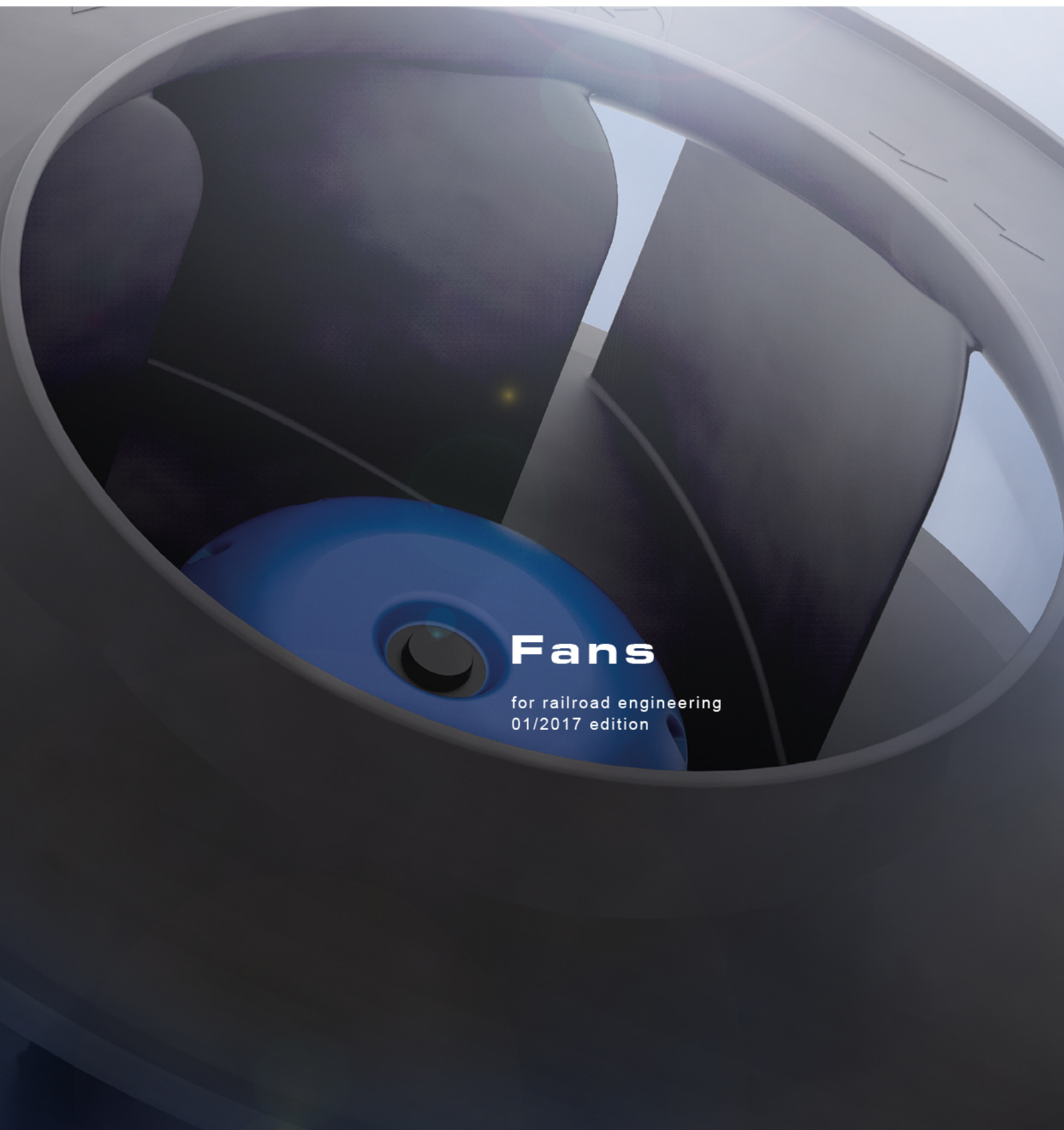


Movement by Perfection



# Fans

for railroad engineering  
01/2017 edition

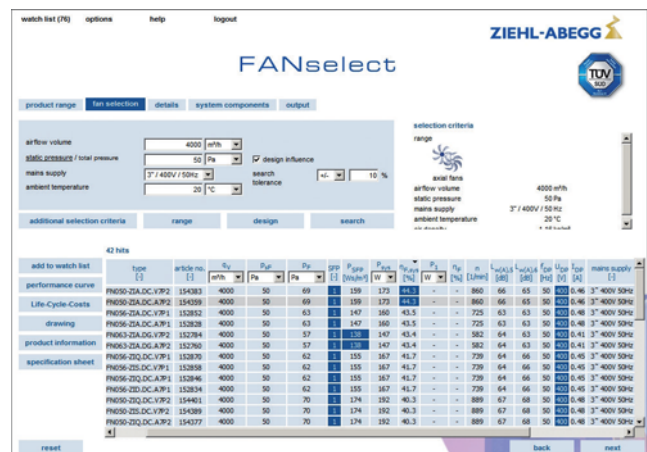
**The Royal League** in ventilation, control and drive technology

# Using air intelligently

Air is always there but is hardly perceived consciously. Directing air in a specific form of movement is the competence of ZIEHL-ABEGG. As the world's leading provider of fans with adapted control technology, ZIEHL-ABEGG relies on the efficiency and reliability of the products. With the trailblazing solutions from ZIEHL-ABEGG, customers use air and energy optimally for their individual requirements.

## FANselect The fan selection program

With the first fully comprehensive certified fan selection program FANselect the customer can find the optimum fans and system components for his needs conveniently, precisely and quickly. The specified values conform to reality. They are determined in the ZIEHL-ABEGG InVent technology centre which houses the world's biggest combined air and noise test benches of the ventilation system branch. More information on [www.fanselect.info](http://www.fanselect.info)










## Other catalogues

In the ZIEHL-ABEGG catalogues, the reader can find out all about ZIEHL-ABEGG fans, motors and the perfectly adapted control technology. All the catalogues are available on [www.ziehl-abegg.de](http://www.ziehl-abegg.de) website in the "Download" section.

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ZAvblue

ZIEHL-ABEGG

Die Königsklasse

*der Lufttechnik,  
Regelitechnik und Antriebstechnik*

**Mehr  
Volumen  
bei kleinerer  
Baugröße**



# Welcome to the world of ZIEHL-ABEGG

## Top technology "Made by ZIEHL-ABEGG"

A pioneering spirit and the courage of innovation were the driving forces behind Emil Ziehl's development of his first external rotor motor over a hundred years ago. With this he laid the corner stone for the success story of ZIEHL-ABEGG in 1910. Today, the family company ZIEHL-ABEGG, with its headquarters in Künzelsau, develops, produces and sells high quality, high-tech components: Fans, special electric motors and their perfectly adapted, state-of-the-art control technology. Still today, Emil Ziehl's pioneering spirit is the motivator for making good even better and finding new, revolutionary solutions. ZIEHL-ABEGG is based in Southern Germany but is at home all over the world. At the world-wide production and sales sites, thousands of employees develop, produce and sell technical, economical and ecological progress.

Welcome to the world of ventilation, control and drive technology.

## Your contact into the world of ZIEHL-ABEGG

Would you like to learn more about the company ZIEHL-ABEGG, its products and applications? Your current direct contact partners can always be found at [www.ziehl-abegg.com](http://www.ziehl-abegg.com)



# One-stop expertise

## Fan, motor and control technology

Whether air conditioning, drying, cooling or ventilating, the efficient fans with adapted drive and control technology from ZIEHL-ABEGG cope with these tasks safely and reliably. Individual and also complex customer requirements are welcome challenges.

At ZIEHL-ABEGG headquarters in Künzelsau, more than 300 engineers and technicians concentrate daily on finding the best solution. In the InVent, one of the most modern technology centres of its kind, they work on the innovations of the future. Their ideas are put into practice by excellently trained specialists on state-of-the-art plants. The production as well as all processes are accompanied by prudent quality management. ZIEHL-ABEGG products are subjected to rigorous testing before being put into operation at the customer's. On the world's biggest air and noise test bench, vibrations and external noises are eliminated and thus ensure top class fan measurements in accordance with ISO and DIN. The result is top class products and services which are marked by the seals "Premium Quality" and "Premium Efficiency".

The world's biggest and most modern test bench for fans at the headquarters in Künzelsau

State-of-the-art production lines to meet the highest demands







Information

ZA rail

Cpro-ECblue

C-ECblue

C series

N series

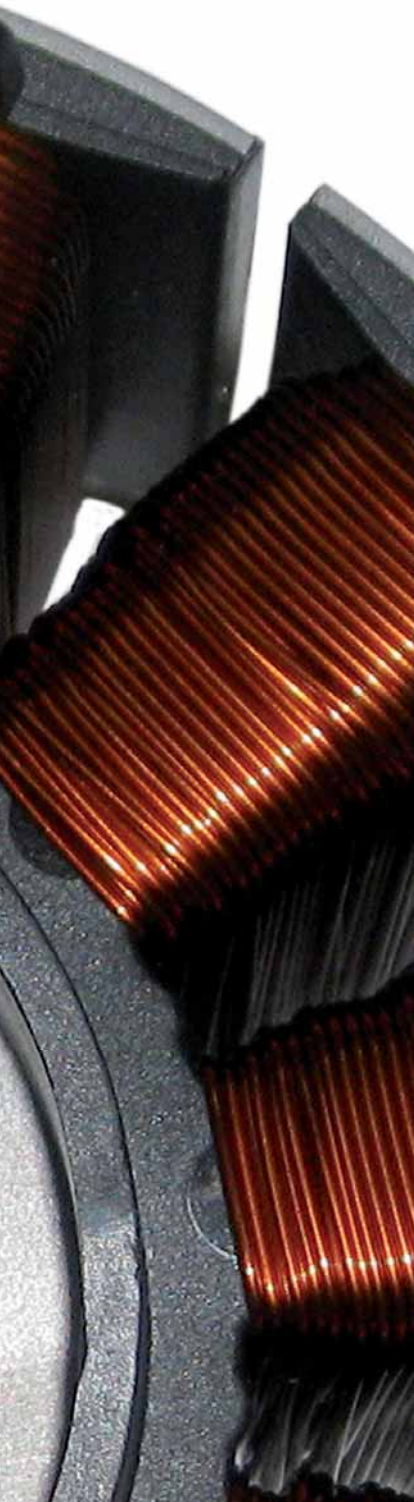
M series

FE2owlet

# EC fans of the Royal League

## Quiet, efficient, environmentally friendly

EC fans from ZIEHL-ABEGG unite state-of-the-art motor technology with innovative aerodynamics. This symbiosis scores high marks by merging revolutionary ECblue technology with premium fans. The result is efficiency and absolutely economical operation. The new generation of axial fans heads the ECblue technology: The FE2owlet has biologically designed rotor blades for almost noiseless conveyance of air. Moreover, the FE2owletbio is made from 100% recyclable bio-polyamides. Further highlights of material development at ZIEHL-ABEGG are shown in the Cpro centrifugal fan with the new ZAmid® technology. The new high performance composite material is as hard as steel but only half the weight. This is kind on the bearings and saves energy. Greater efficiency also comes from the newly developed blade geometry in the centrifugal impellers which has only become possible thanks to the innovative composite material. In standard application, EC-fans achieve maximum volume flows with extraordinary efficiency despite their low noise. Together with the ECblue motors, ZIEHL-ABEGG fans achieve a dynamic response which makes them absolute leaders in environmental friendliness and efficiency.



ECblue motor technology





Maximum efficiency and minimum consumption  
ECblue with the latest **ZAmid**<sup>®</sup> Technology  
Radial fans sector



Unique bionic profile FE2owlet,  
combined with ECblue technology



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# AC-fans of the Royal League

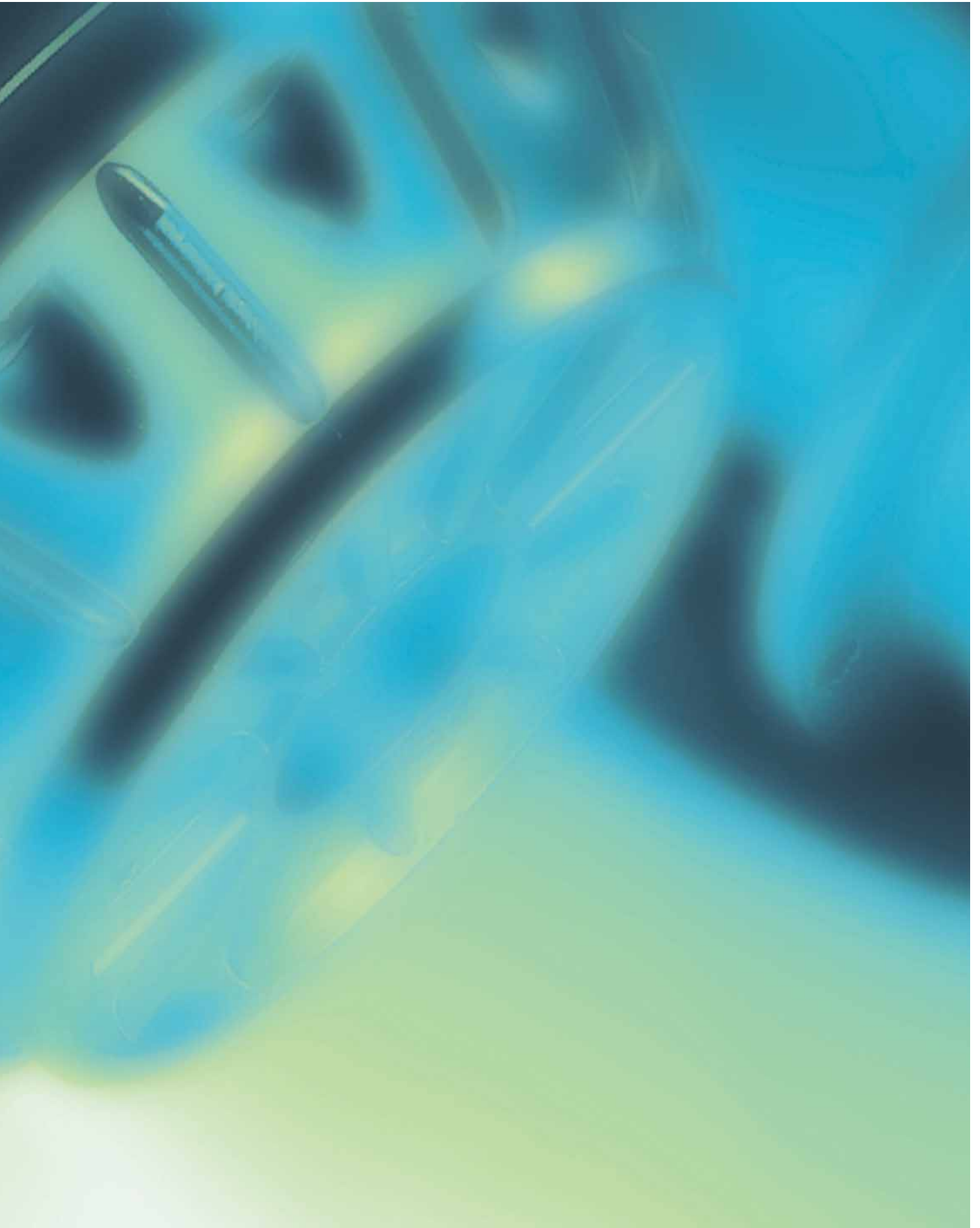
## Strong, robust, extraordinary

In all applications in which the material is exposed to immense stress, the AC fans from ZIEHL-ABEGG demonstrate their quality and ability. Their solid components and robust design and technology are able to withstand even the greatest stresses. The fans are therefore used in many different areas of industry or agriculture - wherever absolute insensitivity and stability is important.

The high quality motor technology is the result of decades of experience at ZIEHL-ABEGG. Intelligently used components such as the Fcontrol frequency inverter make them environmentally friendly and efficient key players. Maintenance-free and extraordinarily performant, AC fans from ZIEHL-ABEGG are a safe and rewarding investment.

AC motor technology, robust in operation





Information

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FE2owlet

# Introduction to railroad engineering

Your ticket for a royal league ride



As the world's leading system supplier in the field of fans and drives with matching control technology, ZIEHL-ABEGG offers innovative solutions for railroad engineering. We are a reliable innovation partner to many companies and rely on our decades of product experience in railroad engineering with special areas of application such as vehicle engineering, wind power stations, agriculture, the chemical industry and transformer cooling.

We produce tens of thousands of fans for the railroad engineering sector every year. With our wide range of products and our more than 300 man strong development team, we are able to flexibly create application-specific solutions. Our world-wide sales and production network provides you with our services locally.



## Expertise for the highest demands

Through their global use in a variety of climate zones and the continuous movements of trains, the fans for railroad engineering must be able to withstand high stresses - unlike fans designed for stationary use. They are exposed to vibrations, shocks and extreme ambient conditions such as dirty or humid air, heavy rain, hail, extreme heat or even radiation. ZIEHL-ABEGG fans also have to function for different power supplies and quality levels. They are used for many years, often for the entire train service life of more than 30 years.

ZIEHL-ABEGG fans for railroad engineering have been specially designed for these high demands being tested in practice for years.

Whether mainline, high-speed, metro, light train or locomotive network, solutions from ZIEHL-ABEGG are required in all areas of railroad engineering where fans are required for cooling or ventilation. From passenger compartment ventilation to motor cooling.

An experienced team specialised in railroad engineering develops products implementing applications precisely tailored to individual application areas.

# Introduction to railroad engineering

## Usage examples

In railroad engineering, ZIEHL-ABEGG fans are used in a variety of applications.

### Passenger compartments

In the case of passenger compartment air conditioning, ventilation systems ensure the travel comfort of passengers. The air exchange is easy to control producing low-noise and an efficient result.

### Driver's cabins

In driver's cabins, fans produce the right climate during work requiring a high level of concentration.

### Electronics and choke cooling

When used in electronics and choke cooling, ZIEHL-ABEGG fans prevent overheating of components by means of efficient heat dissipation, thus supporting the safe and reliable functioning of systems.

### Brake resistor

Fans for cooling brake resistors are optimised to the exact operating point reducing the resulting temperatures quickly and safely.





### Transformer cooling/oil cooler

In transformer cooling, ZIEHL-ABEGG fans are used for the active air cooling of the attached oil coolers. In this way, they reduce the self-heating of the transformer.

### Compressor cooling

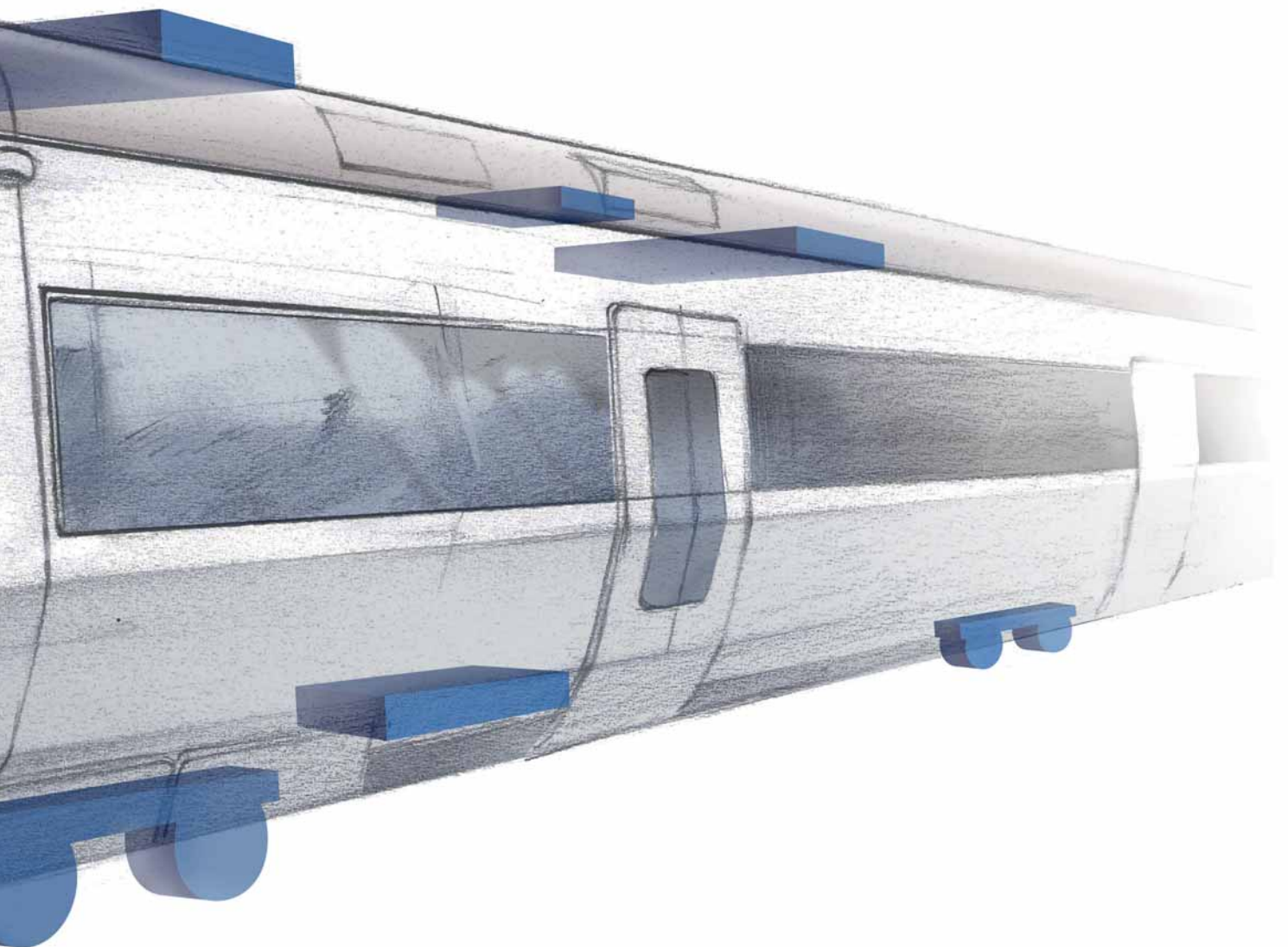
Compressors are used in railroad engineering in various applications including also for producing compressed air and are cooled with fans to protect against overheating.

### Traction motor cooling





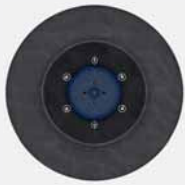




Traction motor cooling places great demands on the fans used. ZIEHL-ABEGG fans are optimised to the exact operating point thus ensuring a smooth ride.

### Ventilation for machine rooms

The correct ventilation for machine rooms not only ensures safe air exchange but also optimum motor cooling.



# Overview centrifugal fans


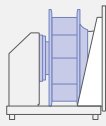
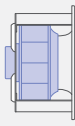
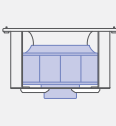
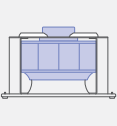
Series	<b>ZArail</b>	<b>Cpro</b>	<b>C series</b>
	Steel	High-performance composite material	Aluminium
	Standard motor	External rotor motor	External rotor motor
	AC Technology Page 38	EC Technology Page 82	EC Technology Page 106
Impeller			
			
			

Series	<b>C series</b>	<b>N series</b>	<b>M series</b>
	Aluminium / steel	Aluminium	Aluminium / steel
	External rotor motor	External rotor motor	External rotor motor
	AC Technology Page 146	AC Technology Page 184	AC Technology Page 196
Impeller			
			
			



# Design and installation position

## GR / ER modular construction

Design	Free-running impeller RH	Plug fan ER	Ventilation unit GR	Ventilation unit GR	Ventilation unit GR
Installation position	H/Vu/Vo	H	H	Vo	Vu
					

## Designs/customer requirements

These catalogue pages only show examples of fans with RH (free running impeller) design.

In addition to that, ZIEHL-ABEGG's range has a whole variety of designs and variants.

Including:

- Customer-specific installation and cooling modules
- Cooling modules for compact installation in the customer device
- Screwed support structure made of galvanized sheet steel or powder coated for high-quality corrosion protection requirements
- Integrated inlet nozzle for optimum impeller inflow

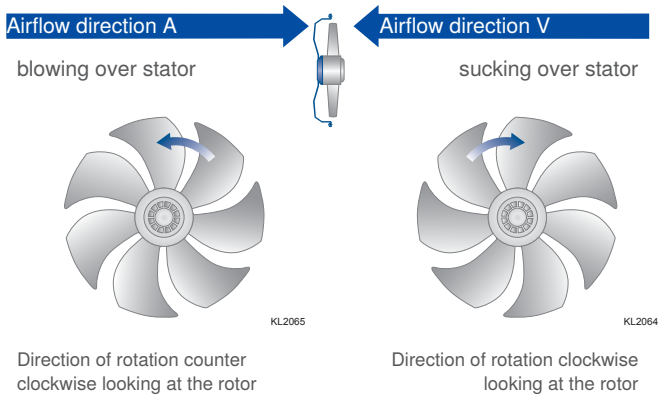
A customer-specific design will also be made on request

We will be happy to advise you on how to find exactly the right fan for your application.



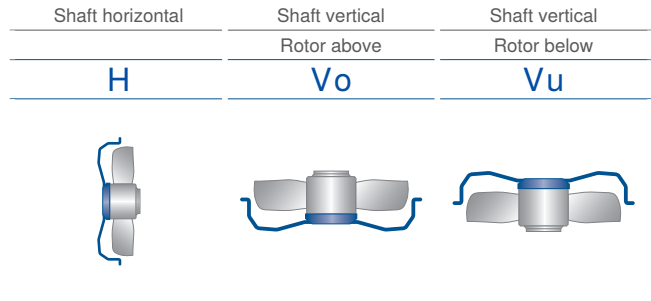
# Overview axial fans

## Airflow direction



## Installation position

The axial fans are usually suitable for all installation positions. For details please see the part-specific documentation.



## Designs/customer requirements

The catalogue pages only show examples of fans without structures (design A).

In addition to that, ZIEHL-ABEGG's range has a whole variety of designs and variants.

Some examples of customer-specific solutions:

- Integrated inlet nozzle for optimum impeller inflow
- Safety grille on the suction side or on the pressure side
- An especially robust motor support

A customer-specific design will also be made on request.

We will be happy to advise you on how to find exactly the right fan for your application.

Series	<b>FE2owlet</b>	<b>FC</b>
	Aluminium	Aluminium
	External rotor motor	External rotor motor
	AC Technology	AC Technology
	Page 244	Page 272



Design	H (guard grille pressure side)	F (without contact protection)	L (guard grille suction side)	Q (guard grille pressure side)



# Relevant standards for railroad

In order to ensure the definitive suitability of the product for the special application, it is necessary to test and validate it yourself in the customer device/in your application. (We consider it necessary to perform these tests in the overall assembly in order to achieve realistic results.) ZIEHL-ABEGG can provide no warranty in respect of the suitability of the product for the special application.

## Please note regarding the ErP Directive

The Directive 2009/125 / EC does not apply to fans and motors, which are used in passenger and freight traffic transport.

We comply with the specifications of the following rail-specific standards among others:

### EN 50155: 2007

Railway applications - Electronic equipment used on rolling stock

### EN 50124-1: 2010

Railway applications- Insulation coordination - Part 1: Basic requirements - Clearances and creepage distances for all electrical and electronic equipment

### EN 50121-3-2:2006

Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock apparatus

### EN 60349-2: 2010

Electric traction - Rotating electrical machines for rail and road vehicles. - Part2 Electronic converted-fed alternating current motors

### EN 61373:2010

Railway applications - Rolling stock equipment - Shock and vibration tests

### EN 45545-2:2013

Railway applications - fire protection for railway vehicles - Part 2: Requirements for fire behaviour of materials and components

### DIN EN 15085:2013

Railway applications - Welding of railway vehicles and components, classification level CL1

Ziehl-Abegg is certified in accordance with EN15085 "Welding of railway vehicles and components" classification level CL1.

### EN 60721-3-5:1997

Classification of environmental conditions. Part 3: Classification of groups of environmental parameters and their severities. Section 5: Ground vehicle installations

# Selection of fans step by step

## 1. Centrifugal fans overview

Get an initial overview of our centrifugal fans and quickly navigate to the section of the catalogue pertaining to your needs.

**Übersicht Radialventilatoren**

Radialventilator	ECblue	Technische Beschreibung	Leistungsdaten	Material	Wartung
Euro-ECblue	Euro-ECblue	Technische Beschreibung	Leistungsdaten	Material	Wartung
ECblue	ECblue	Technische Beschreibung	Leistungsdaten	Material	Wartung

**Technische Beschreibung Cpro-ECblue**

ECblue... Details...

Leistungsdaten...

Material...

Wartung...

## 2. Quick selection

Obtain product details quickly and easily, thanks to quick selection using the volume flow rate and the volume flow rate technical data.

**Übersicht Radialventilatoren**

Flow rate	Pressure	Type	Material	Wartung
...	...	...	...	...

## 3. Product details

The double product page contains all relevant product information for your selected fan.

**Cpro-ECblue für Dreihasen-Wechselstrom, 200-240 V**

**Technische Beschreibung**

Leistungsdaten...

Material...

Wartung...

**Leistungsdaten**

**Bestellformulare Ventilator**

**Anschluss**

**ECblue**



Information
ZArail
Cpro-ECblue
C-ECblue
C series
N series
M series
FE2owlet

# Technical description

## ZArail (without motor)

### Product specification

Fatigue endurable\* design for up to 40 switching operations/h. Circumference-welded blades and fully moulded blade edges. Applicable in a temperature range of 150 K (-50 °C to +100 °C). Air handling capacity up to 15,000 m<sup>3</sup>/h or a maximum pressure increase of 2,800 Pa in 50 Hz operation (alternatively in the case of 60 Hz up to 18,000 m<sup>3</sup>/h or 4,000 Pa). Through its unique series characteristics, almost any operating point can be achieved without additional RPM control. 20 standardised impellers: 5 frame sizes – 315, 355, 400, 450 (2-pole) and 500 (4-pole), each available in various widths and diameters. Corrosion protection as a standard feature through powder coating, RAL 5002 (ultramarine blue), deviating colours on request. Tested in continuous operation and long-term tests. Up to 1,000 h endurance in the case of salt spray testing according to DIN EN ISO 9227. Improved strength – mathematical proof of strength according to FKM guideline with FEM calculations. Welding according to EN 15085 certification level CL2 (CL1 on request), seam quality class CP C2. With hub in half key balancing according to DIN ISO 8821, balance quality G 2.5 according to ISO 1940-1. Function test and balancing test are required in its installed condition.

\*in the case of a typical switching operation in the train (50 Hz, 60 °C, 80% 2-pole 20% 4-pole, 20 switching operations 4-2 pole/h, 2 starts/ h, 6,500 h/a).

### Properties and special features

Single-ended extracting, backward-curved impeller for the increased requirements in railway systems. Strength-optimised impeller design with 7 blades for extreme demands coupled with high efficiency levels and favourable acoustic behaviour.

### Motor concepts

Internal rotor motors

- AC technology

### Application examples

- Electronics and choke cooling
- Brake resistor cooling
- Transformer cooling/oil cooler
- Compressor cooling
- Traction motor cooling





# Technical description

## ZArail (with IEC standard motor)

### Product specification

Free running motor impeller including inlet nozzle for optimum impeller inflow made of galvanized or powder coated sheet steel. Complete fan balanced, permissible vibration intensity smaller than 2.8 mm/s according to ISO 14694. IEC three-phase AC standard motor, 400/460V 50/60Hz, protection rating IP 55, type IMB3, thermal class 155. Standard version for feed-air temperatures from -30°C to +60°C. Standard design for 10 switching operations per hour. Vibration-proof version, outer earthing, balancing weight made of stainless steel. Installation position horizontal, motor foot below. 2-4 or 4-8 pole version using Dahlander pole-changing. Electrical configuration according to EN 60034-1 or EN 60349-2 (railway auxiliary motor). Motor for frequency converter designed in railway systems. Fan must be tested for suitability and validated in the customer device

Further versions on request:

Various motor manufacturers. Customer-specific requirements (other temperatures, voltages, increased corrosion protection measures, operation cycles, other installation positions etc.). Fan in GR modular construction made of galvanized sheet steel or sheet steel with epoxy/polyester powder coating for optimum installation in the customer device.

### Properties and special features

Single-ended extracting, backward-curved impeller for the increased requirements in railway systems. Strength-optimised impeller design with 7 blades for extreme demands coupled with high efficiency levels and favourable acoustic behaviour.

### Motor concepts

Internal rotor motors

- AC technology

### Application examples

- Electronics and choke cooling
- Brake resistor cooling
- Transformer cooling/oil cooler
- Compressor cooling
- Traction motor cooling



Information

ZArail

Cpro-ECblue

C-ECblue

C series

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M series

FE2owlet

# Technical description

## Cpro railroad engineering

### Product specification

Cpro free running impeller made of high-performance composite material for railroad engineering using fire proof certified material, certified according to **requirement set R1 and R7 in HL2 of DIN EN 45545-2 or R23/R24 HL3**.

7 backward-curved blades in frame sizes 250- 450 mm (630 mm on request). Volume flow rates up to 12,000 m<sup>3</sup>/h free blowing, max. static pressure increase up to 1,800 Pa possible. As a motor impeller or ER / GR module version for compact installation in customer applications/devices for horizontal and vertical air feed.

### Properties and special features

Impeller with rotating, non-fluted diffuser for high efficiency levels and favourable acoustic characteristics. Reduced rotational tone as a result of special three-dimensional blade geometry. Thanks to the high-quality plastic material, it has a high temperature application range of -35\*\*\* to +60 °C as well as a high chemical resistance.

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

### Motor concepts

External rotor motors

- EC technology ECblue with integrated controller geared to the fan
- AC technology on request

### Application examples

- Passenger compartment/driver's cabin ventilation
- Electronics and choke cooling
- Transformer cooling/oil cooler
- Ventilation for machine rooms



# Technical description

## C series railroad engineering

### Product specification

Free running impeller with 7 backward-curved blades in frame sizes 225 to 450 mm. Impeller made of sheet steel with surface protection provided by powder coating or unpainted aluminium. As a motor impeller or ER/GR module version. Volume flow rates up to 8,000 m<sup>3</sup>/h free blowing, max. static pressure increase up to 2,300 Pa possible. GR modules for compact installation in customer applications/devices for horizontal and vertical air feed.

### Properties and special features

Impeller with rotating, non-fluted diffuser for high efficiency levels and favourable acoustic characteristics  
Temperature application range of -40\*\*\* to +70 °C.  
\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

### Motor concepts

External rotor motors

- EC technology ECblue with integrated controller geared to the fan
- AC technology

### Application examples

- Passenger compartment/driver's cabin ventilation
- Electronics and choke cooling
- Brake resistor cooling
- Transformer cooling/oil cooler
- Traction motor cooling
- Ventilation for machine rooms



Information

ZArail

Cpro-ECblue

C-ECblue

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# Technical description

## N series railroad engineering

### Product specification

Free running motor impeller with 7 backward-curved blades in frame sizes 500, 560, 630 for use without spiral housing. Impeller made of aluminium, unpainted. Volume flow rates up to 16,500 m<sup>3</sup>/h free blowing, max. static pressure increase up to 1,200 Pa possible. GR modules for compact installation in customer applications/devices for horizontal and vertical air feed.

### Properties and special features

Series with very good acoustic properties combined with the highest efficiency.

### Motor concepts

External rotor motors

- AC technology

### Application examples

- Condenser cooling
- Electronics and choke cooling
- Ventilation for machine rooms



# Technical description

## M series railroad engineering

### Product specification

The single-ended extracting, backward-curved motor impellers in the M series are intended for use without spiral housing. Available in frame sizes 225 - 630 mm (larger sizes on request). Thus, volume flow rates up to 15,000 m<sup>3</sup>/h and static pressures up to 1,800 Pa can be achieved.

### Properties and special features

Versatile series with different wheel widths for applications with demanding mechanical requirements, such as railway systems or high temperatures.

### Motor concepts

External rotor motors

- AC technology

### Application examples

- Passenger compartment/driver's cabin ventilation
- Electronics and choke cooling
- Brake resistor cooling
- Transformer cooling/oil cooler
- Traction motor cooling
- Ventilation for machine rooms



Information

Z rail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# Technical description

## R series railroad engineering

### Product specification

Single-ended/double-ended extracting EC centrifugal fans in the optimised spiral housing with forwards-curved blades. Energy-optimised for operation in a spiral housing for a high level of efficiency and favourable acoustic characteristics. Available in frame sizes 180 to 450 mm (single-ended) and 250 to 450 mm (double-ended). This allows for volume flow rates of up to 9,000 m<sup>3</sup>/h and static pressures of up to 1,100 Pa.

### Properties and special features

Scroll fans in the R series are characterised by their high output density. The high number of blades means the fans have good sound characteristics with very little noise produced by the blades rotating. Housing with discharge flange and fastening bracket.

### Motor concepts

External rotor motors

- ECblue EC technology with integrated controller matched to the fan

Technical data see centrifugal fans main catalogue.



# Technical description

## S series railroad engineering

### Product specification

Single-ended/double-ended extracting centrifugal fans in the compact housing with forwards-curved blades. Available in frame sizes 280 to 400 mm (single-ended) and 200 to 400 mm (double-ended). This allows for volume flow rates of up to approx. 14,000 m<sup>3</sup>/h and static pressures of up to 1,150 Pa.

### Properties and special features

Scroll fans in the S series are characterised by their compact housing design and high output density. The high number of blades means the fans have good sound characteristics with very little noise produced by the blades rotating. Optimum motor cooling and compact design due to voltage variable external rotor motor in the impeller. Option of housing with discharge flange and fastening brackets.

### Motor concepts

External rotor motors

- AC technology

Technical data see centrifugal fans main catalogue.



## P series railroad engineering

### Product specification

Single-ended/double-ended extracting centrifugal fans in the standard spiral housing with forwards-curved blades. Available in frame sizes 200 to 450 mm. Available in frame sizes 200 to 450 mm. This allows for volume flow rates of up to 21,000 m<sup>3</sup>/h and static pressures of up to 1,000 Pa.

### Properties and special features

Scroll fans in the P series are characterised by their high output density. The high number of blades means the fans have good sound characteristics with very little noise produced by the blades rotating. Housing with discharge flange and fastening bracket.

### Motor concepts

External rotor motors

- AC technology

Technical data see centrifugal fans main catalogue.



Information

ZArail

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FE2owlet

# Technical description

## FE2owlet railroad engineering

### Product specification

Fluted, sickle-shaped blades based on bionic insights. Available frame sizes 310 - 800 mm, volume flow rates up to 30,000 m<sup>3</sup>/h and static pressure increase up to 380 Pa.

### Properties and special features

- Low operating costs due to optimum efficiency with minimum noise levels
- Very smooth running and long service life thanks to dynamic balancing in two planes
- Compact dimensions for every installation situation
- Numerous approvals (incl. VDE, UL, CCC, EAC, CE)

### Motor concepts

External rotor motors

- AC technology

### Application examples

- Brake resistor cooling
- Transformer cooling/oil cooler
- Ventilation for machine rooms
- Air conditioning in driver's cabin/passenger compartment





# Technical description

## FC railroad engineering

### Product specification

Fluted aluminium die-cast blade for use in aerodynamically designed air duct systems, such as full nozzles and pipe installation. Available frame sizes 250 - 800 mm, volume flow rates up to 35,000 m<sup>3</sup>/h and static pressure increase up to 350 Pa.

### Properties and special features

- Compromise between energy efficiency and investment costs
- Very smooth running and long service life thanks to dynamic balancing in two planes
- Numerous approvals (incl. VDE, UL, CCC, EAC, CE)

### Motor concepts

External rotor motors

- AC technology

### Application examples

- Brake resistor cooling
- Transformer cooling/oil cooler
- Ventilation for machine rooms
- Air conditioning in driver's cabin/passenger compartment



Information

ZArail

Cpro-ECblue

C-ECblue

C series

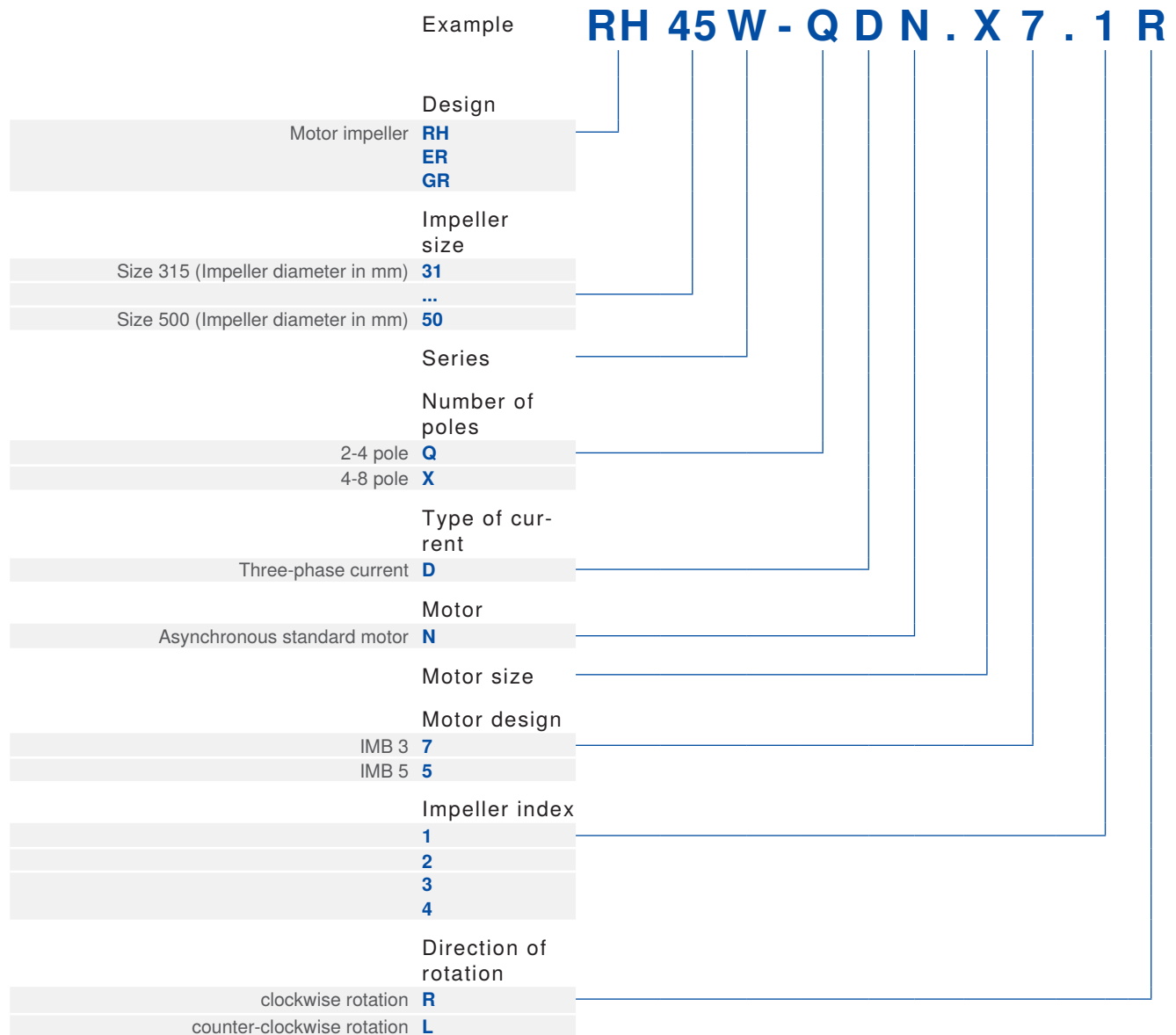
N series

M series

FE2owlet

# Type key

## Centrifugal fans with standard motor



### Required order data

Please specify the following when ordering: Type, article no. and part no. system components if applicable

### Example

Type: RH45W-QDN.X7.1R  
Article no. 172344 (50 Hz), 172364 (60 Hz)



# Type key

## Centrifugal fans with external rotor motor

Example **RH 45 C - Z I K . D C . 1 R**

<b>Design</b>	
Motor impeller	<b>RH</b>
Plug fan	<b>ER</b>
Ventilation unit	<b>GR</b>
<b>Impeller size</b>	
...	
Size 450 (Impeller diameter in mm)	<b>45</b>
Size 500 (Impeller diameter in mm)	<b>50</b>
Size 560 (Impeller diameter in mm)	<b>56</b>
Size 630 (Impeller diameter in mm)	<b>63</b>
<b>Series</b>	
C impeller	<b>C</b>
N-Impeller	<b>N</b>
M impeller	<b>M</b>
<b>Number of poles</b>	
2-pole	<b>2</b>
4 pole	<b>4</b>
4-4 pole	<b>V</b>
6 pole	<b>6</b>
6-6 pole	<b>S</b>
8 pole	<b>8</b>
8-8 pole	<b>A</b>
10 pole	<b>Z</b>
<b>Type of current</b>	
External rotor EC motor with controller	<b>I</b>
three phase alternating current	<b>D</b>
single phase alternating current	<b>E</b>
<b>Motor type</b>	
D flange	<b>D</b>
K flange	<b>K</b>
<b>Motor</b>	
<b>Impeller index</b>	
	<b>C</b>
	<b>1</b>
	<b>2</b>
	<b>3</b>
<b>Direction of rotation</b>	
clockwise rotation	<b>R</b>
counter-clockwise rotation	<b>L</b>

### Required order data

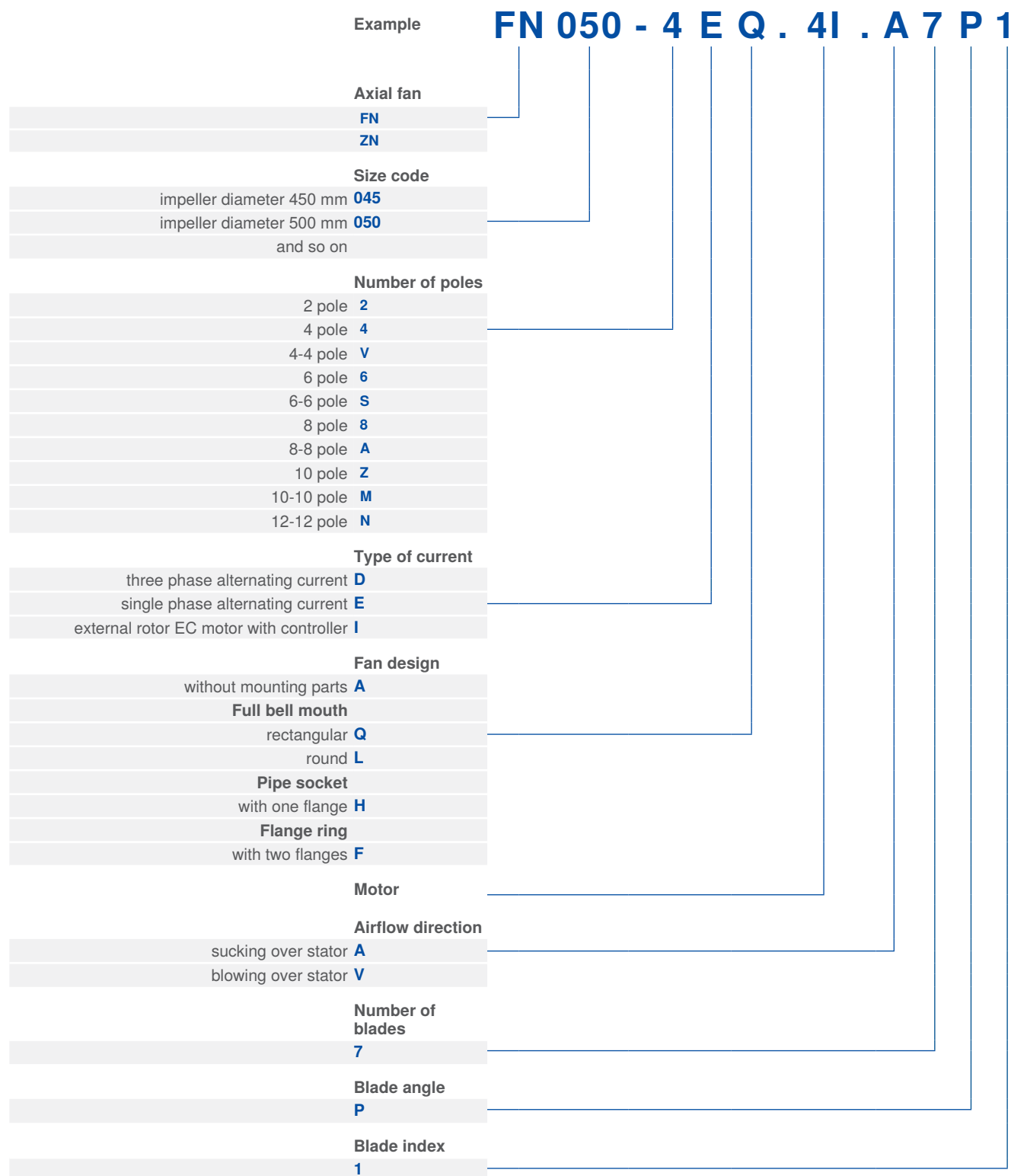
Please specify the following when ordering: Type, article no. and part no. system components if applicable

### Example

Type: RH45C-ZIK.DC.1R,  
Article no.: 171870

# Type key

## Axial fans with external rotor motor




# Selection programme FANselect

The world's best selection program for fans

watch list (14) options help logout

## FANselect

ZIEHL-ABEGG 

product range **fan selection** details system components output

airflow volume  m³/h


static pressure / total pressure  Pa  design influence

mains supply  search tolerance   %

ambient temperature  °C


additional selection criteria range design search

selection criteria range




Cpro-ECblue

airflow volume  
static pressure  
mains supply  
ambient temperature  
air density



C-ECblue

5000 m³/h  
550 Pa  
3° / 400V / 50 Hz  
20 °C  
1.16 kg/m³



Vpro-ECblue

200 / 225 hits

add to watch list	type	article no.	size [mm]	Q <sub>V</sub> [m³/h]	P <sub>sF</sub> [Pa]	P <sub>F</sub> [Pa]	SFP [SFP class]	P <sub>sys</sub> [W]	η <sub>F,sys</sub> [%]	n [1/min]	L <sub>wa</sub> (A)5 [dB]	L <sub>wa</sub> (A)6 [dB]	F <sub>op</sub> [Hz]	U <sub>sup</sub> [V]	I <sub>sup</sub> [A]	mains supply	q <sub>1,2</sub> [m³/h]	
performance curve	ER40C-ZID.DC.CR	114995/A01	400	5000	550	599	3	915	1225	67.9	1955	74	81	50	400	1.99	3° 400V 50Hz	616
Life-Cycle-Costs	GR40C-ZID.DC.CR	114547/H01	400	5000	550	599	3	915	1225	67.9	1955	74	81	50	400	1.99	3° 400V 50Hz	616
drawing	RH40C-ZID.DC.CR	114512	400	5000	550	599	3	915	1225	67.9	1955	74	81	50	400	1.99	3° 400V 50Hz	616
nominal values	GR40C-ZID.DC.CR	113712/A01	400	5000	550	607	3	948	1278	66.0	2019	77	84	50	400	2.15	3° 400V 50Hz	571
product information	GR40C-ZID.DC.CR	113682/O01	400	5000	550	607	3	948	1278	66.0	2019	77	84	50	400	2.15	3° 400V 50Hz	571
specification sheet	GR40C-ZID.DC.CR	113487	400	5000	550	607	3	948	1278	66.0	2019	77	84	50	400	2.15	3° 400V 50Hz	571
	GR40C-ZID.DC.CR	113682/U01	400	5000	550	607	3	948	1278	66.0	2019	77	84	50	400	2.15	3° 400V 50Hz	571
	GR40C-ZID.DC.CR	113682/H01	400	5000	550	607	3	948	1278	66.0	2019	77	84	50	400	2.15	3° 400V 50Hz	571
	ER35C-ZID.DC.CR	114589/A01	355	5000	550	628	3	1015	1368	63.8	2526	78	85	50	400	2.14	3° 400V 50Hz	591
	GR35C-ZID.DC.CR	114541/U01	355	5000	550	628	3	1015	1368	63.8	2526	78	85	50	400	2.14	3° 400V 50Hz	591
	GR35C-ZID.DC.CR	114541/O01	355	5000	550	628	3	1015	1368	63.8	2526	78	85	50	400	2.14	3° 400V 50Hz	591

reset back next


At [www.fanselect.info](http://www.fanselect.info), we are offering you FANselect, a selection program for axial and centrifugal fans with the matching system components.

With FANselect, you can, for instance, select and calculate the fans listed in this catalogue. FANselect provides you a facility for calculating the efficiency, the acoustics, the SFP and much more. In addition, you can also select the matching systems components. You can comfortably save your configuration in a file or print it out.

The FANselect selection program, including the customer DLL, is available for you to download at any time at [www.fanselect.info](http://www.fanselect.info).

watch list (14) options help logout

## FANselect

ZIEHL-ABEGG 

product range fan selection **details** system components output

type	article no.	Q <sub>V</sub> [m³/h]	P <sub>sF</sub> [Pa]	P <sub>F</sub> [Pa]	SFP [SFP class]	P <sub>sys</sub> [W]	η <sub>F,sys</sub> [%]	n [1/min]	power input P <sub>sys</sub>
GR40C-ZID.DC.CR	114547/H01	5000	550	599	3	915	1225	62.4	67.9

air performance | measurement density 1.16 [kg/m³]  
measured in standard nozzle in installation type A according to ISO 5801

Q<sub>V</sub> [m³/h] P<sub>sF</sub> [Pa]

add to watch list

performance curve

Life-Cycle-Costs

drawing

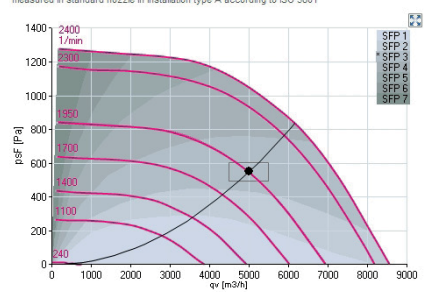
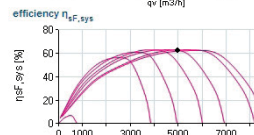
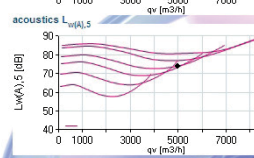
nominal values

product information

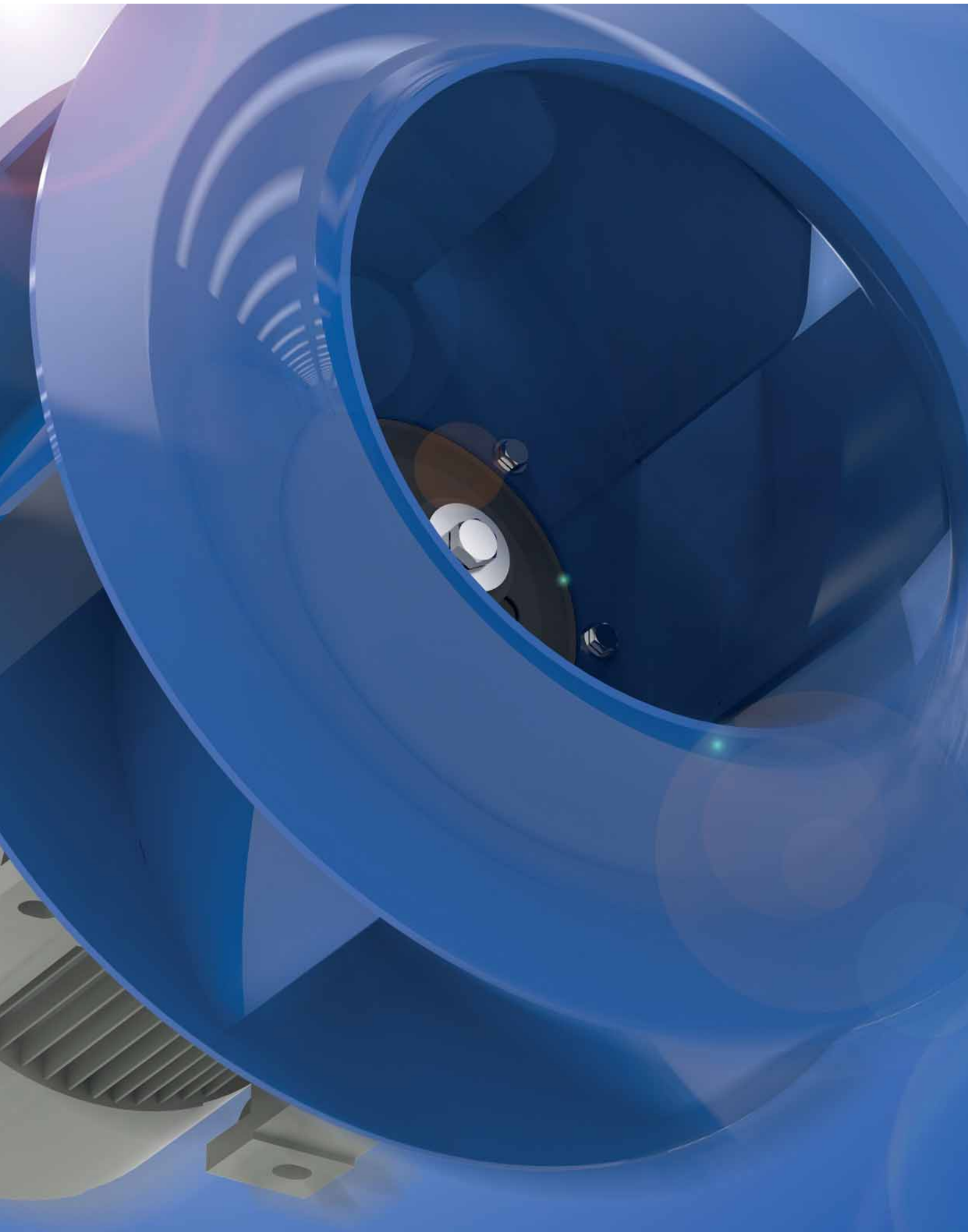
specification sheet

SFP class

reset

back next



# ZArail

## AC technology

### Product overview

Quick selection	Page 40
Size 315	Page 42
Size 355	Page 50
Size 400	Page 58
Size 450	Page 66
Size 500	Page 74

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

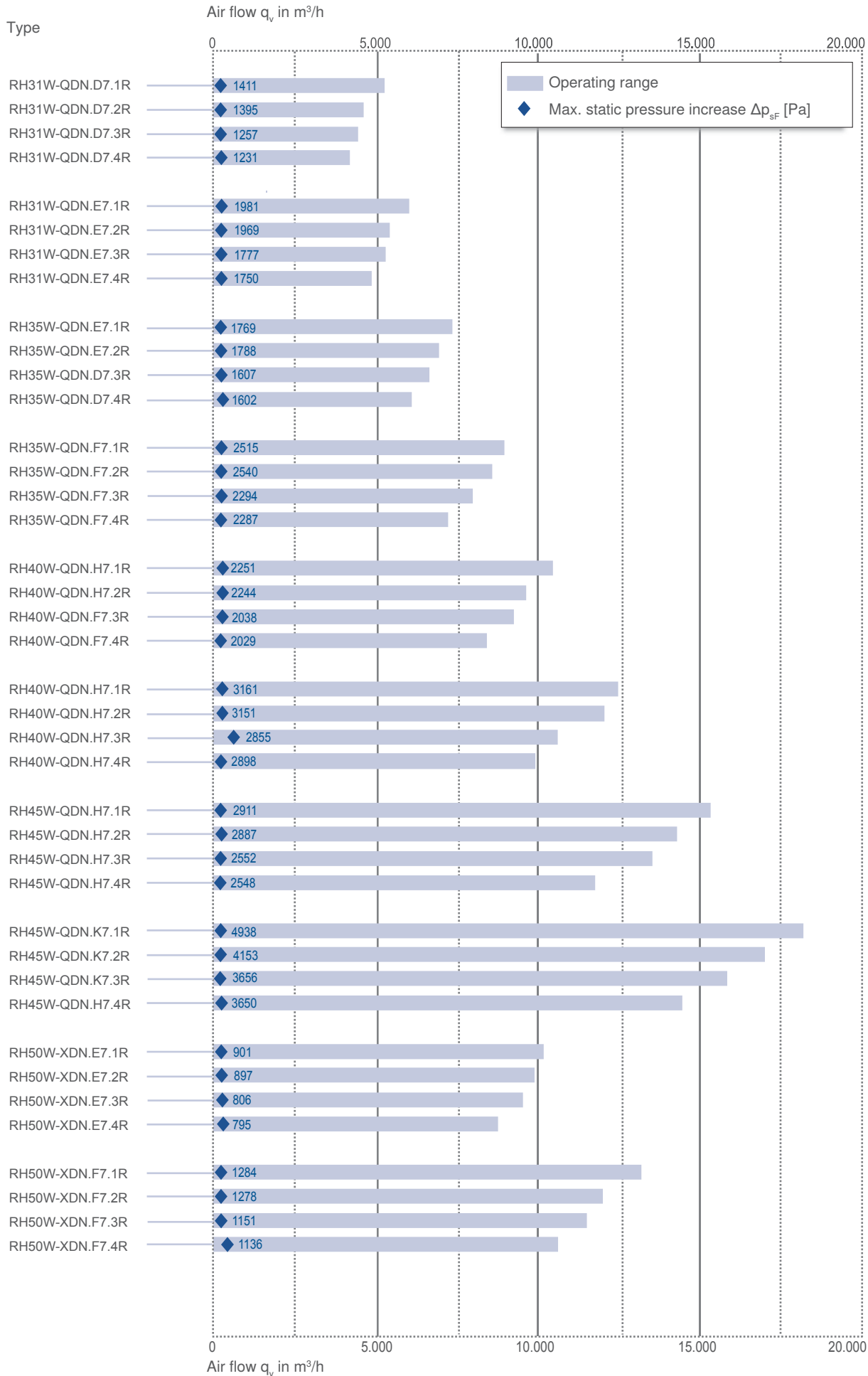
M series

FE2owlet

Size	Frequency	Voltage	Type	Page
315	50 Hz	3~ 400V	RH31W-QDN.D7.1R	42
			RH31W-QDN.D7.2R	44
			RH31W-QDN.D7.3R	46
			RH31W-QDN.D7.4R	48
	60 Hz	3~ 460V	RH31W-QDN.E7.1R	42
			RH31W-QDN.E7.2R	44
			RH31W-QDN.E7.3R	46
			RH31W-QDN.E7.4R	48
355	50 Hz	3~ 400V	RH35W-QDN.E7.1R	50
			RH35W-QDN.E7.2R	52
			RH35W-QDN.D7.3R	54
			RH35W-QDN.D7.4R	56
	60 Hz	3~ 460V	RH35W-QDN.F7.1R	50
			RH35W-QDN.F7.2R	52
			RH35W-QDN.F7.3R	54
			RH35W-QDN.F7.4R	56
400	50 Hz	3~ 400V	RH40W-QDN.H7.1R	58
			RH40W-QDN.H7.2R	60
			RH40W-QDN.F7.3R	62
			RH40W-QDN.F7.4R	64
	60 Hz	3~ 460V	RH40W-QDN.H7.1R	58
			RH40W-QDN.H7.2R	60
			RH40W-QDN.H7.3R	62
			RH40W-QDN.H7.4R	64
450	50 Hz	3~ 400V	RH45W-QDN.H7.1R	66
			RH45W-QDN.H7.2R	68
			RH45W-QDN.H7.3R	70
			RH45W-QDN.H7.4R	72
	60 Hz	3~ 460V	RH45W-QDN.K7.1R	66
			RH45W-QDN.K7.2R	68
			RH45W-QDN.K7.3R	70
			RH45W-QDN.H7.4R	72
500	50 Hz	3~ 400V	RH50W-XDN.E7.1R	74
			RH50W-XDN.E7.2R	76
			RH50W-XDN.E7.3R	78
			RH50W-XDN.E7.4R	80
	60 Hz	3~ 460V	RH50W-XDN.F7.1R	74
			RH50W-XDN.F7.2R	76
			RH50W-XDN.F7.3R	78
			RH50W-XDN.F7.4R	80







Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# ZArail

## RH31W..1R

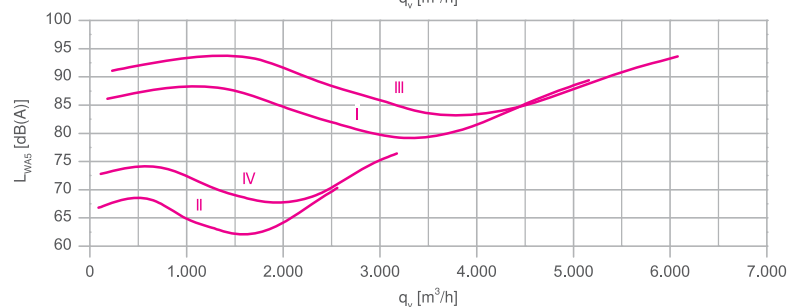
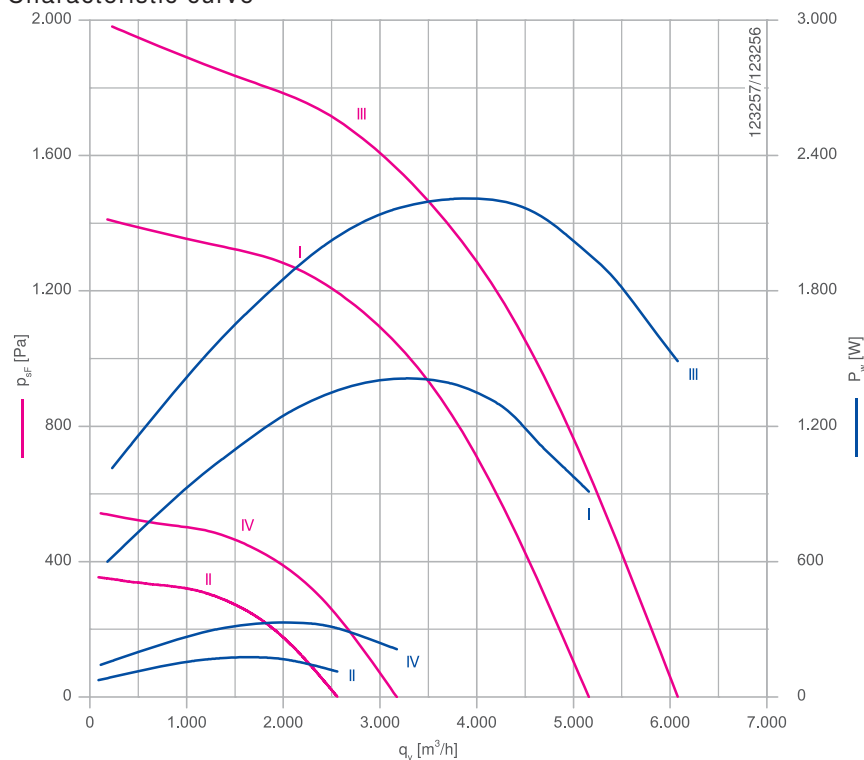
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



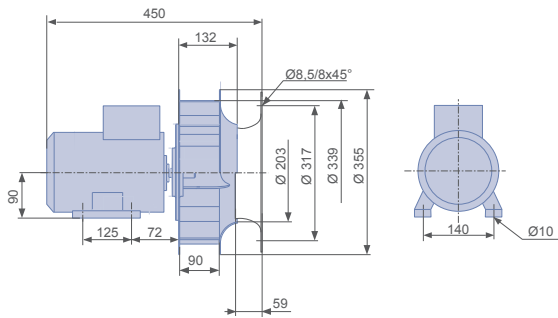
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH31W-QDN.D7.1R</b>
Article no.			<b>172332</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.18/1.50
Rated current	$I_N$	A	0.70/3.60
Speed	$n_N$	min <sup>-1</sup>	1475/2890
Weight		kg	28.00
Characteristic curves			II/I

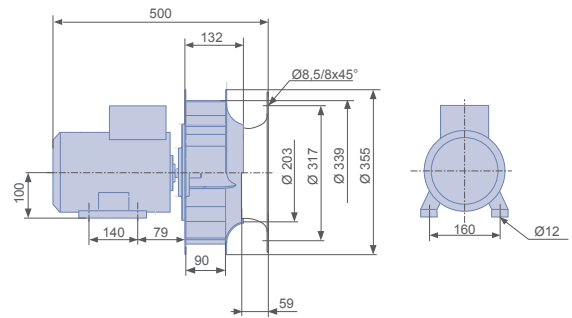
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			100L
Type			<b>RH31W-QDN.E7.1R</b>
Article no.			<b>172352</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.40
Rated current	$I_N$	A	1.15/5.35
Speed	$n_N$	min <sup>-1</sup>	1780/3530
Weight		kg	40.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-01



L-KL-3505-05

# ZArail

## RH31W..2R

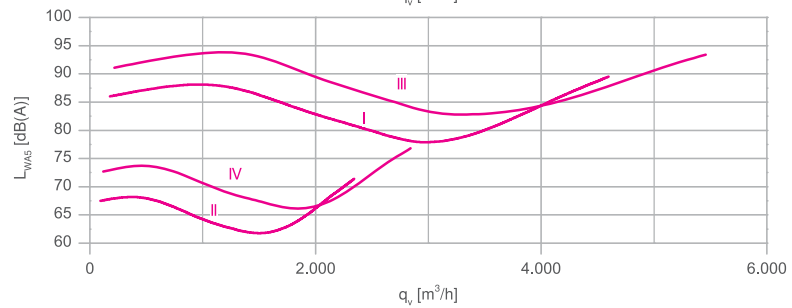
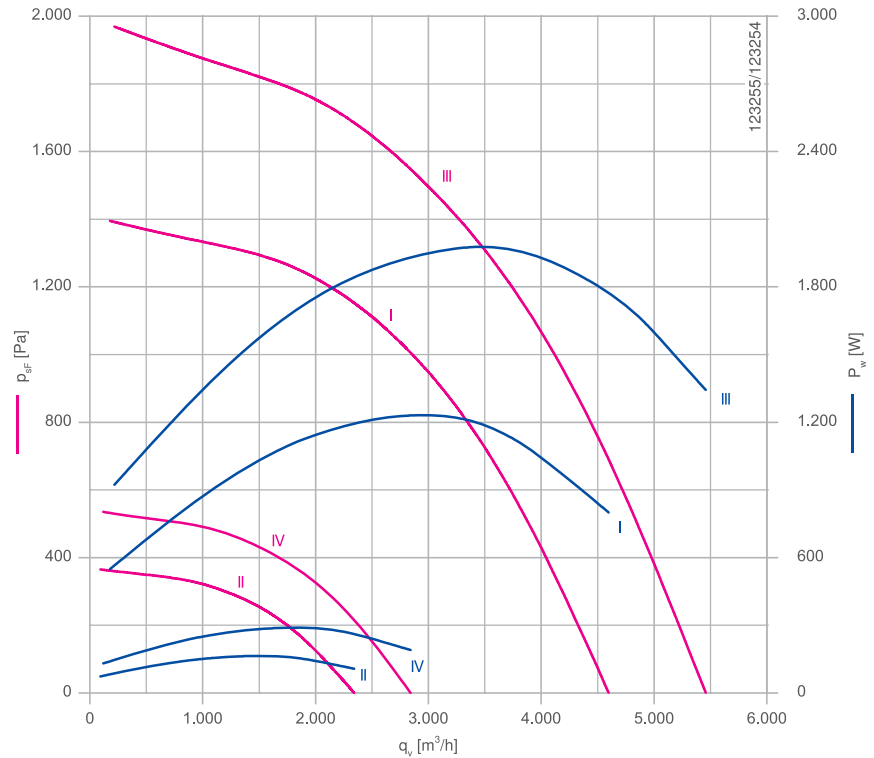
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



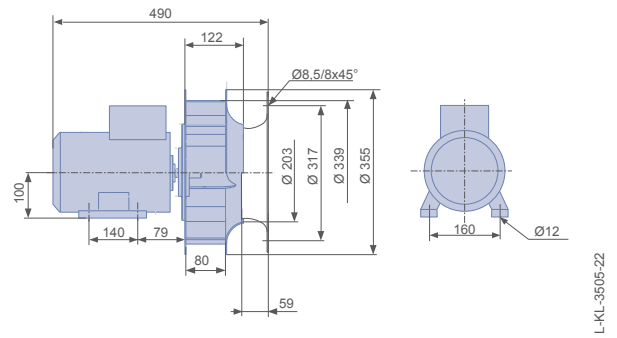
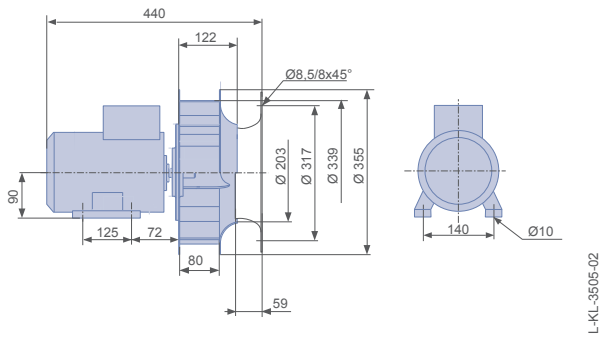
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH31W-QDN.D7.2R</b>
Article no.			<b>172333</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.18/1.50
Rated current	$I_N$	A	0.70/3.60
Speed	$n_N$	min <sup>-1</sup>	1475/2890
Weight		kg	27.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			100L
Type			<b>RH31W-QDN.E7.2R</b>
Article no.			<b>172353</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.40
Rated current	$I_N$	A	1.15/5.35
Speed	$n_N$	min <sup>-1</sup>	1780/3530
Weight		kg	39.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH31W..3R

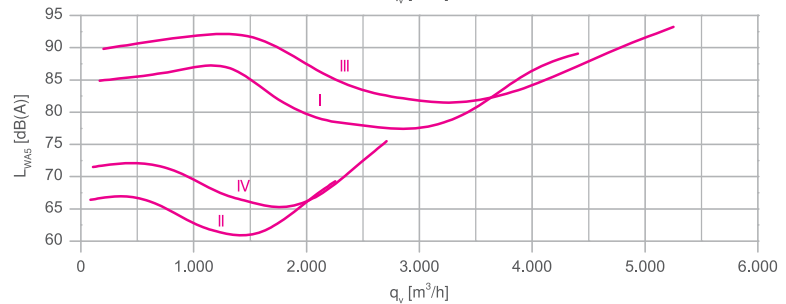
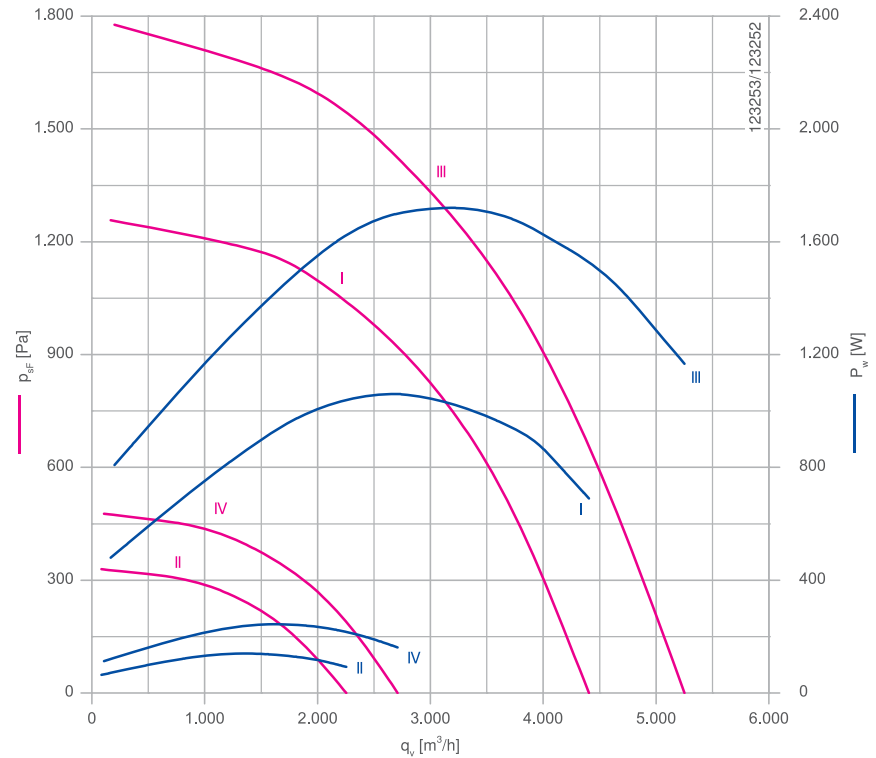
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411846		
Connection diagram	1360-221XA		Page 328
	KLK		



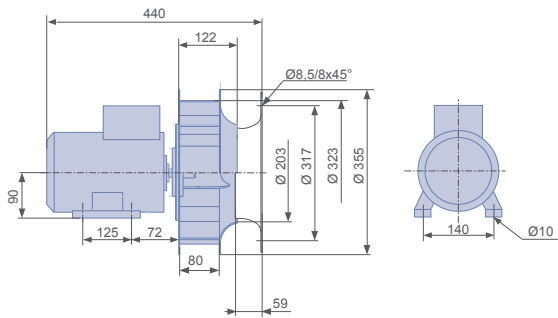
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH31W-QDN.D7.3R</b>
Article no.			<b>172334</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.15/1.20
Rated current	$I_N$	A	0.67/3.20
Speed	$n_N$	min <sup>-1</sup>	1480/2910
Weight		kg	27.00
Characteristic curves			II/I

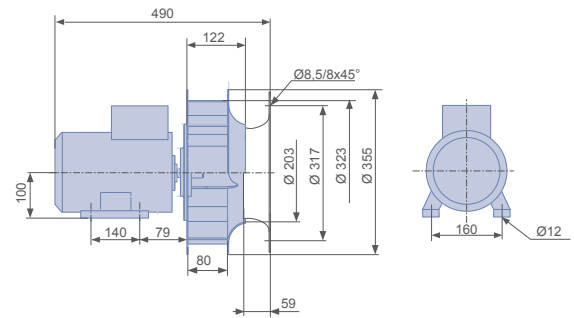
Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			100L
Type			<b>RH31W-QDN.E7.3R</b>
Article no.			<b>172354</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.25/2.00
Rated current	$I_N$	A	1.10/4.90
Speed	$n_N$	min <sup>-1</sup>	1790/3540
Weight		kg	39.00
Characteristic curves			IV/III

Dimensions mm



L-KL-3505-03



L-KL-3505-23

# ZArail

## RH31W..4R

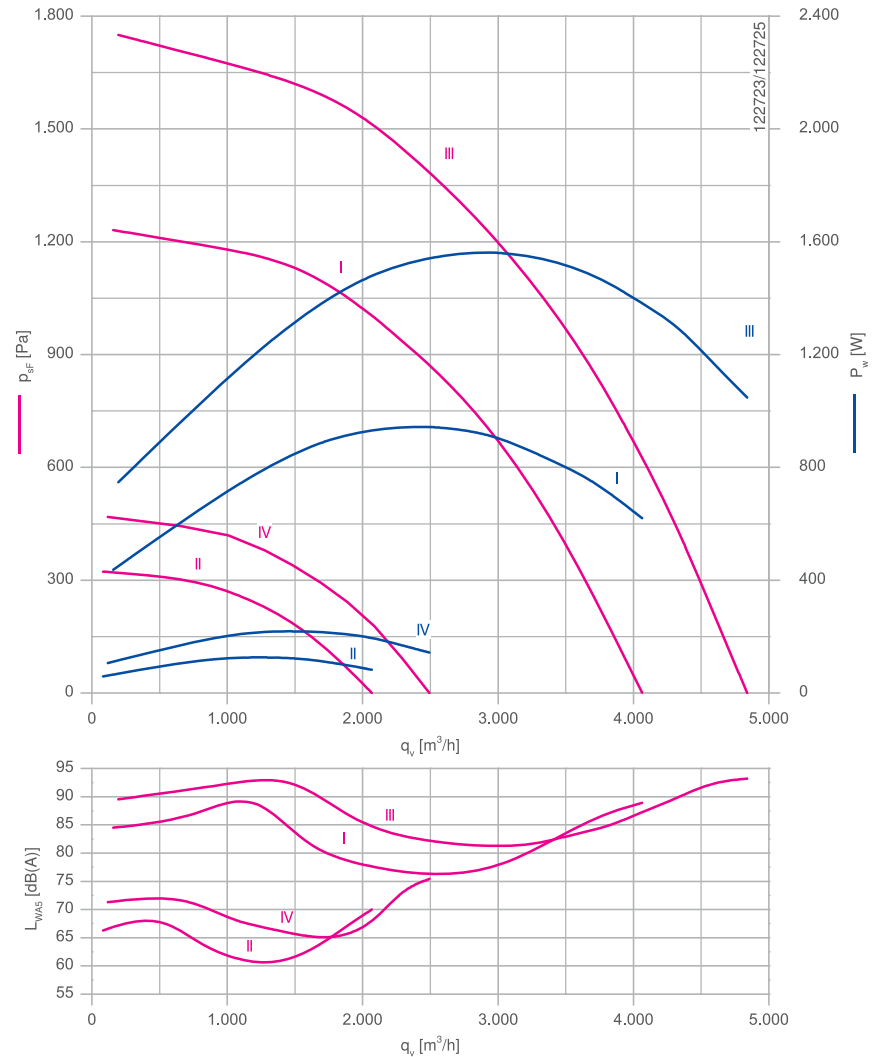
## Standard motor



### Description

Design: RH\*  
 Design: IMB 3  
 Installation position: H  
 Thermal class: THCL155  
 Degree of protection : IP55  
 Number of poles: 4-2 pole  
 Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
 Impeller made of bright sheet metal, powder-coated, ultramarine blue  
 Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411846		
Connection diagram	1360-221XA		Page 328
	KLK		





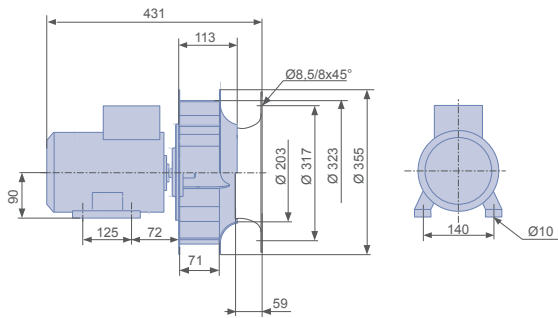
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH31W-QDN.D7.4R</b>
Article no.			<b>172335</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.15/1.20
Rated current	$I_N$	A	0.67/3.20
Speed	$n_N$	min <sup>-1</sup>	1480/2910
Weight		kg	27.00
Characteristic curves			II/I

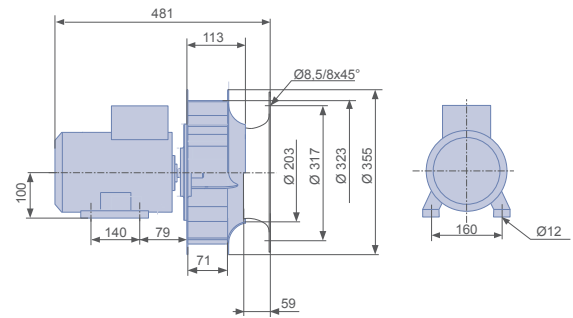
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			100L
Type			<b>RH31W-QDN.E7.4R</b>
Article no.			<b>172355</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.25/2.00
Rated current	$I_N$	A	1.10/4.90
Speed	$n_N$	min <sup>-1</sup>	1790/3540
Weight		kg	39.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-04



L-KL-3505-24

# ZArail

## RH35W..1R

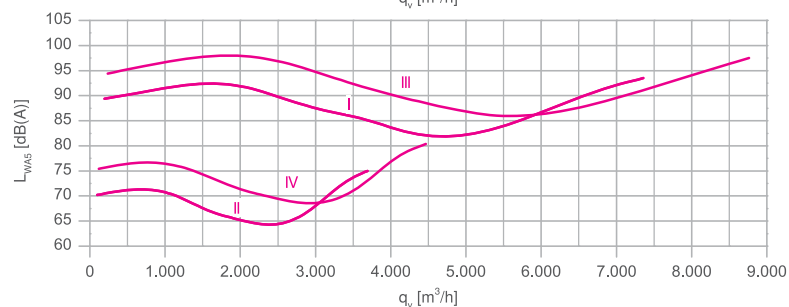
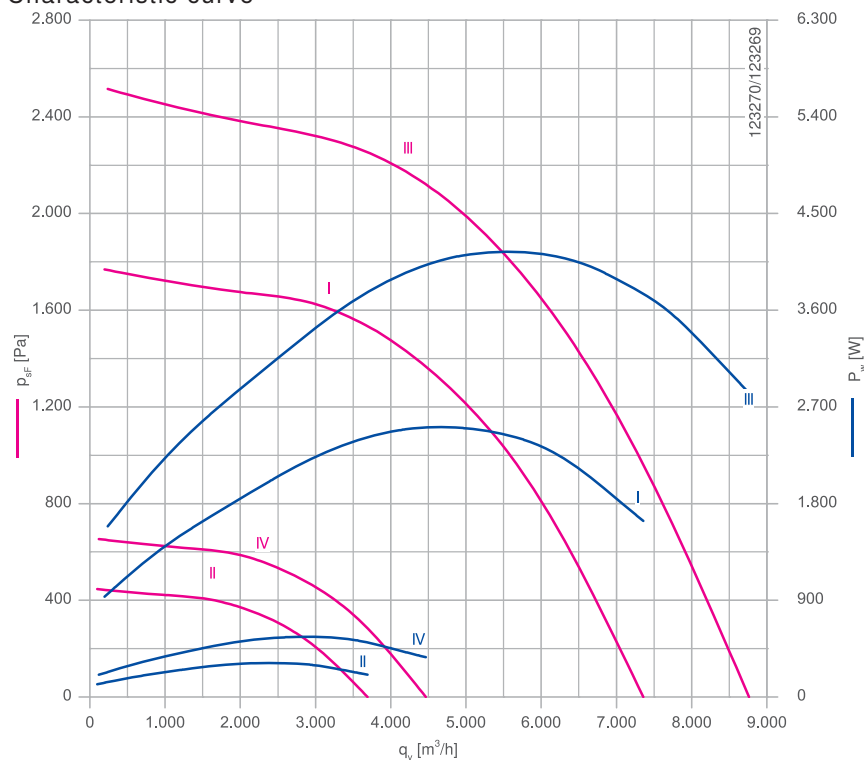
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring 00411854 RAL 7032 Page 302

(pebble grey)  
unpainted

Inlet ring 00411847  
Connection diagram 1360-221XA  
KLK

Page 328



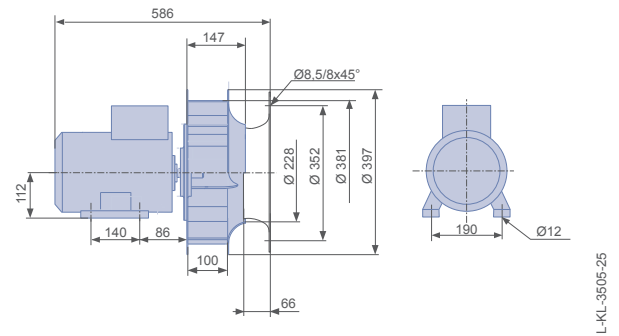
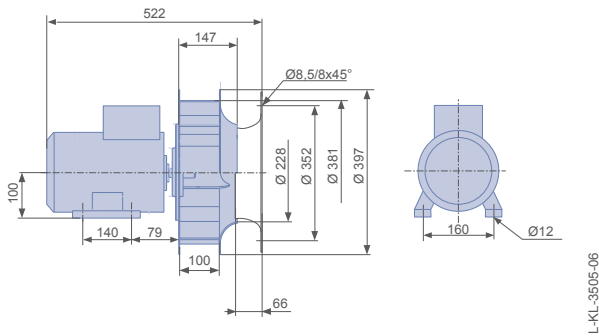
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH35W-QDN.E7.1R</b>
Article no.			<b>172336</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.40/2.60
Rated current	$I_N$	A	1.3/6.1
Speed	$n_N$	min <sup>-1</sup>	1480/2920
Weight		kg	40.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH35W-QDN.F7.1R</b>
Article no.			<b>172356</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.55/4.30
Rated current	$I_N$	A	1.35/7.90
Speed	$n_N$	min <sup>-1</sup>	1760/3510
Weight		kg	56.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH35W..2R

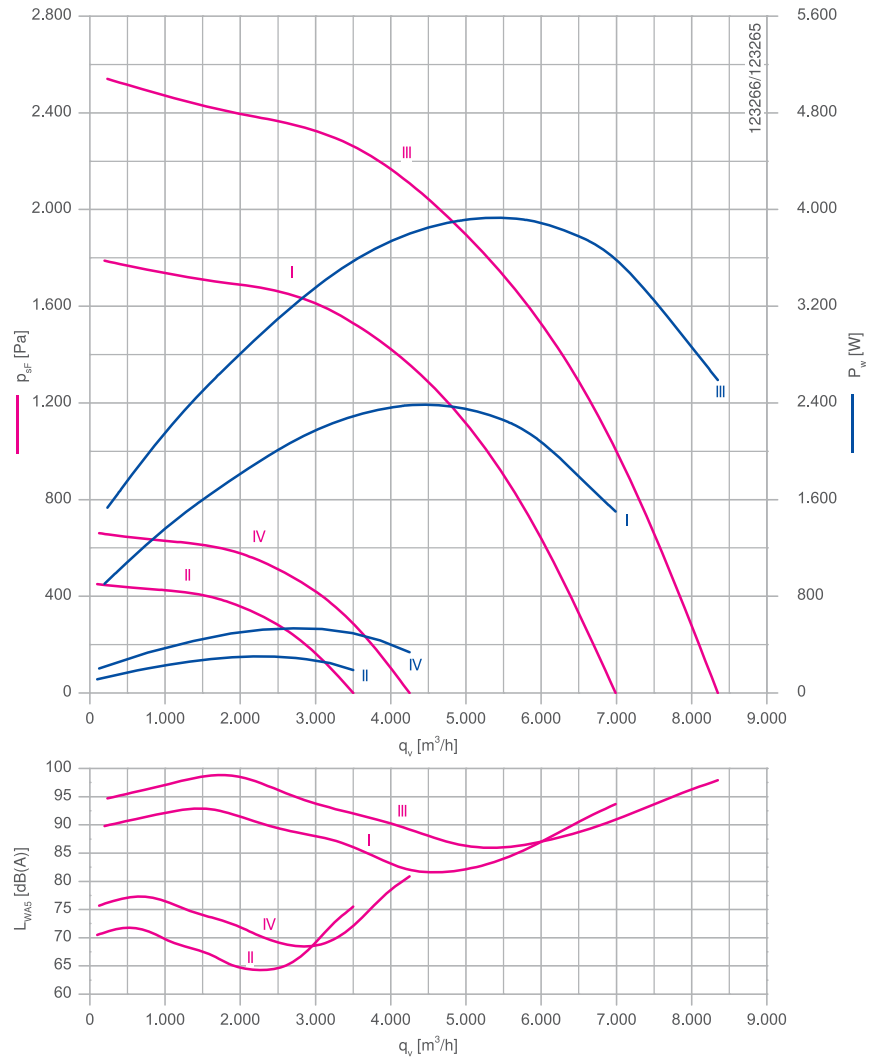
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411847		
Connection diagram	1360-221XA		Page 328
	KLK		



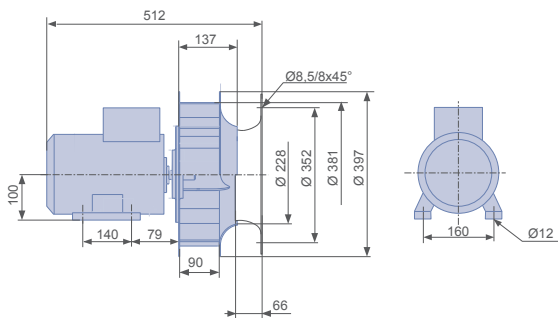
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH35W-QDN.E7.2R</b>
Article no.			<b>172337</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.40/2.60
Rated current	$I_N$	A	1.3/6.1
Speed	$n_N$	min <sup>-1</sup>	1480/2920
Weight		kg	40.00
Characteristic curves			II/I

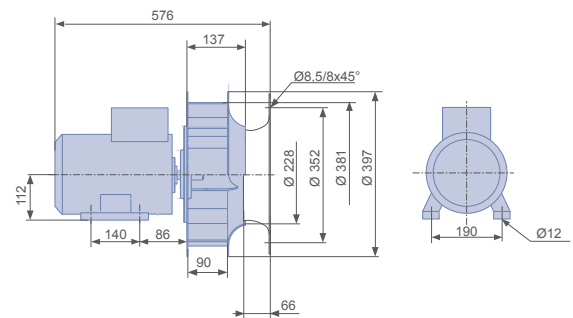
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH35W-QDN.F7.2R</b>
Article no.			<b>172357</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.55/4.30
Rated current	$I_N$	A	1.35/7.90
Speed	$n_N$	min <sup>-1</sup>	1760/3510
Weight		kg	56.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-07



L-KL-3505-26

# ZArail

## RH35W..3R

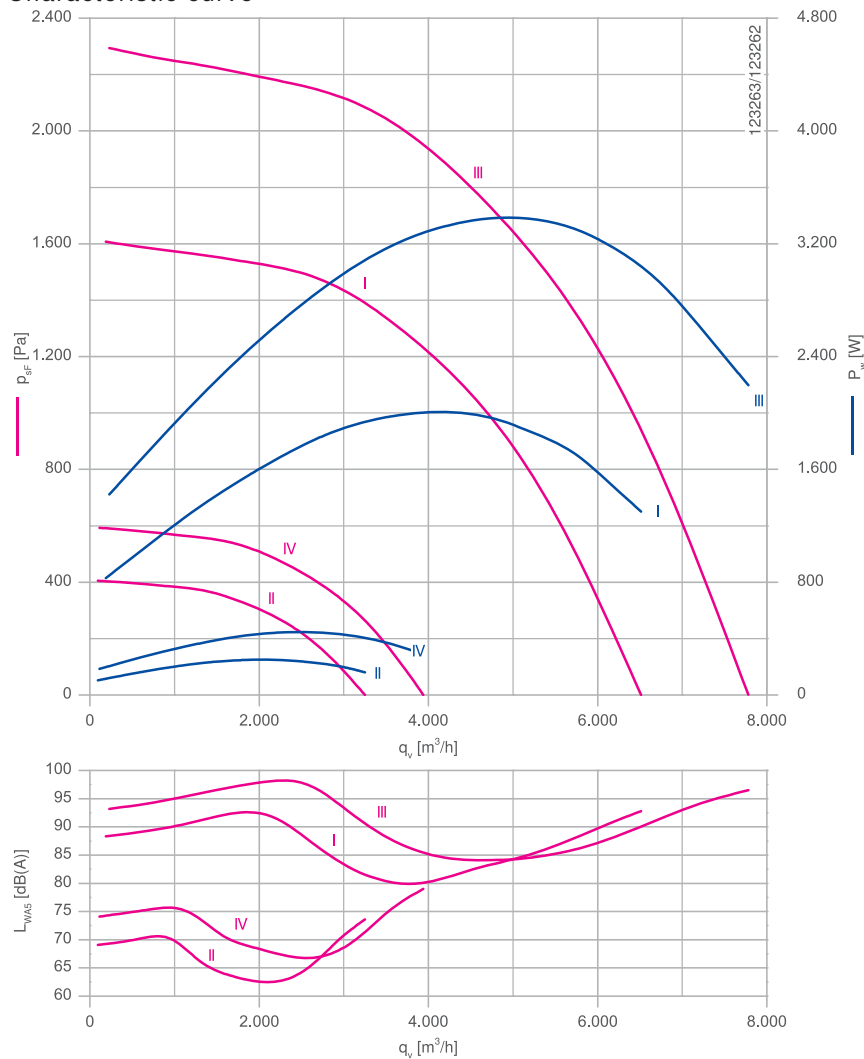
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411847		
Connection diagram	1360-221XA		Page 328
	KLK		



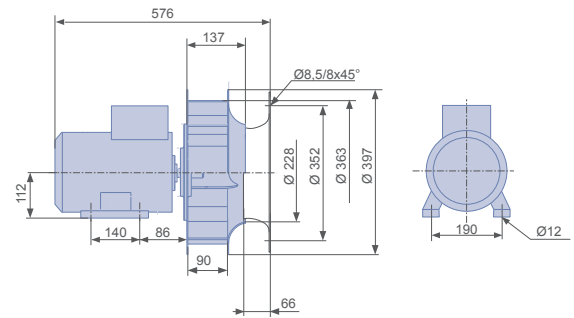
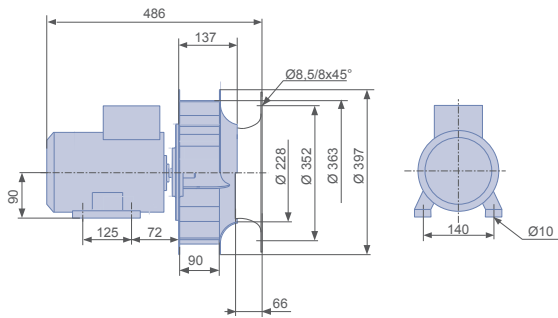
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH35W-QDN.D7.3R</b>
Article no.			<b>172338</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.00
Rated current	$I_N$	A	1.25/5.50
Speed	$n_N$	min <sup>-1</sup>	1485/2940
Weight		kg	34.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH35W-QDN.F7.3R</b>
Article no.			<b>172358</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.45/3.50
Rated current	$I_N$	A	1.25/6.90
Speed	$n_N$	min <sup>-1</sup>	1770/3530
Weight		kg	56.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH35W..4R

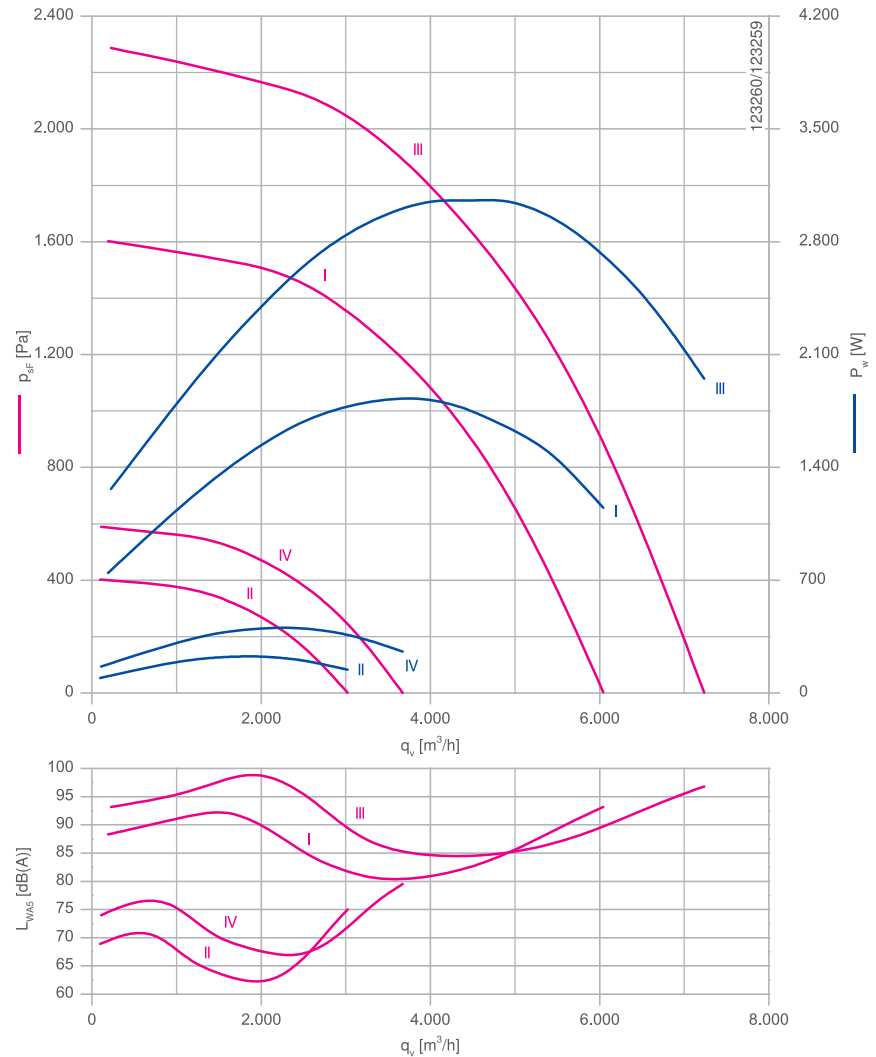
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411847	unpainted	
Connection diagram	1360-221XA KLK		Page 328





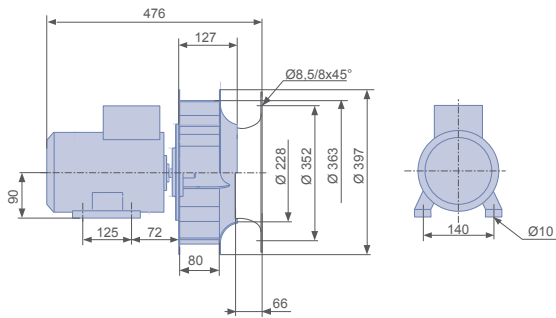
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			090L
Type			<b>RH35W-QDN.D7.4R</b>
Article no.			<b>172339</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.00
Rated current	$I_N$	A	1.25/5.50
Speed	$n_N$	min <sup>-1</sup>	1485/2940
Weight		kg	34.00
Characteristic curves			II/I

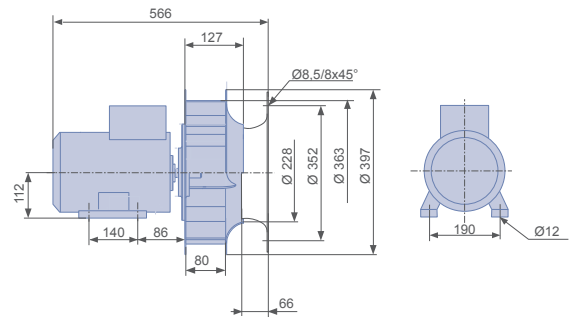
Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH35W-QDN.F7.4R</b>
Article no.			<b>172359</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.45/3.50
Rated current	$I_N$	A	1.25/6.90
Speed	$n_N$	min <sup>-1</sup>	1770/3530
Weight		kg	56.00
Characteristic curves			IV/III

Dimensions mm



L-KL-3505-09



L-KL-3505-28

# ZArail

## RH40W..1R

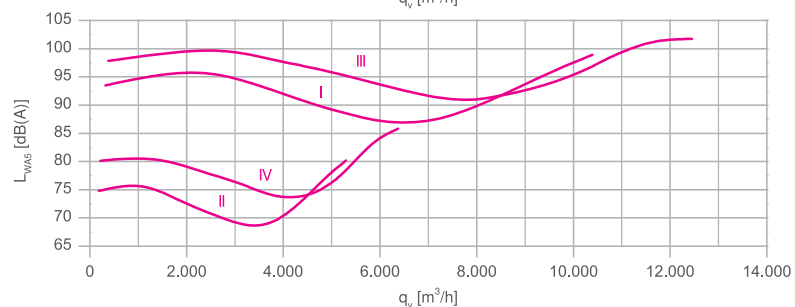
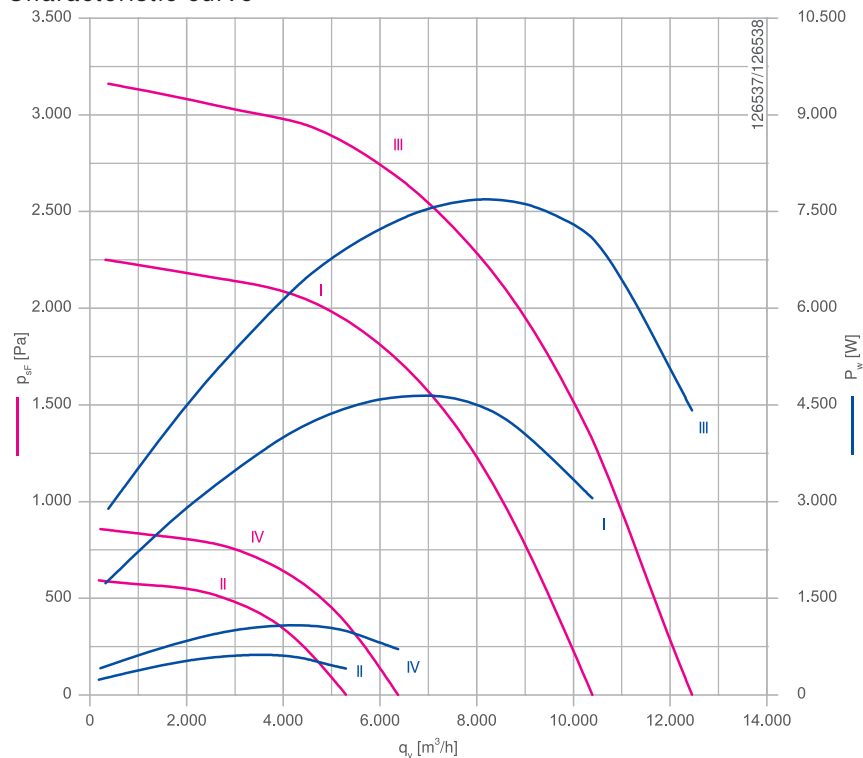
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



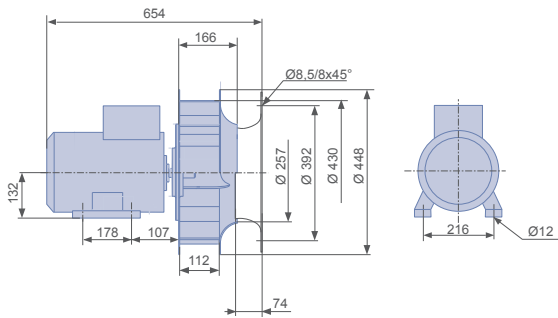
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH40W-QDN.H7.1R</b>
Article no.			<b>172340</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.30/4.90
Rated current	$I_N$	A	2.70/10.80
Speed	$n_N$	min <sup>-1</sup>	1460/2900
Weight		kg	90.00
Characteristic curves			II/I

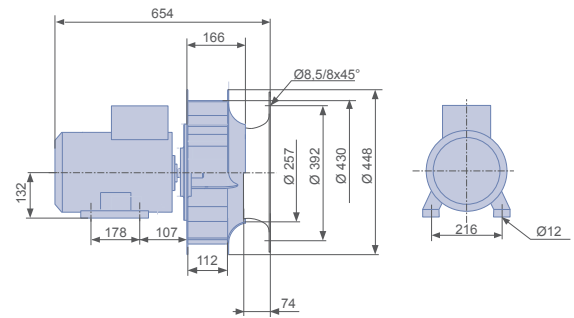
Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	460
Motor size			132M
Type			<b>RH40W-QDN.H7.1R</b>
Article no.			<b>172360</b>
Connection			Y/YY
Motor output power	$P_N$	kW	2.20/8.20
Rated current	$I_N$	A	4.50/15.50
Speed	$n_N$	min <sup>-1</sup>	1750/3480
Weight		kg	89.00
Characteristic curves			IV/III

Dimensions mm



L-KL-3505-10



L-KL-3505-29

# ZArail

## RH40W..2R

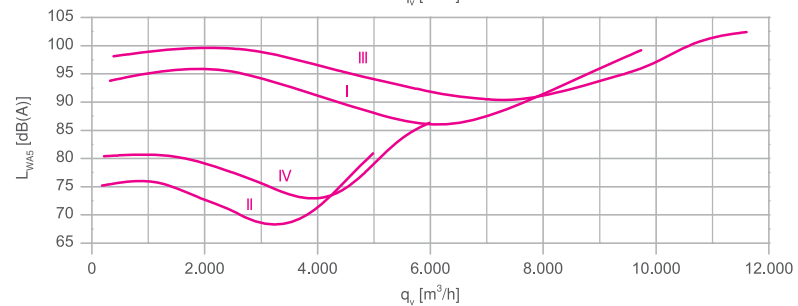
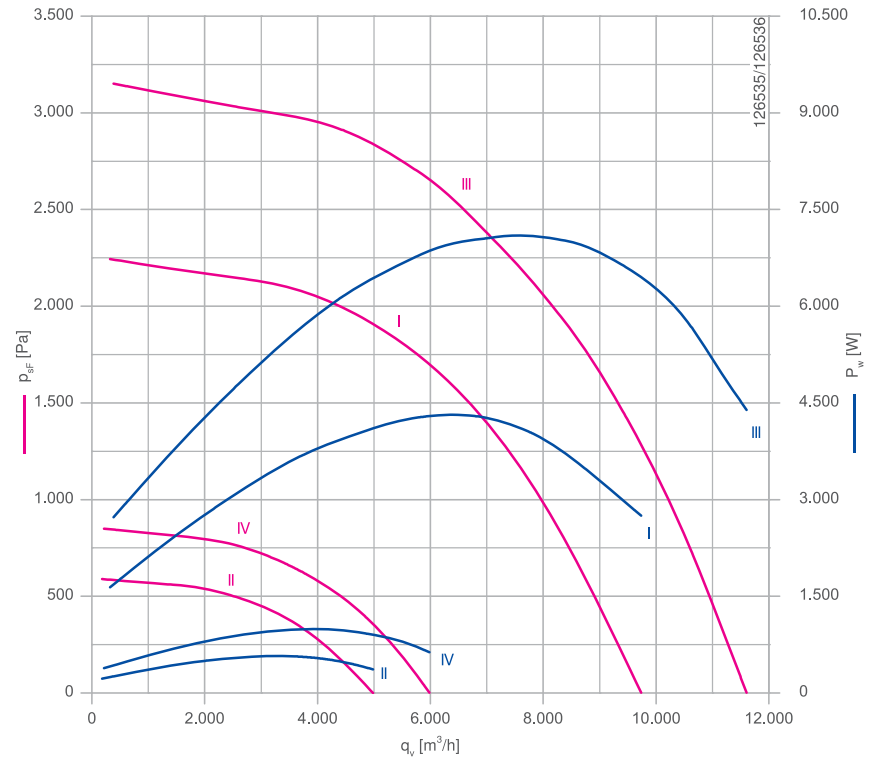
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411848		
Connection diagram	1360-221XA		Page 328
	KLK		



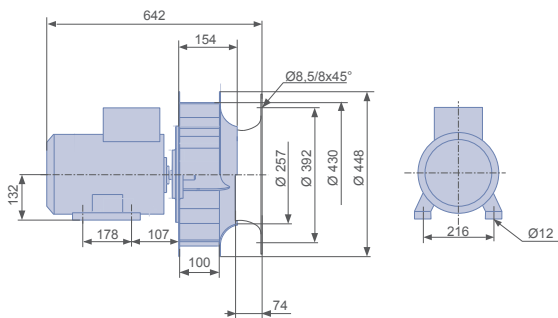
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH40W-QDN.H7.2R</b>
Article no.			<b>172341</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.30/4.90
Rated current	$I_N$	A	2.70/10.80
Speed	$n_N$	min <sup>-1</sup>	1460/2900
Weight		kg	89.00
Characteristic curves			II/I

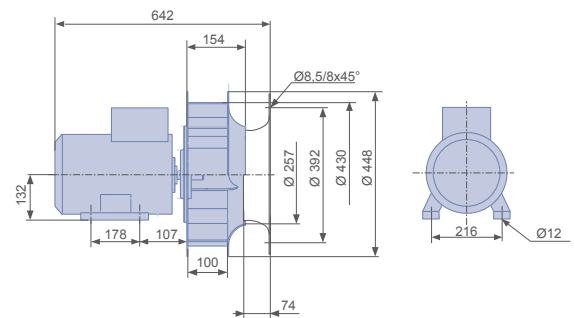
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	460
Motor size			132M
Type			<b>RH40W-QDN.H7.2R</b>
Article no.			<b>172361</b>
Connection			Y/YY
Motor output power	$P_N$	kW	2.20/8.20
Rated current	$I_N$	A	4.50/15.50
Speed	$n_N$	min <sup>-1</sup>	1750/3480
Weight		kg	88.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-11



L-KL-3505-30

# ZArail

## RH40W..3R

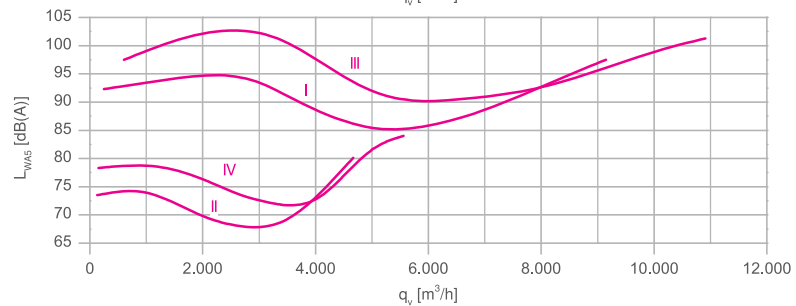
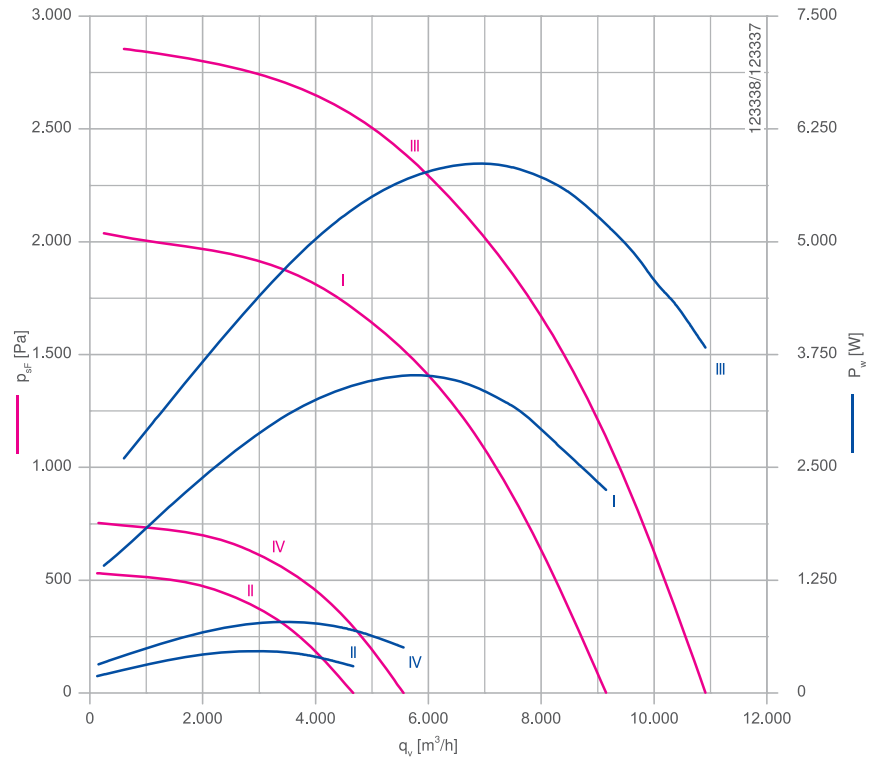
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



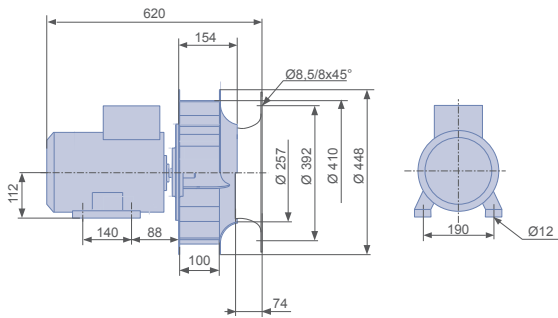
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			112M
Type			<b>RH40W-QDN.F7.3R</b>
Article no.			<b>172342</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.00/3.90
Rated current	$I_N$	A	2.00/7.90
Speed	$n_N$	min <sup>-1</sup>	1450/2870
Weight		kg	76.00
Characteristic curves			II/I

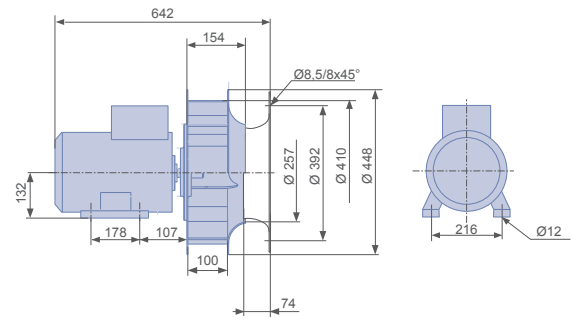
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			132M
Type			<b>RH40W-QDN.H7.3R</b>
Article no.			<b>172362</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.80/6.50
Rated current	$I_N$	A	3.70/12.60
Speed	$n_N$	min <sup>-1</sup>	1740/3470
Weight		kg	88.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-12



L-KL-3505-31

# ZArail

## RH40W..4R

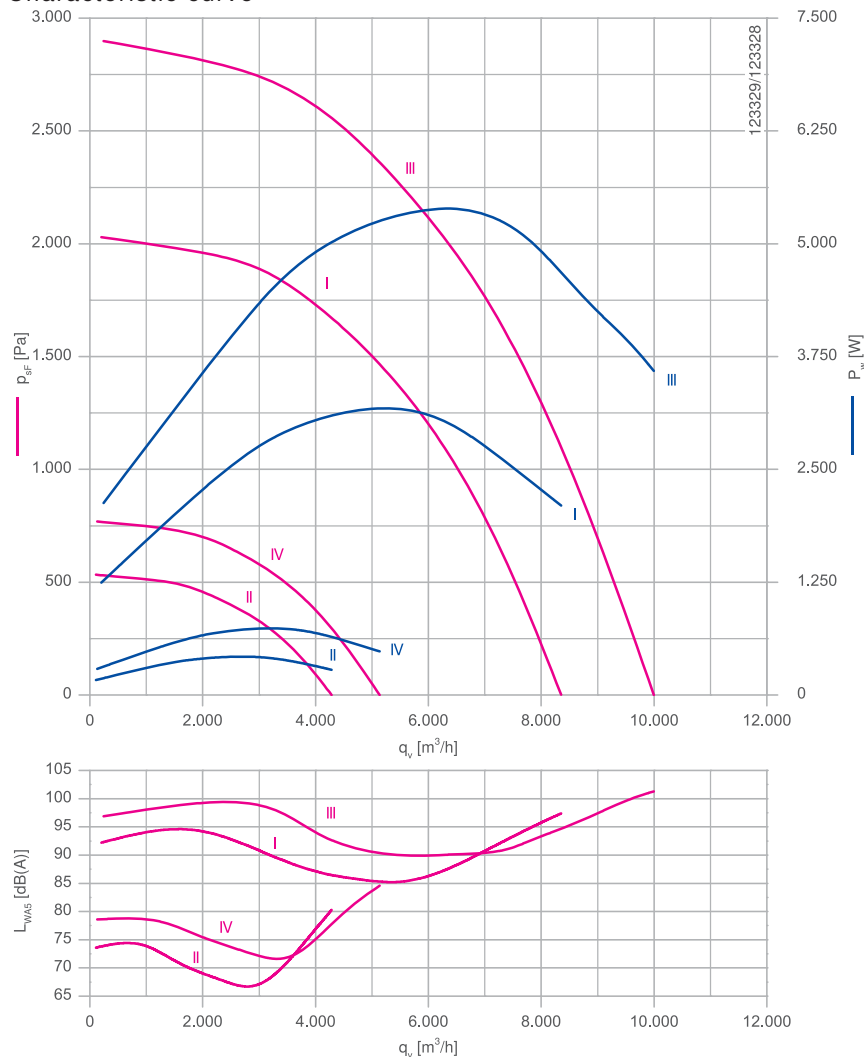
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411848		
Connection diagram	1360-221XA		Page 328
	KLK		





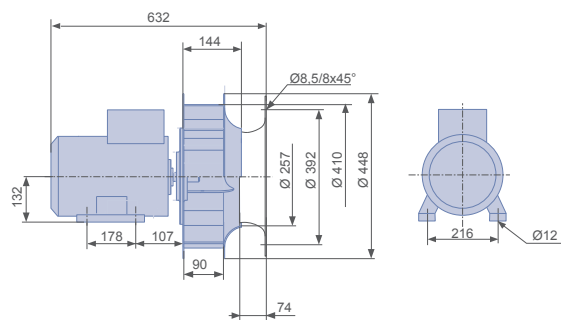
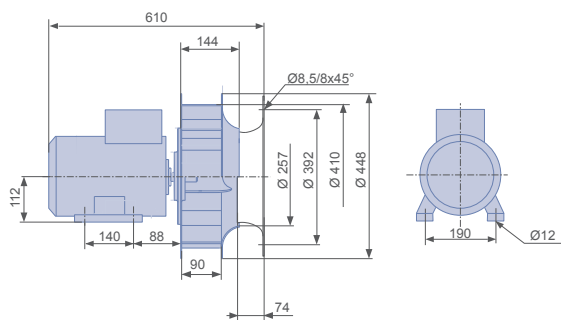
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			112M
Type			<b>RH40W-QDN.F7.4R</b>
Article no.			<b>172343</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.00/3.90
Rated current	$I_N$	A	2.00/7.90
Speed	$n_N$	min <sup>-1</sup>	1450/2870
Weight		kg	75.00
Characteristic curves			II/I

### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			132M
Type			<b>RH40W-QDN.H7.4R</b>
Article no.			<b>172363</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.80/6.50
Rated current	$I_N$	A	3.70/12.60
Speed	$n_N$	min <sup>-1</sup>	1740/3470
Weight		kg	87.00
Characteristic curves			IV/III

### Dimensions mm



# ZArail

## RH45W..1R

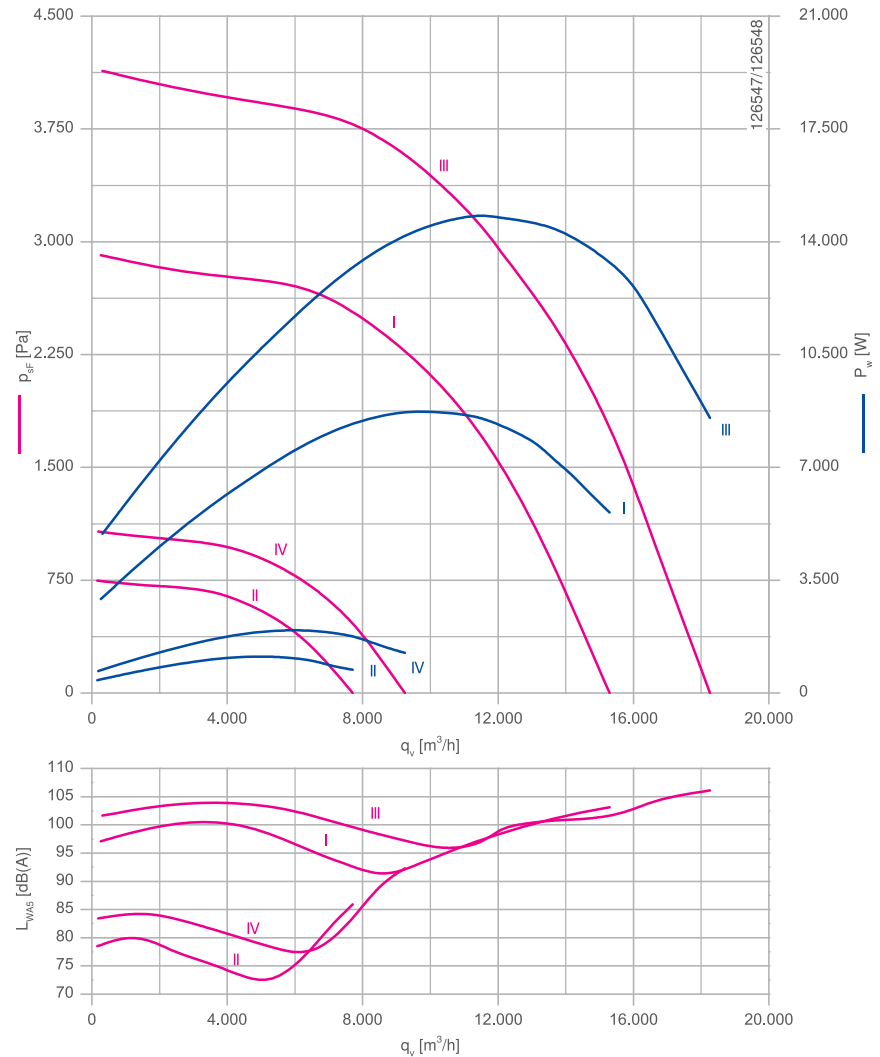
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411849		
Connection diagram	1360-221XA		Page 328
	KLK		



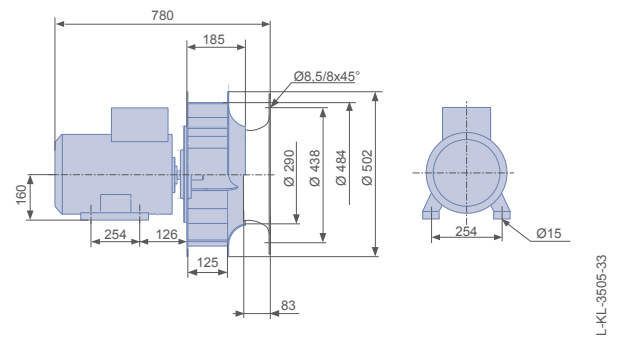
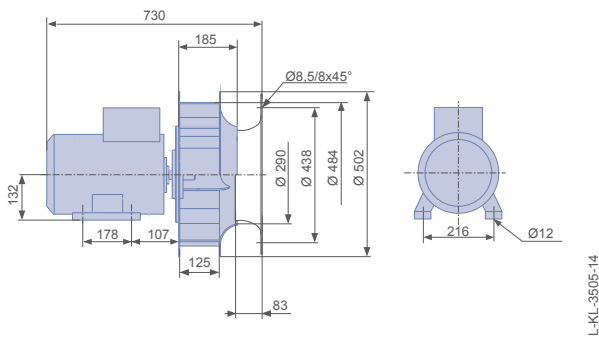
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH45W-QDN.H7.1R</b>
Article no.			<b>172344</b>
Connection			Y/YY
Motor output power	$P_N$	kW	2.50/8.90
Rated current	$I_N$	A	4.90/17.60
Speed	$n_N$	min <sup>-1</sup>	1450/2890
Weight		kg	115.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			160L
Type			<b>RH45W-QDN.K7.1R</b>
Article no.			<b>172364</b>
Connection			Y/YY
Motor output power	$P_N$	kW	4.00/15.00
Rated current	$I_N$	A	7.30/24.60
Speed	$n_N$	min <sup>-1</sup>	1750/3500
Weight		kg	143.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH45W..2R

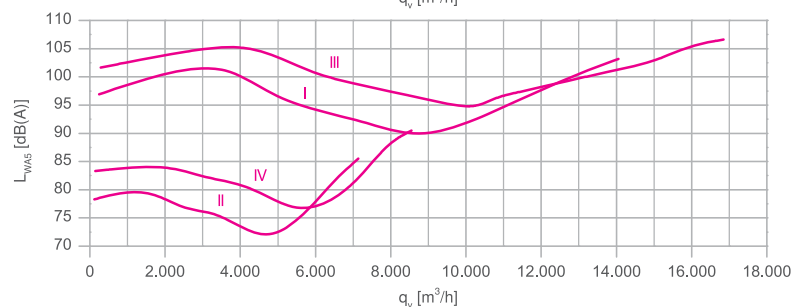
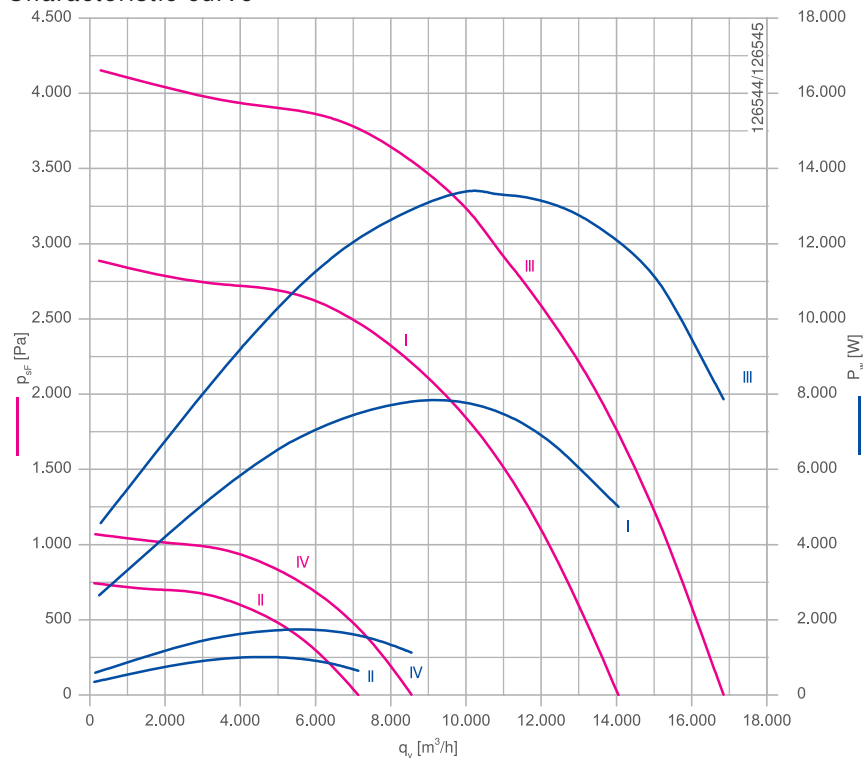
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411849		
Connection diagram	1360-221XA		Page 328
	KLK		



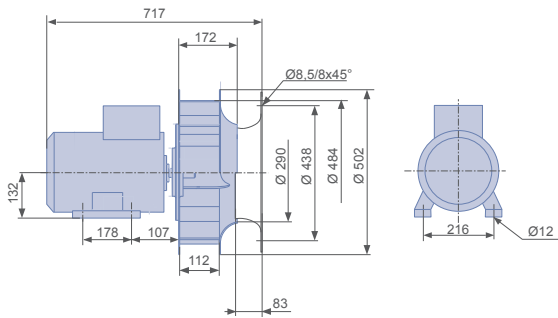
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH45W-QDN.H7.2R</b>
Article no.			<b>172345</b>
Connection			Y/YY
Motor output power	$P_N$	kW	2.50/8.90
Rated current	$I_N$	A	4.90/17.60
Speed	$n_N$	min <sup>-1</sup>	1450/2890
Weight		kg	115.00
Characteristic curves			II/I

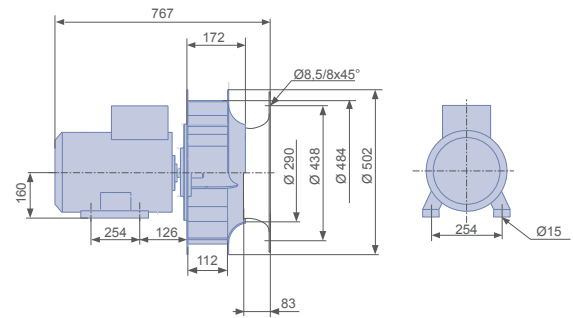
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			160L
Type			<b>RH45W-QDN.K7.2R</b>
Article no.			<b>172365</b>
Connection			Y/YY
Motor output power	$P_N$	kW	4.00/15.00
Rated current	$I_N$	A	7.30/24.60
Speed	$n_N$	min <sup>-1</sup>	1750/3500
Weight		kg	143.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-15



L-KL-3505-34

# ZArail

## RH45W..3R

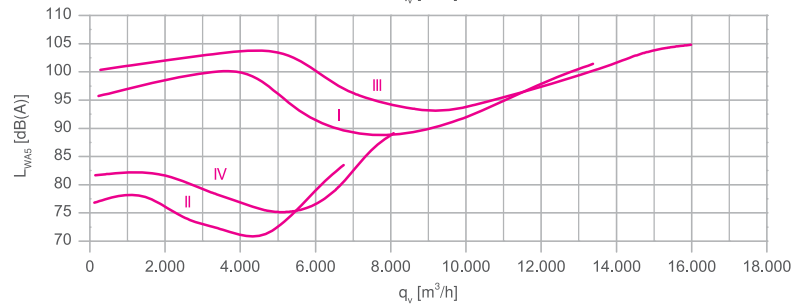
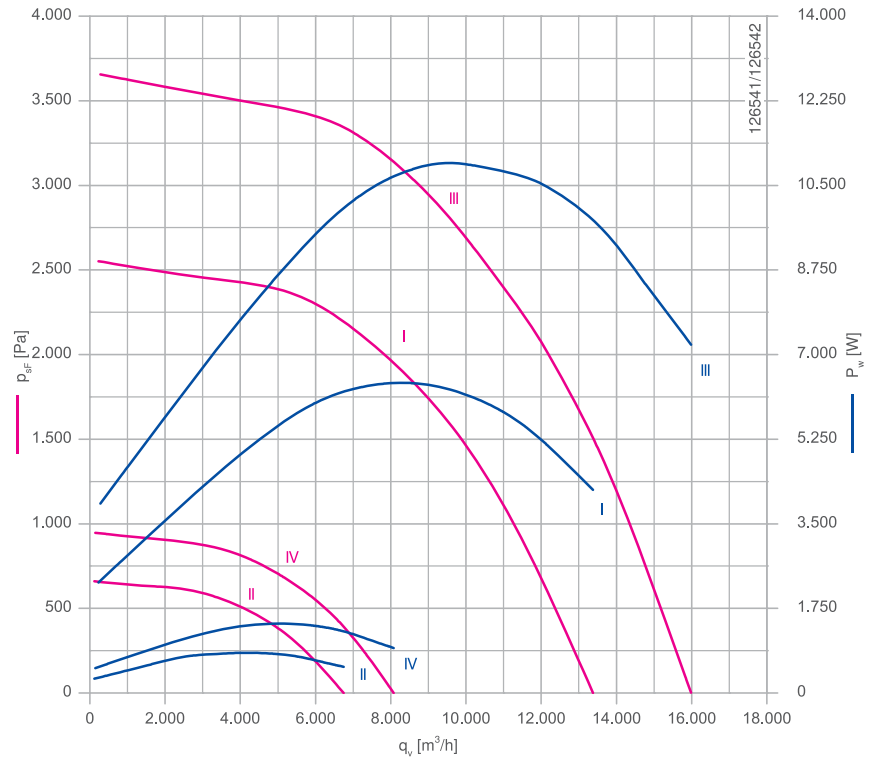
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



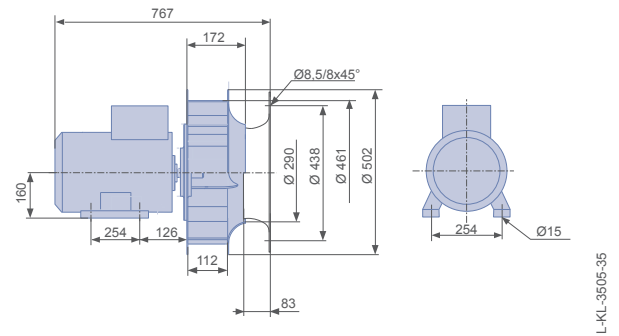
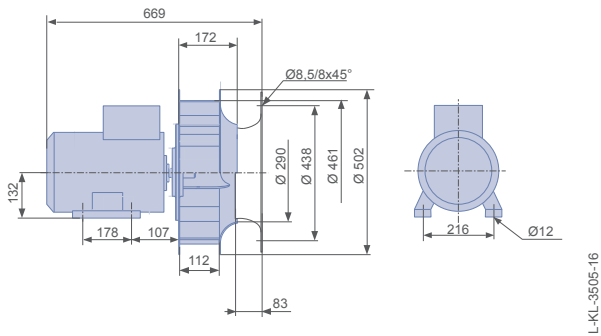
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH45W-QDN.H7.3R</b>
Article no.			<b>172346</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.90/6.90
Rated current	$I_N$	A	3.80/14.90
Speed	$n_N$	min <sup>-1</sup>	1460/2900
Weight		kg	92.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			160L
Type			<b>RH45W-QDN.K7.3R</b>
Article no.			<b>172366</b>
Connection			Y/YY
Motor output power	$P_N$	kW	3.30/12.00
Rated current	$I_N$	A	6.10/19.90
Speed	$n_N$	min <sup>-1</sup>	1740/3490
Weight		kg	142.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH45W..4R

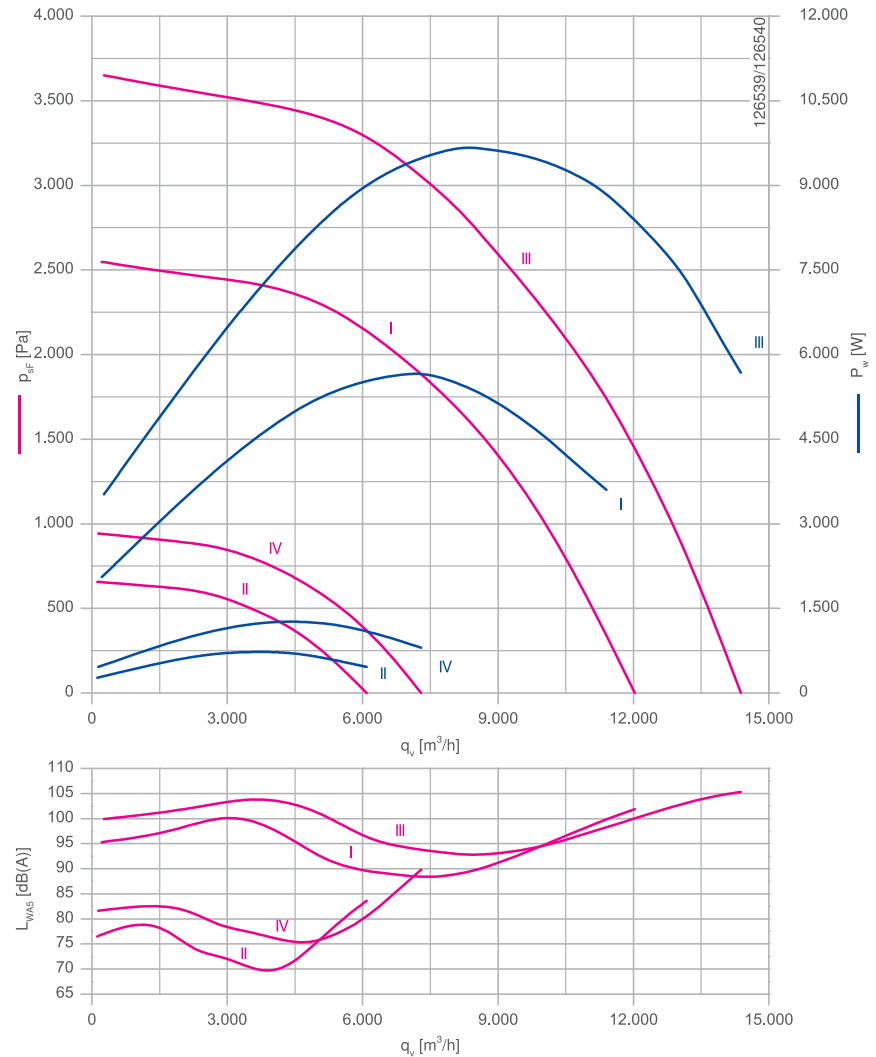
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 4-2 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411849		
Connection diagram	1360-221XA		Page 328
	KLK		





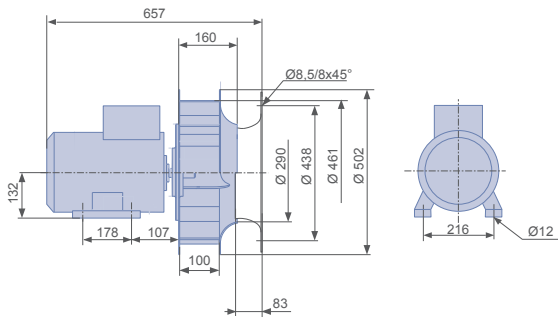
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			132M
Type			<b>RH45W-QDN.H7.4R</b>
Article no.			<b>172347</b>
Connection			Y/YY
Motor output power	$P_N$	kW	1.90/6.90
Rated current	$I_N$	A	3.80/14.90
Speed	$n_N$	min <sup>-1</sup>	1460/2900
Weight		kg	92.00
Characteristic curves			II/I

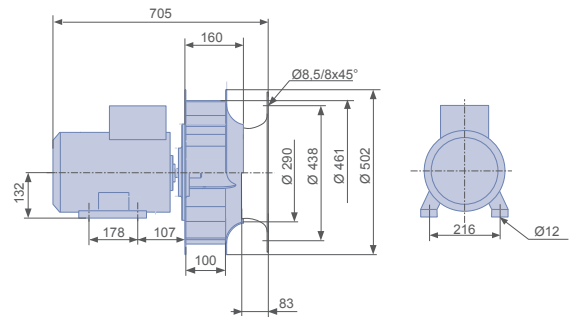
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			132M
Type			<b>RH45W-QDN.H7.4R</b>
Article no.			<b>172367</b>
Connection			Y/YY
Motor output power	$P_N$	kW	3.00/10.60
Rated current	$I_N$	A	5.30/18.40
Speed	$n_N$	min <sup>-1</sup>	1735/3470
Weight		kg	108.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-17



L-KL-3505-36

# ZArail

## RH50W..1R

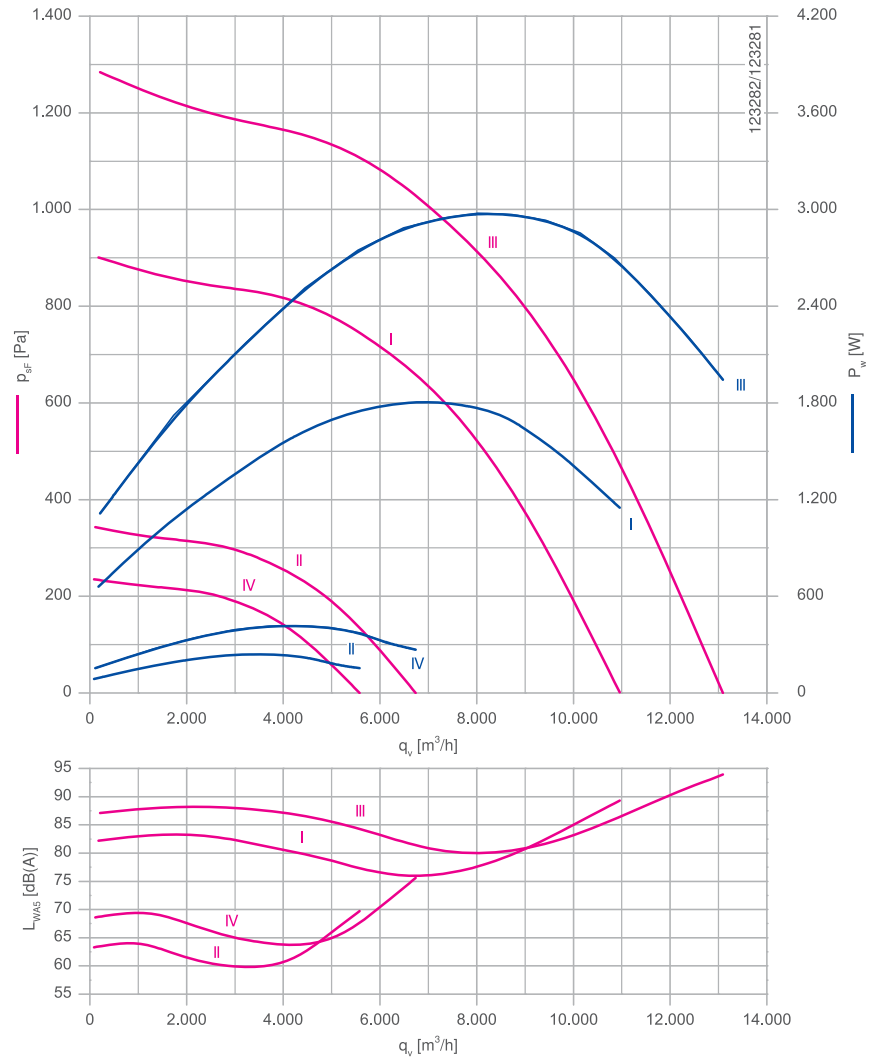
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 8- 4 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411850	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



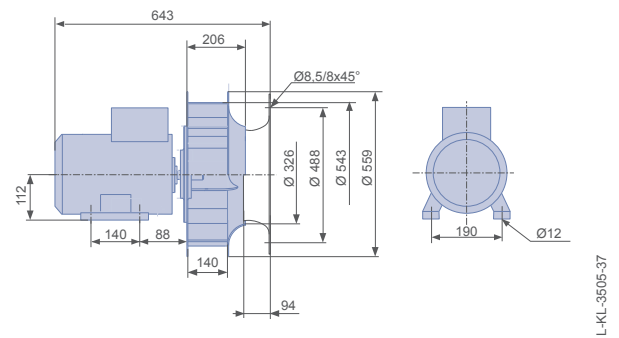
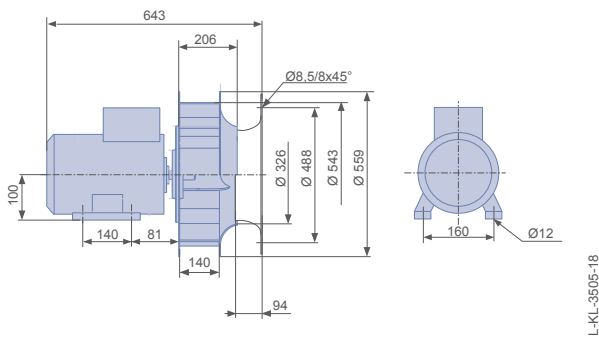
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH50W-XDN.E7.1R</b>
Article no.			<b>172348</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.00
Rated current	$I_N$	A	2.50/5.40
Speed	$n_N$	min <sup>-1</sup>	740/1460
Weight		kg	60.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH50W-XDN.F7.1R</b>
Article no.			<b>172368</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.40/3.10
Rated current	$I_N$	A	2.55/6.20
Speed	$n_N$	min <sup>-1</sup>	885/1750
Weight		kg	51.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH50W..2R

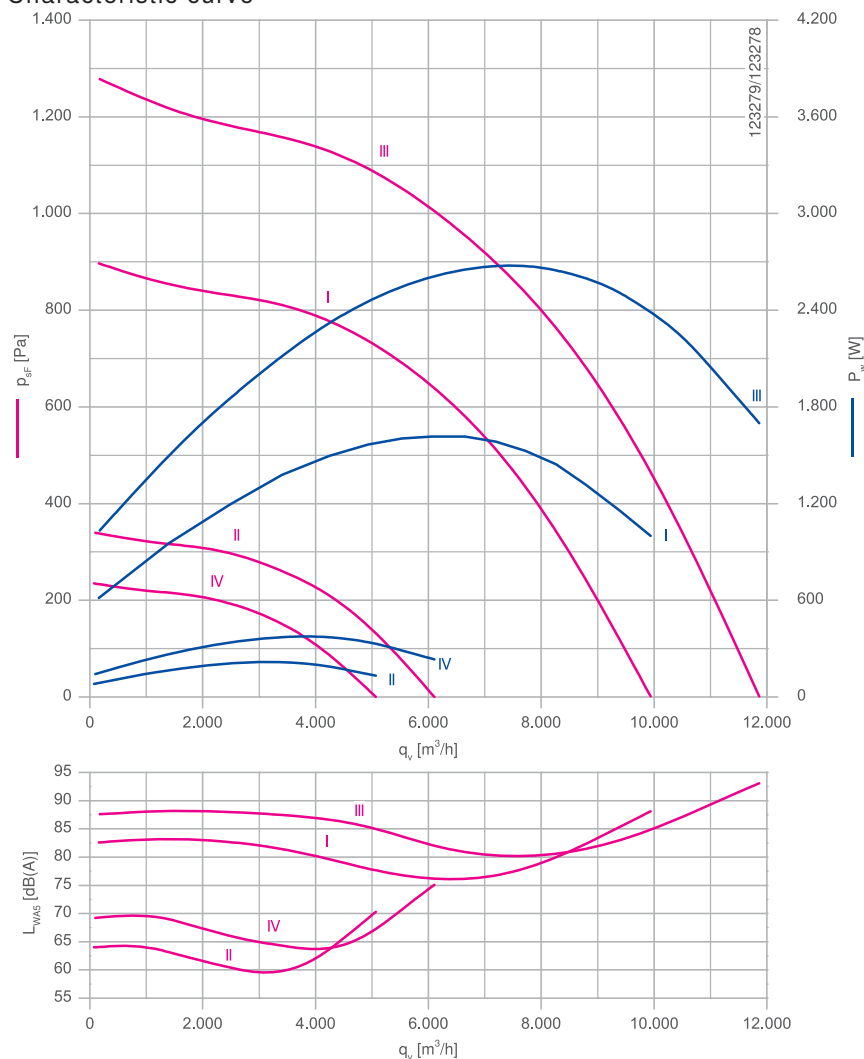
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 8- 4 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411850		
Connection diagram	1360-221XA		Page 328
	KLK		



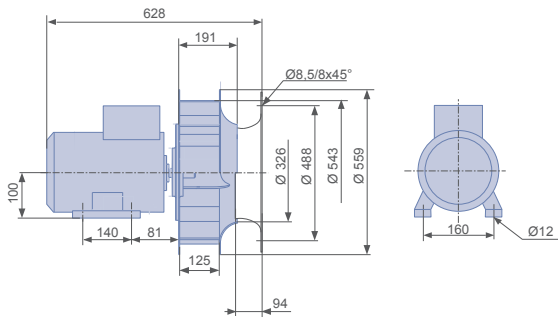
### Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH50W-XDN.E7.2R</b>
Article no.			<b>172349</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.00
Rated current	$I_N$	A	2.50/5.40
Speed	$n_N$	min <sup>-1</sup>	740/1460
Weight		kg	60.00
Characteristic curves			II/I

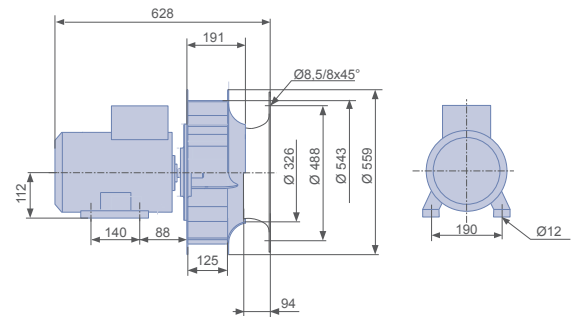
### Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH50W-XDN.F7.2R</b>
Article no.			<b>172369</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.40/3.10
Rated current	$I_N$	A	2.55/6.20
Speed	$n_N$	min <sup>-1</sup>	885/1750
Weight		kg	51.00
Characteristic curves			IV/III

### Dimensions mm



L-KL-3505-19



L-KL-3505-38

# ZArail

## RH50W..3R

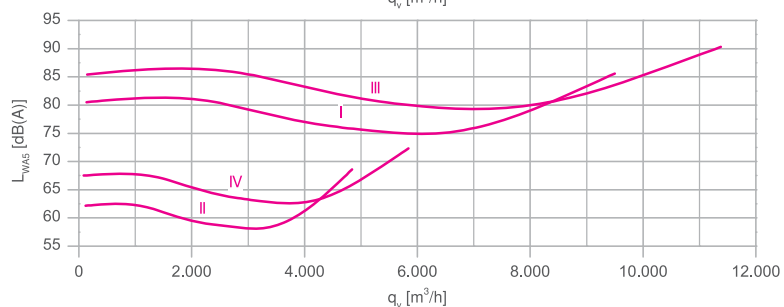
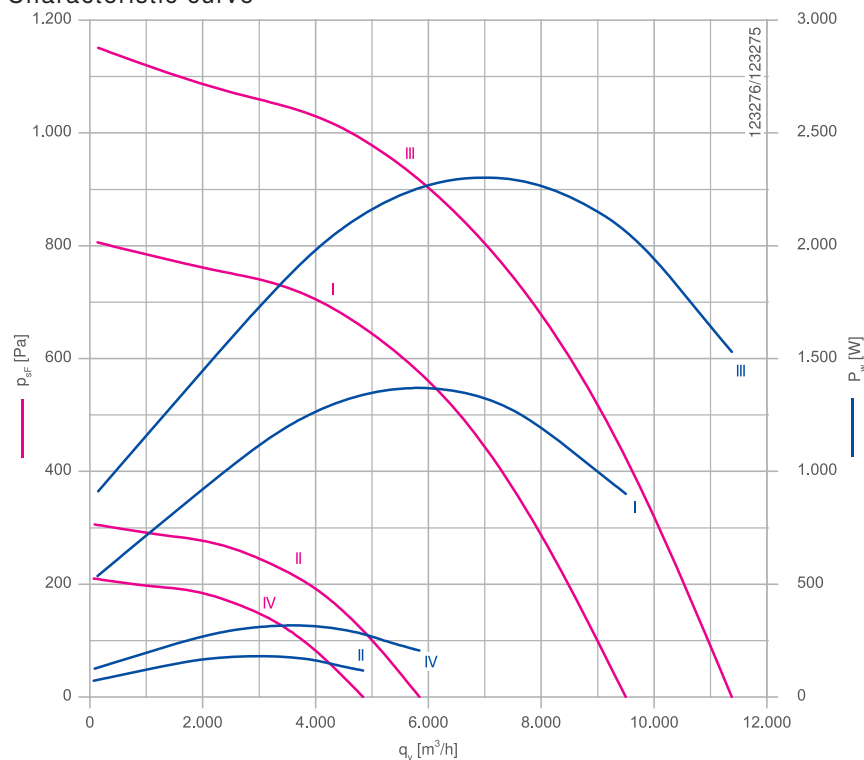
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 8- 4 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411850	unpainted	
Connection diagram	1360-221XA		Page 328
	KLK		



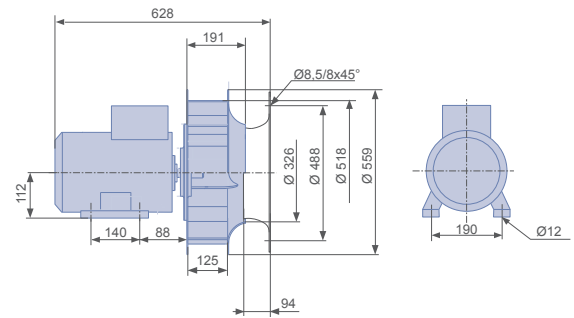
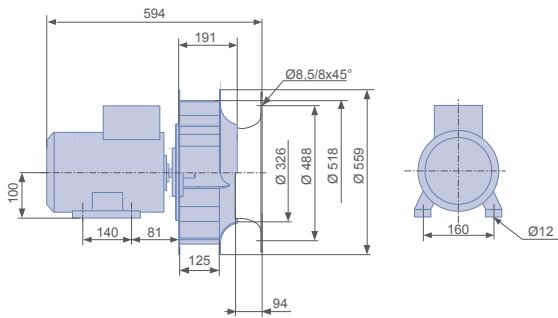
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH50W-XDN.E7.3R</b>
Article no.			<b>172350</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.20/1.50
Rated current	$I_N$	A	2.50/4.90
Speed	$n_N$	min <sup>-1</sup>	745/1470
Weight		kg	50.00
Characteristic curves			II/I

Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH50W-XDN.F7.3R</b>
Article no.			<b>172370</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.50
Rated current	$I_N$	A	2.50/5.50
Speed	$n_N$	min <sup>-1</sup>	890/1760
Weight		kg	59.00
Characteristic curves			IV/III

Dimensions mm



# ZArail

## RH50W..4R

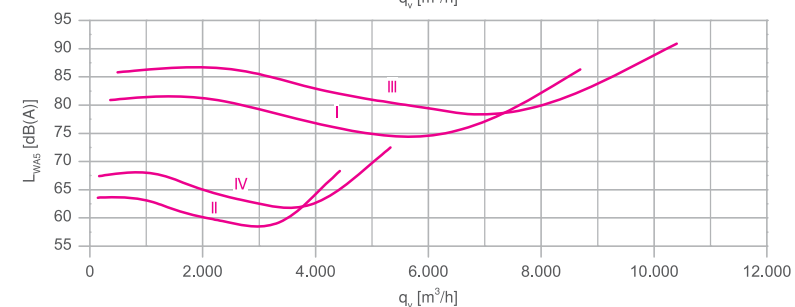
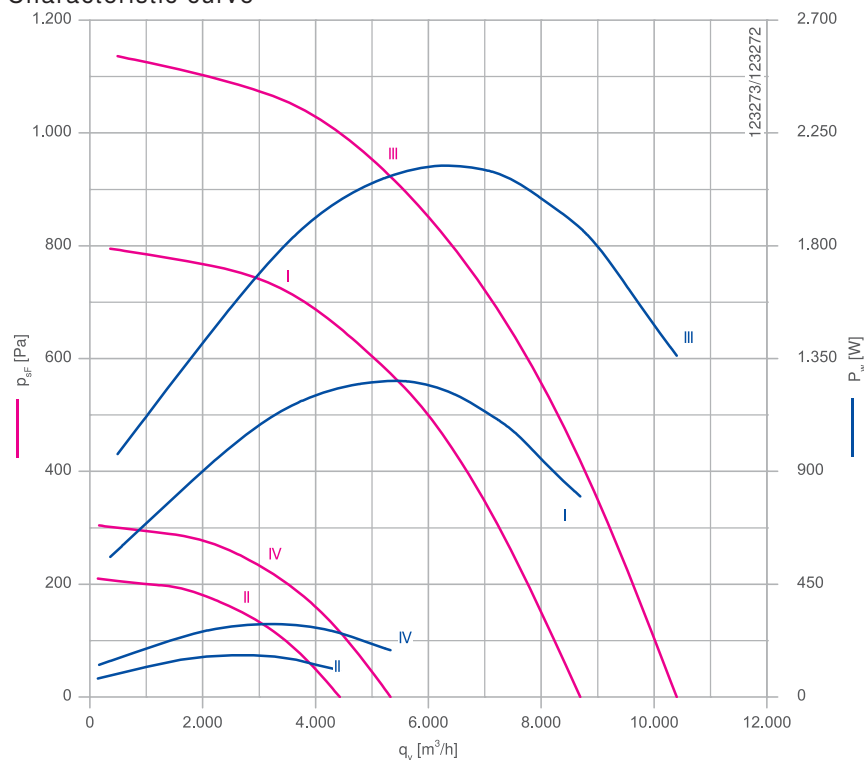
Standard motor



### Description

Design: RH\*  
Design: IMB 3  
Installation position: H  
Thermal class: THCL155  
Degree of protection : IP55  
Number of poles: 8- 4 pole  
Min. permitted ambient temperature  $t_{R(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
Impeller made of bright sheet metal, powder-coated, ultramarine blue  
Inlet ring supplied loosely, powder-coated, RAL 7032 (pebble grey)

### Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411850		
Connection diagram	1360-221XA		Page 328
	KLK		





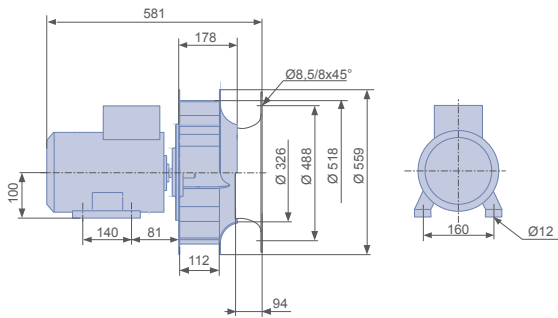
Performance data 50 Hz

Rated frequency	$f_{max}$	Hz	50
Rated voltage	$U_N$	V	400
Motor size			100L
Type			<b>RH50W-XDN.E7.4R</b>
Article no.			<b>172351</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.20/1.50
Rated current	$I_N$	A	2.50/4.90
Speed	$n_N$	min <sup>-1</sup>	745/1470
Weight		kg	50.00
Characteristic curves			II/I

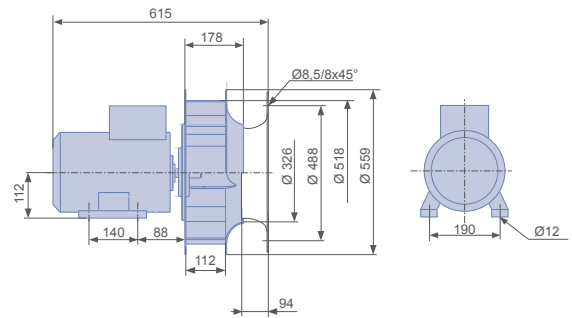
Performance data 60 Hz

Rated frequency	$f_{max}$	Hz	60
Rated voltage	$U_N$	V	460
Motor size			112M
Type			<b>RH50W-XDN.F7.4R</b>
Article no.			<b>172371</b>
Connection			Y/YY
Motor output power	$P_N$	kW	0.30/2.50
Rated current	$I_N$	A	2.50/5.50
Speed	$n_N$	min <sup>-1</sup>	890/1760
Weight		kg	59.00
Characteristic curves			IV/III

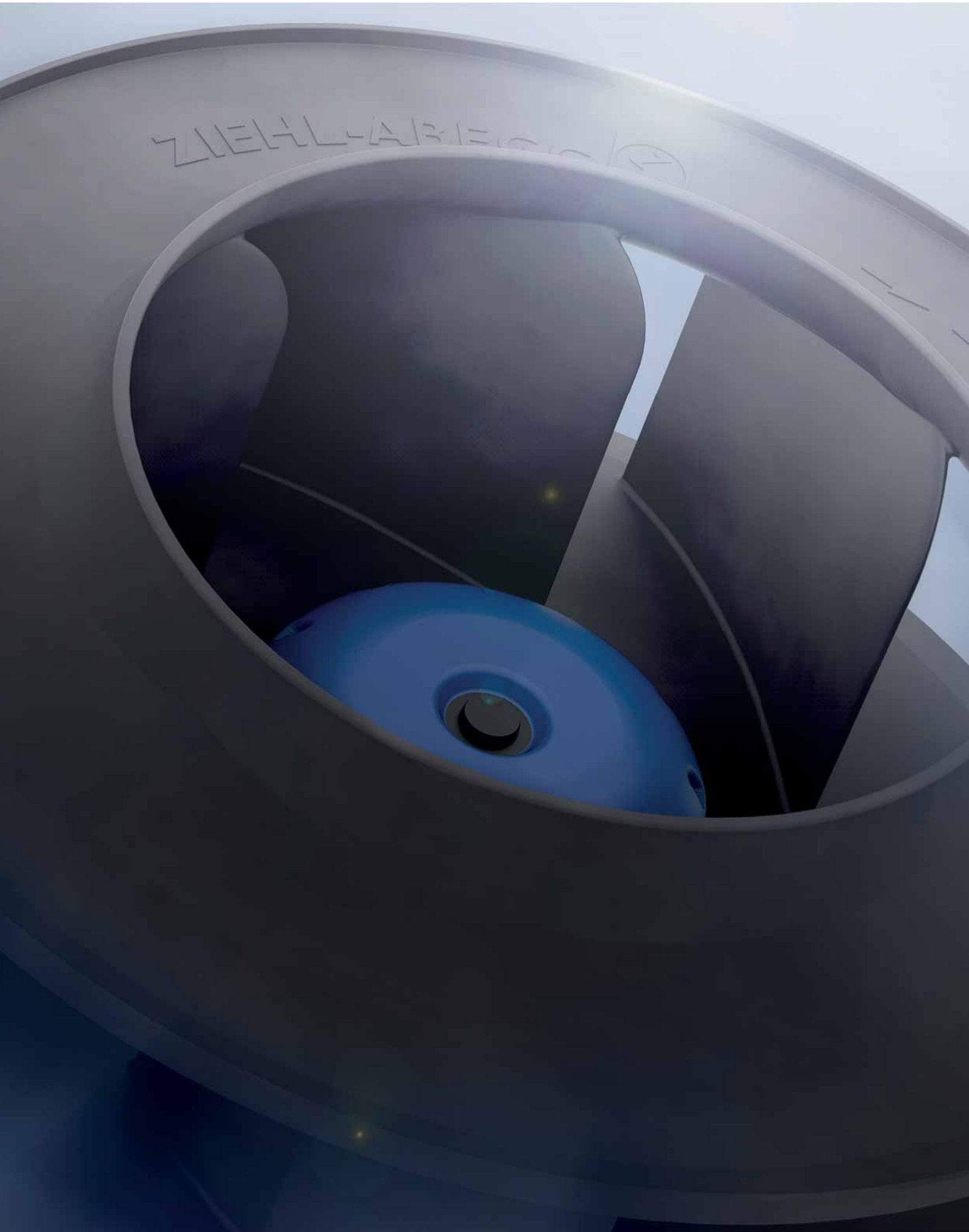
Dimensions mm



L-KL-3505-21



L-KL-3505-40



# Cpro-ECblue

## EC technology

### Product overview

Quick selection	Page 84
Size 250	Page 86
Size 280	Page 88
Size 315	Page 90
Size 355	Page 96
Size 400	Page 100
Size 450	Page 104

Information

ZArail

Cpro-ECblue

C-ECblue

C series

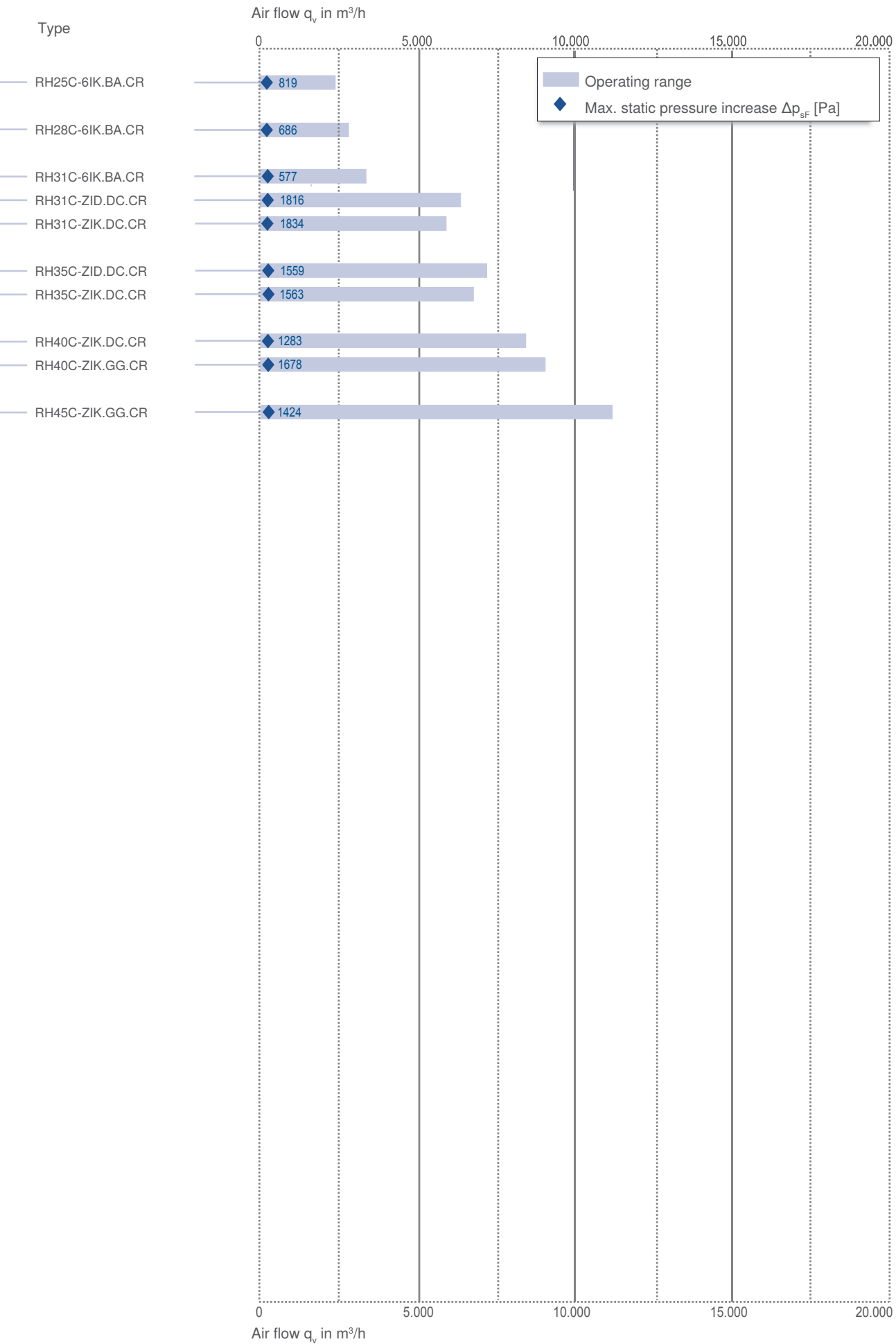
N series

M series

FE2owlet

Size	Voltage	Type	Impeller position	Page
250	DC 110V	RH25C-6IK.BA.CR	K	86
280	DC 110V	RH28C-6IK.BA.CR	K	88
315	DC 110V	RH31C-6IK.BA.CR	K	90
	3~ 380 - 480V	RH31C-ZID.DC.CR	D	92
	3~ 380 - 480V	RH31C-ZIK.DC.CR	K	94
355	3~ 380 - 480V	RH35C-ZID.DC.CR	D	96
	3~ 380 - 480V	RH35C-ZIK.DC.CR	K	98
400	3~ 380 - 480V	RH40C-ZIK.DC.CR	K	100
	3~ 380 - 480V	RH40C-ZIK.GG.CR	K	102
450	3~ 380 - 480V	RH45C-ZIK.GG.CR	K	104





- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet

# Cpro-ECblue

for direct current, 110 V

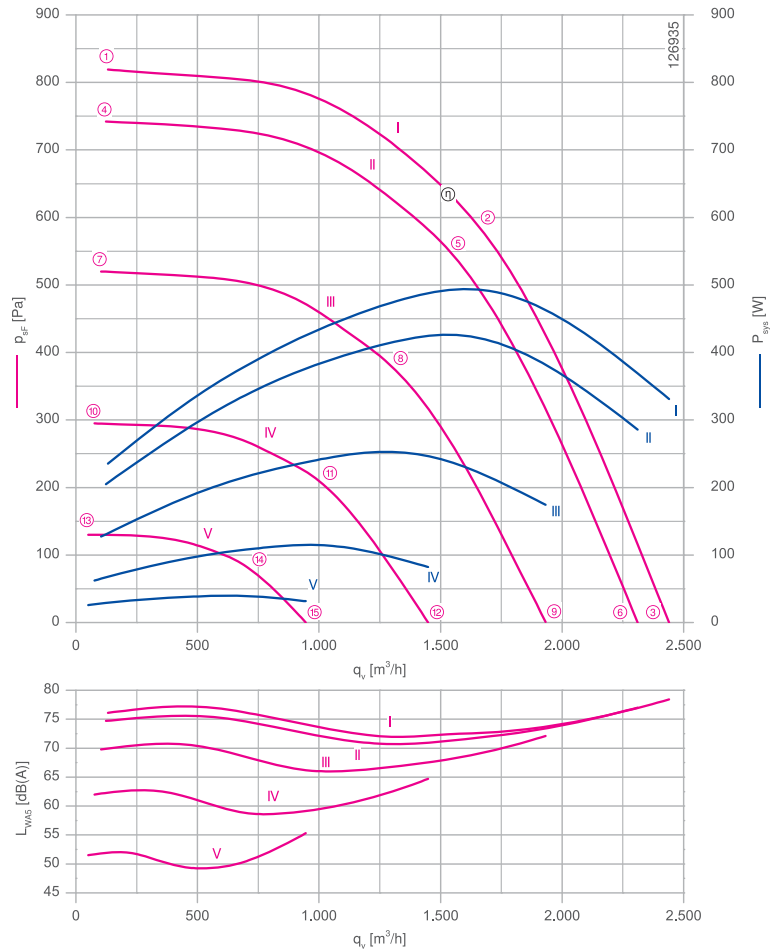
RH25C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **0.50 kW\***  
 Rated current  $I_N$ : **4.40 A\***  
 Rated speed  $n_N$ : **3030 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R-}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R+}$  at  $n_{max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection: IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

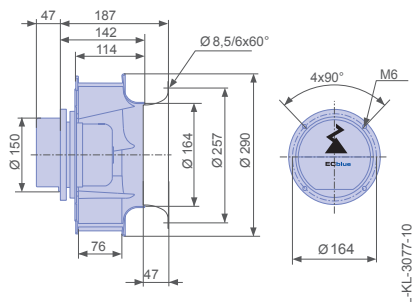


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00401777	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400803	unpainted	
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

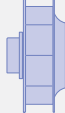
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level $L_{WA5}$ dB(A)	Maximum ambient temperature $t_R$ °C
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W		
RH25C-6IK.BA.CR	I	3030	①	2.10	240	76	
		3030*	②	4.40*	500	73	55
		3030	③	3.00	330	78	
	II	2890	④	1.85	200	75	
			⑤	3.90	420	71	60
			⑥	2.60	290	77	
	III	2420	⑦	1.15	130	70	
			⑧	2.30	250	67	60
			⑨	1.60	170	72	
	IV	1820	⑩	0.56	60	62	
			⑪	1.05	120	59	60
			⑫	0.74	80	65	
	V	1210	⑬	0.24	26	52	
			⑭	0.36	40	50	60
			⑮	0.29	32	55	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH25C-6IK.BA.CR  
**Article no.** 174659

Weight kg 4.80  
\* inlet ring not included

### Control technology

Operating terminal



Page 316

# Cpro-ECblue

for direct current, 110 V

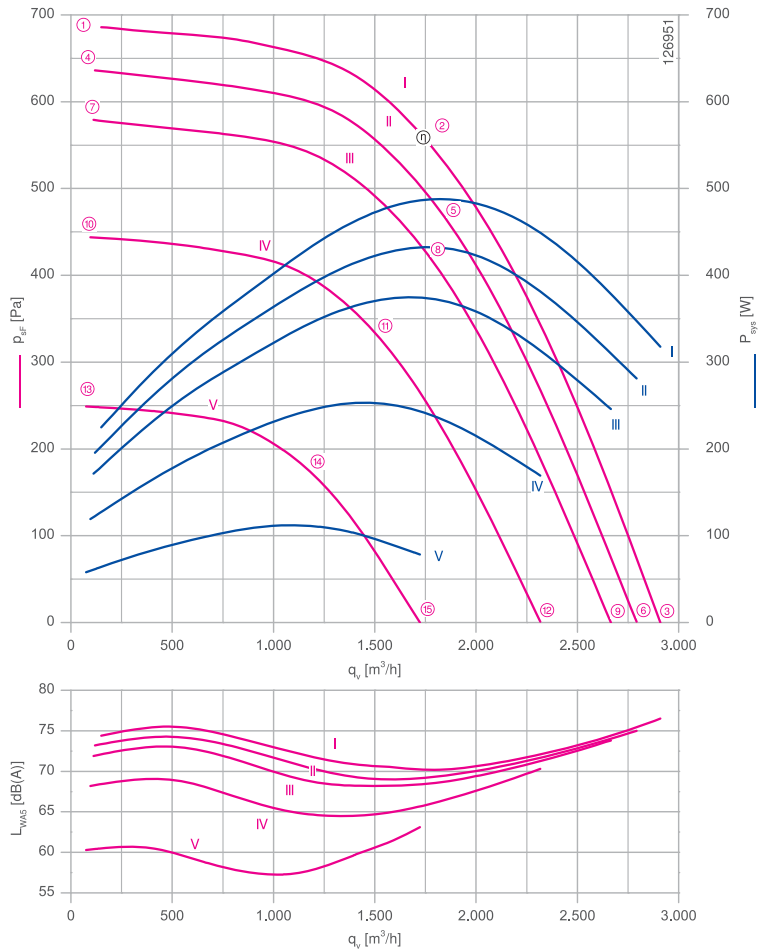
RH28C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **480 W\***  
 Rated current  $I_N$ : **4.40 A\***  
 Rated speed  $n_N$ : **2520 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R-}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R+}$  at  $n_{max}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection: IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

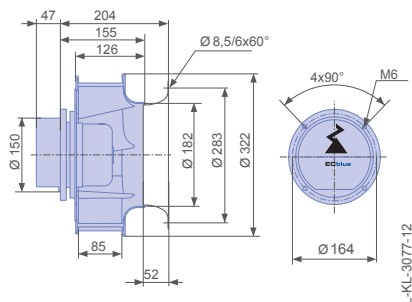


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00401778	RAL 7032 (pebble grey)	Page 302
Inlet ring	00400804	unpainted	
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)	t <sub>R</sub> °C
RH28C-6IK.BA.CR	I	2520	①	2.00	220	74	
		2520*	②	4.40*	480	70	40
		2510	③	2.90	320	77	
	II	2420	④	1.75	200	73	
			⑤	3.90	440	70	50
			⑥	2.50	280	75	
	III	2310	⑦	1.55	170	72	
			⑧	3.40	370	69	60
			⑨	2.20	250	74	
	IV	2020	⑩	1.10	120	68	
			⑪	2.30	250	65	60
			⑫	1.55	170	70	
	V	1510	⑬	0.52	60	60	
			⑭	1.00	110	57	60
			⑮	0.70	80	63	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH28C-6IK.BA.CR

**Article no.** 174662

Weight kg 5.20

\* inlet ring not included

### Control technology

Operating terminal



Page 316

# Cpro-ECblue

for direct current, 110 V

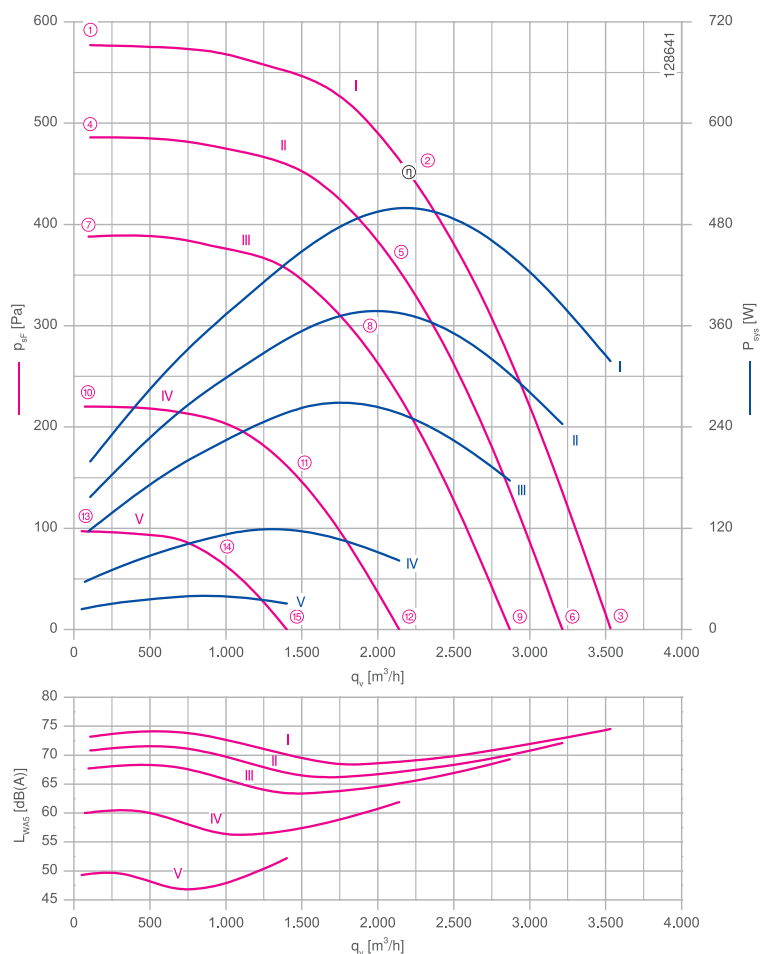
RH31C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **500 W\***  
 Rated current  $I_N$ : **4.60 A\***  
 Rated speed  $n_N$ : **2080 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R-}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R+}$  at  $n_{max}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

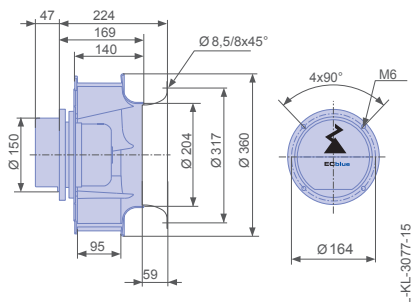


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)	
RH31C-6IK.BA.CR	I	2080	①	1.80	200	73	45
		2080*	②	4.60*	500	69	
		2080	③	2.90	320	75	
	II	1890	④	1.40	160	71	60
			⑤	3.40	380	67	
			⑥	2.20	240	72	
	III	1690	⑦	1.05	120	68	60
			⑧	2.40	270	64	
			⑨	1.60	180	69	
	IV	1270	⑩	0.52	55	60	60
			⑪	1.05	120	57	
			⑫	0.74	80	62	
	V	840	⑬	0.22	24	49	60
			⑭	0.36	40	47	
			⑮	0.28	30	52	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH31C-6IK.BA.CR

**Article no.** 174664

Weight kg 6.20

\* inlet ring not included

### Control technology

Operating terminal



Page 316

# Cpro-ECblue

for three phase alternating current, 380-480 V

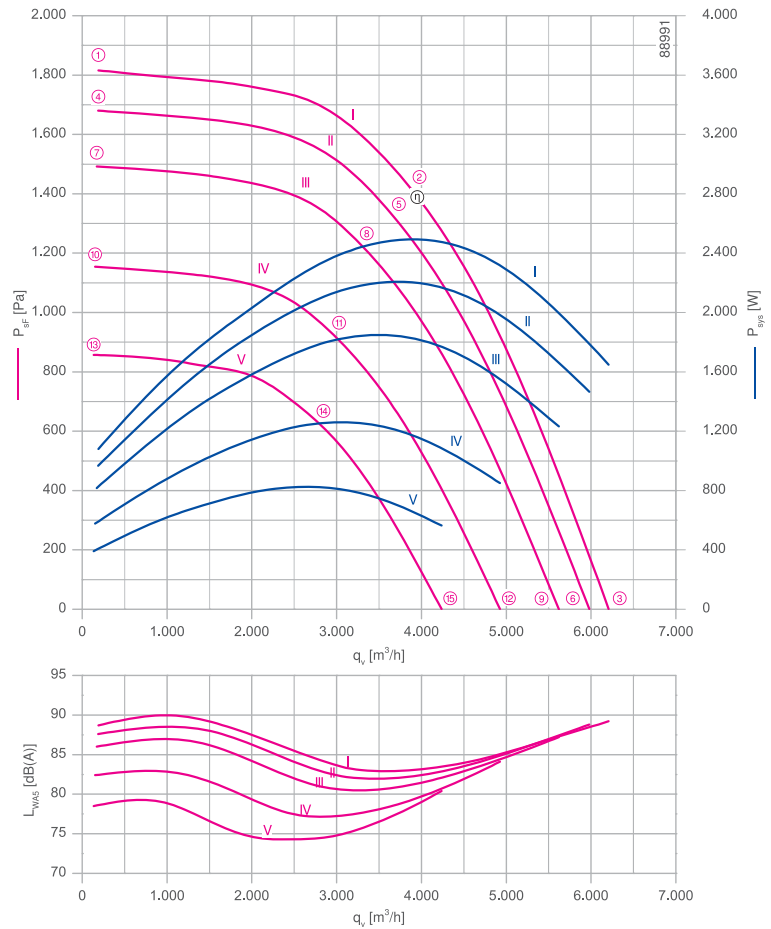
RH31C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.50 kW\*  
 Rated current  $I_N$ : 4.00-3.20 A\*  
 Rated speed  $n_N$ : 3640 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

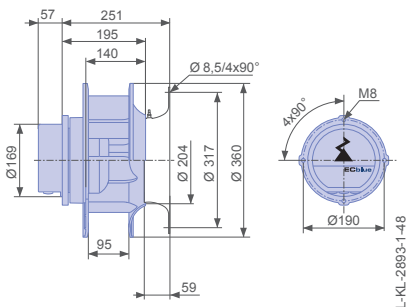


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__31C-ZID.DC.CR	I	3640	①	1.70	1100	89	55
			②	3.80	2500	83	
			③	2.50	1650	89	
	II	3500	④	1.55	960	88	60
			⑤	3.40	2200	82	
			⑥	2.30	1450	89	
	III	3300	⑦	1.35	820	86	60
			⑧	2.90	1850	81	
			⑨	1.95	1250	87	
	IV	2900	⑩	1.00	580	82	60
			⑪	2.00	1250	77	
			⑫	1.40	860	84	
	V	2500	⑬	0.76	390	79	60
			⑭	1.35	820	75	
			⑮	0.98	560	80	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH31C-ZID.DC.CR

**Article no.** 115882

Weight kg 10.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

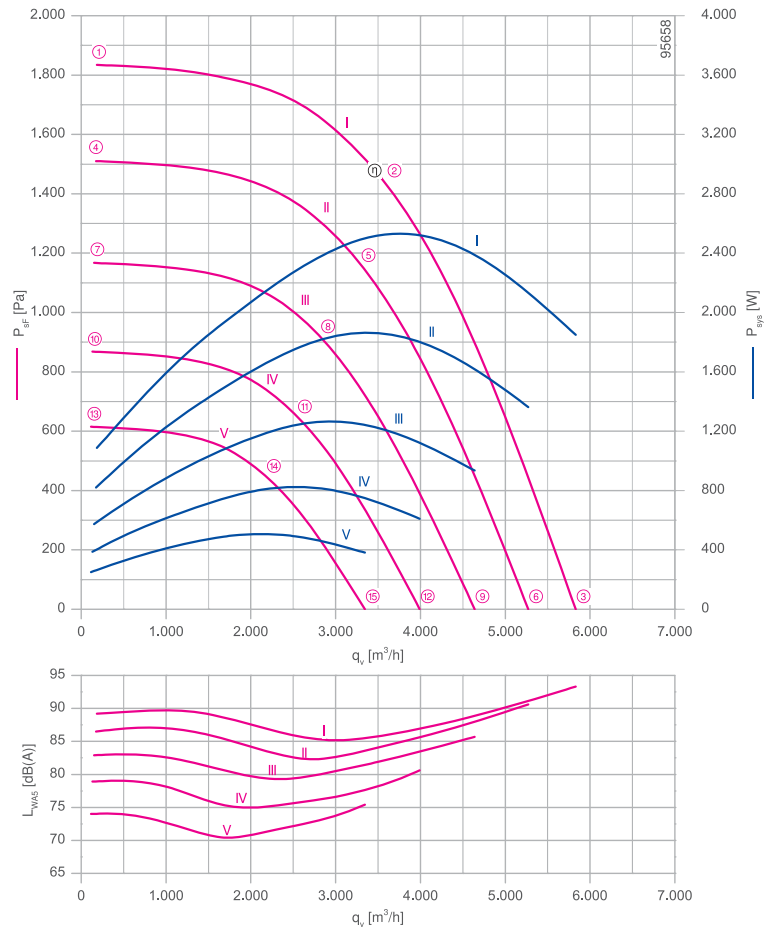
RH31C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.50 kW\*  
 Rated current  $I_N$ : 4.00-3.20 A\*  
 Rated speed  $n_N$ : 3640 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

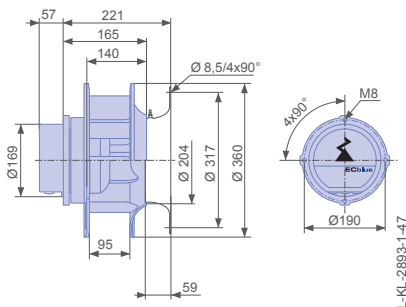


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_31C-ZIK.DC.CR	I	3640	①	1.75	1100	89
			②	3.90	2500	87
			③	2.90	1850	93
	II	3300	④	1.35	820	87
			⑤	2.90	1850	83
			⑥	2.10	1350	91
	III	2900	⑦	1.00	580	83
			⑧	2.00	1250	80
			⑨	1.50	940	86
	IV	2500	⑩	0.78	390	79
			⑪	1.35	820	76
			⑫	1.05	620	81
	V	2100	⑬	0.56	250	74
			⑭	0.92	500	71
			⑮	0.76	380	75

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH31C-ZIK.DC.CR  
**Article no.** 115881

Weight kg 10.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



Page 316      Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

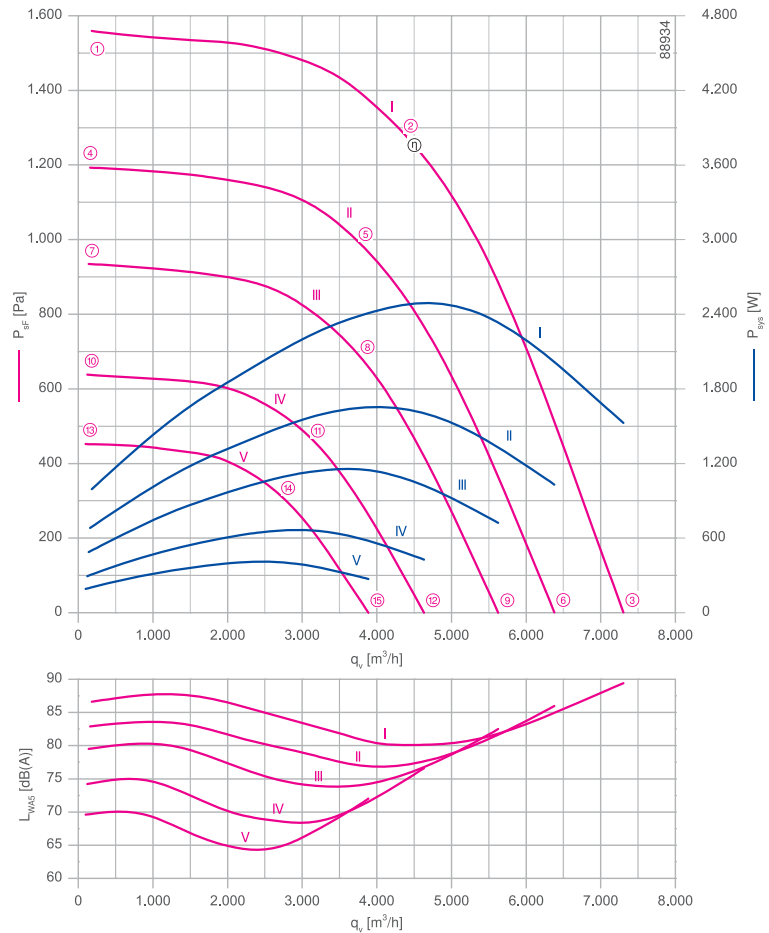
RH35C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.50 kW\*  
 Rated current  $I_N$ : 4.00-3.20 A\*  
 Rated speed  $n_N$ : 2970 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

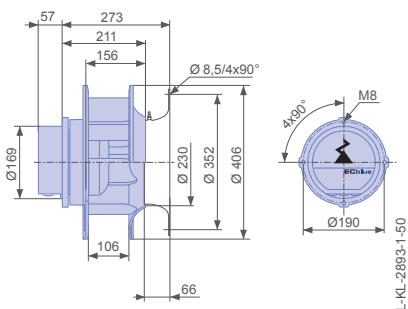


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411847	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data

Type	Characteristic curve	Speed n min <sup>-1</sup>	Operating point	Current I A	Input power P <sub>sys</sub> W	Suction side sound power level L <sub>WAS</sub> dB(A)	Maximum ambient temperature t <sub>R</sub> °C
__35C-ZID.DC.CR	I	2970	①	1.60	1000	87	50
			②	3.80	2500	80	
			③	2.40	1550	89	
	II	2600	④	1.15	680	83	60
			⑤	2.60	1650	77	
			⑥	1.65	1050	86	
	III	2300	⑦	0.86	480	80	60
			⑧	1.85	1150	74	
			⑨	1.20	720	83	
	IV	1900	⑩	0.62	290	74	60
			⑪	1.15	660	68	
			⑫	0.78	420	77	
	V	1600	⑬	0.46	190	70	60
			⑭	0.78	400	65	
			⑮	0.58	270	72	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH35C-ZID.DC.CR

**Article no.** 115884

Weight kg 11.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

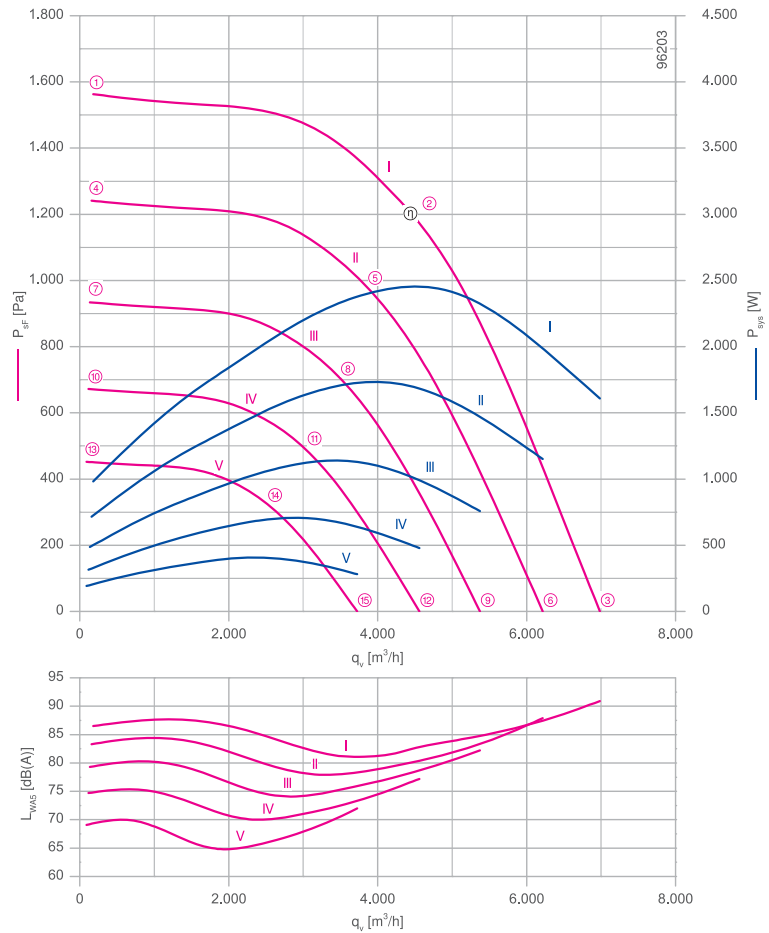
RH35C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.50 kW\*  
 Rated current  $I_N$ : 4.00-3.20 A\*  
 Rated speed  $n_N$ : 2970 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

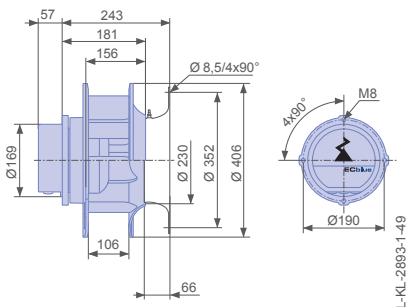
## Characteristic curve



Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411847	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__35C-ZIK.DC.CR	I	2970	①	1.60	980	87	50
			②	3.80	2500	82	
			③	2.50	1600	91	
	II	2650	④	1.25	720	83	60
			⑤	2.70	1750	79	
			⑥	1.85	1150	88	
	III	2300	⑦	0.94	480	79	60
			⑧	1.85	1150	75	
			⑨	1.30	760	82	
	IV	1950	⑩	0.72	310	75	60
			⑪	1.25	700	71	
			⑫	0.92	480	77	
	V	1600	⑬	0.50	190	69	60
			⑭	0.84	400	66	
			⑮	0.66	280	72	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH35C-ZIK.DC.CR

**Article no.** 115883

Weight kg 11.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

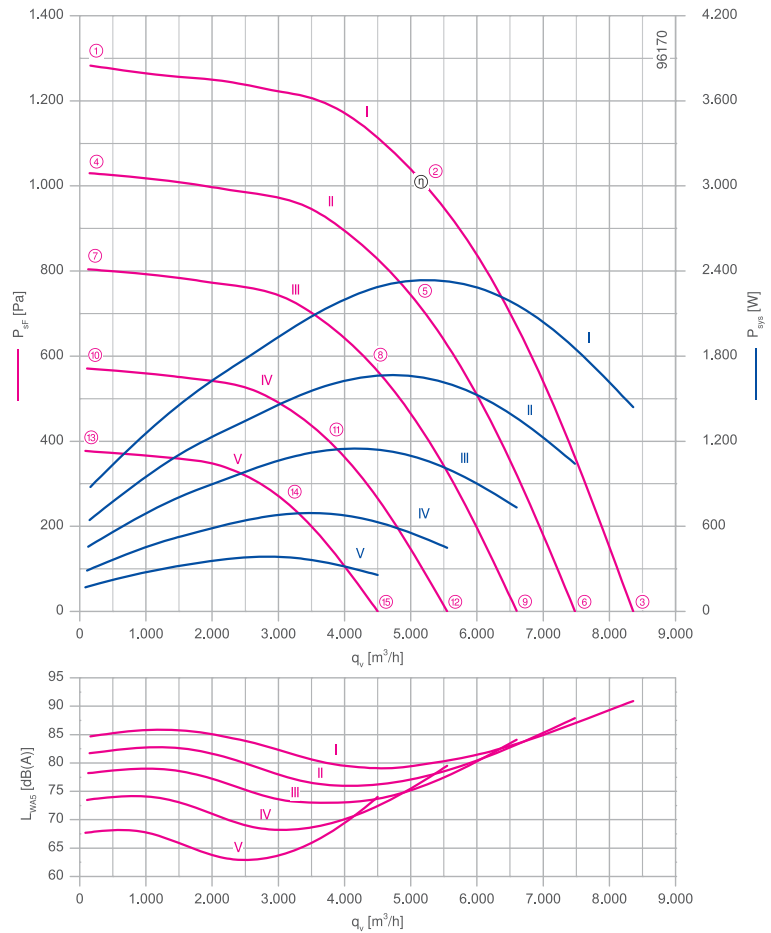
RH40C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.30 kW\*  
 Rated current  $I_N$ : 3.70-2.90 A\*  
 Rated speed  $n_N$ : 2400 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 40 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 2.5  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

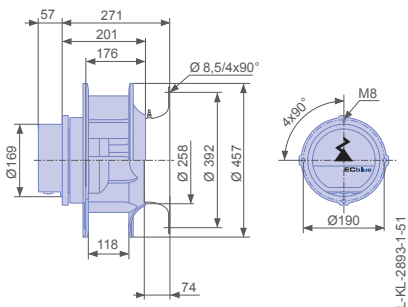


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__40C-ZIK.DC.CR	I	2400	①	1.40	880	85	40
			②	3.50	2300	80	
			③	2.20	1450	91	
	II	2150	④	1.10	640	82	60
			⑤	2.50	1650	77	
			⑥	1.65	1050	88	
	III	1900	⑦	0.86	460	78	60
			⑧	1.80	1150	73	
			⑨	1.20	740	84	
	IV	1600	⑩	0.64	290	74	60
			⑪	1.15	700	69	
			⑫	0.84	440	80	
	V	1300	⑬	0.44	170	68	60
			⑭	0.76	390	64	
			⑮	0.58	260	74	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH40C-ZIK.DC.CR

**Article no.** 115885

Weight kg 12.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

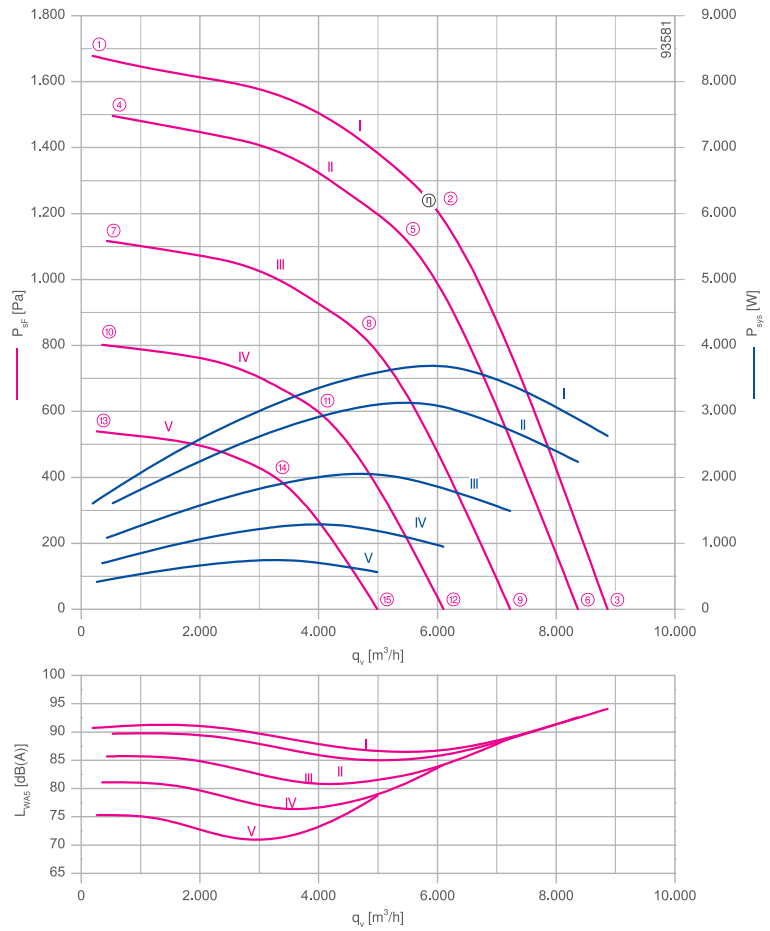
RH40C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.70 kW\*  
 Rated current  $I_N$ : 6.00-4.80 A\*  
 Rated speed  $n_N$ : 2810 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 2.5  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

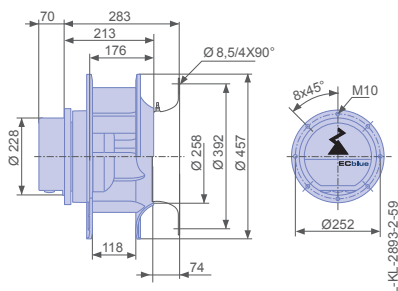


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

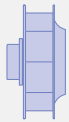
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__40C-ZIK.GG.CR	I	2810	①	2.50	1600	91	55
			②	5.60	3700	87	
			③	4.00	2600	94	
	II	2660	④	2.50	1600	90	60
			⑤	4.80	3100	85	
			⑥	3.40	2200	93	
	III	2300	⑦	1.70	1100	86	60
			⑧	3.10	2100	81	
			⑨	2.30	1500	89	
	IV	1950	⑩	1.20	700	81	60
			⑪	2.00	1300	77	
			⑫	1.55	960	84	
	V	1600	⑬	0.82	420	75	60
			⑭	1.25	740	71	
			⑮	1.00	560	79	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH40C-ZIK.GG.CR

**Article no.** 115886

Weight kg 20.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# Cpro-ECblue

for three phase alternating current, 380-480 V

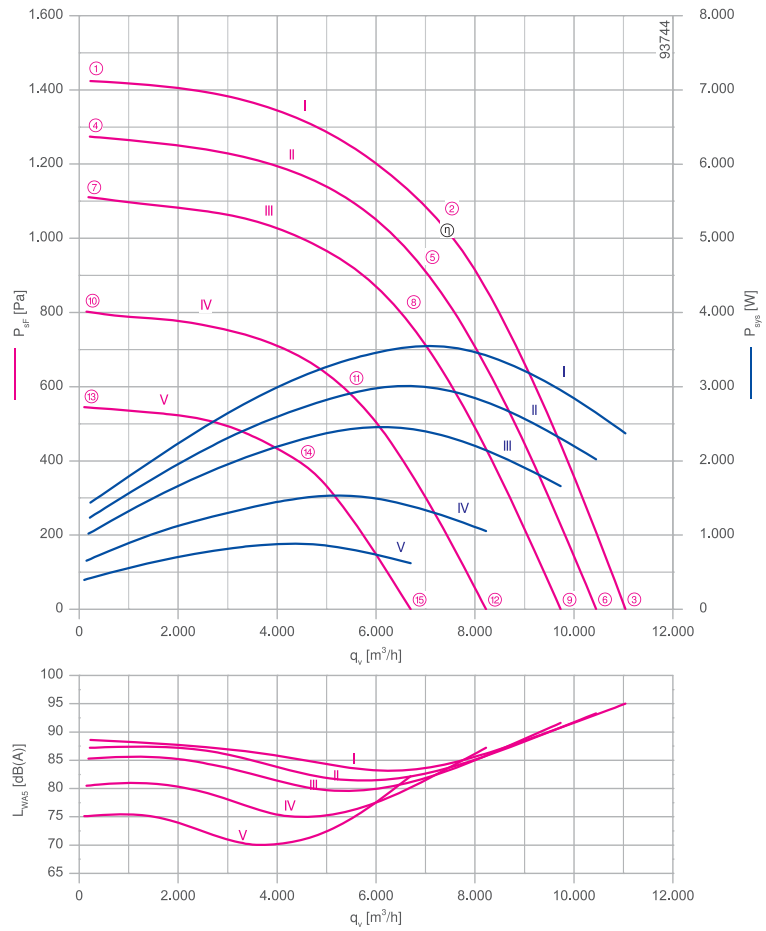
RH45C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.50 kW\*  
 Rated current  $I_N$ : 5.80-4.60 A\*  
 Rated speed  $n_N$ : 2260 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 2.5  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : ZAmid, uncoated, black  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

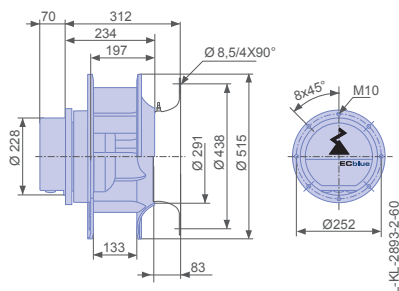


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411849	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__45C-ZIK.GG.CR	I	2260	①	2.30	1450	89	55
			②	5.40	3500	84	
			③	3.60	2400	95	
	II	2140	④	1.95	1250	87	60
			⑤	4.60	3000	82	
			⑥	3.10	2000	93	
	III	2000	⑦	1.65	1000	85	60
			⑧	3.80	2500	80	
			⑨	2.60	1650	92	
	IV	1700	⑩	1.15	660	81	60
			⑪	2.40	1550	76	
			⑫	1.70	1050	87	
	V	1400	⑬	0.82	400	75	60
			⑭	1.45	880	70	
			⑮	1.10	620	82	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH45C-ZIK.GG.CR

**Article no.** 115887

Weight kg 22.00

\* inlet ring not included

### Control technology

Operating terminal

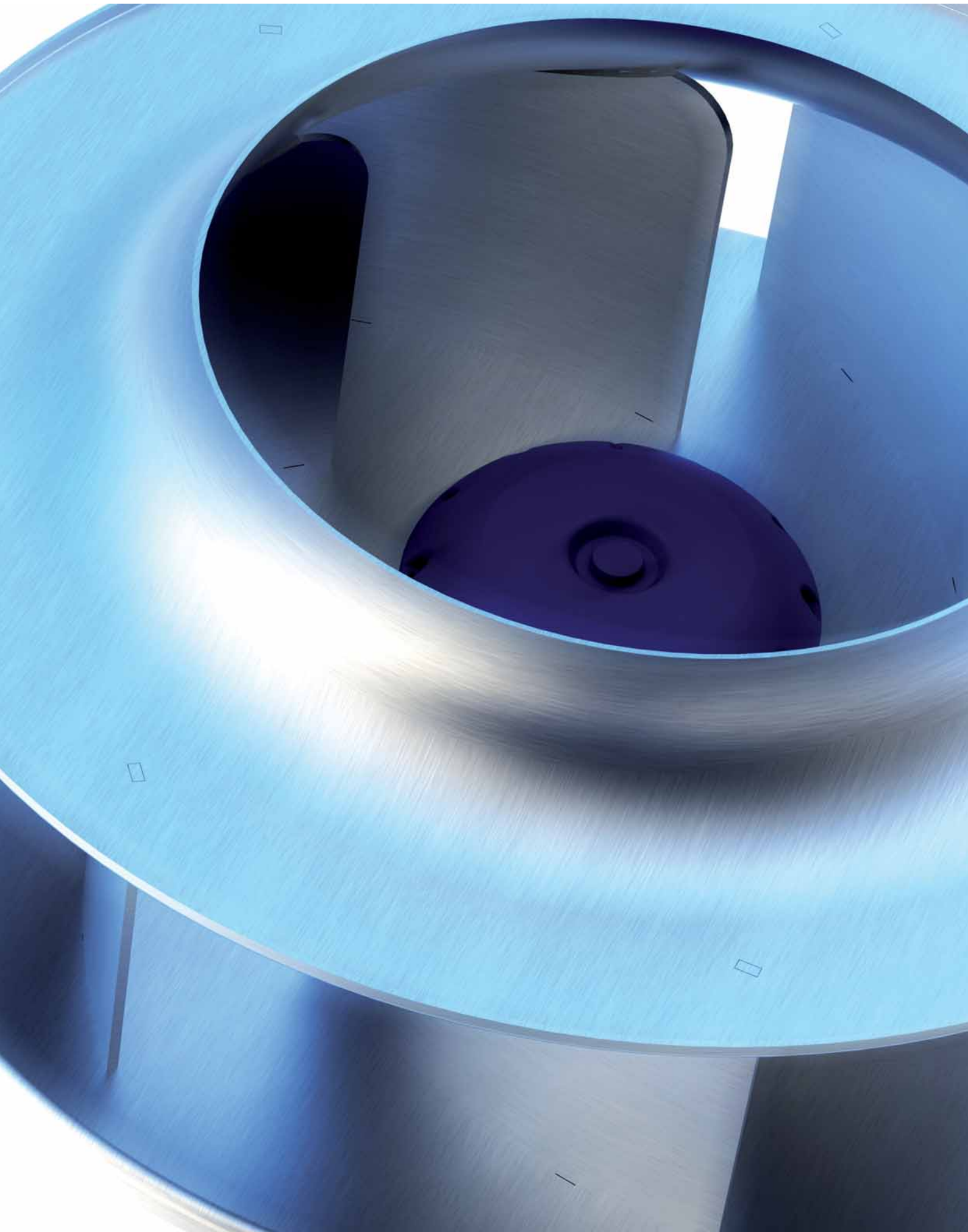
Expansion module



Page 316



Page 307



# C-series

## EC technology

### Product overview

Quick selection	Page 108
Size 250	Page 110
Size 280	Page 112
Size 315	Page 114
Size 355	Page 120
Size 400	Page 124
Size 450	Page 130
Size 500	Page 138
Size 560	Page 140
Size 630	Page 142

Information

ZArail

Cpro-ECblue

C-ECblue

C series

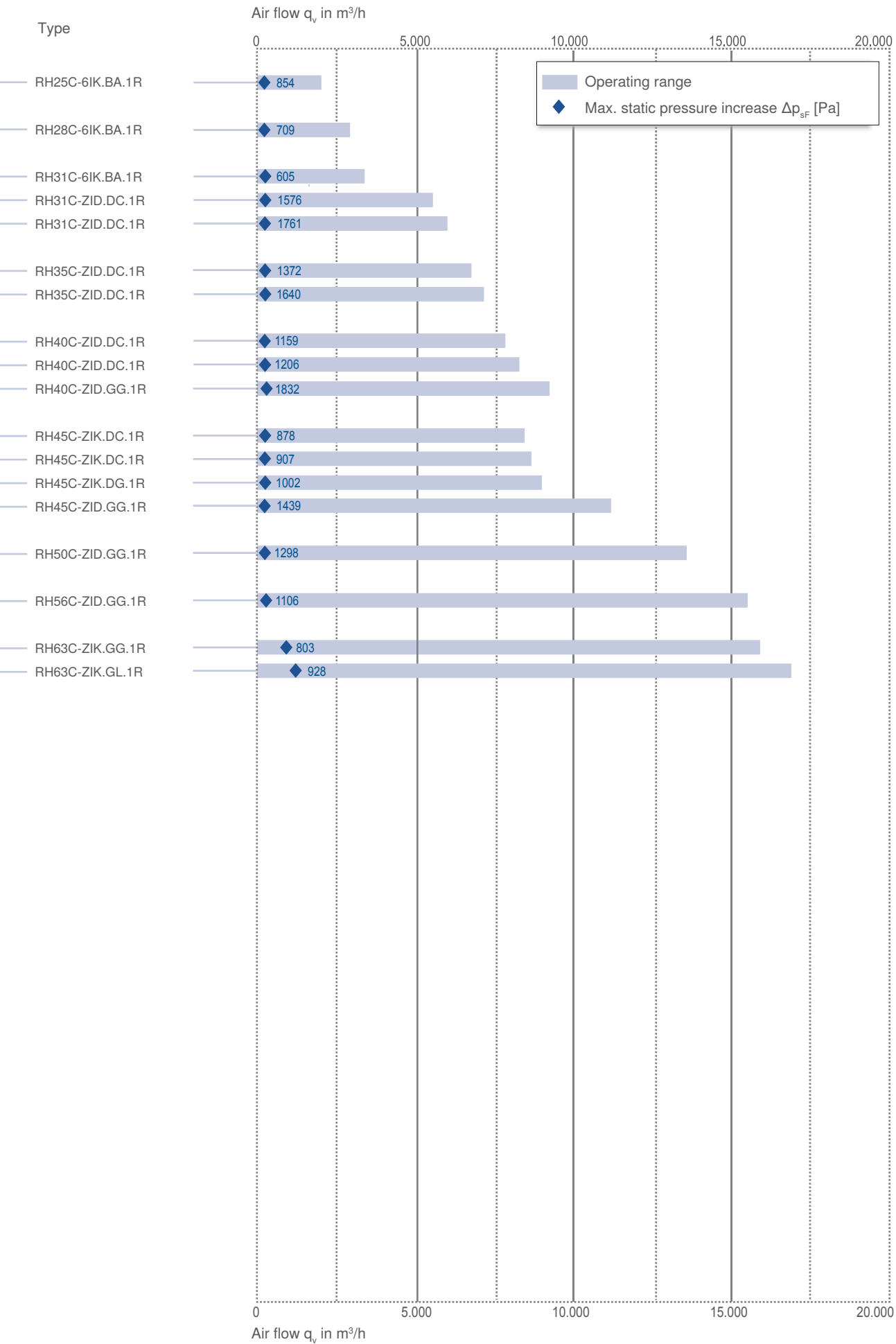
N series

M series

FE2owlet

Size	Voltage	Type	Impeller position	Page
250	DC 110V	RH25C-6IK.BA.1R	K	110
280	DC 110V	RH28C-6IK.BA.1R	K	112
315	DC 110V	RH31C-6IK.BA.1R	K	114
	3~ 200 - 240V	RH31C-ZID.DC.1R	D	116
	3~ 380 - 480V	RH31C-ZID.DC.1R	D	118
355	3~ 200 - 240V	RH35C-ZID.DC.1R	D	120
	3~ 380 - 480V	RH35C-ZID.DC.1R	D	122
400	3~ 200 - 240V	RH40C-ZID.DC.1R	D	124
	3~ 380 - 480V	RH40C-ZID.DC.1R	D	126
	3~ 380 - 480V	RH40C-ZID.GG.1R	D	128
450	3~ 200 - 240V	RH45C-ZIK.DC.1R	K	130
	3~ 380 - 480V	RH45C-ZIK.DC.1R	K	132
	3~ 380 - 480V	RH45C-ZIK.DG.1R	K	134
	3~ 380 - 480V	RH45C-ZID.GG.1R	D	136
500	3~ 380 - 480V	RH50C-ZID.GG.1R	D	138
560	3~ 380 - 480V	RH56C-ZID.GG.1R	D	140
630	3~ 380 - 480V	RH63C-ZIK.GG.1R	K	142
	3~ 380 - 480V	RH63C-ZIK.GL.1R	K	144





- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# C-ECblue

for direct current, 110 V

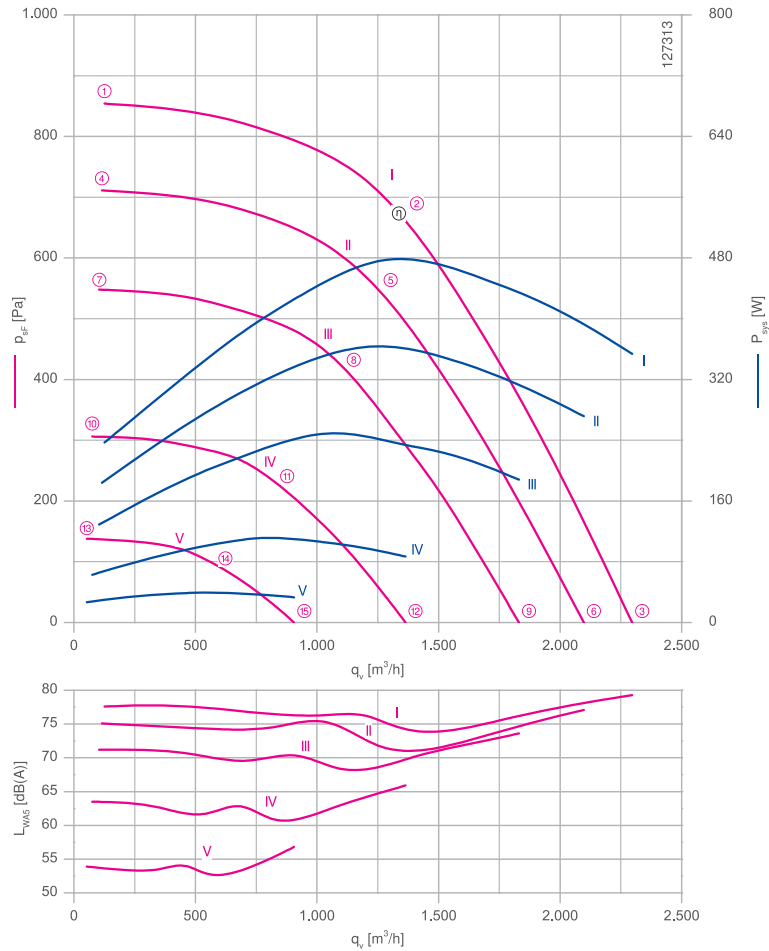
RH25C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **480 W\***  
 Rated current  $I_N$ : **4.40 A\***  
 Rated speed  $n_N$ : **3120 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R}$  at  $n_{max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

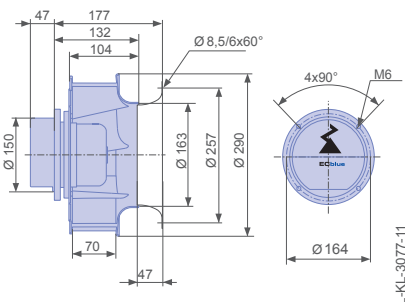


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00401777	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00400803		
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

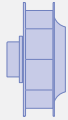
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
RH25C-6IK.BA.1R	I	3130	①	2.10	240	78	50
		3120*	②	4.40*	480	75	
		3120	③	3.20	350	79	
	II	2850	④	1.65	180	75	60
			⑤	3.30	360	72	
			⑥	2.50	270	77	
	III	2500	⑦	1.15	130	71	60
			⑧	2.30	250	68	
			⑨	1.70	190	74	
	IV	1870	⑩	0.56	65	64	60
			⑪	1.00	110	61	
			⑫	0.78	85	66	
	V	1250	⑬	0.24	26	54	60
			⑭	0.35	40	53	
			⑮	0.30	34	57	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH25C-6IK.BA.1R

**Article no.** 174661

Weight kg 7.00

\* inlet ring not included

### Control technology

Operating terminal



Page 316

# C-ECblue

for direct current, 110 V

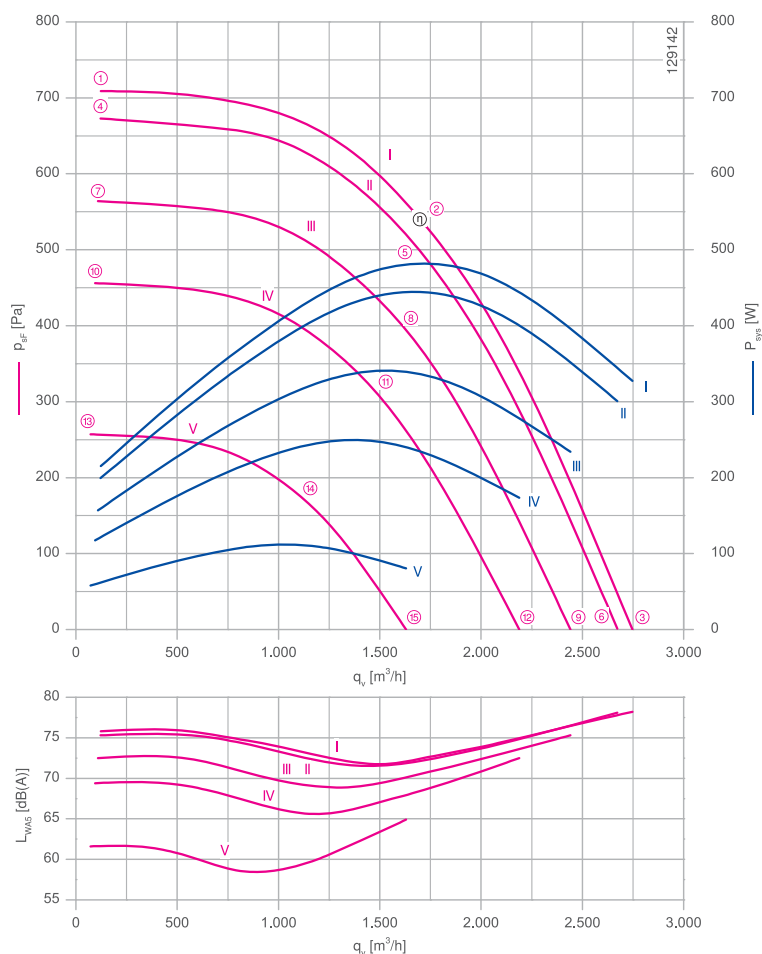
RH28C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **480 W\***  
 Rated current  $I_N$ : **4.40 A\***  
 Rated speed  $n_N$ : **2550 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R-}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R+}$  at  $n_{max}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller: aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

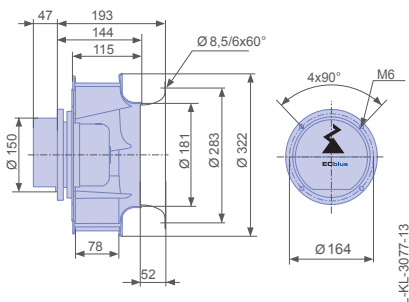


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00401778	RAL 7032 (pebble grey)	Page 302
Inlet ring	00400804	unpainted	
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data

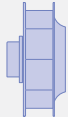
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
RH28C-6IK.BA.1R	I	2550	①	1.95	220	76	40
		2550*	②	4.40*	480	72	
		2550	③	3.00	330	78	
	II	2480	④	1.80	200	75	50
			⑤	4.20	440	72	
			⑥	2.70	300	78	
	III	2270	⑦	1.40	160	73	60
			⑧	3.10	340	70	
			⑨	2.10	230	75	
	IV	2040	⑩	1.05	120	69	60
			⑪	2.30	250	67	
			⑫	1.55	170	73	
	V	1530	⑬	0.52	60	62	60
			⑭	1.00	110	59	
			⑮	0.72	80	65	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH28C-6IK.BA.1R

**Article no.** 174663

Weight kg 5.00

\* inlet ring not included

### Control technology

Operating terminal



Page 316

# C-ECblue

for direct current, 110 V

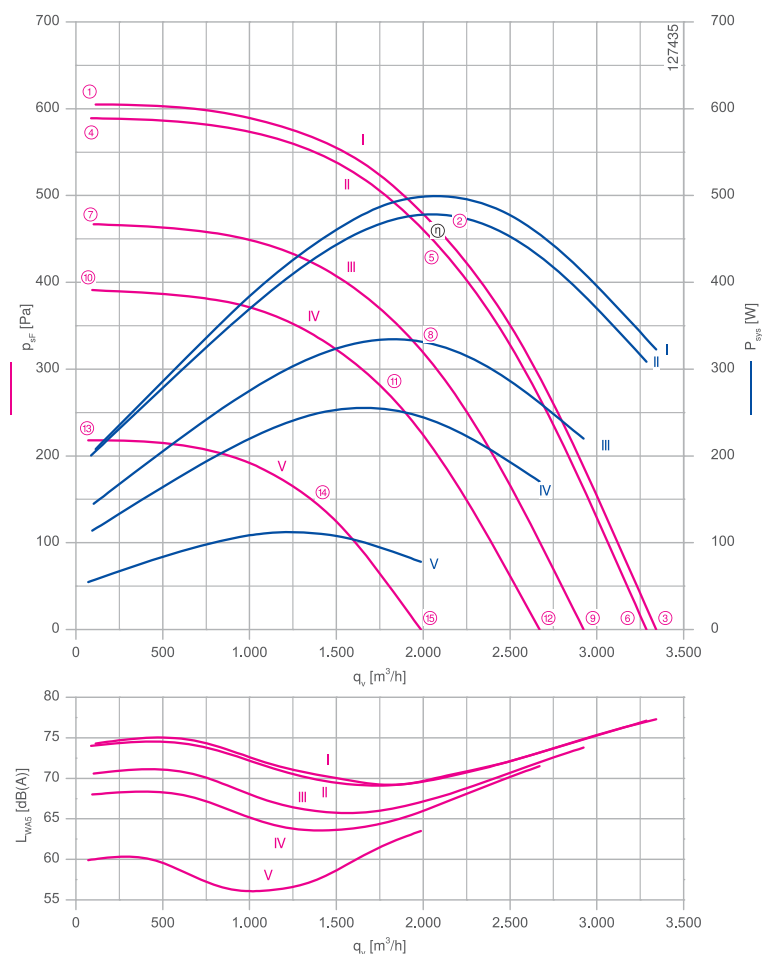
RH31C-6IK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC110 V\***  
 Input power  $P_{sys}$ : **500 W\***  
 Rated current  $I_N$ : **4.60 A\***  
 Rated speed  $n_N$ : **2120 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{R-}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R+}$  at  $n_{max}$ : 45 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

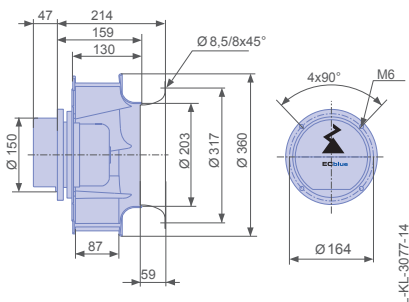


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411846	unpainted	
Connection diagram	1360-384		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

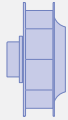
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
RH31C-6IK.BA.1R	I	2120	①	1.85	210	74	45
		2120*	②	4.60*	500	70	
		2120	③	2.90	320	77	
	II	2090	④	1.80	200	74	50
			⑤	4.40	480	70	
			⑥	2.80	310	77	
	III	1860	⑦	1.30	140	71	60
			⑧	3.00	330	67	
			⑨	2.00	220	74	
	IV	1700	⑩	1.05	110	68	60
			⑪	2.30	250	64	
			⑫	1.55	170	72	
	V	1270	⑬	0.50	55	60	60
			⑭	1.00	110	57	
			⑮	0.70	80	64	

\*rated data

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH31C-6IK.BA.1R

**Article no.** 174665

Weight kg 4.40

\* inlet ring not included

### Control technology

Operating terminal



Page 316

# C-ECblue

for three phase alternating current, 200-240 V

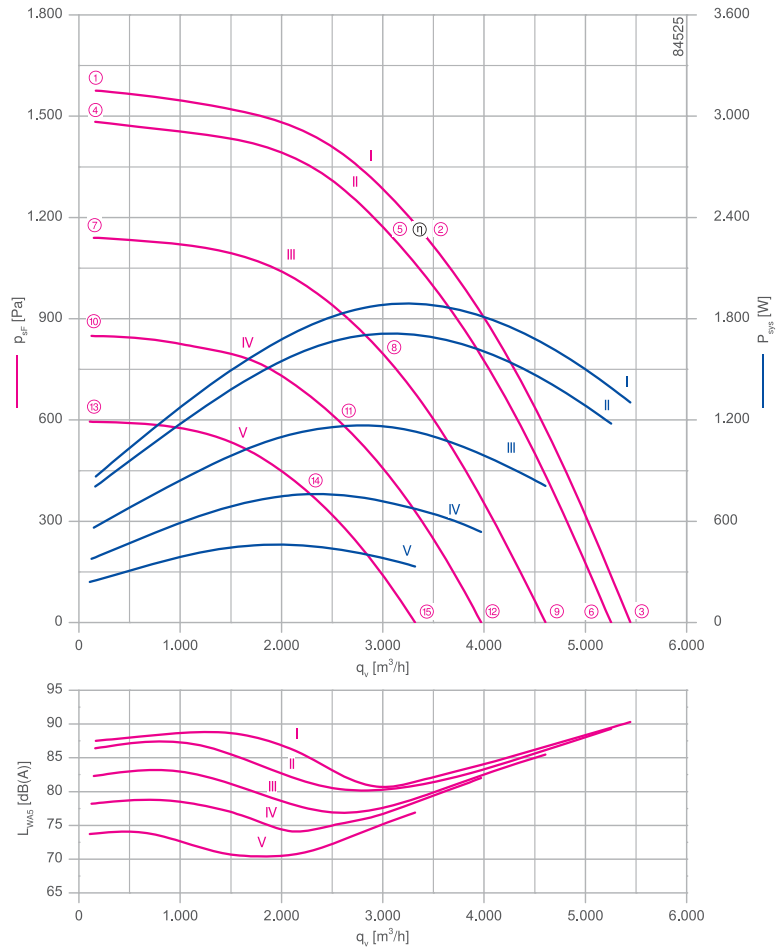
RH31C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-200-240 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.90 kW\*  
 Rated current  $I_N$ : 5.90-4.90 A\*  
 Rated speed  $n_N$ : 3380 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

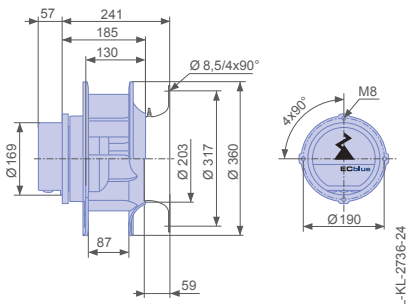


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__31C-ZID.DC.1R	I	3380	①	2.30	860	88	55
			②	5.20	1900	82	
			③	3.50	1300	90	
	II	3270	④	2.20	800	86	60
			⑤	4.60	1700	80	
			⑥	3.20	1200	89	
	III	2870	⑦	1.55	560	82	60
			⑧	3.10	1150	78	
			⑨	2.20	800	86	
	IV	2480	⑩	1.10	380	78	60
			⑪	2.10	760	75	
			⑫	1.50	540	82	
	V	2070	⑬	0.74	240	74	60
			⑭	1.30	460	71	
			⑮	0.96	330	77	

Current values determined at 230V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH31C-ZID.DC.1R

**Article no.** 171863

Weight kg 10.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

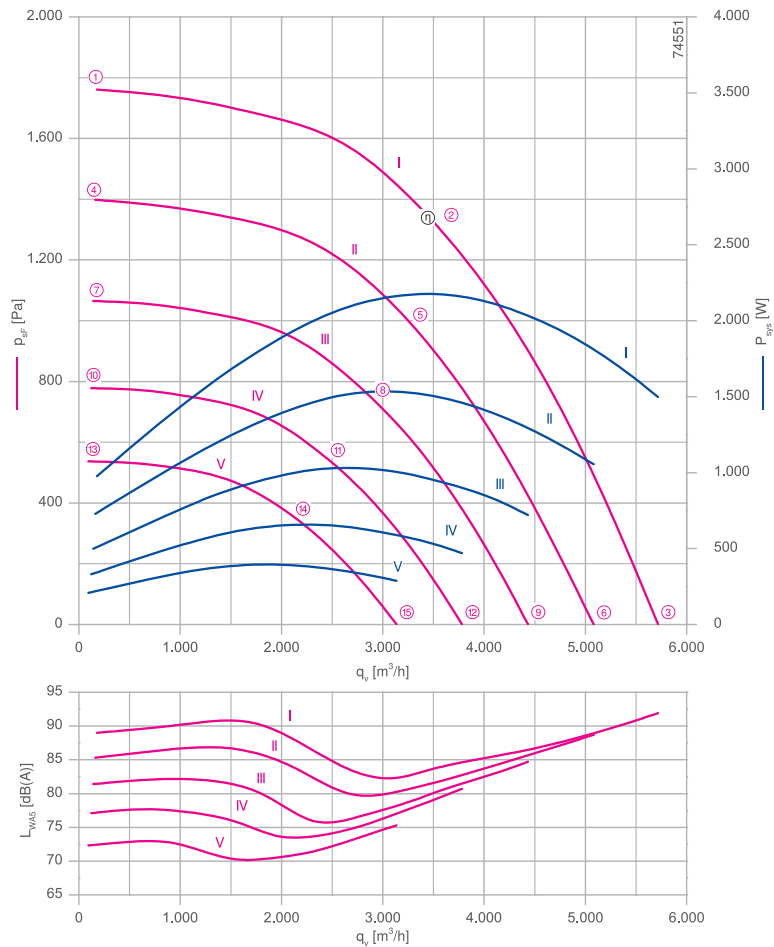
RH31C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.20 kW\*  
 Rated current  $I_N$ : 3.60-2.85 A\*  
 Rated speed  $n_N$ : 3550 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

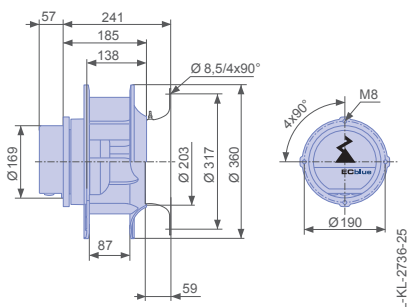


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411846		
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_31C-ZID.DC.1R	I	3550	①	1.70	980	89
			②	3.40	2200	84
			③	2.40	1500	92
	II	3150	④	1.40	720	85
			⑤	2.60	1550	81
			⑥	1.85	1050	89
	III	2750	⑦	1.10	500	81
			⑧	1.85	1050	77
			⑨	1.40	720	85
	IV	2350	⑩	0.84	330	77
			⑪	1.35	660	74
			⑫	1.10	460	81
	V	1950	⑬	0.60	210	72
			⑭	0.98	400	71
			⑮	0.76	290	75

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH31C-ZID.DC.1R  
**Article no.** 171864

Weight kg 10.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



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Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet



# C-ECblue

for three phase alternating current, 200-240 V

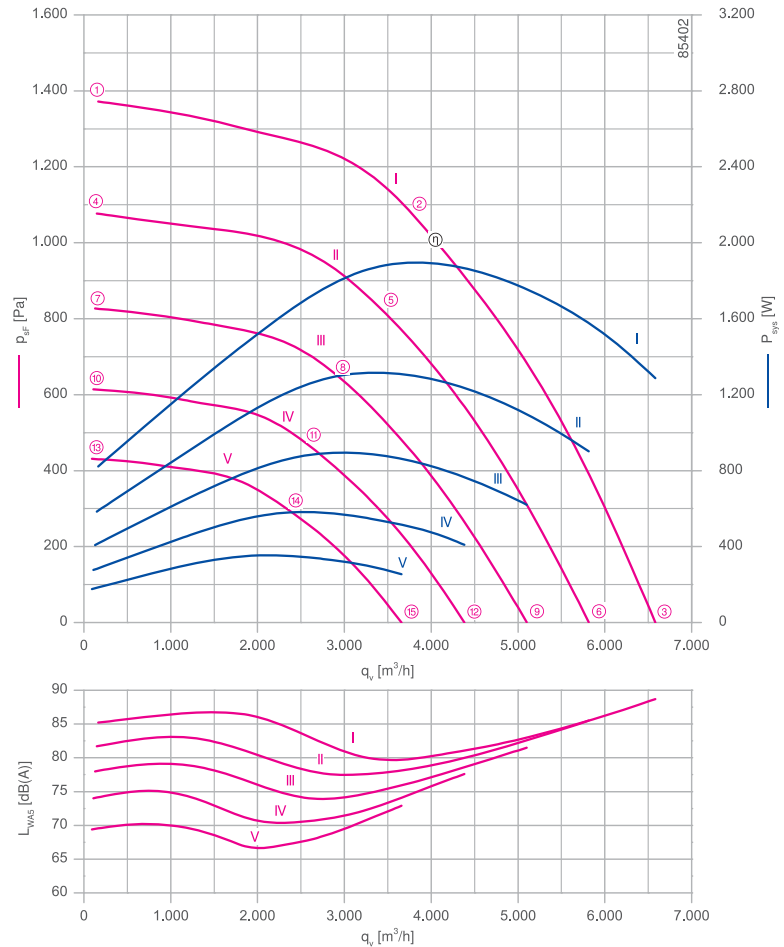
RH35C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-200-240 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.90 kW\*  
 Rated current  $I_N$ : 5.90-4.90 A\*  
 Rated speed  $n_N$ : 2770 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

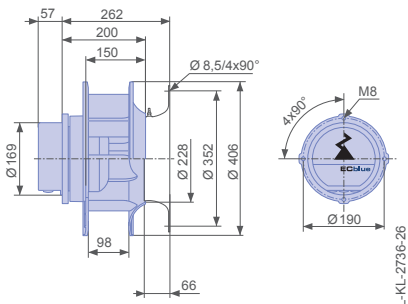


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411847		
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_35C-ZID.DC.1R	I	2770	①	2.30	820	85
			②	5.20	1900	80
			③	3.50	1300	89
	II	2450	④	1.65	580	82
			⑤	3.60	1300	78
			⑥	2.50	900	86
	III	2150	⑦	1.15	400	78
			⑧	2.40	900	74
			⑨	1.75	620	82
	IV	1850	⑩	0.80	280	74
			⑪	1.60	580	70
			⑫	1.15	400	78
	V	1550	⑬	0.54	180	69
			⑭	1.00	350	67
			⑮	0.74	250	73

Current values determined at 230V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH35C-ZID.DC.1R  
**Article no.** 171865

Weight kg 10.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



Page 316      Page 307

# C-ECblue

for three phase alternating current, 380-480 V

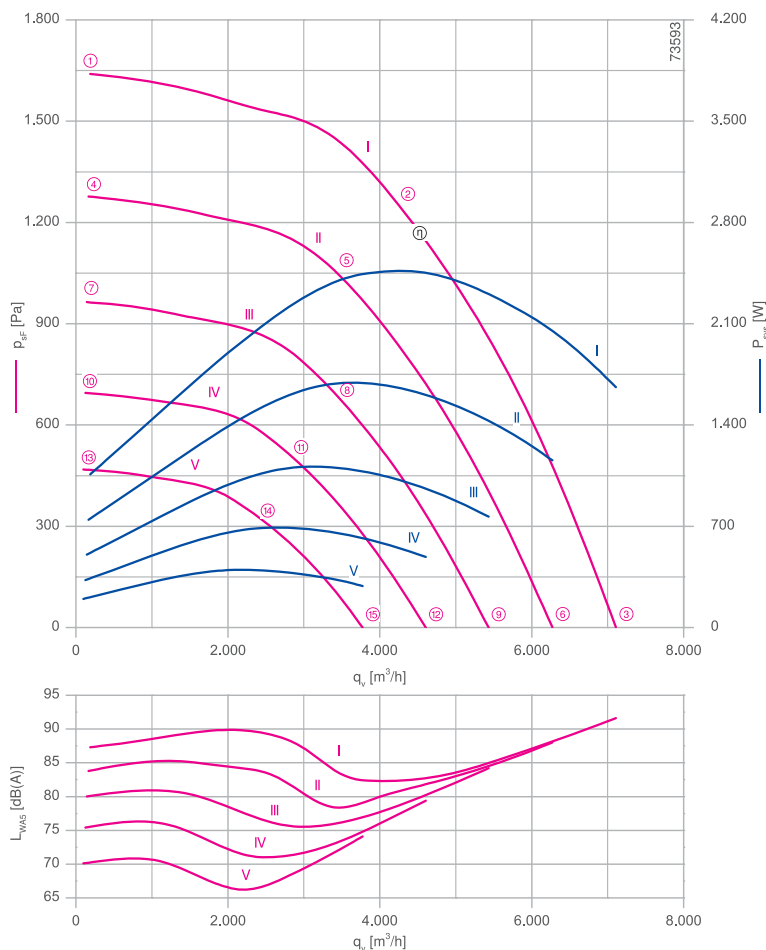
RH35C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 2.50 kW\*  
 Rated current  $I_N$ : 4.00-3.20 A\*  
 Rated speed  $n_N$ : 3000 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

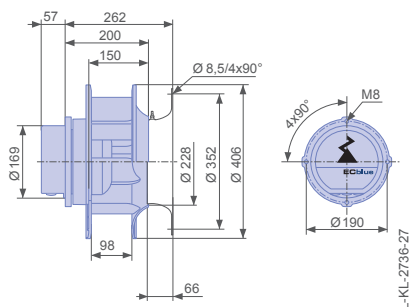


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411854	RAL 7032 (pebble grey) unpainted	Page 302
Inlet ring	00411847		
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

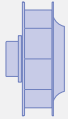
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__35C-ZID.DC.1R	I	3000	①	1.85	1050	87	50
			②	3.80	2500	82	
			③	2.70	1650	92	
	II	2650	④	1.40	740	84	60
			⑤	2.80	1700	79	
			⑥	2.00	1150	88	
	III	2300	⑦	1.10	500	80	60
			⑧	1.90	1100	76	
			⑨	1.45	760	84	
	IV	1950	⑩	0.84	330	75	60
			⑪	1.35	700	71	
			⑫	1.05	480	79	
	V	1600	⑬	0.54	200	70	60
			⑭	0.94	400	66	
			⑮	0.76	290	74	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH35C-ZID.DC.1R

**Article no.** 171866

Weight kg 10.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 200-240 V

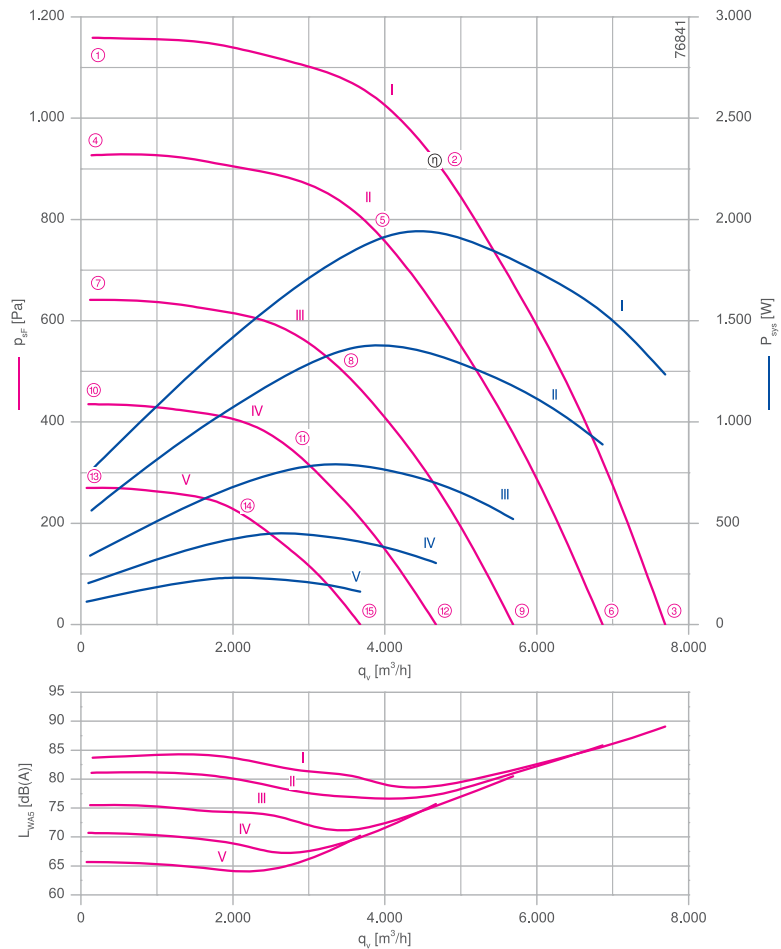
RH40C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-200-240 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.95 kW\*  
 Rated current  $I_N$ : 5.90-4.90 A\*  
 Rated speed  $n_N$ : 2300 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

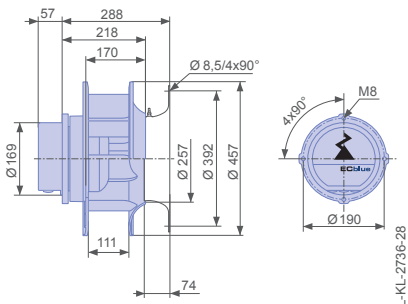


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__40C-ZID.DC.1R	I	2300	①	2.00	760	84	50
			②	5.20	1950	79	
			③	3.30	1250	89	
	II	2050	④	1.50	560	81	60
			⑤	3.70	1350	77	
			⑥	2.40	880	86	
	III	1700	⑦	0.94	340	76	60
			⑧	2.10	800	71	
			⑨	1.40	520	81	
	IV	1400	⑩	0.60	200	71	60
			⑪	1.25	460	67	
			⑫	0.86	300	76	
	V	1100	⑬	0.40	110	66	60
			⑭	0.70	230	64	
			⑮	0.52	160	70	

Current values determined at 230V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH40C-ZID.DC.1R

**Article no.** 171867

Weight kg 10.60

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

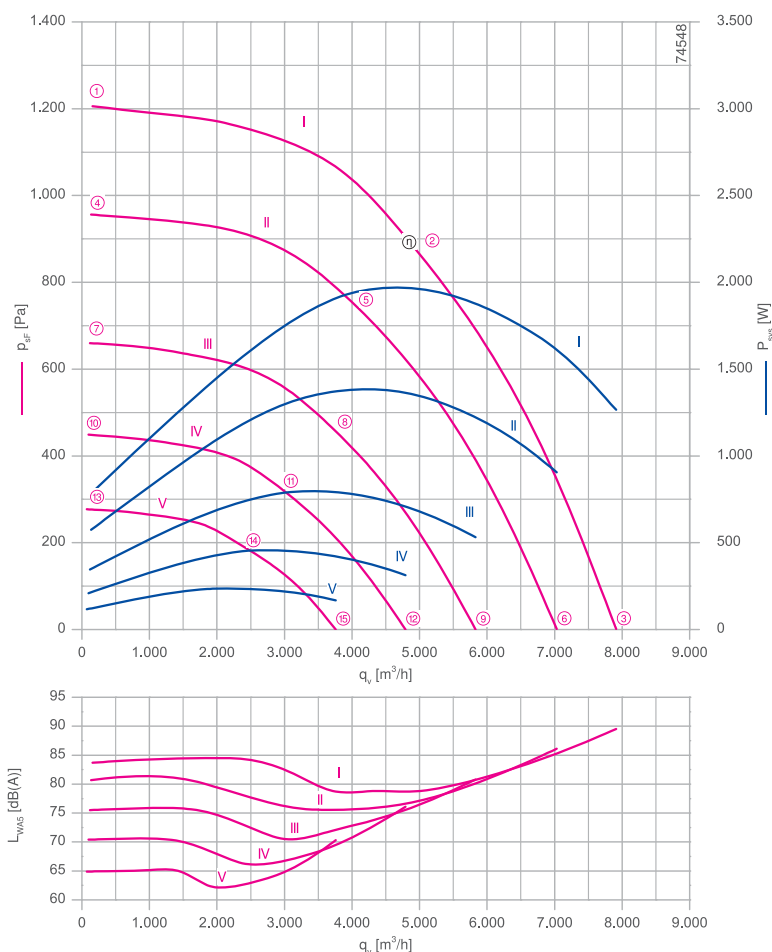
RH40C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.95 kW\*  
 Rated current  $I_N$ : 3.30-2.60 A\*  
 Rated speed  $n_N$ : 2300 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 50 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

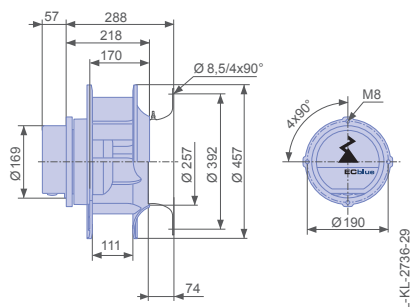


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed n min <sup>-1</sup>	Operating point	Current I A	Input power P <sub>sys</sub> W	Suction side sound power level L <sub>WAS</sub> dB(A)	Maximum ambient temperature t <sub>R</sub> °C
__40C-ZID.DC.1R	I	2300	①	1.45	800	84	50
			②	3.10	1950	79	
			③	2.10	1250	90	
	II	2050	④	1.15	580	81	60
			⑤	2.30	1400	76	
			⑥	1.60	900	86	
	III	1700	⑦	0.84	350	76	60
			⑧	1.45	800	72	
			⑨	1.10	540	81	
	IV	1400	⑩	0.56	210	70	60
			⑪	1.00	460	67	
			⑫	0.80	310	76	
	V	1100	⑬	0.34	120	65	60
			⑭	0.62	240	62	
			⑮	0.46	170	70	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH40C-ZID.DC.1R

**Article no.** 171868

Weight kg 10.60

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



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Page 307

# C-ECblue

for three phase alternating current, 380-480 V

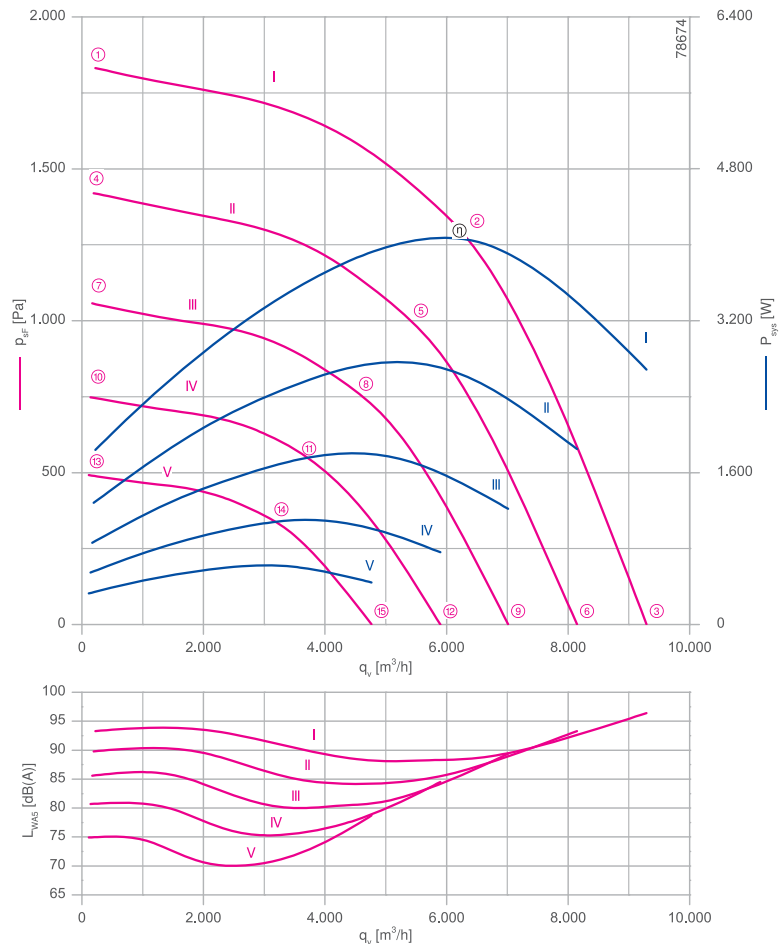
RH40C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 4.10 kW\*  
 Rated current  $I_N$ : 6.50-5.20 A\*  
 Rated speed  $n_N$ : 2900 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

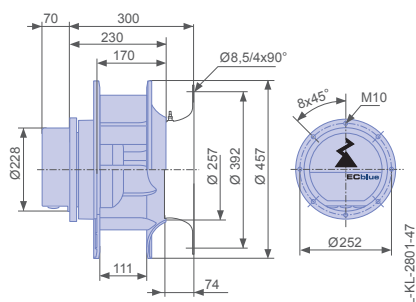


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_40C-ZID.GG.1R	I	2900	①	2.90	1850	93
			②	6.20	4000	88
			③	4.20	2700	96
	II	2550	④	2.10	1300	90
			⑤	4.40	2800	84
			⑥	2.90	1850	93
	III	2200	⑦	1.50	860	86
			⑧	2.90	1800	80
			⑨	2.00	1200	89
	IV	1850	⑩	1.10	540	81
			⑪	1.90	1100	76
			⑫	1.40	760	85
	V	1500	⑬	0.84	330	75
			⑭	1.20	620	70
			⑮	1.00	440	79

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH40C-ZID.GG.1R  
**Article no.** 171869

Weight kg 20.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



Page 316      Page 307

# C-ECblue

for three phase alternating current, 200-240 V

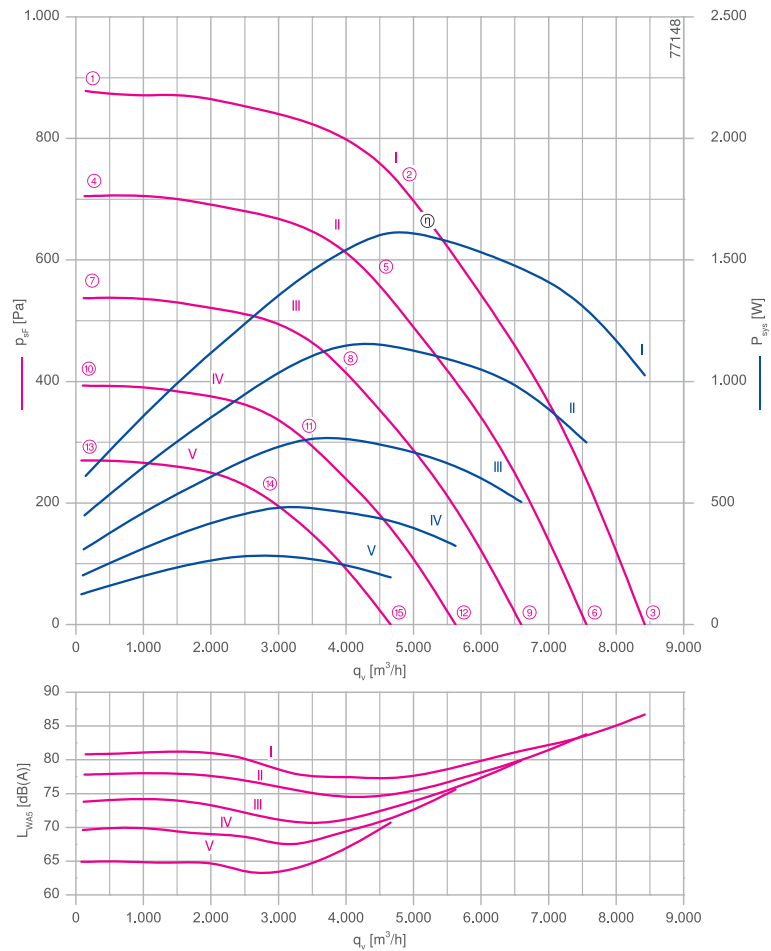
RH45C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-200-240 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.60 kW\*  
 Rated current  $I_N$ : 4.90-4.10 A\*  
 Rated speed  $n_N$ : 1750 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 40 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

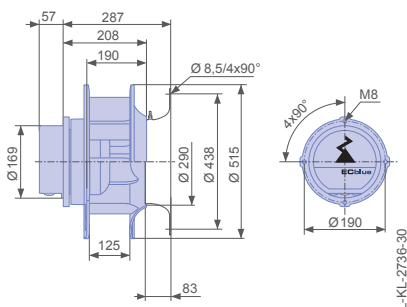


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	t <sub>R</sub> °C
__45C-ZIK.DC.1R	I	1750	①	1.65	620	81	
			②	4.20	1600	77	40
			③	2.70	1050	87	
	II	1570	④	1.25	440	78	
			⑤	3.10	1150	75	60
			⑥	2.00	740	84	
	III	1370	⑦	0.88	310	74	
			⑧	2.10	760	71	60
			⑨	1.35	500	80	
	IV	1170	⑩	0.62	200	70	
			⑪	1.35	480	68	60
			⑫	0.92	320	76	
	V	970	⑬	0.44	120	65	
			⑭	0.82	280	63	60
			⑮	0.60	190	71	

Current values determined at 230V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH45C-ZIK.DC.1R

**Article no.** 171870

Weight kg 11.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



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Page 307

# C-ECblue

for three phase alternating current, 380-480 V

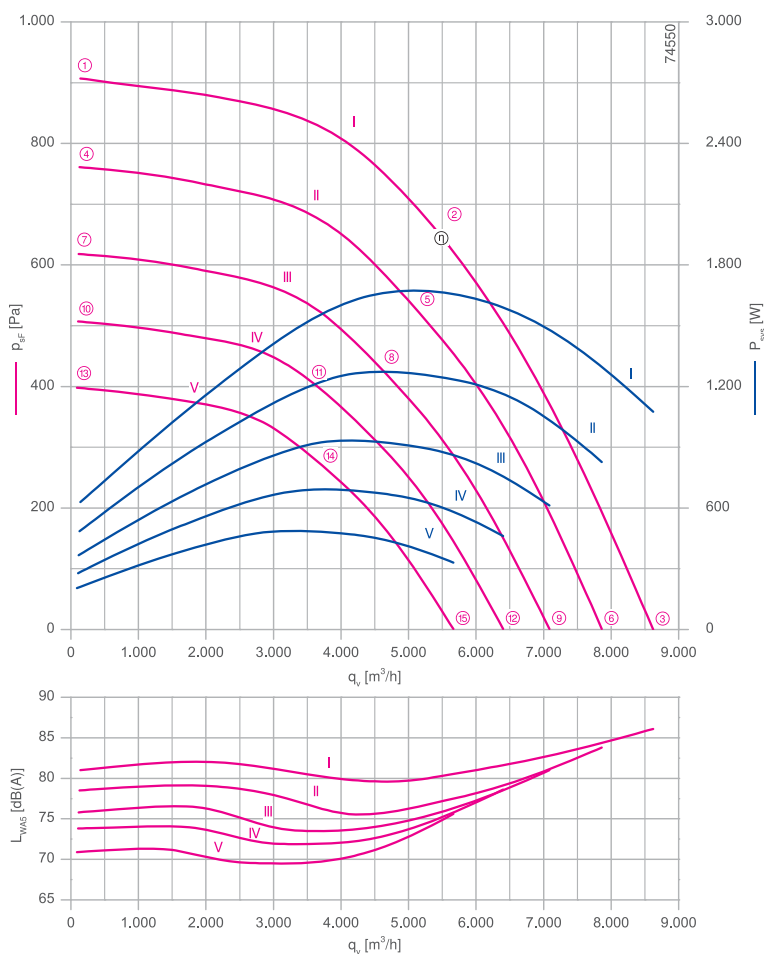
RH45C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.70 kW\*  
 Rated current  $I_N$ : 2.90-2.30 A\*  
 Rated speed  $n_N$ : 1770 min<sup>-1</sup>\*  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_R$  at  $n_{max}$ : 40 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

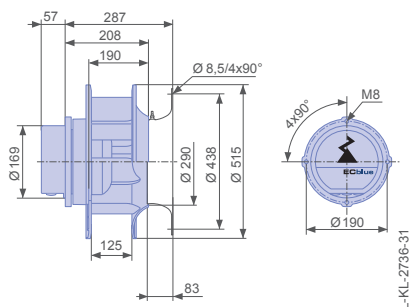


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
__45C-ZIK.DC.1R	I	1770	①	1.25	620	81	40
			②	2.70	1650	80	
			③	1.85	1100	86	
	II	1620	④	1.05	480	79	60
			⑤	2.10	1250	76	
			⑥	1.50	820	84	
	III	1460	⑦	0.86	370	76	60
			⑧	1.65	920	74	
			⑨	1.20	620	81	
	IV	1320	⑩	0.72	280	74	60
			⑪	1.30	680	72	
			⑫	1.00	460	79	
	V	1170	⑬	0.58	200	71	60
			⑭	1.05	480	70	
			⑮	0.82	330	76	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH45C-ZIK.DC.1R

**Article no.** 171871

Weight kg 11.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

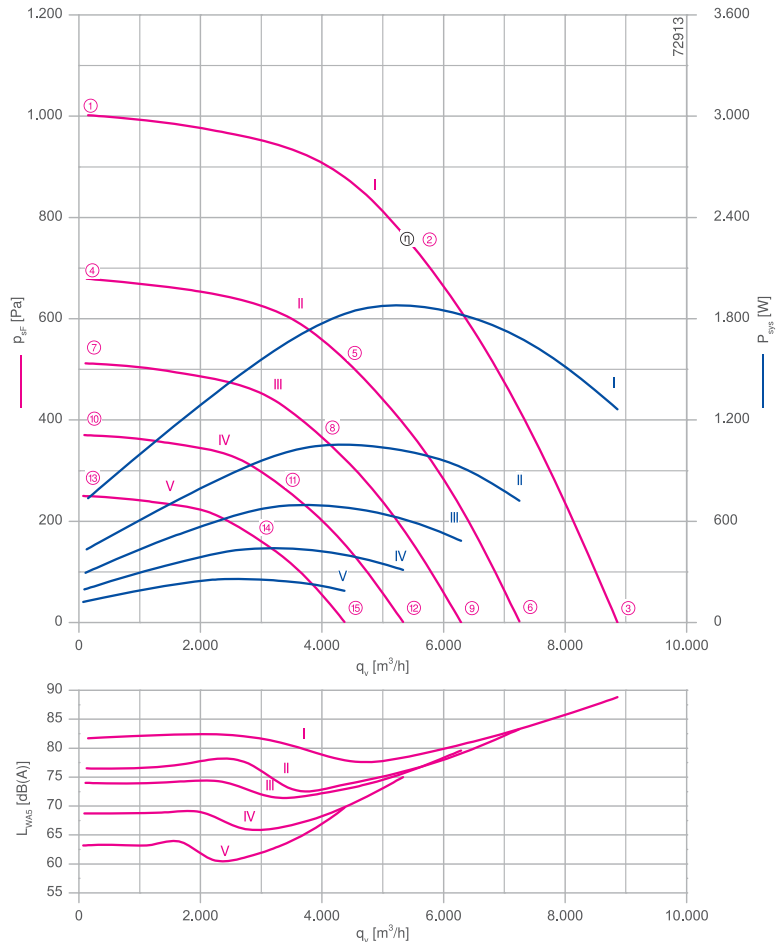
RH45C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 1.90 kW\*  
 Rated current  $I_N$ : 3.20-2.50 A\*  
 Rated speed  $n_N$ : 1850 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 40 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

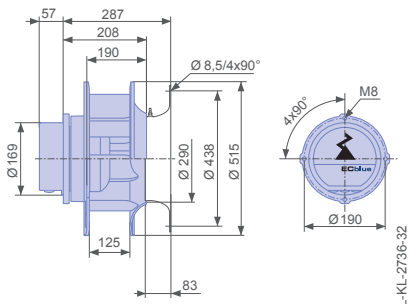


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
		unpainted	
Inlet ring	00411849		
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

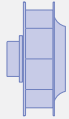
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	t <sub>R</sub> °C
__45C-ZIK.DG.1R	I	1850	①	1.40	740	82	
			②	3.00	1900	79	40
			③	2.10	1250	89	
	II	1520	④	1.05	440	77	
			⑤	1.85	1050	73	60
			⑥	1.40	720	83	
	III	1320	⑦	0.78	290	74	
			⑧	1.35	700	72	60
			⑨	1.10	480	80	
	IV	1120	⑩	0.54	200	69	
			⑪	1.05	440	66	60
			⑫	0.82	310	75	
	V	920	⑬	0.37	120	63	
			⑭	0.70	260	61	60
			⑮	0.52	190	70	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH45C-ZIK.DG.1R

**Article no.** 171872

Weight kg 13.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

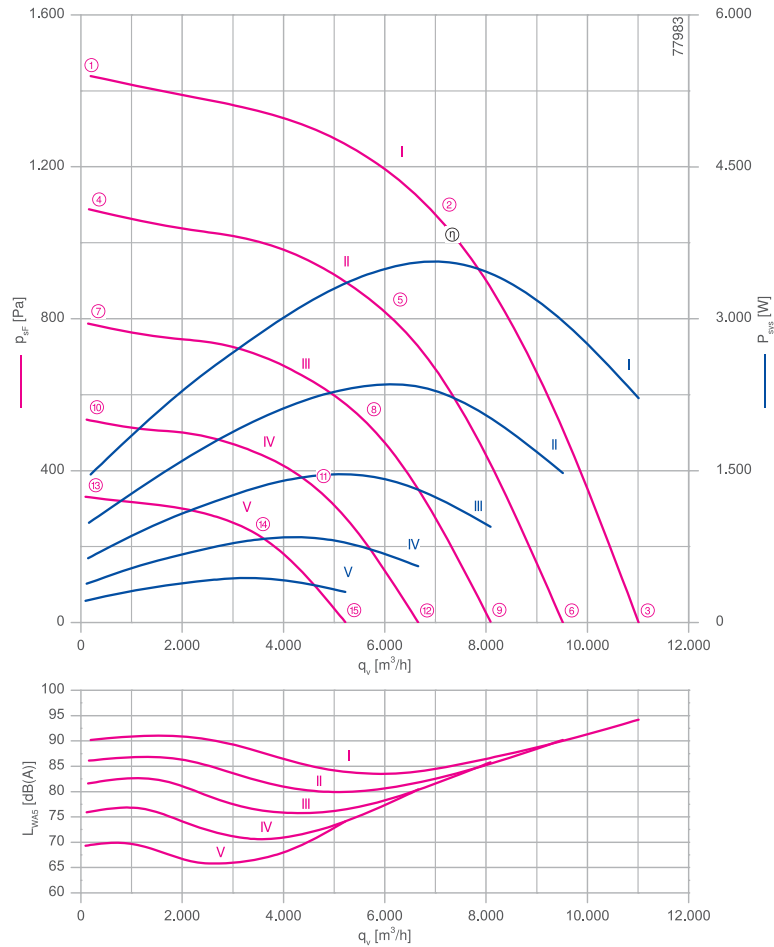
RH45C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.60 kW\*  
 Rated current  $I_N$ : 5.80-4.60 A\*  
 Rated speed  $n_N$ : 2300 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

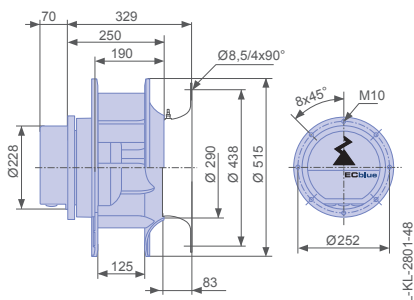


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_45C-ZID.GG.1R	I	2300	①	2.40	1450	90
			②	5.60	3600	84
			③	3.50	2200	94
	II	2000	④	1.70	980	86
			⑤	3.70	2300	80
			⑥	2.40	1500	90
	III	1700	⑦	1.20	640	82
			⑧	2.40	1450	77
			⑨	1.65	940	86
	IV	1400	⑩	0.90	380	76
			⑪	1.50	840	71
			⑫	1.10	560	80
	V	1100	⑬	0.58	220	69
			⑭	0.98	440	66
			⑮	0.78	300	74

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH45C-ZID.GG.1R  
**Article no.** 171873

Weight kg 11.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



Page 316      Page 307

# C-ECblue

for three phase alternating current, 380-480 V

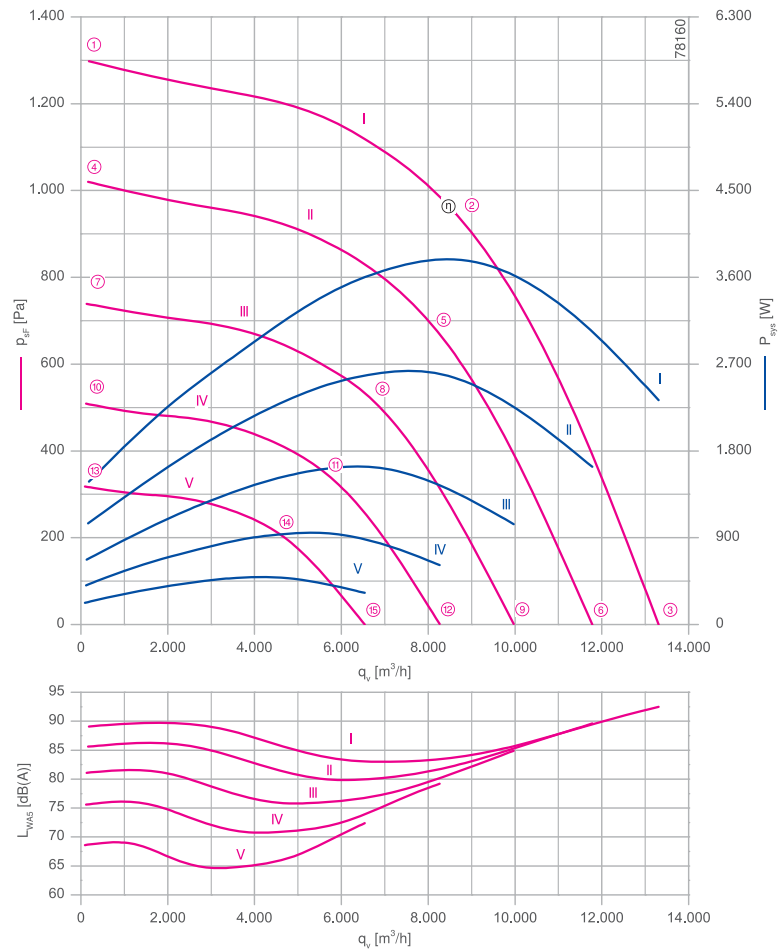
RH50C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.80 kW\*  
 Rated current  $I_N$ : 6.10-4.80 A\*  
 Rated speed  $n_N$ : 1920 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 60 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

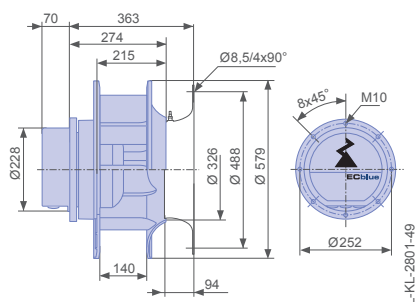


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411850	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WA5</sub> dB(A)
_50C-ZID.GG.1R	I	1920	①	2.40	1500	89
			②	5.80	3800	84
			③	3.60	2300	93
	II	1700	④	1.75	1050	86
			⑤	4.00	2600	81
			⑥	2.60	1650	90
	III	1450	⑦	1.25	680	81
			⑧	2.60	1650	77
			⑨	1.75	1050	85
	IV	1200	⑩	0.92	400	76
			⑪	1.65	960	72
			⑫	1.20	620	79
	V	950	⑬	0.60	230	69
			⑭	1.05	500	66
			⑮	0.82	330	72

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo




**Type** RH50C-ZID.GG.1R  
**Article no.** 171874

Weight kg 25.00  
\* inlet ring not included

### Control technology

Operating terminal      Expansion module



Page 316      Page 307

# C-ECblue

for three phase alternating current, 380-480 V

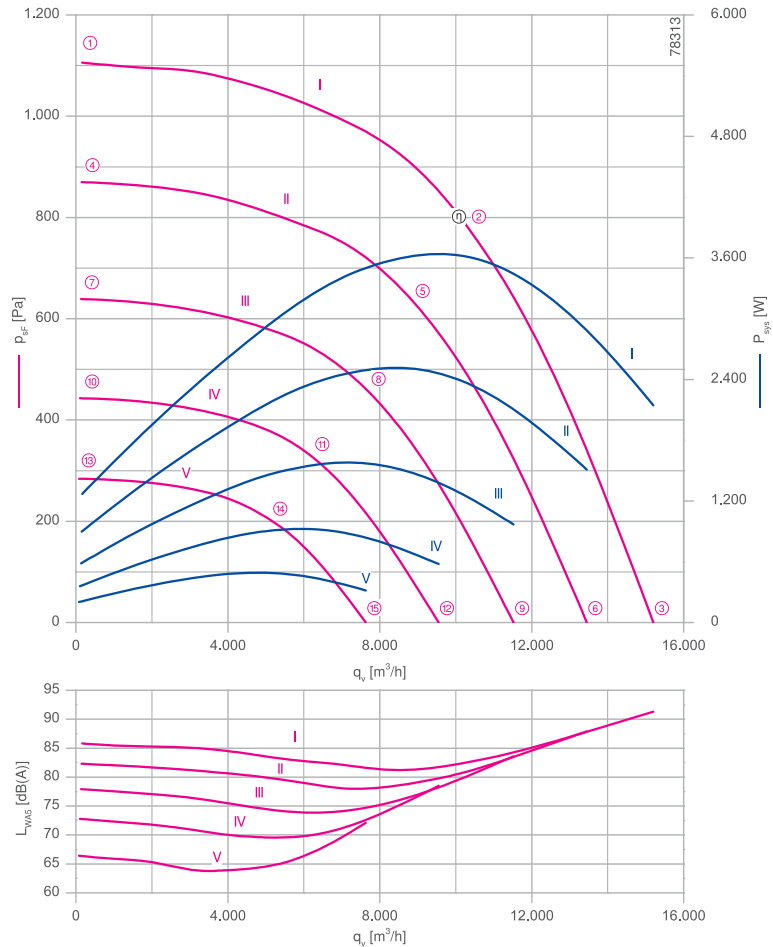
RH56C-ZID



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.60 kW\*  
 Rated current  $I_N$ : 5.90-4.70 A\*  
 Rated speed  $n_N$ : 1580 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

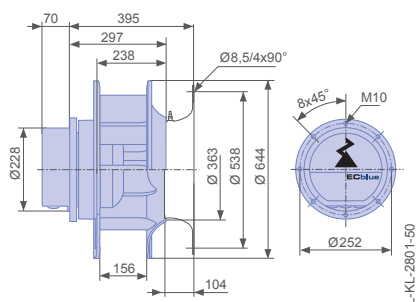


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00411858	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411851	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
_56C-ZID.GG.1R	I	1580	①	2.10	1250	86	55
			②	5.60	3600	82	
			③	3.30	2100	91	
	II	1400	④	1.55	900	82	60
			⑤	3.90	2500	79	
			⑥	2.40	1500	88	
	III	1200	⑦	1.10	580	78	60
			⑧	2.60	1600	74	
			⑨	1.65	960	84	
	IV	1000	⑩	0.82	360	73	60
			⑪	1.60	920	70	
			⑫	1.10	580	79	
	V	800	⑬	0.54	200	66	60
			⑭	1.00	500	64	
			⑮	0.78	320	72	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH56C-ZID.GG.1R

**Article no.** 171875

Weight kg 26.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

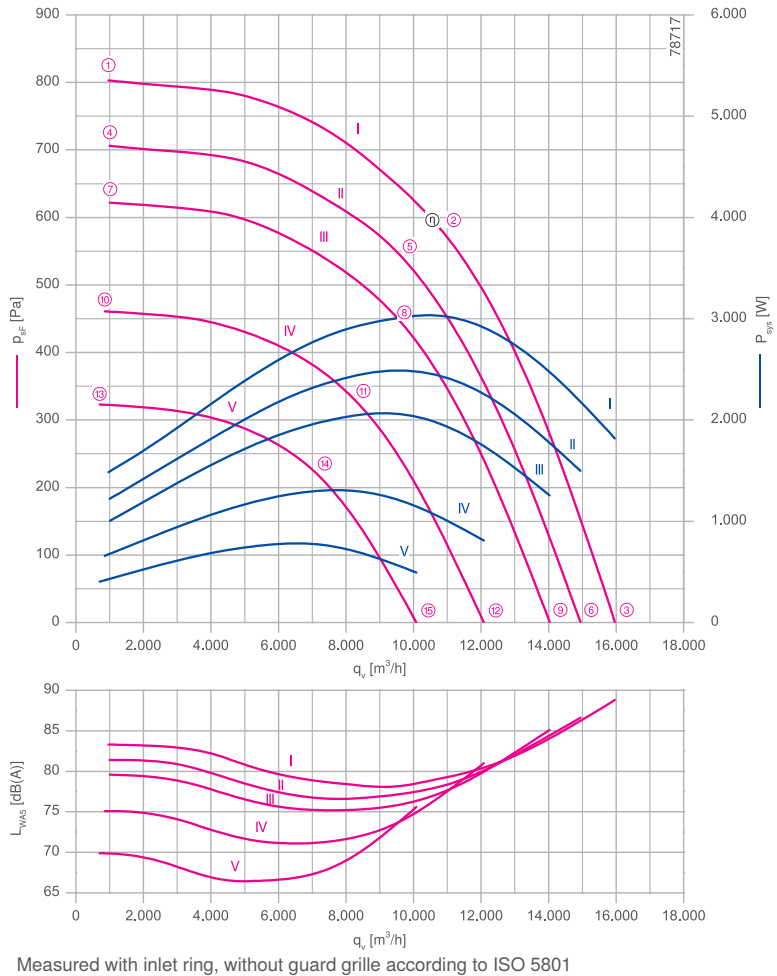
RH63C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.00 kW\*  
 Rated current  $I_N$ : 4.80-3.80 A\*  
 Rated speed  $n_N$ : 1230 min<sup>-1</sup>\*  
 Thermal class: **THCL155**\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 40 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

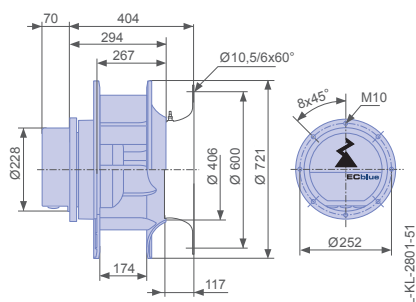
## Characteristic curve



Inlet ring	00411859	RAL 7032 (pebble grey) unpainted	Page 302
Inlet ring	00411852		
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo



### Performance data

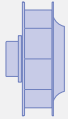
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
_63C-ZIK.GG.1R	I	1230	①	2.30	1500	83	40
			②	4.60	3000	79	
			③	2.80	1800	89	
	II	1150	④	1.90	1200	81	60
			⑤	3.80	2500	77	
			⑥	2.30	1500	87	
	III	1080	⑦	1.60	1000	80	60
			⑧	3.20	2100	76	
			⑨	1.95	1250	85	
	IV	930	⑩	1.10	660	75	60
			⑪	2.00	1300	72	
			⑫	1.30	800	81	
	V	780	⑬	0.78	400	70	60
			⑭	1.30	780	67	
			⑮	0.90	500	76	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH63C-ZIK.GG.1R

**Article no.** 171876

Weight kg 29.00

\* inlet ring not included

### Control technology

Operating terminal

Expansion module



Page 316



Page 307

# C-ECblue

for three phase alternating current, 380-480 V

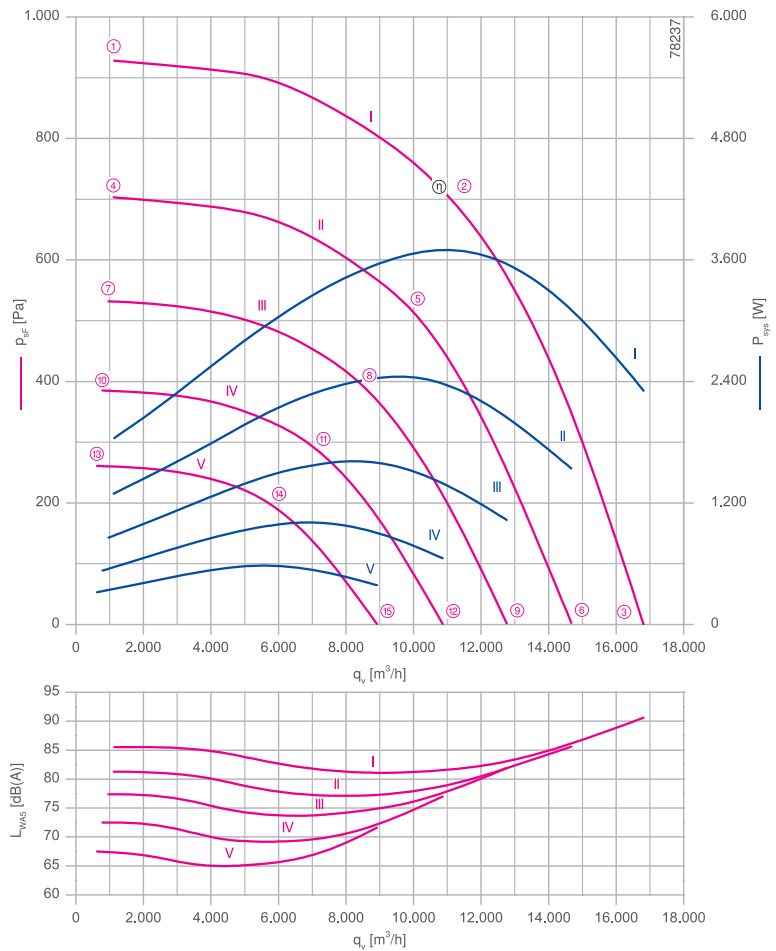
RH63C-ZIK



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3-380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{sys}$ : 3.70 kW\*  
 Rated current  $I_N$ : 5.90-4.70 A\*  
 Rated speed  $n_N$ : 1320 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_R$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R,max}$ : 55 °C  
 Electrical connection: Integrated controller  
 Balancing quality: G 6.3  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Impeller : aluminium, uncoated  
 Conformity: CE  
 \*Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

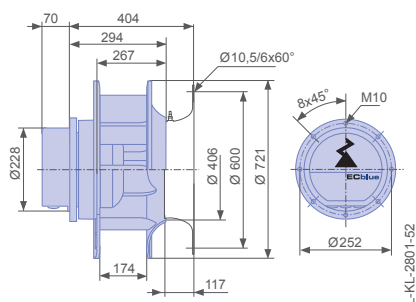


Measured with inlet ring, without guard grille according to ISO 5801

Inlet ring	00401462	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400811	unpainted	
Connection diagram	1360-403		Page 326

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu/Vo





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>sys</sub> W	L <sub>WAS</sub> dB(A)	
_63C-ZIK.GL.1R	I	1330	①	2.80	1850	86	55
			②	5.60	3700	82	
			③	3.50	2300	91	
	II	1150	④	2.00	1300	81	60
			⑤	3.70	2400	78	
			⑥	2.40	1550	86	
	III	1000	⑦	1.40	860	77	60
			⑧	2.50	1600	74	
			⑨	1.65	1050	82	
	IV	850	⑩	0.94	540	73	60
			⑪	1.60	1000	69	
			⑫	1.10	660	77	
	V	700	⑬	0.68	320	68	60
			⑭	1.00	580	65	
			⑮	0.76	390	72	

Current values determined at 400V

### Fan ordering information

Design RH\*

Installation position H/Vu/Vo



**Type** RH63C-ZIK.GL.1R

**Article no.** 171877

Weight kg 33.00

\* inlet ring not included

### Control technology

Operating terminal

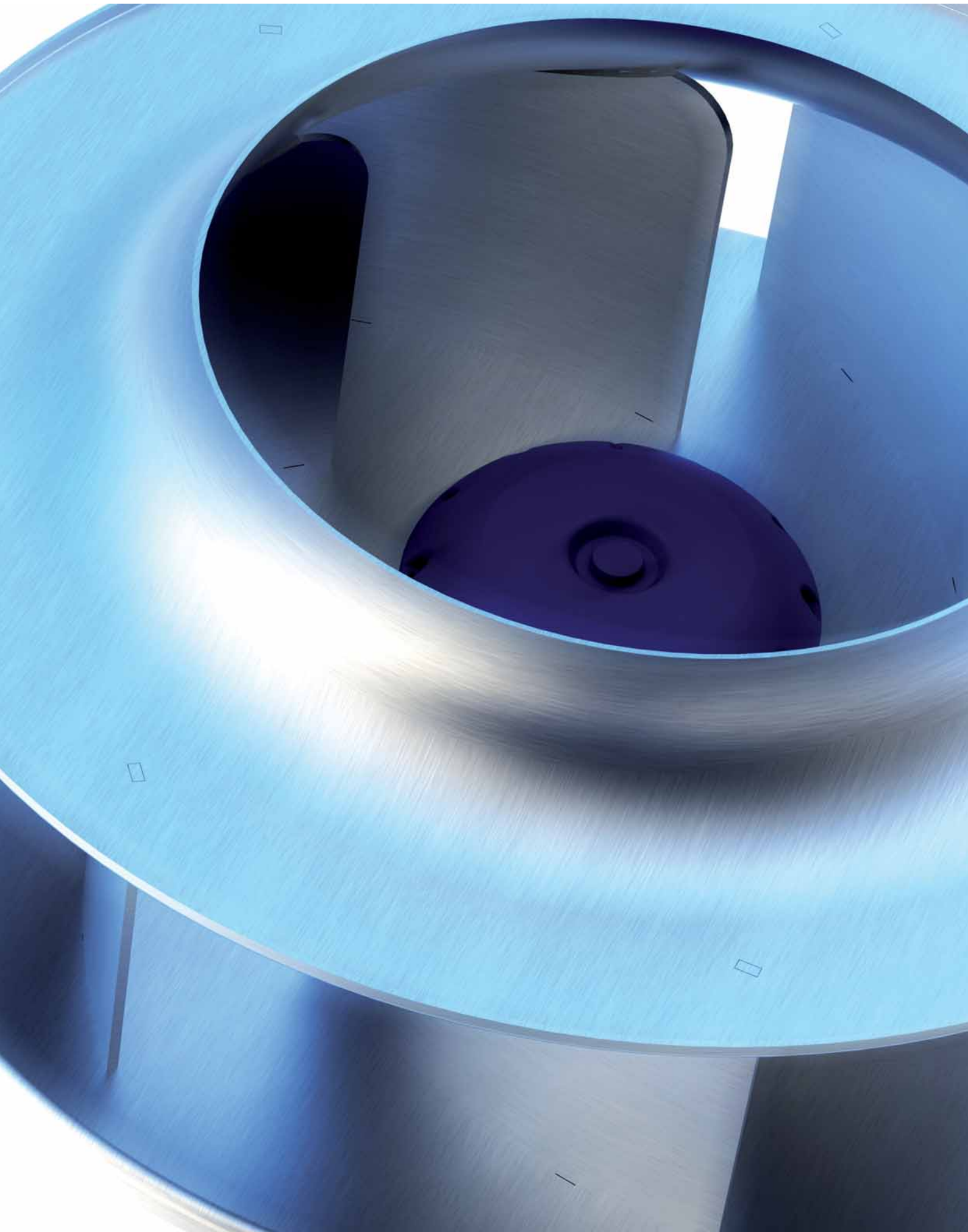
Expansion module



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# C-series

## AC technology

### Product overview

Quick selection	Page 148
Size 225	Page 150
Size 250	Page 154
Size 280	Page 158
Size 315	Page 162
Size 355	Page 172
Size 400	Page 178
Size 450	Page 180

Information

ZArail

Cpro-ECblue

C-ECblue

C series

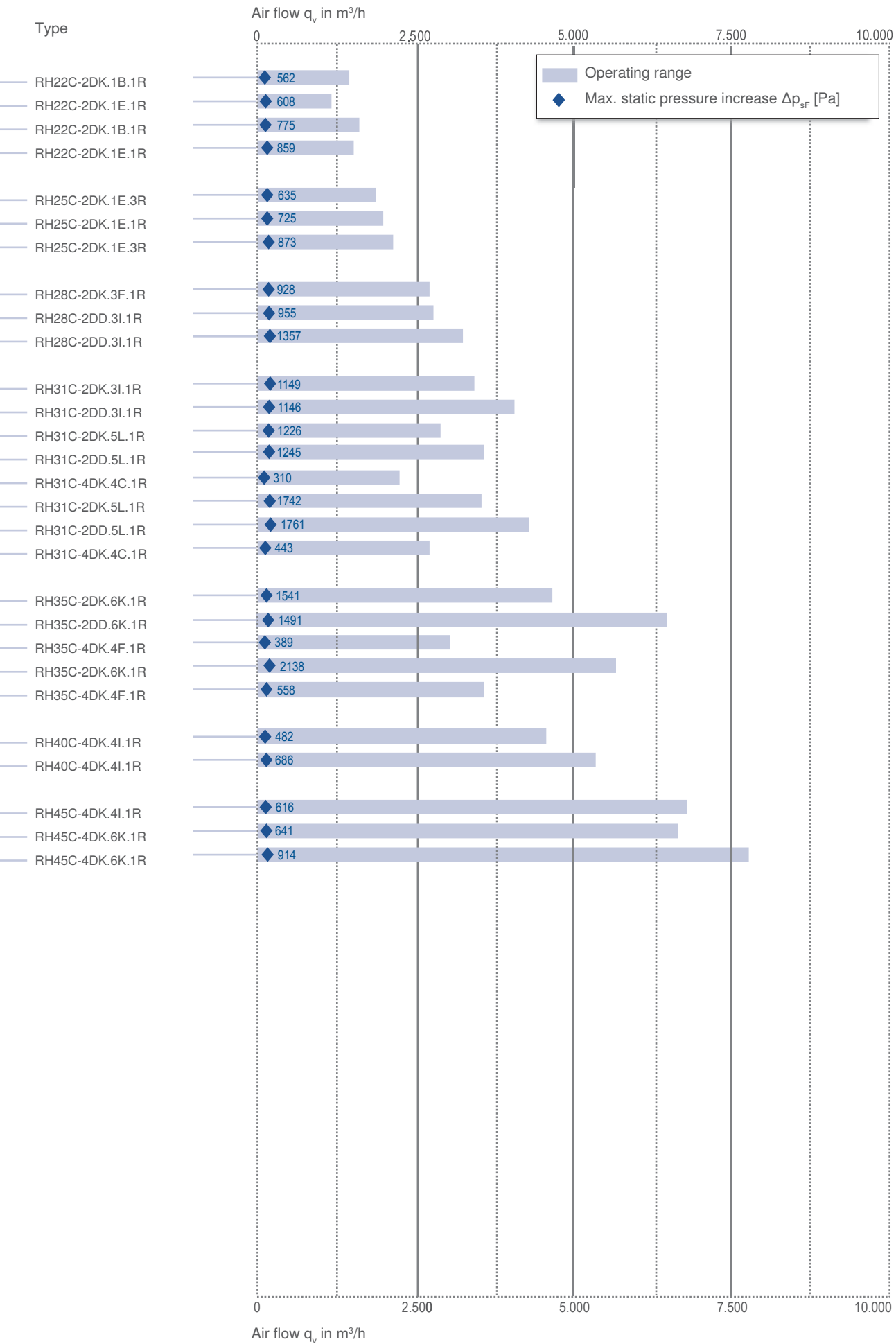
N series

M series

FE2owlet

Size	Frequency	Voltage	Number of poles	Type	Impeller position	Page
225	50 Hz	3~ 400V	2	RH22C-2DK.1B.1R	K	150
				RH22C-2DK.1E.1R	K	152
	60 Hz	3~ 400/460V	2	RH22C-2DK.1B.1R	K	150
				RH22C-2DK.1E.1R	K	152
250	50 Hz	3~ 400V	2	RH25C-2DK.1E.3R	K	154
				RH25C-2DK.1E.1R	K	156
	60 Hz	3~ 400/460V	2	RH25C-2DK.1E.3R	K	154
280	50 Hz	3~ 400V	2	RH28C-2DK.3F.1R	K	158
				RH28C-2DD.3I.1R	D	160
	60 Hz	3~ 400/460V	2	RH28C-2DD.3I.1R	D	160
315	50 Hz	3~ 400V	2	RH31C-2DK.3I.1R	K	162
				RH31C-2DD.3I.1R	D	164
			4	RH31C-2DK.5L.1R	K	166
				RH31C-2DD.5L.1R	D	168
	60 Hz	3~ 400/460V	2	RH31C-4DK.4C.1R	K	170
				RH31C-2DK.5L.1R	K	166
			4	RH31C-2DD.5L.1R	D	168
				RH31C-4DK.4C.1R	K	170
355	50 Hz	3~ 400V	2	RH35C-2DK.6K.1R	K	172
				RH35C-2DD.6K.1R	D	174
			4	RH35C-4DK.4F.1R	K	176
	60 Hz	3~ 400/460V	2	RH35C-2DK.6K.1R	K	172
				4	RH35C-4DK.4F.1R	K
400	50 Hz	3~ 400V	4	RH40C-4DK.4I.1R	K	178
	60 Hz	3~ 400/460V	4	RH40C-4DK.4I.1R	K	178
450	50 Hz	3~ 400V	4	RH45C-4DK.4I.1R	K	180
				RH45C-4DK.6K.1R	K	182
	60 Hz	3~ 400/460V	4	RH45C-4DK.6K.1R	K	182





- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet

# C-series

for three phase alternating current, 2 pole

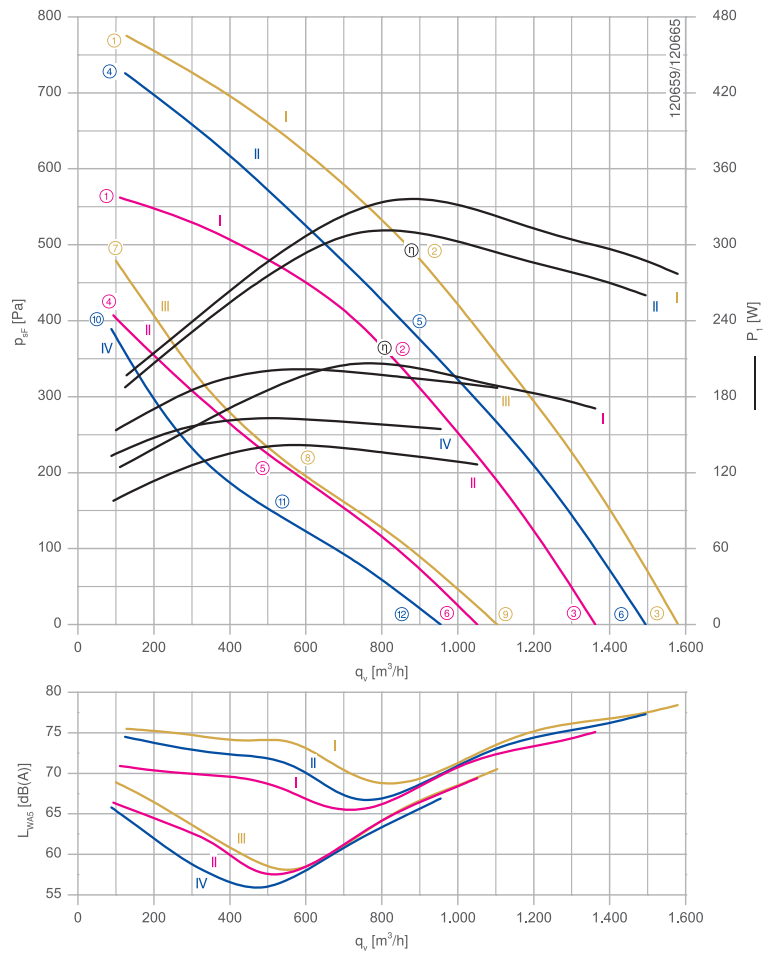
RH22C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 210 W | 310 W | 340 W\*  
 Rated current  $I_N$ :  
 0.57/0.33 A | 0.83/0.48 A | 0.80/0.46 A\*  
 Rated speed  $n_n$ :  
 2640 min<sup>-1</sup> | 2780 min<sup>-1</sup> | 3000 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2,00/1,10 A | 1,90/1,10 A | 2,20/1,30 A  
 Current increase  $\Delta I$ : 15 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, powder-coated, ultramarine blue  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

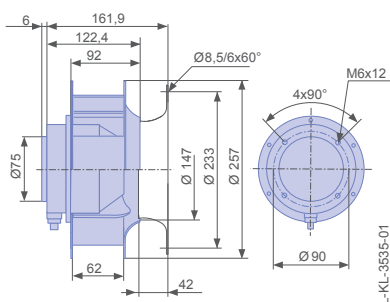


Measured with inlet ring, without guard grille according to ISO 5801

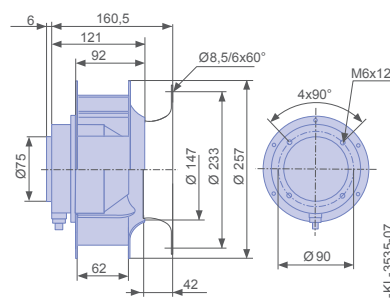
Inlet ring	00401776	RAL 7032 (pebble grey)	Page 302
Inlet ring	00400802	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22C-2DK.1B.1R	I	400	50	①	0.24	120	2810	71
		400*		②	0.33*	210*	2640*	66
		400		③	0.29	170	2720	75
	II	230		④	0.26	100	2400	66
		230		⑤	0.37	140	1930	58
		230		⑥	0.33	130	2120	69
	I	460	60	①	0.28	200	3310	76
		460*		②	0.46*	340*	3000*	69
		460		③	0.38	280	3150	78
	II	400		④	0.29	190	3200	75
		400*		⑤	0.48*	310*	2780*	68
		400		⑥	0.40	260	2990	77
	III	265	⑦	0.35	150	2610	69	
		265	⑧	0.46	200	1950	58	
		265	⑨	0.44	190	2210	71	
	IV	230	⑩	0.35	130	2340	66	
		230	⑪	0.44	160	1690	56	
		230	⑫	0.42	150	1920	67	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH22C-2DK.1B.1R</b>	<b>RH22C-2DK.1B.1R</b>
Article no.	<b>172163</b>	<b>175250</b>
Weight kg	5.00	5.00
* inlet ring not included		

# C-series

for three phase alternating current, 2 pole

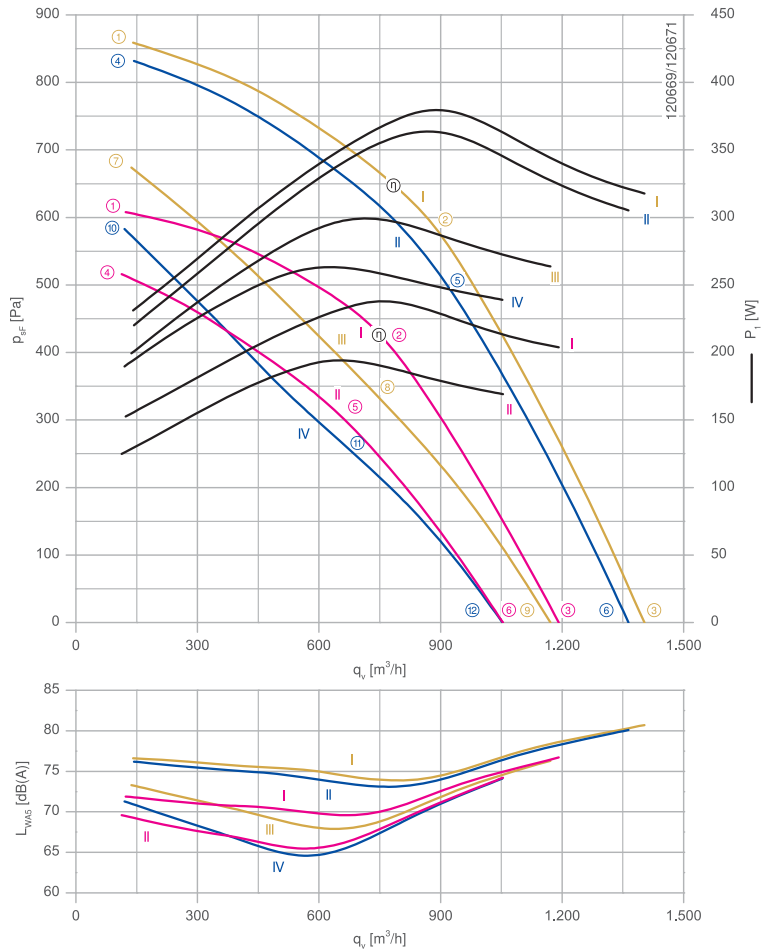
RH22C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 240 W | 360 W | 380 W\*  
 Rated current  $I_N$ :  
 0.80/0.46 A | 1.00/0.58 A | 0.96/0.56 A\*  
 Rated speed  $n_n$ :  
 2820 min<sup>-1</sup> | 3210 min<sup>-1</sup> | 3310 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 4.00/2.20 A | 3.80/2.20 A | 4.40/2.60 A  
 Current increase  $\Delta I$ : 20 % | 25 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 65 °C | 65 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, powder-coated, ultramarine blue  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

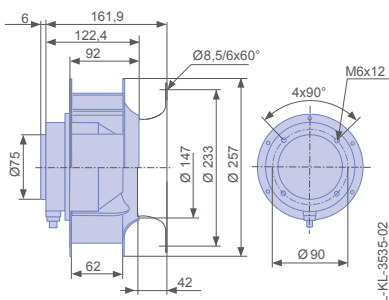


Measured with inlet ring, without guard grille according to ISO 5801

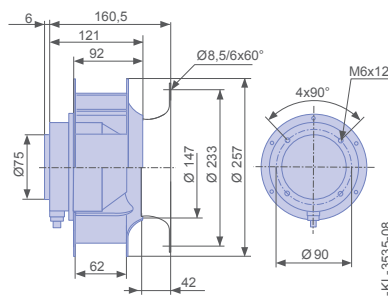
Inlet ring	00401776	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400802	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22C-2DK.1E.1R	I	400	50	①	0.39	150	2890	72
		400*		②	0.46*	240*	2820*	70
		400		③	0.42	200	2850	77
	II	230		④	0.34	120	2670	70
		230		⑤	0.52	190	2410	66
		230		⑥	0.46	170	2520	74
	I	460	60	①	0.40	230	3450	77
		460*		②	0.56*	380*	3310*	74
		460		③	0.48	320	3370	81
	II	400		④	0.38	220	3390	76
		400*		⑤	0.58*	360*	3210*	74
		400		⑥	0.50	310	3280	80
	III	265	⑦	0.46	200	3060	73	
		265	⑧	0.70	300	2620	69	
		265	⑨	0.62	260	2810	76	
	IV	230	⑩	0.50	190	2850	71	
		230	⑪	0.70	260	2320	65	
		230	⑫	0.64	240	2530	74	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH22C-2DK.1E.1R</b>	<b>RH22C-2DK.1E.1R</b>
Article no.	<b>172164</b>	<b>175251</b>
Weight kg	6.00	6.00
* inlet ring not included		

# C-series

for three phase alternating current, 2 pole

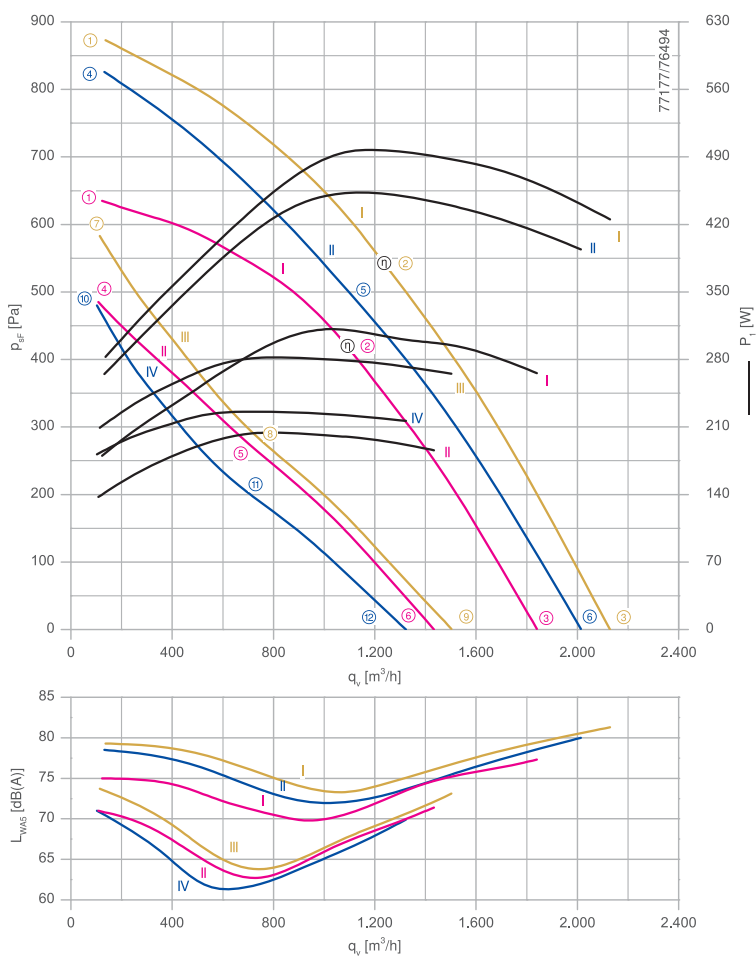
RH25C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 310 W | 460 W | 500 W\*  
 Rated current  $I_N$ :  
 0.96/0.56 A | 1.25/0.74 A | 1.25/0.72 A\*  
 Rated speed  $n_n$ :  
 2650 min<sup>-1</sup> | 2840 min<sup>-1</sup> | 3030 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 3.40/1,90 A | 3,20/1,80 A | 3,60/2,00 A  
 Current increase  $\Delta I$ : 5 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, powder-coated, ultramarine blue  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

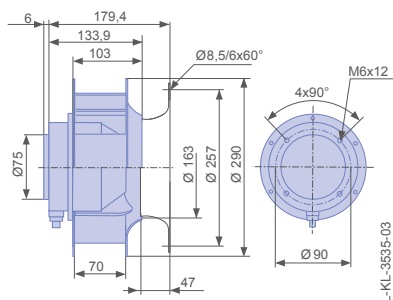


Measured with inlet ring, without guard grille according to ISO 5801

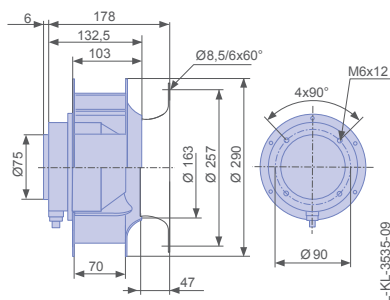
Inlet ring	00401777	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400803	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH25C-2DK.1E.3R	I	400	50	①	0.40	180	2830	75
		400*		②	0.56*	310*	2650*	70
		400		③	0.50	270	2720	77
	II	230		④	0.39	140	2470	71
		230		⑤	0.58	200	2000	63
		230		⑥	0.52	190	2150	71
	I	460	60	①	0.46	280	3330	79
		460*		②	0.72*	500*	3030*	74
		460		③	0.62	420	3150	81
	II	400		④	0.46	260	3250	79
		400*		⑤	0.74*	460*	2840*	72
		400		⑥	0.64	390	2990	80
	III	265	⑦	0.52	210	2730	74	
		265	⑧	0.70	280	2070	64	
		265	⑨	0.66	270	2260	73	
	IV	230	⑩	0.52	180	2480	71	
		230	⑪	0.66	230	1810	61	
		230	⑫	0.62	220	1980	70	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH25C-2DK.1E.3R</b>	<b>RH25C-2DK.1E.3R</b>
Article no.	<b>172165</b>	<b>175252</b>
Weight kg	6.00	6.00
* inlet ring not included		

# C-series

for three phase alternating current, 2 pole

RH25C-2D



## Description

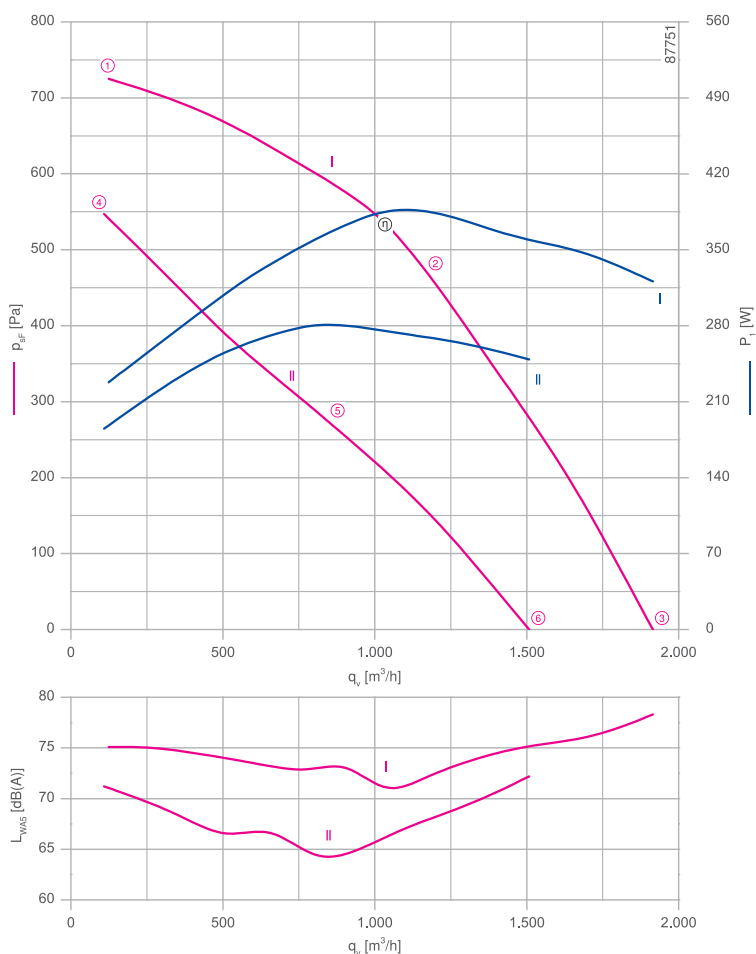
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 390 W\*  
 Rated current  $I_N$ : 1.10/0.64 A\*  
 Rated speed  $n_N$ : 2690 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 4.00/2.20 A  
 Current increase  $\Delta I$ : 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 70 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

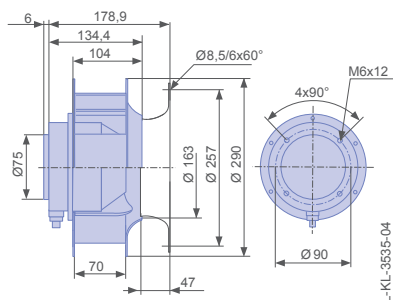


Measured with inlet ring, without guard grille according to ISO 5801

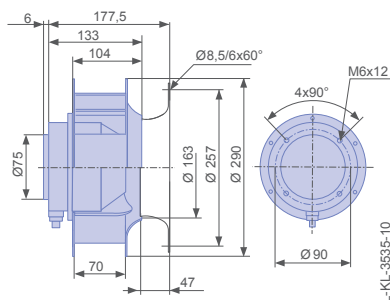
Inlet ring	00401777	RAL 7032 (pebble grey)	Page 302
Inlet ring	00400803	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH25C-2DK.1E.1R	I	400	①	0.46	230	2840	75
		400*	②	0.64*	390*	2690*	72
		400	③	0.56	320	2750	78
	II	230	④	0.50	190	2460	71
		230	⑤	0.74	280	2000	64
		230	⑥	0.66	250	2200	72

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH25C-2DK.1E.1R</b>	<b>RH25C-2DK.1E.1R</b>
<b>Article no.</b>	<b>172166</b>	<b>175253</b>
Weight kg	4.40	4.40
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

RH28C-2D



## Description

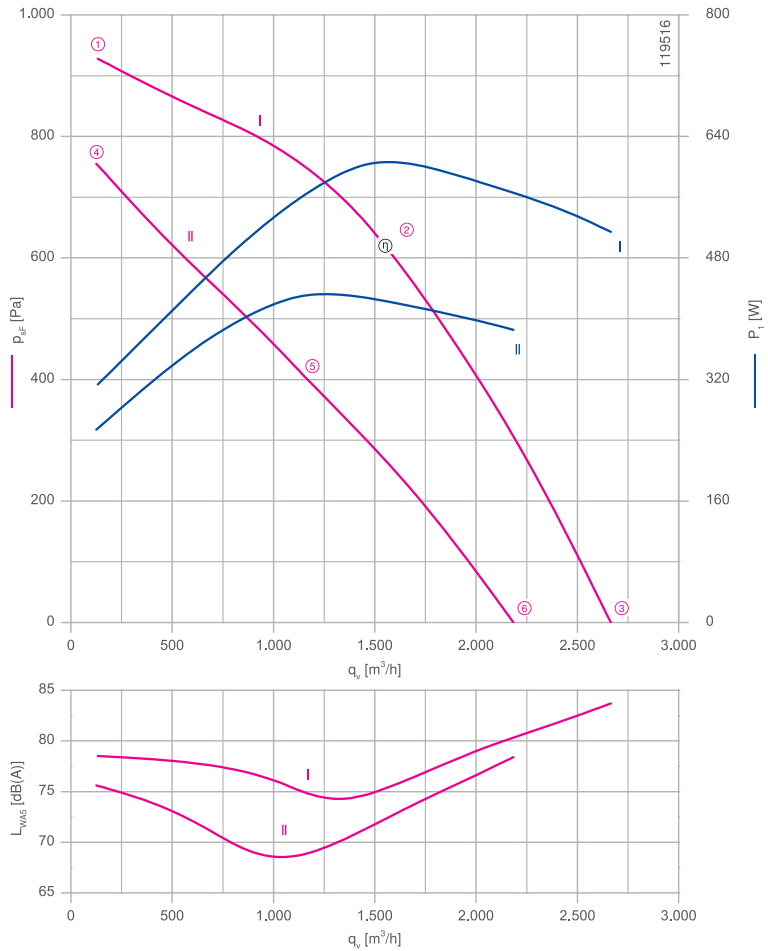
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 600 W\*  
 Rated current  $I_N$ : 1.80/1.05 A\*  
 Rated speed  $n_N$ : 2700 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A  
 Current increase  $\Delta I$ : 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 65 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

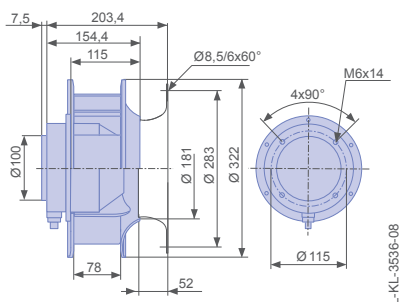


Measured with inlet ring, without guard grille according to ISO 5801

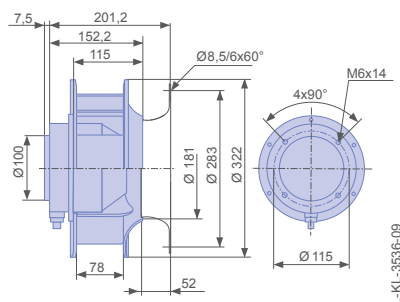
Inlet ring	00401778	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400804	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH28C-2DK.3F.1R	I	400	①	0.72	310	2860	79
		400*	②	1.05*	600*	2700*	75
		400	③	0.94	520	2760	84
	II	230	④	0.70	250	2580	76
		230	⑤	1.15	420	2130	69
		230	⑥	1.05	390	2270	78

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH28C-2DK.3F.1R</b>	<b>RH28C-2DK.3F.1R</b>
<b>Article no.</b>	<b>172167</b>	<b>175254</b>
Weight kg	8.00	8.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

RH28C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 620 W | 980 W | 1.05 kW\*  
 Rated current  $I_N$ :  
 2.10/1.20 A | 2.80/1.60 A | 2.70/1.55 A\*  
 Rated speed  $n_n$ :  
 2790 min<sup>-1</sup> | 3150 min<sup>-1</sup> | 3270 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 11.00/6,50 A | 10,00/6,00 A | 12,00/7,00 A  
 Current increase  $\Delta I$ : 15 % | 10 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 65 °C | 65 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

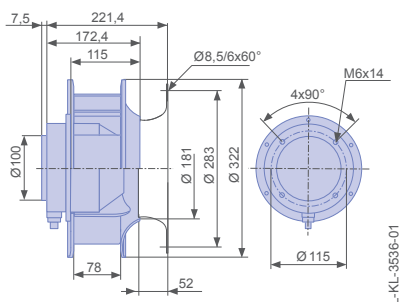
\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

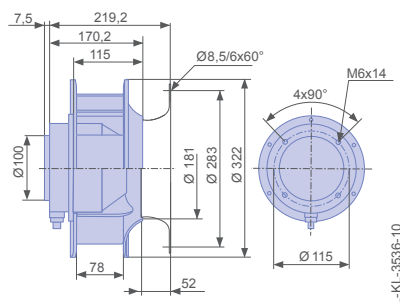
Inlet ring	00401778	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00400804	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

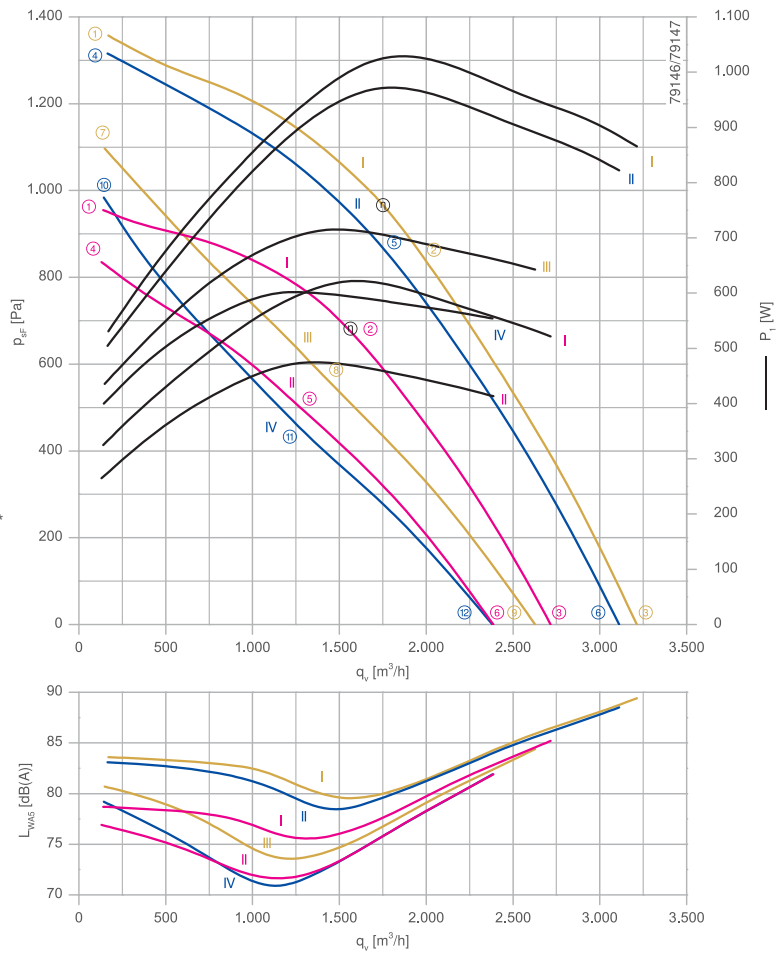
Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



## Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801






Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH28C-2DD.3I.1R	I	400	50	①	0.92	320	2910	79
		400*		②	1.20*	620*	2790*	76
		400		③	1.10	520	2830	85
	II	230		④	0.78	260	2710	77
		230		⑤	1.35	480	2380	72
		230		⑥	1.20	420	2490	82
	I	460	60	①	0.98	540	3460	84
		460*		②	1.55*	1050*	3270*	81
		460		③	1.35	860	3340	89
	II	400		④	0.94	500	3410	83
		400*		⑤	1.60*	980*	3150*	80
		400		⑥	1.40	820	3240	89
	III	265	⑦	1.10	440	3120	81	
		265	⑧	1.80	720	2560	74	
		265	⑨	1.60	640	2740	84	
	IV	230	⑩	1.15	400	2950	79	
		230	⑪	1.75	600	2300	72	
		230	⑫	1.60	560	2490	82	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH28C-2DD.3I.1R</b>	<b>RH28C-2DD.3I.1R</b>
Article no.	<b>172168</b>	<b>175255</b>
Weight kg	10.00	10.00
* inlet ring not included		

# C-series

for three phase alternating current, 2 pole

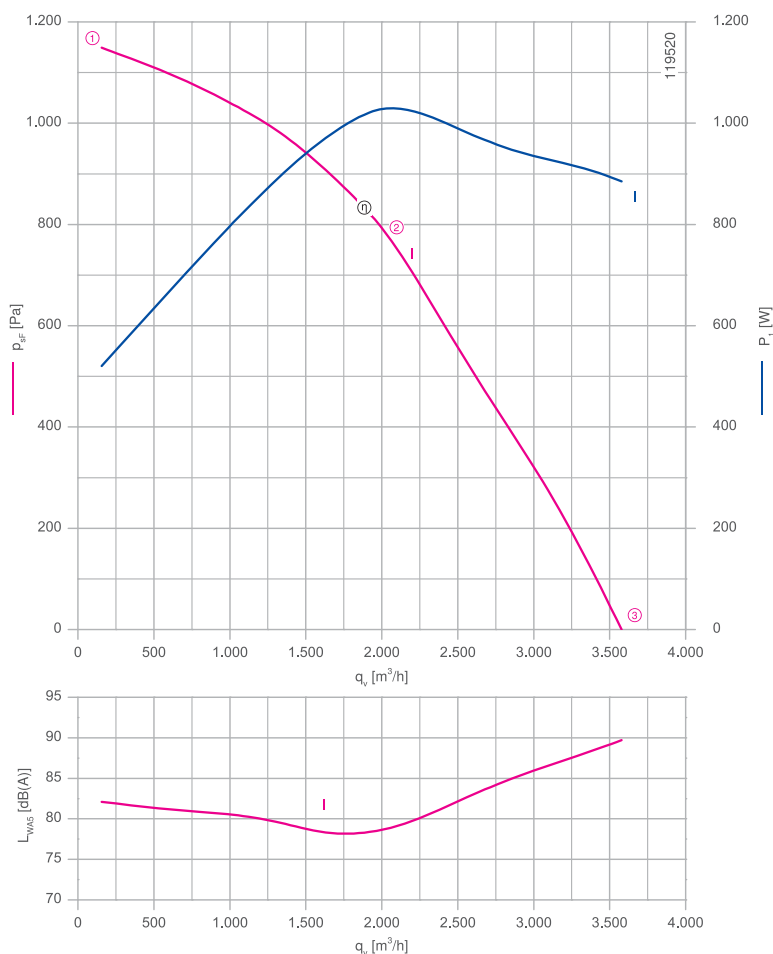
RH31C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 1.05 kW\*  
 Rated current  $I_N$ : 2.90/1.70 A\*  
 Rated speed  $n_N$ : 2670 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 13,00/7,50 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

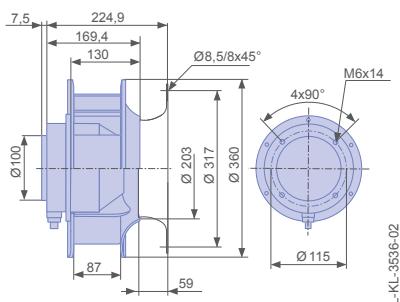


Measured with inlet ring, without guard grille according to ISO 5801  
 Not voltage controllable fan.

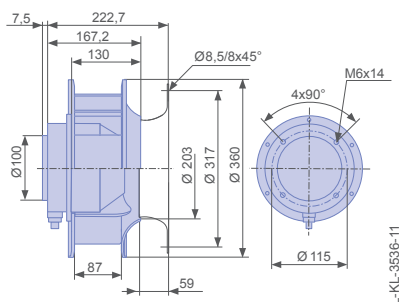
Inlet ring	00411853	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411846	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
 in installation position H/Vu



Free-running motorized impeller RH  
 in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH31C-2DK.3I.1R	I	400	①	1.05	520	2860	82
		400*	②	1.70*	1050*	2670*	79
		400	③	1.50	880	2740	90

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31C-2DK.3I.1R</b>	<b>RH31C-2DK.3I.1R</b>
<b>Article no.</b>	<b>172169</b>	<b>175256</b>
Weight kg	11.00	11.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

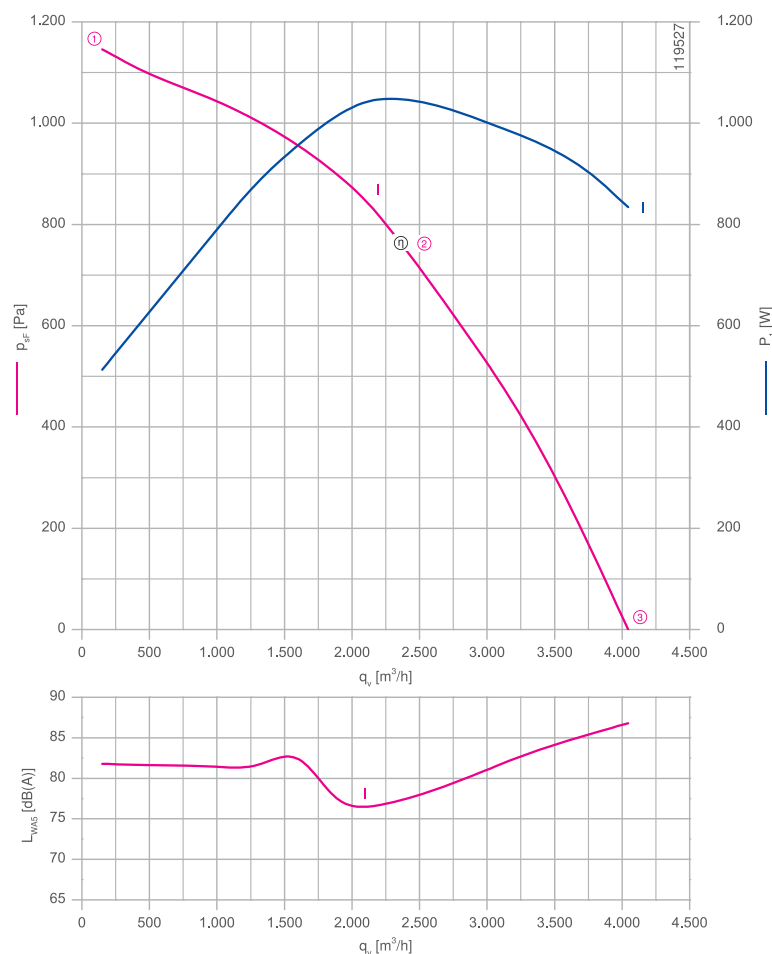
RH31C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 1.05 kW\*  
 Rated current  $I_N$ : 2.90/1.70 A\*  
 Rated speed  $n_N$ : 2680 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 13,00/7,50 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

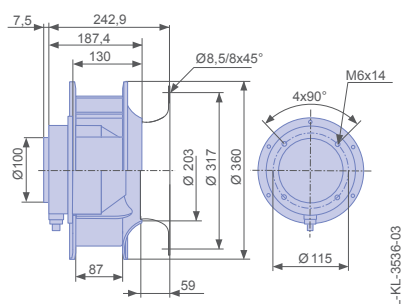


Measured with inlet ring, without guard grille according to ISO 5801  
 Not voltage controllable fan.

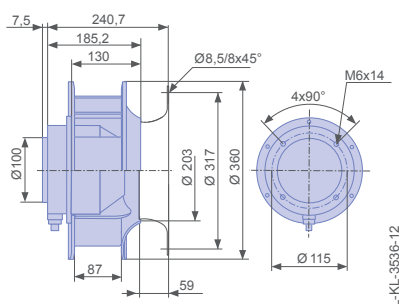
Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH31C-2DD.3I.1R	I	400	①	1.05	520	2860	82
		400*	②	1.70*	1050*	2680*	77
		400	③	1.45	840	2760	87

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31C-2DD.3I.1R</b>	<b>RH31C-2DD.3I.1R</b>
<b>Article no.</b>	<b>172170</b>	<b>175257</b>
Weight kg	11.00	11.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

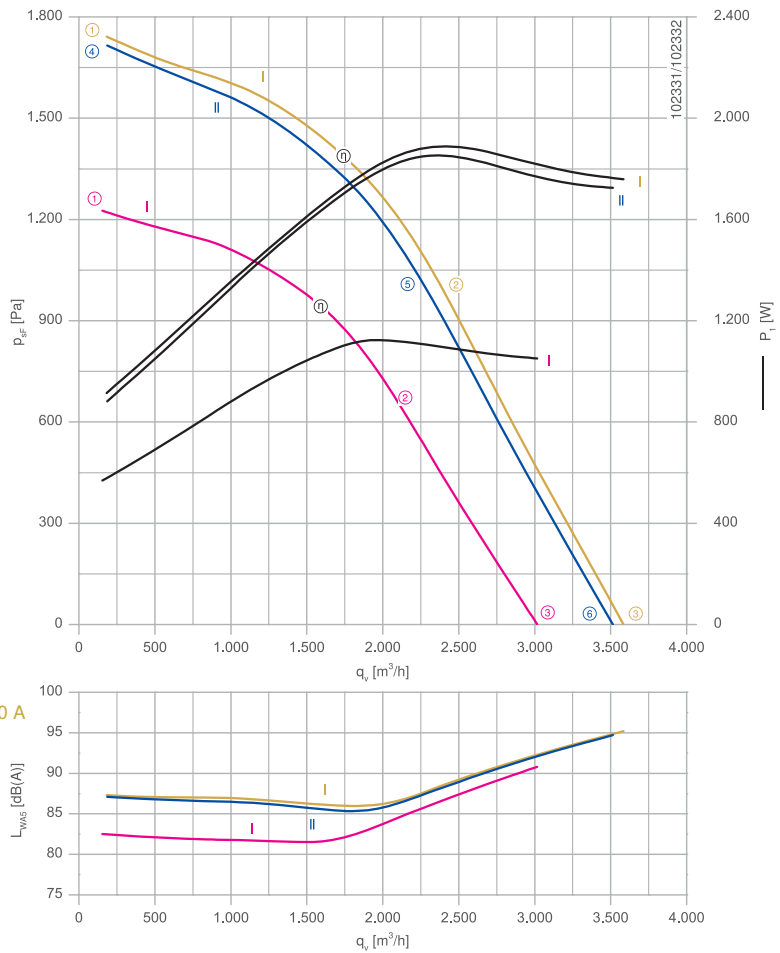
RH31C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.10 kW | 1.85 kW | 1.90 kW\*  
 Rated current  $I_N$ :  
 3.40/1.95 A | 5.00/2.90 A | 4.50/2.60 A\*  
 Rated speed  $n_n$ :  
 2880 min<sup>-1</sup> | 3330 min<sup>-1</sup> | 3400 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 26,00/15,00 A | 24,00/14,00 A | 28,00/17,00 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, powder-coated, ultramarine blue  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

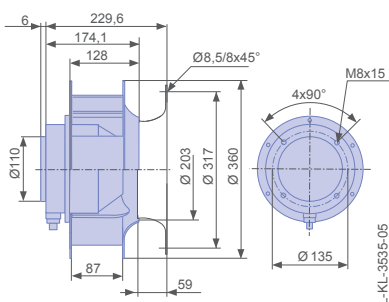


Measured with inlet ring, without guard grille according to ISO 5801  
 Not voltage controllable fan.

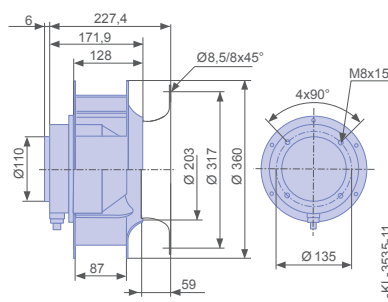
Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
 in installation position H/Vu



Free-running motorized impeller RH  
 in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH31C-2DK.5L.1R	I	400	50	①	1.35	560	2940	83
		400*		②	1.95*	1100*	2880*	84
		400		③	1.85	1050	2880	91
		460	60	①	1.50	920	3530	87
		460*		②	2.60*	1900*	3400*	88
		460		③	2.50	1750	3430	95
	II	400		④	1.50	880	3500	87
		400*		⑤	2.90*	1850*	3330*	87
		400		⑥	2.70	1700	3360	95

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31C-2DK.5L.1R</b>	<b>RH31C-2DK.5L.1R</b>
<b>Article no.</b>	<b>172171</b>	<b>175258</b>
Weight kg	18.00	18.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

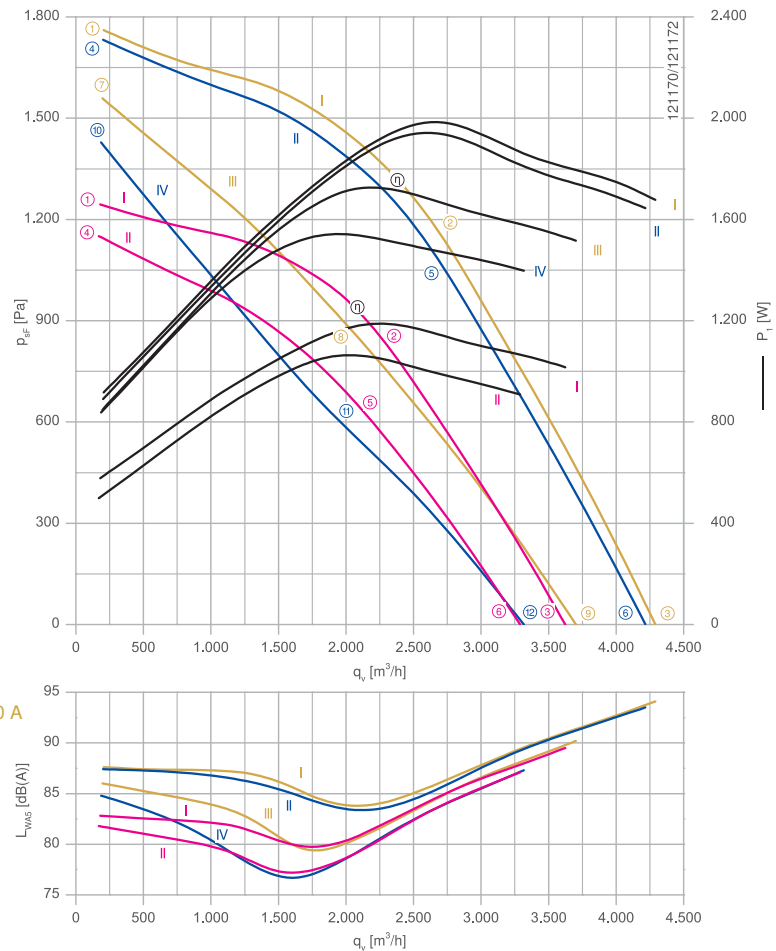
RH31C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.20 kW | 1.95 kW | 2.00 kW\*  
 Rated current  $I_N$ :  
 3.50/2.00 A | 5.20/3.00 A | 4.70/2.70 A\*  
 Rated speed  $n_n$ :  
 2870 min<sup>-1</sup> | 3320 min<sup>-1</sup> | 3390 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 26,00/15,00 A | 24,00/14,00 A | 28,00/17,00 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, powder-coated, ultramarine blue  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

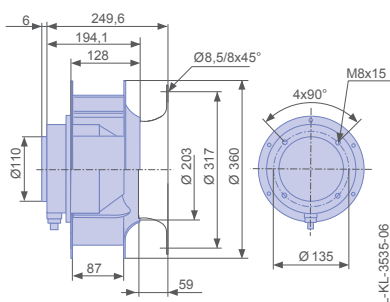


Measured with inlet ring, without guard grille according to ISO 5801  
 Not 60Hz voltage controllable fan.

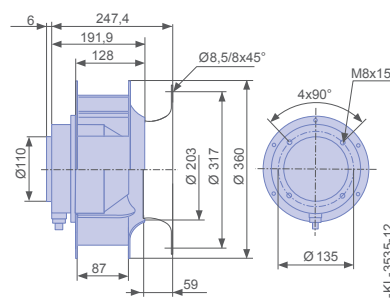
Inlet ring	00411853	RAL 7032	Page 302
Inlet ring	00411846	(pebble grey) unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
 in installation position H/Vu



Free-running motorized impeller RH  
 in installation position H/Vo






Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH31C-2DD.5L.1R	I	400	50	①	1.35	580	2950	83
		400*		②	2.00*	1200*	2870*	82
		400		③	1.85	1000	2900	90
	II	230		④	1.35	500	2840	82
		230		⑤	2.80	1050	2570	79
		230		⑥	2.40	900	2660	87
	I	460	60	①	1.50	920	3520	88
		460*		②	2.70*	2000*	3390*	86
		460		③	2.40	1700	3430	94
	II	400		④	1.50	900	3490	87
		400*		⑤	3.00*	1950*	3320*	86
		400		⑥	2.60	1650	3370	94
	III	265	⑦	1.95	840	3320	86	
		265	⑧	4.00	1700	2800	80	
		265	⑨	3.60	1500	2970	90	
	IV	230	⑩	2.20	840	3180	85	
		230	⑪	4.20	1550	2450	78	
		230	⑫	3.80	1400	2690	87	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH31C-2DD.5L.1R</b>	<b>RH31C-2DD.5L.1R</b>
Article no.	<b>172172</b>	<b>175259</b>
Weight kg	19.00	19.00
* inlet ring not included		

# C-series

for three phase alternating current, 4 pole

RH31C-4D

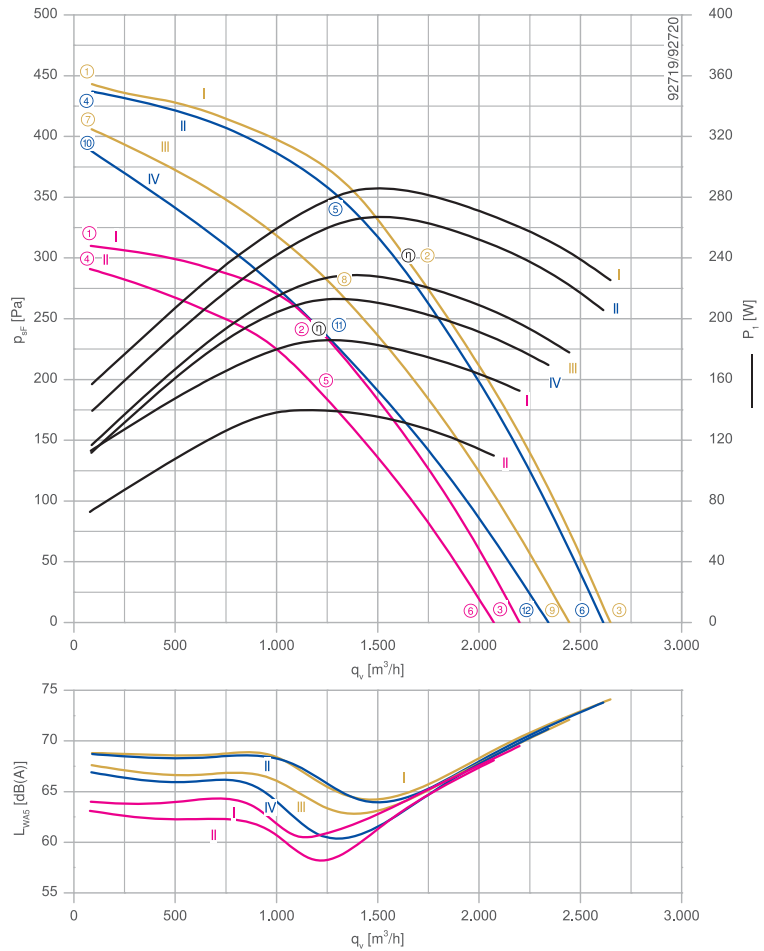


## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 190 W | 270 W | 290 W\*  
 Rated current  $I_N$ :  
 0.94/0.54 A | 0.90/0.52 A | 0.96/0.56 A\*  
 Rated speed  $n_n$ :  
 1440 min<sup>-1</sup> | 1690 min<sup>-1</sup> | 1720 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 4.0/2.80 A | 4.40/2.60 A | 5.00/3.00 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

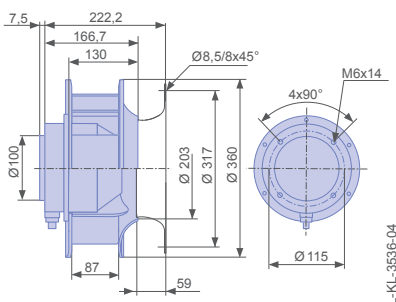


Measured with inlet ring, without guard grille according to ISO 5801

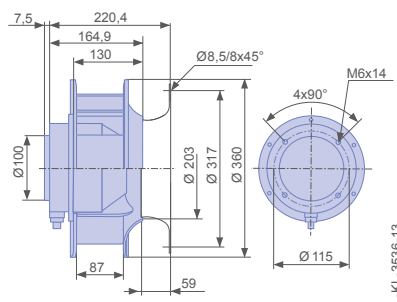
Inlet ring	00411853	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411846	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH31C-4DK.4C.1R	I	400	50	①	0.50	110	1470	64
		400*		②	0.54*	190*	1440*	61
		400		③	0.52	150	1460	70
	II	230		④	0.27	75	1430	63
		230		⑤	0.42	140	1340	58
		230		⑥	0.34	110	1380	68
	I	460	60	①	0.46	160	1770	69
		460*		②	0.56*	290*	1720*	65
		460		③	0.52	230	1740	74
	II	400		④	0.38	140	1750	69
		400*		⑤	0.52*	270*	1690*	64
		400		⑥	0.44	210	1720	74
	III	265	⑦	0.32	120	1690	68	
		265	⑧	0.56	230	1540	63	
		265	⑨	0.44	180	1610	72	
	IV	230	⑩	0.33	110	1650	67	
		230	⑪	0.60	210	1440	61	
		230	⑫	0.48	170	1550	71	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31C-4DK.4C.1R</b>	<b>RH31C-4DK.4C.1R</b>
<b>Article no.</b>	<b>172173</b>	<b>175260</b>
Weight kg	7.00	7.00
* inlet ring not included		

# C-series

for three phase alternating current, 2 pole

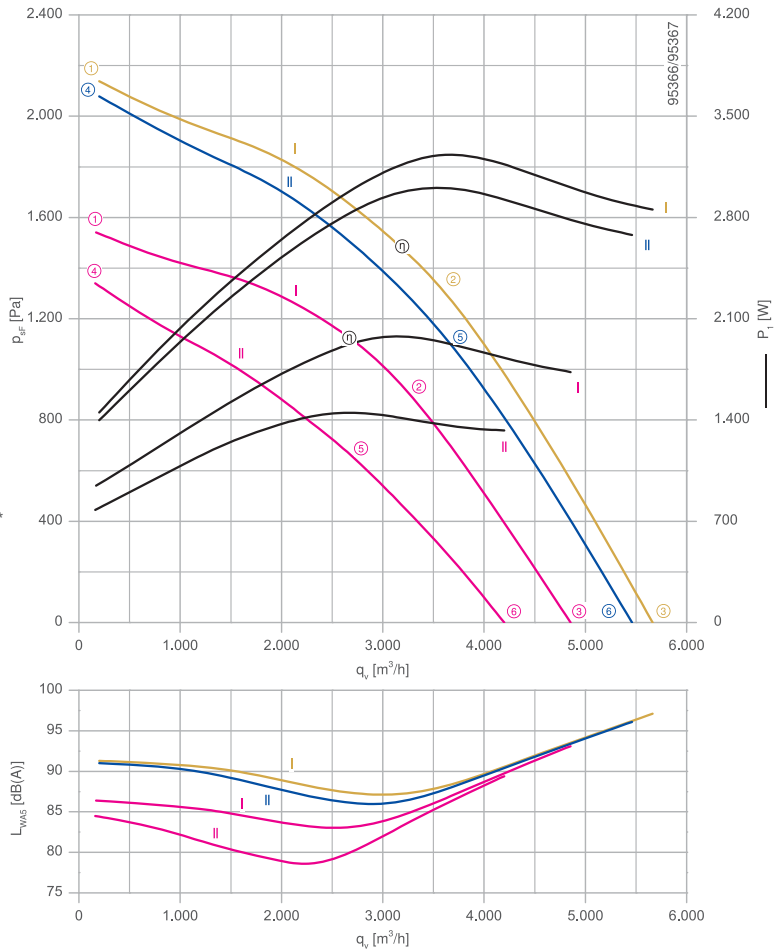
RH35C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 2.00 kW | 3.00 kW | 3.20 kW\*  
 Rated current  $I_N$ :  
 6.00/3.50 A | 8.40/4.80 A | 8.00/4.60 A\*  
 Rated speed  $n_N$ :  
 2760 min<sup>-1</sup> | 3070 min<sup>-1</sup> | 3200 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 40 °C | 50 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

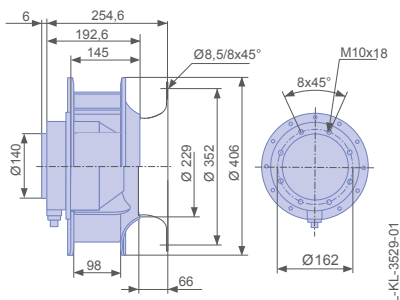


Measured with inlet ring, without guard grille according to ISO 5801  
 Not 60Hz voltage controllable fan.

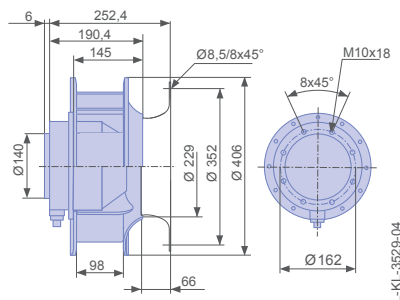
Inlet ring	00411854	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411847	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH35C-2DK.6K.1R	I	400	50	①	2.30	940	2900	86
		400*		②	3.50*	2000*	2760*	85
		400		③	3.20	1750	2800	93
		230		④	2.10	780	2710	85
		230		⑤	4.00	1450	2320	80
		230		⑥	3.70	1350	2410	89
	I	460	60	①	2.50	1450	3450	91
		460*		②	4.60*	3200*	3200*	88
		460		③	4.20	2900	3260	97
		400		④	2.40	1400	3410	91
		400*		⑤	4.80*	3000*	3070*	88
		400		⑥	4.40	2700	3150	96
	II	400	50	①	2.30	940	2900	86
		400*		②	3.50*	2000*	2760*	85
		400		③	3.20	1750	2800	93
		230		④	2.10	780	2710	85
		230		⑤	4.00	1450	2320	80
		230		⑥	3.70	1350	2410	89
II	460	60	①	2.50	1450	3450	91	
	460*		②	4.60*	3200*	3200*	88	
	460		③	4.20	2900	3260	97	
	400		④	2.40	1400	3410	91	
	400*		⑤	4.80*	3000*	3070*	88	
	400		⑥	4.40	2700	3150	96	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH35C-2DK.6K.1R</b>	<b>RH35C-2DK.6K.1R</b>
<b>Article no.</b>	<b>172174</b>	<b>175261</b>
Weight kg	19.00	19.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 2 pole

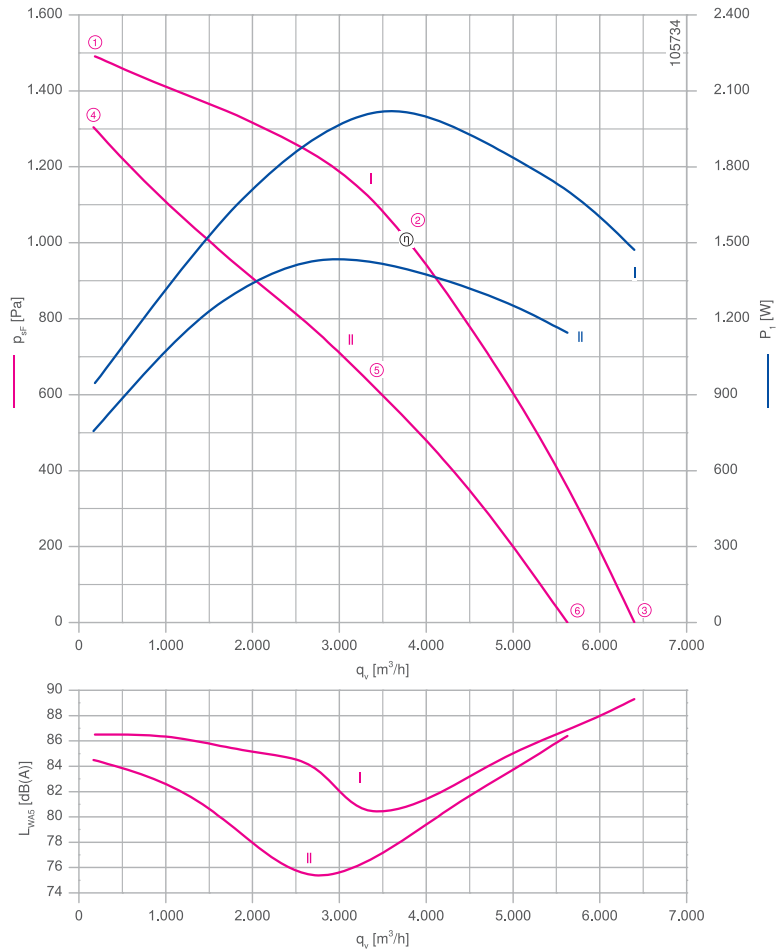
RH35C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 2.00 kW\*  
 Rated current  $I_N$ : 6.60/3.80 A\*  
 Rated speed  $n_N$ : 2750 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

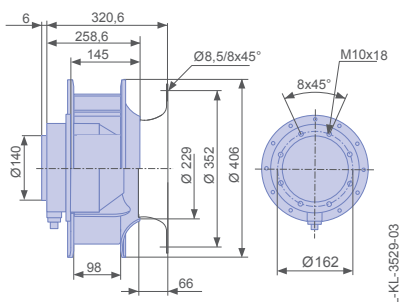


Measured with inlet ring, without guard grille according to ISO 5801

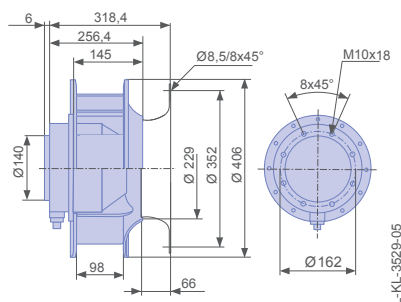
Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411847	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH35C-2DD.6K.1R	I	400	①	2.60	940	2900	87
		400*	②	3.80*	2000*	2750*	81
		400	③	3.10	1450	2830	89

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH35C-2DD.6K.1R</b>	<b>RH35C-2DD.6K.1R</b>
<b>Article no.</b>	<b>172175</b>	<b>175262</b>
Weight kg	19.00	19.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 4 pole

RH35C-4D



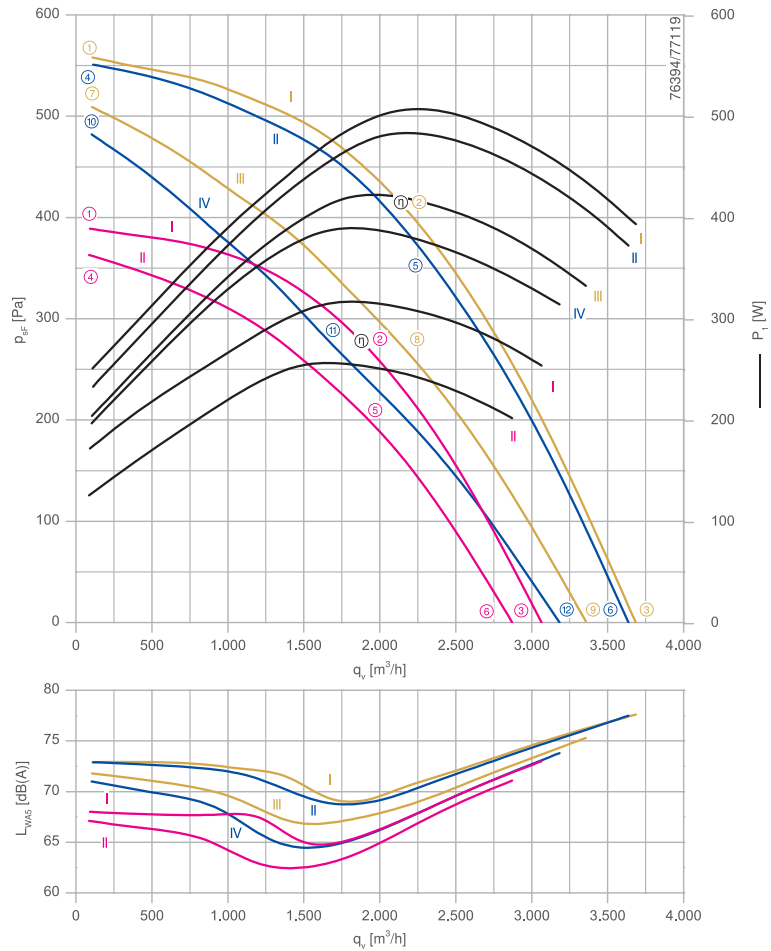
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 320 W | 480 W | 500 W\*  
 Rated current  $I_N$ :  
 1.40/0.82 A | 1.50/0.88 A | 1.55/0.90 A\*  
 Rated speed  $n_n$ :  
 1440 min<sup>-1</sup> | 1680 min<sup>-1</sup> | 1710 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 8,00/4,60 A | 7,00/4,00 A | 8,50/4,80 A  
 Current increase  $\Delta I$ : 10 % | 30 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 60 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

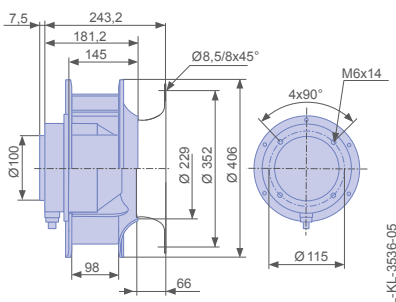


Measured with inlet ring, without guard grille according to ISO 5801

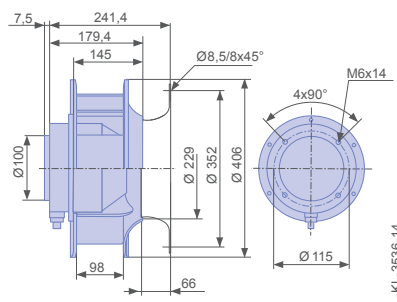
Inlet ring	00411854	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411847	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH35C-4DK.4F.1R	I	400	50	①	0.76	170	1470	68
		400*		②	0.82*	320*	1440*	66
		400		③	0.78	250	1450	73
	II	230		④	0.44	130	1420	67
		230		⑤	0.74	260	1320	64
		230		⑥	0.60	200	1360	71
	I	460	60	①	0.72	250	1770	73
		460*		②	0.90*	500*	1710*	70
		460		③	0.80	390	1740	78
	II	400		④	0.60	230	1760	73
		400*		⑤	0.88*	480*	1680*	71
		400		⑥	0.74	370	1710	78
	III	265		⑦	0.54	210	1690	72
		265		⑧	1.05	420	1500	69
		265		⑨	0.84	330	1580	75
	IV	230		⑩	0.58	200	1640	71
		230		⑪	1.10	390	1380	65
		230		⑫	0.90	320	1500	74

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH35C-4DK.4F.1R</b>	<b>RH35C-4DK.4F.1R</b>
Article no.	<b>172176</b>	<b>175263</b>
Weight kg	9.00	9.00
* inlet ring not included		

# C-series

for three phase alternating current, 4 pole

RH40C-4D



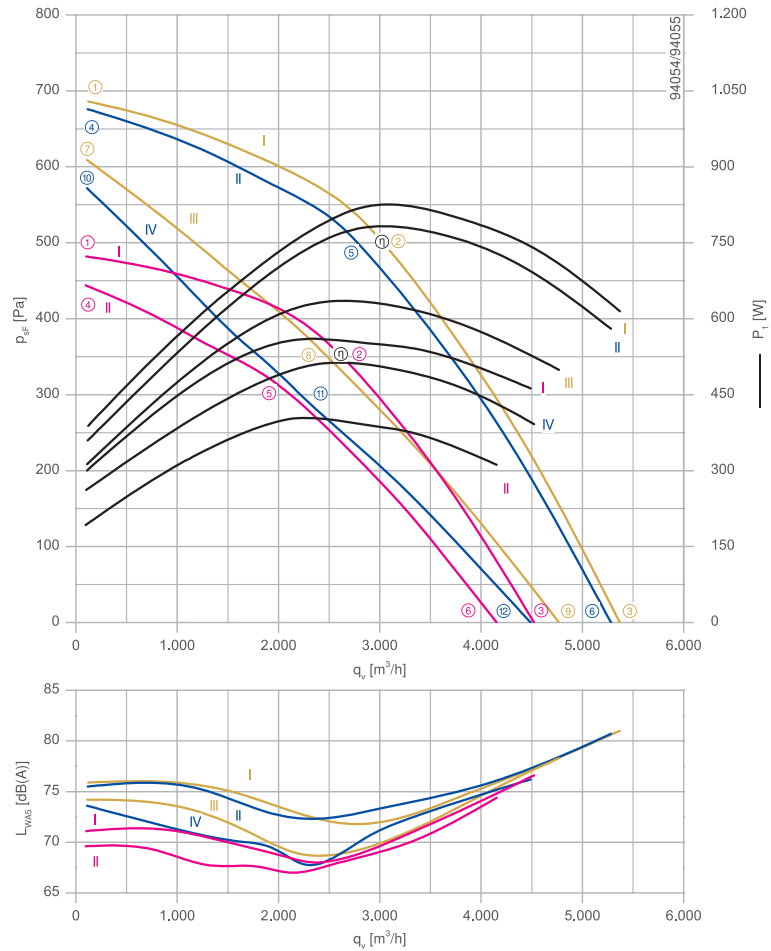
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 520 W | 780 W | 820 W\*  
 Rated current  $I_N$ :  
 2.20/1.30 A | 2.40/1.40 A | 2.50/1.45 A\*  
 Rated speed  $n_n$ :  
 1420 min<sup>-1</sup> | 1630 min<sup>-1</sup> | 1670 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 11.00/6,50 A | 10,00/6,00 A | 12,00/7,00 A  
 Current increase  $\Delta I$ : 0 % | 15 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 60 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

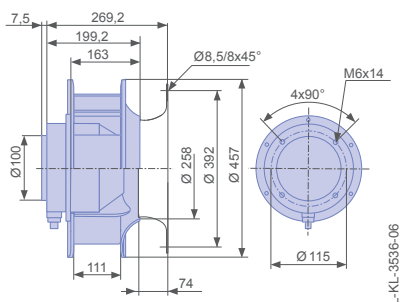


Measured with inlet ring, without guard grille according to ISO 5801

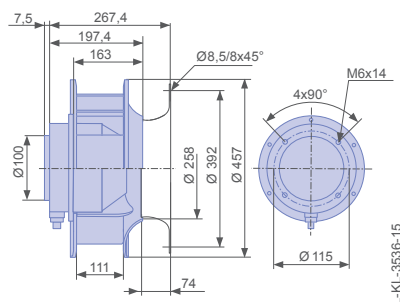
Inlet ring	00411855	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411848	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH40C-4DK.4I.1R	I	400	50	①	1.10	260	1470	71
		400*		②	1.30*	520*	1420*	68
		400		③	1.20	390	1440	77
	II	230		④	0.68	190	1400	70
		230		⑤	1.20	400	1260	67
		230		⑥	0.96	310	1330	74
	I	460	60	①	1.05	390	1750	76
		460*		②	1.45*	820*	1670*	72
		460		③	1.25	620	1710	81
	II	400		④	0.90	360	1730	76
		400*		⑤	1.40*	780*	1630*	73
		400		⑥	1.15	580	1680	81
	III	265	⑦	0.84	310	1640	74	
		265	⑧	1.65	640	1390	69	
		265	⑨	1.30	500	1520	78	
	IV	230	⑩	0.90	300	1590	74	
		230	⑪	1.70	560	1270	68	
		230	⑫	1.35	460	1430	76	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH40C-4DK.4I.1R</b>	<b>RH40C-4DK.4I.1R</b>
<b>Article no.</b>	<b>172178</b>	<b>175264</b>
Weight kg	9.00	9.00
* inlet ring not included		

# C-series

for three phase alternating current, 4 pole

RH45C-4D



## Description

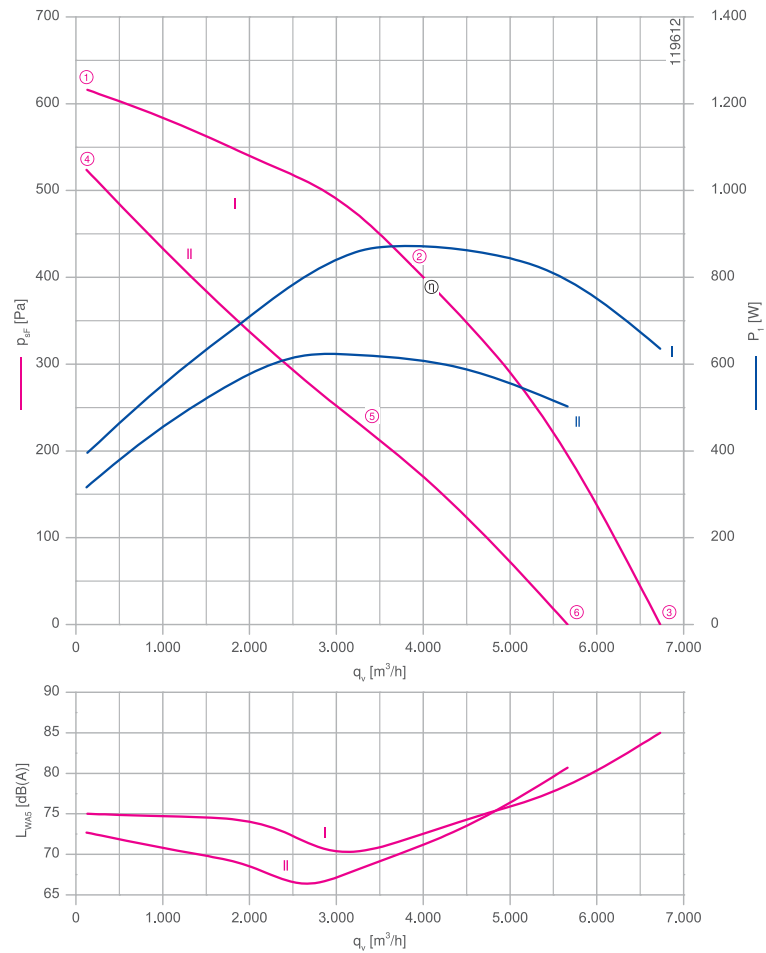
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 880 W\*  
 Rated current  $I_N$ : 2.90/1.65 A\*  
 Rated speed  $n_N$ : 1360 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 11.00/6.50 A  
 Current increase  $\Delta I$ : 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 45 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

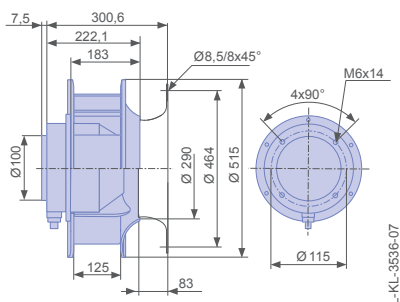


Measured with inlet ring, without guard grille according to ISO 5801

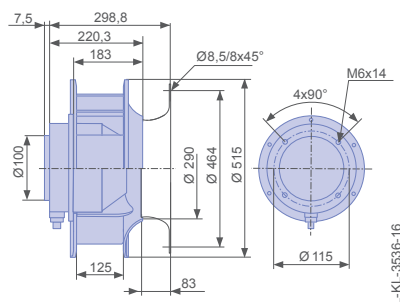
Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH45C-4DK.4I.1R	I	400	①	1.15	400	1440	75
		400*	②	1.65*	880*	1360*	72
		400	③	1.40	640	1400	85
	II	230	④	0.94	320	1330	73
		230	⑤	1.80	620	1060	68
		230	⑥	1.45	500	1200	81

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH45C-4DK.4I.1R</b>	<b>RH45C-4DK.4I.1R</b>
<b>Article no.</b>	<b>172179</b>	<b>175265</b>
Weight kg	12.00	12.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# C-series

for three phase alternating current, 4 pole

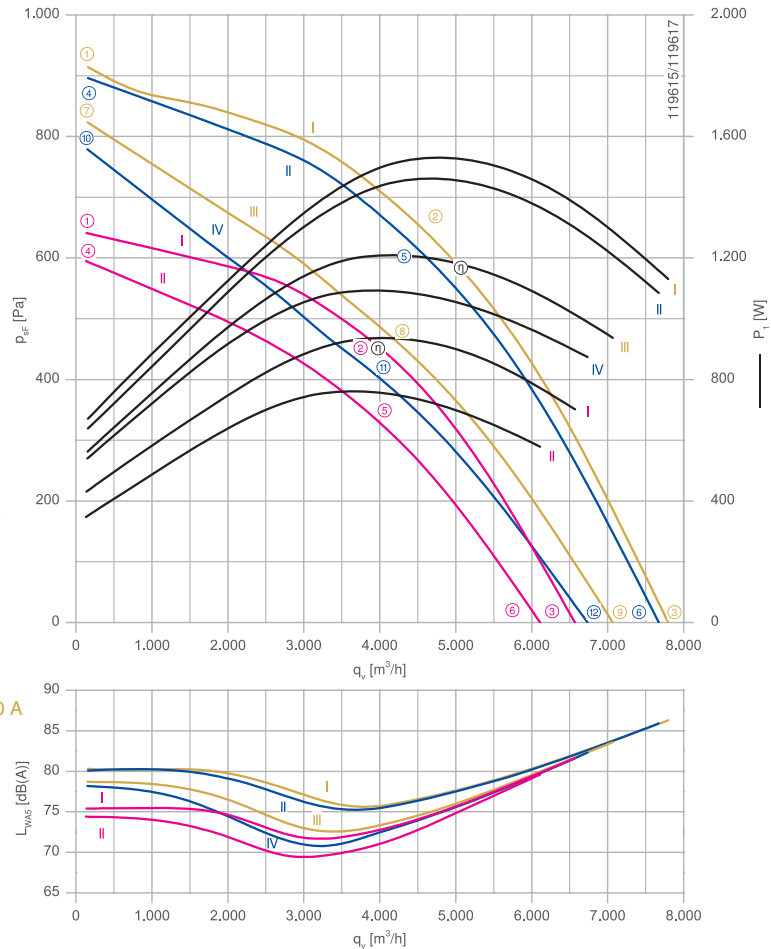
RH45C-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 940 W | 1.45 kW | 1.55 kW\*  
 Rated current  $I_N$ :  
 3.60/2.10 A | 4.30/2.50 A | 4.30/2.50 A\*  
 Rated speed  $n_N$ :  
 1430 min<sup>-1</sup> | 1650 min<sup>-1</sup> | 1680 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 26,00/15,00 A | 24,00/14,00 A | 28,00/16,00 A  
 Current increase  $\Delta I$ : 15 % | 20 % | 20 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 65 °C | 65 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

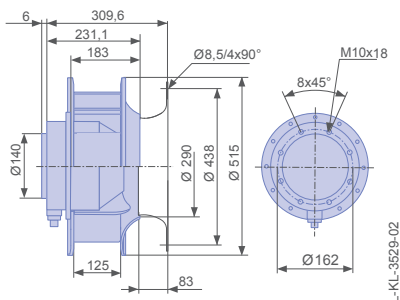


Measured with inlet ring, without guard grille according to ISO 5801

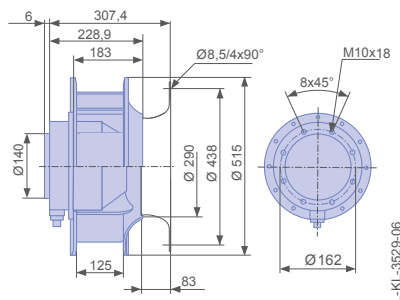
Inlet ring	00411856	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411849	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo




Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH45C-4DK.6K.1R	I	400	50	①	1.70	440	1470	75
		400*		②	2.10*	940*	1430*	73
		400		③	1.90	700	1450	82
	II	230		④	1.20	350	1420	74
		230		⑤	2.20	760	1290	71
		230		⑥	1.70	580	1350	80
	I	460	60	①	1.65	680	1760	80
		460*		②	2.50*	1550*	1680*	77
		460		③	2.10	1150	1720	86
	II	400		④	1.50	640	1740	80
		400*		⑤	2.50*	1450*	1650*	77
		400		⑥	2.00	1100	1690	86
	III	265		⑦	1.50	560	1670	79
		265		⑧	2.90	1200	1460	74
		265		⑨	2.30	940	1560	84
	IV	230		⑩	1.55	540	1630	78
		230		⑪	3.00	1100	1370	72
		230		⑫	2.40	880	1490	82

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH45C-4DK.6K.1R</b>	<b>RH45C-4DK.6K.1R</b>
Article no.	<b>172180</b>	<b>175266</b>
Weight kg	21.00	21.00
* inlet ring not included		







# N-series

## AC technology

### Product overview

Quick selection	Page 186
Size 500	Page 188
Size 560	Page 190
Size 630	Page 194

Information

ZArail

Cpro-ECblue

C-ECblue

C series

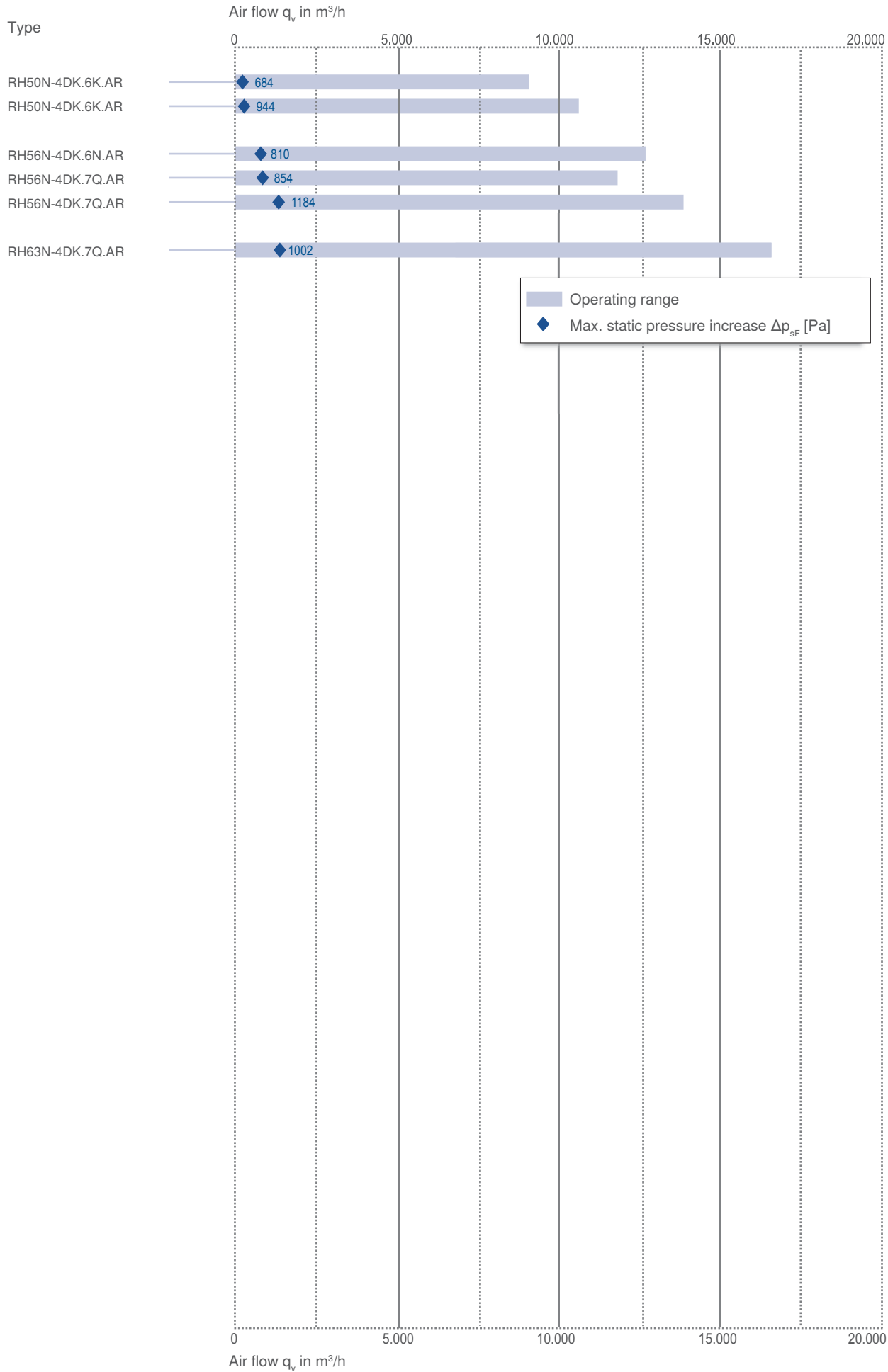
**N series**

M series

FE2owlet

Size	Frequency	Voltage	Number of poles	Type	Impeller position	Page
500	50 Hz	3~ 400V	4	RH50N-4DK.6K.AR	K	188
	60 Hz	3~ 400/460V	4	RH50N-4DK.6K.AR	K	188
560	50 Hz	3~ 400V	4	RH56N-4DK.6N.AR	K	190
				RH56N-4DK.7Q.AR	K	192
	60 Hz	3~ 400/460V	4	RH56N-4DK.7Q.AR	K	192
630	50 Hz	3~ 400V	4	RH63N-4DK.7Q.AR	K	194





- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series**
- M series
- FE2owlet

# N-series

for three phase alternating current, 4 pole

RH50N-4D



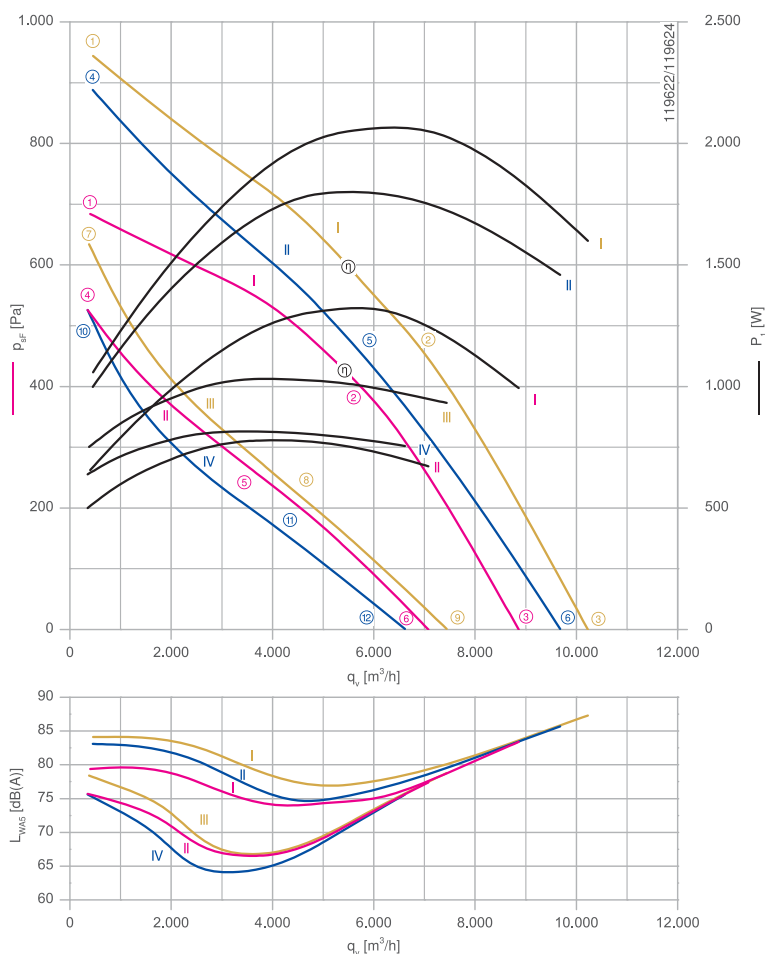
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.30 kW | 1.80 kW | 2.10 kW\*  
 Rated current  $I_N$ :  
 4.50/2.60 A | 5.70/3.30 A | 5.90/3.40 A\*  
 Rated speed  $n_n$ :  
 1300 min<sup>-1</sup> | 1360 min<sup>-1</sup> | 1460 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 16.00/9,50 A | 14,00/8,00 A | 17,00/9,50 A  
 Current increase  $\Delta I$ : 5 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 55 °C | 55 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

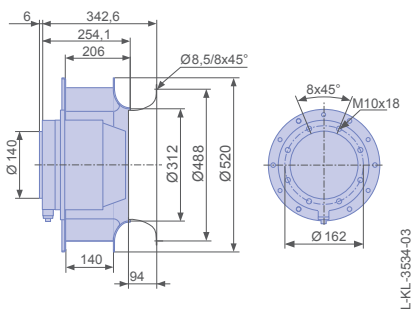


Measured with inlet ring, without guard grille according to ISO 5801

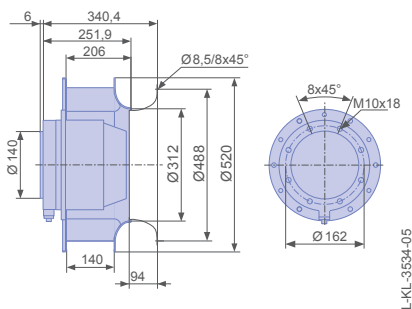
Inlet ring	00411857	RAL 7032	Page 302
		(pebble grey)	
Inlet ring	00411850	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH50N-4DK.6K.AR	I	400	50	①	1.75	660	1410	79
		400*		②	2.60*	1300*	1300*	75
		400		③	2.20	1000	1360	83
	II	230		④	1.60	500	1240	76
		230		⑤	2.50	780	970	67
		230		⑥	2.10	680	1090	77
	I	460	60	①	2.00	1050	1670	84
		460*		②	3.40*	2100*	1460*	79
		460		③	2.70	1600	1570	87
	II	400		④	1.95	1000	1620	83
		400*		⑤	3.30*	1800*	1360*	76
		400		⑥	2.70	1450	1480	86
	III	265	⑦	2.10	760	1360	78	
		265	⑧	2.90	1050	990	67	
		265	⑨	2.60	940	1150	79	
	IV	230	⑩	2.10	640	1240	76	
		230	⑪	2.70	820	880	65	
		230	⑫	2.50	760	1020	76	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH50N-4DK.6K.AR</b>	<b>RH50N-4DK.6K.AR</b>
Article no.	<b>172507</b>	<b>175800</b>
Weight kg	20.90	20.90
* inlet ring not included		

# N-series

for three phase alternating current, 4 pole

RH56N-4D



## Description

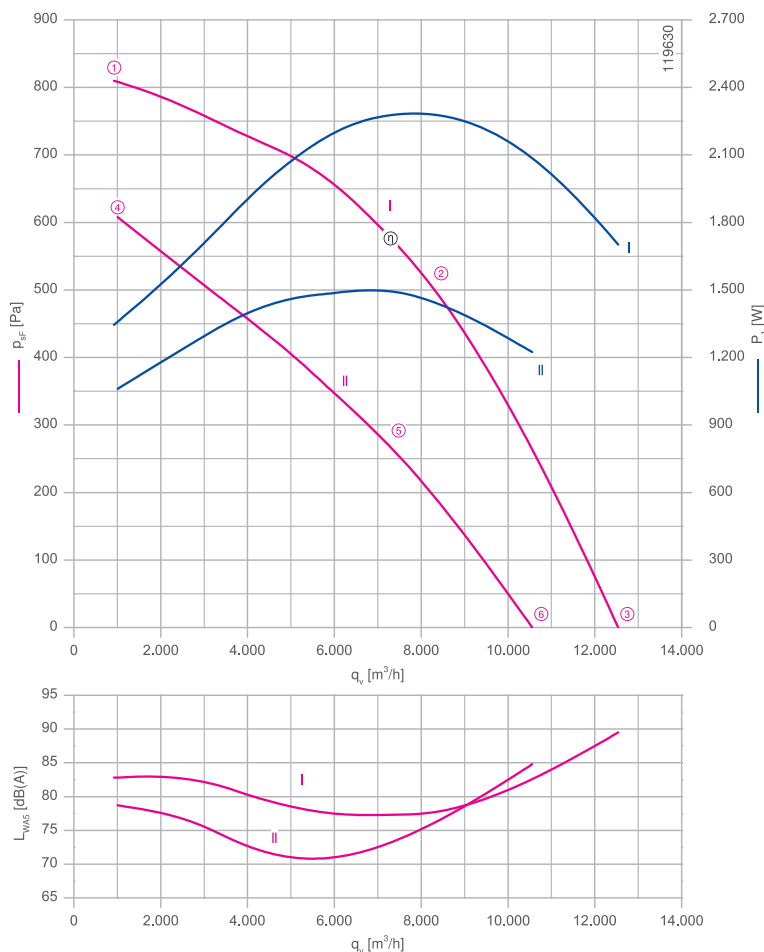
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 2.30 kW\*  
 Rated current  $I_N$ : 8.00/4.60 A\*  
 Rated speed  $n_N$ : 1330 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 30,00/17,00 A  
 Current increase  $\Delta I$ : 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 60 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

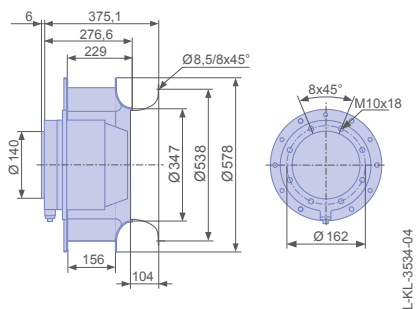


Measured with inlet ring, without guard grille according to ISO 5801

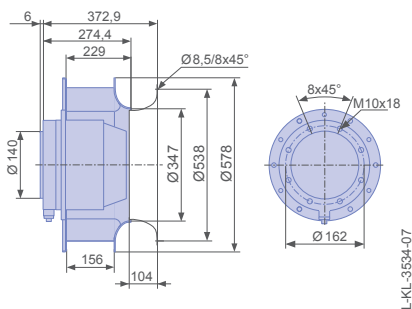
Inlet ring	00411858	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411851	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH56N-4DK.6N.AR	I	400	①	3.40	1350	1410	83
		400*	②	4.60*	2300*	1330*	78
		400	③	3.80	1700	1380	90
	II	230	④	3.20	1050	1220	79
		230	⑤	4.40	1500	1060	73
		230	⑥	3.60	1200	1170	85

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH56N-4DK.6N.AR</b>	<b>RH56N-4DK.6N.AR</b>
<b>Article no.</b>	<b>172509</b>	<b>175801</b>
Weight kg	26.20	26.20
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# N-series

for three phase alternating current, 4 pole

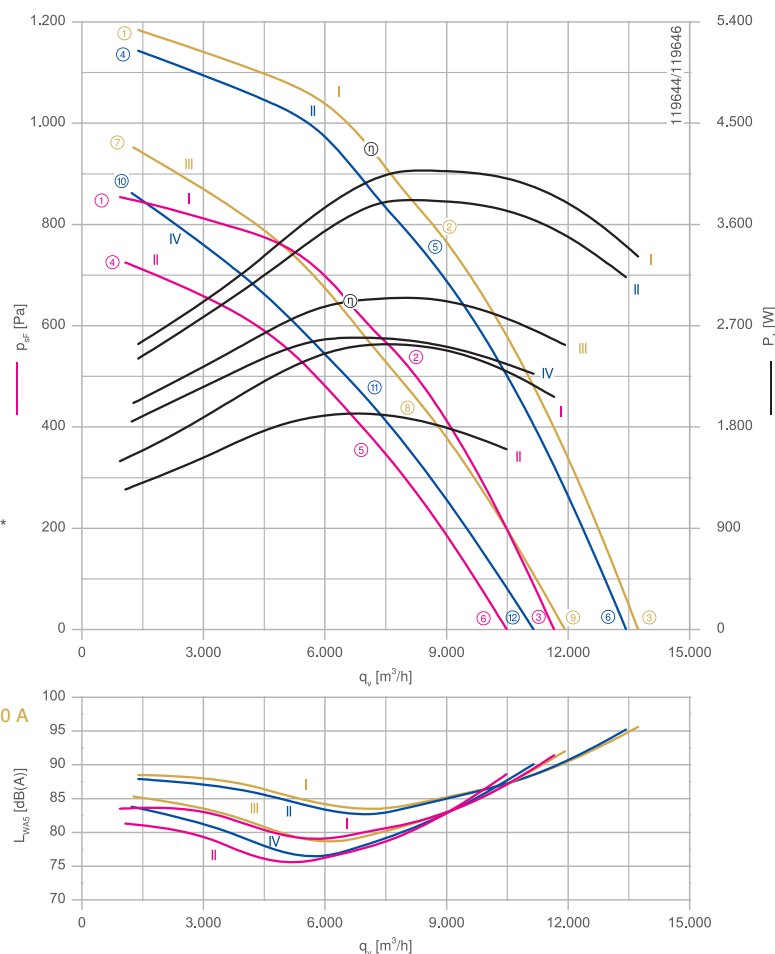
RH56N-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 2.50 kW | 3.80 kW | 4.00 kW\*  
 Rated current  $I_N$ :  
 9.00/5.20 A | 11.00/6.40 A | 10.50/6.20 A\*  
 Rated speed  $n_N$ :  
 1400 min<sup>-1</sup> | 1590 min<sup>-1</sup> | 1640 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 55,00/32,00 A | 50,00/28,00 A | 60,00/34,00 A  
 Current increase  $\Delta I$ : 10 % | 15 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

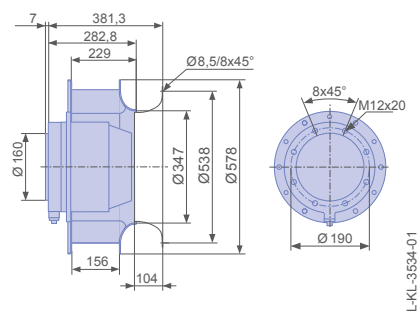


Measured with inlet ring, without guard grille according to ISO 5801

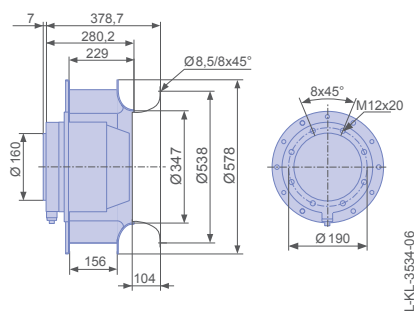
Inlet ring	00411858	RAL 7032	Page 302
Inlet ring	00411851	(pebble grey) unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH56N-4DK.7Q.AR	I	400	50	①	4.00	1500	1450	84
		400*		②	5.20*	2500*	1400*	81
		400		③	4.60	2100	1420	91
	II	230		④	3.60	1250	1340	81
		230		⑤	5.40	1900	1230	78
		230		⑥	4.60	1600	1280	89
	I	460	60	①	4.60	2500	1710	89
		460*		②	6.20*	4000*	1640*	85
		460		③	5.40	3300	1670	96
	II	400		④	4.40	2400	1680	88
		400*		⑤	6.40*	3800*	1590*	84
		400		⑥	5.40	3100	1630	95
	III	265	⑦	4.80	2000	1540	85	
		265	⑧	7.00	2900	1380	82	
		265	⑨	6.00	2500	1450	92	
	IV	230	⑩	5.20	1850	1460	84	
		230	⑪	7.20	2600	1270	78	
		230	⑫	6.20	2300	1370	90	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH56N-4DK.7Q.AR</b>	<b>RH56N-4DK.7Q.AR</b>
Article no.	<b>172510</b>	<b>175802</b>
Weight kg	43.10	43.10
* inlet ring not included		

# N-series

for three phase alternating current, 4 pole

RH63N-4D



## Description

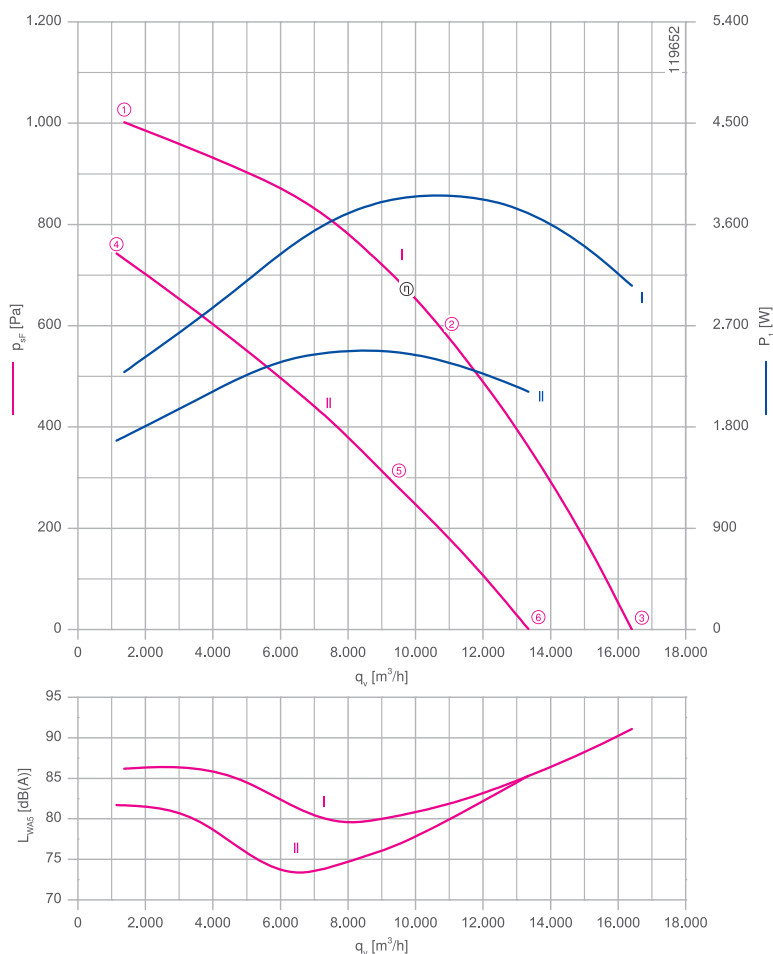
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 3.90 kW\*  
 Rated current  $I_N$ : 11.00/6.40 A\*  
 Rated speed  $n_N$ : 1290 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 46,00/26,00 A  
 Current increase  $\Delta I$ : 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 65 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

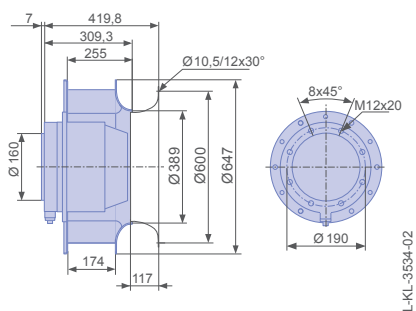


Measured with inlet ring, without guard grille according to ISO 5801

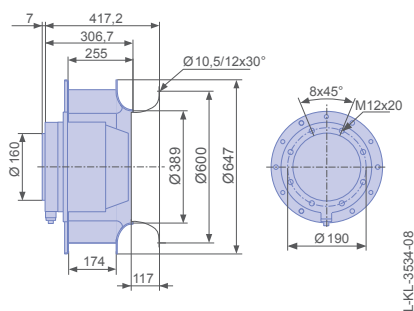
Inlet ring	00411859	RAL 7032 (pebble grey)	Page 302
Inlet ring	00411852	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH63N-4DK.7Q.AR	I	400	①	4.40	2300	1390	86
		400*	②	6.40*	3900*	1290*	82
		400	③	5.40	3100	1350	91
	II	230	④	4.60	1700	1200	82
		230	⑤	6.80	2500	1010	76
		230	⑥	5.80	2100	1100	85

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH63N-4DK.7Q.AR</b>	<b>RH63N-4DK.7Q.AR</b>
<b>Article no.</b>	<b>172511</b>	<b>175803</b>
Weight kg	41.00	41.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet





# M-series

## AC technology

### Product overview

Quick selection	Page 198
Size 225	Page 200
Size 250	Page 208
Size 280	Page 212
Size 315	Page 222
Size 355	Page 228
Size 400	Page 234
Size 450	Page 236
Size 500	Page 238
Size 560	Page 240
Size 630	Page 242

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

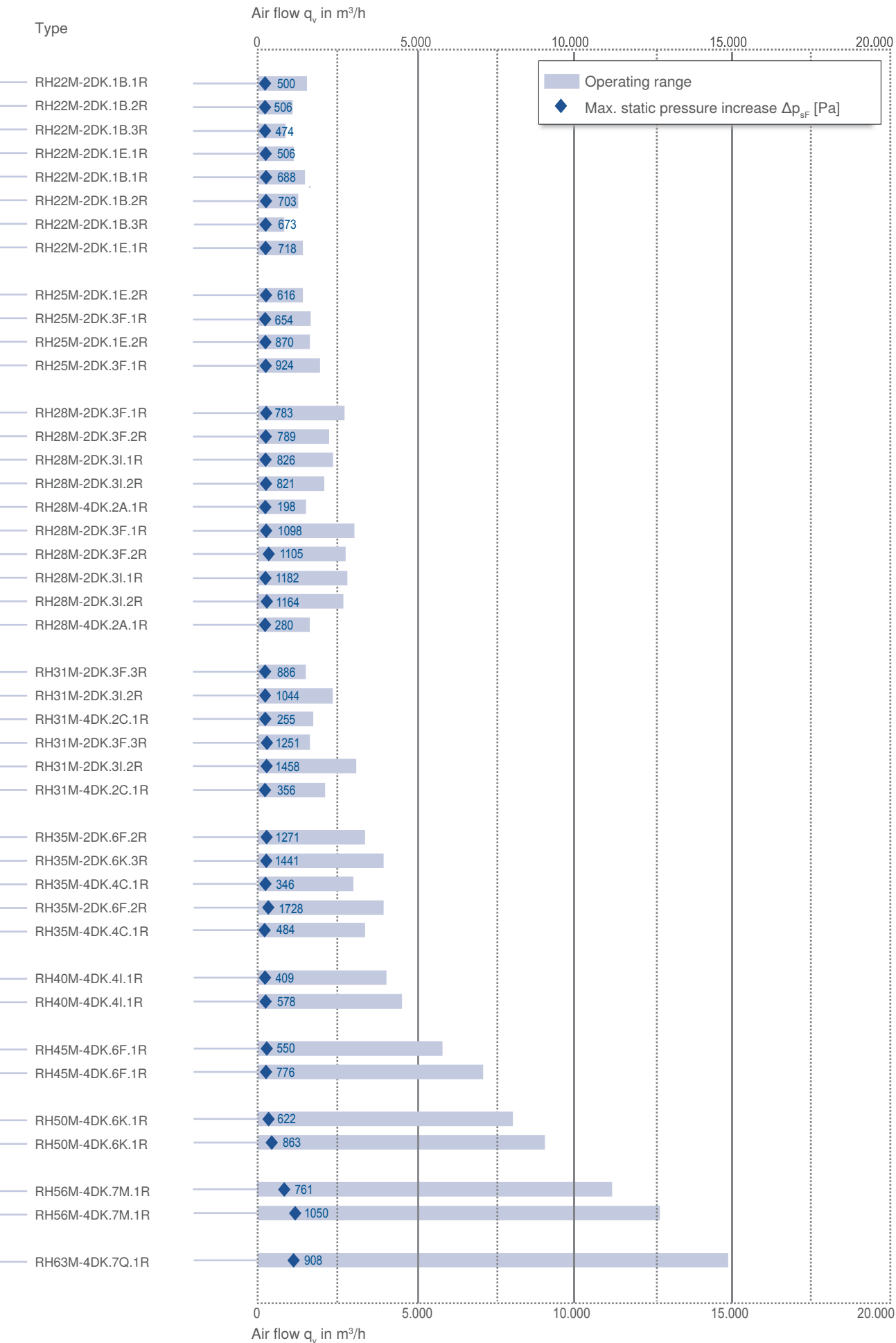
M series

FE2owlet



Size	Frequency	Voltage	Number of poles	Type	Page
225	50 Hz	3~ 400V	2	RH22M-2DK.1B.1R	200
				RH22M-2DK.1B.2R	202
				RH22M-2DK.1B.3R	204
	60 Hz	3~ 400/460V	2	RH22M-2DK.1E.1R	206
				RH22M-2DK.1B.1R	200
				RH22M-2DK.1B.2R	202
250	50 Hz	3~ 400V	2	RH25M-2DK.1E.2R	208
				RH25M-2DK.3F.1R	210
				RH25M-2DK.1E.2R	208
	60 Hz	3~ 400/460V	2	RH25M-2DK.3F.1R	210
280	50 Hz	3~ 400V	2	RH28M-2DK.3F.1R	212
				RH28M-2DK.3F.2R	214
			4	RH28M-2DK.3I.1R	216
				RH28M-2DK.3I.2R	218
			4	RH28M-4DK.2A.1R	220
	60 Hz	3~ 400/460V	2	RH28M-2DK.3F.1R	212
				RH28M-2DK.3F.2R	214
			4	RH28M-2DK.3I.1R	216
				RH28M-2DK.3I.2R	218
			4	RH28M-4DK.2A.1R	220
315	50 Hz	3~ 400V	2	RH31M-2DK.3F.3R	222
				RH31M-2DK.3I.2R	224
			4	RH31M-4DK.2C.1R	226
	60 Hz	3~ 400/460V	2	RH31M-2DK.3F.3R	222
				RH31M-2DK.3I.2R	224
4			RH31M-4DK.2C.1R	226	
355	50 Hz	3~ 400V	2	RH35M-2DK.6F.2R	228
				RH35M-2DK.6K.3R	230
			4	RH35M-4DK.4C.1R	232
	60 Hz	3~ 400/460V	2	RH35M-2DK.6F.2R	228
				RH35M-4DK.4C.1R	232
4					
400	50 Hz	3~ 400V	4	RH40M-4DK.4I.1R	234
	60 Hz	3~ 400/460V	4	RH40M-4DK.4I.1R	234
450	50 Hz	3~ 400V	4	RH45M-4DK.6F.1R	236
	60 Hz	3~ 400/460V	4	RH45M-4DK.6F.1R	236
500	50 Hz	3~ 400V	4	RH50M-4DK.6K.1R	238
	60 Hz	3~ 400/460V	4	RH50M-4DK.6K.1R	238
560	50 Hz	3~ 400V	4	RH56M-4DK.7M.1R	240
	60 Hz	3~ 400/460V	4	RH56M-4DK.7M.1R	240
630	50 Hz	3~ 400V	4	RH63M-4DK.7Q.1R	242





- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet

# M-series

for three phase alternating current, 2 pole

RH22M-2D



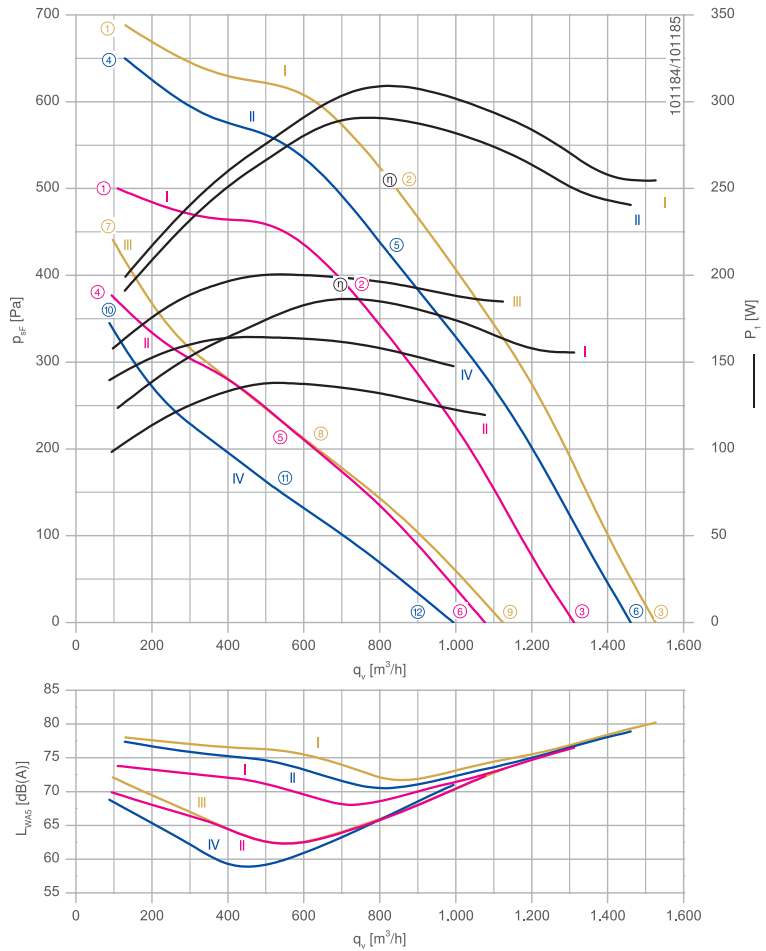
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 190 W | 290 W | 310 W\*  
 Rated current  $I_N$ :  
 0.54/0.31 A | 0.76/0.44 A | 0.72/0.42 A\*  
 Rated speed  $n_n$ :  
 2710 min<sup>-1</sup> | 2940 min<sup>-1</sup> | 3120 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2,00/1,10 A | 1,90/1,10 A | 2,20/1,30 A  
 Current increase  $\Delta I$ : 15 % | 5 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 80 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

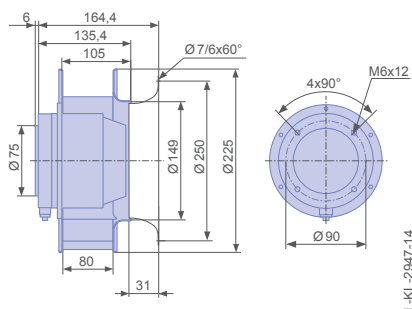


Measured with inlet ring, without guard grille according to ISO 5801

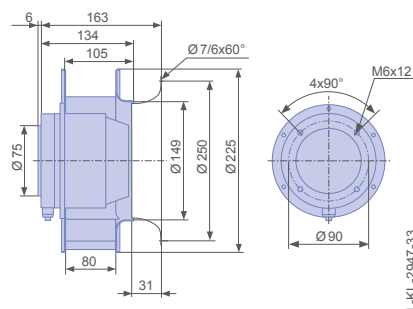
Inlet ring	00352266	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00278352	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22M-2DK.1B.1R	I	400	50	①	0.25	120	2830	74
		400*		②	0.31*	190*	2710*	68
		400		③	0.28	160	2770	77
	II	230		④	0.26	100	2460	70
		230		⑤	0.36	140	2100	62
		230		⑥	0.31	120	2290	72
	I	460	60	①	0.29	200	3320	78
		460*		②	0.42*	310*	3120*	72
		460		③	0.35	250	3230	80
	II	400		④	0.30	190	3230	77
		400*		⑤	0.44*	290*	2940*	71
		400		⑥	0.37	240	3100	79
	III	265	⑦	0.36	160	2670	72	
		265	⑧	0.46	200	2110	63	
		265	⑨	0.42	180	2380	73	
	IV	230	⑩	0.37	140	2360	69	
		230	⑪	0.44	160	1830	59	
		230	⑫	0.40	150	2220	71	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH22M-2DK.1B.1R</b>	<b>RH22M-2DK.1B.1R</b>
<b>Article no.</b>	<b>172131</b>	<b>175218</b>
Weight kg	3.20	3.20
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH22M-2D



## Description

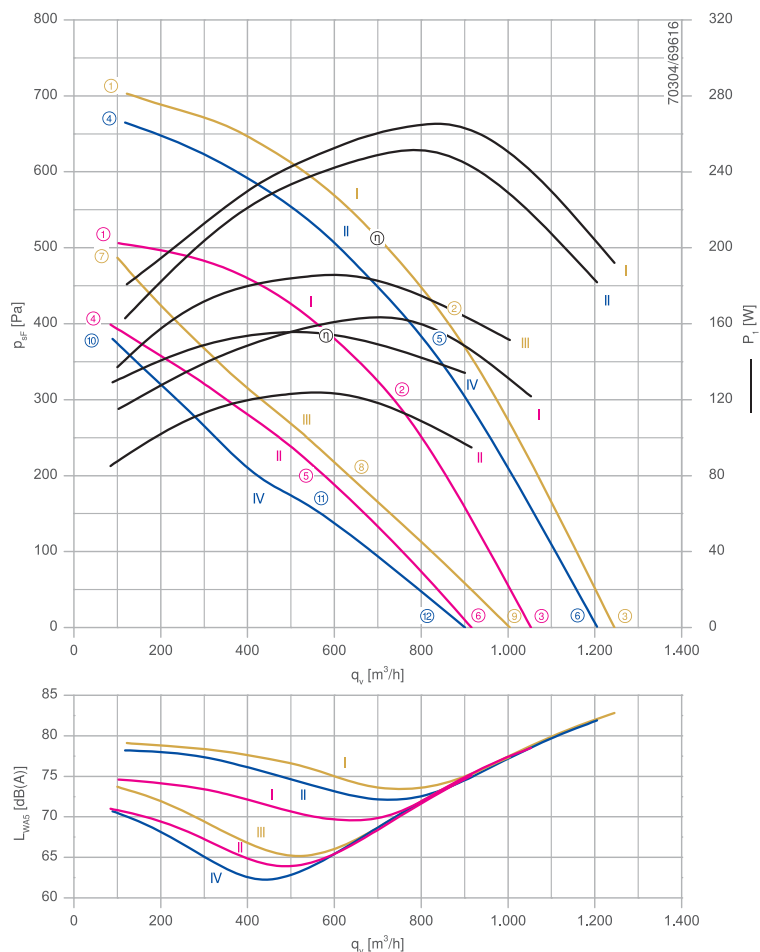
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 160 W | 250 W | 270 W\*  
 Rated current  $I_N$ :  
 0.48/0.28 A | 0.66/0.38 A | 0.62/0.36 A\*  
 Rated speed  $n_n$ :  
 2740 min<sup>-1</sup> | 3040 min<sup>-1</sup> | 3190 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2,00/1,10 A | 1,90/1,10 A | 2,20/1,30 A  
 Current increase  $\Delta I$ : 20 % | 15 % | 20 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 80 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00352266	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00278352	unpainted	
Connection diagram	1360-106XA		Page 327

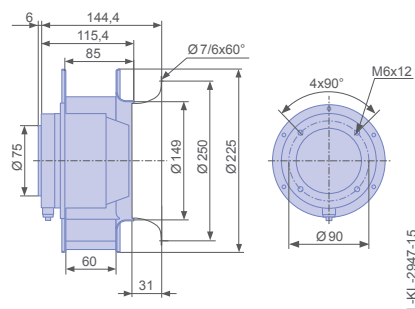
## Characteristic curve



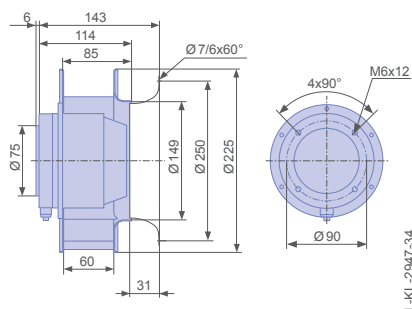
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22M-2DK.1B.2R	I	400	50	①	0.24	120	2840	75
		400*		②	0.28*	160*	2740*	70
		400		③	0.24	120	2830	79
	II	230		④	0.22	85	2550	71
		230		⑤	0.33	120	2200	65
		230		⑥	0.25	95	2460	75
	I	460	60	①	0.27	180	3340	79
		460*		②	0.36*	270*	3190*	74
		460		③	0.29	190	3330	83
	II	400		④	0.26	160	3280	78
		400*		⑤	0.38*	250*	3040*	73
		400		⑥	0.29	180	3240	82
	III	265	⑦	0.31	140	2820	74	
		265	⑧	0.44	190	2300	67	
		265	⑨	0.35	150	2700	77	
	IV	230	⑩	0.34	130	2510	71	
		230	⑪	0.42	160	2000	63	
		230	⑫	0.35	130	2420	75	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH22M-2DK.1B.2R</b>	<b>RH22M-2DK.1B.2R</b>
Article no.	<b>172132</b>	<b>175219</b>
Weight kg	3.00	3.00
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH22M-2D



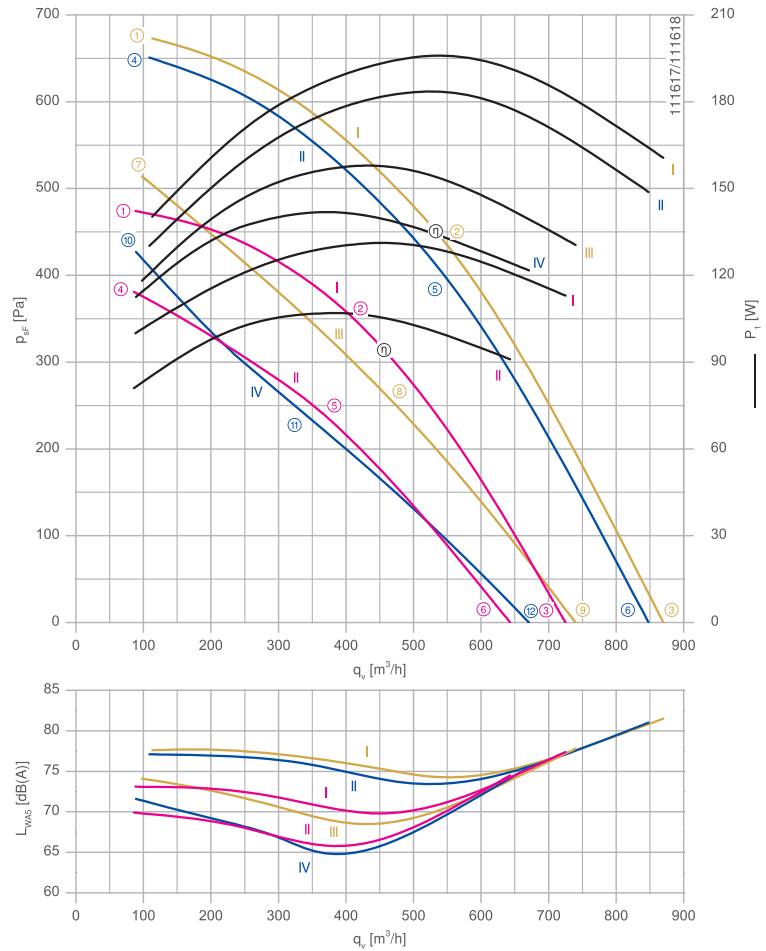
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3-230/400 V ( $\Delta/Y$ ) | 3-265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 130 W | 180 W | 200 W\*  
 Rated current  $I_N$ :  
 0.45/0.26 A | 0.50/0.29 A | 0.50/0.29 A\*  
 Rated speed  $n_n$ :  
 2810 min<sup>-1</sup> | 3240 min<sup>-1</sup> | 3320 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2,00/1,10 A | 1,90/1,10 A | 2,20/1,30 A  
 Current increase  $\Delta I$ : 10 % | 30 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

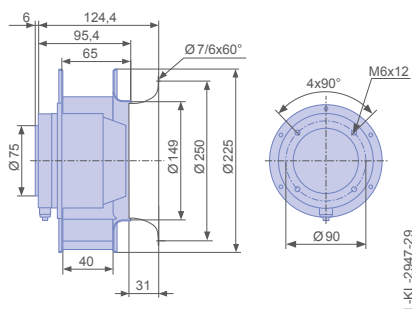


Measured with inlet ring, without guard grille according to ISO 5801

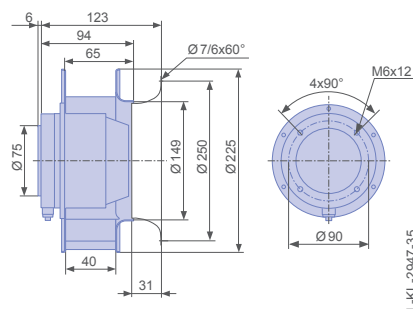
Inlet ring	00352266	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00278352	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH in installation position H/Vu



Free-running motorized impeller RH in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22M-2DK.1B.3R	I	400	50	①	0.23	100	2880	73
		400*		②	0.26*	130*	2810*	70
		400		③	0.24	110	2850	77
	II	230		④	0.22	80	2580	70
		230		⑤	0.28	110	2390	66
		230		⑥	0.24	90	2520	75
	I	460	60	①	0.24	140	3430	78
		460*		②	0.29*	200*	3320*	74
		460		③	0.26	160	3390	82
	II	400		④	0.22	130	3370	77
		400*		⑤	0.29*	180*	3240*	74
		400		⑥	0.25	150	3320	81
	III	265	⑦	0.27	120	3000	74	
		265	⑧	0.36	160	2670	69	
		265	⑨	0.30	130	2910	78	
	IV	230	⑩	0.30	110	2730	72	
		230	⑪	0.38	140	2330	65	
		230	⑫	0.32	120	2630	76	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH22M-2DK.1B.3R</b>	<b>RH22M-2DK.1B.3R</b>
<b>Article no.</b>	<b>172133</b>	<b>175220</b>
Weight kg	3.10	3.10
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH22M-2D



## Description

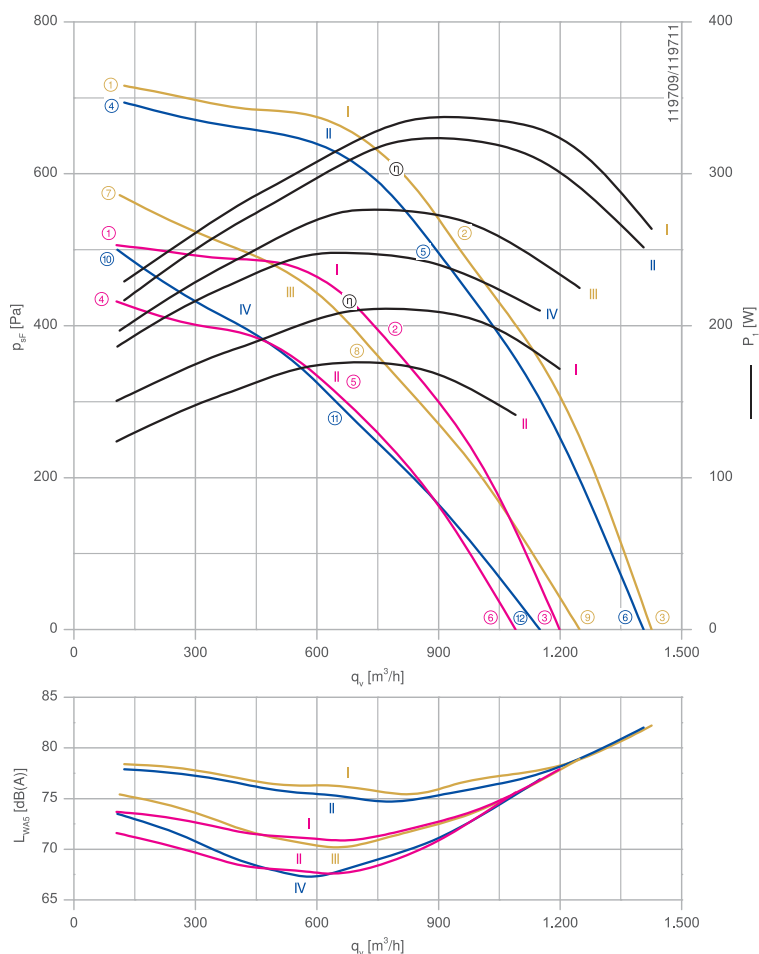
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 210 W | 320 W | 340 W\*  
 Rated current  $I_N$ :  
 0.76/0.44 A | 0.90/0.52 A | 0.86/0.50 A\*  
 Rated speed  $n_n$ :  
 2840 min<sup>-1</sup> | 3260 min<sup>-1</sup> | 3350 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 4.00/2.20 A | 3.80/2.20 A | 4.40/2.60 A  
 Current increase  $\Delta I$ : 20 % | 30 % | 35 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00352266	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00278352	unpainted	
Connection diagram	1360-106XA		Page 327

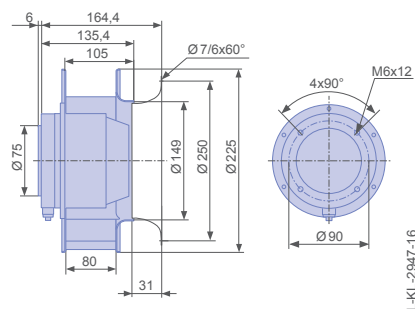
## Characteristic curve



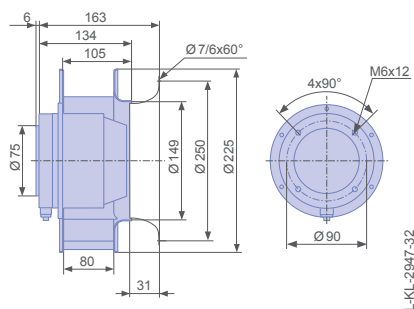
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH22M-2DK.1E.1R	I	400	50	①	0.39	150	2890	74
		400*		②	0.44*	210*	2840*	71
		400		③	0.40	170	2880	78
	II	230		④	0.34	120	2680	72
		230		⑤	0.46	180	2500	68
		230		⑥	0.38	140	2620	76
	I	460	60	①	0.40	230	3450	78
		460*		②	0.50*	340*	3350*	76
		460		③	0.44	260	3430	82
	II	400		④	0.38	220	3400	78
		400*		⑤	0.52*	320*	3260*	75
		400		⑥	0.42	250	3360	82
	III	265	⑦	0.46	200	3100	75	
		265	⑧	0.64	280	2760	71	
		265	⑨	0.52	220	2990	79	
	IV	230	⑩	0.50	190	2900	74	
		230	⑪	0.66	250	2480	68	
		230	⑫	0.56	210	2760	77	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH22M-2DK.1E.1R</b>	<b>RH22M-2DK.1E.1R</b>
Article no.	<b>172134</b>	<b>175221</b>
Weight kg	4.10	4.10
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH25M-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 260 W | 400 W | 420 W\*  
 Rated current  $I_N$ :  
 0.84/0.48 A | 1.05/0.62 A | 1.05/0.60 A\*  
 Rated speed  $n_n$ :  
 2800 min<sup>-1</sup> | 3160 min<sup>-1</sup> | 3280 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 4.00/2.20 A | 3.80/2.20 A | 4.40/2.60 A  
 Current increase  $\Delta I$ : 20 % | 20 % | 25 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

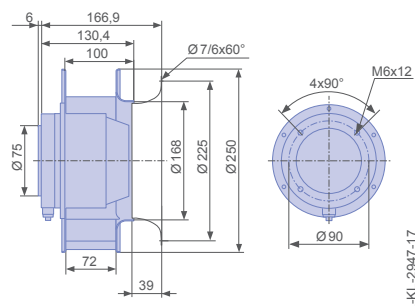
\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

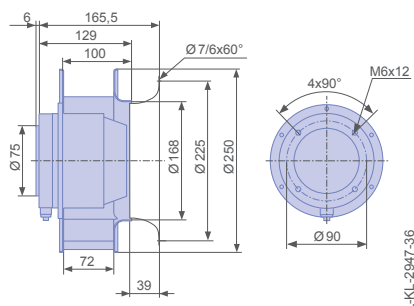
Inlet ring	00401735	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275847	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

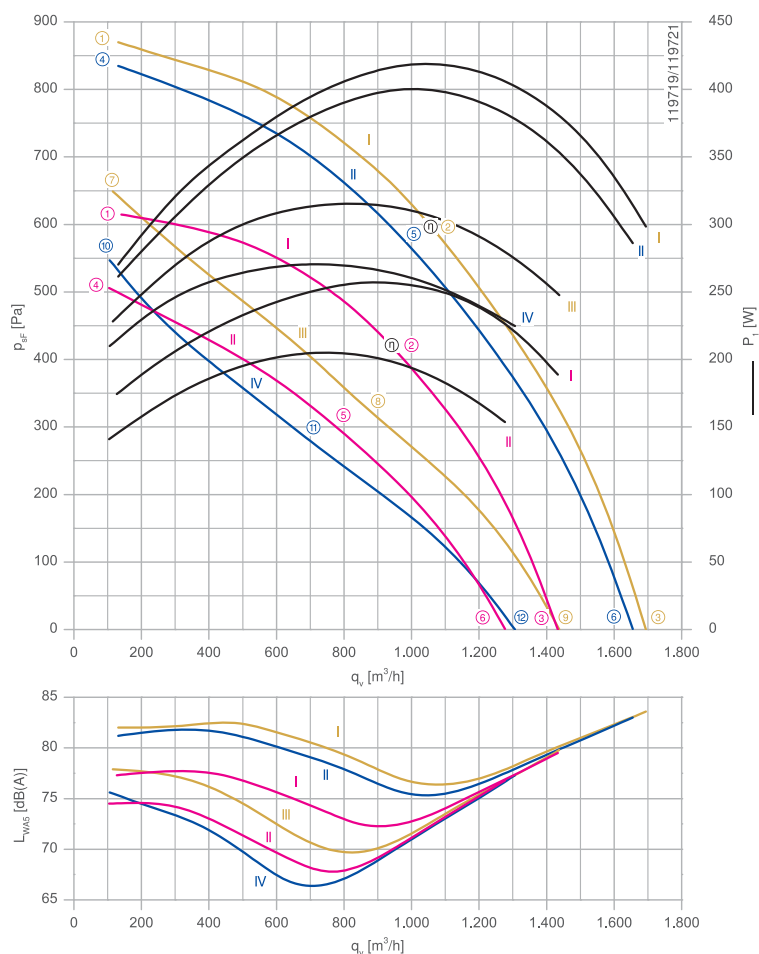
Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



## Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH25M-2DK.1E.2R	I	400	50	①	0.40	170	2880	77
		400*		②	0.48*	260*	2800*	72
		400		③	0.42	190	2860	80
	II	230		④	0.38	140	2610	75
		230		⑤	0.54	210	2350	68
		230		⑥	0.42	150	2550	77
	I	460	60	①	0.44	270	3410	82
		460*		②	0.60*	420*	3280*	76
		460		③	0.46	300	3400	84
	II	400		④	0.44	260	3360	81
		400*		⑤	0.62*	400*	3160*	76
		400		⑥	0.46	290	3320	83
	III	265		⑦	0.52	230	2960	78
		265		⑧	0.74	320	2530	70
		265		⑨	0.58	250	2890	80
	IV	230		⑩	0.56	210	2720	76
		230		⑪	0.74	270	2220	67
		230		⑫	0.60	220	2620	77

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH25M-2DK.1E.2R</b>	<b>RH25M-2DK.1E.2R</b>
<b>Article no.</b>	<b>172135</b>	<b>175222</b>
Weight kg	4.20	4.20
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH25M-2D



## Description

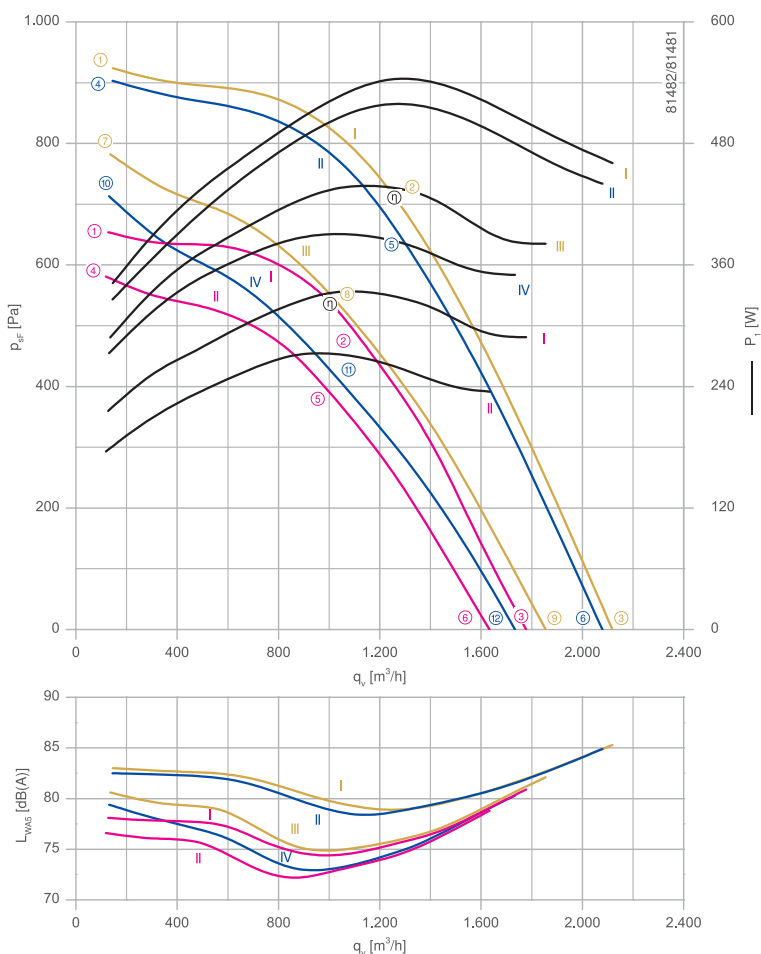
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 330 W | 520 W | 540 W\*  
 Rated current  $I_N$ :  
 1.25/0.72 A | 1.50/0.86 A | 1.45/0.84 A\*  
 Rated speed  $n_n$ :  
 2850 min<sup>-1</sup> | 3300 min<sup>-1</sup> | 3380 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A | 7,00/4,20 A | 8,50/4,80 A  
 Current increase  $\Delta I$ : 20 % | 30 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00401735	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275847	unpainted	
Connection diagram	1360-106XA		Page 327

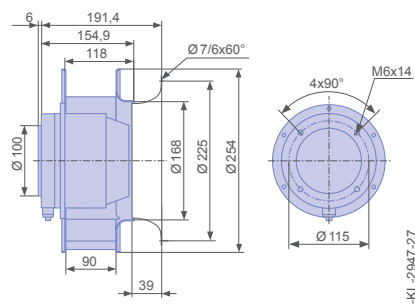
## Characteristic curve



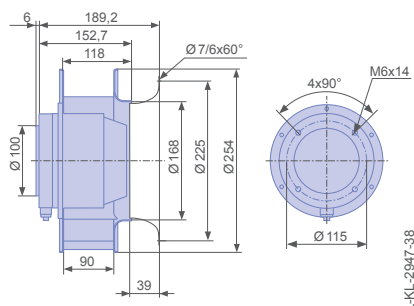
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH25M-2DK.3F.1R	I	400	50	①	0.62	220	2910	78
		400*		②	0.72*	330*	2850*	75
		400		③	0.66	290	2880	81
		230		④	0.50	180	2750	77
		230		⑤	0.76	270	2570	73
		230		⑥	0.66	230	2650	79
	II	60	460	①	0.64	340	3470	83
			460*	②	0.84*	540*	3380*	79
			460	③	0.76	460	3410	85
			400	④	0.60	330	3430	83
			400*	⑤	0.86*	520*	3300*	79
			400	⑥	0.76	440	3350	85
	III	60	265	⑦	0.70	290	3190	81
			265	⑧	1.05	440	2880	75
			265	⑨	0.92	380	3010	82
	IV	60	230	⑩	0.74	270	3050	79
			230	⑪	1.10	390	2650	73
			230	⑫	0.96	350	2820	80

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH25M-2DK.3F.1R</b>	<b>RH25M-2DK.3F.1R</b>
Article no.	<b>172137</b>	<b>175224</b>
Weight kg	6.90	6.90
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

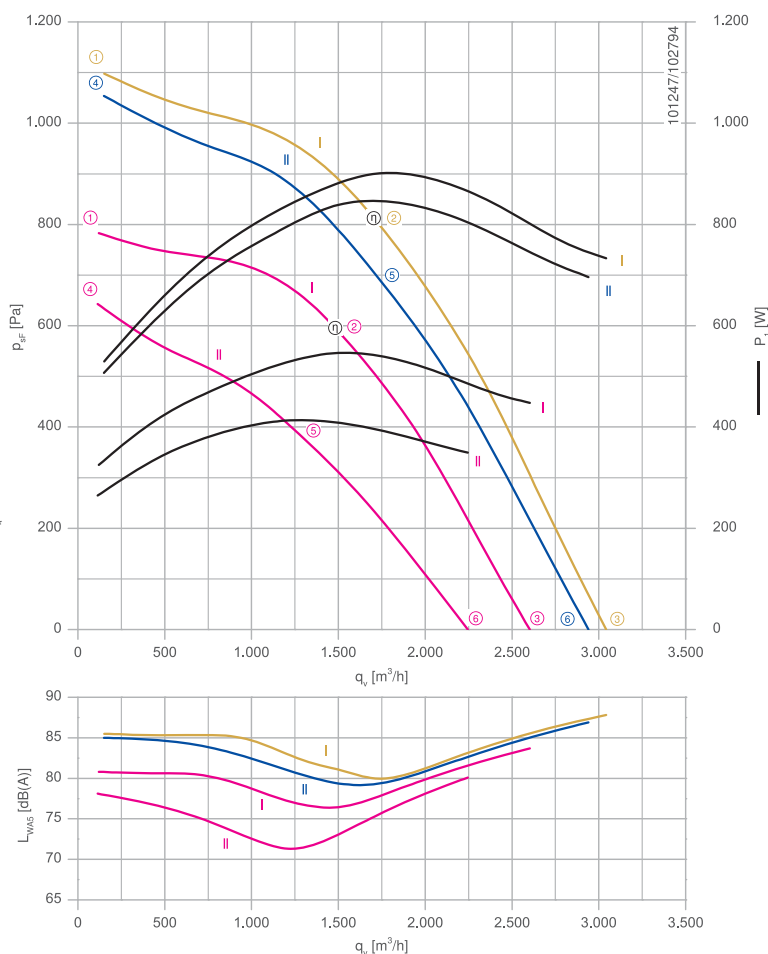
RH28M-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 540 W | 840 W | 900 W\*  
 Rated current  $I_N$ :  
 1.70/0.98 A | 2.30/1.35 A | 2.30/1.30 A\*  
 Rated speed  $n_n$ :  
 2740 min<sup>-1</sup> | 3030 min<sup>-1</sup> | 3180 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A | 7,00/4,20 A | 8,50/4,80 A  
 Current increase  $\Delta I$ : 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 50 °C | 50 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

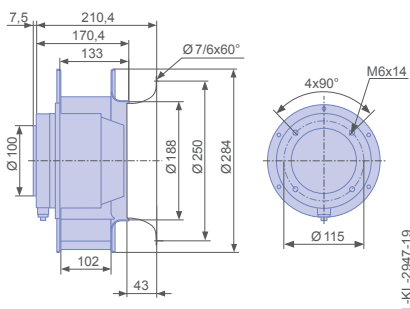


Measured with inlet ring, without guard grille according to ISO 5801  
 Not 60Hz voltage controllable fan.

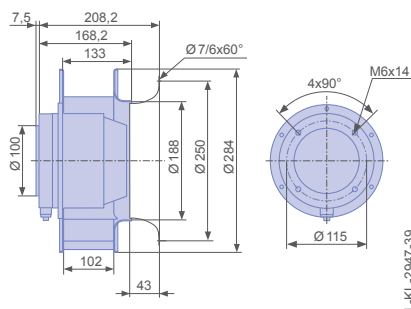
Inlet ring	00280734	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275848	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH in installation position H/Vu



Free-running motorized impeller RH in installation position H/Vo




Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH28M-2DK.3F.1R	I	400	50	①	0.74	330	2860	81
		400*		②	0.98*	540*	2740*	76
		400		③	0.86	440	2800	84
		230		④	0.72	260	2600	78
		230		⑤	1.15	420	2260	71
		230		⑥	0.96	350	2420	80
	I	460	60	①	0.84	520	3380	86
		460*		②	1.30*	900*	3180*	80
		460		③	1.10	740	3280	88
		400		④	0.86	500	3320	85
		400*		⑤	1.35*	840*	3030*	79
		400		⑥	1.10	700	3170	87
	II	400	50	①	0.74	330	2860	81
		400*		②	0.98*	540*	2740*	76
		400		③	0.86	440	2800	84
		230		④	0.72	260	2600	78
		230		⑤	1.15	420	2260	71
		230		⑥	0.96	350	2420	80
II	460	60	①	0.84	520	3380	86	
	460*		②	1.30*	900*	3180*	80	
	460		③	1.10	740	3280	88	
	400		④	0.86	500	3320	85	
	400*		⑤	1.35*	840*	3030*	79	
	400		⑥	1.10	700	3170	87	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH28M-2DK.3F.1R</b>	<b>RH28M-2DK.3F.1R</b>
<b>Article no.</b>	<b>172138</b>	<b>175225</b>
Weight kg	7.20	7.20
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

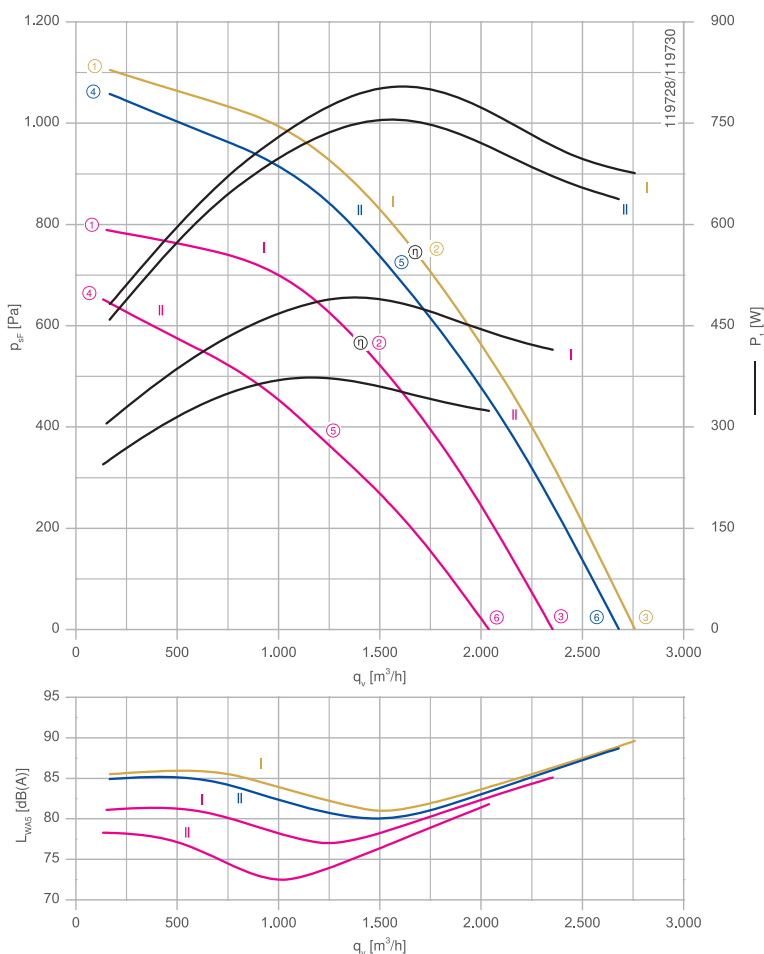
RH28M-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 500 W | 760 W | 800 W\*  
 Rated current  $I_N$ :  
 1.55/0.90 A | 2.10/1.20 A | 2.00/1.15 A\*  
 Rated speed  $n_n$ :  
 2760 min<sup>-1</sup> | 3080 min<sup>-1</sup> | 3210 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A | 7,00/4,20 A | 8,50/4,80 A  
 Current increase  $\Delta I$ : 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

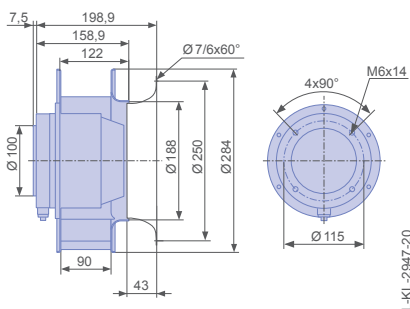


Measured with inlet ring, without guard grille according to ISO 5801  
 Not 60Hz voltage controllable fan.

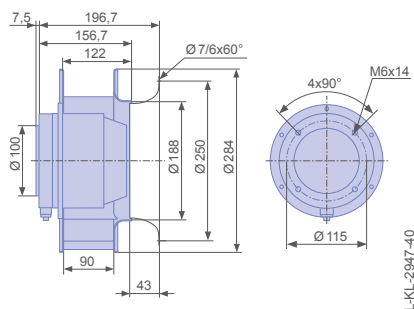
Inlet ring	00280734	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275848	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH in installation position H/Vu



Free-running motorized impeller RH in installation position H/Vo




Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH28M-2DK.3F.2R	I	400	50	①	0.72	310	2850	81
		400*		②	0.90*	500*	2760*	77
		400		③	0.82	420	2810	85
		230		④	0.68	240	2610	78
		230		⑤	1.00	370	2310	74
		230		⑥	0.88	320	2440	82
	I	460	60	①	0.80	480	3390	86
		460*		②	1.15*	800*	3210*	82
		460		③	1.00	680	3290	90
		400		④	0.78	460	3320	85
		400*		⑤	1.20*	760*	3080*	80
		400		⑥	1.05	640	3200	89
	II	400	50	①	0.72	310	2850	81
		400*		②	0.90*	500*	2760*	77
		400		③	0.82	420	2810	85
		230		④	0.68	240	2610	78
		230		⑤	1.00	370	2310	74
		230		⑥	0.88	320	2440	82

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH28M-2DK.3F.2R</b>	<b>RH28M-2DK.3F.2R</b>
<b>Article no.</b>	<b>172139</b>	<b>175226</b>
Weight kg	7.10	7.10
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH28M-2D



## Description

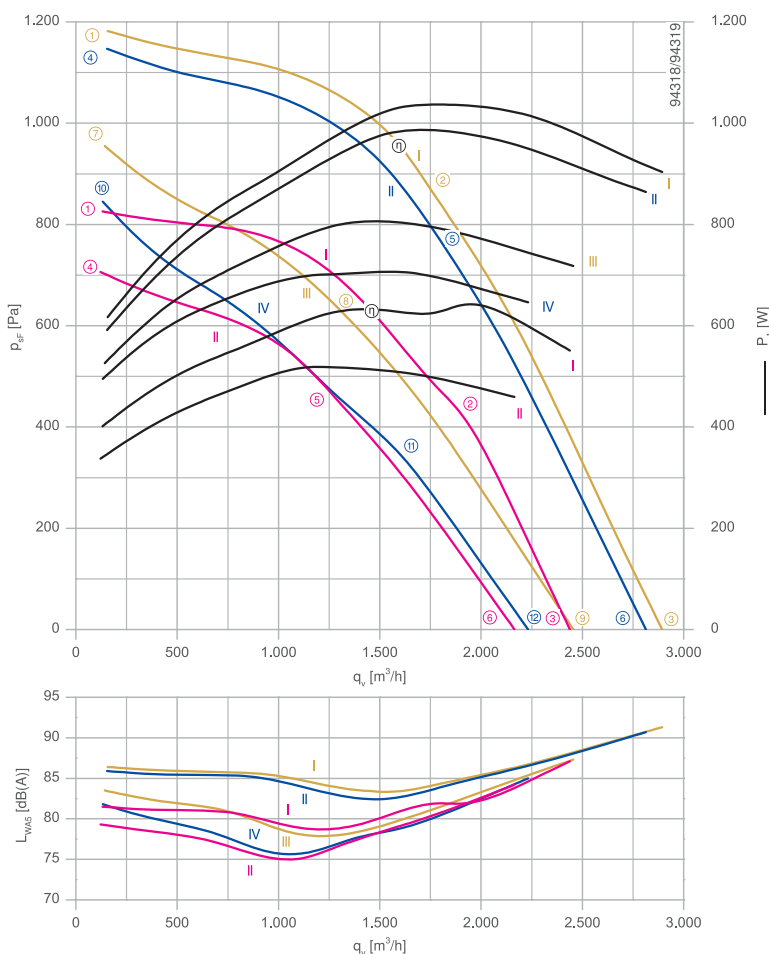
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~ 230/400 V ( $\Delta/Y$ ) | 3~ 265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 640 W | 980 W | 1.05 kW\*  
 Rated current  $I_N$ :  
 2.10/1.20 A | 2.80/1.60 A | 2.60/1.50 A\*  
 Rated speed  $n_n$ :  
 2820 min<sup>-1</sup> | 3230 min<sup>-1</sup> | 3320 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 13,00/7,50 A | 12,00/7,00 A | 14,00/8,00 A  
 Current increase  $\Delta I$ : 30 % | 20 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 50 °C | 50 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00280734	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275848	unpainted	
Connection diagram	1360-106XA		Page 327

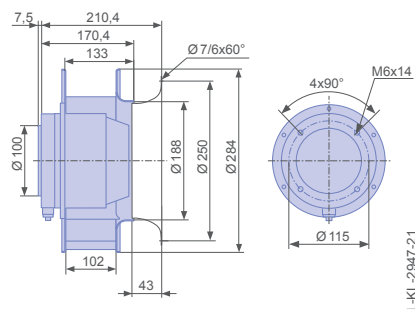
## Characteristic curve



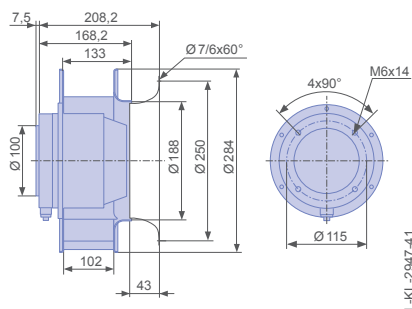
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH28M-2DK.3I.1R	I	400	50	①	0.98	400	2900	82
		400*		②	1.20*	640*	2820*	82
		400		③	1.10	560	2850	87
	II	230		④	0.94	340	2680	79
		230		⑤	1.40	520	2450	77
		230		⑥	1.25	460	2530	84
	I	460	60	①	1.05	620	3460	86
		460*		②	1.50*	1050*	3320*	84
		460		③	1.35	900	3370	91
	II	400		④	1.00	600	3410	86
		400*		⑤	1.60*	980*	3230*	84
		400		⑥	1.40	860	3290	91
	III	265	⑦	1.25	520	3120	84	
		265	⑧	1.90	800	2710	78	
		265	⑨	1.70	720	2860	87	
	IV	230	⑩	1.35	500	2930	82	
		230	⑪	1.95	700	2490	79	
		230	⑫	1.75	640	2620	85	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH28M-2DK.3I.1R</b>	<b>RH28M-2DK.3I.1R</b>
Article no.	<b>172140</b>	<b>175227</b>
Weight kg	9.10	9.10
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH28M-2D



## Description

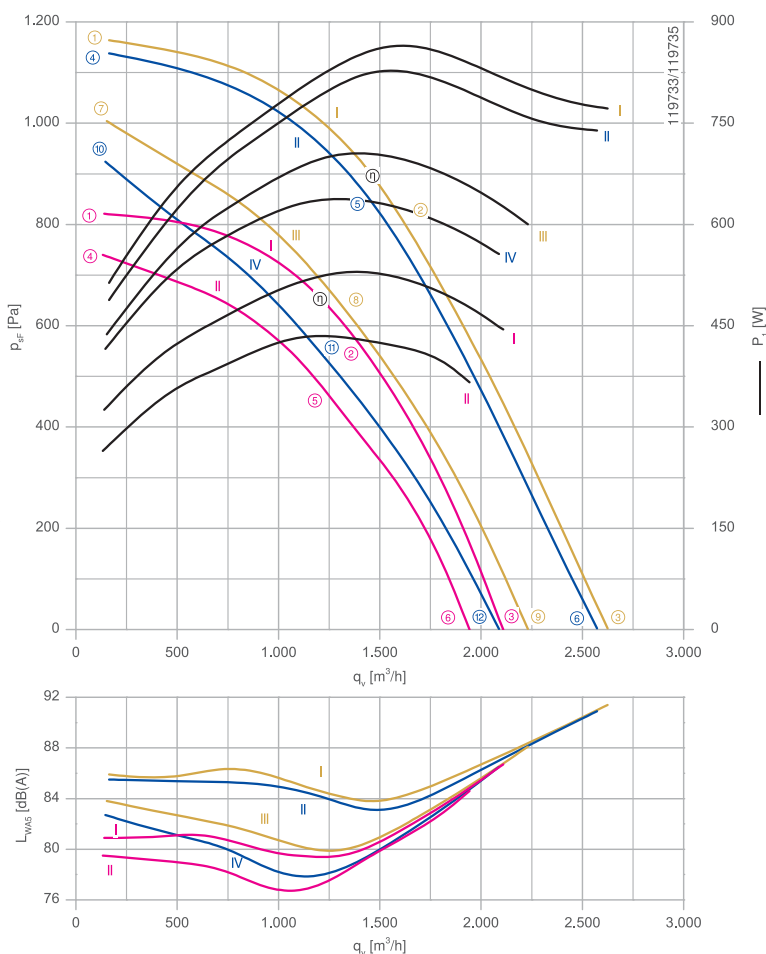
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 520 W | 820 W | 860 W\*  
 Rated current  $I_N$ :  
 1.90/1.10 A | 2.30/1.35 A | 2.30/1.35 A\*  
 Rated speed  $n_n$ :  
 2860 min<sup>-1</sup> | 3310 min<sup>-1</sup> | 3380 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 13,00/7,50 A | 12,00/7,00 A | 14,00/8,00 A  
 Current increase  $\Delta I$ : 20 % | 30 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00280734	RAL 7032	Page 303
Inlet ring	00275848	(pebble grey) unpainted	
Connection diagram	1360-106XA		Page 327

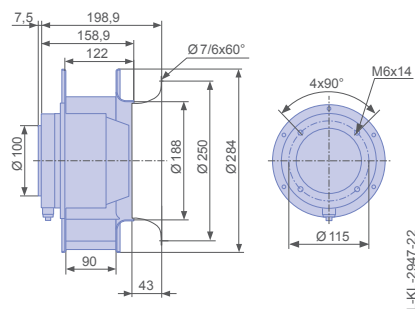
## Characteristic curve



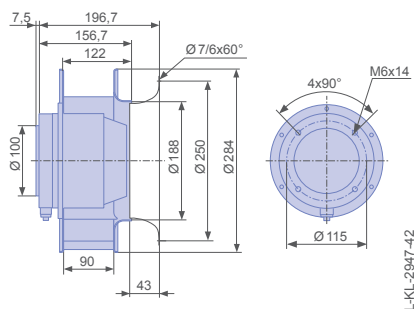
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH28M-2DK.3I.2R	I	400	50	①	0.96	330	2920	81
		400*		②	1.10*	520*	2860*	80
		400		③	1.05	440	2890	87
	II	230		④	0.76	260	2780	80
		230		⑤	1.20	440	2590	78
		230		⑥	1.00	370	2670	85
	I	460	60	①	0.98	520	3490	86
		460*		②	1.35*	860*	3380*	84
		460		③	1.25	780	3410	91
	II	400		④	0.90	480	3450	86
		400*		⑤	1.35*	820*	3310*	83
		400		⑥	1.25	740	3340	91
	III	265	⑦	1.05	440	3240	84	
		265	⑧	1.65	700	2920	80	
		265	⑨	1.40	600	3060	88	
	IV	230	⑩	1.15	420	3110	83	
		230	⑪	1.75	640	2700	78	
		230	⑫	1.50	560	2870	87	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH28M-2DK.3I.2R</b>	<b>RH28M-2DK.3I.2R</b>
Article no.	<b>172141</b>	<b>175228</b>
Weight kg	9.00	9.00
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

RH28M-4D



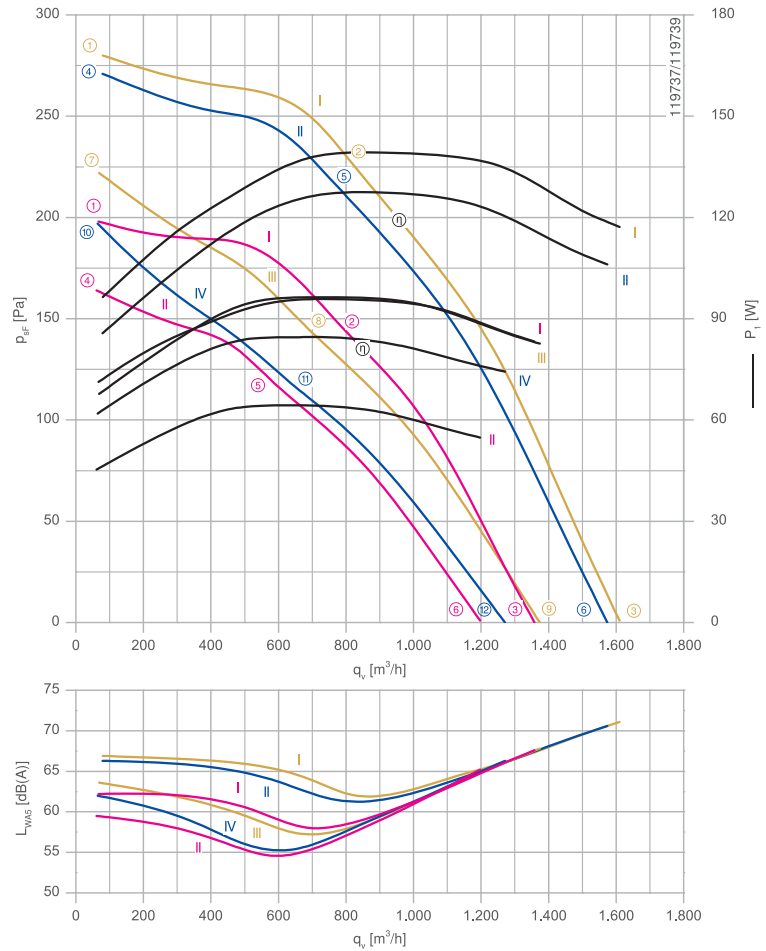
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3-230/400 V ( $\Delta/Y$ ) | 3-265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 95 W | 130 W | 140 W\*  
 Rated current  $I_N$ :  
 0.42/0.24 A | 0.42/0.24 A | 0.44/0.25 A\*  
 Rated speed  $n_n$ :  
 1380 min<sup>-1</sup> | 1580 min<sup>-1</sup> | 1630 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 1.30/0.75 A | 1,20/0,70 A | 1,40/0,80 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

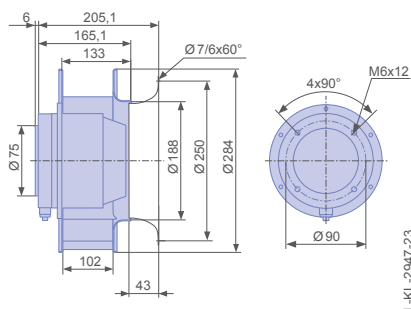


Measured with inlet ring, without guard grille according to ISO 5801

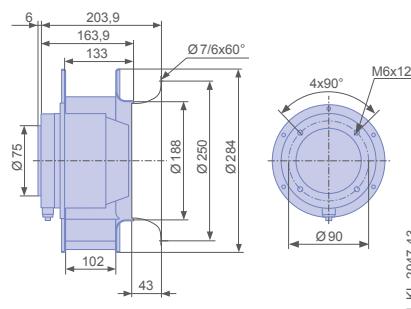
Inlet ring	00280734	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275848	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)	
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
RH28M-4DK.2A.1R	I	400	50	①	0.23	70	1430	62	
		400*			②	0.24*	95*	1380*	58
		400			③	0.24	85	1410	68
	II	230			④	0.15	46	1310	60
		230			⑤	0.18	65	1180	55
		230			⑥	0.16	55	1250	65
	I	460	60	①	0.22	95	1700	67	
		460*			②	0.25*	140*	1630*	62
		460			③	0.24	120	1670	71
	II	400			④	0.19	85	1680	66
		400*			⑤	0.24*	130*	1580*	62
		400			⑥	0.21	110	1630	71
	III	265		⑦	0.17	70	1510	64	
		265			⑧	0.23	95	1330	57
		265				⑨	0.20	85	1430
	IV	230		⑩	0.17	60	1430	62	
		230			⑪	0.23	85	1210	57
		230				⑫	0.21	75	1320

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH28M-4DK.2A.1R</b>	<b>RH28M-4DK.2A.1R</b>
Article no.	<b>172142</b>	<b>175229</b>
Weight kg	3.30	3.30
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH31M-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 340 W | 520 W | 560 W\*  
 Rated current  $I_N$ :  
 1.30/0.74 A | 1.50/0.88 A | 1.50/0.88 A\*  
 Rated speed  $n_n$ :  
 2840 min<sup>-1</sup> | 3280 min<sup>-1</sup> | 3360 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A | 7,00/4,20 A | 8,50/4,80 A  
 Current increase  $\Delta I$ : 15 % | 25 % | 25 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

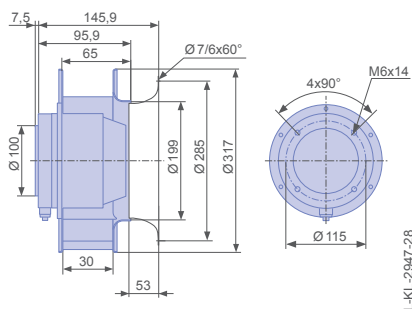
\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

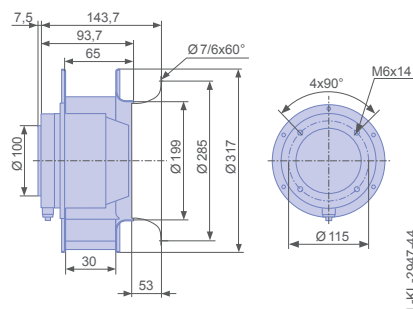
Inlet ring	00400327	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00279152	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

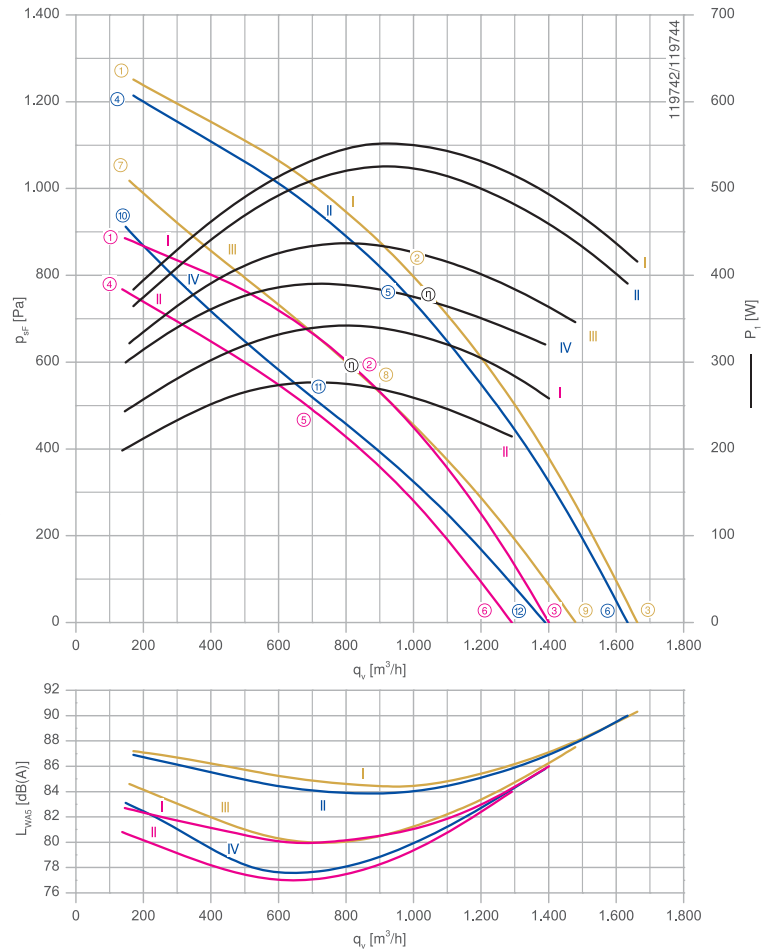
Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



## Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801



Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)	
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
RH31M-2DK.3F.3R	I	400	50	①	0.66	240	2900	83	
		400*		②	0.74*	340*	2840*	80	
		400		③	0.68	260	2890	86	
		230		④	0.56	200	2700	81	
		230		⑤	0.76	280	2540	77	
		230		⑥	0.60	210	2670	84	
	II	I	460	60	①	0.70	380	3450	87
			460*		②	0.88*	560*	3360*	84
			460		③	0.74	420	3430	90
		II	400		④	0.66	360	3400	87
			400*		⑤	0.88*	520*	3280*	84
			400		⑥	0.70	390	3380	90
	III	I	265		⑦	0.78	320	3110	85
			265		⑧	1.05	440	2840	80
			265		⑨	0.84	350	3060	88
		IV	230		⑩	0.82	300	2940	83
			230		⑪	1.10	390	2600	78
			230		⑫	0.90	320	2870	86

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31M-2DK.3F.3R</b>	<b>RH31M-2DK.3F.3R</b>
<b>Article no.</b>	<b>172143</b>	<b>175230</b>
Weight kg	7.20	7.20
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH31M-2D



## Description

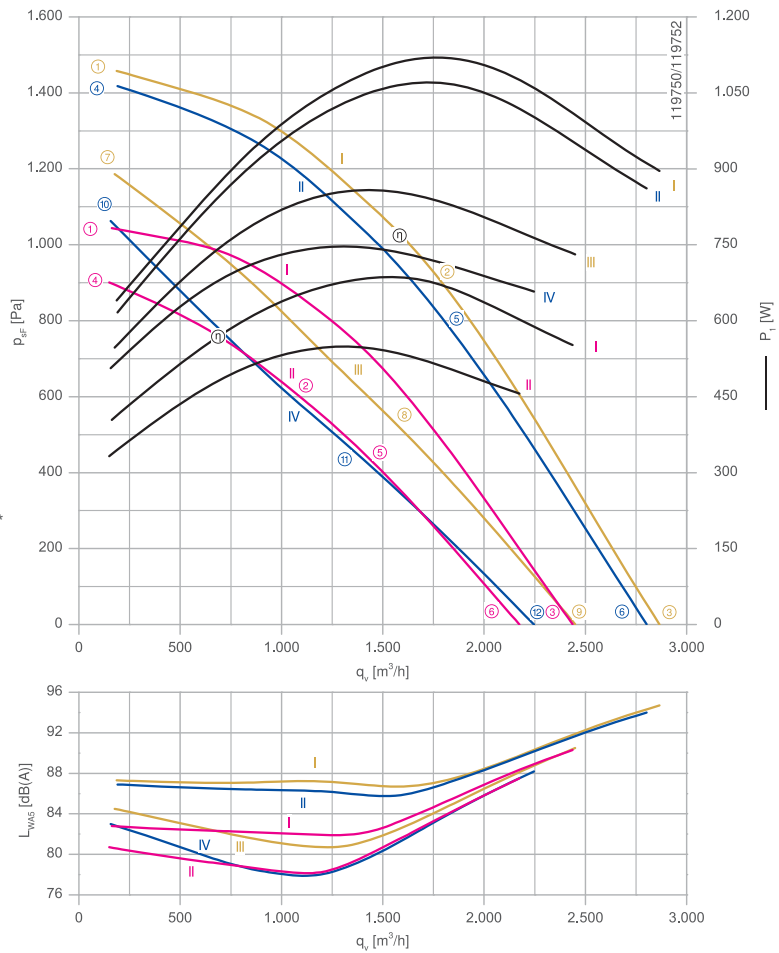
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 680 W | 1.05 kW | 1.10 kW\*  
 Rated current  $I_N$ :  
 2.30/1.30 A | 2.90/1.70 A | 2.80/1.60 A\*  
 Rated speed  $n_n$ :  
 2830 min<sup>-1</sup> | 3210 min<sup>-1</sup> | 3300 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 13,00/7,50 A | 12,00/7,00 A | 14,00/8,00 A  
 Current increase  $\Delta I$ : 20 % | 20 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 40 °C | 40 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00400327	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00279152	unpainted	
Connection diagram	1360-106XA		Page 327

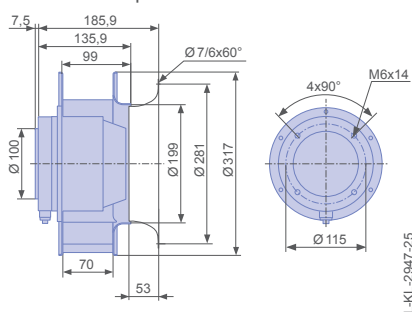
## Characteristic curve



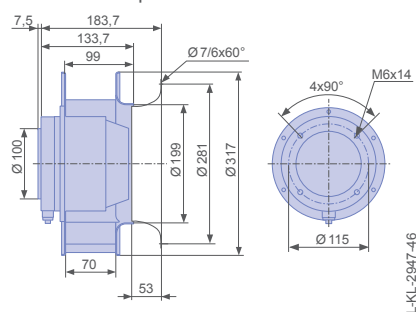
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo






Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH31M-2DK.3I.2R	I	400	50	①	1.00	400	2910	83
		400*		②	1.30*	680*	2830*	83
		400		③	1.15	560	2860	90
	II	230		④	0.92	330	2710	81
		230		⑤	1.50	540	2450	80
		230		⑥	1.25	460	2570	88
	I	460	60	①	1.10	640	3450	87
		460*		②	1.60*	1100*	3300*	87
		460		③	1.35	900	3370	95
	II	400		④	1.05	620	3400	87
		400*		⑤	1.70*	1050*	3210*	87
		400		⑥	1.40	860	3300	94
	III	265		⑦	1.30	540	3110	85
		265		⑧	2.00	860	2690	82
		265		⑨	1.70	740	2900	91
	IV	230		⑩	1.35	500	2950	83
		230		⑪	2.00	740	2430	79
		230		⑫	1.80	660	2660	88

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH31M-2DK.3I.2R</b>	<b>RH31M-2DK.3I.2R</b>
Article no.	<b>172145</b>	<b>175232</b>
Weight kg	9.10	9.10
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

RH31M-4D



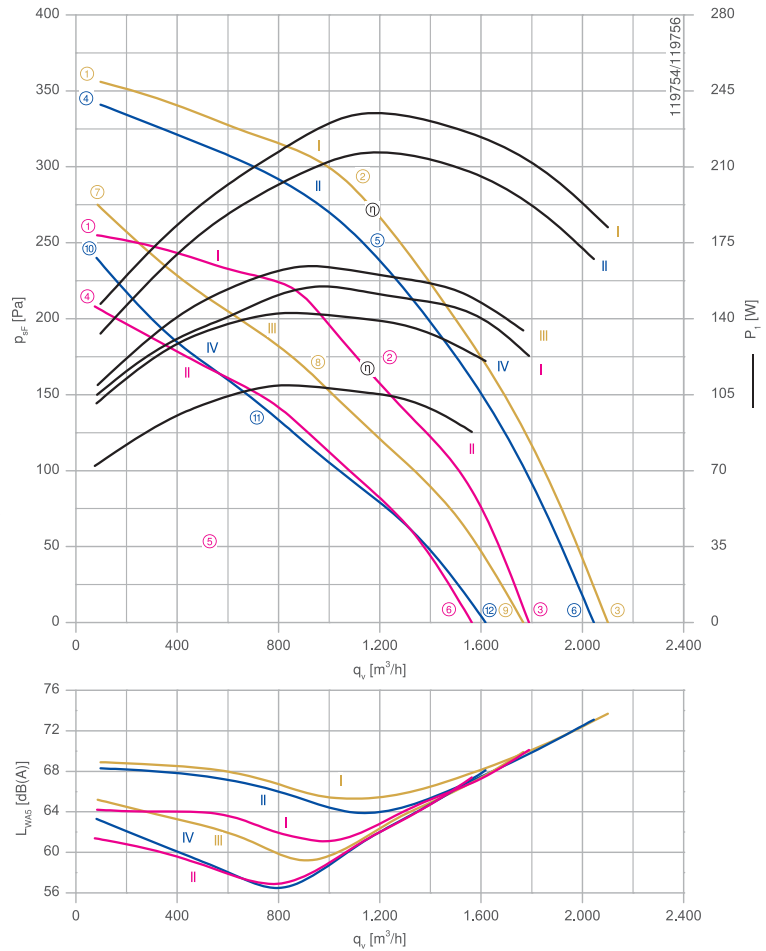
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3-230/400 V ( $\Delta/Y$ ) | 3-265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 150 W | 220 W | 230 W\*  
 Rated current  $I_N$ :  
 0.62/0.36 A | 0.66/0.38 A | 0.68/0.39 A\*  
 Rated speed  $n_n$ :  
 1370 min<sup>-1</sup> | 1540 min<sup>-1</sup> | 1600 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2.20/1.20 A | 2,00/1,20 A | 2,40/1,40 A  
 Current increase  $\Delta I$ : 0 % | 5 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

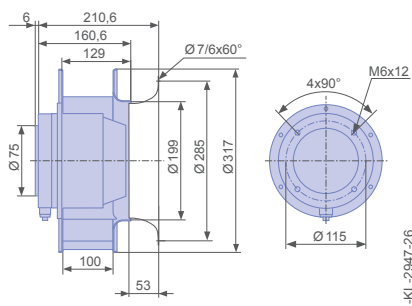


Measured with inlet ring, without guard grille according to ISO 5801

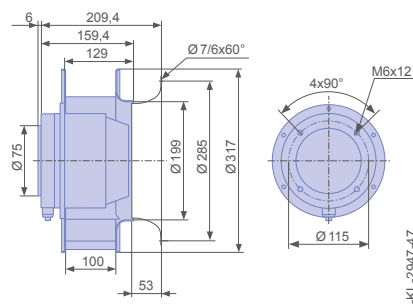
Inlet ring	00400327	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00279152	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH31M-4DK.2C.1R	I	400	50	①	0.33	110	1430	64
		400*		②	0.36*	150*	1370*	61
		400		③	0.34	120	1410	70
	II	230		④	0.23	70	1290	61
		230		⑤	0.31	110	1140	57
		230		⑥	0.26	90	1230	67
	I	460	60	①	0.32	150	1690	69
		460*		②	0.39*	230*	1600*	65
		460		③	0.35	180	1650	74
	II	400		④	0.29	130	1650	68
		400*		⑤	0.38*	220*	1540*	64
		400		⑥	0.32	170	1610	73
	III	265		⑦	0.28	110	1490	65
		265		⑧	0.39	160	1250	59
		265		⑨	0.33	130	1390	70
	IV	230		⑩	0.28	100	1380	63
		230		⑪	0.39	140	1120	57
		230		⑫	0.33	120	1280	68

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH31M-4DK.2C.1R</b>	<b>RH31M-4DK.2C.1R</b>
Article no.	<b>172146</b>	<b>175233</b>
Weight kg	4.00	4.00
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH35M-2D



## Description

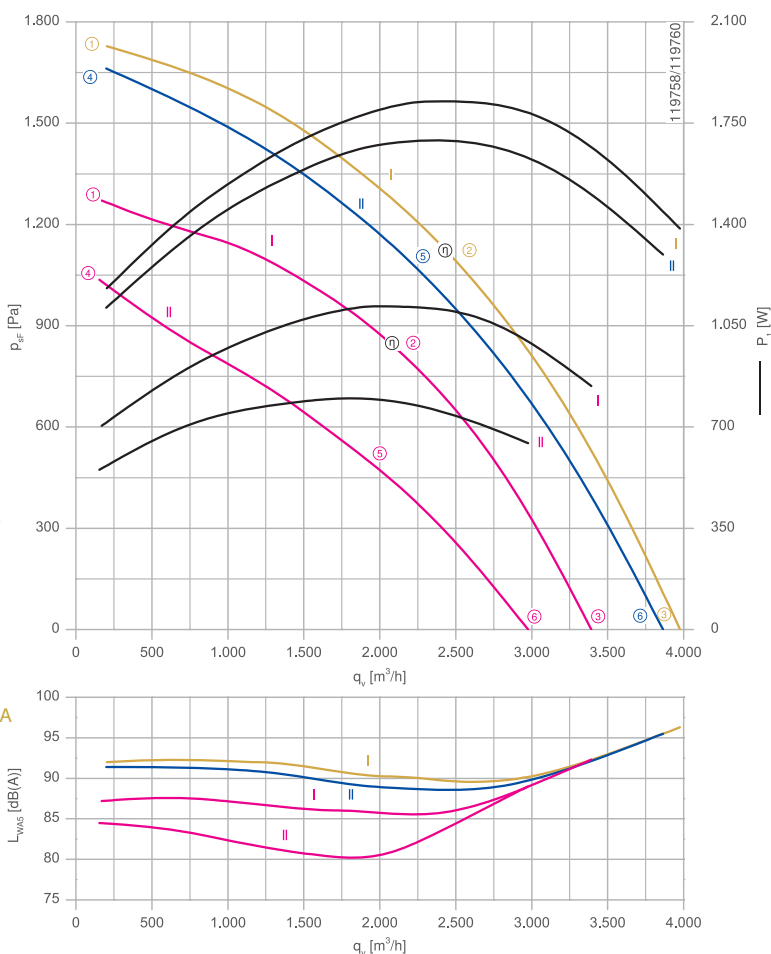
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.10 kW | 1.70 kW | 1.85 kW\*  
 Rated current  $I_N$ :  
 4.00/2.30 A | 5.00/2.90 A | 4.80/2.80 A\*  
 Rated speed  $n_N$ :  
 2760 min<sup>-1</sup> | 3060 min<sup>-1</sup> | 3190 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 18,00/10,00 A | 16,00/9,00 A | 19,00/11,00 A  
 Current increase  $\Delta I$ : 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 55 °C | 55 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00402617	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275850	unpainted	
Connection diagram	1360-106XA		Page 327

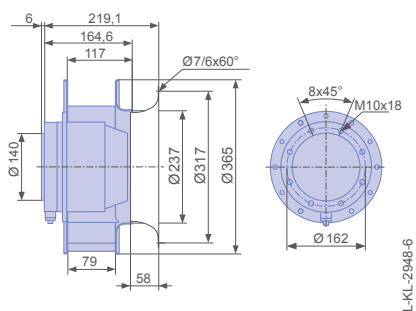
## Characteristic curve



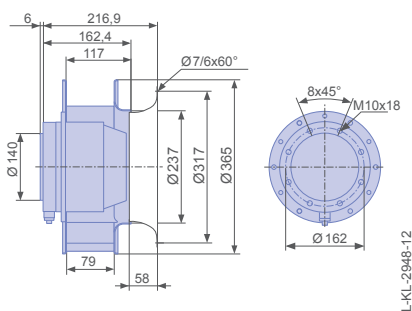
Measured with inlet ring, without guard grille according to ISO 5801  
 Not 60Hz voltage controllable fan.

## Dimensions mm

Free-running motorized impeller RH  
 in installation position H/Vu



Free-running motorized impeller RH  
 in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH35M-2DK.6F.2R	I	400	50	①	1.85	700	2860	87
		400*		②	2.30*	1100*	2760*	86
		400		③	2.00	840	2830	92
		230		④	1.60	560	2580	85
		230		⑤	2.30	800	2280	80
		230		⑥	1.90	640	2490	89
	I	460	60	①	2.10	1200	3370	92
		460*		②	2.80*	1850*	3190*	90
		460		③	2.30	1400	3330	96
		400		④	2.00	1100	3300	91
		400*		⑤	2.90*	1700*	3060*	89
		400		⑥	2.30	1300	3230	96
	II	400	50	①	1.85	700	2860	87
		400*		②	2.30*	1100*	2760*	86
		400		③	2.00	840	2830	92
		230		④	1.60	560	2580	85
		230		⑤	2.30	800	2280	80
		230		⑥	1.90	640	2490	89

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH35M-2DK.6F.2R</b>	<b>RH35M-2DK.6F.2R</b>
<b>Article no.</b>	<b>172147</b>	<b>175234</b>
Weight kg	14.10	14.10
* inlet ring not included		

# M-series

for three phase alternating current, 2 pole

RH35M-2D



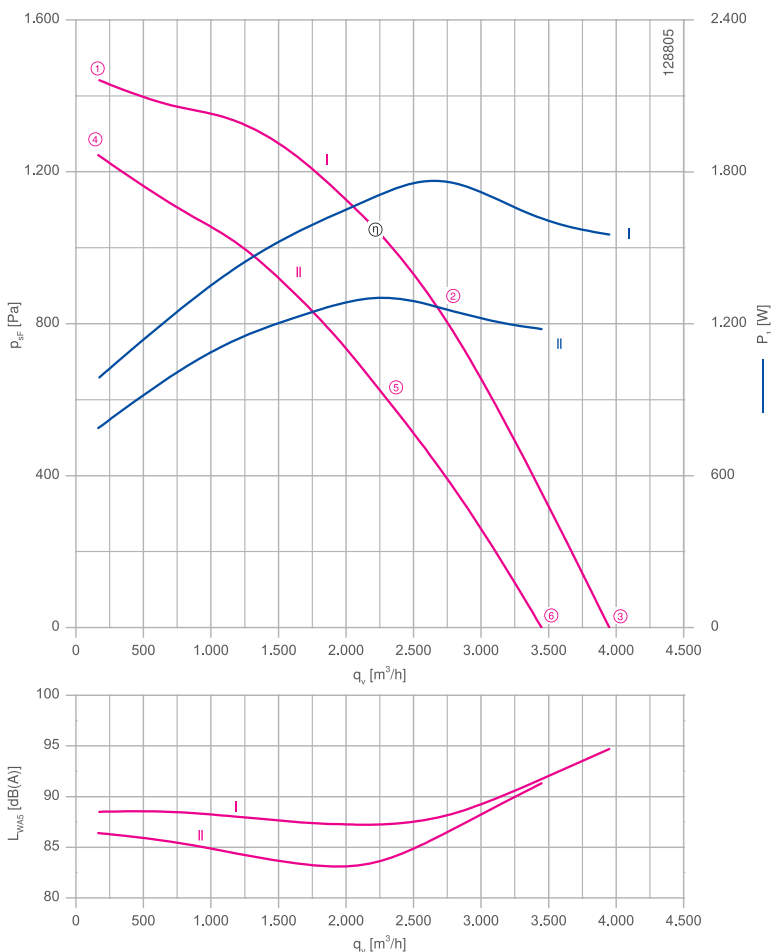
## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_i$ : 1.75 kW\*  
 Rated current  $I_N$ : 6.00/3.50 A\*  
 Rated speed  $n_N$ : 2790 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 30,00/17,00 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ : 70 °C

Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

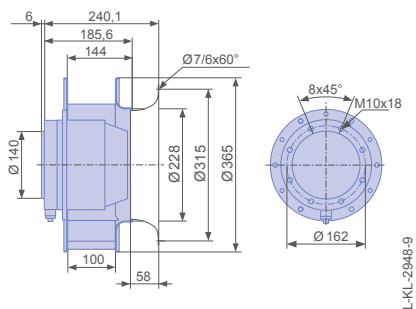


Measured with inlet ring, without guard grille according to ISO 5801

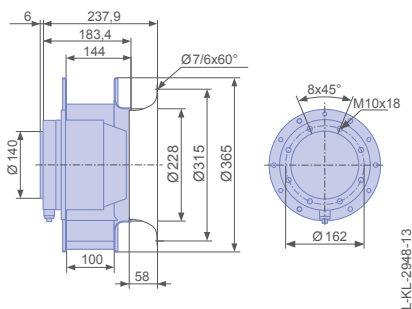
Inlet ring	00402617	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275850	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH35M-2DK.6K.3R	I	400	①	2.60	980	2890	89
		400*	②	3.50*	1750*	2790*	88
		400	③	3.20	1550	2820	95
	II	230	④	2.20	780	2690	86
		230	⑤	3.60	1300	2380	84
		230	⑥	3.30	1200	2470	91

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH35M-2DK.6K.3R</b>	<b>RH35M-2DK.6K.3R</b>
<b>Article no.</b>	<b>172148</b>	<b>175235</b>
Weight kg	17.90	17.90
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# M-series

for three phase alternating current, 4 pole

RH35M-4D



## Description

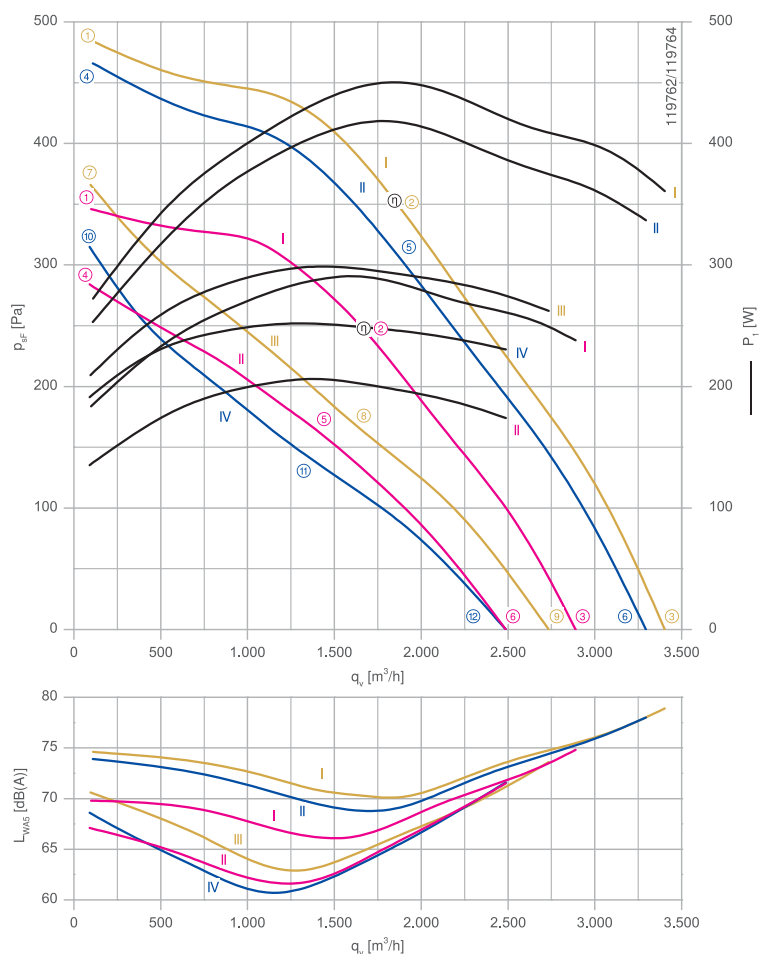
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 290 W | 420 W | 460 W\*  
 Rated current  $I_N$ :  
 1.20/0.68 A | 1.30/0.76 A | 1.35/0.78 A\*  
 Rated speed  $n_n$ :  
 1360 min<sup>-1</sup> | 1520 min<sup>-1</sup> | 1590 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 4.00/2.40 A | 3.60/2.20 A | 4.40/2.40 A  
 Current increase  $\Delta I$ : 0 % | 5 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 80 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00402617	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275850	unpainted	
Connection diagram	1360-106XA		Page 327

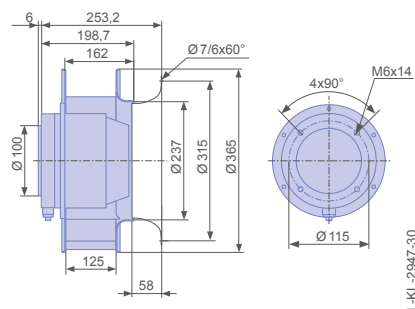
## Characteristic curve



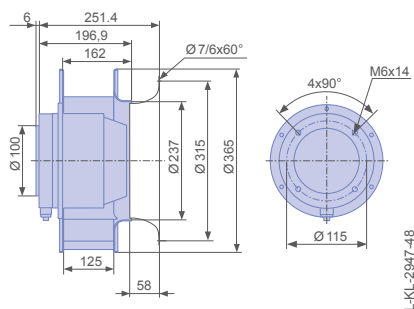
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH35M-4DK.4C.1R	I	400	50	①	0.60	180	1420	70
		400*		②	0.68*	290*	1360*	66
		400		③	0.66	240	1400	75
	II	230		④	0.44	140	1290	67
		230		⑤	0.62	210	1130	62
		230		⑥	0.52	170	1210	72
	I	460	60	①	0.60	270	1690	75
		460*		②	0.78*	460*	1590*	70
		460		③	0.68	360	1640	79
	II	400		④	0.54	250	1660	74
		400*		⑤	0.76*	420*	1520*	69
		400		⑥	0.64	340	1590	78
	III	265		⑦	0.56	210	1460	71
		265		⑧	0.78	300	1200	64
		265		⑨	0.68	260	1320	74
	IV	230		⑩	0.58	190	1360	69
		230		⑪	0.78	250	1070	62
		230		⑫	0.70	230	1210	72

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH35M-4DK.4C.1R</b>	<b>RH35M-4DK.4C.1R</b>
Article no.	<b>172149</b>	<b>175236</b>
Weight kg	6.30	6.30
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

RH40M-4D



## Description

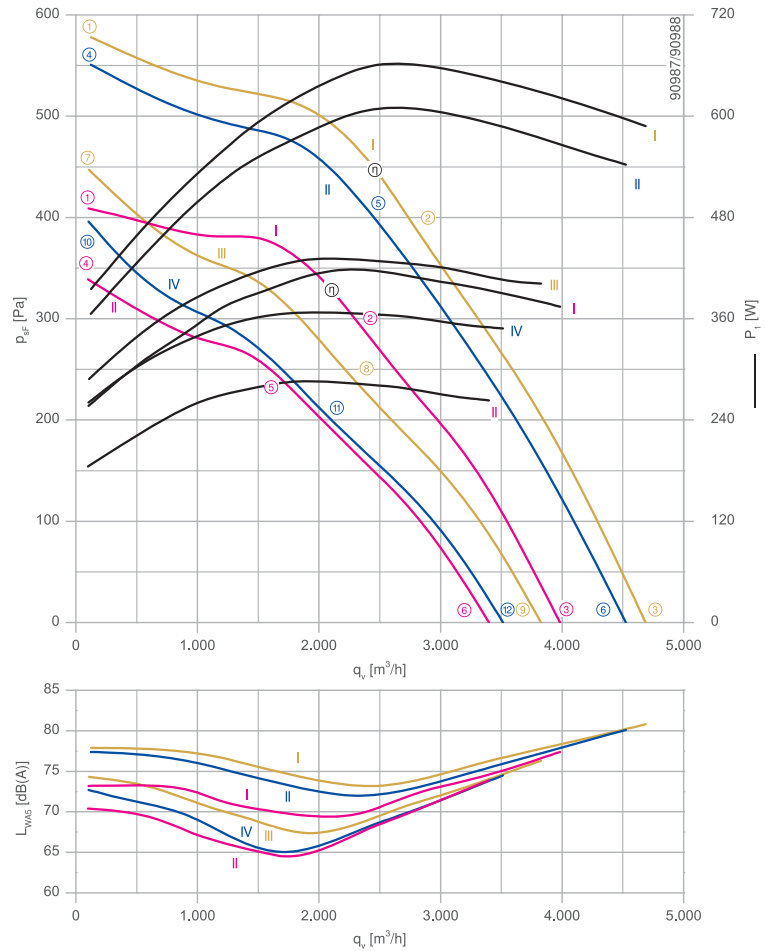
Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3-230/400 V ( $\Delta/Y$ ) | 3-265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 420 W | 600 W | 660 W\*  
 Rated current  $I_N$ :  
 1.80/1.05 A | 2.00/1.15 A | 2.10/1.20 A\*  
 Rated speed  $n_n$ :  
 1350 min<sup>-1</sup> | 1510 min<sup>-1</sup> | 1570 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.20 A | 7,00/4,00 A | 8,00/4,60 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

Inlet ring	00279265	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275570	unpainted	
Connection diagram	1360-106XA		Page 327

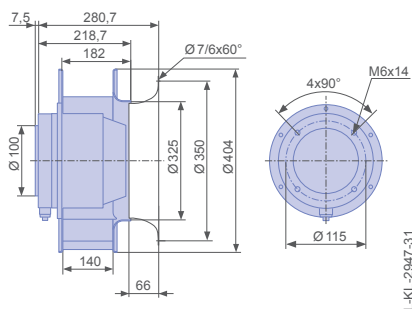
## Characteristic curve



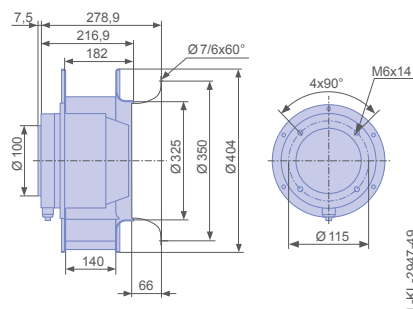
Measured with inlet ring, without guard grille according to ISO 5801

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH40M-4DK.4I.1R	I	400	50	①	0.94	260	1420	73
		400*		②	1.05*	420*	1350*	70
		400		③	1.00	370	1360	77
	II	230		④	0.64	180	1280	70
		230		⑤	0.88	290	1130	65
		230		⑥	0.82	260	1170	74
	I	460	60	①	0.94	400	1680	78
		460*		②	1.20*	660*	1570*	74
		460		③	1.10	580	1600	81
	II	400		④	0.86	370	1650	77
		400*		⑤	1.15*	600*	1510*	72
		400		⑥	1.05	540	1540	80
	III	265	⑦	0.78	290	1470	74	
		265	⑧	1.10	440	1260	68	
		265	⑨	1.05	400	1310	76	
	IV	230	⑩	0.80	260	1400	73	
		230	⑪	1.10	370	1150	66	
		230	⑫	1.05	350	1210	75	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH40M-4DK.4I.1R</b>	<b>RH40M-4DK.4I.1R</b>
Article no.	<b>172150</b>	<b>175237</b>
Weight kg	9.70	9.70
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

RH45M-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 820 W | 1.25 kW | 1.35 kW\*  
 Rated current  $I_N$ :  
 3.20/1.85 A | 3.80/2.20 A | 3.80/2.20 A\*  
 Rated speed  $n_n$ :  
 1410 min<sup>-1</sup> | 1600 min<sup>-1</sup> | 1650 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 16.00/9,50 A | 15,00/8,50 A | 17,00/10,00 A  
 Current increase  $\Delta I$ : 10 % | 15 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 40 °C | 40 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

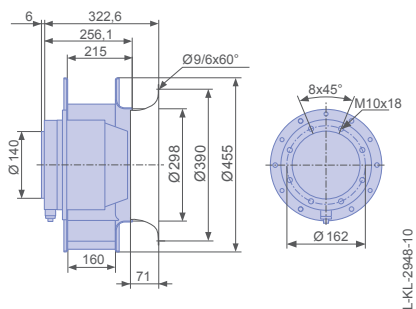
\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

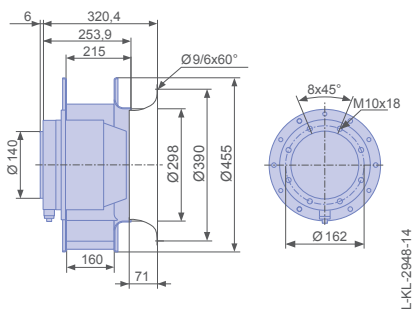
Inlet ring	00400383	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275571	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

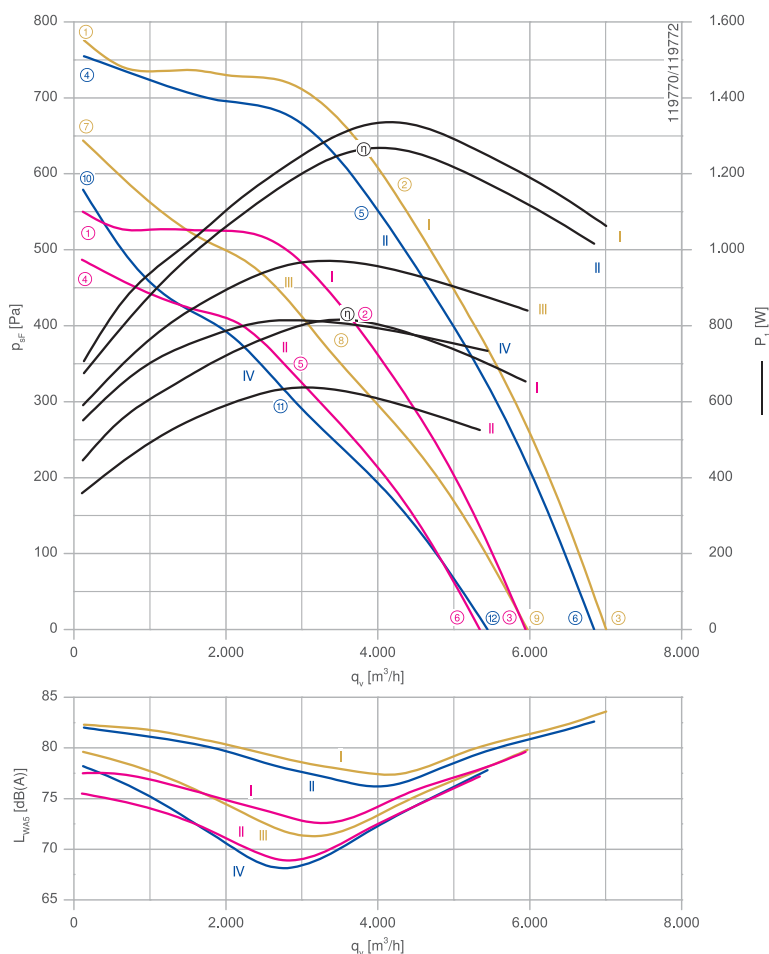
Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



## Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH45M-4DK.6F.1R	I	400	50	①	1.50	440	1460	78
		400*		②	1.85*	820*	1410*	73
		400		③	1.70	660	1430	80
	II	230		④	1.10	360	1370	76
		230		⑤	1.85	640	1230	69
		230		⑥	1.55	520	1290	77
	I	460	60	①	1.50	700	1730	82
		460*		②	2.20*	1350*	1650*	77
		460		③	1.85	1050	1690	84
	II	400		④	1.40	680	1710	82
		400*		⑤	2.20*	1250*	1600*	76
		400		⑥	1.85	1000	1650	83
	III	265	⑦	1.55	600	1580	80	
		265	⑧	2.60	980	1330	71	
		265	⑨	2.20	840	1440	80	
	IV	230	⑩	1.65	560	1500	78	
		230	⑪	2.60	820	1190	68	
		230	⑫	2.30	740	1310	78	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH45M-4DK.6F.1R</b>	<b>RH45M-4DK.6F.1R</b>
Article no.	<b>172151</b>	<b>175238</b>
Weight kg	16.00	16.00
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

RH50M-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3- 230/400 V ( $\Delta/Y$ ) | 3-230/400 V ( $\Delta/Y$ ) | 3-265/460 V ( $\Delta/Y$ ) \***  
 Rated frequency  $f_N$ : **50 Hz | 60 Hz | 60 Hz\***  
 Input power  $P_i$ :  
**1.20 kW | 1.70 kW | 1.90 kW\***  
 Rated current  $I_N$ :  
**4.40/2.50 A | 5.40/3.10 A | 5.40/3.10 A\***  
 Rated speed  $n_N$ :  
**1350 min<sup>-1</sup> | 1470 min<sup>-1</sup> | 1550 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **18,00/10,00 A | 16,00/9,00 A | 19,00/11,00 A**  
 Current increase  $\Delta I$ : **0 % | 0 % | 0 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**70 °C | 65 °C | 65 °C**  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : aluminium, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

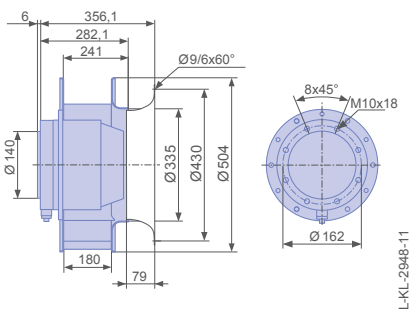
\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

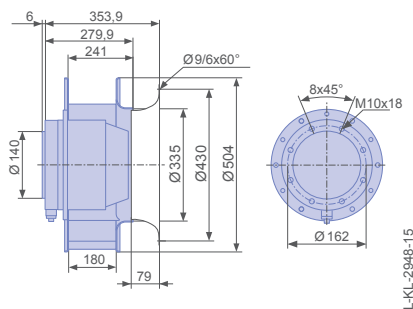
Inlet ring	00358610	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00275572	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

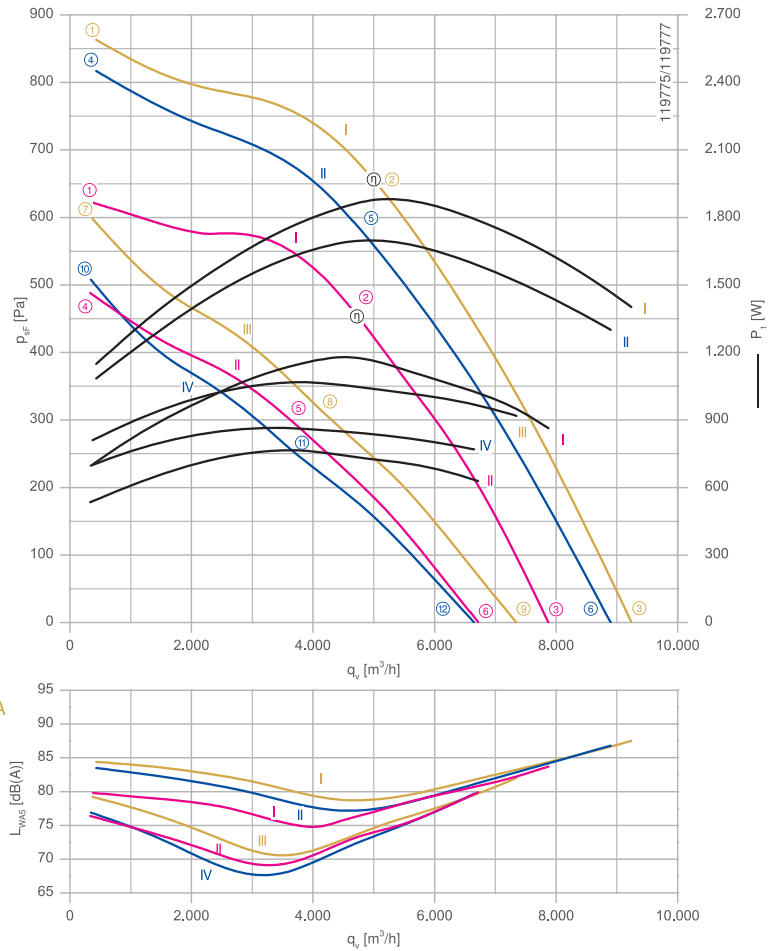
Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo



## Characteristic curve



Measured with inlet ring, without guard grille according to ISO 5801




Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH50M-4DK.6K.1R	I	400	50	①	1.90	700	1420	80
		400*		②	2.50*	1200*	1350*	76
		400		③	2.10	860	1400	84
	II	230		④	1.70	540	1250	76
		230		⑤	2.40	760	1070	69
		230		⑥	2.00	620	1190	80
	I	460	60	①	2.20	1150	1670	84
		460*		②	3.10*	1900*	1550*	79
		460		③	2.50	1400	1630	88
	II	400		④	2.10	1100	1630	84
		400*		⑤	3.10*	1700*	1470*	77
		400		⑥	2.50	1300	1570	87
	III	265	⑦	2.20	820	1390	79	
		265	⑧	2.90	1050	1140	72	
		265	⑨	2.50	920	1300	82	
	IV	230	⑩	2.20	700	1290	77	
		230	⑪	2.80	860	1030	68	
		230	⑫	2.40	760	1180	80	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH50M-4DK.6K.1R</b>	<b>RH50M-4DK.6K.1R</b>
<b>Article no.</b>	<b>172152</b>	<b>175239</b>
Weight kg	20.80	20.80
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

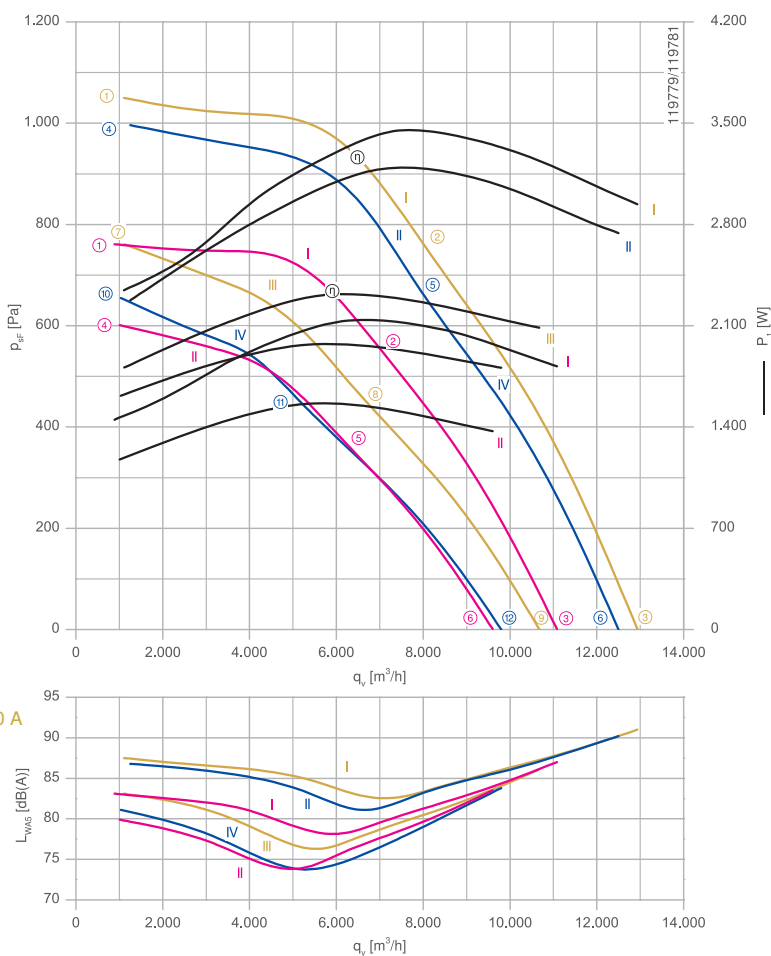
RH56M-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 2.10 kW | 3.20 kW | 3.40 kW\*  
 Rated current  $I_N$ :  
 7.00/4.00 A | 9.00/5.20 A | 9.00/5.20 A\*  
 Rated speed  $n_n$ :  
 1370 min<sup>-1</sup> | 1530 min<sup>-1</sup> | 1590 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 38.00/22.00 A | 34.00/20.00 A | 40.00/24.00 A  
 Current increase  $\Delta I$ : 10 % | 10 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -20 °C  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 50 °C | 50 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : bright sheet metal blue chromated, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

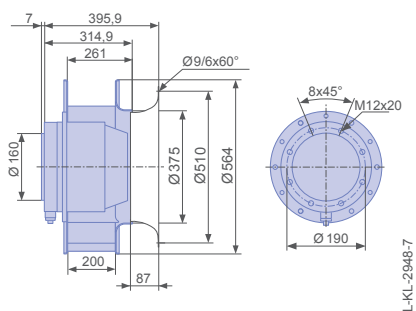


Measured with inlet ring, without guard grille according to ISO 5801

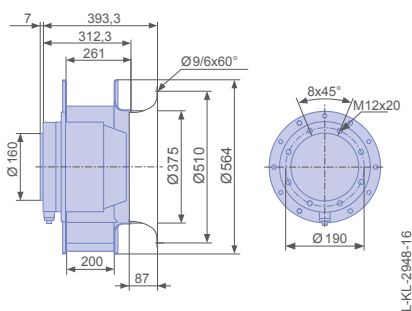
Inlet ring	00602372	RAL 7032	Page 303
		(pebble grey)	
Inlet ring	00278489	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo







Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>	
RH56M-4DK.7M.1R	I	400	50	①	3.20	1450	1420	83
		400*		②	4.00*	2100*	1370*	79
		400		③	3.60	1800	1390	87
	II	230		④	3.30	1200	1270	80
		230		⑤	4.40	1550	1160	76
		230		⑥	3.90	1350	1210	84
	I	460	60	①	3.80	2300	1670	88
		460*		②	5.20*	3400*	1590*	83
		460		③	4.40	2900	1630	91
	II	400		④	3.90	2300	1630	87
		400*		⑤	5.20*	3200*	1530*	83
		400		⑥	4.60	2700	1580	90
	III	265	⑦	4.40	1800	1430	83	
		265	⑧	5.60	2300	1270	78	
		265	⑨	5.00	2100	1340	86	
	IV	230	⑩	4.60	1600	1310	81	
		230	⑪	5.60	1950	1150	74	
		230	⑫	5.00	1800	1230	84	

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
Type	<b>RH56M-4DK.7M.1R</b>	<b>RH56M-4DK.7M.1R</b>
Article no.	<b>172153</b>	<b>175240</b>
Weight kg	41.00	41.00
* inlet ring not included		

# M-series

for three phase alternating current, 4 pole

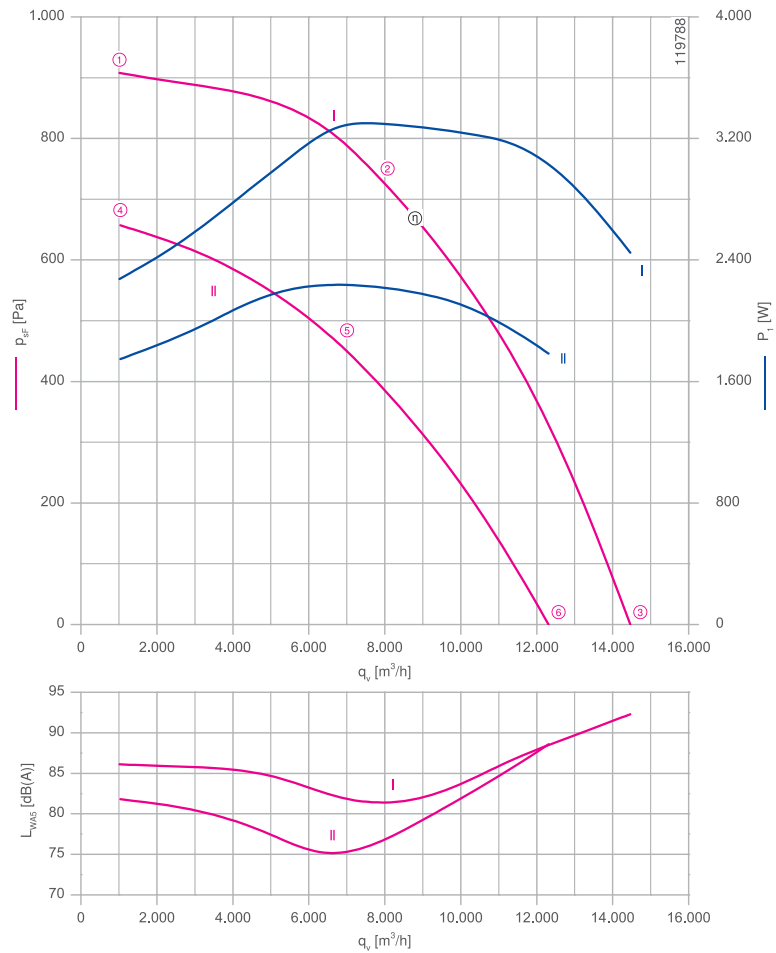
RH63M-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~ 230/400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**3.30 kW\***  
 Rated current  $I_N$ :  
**10.00/5.80 A\***  
 Rated speed  $n_N$ :  
**1330 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **46,00/26,00 A**  
 Current increase  $\Delta I$ : **5 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-20 °C**  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**70 °C**  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : bright sheet metal, blue chromated, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data

## Characteristic curve

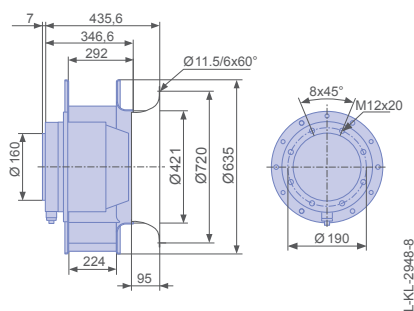


Measured with inlet ring, without guard grille according to ISO 5801

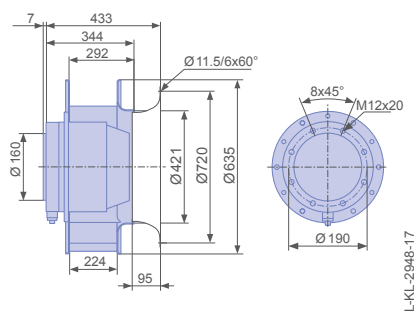
Inlet ring	00348113	RAL 7032 (pebble grey)	Page 303
Inlet ring	00279305	unpainted	
Connection diagram	1360-106XA		Page 327

## Dimensions mm

Free-running motorized impeller RH  
in installation position H/Vu



Free-running motorized impeller RH  
in installation position H/Vo

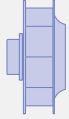
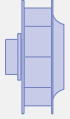


### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_1$ W	n min <sup>-1</sup>	
RH63M-4DK.7Q.1R	I	400	①	4.40	2300	1390	86
		400*	②	5.80*	3300*	1330*	81
		400	③	4.60	2400	1380	92
	II	230	④	4.80	1750	1190	82
		230	⑤	6.20	2200	1070	75
		230	⑥	5.00	1800	1180	89

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH63M-4DK.7Q.1R</b>	<b>RH63M-4DK.7Q.1R</b>
<b>Article no.</b>	<b>172154</b>	<b>175241</b>
Weight kg	54.00	54.00
* inlet ring not included		

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet





# FE2owlet

## AC technology

### Product overview

Quick selection	Page 246
Size 315	Page 248
Size 350	Page 250
Size 400	Page 252
Size 450	Page 254
Size 500	Page 256
Size 560	Page 258
Size 630	Page 264
Size 710	Page 268
Size 800	Page 270

Information

ZArail

Cpro-ECblue

C-ECblue

C series

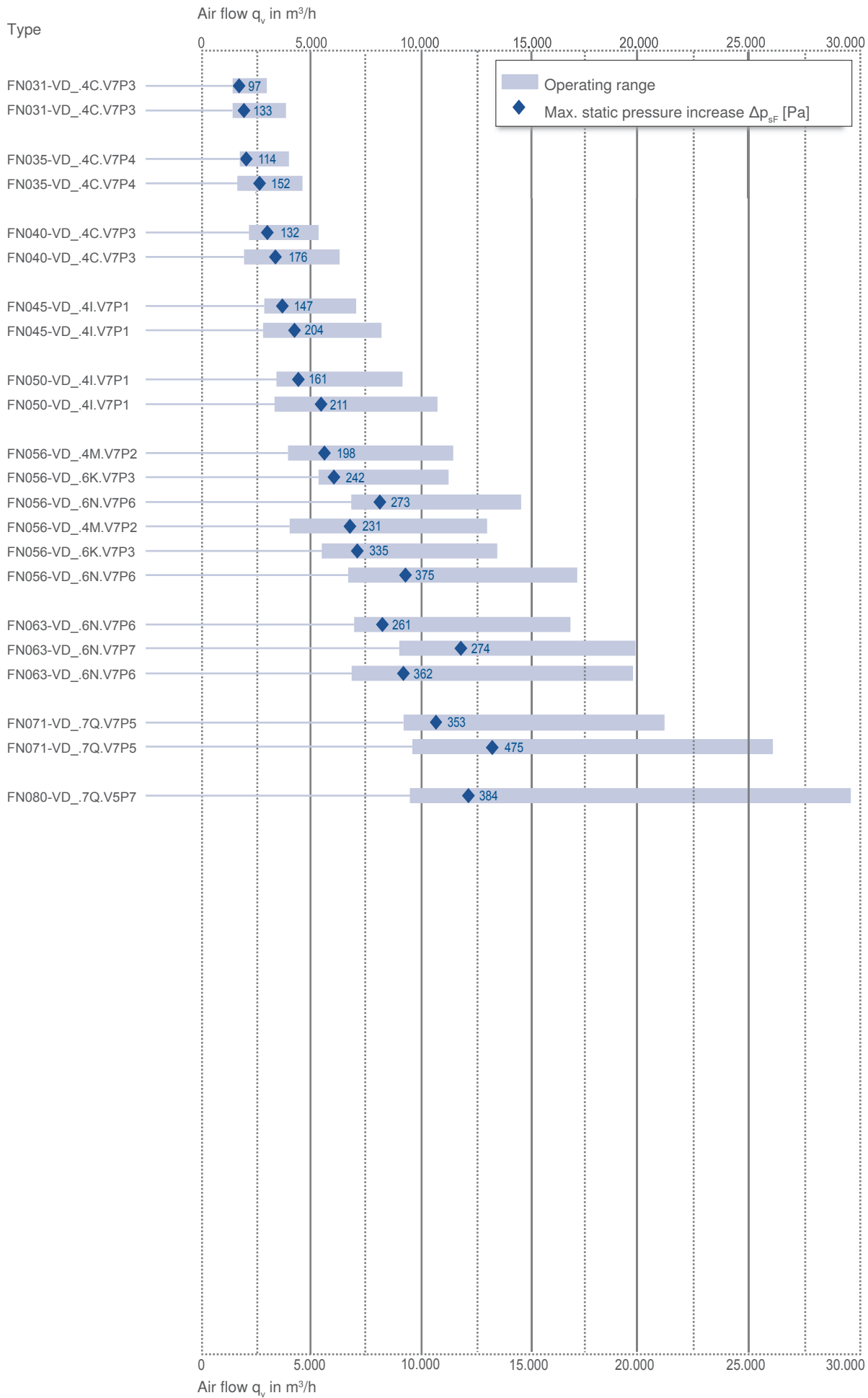
N series

M series

FE2owlet

Size	Frequency	Voltage	Number of poles	Type	Airflow direction	Page
310	50 Hz	3~ 400V	4-4	FN031-VD_4C.V7P3	← V	248
	60 Hz	3~ 400/460V	4-4	FN031-VD_4C.V7P3	← V	248
350	50 Hz	3~ 400V	4-4	FN035-VD_4C.V7P4	← V	250
	60 Hz	3~ 400/460V	4-4	FN035-VD_4C.V7P4	← V	250
400	50 Hz	3~ 400V	4-4	FN040-VD_4C.V7P3	← V	252
	60 Hz	3~ 400/460V	4-4	FN040-VD_4C.V7P3	← V	252
450	50 Hz	3~ 400V	4-4	FN045-VD_4I.V7P1	← V	254
	60 Hz	3~ 400/460V	4-4	FN045-VD_4I.V7P1	← V	254
500	50 Hz	3~ 400V	4-4	FN050-VD_4I.V7P1	← V	256
	60 Hz	3~ 400/460V	4-4	FN050-VD_4I.V7P1	← V	256
560	50 Hz	3~ 400V	4-4	FN056-VD_4M.V7P2	← V	258
				FN056-VD_6K.V7P3	← V	260
				FN056-VD_6N.V7P6	← V	262
	60 Hz	3~ 400/460V	4-4	FN056-VD_4M.V7P2	← V	258
				FN056-VD_6K.V7P3	← V	260
				FN056-VD_6N.V7P6	← V	262
630	50 Hz	3~ 400V	4-4	FN063-VD_6N.V7P6	← V	264
				FN063-VD_6N.V7P7	← V	266
	60 Hz	3~ 400/460V	4-4	FN063-VD_6N.V7P6	← V	264
710	50 Hz	3~ 400V	4-4	FN071-VD_7Q.V7P5	← V	268
	60 Hz	3~ 400/460V	4-4	FN071-VD_7Q.V7P5	← V	268
800	50 Hz	3~ 400V	4-4	FN080-VD_7Q.V5P7	← V	270





Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet

# FE2owlet

for three phase alternating current, 4-4 pole

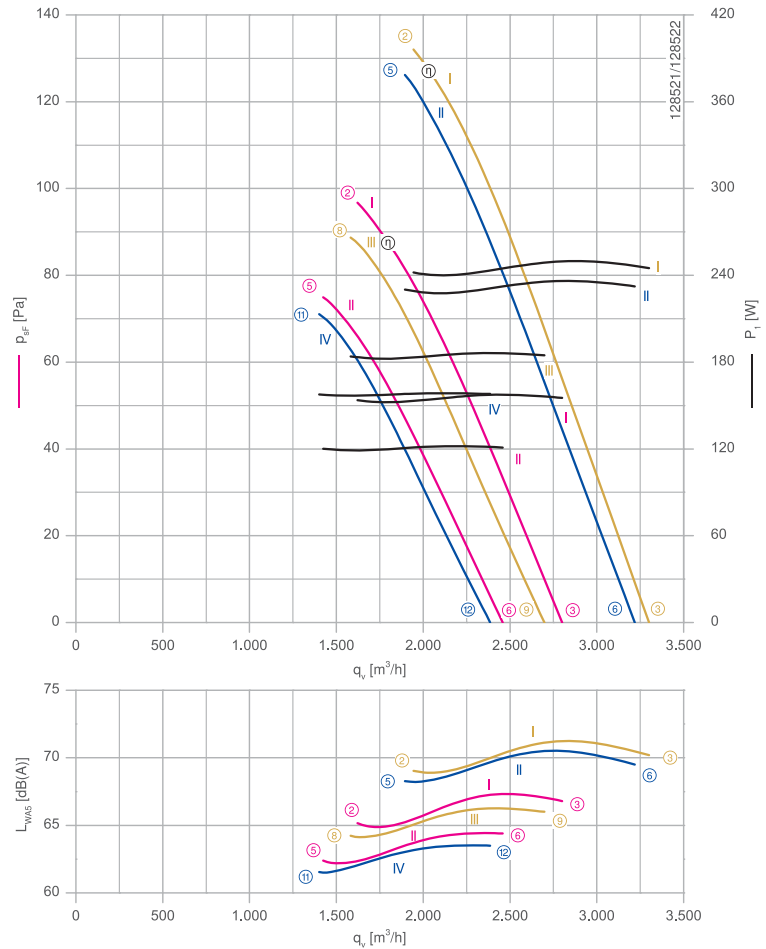
FNO31-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 160/120 W | 240/150 W | 250/180 W\*  
 Rated current  $I_N$ :  
 0.39/0.21 A | 0.46/0.29 A | 0.46/0.29 A\*  
 Rated speed  $n_N$ :  
 1400/1200 min<sup>-1</sup> | 1600/1150 min<sup>-1</sup> | 1650/1300 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 0 % | 10 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

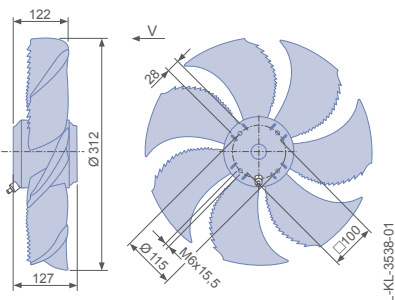
Connection diagram

Page 327  
1360-108XA

## Dimensions mm

Airflow direction V

Design A - without mounting





Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN031-4D_4C_7P3	Δ	I	400*	50	②	0.38*	150*	1420*	65	
			400			③	0.38	160	1420	67
			400*			⑤	0.21*	120*	1250*	62
	400	⑥	0.21		120		1250	64		
	Δ	I	460*		60	②	0.44*	240*	1670*	69
			460				③	0.44	250	1670
			400*	⑤			0.44*	230*	1630*	68
	400	⑥	0.44			230	1620	70		
	Y	III	460*	60		⑧	0.29*	180*	1370*	64
			460				⑨	0.29	180	1360
			400*		⑪		0.29*	160*	1210*	62
	400	⑫	0.29			160	1210	64		

\*rated data

Fan ordering information

**Airflow direction V**

Design A

Installation position H/Vu



Type **FN031-VDA.4C.V7P3**  
Article no. **175765**

Weight kg 6.50

- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

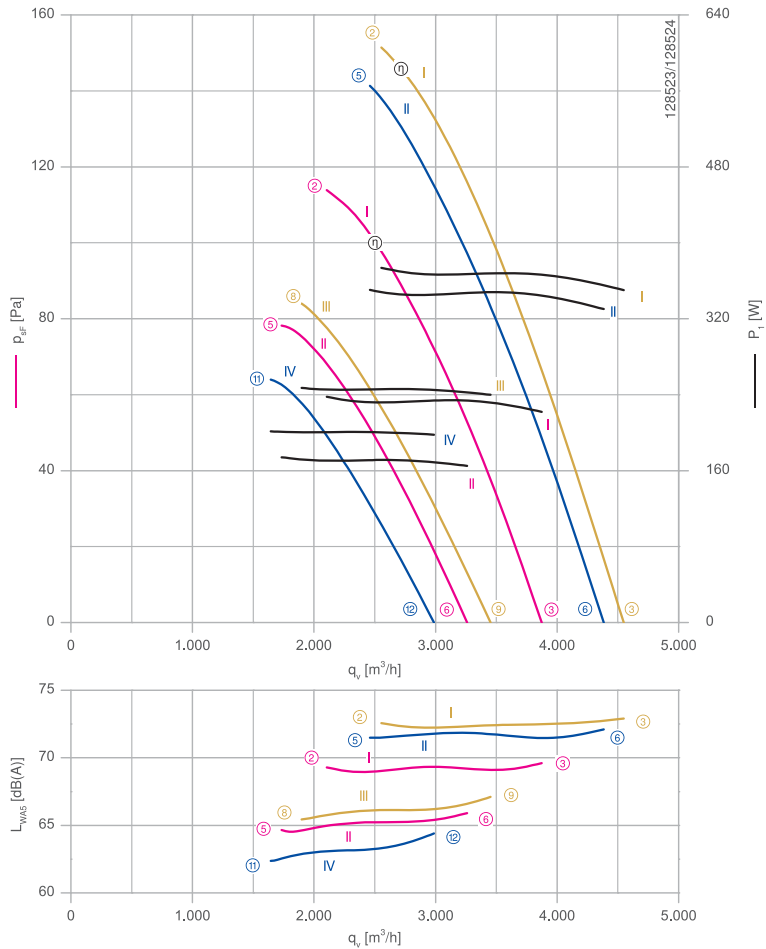
FN035-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 240/170 W | 360/200 W | 380/250 W\*  
 Rated current  $I_N$ :  
 0.55/0.31 A | 0.66/0.39 A | 0.66/0.40 A\*  
 Rated speed  $n_N$ :  
 1380/1150 min<sup>-1</sup> | 1540/1040 min<sup>-1</sup> | 1600/1190 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 0 % | 5 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

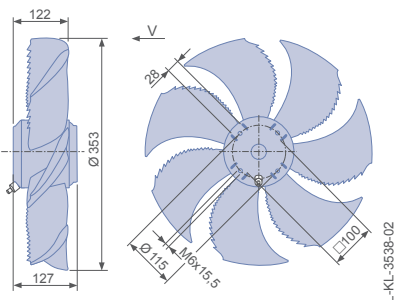
Connection diagram

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1360-108XA

## Dimensions mm



Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN035-4D_4C_7P4	Δ	I	400*	50	②	0.54*	240*	1380*	69	
			400			③	0.52	220	1390	70
			400			⑤	0.31*	170*	1140*	65
	Y	II	400		⑥	0.29	170	1170	66	
			460*		60	②	0.64*	370*	1610*	73
						③	0.60	350	1620	73
	II	400	⑤	0.64*	350*	1540*	72			
		400	⑥	0.62	330	1570	72			
	Y	III	460*	60	⑧	0.40*	250*	1190*	66	
			460		⑨	0.38	240	1240	67	
			400*		⑪	0.38*	200*	1040*	62	
	IV	400	⑫		0.37	200	1080	64		

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN035-VDA.4C.V7P4</b>
<b>Article no.</b>	<b>175766</b>
Weight kg	6.80

- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

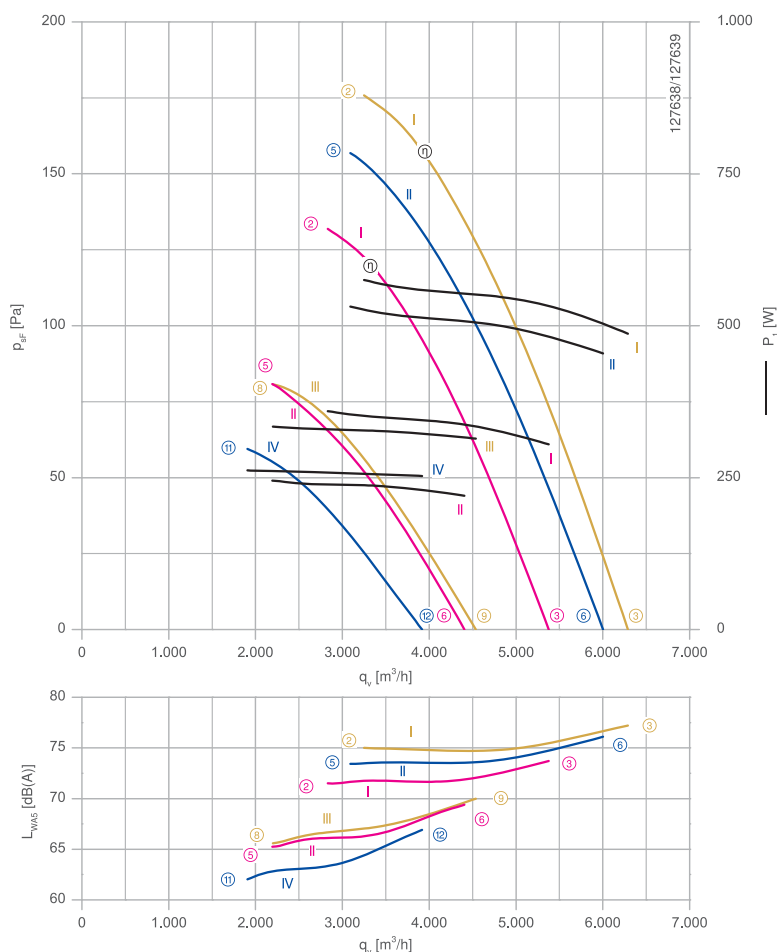
FNO40-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 0.36/0.24 kW | 0.52/0.26 kW | 0.58/0.33 kW\*  
 Rated current  $I_N$ :  
 0.78/0.44 A | 0.96/0.50 A | 0.96/0.54 A\*  
 Rated speed  $n_N$ :  
 1350/1050  $\text{min}^{-1}$  | 1470/910  $\text{min}^{-1}$  | 1550/1070  $\text{min}^{-1}$ \*  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(\text{min})}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(\text{max})}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

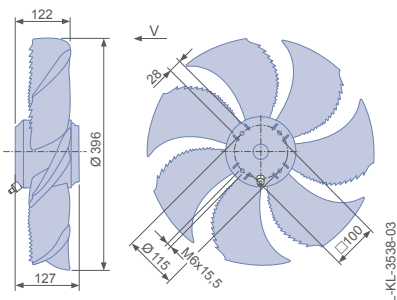
Connection diagram

Page 327  
1360-108XA

## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN040-VD_4C_7P3	Δ	I	400*	50	②	0.78*	360*	1350*	71	
			400			0.72	300	1380	74	
			400*			0.44*	240*	1050*	66	
	Y	II	400		60	⑥	0.39	220	1130	69
			460*				0.94*	580*	1550*	75
			460				0.82	480	1610	77
	Δ	I	400*	60	②	0.96*	540*	1460*	74	
			400			0.84	460	1540	76	
			460*			0.54*	330*	1050*	66	
	Y	III	460		60	⑥	0.50	310	1170	70
			460*				0.50*	260*	910*	62
			400*				0.48	250	1010	67
Y	IV	400*	60	⑫		0.48	250	1010	67	
		400				0.48	250	1010	67	
		400				0.48	250	1010	67	

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN040-VDA.4C.V7P3</b>
<b>Article no.</b>	<b>175767</b>
Weight kg	7.20

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

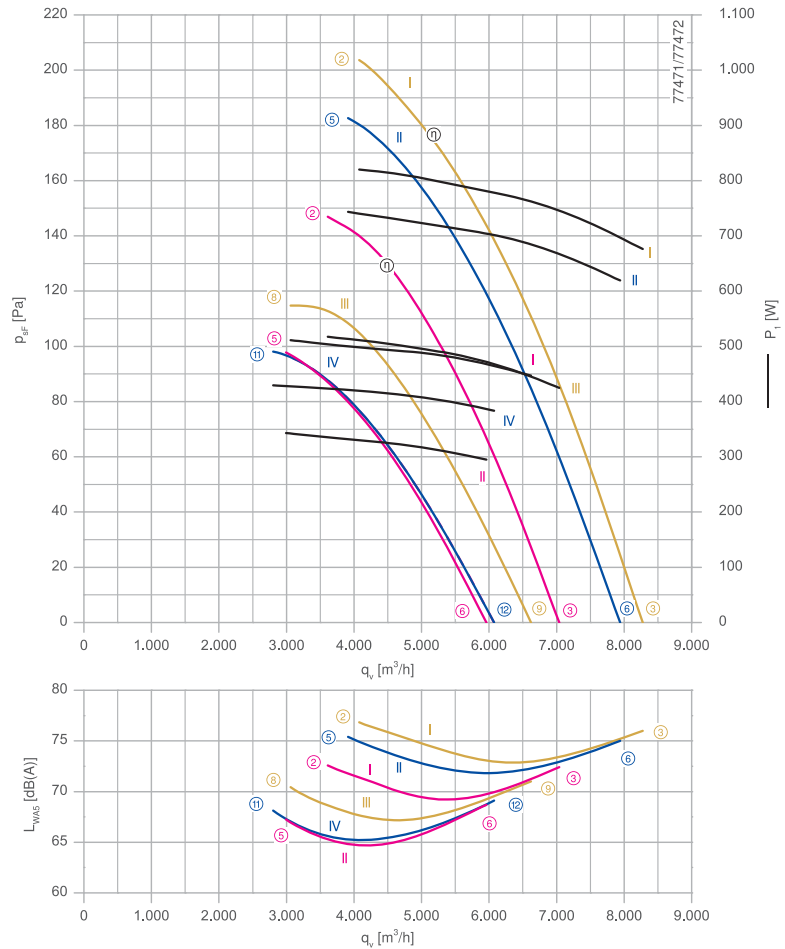
FNO45-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 0.52/0.34 kW | 0.75/0.43 kW | 0.82/0.51 kW\*  
 Rated current  $I_N$ :  
 1.20/0.60 A | 1.35/0.72 A | 1.40/0.75 A\*  
 Rated speed  $n_N$ :  
 1320/1070  $\text{min}^{-1}$  | 1450/1060  $\text{min}^{-1}$  | 1520/1160  $\text{min}^{-1}$ \*  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(\text{min})}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(\text{max})}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

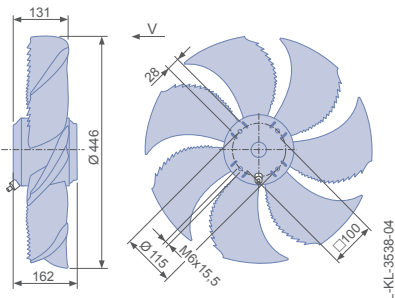
Connection diagram

Page 327  
1360-108XA

## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN045-VD_4I_7P1	Δ	I	400*	50	②	1.20*	520*	1310*	73	
			400			③	1.10	420	1360	72
			400*			⑤	0.60*	340*	1070*	68
	Y	II	400		⑥	0.52	300	1150	69	
			460*		60	②	1.40*	820*	1520*	77
						③	1.25	680	1590	76
	II	⑤	1.35*	740*	1450*	76				
		⑥	1.20	620	1520	75				
	Y	III	460*	⑧	0.74*	500*	1170*	71		
			460	⑨	0.66	440	1270	71		
			400*	⑪	0.72*	420*	1060*	68		
	IV	⑫	0.64	380	1170	69				

\*rated data

Fan ordering information

**Airflow direction V**

Design A

Installation position H/Vu



**Type** FN045-VDA.4I.V7P1  
**Article no.** 175771

Weight kg 10.70

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

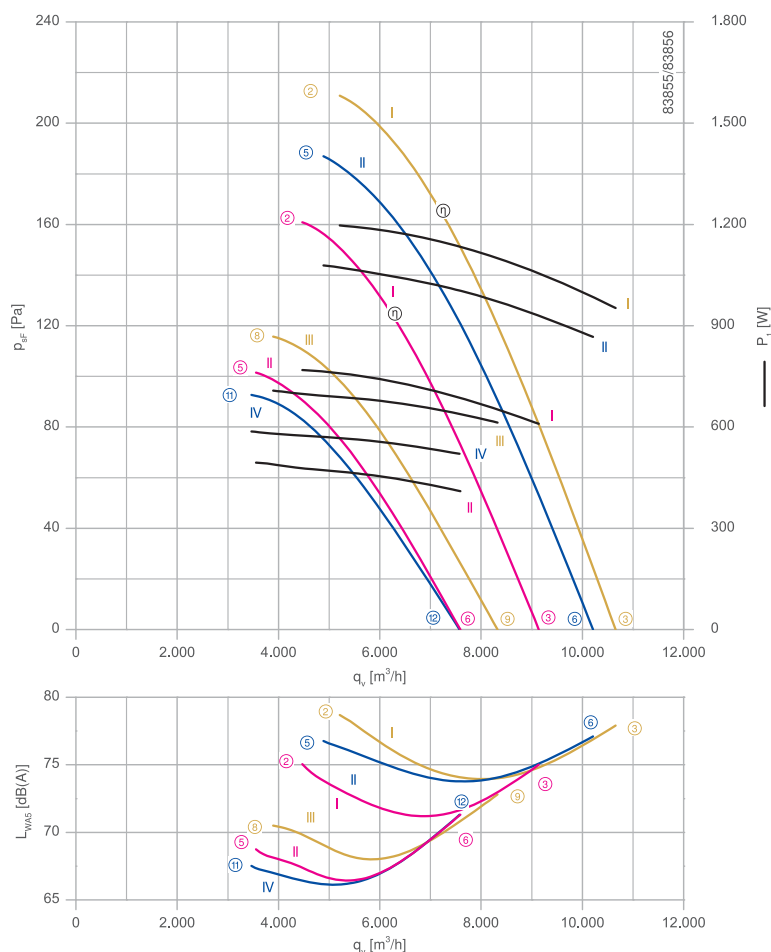
FN050-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 0.77/0.49 kW | 1.10/0.60 kW | 1.20/0.70 kW\*  
 Rated current  $I_N$ :  
 1.70/0.84 A | 1.90/1.00 A | 2.00/1.05 A\*  
 Rated speed  $n_N$ :  
 1300/1025  $\text{min}^{-1}$  | 1400/980  $\text{min}^{-1}$  | 1480/1100  $\text{min}^{-1}$ \*  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(\text{min})}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(\text{max})}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

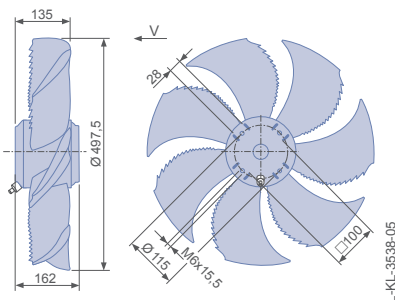
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting





Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN050-VD_4I_7P1	Δ	I	400*	50	②	1.70*	760*	1290*	75	
			400			③	1.55	600	1340	75
		Y	II		400*	⑤	0.84*	480*	1030*	69
	400				⑥	0.72	420	1130	71	
	Δ	I	460*		60	②	2.00*	1200*	1480*	79
			460				③	1.70	960	1570
		II	400*	⑤		1.90*	1100*	1400*	77	
	400		⑥	1.60		860	1500	77		
	Y	III	460*			⑧	1.05*	700*	1100*	71
			460				⑨	0.90	620	1230
		IV	400*		⑪	0.98*	580*	990*	68	
	400		⑫		0.88	520	1120	71		

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN050-VDA.4I.V7P1</b>
<b>Article no.</b>	<b>175772</b>
Weight kg	11.20

- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN056-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.05/0.58 kW | 1.35/0.58 kW | 1.55/0.72 kW\*  
 Rated current  $I_N$ :  
 2.20/1.10 A | 2.60/1.15 A | 2.70/1.25 A\*  
 Rated speed  $n_N$ :  
 1280/910 min<sup>-1</sup> | 1320/830 min<sup>-1</sup> | 1430/950 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 6.50/1.90 A | 5.50/1.60 A | 7.00/1.90 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 55 °C | 55 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

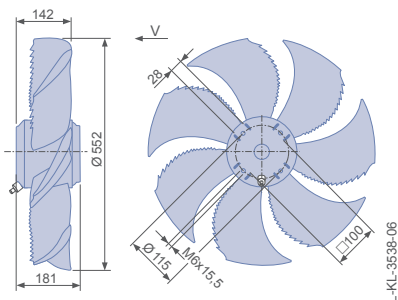
Connection diagram

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1360-108XA

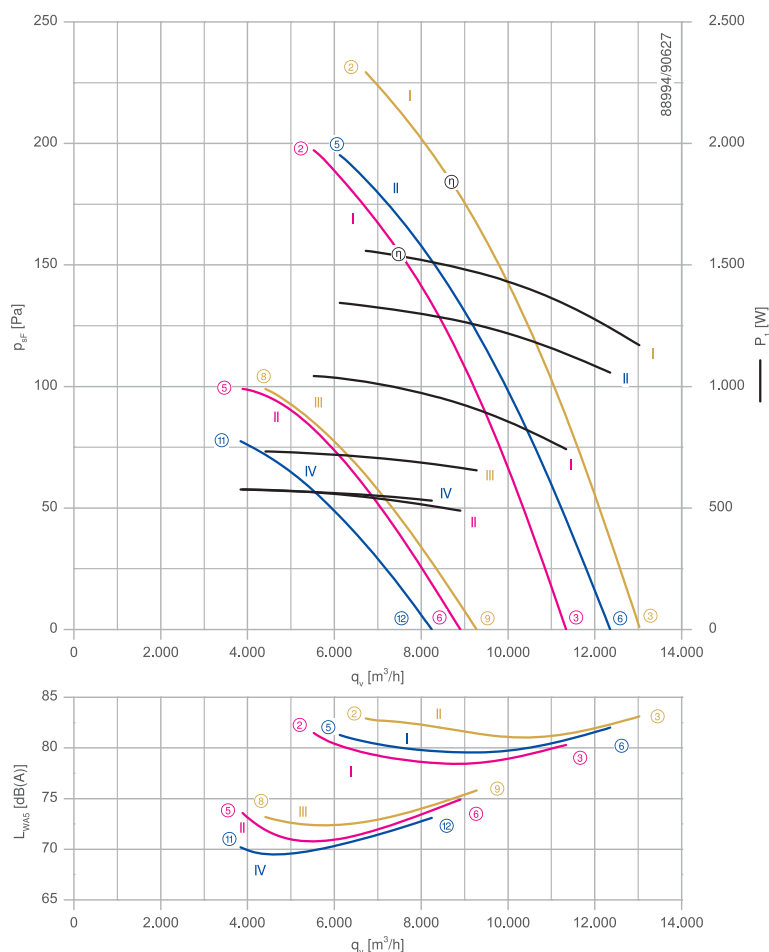
## Dimensions mm

Airflow direction V

Design A - without mounting



## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)		
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>			
FN056-VD_4M_7P2	Δ	I	400*	50	②	2.20*	1050*	1280*	82		
			400			③	1.75	740	1370	80	
			400			⑤	1.10*	580*	910*	73	
	Y	II	400		⑥	0.94	480	1080	75		
			460*		60	②	2.70*	1550*	1420*	83	
			460			③	2.10	1150	1570	83	
	400	⑤	2.70*	1350*		1310*	81				
	400	⑥	2.10	1050		1490	82				
	Δ	I	460*	60		②	2.70*	1550*	1420*	83	
			460				③	2.10	1150	1570	83
			400		⑤		2.70*	1350*	1310*	81	
	Y	III	460*		60	⑥	1.25*	740*	940*	73	
460			⑨				1.10	660	1120	76	
400			⑪				1.15*	580*	820*	70	
Y	IV	400	60			⑫	1.05	540	1000	73	
		400					⑫	1.05	540	1000	73
		400					⑫	1.05	540	1000	73

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN056-VDA.4M.V7P2</b>
<b>Article no.</b>	<b>175774</b>
Weight kg	12.60

- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN056-VD



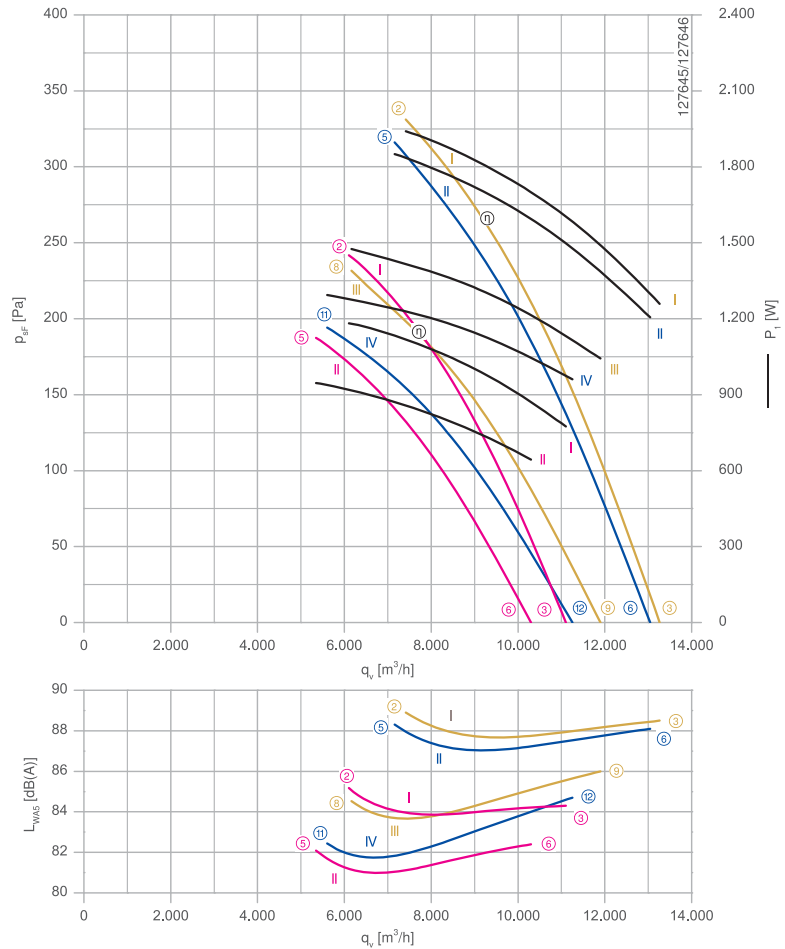
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.20/0.96 kW | 1.85/1.30 kW | 1.95/1.50 kW\*  
 Rated current  $I_N$ :  
 2.40/1.55 A | 3.10/2.20 A | 3.00/2.10 A\*  
 Rated speed  $n_N$ :  
 1410/1240 min<sup>-1</sup> | 1620/1270 min<sup>-1</sup> | 1660/1390 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 15.00/4.80 A | 14.00/4.40 A | 16.00/5.00 A  
 Current increase  $\Delta I$ : 20 % | 20 % | 20 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

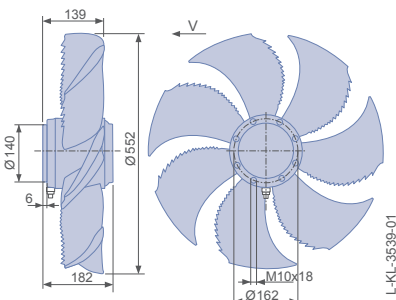
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)		
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>			
FN056-VD_6K_7P3	Δ	I	400*	50	②	2.40*	1200*	1410*	85		
			400			③	1.95	780	1450	84	
			400			⑤	1.55*	940*	1240*	82	
	Y	II	400		⑥	1.10	640	1340	82		
			460*			60	②	3.00*	1950*	1660*	89
			460					③	2.20	1250	1720
	400	⑤	3.10*	1850*	1620*			88			
	Δ	I	400	⑥	2.20		1200	1690	88		
			460*		⑧		2.10*	1500*	1390*	85	
			460				⑨	1.45	1050	1550	86
	Y	III	400*	⑩		2.10*	1300*	1270*	82		
			400		⑫	1.55	960	1470	85		
400											

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN056-VDA.6K.V7P3</b>
<b>Article no.</b>	<b>175775</b>
Weight kg	20.00

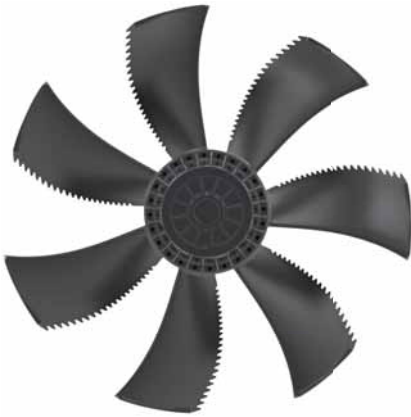
- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN056-VD



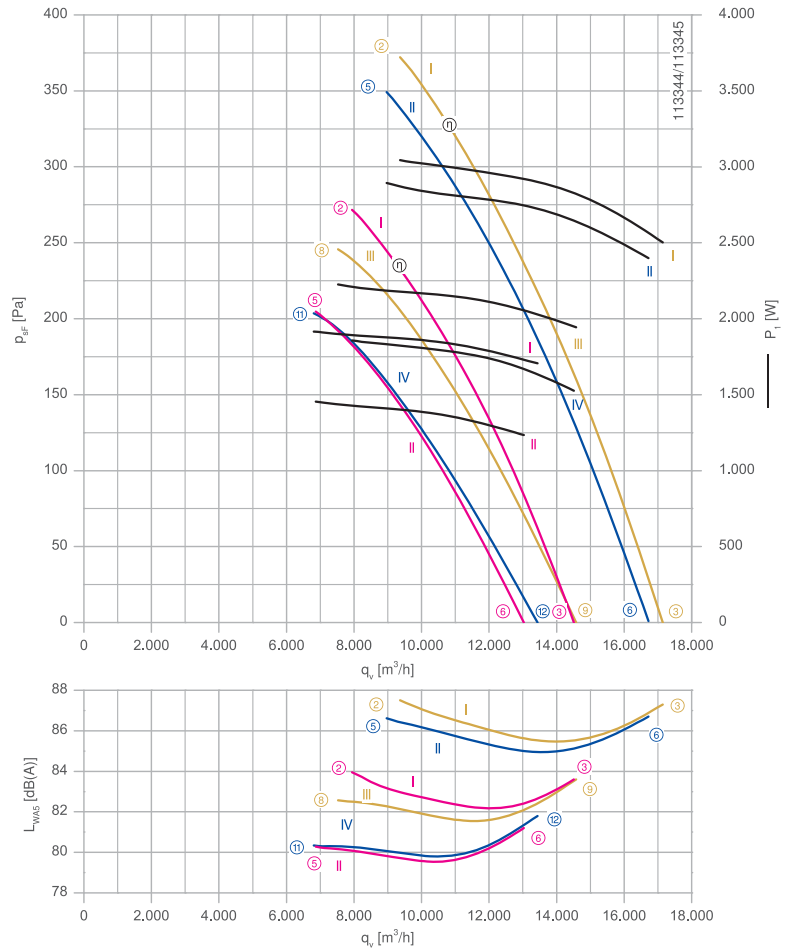
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.85/1.45 kW | 2.90/1.90 kW | 3.10/2.20 kW\*  
 Rated current  $I_N$ :  
 3.80/2.40 A | 4.80/3.20 A | 4.80/3.20 A\*  
 Rated speed  $n_N$ :  
 1400/1220 min<sup>-1</sup> | 1590/1220 min<sup>-1</sup> | 1640/1340 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 20.00/6.50 A | 19.00/6.00 A | 22.00/7.00 A  
 Current increase  $\Delta I$ : 10 % | 15 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 55 °C | 55 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

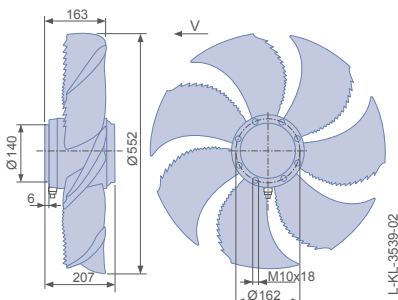
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FN056-VD_6N_7P6	Δ	I	400*	50	②	3.80*	1850*	1400*	84	
			400			③	3.40	1550		1420
			400*			⑤	2.40*	1450*		1220*
	Y	II	400		⑥	2.00	1250	1270	81	
			460*		60	②	4.80*	3100*	1640*	88
			460			③	4.00	2500	1680	87
	400*	⑤	5.00*	2900*		1590*	87			
	400	⑥	4.20	2400		1640	87			
	Δ	I	460	⑧		3.20	2200	1340	83	
			460	⑨		2.80	1950	1430	84	
			400	⑩	3.20	1900	1210	80		
	Y	IV	400	⑫	2.80	1700	1320	82		

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN056-VDA.6N.V7P6</b>
<b>Article no.</b>	<b>175776</b>
Weight kg	24.70

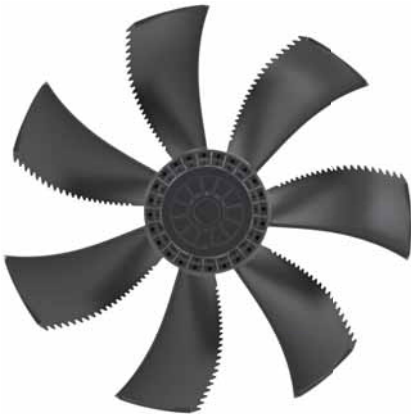
- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN063-VD



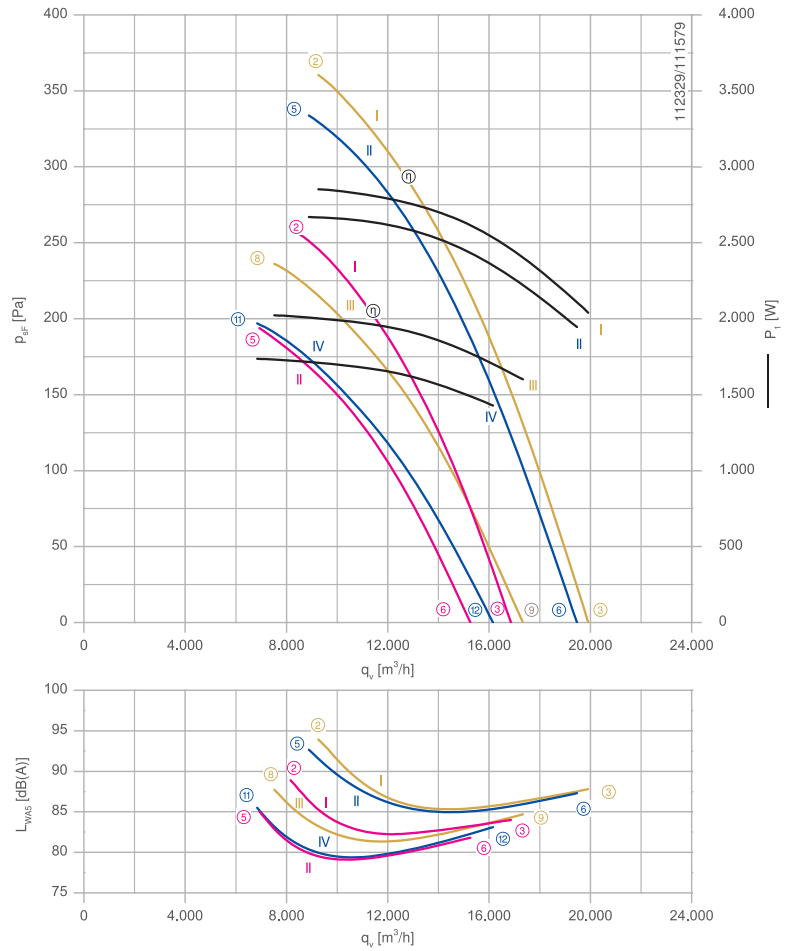
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.75/1.35 kW | 2.80/1.80 kW | 2.90/2.10 kW\*  
 Rated current  $I_N$ :  
 3.70/2.20 A | 4.80/3.00 A | 4.60/3.00 A\*  
 Rated speed  $n_N$ :  
 1400/1210 min<sup>-1</sup> | 1580/1210 min<sup>-1</sup> | 1640/1330 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 20.00/6.50 A | 19.00/6.00 A | 22.00/7.00 A  
 Current increase  $\Delta I$ : 5 % | 5 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

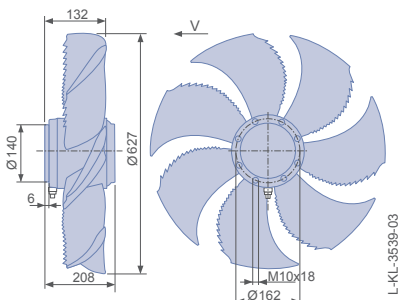
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting





Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)			
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>				
FN063-VD_6N_7P6	Δ	I	400*	50	②	3.70*	1750*	1400*	89			
			400			③	3.10	1250	1430	84		
			400			⑤	2.20*	1350*	1210*	85		
	Y	II	400		⑥	1.75	1000	1300	82			
			Δ		I	460*	60	②	4.60*	2900*	1640*	94
						460			③	3.60	2000	1690
	II	400*	⑤	4.60*	2700*	1590*		93				
		400	⑥	3.60	1950	1660		87				
	Y	III	460*	60	⑧	2.90*		2000*	1330*	88		
			460			⑨		2.30	1600	1470	85	
			400*			IV	⑪	2.90*	1750*	1220*	86	
	400	⑫	2.40		1450		1370	83				

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN063-VDA.6N.V7P6</b>
<b>Article no.</b>	<b>175777</b>
Weight kg	22.50

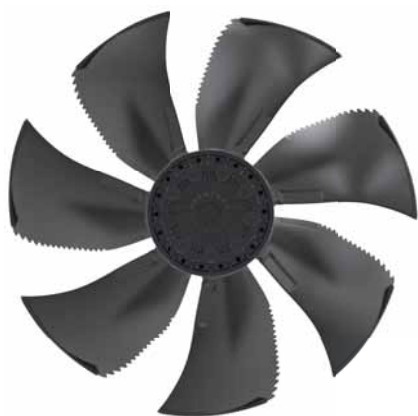
- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN063-VD



## Description

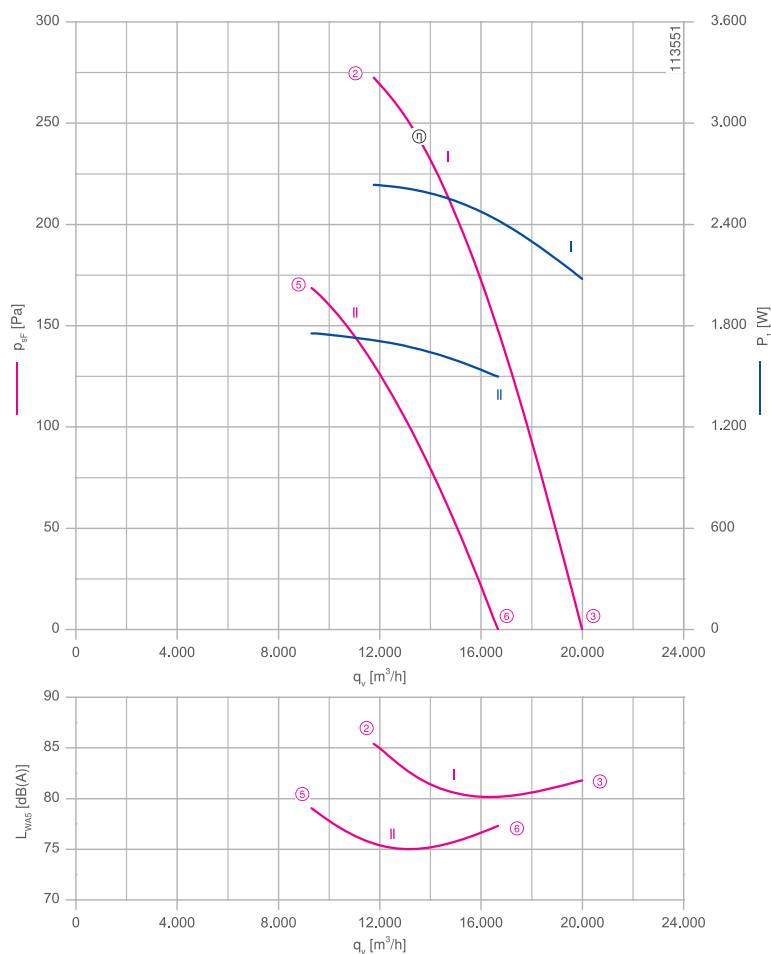
Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~ 400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**2.70/1.75 kW\***  
 Rated current  $I_N$ :  
**5.00/3.00 A\***  
 Rated speed  $n_N$ :  
**1330/1040 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **19.00/6.00 A**  
 Current increase  $\Delta I$ : **5 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**60 °C**

Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

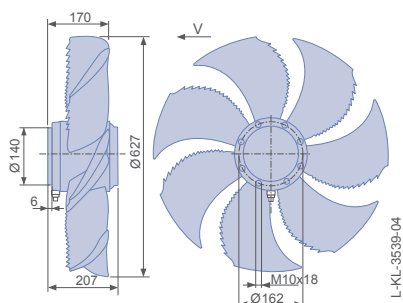
Connection diagram

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## Dimensions mm

← Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
			U V					
FN063-VD_6N_7P7	Δ	I	400	①	5.80	3300	1280	
			400*	②	5.00*	2600*	1330*	86
			400	③	4.20	2100	1380	82
	Y	II	400	④	3.30	2000	940	
			400*	⑤	3.00*	1750*	1050*	79
			400	⑥	2.50	1500	1140	77

\*rated data

Fan ordering information

**Airflow direction V**

Design A

Installation position H/Vu



**Type** FN063-VDA.6N.V7P7  
**Article no.** 175778

Weight kg 25.50

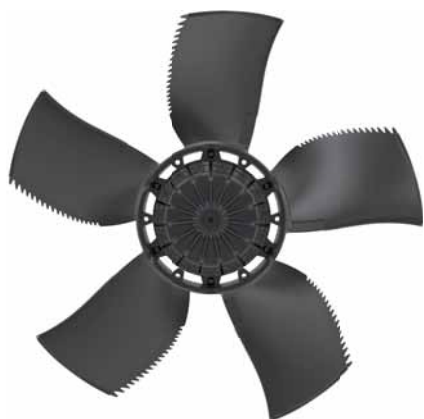
- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FNO7 1-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 2.90/2.20 kW | 4.40/2.80 kW | 4.60/3.20 kW\*  
 Rated current  $I_N$ :  
 5.40/3.50 A | 7.20/4.60 A | 7.00/4.60 A\*  
 Rated speed  $n_N$ :  
 1380/1190 min<sup>-1</sup> | 1570/1210 min<sup>-1</sup> | 1620/1320 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 32.00/10.00 A | 28.00/9.00 A | 34.00/10.00 A  
 Current increase  $\Delta I$ : 15 % | 10 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 50 °C | 50 °C  
 Electrical connection: Supply cable axial 105 cm  
 Number of blades: 5  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

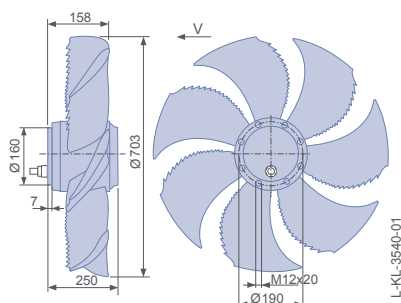
Connection diagram

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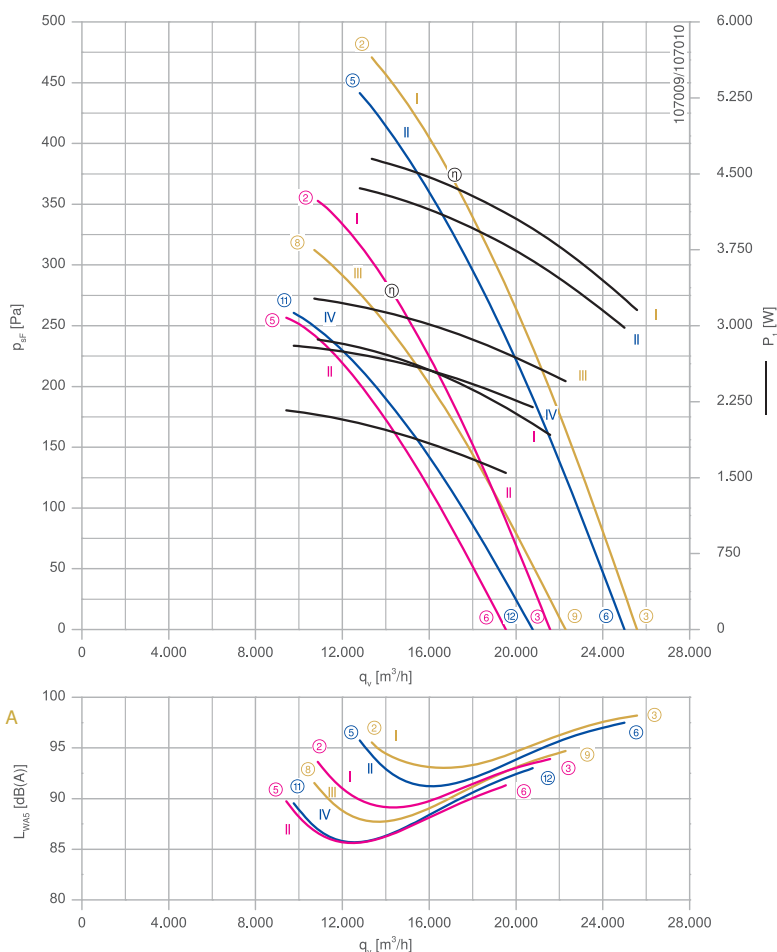
## Dimensions mm

Airflow direction V

Design A - without mounting



## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)			
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>				
FN071-VD_7Q_5P5	Δ	I	400*	50	②	5.40*	2900*	1380*	94			
			400			③	4.20	1900		1430		
			400*			⑤	3.50*	2200*		1190*		
	Y	II	400		⑥	2.60	1550	1290	91			
			Δ		I	460*	60	②	7.00*	4600*	1620*	96
						460		③	5.20	3200	1690	98
	II	⑤	7.20*	4400*	1560*	96						
		⑥	5.20	3000	1650	98						
	Y	III	460	⑧	4.60	3300		1310	92			
			460	⑨	3.40	2500		1470	95			
			400	⑩	4.60	2800	1200	90				
			IV	400	⑫	3.50	2200	1380	93			

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FN071-VDA.7Q.V5P5</b>
<b>Article no.</b>	<b>175780</b>
Weight kg	40.50

Information

ZArail

Cpro-ECblue

C-ECblue

C series

N series

M series

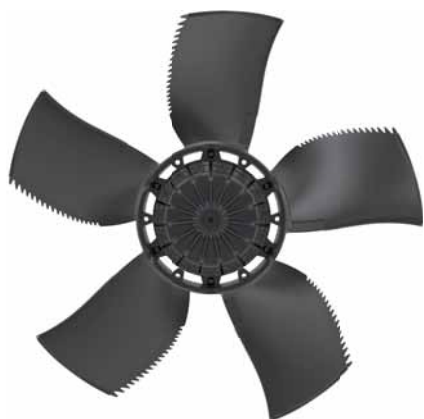
FE2owlet



# FE2owlet

for three phase alternating current, 4-4 pole

FN080-VD



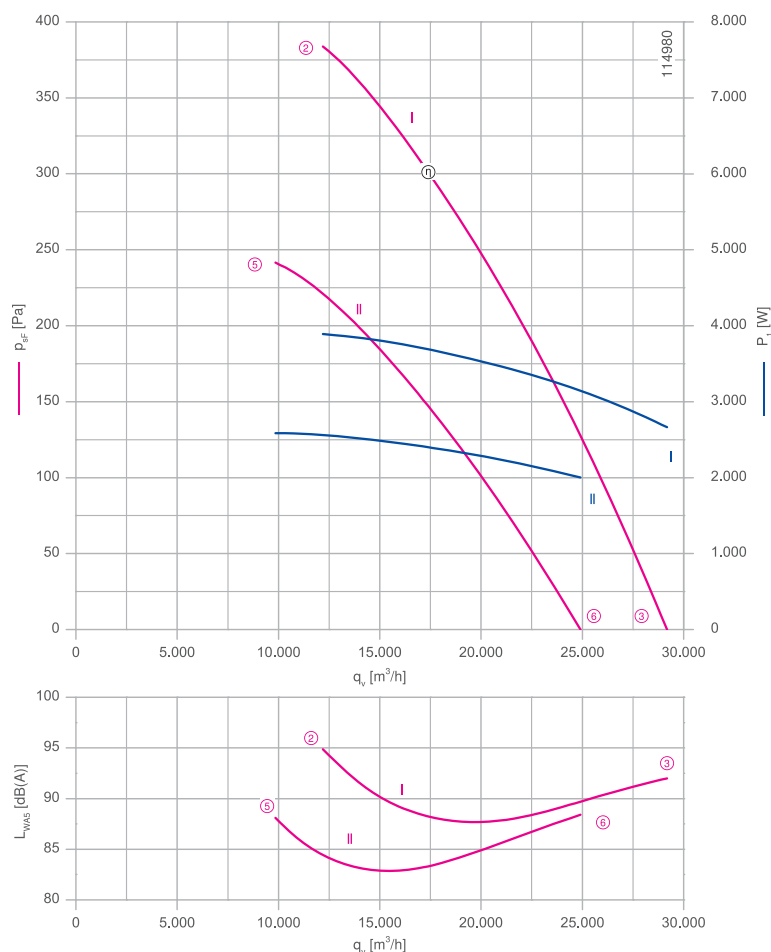
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~ 400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**3.90/2.60 kW\***  
 Rated current  $I_N$ :  
**6.80/4.20 A\***  
 Rated speed  $n_N$ :  
**1310/1050 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **32.00/10.00 A**  
 Current increase  $\Delta I$ : **5 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**70 °C**

Electrical connection: Supply cable axial 105 cm  
 Number of blades: 5  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE \* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

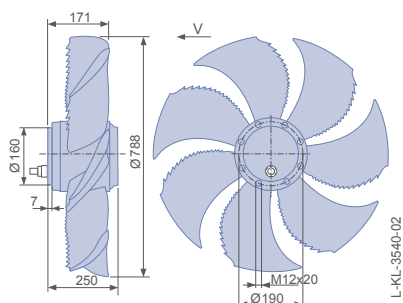
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



### Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
			U V					
FN080-VD_7Q_5P7	Δ	I	400*	②	6.80*	3900*	1310*	95
			400	③	5.20	2700	1380	92
	Y	II	400*	⑤	4.20*	2600*	1050*	88
			400	⑥	3.20	2000	1180	88

\*rated data

### Fan ordering information

**Airflow direction V**

Design A

Installation position H/Vu



**Type** FN080-VDA.7Q.V5P7  
**Article no.** 175781

Weight kg 41.00

- Information
- ZArail
- Cpro-ECblue
- C-ECblue
- C series
- N series
- M series
- FE2owlet







# FC

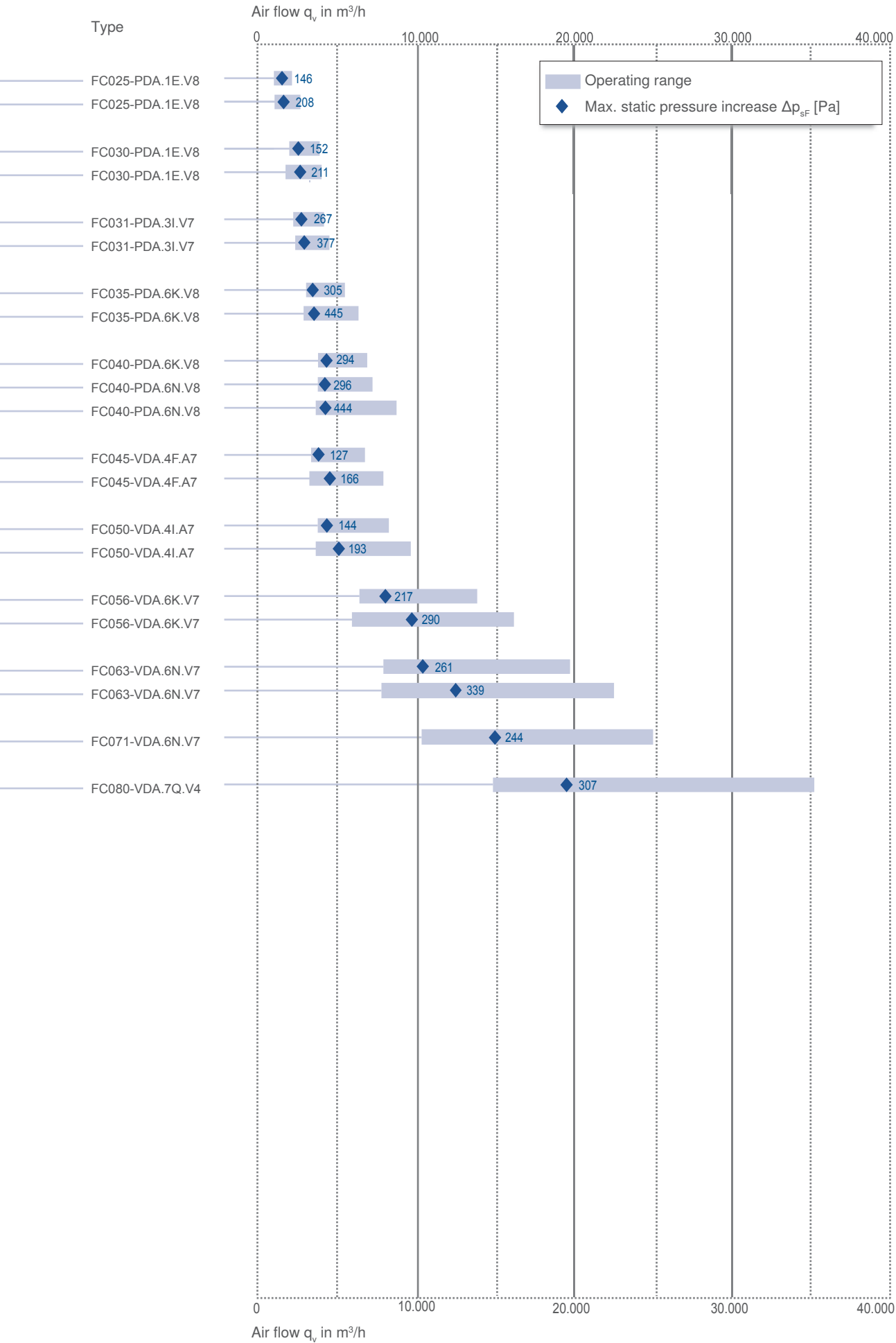
## AC technology

### Product overview

Quick selection	Page 274
Size 250	Page 276
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Size 350	Page 282
Size 400	Page 284
Size 450	Page 288
Size 500	Page 290
Size 560	Page 292
Size 630	Page 294
Size 710	Page 296
Size 800	Page 298

Size	Frequency	Voltage	Number of poles	Type	Airflow direction	Page
250	50 Hz	3~ 400V	2-2	FC025-PDA.1E.V8	← V	276
	60 Hz	3~ 400/460V	2-2	FC025-PDA.1E.V8	← V	276
300	50 Hz	3~ 400V	2-2	FC030-PDA.1E.V8	← V	278
	60 Hz	3~ 400/460V	2-2	FC030-PDA.1E.V8	← V	278
310	50 Hz	3~ 400V	2-2	FC031-PDA.3I.V7	← V	280
	60 Hz	3~ 400/460V	2-2	FC031-PDA.3I.V7	← V	280
350	50 Hz	3~ 400V	2-2	FC035-PDA.6K.V8	← V	282
	60 Hz	3~ 400/460V	2-2	FC035-PDA.6K.V8	← V	282
400	50 Hz	3~ 400V	2-2	FC040-PDA.6K.V8	← V	284
				FC040-PDA.6N.V8	← V	286
	60 Hz	3~ 400/460V	2-2	FC040-PDA.6N.V8	← V	286
450	50 Hz	3~ 400V	4-4	FC045-VDA.4F.A7	→ A	288
	60 Hz	3~ 400/460V	4-4	FC045-VDA.4F.A7	→ A	288
500	50 Hz	3~ 400V	4-4	FC050-VDA.4I.A7	→ A	290
	60 Hz	3~ 400/460V	4-4	FC050-VDA.4I.A7	→ A	290
560	50 Hz	3~ 400V	4-4	FC056-VDA.6K.V7	← V	292
	60 Hz	3~ 400/460V	4-4	FC056-VDA.6K.V7	← V	292
630	50 Hz	3~ 400V	4-4	FC063-VDA.6N.V7	← V	294
	60 Hz	3~ 400/460V	4-4	FC063-VDA.6N.V7	← V	294
710	50 Hz	3~ 400V	4-4	FC071-VDA.6N.V7	← V	296
800	50 Hz	3~ 400V	4-4	FC080-VDA.7Q.V4	← V	298





# FC

for three phase alternating current, 2-2 pole

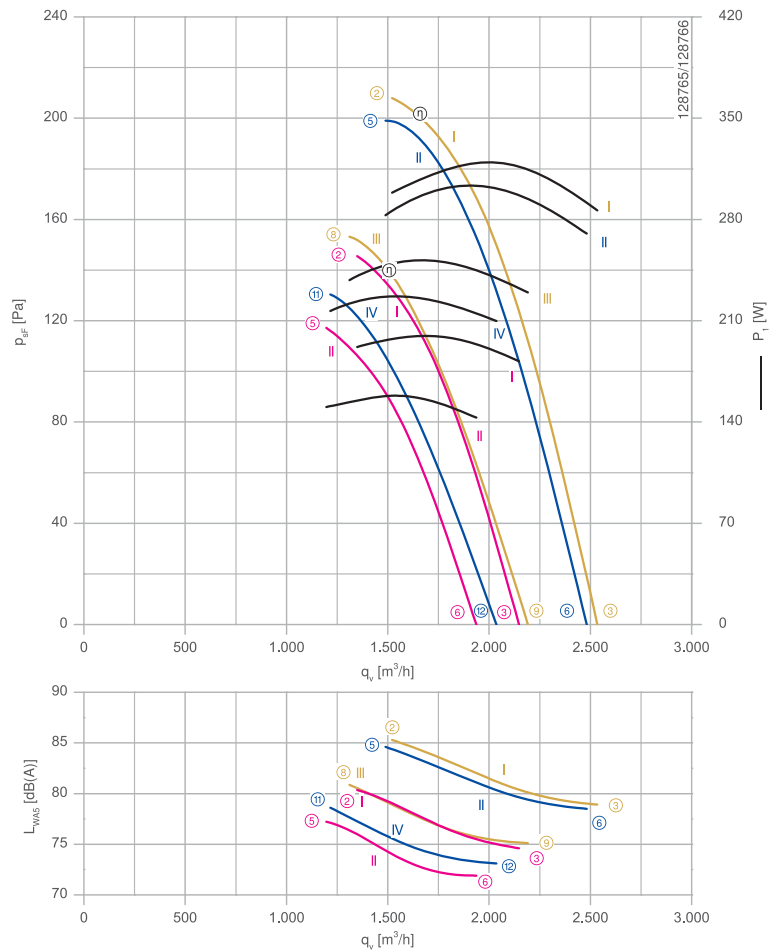
FC025-PD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 200/160 W | 310/230 W | 320/250 W\*  
 Rated current  $I_N$ :  
 0.46/0.25 A | 0.51/0.35 A | 0.52/0.34 A\*  
 Rated speed  $n_N$ :  
 2840/2530 min<sup>-1</sup> | 3270/2600 min<sup>-1</sup> | 3350/2830 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 2.40/0.80 A | 2.20/0.75 A | 2.60/0.85 A  
 Current increase  $\Delta I$ : 0 % | 20 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 8  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

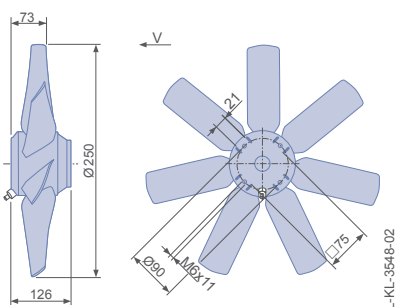
Connection diagram

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## Dimensions mm

← Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)		
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>			
FC025-PD_1E_8	Δ	I	400*	50	②	0.46*	190*	2850*	80		
			400			0.44	180	2860	75		
			400			0.24*	150*	2550*	77		
	Y	II	400		⑥	0.23	140	2590	72		
			460*			60	②	0.50*	300*	3370*	85
			460					0.48	290	3380	79
	400*	⑤	0.48*	280*	3300*			85			
	400		0.46	270	3310		79				
	460*		⑧	0.32*	240*		2890*	81			
	460	⑨		0.31	230		2930	75			
	400*			⑩	0.33*	220*	2670*	79			
	400		0.32		210	2720	73				

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC025-PDA.1E.V8</b>
<b>Article no.</b>	<b>175787</b>
Weight kg	4.00

# FC

for three phase alternating current, 2-2 pole

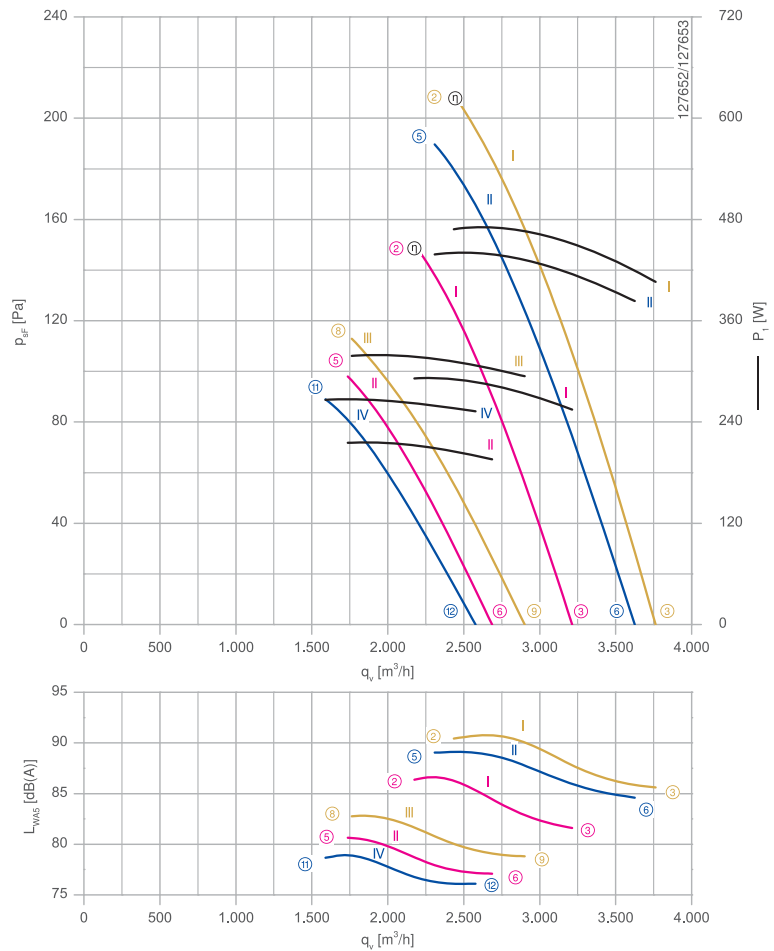
FC030-PD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 290/210 W | 440/270 W | 470/320 W\*  
 Rated current  $I_N$ :  
 0.53/0.33 A | 0.69/0.42 A | 0.67/0.43 A\*  
 Rated speed  $n_N$ :  
 2740/2220 min<sup>-1</sup> | 3010/2080 min<sup>-1</sup> | 3170/2340 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 2.40/0.80 A | 2.20/0.75 A | 2.60/0.85 A  
 Current increase  $\Delta I$ : 10 % | 5 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 8  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

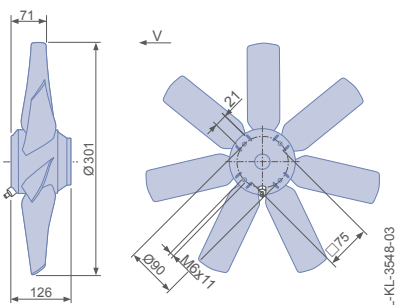
Connection diagram

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## Dimensions mm

← Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FC030-PD_1E_8	Δ	I	400*	50	②	0.52*	290*	2730*	86	
			400			0.48	250	2770	82	
			400*			0.33*	220*	2210*	81	
	Y	II	400		⑤	0.30	200	2320	77	
			460*			⑥	0.66*	460*	3170*	90
			460				0.58	400	3240	86
	Δ	I	400*	60	②	0.68*	440*	3020*	89	
			400			③	0.60	380	3120	85
			460*				⑥	0.42*	320*	2340*
	Y	III	460		③	0.39		290	2510	79
			400*			⑩		0.42*	270*	2080*
			400				⑫	0.39	250	2230

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC030-PDA.1E.V8</b>
<b>Article no.</b>	<b>175788</b>
Weight kg	4.10

# FC

for three phase alternating current, 2-2 pole

FC031-PD



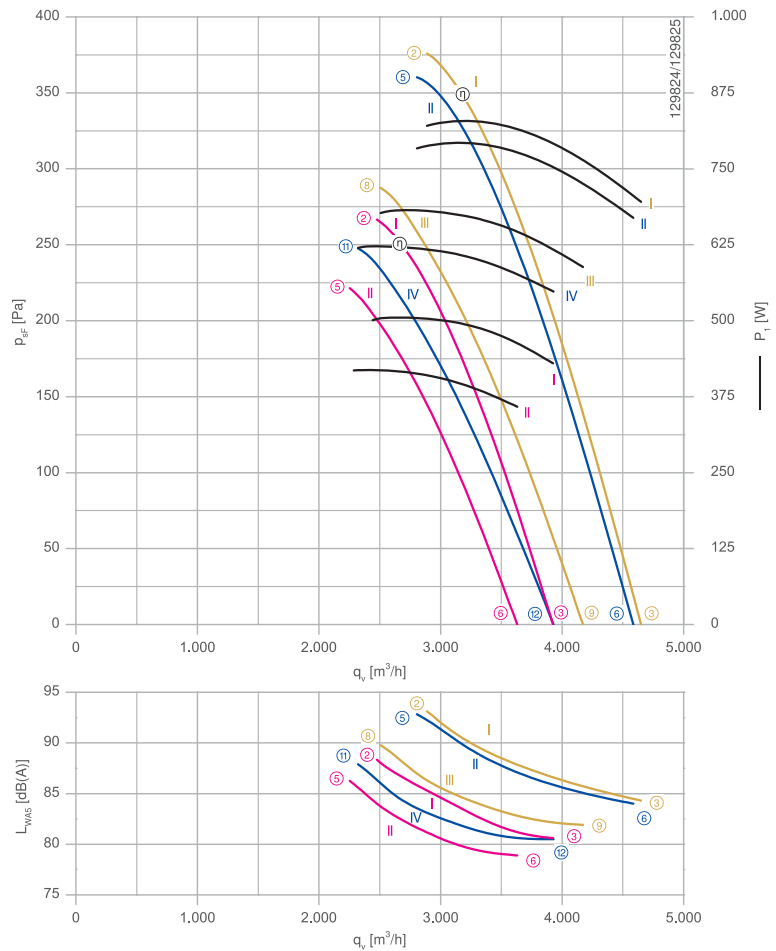
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 500/420 W | 800/620 W | 820/680 W\*  
 Rated current  $I_N$ :  
 1.10/0.66 A | 1.30/0.98 A | 1.30/0.92 A\*  
 Rated speed  $n_N$ :  
 2870/2610 min<sup>-1</sup> | 3320/2750 min<sup>-1</sup> | 3390/2960 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.00/2.40 A | 7.00/2.20 A | 8.00/2.60 A  
 Current increase  $\Delta I$ : 25 % | 30 % | 30 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

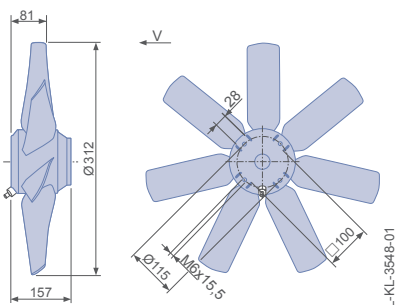
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting






Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FC031-PD_3I_7	Δ	I	400*	50	②	1.05*	500*	2870*	88	
			400			③	1.00	440	2900	81
	Y	II	400*		⑤	0.66*	420*	2620*	87	
			400			⑥	0.56	360	2680	79
	Δ	I	460*		60	②	1.25*	820*	3390*	93
			460				③	1.15	700	3430
		II	⑤	400*		1.30*	780*	3330*	93	
				400		⑥	1.10	660	3380	84
	Y	III	460*	⑧		0.92*	680*	2970*	90	
			460			⑨	0.80	580	3080	82
	IV	⑪	400*	0.96*		620*	2750*	88		
			400	⑫		0.86	540	2890	81	

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC031-PDA.3I.V7</b>
<b>Article no.</b>	<b>175790</b>
Weight kg	9.00

# FC

for three phase alternating current, 2-2 pole

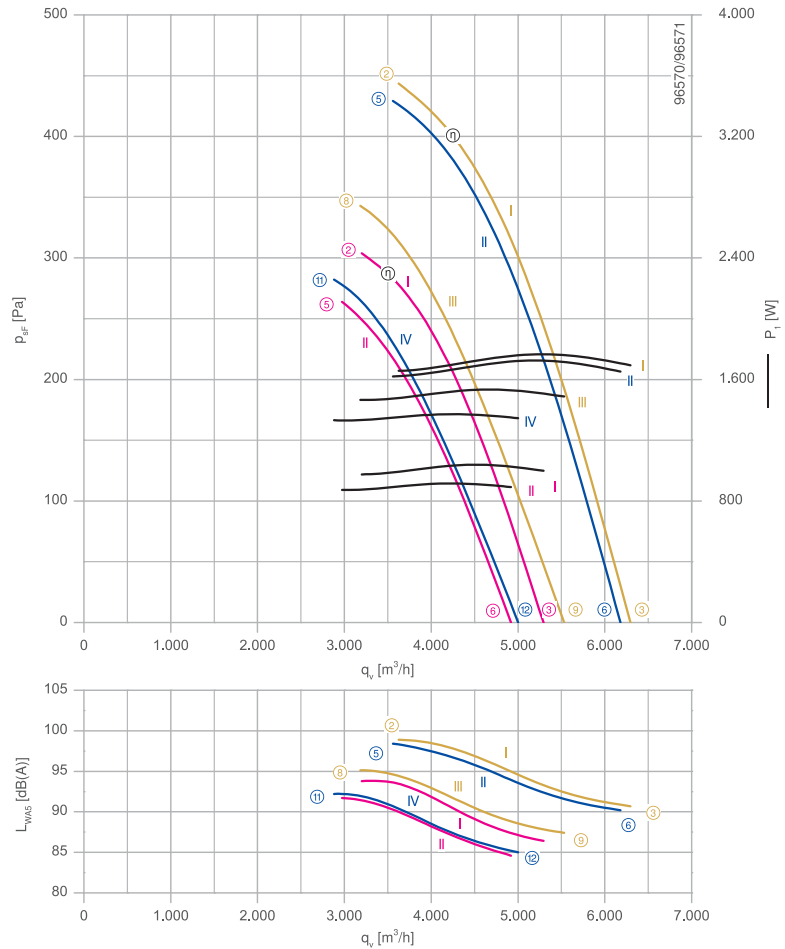
FC035-PD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.05/0.94 kW | 1.75/1.40 kW | 1.8/1.55 kW\*  
 Rated current  $I_N$ :  
 2.00/1.50 A | 2.80/2.40 A | 2.60/2.30 A\*  
 Rated speed  $n_N$ :  
 2900/2700 min<sup>-1</sup> | 3400/2770 min<sup>-1</sup> | 3470/3050 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 60 % | 50 % | 50 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 45 °C | 45 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 8  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

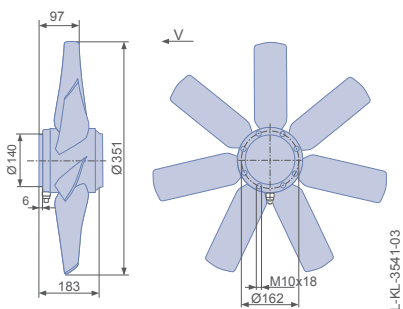
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FC035-PD_6K_8	Δ	I	400*	50	②	1.90*	980*	2900*	94	
			400		③	1.90	1000	2910	86	
			400*		⑤	1.40*	880*	2710*	92	
	Y	II	400		⑥	1.40	900	2700	85	
			460*		60	②	2.50*	1650*	3470*	99
			460			③	2.50	1700	3460	91
	400*	⑤	2.60*	1600*		3400*	98			
	400	⑥	2.70	1650		3400	90			
	Δ	I	460*	60		②	2.50*	1650*	3470*	99
			460			③	2.50	1700	3460	91
			400*		⑤	2.60*	1600*	3400*	98	
	Y	III	460*		⑥	2.70	1650	3400	90	
460			⑧		2.10*	1450*	3040*	95		
460			⑨		2.10	1500	3030	87		
Y	IV	400*	⑩		2.30*	1350*	2770*	92		
		400	⑪		2.30*	1350*	2770*	92		
		400	⑫		2.30	1350	2750	85		

\*rated data

Fan ordering information

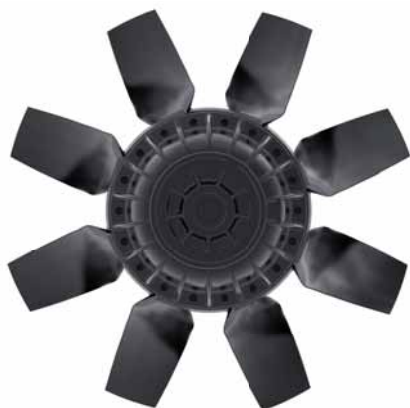
← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC035-PDA.6K.V8</b>
<b>Article no.</b>	<b>175791</b>
Weight kg	16.80

# FC

for three phase alternating current, 2-2 pole

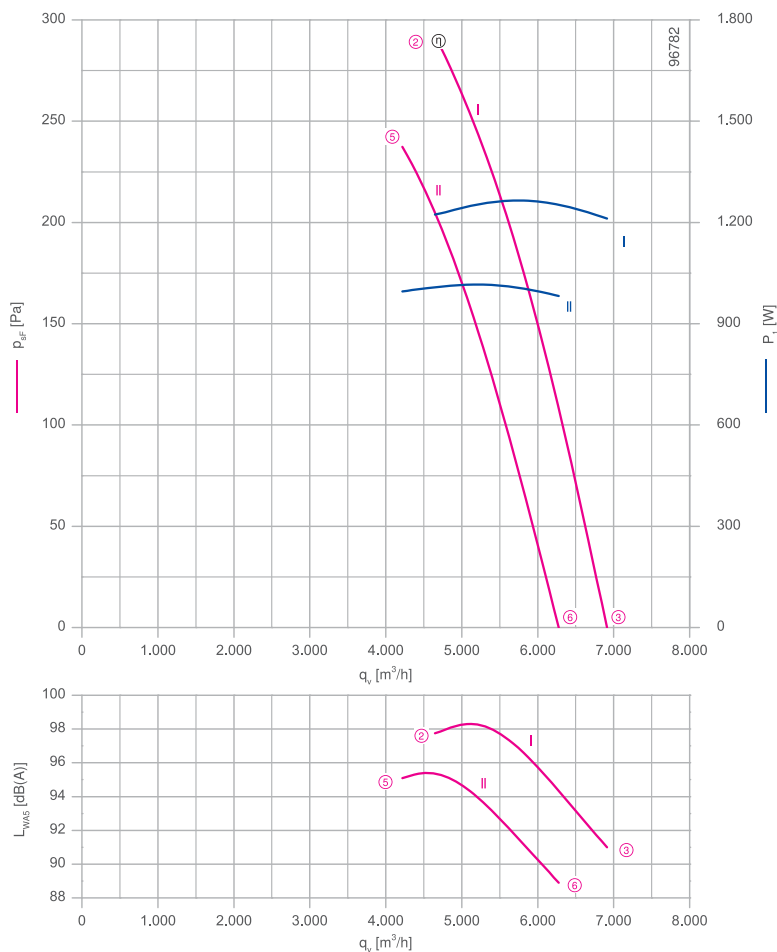
FC040-PD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~ 400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**1.30/1.05 kW\***  
 Rated current  $I_N$ :  
**2.70/1.65 A\***  
 Rated speed  $n_N$ :  
**2850/2570 min<sup>-1</sup>\***  
 Current increase  $\Delta I$ : **20 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**70 °C**  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 8  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

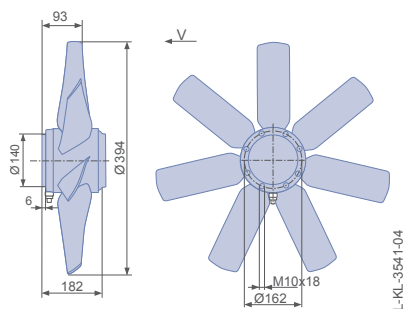
Connection diagram

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## Dimensions mm

← Airflow direction V

Design A - without mounting



### Performance data

Type	Connection	Characteristic curve	Voltage U V	Operating point	Current I A	Input power P <sub>1</sub> W	Speed n min <sup>-1</sup>	Suction side sound power level L <sub>WA5</sub> dB(A)
FC040-PD_6K_8	Δ	I	400*	②	2.60*	1200*	2870*	98
			400	③	2.60	1200	2860	91
	Y	II	400*	⑤	1.60*	1000*	2600*	95
			400	⑥	1.60	980	2600	89

\*rated data

### Fan ordering information

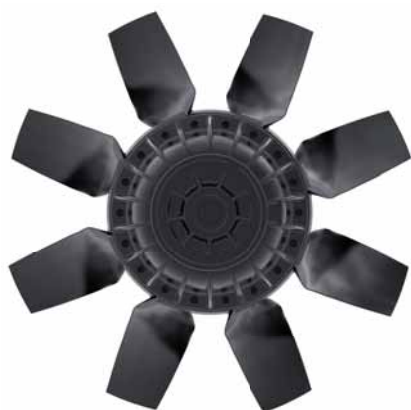
← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC040-PDA.6K.V8</b>
<b>Article no.</b>	<b>175792</b>
Weight kg	17.90

# FC

for three phase alternating current, 2-2 pole

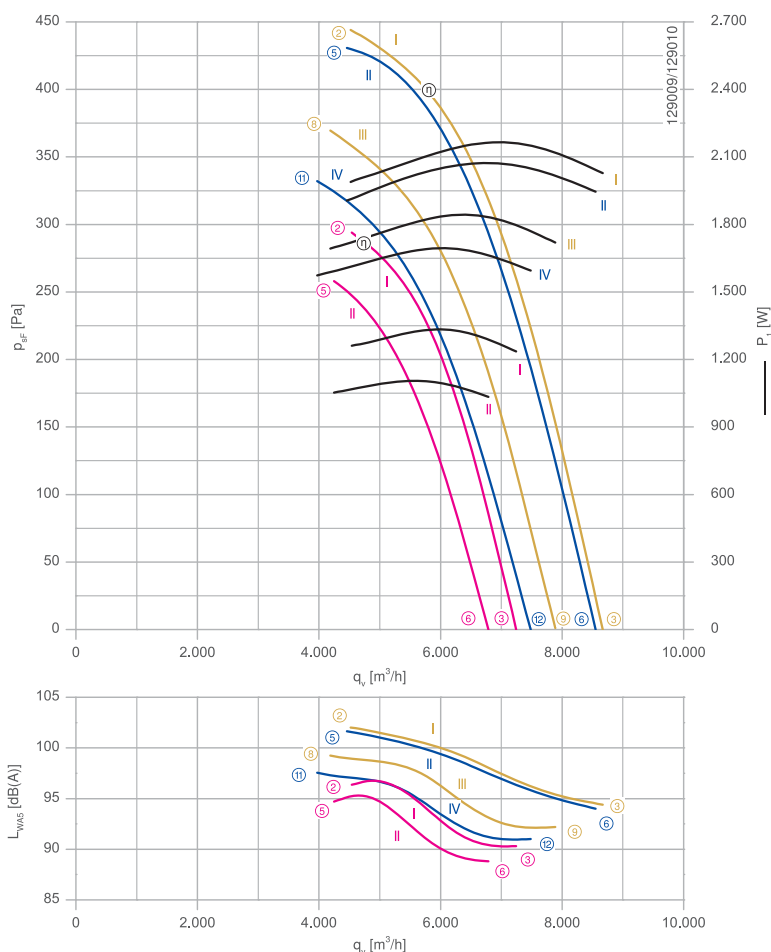
FC040-PD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.35/1.1 kW | 2.10/1.70 kW | 2.20/1.85 kW\*  
 Rated current  $I_N$ :  
 2.90/1.75 A | 3.50/2.70 A | 3.40/2.50 A\*  
 Rated speed  $n_N$ :  
 2900/2710 min<sup>-1</sup> | 3400/2940 min<sup>-1</sup> | 3450/3110 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 25 % | 40 % | 45 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 8  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

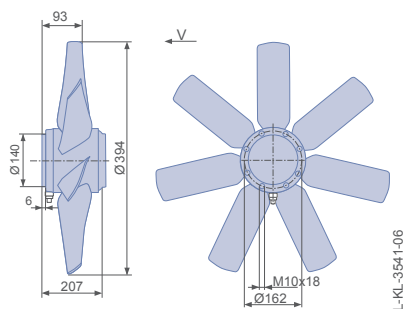
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)
			U V		I A	$P_1$ W	n min <sup>-1</sup>	
FC040-PD_6N_8	Δ	I	400*	②	2.80*	1250*	2900*	96
			400	③	2.80	1250	2910	90
	Y	II	400*	⑤	1.65*	1050*	2730*	95
			400	⑥	1.60	1050	2730	89
	Δ	I	460*	②	3.20*	2000*	3470*	102
			460	③	3.20	2000	3470	94
		II	400*	⑤	3.20*	1900*	3430*	102
			400	⑥	3.20	1950	3420	94
	Y	III	460*	⑧	2.30*	1700*	3170*	99
			460	⑨	2.30	1700	3160	92
	IV	IV	400*	⑪	2.50*	1550*	3010*	98
			400	⑫	2.50	1600	3000	91

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC040-PDA.6N.V8</b>
<b>Article no.</b>	<b>175793</b>
Weight kg	22.00

# FC

for three phase alternating current, 4-4 pole

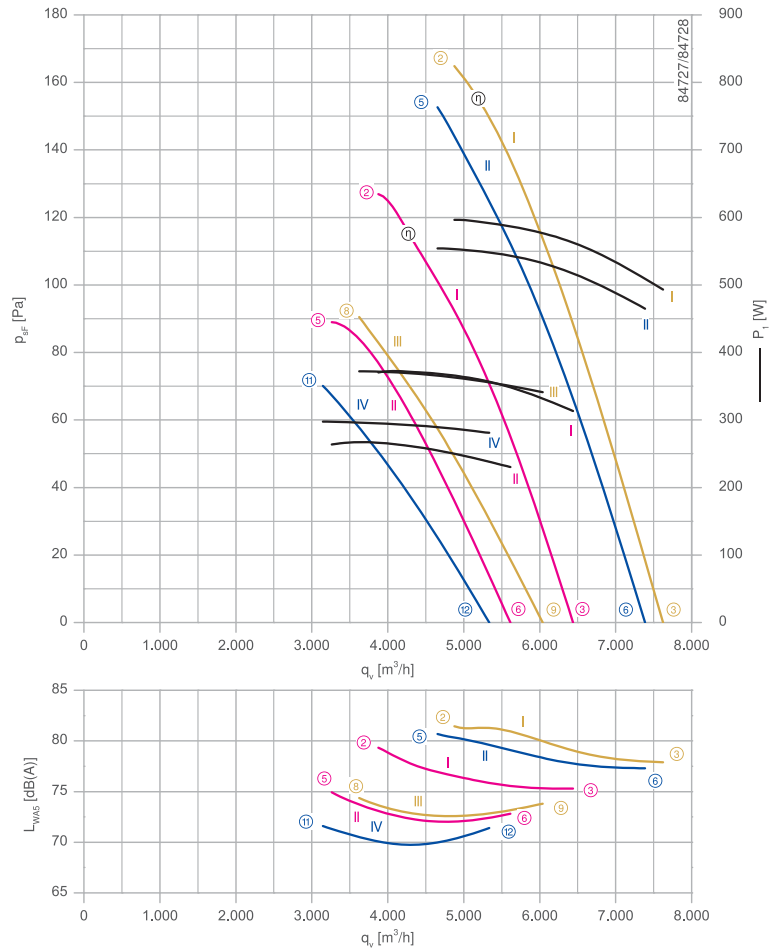
FC045-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 380/260 W | 560/300 W | 600/370 W\*  
 Rated current  $I_N$ :  
 0.98/0.52 A | 1.15/0.62 A | 1.15/0.64 A\*  
 Rated speed  $n_N$ :  
 1390/1160 min<sup>-1</sup> | 1560/1060 min<sup>-1</sup> | 1620/1200 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

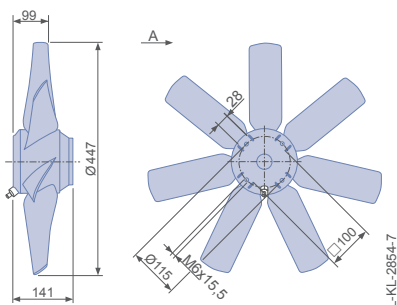
Connection diagram

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## Dimensions mm

### Airflow direction A

Design A - without mounting





Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)		
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>			
FC045-VD_4F_7	Δ	I	400*	50	②	0.96*	370*	1390*	79		
			400			③	0.92	310	1410	75	
			400*			⑤	0.52*	260*	1160*	75	
	Y	II	400		⑥	0.44	230	1230	73		
			460*		60	②	1.15*	600*	1620*	82	
			460			③	1.00	500	1660	78	
	400*	⑤	1.10*	560*		1560*	81				
	400	⑥	0.98	460		1610	77				
	Δ	I	460*	60		②	1.15*	600*	1620*	82	
			460				③	1.00	500	1660	78
			400*		⑤		1.10*	560*	1560*	81	
	Y	III	460*		60	⑧	0.64*	370*	1200*	75	
460			⑨				0.58	340	1320	74	
400*			⑪				0.60*	300*	1060*	72	
Y	IV	400*	60			⑫	0.56	280	1170	71	
		400					⑫	0.56	280	1170	71

\*rated data

Fan ordering information

Airflow direction A ➔

Design      A

Installation position      H/Vu



**Type**              FC045-VDA.4F.A7  
**Article no.**      175794

Weight kg      7.40



# FC

for three phase alternating current, 4-4 pole

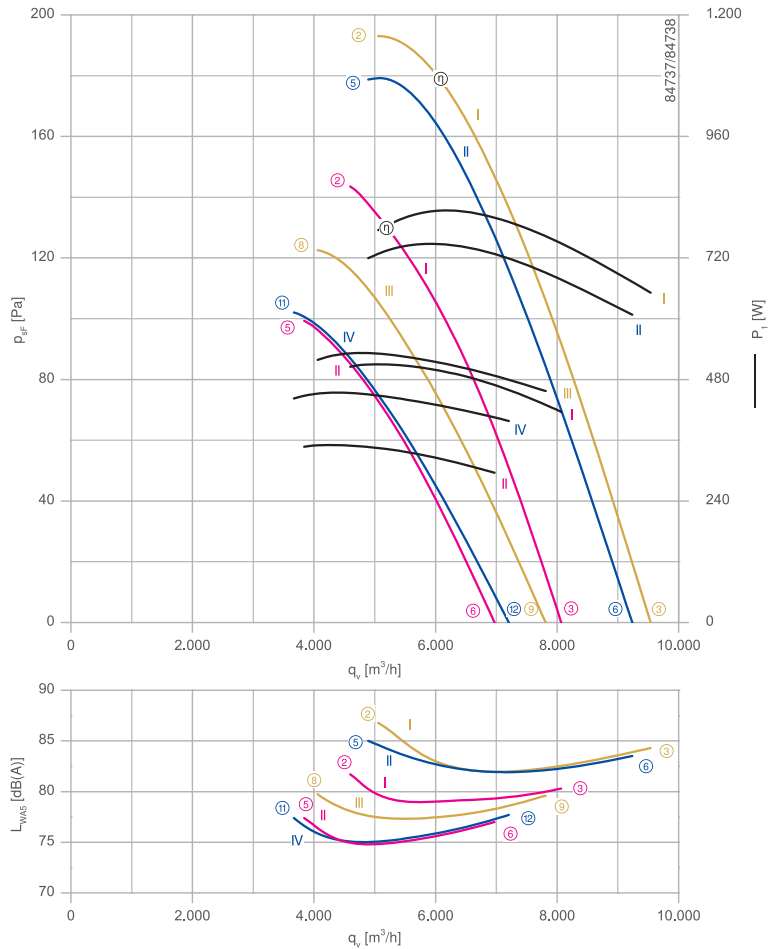
FC050-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 500/350 W | 740/450 W | 800/520 W\*  
 Rated current  $I_N$ :  
 1.20/0.60 A | 1.35/0.76 A | 1.35/0.76 A\*  
 Rated speed  $n_N$ :  
 1340/1120 min<sup>-1</sup> | 1500/1120 min<sup>-1</sup> | 1570/1230 min<sup>-1</sup>\*  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable lateral-diagonal 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

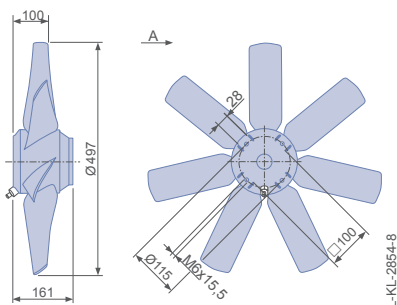
Connection diagram

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## Dimensions mm

### Airflow direction A

Design A - without mounting



Performance data

Type	Connection	Characteris- tic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FC050-VD_4I_7	Δ	I	400*	50	②	1.20*	500*	1340*	82	
			400			③	1.10	420	1370	80
			400*			⑤	0.60*	350*	1130*	78
	Y	II	400		⑥	0.52	300	1190	77	
			460*		60	②	1.35*	780*	1570*	87
			460			③	1.20	660	1610	84
	400*	⑤	1.30*	720*		1510*	85			
	400	⑥	1.15	600		1570	84			
	Δ	I	460*	60		②	0.76*	520*	1250*	80
			460				③	0.66	460	1340
			400*		⑩		0.74*	440*	1130*	77
	Y	III	400			⑫	0.66	400	1230	78
460*			IV				⑩	0.66	460	1340
460										
400*										

\*rated data

Fan ordering information

Airflow direction A

Design      A

Installation position      H/Vu



**Type**              FC050-VDA.4I.A7  
**Article no.**      175795

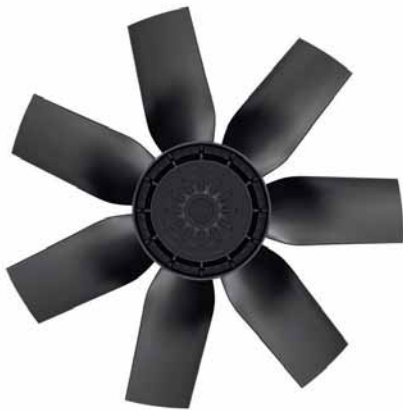
Weight kg      9.50



# FC

for three phase alternating current, 4-4 pole

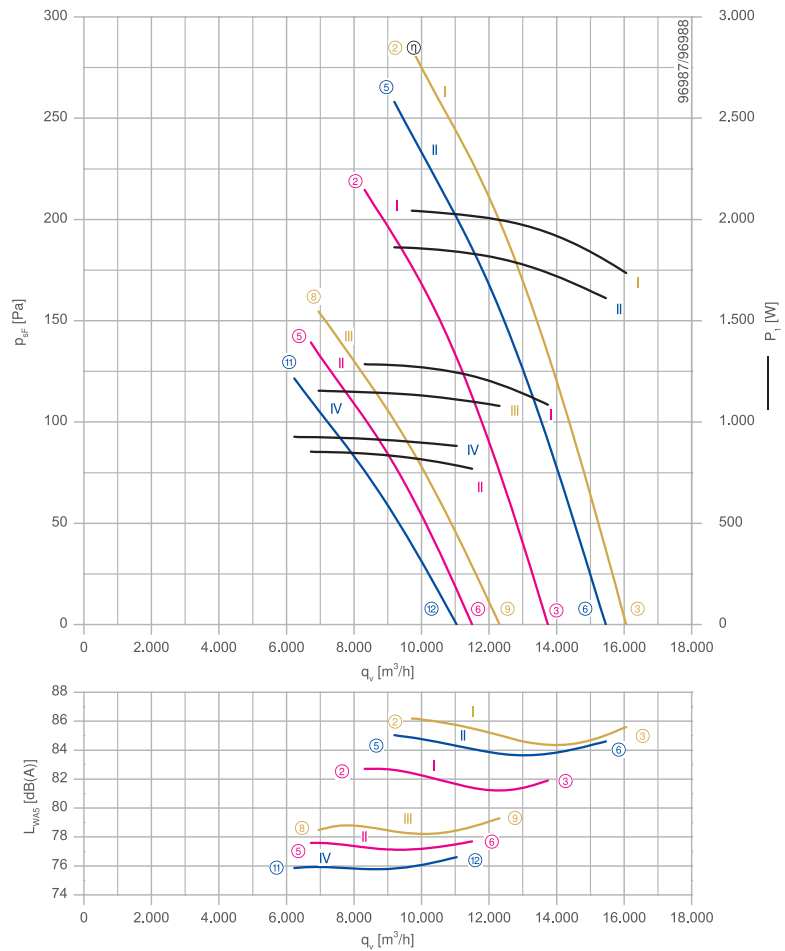
FC056-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 1.30/0.92 kW | 2.00/1.20 kW | 2.10/1.30 kW\*  
 Rated current  $I_N$ :  
 2.80/1.65 A | 3.70/2.10 A | 3.70/2.10 A\*  
 Rated speed  $n_N$ :  
 1370/1140 min<sup>-1</sup> | 1520/1100 min<sup>-1</sup> | 1580/1200 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 13.00/3.80 A | 11.00/3.40 A | 13.00/4.00 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
 70 °C | 60 °C | 60 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

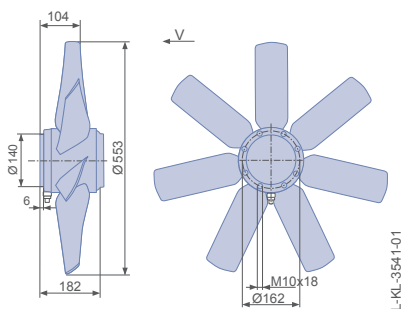
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>		
FC056-VD_6K_7	Δ	I	400*	50	②	3.10*	1300*	1360*	83	
			400			③	2.90	1100	1380	82
			400*			⑤	1.65*	860*	1100*	78
	Y	II	400		⑥	1.50	760	1170	78	
			460*		60	②	3.70*	2000*	1570*	86
			460			③	3.30	1750	1620	86
	400*	⑤	3.70*	1850*		1500*	85			
	400	⑥	3.30	1600		1560	85			
	Δ	I	460*	60		②	3.70*	2000*	1570*	86
			460				③	3.30	1750	1620
			400*		⑤		3.70*	1850*	1500*	85
	Y	III	460*		60	⑧	2.00*	1150*	1150*	79
460			⑨				1.85	1100	1240	79
400*			IV				⑪	1.90*	920*	1030*
400	⑫	1.80				880	1120	77		

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC056-VDA.6K.V7</b>
<b>Article no.</b>	<b>175796</b>
Weight kg	18.10

# FC

for three phase alternating current, 4-4 pole

FC063-VD



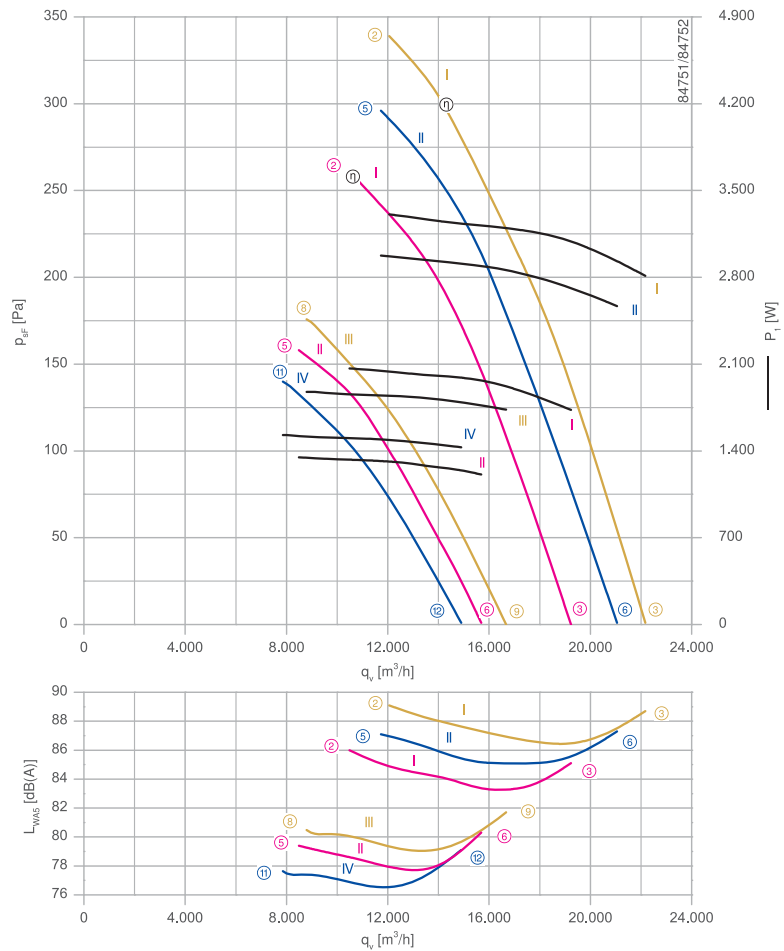
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_i$ :  
 2.10/1.35 kW | 3.00/1.55 kW | 3.30/1.90 kW\*  
 Rated current  $I_N$ :  
 3.80/2.30 A | 5.10/2.70 A | 5.00/2.80 A\*  
 Rated speed  $n_N$ :  
 1320/1040  $\text{min}^{-1}$  | 1410/970  $\text{min}^{-1}$  | 1500/1080  $\text{min}^{-1}$ \*  
 Starting current  $I_A$ : 15.00/4,60 A | 14,00/4,20 A | 16,00/5,00 A  
 Current increase  $\Delta I$ : 5 % | 0 % | 5 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(\text{min})}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{R(\text{max})}$ :  
 70 °C | 55 °C | 55 °C  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

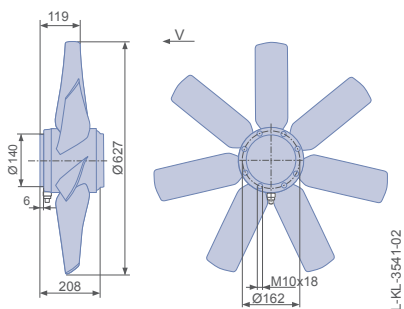
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)		
			U V	f Hz		I A	$P_1$ W	n min <sup>-1</sup>			
FC063-VD_6N_7	Δ	I	400*	50	②	3.80*	2100*	1320*	86		
			400			3.30	1750	1360	85		
			400			2.20*	1300*	1050*	82		
	Y	II	400		⑤	2.10	1200	1110	80		
			460*			60	②	5.00*	3300*	1500*	89
			460					4.40	2800	1560	89
	400	5.00*	3000*	1420*	88						
	Δ	I	460*	③	4.40		2600	1490	87		
			460		⑥		2.80*	1850*	1080*	81	
			460				2.60	1750	1180	82	
	Y	III	400*	⑧		2.70*	1500*	970*	78		
			400		⑩	2.50	1450	1060	79		
400			2.50			1450	1060	79			

\*rated data

Fan ordering information

← Airflow direction V

Design	A
Installation position	H/Vu
	
<b>Type</b>	<b>FC063-VDA.6N.V7</b>
<b>Article no.</b>	<b>175797</b>
Weight kg	23.80

# FC

for three phase alternating current, 4-4 pole

FC071-VD



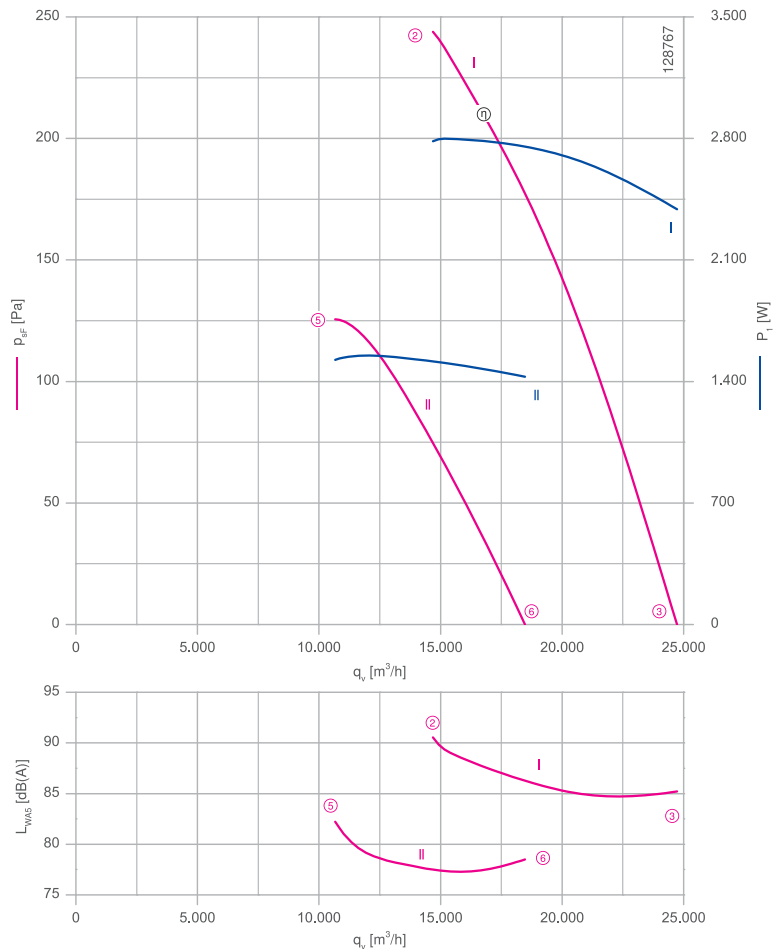
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**2.80/1.60 kW\***  
 Rated current  $I_N$ :  
**5.40/2.90 A\***  
 Rated speed  $n_N$ :  
**1280/930 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **19.00/6.00 A**  
 Current increase  $\Delta I$ : **0 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**65 °C**  
 Electrical connection: Supply cable lateral 105 cm  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

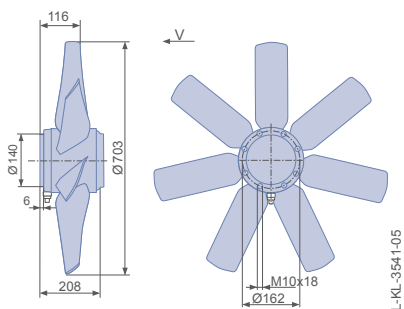
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



L-KL-3541-05



### Performance data

Type	Connection	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
			U V					
FC071-VD_6N_7	Δ	I	400*	②	5.40*	2800*	1280*	91
			400	③	4.80	2400	1320	85
	Y	II	400*	⑤	2.70*	1500*	940*	83
			400	⑥	2.60	1450	990	79

\*rated data

### Fan ordering information

← Airflow direction V

Design A

Installation position H/Vu



**Type** FC071-VDA.6N.V7  
**Article no.** 175798

Weight kg 24.10

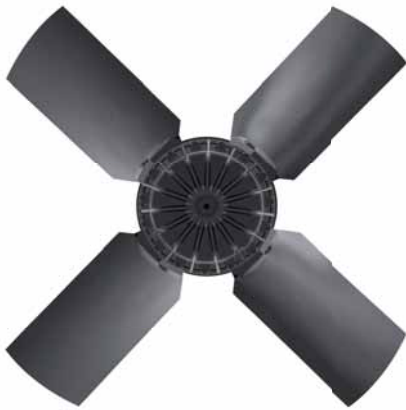
- FC
- System components
- Control technology
- Appendix



# FC

for three phase alternating current, 4-4 pole

FC080-VD



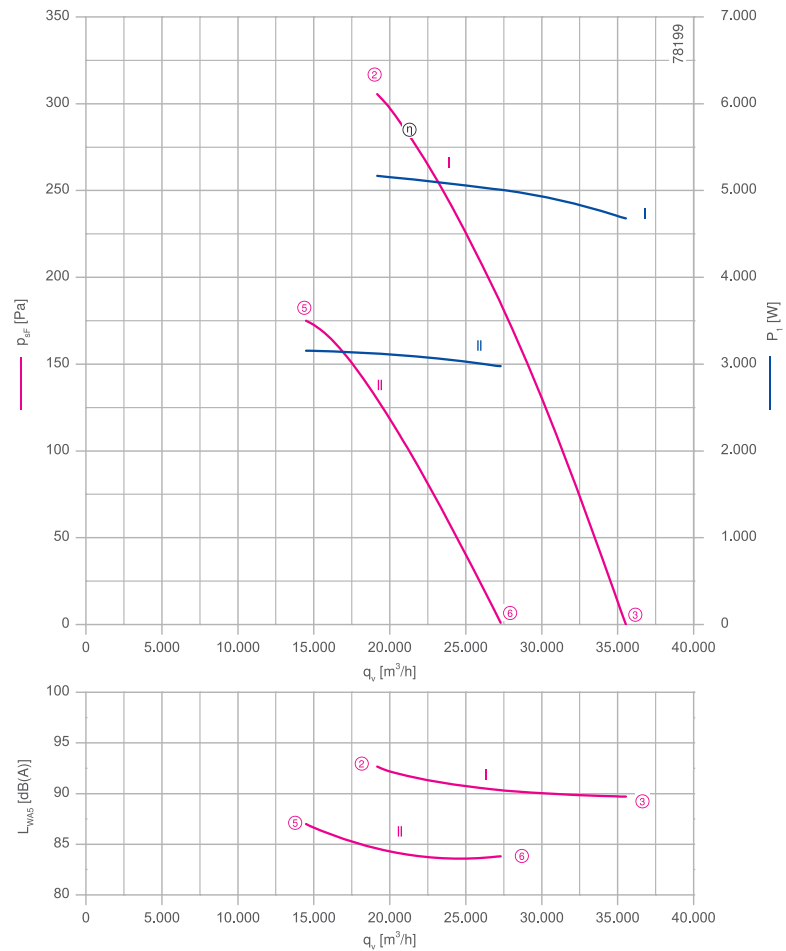
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_i$ :  
**5.20/3.20 kW\***  
 Rated current  $I_N$ :  
**8.60/5.00 A\***  
 Rated speed  $n_N$ :  
**1250/940 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **32.00/10.00 A**  
 Current increase  $\Delta I$ : **5 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{R(min)}$ : **-40 °C\*\*\***  
 Max. permitted ambient temperature  $t_{R(max)}$ :  
**65 °C**  
 Electrical connection: Supply cable axial 105 cm  
 Number of blades: 4  
 Degree of protection: IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

\*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in full bell mouth without guard grille in installation type A according to ISO 5801.

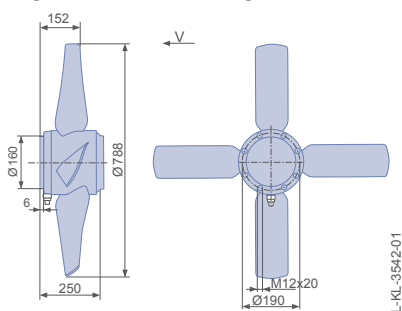
Connection diagram

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## Dimensions mm

Airflow direction V

Design A - without mounting



### Performance data

Type	Connection	Characteristic curve	Voltage U V	Operating point	Current I A	Input power P <sub>1</sub> W	Speed n min <sup>-1</sup>	Suction side sound power level L <sub>TWA5</sub> dB(A)
FC080-VD_7Q_4	Δ	I	400*	②	8.60*	5200*	1250*	93
			400	③	7.90	4700	1280	90
	Y	II	400*	⑤	5.00*	3200*	940*	87
			400	⑥	4.70	3000	990	84

\*rated data

### Fan ordering information

← Airflow direction V

Design A

Installation position H/Vu



**Type** FC080-VDA.7Q.V4  
**Article no.** 175799

Weight kg 37.90





# System components

Product overview

Inlet ring

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Control technology

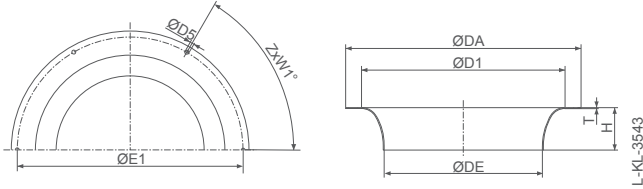
Appendix



# System components

## Inlet ring for ZArail, Cpro, C- and N-Series full bell mouth

- Material: Sheet steel, galvanised

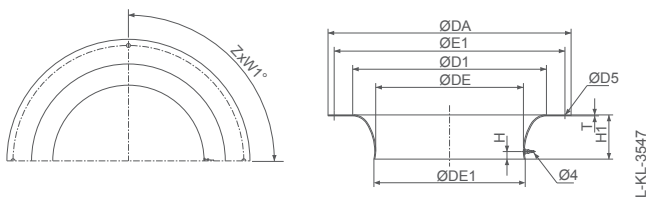


Size	Article no. galvanized	Article no. coated	DA mm	DE mm	D1 mm	D5 mm	E1 mm	H mm	T mm	ZxW1° (1)	Weight kg
RH22	00400802	00401776	253	140	179	8.5	233	42	1.5	6x60°	0.6
RH25	00400803	00401777	277	158	202	8.5	257	47	1.5	6x60°	0.7
RH28	00400804	00401778	303	176	225	8.5	283	52	1.5	6x60°	0.8
RH31	00411846	00411853	343	193	253	8.5	317	59	1.5	8x45°	1.0
RH35	00411847	00411854	378	218	286	8.5	352	66	1.5	8x45°	1.3
RH40	00411848	00411855	418	246	322	8.5	392	74	2.0	8x45°	2.1
RH45	00411849	00411856	464	278	364	8.5	438	83	2.0	8x45°	2.5
RH50	00411850	00411857	514	312	410	8.5	488	94	2.0	8x45°	3.1
RH56	00411851	00411858	564	347	455	8.5	538	104	2.0	8x45°	3.7
RH63	00411852	00411859	634	389	510	10.5	600	117	2.0	12x30°	4.7

(1) fastening inlet ring

## Full bell mouth with measuring device for volume flow measurement

- Material: Sheet steel, galvanised
- With air flow meter
- Fastening diameter according to DIN EN 12 220



Size	Article no. galvanized	Article no. coated	DA mm	DE mm	DE1 mm	D1 mm	D5 mm	E1 mm	H mm	H1 mm	T mm	ZxW1° (1)	Weight kg
RH22	00401503	00401736	253	135	140	179	8.5	233	12	42	1.5	6x60°	0.6
RH25	00401504	00401737	277	153	158	202	8.5	257	12	47	1.5	6x60°	0.7
RH28	00401505	00401738	303	171	176	225	8.5	283	12	52	1.5	6x60°	0.8
RH31	00411860	00412243	343	193	198	253	8.5	317	12	59	1.5	8x45°	1.1
RH35	00411861	00412244	378	218	223	286	8.5	352	12	66	1.5	8x45°	1.3
RH40	00411862	00412245	418	246	252	322	8.5	392	13	74	2.0	8x45°	2.1
RH45	00411863	00412246	464	278	285	364	8.5	438	14	83	2.0	8x45°	2.5
RH50	00411864	00412247	514	312	320	410	8.5	488	16	94	2.0	8x45°	3.1
RH56	00411865	00412248	564	347	355	455	8.5	538	18	104	2.0	8x45°	3.8
RH63	00411866	00412249	634	389	397	510	10.5	600	20	117	2.0	6x60°	4.7

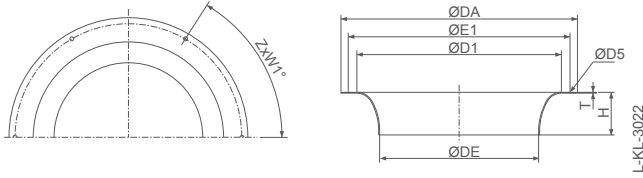
(1) fastening inlet ring



# System components

## Inlet ring for M-series full bell mouth

- Material: Steel(sheet) galvanized or steel powder-coated RAL  
7032 (resistance classe 1)



Size	Article no. galvanized	Article no. coated	DA mm	DE mm	D1 mm	D5 mm	E1 mm	H mm	T mm	ZxW1°	Weight kg
RH22M	00278352	00352266	265	143	187.5	7.0	250	31	1.0	6x60°	0.4
RH25M	00275847	00401735	240	160	207.0	7.0	225	39	1.0	6x60°	0.3
RH28M	00275848	00280734	265	180	235.0	7.0	250	43	1.0	6x60°	0.4
RH31M	00279152	00400327	300	192	255.0	7.0	285	53	1.0	6x60°	0.5
RH35M	00275850	00402617	338	228	292.0	7.0	315	58	1.0	6x60°	0.6
RH40M	00275570	00279265	374	257	325.0	9.0	350	66	1.0	6x60°	0.7
RH45M	00275571	00400383	413	287	364.0	9.0	390	71	1.0	6x60°	0.9
RH50M	00275572	00358610	456	323	410.0	9.0	430	79	1.0	6x60°	1.1
RH56M	00278489	00602372	530	361	459.0	9.0	510	87	1.5	6x60°	2.2
RH63M	00279305	00348113	745	407	510.3	11.5	720	95	1.5	6x60°	4.6





# Control technology

## Product overview

Motor protection concept Page 306

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# Motor protection concept

The majority of ZIEHL-ABEGG external rotor motors (excluding ex-motors) are equipped with "TB" thermostats. Standard protective switches or bi-metal actuators in the motor feed line work dependent of current and thus offer only incomplete protection as the current does not allow conclusions to be made about the motor winding temperature under all conditions. In contrast, thermostats are bimetal switches embedded in the motor winding and they can react directly to the motor's winding temperature. They open an electrical contact, as soon as their nominal switch temperature (NST) is attained.



Thermal contact

Fans can be securely protected by ZIEHL-ABEGG motor protection devices. Especially when they are

- speed controlled by voltage,
- operated with excessive switching frequency,
- when they are stalled,
- or exposed to high ambient temperatures.

Thermostats must be connected in the control circuit so that during a malfunction the fans are not independently reconnected after cooling off. ZIEHL-ABEGG devices meet these conditions. Mutual protection of several motors is possible with one protection device. In order to do this, the temperature protectors of the individual motors have to be connected in series. Please pay attention to the fact that all motors are disconnected at the same time in case of a temperature failure in a single motor. In real life applications, motors are grouped, so in case one motor fails it is still possible to run in emergency mode with reduced power. To ensure optimum motor protection we provide motor protection units in various designs.

# Add-on modules

## AM-MODBUS (-W) for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "Icontron Basic" and "Fcontrol Basic" frequency inverters without integrated display as well as ECblue motors and fans.  
With the AM-MODBUS/-W add-on modules, the devices integrated into MODBUS networks or the A-G-247NW operator terminal can be connected. Parameterization and data polling by radio (with AM-MODBUS-W) are optionally possible.  
Whole groups of frequency inverters or ECblue motors and fans that are equipped with these AM-MODBUS add-on modules can be addressed quickly and automatically by a ZIEHL-ABEGG UNIcon control module with MODBUS-Master function. These devices are then controlled conveniently by the UNIcon "master" device.

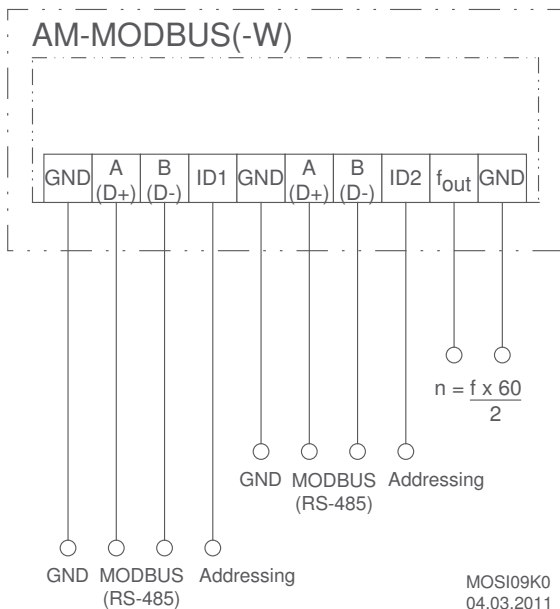
### Equipment/properties

**2 x interface RS485:**

For integration into a MODBUS RTU network (MODBUS Slave).  
With the possibility of automatic addressing by a UNIcon control module with MODBUS-Master function.

Add-on module - AM-MODBUS (-W)		
Type	Article no.	Weight kg
AM-MODBUS	349045	0.03
AM-MODBUS-W	349050	0.03

### Connection diagram



# Add-on modules

## AM-PREMIUM (-W) for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "Icontrol Basic" and "Fcontrol Basic" frequency inverters without integrated display as well as ECblue motors and fans.

With the AM-PREMIUM/-W add-on modules, the devices can be functionally extended as a control unit. In addition, it is possible to link to MODBUS networks or connect operator terminals (A-G-247NW / AXG-1A / AXG-1AE). Radio parameterization and data polling (with AM-PREMIUM-W) is also possible as an option.

### Input for sensors or speed settings through



Setting of the desired speed through device or by external default, e.g. 0...10 V



Connecting pressure sensors (refrigeration), e.g. type MBG.. sensors, measuring range 0...30 bar, 0...50 bar



Connection of thermistors, e.g. sensors type TF.. e.g. active sensor type MTG..



Connecting differential pressure sensors (air conditioning), e.g. type DSG.. sensors, measuring range 0...6000 Pa, acquisition of volume flows up to 65000 m³/h

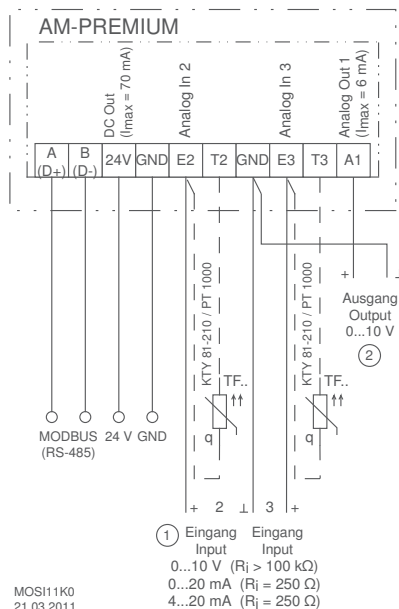


Connecting air velocity sensors, e.g. type MAL.. sensors, measuring range 0...1 m/s, 0...10 m/s



Connecting additional sensors, e.g. combination sensors, CO<sub>2</sub>, sensor signal 0...10 V / 0...20 mA / 4...20 mA

### Connection diagram



① Input  
② Output

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21.03.2011

## Equipment/properties

### Simple start-up by operating modes:

When an operator terminal is connected to the AM-PREMIUM add-on module plugged into the frequency inverter (for AM-PREMIUM-W via radio), typical operating modes, e.g. for air conditioning, refrigerant or ventilation technology can be selected.

### 2 analog inputs for sensors or setting signals:

analog input E2 and E3: Setting by operating modes or manually programmable, e.g. 0-10 V, 0,20 mA, 4-20 mA

analog input E3: Programmable, e.g. comparison with sensor E2, difference to sensor E2, average value formation, setpoint setting, setpoint adaptation (e.g. outdoor temperature-dependent) connection of passive thermistors: On E2 and T2, E3 and T3.

### 1 analog output A1:

Setting by operating modes or manually programmable, e.g. output signal proportional to modulation, output signal proportional to input signal, invertible, 10 V constant voltage, group control.

### Functional extension: Digital input D1 in the basic device:

programmable, e.g. enable, switch over setpoint 1 or 2, switch over control or manual mode, switch over E1 or E3, control function inversion, output limitation, external fault, reset, reversal of direction of rotation.

### Functional extension: Digital output K1 in the basic device:

setting by operating modes or manually programmable, e.g. operating indication, fault indication, limits, external fault at digital input, activation of external devices, e.g. heating, shutters, group control fans, etc.

### 1 x interface RS485:

For linking to a MODBUS RTU network (MODBUS Slave). Manual addressing of the devices in the network

Add-on module AM-PREMIUM (-W)		
Type	Article no.	Weight kg
AM-PREMIUM	349046	0.03
AM-PREMIUM-W	349051	0.04

# Add-on modules

## AM-AMPsignal for Basic Frequency inverter and ECblue fans



Pluggable add-on modules for function extension of the "Icontrol Basic" and "Fcontrol Basic" frequency inverters without integrated display as well as ECblue motors and fans.

The add-on module AM-AMPsignal transforms a current signal (0-20 mA, 4-20 mA) into a voltage signal (0-10 V). Several basic frequency inverters or ECblue fans can then be controlled by one current signal.

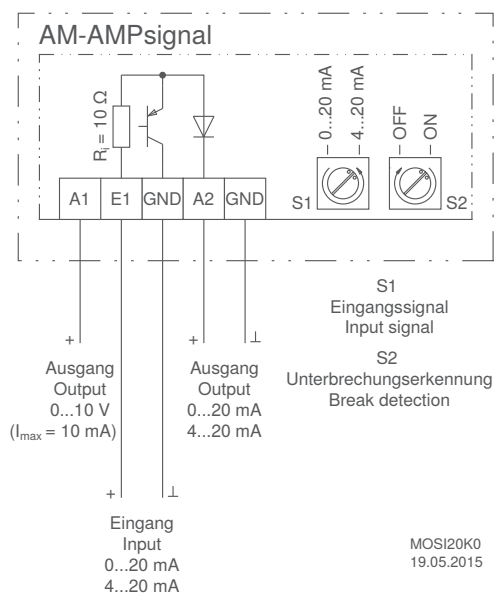
### Equipment/properties

#### 2 integrated rotary switches

Setting input signal (4-20mA, 0-20mA) by rotary switch "S1".  
Setting fractured wire detection (detection active, not active) by rotary switch "S2".

#### Add-on module AM-AMPsignal

Type	Article no.	Weight kg
AM-AMPsignal	349065	0.03



# Add-on modules

## AM-ETHERCAT for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the “Icontrol Basic” and “Fcontrol Basic” frequency inverters without integrated display as well as ECblue motors and fans. With the AM-ETHERCAT add-on modules the frequency inverters or ECblue fans can be integrated into EtherCat networks.

A device master data filed (ESI file) is required for integration of the device into an EtherCat network. If there is any doubt about the use or procurement of the ESI file for this add-on module, our Control Technology Support Department will be very glad to help.

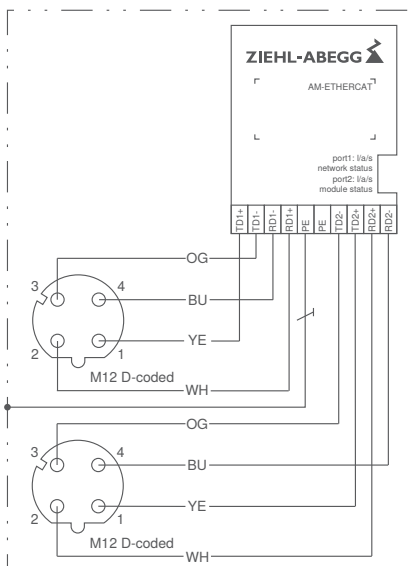
### Equipment/properties

#### 4 integrated LED

For status display and error message:  
Network status, status module, status port 1 / port 2.

### Add-on module AM-ETHERCAT

Type	Article no.	Weight kg
AM-ETHERCAT	349071	0.03



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12.08.2015

# Add-on modules

## AM-CAN-OPEN for Basic Frequency inverter and ECblue



Pluggable add-on modules for a function extension of the "Iconrol Basic" and "Fcontrol Basic" frequency inverters without integrated display as well as ECblue motors and fans.  
With the AM-CAN-OPEN add-on modules the devices can be integrated into CANopen networks.

An Electronic Datasheet (EDS file) is required for a device integration into the CANopen network.  
This file is provided free of charge by our Control Engineering Support Department.

### Equipment/properties

#### 3 integrated LEDs

For status display and error message.

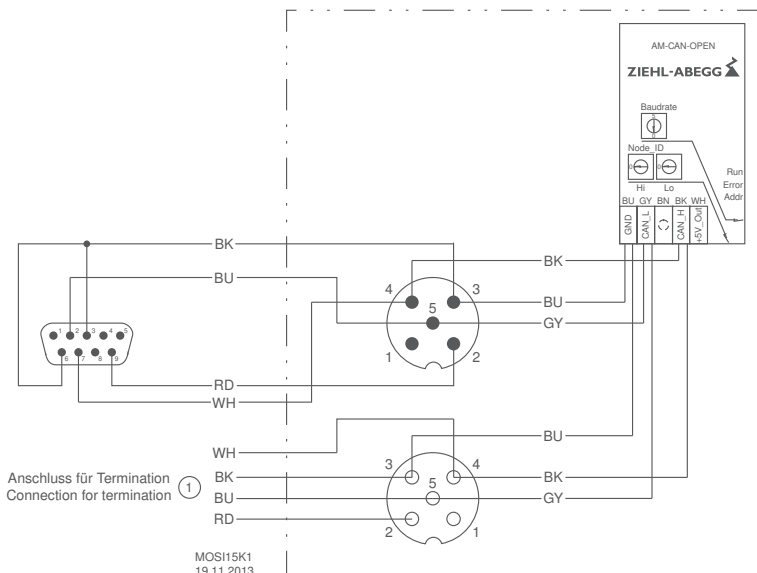
#### 3 integrated rotary switches

2 rotary switches for manual address setting.  
1 rotary switch for setting the baud rate



Add-on module - AM-CAN-OPEN		
Type	Article no.	Weight
AM-CAN-OPEN	349064	kg 0.03

### Connection diagram





# Add-on modules

## AM-LON for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "Icontrol Basic" and "Fcontrol Basic" frequency inverters without integrated display as well as ECblue motors and fans. With AM-LON add-on modules the devices can be integrated into LON networks.

FC

System components

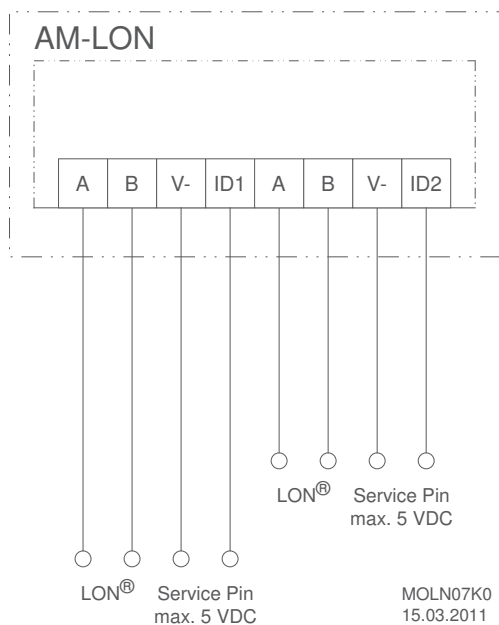
Control technology

Appendix

### Add-on module - AM-LON

Type	Article no.	Weight kg
AM-LON	349049	0.03

### Connection diagram



# Add-on modules

## AM-PROFIBUS for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "lcontrol Basic" and "Fcontrol Basic" without integrated display as well as ECblue motors and fans.  
With the AM-PROFIBUS add-on modules the devices can be integrated into PROFIBUS networks.  
A device master data file (GSD file) is required for integration of the device into the PROFIBUS network. This is provided free by our Control Engineering Support Department.



### Equipment/properties

**3 integrated LEDs**  
For status display and error message.

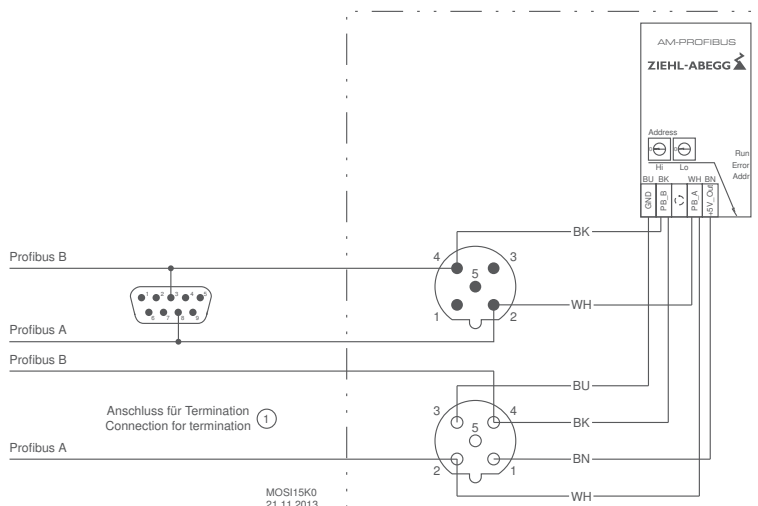
**2 integrated rotary switches**  
For manual address setting.

### Automatic baud rate detection

**Optionally available connectors**  
Plug with connecting wires 80 mm:  
5-pole, M12, wall installation M16, Article No. 00161258  
5-pole, M12, wall installation M20, Article No. 00161263  
Socket with connecting wires 80 mm:  
5-pole, M12, wall installation M16, Article No. 00161259  
5-pole, M12, wall installation M20, Article No. 00161264

Add-on module AM-PROFIBUS		
Type	Article no.	Weight kg
AM-PROFIBUS	349063	0.03

### Connection diagram



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- System components
- Control technology**
- Appendix



# Hand held terminal

## Parameterization of the basic frequency inverters and ECblue



Hand held terminal for parameterization and operation of the "Icontrol Basic" and "Fcontrol Basic" frequency inverters as well as ECblue motors and fans.

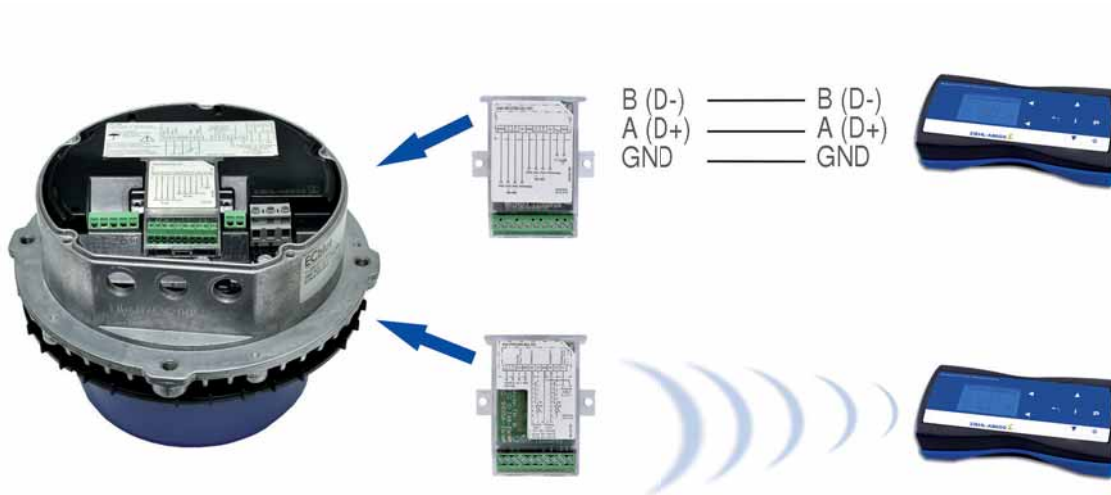
The basic frequency inverters without integrated display and ECblue motors can be extended with AM-MODBUS or AM-PREMIUM add-on modules. The A-G-247NW operator terminal can be connected to this by plugging add-on modules.

When using the AM-MODBUS-W or AM-PREMIUM-W add-on modules, communication with this operator terminal can take place without cables, wirelessly, by radio.

The hand held terminal enables storing of data records and transmission of these to other devices.

### Application example

Optional connection of the hand held terminal by cable (connection by interface RS485, MODBUS RTU) or radio communication.



## Technical data

- External voltage supply:  
by plug power pack (1~ 230 V, 50/60 Hz)
- Internal voltage supply:  
3 x Mignon rechargeable batteries (NiMH 1.2 V)

## Equipment/properties

**LC multi-function display with plain text display:**  
Different menu languages can be selected

**1 x Mini USB interface:**  
voltage supply / data transfer with a PC

**1 x interface RS485:**  
for connection to an AM-MODBUS or AM-Premium add-on module.  
Frequency inverters, ECblue motors and fans can be parameterized and operated with this. It is possible to save data records and transfer them to these devices.

**Data transmission by radio:**  
for communication with AM-MODBUS-W or AM-Premium-W add-on module.

Hand held terminal		
Type	Article no.	Weight kg
A-G-247NW	380090	0.42



# General notes

## Overview

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Aerodynamics and acoustics	Page 321
Electrical connection and motor	Page 324
Connection diagram	Page 325
Installation and usage information	Page 329

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# Explanation of technical details

## Symbols, Units of Measure

Symbol	Unit	Description
$p_{sF}$	Pa	Static pressure increase
$p_{d2}$	Pa	Dynamic pressure
$q_v$	m <sup>3</sup> /h	Air flow
$n_N$	min <sup>-1</sup>	Rated speed
$P_i$	W	Motor input power
$P_{sys}$	W	Motor input power system (including controller)
$U_N$	V	Rated voltage
$f_N$	Hz	Rated frequency
$I_N$	A	Rated current
$I_A$	A	Starting current
$\Delta I$	%	Percentage increase of current based on rated current for speed control by voltage reduction
$C_{400V}$	$\mu$ F	Capacity
$t_{R(min)}$	°C	Minimum permitted ambient temperature
$t_{R(max)}$	°C	Maximum permitted ambient temperature
$L_{WA5}$	dB	Suction side sound power level
$\eta_{statA}$	%	Overall efficiency, static according to measurement category A at optimum duty point without losses of electronic speed control according to calculation method ErP-commission regulation No. 327/2011 annex II
$N_{actual}$	-	Actual efficiency grade of the fan based on an electrical input power of 10 kW at its point of optimum energy efficiency
$N_{target}$	-	Target efficiency grade at motor input power 10 kW

## Conversion factors

### Pressure

		SI-unit	Additional units		
		Pa (N/m <sup>2</sup> )	mbar	in.wg	psi (lbs./in <sup>2</sup> )
SI-unit	Pa (N/m <sup>2</sup> )	1	0.01	0.004015	0.000145
Additional units	mbar	100	1	0.401463	0.014503
	in.wg	249.10	2.49	1	0.036127
	psi (lbs./in <sup>2</sup> )	6894.76	68.95	27.68	1

### Air flow

		SI-unit	Additional units		
		m <sup>3</sup> /s	m <sup>3</sup> /h	l/s	cfm
SI-unit	m <sup>3</sup> /s	1	3600	1000	2118.9
Additional units	m <sup>3</sup> /h	0.000277	1	0.277777	0.588583
	l/s	0.001	3.6	1	2.1189
	cfm	0.000472	1.698994	0.471943	1

### input power

		W	kW	hp
SI-unit	W (J/s)	1	0.001	745.699
Additional units	kW	1000	1	0.74569
	hp	0.00134102	1.34102	1

### Temperature

		SI-unit	Additional units
		°C	°F
SI-unit	°C	1	(°C × 1.8) + 32
Additional units	°F	(°F – 32) / 1.8	1





# Aerodynamics and Acoustics

## Measurement method

The characteristic curve diagram shows the pressure increase  $\Delta p_{sF}$  in Pa as a function of the volume flow rate  $q_v$  in m<sup>3</sup>/h.

### Technical conditions of supply

The specified performance data meet the requirements for accuracy class AN4 for AC fans and accuracy class AN3 for ECblue fans in line with **DIN 13348** and apply to the rated data and air performance curves at the rated voltage. The continuous line in the characteristic curve represents the optimum reliable operating range for fans.

### Fan test bench

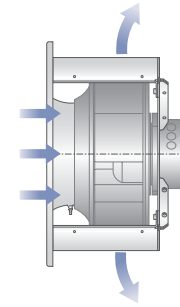
The fan characteristic curves are determined on a combines test bench for acoustics and air performance.

The fan characteristic curves are measured in compliance to **DIN EN ISO 5801**, respectively **AMCA 210-99**. The sound power levels are measured in compliance with **DIN EN ISO 3745** and **ISO 13347-3** using the enveloping surface measuring method.

The figure below shows an example of the measuring setup. The fan intake is installed in the measuring chamber at free intake and free exhaust (installation type A as per **DIN EN ISO 5801** respectively **AMCA 210-99**).

### Air density

The air temperature and humidity are conditioned during the measurement using heat exchangers and kept largely constant. The characteristic curves shown refer to the measuring density. The mean measuring density is 1.16 kg/m<sup>3</sup>.

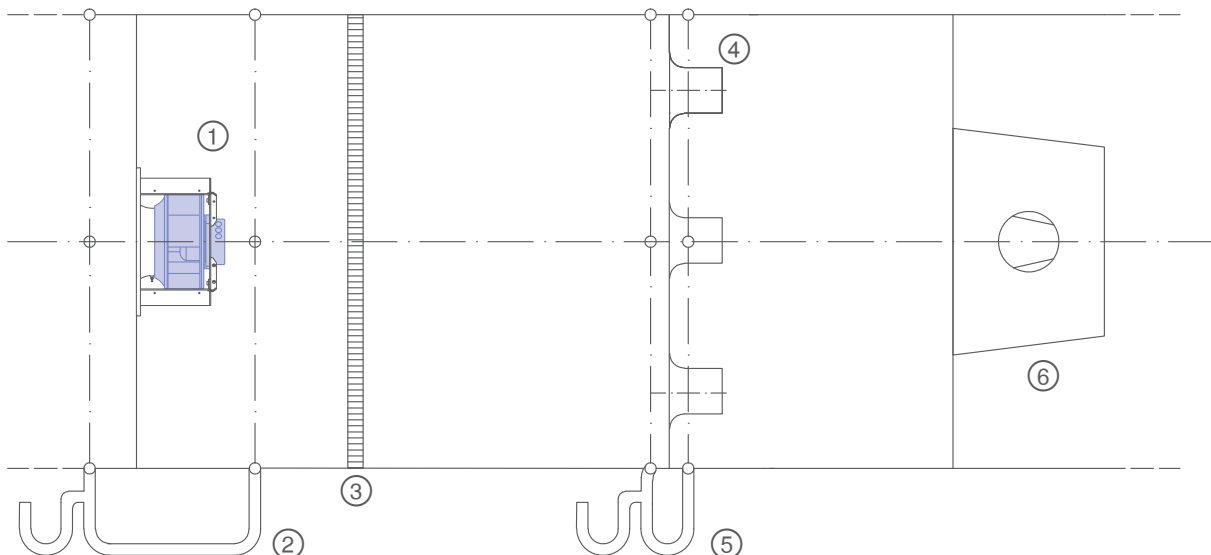


L-KL-3015

Installation type A according to ISO 5801



Technology Centre (InVent)



- ① Test fan
- ②  $P_{sF}$
- ③ Flow straightener
- ④ Nozzles
- ⑤  $\Delta p$  Differential pressure
- ⑥ Auxiliary fan

## Noise level data

Unless otherwise indicated, this catalogue specifies the intake side, A-evaluated sound power levels  $L_{WA}$ . The sound power levels are determined by using the enveloping surface method in compliance with ISO 13347-3, accuracy class 1 and/or DIN EN ISO 3745.

This is done by measuring the sound pressure level  $L_p$  of the individual third-octave bands at 12 points on the enveloping surface (Fig. 1a). The measured sound pressure levels for the third-octave bands are initially used to calculate the sound power level for the third-octave bands and then the intake side sound power level  $L_W$ . To do this, the fans are installed with a free intake (from the measuring chamber) and (air) outlet (into the surrounding area). The standard measurements are carried out without the need for additional parts, e.g. guard grille. The measuring equipment used complies with DIN EN 61672.

Because of the different weighting of the third-octave sound power level, the A-evaluation, which is typically carried out, takes into account the subjective nature of human sound perception. The A-tested sound power level is the standard variable used to assess the sound characteristics of technical equipment.

### Calculation of pressure side sound power level and total sound power level

For axial fans, the pressure side sound power level is approximately equal to the intake side level. The total sound power level is calculated by adding up the power from the sound power levels of both the intake and the pressure side (see DIN 45 635 Part 1, Appendix F, DIN EN ISO 3745). Thus, it is approximately 3 dB higher than the intake side sound power level specified in the catalogue.

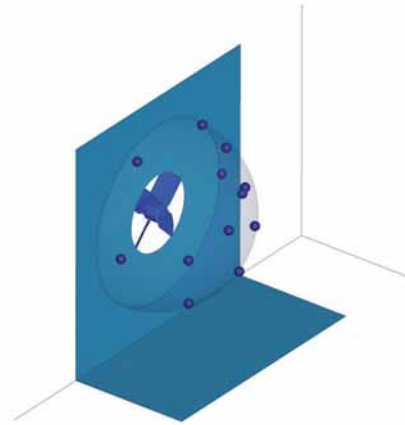


Fig.1a: Position of microphones in relation to fans



Fig. 1b: Fan test-bench

### Determination of total sound power level during the interaction of several sound sources

The total sound power level of several individual sound sources operating concurrently is calculated by adding the power of the individual levels in compliance with **DIN EN ISO 3745**. This equation is the basis for the diagrams in Fig. II and III.

To add up several sound sources with the same level, please see diagram (Fig. II) for complete level information; e.g. 6 identical sound sources operating concurrently results in a total level that is approx. 8 dB higher.

The total sound power level of two sound sources with different levels can be seen in diagram Fig. III. For example, two sound sources whose sound power levels differ by 4 dB produce a total sound power level that is around 1.5 dB higher than that of the louder sound source.

### Determination of sound pressure level

The A-tested sound pressure level  $L_{pA}$  for rooms with average absorption capacity for a distance of 1m from the fan axis is calculated by subtracting 7 dB from the A sound power level  $L_{WA}$ . In most cases, this assumption is correct and provides a sufficient level of accuracy. However, the sound characteristics can be hugely influenced by the individual installation situation.

Absorption of the sound pressure level, depending on the distance with partial reflection, is shown in Fig. IV.

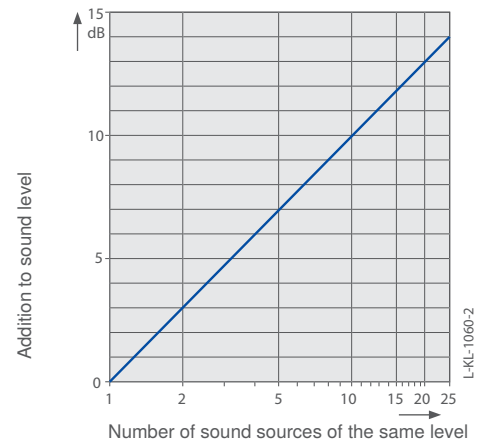


Fig. II: Addition of several sound sources

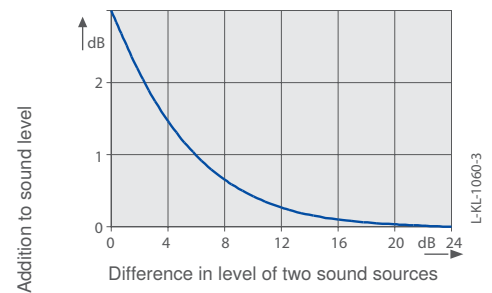


Fig. III: Sound sources of different levels

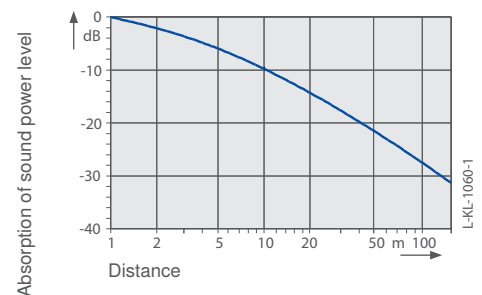


Fig. IV: Reduction of sound pressure level

# Electrical connection and motor

## Fan drive

The three-phase or single-phase AC external rotor motor integrated into the fan hub meets the requirements for circulating electrical machines set out in **DIN EN 60 034-1**

(VDE 0530 Part 1).

AC technology:

The rated voltage for three-phase current is 400 V, 460V for single-phase AC motors 230 V, 265 V.

EC technology:

The fans with ECblue technology are powered by a highly efficient EC motor with integrated commutation electronics. Depending on the version, the ECblue motors have a broad voltage range.

1~ 200-277 V, 50/60 Hz

3~ 200-240 V, 50/60 Hz

3~ 380-480 V, 50/60 Hz

## Operation with frequency inverter

**ZIEHL-ABEGG fans are suitable for operation with frequency inverters if the following requirements are met:**

All-pole sine filters - as supplied by some inverter manufacturers - must be installed between the inverter and the motor (sinusoid output voltage - phase to phase, phase to protective earth). Request our technical information L-TI-0510 for more details.

du/dt filters (also known as motor or attenuation filters) may not be used instead of sine filters.

When using sine filters, there may be no need for screened motor power cables, metal terminal boxes or a second earth connection on the motor (consult the sine filter supplier).

## Electrical connection

### Voltage

The single-phase or three-phase AC motors are suitable for 460, 400 V or 230, 265 V and are continuously voltage controllable. Please pay attention to the data sheet.

### Current

Motor current is dependent on the installation (i.e. flow situation and nozzle) and operation (i.e. operating point in connection with air density). For the definition of electrical installations, the following value is recommended:  $I_{\max} = I_N + \Delta I + \approx 30\%$

### Motor connection

Mains connection via terminal box or connecting cable implemented as per dimensional drawings. Cable length tolerance  $\pm 3$  cm.

### Terminal box

Terminal boxes are made of impact resistant and weather resistant plastic or die-cast aluminium.

All terminal boxes have two M20x1.5 cable inlets.

For FE2owlet and FE2owlet-ECblue axial fans in F design without guard grille, the terminal box is located on the outside on the flange ring. In the F design with guard grille, the terminal box is mounted on the front on the motor.

### Connection cable

Heat and UV resistant halogen-free hose cables are used, marked by a colour code or connection designations.

The cable construction complies with VDE 0282 part 804 and is suitable for operating voltages of up to 690 V.

Temperature resistance -50 to +150 °C.

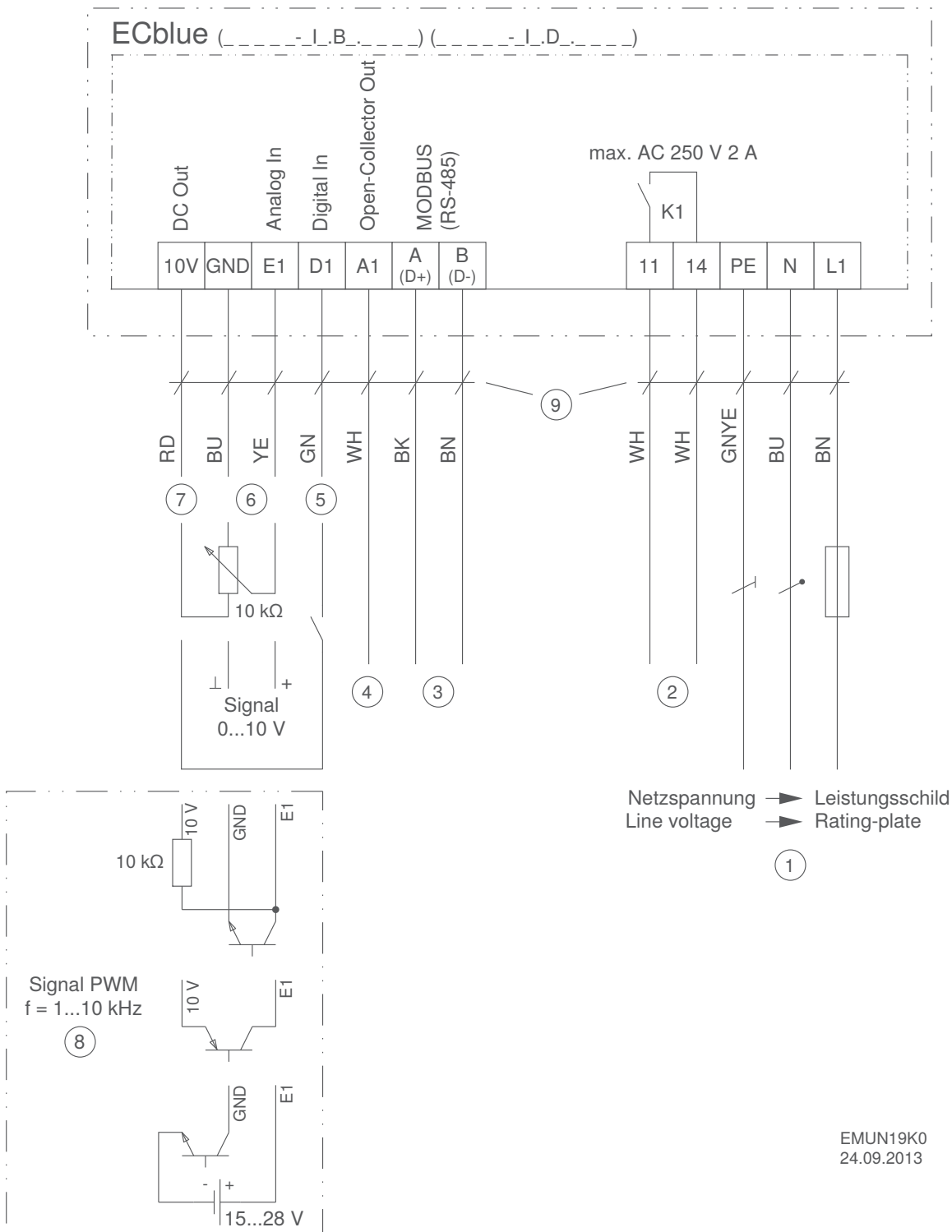
The ends of the connection are stripped for 10 cm and fitted with wire end ferrules.



# Connection diagrams

## EC technology

### 1360-384 (EC090)



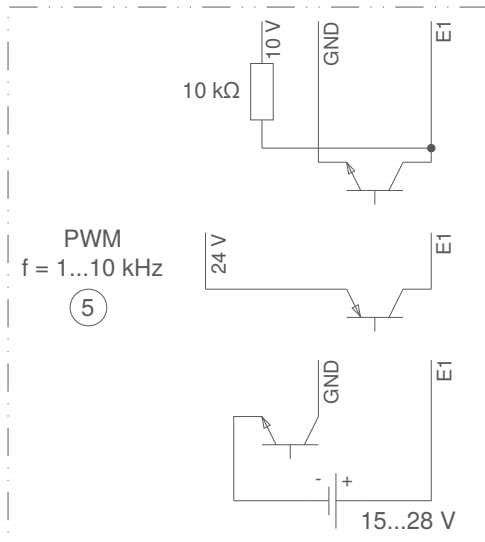
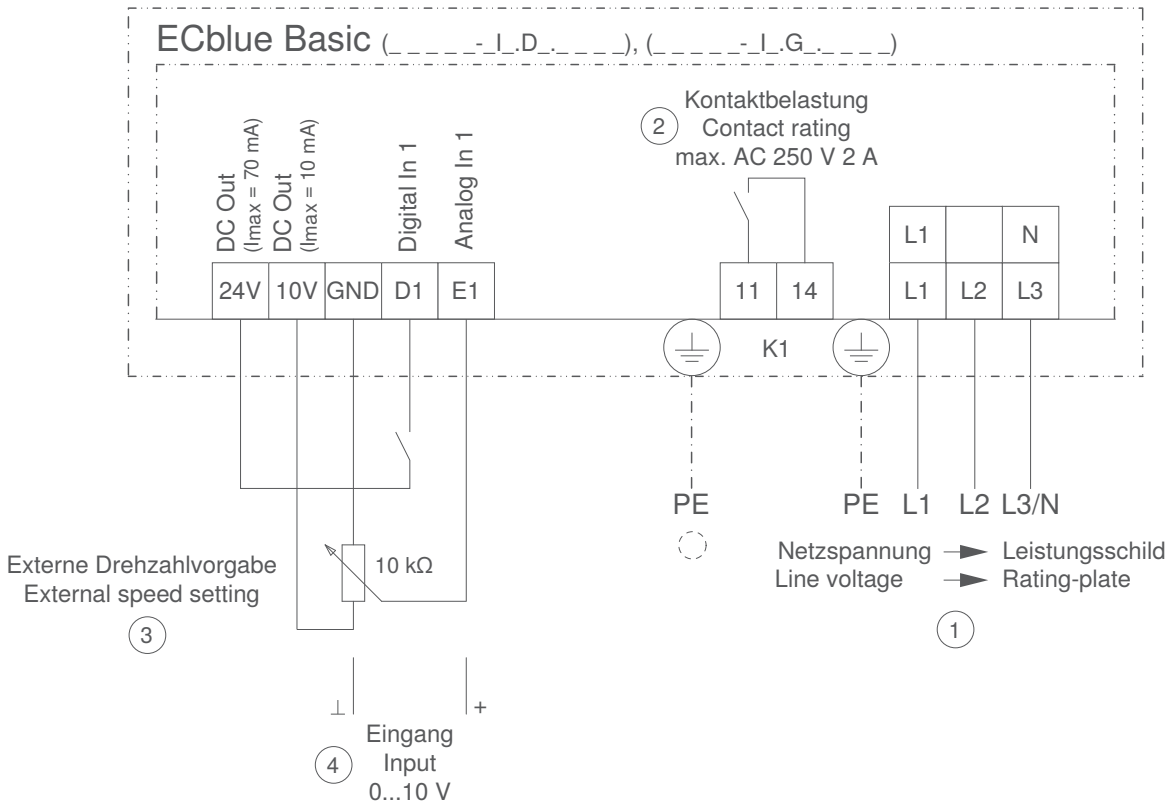
EMUN19K0  
24.09.2013

- ① Line voltage see rating-plate
- ② Relay output for fault indication (max. contact rating AC 250 V 2 A)
- ③ MODBUS (RS-485) interface
- ④ Open-Collector output status / tachometer
- ⑤ Digital input for enable
- ⑥ Input for setting speed by 0...10 V signal / potentiometer ( $R_1 > 100 \text{ k}\Omega$ )
- ⑦ Voltage supply 10 V DC ( $I_{\text{max}} 50 \text{ mA}$ )
- ⑧ Setting speed by PWM signal ( $f = 1...10 \text{ kHz}$ )
- ⑨ Version with connection cables

# Connection diagrams

## EC technology

### 1360-403 (EC116 / EC152)



MOEA03K1  
 25.05.2012

- ① line voltage
- ② contact load
- ③ external speed setting
- ④ input
- ⑤ PWM

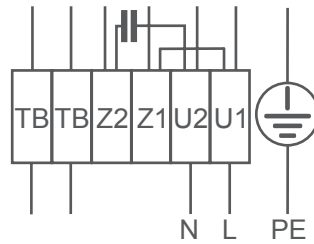


# Connection diagrams

## AC technology

### 104XA

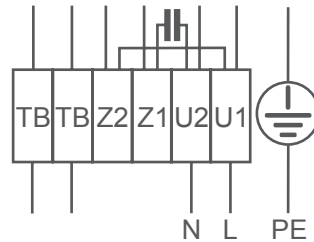
For 1~-motor with capacitor and thermostatic switch (if built in).  
**Airflow direction:** V  
**Direction of rotation:** clockwise



**Cable colours:**  
U1 brown  
U2 blue  
Z1 black  
Z2 orange  
TB white

### 104XB

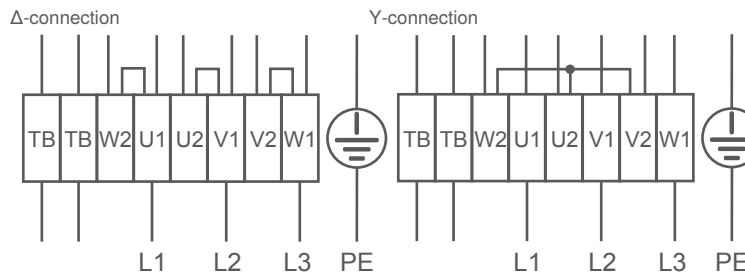
For 1~-motor with capacitor and thermostatic switch (if built in).  
**Airflow direction:** A  
**Direction of rotation:** counter clockwise



**Cable colours:**  
U1 brown  
U2 blue  
Z1 black  
Z2 orange  
TB white

### 106XA

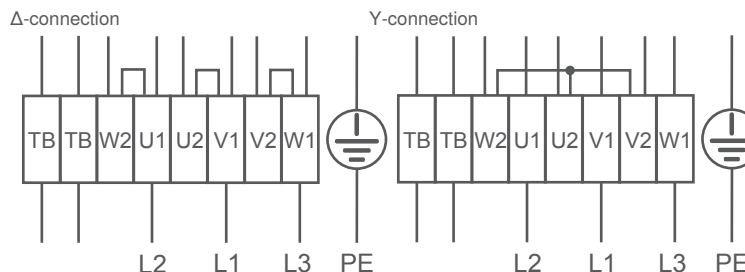
For 3~-motor with one speed and thermostatic switch (if built in).  
**Airflow direction:** V  
**Direction of rotation:** clockwise



**Cable colours:**  
U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

### 106XB

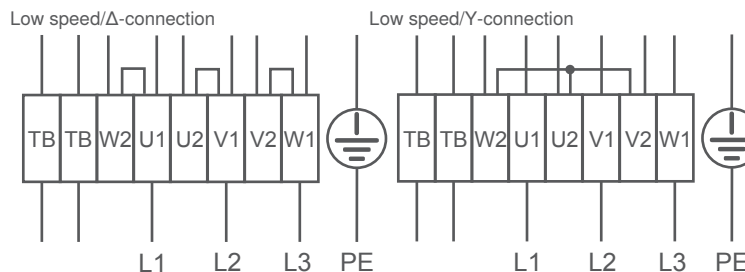
For 3~-motor with one speed and thermostatic switch (if built in).  
**Airflow direction:** A  
**Direction of rotation:** clockwise



**Cable colours:**  
U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

### 108XA

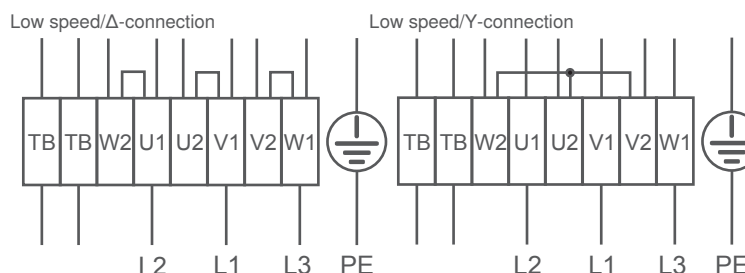
For 3~-Motor with 2 speeds (Δ-/Y switch over) and thermostatic switch (if built in). Without bridge when using speed change-over switch.  
**Direction of air flow:** V  
**Direction of rotation:** Clockwise



**Cable colours:**  
U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

### 108XB

For 3~ motor with 2 speeds (Δ-/Y switch over) and thermostatic switch (if built in). Without bridge when using speed change-over switch.  
**Direction of airflow:** A  
**Direction of rotation:** Counter clockwise



**Cable colours:**  
U1 brown  
V1 blue  
W1 black  
U2 red  
V2 grey  
W2 orange  
TB white

# Connection diagrams

## 177X

1~ Motor with condenser and thermostat switch.

### FN Series

**Airflow direction:** A

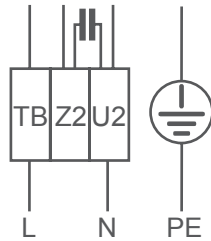
**Direction of rotation:** counterclockwise rotation (looking at rotor)

### FB Series

**Airflow direction:** A

**Direction of rotation:** clockwise rotation (looking at rotor)

Other speeds possible with capacitors connected in series.



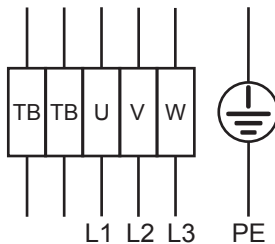
**Cable colours:**  
 U2 blue or grey  
 Z2 black  
 TB brown

## 159XA

1~ Motor with 1 speed and thermostats (if installed)

**Airflow direction:** V

**Rotat. direction:** clockwise rotation



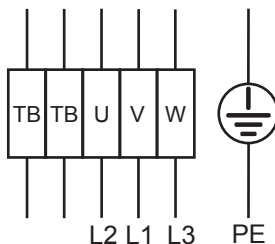
**Cable colours:**  
 U brown  
 V blue or grey  
 W black  
 TB white

## 159XB

1~ Motor with 1 speed and thermostats (if installed)

**Airflow direction:** A

**Rotat. direction:** counter clockwise rotation



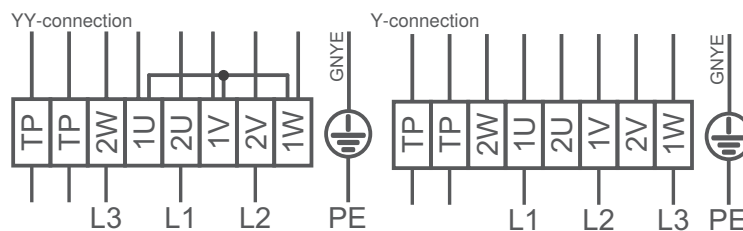
**Cable colours:**  
 U brown  
 V blue or grey  
 W black  
 TB white

## Connection diagram standard motor (2-4 pole)

### 221XA

3~ motor, 2 speeds (Dahlander YY/Y) with temperature sensor (if built in). Without bridge when using speed change-over switch.

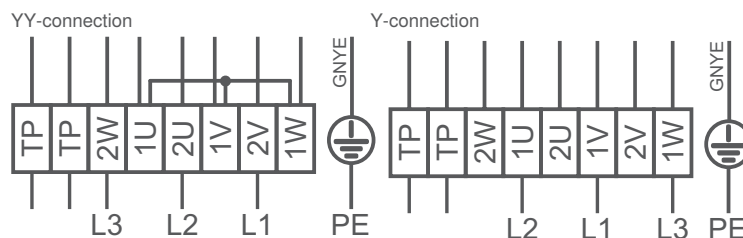
**Direction of rotation:** clockwise (looking at suction side)



### 221XB

3~ motor, 2 speeds (Dahlander YY/Y) with temperature sensor (if built in). Without bridge when using speed change-over switch.

**Direction of rotation:** counterclockwise (looking at suction side)





# Installation and usage information

## Measuring device for determining air volume

The active pressure process compares the static pressure before the inlet ring with the static pressure in the inlet ring at the place of greatest constriction (lowest free nozzle cross sectional area). Using the energy conservation principle, the active pressure (differential pressure of the static pressures) can be assigned to the airflow as follows:

$q_v$	Air flow in m <sup>3</sup> /h
$\Delta p_w$	Differential pressure of the static pressures in Pa
$k$	Factor for specific nozzle properties, nozzle factor
$\rho_{20}$	Standard air density with 1.2 kg/m <sup>3</sup>
$\rho_{BP}$	Air density at current operating point in kg/m <sup>3</sup>

Under normal conditions at 20 °C:

$$q_v = k \cdot \sqrt{\Delta p_w}$$

### Nozzle coefficients

Size	C / Cpro / N / ZArail	M series
225		57
250	60	68
280	75	86
315	95	96
355	121	142
400	154	172
450	197	217
500	252	274
560	308	
630	381	

$\rho = 1.20 \text{ kg/m}^3$

### Example:

If an active pressure of 700 Pa is measured for size ER63C, the air flow can be calculated as follows, using this simplified formula:

$$q_v = k \cdot \sqrt{\Delta p_w} = 381 \cdot \sqrt{700} = 10080 \text{ m}^3/\text{h}$$

The corresponding active pressure / air flow characteristic curves can be downloaded from our website in the Download section under Product Information.

The nozzle factors (k factors) were determined under laboratory conditions and with an undisturbed supply. If intake guard grilles are used (fitted in front of the inlet nozzle), these nozzle factors cannot be used for air flow determination because of a change in the supply flow and other static pressures.

### Notes pertaining to the measuring method

The measured values, which were determined using the active pressure method, are subject to a tolerance of +/- 8.0% as they pertain to the airflow result. This tolerance is reached above a minimum air velocity of approx. 29.53 ft/s at the place of greatest constriction.

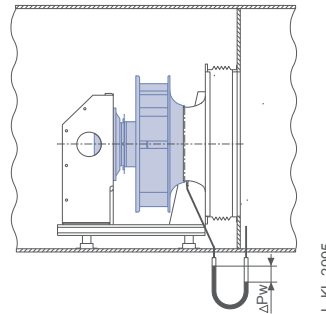
The tolerances cannot be clearly quantified below this minimum air velocity.

This airflow measuring method is only suitable for acceptance measurements on site.

For a more accurate airflow determination in the existing installation setup, a counter calibration of the airflow has to be carried out on site to measure the active pressure. The nozzle factors determined during this process apply exclusively to this installation setup.

Under fluctuating air conditions:

$$q_v = \sqrt{\frac{\rho_{20}}{\rho_{Bet}}} \cdot k_{20} \cdot \sqrt{\Delta p_w}$$



# Installation information

## Centrifugal fans

### Distances to other components

**Distance on the suction side:**  $LA \geq 0.5 \times DSa$

In the case of disturbance flow (per example curved pipe at the suction side, flaps etc.):  $LA \geq 1 \times DSa$

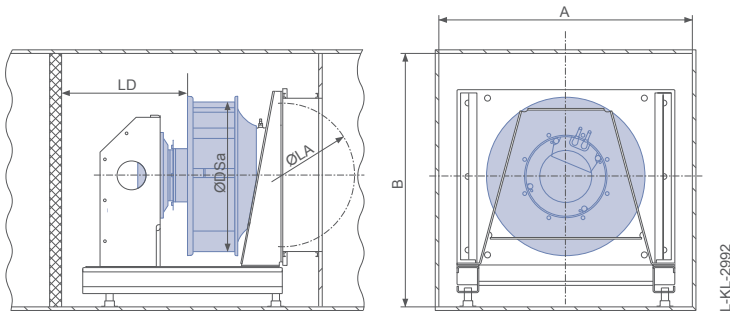
**Distance on the duct side:**

$LD \geq 1 \times DSa$

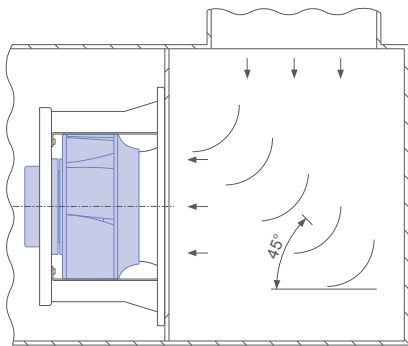
**housing wall distances:**

$A \geq 1.8 \times DSa$ ;  $A = B$  for air flow conditions without loss

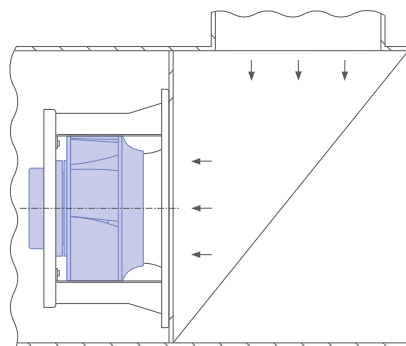
$A \geq 1.4 \times DSa$ ;  $A = B$  for air flow conditions almost without loss regarding to operating point but acoustical losses



Additional baffle plates **must be** fitted in the suction chamber over the whole width of the AHU if there is a 90° change of direction before the intake.



Baffle plates as a 1/4 circle

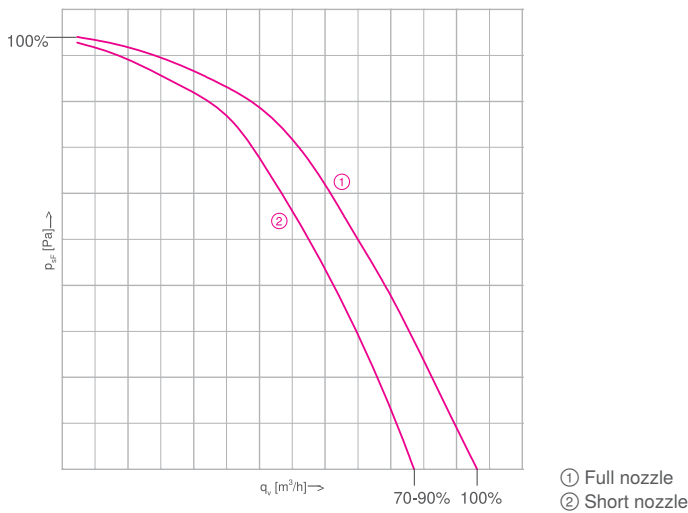


Baffle plate as a sheet metal mounted in a angle



# Installation information

## Influence of a short bell mouth



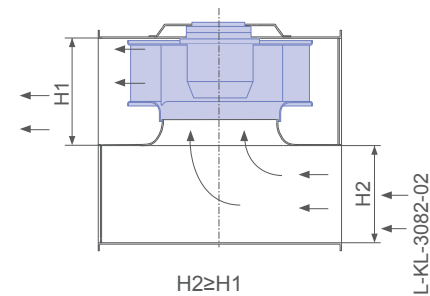
### Comparison of characteristic curves

Influence of bell mouth shape  
The airflow changes, when using a different bell mouth geometry.  
Shown on comparison short bell mouth to full bell mouth.

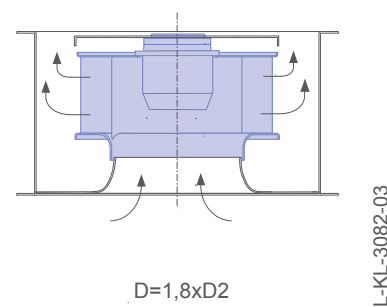
## Installation example

### Guard grills

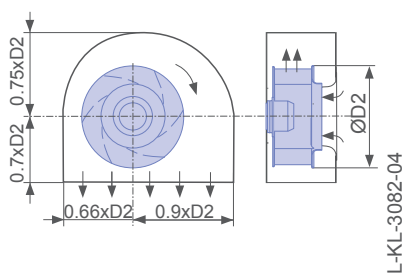
The fans are not ready-for-use products, but have been designed as components for air conditioning, ventilation, and exhaust air removal systems for equipment installation. They do not come equipped with built-in accidental contact-protection. They may only be operated after being installed in accordance with their intended use and all necessary safety devices have been attached and connected. If air intake and exhaust vents are freely accessible, protective devices corresponding to DIN EN ISO 13857 must be attached to the fan.



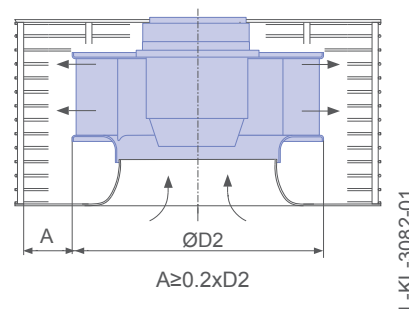
Switch cabinet ventilation



Pipe fan



Centrifugal fan RH\_M with semi-scroll housing



Duct fan

# Installation information

## Axial fans

### Airflow conditions

When installing fans in the devices, favourable airflow conditions must be maintained; this also applies to compact designs.

The following installation recommendations (Fig. I and II) indicate the required minimum distances.

Fig. I free air intake, connected to outlet side

Fig. II free air outlet, connected to intake side

Fig. III Air inlet nozzles

Please observe recommended gap  $s$  between fan blade and inner edge of nozzle

Fig. IV Influence of nozzle shape, comparison of characteristic curves (Fig. IV)

- ① Full nozzle (Design Q)
- ② Short nozzle, see Accessories

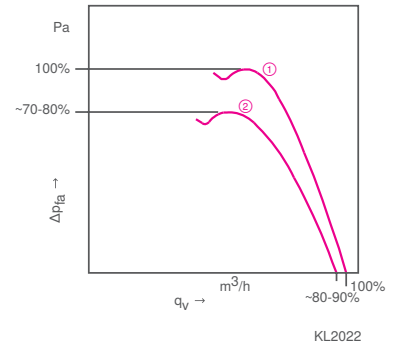


Fig. IV

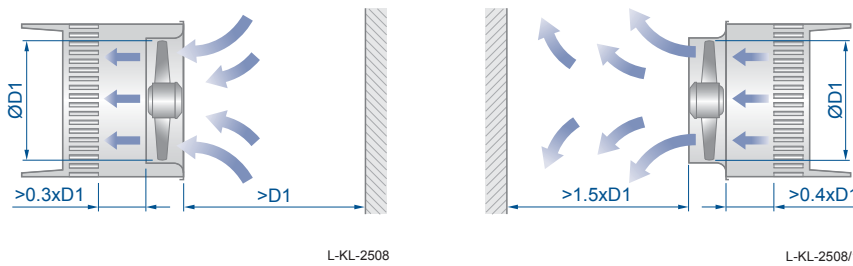


Fig. I

Fig. II

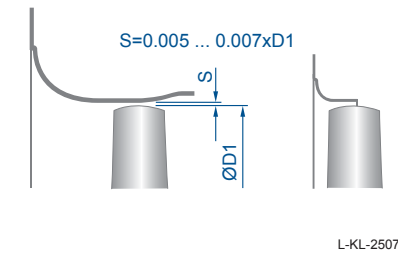


Fig. III

## Conditions for use and lifetime

### Operating mode

Continuous operation with occasional starts (S1) according to **DIN EN 60034-1:2011-02**. If the defined temperature  $t_{R(\min)}$  of the product is less than  $-25\text{ °C}$  an occasional starting between  $-25\text{ °C}$  and the defined minimum temperature is permissible. Continuous operation below  $-25\text{ °C}$  only with special bearings for refrigeration applications on request.

### Permissible minimum and maximum ambient temperature for operation

Please refer to the technical documentation of the product for the minimum and maximum ambient temperature valid for the respective fan. Operation below  $-25\text{ °C}$  as well as partial load operation for refrigeration applications is only possible with special bearings for refrigeration applications on request. If special bearings for refrigeration applications are installed in the fan, please observe the permissible maximum temperatures in the technical documentation of the product.

### Ball-bearing service life

The according to standard calculation methods determined bearing service life expectation of the motor-integrated ball bearings is mainly determined by the grease service life F10h and amounts for standard application to approx. 30.000 – 40.000 operating hours. The fan is maintenance-free due to the use of ball bearings with „lifetime lubrication“. Once the grease operating life F10h has been reached, it may be necessary to replace the bearing. The bearing service life expectation may change compared to the specified value, if operating conditions such as increased vibrations or shocks, increased or too low temperatures, humidity, dirt in the ball bearing or unfavourable control modes are present. A service life calculation for special applications can be provided on request.



## General notes

The information and data contained in this catalogue were composed to the best of our best ability and do not absolve the user from its duty to check the suitability of the products with respect to its intended application.

The customer is obligated to inform the supplier about general information concerning the intended use, the type of installation, the operating conditions and any other conditions that need to be taken into consideration if the order is not based on catalogue information.

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# The Royal League



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