



BLAUBERG
Motoren



VENTILATION UNITS

CATALOGUE 2021



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Blauberg Group manufactures and sells a complete range of hi-tech energy-efficient ventilation equipment offering a balanced mix of innovative technology, contemporary design and traditional German quality.

The group's main products include domestic fans, single-room ventilation units, heat recovery units, industrial fans and air handling units, parts and accessories for customized system configurations as well as bespoke ventilation solutions.

Due to our product diversity, we do our best to meet the individual needs of our clients in various countries with the best combination of price and quality.





Blauberg Motoren was born in Munich, Germany, like own direction of fans and motors manufacturing and integral part of Blauberg Group.

Starting with manufacturing AC motors with external rotors for own needs, for now Blauberg Motoren produce wide range of motors and fans with EC and AC technology for clients all around the world. It includes axial fans, backward curved fans, forward curved fans, blowers.

We are proud to be presented in products of our clients – world famous manufactures of ventilation, heat, home appliance and other equipment, and be part of their success.

For now Blauberg Motoren have R&D (research and development) center in Munich (Germany), as well as main testing laboratories for products and factories in Germany (Munich), Ukraine (Kiev) and Poland.

Every day we are working with our passion and respect to technology and engineering to make our products better – more responsive to needs and expectations of our clients.

With traditional German quality, we are focused on developing and improving best one and newest technology – in our own manufacturing and in our products.

WE ARE CLIENT-ORIENTED COMPANY AND TRY TO BE BEST ONE FOR OUR CLIENTS IN SEGMENTS WE ARE PRESENT.

FAN MOTORS

THE MOTORS ARE POWERED BY DIRECT OR ALTERNATING CURRENT.

- A direct current motor is powered by a direct power supply.
- An alternating current motor is powered by an alternating power supply.

Alternating current motors are the most widely used motors because the basic electric grid in the country has alternating power supply.

ALTERNATING CURRENT MOTORS HAVE TWO TYPES:

- **Synchronous** electric motors are alternating current motors with a rotor that rotates synchronously with a magnetic field;
- **Asynchronous** electric motors are alternating current motors with the magnetic field frequency exceeding the motor rotation speed.

Asynchronous motors

Nowadays the asynchronous electric motors find wide application.

Asynchronous electric motors consist of two basic components, the stator and the rotor.

The stator is a fixed motor component. On the inner side the stator has some slots for laying of three-phase cable winding that is powered by three-phase current. The rotor is a rotating part of the motor and also has slots for inserting the cable winding. The rotor and the stator are assembled of separate 0.35-0.5 mm thick electrotechnical steel pressed plates.

Separate plates are insulated from each other with a varnish layer. The air gap between the stator and the rotor is kept as low as possible: 0.3-0.35 mm for low capacity machinery and 1.0-1.5 for more powerful machinery.

Depending on the rotor design the asynchronous motors are available in short circuit modification and phased modifications. Short circuit motors are the most widely used motors because of their simple design and easy operation. The threephase stator winding is inserted inside the slots and consists of a number of interconnected coils. Each coil consists of one or several turns which are insulated against each other and against the slot walls.

THE ASYNCHRONOUS ELECTRIC MOTOR WITH SHORT CIRCUIT ROTOR HAS THE FOLLOWING ADVANTAGES:

- Permanent speed at various loads.
- Resistance to short-term mechanical overloads.
- Easy structure.
- Easy start-up.
- Higher $\cos \phi$ and efficiency compared to electric motors with phased rotor.

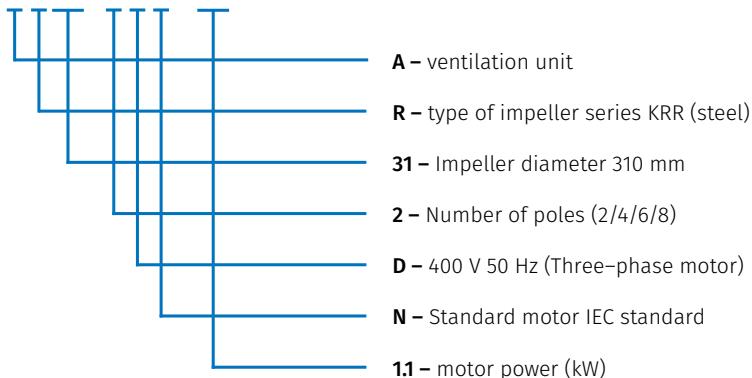
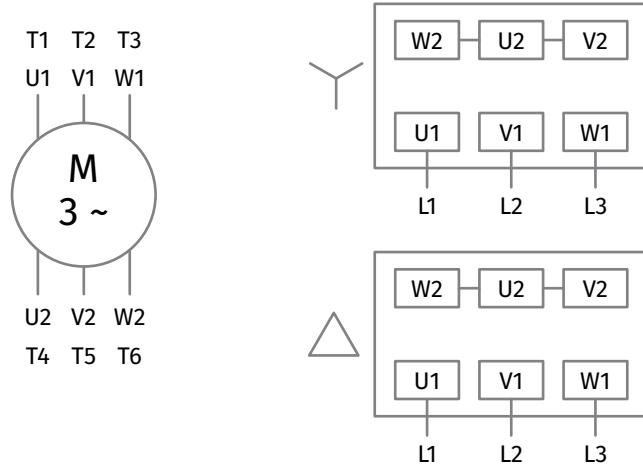
The design of the asynchronous electric motor with external rotor is similar to that of the standard asynchronous electric motor.

The only difference is the position of the rotor. The electric rotor motor is located inside the stator winding and the stator with turns is located in the electric motor center. This configuration provides a compact size of the ventilation unit. The electric motor shaft is carried by ball bearings fixed inside the stator and the impeller is fixed in the rotor casing. Such a design provides air cooling of the electric motor which makes it applicable for a wide temperature range. The electric motors are assembled with the impellers and are subjected to static and dynamic balancing in compliance with DIN ISO 1940. The motors have an integrated overheating protection with automatic restart.

All the motors have 100 % controllable speed range. Speed control is performed with a transformer or electronic devices. Explosionproof motors are controlled exclusively by transformers within 25% up to 100% of the rated voltage range. Speed control is performed by voltage change whereas the frequency in the grid remains the same. The electric motor speed is smoothly decreased as power voltage drops or is increased as power voltage rises. The motor can also be controlled with a frequency converter.

ADVANTAGES OF THE ASYNCHRONOUS ELECTRIC MOTOR WITH EXTERNAL ROTOR:

- Long service life.
- Light weight and small overall dimensions.
- Easy assembly and installation.
- Aligned impeller and electric motor.
- Regulated air capacity.
- Low energy demand during start-up.

AC centrifugal fans
AR31-2DN-1.1

ELECTRICAL CONNECTION DIAGRAM
Type D


Ø 310 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



Features

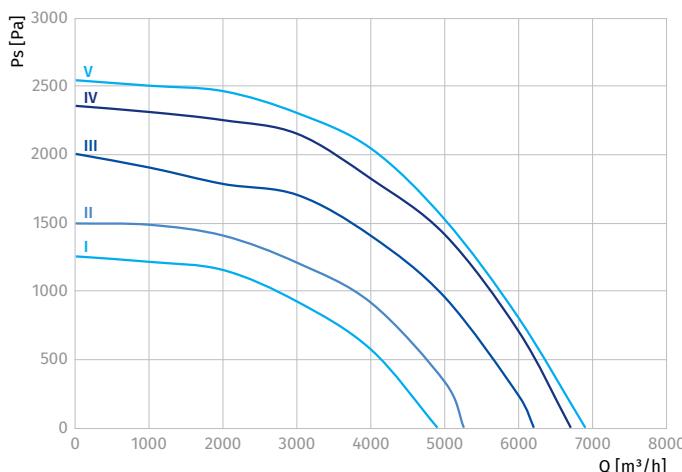
- Materials:
- Direction of rotation:
- Type of protection:
- Insulation class:
- Mode of operation:
- Bearing:
- Motor protection:

Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
clockwise
IP55
155(F) to 130(B)
S1
preloaded bearing DE
(A) without (Standard)



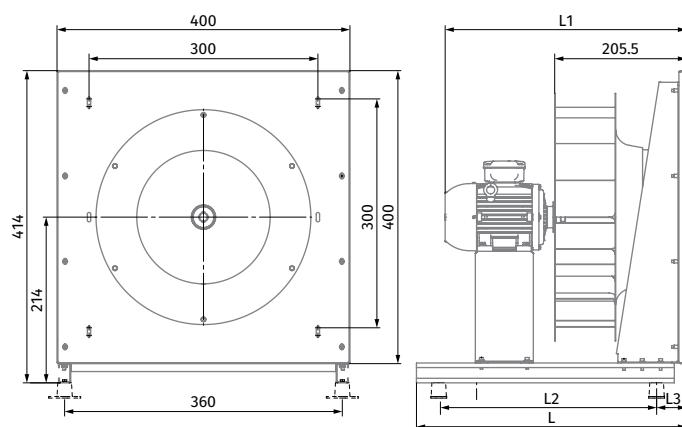
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR31-2DN-1.1	I	400	50	2845	2930	1.1	2.4	91	-20...+40	Type "D"/p. 5
AR31-2DN-1.5	II	400	50	2860	3250	1.5	3.4	94	-20...+40	Type "D"/p. 5
AR31-2DN-2.2	III	400	50	2880	3690	2.2	4.6	95	-20...+40	Type "D"/p. 5
AR31-2DN-3	IV	400	50	2890	4100	3	6.1	100	-20...+40	Type "D"/p. 5
AR31-2DN-4	V	400	50	2905	4245	4	7.8	98	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR31-2DN-1.1	29.8	460	448	462	63
AR31-2DN-1.5	35.4	570	473	434	43
AR31-2DN-2.2	38.6	570	498	448	43
AR31-2DN-3	46.8	570	523	472	63
AR31-2DN-4	53.8	570	538	436	95



Ø 355 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



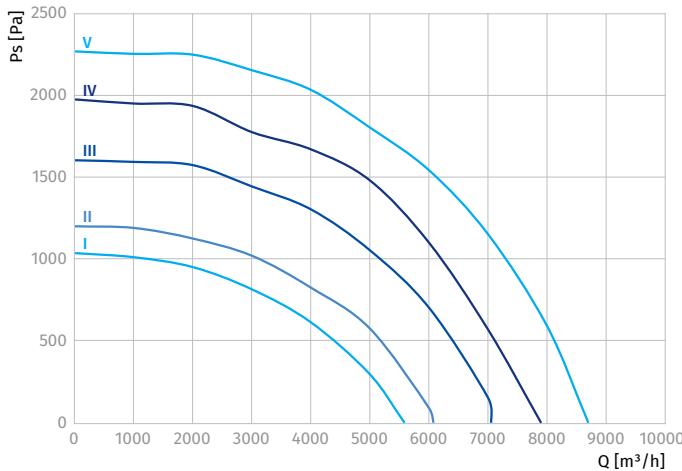
Features

- **Materials:**
Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
- **Direction of rotation:**
clockwise
- **Type of protection:**
IP55
- **Insulation class:**
155(F) to 130(B)
- **Mode of operation:**
S1
- **Bearing:**
preloaded bearing DE
- **Motor protection:**
(A) without (Standard)



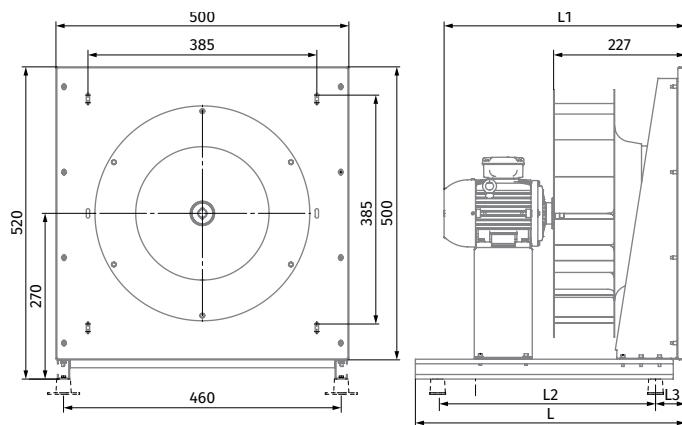
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR35-4DN-1.1	I	400	50	1415	2350	1.1	2.6	90	-20...+40	Type "D"/p. 5
AR35-4DN-1.5	II	400	50	1420	2500	1.5	3.4	91	-20...+40	Type "D"/p. 5
AR35-2DN-2.2	III	400	50	2880	3020	2.2	4.6	93	-20...+40	Type "D"/p. 5
AR35-2DN-3	IV	400	50	2905	3350	3	6.1	94	-20...+40	Type "D"/p. 5
AR35-2DN-4	V	400	50	2905	3670	4	7.8	96	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR35-4DN-1.1	37.9	570	496	432	43
AR35-4DN-1.5	40.1	570	521	448	43
AR35-2DN-2.2	41.1	570	521	448	43
AR35-2DN-3	42.3	570	546	466	69
AR35-2DN-4	56.3	594	571	436	99



Ø 400 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



Features

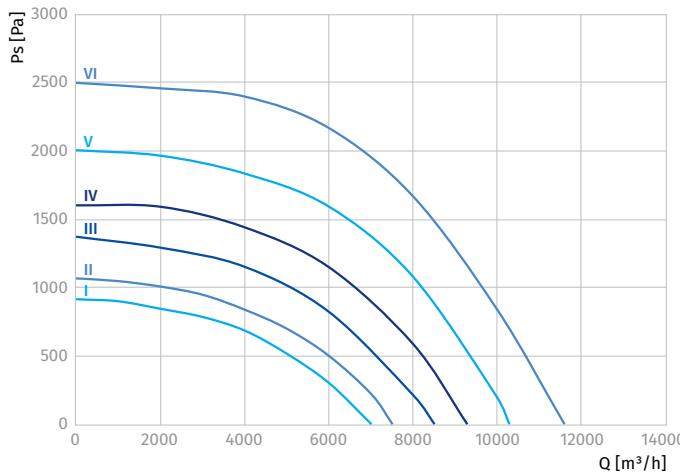
- Materials:
- Direction of rotation:
- Type of protection:
- Insulation class:
- Mode of operation:
- Bearing:
- Motor protection:

Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
clockwise
IP55
155(F) to 130(B)
S1
preloaded bearing DE
(A) without (Standard)



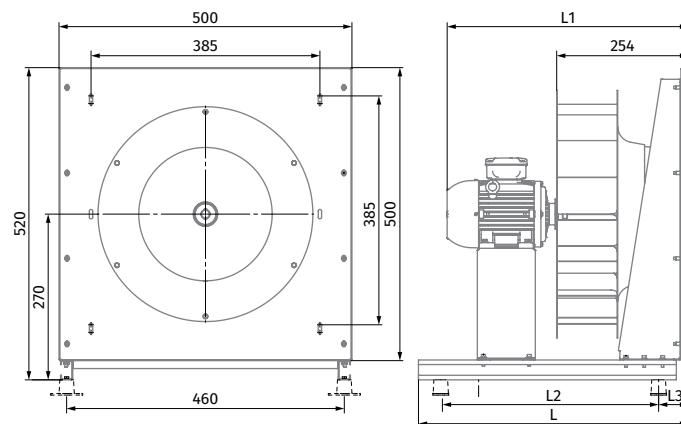
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR40-4DN-1.1	I	400	50	1415	1970	1.1	2.6	85	-20...+40	Type "D"/p. 5
AR40-4DN-1.5	II	400	50	1420	2180	1.5	3.4	87	-20...+40	Type "D"/p. 5
AR40-4DN-2.2	III	400	50	1420	2480	2.2	4.7	91	-20...+40	Type "D"/p. 5
AR40-4DN-3	IV	400	50	1420	2650	3	6.4	93	-20...+40	Type "D"/p. 5
AR40-2DN-4	V	400	50	2905	3030	4	7.8	95	-20...+40	Type "D"/p. 5
AR40-2DN-5.5	VI	400	50	2925	3340	5.5	10.3	97	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR40-4DN-1.1	41.2	570	521.5	438	43
AR40-4DN-1.5	46.4	570	546.5	446	49
AR40-4DN-2.2	53.5	602	571.5	462	73
AR40-4DN-3	57.5	609	571.5	434	95
AR40-2DN-4	60.4	720	569.5	572	43
AR40-2DN-5.5	81.4	720	643.5	590	59



Ø 450 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



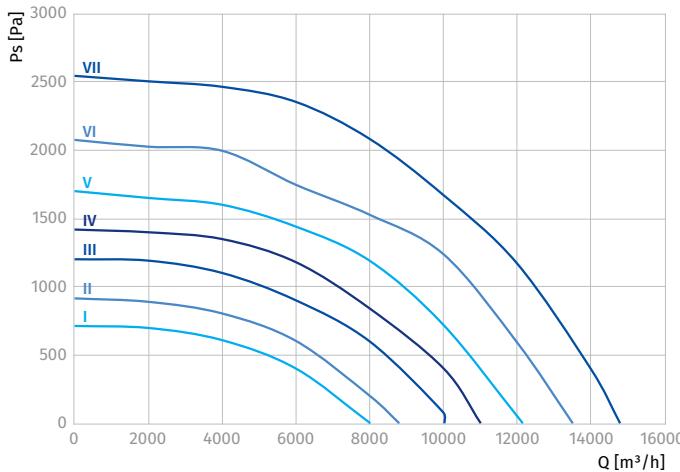
Features

- **Materials:**
Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
- **Direction of rotation:**
clockwise
- **Type of protection:**
IP55
- **Insulation class:**
155(F) to 130(B)
- **Mode of operation:**
S1
- **Bearing:**
preloaded bearing DE
- **Motor protection:**
(A) without (Standard)



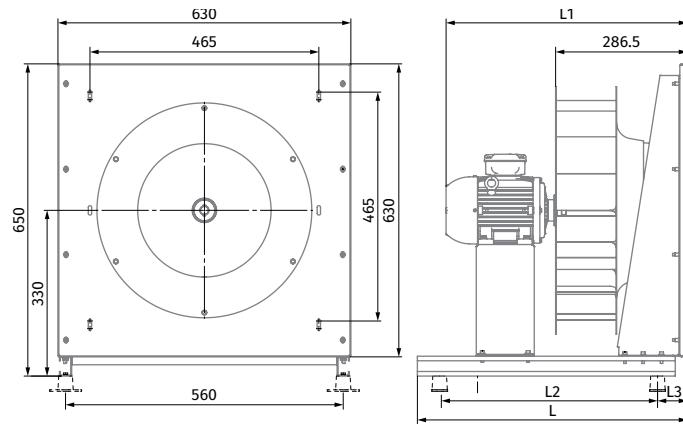
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_N [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR45-4DN-1.1	I	400	50	1415	1620	1.1	2.6	85	-20...+40	Type "D"/p. 5
AR45-4DN-1.5	II	400	50	1420	1790	1.5	3.4	87	-20...+40	Type "D"/p. 5
AR45-4DN-2.2	III	400	50	1420	2040	2.2	4.7	91	-20...+40	Type "D"/p. 5
AR45-4DN-3	IV	400	50	1420	2250	3	6.4	94	-20...+40	Type "D"/p. 5
AR45-4DN-4	V	400	50	1440	2480	4	8.2	99	-20...+40	Type "D"/p. 5
AR45-4DN-5.5	VI	400	50	1455	2740	5.5	11.4	102	-20...+40	Type "D"/p. 5
AR45-2DN-7.5	VII	400	50	2930	2970	7.5	13.8	102	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR45-4DN-1.1	48.7	604	552	446	43
AR45-4DN-1.5	54.1	604	577	440	55
AR45-4DN-2.2	61.2	642	602	462	73
AR45-4DN-3	65.2	642	602	432	95
AR45-4DN-4	72.1	720	627	478	73
AR45-4DN-5.5	89.2	720	672	638	43
AR45-2DN-7.5	90.2	720	672	630	55



Ø 500 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



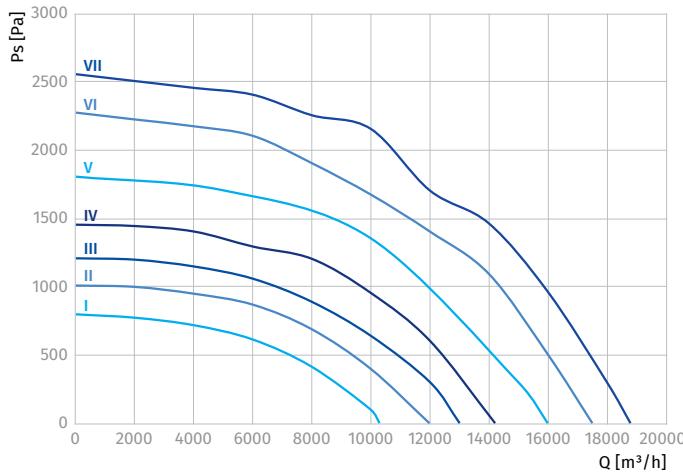
Features

- Materials:
Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
- Direction of rotation:
clockwise
- Type of protection:
IP55
- Insulation class:
155(F) to 130(B)
- Mode of operation:
S1
- Bearing:
preloaded bearing DE
- Motor protection:
(A) without (Standard)



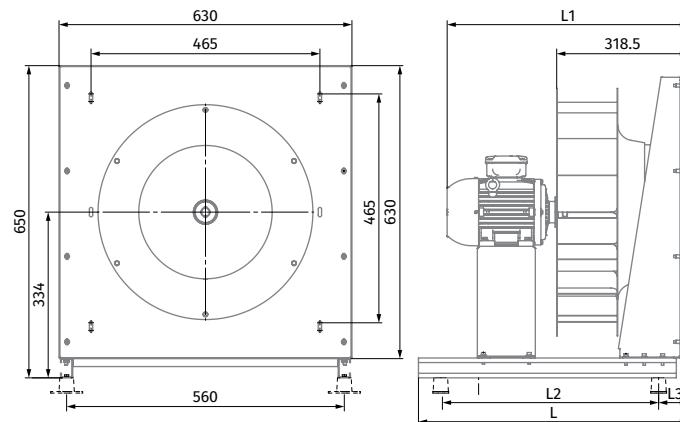
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR50-4DN-1.5	I	400	50	1420	1470	1.5	3.4	84	-20...+40	Type "D"/p. 5
AR50-4DN-2.2	II	400	50	1420	1670	2.2	4.7	88	-20...+40	Type "D"/p. 5
AR50-4DN-3	III	400	50	1420	1850	3	6.4	92	-20...+40	Type "D"/p. 5
AR50-4DN-4	IV	400	50	1440	2030	4	8.2	96	-20...+40	Type "D"/p. 5
AR50-4DN-5.5	V	400	50	1455	2260	5.5	11.4	102	-20...+40	Type "D"/p. 5
AR50-4DN-7.5	VI	400	50	1455	2510	7.5	15.2	107	-20...+40	Type "D"/p. 5
AR50-4DN-11	VII	400	50	1460	2675	11	21.5	110	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR50-4DN-1.5	54	728	620.5	549	55
AR50-4DN-2.2	60	728	620.5	549	55
AR50-4DN-3	64	728	620.5	549	55
AR50-4DN-4	68	730	620.5	602	55
AR50-4DN-5.5	81	730	620.5	602	55
AR50-4DN-7.5	95	815	620.5	602	55
AR50-4DN-11	115	889	620.5	776	55



Ø 560 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



Features

- Materials:

Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium

clockwise

IP55

155(F) to 130(B)

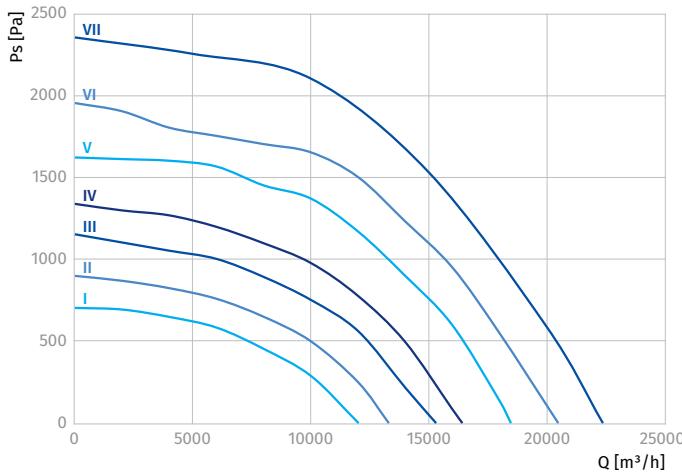
S1

preloaded bearing DE
(A) without (Standard)



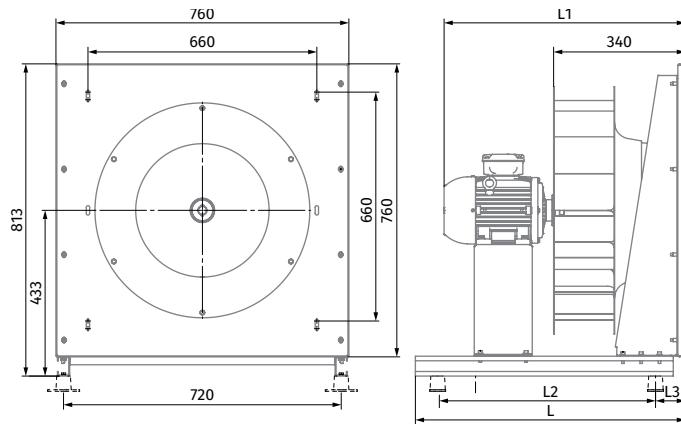
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR56-6DN-1.5	I	400	50	925	1230	1.5	3.9	85	-20...+40	Type "D"/p. 5
AR56-4DN-2.2	II	400	50	1420	1420	2.2	4.7	90	-20...+40	Type "D"/p. 5
AR56-4DN-3	III	400	50	1420	1550	3	6.4	95	-20...+40	Type "D"/p. 5
AR56-4DN-4	IV	400	50	1440	1710	4	8.2	99	-20...+40	Type "D"/p. 5
AR56-4DN-5.5	V	400	50	1455	1900	5.5	11.4	103	-20...+40	Type "D"/p. 5
AR56-4DN-7.5	VI	400	50	1455	2110	7.5	15.2	107	-20...+40	Type "D"/p. 5
AR56-4DN-11	VII	400	50	1460	2310	11	21.5	109	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR56-6DN-1.5	75.3	720	675.5	576	43
AR56-4DN-2.2	76.3	720	675.5	576	43
AR56-4DN-3	80.3	720	675.5	590	43
AR56-4DN-4	86.4	720	700.5	626	43
AR56-4DN-5.5	104.4	880	745.5	700	43
AR56-4DN-7.5	117	880	758.5	682	72
AR56-4DN-11	157.4	880	858.5	744	100



Ø 630 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



Features

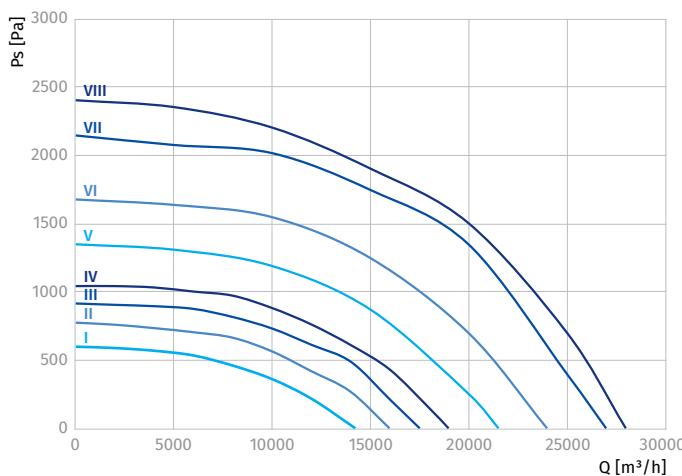
- Materials:
- Direction of rotation:
- Type of protection:
- Insulation class:
- Mode of operation:
- Bearing:
- Motor protection:

Impeller – welded sheet steel
Frame – aluminium
Terminal box – aluminium
clockwise
IP55
155(F) to 130(B)
S1
preloaded bearing DE
(A) without (Standard)



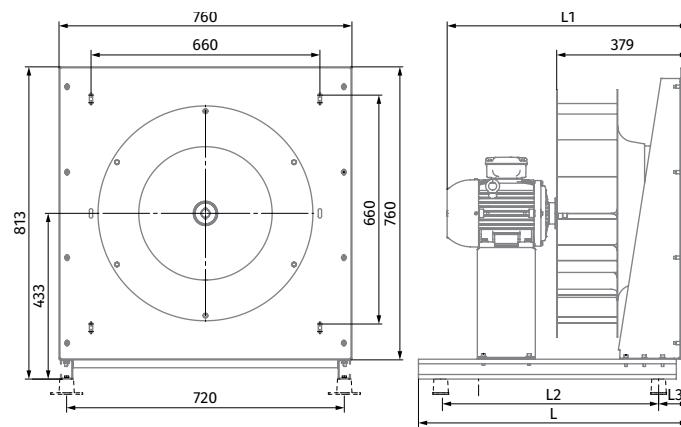
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR63-6DN-1.5	I	400	50	925	1020	1.5	3.9	85	-20...+40	Type "D"/p. 5
AR63-6DN-2.2	II	400	50	940	1160	2.2	5.2	89	-20...+40	Type "D"/p. 5
AR63-6DN-3	III	400	50	950	1285	3	7.2	93	-20...+40	Type "D"/p. 5
AR63-4DN-4	IV	400	50	1440	1440	4	8.2	96	-20...+40	Type "D"/p. 5
AR63-4DN-5.5	V	400	50	1455	1570	5.5	11.4	97	-20...+40	Type "D"/p. 5
AR63-4DN-7.5	VI	400	50	1455	1750	7.5	15.2	104	-20...+40	Type "D"/p. 5
AR63-4DN-11	VII	400	50	1460	1985	11	21.5	108	-20...+40	Type "D"/p. 5
AR63-4DN-15	VIII	400	50	1460	2060	15	28.5	110	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR63-6DN-1.5	89.6	720	723.5	584	60
AR63-6DN-2.2	95.4	720	748.5	646	43
AR63-6DN-3	113.7	880	793.5	698	55
AR63-4DN-4	100.6	720	748.5	642	55
AR63-4DN-5.5	118.7	880	793.5	732	43
AR63-4DN-7.5	131.3	880	883.5	784	55
AR63-4DN-11	171.6	880	906.5	734	120
AR63-4DN-15	192.3	880	956.5	690	165



Ø 710 MM, BACKWARD CURVED

AC CENTRIFUGAL FAN



Features

- Materials:

Impeller – welded sheet steel

Frame – aluminium

Terminal box – aluminium

clockwise

IP55

155(F) to 130(B)

S1

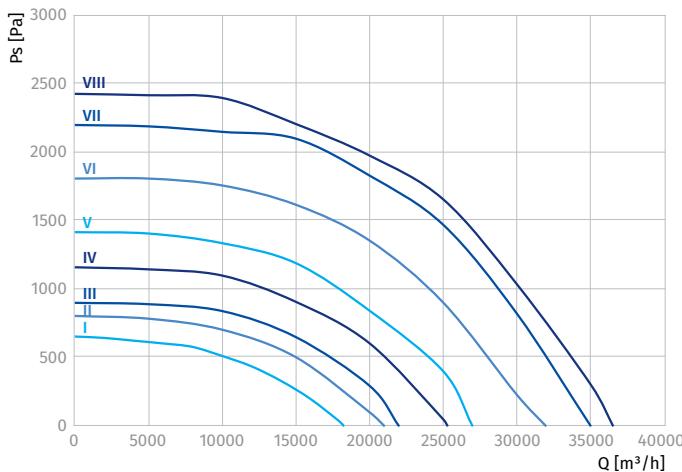
preloaded bearing DE

(A) without (Standard)



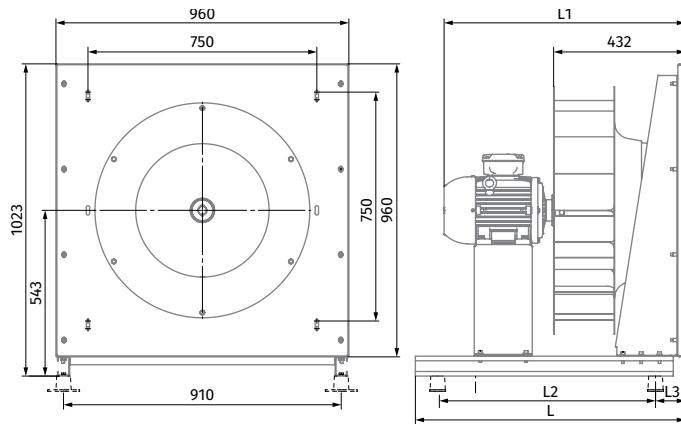
Technical data

Model	Performance curve	Nominal voltage [VAC]	Frequency [Hz]	Speed n_n [RPM]	Speed n_{max} [RPM]	Power [kW]	Current [A]	Sound pressure level [dBA]	Perm. amb. temp. [°C]	Electrical connection
AR71-6DN-2.2	I	400	50	940	950	2.2	5.2	86	-20...+40	Type "D"/p. 5
AR71-6DN-3	II	400	50	950	1055	3	7.2	92	-20...+40	Type "D"/p. 5
AR71-6DN-4	III	400	50	950	1160	4	9.4	93	-20...+40	Type "D"/p. 5
AR71-6DN-5.5	IV	400	50	950	1290	5.5	12.8	99	-20...+40	Type "D"/p. 5
AR71-6DN-7.5	V	400	50	1455	1455	7.5	15.2	105	-20...+40	Type "D"/p. 5
AR71-4DN-11	VI	400	50	1460	1630	11	21.5	105	-20...+40	Type "D"/p. 5
AR71-4DN-15	VII	400	50	1460	1800	15	28.5	105	-20...+40	Type "D"/p. 5
AR71-4DN-18.5	VIII	400	50	1465	1840	18.5	35	112	-20...+40	Type "D"/p. 5



Overall dimensions [mm]

Model	Weight [kg]	L	L1	L2	L3
AR71-6DN-2.2	116.8	885	798	709	98
AR71-6DN-3	133.7	885	843	730	60
AR71-6DN-4	149.7	885	843	744	68
AR71-6DN-5.5	153.7	885	843	782	60
AR71-6DN-7.5	151.7	885	843	774	60
AR71-4DN-11	193.2	1045	956	890	60
AR71-4DN-15	214.2	1045	1000	934	60
AR71-4DN-18.5	248.2	1045	1038	846	152





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