing made out of special composite material or sheet metal, is fully airtight class C according to EN12237.  
The Fans are equipped with an external **terminal box with** protection class **IP44**.

### Impeller

Prio fans have aerodynamically optimised impellers and guide vanes. These are from lightweight, hard-wearing fiberglass reinforced **polyamide**, dynamically **balanced** and paired with corresponding external rotor motors.

### Motor

Depending on the type, prio fans are equipped with **AC** or **EC** external rotor motor. Motors are suitable for **50Hz** and **60Hz**.

### Motor protection

Fans with **AC** motors have an **integrated** thermal protection with manual (electrical) reset.  
Fans with **EC** motors have an **integrated** electronic **thermal protection** including **locked-rotor protection** and **soft-start**.  
For size **315 – 500** an external motor protection is needed.

### Control

**EC motors** with **built-in potentiometer** to adjust working point can be also controlled by external **signal 0-10V**.  
**AC motors** can be controlled by **5-step** or **stepless** speed regulator.

### Installation

Prio fans can be installed in any position **indoor** and in **damp areas**. Spigot with 25 mm length is perfectly designed to connect circular duct by **fast clamps preventing vibration** to the duct.

## Technical parameters

### Nominal data

Voltage (nominal)	400	V
Frequency	50; 60	Hz
Phases	3~	
Input power	2,479	W
Input power kW	2.479	kW
Input current	3.79	A
Impeller speed	1,768	rpm
Air flow	max 2.9822	m <sup>3</sup> /s
Temperature of transported air	max 60	°C
Max temperature of transported air, when speed controlled	60	°C

### Sound data

Sound pressure level at 3m (20m <sup>2</sup> Sabin)	74	dB(A)
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### Protection/Classification

Enclosure class, motor	IP54
Insulation class	F

### Data according to ErP

ErP ready	ErP 2018
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### Dimensions and weights

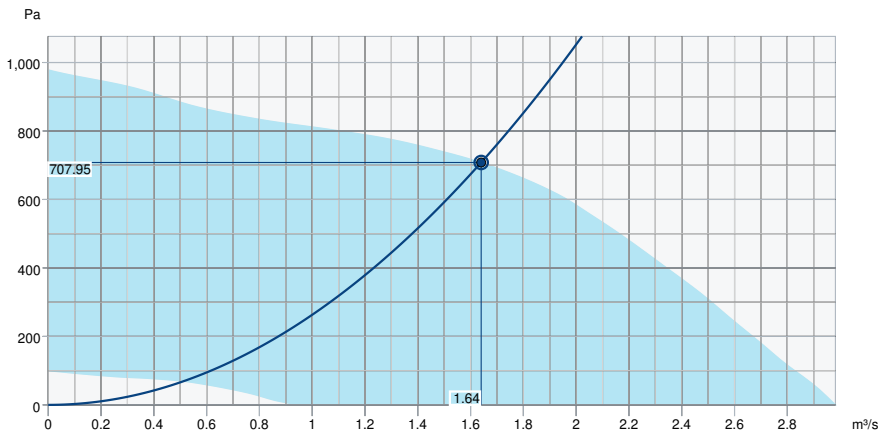
Duct dimension; Circular, inlet	500	mm
Weight	36.8	kg

### Others

Motor type	EC
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Performance

Performance curve



Hydraulic data

Required air flow	1.64 m³/s
Required static pressure	708 Pa
Working air flow	1.64 m³/s
Working static pressure	708 Pa
Air density	1.204 kg/m³
Power	2,298.5 W
Fan control - RPM	1,772 rpm
Current	3.51 A
SFP	1.401 kW/m³/s
Control voltage	10.0 V
Supply voltage	400 V

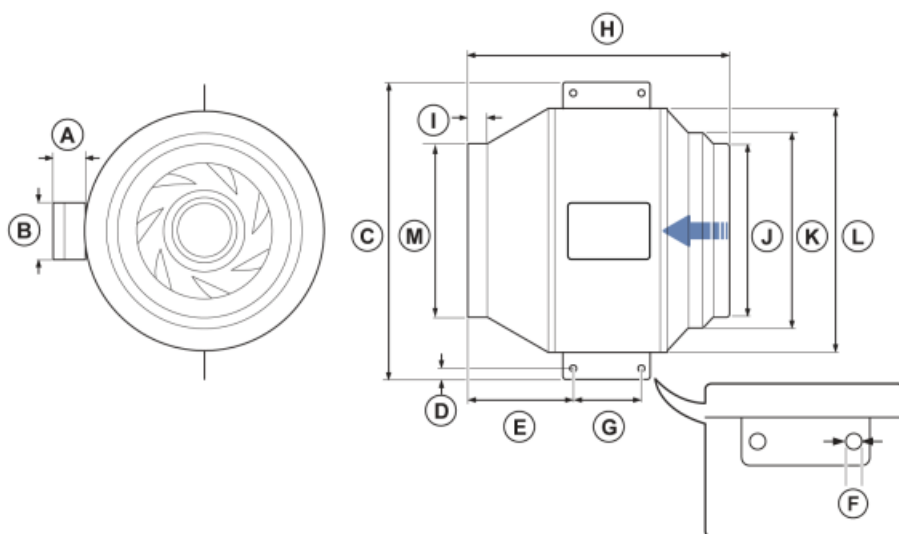
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	71	80	85	85	84	81	74	64	90
Outlet	dB(A)	66	78	82	87	88	84	77	68	92
Surrounding	dB(A)	34	53	72	76	78	70	60	43	81
Sound pressure level at 3m (20m² Sabine)	dB(A)	-	-	-	-	-	-	-	-	74
Sound pressure level at 3m free field	dB(A)	-	-	-	-	-	-	-	-	60

## Ecodesign

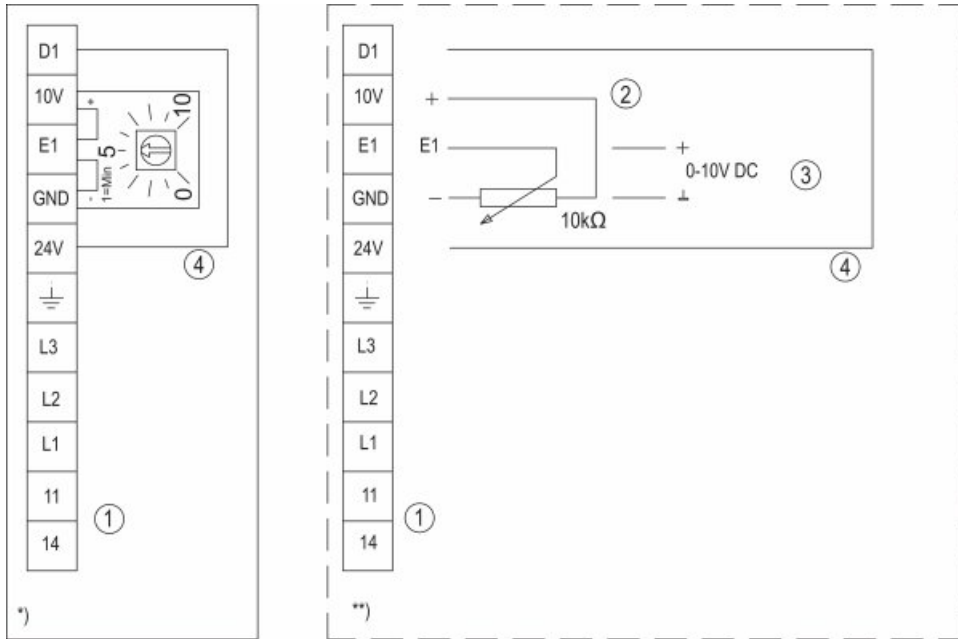
Ecodesign	
ErP compliance	2018
Unit category	NRVU
Drive	Integrated VSD
Unit type	UVU
Heat recovery type	nan
Temperature ratio (UVU)	Not applicable
qv nom	1.64 m³/s
P nom	2.299 kW
Ps nom	708 Pa
Fan efficiency	51 %
External Leakage	0.1 %
Sound power (LWA)	69 dB(A)

## Dimension

A	B	C	D	E	ØF	G	H	I	ØJ	ØK	ØL	ØM
65	107	812	18,5	265	12	100	643	46	450	500	660	500



## Wiring



\*) = Internal potentiometer

\*\*\*) = External speed control

1 11 & 14 = Alarm

For operation the relay is energized, connections "11" and "14" are bridged.

For fault the relay is de-energized (Diagnostics/faults).

Contact rating max. AC 250V 2A.

2 External potentiometer

3 External input DC 0...10V

4 External ON / OFF control via potential free contact

## Accessories

- CXE/AVC Modbus (37256)
- EC-Basic-CO2 and temperature (24808)
- EC-Basic-T temperature (24805)
- EC-Selector (9908)
- EC-Vent Room Unit (3018)
- MTV-1/010 Controller 0..10V+ (30650)
- REV-5POL/05-7,5kW R/Y (33979)
- SG 500 Protection guard (5615)
- Step switch S-5EC-2, 0-10V (449084)
- Presence detector/IR24-P (6995)
- FK 500 Fast clamp (1617)
- VK-50 Louvre shutter (5646)
- DMD-C Pressure controller (15793)
- EC-Basic-H humidity (24807)
- EC-Basic-U universal 0-10V (24806)
- EC-Vent control board (3115)
- MTP 10, 10K, Speed control (32731)
- Potentiometer MTP 20, 0-10V (310220)
- RSK-500 Back draft damper (73049)
- Step switch S-5EC, 0-10V (76738)
- HR1 Room Humidistat (215150)
- RT 0-30 Room Thermostat (5151)
- VBC 500-2 Water heating batt (9837)
- BMS Trickle & Boost Switch (120363)

## Documents

- INSTALLATION\_OPERATION\_AND\_MAINTENANCE\_INSTRUCTION\_K\_KV\_PRIO\_EN\_010.PDF
- COMMISSIONING\_RECORD\_FANS\_EN.PDF