

## AR Axial Fans

### Low pressure axial duct fan

- Available with AC motors for 50 and 60Hz
- Installation in any position
- Noise and energy optimized impeller

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



### Flexible

The AR fans are **designed** for extracting air in **low pressure systems**. They can be installed in any position and way according to your demands.

This ensures that the fans can be used in a variety of **commercial** and **industrial** applications.

### Performance

The **noise optimized** axial impellers together with the **high efficient** external rotor motors are designed to ensure high-level performance to **minimize power consumption** and **maximize efficiency**.

## Features

### Construction

The round casing is made of galvanized steel with powder coating in RAL9005.

The **complete** range is provided **with inlet protection grid**. An **outlet protection grid** is **available as accessory**.

Depending on type, the fans are equipped with an external **terminal box**, protection class **IP44** or **IP54**.

### Impeller

The AR fans use **axial impellers**. These are made of **coated steel**, **composite** material or **aluminum**, are dynamically **balanced** and are paired with corresponding external rotor motors.

### Motor

AR fans are equipped with an **AC external rotor motor**. The motors are suitable for **50Hz** and **60Hz**.

### Motor protection

The **AC** motors are equipped with prewired integral **thermal contact** with leads to be connected to a **motor protection unit**.

### Control

The **AC motor** can be controlled by **5-step**, **stepless** speed regulator or **frequency inverter**.

### Installation

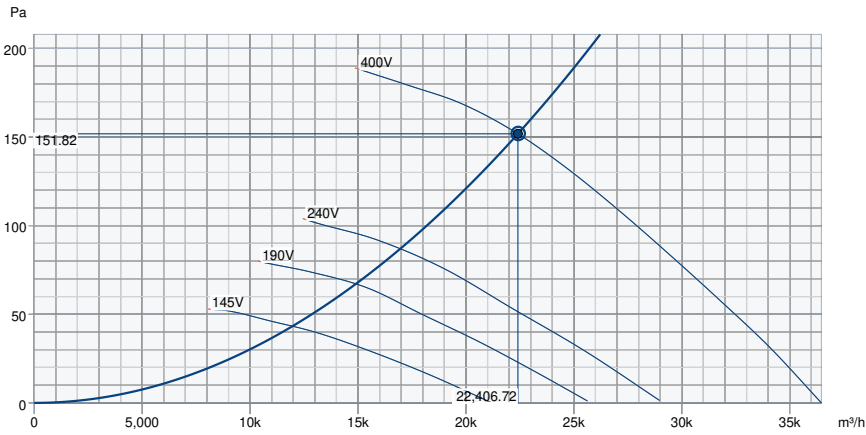
The AR fans can be installed in **any position** in the **duct** in **indoor** environments.

## Technical parameters

Nominal data		
Voltage (nominal)	400	V
Frequency	50	Hz
Phases	3~	
Motor circuit connection	Y	
Input power	2,700	W
Input power kW	2.7	kW
Input current	5.4	A
Impeller speed	820	rpm
Air flow	max 36,468	m³/h
Air flow at max. efficiency	22,250	m³/h
Specific ratio	1	
Temperature of transported air	max 70	°C
Max temperature of transported air, when speed controlled	70	°C
Protection/Classification		
Enclosure class, motor	IP54	
Insulation class	F	
Data according to ErP		
ErP ready	ErP 2018	
Measurement category	A	
Efficiency grade	40.5	$\eta_{actual}$
Efficiency, static	36.8	$\eta_{statA}$
Target efficiency grade ErP2013	36	$\eta_{target2013}$
Target efficiency grade ErP2015	40	$\eta_{target2015}$
Dimensions and weights		
Duct dimension; Circular, inlet	1,000	mm
Duct dimension; Circular, outlet	1,000	mm
Weight	74	kg
Others		
Duct connection type	Circular	
Color name, casing	Black	
Motor type	AC	

Performance

Performance curve



Hydraulic data

Required air flow	22,420 m³/h
Required static pressure	152 Pa
Working air flow	22,407 m³/h
Working static pressure	152 Pa
Air density	1.204 kg/m³
Power	2,630.9 W
Fan control - RPM	830 rpm
Current	5.20 A
SFP	0.423 kW/m³/s
Control voltage	400.0 V
Supply voltage	400 V

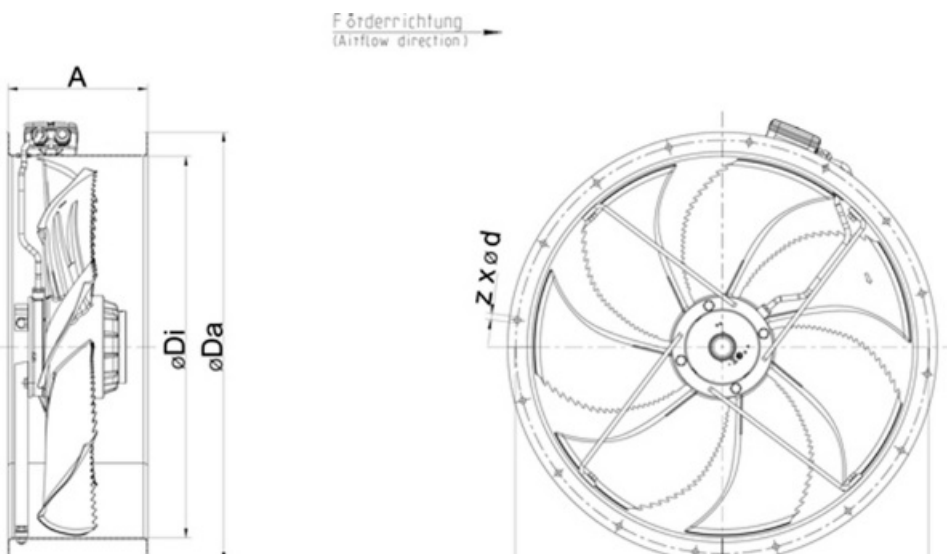
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	58	63	71	72	74	72	68	64	79
Outlet	dB(A)	58	63	71	73	74	70	67	64	79

Ecodesign

Ecodesign 327

Manufacturer	Systemair GmbH
Type	AR 1000DS
Year of manufacture	See name plate of the fan
Air flow $q_v$	22,250 m <sup>3</sup> /h
Efficiency category	static
Efficiency grade N	40.5
Efficiency grade target N	40
Speed (rpm) n	830 rpm
Pressure increase total psf	153 Pa
Power consumption $P_{ed}$	2,630 W
Overall efficiency	36.8 %
Variable speed drive	No
Additional components	Components used to calculate the energy efficiency that are not apparent from the measurement category are detailed in the CE declaration.
Maintenance	Information on installation, operation and maintenance is provided in the operating instructions.
Recycling / disposal	Information on recycling and disposal is provided in the operating instructions.

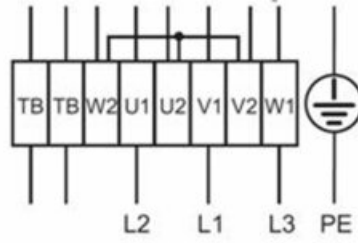
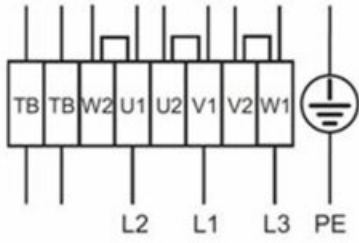
Dimension





	A	$\varnothing Di$	$\varnothing Da$	$\varnothing TK$	z x $\varnothing d$
AR 1000DS sileo	330	1001	1105	1070	16 x $\varnothing 14.5$

## Wiring



## Accessories

- EV-AR/AXC 1000 flex.conn. 70°C (8362)
- Frequency converter FXDM8AM (31388)
- MFA-AXC/AM 1000 mounting foot (311293)
- Motor protect. switch S-DT 16E (161207)
- RTRD 7 speed control Systemair (5943)
- SG AXC/AM/AR 1000 guard grill (310695)
- Frequency converter FRQS-10A (36232)
- SG-20 AXC1000 protection grill (254262)
- Frequency converter FRQ5S-10A (36234)
- GFL-AR/AXC 1000 counter flange (8386)
- Motor protect. switch S-DT 16 (161206)
- REV-5POL/07-7,5kW R/Y (33980)
- RTRDU 7 Speed contr. Systemair (5947)
- Step switch S-DT2SKT, Y/D (2697)
- REV-5POL/07-7,5kW B/G (281742)

## Documents

- L-BAL-001-SYSTEMAIR.PDF
- EU Declaration of Conformity\_002
- installation variations\_1\_AR\_AW.pdf