

## 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

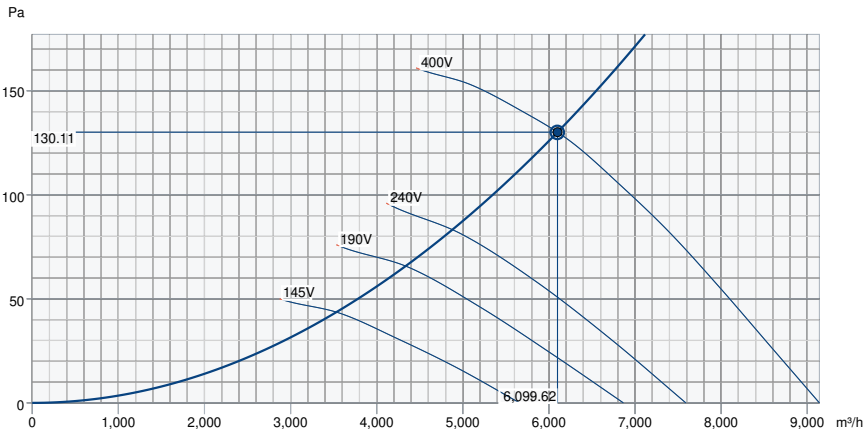
Nominal data		
Voltage (nominal)	400	V
Frequency	50	Hz
Phases	3~	
Motor circuit connection	Y	
Input power	770	W
Input power kW	0.77	kW
Input current	1.7	A
Impeller speed	1,300	rpm
Air flow	max 9,140	m³/h
Air flow at max. efficiency	5,638	m³/h
Specific ratio	1	
Temperature of transported air	max 70	°C
Max temperature of transported air, when speed controlled	70	°C
Sound data		
Sound pressure level at 1m	67	dB(A)
Protection/Classification		
Enclosure class, motor	IP54	
Insulation class	F	
Data according to ErP		
ErP ready	ErP 2018	
Measurement category	A	
Efficiency grade	40.7	$\eta_{actual}$
Efficiency, static	33.4	$\eta_{statA}$
Target efficiency grade ErP2013	36	$\eta_{target2013}$
Target efficiency grade ErP2015	40	$\eta_{target2015}$
Dimensions and weights		
Duct dimension; Circular, inlet	500	mm
Duct dimension; Circular, outlet	500	mm
Weight	18.6	kg

**Others**

Duct connection type	Circular
Color name, casing	Black
Motor type	AC

Performance

Performance curve



Hydraulic data

Required air flow	6,097 m³/h
Required static pressure	130 Pa
Working air flow	6,100 m³/h
Working static pressure	130 Pa
Air density	1.204 kg/m³
Power	739.6 W
Fan control - RPM	1,301 rpm
Current	1.70 A
SFP	0.437 kW/m³/s
Control voltage	400.0 V
Supply voltage	400 V

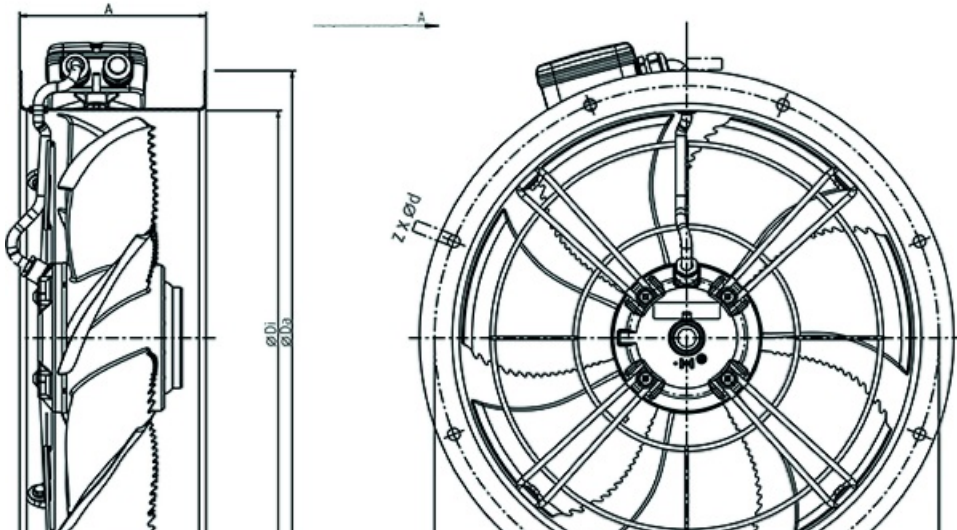
Sound power level		63	125	250	500	1k	2k	4k	8k	Total
Inlet	dB(A)	43	53	55	60	66	67	62	53	71
Outlet	dB(A)	45	53	59	62	65	66	61	52	70

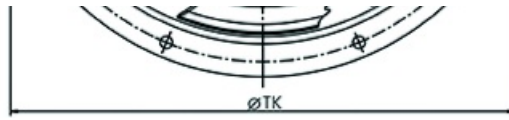
Ecodesign

Ecodesign 327

Manufacturer	Systemair GmbH
Type	AR 500DV
Year of manufacture	See name plate of the fan
Air flow $q_v$	5,638 m <sup>3</sup> /h
Efficiency category	static
Efficiency grade N	40.7
Efficiency grade target N	40
Speed (rpm) n	1,285 rpm
Pressure increase total psf	148 Pa
Power consumption $P_{ed}$	710 W
Overall efficiency	33.4 %
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.

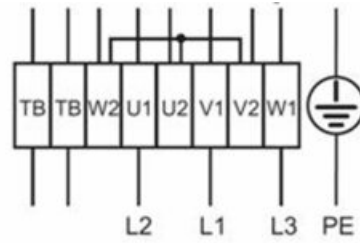
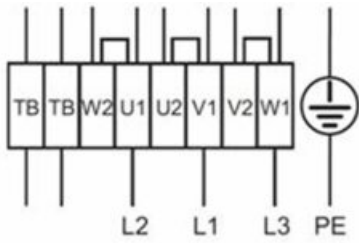
Dimension





	A	ØDi	ØDa	ØTK	z x Ød
AR 500 sileo	205	503	590	560	12 x Ø12

## Wiring



High speed

Low Speed

Δ-Connection

Y-Connection

## Accessories

- AWE-SK Motorprotection 2A/230V (5138)
- Frequency converter FRQ5S-4A (36233)
- Frequency converter FXDM5AM (31387)
- MFA-AXC/AM 500 mounting foot (311287)
- Motor protect. switch S-DT 16E (161207)
- RTRD 2 Speed Cont. Systemair (5941)
- Step switch S-DT2SKT, Y/D (2697)
- REV-5POL/07-7,5kW B/G (281742)
- EV-AR/AXC 500 flex.conn. 70°C (8356)
- Frequency converter FRQS-4A (36231)
- GFL-AR/AXC 500 counter flange (8380)
- Motor protect. switch S-DT 16 (161206)
- REV-5POL/07-7,5kW R/Y (33980)
- RTRDU 2 Speed contr. Systemair (5945)
- VK-50 Louvre shutter (87694)

## Documents

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