

Movement by Perfection

Centrifugal Fans

Main Catalogue 2019

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












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 website in the "Downloads" section.



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Wir entwickeln und produzieren die
effizientesten Ventilatoren für die Zukunft

ZIEHL-ABEGG

Die Königsklasse

*der Lufttechnik
Regeltechnik und Antriebstechnik*

Einzigartige
Kunststoffproduktion
für bionische Hightech-
Ventilatoren



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



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One-stop expertise

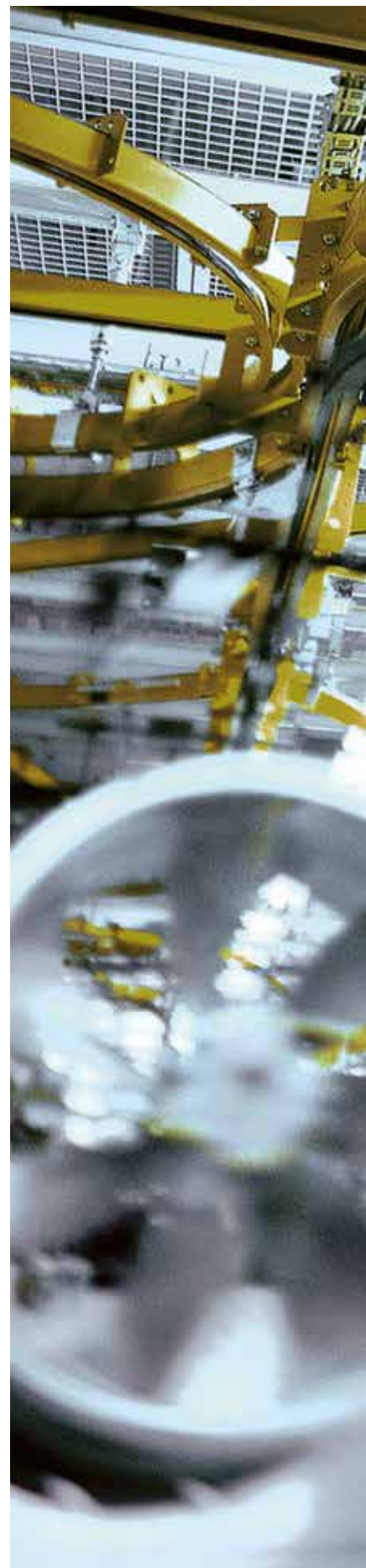
Fan, motor and control technology

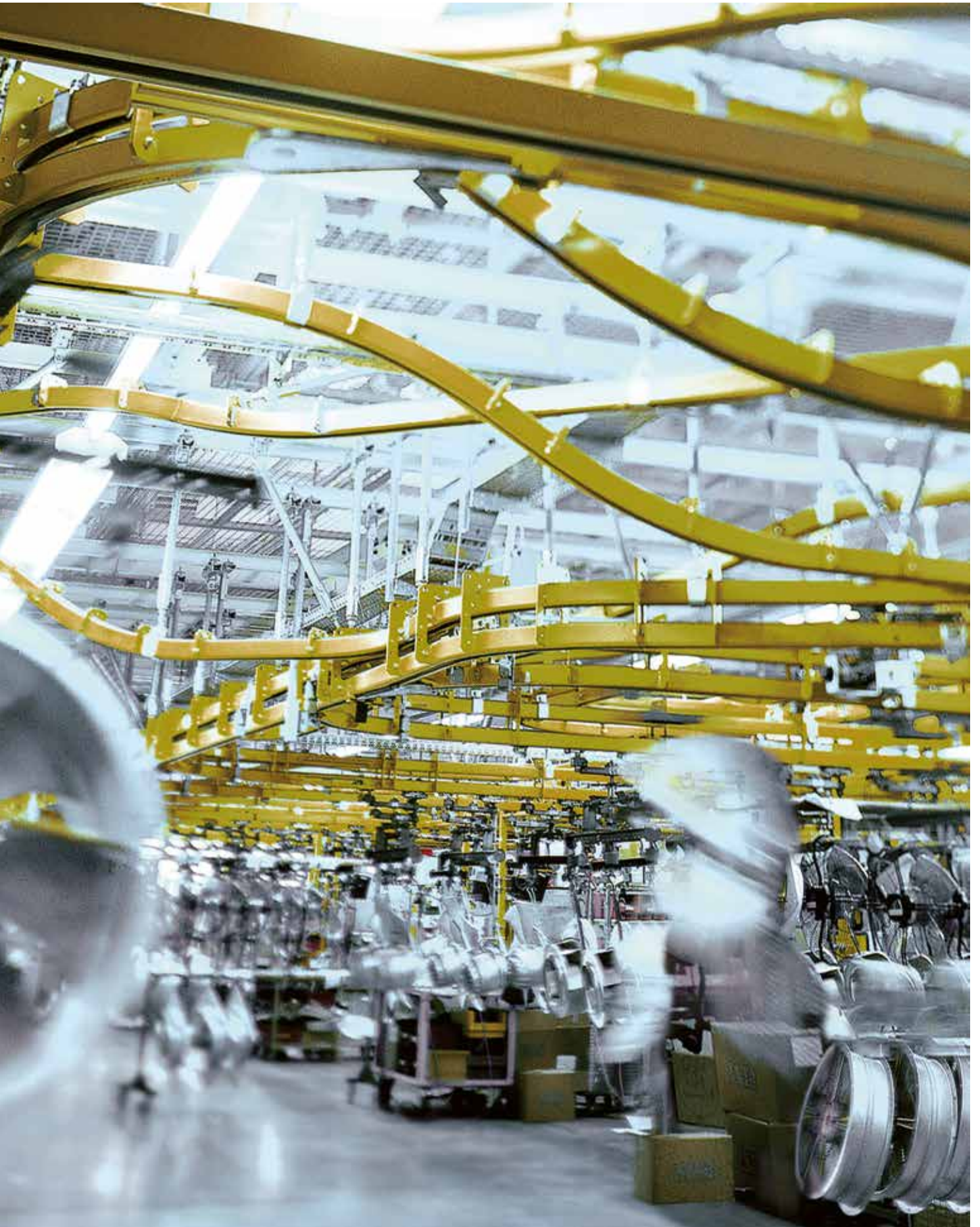
Whether air conditioning, drying, cooling or ventilating, the efficient fans with adapted drive and control technology from ZIEHL-ABEGG cope with these tasks safely and reliably. Individual and also complex customer requirements are welcome challenges.

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





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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 air 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.

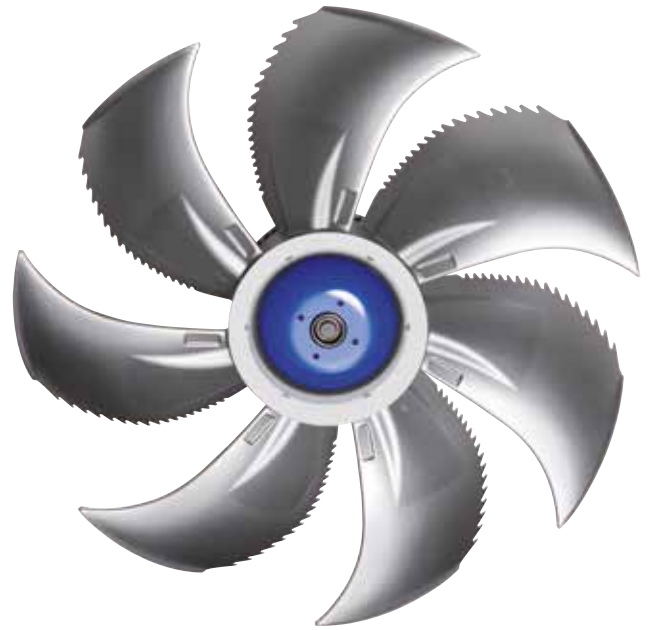


ECblue motor technology





Maximum efficiency and minimum consumption
ECblue with the latest **ZAmid**[®] Technology
Radial fans sector



Unique bionic profile FE2owlet,
combined with ECblue technology



ECblue – highest efficiency

AC-fans of the Royal League

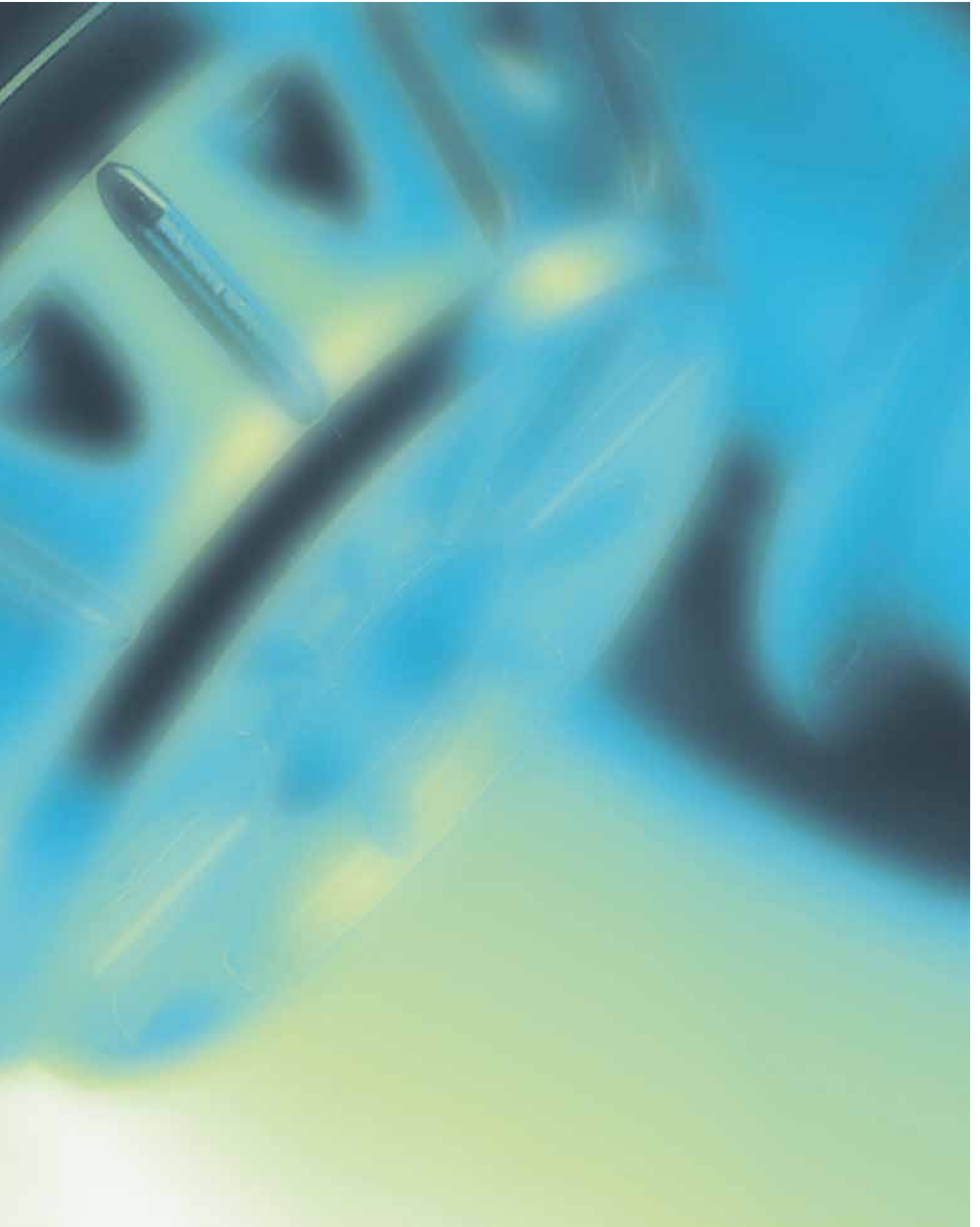
Strong, robust, extraordinary

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





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Expertise in ventilation

ErP directive

With the Kyoto protocol, the European Union pledged to reduce CO₂ emissions by at least 20 per cent by the year 2020. One measure for achieving this is the ErP directive for improved energy efficiency and general environmental compatibility of energy-related products – also known in Germany as the Eco Design directive. It supports a resource-friendly and energy-efficient product design. The implementation of these requirements is carried out for electromotors according to the Implementing Regulation (EU) No. 640/2009 and for fans according to the Implementing Regulation (EU) No. 327/2011.

With the implementation of the ErP directive, stricter efficiency requirements for **fans in the output range from 125 W to 500 kW** apply since 2013 and 2015 in two stages. The current ErP directive is under revision and a next stage with higher efficiency requirements is planned. Energy efficiency is thus given the same standing as the compliance with the low voltage or EMC directive. The system efficiency requirement is a prerequisite for a CE mark and is thus essential for a product to be used in EU member states.

Notes pertaining to the ErP evaluation

In order to meet ErP requirements, a fan must achieve a particular minimum efficiency (target energy efficiency). The directive sets out the corresponding formulae for calculating the limit value for the relevant fan type. The actual efficiency in the efficiency optimum of the fan, which is used for the ErP evaluation, is designated η_{statA} . The efficiency N is a parameter in the calculation of the target energy efficiency of the ErP directive. As a reference value for the required efficiency N_{nominal} , ZIEHL-ABEGG specifies the actual efficiency N_{actual} relative to a motor input power of 10 kW.

All specifications relevant for ErP relate to the requirements in the 2nd stage of ErP 2015. The measured data was determined in line with measurement category A using an inlet nozzle without contact protection complying with ISO 5801.

The **European Ventilation Industry Association (EVIA)** represents the European ventilation industry in dealings with national and European institutions.

The EVIA is a key platform for fan manufacturers and provides an interface with politicians, decision-makers in the European Union and other associations that use fans in their products. The EVIA supports the use of high-efficiency fans in Europe, in order to implement the EU efficiency increase targets.

ZIEHL-ABEGG played a major role in establishing the EVIA and supports it through active participation in its working groups.



Technical description

ZAbluefin-ECblue

Product specification

Free running impeller of the latest generation made of high performance composite material ZAmid with 5 backward curved blades in sizes 250 to 560 mm. Air flow rates up to 19,000 m³/h free blowing, max. static pressure increase up to 1,800 Pa possible. Design involves impeller mounted on motor flange and inlet nozzle with measuring device for air flow measurement. Ventilation units GR for compact installation in customer applications/devices for vertical air flow

Properties and special features

- Impeller with bionic 3D profile thanks to innovative design in the form of specially twisted blade geometry. The tubercle on the blade leading edge, which is based on a humpback whale, and the V-shaped serrated rear edge allow a characteristic map range with a wide optimal efficiency. Coupled with an opening, rotating diffusor the highest efficiencies are achieved.
- The innovatively rippled blade surface ensures a scattered noise emission and the lowest noise level.
- Impellers can be used in the application temperature range from -35°C to 60°C

Motor concepts

External rotor motors

- EC technology ECblue with integrated controller matched to the fan



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Technical description

Cpro-ECblue

Product specification

Free running Cpro impeller made of high performance composite material ZAmid with 7 backward curved, profiled blades in sizes 250 to 630 mm. Air flow rates up to 19,000 m³/h free blowing, static pressure increase up to 1,800 Pa possible. Design involves impeller mounted on motor flange and inlet nozzle with measuring device for air flow measurement.

Ventilation units GR for compact installation in customer applications/devices for horizontal and vertical air flow.

ER built-in fans, e.g. for vibration-damped use in central air handling units for horizontal air flow.



Properties and special features

- Impeller with rotating, bladeless diffusor for high efficiencies and favourable acoustic behaviour.
- Reduced tonal noise as a result of special 3D blade geometry.
- Impeller made of high-quality composite material with high chemical resistance and hygienically tested.
- Impellers can be used in the application temperature range from -35°C to 60°C.

Motor concepts

External rotor motors

- EC technology ECblue with integrated controller matched to the fan



Technical description

C-ECblue

Product specification

Free running impeller with 7 backward curved blades in sizes 250 to 800 mm. Impeller made of sheet steel. Impeller version mounted on motor flange and inlet nozzle with measurement device for air flow measurement. Air flow rates up to 24,000 m³/h free blowing, max. static pressure increase up to 1,800 Pa possible.

GR modules for compact installation in customer applications/devices for horizontal and vertical air flow.

ER plug fans e.g. for vibration-damped use in central air-conditioning units with horizontal air flow.

Characteristics and special features

- Impeller with rotating vaneless diffusor for high efficiency levels and favourable acoustic characteristics.
- Aluminium impeller for use with external rotor motors.
- Impellers can be used in the application temperature range from -40°C to 60°C.

Motor concepts

Internal rotor motors

- EC technology ECblue with integrated controller matched to the fan



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Technical description

ZAvblue-ECblue & ZAvblue

Product specification

Free running impeller ZAvblue made of high performance composite material with 7 backward curved, profiled blades in sizes 250 to 630 mm. Design involves impeller on motor flange and inlet nozzle made of composite material with measuring device for air flow measurement. Air flow rate up to approx. 19,000 m³/h free blowing, max. static pressure increase up to 800 Pa possible. Ventilation units GR for compact installation in customer applications/devices for horizontal and vertical air flow.

Properties and special features

- High air flow rates and low sound power level thanks to special 3D blade geometry with diagonal outflow, reduced tonal noise. Ideally suited for low-pressure applications in confined installation spaces.
- Complete model range meets ErP 2015 including in AC technology.
- Impellers can be used in the application temperature range from -15°C to 60°C

Motor concepts

External rotor motors

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



Technical description

ZAvblue & ZApilot with EC055

Product specification

Free running impeller ZAvblue with EC055 made of high performance composite material with 7 backward curved blades in sizes 175 up to 250 mm. Design involves impeller on motor flange with inlet nozzle made of composite material.
Air flow rates up to 1,300 m³/h free blowing, max. static pressure increase up to 1,000 Pa possible.

A fast Plug & Play solution is offered by the ventilation unit GR ZApilot which is available for all sizes and optimised for compact installation in customer applications/devices. In addition, the module enables a performance increase compared to backward curved motor impellers by means of aerodynamic enhancement .

Properties and special features

- Acoustics-optimised products for use in particularly noise-critical applications
- Compact, highly efficient motor
- Bionic elements in the form of 3D blade geometry and honey-comb structure
- Impellers can be used in the application temperature range from -30°C to 60°C

Motor concepts

External rotor motors

- EC technology ECblue with integrated controller matched to the fan



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Vpro-ECblue & Vpro

Product specification

Free running Vpro impeller made of high performance composite material with 6 backward curved, profiled blades in sizes 190 to 630 mm. Design involves impeller on motor flange and inlet nozzle. Air flow rates up to 18,000 m³/h free blowing, max. static pressure increase up to 1,300 Pa possible. Ventilation units GR for compact installation in customer applications/devices for horizontal and vertical air flow.

Properties and special features

- High air flow rates, high efficiency, low sound power levels thanks to special 3D blade geometry, reduced tonal noise. Ideally suited for low-pressure applications.
- Impellers can be used in the application temperature range from -15°C to 60°C

Motor concepts

External rotor motors

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



Technical description

Ventilation unit GR

Product specification

Compact optimised construction made of galvanised sheet metal parts complying with DIN EN 10346, surface type A resp. welded and powder coated motor suspension in spider design. Integrated galvanised sheet steel inlet nozzle for optimum flow to impeller, with measurement device for air flow determination.

Characteristics and special features

- Complete fans are delivered balanced in accordance with ISO 21940-11 for the appropriate fan category in accordance with ISO 14694.
- The ventilation units have an application temperature range of -20°C to 40°C, with different temperatures available on request.
- All ventilation units GR units can be mounted in any installation positions H (horizontal air flow), Vo (intake from above), Vu (intake from below)

More GR ventilation units, see FANselect selection software or on request.



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ZAcube

Product specification

Stackable fan module with built-in Premium Optimizer for maximum efficiency with reduced acoustics. Modules feature free running impeller in sizes 315 to 560 mm. Impeller made of high performance composite material ZAmid. Air flow rate up to approx. 17,500 m³/h free blowing, max. static pressure increase up to 2,100 Pa possible. Modules in 3 sizes for easy handling and multiple fan formation set-up for horizontal air feed in air handling units or for retrofitting of older existing devices.

Properties and special features

- ZAcube modules feature the Premium Optimizer. This ensures a substantially improved flow pattern at the module outlet to increase the ventilation performance. At the same time, the acoustics are significantly improved. The components below are more homogeneously supplied with it being possible to reduce their distance to the fan.
- The modular design of the ZAcube fans enables a fast and easy multiple fan formation set-up. Fans can be stacked up to 5 levels and operated in parallel.
- The modules possess smooth surfaces without sharp edges offering very good accessibility and cleanability for the highest hygienic requirements thanks to the Premium Optimizer's click system.
- Standardised connection screws are provided with every ZAcube ensuring easy interconnectability. The surrounding flange level allows the ZAcube modules to be sealed from one another for leak-proof operation of the multiple fan formation.
- The advantages of the space-optimised design of the ZAcube modules are noticeable as early as during transport and handling.
- Modules can be used in the application temperature range from -35°C to 60°C

Motor concepts

External rotor motors

- EC technology ECblue with integrated controller matched to the fan



Technical description

Housing fans

Product specification

Single-/double-ended sucking EC centrifugal fans in optimised spiral housing with forward curved blades. Energy-optimised for operation in spiral housing for high efficiencies and favourable acoustic behaviour. Available in sizes 108 to 450 mm (single-sided) and 133 to 450 mm (double-sided). Air flow rates up to 9,000 m³/h and static pressures up to 1,100 Pa achievable.

Properties and special features

- Housing fans are characterized by a very high output density.
- The high number of blades means the fans have very good sound characteristics with very little tonal noise of blades.
- Housing with discharge flange and fixing bracket.
- Fans can be used in the application temperature range from -20°C to 60°C

Motor concepts

External rotor motors

- EC technology ECblue with integrated controller matched to the fan



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Type key

Example		RH 56 I - Z I D . G Q . C R
Design		
Motorised impeller	RH	
Ventilation unit	GR	
Plug fan	ER	
Fan module	WR	
Motorised impeller	RE	
Housing fan single inlet	RG	
Housing fan double inlet	RD	
Size impeller		
Impeller diameter 560 mm	56	
	...	
Series		
ZAbluefin	I	
C/Cpro	C	
Vpro/ZAblue	V	
R	R	
S	S	
Number of poles		
6 pole	6	
10 pole	Z	
Type of current		
external rotor EC motor with controller	I	
three phase alternating current	D	
single phase alternating current	E	
Motor design		
Offset flange on rotor outer diameter	D	
Flange on rotor diameter	K	
Motor		
Impeller version		
Direction of rotation		
Clockwise rotation	R	
Counter clockwise rotation	L	

Ordering information

The following shall be stated when ordering: Type, article no. and when ordering system components part no.



Selection program FANselect

The world's best selection program for fans



At 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 with an option to calculate the efficiency, the acoustics, the SFP and much more. In addition, you can also select the matching systems components. You can conveniently 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.



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ZAbluefin-ECblue

EC-Technology

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ZBluefin-ECblue

Size 250

RH25I

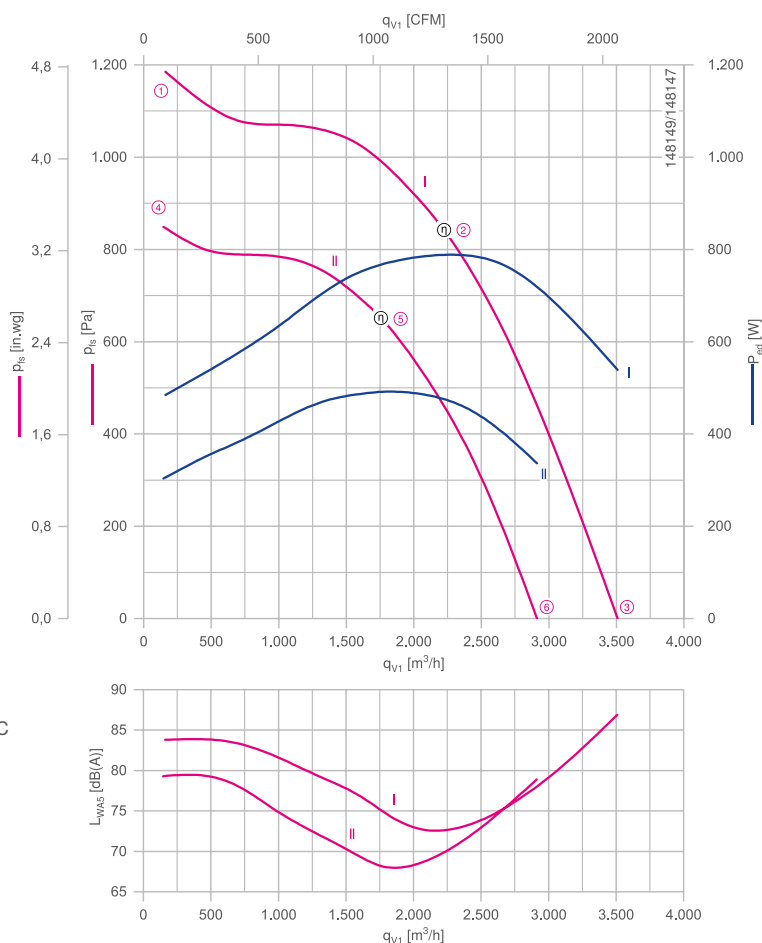


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %				kg
I	1~ 200-277	RH25I-6ID.BD.CR	BD	116855	780 W	4.00-2.90	3730	74.1	85.7	2015	yes		5.20
	1~ 200-277	GR25I-6ID.BD.CR	BD	116883/A01	780 W					2015			11.00
II	1~ 200-277	RH25I-6ID.BD.CR	BD	116854	500 W	2.50-1.80	3170	73.6	87.3	2015			5.20
	1~ 200-277	GR25I-6ID.BD.CR	BD	116882/A01	500 W					2015			11.00

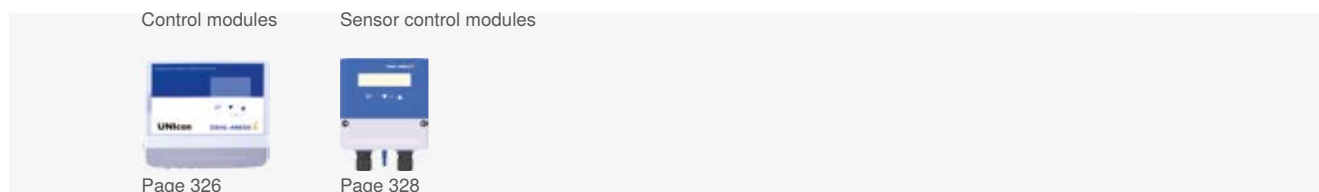
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
_25I-6ID.BD.CR	I	3730	①	2.10	480	84	55	230
			②	3.50	780	73		
			③	2.40	540	87		
	II	3170	④	1.35	300	79	55	
			⑤	2.20	500	68		
			⑥	1.50	340	79		

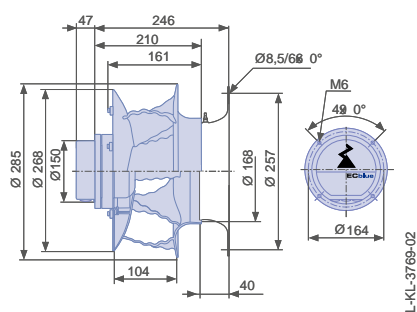
Control technology



Dimensions mm

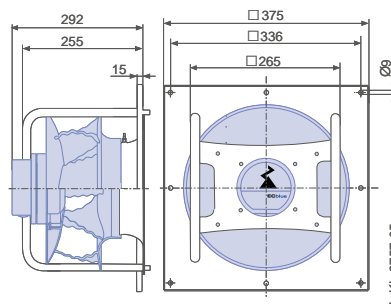
Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

BD



Ventilation unit GR in installation position H/Vu/Vo

Inlet nozzle integrated



ZBluefin-ECblue

Size 280

RH28I

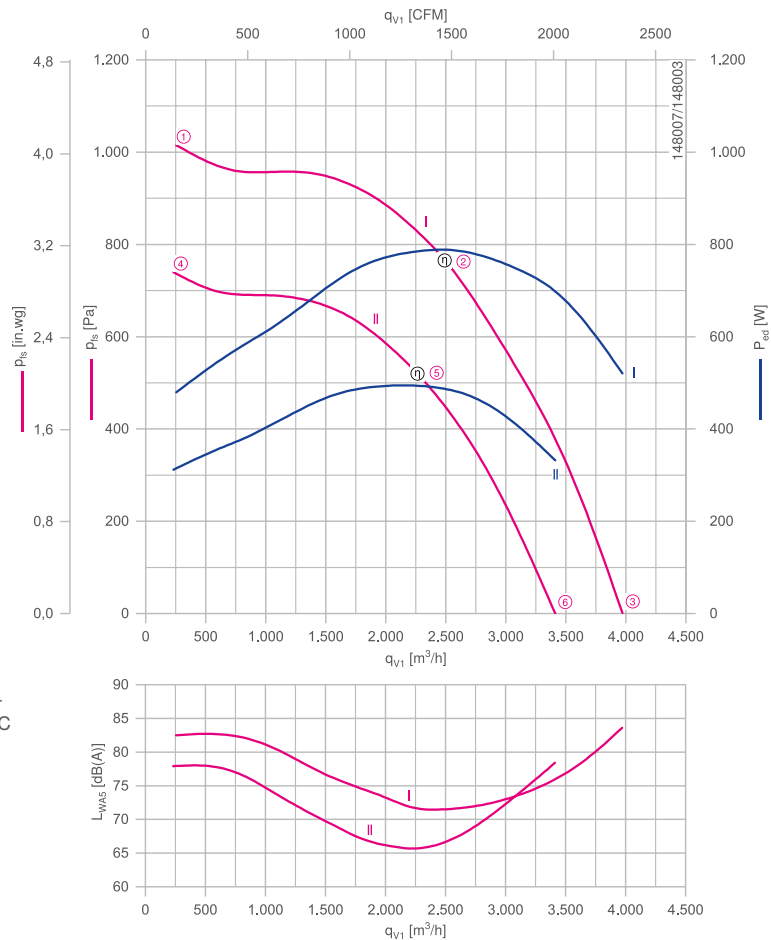


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	1~ 200-277	RH28I-6ID.BD.CR	BD	116857	780 W	4.00-2.90	3110	75.4	87.0	2015	yes		5.50
	1~ 200-277	GR28I-6ID.BD.CR	BD	116885/A01	780 W					2015			12.00
II	1~ 200-277	RH28I-6ID.BD.CR	BD	116856	500 W	2.50-1.80	2640	75.3	89.0	2015			5.50
	1~ 200-277	GR28I-6ID.BD.CR	BD	116884/A01	500 W					2015			12.00

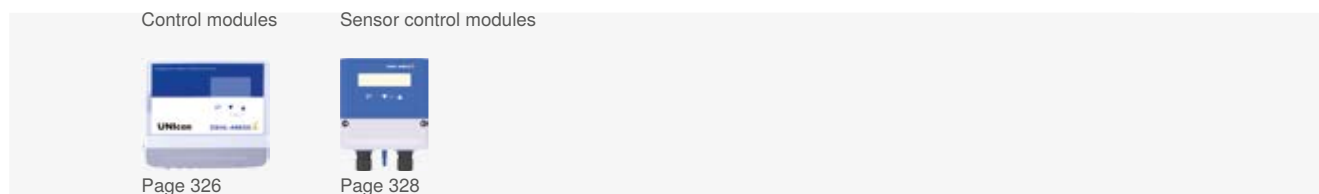
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
_28I-6ID.BD.CR	I	3110	①	2.10	480	83	50	230
			②	3.50	780	72		
			③	2.30	520	84		
	II	2640	④	1.35	310	78	55	
			⑤	2.20	500	66		
			⑥	1.45	330	78		

Control technology

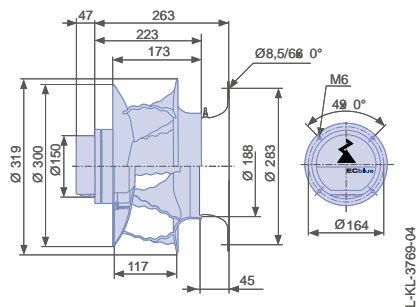


Dimensions mm

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

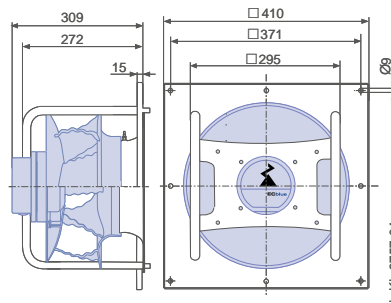
Inlet nozzle not included

BD



Ventilation unit GR in installation position H/Vu/Vo

Inlet nozzle integrated



ZBluefin-ECblue

Size 315

RH311

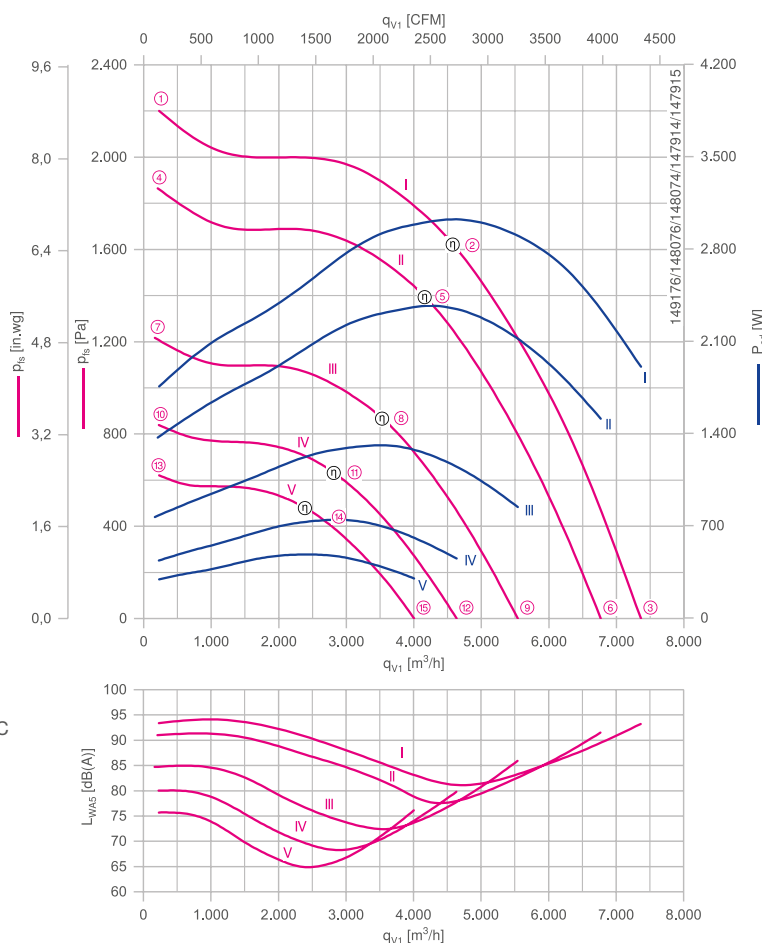


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : min. IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414632 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH311-ZID.DC.CR	DC	116862	3.00 kW	4.80-3.80	4020	73.7	79.2	2015	yes	UL Listed Product	10.70
	3~ 380-480	GR311-ZID.DC.CR	DC	116890/A01	3.00 kW					2015			21.00
II	3~ 380-480	RH311-ZID.DC.CR	DC	116861	2.40 kW	3.80-3.00	3700	74.3	80.8	2015	yes	UL Listed Product	8.90
	3~ 380-480	GR311-ZID.DC.CR	DC	116889/A01	2.40 kW					2015			18.00
III	1~ 200-277	RH311-ZID.DC.CR	DC	116860	1.30 kW	6.60-4.80	3000	71.9	81.2	2015	yes	UL Listed Product	8.90
	1~ 200-277	GR311-ZID.DC.CR	DC	116888/A01	1.30 kW					2015			18.00
IV	1~ 200-277	RH311-6IK.BD.CR	BD	116859	740 W	3.80-2.70	2520	74.6	86.5	2015	yes	UL Listed Product	5.90
	1~ 200-277	GR311-6IK.BD.CR	BD	116887/A01	740 W					2015			14.00
V	1~ 200-277	RH311-6IK.BD.CR	BD	116858	480 W	2.40-1.75	2170	75.4	89.3	2015	yes	UL Listed Product	5.90
	1~ 200-277	GR311-6IK.BD.CR	BD	116886/A01	480 W					2015			14.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WAS} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C	Voltage
		n min ⁻¹		I A	P_{ed} W			U V
_31I-_I_-_CR	I	4020	①	2.70	1750	93	45	400
			②	4.60	3000	81		
			③	3.00	1900	93		
	II	3700	④	2.20	1350	91	55	
			⑤	3.70	2400	78		
			⑥	2.40	1500	92		
	III	3000	⑦	3.60	760	85		50
			⑧	6.00	1300	72		
			⑨	3.90	840	86		
	IV	2520	⑩	1.95	440	80	40	
			⑪	3.30	740	68		
			⑫	2.00	460	80		
	V	2170	⑬	1.30	290	76		50
			⑭	2.10	480	66		
			⑮	1.30	300	76		

Control technology

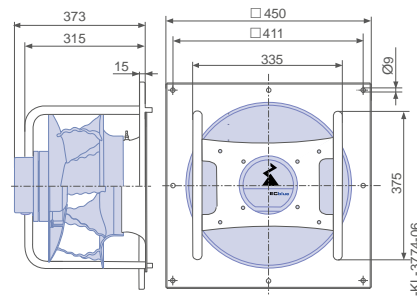
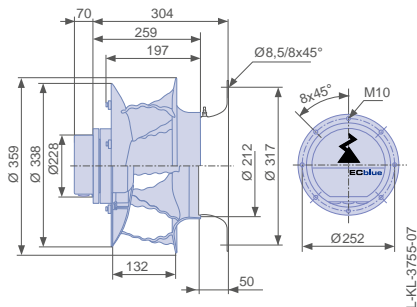
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

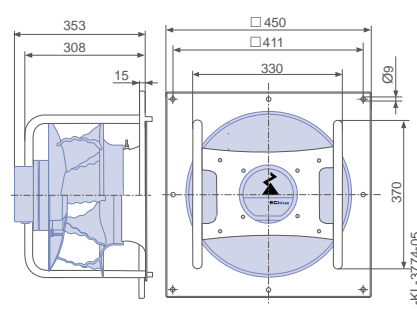
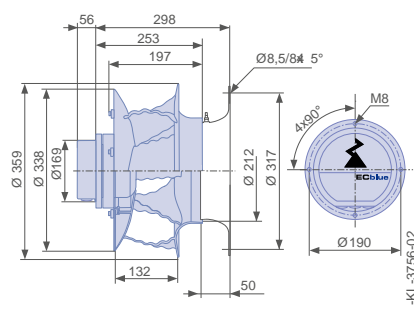
Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/Vo
Inlet nozzle integrated

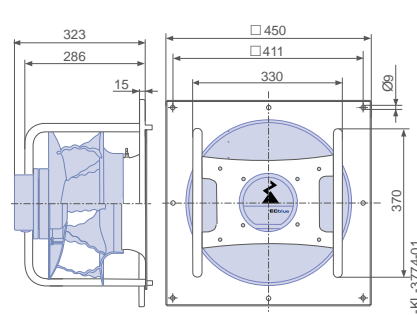
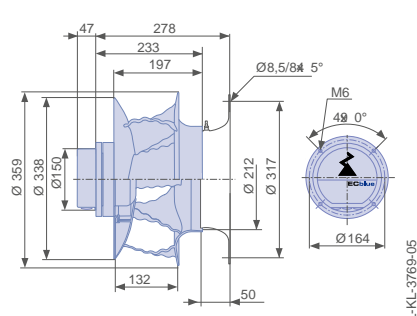
DC I



DC



BD



ZBluefin-ECblue

Size 355

RH35I

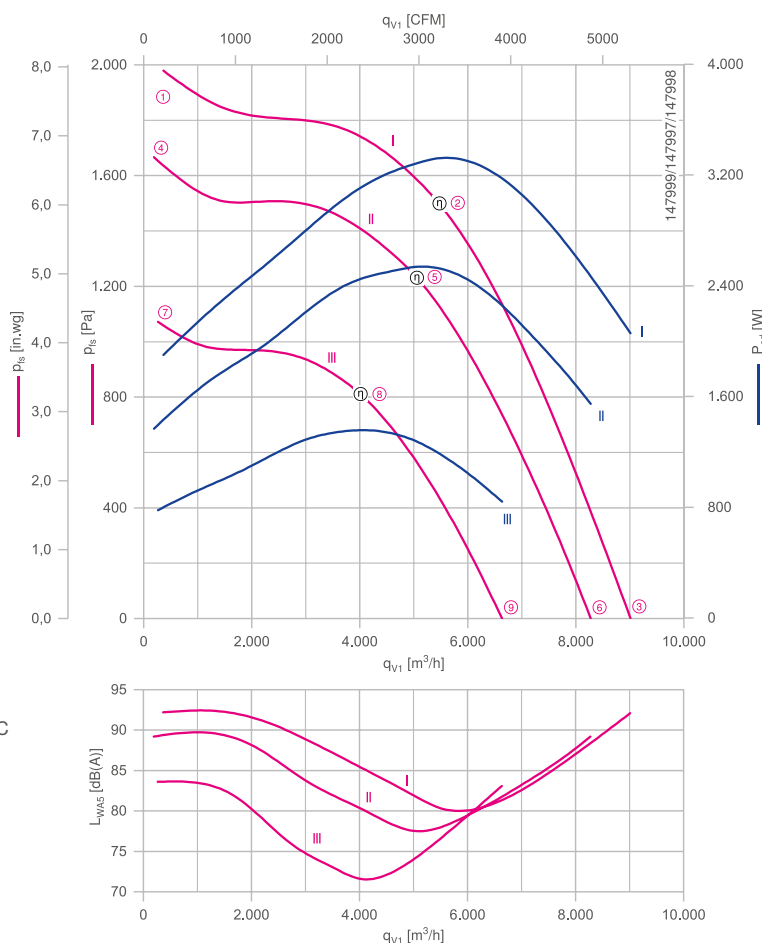


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP55
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414633 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH35I-ZID.DG.CR	DG	116865	3.30 kW	5.40-4.20	3410	74.0	79.0	2015	yes	UL Listed Product	13.10
	3~ 380-480	GR35I-ZID.DG.CR	DG	116893/A01	3.30 kW					2015			25.00
II	3~ 380-480	RH35I-ZID.DC.CR	DC	116864	2.50 kW	4.00-3.20	3100	74.1	80.4	2015	yes	UL Listed Product	9.40
	3~ 380-480	GR35I-ZID.DC.CR	DC	116892/A01	2.50 kW					2015			21.00
III	1~ 200-277	RH35I-ZID.DC.CR	DC	116863	1.35 kW	6.80-5.00	2490	73.6	82.8	2015	yes	UL Listed Product	9.40
	1~ 200-277	GR35I-ZID.DC.CR	DC	116891/A01	1.35 kW					2015			21.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		
_35I-ZID.D_CR	I	3410	①	3.00	1900	92	50	400
			②	5.20	3300	80		
			③	3.20	2100	92		
	II	3100	④	2.20	1350	89	50	230
			⑤	3.90	2500	78		
			⑥	2.40	1550	89		
	III	2490	⑦	3.60	780	84	50	230
			⑧	6.20	1350	72		
			⑨	3.90	840	83		

Control technology

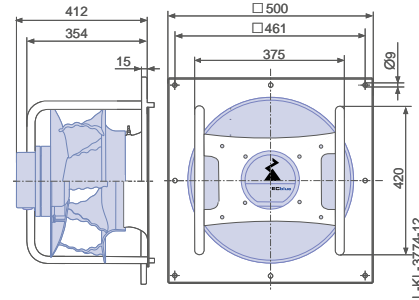
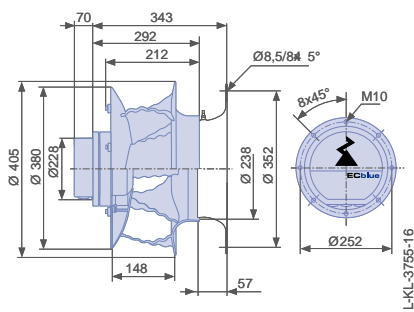


Dimensions mm

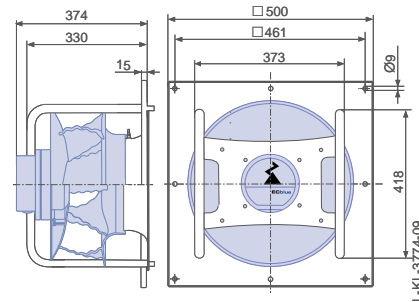
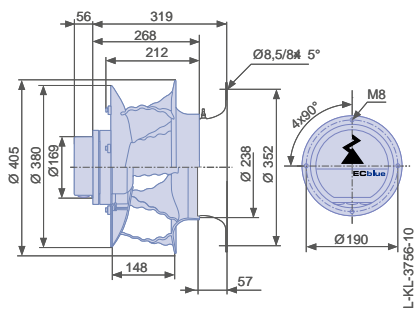
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

DG



DC



ZBluefin-ECblue

Size 400

RH40I

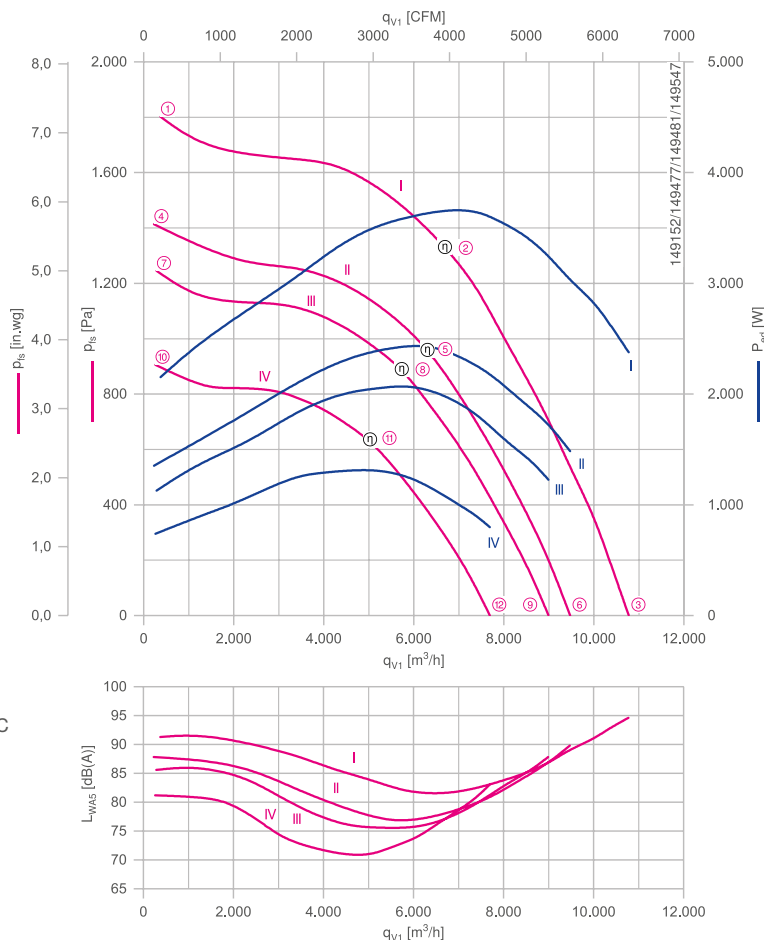


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP55
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414634 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %			kg	
I	3~ 380-480	RH40I-ZID.GG.CR	GG	116869	3.70 kW	5.80-4.60	2860	72.7	77.3	2015	yes	UL Listed Product	19.50
	3~ 380-480	GR40I-ZID.GG.CR	GG	116897/A01	3.70 kW					2015			34.00
II	3~ 380-480	RH40I-ZID.DG.CR	DG	116868	2.50 kW	4.00-3.10	2500	75.0	81.5	2015			14.20
	3~ 380-480	GR40I-ZID.DG.CR	DG	116896A01	2.50 kW					2015			29.00
III	3~ 380-480	RH40I-ZID.DC.CR	DC	116867	2.10 kW	3.40-2.70	2360	74.7	81.9	2015			10.50
	3~ 380-480	GR40I-ZID.DC.CR	DC	116895/A01	2.10 kW					2015			26.00
IV	1~ 200-277	RH40I-ZID.DC.CR	DC	116866	1.30 kW	6.80-5.00	2020	74.3	83.5	2015	10.50		
	1~ 200-277	GR40I-ZID.DC.CR	DC	116894/A01	1.30 kW					2015	26.00		

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		
__40I-ZID__CR	I	2860	①	3.30	2200	91	55	400
			②	5.60	3700	81		
			③	3.60	2400	95		
	II	2500	④	2.10	1350	88	60	
			⑤	3.80	2500	77		
			⑥	2.30	1500	90		
	III	2360	⑦	1.80	1150	86	40	
			⑧	3.20	2100	76		
			⑨	1.95	1250	88		
	IV	2020	⑩	3.50	740	81	45	
			⑪	6.00	1300	71		
			⑫	3.70	800	83		

Control technology

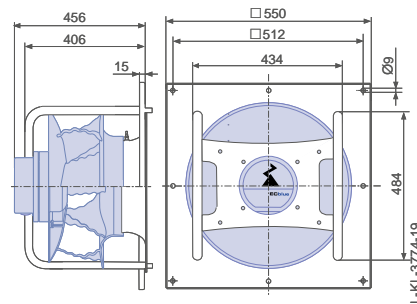
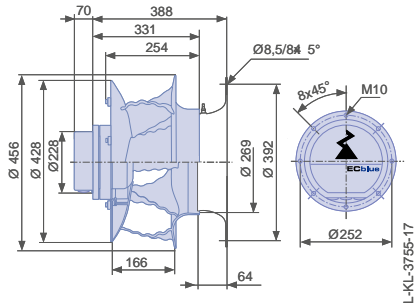


Dimensions mm

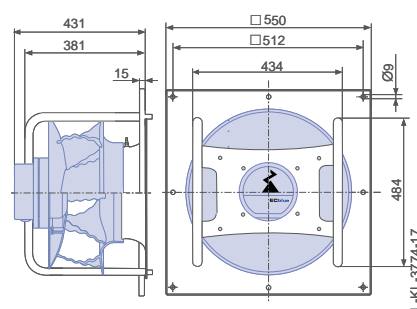
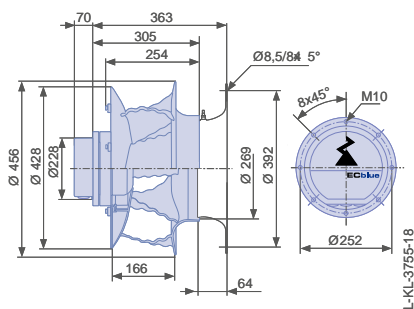
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

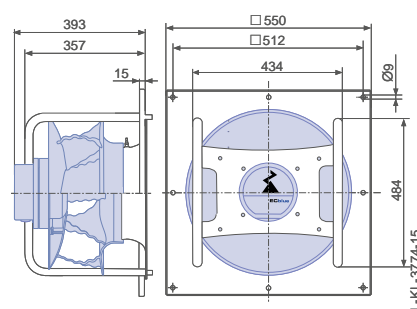
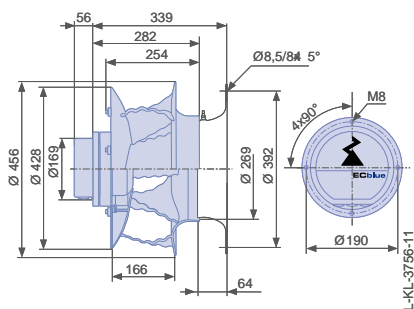
GG



DG



DC



ZBluefin-ECblue

Size 450

RH45I

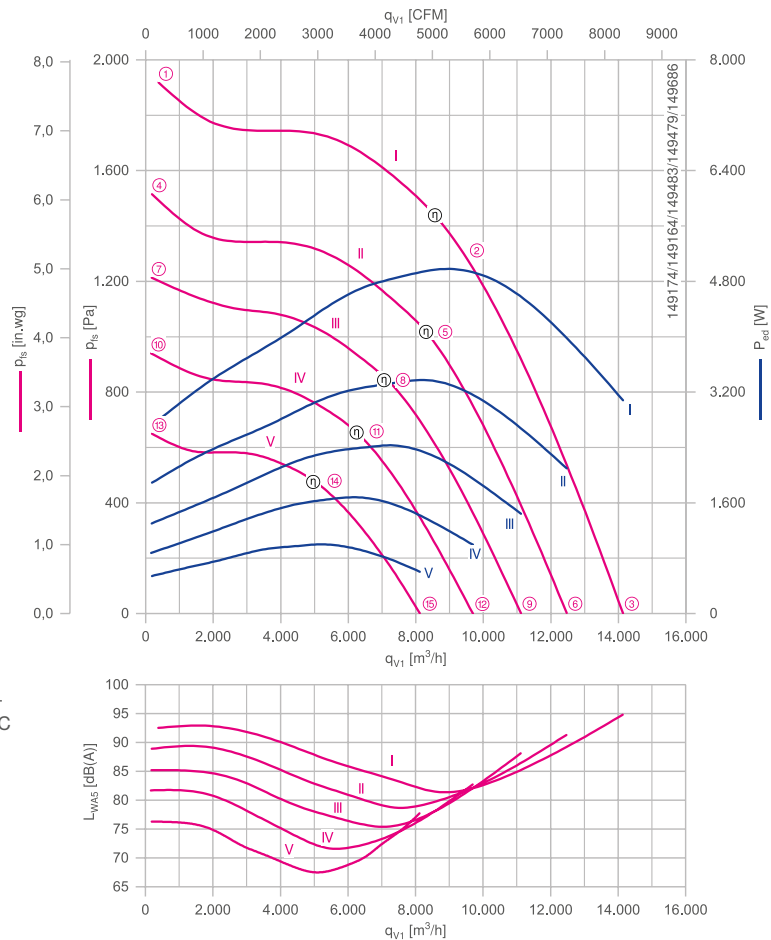


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP55
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414635 Page 288
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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %			kg	
I	3~ 380-480	RH45I-ZID.GG.CR	GG	116875	5.00 kW	8.00-6.40	2620	73.4	76.6	2015	yes	UL Listed Product	20.70
	3~ 380-480	GR45I-ZID.GG.CR	GG	116903/A01	5.00 kW								37.00
II	3~ 380-480	RH45I-ZID.GG.CR	GG	116874	3.40 kW	5.40-4.20	2300	75.0	80.0	2015			20.70
	3~ 380-480	GR45I-ZID.GG.CR	GG	116902/A01	3.40 kW								37.00
III	3~ 380-480	RH45I-ZID.DG.CR	DG	116873	2.40 kW	3.90-3.10	2050	75.1	81.5	2015			15.40
	3~ 380-480	GR45I-ZID.DG.CR	DG	116901/A01	2.40 kW								31.00
IV	3~ 380-480	RH45I-ZID.DC.CR	DC	116872	1.70 kW	2.80-2.20	1800	74.3	82.4	2015			11.70
	3~ 380-480	GR45I-ZID.DC.CR	DC	116900/A01	1.70 kW								28.00
V	1~ 200-277	RH45I-ZID.DC.CR	DC	116871	1.00 kW	5.20-3.70	1500		84.8	2015			11.70
	1~ 200-277	GR45I-ZID.DC.CR	DC	116899/A01	1.00 kW								28.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V	
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C		
__45I-ZID__CR	I	2620	①	4.40	2800	93	40	400	
			②	7.80	5000	82			
			③	4.80	3100	95			
	II	2300	④	2.90	1900	89	55		
			⑤	5.20	3400	79			
			⑥	3.20	2100	91			
	III	2050	⑦	2.10	1300	85	40		
			⑧	3.80	2400	75			
			⑨	2.30	1450	88			
	IV	1800	⑩	1.45	880	82	40		
			⑪	2.60	1700	72			
			⑫	1.60	1000	83			
	V	1500	⑬	2.60	540	76	50		230
			⑭	4.60	1000	67			
			⑮	2.80	600	78			

Control technology

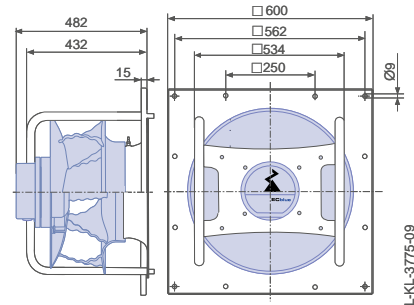
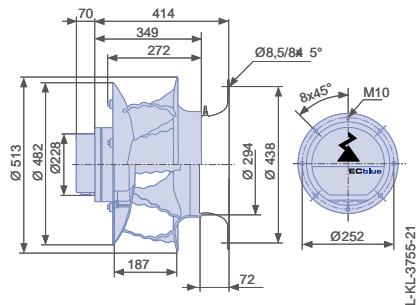
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

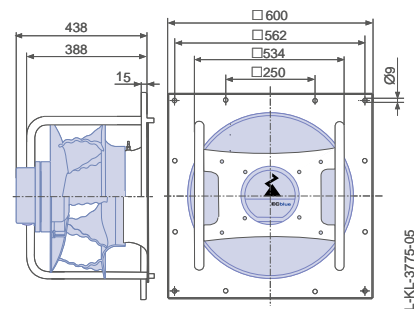
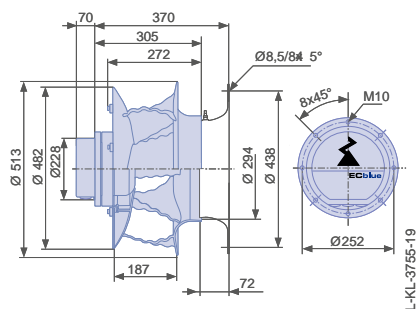
Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/Vo
Inlet nozzle integrated

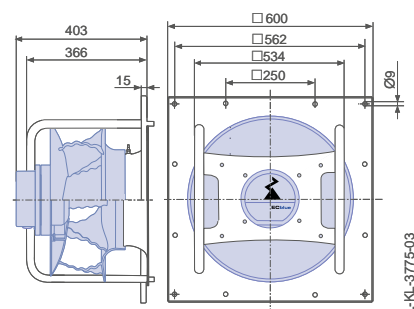
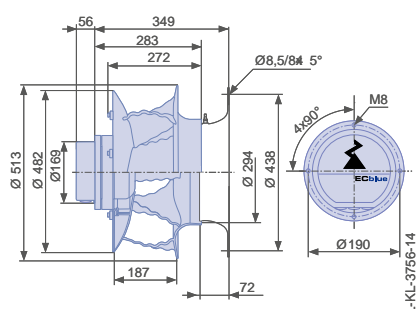
GG



DG



DC



ZBluefin-ECblue

Size 500

RH50I

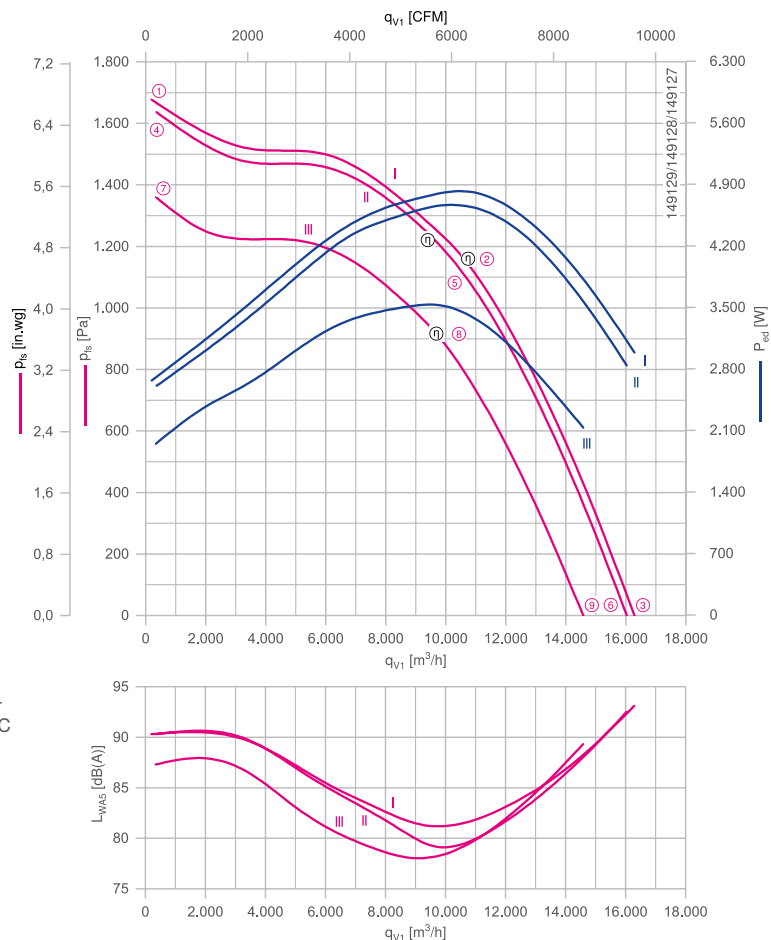


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP55
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414636 Page 288
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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH50I-ZID.GQ.CR	GQ	116878	4.80 kW	7.80-6.20	2180	75.5	78.9	2015	yes	UL Listed Product	33.30
	3~ 380-480	GR50I-ZID.GQ.CR	GQ	116906/A01	4.80 kW								2015
II	3~ 380-480	RH50I-ZID.GL.CR	GL	116877	4.60 kW	7.40-6.00	2150	75.1	78.6	2015			26.50
	3~ 380-480	GR50I-ZID.GL.CR	GL	116905/A01	4.60 kW								2015
III	3~ 380-480	RH50I-ZID.GG.CR	GG	116876	3.50 kW	5.60-4.40	1950	75.2	80.0	2015			21.90
	3~ 380-480	GR50I-ZID.GG.CR	GG	116904/A01	3.50 kW								2015

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		
_50I-ZID.G_CR	I	2180	①	4.20	2700	90	45	400
			②	7.40	4800	82		
			③	4.60	3000	93		
	II	2150	④	4.00	2600	90	40	
			⑤	7.20	4600	80		
			⑥	4.40	2800	93		
	III	1950	⑦	3.00	1950	87	55	
			⑧	5.40	3500	78		
			⑨	3.30	2100	89		

Control technology

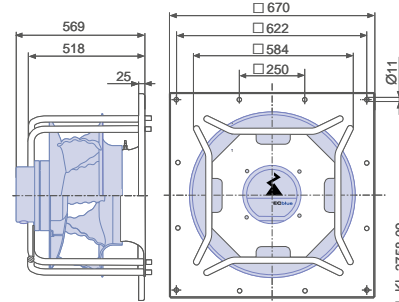
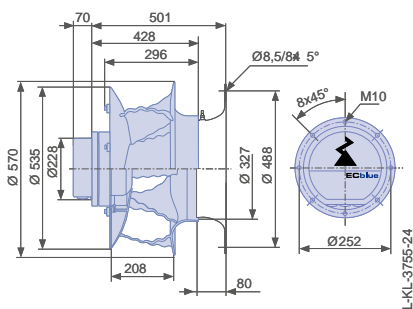


Dimensions mm

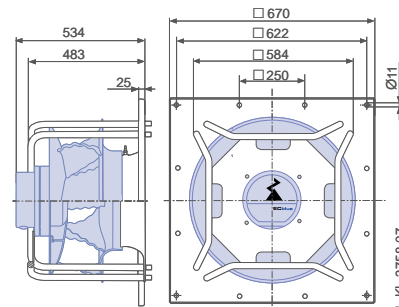
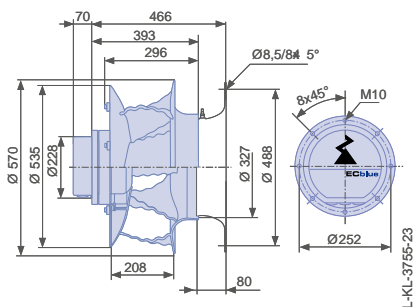
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

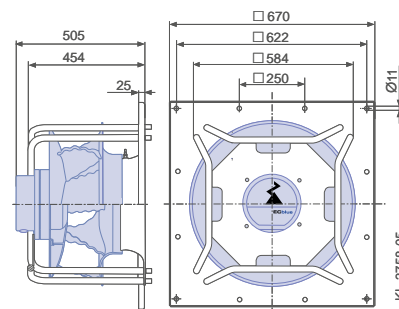
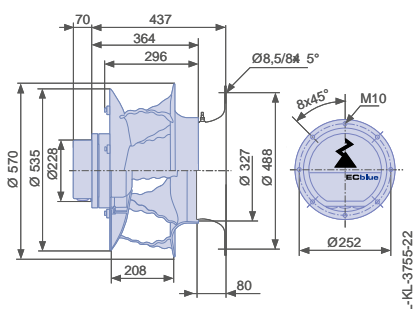
GQ



GL



GG



ZBluefin-ECblue

Size 560

RH56I

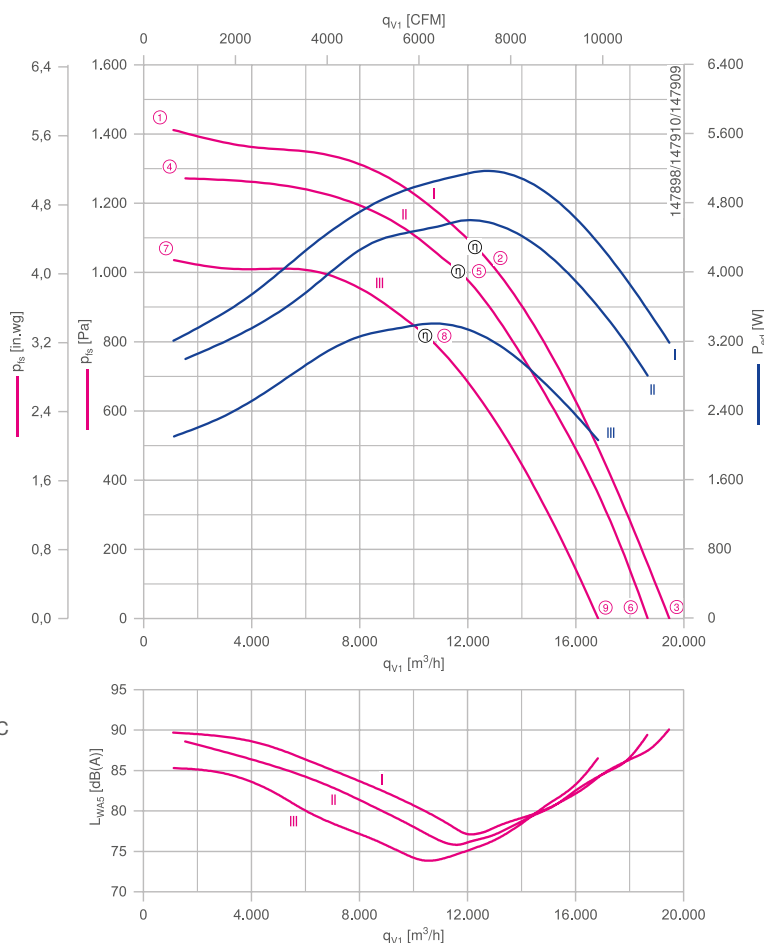


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP55
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00414637 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH56I-ZID.GQ.CR	GQ	116881	5.20 kW	8.20-6.60	1860	75.8	78.8	2015	yes	UL Listed Product	35.40
	3~ 380-480	GR56I-ZID.GQ.CR	GQ	116909/A01	5.20 kW								67.00
II	3~ 380-480	RH56I-ZID.GL.CR	GL	116880	4.60 kW	7.40-5.80	1780	75.7	79.3	2015			28.60
	3~ 380-480	GR56I-ZID.GL.CR	GL	116908A01	4.60 kW								59.00
III	3~ 380-480	RH56I-ZID.GG.CR	GG	116879	3.40 kW	5.40-4.40	1610	73.8	78.7	2015			24.00
	3~ 380-480	GR56I-ZID.GG.CR	GG	116907A01	3.40 kW								54.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
_56I-ZID.G_CR	I	1860	①	5.00	3200	90		400
			②	8.00	5200	77	40	
			③	5.00	3200	90		
	II	1780	④	4.60	3000	89		
			⑤	7.00	4600	76	40	
			⑥	4.40	2800	89		
	III	1610	⑦	3.30	2100	85		
			⑧	5.20	3400	74	50	
			⑨	3.20	2100	87		

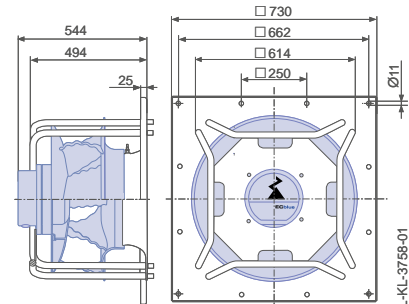
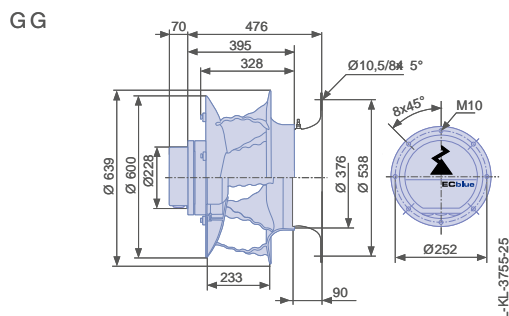
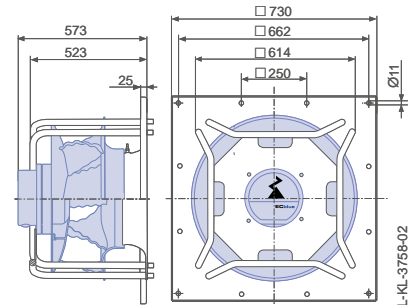
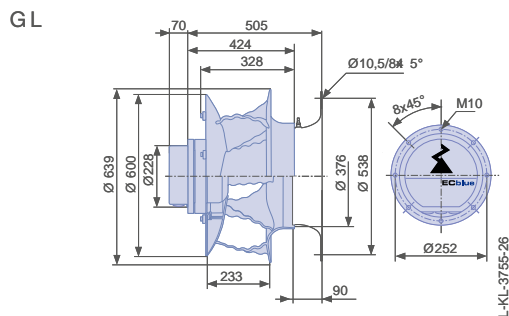
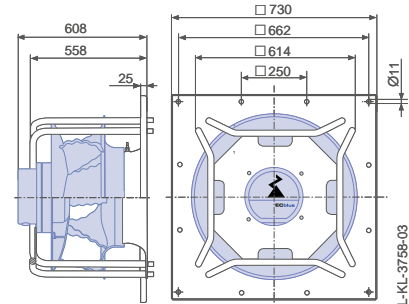
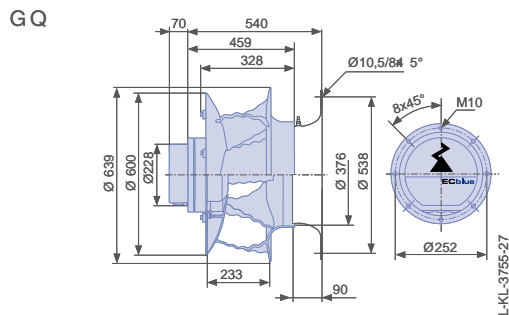
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated





Cpro-ECblue

EC-Technology

Product overview

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Size 355	Page 50
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Size 560	Page 58
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Information

ZBluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

Cpro-ECblue

Size 250

RH25C

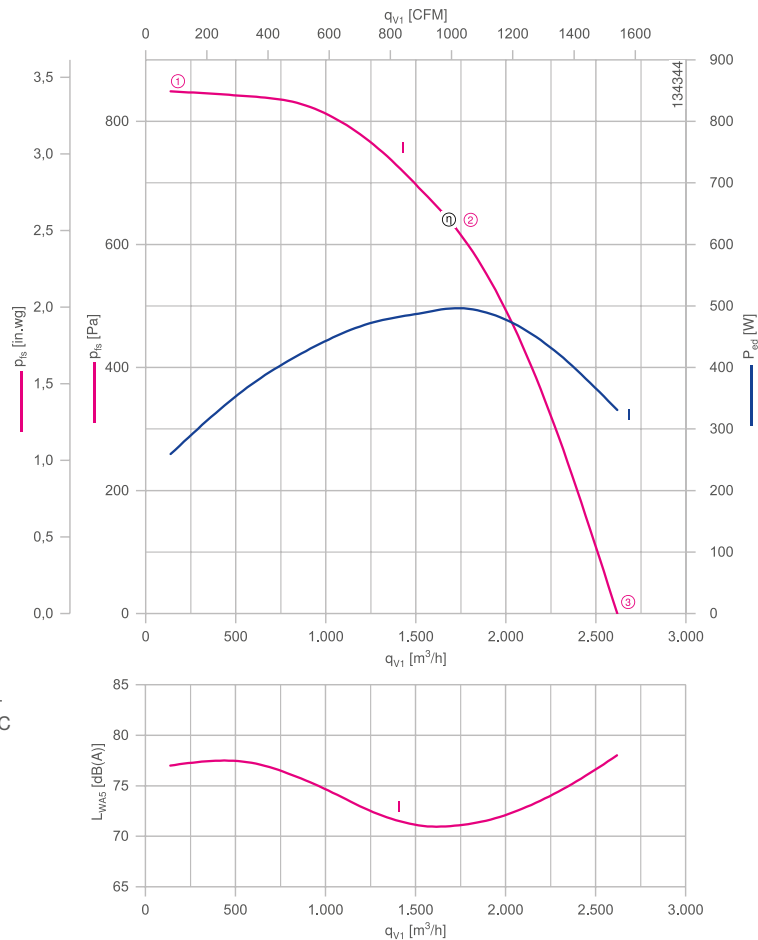


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401504 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

I	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
	1~ 200-277	RH25C-6ID.BD.CR	BD	114843	0.50 kW	2.50-1.80	3080	67.3	81.1	2015	yes		6.00
	1~ 200-277	GR25C-6ID.BD.CR	BD	115466/A01	0.50 kW					2015			12.00

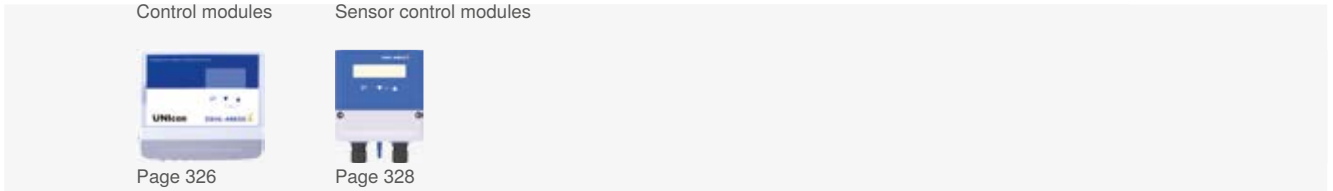
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
_25C-6ID.BD.CR	I	3880	①	0.37	260	77	60	230
			②	0.70	500	71		
			③	0.48	330	78		

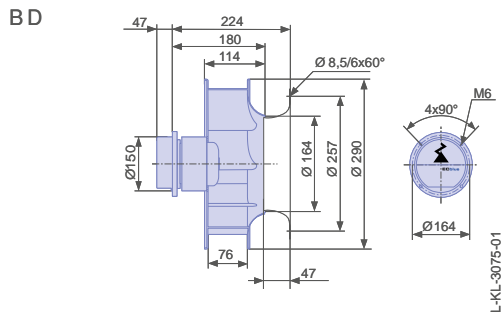
Control technology



Dimensions mm

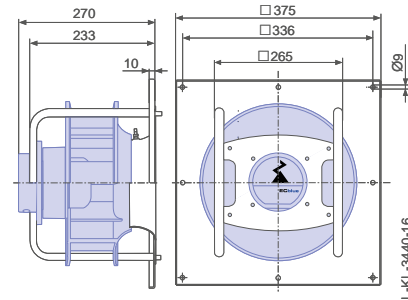
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo

Inlet nozzle not included



Ventilation unit GR in installation position H/Vu/
Vo

Inlet nozzle integrated



Cpro-ECblue

Size 280

RH28C

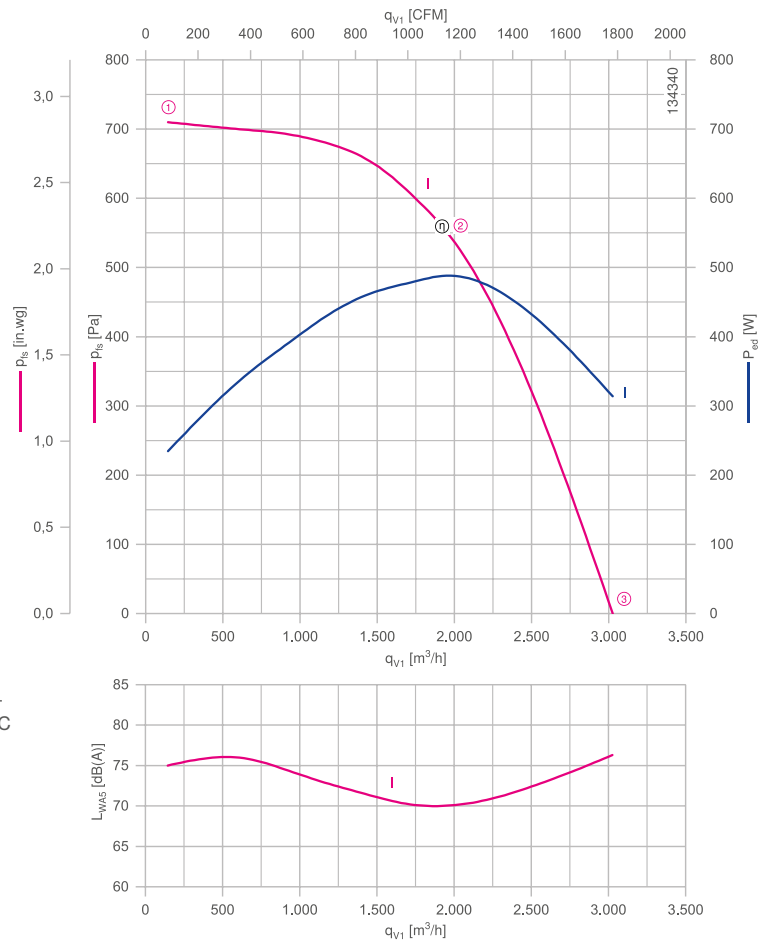


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring	00401505	Page 288
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Characteristic curve



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

Fan ordering information

I	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
	1~ 200-277	RH28C-6ID.BD.CR	BD	114844	0.48 kW	2.50-1.75	2510	68.2	82.0	2015	yes		6.00
	1~ 200-277	GR28C-6ID.BD.CR	BD	115468/A01	0.48 kW					2015			13.00

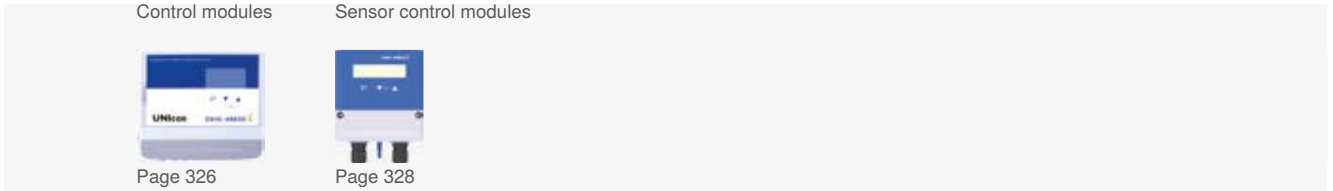
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current I A	Input power P _{ed} W	Suction side sound power level L _{WAS} dB(A)	Maximum ambient temperature t _{amb} (max.) °C	Voltage U V
_28C-6ID.BD.CR	I	2510	①	0.34	230	75	60	230
			②	0.70	480	70		
			③	0.46	310	76		

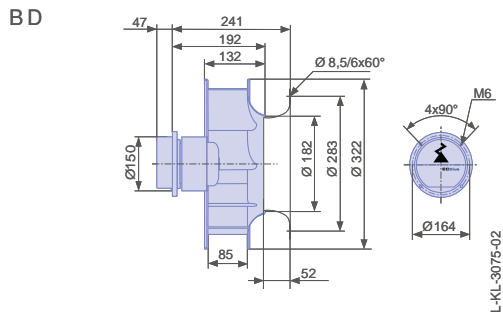
Control technology



Dimensions mm

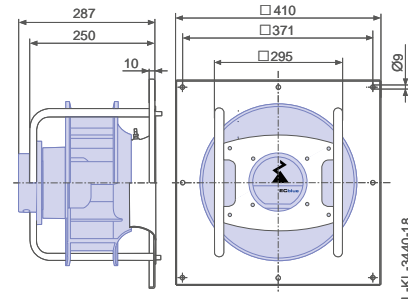
Motor Free-running motorized impeller RH in installation position H/Vu/Vo

Inlet nozzle not included



Ventilation unit GR in installation position H/Vu/Vo

Inlet nozzle integrated



Cpro-ECblue

Size 315

RH31C

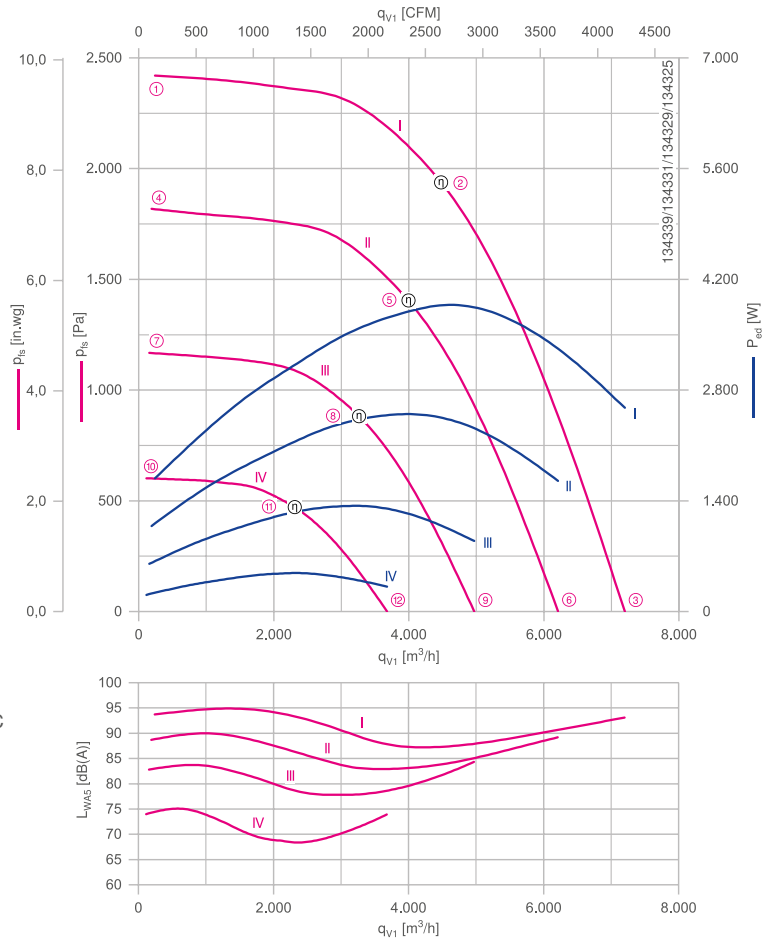


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401506 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	3~ 380-480	RH31C-ZID.DG.CR	DG	114866	3.90 kW	6.20-5.00	4200	65.6	69.9	2015	yes	UL Listed Product	13.00
	3~ 380-480	GR31C-ZID.DG.CR	DG	115474/A01	3.90 kW					2015			22.00
II	3~ 380-480	RH31C-ZID.DC.CR	DC	114488	2.50 kW	4.00-3.20	3640	66.5	72.9	2015			10.00
	3~ 380-480	GR31C-ZID.DC.CR	DC	115506/A01	2.50 kW					2015			17.00
III	1~ 200-277	RH31C-ZID.DC.CR	DC	114484	1.35 kW	6.70-4.80	2920	65.0	74.2	2015			10.00
	1~ 200-277	GR31C-ZID.DC.CR	DC	115472/A01	1.35 kW					2015			17.00
IV	1~ 200-277	RH31C-6ID.BD.CR	BD	114845	0.48 kW	2.40-1.75	2100	69.3	83.1	2015			7.00
	1~ 200-277	GR31C-6ID.BD.CR	BD	115470/A01	0.48 kW					2015			14.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
__31C_ID__CR	I	4200	①	2.60	1700	94	40	400
			②	6.00	3900	87		
			③	4.00	2600	93		
	II	3650	④	1.70	1100	89	55	
			⑤	3.80	2500	83		
			⑥	2.50	1650	89		
	III	2920	⑦	2.70	600	83	45	
			⑧	5.80	1350	78		
			⑨	3.90	900	84		
	IV	2100	⑩	0.92	210	74	60	
			⑪	2.10	480	68		
			⑫	1.35	310	74		

Control technology

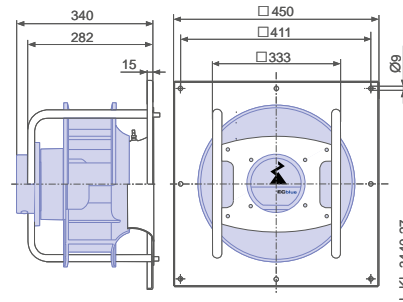
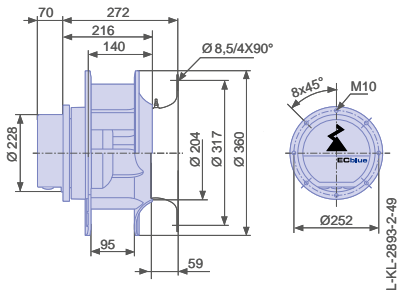
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

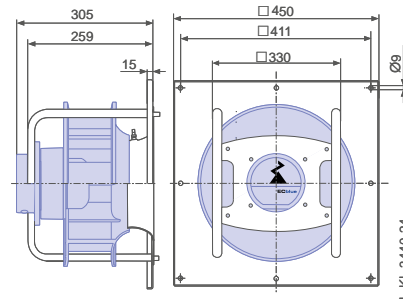
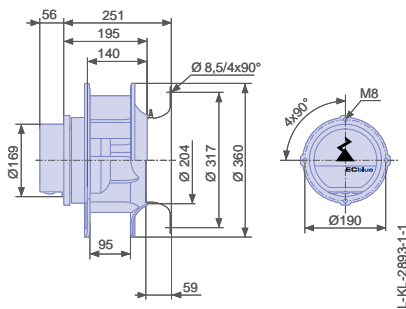
Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/Vo
Inlet nozzle integrated

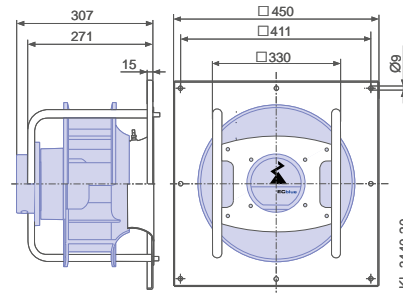
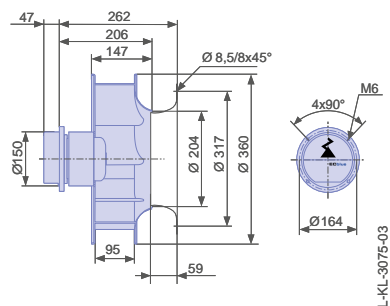
DG



DC



BD



Cpro-ECblue

Size 355

RH35C

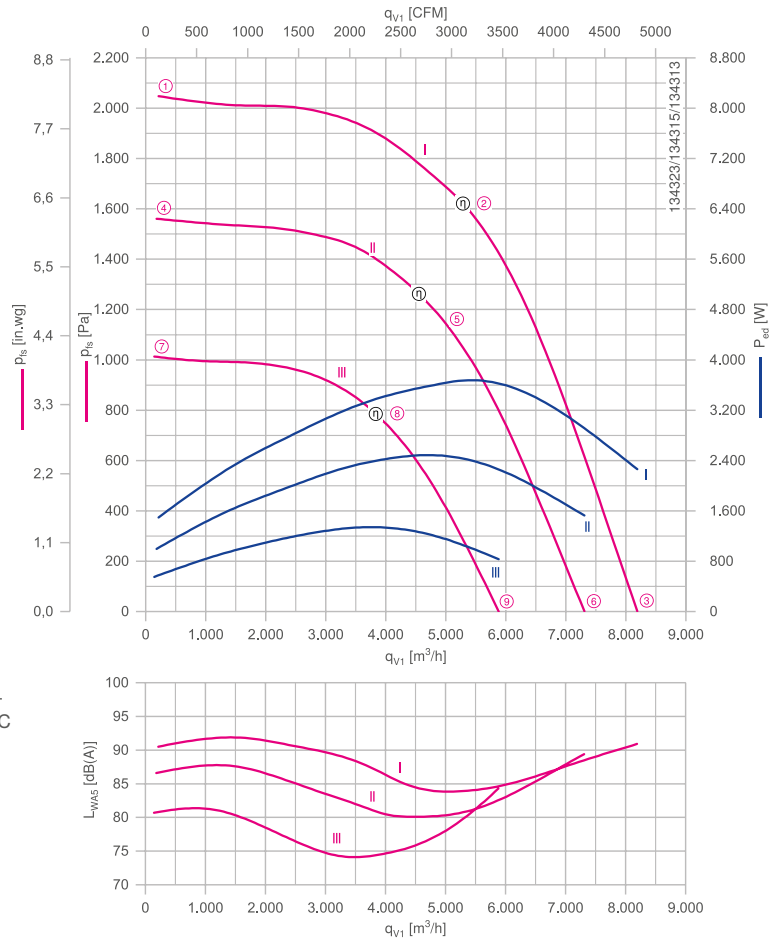


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401296 Page 288
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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH35C-ZID.DG.CR	DG	114874	3.70 kW	5.80-4.60	3400	68.4	72.9	2015	yes	UL Listed Product	14.00
	3~ 380-480	GR35C-ZID.DG.CR	DG	115477/A01	3.70 kW					2015			24.00
II	3~ 380-480	RH35C-ZID.DC.CR	DC	114500	2.50 kW	4.00-3.20	2970	68.6	74.9	2015	yes	UL Listed Product	11.00
	3~ 380-480	GR35C-ZID.DC.CR	DC	115510/A01	2.50 kW					2015			20.00
III	1~ 200-277	RH35C-ZID.DC.CR	DC	114496	1.35 kW	6.80-4.90	2400	67.5	76.7	2015	yes	UL Listed Product	11.00
	1~ 200-277	GR35C-ZID.DC.CR	DC	115475/A01	1.35 kW					2015			20.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature $t_{amb}^{(max.)}$ °C	Voltage U V
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
_35C-ZID.D_CR	I	3410	①	2.30	1500	91	40	400
			②	5.60	3700	84		
			③	3.50	2300	91		
	II	2970	④	1.60	1000	87	50	
			⑤	3.80	2500	80		
			⑥	2.40	1550	89		
	III	2400	⑦	2.50	560	81	45	
			⑧	6.00	1350	74		
			⑨	3.70	840	84		

Control technology

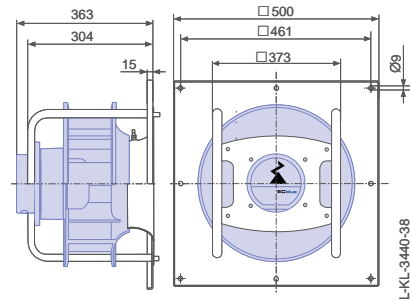
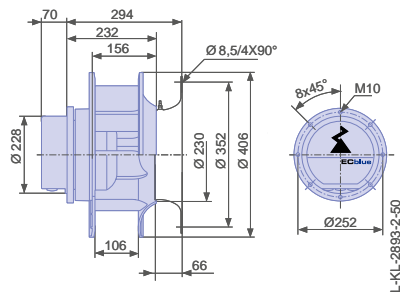


Dimensions mm

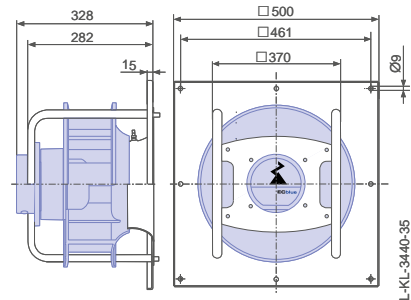
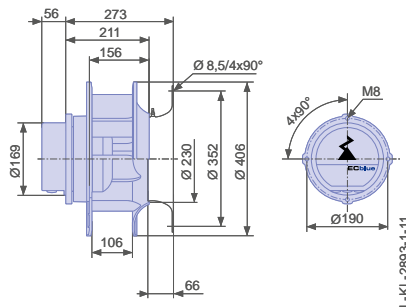
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

DG



DC



Cpro-ECblue

Size 400

RH40C

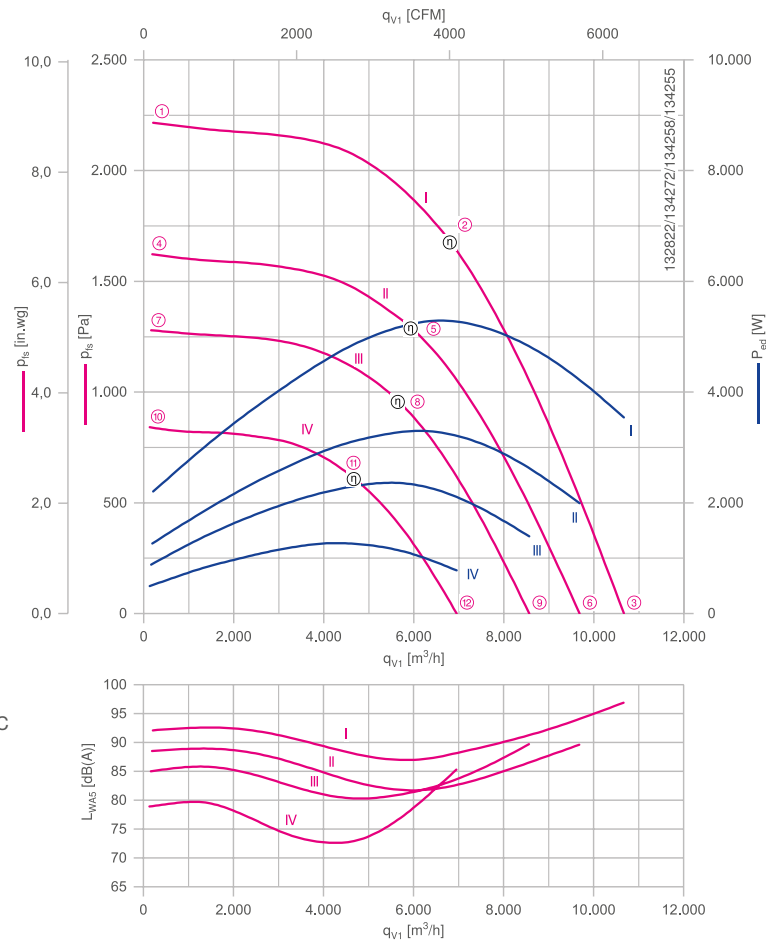


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401297 Page 288
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 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH40C-ZID.GG.CR	GG	114703	5.60 kW	9.00-7.10	3170	61.8	64.4	2015	yes	UL Listed Product	21.00
	3~ 380-480	GR40C-ZID.GG.CR	GG	115527/A01	5.60 kW								2015
II	3~ 380-480	RH40C-ZID.DG.CR	DG	114878	3.30 kW	5.40-4.20	2700	68.4	73.4	2015			14.00
	3~ 380-480	GR40C-ZID.DG.CR	DG	115503/A01	3.30 kW								2015
III	3~ 380-480	RH40C-ZID.DC.CR	DC	114512	2.40 kW	3.90-3.10	2400	68.3	74.9	2015			12.00
	3~ 380-480	GR40C-ZID.DC.CR	DC	115514/A01	2.40 kW								2015
IV	1~ 200-277	RH40C-ZID.DC.CR	DC	114508	1.25 kW	6.40-4.60	1950		77.7	2015			12.00
	1~ 200-277	GR40C-ZID.DC.CR	DC	115478/A01	1.25 kW								2015

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V	
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C		
__40C-ZID__CR	I	3170	①	3.40	2200	92	40	400	
			②	8.20	5200	87			
			③	5.40	3500	97			
	II	2710	④	2.10	1250	89	40		
			⑤	5.20	3300	82			
			⑥	3.20	2000	90			
	III	2400	⑦	1.45	880	85	40		
			⑧	3.70	2400	81			
			⑨	2.20	1400	90			
	IV	1950	⑩	2.30	500	79	45		230
			⑪	5.60	1250	73			
			⑫	3.50	780	85			

Control technology

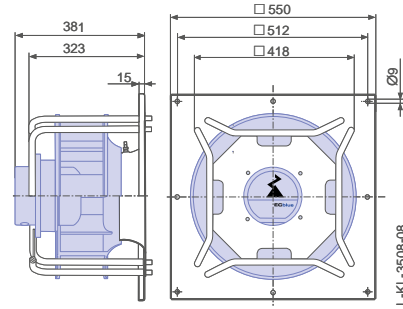
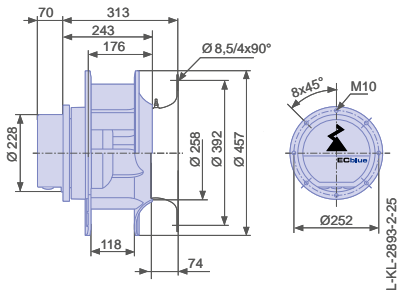
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

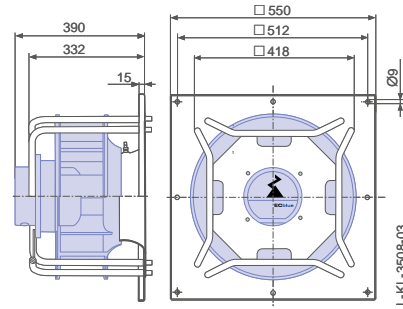
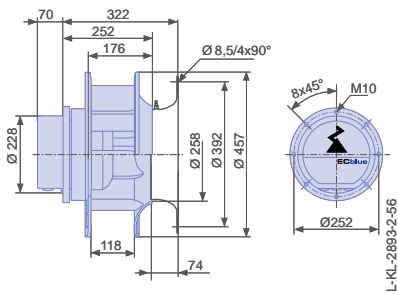
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

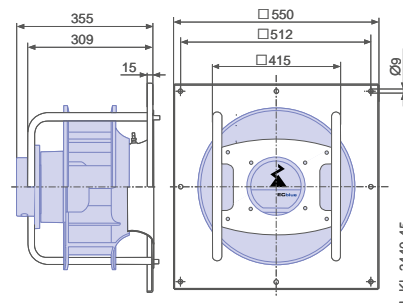
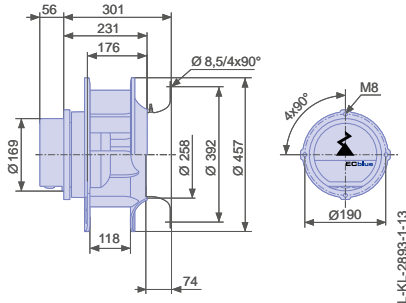
GG



DG



DC



Cpro-ECblue

Size 450

RH45C

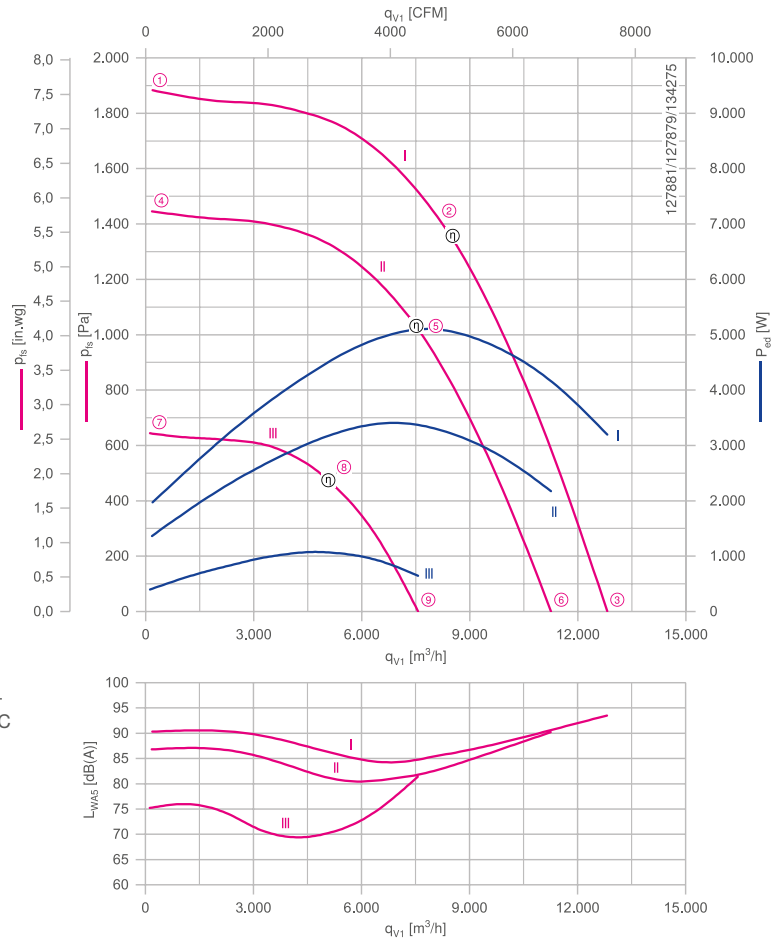


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401298 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		yes	UL Listed Product	kg
I	3~ 380-480	RH45C-ZID.GG.CR	GG	114707	5.20 kW	8.40-6.60	2570	65.7	68.7	2015	yes	UL Listed Product	22.00
	3~ 380-480	GR45C-ZID.GG.CR	GG	115528/A01	5.20 kW					2015			42.00
II	3~ 380-480	RH45C-ZID.GG.CR	GG	114615	3.60 kW	5.80-4.60	2260	67.1	71.8	2015			22.00
	3~ 380-480	GR45C-ZID.GG.CR	GG	115521/A01	3.60 kW					2015			42.00
III	1~ 200-277	RH45C-ZIK.DC.CR	DC	114514	1.05 kW	5.80-4.20	1500	68.3	82.1	2015			13.00
	1~ 200-277	GR45C-ZIK.DC.CR	DC	115482/A01	1.05 kW					2015			33.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
__45C-ZI__CR	I	2570	①	3.00	1950	90	40	400
			②	7.80	5200	85		
			③	4.80	3200	94		
	II	2260	④	2.20	1350	87	55	
			⑤	5.20	3400	81		
			⑥	3.30	2200	90		
	III	1500	⑦	1.95	400	75	45	
			⑧	5.00	1100	70		
			⑨	3.10	640	81		

Control technology

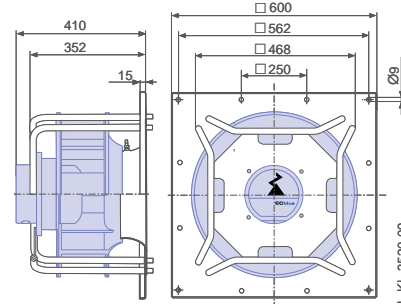
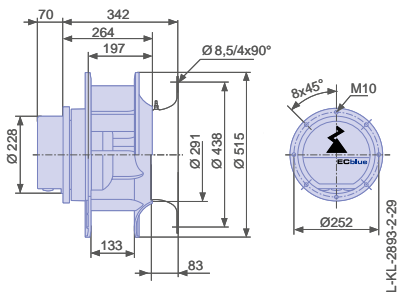
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

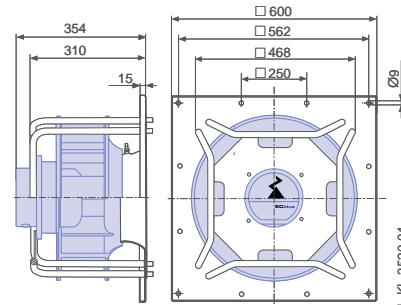
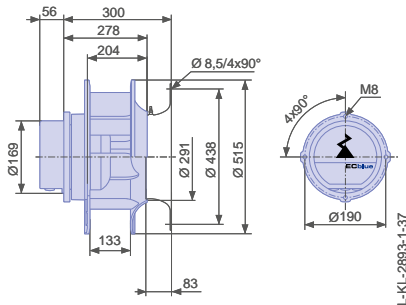
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

GG



DC



Cpro-ECblue

Size 500

RH50C

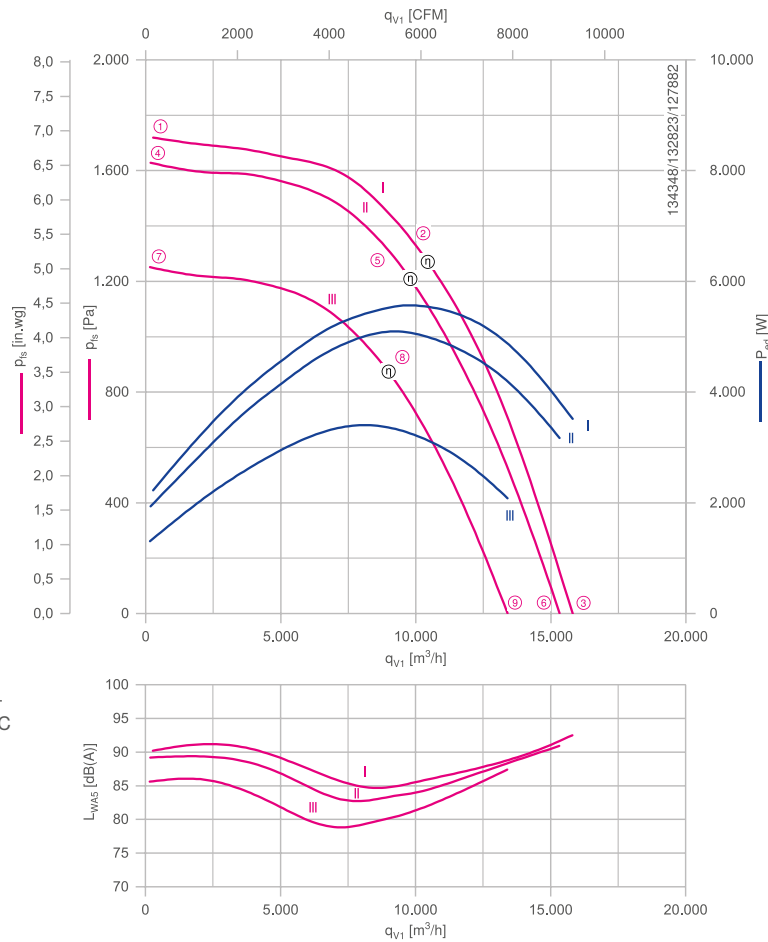


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401299 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	3~ 380-480	RH50C-ZID.GQ.CR	GQ	176076	5.60 kW	8.80-7.00	2180	69.5	72.2	2015	yes	UL Listed Product	35.00
	3~ 380-480	GR50C-ZID.GQ.CR	GQ	176216	5.60 kW					2015			60.40
II	3~ 380-480	RH50C-ZID.GL.CR	GL	114711	5.40 kW	8.60-6.80	2130	66.5	69.5	2015			29.00
	3~ 380-480	GR50C-ZID.GL.CR	GL	115497/A01	5.40 kW					2015			55.00
III	3~ 380-480	RH50C-ZID.GG.CR	GG	114623	3.50 kW	5.60-4.40	1860	67.2	72.0	2015			24.00
	3~ 380-480	GR50C-ZID.GG.CR	GG	115523/A01	3.50 kW					2015			50.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
_50C-ZID.G_CR	I	2180	①	3.40	2200	90	40	400
			②	8.60	5600	85		
			③	5.40	3500	93		
	II	2130	④	3.00	1950	89	40	
			⑤	7.80	5000	84		
			⑥	4.80	3200	91		
	III	1860	⑦	2.10	1300	86	55	
			⑧	5.20	3400	79		
			⑨	3.20	2100	87		

Control technology

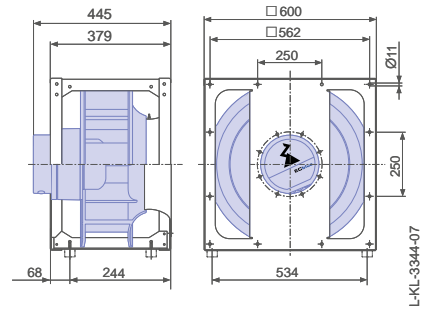
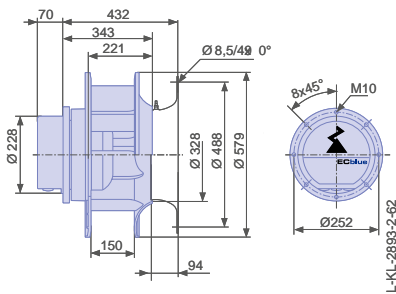
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

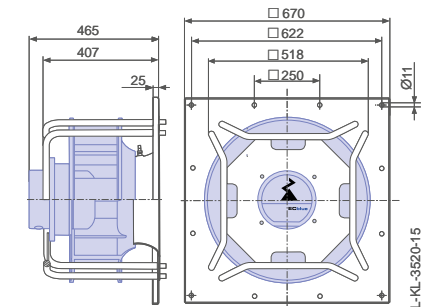
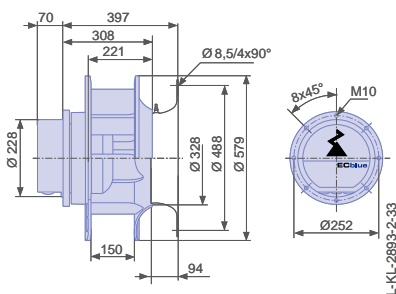
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

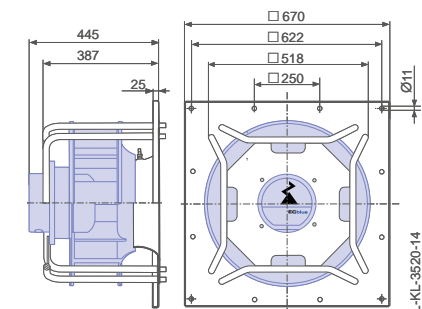
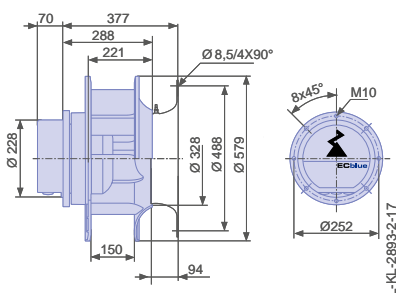
GQ



GL



GG



Cpro-ECblue

Size 560

RH56C

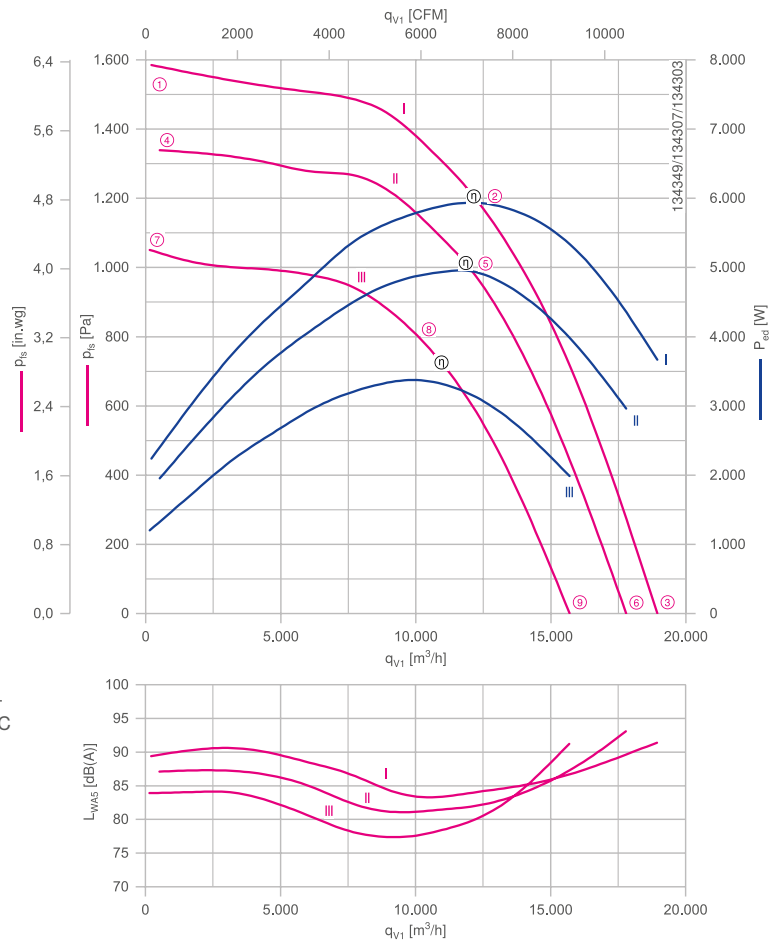


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401300 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %				kg
I	3~ 380-480	RH56C-ZID.GQ.CR	GQ	115271	6.00 kW	9.40-7.40	1860	69.9	72.3	2015	yes	UL Listed Product	39.00
	3~ 380-480	GR56C-ZID.GQ.CR	GQ	115278	6.00 kW					2015			71.00
II	3~ 380-480	RH56C-ZID.GL.CR	GL	114715	5.00 kW	8.00-6.40	1750	71.6	74.8	2015			32.00
	3~ 380-480	GR56C-ZID.GL.CR	GL	115492/A01	5.00 kW					2015			64.00
III	3~ 380-480	RH56C-ZID.GG.CR	GG	114631	3.40 kW	5.40-4.20	1550	70.2	75.2	2015			27.00
	3~ 380-480	GR56C-ZID.GG.CR	GG	115525/A01	3.40 kW					2015			59.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
_56C-ZID.G_CR	I	1860	①	3.50	2200	89	40	400
			②	9.20	6000	84		
			③	5.60	3700	91		
	II	1750	④	3.00	1950	87	40	
			⑤	7.60	5000	82		
			⑥	4.60	3000	93		
	III	1550	⑦	1.90	1200	84	45	
			⑧	5.20	3400	78		
			⑨	3.00	2000	91		

Control technology

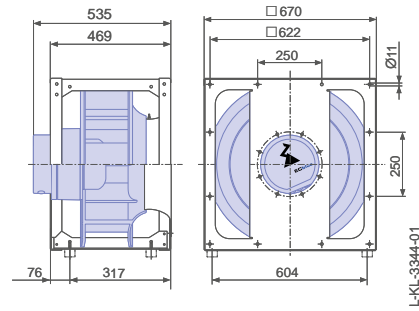
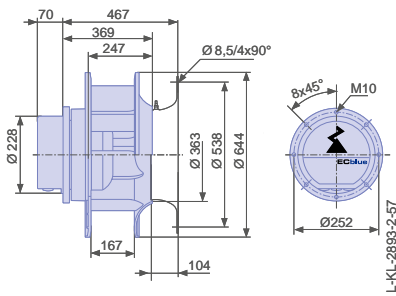
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

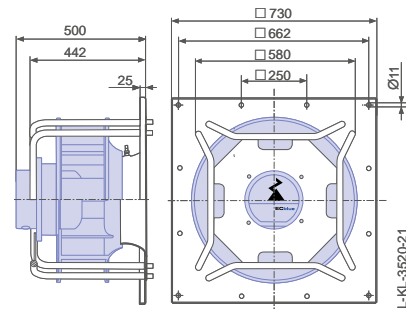
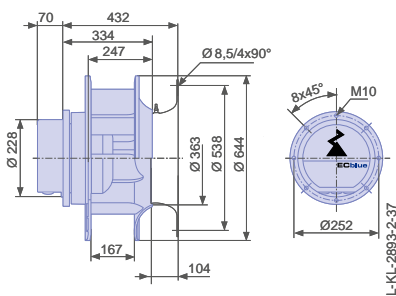
Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated

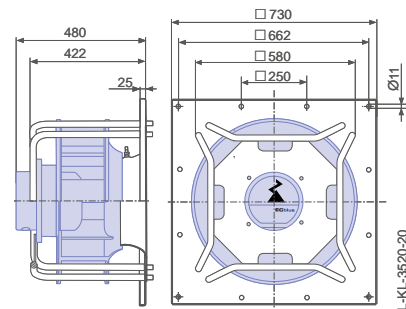
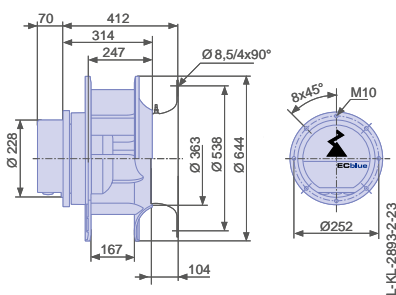
GQ



GL



GG



Cpro-ECblue

Size 630

RH63C

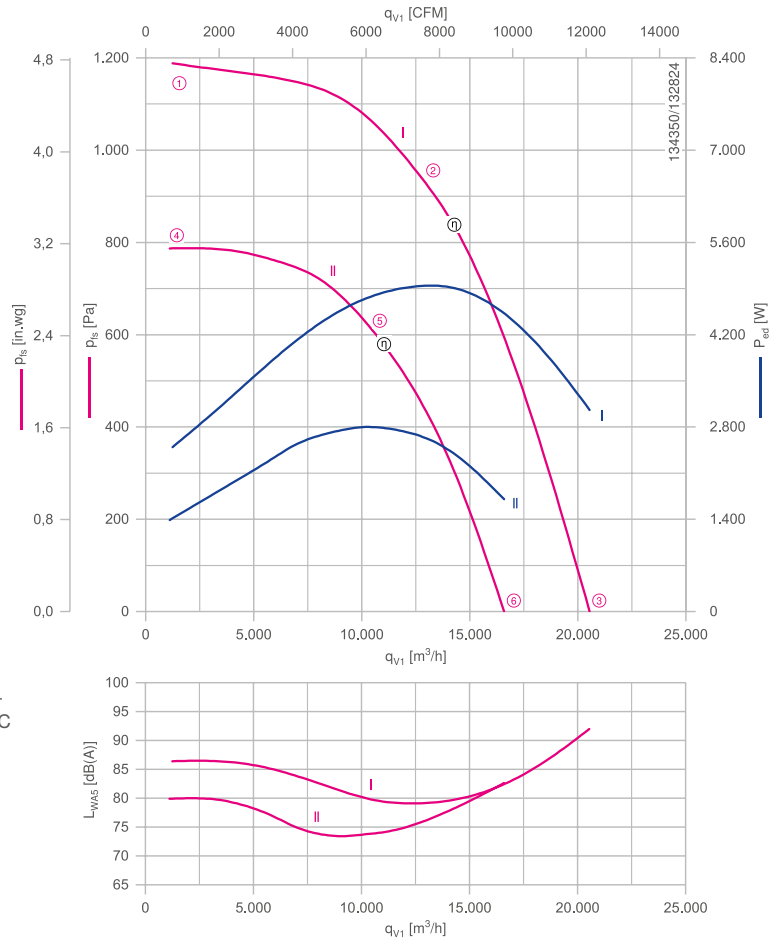


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401301 Page 288
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 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		yes	UL Listed Product	kg
I	3~ 380-480	RH63C-ZID.GQ.CR	GQ	115272	5.00 kW	7.80-6.20	1450	70.7	74.0	2015	yes	UL Listed Product	43.00
	3~ 380-480	GR63C-ZID.GQ.CR	GQ	115279	5.00 kW					2015			80.00
II	3~ 380-480	RH63C-ZIK.GG.CR	GG	114635	2.90 kW	4.80-3.80	1200	65.5	71.1	2015	yes	UL Listed Product	31.00
	3~ 380-480	GR63C-ZIK.GG.CR	GG	115534/A01	2.90 kW					2015			72.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
_63C-ZI_G_CR	I	1450	①	3.80	2500	86	40	400
			②	7.60	5000	79		
			③	4.60	3100	92		
	II	1200	④	2.10	1400	80		
			⑤	4.20	2800	74		
			⑥	2.60	1700	83		

Control technology

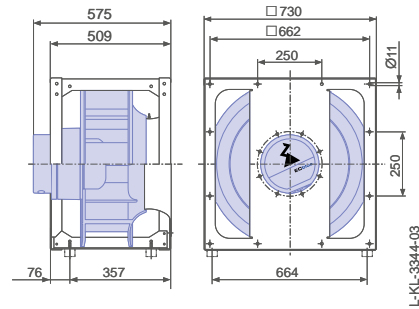
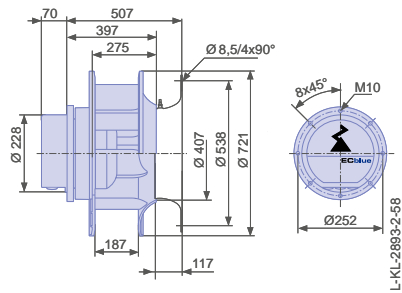


Dimensions mm

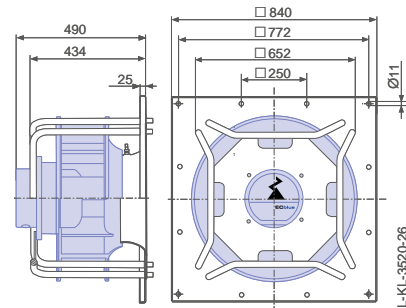
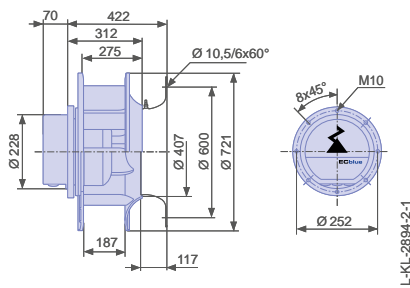
Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/Vo
Inlet nozzle integrated

GQ



GG







C-ECblue

EC-Technology

Product overview

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Size 280	Page 66
Size 315	Page 68
Size 355	Page 70
Size 400	Page 72
Size 450	Page 74
Size 500	Page 76
Size 560	Page 78
Size 630	Page 80
Size 710	on request
Size 800	on request

Information

ZABluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

C-ECblue

Size 250

RH25C

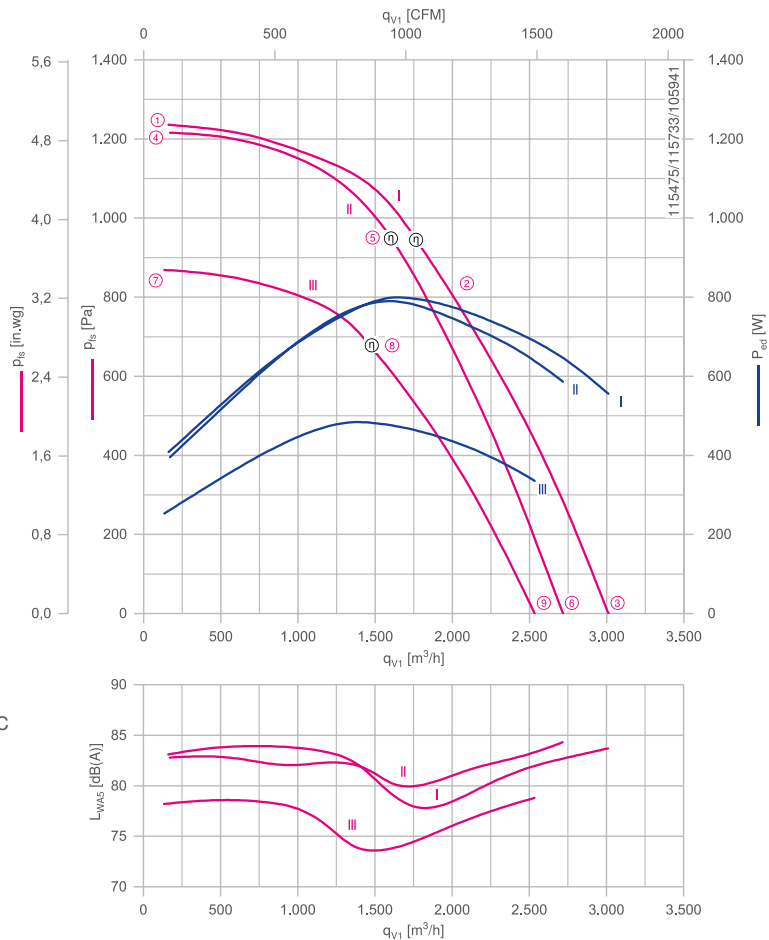


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401504 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %			kg	
I	1~ 200-277	RH25C-6ID.BD.1R	BD	115396	0.80 kW	4.00-2.90	3730	65.3	76.9	2015	yes		5.00
II	1~ 200-277	RH25C-6IK.BA.1R	BA	115399	0.78 kW		3660	60.1	71.6	2015			4.40
III	1~ 200-277	RH25C-6ID.BD.1R	BD	115172	0.48 kW	2.40-1.75	3120	65.1	78.9	2015			6.00

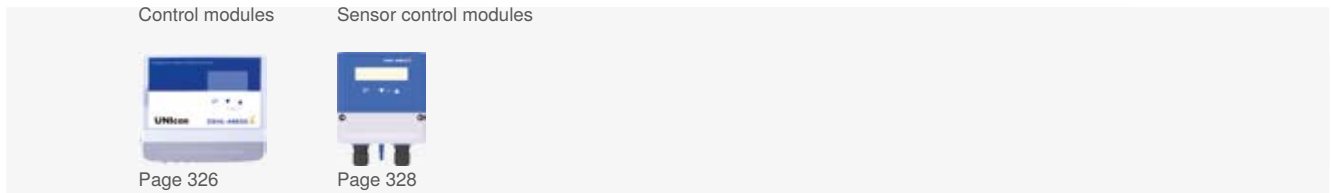
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
RH25C-6I_B_1R	I	3730	①	1.80	400	83	50	230
			②	3.50	800	79		
			③	2.40	560	84		
	II	3660	④	1.75	400	83	40	
			⑤	3.50	780	80		
			⑥	2.60	580	84		
	III	3120	⑦	1.10	250	78	60	
			⑧	2.10	480	74		
			⑨	1.45	340	79		

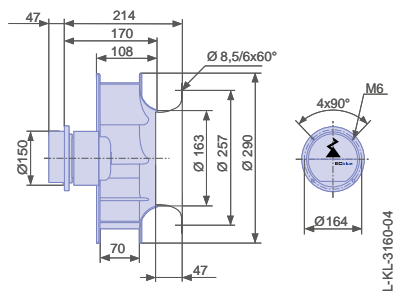
Control technology



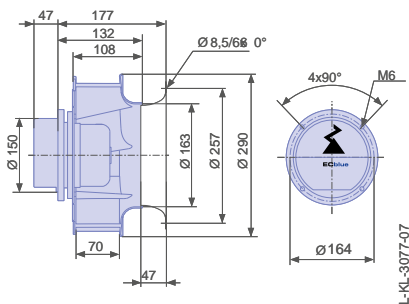
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

BD



BA



C-ECblue

Size 280

RH28C

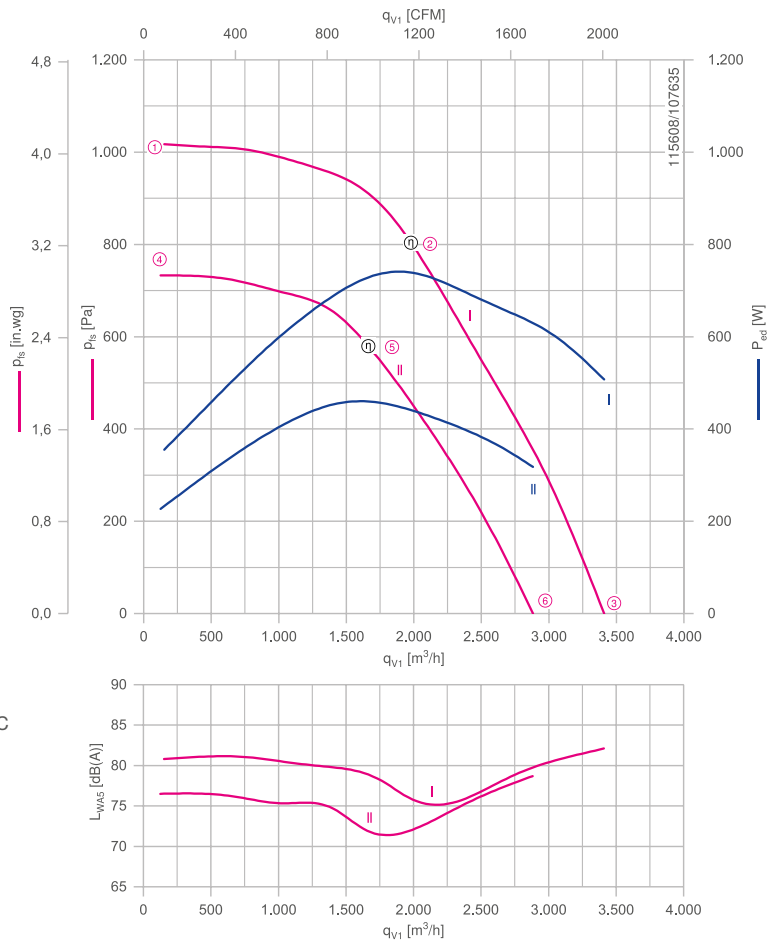


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401505 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

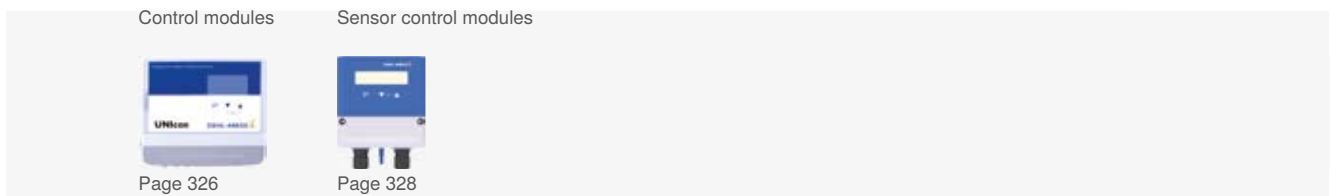
	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	1~ 200-277	RH28C-6ID.BD.1R	BD	115397	0.74 kW	3.70-2.70	3000	67.2	79.1	2015	yes		5.20
II	1~ 200-277	RH28C-6ID.BD.1R	BD	115173	0.46 kW	2.30-1.65	2580	66.3	80.3	2015			6.20

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
RH28C-6ID.BD.1R	I	3000	①	1.55	360	81	50	230
			②	3.20	740	76		
			③	2.20	500	82		
	II	2580	④	1.00	230	77		
			⑤	2.00	460	72		
			⑥	1.40	320	79		

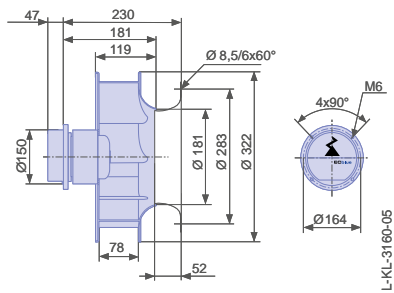
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

BD



C-ECblue

Size 315

RH31C

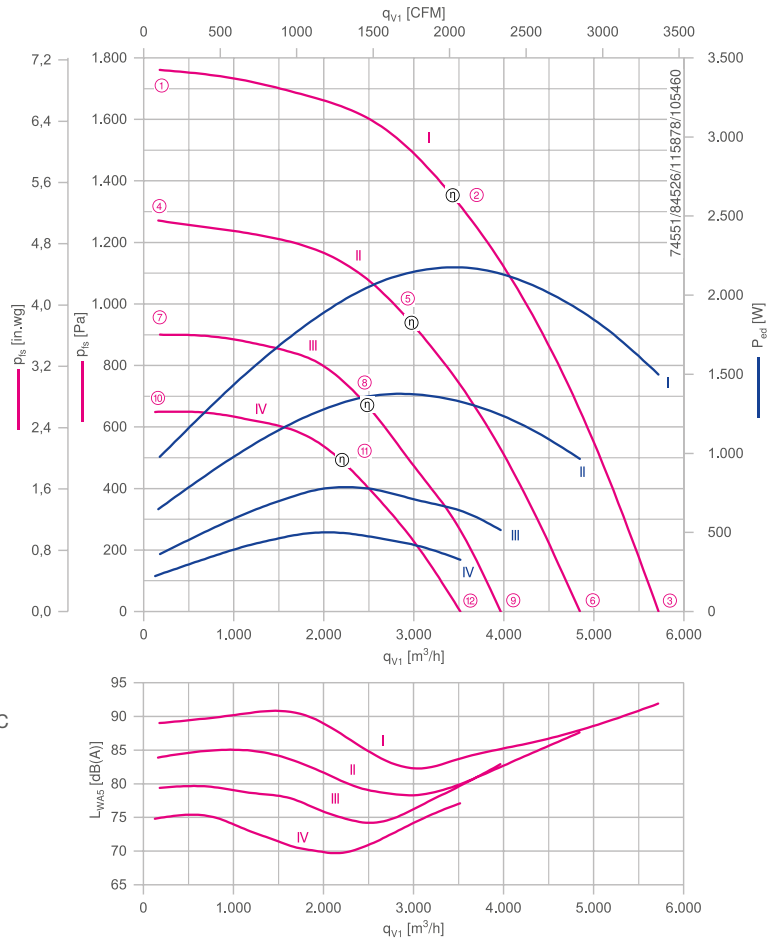


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401506 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	N_{actual} %		CE	UL	kg
I	3~ 380-480	RH31C-ZID.DC.1R	DC	113481	2.20 kW	3.60-2.85	3550	60.7	67.8	2015	yes	UL	10.00
II	1~ 200-277	RH31C-ZID.DC.1R	DC	113483	1.35 kW	6.90-5.00	3000	62.2	71.3	2015		Listed Product	10.00
III	1~ 200-277	RH31C-6ID.BD.1R	BD	115398	0.78 kW	4.00-2.90	2540	66.6	78.2	2015			6.10
IV	1~ 200-277	RH31C-6ID.BD.1R	BD	115174	0.50 kW	2.50-1.80	2160	68.4	82.1	2015			7.10

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
__31C_ID__1R	I	3550	①	1.70	980	89	60	400
			②	3.40	2200	84		
			③	2.40	1500	92		
	II	3000	④	2.90	640	84	40	230
			⑤	6.00	1350	79		
			⑥	4.20	960	88		
	III	2540	⑦	1.60	360	79	45	
			⑧	3.40	780	75		
			⑨	2.30	520	83		
	IV	2170	⑩	1.00	220	75	55	
			⑪	2.20	500	70		
			⑫	1.45	330	77		

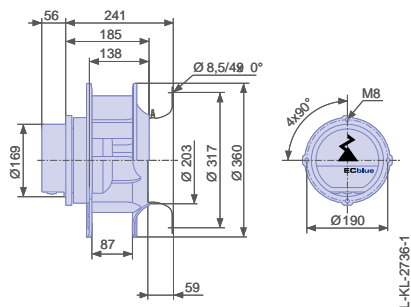
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

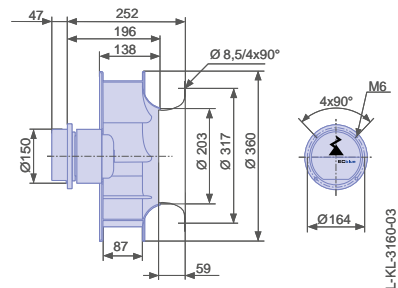
Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

DC



BD



C-ECblue

Size 355

RH35C

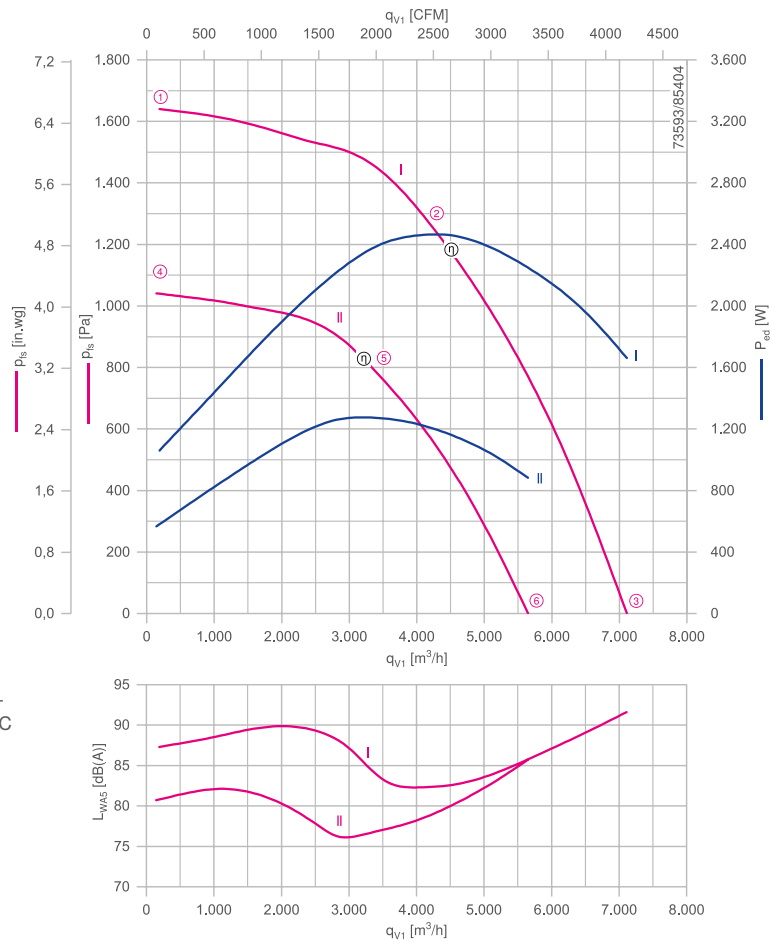


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401296 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity	Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		CE UL	kg
I	3~ 380-480	RH35C-ZID.DC.1R	DC	113484	2.50 kW	4.00-3.20	3000	65.0	72.1	2015	yes UL	10.00
II	1~ 200-277	RH35C-ZID.DC.1R	DC	113486	1.30 kW	6.40-4.60	2390	64.2	73.6	2015	yes Listed Product	9.50

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

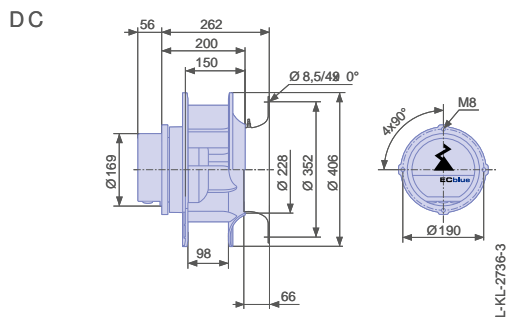
Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
_35C-ZID.DC.1R	I	3000	①	1.85	1050	87	50	400
			②	3.80	2500	82		
			③	2.70	1650	92		
	II	2390	④	2.60	560	81	40	230
			⑤	5.60	1250	77		
			⑥	3.90	880	86		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



C-ECblue

Size 400

RH40C

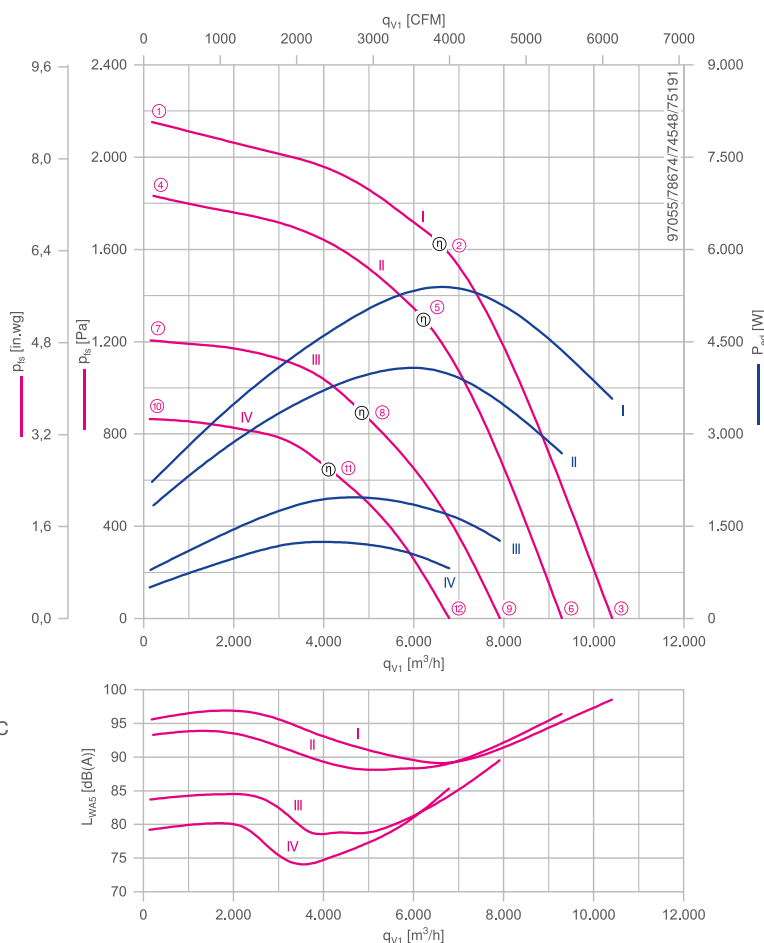


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401297 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH40C-ZID.GG.1R	GG	114763	5.40 kW	8.60-6.80	3200	59.1	62.0	2015	yes	UL Listed Product	21.00
II	3~ 380-480	RH40C-ZID.GG.1R	GG	113962	4.10 kW	6.50-5.20	2900	59.9	64.0	2015			20.00
III	3~ 380-480	RH40C-ZID.DC.1R	DC	113487	1.95 kW	3.30-2.60	2300	67.9	75.3	2015			11.00
IV	1~ 200-277	RH40C-ZID.DC.1R	DC	113489	1.25 kW	6.20-4.50	1950	65.9	75.4	2015			10.60

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
RH40C-ZID...1R	I	3200	①	3.50	2200	96		400
			②	8.20	5400	89	40	
			③	5.40	3600	99		
	II	2900	④	2.90	1850	93		60
			⑤	6.20	4000	88		
			⑥	4.20	2700	96		
	III	2300	⑦	1.45	800	84	50	
			⑧	3.10	1950	79		
			⑨	2.10	1250	90		
	IV	1950	⑩	2.30	500	79	40	230
			⑪	5.40	1250	75		
			⑫	3.60	820	85		

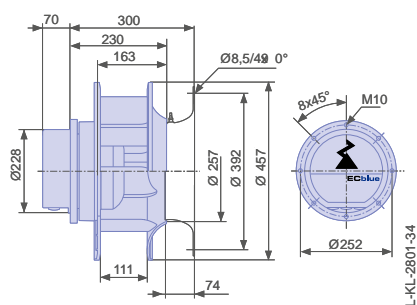
Control technology



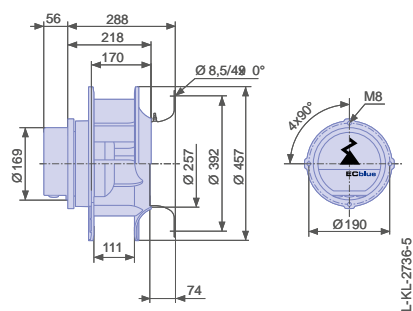
Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

GG



DC



C-ECblue

Size 450

RH45C

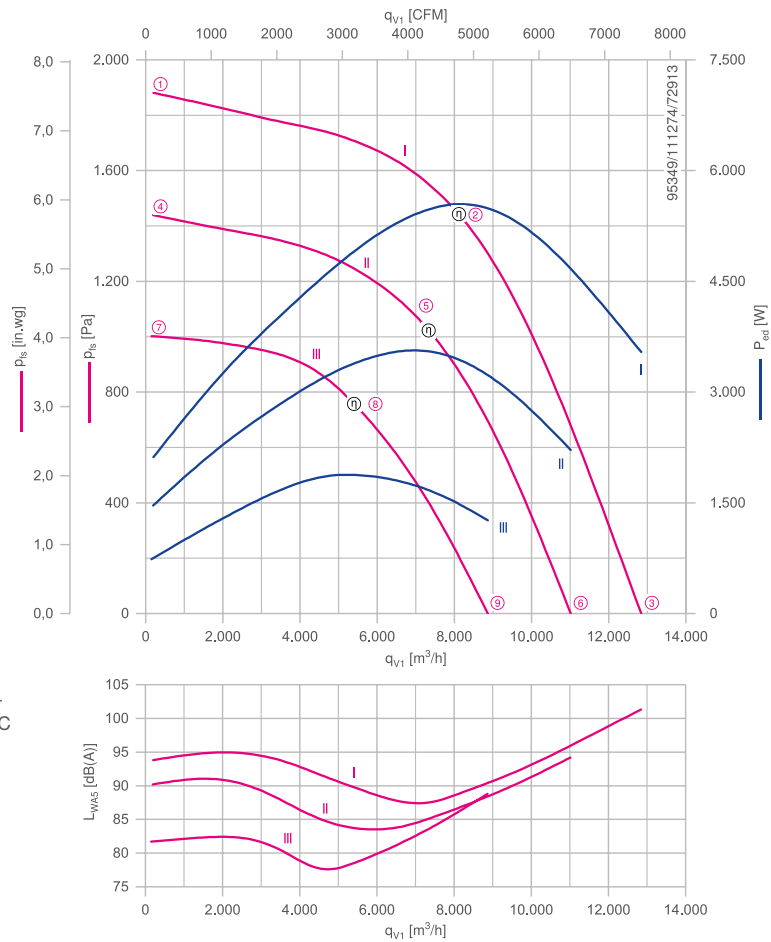


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401298 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	3~ 380-480	RH45C-ZID.GG.1R	GG	114765	5.60 kW	8.80-7.00	2630	62.4	65.1	2015	yes	UL Listed Product	22.00
II	3~ 380-480	RH45C-ZID.GG.1R	GG	113966	3.60 kW	5.80-4.60	2300	63.1	67.9	2015			22.00
III	3~ 380-480	RH45C-ZIK.DG.1R	DG	113492	1.90 kW	3.20-2.50	1850	66.3	73.9	2015			12.40

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

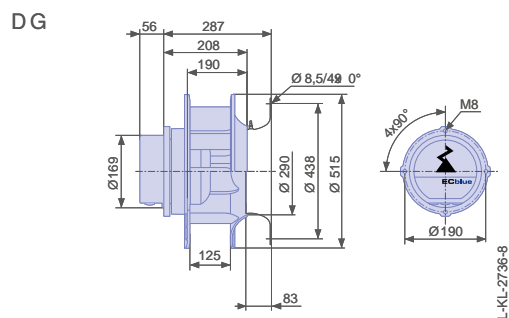
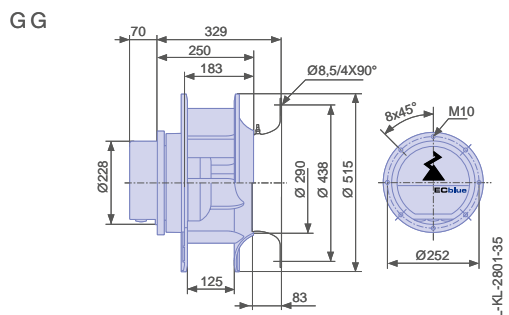
Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
RH45C-ZI_G.1R	I	2630	①	3.30	2100	94	40	400
			②	8.60	5600	89		
			③	5.40	3500	101		
	II	2300	④	2.40	1450	90	60	
			⑤	5.60	3600	84		
			⑥	3.50	2200	94		
	III	1850	⑦	1.40	740	82	40	
			⑧	3.00	1900	79		
			⑨	2.10	1250	89		

Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



- Information
- ZAbluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZAvblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes

C-ECblue

Size 500

RH50C

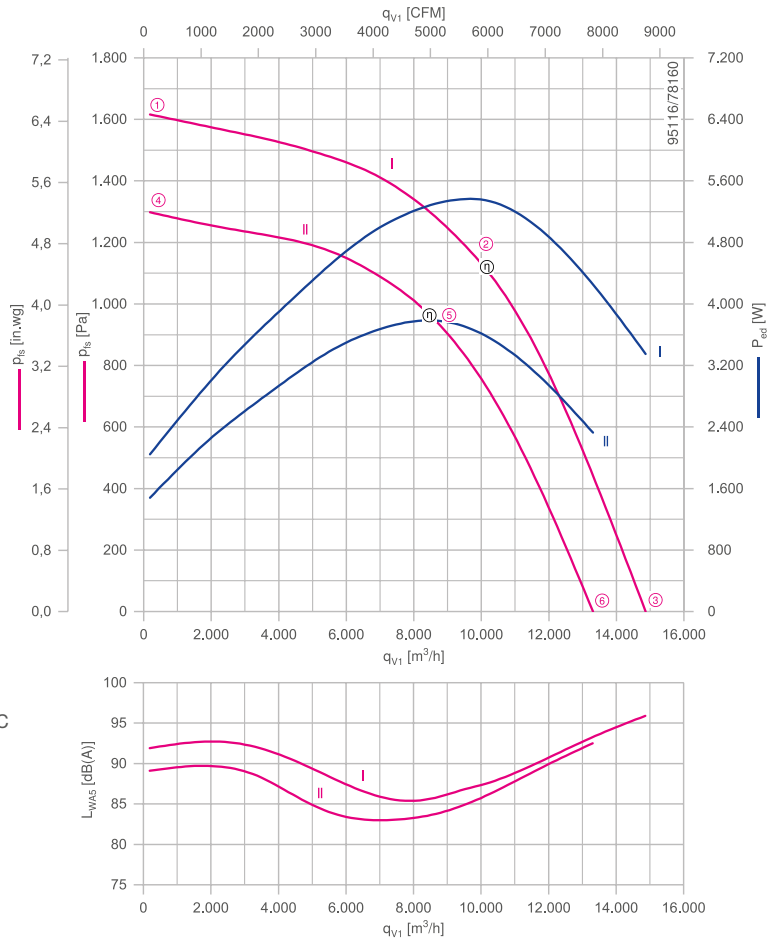


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401299 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity	Weight
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %		CE UL	kg
I	3~ 380-480	RH50C-ZID.GL.1R	GL	114767	5.40 kW	8.60-6.80	2160	62.5	65.4	2015	yes UL	29.00
II	3~ 380-480	RH50C-ZID.GG.1R	GG	113970	3.80 kW	6.10-4.80	1920	64.4	68.8	2015	yes UL Listed Product	25.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
RH50C-ZID.G_1R	I	2160	①	3.20	2000	92	40	400
			②	8.20	5400	87		
			③	5.20	3400	96		
	II	1920	④	2.40	1500	89		
			⑤	5.80	3800	84		
			⑥	3.60	2300	93		

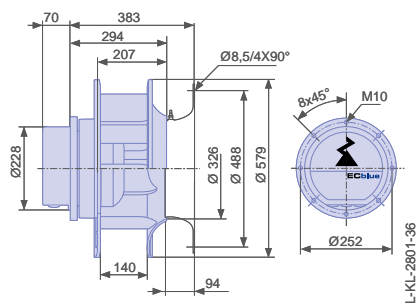
Control technology



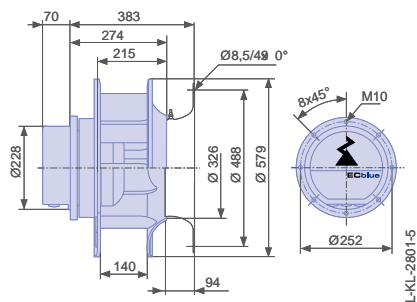
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

GL



GG



C-ECblue

Size 560

RH56C

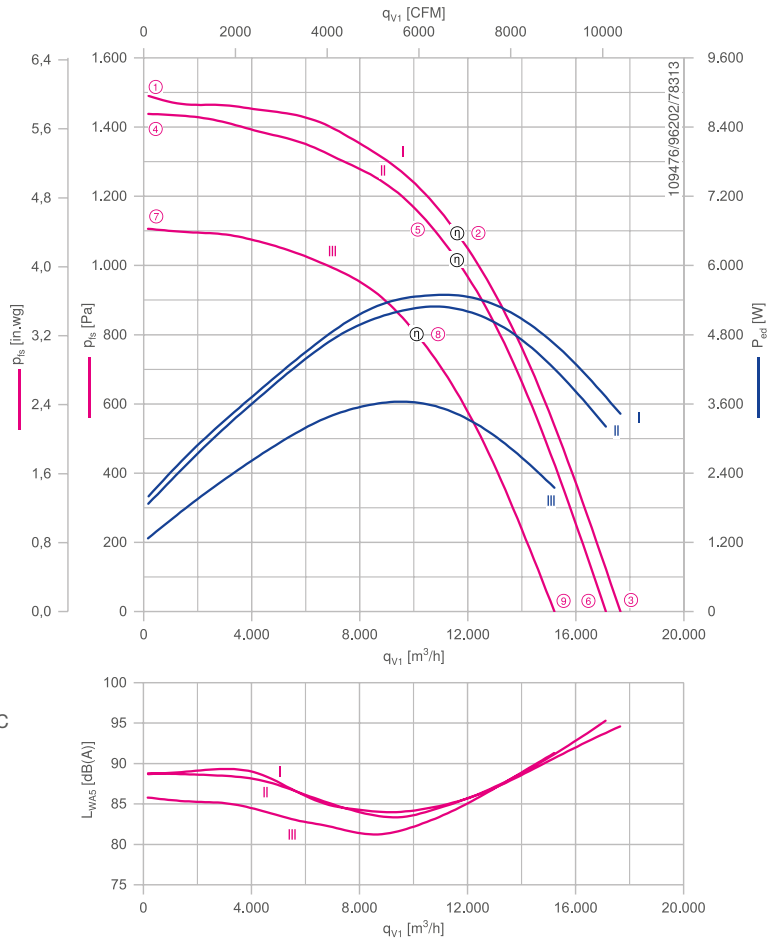


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401300 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH56C-ZID.GQ.1R	GQ	115273	5.40 kW	8.80-7.00	1840	68.5	71.3	2015	yes	UL Listed Product	36.00
II	3~ 380-480	RH56C-ZID.GL.1R	GL	114769	5.20 kW	8.40-6.60	1800	66.3	69.3	2015			29.00
III	3~ 380-480	RH56C-ZID.GG.1R	GG	113974	3.60 kW	5.90-4.70	1580	66.8	71.5	2015			26.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
RH56C-ZID.G_1R	I	1840	①	3.10	2000	89	40	400
			②	8.40	5400	85		
			③	5.20	3400	95		
	II	1800	④	2.90	1850	89	40	
			⑤	8.00	5200	84		
			⑥	4.80	3200	95		
	III	1580	⑦	2.10	1250	86	55	
			⑧	5.60	3600	82		
			⑨	3.30	2100	91		

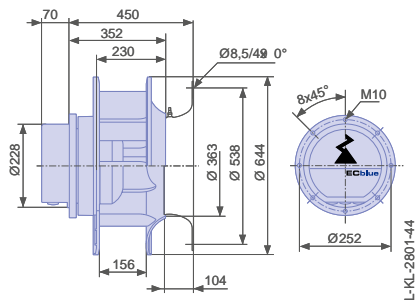
Control technology



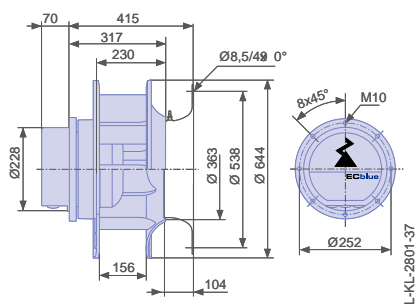
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

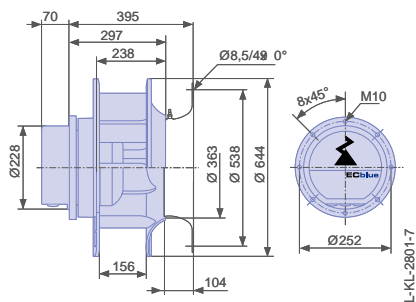
GQ



GL



GG



C-ECblue

Size 630

RH63C

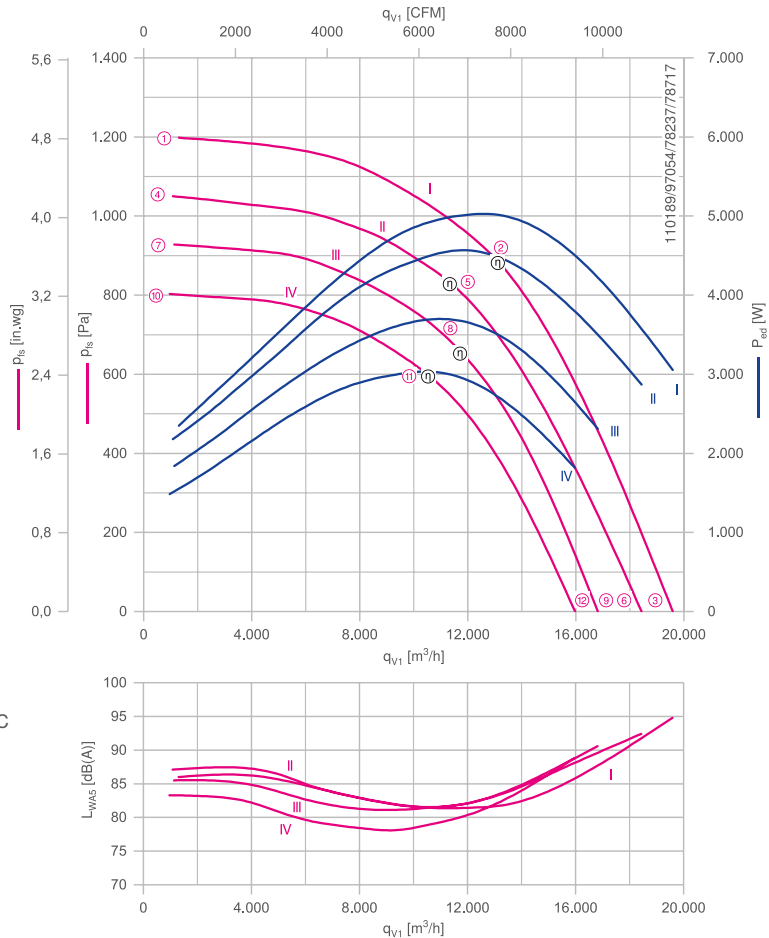


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -35 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of aluminium, uncoated
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Inlet ring 00401301 Page 288
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH63C-ZID.GQ.1R	GQ	115274	5.00 kW	8.00-6.40	1480	68.5	71.7	2015	yes	UL Listed Product	40.00
II	3~ 380-480	RH63C-ZIK.GL.1R	GL	114770	4.60 kW	7.20-5.80	1430	61.5	65.1	2015			33.00
III	3~ 380-480	RH63C-ZIK.GL.1R	GL	113998	3.70 kW	5.90-4.70	1320	62.7	67.3	2015			33.00
IV	3~ 380-480	RH63C-ZIK.GG.1R	GG	113978	3.00 kW	4.80-3.80	1230	62.4	67.9	2015			29.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.

Performance data

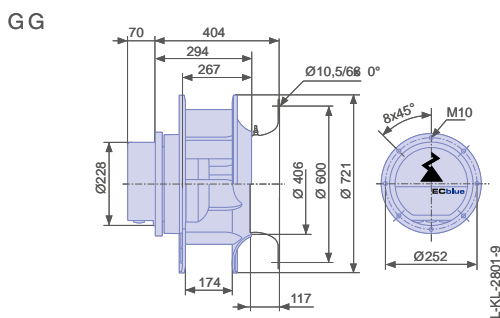
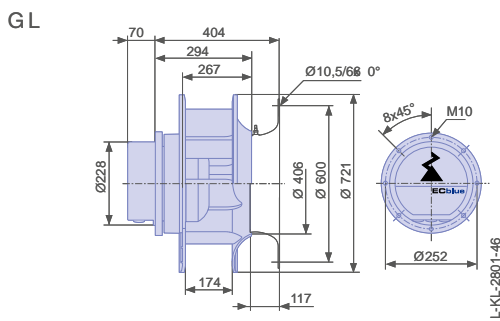
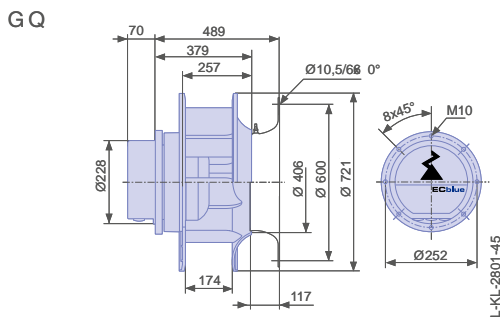
Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
RH63C-ZI_G_1R	I	1480	①	3.60	2400	86		400
			②	7.60	5000	82	40	
			③	4.60	3100	95		
	II	1430	④	3.30	2200	87		
			⑤	7.00	4600	82	40	
			⑥	4.40	2900	92		
	III	1330	⑦	2.80	1850	86		
			⑧	5.60	3700	82	55	
			⑨	3.50	2300	91		
	IV	1230	⑩	2.30	1500	83		
			⑪	4.60	3000	79	40	
			⑫	2.80	1800	89		

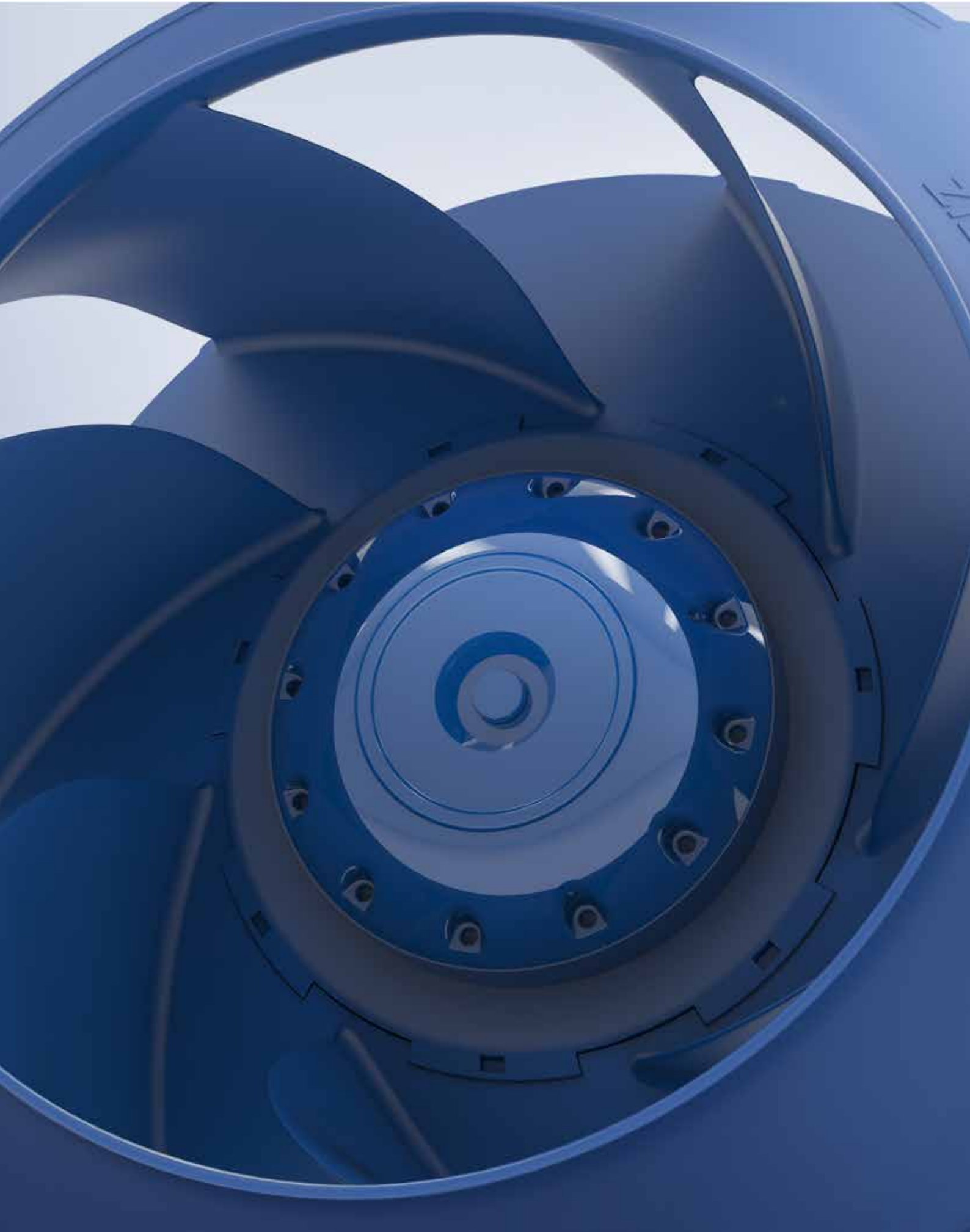
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included







ZAvblue

Product overview

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Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

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components

Control
technology

General notes





ZAvblue-ECblue

EC-Technology

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Information

ZBluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

ZAvblue-ECblue

Size 250

RH25V

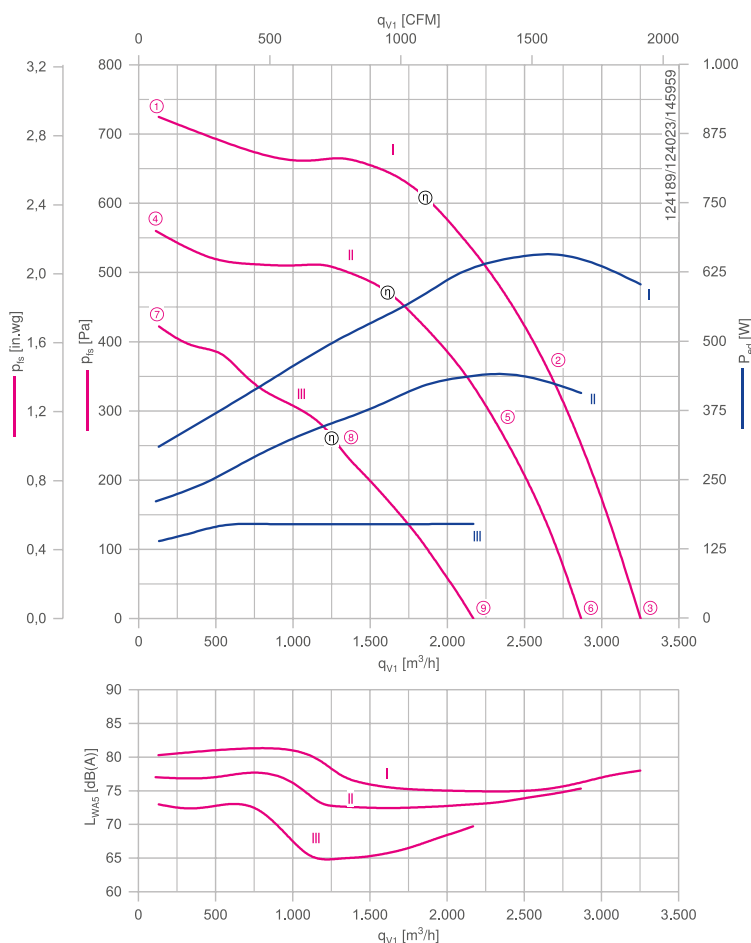


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	1~ 200-277	RH25V-6IK.BA.VR	BA	115775	660 W	3.30-2.40	3250	61.3	74.3	2015	yes		4.30
	1~ 200-277	GR25V-6IK.BA.VR	BA	115778/A01	660 W					2015			9.00
II	1~ 200-277	RH25V-6IK.BA.VR	BA	115774	440 W	2.20-1.60	2860	62.6	77.4	2015			4.30
	1~ 200-277	GR25V-6IK.BA.VR	BA	115777/A01	440 W					2015			9.00
III	1~ 200-240	RH25V-ZIP.0A.VR*	0A	179840	170 W	1.80-1.50	2060	64.2	82.8	2015			2.80

* on request

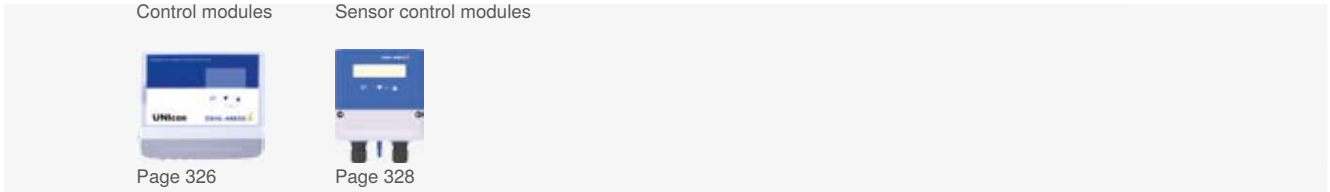
Further fans can be found in the selection program FANselect:
www.fanselect.net Other voltages and versions on request.



Performance data

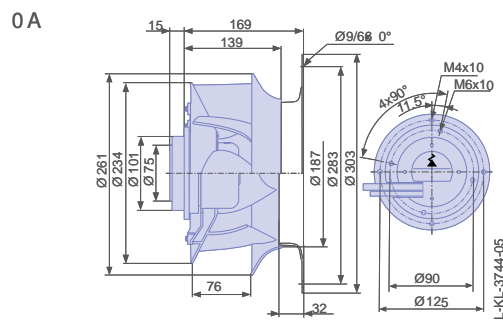
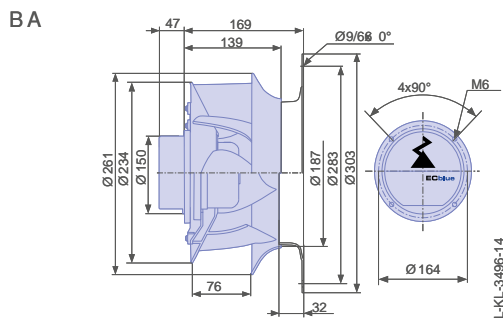
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		
_25V-_I-_A.VR	I	3250	①	1.35	310	80	50	230
			②	2.90	660	75		
			③	2.60	600	78		
	II	2860	④	0.92	210	77	60	
			⑤	1.90	440	73		
			⑥	1.75	400	75		
	III	2510	⑦	1.35	140	73	60	
			⑧	1.60	170	65		
			⑨	1.60	170	70		

Control technology



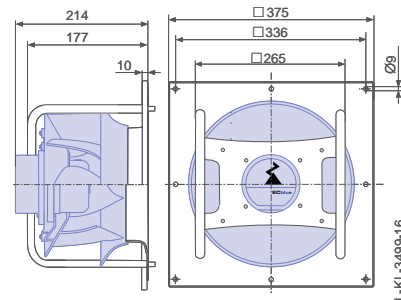
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



Ventilation unit GR in installation position H/Vu/
Vo

Inlet nozzle integrated



ZAvblue-ECblue

Size 280

RH28V



Description

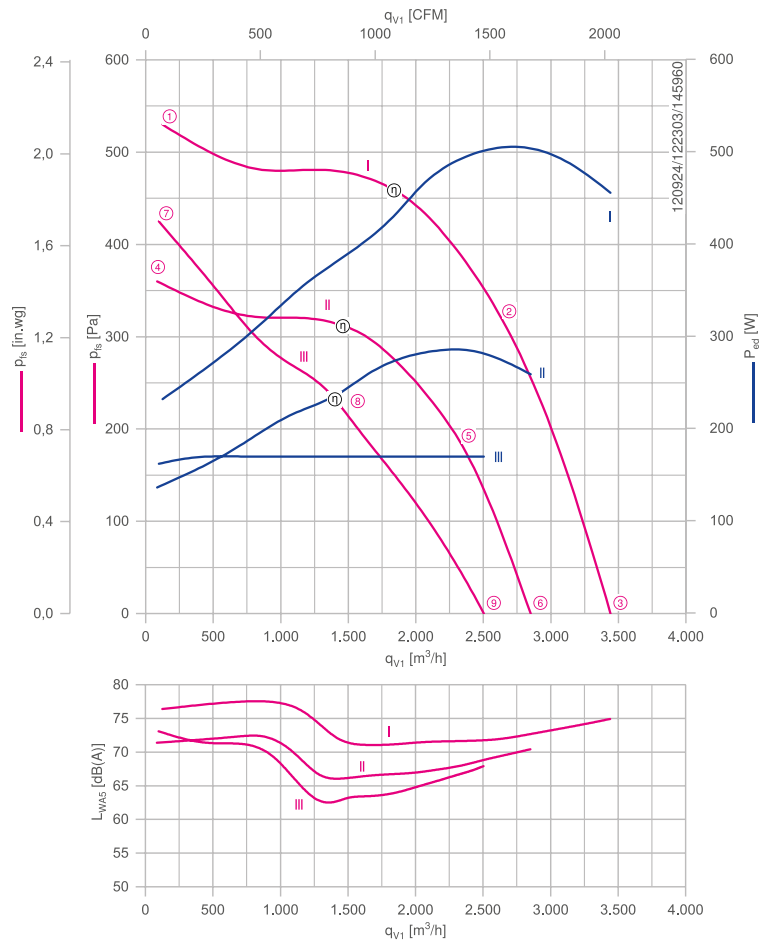
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring
 Connection diagrams
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00412366

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	1~ 200-277	RH28V-6IK.BA.VR	BA	115689	0.50 kW	2.60-1.85	2450	62.8	77.2	2015	yes		4.50
	1~ 200-277	GR28V-6IK.BA.VR	BA	115729/A01	0.50 kW					2015			10.00
II	1~ 200-277	RH28V-6IK.BA.VR	BA	115688	290 W	1.45-1.05	2040	61.6	78.6	2015			4.50
	1~ 200-277	GR28V-6IK.BA.VR	BA	115728/A01	290 W					2015			10.00
III	1~ 200-240	RH28V-ZIP.0A.VR*	0A	179841	170 W	1.75-1.45	1710	63.9	82.5	2015			2.90

* on request



Further fans can be found in the selection program FANselect:
www.fanselect.net Other voltages and versions on request.



Performance data

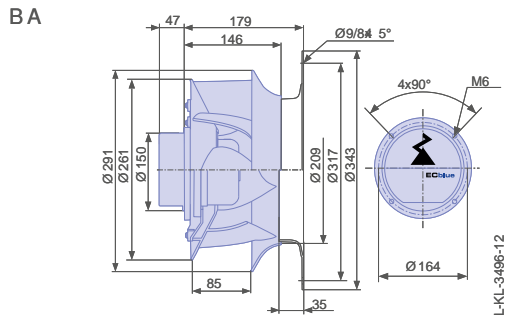
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb} (max.) °C	
_28V-_I-_A.VR	I	2450	①	1.05	230	76	55	230
			②	2.20	500	72		
			③	2.00	460	75		
	II	2040	④	0.60	140	71	60	
			⑤	1.25	290	68		
			⑥	1.15	260	70		
	III	2220	⑦	1.45	160	73	60	
			⑧	1.55	170	62		
			⑨	1.50	170	68		

Control technology

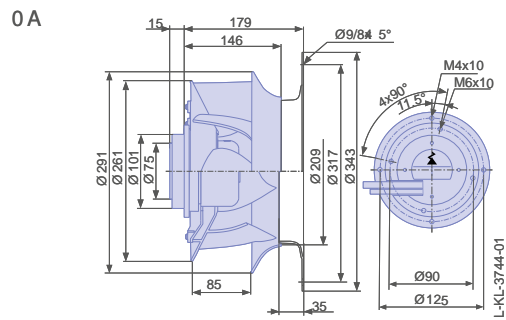
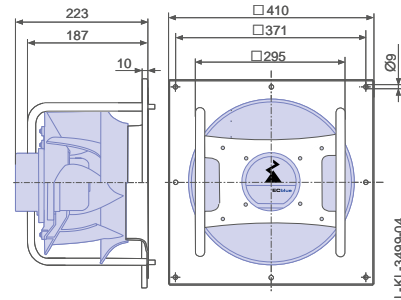
Control modules	Sensor control modules
	
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 315

RH31V

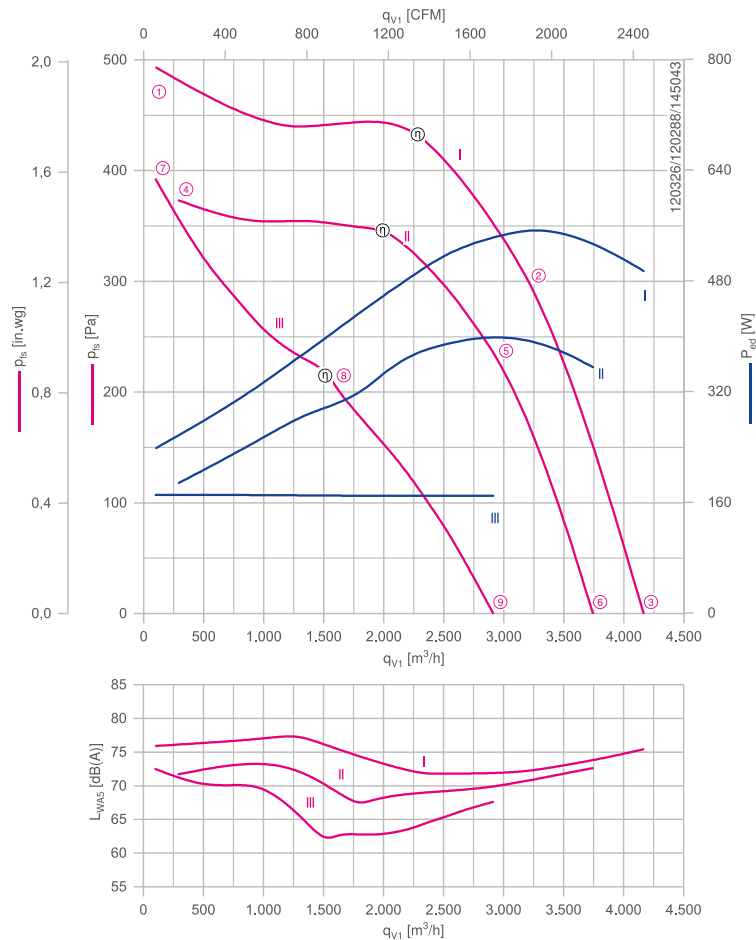


Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material,
 uncoated, ultramarine blue
 * Rated data

Inlet ring 00412368 Page 290
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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %				kg
I	1~ 200-277	RH31V-6IK.BD.VR	BD	115691	0.56 kW	2.80-2.00	2100	63.6	77.3	2015	yes		5.50
	1~ 200-277	GR31V-6IK.BD.VR	BD	115731/A01	0.56 kW					2015			12.00
II	1~ 200-277	RH31V-6IK.BD.VR	BD	115690	0.40 kW	2.00-1.45	1880	63.7	79.0	2015			5.40
	1~ 200-277	GR31V-6IK.BD.VR	BD	115730/A01	0.40 kW					2015			12.00
III	1~ 200-240	RH31V-ZIP.0F.VR*	0F	179842	170 W	1.80-1.50	1410	63.9	82.5	2015			4.10



* on request
 Further fans can be found in the selection program FANselect:
www.fanselect.net Other voltages and versions on request.



Performance data

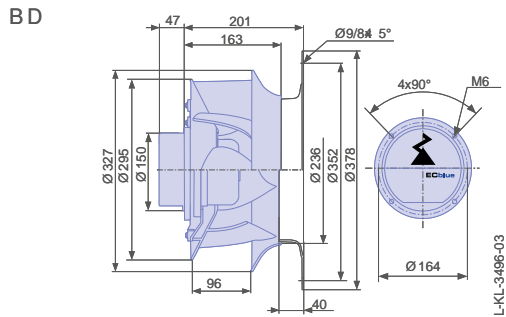
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
__31V-__I__VR	I	2100	①	1.05	240	76	55	230
			②	2.40	560	72		
			③	2.20	500	75		
	II	1880	④	0.82	190	72	55	
			⑤	1.75	400	70		
			⑥	1.55	360	73		
	III	1520	⑦	1.45	170	73	60	
			⑧	1.50	170	62		
			⑨	1.45	170	68		

Control technology

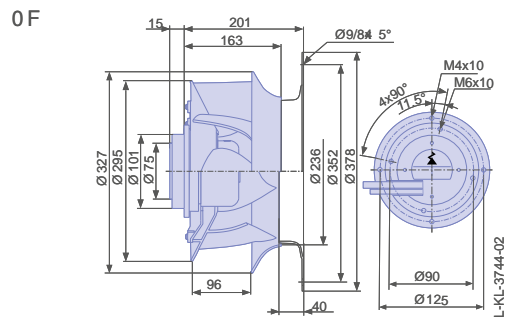
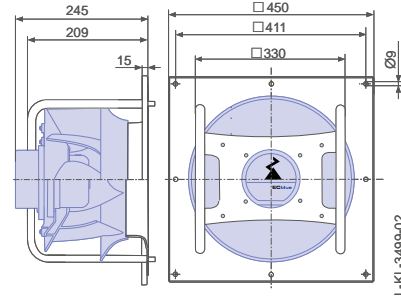
Control modules	Sensor control modules
 Page 326	 Page 328

Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 355

RH35V



Description

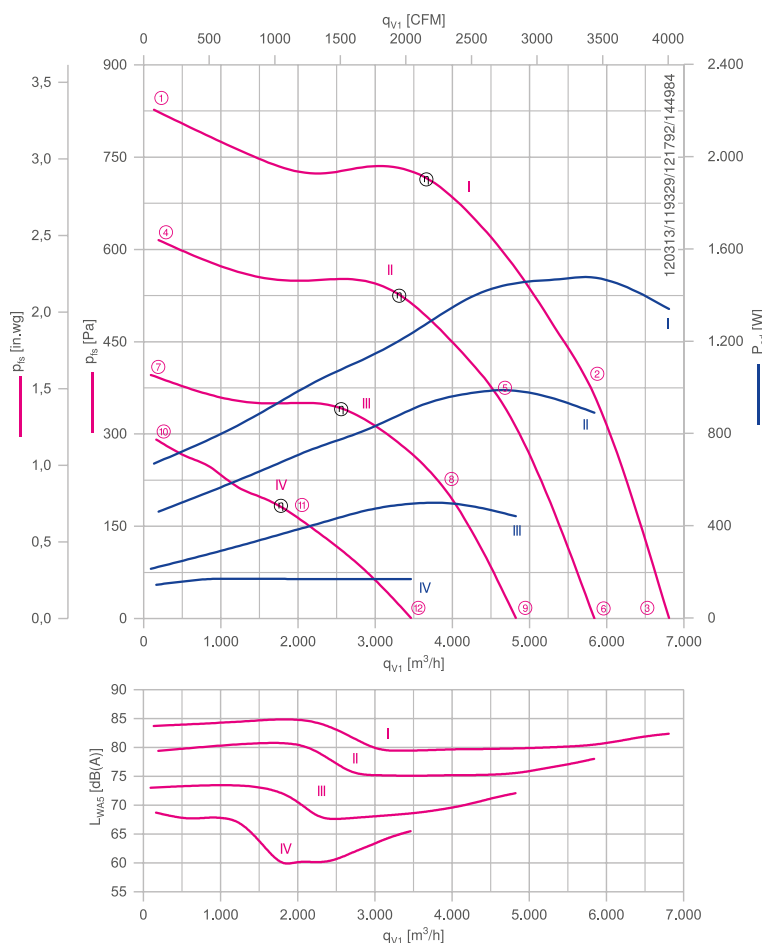
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring
 Connection diagrams
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00412370

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH35V-ZIK.DC.VR	DC	115694	1.50 kW	2.40-1.90	2430	63.7	73.1	2015	yes	UL Listed Product	8.70
	3~ 380-480	GR35V-ZIK.DC.VR	DC	115734/A01	1.50 kW					2015			17.00
II	1~ 200-277	RH35V-ZIK.DC.VR	DC	115696	0.98 kW	5.00-3.60	2090	62.1	73.2	2015			8.70
	1~ 200-277	GR35V-ZIK.DC.VR	DC	115736/A01	0.98 kW					2015			17.00
III	1~ 200-277	RH35V-6IK.BD.VR	BD	115693	0.50 kW	2.50-1.85	1680	63.9	78.1	2015			5.80
	1~ 200-277	GR35V-6IK.BD.VR	BD	115733/A01	0.50 kW					2015			14.00
IV	1~ 200-240	RH35V-ZIP.0F.VR*	0F	179843	170 W	1.85-1.50	1150	65.8	85.4	2015			4.50

* on request

Further fans can be found in the selection program FANselect:
www.fanselect.net Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage	
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		t _{amb (max.)} °C	U V
__35V-__VR	I	2430	①	1.15	660	84	60	400	
			②	2.30	1500	80			
			③	2.10	1350	82			
	II	2090	④	2.10	460	79	55	230	
			⑤	4.40	980	75			
			⑥	4.00	880	78			
	III	1680	⑦	0.94	210	73	55		
			⑧	2.20	500	69			
			⑨	1.95	440	72			
	IV	1450	1250	⑩	1.30	140	69	60	
				⑪	1.50	170	59		
				⑫	1.50	170	66		

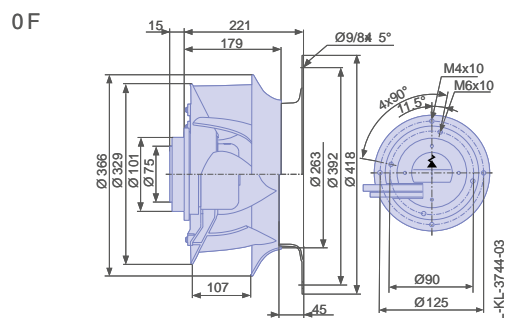
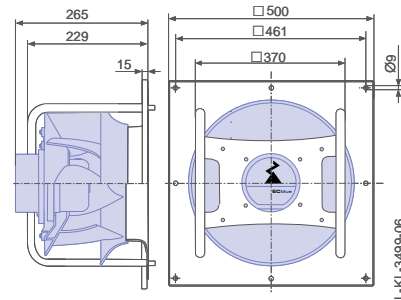
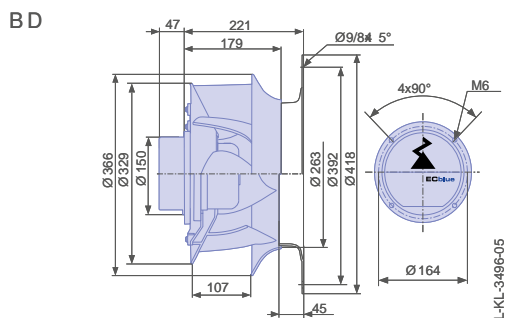
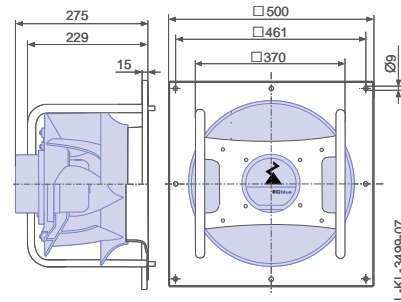
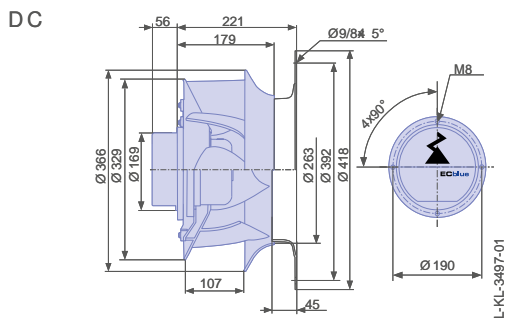
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 400

RH40V



Description

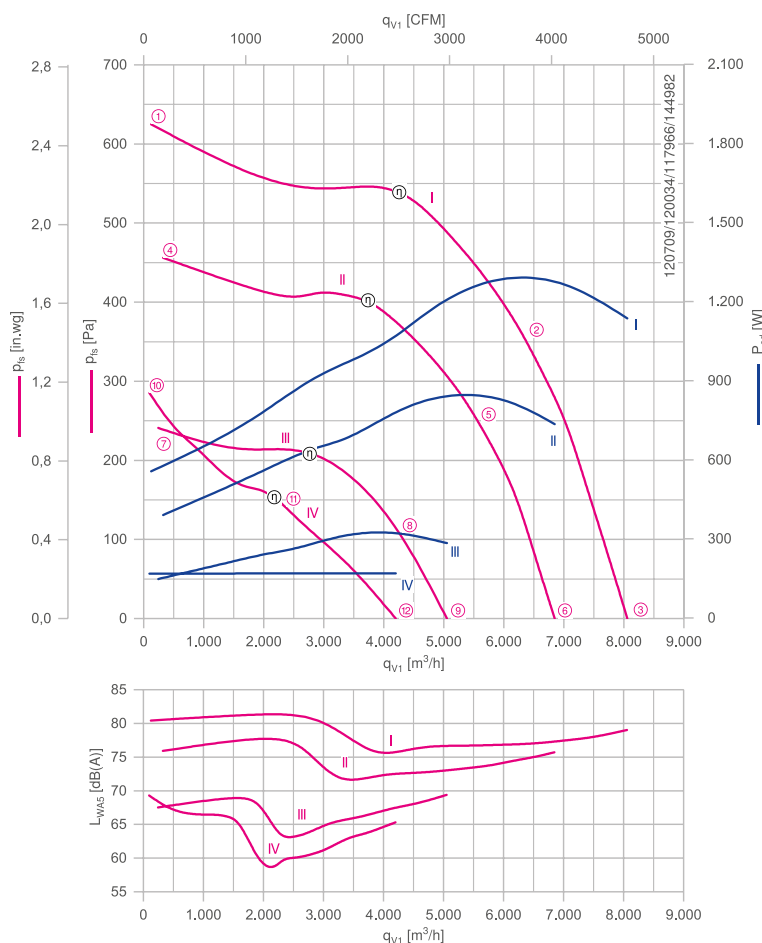
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: **THCL155***
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring
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00411684

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Characteristic curve



Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH40V-ZIK.DC.VR	DC	115699	1.30 kW	2.10-1.70	1840	66.0	76.1	2015	yes	UL Listed Product	9.40
	3~ 380-480	GR40V-ZIK.DC.VR	DC	115739/A01	1.30 kW					2015			20.00
II	1~ 200-277	RH40V-ZIK.DC.VR	DC	115701	0.84 kW	4.20-3.10	1580	65.0	77.0	2015			9.40
	1~ 200-277	GR40V-ZIK.DC.VR	DC	115741/A01	0.84 kW					2015			20.00
III	1~ 200-277	RH40V-6IK.BD.VR	BD	115698	0.33 kW	1.70-1.20	1150	66.6	82.9	2015			6.50
	1~ 200-277	GR40V-6IK.BD.VR	BD	115738/A01	0.33 kW					2015			17.00
IV	1~ 200-240	RH40V-ZIP.0F.VR*	0F	179844	170 W	1.75-1.45	920	63.9	82.5	2015			5.10

* on request

Further fans can be found in the selection program FANselect:
www.fanselect.net Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	U V
_40V-_I_-_VR	I	1840	①	0.98	560	80	60	400
			②	2.00	1300	77		
			③	1.80	1150	79		
	II	1580	④	1.75	390	76	55	230
			⑤	3.70	840	73		
			⑥	3.20	740	76		
	III	1150	⑦	0.68	150	68	60	
			⑧	1.45	330	68		
			⑨	1.25	280	69		
	IV	1230	⑩	1.45	170	69	60	
			⑪	1.50	170	58		
			⑫	1.55	170	65		

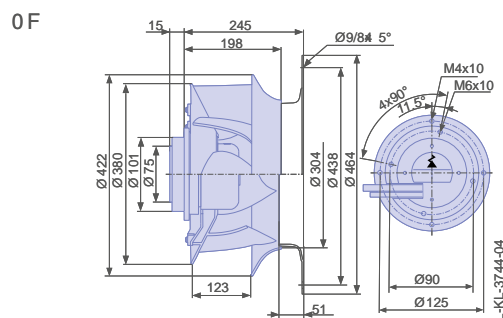
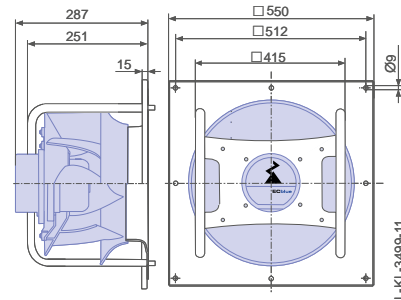
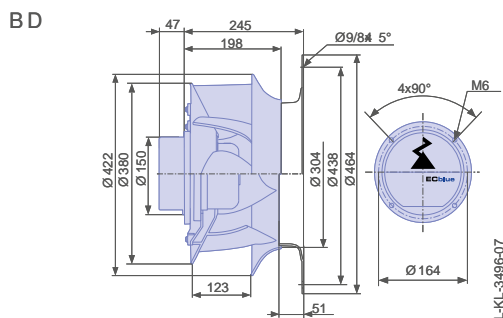
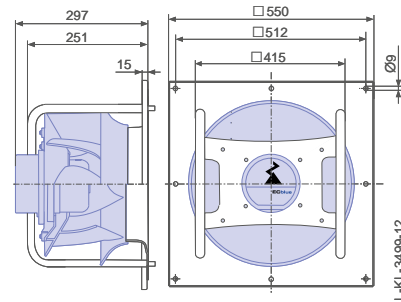
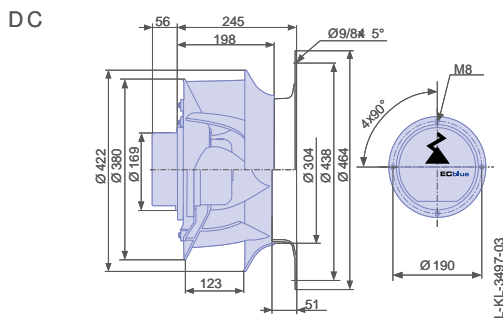
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 450

RH45V



Description

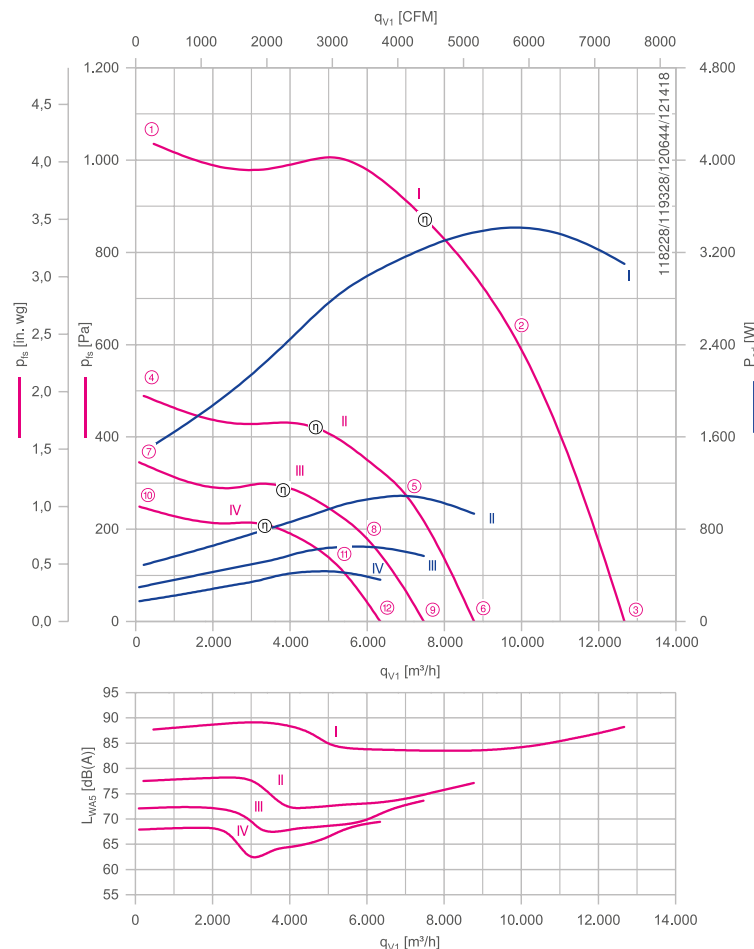
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring
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00411686

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	n_{statA} %	N_{actual} %		CE	UL	
I	3~ 380-480	RH45V-ZIK.GG.VR	GG	115707	3.40 kW	5.40-4.40	2120	60.4	65.6	2015	yes	UL Listed Product	19.00
	3~ 380-480	GR45V-ZIK.GG.VR	GG	115747/A01	3.40 kW					2015			36.00
II	3~ 380-480	RH45V-ZIK.DC.VR	DC	115704	1.10 kW	1.80-1.45	1450	66.3	77.1	2015			10.50
	3~ 380-480	GR45V-ZIK.DC.VR	DC	115744/A01	1.10 kW					2015			28.00
III	1~ 200-277	RH45V-ZIK.DC.VR	DC	115706	0.64 kW	3.30-2.40	1220	63.4	76.7	2015			10.50
	1~ 200-277	GR45V-ZIK.DC.VR	DC	115746/A01	0.64 kW					2015			28.00
IV	1~ 200-277	RH45V-6IK.BD.VR	BD	115703	0.44 kW	2.20-1.60	1040	61.9	77.2	2015			7.60
	1~ 200-277	GR45V-6IK.BD.VR	BD	115743/A01	0.44 kW					2015			25.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
__45V-_IK__VR	I	2120	①	2.40	1550	88	60	400
			②	5.20	3400	84		
			③	4.80	3100	88		
	II	1450	④	0.92	500	78	60	230
			⑤	1.75	1100	74		
			⑥	1.50	940	77		
	III	1220	⑦	1.35	300	72	60	230
			⑧	2.80	640	69		
			⑨	2.50	560	74		
	IV	1040	⑩	0.80	180	68	45	230
			⑪	1.90	440	66		
			⑫	1.60	360	69		

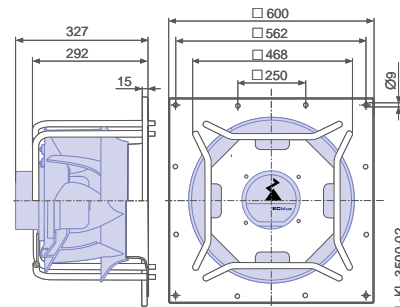
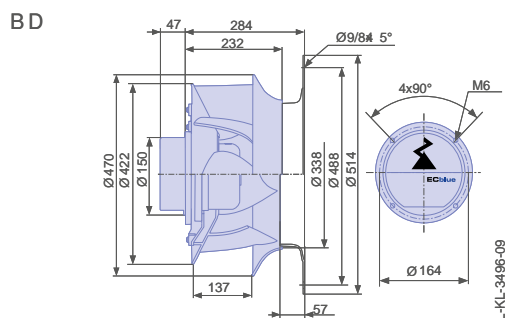
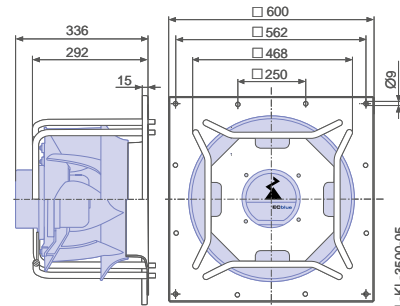
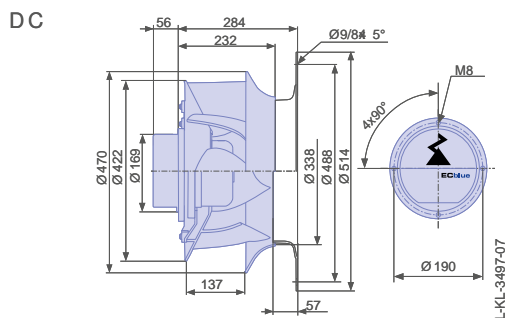
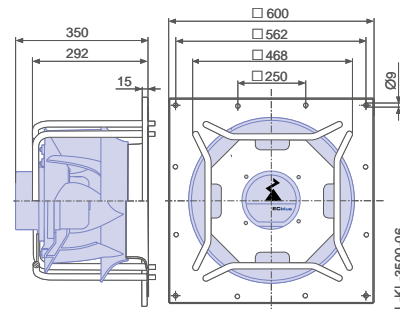
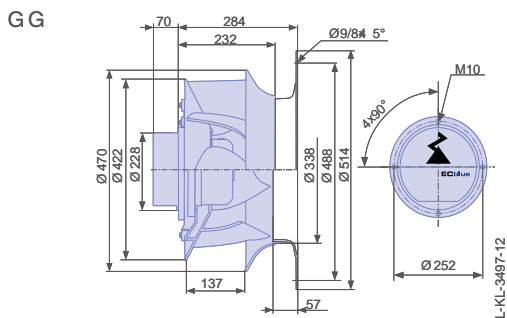
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 500

RH50V



Description

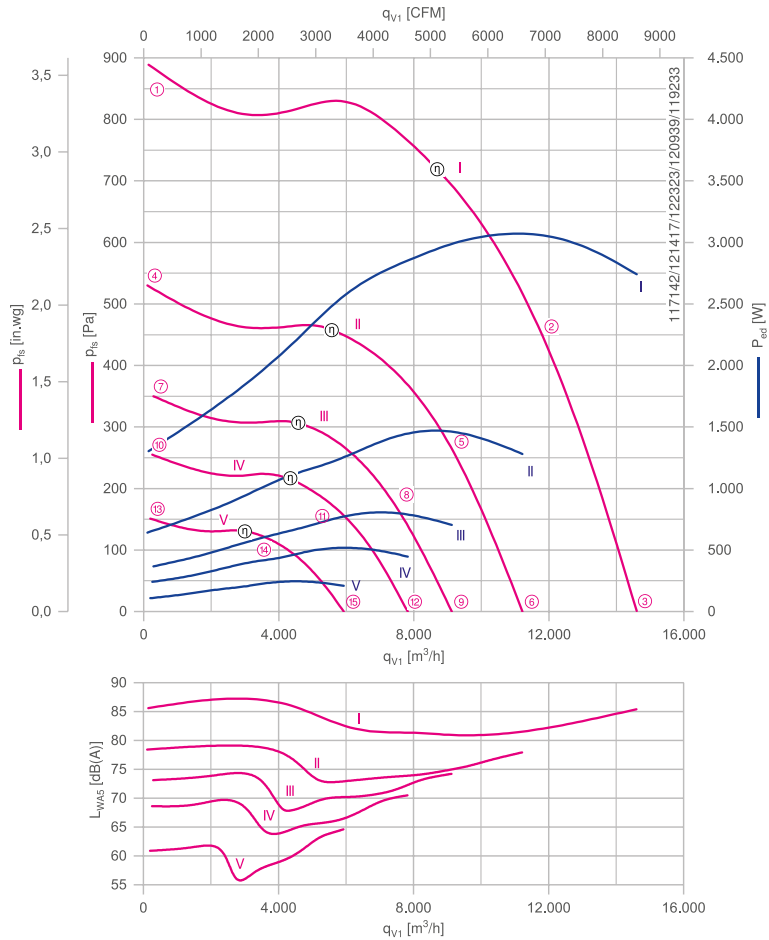
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material,
 unlackiert, ultramarine blue
 * Rated data

Inlet ring
 Connection diagrams
 System components

00412014

Page 290
 Page 358
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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	n_{statA} %	N_{actual} %			kg	
I	3~ 380-480	RH50V-ZIK.GG.VR	GG	115714	3.10 kW	5.00-3.90	1770	63.6	69.1	2015	yes	UL Listed Product	19.90
	3~ 380-480	GR50V-ZIK.GG.VR	GG	115754/A01	3.10 kW					2015			42.00
II	3~ 380-480	RH50V-ZIK.DG.VR	DG	173036	1.50 kW	2.40-1.95	1380	65.1	74.6	2015			12.80
	3~ 380-480	GR50V-ZIK.DG.VR	DG	179214/A01	1.50 kW					2015			35.00
III	3~ 380-480	RH50V-ZIK.DC.VR	DC	115711	0.82 kW	1.40-1.15	1120	65.8	78.0	2015			11.40
	3~ 380-480	GR50V-ZIK.DC.VR	DC	115751/A01	0.82 kW					2015			34.00
IV	1~ 200-277	RH50V-ZIK.DC.VR	DC	115713	0.52 kW	2.60-1.90	960	65.0	79.2	2015			11.40
	1~ 200-277	GR50V-ZIK.DC.VR	DC	115753/A01	0.52 kW					2015			34.00
V	1~ 200-277	RH50V-6IK.BD.VR	BD	115710	0.25 kW	1.25-0.92	730	61.7	79.5	2015			8.60
	1~ 200-277	GR50V-6IK.BD.VR	BD	115750/A01	0.25 kW					2015			31.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current I A	Input power P _{ed} W	Suction side sound power level L _{WAS} dB(A)	Maximum ambient temperature t _{amb} (max.) °C	Voltage U V
_50V-_IK__VR	I	1770	①	2.00	1300	86	60	400
			②	4.60	3100	82		
			③	4.20	2700	85		
	II	1380	④	1.10	640	78	40	
			⑤	2.30	1500	75		
			⑥	2.00	1300	78		
	III	1120	⑦	0.76	370	73	55	
			⑧	1.35	820	71		
			⑨	1.20	700	74		
	IV	960	⑩	1.10	240	69	60	
			⑪	2.30	520	67		
			⑫	1.95	440	71		
	V	730	⑬	0.52	110	61	55	
			⑭	1.10	250	60		
			⑮	0.94	210	65		

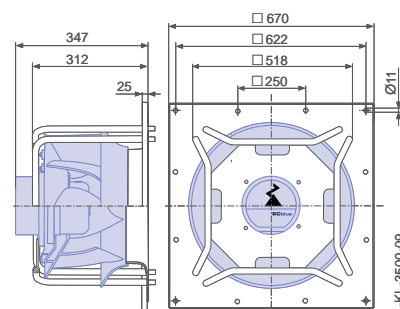
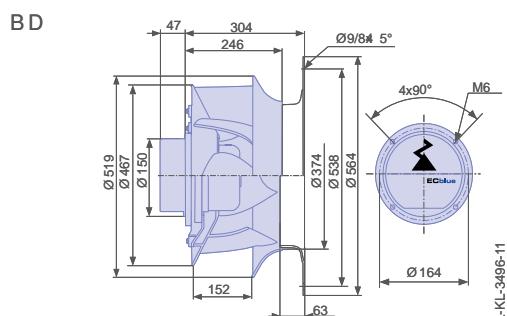
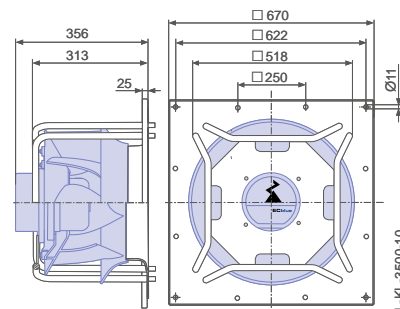
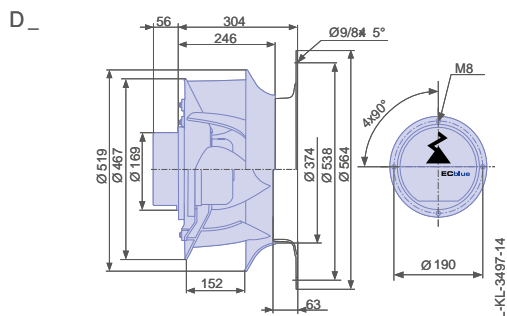
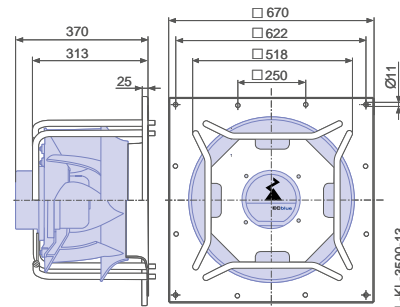
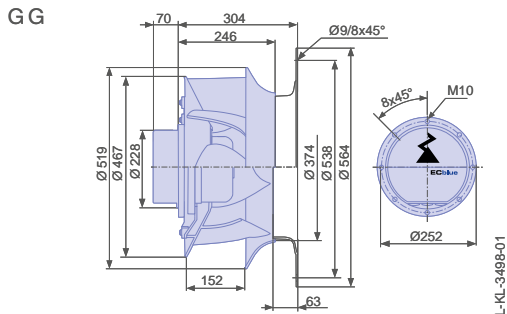
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated



ZAvblue-ECblue

Size 560

RH56V



Description

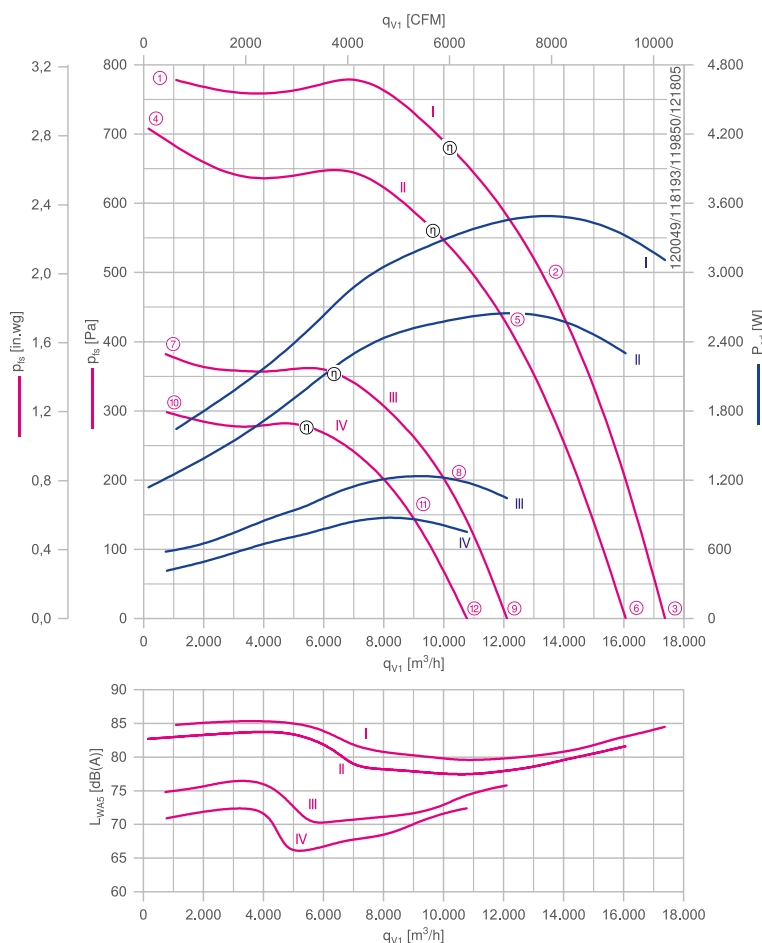
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring
 Connection diagrams
 System components

00412015

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %		CE	UL	kg
I	3~ 380-480	RH56V-ZIK.GL.VR	GL	115721	3.50 kW	5.60-4.40	1550	63.1	68.1	2015	yes	UL Listed Product	25.90
	3~ 380-480	GR56V-ZIK.GL.VR	GL	115761/A01	3.50 kW					2015			52.00
II	3~ 380-480	RH56V-ZIK.GG.VR	GG	115719	2.60 kW	4.20-3.40	1410	64.1	70.3	2015			21.60
	3~ 380-480	GR56V-ZIK.GG.VR	GG	115759/A01	2.60 kW					2015			48.00
III	3~ 380-480	RH56V-ZIK.DG.VR	DG	115716	1.25 kW	2.00-1.60	1080	64.2	74.4	2015			14.40
	3~ 380-480	GR56V-ZIK.DG.VR	DG	115756/A01	1.25 kW					2015			42.00
IV	1~ 200-277	RH56V-ZIK.DG.VR	DG	115718	0.88 kW	4.40-3.20	960	63.8	75.7	2015			14.40
	1~ 200-277	GR56V-ZIK.DG.VR	DG	115758/A01	0.88 kW					2015			42.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
_56V-ZIK_VR	I	1550	①	2.50	1650	85	50	400
			②	5.20	3500	80		
			③	4.80	3100	85		
	II	1410	④	1.85	1150	83	60	
			⑤	4.00	2600	78		
			⑥	3.50	2300	82		
	III	1080	⑦	1.00	580	75	40	
			⑧	1.95	1250	73		
			⑨	1.65	1050	76		
	IV	960	⑩	1.90	420	71	45	230
			⑪	3.90	880	69		
			⑫	3.30	760	72		

Control technology

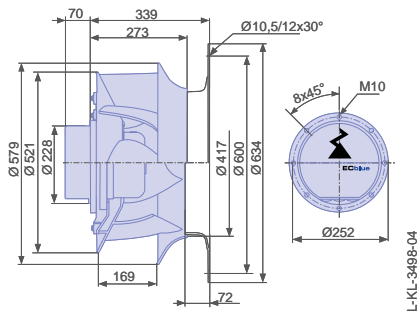
Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

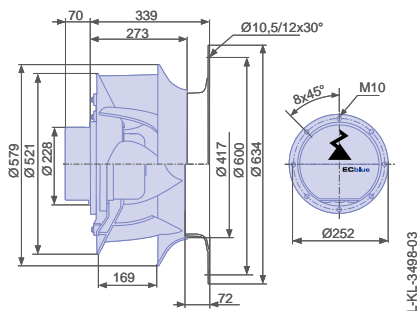
Motor

Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

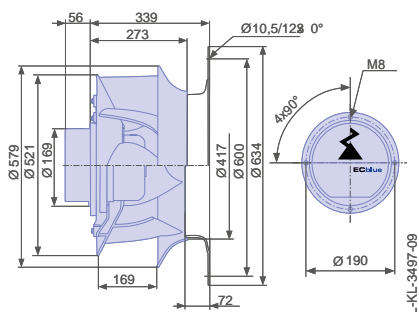
GL



GG

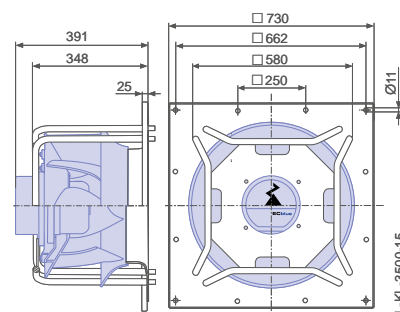
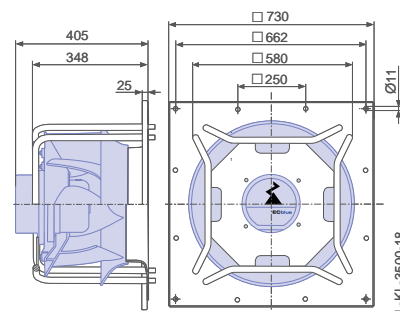
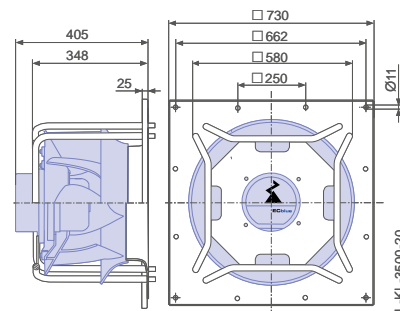


DG



Ventilation unit GR in installation position H/Vu/
Vo

Inlet nozzle integrated



ZAvblue-ECblue

Size 630

RH63V



Description

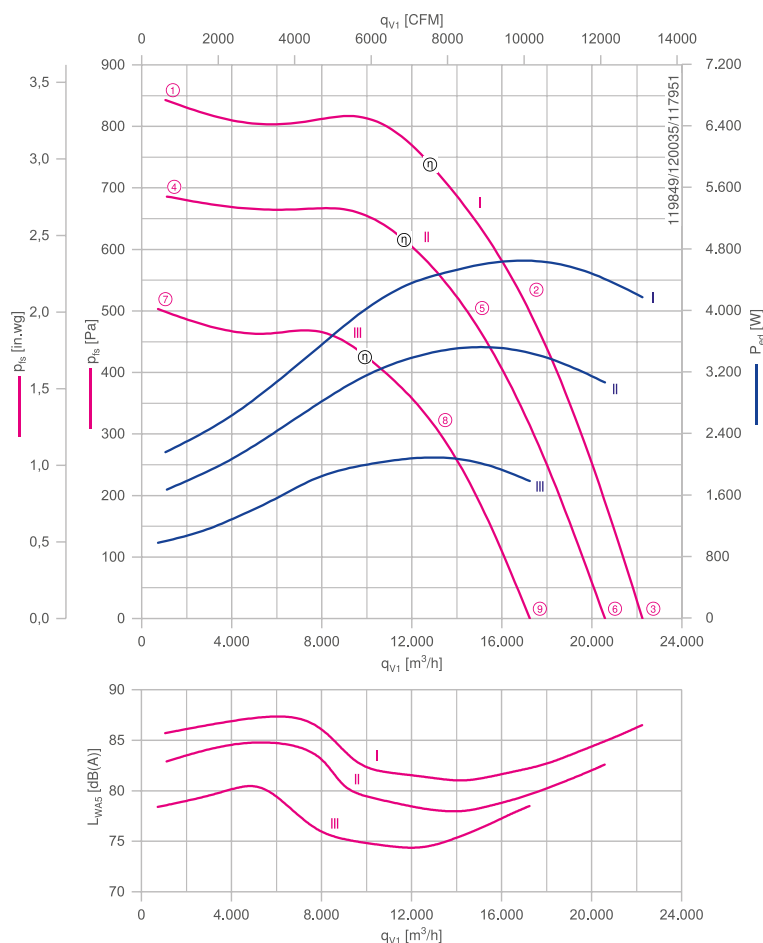
Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: **THCL155***
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material,
 uncoated, ultramarine blue
 * Rated data

Inlet ring
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00412371

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Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity	Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		CE UL	kg
I	3~ 380-480	RH63V-ZIK.GQ.VR	GQ	171449	4.60 kW	7.40-6.00	1430	63.4	67.1	2015	yes UL	34.70
II	3~ 380-480	RH63V-ZIK.GL.VR	GL	171427	3.50 kW	5.60-4.40	1300	64.2	69.2	2015	Listed Product	27.90
	3~ 380-480	GR63V-ZIK.GL.VR	GL	178044/A01	3.50 kW					2015		63.00
III	3~ 380-480	RH63V-ZIK.GG.VR	GG	115723	2.10 kW	3.40-2.70	1090	64.9	72.2	2015		23.50
	3~ 380-480	GR63V-ZIK.GG.VR	GG	115763/A01	2.10 kW					2015		58.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
_63V-ZIK.G_VR	I	1430	①	3.30	2200	86	40	400
			②	7.00	4600	82		
			③	6.40	4200	87		
	II	1300	④	2.60	1650	83	40	
			⑤	5.40	3500	78		
			⑥	4.60	3100	83		
	III	1090	⑦	1.60	980	78	60	
			⑧	3.20	2100	74		
			⑨	2.70	1800	79		

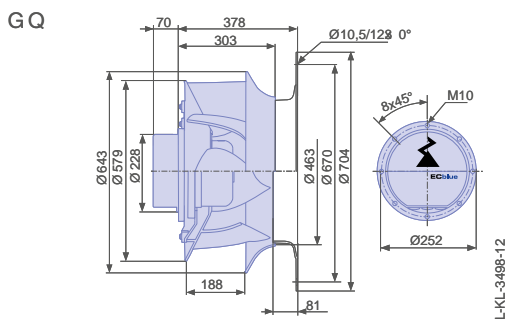
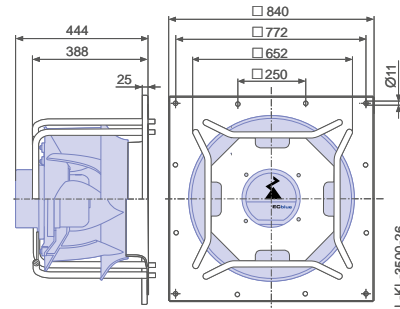
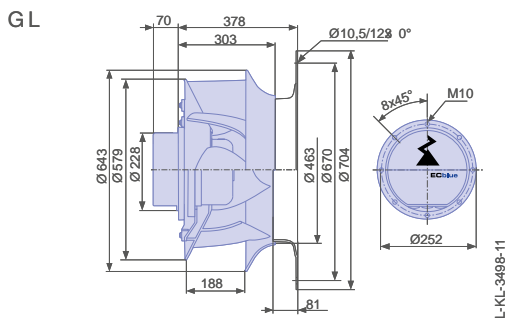
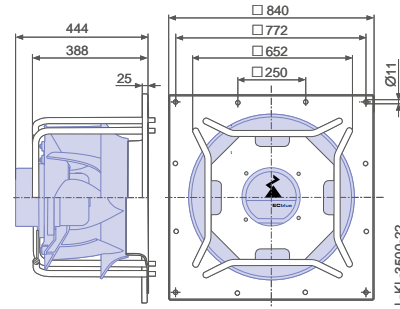
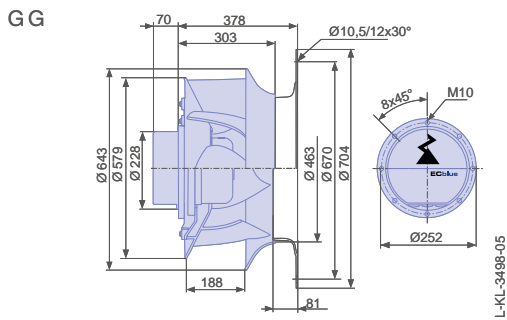
Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

Ventilation unit GR in installation position H/Vu/
Vo
Inlet nozzle integrated







ZAvblue

AC-Technology

Product overview

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Size 500	Page 130
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Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

ZAvblue

Size 250 for 1~ alternating current

RH25V

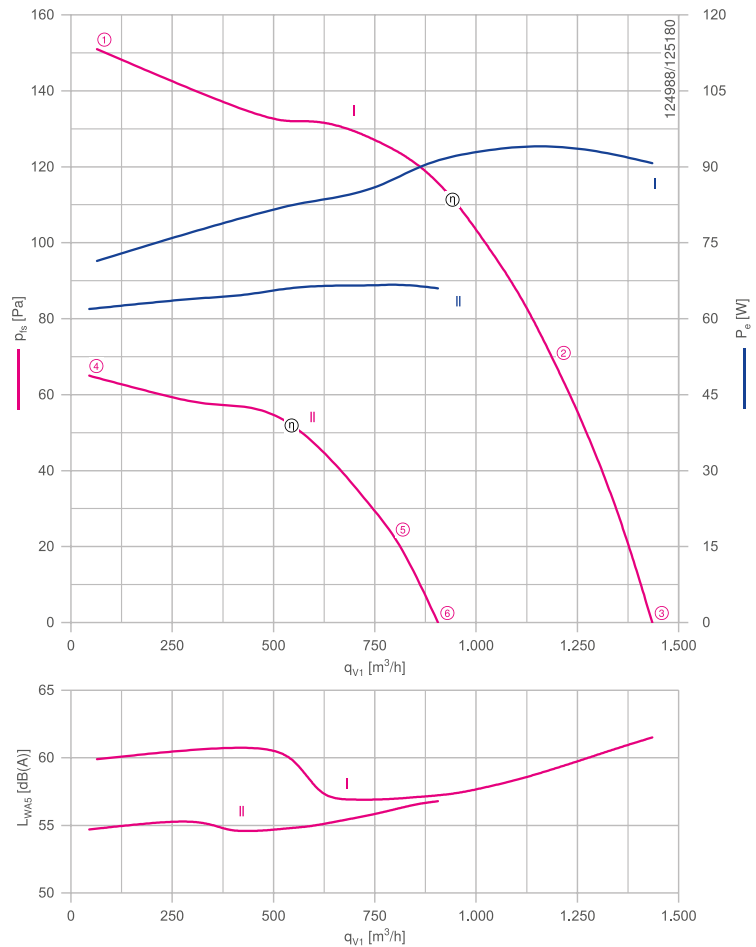


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412364 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH25V-4EK.0C.VR	0C	115769	95 W	0.48 A	1440 min ⁻¹	20 %	2.5uF/400V		32.7 %	32.7 %	not relevant	yes		3.40
II	RH25V-6EK.2A.VR	2A	115773	65 W	0.38 A	950 min ⁻¹	0 %	2,0uF/400V	0.80 A	12.3 %	12.3 %	not relevant			3.10

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V						
Rh25V-_EK_._VR	I	230	①	0.42	70	1470	60	
		230*	②	0.48*	95*	1440*	59	60
		230	③	0.46	90	1440	62	
	II	230	④	0.37	60	970	55	
		230*	⑤	0.38*	65*	950*	56	60
		230	⑥	0.38	65	960	57	

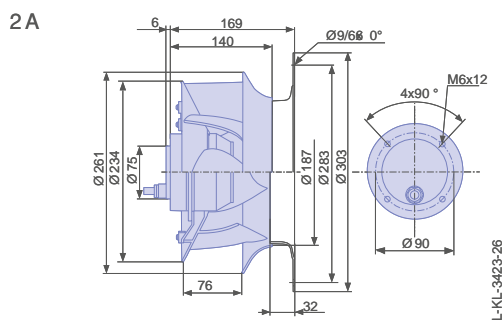
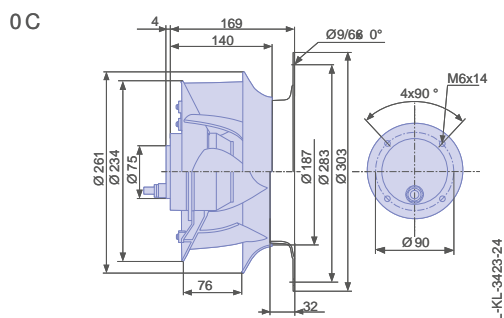
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 250 for 3~ alternating current

RH25V

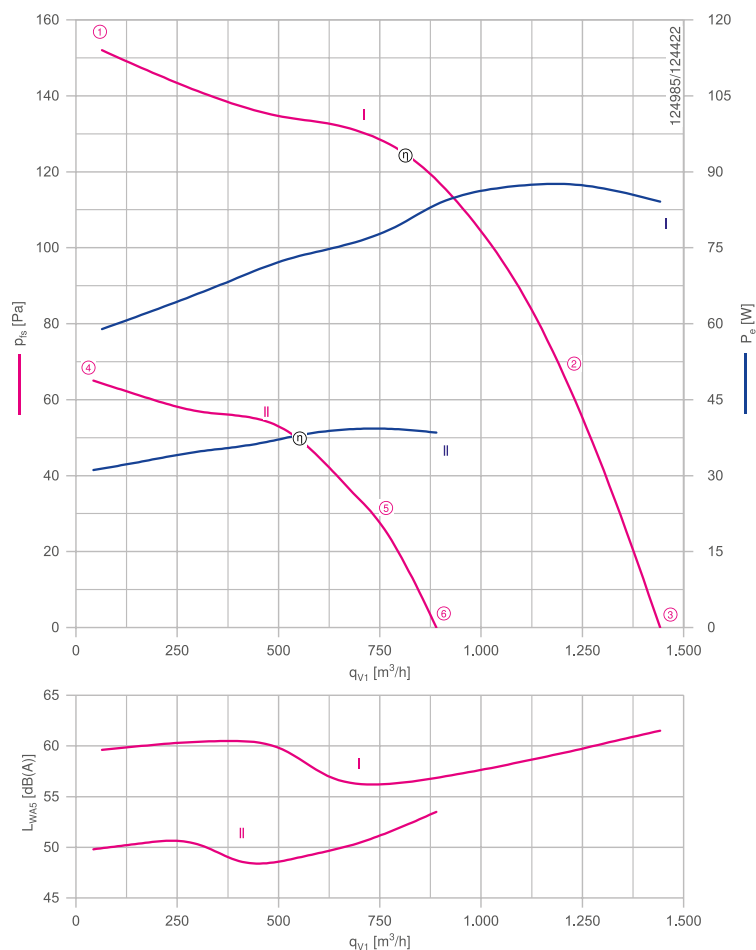


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412364 Page 290
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Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
				P_e	I_N A	n_N min ⁻¹	ΔI %	I_A A	η_{statA} %	N_{actual} %		CE	UL	
I	RH25V-4DK.0C.VR	0C	115768	90 W	0.46/ 0.26	1440	0	1.70/1.00	36.4	36.4	not relevant	yes		3.40
II	RH25V-6DK.2A.VR	2A	115772	40 W	0.18/ 0.10	940	0	0.40/0.24	20.6	20.6	not relevant			3.10

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH25V-DK__VR	I	400	①	0.26	60	1480	60	
		400*	②	0.26*	90*	1440*	59	60
		400	③	0.26	85	1450	62	
	II	400	④	0.10	32	970	50	
		400*	⑤	0.11*	40*	940*	51	60
		400	⑥	0.11	38	940	54	

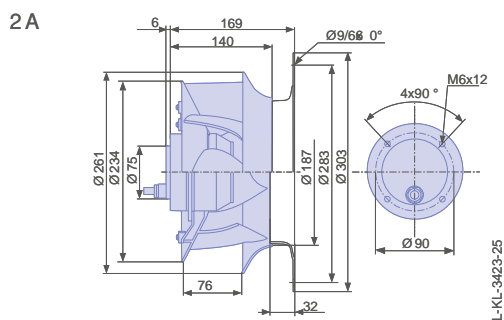
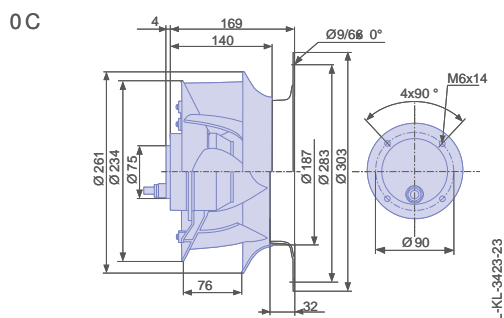
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 280 for 1~ alternating current

RH28V

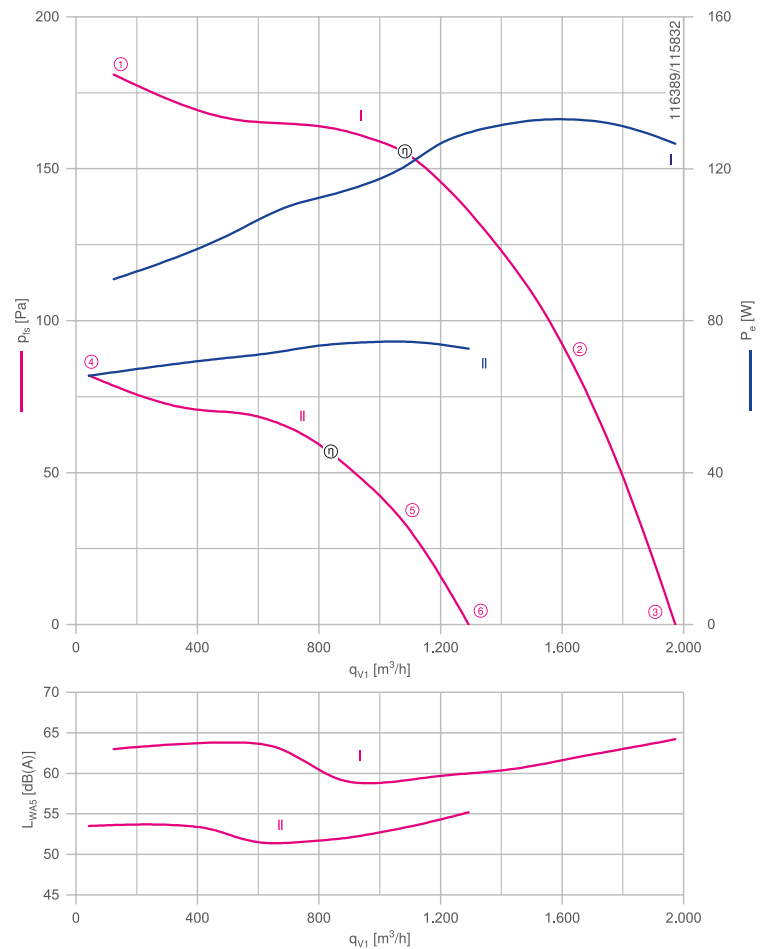


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412366 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Mo- tor	Article no.	Input power P_e	Rated cur- rent I_N A	Rated speed n_N min ⁻¹	Cur- rent in- crease ΔI %	Service capacitor	Start- ing cur- rent I_A A	Effi- ciency η_{statA} %	Effi- ciency grade N_{actual} %	ErP	Conform- ity		Weight kg
													CE	UL	
I	RH28V-4EK.0F.VR	0F	115578	0.13 kW	0.66	1430	40	3uF/400V	2.40	40.2	40.2	not rele- vant	yes		4.30
II	RH28V-6EK.2A.VR	2A	115580	0.07 kW	0.40	930	0	2uF/400V	0.75	18.3	18.3				3.30

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V						
RH28V-_EK__VR	I	230	①	0.56	90	1470	63	
		230*	②	0.66*	130*	1430*	62	60
		230	③	0.64	130	1440	64	
	II	230	④	0.38	65	960	54	
		230*	⑤	0.40*	75*	930*	53	60
		230	⑥	0.39	75	940	55	

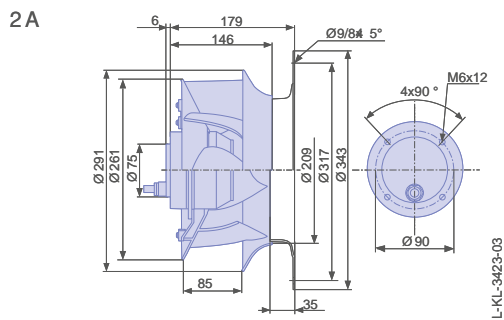
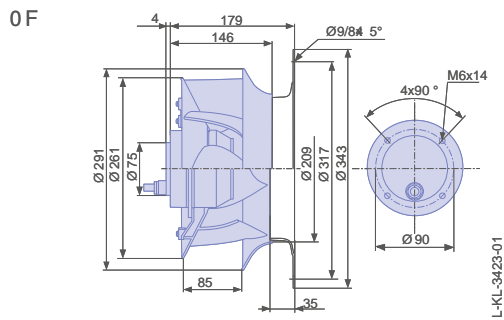
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 280 for 3~ alternating current

RH28V

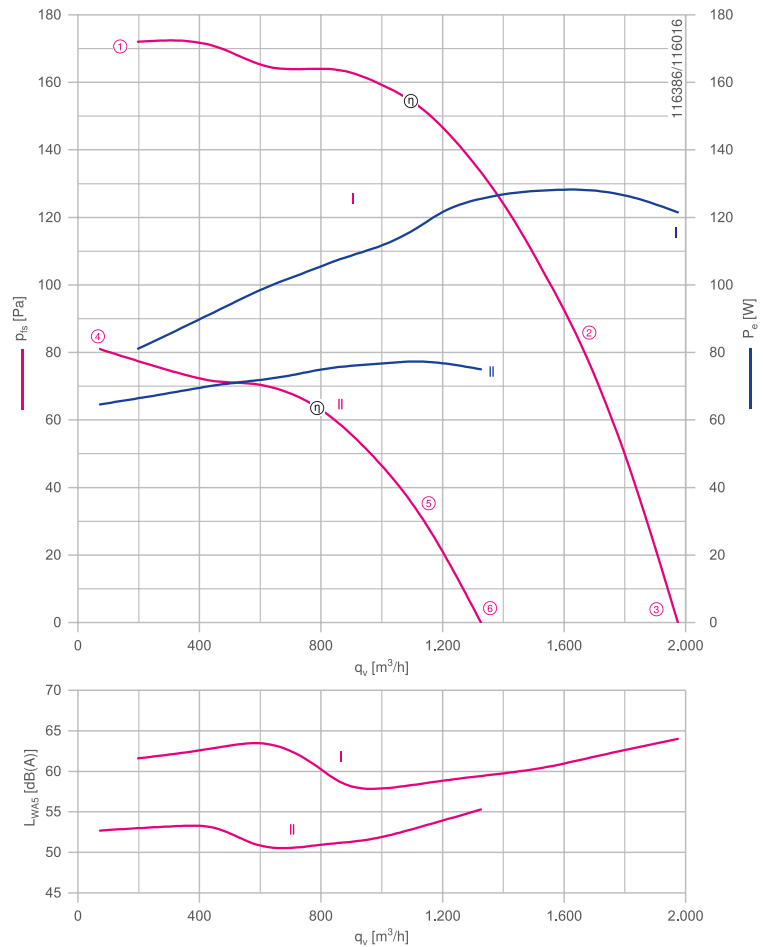


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: **THCL155***
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring	00412366	Page 290
Connection diagrams		Page 358
System components		Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power		Rated current		Rated speed		Current increase		Starting current		Efficiency		ErP	Conformity		Weight
				P_e	I_N	n_N	ΔI	I_A	n_{statA}	N_{actual}	CE	UL							
I	RH28V-4DK.0F.VR	0F	115579	0.13 kW	0.62/ 0.36	1440	0	2.80/1.70	42.0	42.0	not relevant	yes		4.30					
II	RH28V-6DK.2A.VR	2A	115581	0.08 kW	0.44/ 0.26	950	0	0.90/0.55	19.1	19.1	not relevant			3.30					

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W			
RH28V-DK_VR	I	400	①	0.34	80	1470	62	
		400*	②	0.36*	130*	1440*	61	60
		400	③	0.35	120	1440	64	
	II	400	④	0.25	65	970	53	
		400*	⑤	0.25*	75*	950*	53	60
		400	⑥	0.25	75	950	55	

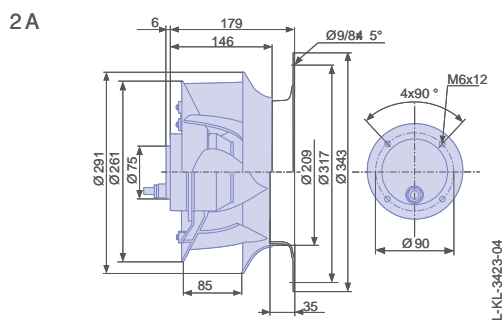
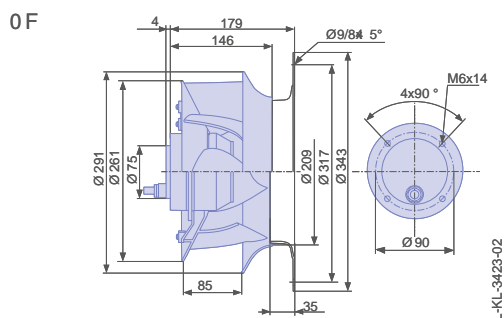
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 315 for 1~ alternating current

RH31V

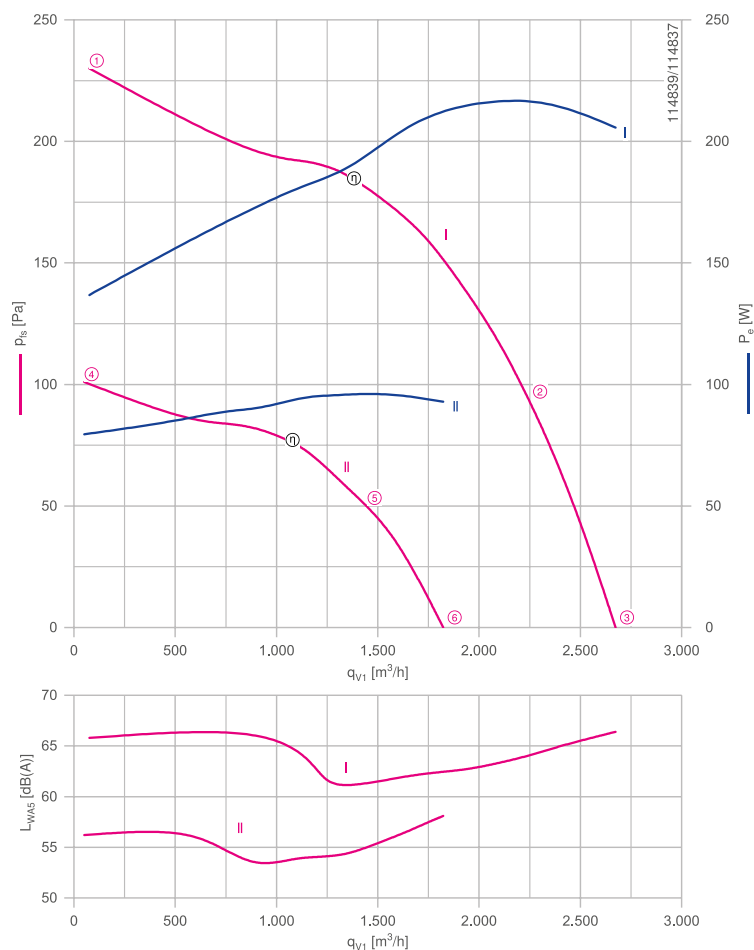


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412368 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH31V-4EK.2F.VR	2F	115582	0.22 kW	1.10	1370	15	3uF/400V	3.00	38.5	56.3	2015	yes		5.10
II	RH31V-6EK.2C.VR	2C	115583	0.10 kW	0.48	910	0	3uF/400V	1.00	25.1	25.1	not relevant			4.30

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH31V- <u>EK.2</u> -VR	I	230	①	0.84	140	1440	66	
		230*	②	1.10*	220*	1370*	64	60
		230	③	1.05	210	1380	66	
	II	230	④	0.44	80	950	56	
		230*	⑤	0.48*	95*	910*	55	60
		230	⑥	0.46	95	920	58	

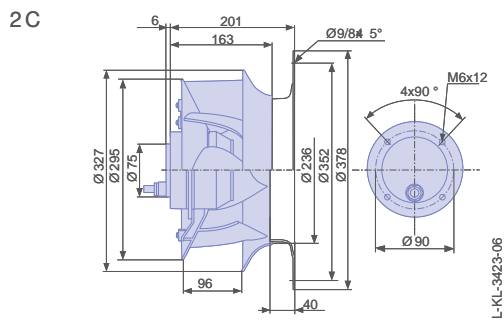
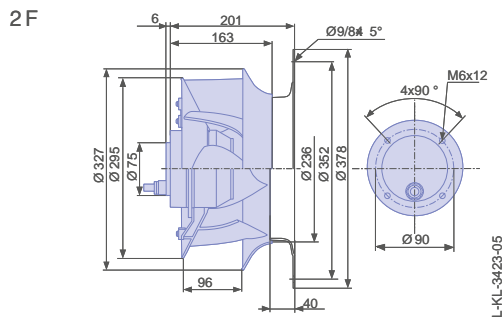
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 315 for 3~ alternating current

RH31V

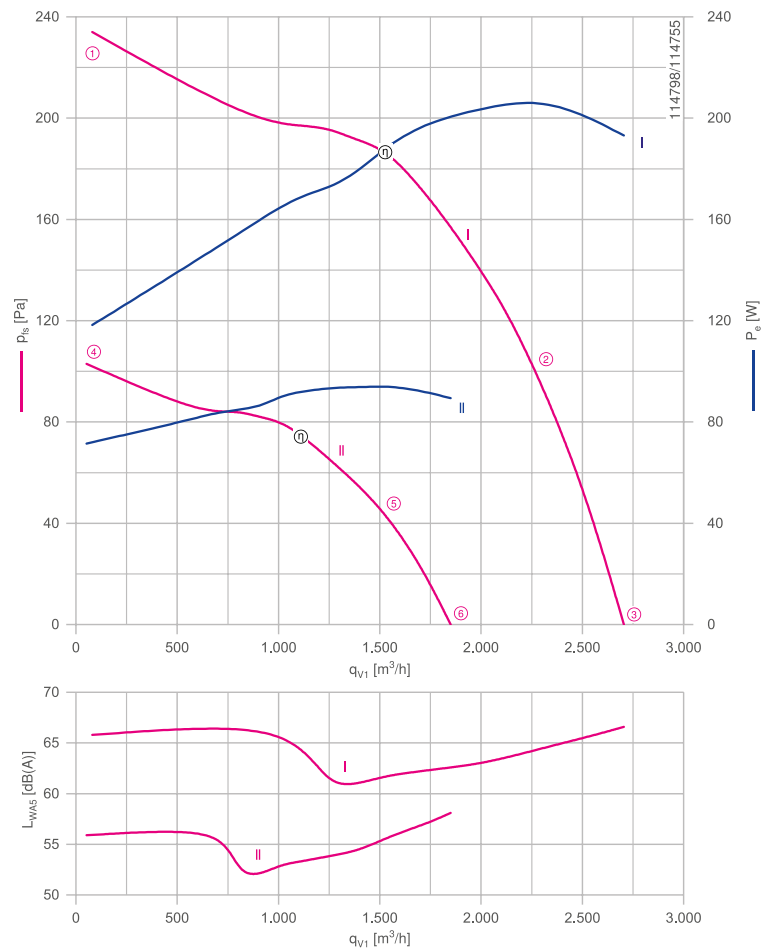


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412368 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Mo- tor	Article no.	Input power		Rated current		Rated speed		Current in- crease		Starting cur- rent		Efficiency		Ef- ficiency grade		ErP	Conform- ity		Weight kg
				P_e	I_N A	n_N min ⁻¹	ΔI %	I_A A	n_{statA} %	N_{actual} %	CE	UL									
I	RH31V-4DK.2F.VR	2F	115584	0.21 kW	0.88/ 0.50	1390	0	3.40/2.00	42.9	61.0	2015	yes			5.10						
II	RH31V-6DK.2A.VR	2A	115585	0.09 kW	0.44/ 0.26	910	0	0.90/0.55	25.8	25.8	not relevant			3.70							

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH31V-DK.2_VR	I	400	①	0.46	120	1450	66	
		400*	②	0.50*	210*	1390*	64	60
		400	③	0.50	190	1400	67	
	II	400	④	0.25	70	960	56	
		400*	⑤	0.25*	95*	910*	56	60
		400	⑥	0.25	90	920	58	

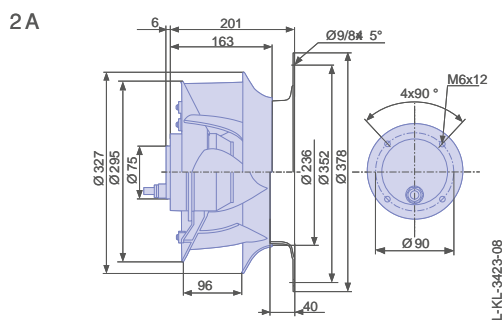
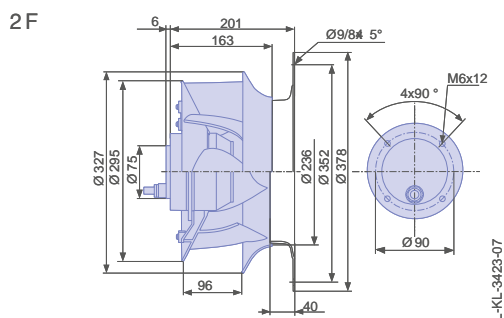
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 355 for 1~ alternating current

RH35V

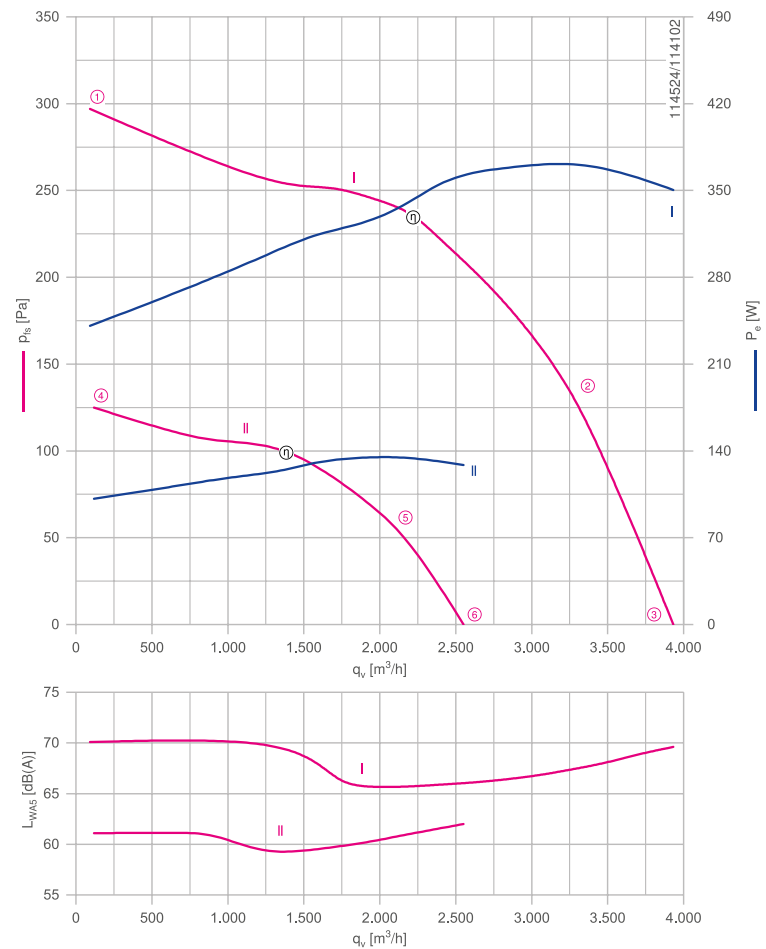


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412370 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH35V-4EK.4F.VR	4F	115589	0.37 kW	1.85 A	1390 min^{-1}	10 %	10uF/400V	5.50 A	43.9 %	59.3 %	2015	yes		7.90
II	RH35V-6EK.2F.VR	2F	115586	0.13 kW	0.64 A	900 min^{-1}	0 %	4uF/400V	1.50 A	31.8 %	31.8 %	not relevant			5.50

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH35V-_EK_F.VR	I	230	①	1.40	240	1450	70	
		230*	②	1.85*	370*	1390*	67	60
		230	③	1.75	350	1400	70	
	II	230	④	0.54	100	950	61	
		230*	⑤	0.64*	130*	900*	61	60
		230	⑥	0.62	130	910	62	

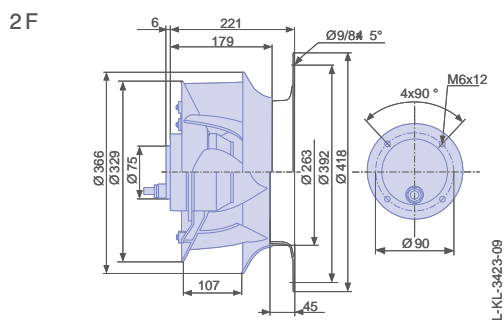
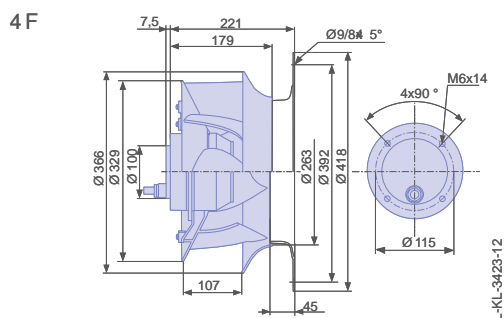
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



Information
ZAvbluefin-ECblue
Cpro-ECblue
C-ECblue
ZAvblue
Vpro-ECblue
ZAcube-Cpro-ECblue
Housing fans
System components
Control technology
General notes

ZAvblue

Size 355 for 3~ alternating current

RH35V

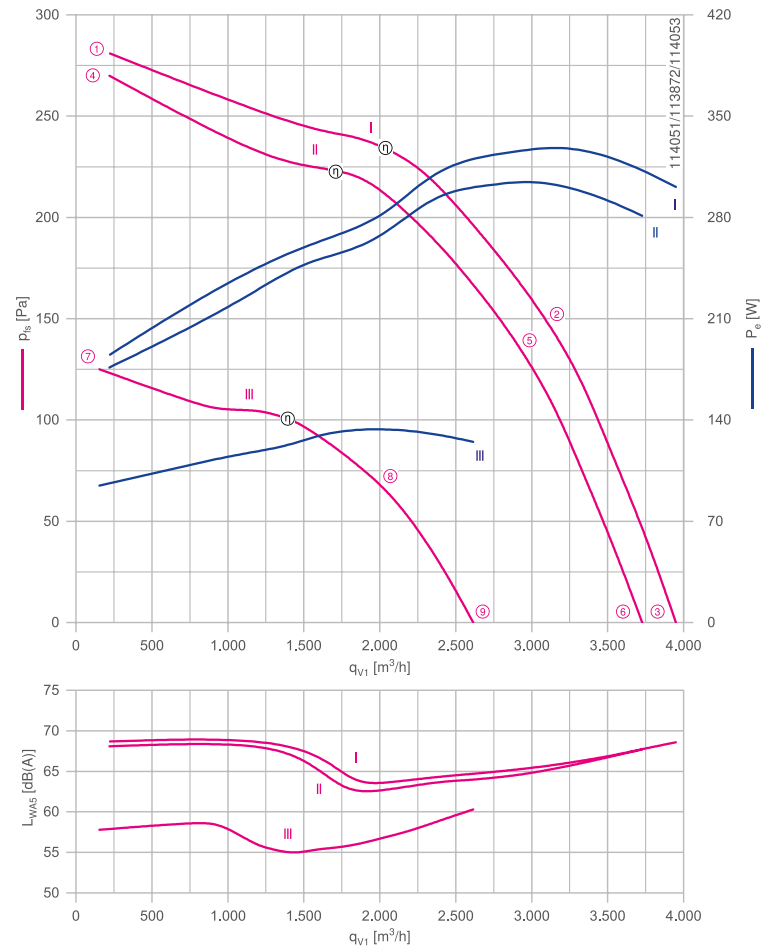


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412370 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power		Rated current		Rated speed		Current increase		Starting current		Efficiency		Efficiency grade		ErP	Conformity		Weight
				P_e		I_N		n_N		ΔI		I_A		n_{statA}		N_{actual}			CE	UL	
I	RH35V-4DK.4C.VR	4C	115591	0.33 kW	1.15/0.68	1380	5	4.80/2.80	48.5	64.7	2015	yes								6.50	
II	RH35V-4DK.2F.VR	2F	115587	300 W	1.05/0.60	1310	0	3.40/2.00	46.1	62.7	2015									5.50	
III	RH35V-6DK.2C.VR	2C	115588	0.13 kW	0.62/0.36	910	0	1.50/0.85	34.1	34.1	not relevant								4.70		

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH35V-DK__VR	I	400	①	0.56	190	1440	69	
		400*	②	0.68*	330*	1380*	66	60
		400	③	0.64	300	1390	69	
	II	400	④	0.48	180	1410	68	
		400*	⑤	0.60*	300*	1310*	65	60
		400	⑥	0.56	280	1330	68	
	III	400	⑦	0.35	95	950	58	
		400*	⑧	0.36*	130*	910*	57	60
		400	⑨	0.36	120	920	60	

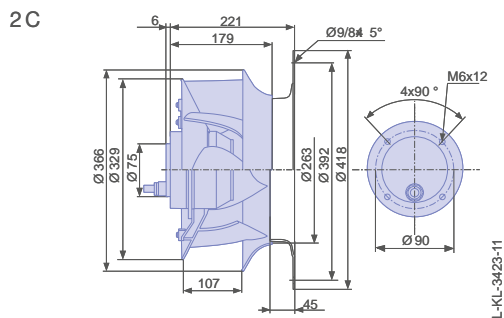
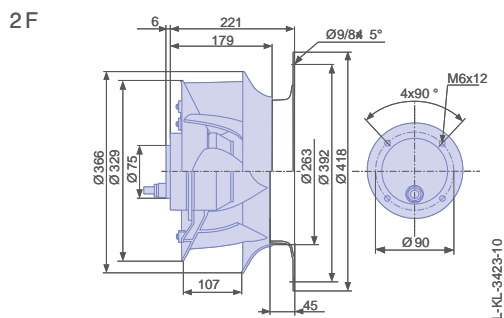
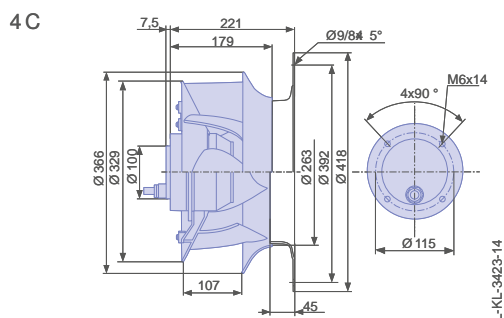
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 400 for 1~ alternating current

RH40V

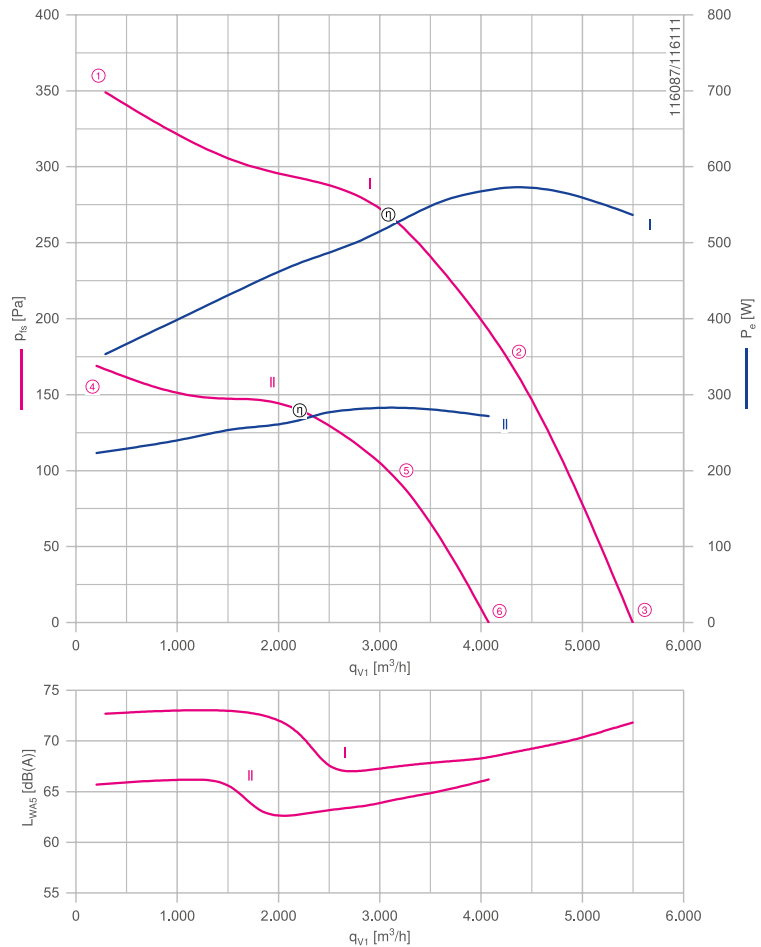


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00411684 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH40V-4EK.4I.VR	4I	115593	0.58 kW	2.60 A	1270 min ⁻¹	5 %	12uF/400V	6.00 A	45.7 %	59.2 %	2015	yes		10.20 kg
II	RH40V-6EK.4F.VR	4F	115594	0.28 kW	1.35 A	940 min ⁻¹	0 %	12uF/400V	3.20 A	33.5 %	50.0 %	2015			8.60 kg

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V						
RH40V-EK.4_VR	I	230	①	1.65	350	1390	73	
		230*	②	2.60*	580*	1270*	69	60
		230	③	2.40	540	1300	72	
	II	230	④	1.20	220	970	66	
		230*	⑤	1.35*	280*	940*	64	60
		230	⑥	1.30	270	940	66	

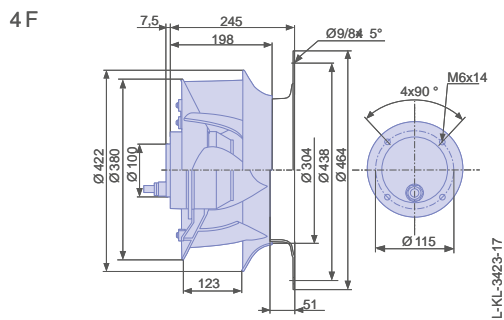
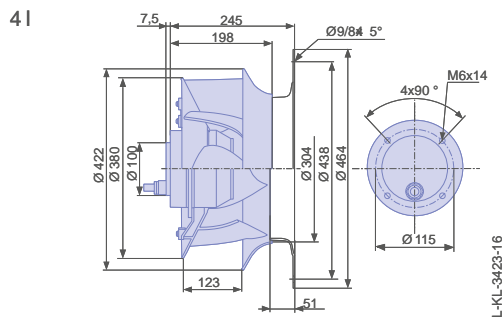
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 400 for 3~ alternating current

RH40V

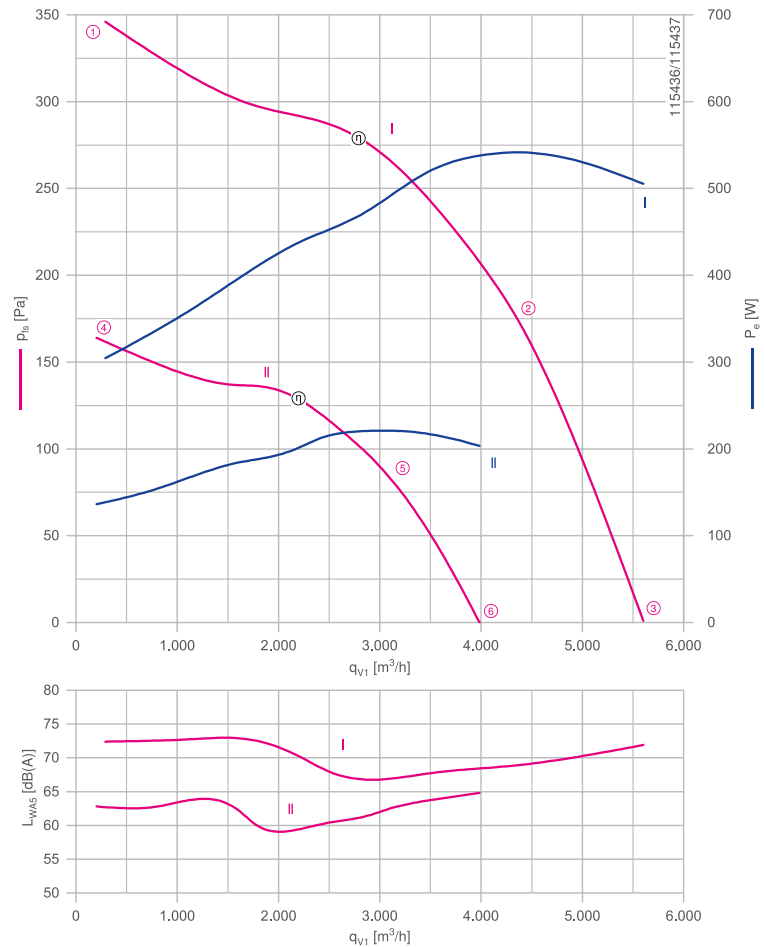


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00411684 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current		Rated speed	Current increase	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
					P_e	I_N							n_N	ΔI	
I	RH40V-4DK.4I.VR	4I	115595	0.54 kW	2.00/ 1.20	1290	0	7.50/4.20	48.3	62.3	2015	yes			10.20
II	RH40V-6DK.4C.VR	4C	115596	0.22 kW	0.98/ 0.56	900	0	2.40/1.40	40.5	58.3	2015				7.20

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH40V-DK.4_VR	I	400	①	0.92	300	1390	72	
		400*	②	1.15*	540*	1290*	69	60
		400	③	1.10	500	1310	72	
	II	400	④	0.48	140	950	63	
		400*	⑤	0.56*	220*	900*	63	60
		400	⑥	0.54	200	910	65	

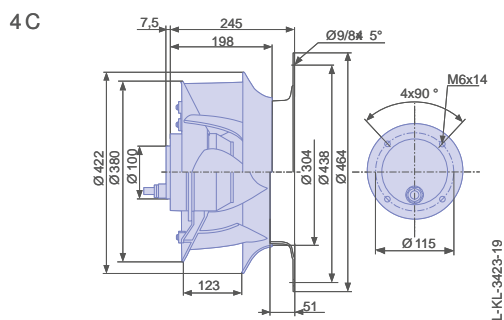
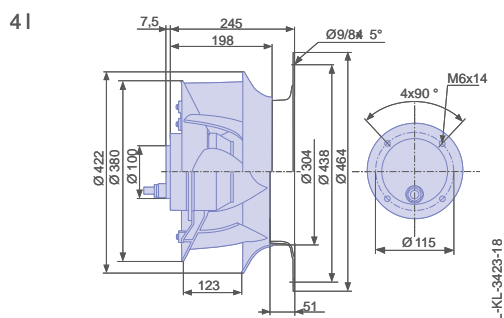
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 450 for 1~ alternating current

RH45V

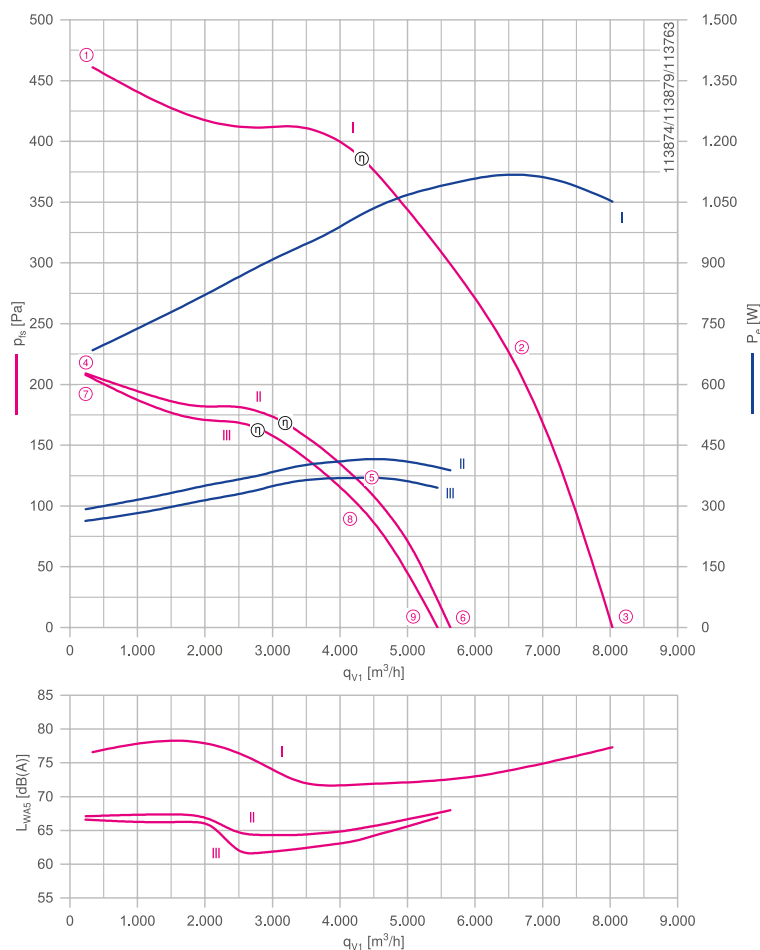


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00411686 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH45V-4EK.6K.VR	6K	115599	1.10 kW	5.20	1380	10	30uF/400V	17.00	46.6	57.0	2015	yes		20.00
II	RH45V-6EK.6F.VR	6F	115600	0.42 kW	2.30	940	5	12uF/400V	7.00	39.0	53.7	2015			16.20
III	RH45V-6EK.4F.VR	4F	115597	0.37 kW	1.75	880	0	8uF/400V		38.6	54.1	2015			9.60

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb(max)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH45V- <u>EK</u> - <u>VR</u>	I	230	①	3.60	680	1450	77	
		230*	②	5.20*	1100*	1380*	74	60
		230	③	5.00	1050	1400	77	
	II	230	④	2.00	290	970	67	
		230*	⑤	2.30*	420*	940*	65	60
		230	⑥	2.20	390	950	68	
	III	230	⑦	1.45	260	950	67	
		230*	⑧	1.80*	370*	880*	64	60
		230	⑨	1.70	340	900	67	

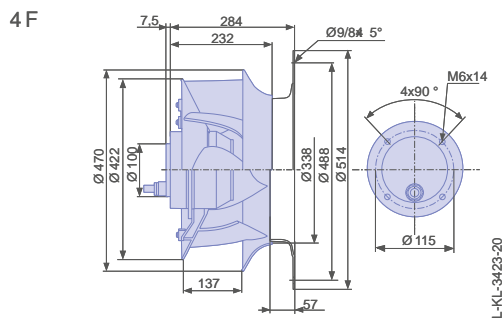
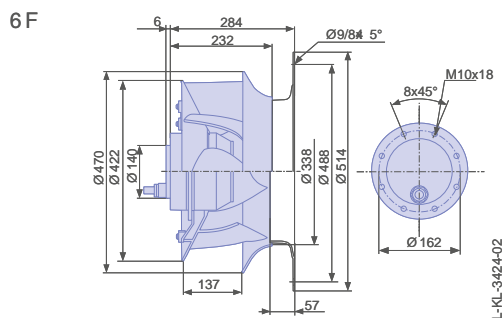
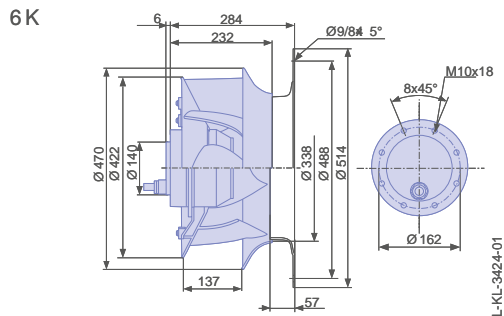
*rated data

Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 450 for 3~ alternating current

RH45V

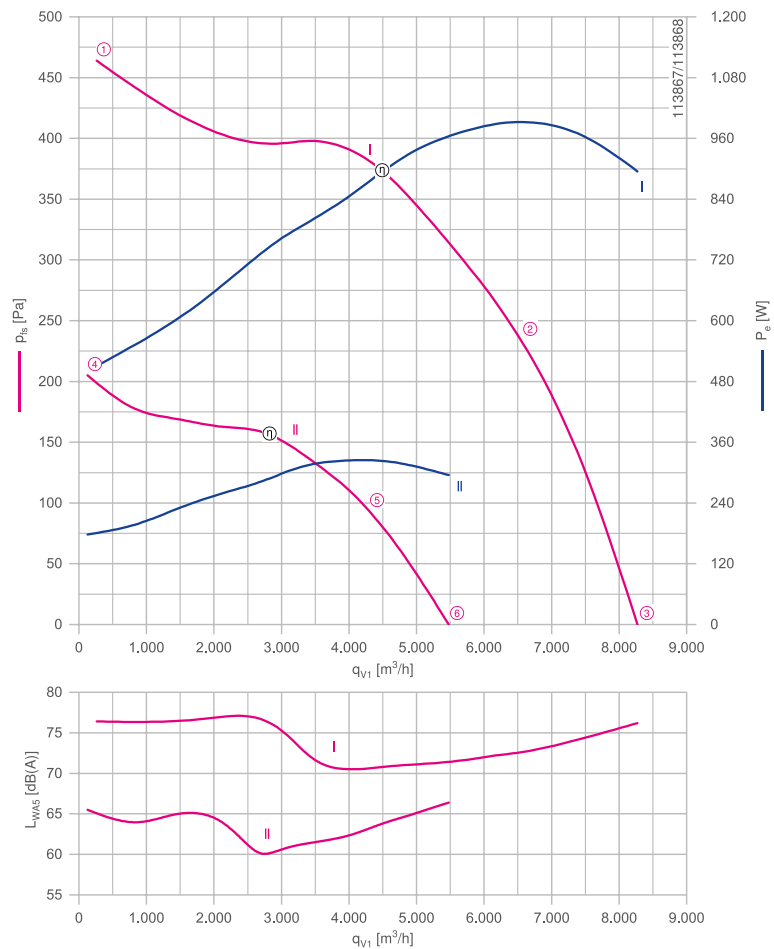


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00411686 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power		Rated current		Rated speed		Current increase		Starting current		Efficiency		Efficiency grade		ErP	Conformity		Weight
				P_e	I_N	n_N	ΔI	I_A	n_{statA}	N_{actual}	CE	UL									
I	RH45V-4DK.6F.VR	6F	115601	1.00 kW	3.40/ 1.95	1370	5	17.00/9.50	53.6	64.6	2015	yes								16.20	
II	RH45V-6DK.4F.VR	4F	115598	0.32 kW	1.20/ 0.70	880	0		44.6	60.8	2015									9.60	

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH45V-DK-__VR	I	400	①	1.45	520	1440	76	60
		400*	②	1.95*	1000*	1370*	73	
		400	③	1.85	900	1380	76	
	II	400	④	0.52	180	950	66	60
		400*	⑤	0.70*	320*	880*	63	
		400	⑥	0.66	300	890	66	

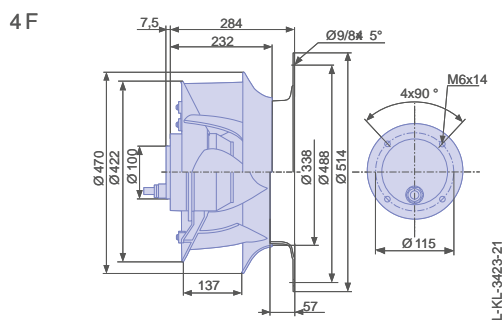
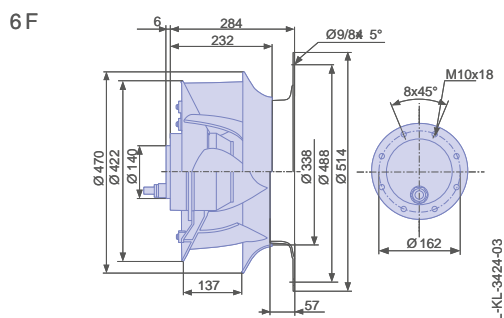
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 500 for 1~ alternating current

RH50V

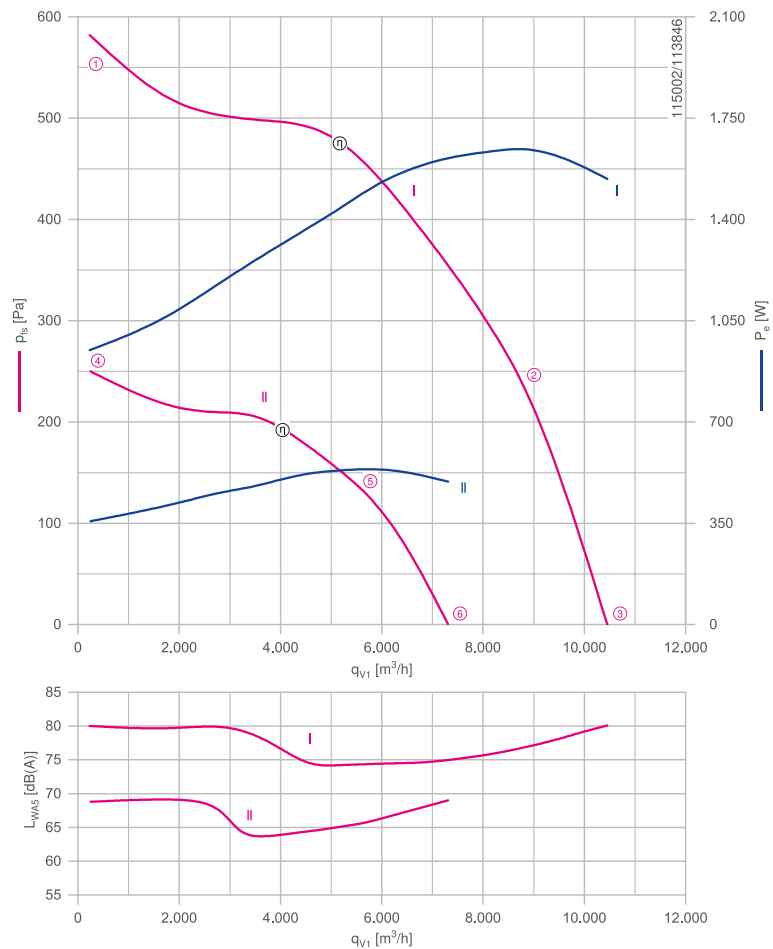


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412014 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
													CE	UL	
I	RH50V-4EK.6N.VR	6N	115606	1.65 kW	7.40 A	1350 min ⁻¹	15 %	35uF/400V	22.00 A	49.4 %	58.3 %	2015	yes		25.20
II	RH50V-6EK.6F.VR	6F	115603	0.54 kW	2.50 A	900 min ⁻¹	5 %	14uF/400V	6.00 A	44.1 %	57.7 %				17.20

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH50V-_EK.6_VR	I	230	①	4.20	940	1440	80	
		230*	②	7.40*	1650*	1350*	77	60
		230	③	6.80	1550	1370	80	
	II	230	④	1.75	360	950	69	
		230*	⑤	2.50*	540*	900*	66	60
		230	⑥	2.30	500	910	69	

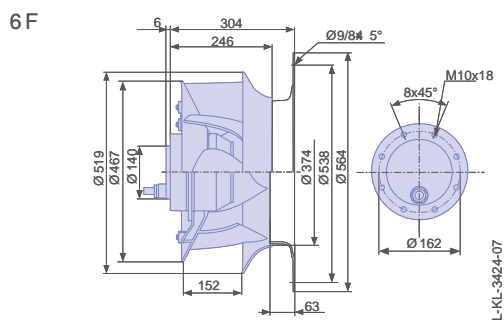
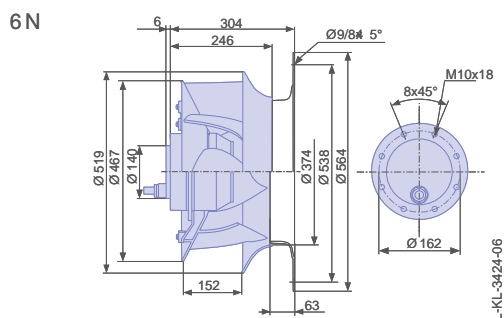
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 500 for 3~ alternating current

RH50V

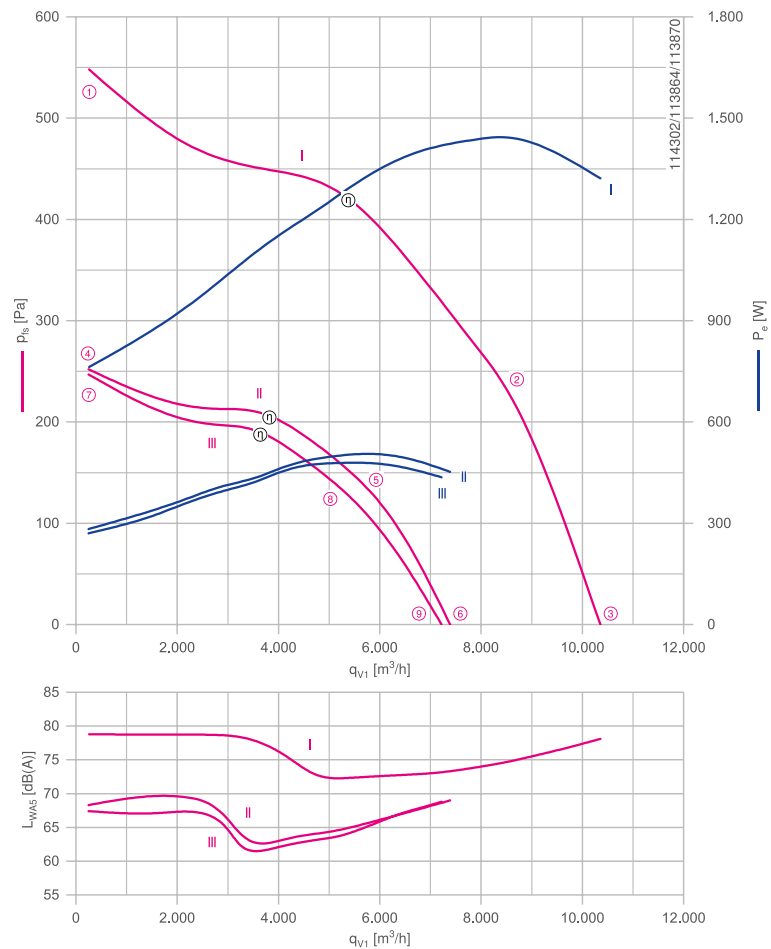


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: **THCL155***
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412014 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current		Rated speed	Current increase	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
					P_e	I_N							n_N	ΔI	
					A	min ⁻¹	%	A	%	%					kg
I	RH50V-4DK.6K.VR	6K	115604	1.45 kW	5.00/ 2.80	1280	0	16.00/9.50	50.2	59.5	2015	yes			21.00
II	RH50V-6DK.6F.VR	6F	115605	0.50 kW	2.30/ 1.30	920	0	8.50/5.00	49.9	64.1	2015				17.20
III	RH50V-6DK.4F.VR	4F	115602	0.48 kW	1.55/ 0.88	860	0	4.80/2.80	46.4	60.9	2015				10.60

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W			
RH50V-DK-__VR	I	400	①	1.90	760	1400	79	
		400*	②	2.80*	1450*	1280*	75	60
		400	③	2.60	1300	1310	78	
	II	400	④	1.10	280	960	68	
		400*	⑤	1.30*	500*	920*	66	60
		400	⑥	1.25	460	920	69	
	III	400	⑦	0.66	270	930	67	
		400*	⑧	0.88*	480*	860*	65	60
		400	⑨	0.82	440	880	69	

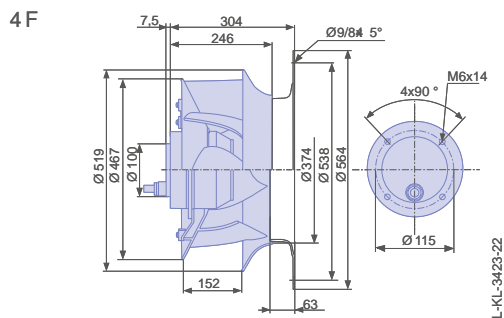
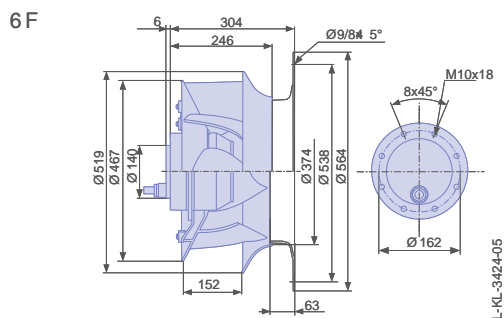
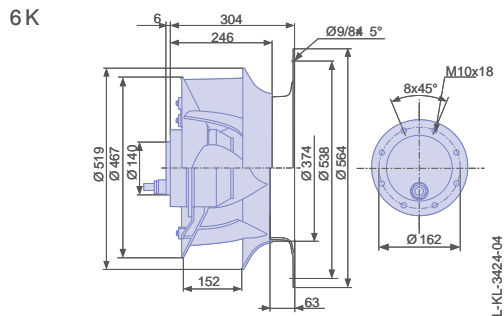
*rated data

Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 560 for 1~ alternating current

RH56V

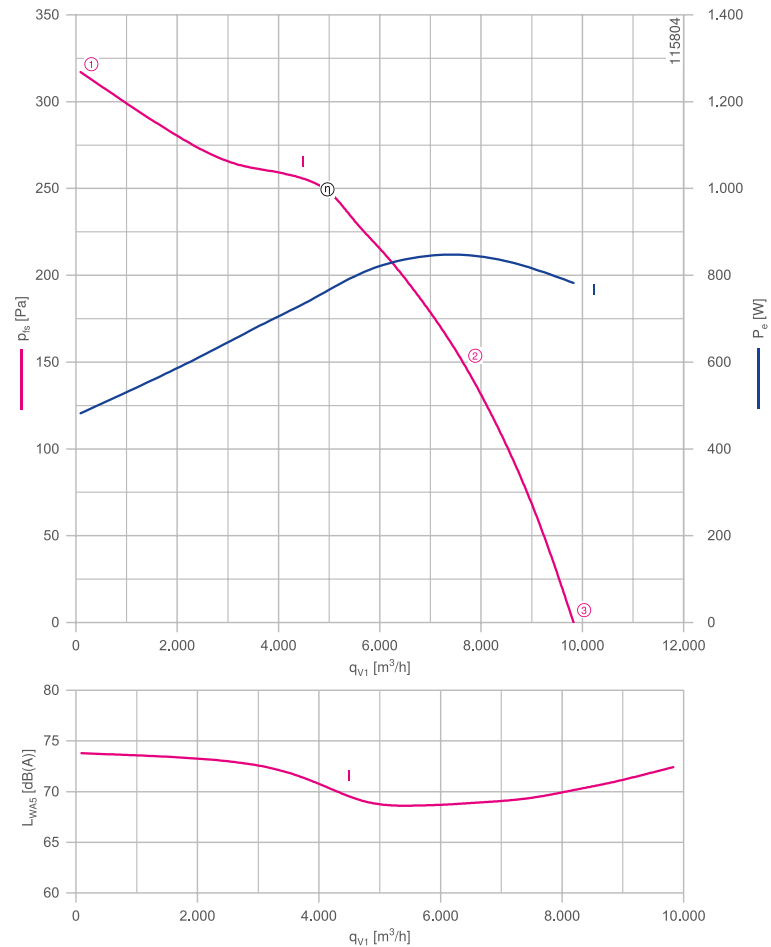


Description

Motor technology: AC
 Rated voltage U_N : 1~ 230 V \pm 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412015 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

I	Type	Motor	Article no.	Input power		Rated current		Rated speed		Current increase		Service capacitor	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
				P_e	I_N	n_N	ΔI	I_A	n_{statA}	N_{actual}	CE						UL	kg	
I	RH56V-6EK.6N.VR	6N	115607	0.84 kW	4.20 A	890 min ⁻¹	10 %	16uF/400V	11.00 A	46.5 %	58.2 %	2015	yes					26.80 kg	

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb (max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH56V-6EK.6N.VR	I	230	①	2.80	480	950	74	60
		230*	②	4.20*	840*	890*	70	
		230	③	4.00	780	900	72	

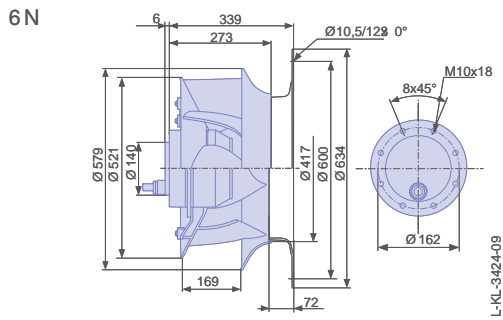
*rated data

Control technology

<p>Frequency inverters Fcontrol 1~</p>  <p>Page 306</p>	<p>Motor protection units 1~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 1~</p>  <p>Page 320</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 560 für 3~ alternating current

RH56V

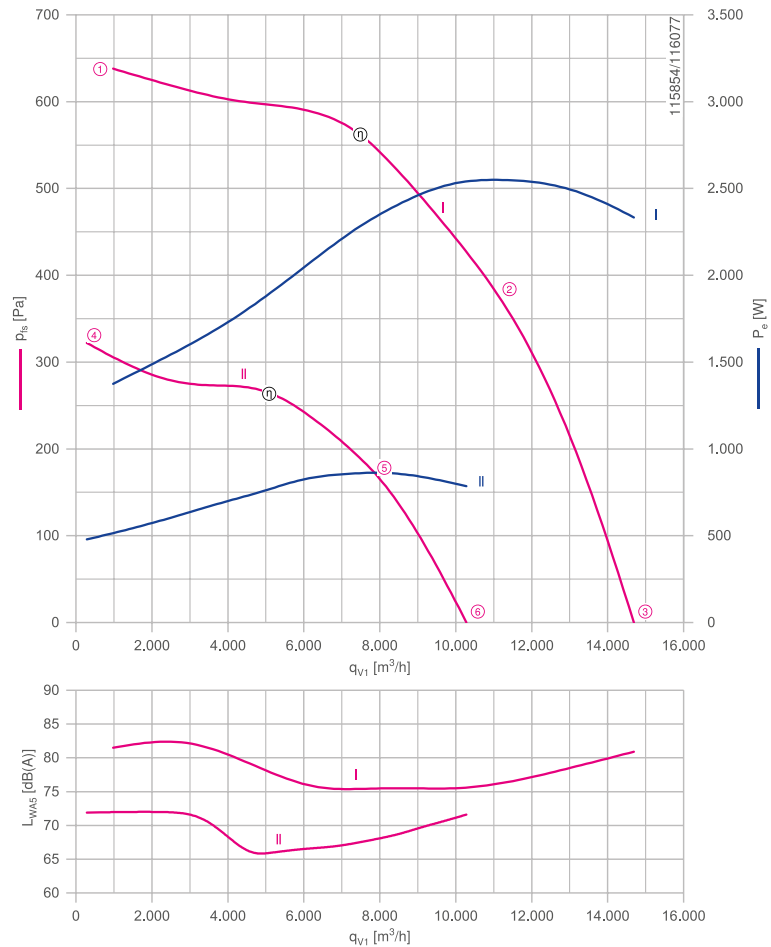


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: **THCL155***
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412015 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current	Rated speed	Current increase	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
												CE	UL	
I	RH56V-4DK.6N.VR	6N	115641	2.50 kW	8.20/ 4.60	1330	5	38.00/22.00	52.6	59.3	2015	yes		26.80
II	RH56V-6DK.6K.VR	6K	115608	0.86 kW	3.80/ 2.20	920	0	16.00/9.00	50.7	62.5				22.60

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH56V-DK.6_VR	I	400	①	3.20	1400	1420	82	45
		400*	②	4.60*	2500*	1330*	76	
		400	③	4.40	2300	1350	81	
	II	400	④	1.90	480	960	72	60
		400*	⑤	2.20*	860*	920*	68	
		400	⑥	2.10	780	930	72	

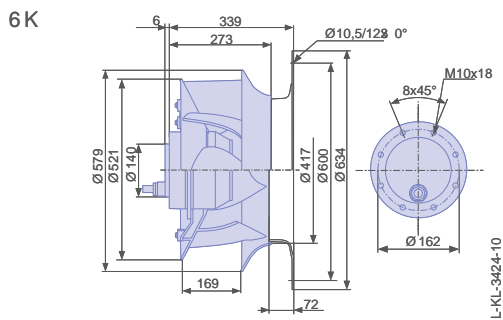
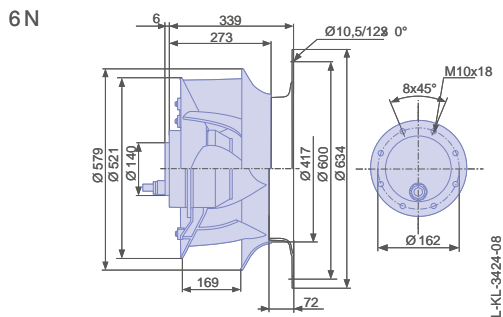
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



ZAvblue

Size 630 for 3~ alternating current

RH63V

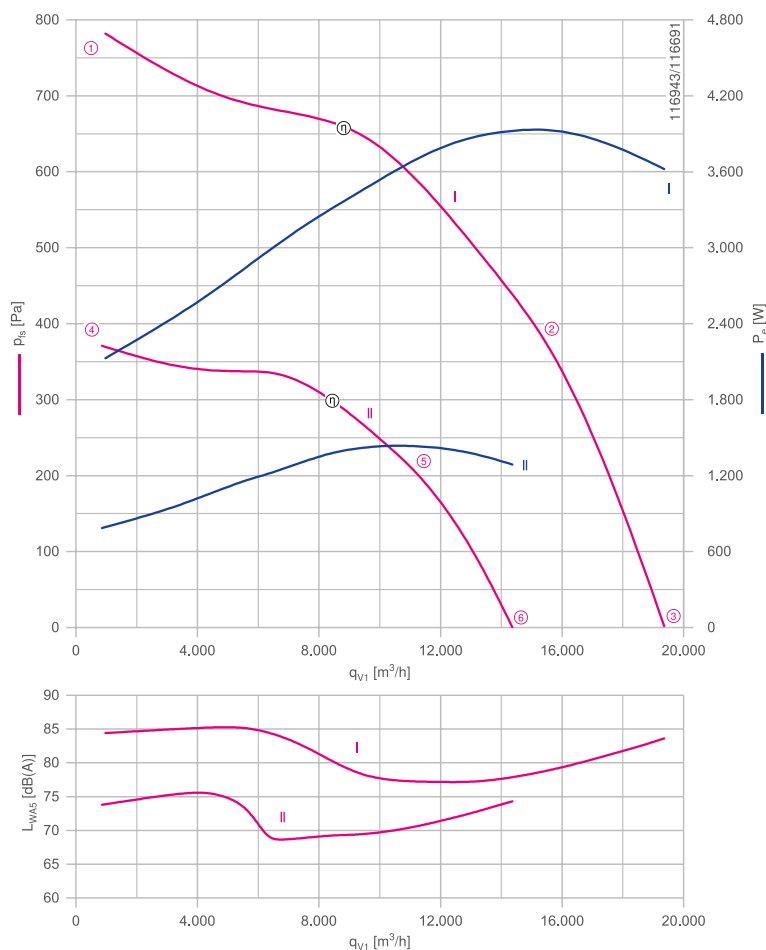


Description

Motor technology: AC
 Rated voltage U_N : 3~ 230/400 V (D/Y) ± 10 %*
 Rated frequency f_N : 50 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Supply cable axial, 105cm
 Degree of protection : IP54
 Motor protection: thermal contact
 Impeller made of High Performance Composite Material, uncoated, ultramarine blue
 * Rated data

Inlet ring 00412371 Page 290
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Type	Motor	Article no.	Input power	Rated current		Rated speed	Current increase	Starting current	Efficiency	Efficiency grade	ErP	Conformity		Weight
					P_e	I_N							n_N	ΔI	
I	RH63V-4DK.7Q.VR	7Q	115611	3,90 kW	11.50/ 6.60	A	1270	5	46.00/26.00	51.5	56.3	2015	yes		41.80
II	RH63V-6DK.6N.VR	6N	115609	1,45 kW	6.00/ 3.40	A	920	0	22.00/12.00	51.8	60.8				28.70

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level L_{WA5} dB(A)	Maximum ambient temperature $t_{amb}^{(max.)}$ °C
		U V		I A	P_e W	n min ⁻¹		
RH63V-DK-__VR	I	400	①	4.20	2100	1390	84	
		400*	②	6.60*	3900*	1270*	79	55
		400	③	6.20	3600	1300	84	
	II	400	④	2.70	780	960	74	
		400*	⑤	3.40*	1450*	920*	71	60
		400	⑥	3.20	1300	930	74	

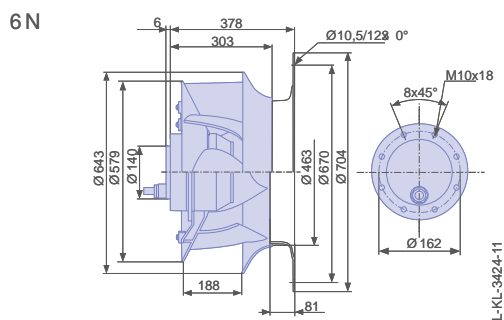
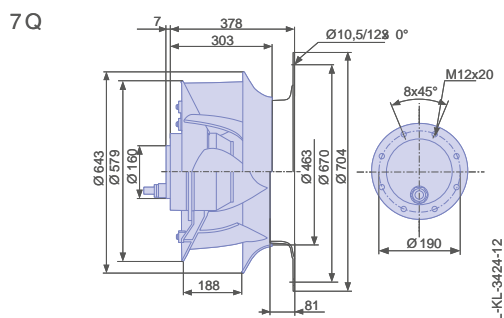
*rated data

Control technology

<p>Frequency inverters Fcontrol 3~</p>  <p>Page 310</p>	<p>Motor protection units 3~</p>  <p>Page 304</p>	<p>Electronic voltage controllers 3~</p>  <p>Page 322</p>
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Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included







ZAvblue with EC055

EC-Technology

Product overview

Size 175	Page 142
Size 190	Page 146
Size 200	Page 150
Size 220	Page 158
Size 225	Page 162
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Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

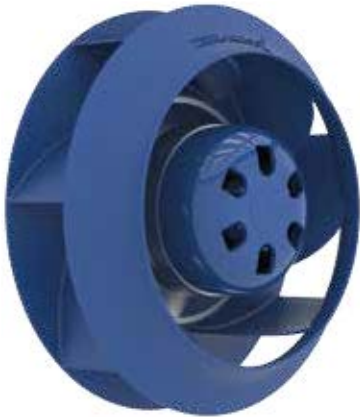
Control
technology

General notes

ZAvblue with EC055

for single phase alternating current, 200-240 V

RH18V-4IP



Description

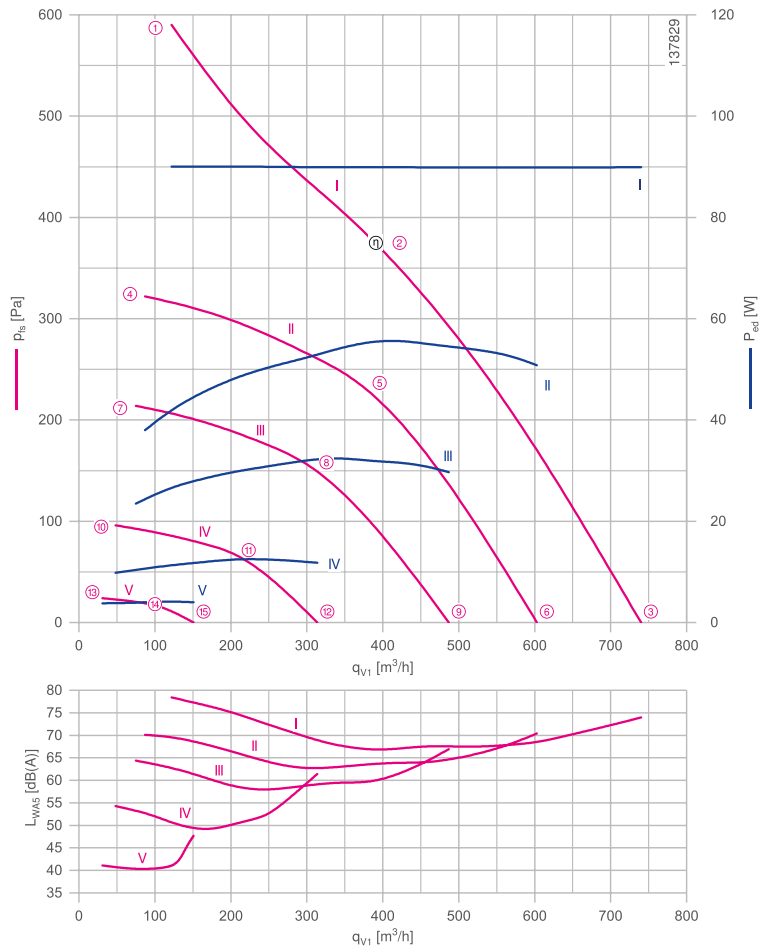
Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.74 A*
 Rated speed n_N : 3570 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

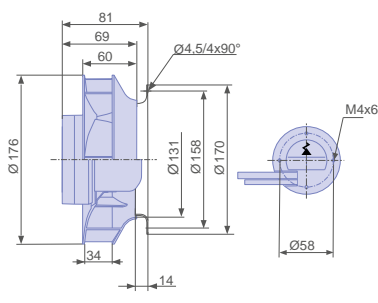


Measured with inlet nozzle, without guard grille according to ISO 5801

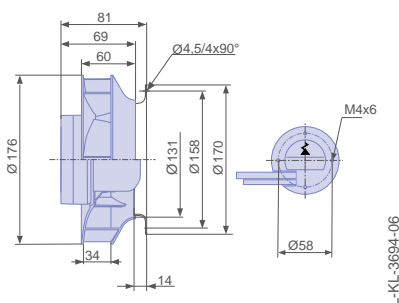
Inlet ring	00407897	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle


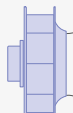


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH18V-4IP.Z8.AR	I	4100	①	0.78	90	78
		3650	②	0.78	90	67
		3700	③	0.78	90	74
	II	3010	④	0.36	38	70
			⑤	0.50	55	63
			⑥	0.48	50	70
	III	2460	⑦	0.23	24	64
			⑧	0.30	32	59
			⑨	0.28	30	67
	IV	1640	⑩	0.11	10	54
			⑪	0.13	12	50
			⑫	0.12	12	61
	V	820	⑬	0.05	4	41
			⑭	0.05	4	40
			⑮	0.05	4	48

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH18V-4IP.Z8.AR	RH18V-4IP.Z8.AR
Article no.	178183	178183/01
Weight kg	1.20	1.40
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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- Information
- ZAvbluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZAvblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes



ZAvblue with EC055

for single phase alternating current, 200-240 V

RH18V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.75-1.45 A*
 Rated speed n_N : 4440 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

Efficiency η_{statA} : 53.9 %
 Efficiency grade: $N_{actual} = 72.5 / N_{target} = 62^{**}$
 EC controller integrated

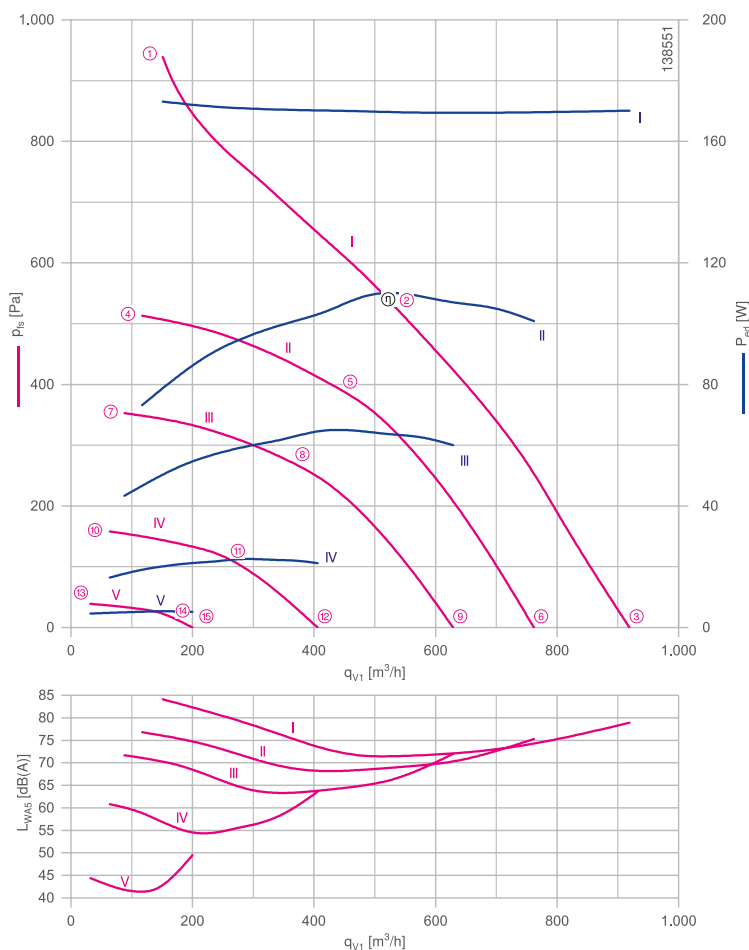
*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407897	Page 290
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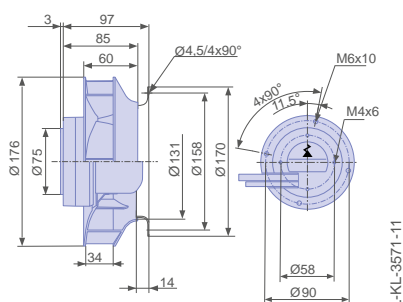
Characteristic curve



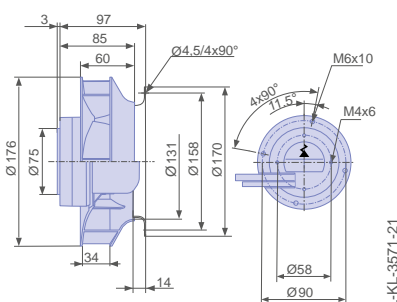
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle

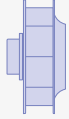
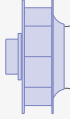


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH18V-4IP.Z8.AR	I	5200	①	1.50	170	84
		4440	②	1.50	170	72
		4630	③	1.50	170	79
	II	3840	④	0.68	75	77
			⑤	0.94	100	68
			⑥	0.96	100	75
	III	3200	⑦	0.42	44	72
			⑧	0.58	60	63
			⑨	0.56	60	72
	IV	2130	⑩	0.19	17	61
			⑪	0.24	22	54
			⑫	0.23	22	64
	V	1060	⑬	0.06	5	44
			⑭	0.07	5	42
			⑮	0.07	5	50

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH18V-4IP.Z8.AR	RH18V-4IP.Z8.AR
Article no.	177317	177317/01
Weight kg	1.30	1.40
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZAvblue with EC055

for single phase alternating current, 200-240 V

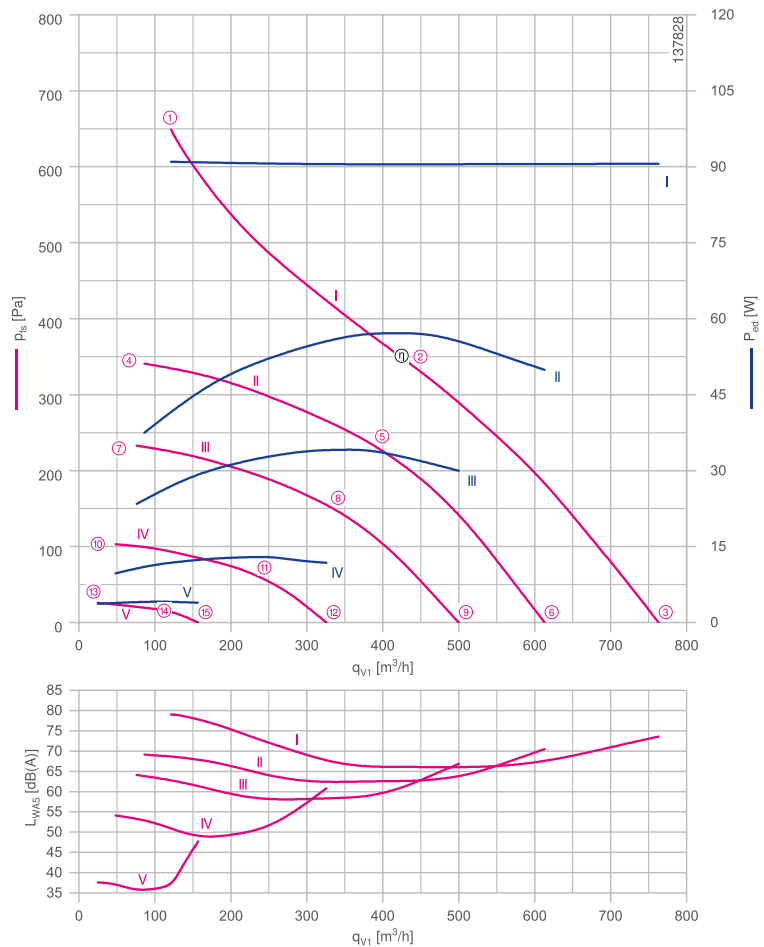
RH19V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.76 A*
 Rated speed n_N : 3240 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

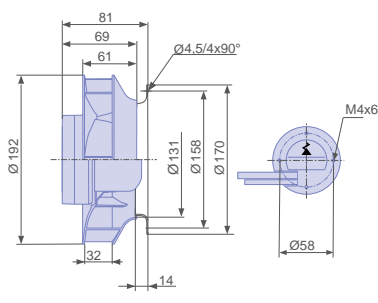


Measured with inlet nozzle, without guard grille according to ISO 5801

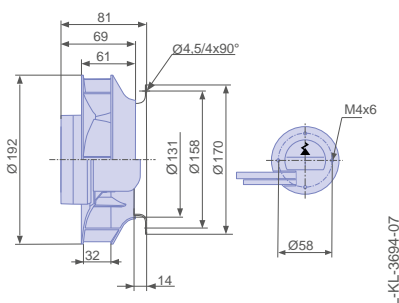
Inlet ring	00407897	Page 290
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Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


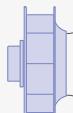


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH19V-4IP.Z8.AR	I	3800	①	0.78	90	79
		3250	②	0.78	90	66
		3420	③	0.78	90	74
	II	2760	④	0.35	38	69
			⑤	0.52	55	63
			⑥	0.48	50	71
	III	2280	⑦	0.23	24	64
			⑧	0.33	34	58
			⑨	0.30	30	67
	IV	1520	⑩	0.11	10	54
			⑪	0.14	13	49
			⑫	0.13	12	61
	V	760	⑬	0.05	4	38
			⑭	0.05	4	36
			⑮	0.05	4	48

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH19V-4IP.Z8.AR	RH19V-4IP.Z8.AR
Article no.	178184	178184/01
Weight kg	1.30	1.40
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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Information

ZAvbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZAvblue with EC055

for single phase alternating current, 200-240 V

RH19V-4IP

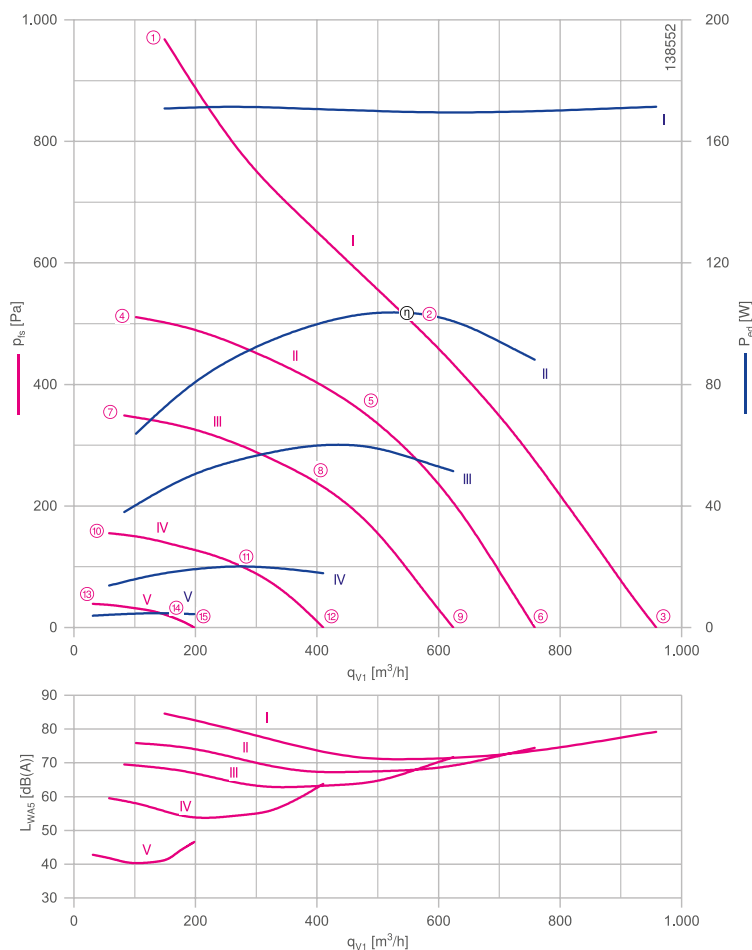


Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.75-1.45 A*
 Rated speed n_N : 4000 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 53.6 %
 Efficiency grade: $N_{actual} = 72.2 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407897	Page 290
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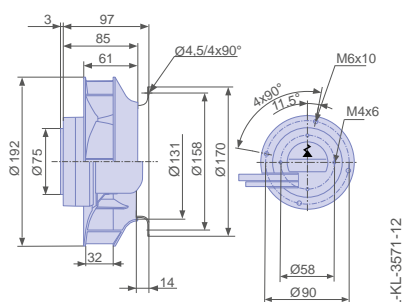
Characteristic curve



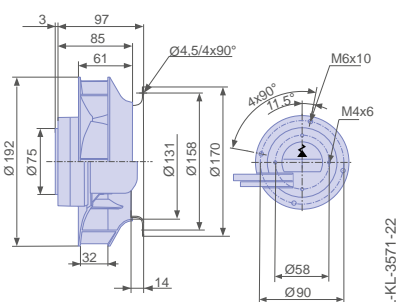
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


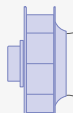


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH19V-4IP.Z8.AR	I	4710	①	1.50	170	85
		4020	②	1.50	170	71
		4270	③	1.55	170	79
	II	3420	④	0.58	65	76
			⑤	0.94	100	67
			⑥	0.82	90	74
	III	2830	⑦	0.39	38	70
			⑧	0.56	60	63
			⑨	0.46	50	72
	IV	1880	⑩	0.15	14	60
			⑪	0.23	20	54
			⑫	0.20	18	64
	V	940	⑬	0.05	4	43
			⑭	0.06	5	41
			⑮	0.05	4	47

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH19V-4IP.Z8.AR	RH19V-4IP.Z8.AR
Article no.	177318	177318/01
Weight kg	1.40	1.50
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZAvblue with EC055

for single phase alternating current, 200-240 V Performance

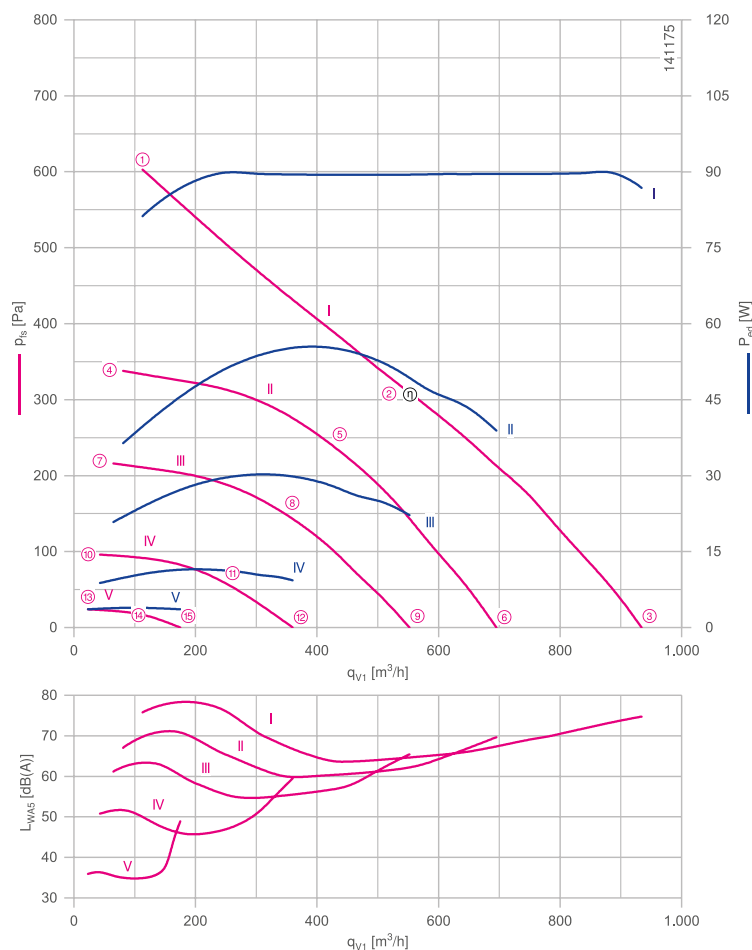
RH20V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.74 A*
 Rated speed n_N : 3280 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

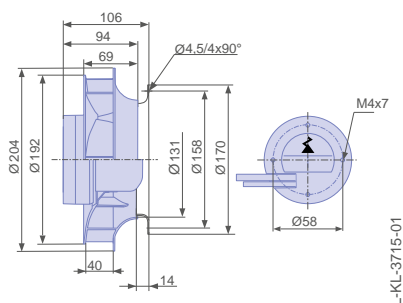


Measured with inlet nozzle, without guard grille according to ISO 5801

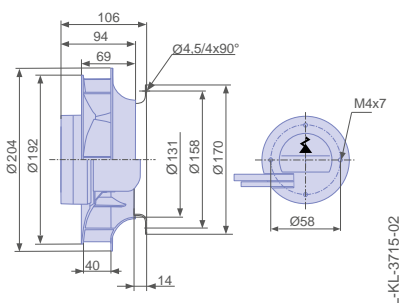
Inlet ring	00407897	Page 290
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Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


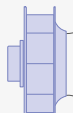


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH20V-4IP.Z8.AR	I	3710	①	0.72	80	76
		3300	②	0.78	90	65
		3710	③	0.74	85	75
	II	2780	④	0.38	36	67
			⑤	0.54	55	60
			⑥	0.39	38	70
	III	2220	⑦	0.23	20	61
			⑧	0.32	30	55
			⑨	0.24	22	65
	IV	1480	⑩	0.10	9	51
			⑪	0.13	12	46
			⑫	0.11	9	60
	V	740	⑬	0.05	4	36
			⑭	0.05	4	35
			⑮	0.05	4	49

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH20V-4IP.Z8.AR	RH20V-4IP.Z8.AR
Article no.	178683	178683/01
Weight kg	1.30	1.40
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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Information

ZAvbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

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General notes

ZAvblue with EC055

for single phase alternating current, 200-240 V Performance

RH20V-4IP

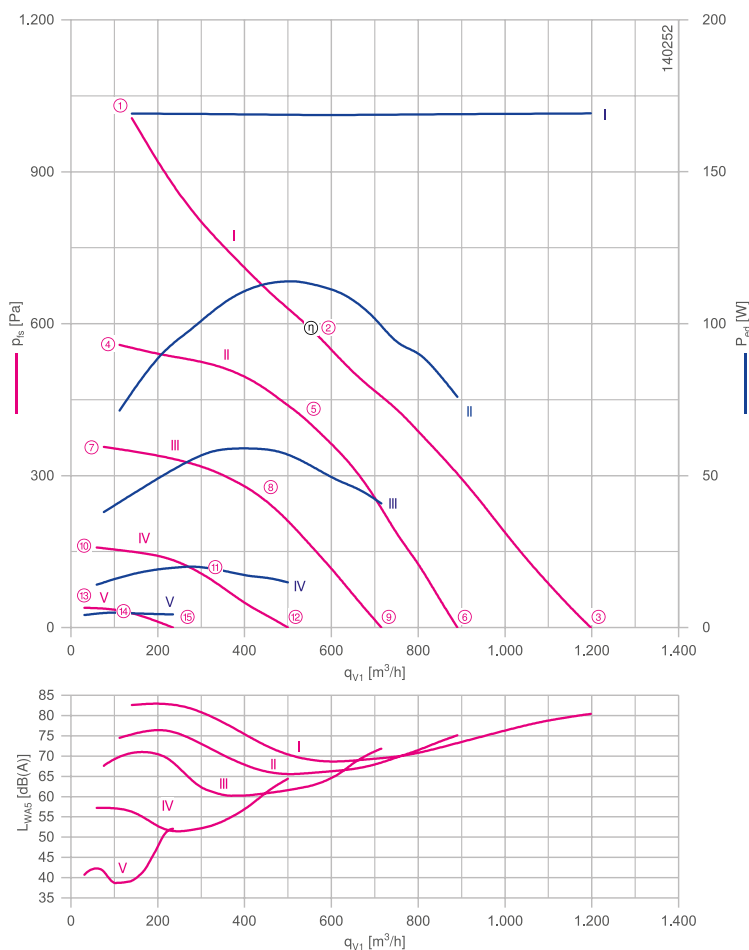


Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.65-1.40 A*
 Rated speed n_N : 4020 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 63.2 %
 Efficiency grade: $N_{actual} = 81.8 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407897	Page 290
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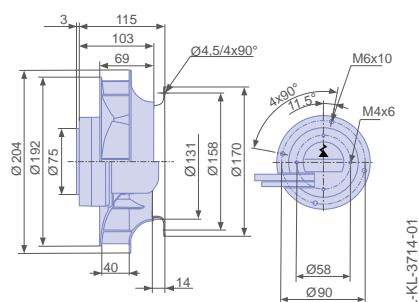
Characteristic curve



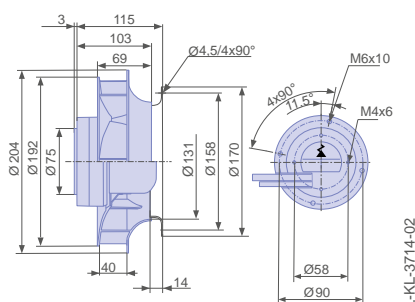
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


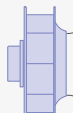


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH20V-4IP.Z8.AR	I	4760	①	1.45	170	83
		4030	②	1.45	170	69
		4650	③	1.45	170	80
	II	3520	④	0.66	70	75
			⑤	1.05	110	66
			⑥	0.68	75	75
	III	2820	⑦	0.39	38	68
			⑧	0.56	60	60
			⑨	0.40	40	72
	IV	1880	⑩	0.16	14	57
			⑪	0.22	20	52
			⑫	0.17	15	64
	V	940	⑬	0.06	4	41
			⑭	0.06	5	39
			⑮	0.06	4	52

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH20V-4IP.Z8.AR	RH20V-4IP.Z8.AR
Article no.	178679	178679/01
Weight kg	1.40	1.50
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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Information

ZAvbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZAvblue with EC055

for single phase alternating current, 200-240 V Compact

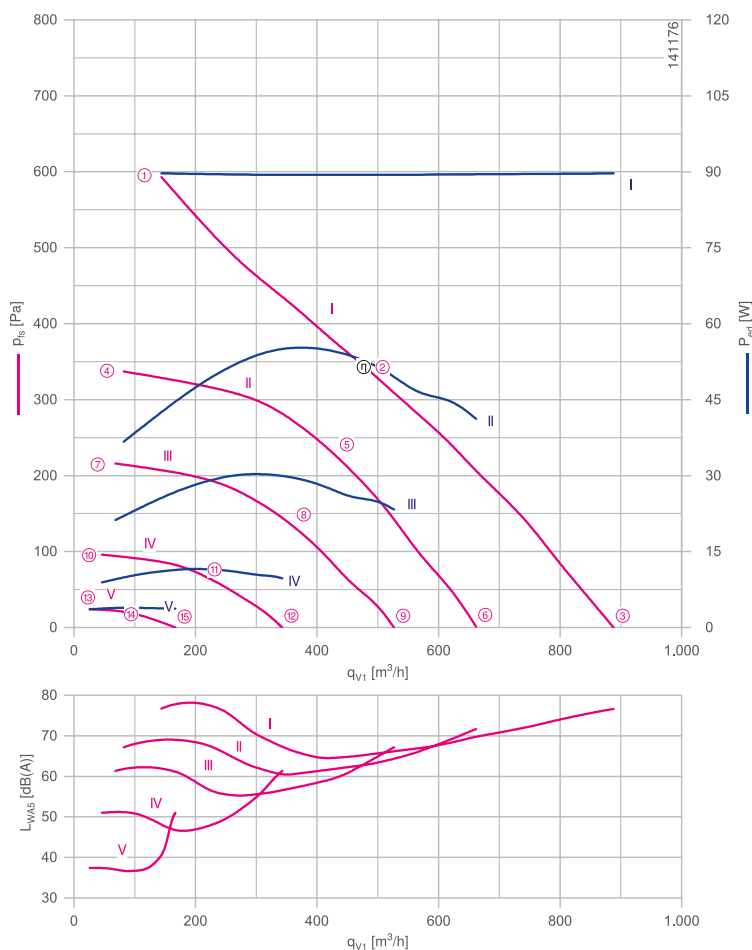
RH20V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.74 A*
 Rated speed n_N : 3270 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

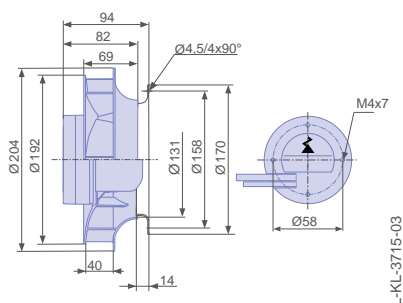


Measured with inlet nozzle, without guard grille according to ISO 5801

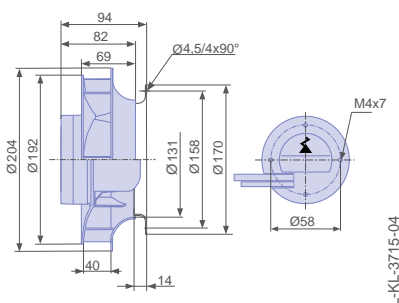
Inlet ring	00407897	Page 290
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Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


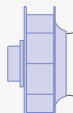


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH20V-4IP.Z8.AR	I	3710	①	0.76	90	77
		3270	②	0.76	90	65
		3680	③	0.78	90	77
	II	2780	④	0.38	36	67
			⑤	0.52	55	62
			⑥	0.40	42	72
	III	2220	⑦	0.23	22	61
			⑧	0.32	30	56
			⑨	0.24	24	67
	IV	1480	⑩	0.11	9	51
			⑪	0.13	12	46
			⑫	0.11	10	61
	V	740	⑬	0.05	4	37
			⑭	0.05	4	37
			⑮	0.05	4	51

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH20V-4IP.Z8.AR	RH20V-4IP.Z8.AR
Article no.	178684	178684/01
Weight kg	1.30	1.40
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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Information

ZAvbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes

ZAvblue with EC055

for single phase alternating current, 200-240 V Compact

RH20V-4IP



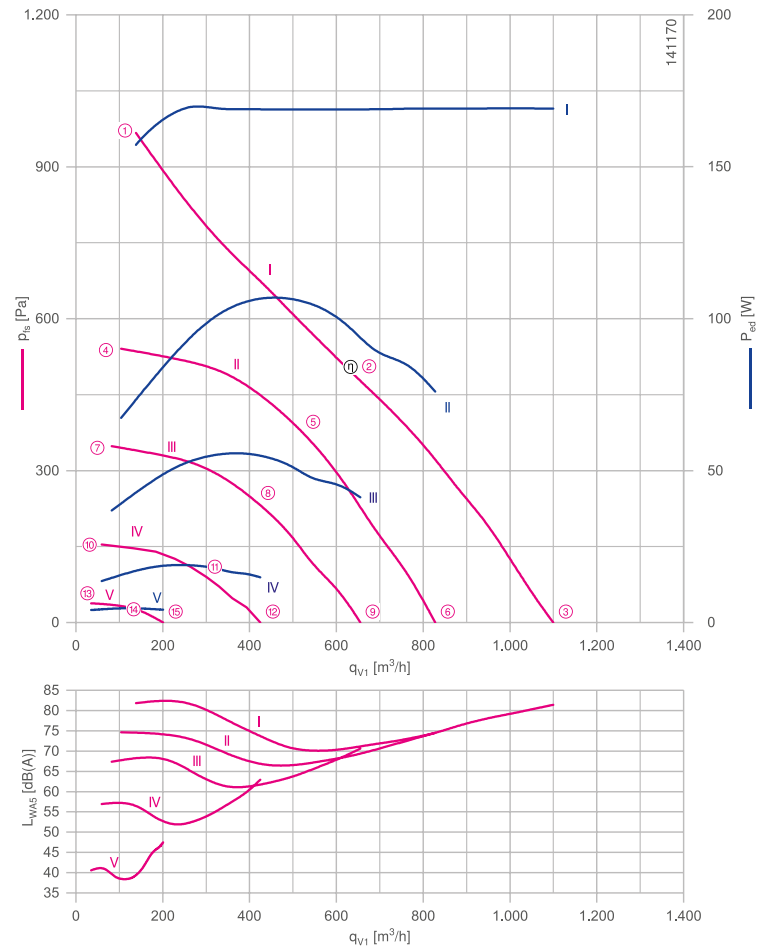
Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.70-1.40 A*
 Rated speed n_N : 4110 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 60.4 %
 Efficiency grade: $N_{actual} = 79.0 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407897	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

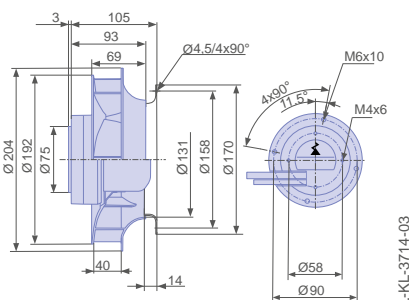
Characteristic curve



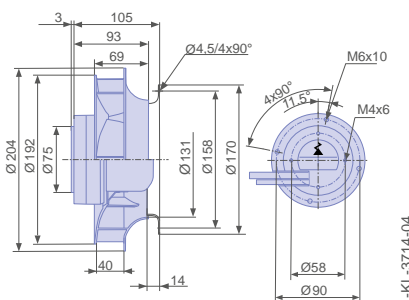
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle

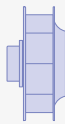
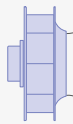


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH20V-4IP.Z8.AR	I	4700	①	1.40	160	82
		4120	②	1.50	170	71
		4660	③	1.45	170	81
	II	3530	④	0.68	65	75
			⑤	0.98	110	66
			⑥	0.72	75	75
	III	2820	⑦	0.40	36	67
			⑧	0.56	55	61
			⑨	0.42	42	71
	IV	1880	⑩	0.16	14	57
			⑪	0.22	19	52
			⑫	0.18	15	63
	V	940	⑬	0.05	4	41
			⑭	0.06	5	39
			⑮	0.06	4	48

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH20V-4IP.Z8.AR	RH20V-4IP.Z8.AR
Article no.	178680	178680/01
Weight kg	1.40	1.50
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
Page 326	Page 328

ZAvblue with EC055

for single phase alternating current, 200-240 V

RH22V-4IP



Description

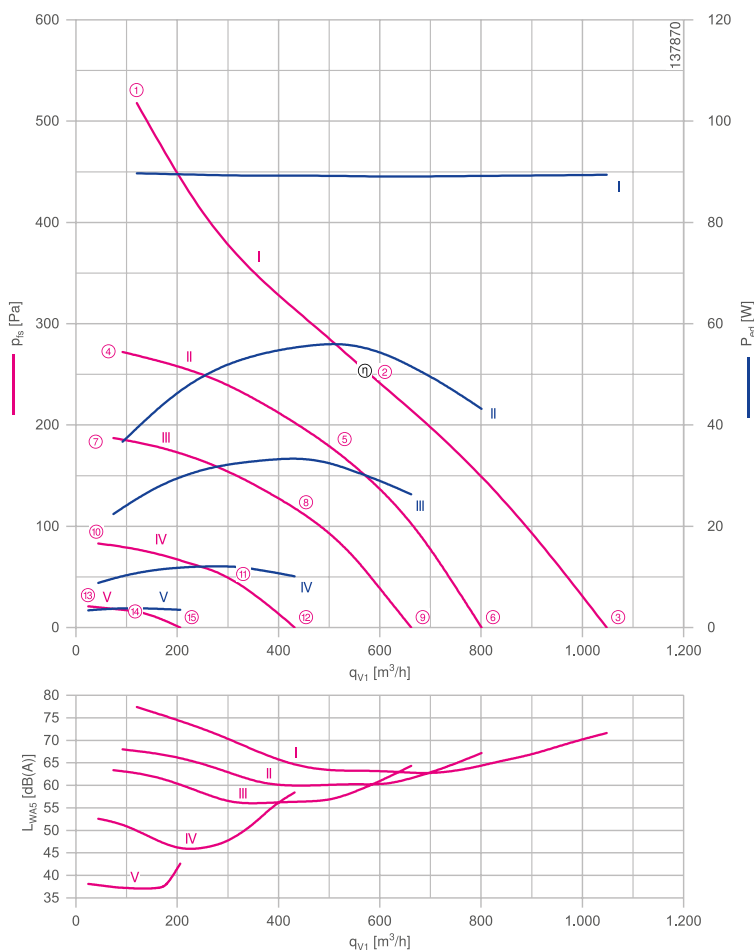
Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.94-0.78 A*
 Rated speed n_N : 2620 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

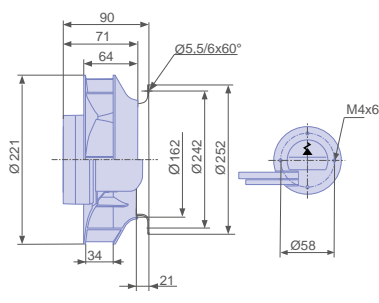


Measured with inlet nozzle, without guard grille according to ISO 5801

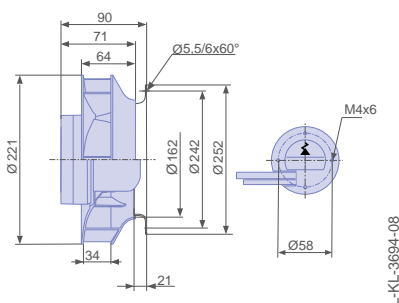
Inlet ring	00407898	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle

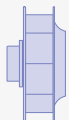



Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	
RH22V-4IP.Z8.AR	I	3100	①	0.84	90	77	
		2620	②	0.82	90	63	
		2910	③	0.80	90	72	
	II	2240	④	0.40	36	68	
			⑤	0.56	55	60	
			⑥	0.46	44	67	
	III	1860		⑦	0.22	22	63
				⑧	0.32	34	56
				⑨	0.26	26	64
	IV	1240		⑩	0.10	9	53
				⑪	0.13	12	47
				⑫	0.12	10	58
	V	620		⑬	0.05	3	38
				⑭	0.05	4	37
				⑮	0.05	4	43

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH22V-4IP.Z8.AR	RH22V-4IP.Z8.AR
Article no.	178185	178185/01
Weight kg	1.30	1.60
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZAvblue with EC055

for single phase alternating current, 200-240 V

RH22V-4IP



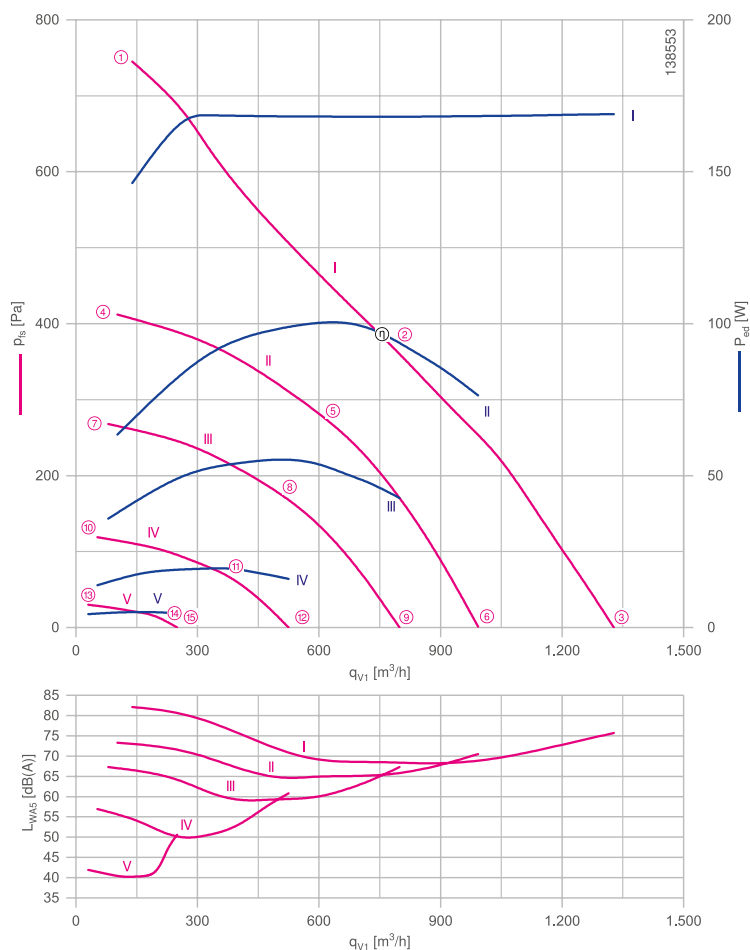
Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.70-1.40 A*
 Rated speed n_N : 3280 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 56.0 %
 Efficiency grade: $N_{actual} = 74.7 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407898	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

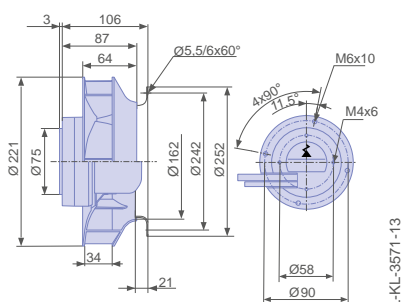
Characteristic curve



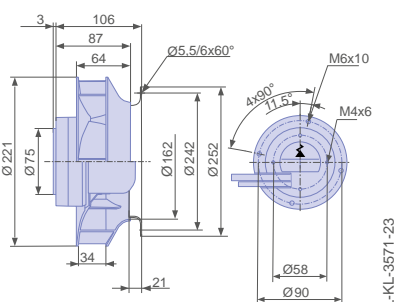
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle


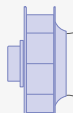


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH22V-4IP.ZC.AR	I	3700	①	1.30	150	82
		3280	②	1.45	170	69
		3640	③	1.45	170	76
	II	2750	④	0.58	65	73
			⑤	0.90	100	65
			⑥	0.70	75	71
	III	2220	⑦	0.33	36	67
			⑧	0.52	55	59
			⑨	0.42	42	67
	IV	1480	⑩	0.17	14	57
			⑪	0.22	19	50
			⑫	0.18	16	61
	V	740	⑬	0.06	4	42
			⑭	0.07	5	40
			⑮	0.06	5	51

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH22V-4IP.ZC.AR	RH22V-4IP.ZC.AR
Article no.	177319	177319/01
Weight kg	1.70	2.00
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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Information

ZAvbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZAvblue with EC055

for single phase alternating current, 200-240 V

RH22V-4IP



Description

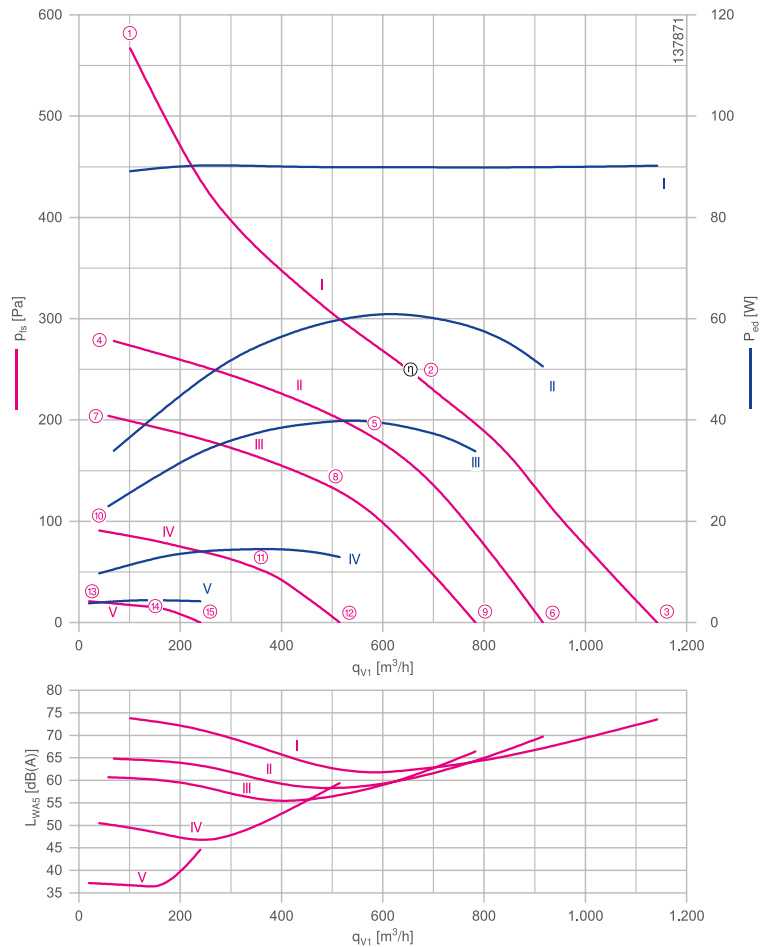
Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.74 A*
 Rated speed n_N : 2320 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

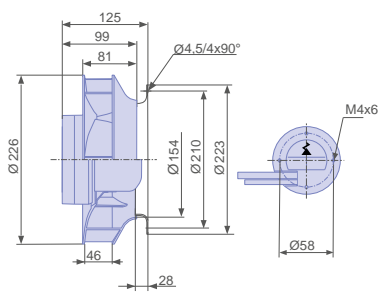


Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00407899	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

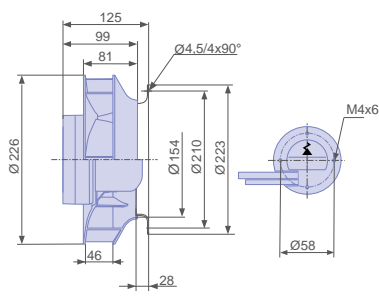
Dimensions mm

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



L-KL-3694-04

Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle



L-KL-3694-09

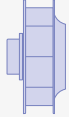
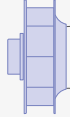


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH22V-4IP.ZC.BR	I	2900	①	0.78	90	74
		2330	②	0.78	90	62
		2500	③	0.78	90	74
	II	2030	④	0.33	34	65
			⑤	0.56	60	59
			⑥	0.48	50	70
	III	1740	⑦	0.23	24	61
			⑧	0.38	40	56
			⑨	0.33	34	66
	IV	1160	⑩	0.11	10	51
			⑪	0.16	14	48
			⑫	0.14	13	59
	V	580	⑬	0.05	4	37
			⑭	0.06	4	37
			⑮	0.06	4	45

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH22V-4IP.ZC.BR	RH22V-4IP.ZC.BR
Article no.	178186	178186/01
Weight kg	1.70	1.90
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZAvblue with EC055

for single phase alternating current, 200-240 V

RH22V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.75-1.45 A*
 Rated speed n_N : 2860 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

Efficiency η_{statA} : 59.8 %
 Efficiency grade: $N_{actual} = 78.4 / N_{target} = 62^{**}$
 EC controller integrated

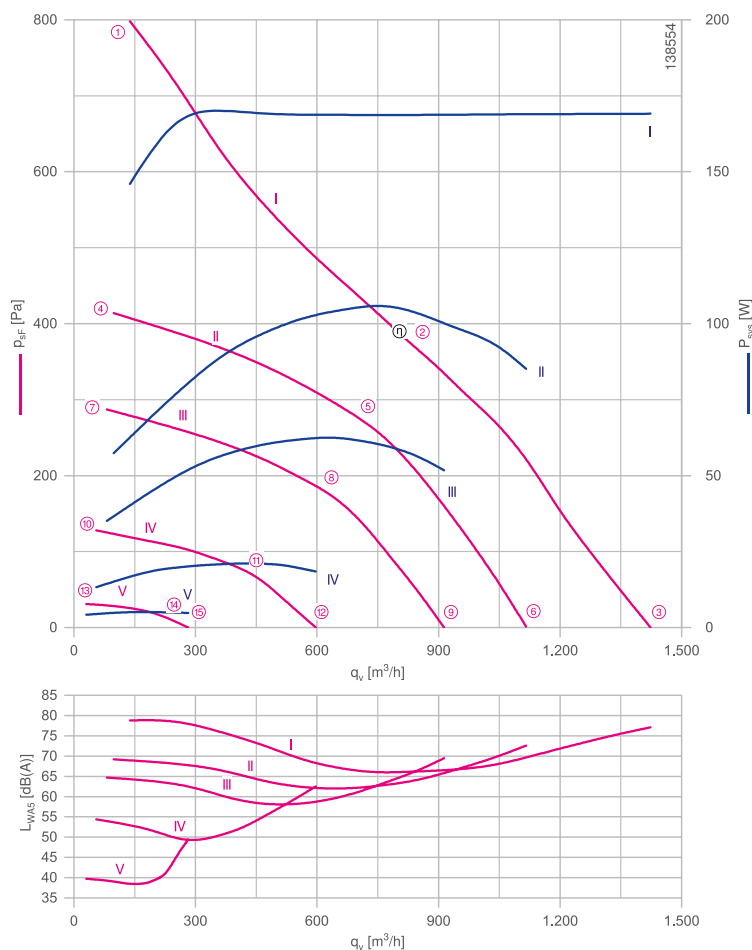
*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00407899	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

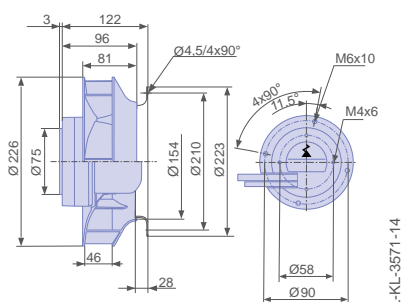
Characteristic curve



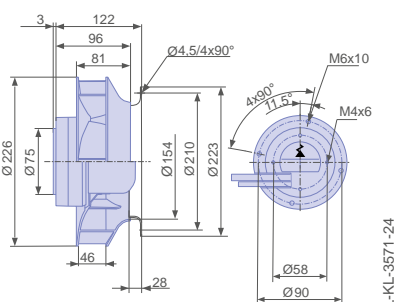
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
 in installation position H/Vu/Vo incl. inlet
 nozzle


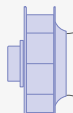


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH22V-4IP.ZC.BR	I	3400	①	1.30	150	79
		2870	②	1.50	170	66
		3100	③	1.50	170	77
	II	2450	④	0.52	55	69
			⑤	0.94	100	62
			⑥	0.78	85	73
	III	2040	⑦	0.36	36	65
			⑧	0.58	60	58
			⑨	0.48	50	70
	IV	1360	⑩	0.16	13	54
			⑪	0.23	20	51
			⑫	0.21	18	63
	V	680	⑬	0.07	4	40
			⑭	0.07	5	39
			⑮	0.07	5	49

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH22V-4IP.ZC.BR	RH22V-4IP.ZC.BR
Article no.	177320	177320/01
Weight kg	1.80	2.00
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZAvblue with EC055

for single phase alternating current, 200-240 V

RH25V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.76 A*
 Rated speed n_N : 2040 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: CE, UL

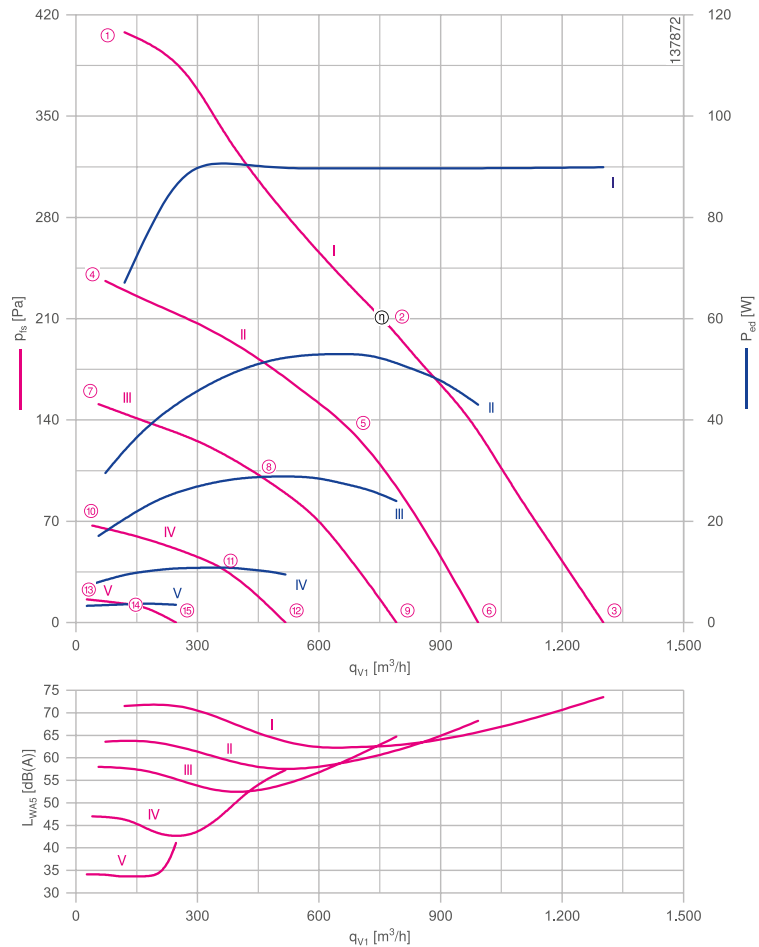
ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)

*Rated data

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

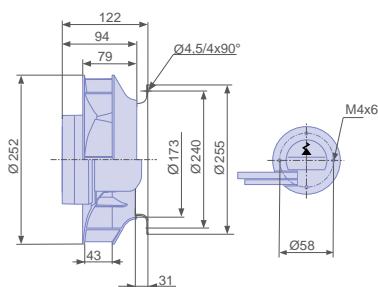


Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00407900	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

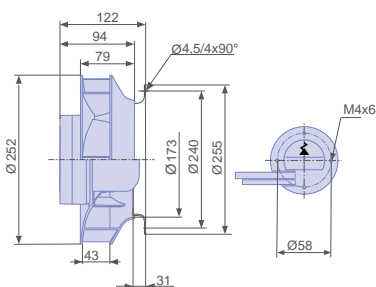
Dimensions mm

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



L-KL-3694-05

Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet nozzle



L-KL-3694-10


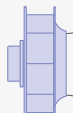


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RH25V-4IP.ZC.AR	I	2270	①	0.62	65	72
		2040	②	0.80	90	63
		2210	③	0.76	90	74
	II	1700	④	0.31	30	64
			⑤	0.50	55	59
			⑥	0.42	44	68
	III	1360	⑦	0.18	17	58
			⑧	0.30	28	53
			⑨	0.25	24	65
	IV	910	⑩	0.08	8	47
			⑪	0.11	11	46
			⑫	0.10	10	57
	V	450	⑬	0.04	3	34
			⑭	0.06	4	34
			⑮	0.06	4	41

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH25V-4IP.ZC.AR	RH25V-4IP.ZC.AR
Article no.	178187	178187/01
Weight kg	1.70	2.10
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
Page 326	Page 328

ZAvblue with EC055

for single phase alternating current, 200-240 V

RH25V-4IP

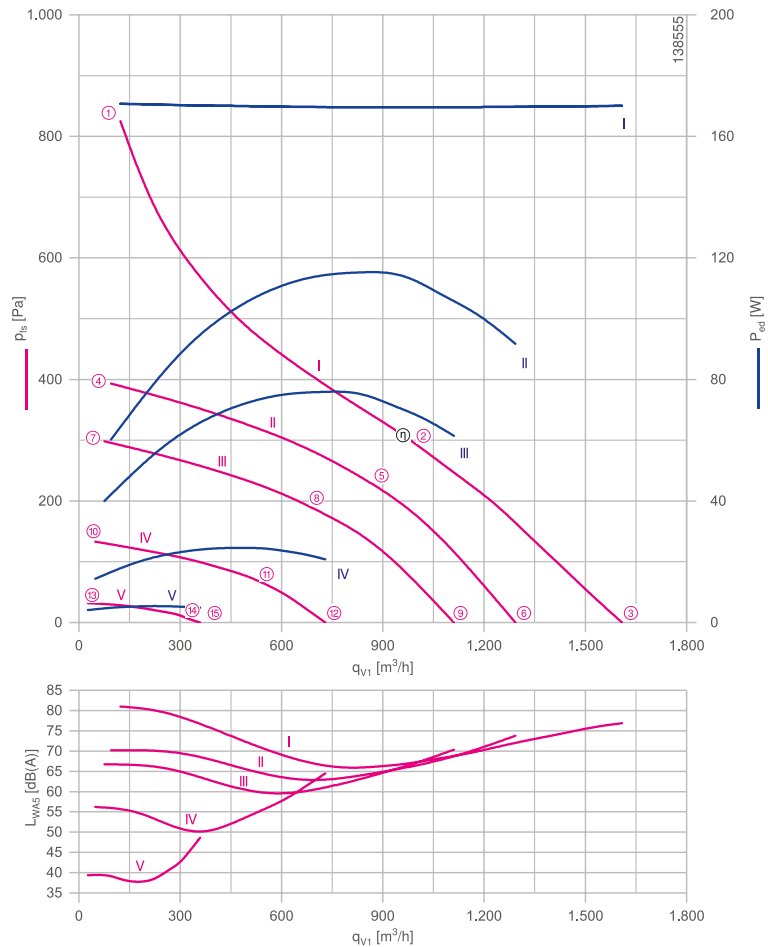


Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.65-1.35 A*
 Rated speed n_N : 2520 min⁻¹*
 Thermal class: **THCL155***
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 56.9 %
 Efficiency grade: $N_{actual} = 75.4 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015
 *** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Inlet ring	00407900	Page 290
Connection diagram	1360-404	Page 358
System components		Page 286

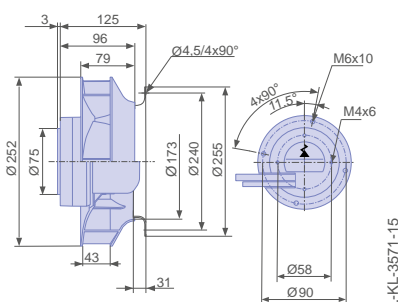
Characteristic curve



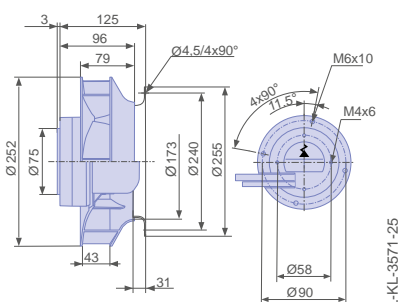
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

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



Free-running motorized impeller RH
in installation position H/Vu/Vo incl. inlet
nozzle


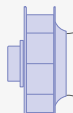


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	
RH25V-4IP.ZC.AR	I	3220	①	1.50	170	81	
		2530	②	1.40	170	67	
		2750	③	1.40	170	77	
	II	2230	④	0.58	60	70	
			⑤	1.00	120	64	
			⑥	0.84	90	74	
	III	1930		⑦	0.38	40	67
				⑧	0.70	75	59
				⑨	0.58	60	70
	IV	1290		⑩	0.16	14	56
				⑪	0.26	24	53
				⑫	0.23	20	65
	V	640		⑬	0.05	4	39
				⑭	0.07	5	38
				⑮	0.06	5	49

Current values determined at 230V

Fan ordering information

Design	RH*	RH**
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	RH25V-4IP.ZC.AR	RH25V-4IP.ZC.AR
Article no.	177321	177321/01
Weight kg	1.80	2.10
* Inlet nozzle not included in the scope of delivery		
** Inlet nozzle included in the scope of delivery		

Control technology

Control modules	Sensor control modules
	
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ZApilot with EC055

EC-Technology

Product overview

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Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

ZApilot with EC055

for single phase alternating current, 200-240 V

GR18V-4IP



Description

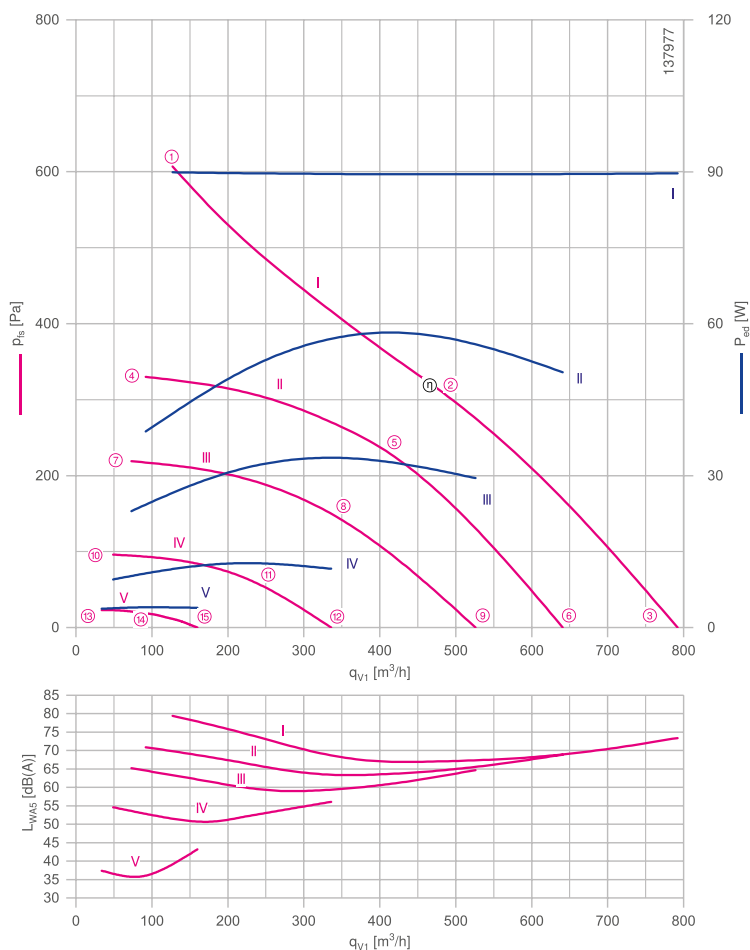
Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.88-0.72 A*
 Rated speed n_N : 3490 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material,
 uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve

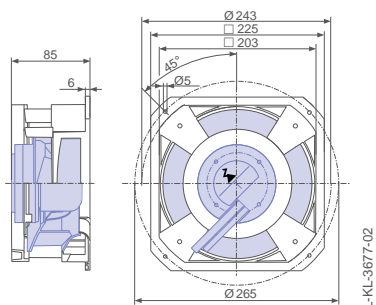


Measured with inlet nozzle, without guard grille according to ISO 5801

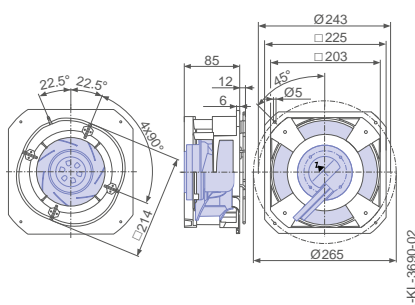
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Ventilation unit GR in installation position
H/Vu/Vo



Ventilation unit GR incl. measuring devices
in installation position H/Vu/Vo

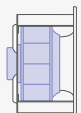
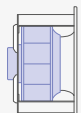


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR18V-4IP.Z8.AR	I	4090	①	0.76	90	79
		3510	②	0.76	90	67
		3710	③	0.76	90	73
	II	3010	④	0.37	38	71
			⑤	0.50	60	64
			⑥	0.46	50	69
	III	2460	⑦	0.24	24	65
			⑧	0.33	34	59
			⑨	0.30	30	65
	IV	1640	⑩	0.11	10	55
			⑪	0.14	13	52
			⑫	0.14	12	56
	V	820	⑬	0.05	4	37
			⑭	0.05	4	37
			⑮	0.05	4	43

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR18V-4IP.Z8.AR	GR18V-4IP.Z8.AR
Article no.	178236	178236/A02
Weight kg	1.70	1.70
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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Information

ZAbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZApilot with EC055

for single phase alternating current, 200-240 V

GR18V-4IP



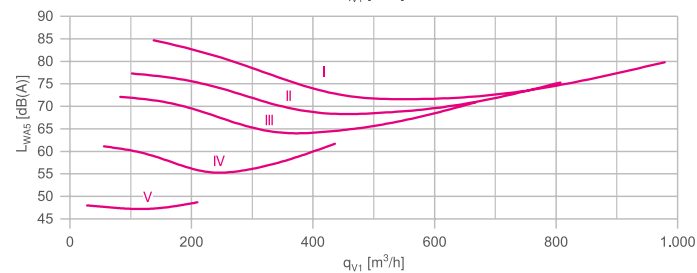
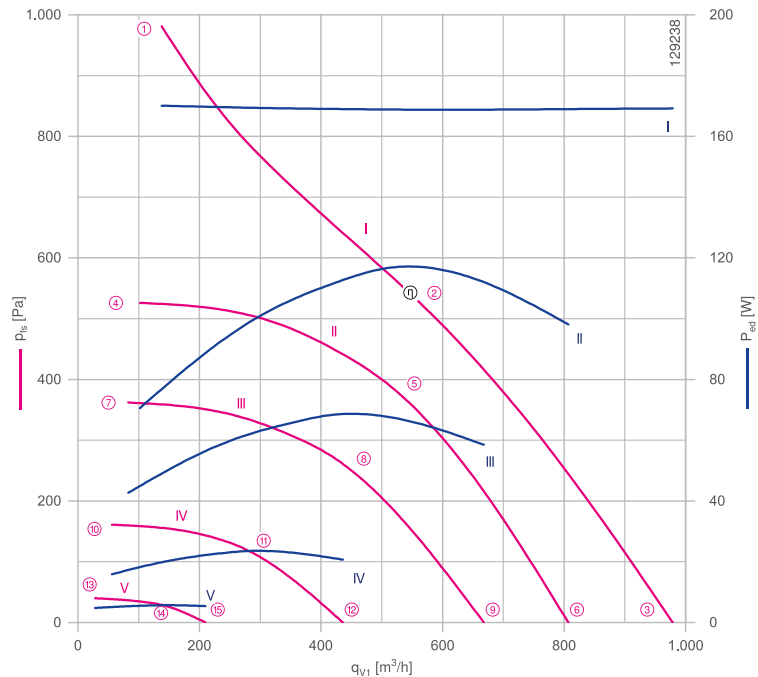
Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.75-1.50 A*
 Rated speed n_N : 4340 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 57.0 %
 Efficiency grade: $N_{actual} = 75.6 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

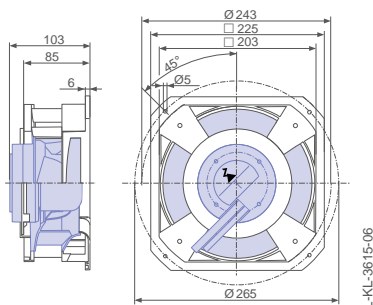
Characteristic curve



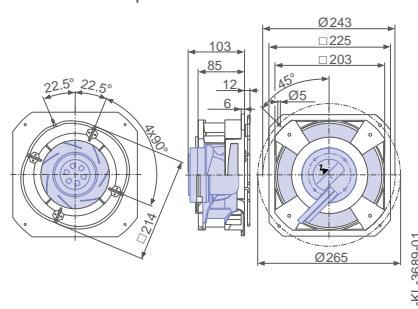
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

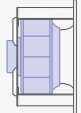
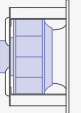


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR18V-4IP.Z8.AR	I	5230	①	1.50	170	85
		4370	②	1.50	170	72
		4640	③	1.50	170	80
	II	3840	④	0.62	70	77
			⑤	1.00	120	69
			⑥	0.86	100	75
	III	3190	⑦	0.42	42	72
			⑧	0.60	70	64
			⑨	0.52	60	71
	IV	2130	⑩	0.18	16	61
			⑪	0.25	24	56
			⑫	0.22	20	62
	V	1060	⑬	0.08	5	48
			⑭	0.08	6	47
			⑮	0.07	5	49

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR18V-4IP.Z8.AR	GR18V-4IP.Z8.AR
Article no.	178086	178086/A02
Weight kg	1.80	1.80
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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ZApilot with EC055

for single phase alternating current, 200-240 V

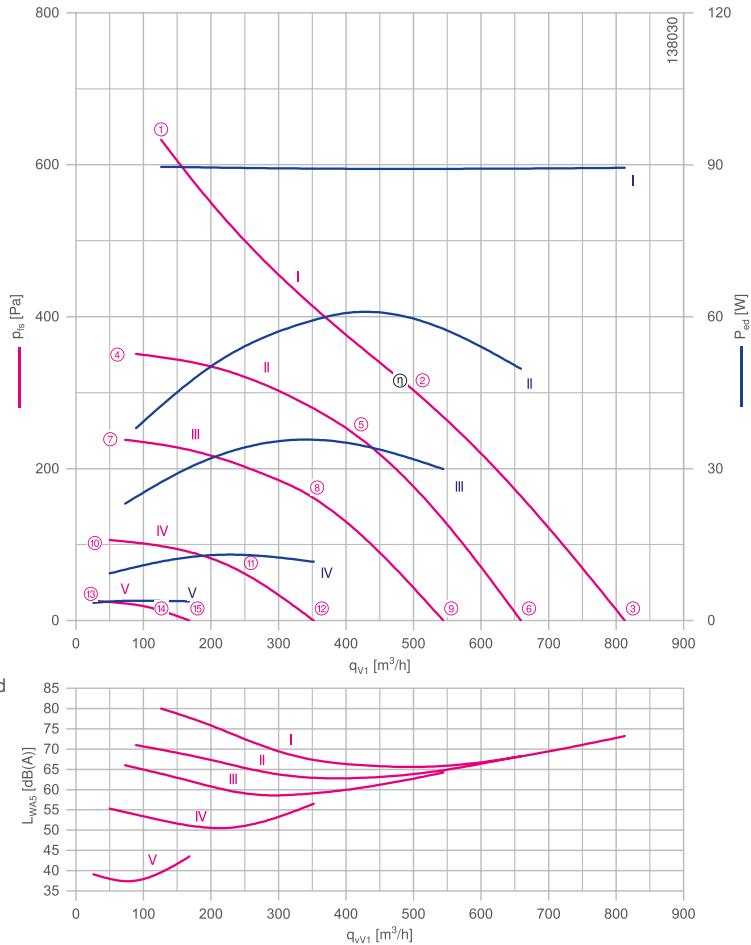
GR19V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.88-0.72 A*
 Rated speed n_N : 3150 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

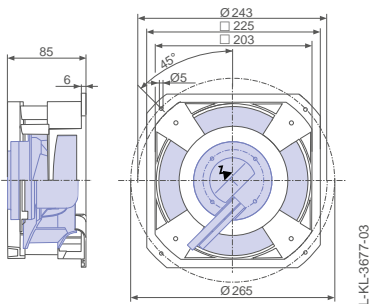


Measured with inlet nozzle, without guard grille according to ISO 5801

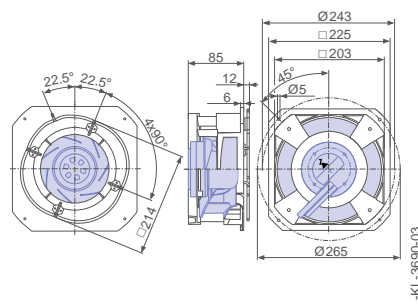
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

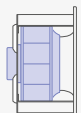
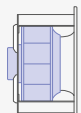


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	
GR19V-4IP.Z8.AR	I	3730	①	0.76	90	80	
		3150	②	0.76	90	66	
		3400	③	0.76	90	73	
	II	2760	④	0.36	38	71	
			⑤	0.54	60	63	
			⑥	0.46	50	68	
	III	2280		⑦	0.23	24	66
				⑧	0.34	36	59
				⑨	0.29	30	64
	IV	1520		⑩	0.11	9	55
				⑪	0.14	13	51
				⑫	0.12	12	57
	V	760		⑬	0.05	4	39
				⑭	0.05	4	38
				⑮	0.05	4	44

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR19V-4IP.Z8.AR	GR19V-4IP.Z8.AR
Article no.	178237	178237/A02
Weight kg	1.70	1.70
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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ZApilot with EC055

for single phase alternating current, 200-240 V

GR19V-4IP



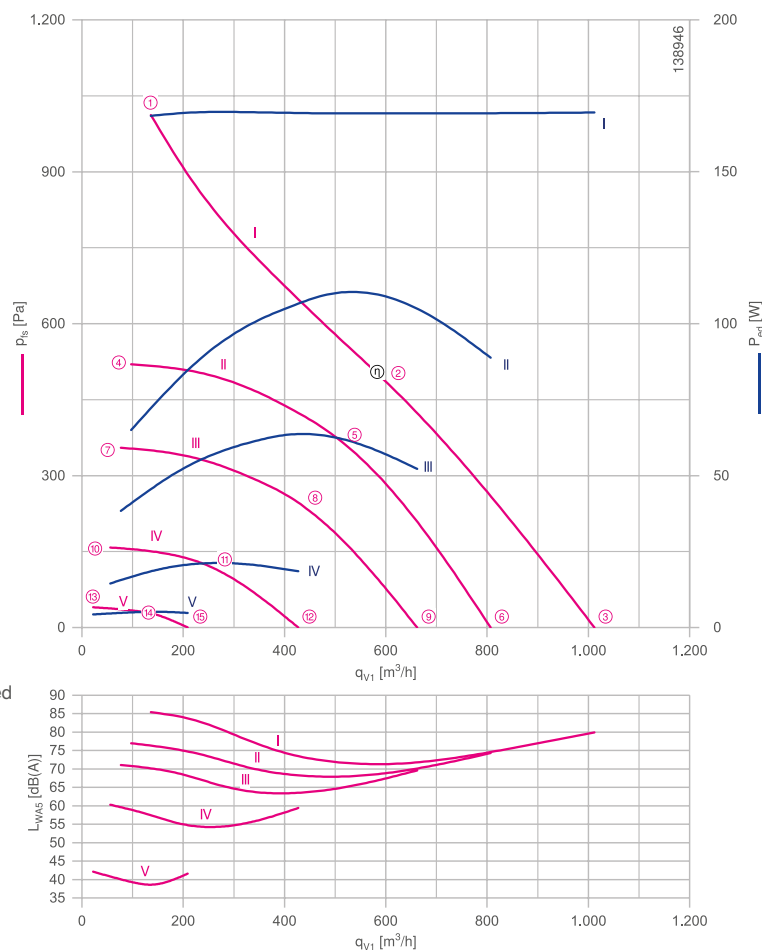
Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.70-1.45 A*
 Rated speed n_N : 3930 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 56.2 %
 Efficiency grade: $N_{actual} = 74.8 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

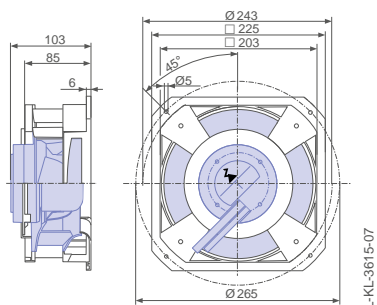
Characteristic curve



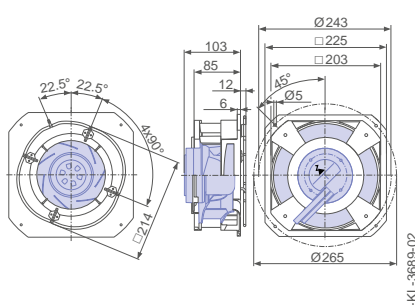
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

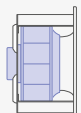
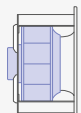


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR19V-4IP.Z8.AR	I	4750	①	1.45	170	85
		3940	②	1.50	170	71
		4250	③	1.50	170	80
	II	3410	④	0.56	65	77
			⑤	0.92	110	68
			⑥	0.72	90	74
	III	2820	⑦	0.37	38	71
			⑧	0.58	65	63
			⑨	0.52	50	70
	IV	1880	⑩	0.17	15	60
			⑪	0.23	22	54
			⑫	0.20	19	59
	V	940	⑬	0.06	4	42
			⑭	0.07	5	39
			⑮	0.06	5	42

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR19V-4IP.Z8.AR	GR19V-4IP.Z8.AR
Article no.	178087	178087/A02
Weight kg	1.80	1.80
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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ZApilot with EC055

for single phase alternating current, 200-240 V

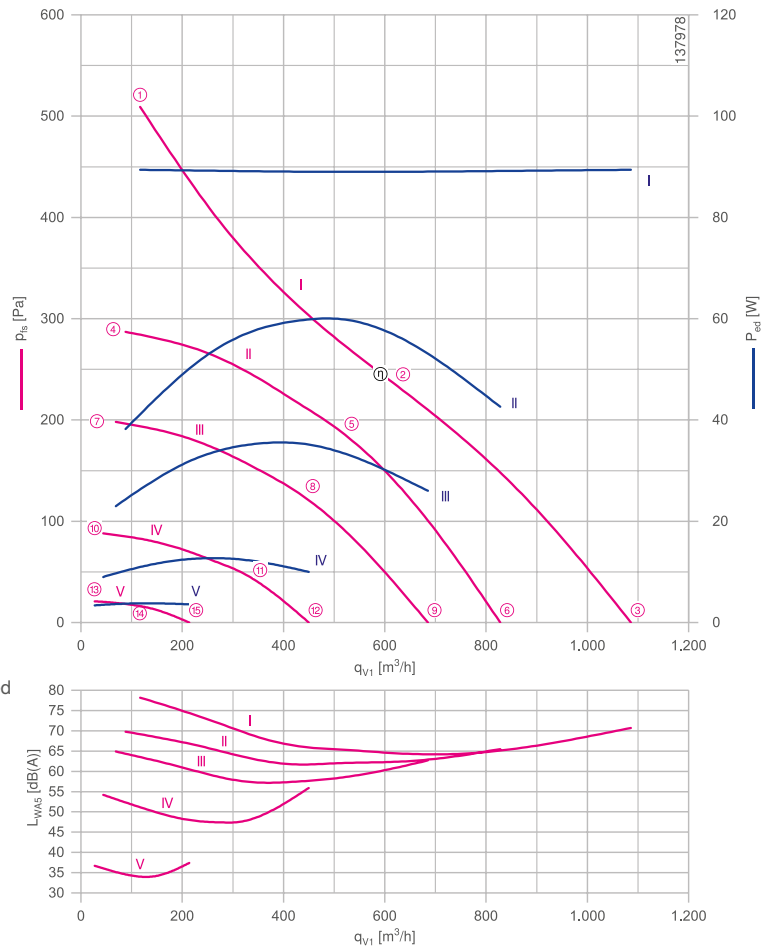
GR22V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.92-0.76 A*
 Rated speed n_N : 2570 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

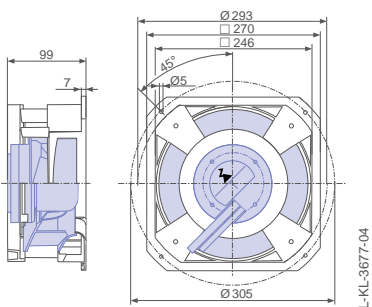


Measured with inlet nozzle, without guard grille according to ISO 5801

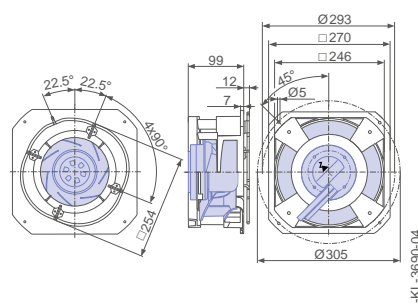
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

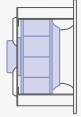
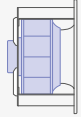


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	
GR22V-4IP.Z8.AR	I	3020	①	0.80	90	78	
		2570	②	0.80	90	65	
		2920	③	0.82	90	71	
	II	2240	④	0.42	38	70	
			⑤	0.58	60	62	
			⑥	0.44	42	66	
	III	1860		⑦	0.26	24	65
				⑧	0.39	36	57
				⑨	0.30	26	63
	IV	1240		⑩	0.11	9	54
				⑪	0.14	13	48
				⑫	0.12	10	56
	V	620		⑬	0.05	3	37
				⑭	0.05	4	34
				⑮	0.05	4	37

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR22V-4IP.Z8.AR	GR22V-4IP.Z8.AR
Article no.	178238	178238/A02
Weight kg	2.20	2.10
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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ZApilot with EC055

for single phase alternating current, 200-240 V

GR22V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.70-1.40 A*
 Rated speed n_N : 3230 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

Efficiency η_{statA} : 56.4 %
 Efficiency grade: $N_{actual} = 75.0 / N_{target} = 62^{**}$
 EC controller integrated

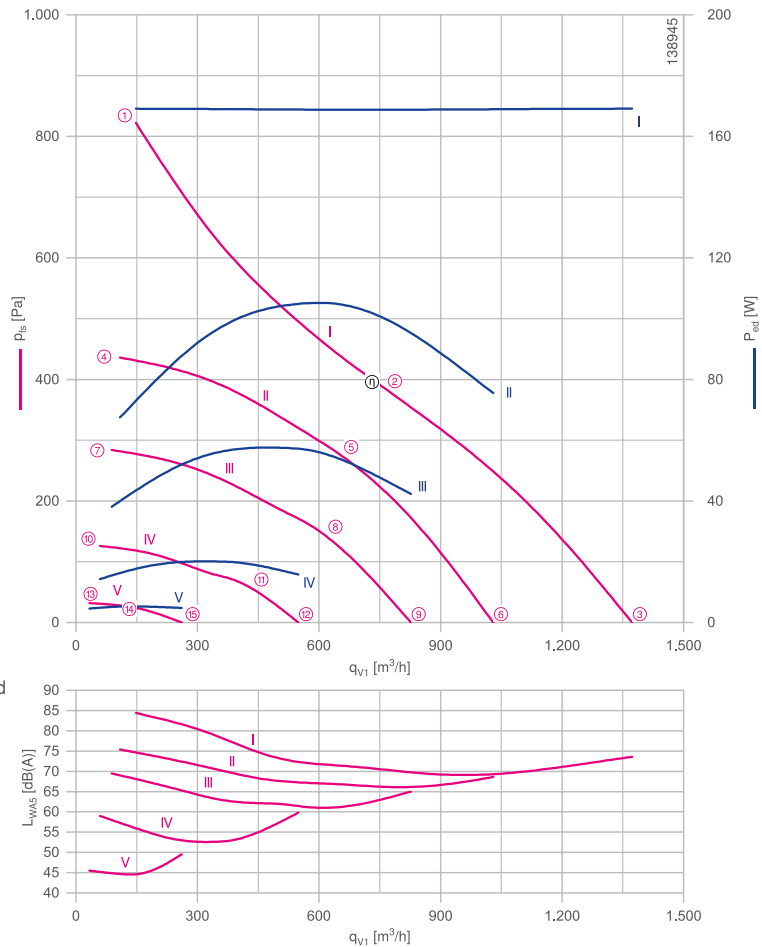
*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

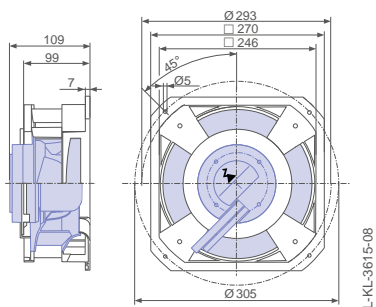
Characteristic curve



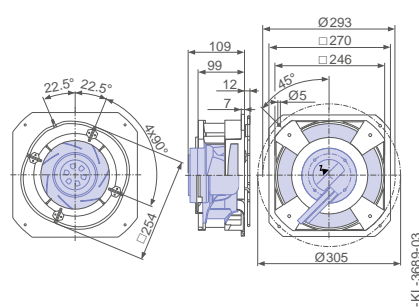
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

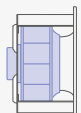
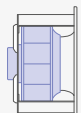


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR22V-4IP.ZC.AR	I	3790	①	1.45	170	84
		3230	②	1.45	170	71
		3650	③	1.45	170	74
	II	2750	④	0.58	70	75
			⑤	0.88	110	67
			⑥	0.68	75	69
	III	2220	⑦	0.42	38	70
			⑧	0.54	55	61
			⑨	0.40	42	65
	IV	1480	⑩	0.15	14	59
			⑪	0.19	20	53
			⑫	0.16	16	60
	V	740	⑬	0.06	5	46
			⑭	0.07	5	45
			⑮	0.07	5	50

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR22V-4IP.ZC.AR	GR22V-4IP.ZC.AR
Article no.	178088	178088/A02
Weight kg	2.50	2.50
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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Information

ZAbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZApilot with EC055

for single phase alternating current, 200-240 V

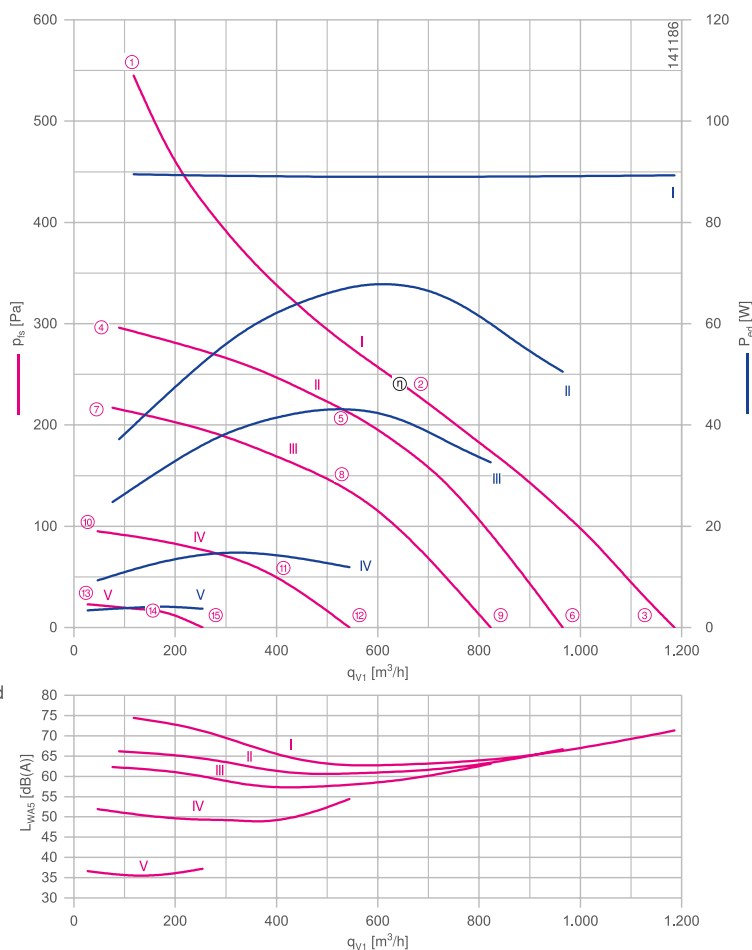
GR22V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.96-0.80 A*
 Rated speed n_N : 2220 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

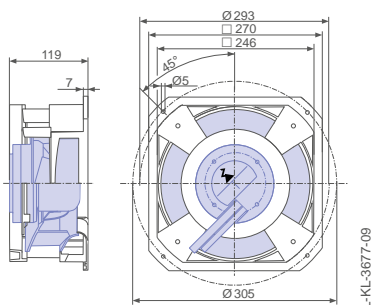


Measured with inlet nozzle, without guard grille according to ISO 5801

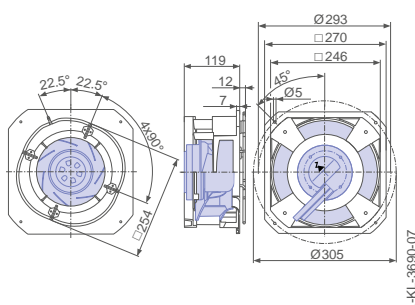
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

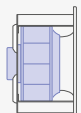
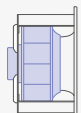


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR22V-4IP.Z8.BR	I	2750	①	0.80	90	74
		2220	②	0.82	90	63
		2470	③	0.84	90	71
	II	2030	④	0.35	38	66
			⑤	0.64	70	61
			⑥	0.48	50	67
	III	1740	⑦	0.25	24	62
			⑧	0.42	44	58
			⑨	0.32	32	63
	IV	1160	⑩	0.10	9	52
			⑪	0.16	15	49
			⑫	0.13	12	54
	V	580	⑬	0.05	3	37
			⑭	0.06	4	36
			⑮	0.05	4	37

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR22V-4IP.Z8.BR	GR22V-4IP.Z8.BR
Article no.	178239	178239/A02
Weight kg	2.20	2.20
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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- Information
- ZAbluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZAVblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes



ZApilot with EC055

for single phase alternating current, 200-240 V

GR22V-4IP

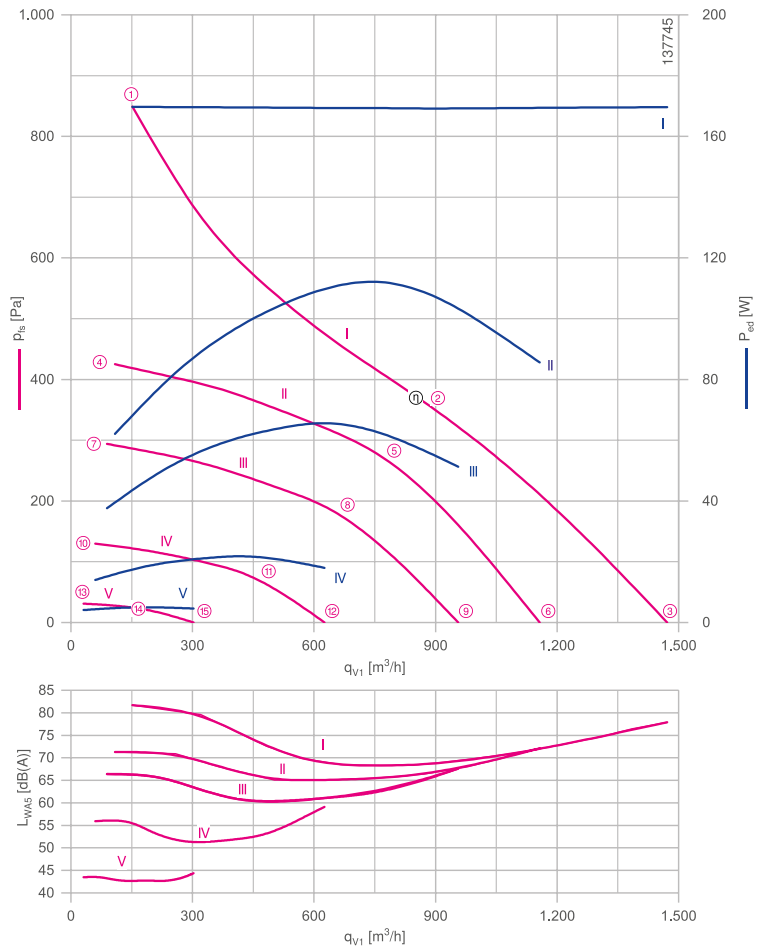


Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.65-1.40 A*
 Rated speed n_N : 2810 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 60.8 %
 Efficiency grade: $N_{actual} = 79.4 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

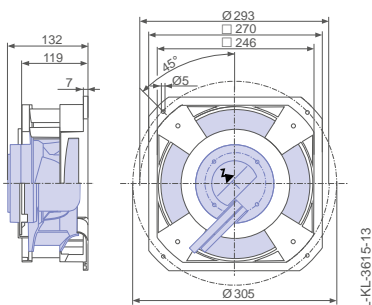
Characteristic curve



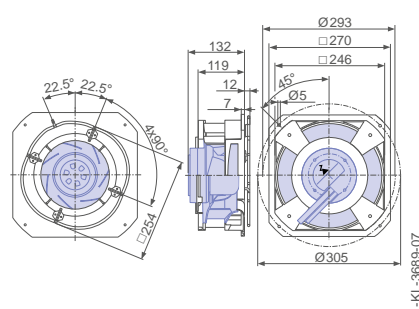
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

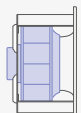
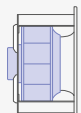


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR22V-4IP.ZC.BR	I	3460	①	1.45	170	82
		2810	②	1.45	170	69
		3100	③	1.45	170	78
	II	2450	④	0.56	60	71
			⑤	0.96	110	66
			⑥	0.74	85	72
	III	2040	⑦	0.37	38	66
			⑧	0.56	65	61
			⑨	0.46	50	68
	IV	1360	⑩	0.16	14	56
			⑪	0.23	22	52
			⑫	0.20	18	59
	V	680	⑬	0.05	4	44
			⑭	0.06	5	43
			⑮	0.06	5	44

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR22V-4IP.ZC.BR	GR22V-4IP.ZC.BR
Article no.	178089	178089/A02
Weight kg	2.60	2.60
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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Information

ZAbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZApilot with EC055

for single phase alternating current, 200-240 V

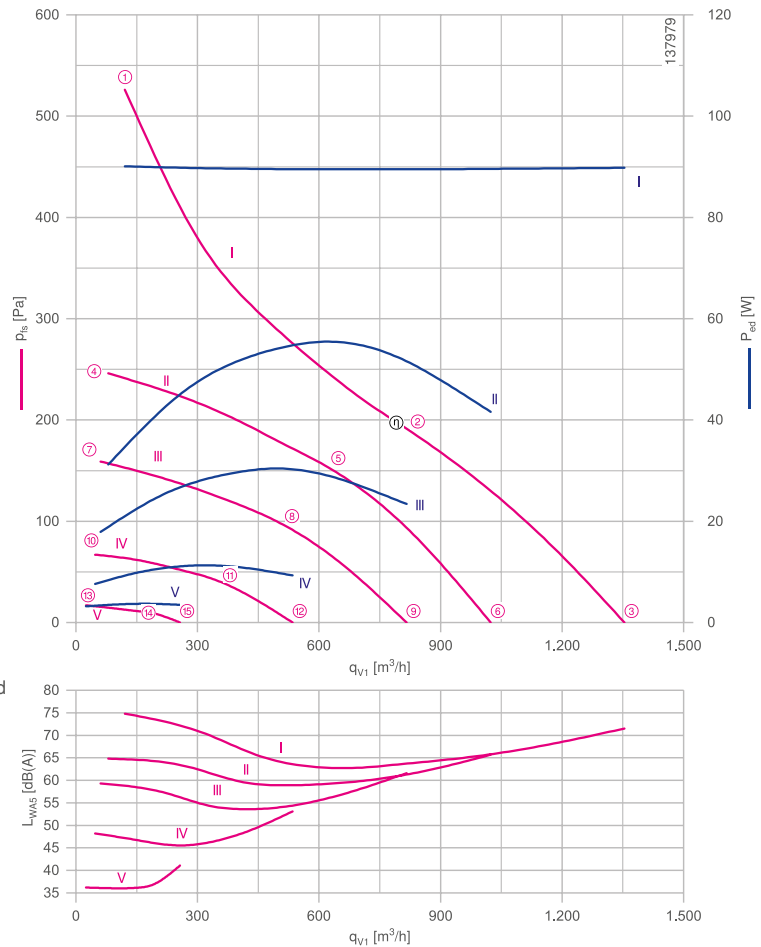
GR25V-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.76 A*
 Rated speed n_N : 2000 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection: IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

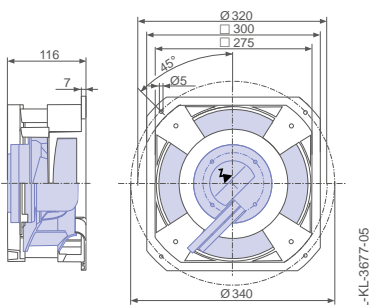


Measured with inlet nozzle, without guard grille according to ISO 5801

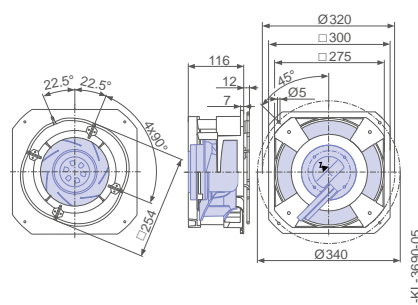
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

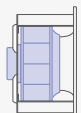
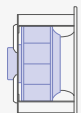


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR25V-4IP.ZC.AR	I	2490	①	0.80	90	75
		2000	②	0.78	90	64
		2240	③	0.78	90	72
	II	1700	④	0.29	32	65
			⑤	0.48	55	59
			⑥	0.39	42	66
	III	1370	⑦	0.17	18	59
			⑧	0.30	30	54
			⑨	0.23	24	62
	IV	910	⑩	0.09	8	48
			⑪	0.15	11	46
			⑫	0.11	9	53
	V	460	⑬	0.04	3	36
			⑭	0.06	4	37
			⑮	0.04	4	41

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR25V-4IP.ZC.AR	GR25V-4IP.ZC.AR
Article no.	178240	178240/A02
Weight kg	2.70	2.70
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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Information

ZAbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



ZApilot with EC055

for single phase alternating current, 200-240 V

GR25V-4IP

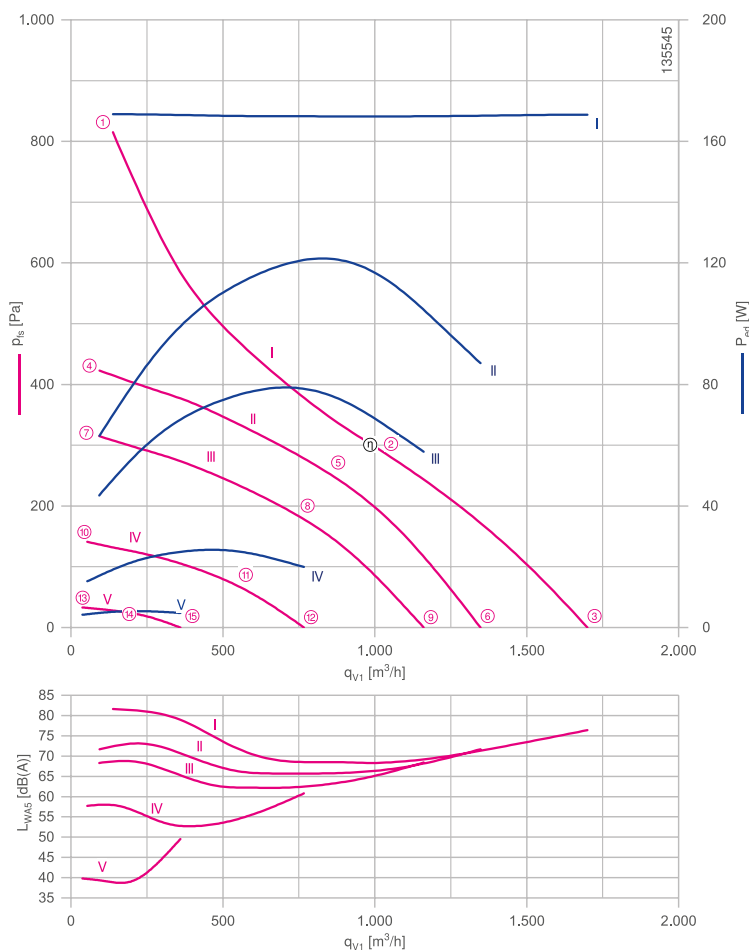


Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.75-1.45 A*
 Rated speed n_N : 2480 min⁻¹*
 Thermal class: **THCL155***
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with lateral attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of High Performance Composite Material, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 57.6 %
 Efficiency grade: $N_{actual} = 76.2 / N_{target} = 62^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015
 *** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

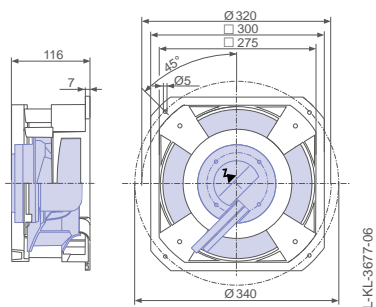
Characteristic curve



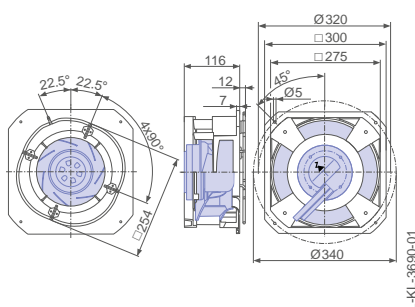
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Ventilation unit GR in installation position H/Vu/Vo



Ventilation unit GR incl. measuring devices in installation position H/Vu/Vo

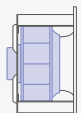
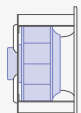


Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
GR25V-4IP.ZC.AR	I	3110	①	1.50	170	82
		2480	②	1.50	170	68
		2800	③	1.50	170	76
	II	2230	④	0.62	65	72
			⑤	1.10	120	66
			⑥	0.84	85	72
	III	1930	⑦	0.44	44	68
			⑧	0.76	80	62
			⑨	0.56	60	68
	IV	1290	⑩	0.17	15	58
			⑪	0.28	26	53
			⑫	0.22	20	61
	V	640	⑬	0.06	4	40
			⑭	0.07	5	40
			⑮	0.06	5	50

Current values determined at 230V

Fan ordering information

Design	GR**	GR***
Installation position	H/Vu/Vo	H/Vu/Vo
		
Type	GR25V-4IP.ZC.AR	GR25V-4IP.ZC.AR
Article no.	178090	178090/A02
Weight kg	2.80	2.80
** Inlet nozzle integrated		
*** Inlet nozzle integrated, incl. four mounted pressure taps for volume flow measurement		

Control technology

Control modules	Sensor control modules
	
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Vpro-ECblue

EC-Technology

Product overview

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Size 400	Page 202
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Size 500	Page 206
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Information

ZBluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

Vpro-ECblue

Size 250

RH25V



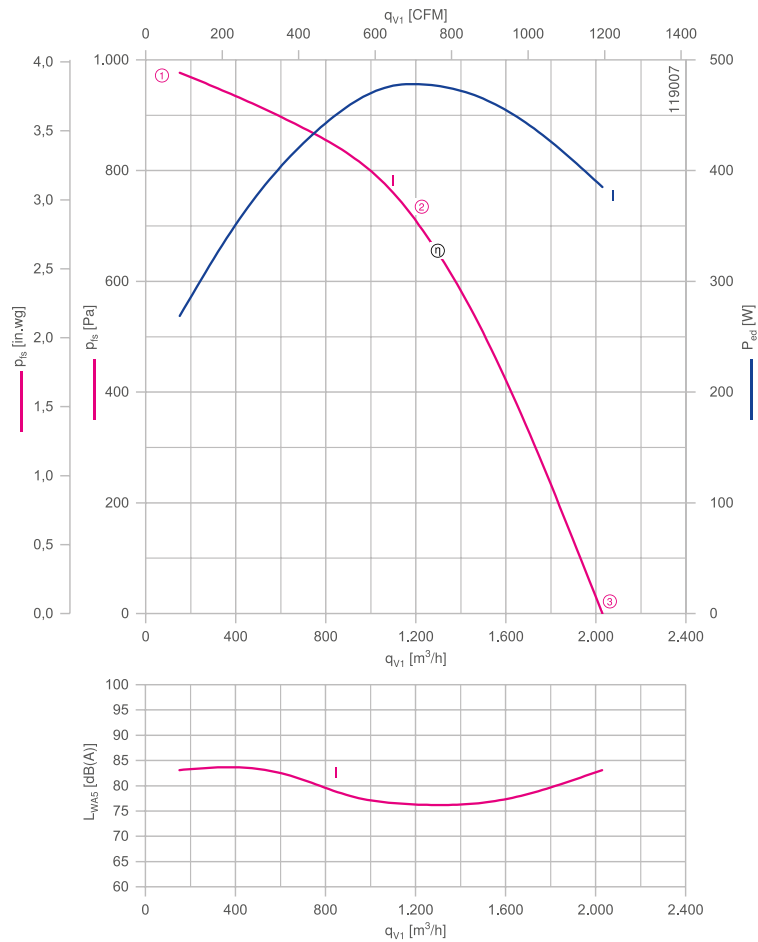
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated

* Rated data

Inlet ring	00407900	Page 289
Connection diagrams		Page 358
System components		Page 286

Characteristic curve



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

Fan ordering information

I	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										P_{ed}	I_N A	
I	1~ 200-277	RH25V-6IK.BA.1R	BA	171287	0.48 kW	2.40-1.75	3600	56.3	70.2	2015	yes		4.10

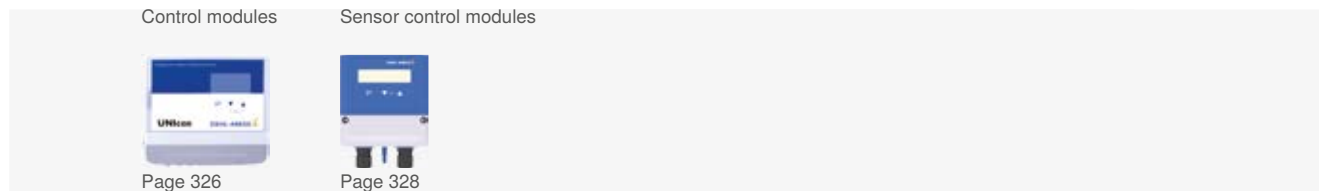
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
RH25V-6IK.BA.1R	I	3610	①	1.15	270	83	40	230
			②	2.10	480	76		
			③	1.70	390	83		

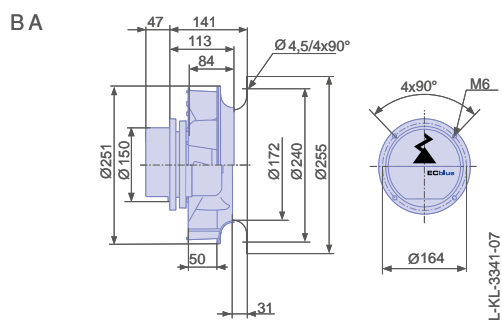
Control technology



Dimensions mm

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

Inlet nozzle not included



- Information
- ZBluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZAvblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes

Vpro-ECblue

Size 280

RH28V



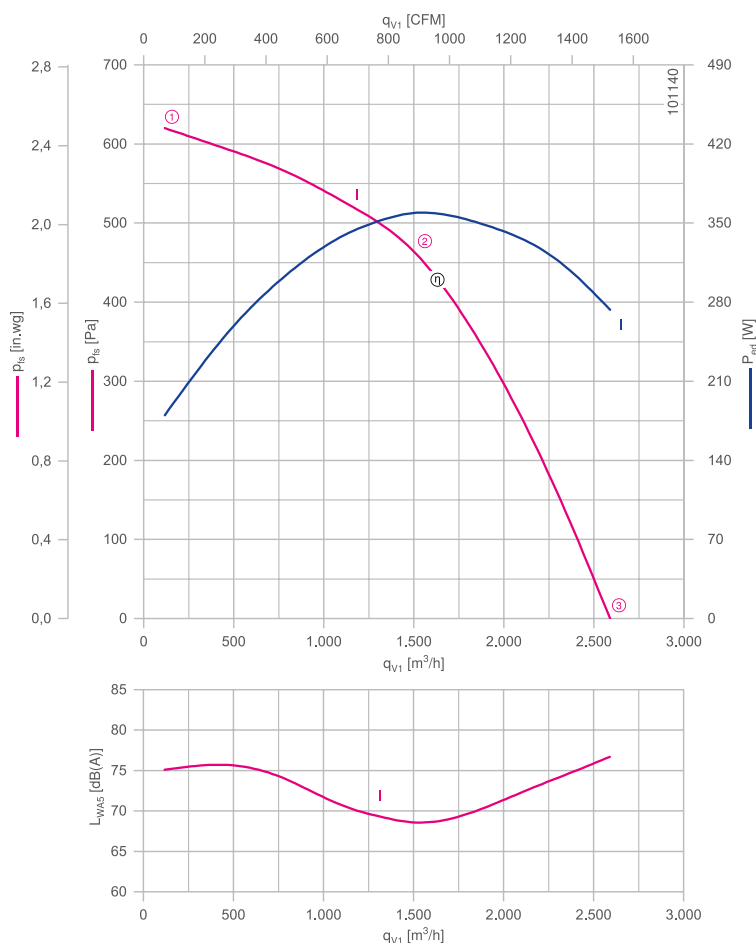
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated

* Rated data

Inlet ring	00275848	Page 289
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Characteristic curve



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

Fan ordering information

Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity	Weight
U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		CE UL	kg
1~ 200-277	RH28V-6IK.BA.1R	BA	114835	0.36 kW	1.80-1.30	2450	62.4	77.6	2015	yes	4.50

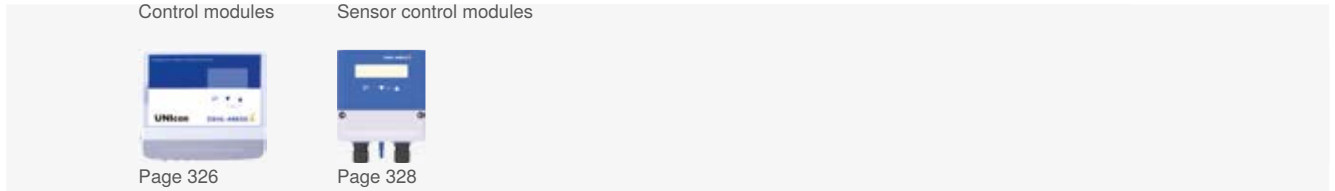
Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current I A	Input power P _{ed} W	Suction side sound power level L _{WAS} dB(A)	Maximum ambient temperature t _{amb} (max.) °C	Voltage U V
RH25V-6IK.BA.1R	I	2450	①	0.80	180	75	60	230
			②	1.55	360	69		
			③	1.20	270	77		

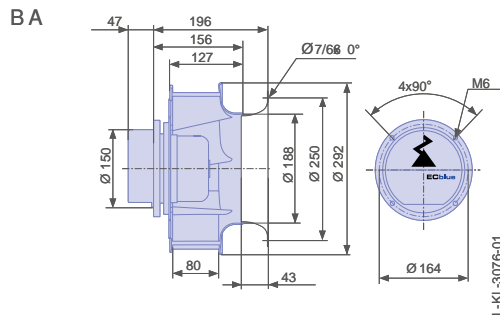
Control technology



Dimensions mm

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

Inlet nozzle not included



Information

ZAbluefin-ECblue

Cpro-ECblue

C-ECblue

ZAblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes



Vpro-ECblue

Size 315

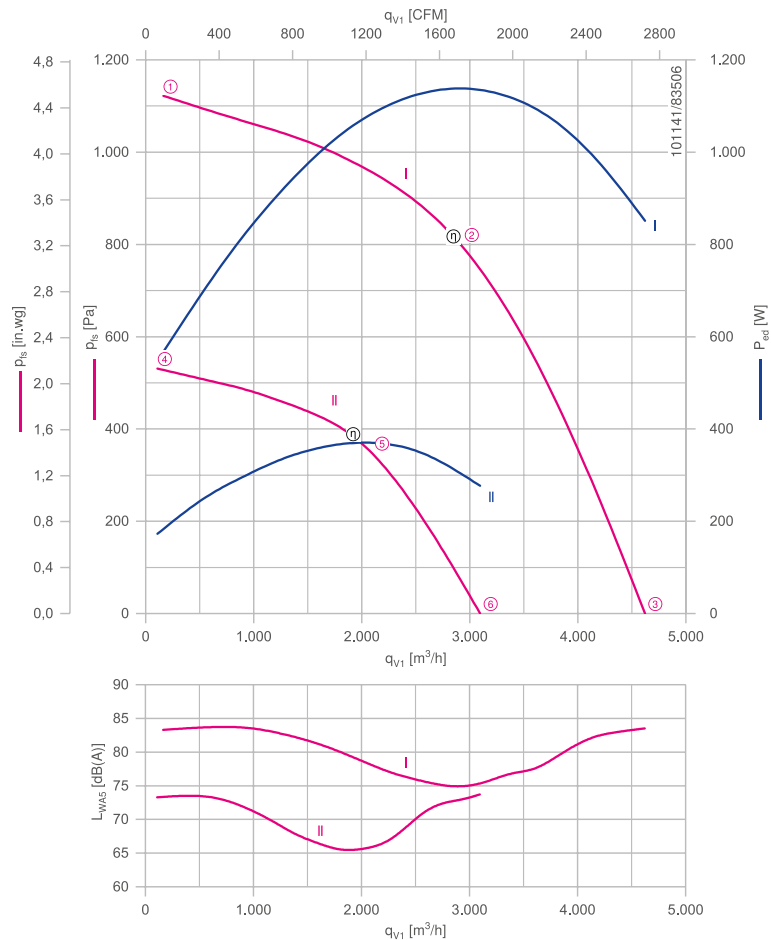
RH31V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00335943 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
I	3~ 380-480 V	RH31V-ZID.DC.1R	DC	160949	1.15 kW	1.90-1.50 A	2900 min ⁻¹	62.8 %	72.0 %	2015	yes	UL Listed Product	8.80 kg
II	1~ 200-277 V	RH31V-6IK.BD.1R	BD	114836	0.37 kW	1.65-1.35 A	2010 min ⁻¹	63.5 %	78.5 %	2015			5.40 kg

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

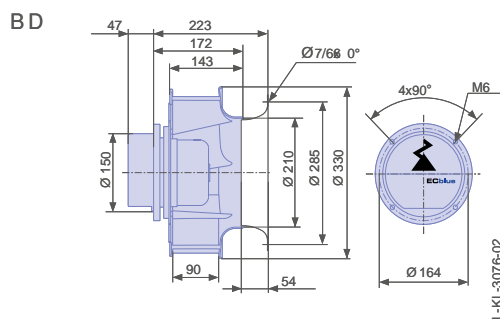
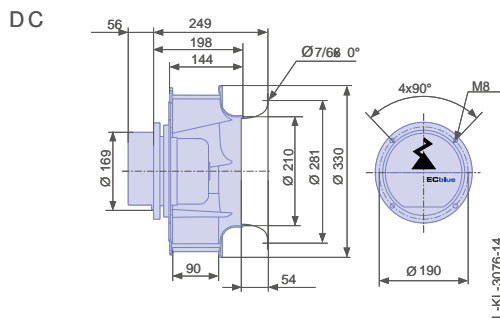
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)		
RH31V-1____1R	I	2900	①	1.00	560	83		400
			②	1.80	1150	75		
			③	1.40	860	84		
	II	2010	④	0.76	170	73	60	230
			⑤	1.60	370	66		
			⑥	1.20	280	74		

Control technology



Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included



Vpro-ECblue

Size 355

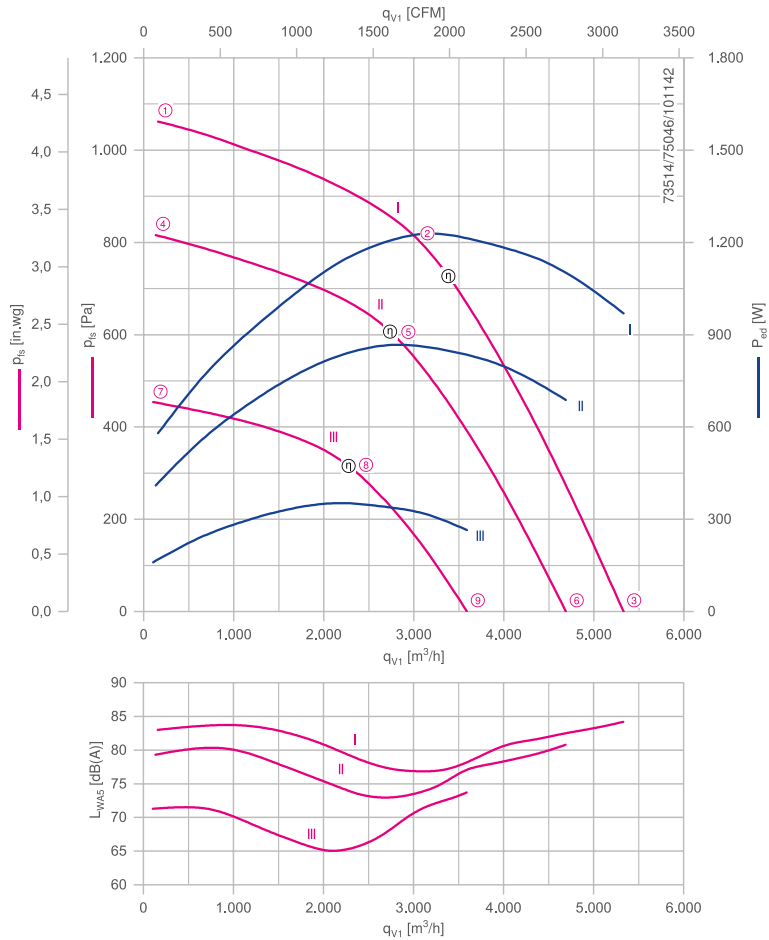
RH35V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00275850 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %		CE	UL	kg
I	3~ 380-480	RH35V-ZIK.DC.1R	DC	113466	1.25 kW	2.10-1.65	2500	62.0	71.6	2015	yes	UL	8.80
II	1~ 200-277	RH35V-ZIK.DC.1R	DC	113468	0.86 kW	4.40-3.20	2200	59.7	70.8	2015		Listed Product	8.80
III	1~ 200-277	RH35V-6IK.BD.1R	BD	114837	0.35 kW	1.80-1.30	1650	65.1	80.3	2015			5.90

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
RH35V- <u>IK</u> -1R	I	2500	①	1.10	580	83	60	400
			②	2.00	1250	77		
			③	1.65	960	84		
	II	2200	④	1.90	400	79	60	230
			⑤	3.90	860	73		
			⑥	3.10	680	81		
	III	1650	⑦	0.72	160	71	60	
			⑧	1.55	350	65		
			⑨	1.15	260	74		

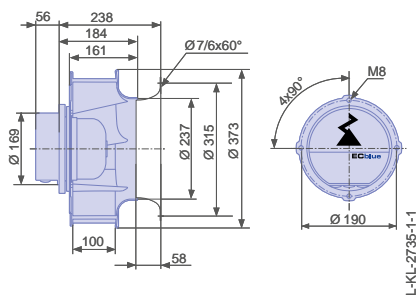
Control technology



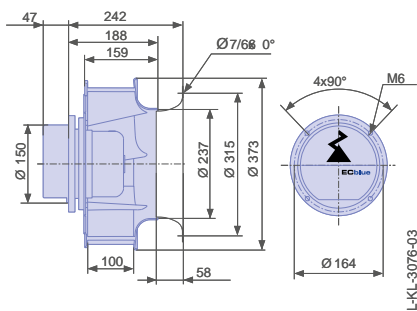
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

DC



BD



Vpro-ECblue

Size 400

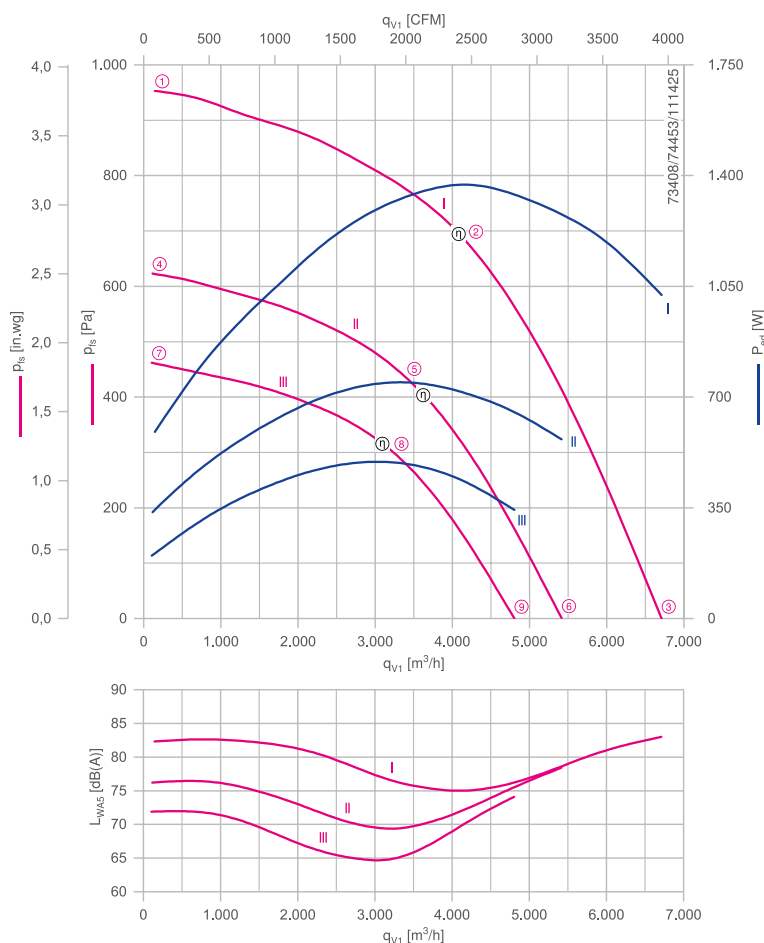
RH40V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection: IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00275570 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH40V-ZIK.DC.1R	DC	113469	1.35 kW	2.40-1.90	2100	63.7	72.7	2015	yes	UL	10.00
II	1~ 200-277	RH40V-ZIK.DC.1R	DC	113471	0.74 kW	3.90-2.80	1700	61.7	73.6	2015		Listed Product	10.00
III	1~ 200-277	RH40V-6IK.BD.1R	BD	168782	0.50 kW	2.50-1.80	1470	62.3	76.0	2015			6.60

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	U V
RH40V- <u>IK</u> - <u>1R</u>	I	2100	①	1.15	600	82	60	400
			②	2.30	1350	75		
			③	1.80	1000	83		
	II	1700	④	1.60	340	76	60	230
			⑤	3.40	740	69		
			⑥	2.60	560	78		
	III	1470	⑦	0.86	200	72	45	
			⑧	2.10	500	65		
			⑨	1.50	340	74		

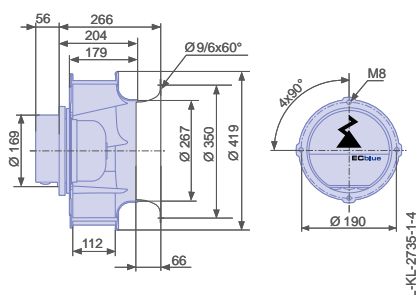
Control technology



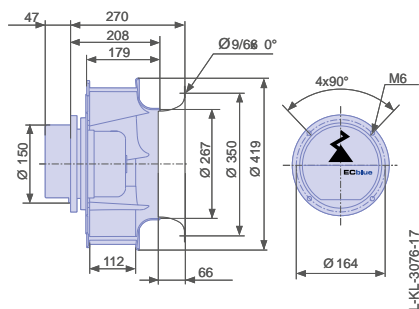
Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included

DC



BD



Vpro-ECblue

Size 450

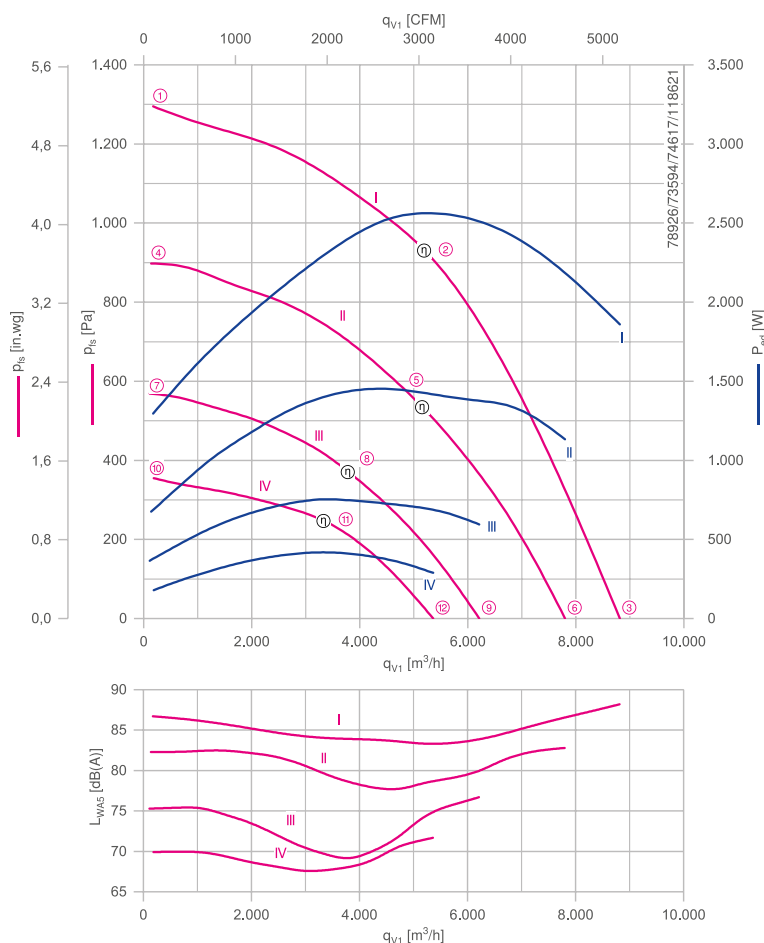
RH45V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00275571 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH45V-ZIK.GG.1R	GG	113930	2.60 kW	4.20-3.30	2120	57.8	64.0	2015	yes	UL Listed Product	20.00
II	3~ 380-480	RH45V-ZIK.DC.1R	DC	113473	1.45 kW	2.50-2.00	1800	59.3	68.2	2015			10.30
III	1~ 200-277	RH45V-ZIK.DC.1R	DC	113475	0.76 kW	3.90-2.80	1440	58.6	70.5	2015			10.30
IV	1~ 200-277	RH45V-6IK.BD.1R	BD	168847	0.42 kW	2.10-1.50	1150	62.6	77.1	2015			7.40

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

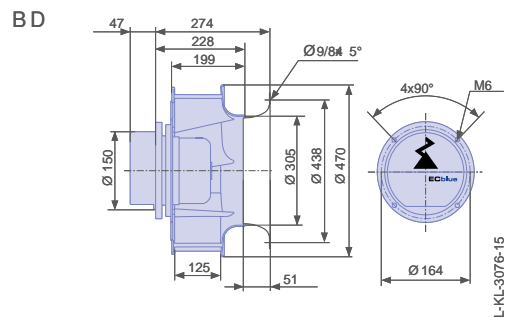
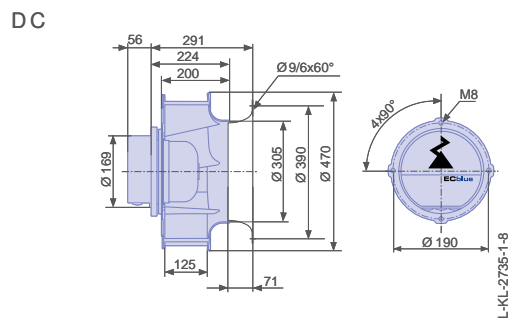
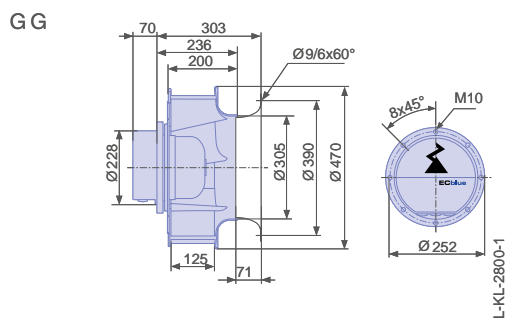
Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage	
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	U V	
RH45V- <u>IK</u> - <u>1R</u>	I	2120	①	2.10	1300	87	60	400	
			②	4.00	2600	83			
			③	2.90	1850	88			
	II	1800	④	1.25	680	82	60		230
			⑤	2.30	1450	77			
			⑥	1.90	1150	83			
	III	1440	⑦	1.70	370	75	60	230	
			⑧	3.40	760	70			
			⑨	2.70	600	77			
	IV	1150	⑩	0.80	180	70	40		230
			⑪	1.85	420	68			
			⑫	1.25	290	72			

Control technology



Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included



Vpro-ECblue

Size 500

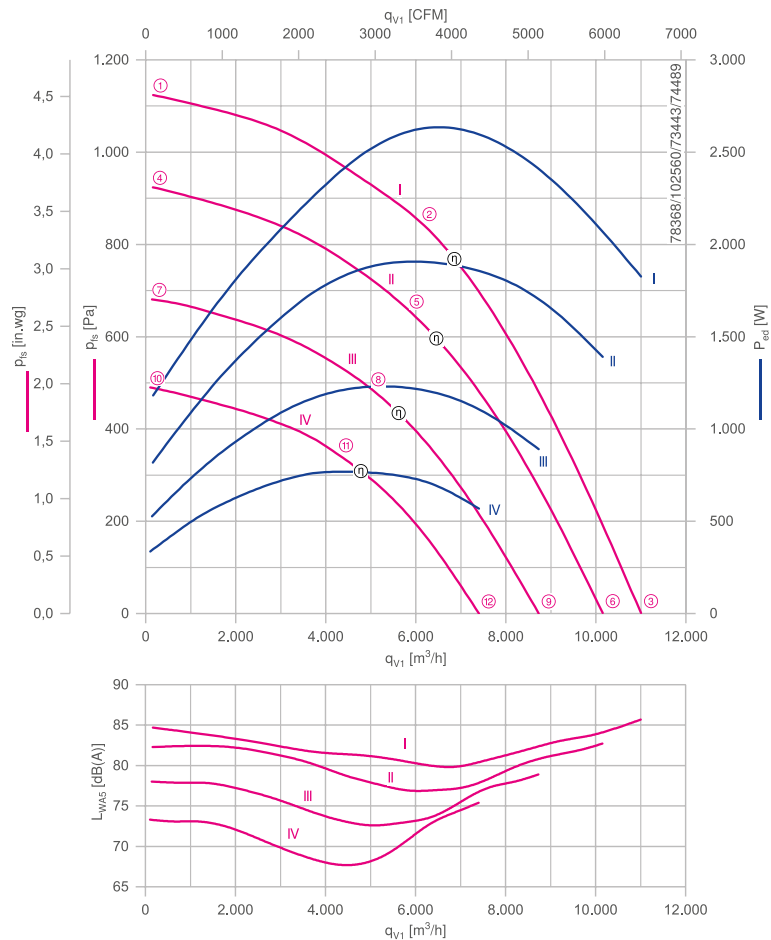
RH50V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00275572 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V										CE	UL	
I	3~ 380-480	RH50V-ZIK.GG.1R	GG	113934	2.60 kW	4.30-3.40	1800	60.5	66.6	2015	yes	UL Listed Product	19.90
II	3~ 380-480	RH50V-ZIK.DG.1R	DG	176031	1.90 kW	3.10-2.50	1650	61.7	69.3	2015			13.00
III	3~ 380-480	RH50V-ZIK.DC.1R	DC	113477	1.25 kW	2.10-1.65	1400	61.8	71.4	2015			12.50
IV	1~ 200-277	RH50V-ZIK.DC.1R	DC	113479	0.76 kW	3.90-2.80	1200	60.4	72.1	2015			12.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	U V
RH50V-ZIK...1R	I	1800	①	1.95	1200	85		400
			②	4.00	2600	80		
			③	2.90	1850	86		
	II	1650	④	1.40	820	82		
			⑤	3.00	1900	77	40	
			⑥	2.20	1400	83		
	III	1400	⑦	1.05	520	78		
			⑧	2.00	1250	72	60	
			⑨	1.55	900	79		
	IV	1200	⑩	1.50	340	73		
			⑪	3.40	760	68	40	
			⑫	2.50	560	75		

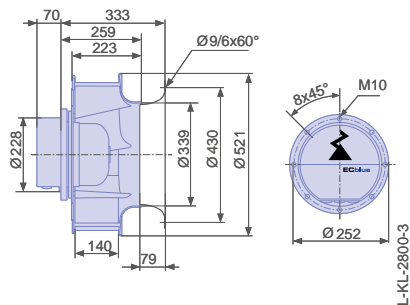
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

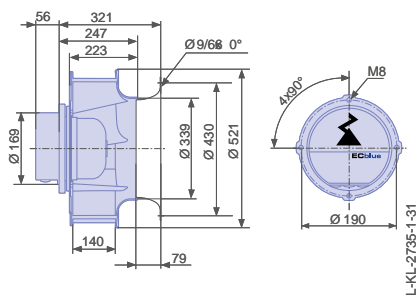
Dimensions mm

Motor Free-running motorized impeller RH in installation position H/Vu/Vo
Inlet nozzle not included

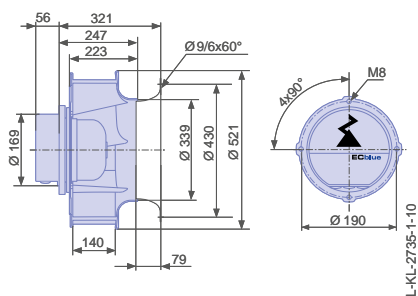
GG



DG



DC



Information

ZBluefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes

Vpro-ECblue

Size 560

RH56V



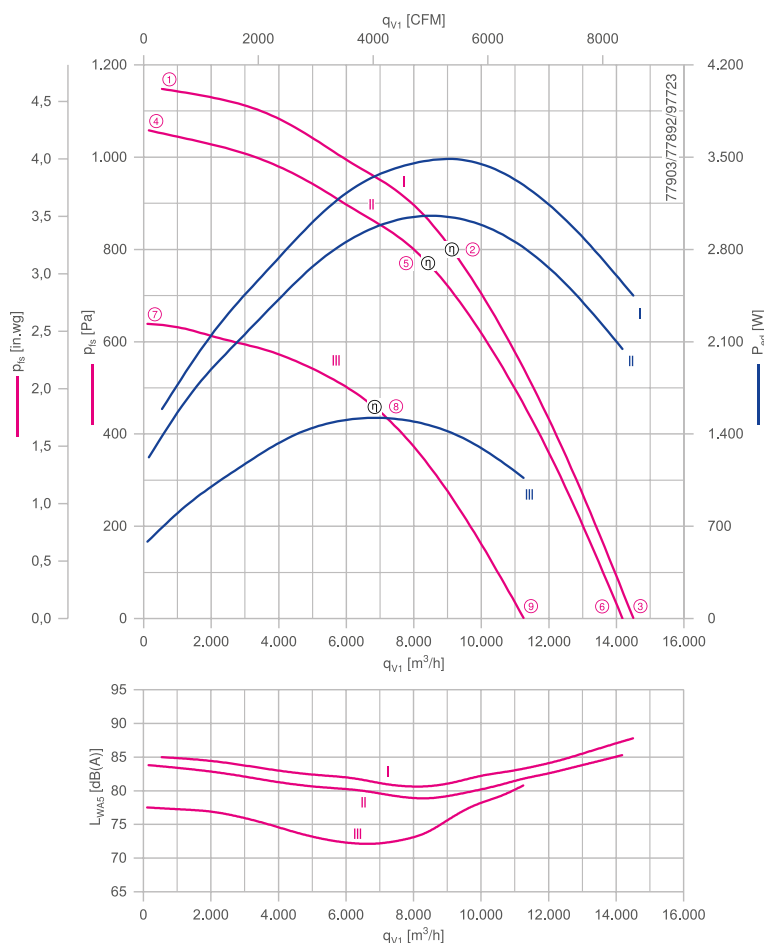
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated

* Rated data

Inlet ring	00278489	Page 289
Connection diagrams		Page 358
System components		Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	η_{actual} %		CE	UL	kg
I	3~ 380-480	RH56V-ZIK.GL.1R	GL	113954	3.50 kW	5.70-4.50	1620	62.6	67.4	2015	yes	UL	26.00
II	3~ 380-480	RH56V-ZIK.GG.1R	GG	113938	3.10 kW	5.00-4.00	1560	63.8	69.2	2015		Listed Product	22.00
III	3~ 380-480	RH56V-ZIK.DG.1R	DG	113905	1.50 kW	2.60-2.10	1230	63.0	71.6	2015			14.40

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

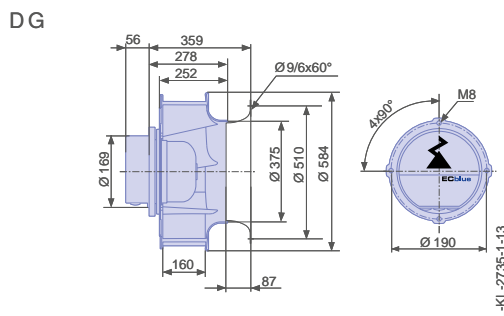
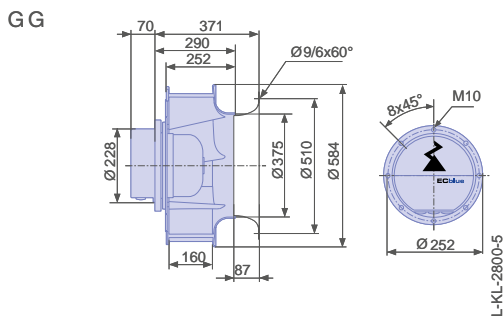
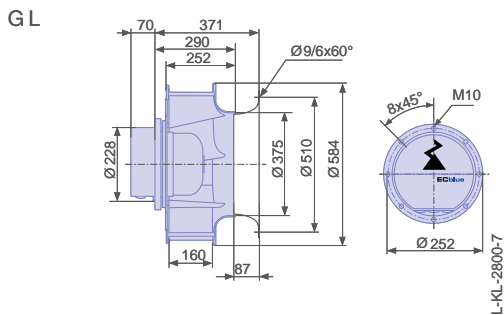
Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
RH56V-ZIK...1R	I	1620	①	2.60	1600	85	60	400
			②	5.40	3500	81		
			③	3.80	2400	88		
	II	1560	④	2.00	1200	84	60	
			⑤	4.80	3100	79		
			⑥	3.20	2000	85		
	III	1230	⑦	1.15	580	78	40	
			⑧	2.50	1500	72		
			⑨	1.85	1050	81		

Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included



Vpro-ECblue

Size 630

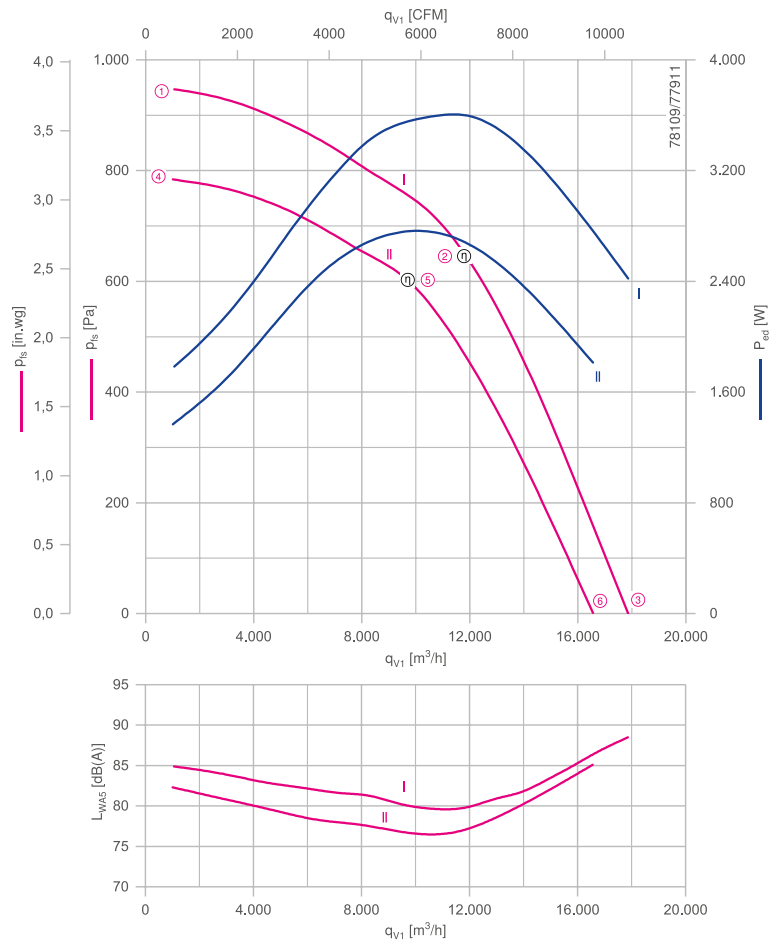
RH63V



Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -15 °C
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of High Performance Composite Material, uncoated
 * Rated data
 Inlet ring 00279305 Page 289
 Connection diagrams Page 358
 System components Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	η_{statA} %	η_{actual} %		CE	UL	kg
I	3~ 380-480	RH63V-ZIK.GL.1R	GL	113958	3.60 kW	5.70-4.50	1340	63.6	68.2	2015	yes	UL	28.20
II	3~ 380-480	RH63V-ZIK.GG.1R	GG	113942	2.80 kW	4.40-3.50	1230	63.8	69.6	2015		Listed Product	24.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

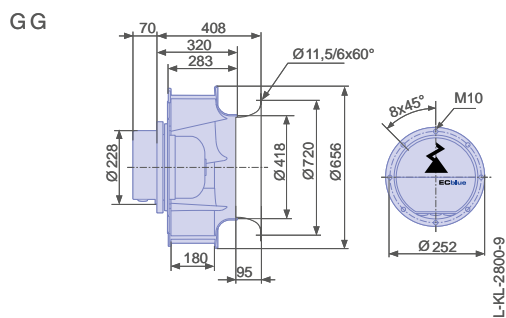
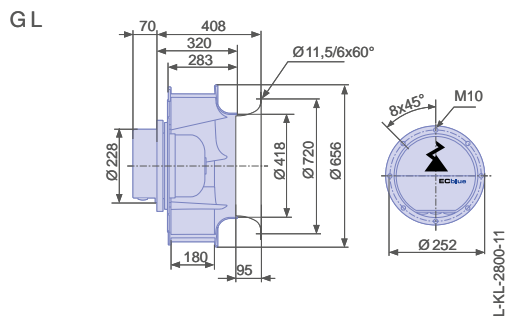
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)		
RH63V-ZIK.G_1R	I	1340	①	2.70	1800	85	60	400
			②	5.40	3600	80		
			③	3.70	2400	89		
	II	1230	④	2.10	1350	82		
			⑤	4.20	2800	77		
			⑥	2.80	1800	85		

Control technology



Dimensions mm

Motor Free-running motorized impeller RH
in installation position H/Vu/Vo
Inlet nozzle not included







ZAcube-Cpro-ECblue

EC-Technology

Product overview

Module size 607 x 607 mm	Page 214
Module size 760 x 760 mm	Page 216
Module size 912 x 912 mm	Page 218

Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAblue-
ECblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

Control
technology

General notes

ZAcube-Cpro-ECblue

Cube 607 x 607 mm

WR..C/HO11



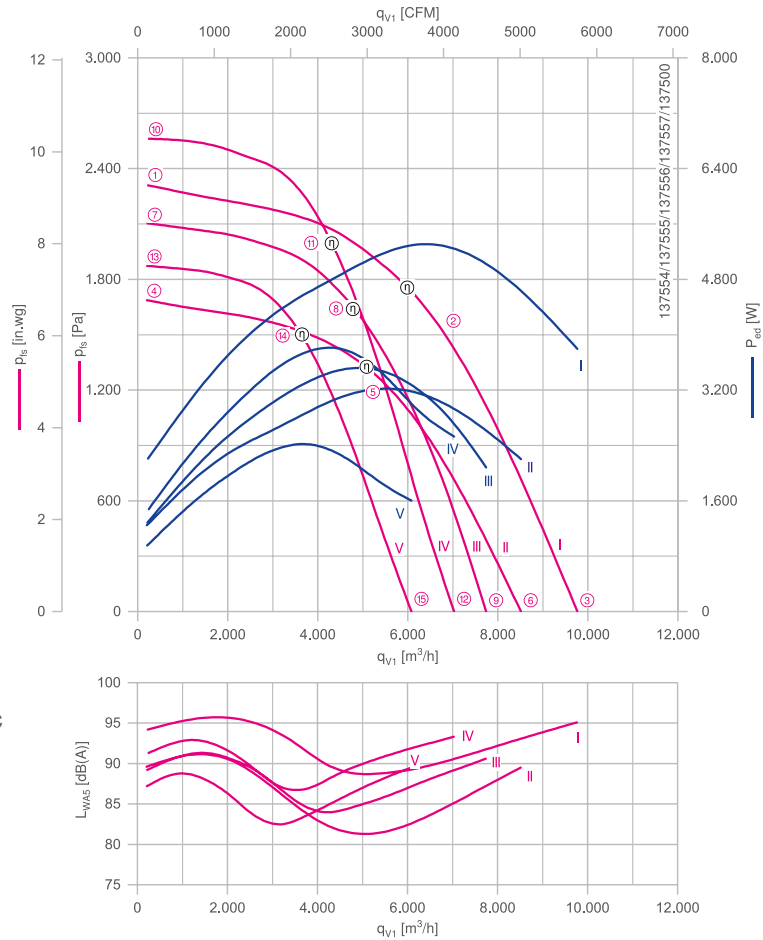
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagrams
 System components

Page 358
 Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V				P_{ed}	I_N A	n_N min^{-1}	n_{statA} %	N_{actual} %		CE	UL	
I	3~ 380-480	WR40C-ZID.GG.CR	GG	116029/H011	5.60 kW	9.00-7.10	3170	61.8	64.4	2015	yes	UL Listed Product	53.00
II	3~ 380-480	WR40C-ZID.DG.CR	DG	116028/H011	3.30 kW	5.40-4.20	2700	68.4	73.4	2015			47.00
III	3~ 380-480	WR35C-ZID.DG.CR	DG	116027/H011	3.70 kW	5.80-4.60	3400	68.4	72.9	2015			46.00
IV	3~ 380-480	WR31C-ZID.DG.CR	DG	116026/H011	3.90 kW	6.20-5.00	4200	65.6	69.9	2015			45.00
V	3~ 380-480	WR31C-ZID.DC.CR	DC	116025/H011	2.50 kW	4.00-3.20	3640	66.5	72.9	2015			42.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)	t _{amb (max.)} °C	
WR_C-ZID___CR	I	3170	①	3.40	2200	94	40	400
			②	8.20	5400	90		
			③	5.80	3800	95		
	II	2700	④	2.00	1250	90	40	
			⑤	5.00	3200	82		
			⑥	3.40	2200	90		
	III	3400	⑦	2.00	1300	89	40	
			⑧	5.40	3500	85		
			⑨	3.20	2100	91		
	IV	4200	⑩	2.30	1500	91	40	
			⑪	5.80	3800	88		
			⑫	3.90	2500	93		
	V	3640	⑬	1.55	960	87	55	
			⑭	3.70	2400	83		
			⑮	2.50	1600	90		

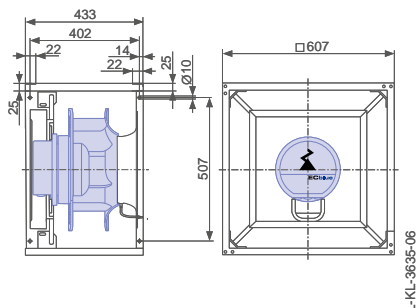
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

Fan module WR in installation position H

Inlet nozzle integrated



- Information
- ZBluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZBluefin-ECblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes

ZAcube-Cpro-ECblue

Cube 760 x 760 mm

WR..C/HO12



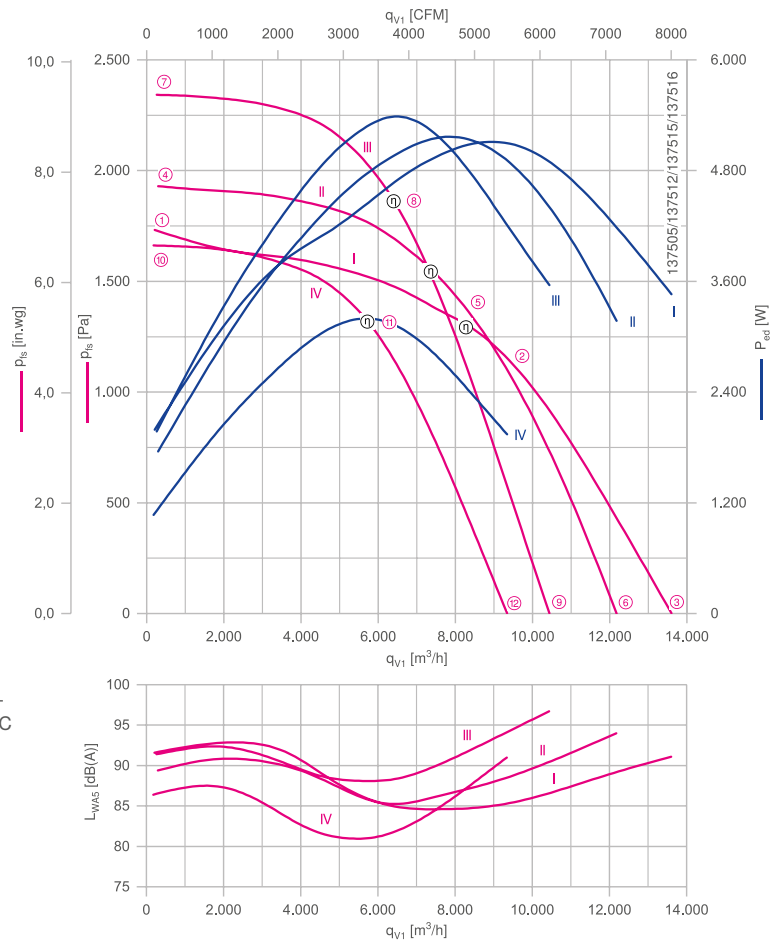
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagrams
 System components

Page 358
 Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
											CE	UL	
	U_N V				P_{ed}	I_N A	n_N min ⁻¹	η_{statA} %	N_{actual} %				kg
I	3~ 380-480	WR50C-ZID.GL.CR	GL	116033/HO12	5.40 kW	8.60-6.80	2130	66.5	69.5	2015	yes	UL Listed Product	75.00
II	3~ 380-480	WR45C-ZID.GG.CR	GG	116032/HO12	5.20 kW	8.40-6.60	2570	65.7	68.7	2015			69.00
III	3~ 380-480	WR40C-ZID.GG.CR	GG	116031/HO12	5.60 kW	9.00-7.10	3170	61.8	64.4	2015			68.00
IV	3~ 380-480	WR40C-ZID.DG.CR	DG	116030/HO12	3.30 kW	5.40-4.20	2700	68.4	73.4	2015			62.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed n min ⁻¹	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage U V
				I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
WR_C-ZID__CR	I	2130	①	3.10	2000	92	40	
			②	8.00	5200	85		
			③	5.40	3500	91		
	II	2570	④	2.70	1750	89		
			⑤	2.70	1750	89		
			⑥	8.00	5200	87		
	III	3170	⑦	3.00	1950	91		
			⑧	8.20	5400	88		
			⑨	5.40	3600	97		
	IV	2700	⑩	1.70	1050	86		
			⑪	4.80	3200	81		
			⑫	3.00	1950	91		

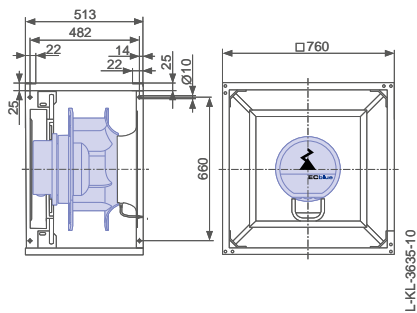
Control technology



Dimensions mm

Fan module WR in installation position H

Inlet nozzle integrated



ZAcube-Cpro-ECblue

Cube 912 x 912 mm

WR..C/H013



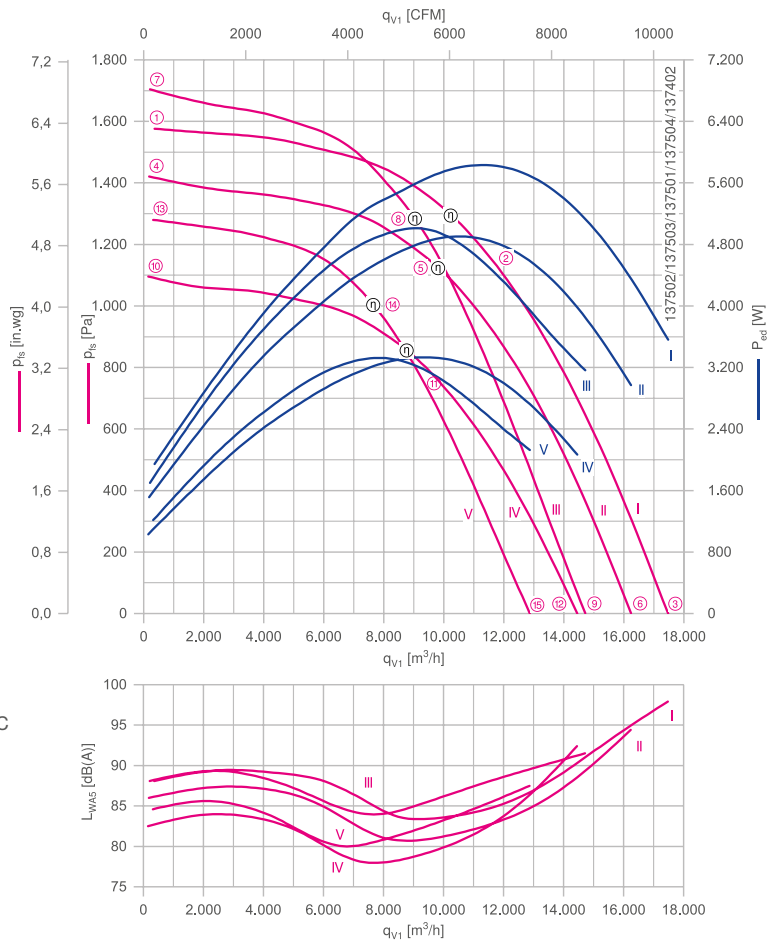
Description

Motor technology: EC
 Rated frequency f_N : 50/60 Hz*
 Thermal class: THCL155*
 Min. permitted ambient temperature $t_{amb(min)}$: -20 °C***
 Electrical connection: Integrated controller
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller made of ZAmid, uncoated, ultramarine blue
 * Rated data
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagrams
 System components

Page 358
 Page 286

Characteristic curve



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

Fan ordering information

	Rated voltage	Type	Motor	Article no.	Input power	Rated current	Rated speed	Efficiency	Efficiency grade	ErP	Conformity		Weight
	U_N V					P_{ed}		I_N A	n_N min^{-1}		η_{statA} %	N_{actual} %	
I	3~ 380-480	WR56C-ZID.GQ.CR	GQ	116038/H013	6.00 kW	9.40-7.40	1860	69.9	72.3	2015	yes	UL Listed Product	105.00
II	3~ 380-480	WR56C-ZID.GL.CR	GL	116037/H013	5.00 kW	8.00-6.40	1750	71.6	74.8	2015			98.00
IV	3~ 380-480	WR56C-ZID.GG.CR	GG	116036/H013	3.40 kW	5.40-4.20	1550	70.2	75.2	2015			94.00
III	3~ 380-480	WR50C-ZID.GL.CR	GL	116035/H013	5.40 kW	8.60-6.80	2130	66.5	69.5	2015			95.00
V	3~ 380-480	WR50C-ZID.GG.CR	GG	116034/H013	3.50 kW	5.60-4.40	1860	67.2	72.0	2015			90.00

Further fans can be found in the selection program FANselect: www.fanselect.net
 Other voltages and versions on request.



Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	Voltage
		n min ⁻¹		I A	P _{ed} W	L _{WAS} dB(A)	t _{amb (max.)} °C	
WR5_-ZID.G_CR	I	1860	①	3.00	1950	88	40	400
			②	8.80	5800	85		
			③	5.40	3600	98		
	II	1750	④	2.40	1500	86	40	
			⑤	7.40	4800	81		
			⑥	4.60	3000	94		
	III	2130	⑦	2.60	1700	88	40	
			⑧	7.60	5000	85		
			⑨	4.80	3200	92		
	IV	1550	⑩	1.65	1050	83	45	
			⑪	5.00	3300	80		
			⑫	3.20	2100	92		
	V	1860	⑬	1.95	1200	85	55	
			⑭	5.20	3300	81		
			⑮	3.30	2100	88		

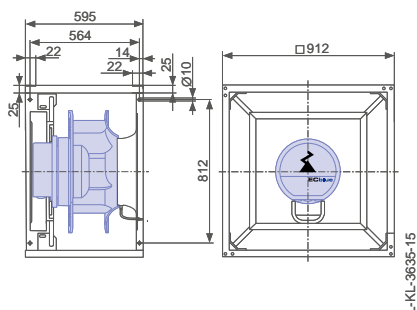
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Motor D_, G_ Page 332	Page 344

Dimensions mm

Fan module WR in installation position H

Inlet nozzle integrated



- Information
- ZBluefin-ECblue
- Cpro-ECblue
- C-ECblue
- ZBluefin-ECblue
- Vpro-ECblue
- ZAcube-Cpro-ECblue
- Housing fans
- System components
- Control technology
- General notes



Housing fans-ECblue

EC-Technology

Product overview

Single inlet		Double inlet	
Size 108	Page 222	Size 133	Page 264
Size 120	Page 224	Size 146	Page 268
Size 133	Page 226	Size 160	Page 270
Size 140	Page 228	Size 250	Page 272
Size 146	Page 232	Size 280	Page 274
Size 160	Page 234	Size 315	Page 276
Size 180	Page 236	Size 400	Page 280
Size 200	Page 240	Size 450	Page 284
Size 225	Page 242		
Size 250	Page 244		
Size 280	Page 248		
Size 315	Page 254		
Size 355	Page 258		
Size 400	Page 260		
Size 450	Page 262		



Information

ZAbuefin-ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes

RG..R-ECblue

for single phase alternating current, 200-240 V

RG 1 R-4IP



Description

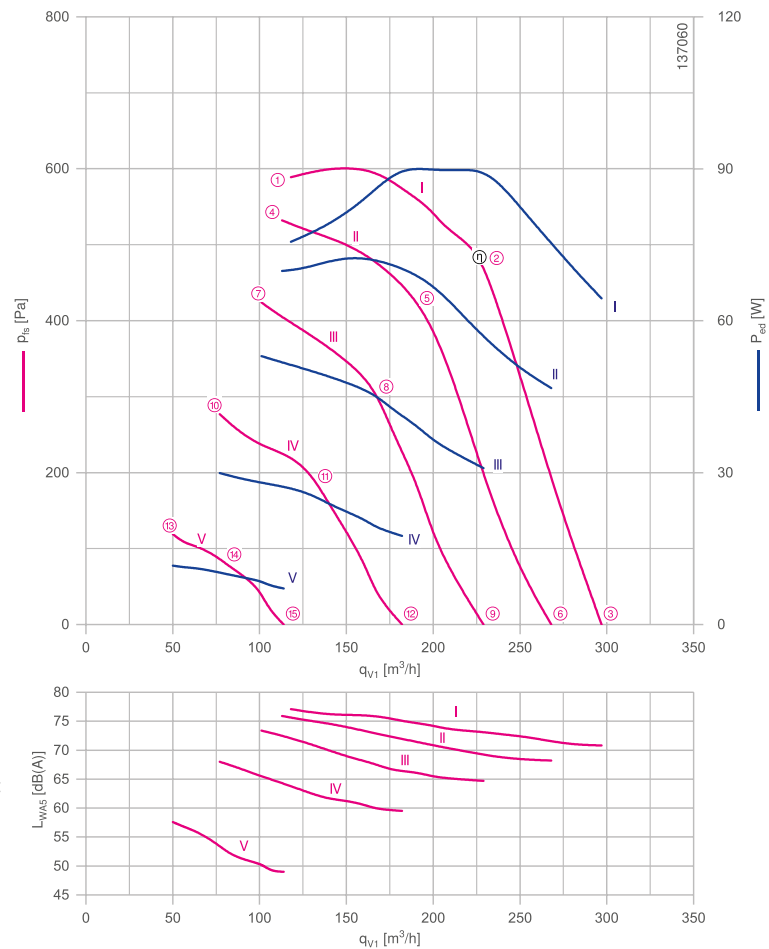
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.88-0.74 A*
 Rated speed n_N : 4230 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_1 < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve



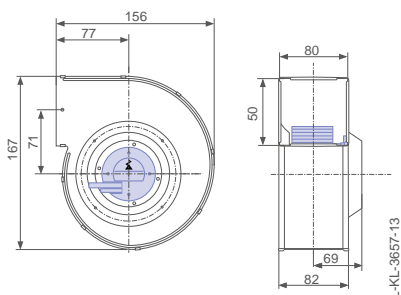
Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00413145	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

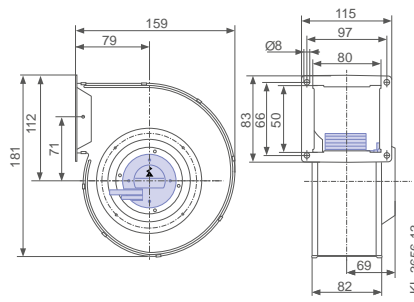
Dimensions mm

Clockwise rotation

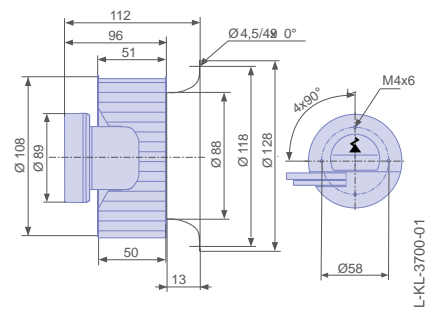
Fan with housing, single inlet, without
flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange,
in installation position H/Vu/Vo



Motorised impeller in installation position H/
Vu/Vo



Performance data

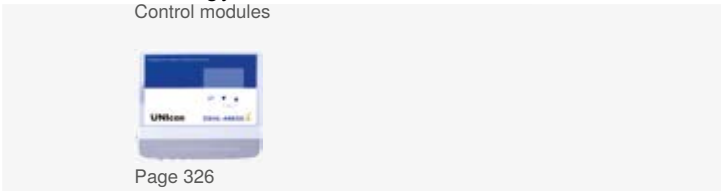
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG11R-4IP.Z8.4R	I	4660	①	0.72	75	77
		4230	②	0.76	90	73
		2860	③	0.60	65	71
	II	4540	④	0.62	70	76
		3990	⑤	0.64	70	71
		2560	⑥	0.46	46	68
	III	3930	⑦	0.48	55	73
		3420	⑧	0.42	46	68
		2210	⑨	0.30	30	65
	IV	3300	⑩	0.28	30	68
		2750	⑪	0.24	26	63
		1770	⑫	0.17	18	60
	V	2170	⑬	0.13	12	58
		1910	⑭	0.12	11	54
		1150	⑮	0.08	7	49

Current values determined at 230V

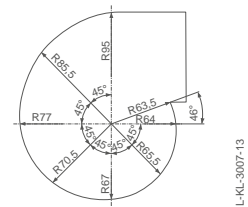
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG11R-4IP.Z8.4R	RG11R-4IP.Z8.4R	RE11P-4IP.Z8.1R	RG11R-4IP.Z8.4L	RG11R-4IP.Z8.4L	RE11P-4IP.Z8.1L
Article no.	178210	178202	178194	178214	178206	178198
Weight kg	1.90	2.10	1.20	1.90	2.10	1.20
* Inlet nozzle not included in the scope of delivery						

Control technology

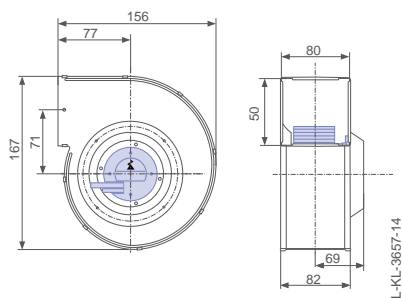


Used scroll

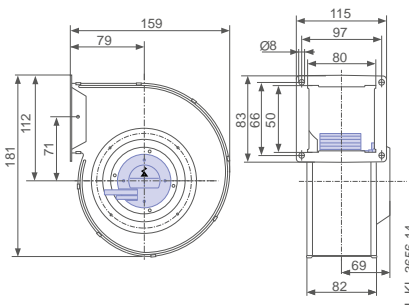


Counter clockwise rotation

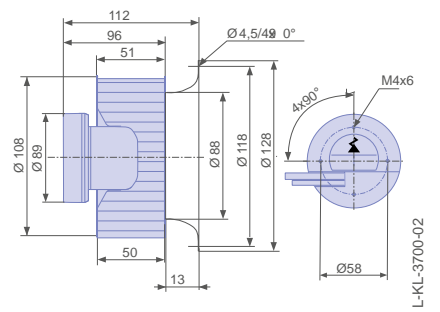
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG12R-4IP



Description

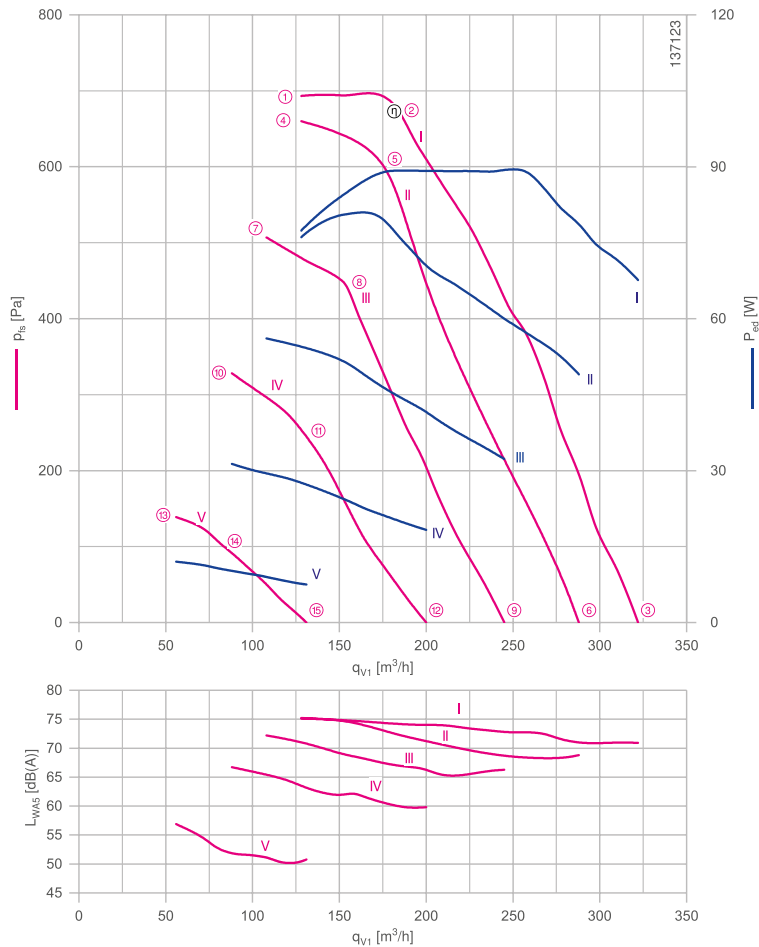
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.90-0.74 A*
 Rated speed n_N : 3660 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_1 < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve



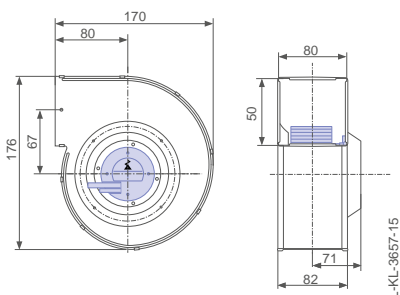
Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00413146	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

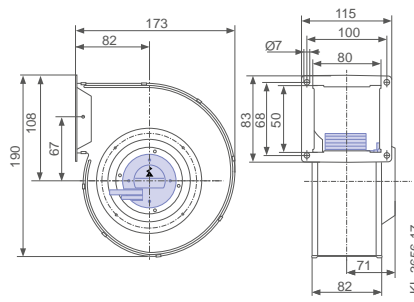
Dimensions mm

Clockwise rotation

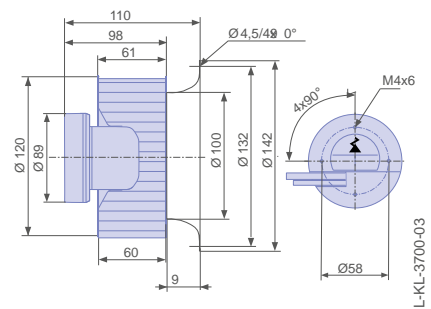
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



Performance data

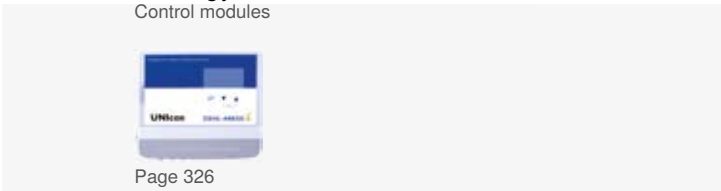
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG12R-4IP.Z8.4R	I	4420	①	0.68	75	75
		4230	②	0.78	90	74
		2620	③	0.58	70	71
	II	4380	④	0.72	75	75
		4030	⑤	0.72	80	73
		2350	⑥	0.42	50	69
	III	3730	⑦	0.58	55	72
		3490	⑧	0.54	50	69
		2030	⑨	0.39	32	66
	IV	3100	⑩	0.35	32	67
		2640	⑪	0.33	28	63
		1630	⑫	0.24	18	60
	V	1960	⑬	0.12	12	57
		1780	⑭	0.11	11	53
		1090	⑮	0.08	8	51

Current values determined at 230V

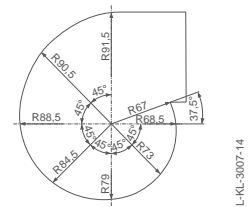
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG12R-4IP.Z8.4R	RG12R-4IP.Z8.4R	RE12P-4IP.Z8.1R	RG12R-4IP.Z8.4L	RG12R-4IP.Z8.4L	RE12P-4IP.Z8.1L
Article no.	178211	178203	178195	178215	178207	178199
Weight kg	2.10	2.20	1.20	2.10	2.20	1.20
* Inlet nozzle not included in the scope of delivery						

Control technology

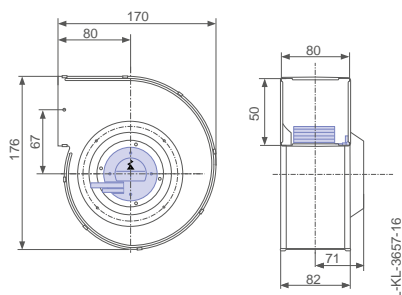


Used scroll

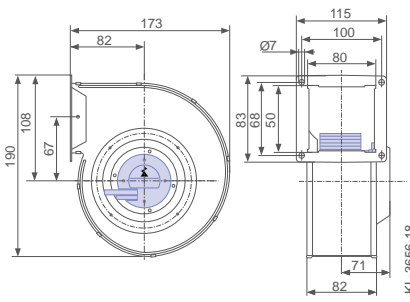


Counter clockwise rotation

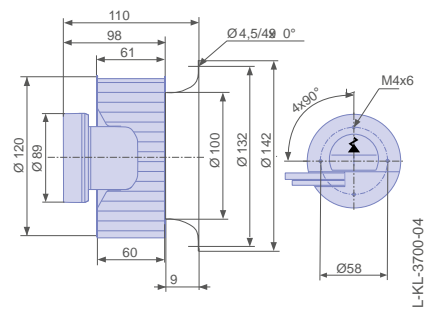
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG13R-4IP



Description

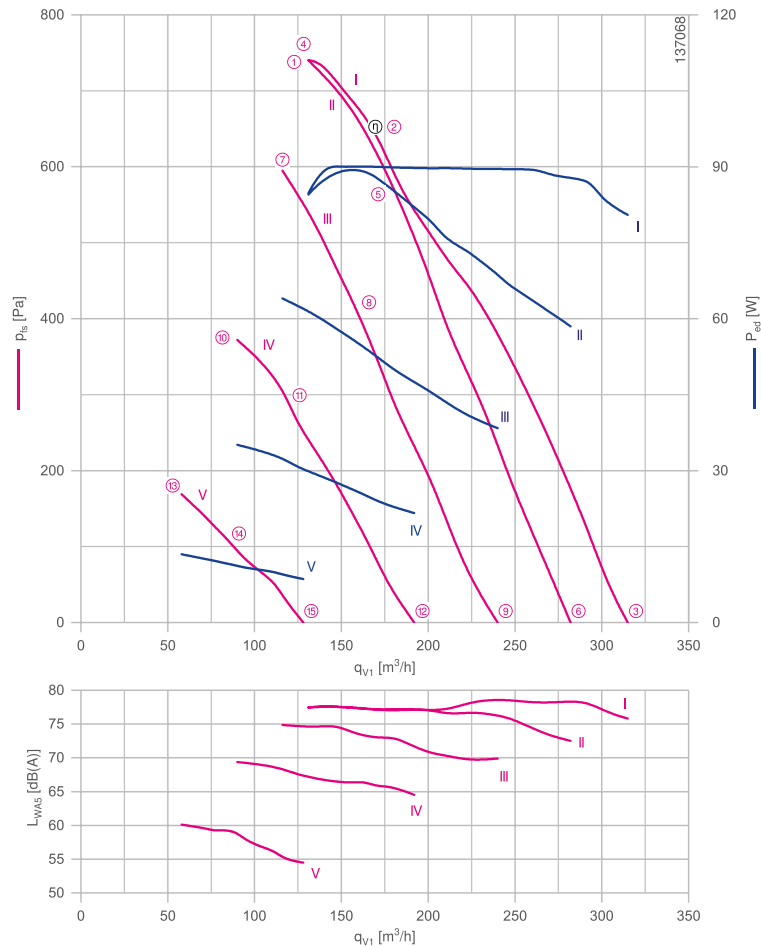
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.92-0.76 A*
 Rated speed n_N : 3900 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_1 < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve



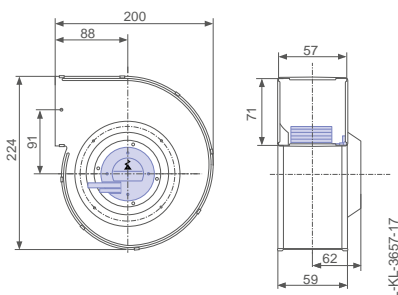
Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00413147	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

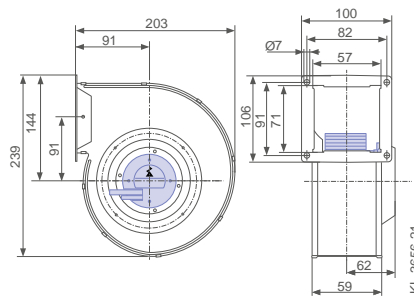
Dimensions mm

Clockwise rotation

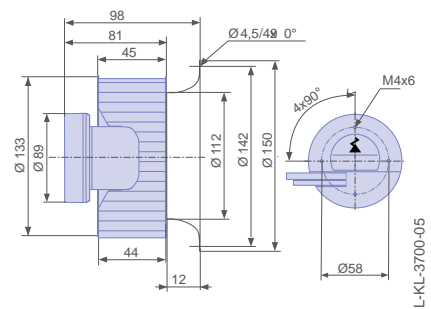
Fan with housing, single inlet, without
flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange,
in installation position H/Vu/Vo



Motorised impeller in installation position H/
Vu/Vo



Performance data

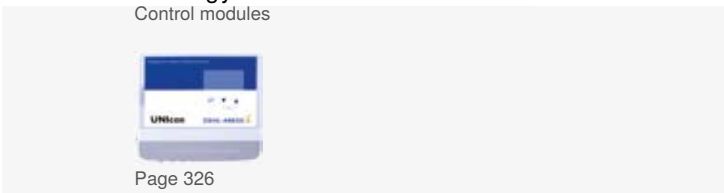
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG13R.4IP.Z8.4R	I	4010	①	0.72	85	77
		3790	②	0.76	90	77
		2600	③	0.70	80	76
	II	4000	④	0.76	85	78
		3570	⑤	0.74	85	77
		2340	⑥	0.54	60	73
	III	3620	⑦	0.60	65	75
		3090	⑧	0.54	55	74
		2020	⑨	0.39	38	70
	IV	2920	⑩	0.33	36	69
		2600	⑪	0.31	32	68
		1640	⑫	0.23	22	65
	V	1980	⑬	0.14	14	60
		1660	⑭	0.13	12	59
		1110	⑮	0.10	9	55

Current values determined at 230V

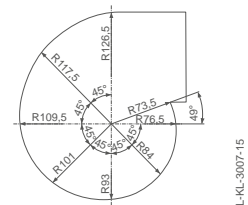
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG13R-4IP.Z8.4R	RG13R-4IP.Z8.4R	RE13P-4IP.Z8.1R	RG13R-4IP.Z8.4L	RG13R-4IP.Z8.4L	RE13P-4IP.Z8.1L
Article no.	178212	178204	178196	178216	178208	178200
Weight kg	2.20	2.30	1.20	2.20	2.30	1.20
* Inlet nozzle not included in the scope of delivery						

Control technology

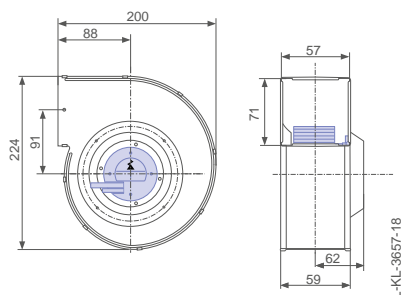


Used scroll

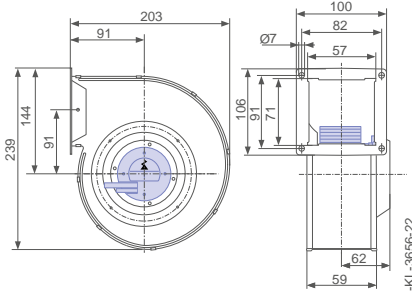


Counter clockwise rotation

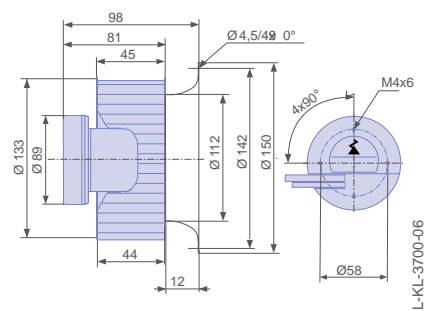
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG1 4R-4IP

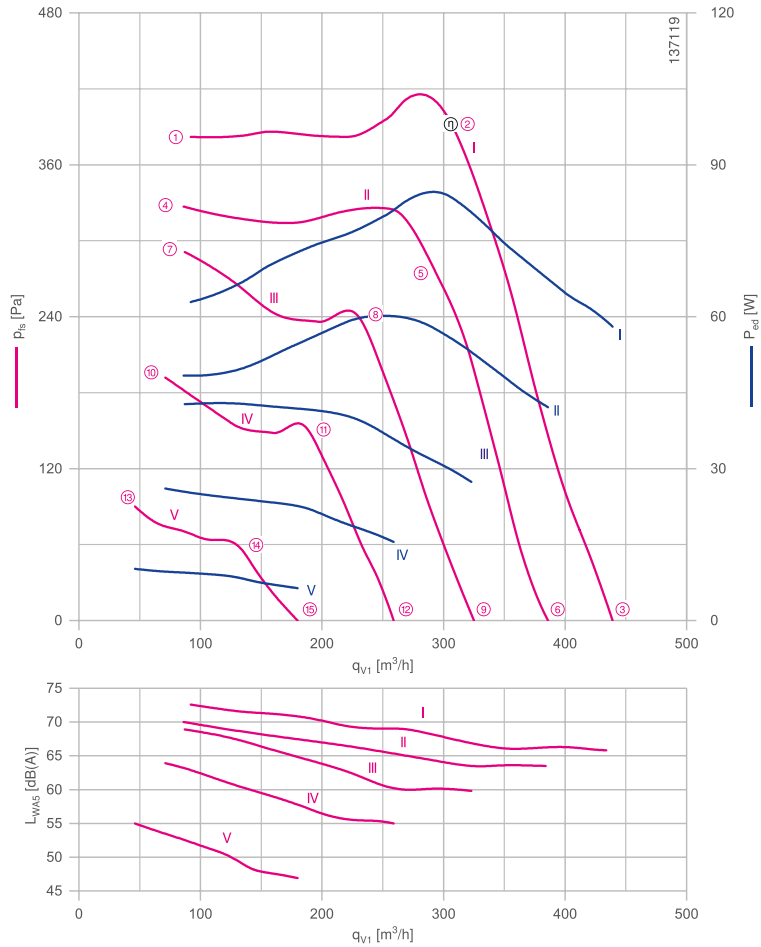


Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 85 W*
 Rated current I_N : 0.86-0.72 A*
 Rated speed n_N : 2550 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_1 < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation ≤ -20 °C
 cold design on request.

Characteristic curve



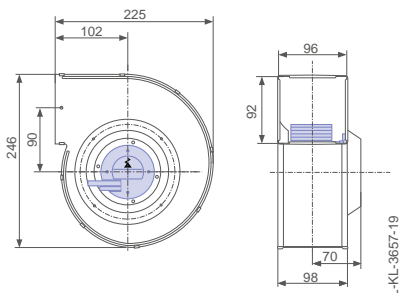
Measured with inlet nozzle, without guard grille according to ISO 5801

Inlet ring	00413148	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

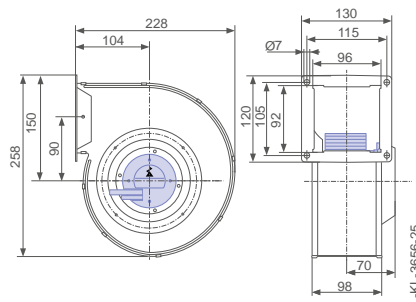
Dimensions mm

Clockwise rotation

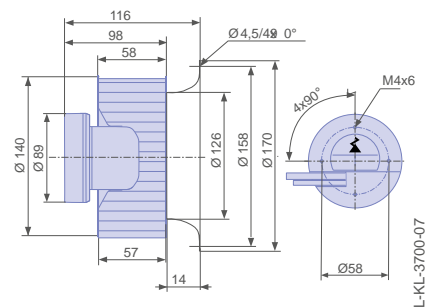
Fan with housing, single inlet, without
flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange,
in installation position H/Vu/Vo



Motorised impeller in installation position H/
Vu/Vo



Performance data

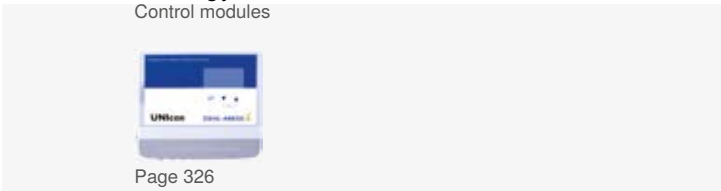
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG14R-4IP.Z8.4R	I	2480	①	0.28	65	73
		2550	②	0.74	85	68
		1640	③	0.56	60	66
	II	2360	④	0.48	48	70
		2150	⑤	0.54	60	64
		1470	⑥	0.42	42	64
	III	2200	⑦	0.44	42	69
		2000	⑧	0.40	40	62
		1260	⑨	0.28	28	60
	IV	2110	⑩	0.27	26	64
		1650	⑪	0.23	22	58
		1020	⑫	0.16	16	55
	V	1260	⑬	0.11	10	55
		1020	⑭	0.10	8	49
		680	⑮	0.08	6	47

Current values determined at 230V

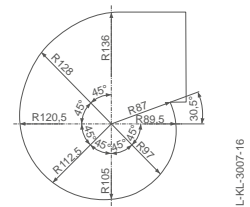
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG14R-4IP.Z8.4R	RG14R-4IP.Z8.4R	RE14P-4IP.Z8.1R	RG14R-4IP.Z8.4L	RG14R-4IP.Z8.4L	RE14P-4IP.Z8.1L
Article no.	178213	178205	178197	178217	178209	178201
Weight kg	2.60	2.80	1.20	2.60	2.80	1.20
* Inlet nozzle not included in the scope of delivery						

Control technology

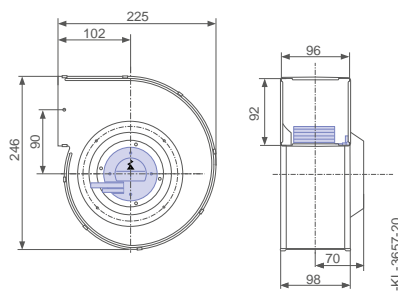


Used scroll

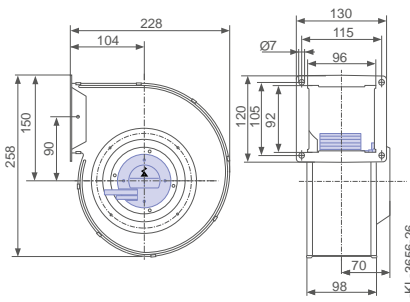


Counter clockwise rotation

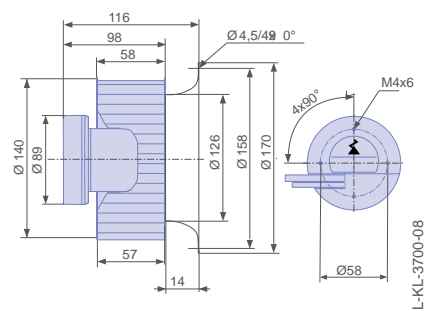
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG1 4R-4IP



Description

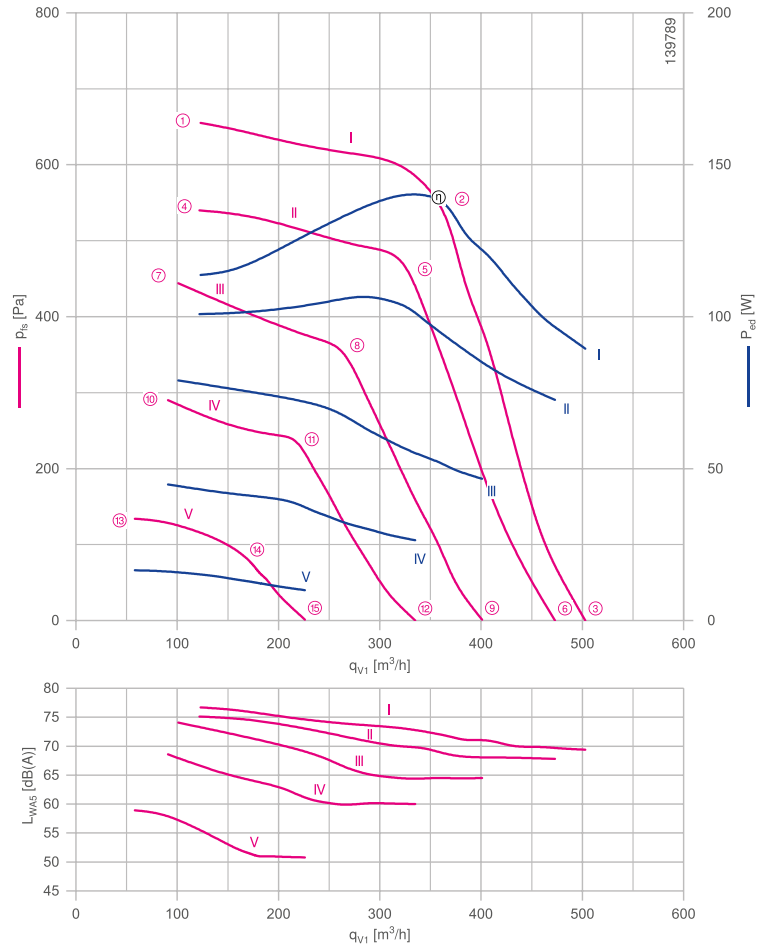
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 150 W*
 Rated current I_N : 1.45-1.20 A*
 Rated speed n_N : 3310 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 48.5 %
 Efficiency grade: $N_{actual} = 60.2 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00413148	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

Characteristic curve

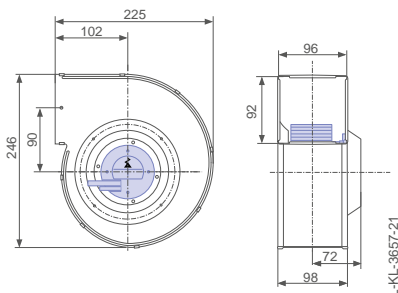


Measured with inlet nozzle, without guard grille according to ISO 5801

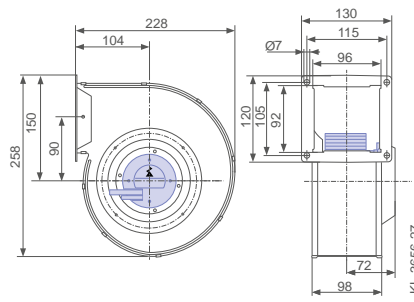
Dimensions mm

Clockwise rotation

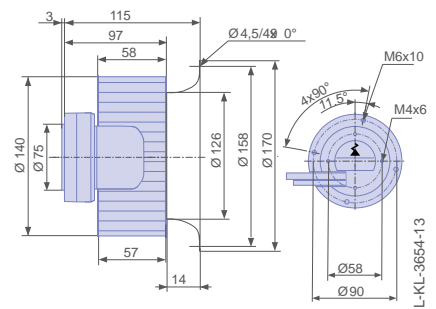
Fan with housing, single inlet, without
flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange,
in installation position H/Vu/Vo



Motorised impeller in installation position H/
Vu/Vo



Performance data

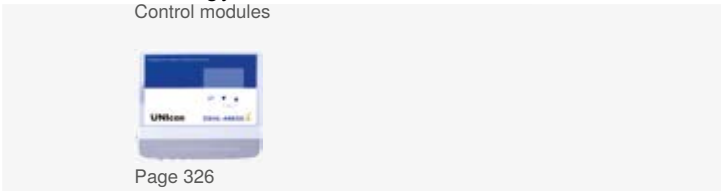
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG14R-4IP.Z8.4R	I	3640	①	1.05	110	77
		3040	②	1.25	140	72
		1930	③	0.82	90	69
	II	2980	④	0.92	100	75
		2760	⑤	0.94	100	70
		1800	⑥	0.70	75	68
	III	2700	⑦	0.74	80	74
		2510	⑧	0.64	70	66
		1560	⑨	0.48	46	65
	IV	2570	⑩	0.46	44	69
		1970	⑪	0.40	38	62
		1280	⑫	0.28	26	60
	V	1510	⑬	0.23	17	59
		1270	⑭	0.20	13	52
		870	⑮	0.12	10	51

Current values determined at 230V

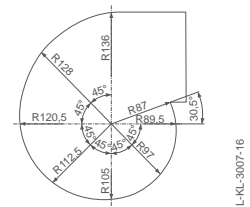
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG14R-4IP.Z8.4R	RG14R-4IP.Z8.4R	RE14P-4IP.Z8.1R	RG14R-4IP.Z8.4L	RG14R-4IP.Z8.4L	RE14P-4IP.Z8.1L
Article no.	177435	177441	177423	177436	177442	177424
Weight kg	2.70	2.80	1.30	2.70	2.80	1.30
* With electronic flange on request, inlet nozzle not included in the scope of delivery						

Control technology

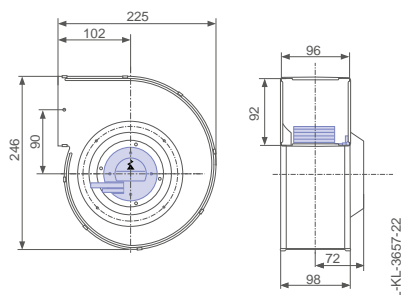


Used scroll

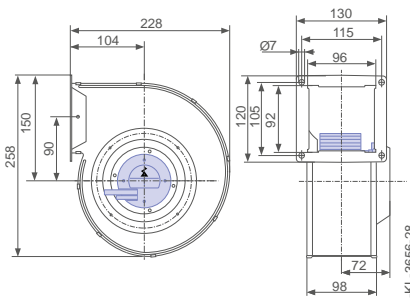


Counter clockwise rotation

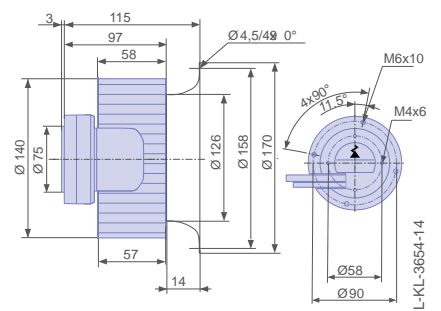
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG15R-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.65-1.35 A*
 Rated speed n_N : 3420 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection: IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: ErP 2015, CE, UL

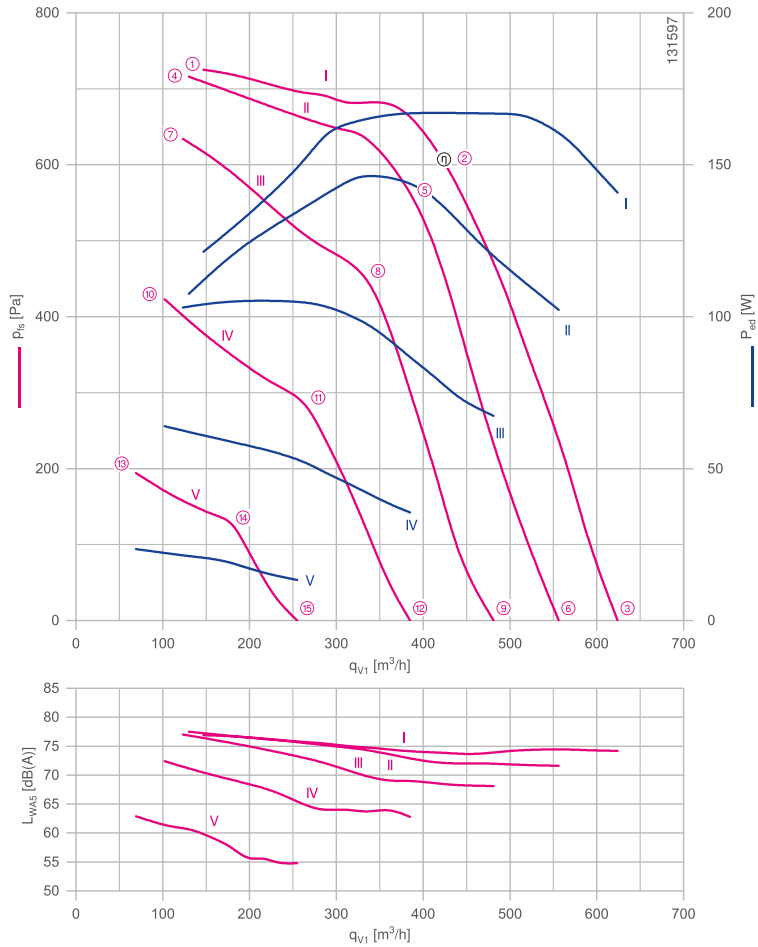
ErP-data

Efficiency η_{statA} : 50.2 %
 Efficiency grade: $N_{actual} = 61.4 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015
 *** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00413148	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

Characteristic curve

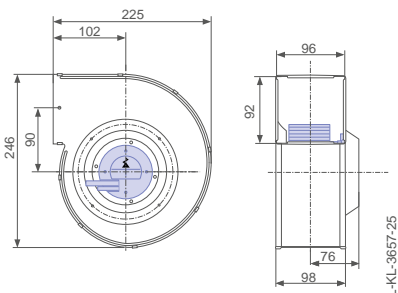


Measured with inlet nozzle, without guard grille according to ISO 5801

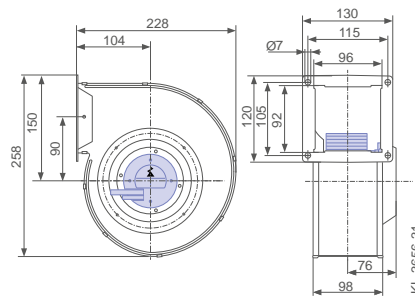
Dimensions mm

Clockwise rotation

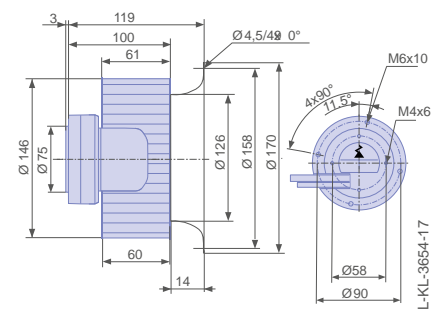
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



Performance data

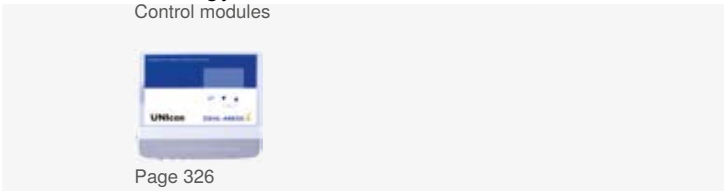
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG15R-4IP.ZC.4R	I	3400	①	0.78	120	77
		3050	②	1.40	170	74
		2190	③	1.20	140	74
	II	3340	④	0.98	110	78
		2960	⑤	1.20	140	73
		1970	⑥	0.94	100	72
	III	3170	⑦	0.92	100	77
		2620	⑧	0.86	100	70
		1730	⑨	0.64	65	68
	IV	2730	⑩	0.60	65	72
		2150	⑪	0.50	50	65
		1370	⑫	0.37	36	63
	V	1740	⑬	0.25	24	63
		1430	⑭	0.22	19	58
		940	⑮	0.16	13	55

Current values determined at 230V

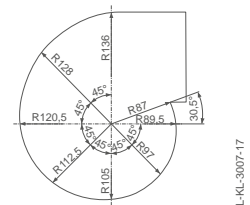
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG15R-4IP.ZC.4R	RG15R-4IP.ZC.4R	RE15P-4IP.ZC.2R	RG15R-4IP.ZC.4L	RG15R-4IP.ZC.4L	RE15P-4IP.ZC.2L
Article no.	177437	177443	177425	177438	177444	177426
Weight kg	3.00	3.20	1.70	3.00	3.20	1.70
* With electronic flange on request, inlet nozzle not included in the scope of delivery						

Control technology

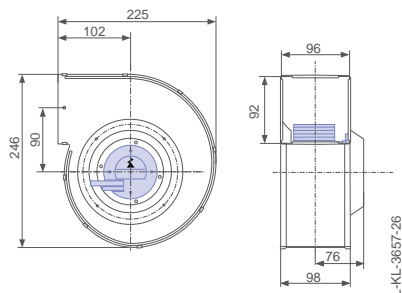


Used scroll

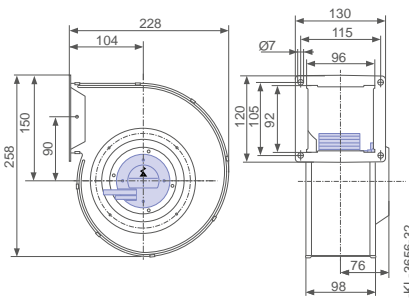


Counter clockwise rotation

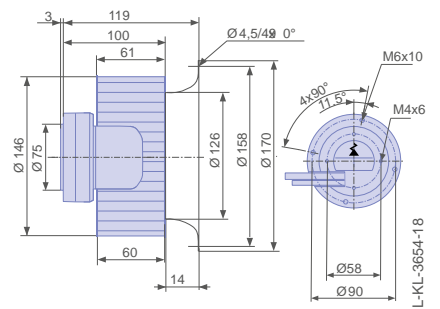
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-240 V

RG16R-4IP



Description

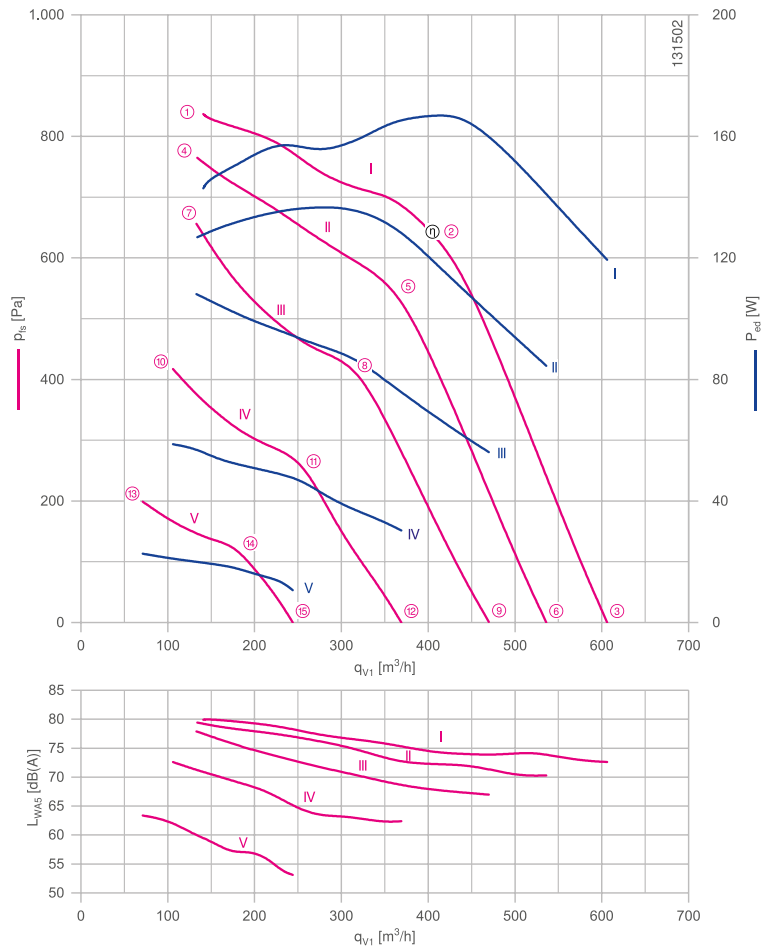
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.80-1.50 A*
 Rated speed n_N : 2880 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL
ErP-data
 Efficiency η_{statA} : 50.8 %
 Efficiency grade: $N_{actual} = 62.0 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Inlet ring	00413149	Page 291
Connection diagram	1360-404	Page 358
System components		Page 286

Characteristic curve

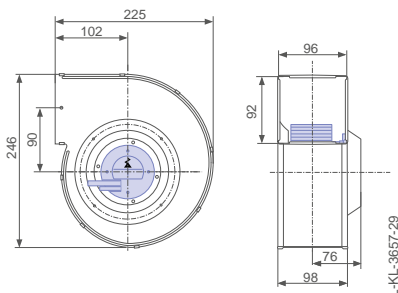


Measured with inlet nozzle, without guard grille according to ISO 5801

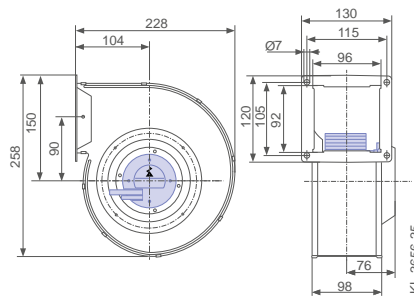
Dimensions mm

Clockwise rotation

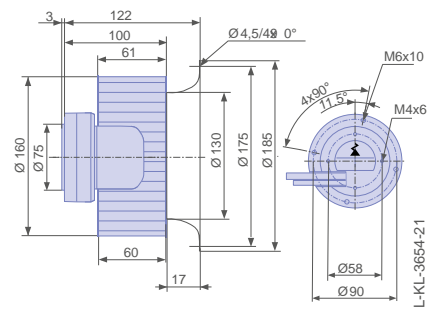
Fan with housing, single inlet, without
flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange,
in installation position H/Vu/Vo



Motorised impeller in installation position H/
Vu/Vo



Performance data

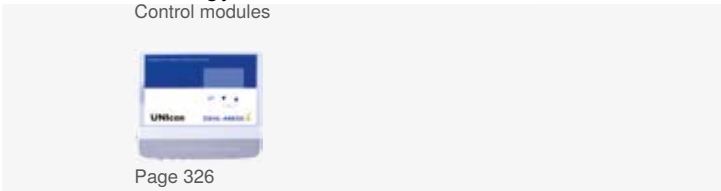
Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RG16R-4IP.ZC.4R	I	3230	①	0.98	140	80
		2880	②	1.55	170	74
		1820	③	1.15	120	73
	II	3110	④	1.25	130	79
		2680	⑤	1.15	130	73
		1620	⑥	0.78	85	70
	III	2850	⑦	0.94	110	78
		2350	⑧	0.88	90	71
		1410	⑨	0.56	55	67
	IV	2310	⑩	0.58	60	73
		1880	⑪	0.46	48	64
		1140	⑫	0.31	30	62
	V	1620	⑬	0.24	22	63
		1330	⑭	0.21	18	57
		750	⑮	0.13	11	53

Current values determined at 230V

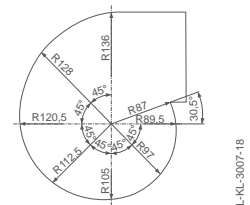
Fan ordering information

Clockwise rotation			Counter clockwise rotation			
Design	RG (without flange)	RG (with flange)	RE..P*	RG (without flange)	RG (with flange)	RE..P*
Type	RG16R-4IP.ZC.4R	RG16R-4IP.ZC.4R	RE16P-4IP.ZC.1R	RG16R-4IP.ZC.4L	RG16R-4IP.ZC.4L	RE16P-4IP.ZC.1L
Article no.	177439	177445	177427	177440	177446	177428
Weight kg	3.10	3.30	1.80	3.00	3.30	1.80
* With electronic flange on request, inlet nozzle not included in the scope of delivery						

Control technology

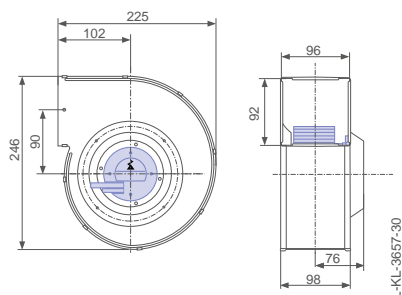


Used scroll

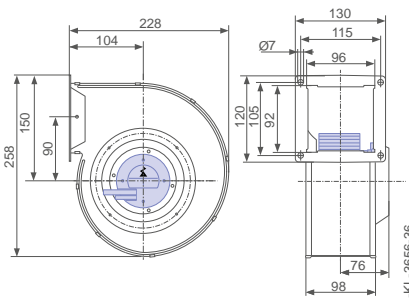


Counter clockwise rotation

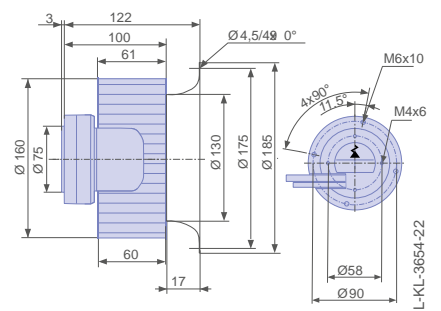
Fan with housing, single inlet, without flange, in installation position H/Vu/Vo



Fan with housing, single inlet, with flange, in installation position H/Vu/Vo



Motorised impeller in installation position H/Vu/Vo



RG..R-ECblue

for single phase alternating current, 200-277 V

RG18R-6IK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.48 kW*
 Rated current I_N : 2.40-1.75 A*
 Rated speed n_N : 2740 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE

ErP-data

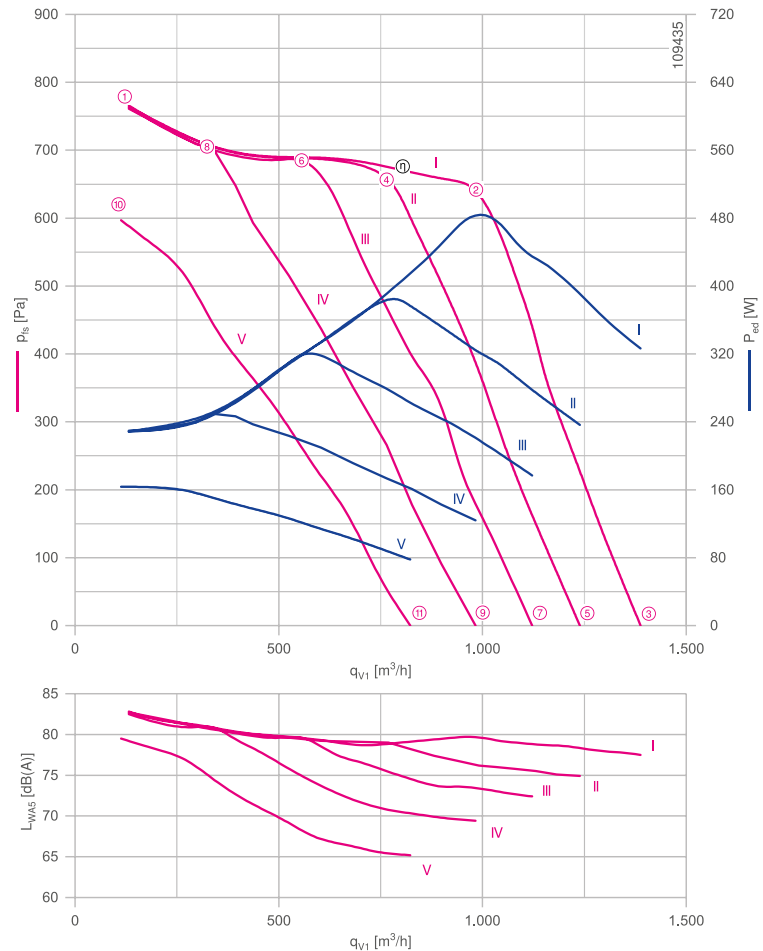
Efficiency η_{statA} : 42.1 %
 Efficiency grade: $N_{actual} = 50.9 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

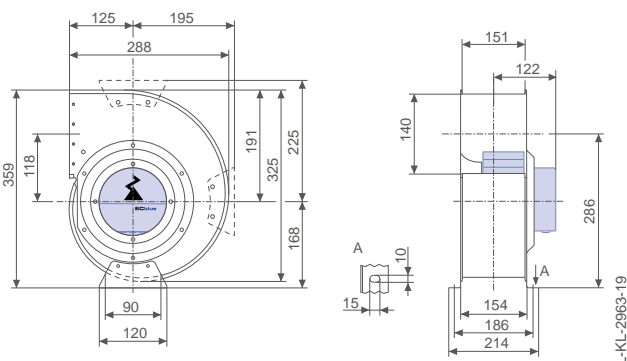


Measured with inlet nozzle, without guard grille according to ISO 5801

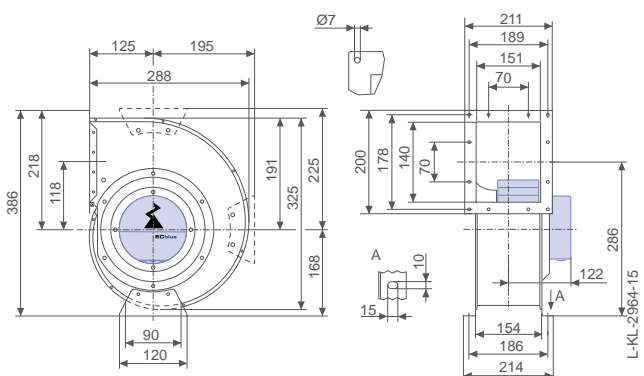
Inlet ring	00412586	Page 291
Connection diagram	1360-384	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

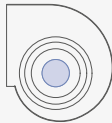




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG18R-6IK.BA.4R	I	2770	100	①	1.00	230	83	55
		2740		②	2.10	480	80	
		1760		③	1.40	330	78	
	II	2770	80	④	1.70	390	79	60
		1590		⑤	1.05	240	75	
		2770		⑥	1.40	320	80	
	III	1440	65	⑦	0.78	180	72	
		2770		⑧	1.10	250	81	
	IV	1260	51	⑨	0.54	120	69	
		2770		⑩	0.72	160	80	
	V	2450	90	⑪	0.36	80	65	
1070		⑪		0.36	80	65		



Current values determined at 230V

Fan ordering information

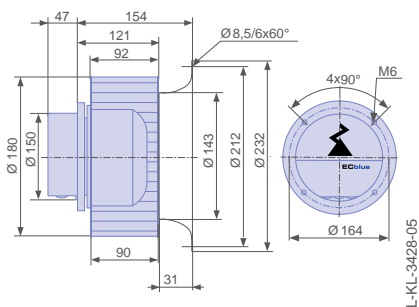
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG18R-6IK.BA.4R	RG18R-6IK.BA.4R	RE18P-6IK.BA.1R
Article no.	115225	115226	115215
Weight kg	7.00	8.00	4.10

* Inlet nozzle not included in the scope of delivery

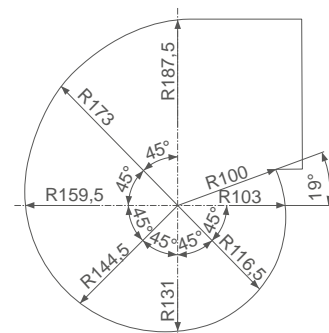
Control technology

Control modules	Operating terminal
	
Page 326	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



Information

ZABluefin-ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-Cpro-ECblue

Housing fans

System components

Control technology

General notes

RG..S-ECblue

for single phase alternating current, 200-240 V

RG18S-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 170 W*
 Rated current I_N : 1.60-1.35 A*
 Rated speed n_N : 2250 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable at-
 tached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: Integrated active temperature management
 Impeller made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

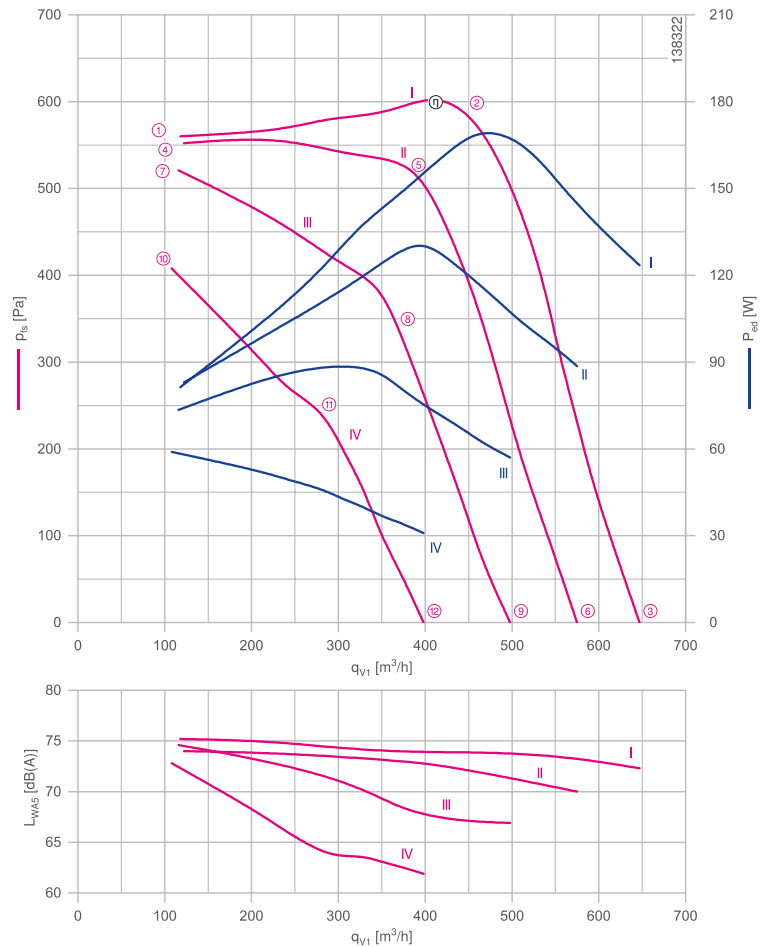
Efficiency η_{statA} : 51.4 %
 Efficiency grade: $N_{actual} = 62.8 / N_{target} = 44$ **
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of low-
 est temperature according to product documentation permissi-
 ble. For cooling applications with continuous operation $\leq -20^\circ\text{C}$
 cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

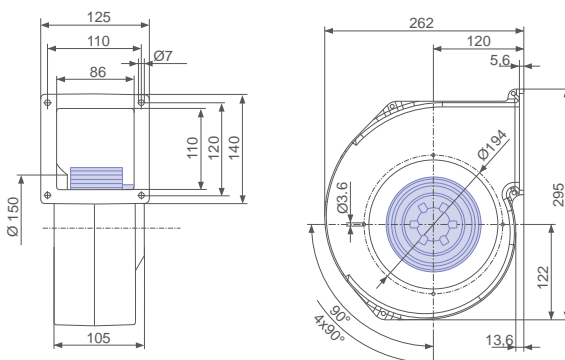
Characteristic curve



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

Dimensions mm

Fan with housing, single inlet, with flange, in installation position H/
 Vu/Vo



L-KL-3765-01

Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RG18S-4IP.ZC.5R	I	2370	①	0.78	80	75
		2400	②	1.30	160	74
		1520	③	1.00	120	72
	II	2390	④	0.78	85	74
		2230	⑤	1.10	130	73
		1360	⑥	0.78	90	70
	III	2230	⑦	0.66	75	75
		1830	⑧	0.72	80	69
		1180	⑨	0.56	55	67
	IV	2010	⑩	0.56	60	73
		1530	⑪	0.48	46	64
		960	⑫	0.32	30	62

Current values determined at 230V

Fan ordering information

Design RG (with flange)

Installation position H/Vu/Vo




Type RG18S-4IP.ZC.5R
Article no. 178798

Weight kg 3.30
Inlet nozzle integrated

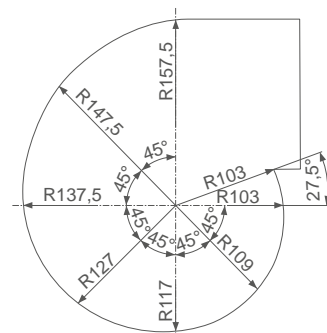
Control technology

Control modules



Page 326

Used scroll



L-KL-2950-24

RG..R-ECblue

for single phase alternating current, 200-277 V

RG20R-6IK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.50 kW*
 Rated current I_N : 2.50-1.80 A*
 Rated speed n_N : 2040 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE

ErP-data

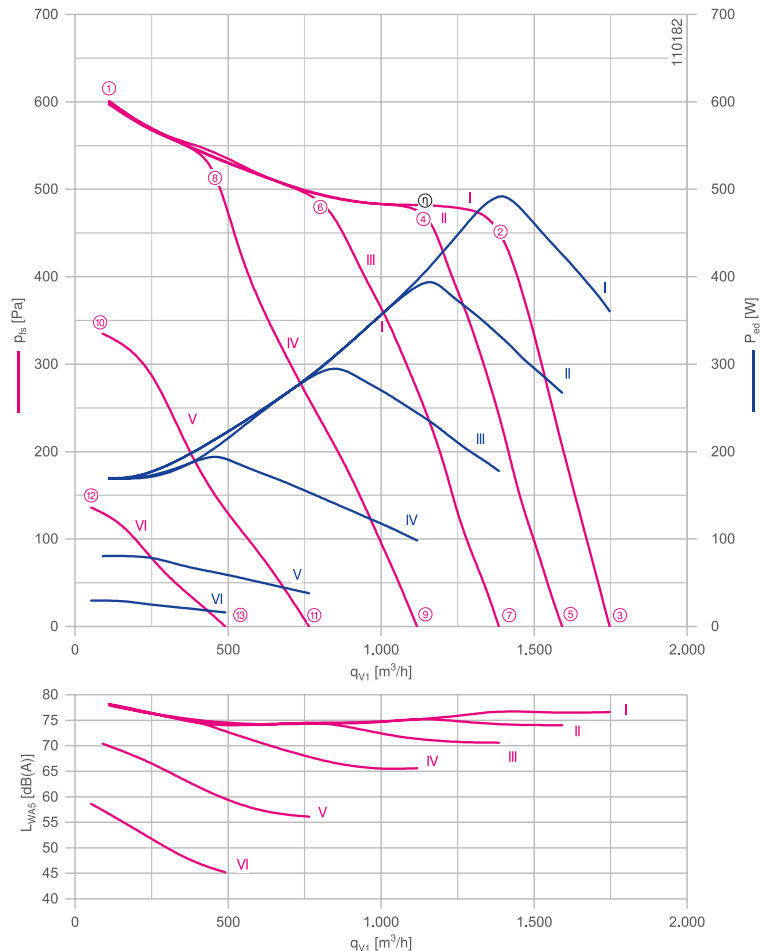
Efficiency η_{statA} : 43.3 %
 Efficiency grade: $N_{actual} = 52.1 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

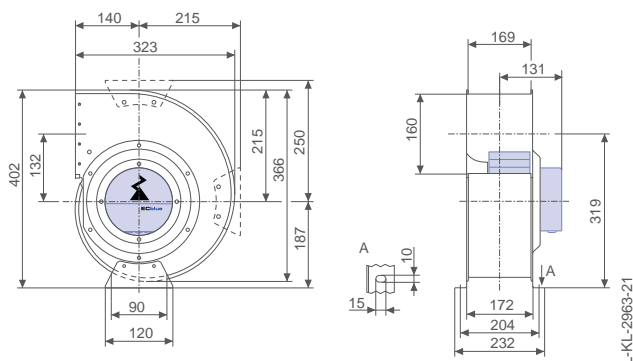


Measured with inlet nozzle, without guard grille according to ISO 5801

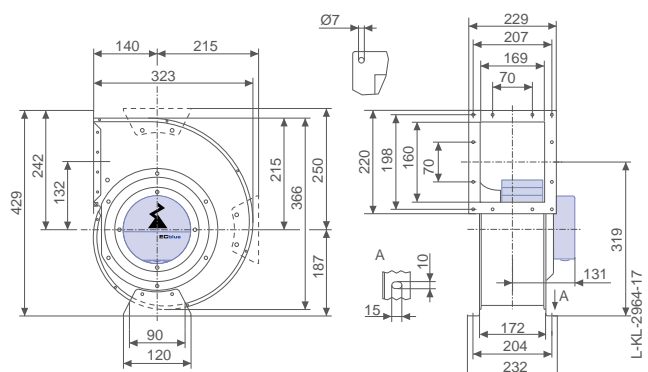
Inlet ring	00412587	Page 291
Connection diagram	1360-384	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

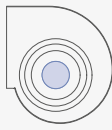




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	
		n min ⁻¹	%						I A
RG20R-6IK.BA.4R	I	2060	100	①	0.76	170	78	50	
		2040		②	2.20	500	77		
		1430		③	1.60	360	77		
	II	2060	80	④	1.75	400	75		60
		1290		⑤	1.15	270	74		
		2050		⑥	1.30	300	74		
	III	1130	60	⑦	0.78	180	71		
		1990		⑧	0.86	190	73		
	IV	920	40	⑨	0.44	100	66		
		1560		⑩	0.38	80	70		
	V	640	20	⑪	0.21	38	56		
		1000		⑫	0.18	30	59		
	VI	420	20	⑬	0.15	16	45		



Current values determined at 230V

Fan ordering information

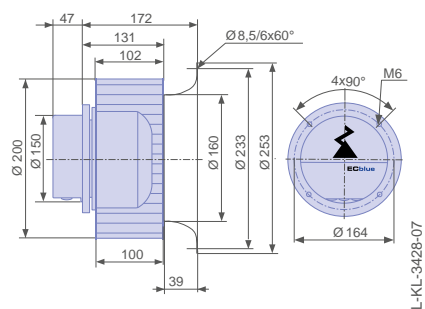
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG20R-6IK.BA.4R	RG20R-6IK.BA.4R	RE20P-6IK.BA.2R
Article no.	115227	115228	115216
Weight kg	8.00	9.00	4.20

* Inlet nozzle not included in the scope of delivery

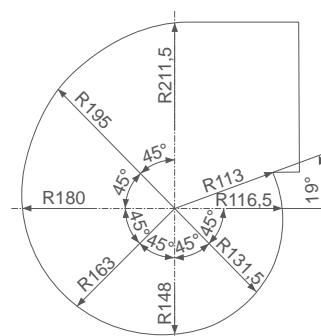
Control technology

Control modules	Operating terminal
	
Page 326	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for single phase alternating current, 200-277 V

RG22R-6IK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.48 kW*
 Rated current I_N : 2.40-1.75 A*
 Rated speed n_N : 1880 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE

ErP-data

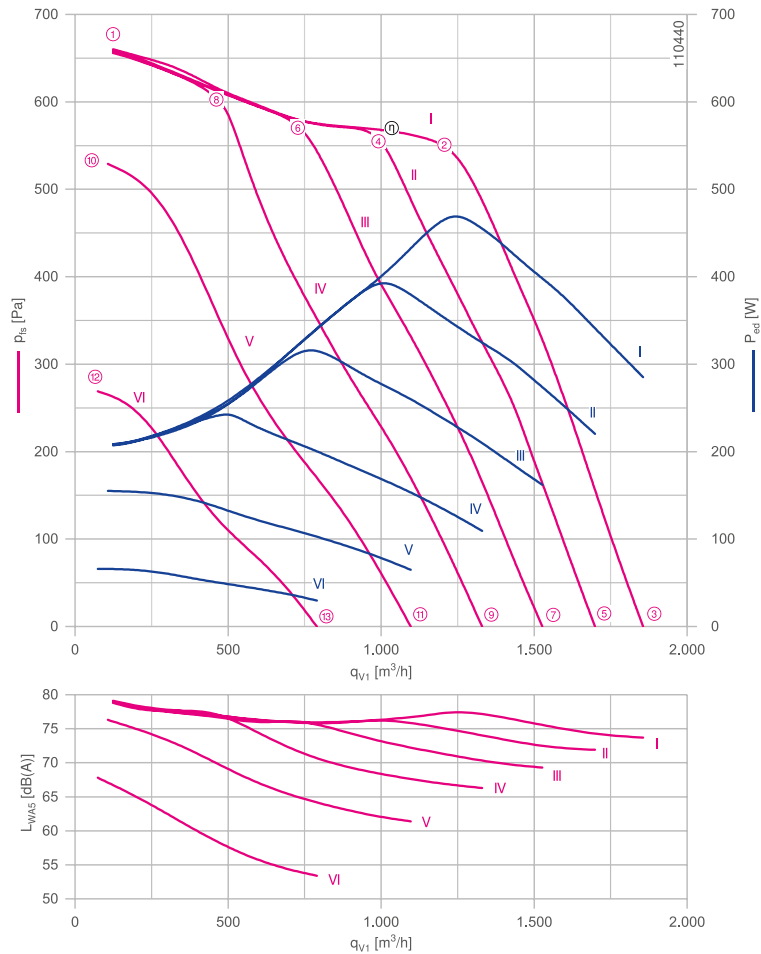
Efficiency η_{statA} : 45.6 %
 Efficiency grade: $N_{actual} = 54.4 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

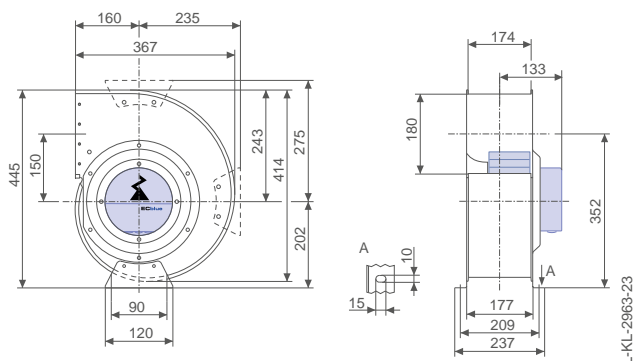


Measured with inlet nozzle, without guard grille according to ISO 5801

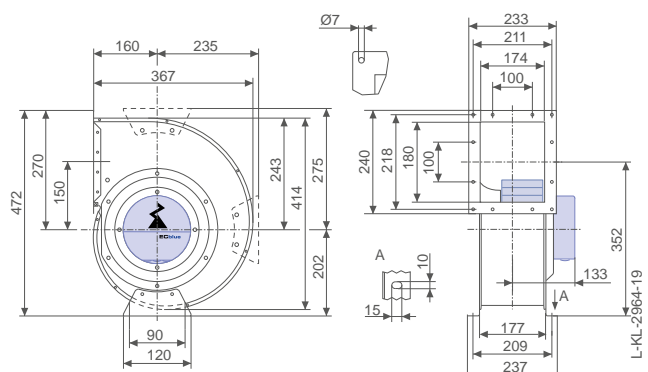
Inlet ring	00412588	Page 291
Connection diagram	1360-384	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H



RG..R-ECblue

for single phase alternating current, 200-277 V

RG25R-6IK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.48 kW*
 Rated current I_N : 2.40-1.70 A*
 Rated speed n_N : 1440 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE

ErP-data

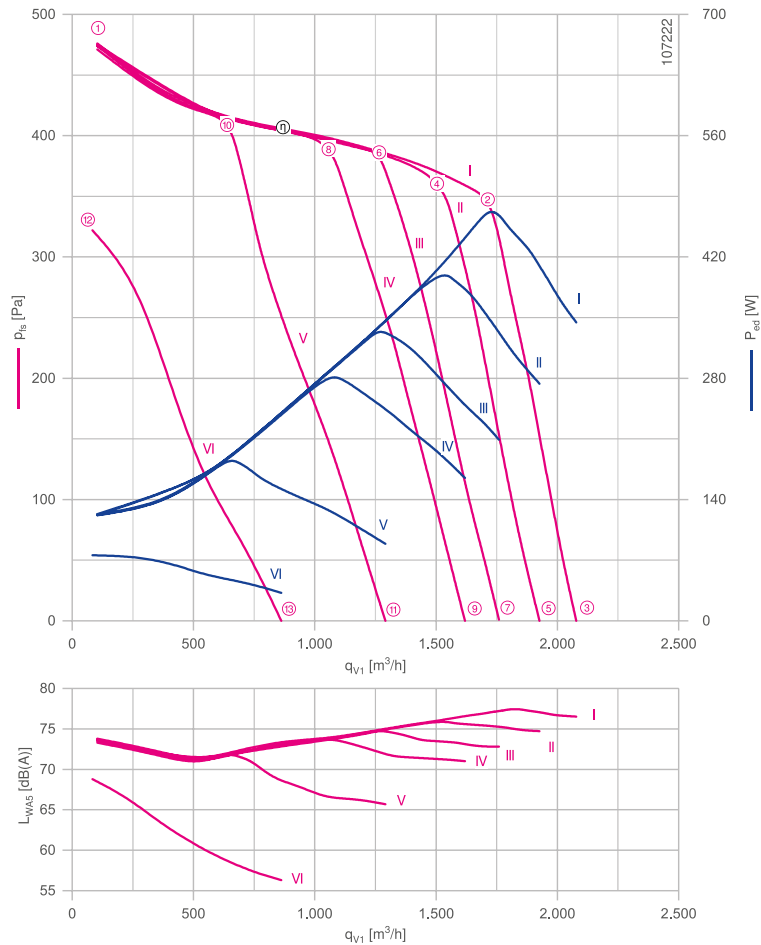
Efficiency η_{statA} : 47.0 %
 Efficiency grade: $N_{actual} = 56.7 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

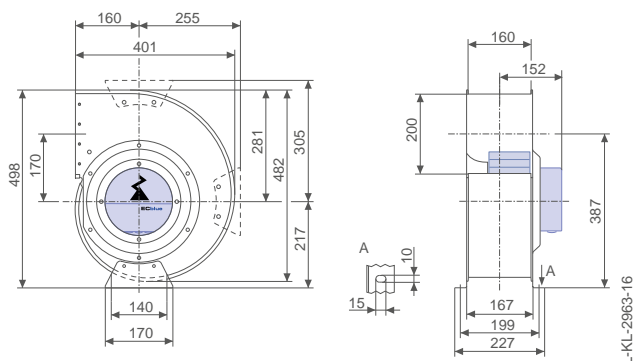


Measured with inlet nozzle, without guard grille according to ISO 5801

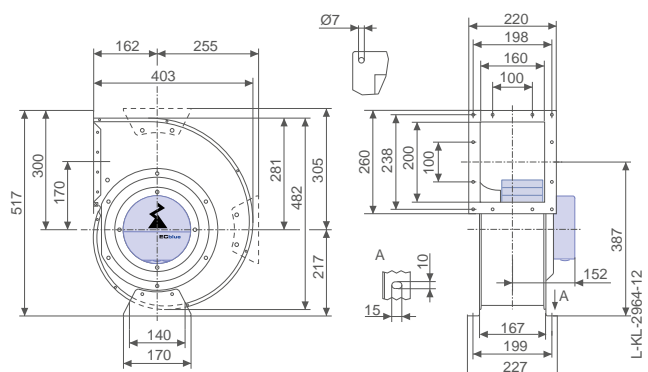
Inlet ring	00412589	Page 291
Connection diagram	1360-384	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H



Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG25R-6IK.BD.4R	I	1450	100	①	0.56	120	74	45
		1450		②	2.10	480	77	
		980		③	1.50	340	77	
	II	1450	86	④	1.80	400	76	
		910		⑤	1.20	270	75	
	III	1450	100	⑥	1.50	340	75	
		830		⑦	0.92	210	73	
	IV	1450	100	⑧	1.25	280	74	
		770		⑨	0.74	170	71	
	V	1450	100	⑩	0.82	190	72	
		620		⑪	0.42	90	66	
	VI	1200	80	⑫	0.36	75	69	
		420		⑬	0.19	32	56	

Current values determined at 230V

Fan ordering information

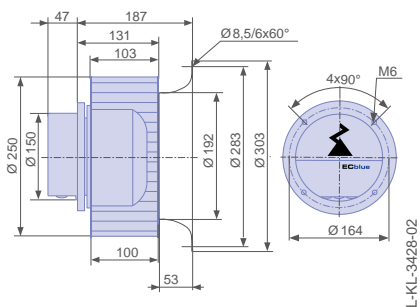
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
Type	RG25R-6IK.BD.4R	RG25R-6IK.BD.4R	RE25P-6IK.BD.1R
Article no.	115231	115232	115218
Weight kg	14.00	14.00	5.80

* Inlet nozzle not included in the scope of delivery

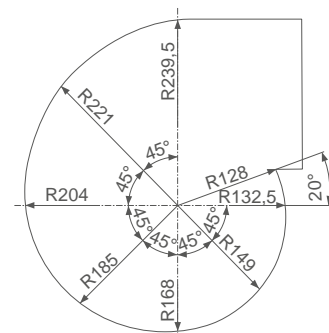
Control technology

Control modules	Operating terminal
Page 326	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for single phase alternating current, 200-277 V

RG25R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.78 kW*
 Rated current I_N : 3.90-2.80 A*
 Rated speed n_N : 1550 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

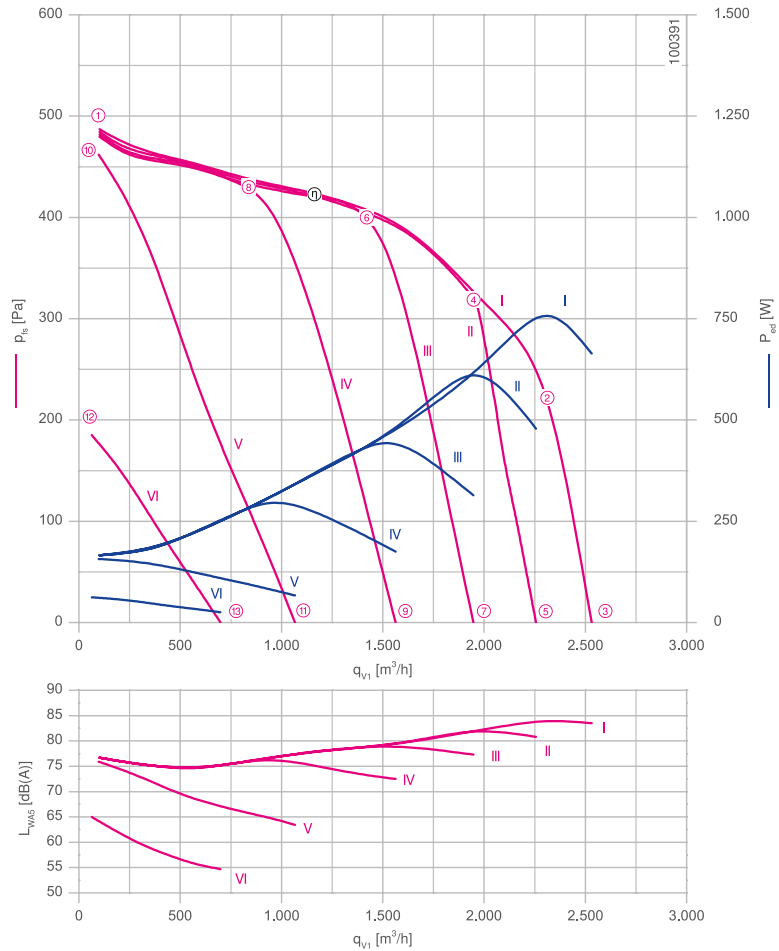
Efficiency η_{statA} : 42.5 %
 Efficiency grade: $N_{actual} = 51.6 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

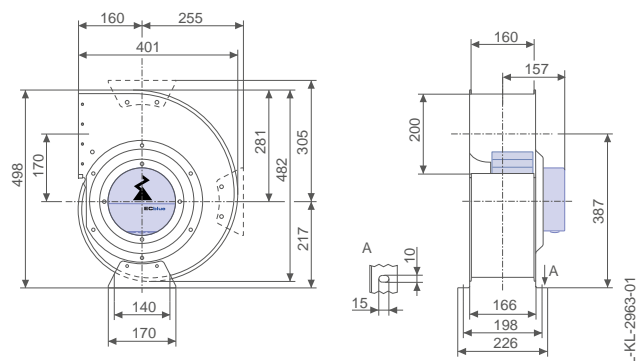
Characteristic curve



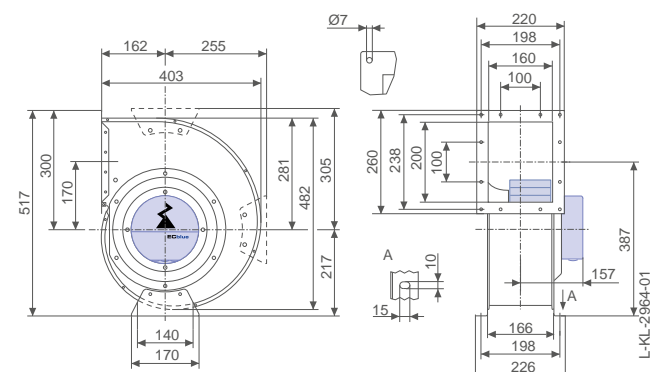
Inlet ring	00411503	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H






Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹	%		I A	P _{ed} W	L _{WAS} dB(A)
RG25R-ZIK.DC.4R	I	1560	100	①	0.76	170	77
		1550		②	3.40	780	84
		1300		③	2.90	660	84
	II	1560	80	④	2.70	620	82
		1160		⑤	2.10	480	81
	III	1560	100	⑥	2.00	460	79
		1020	60	⑦	1.40	310	77
	IV	1550	100	⑧	1.35	310	77
		830	40	⑨	0.80	180	73
	V	1520	100	⑩	0.72	160	76
		570	20	⑪	0.37	65	63
	VI	980	60	⑫	0.52	60	65
		390	10	⑬	0.36	26	55

Current values determined at 230V

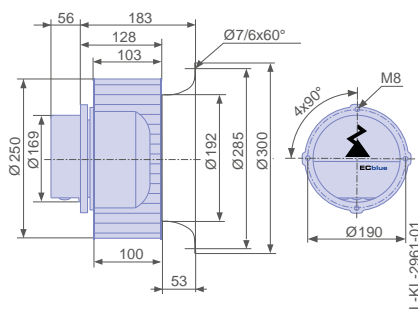
Fan ordering information

Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG25R-ZIK.DC.4R	RG25R-ZIK.DC.4R	RE25P-ZIK.DC.1R
Article no.	114791	114792	114783
Weight kg	15.00	16.00	8.40
* Inlet nozzle not included in the scope of delivery			

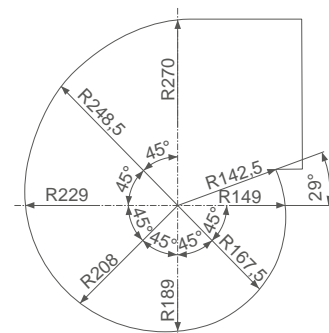
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



L-KL-3007-01

RG..R-ECblue

for single phase alternating current, 200-277 V

RG28R-6IK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.46 kW*
 Rated current I_N : 2.30-1.65 A*
 Rated speed n_N : 1050 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE

ErP-data

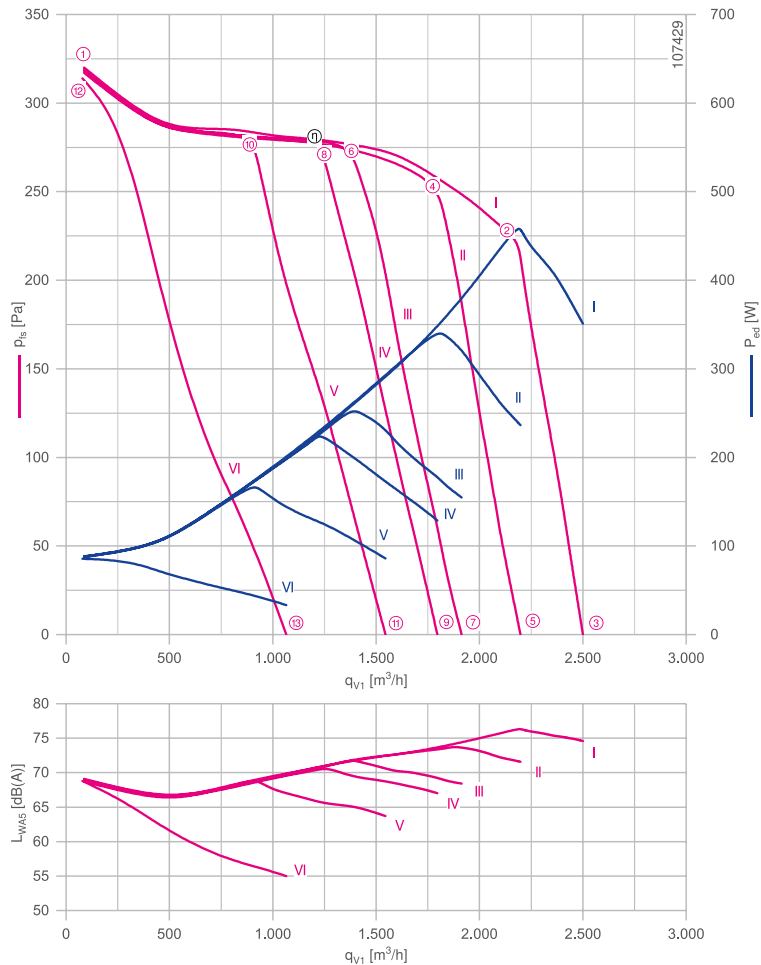
Efficiency η_{statA} : 49.0 %
 Efficiency grade: $N_{actual} = 59.5 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

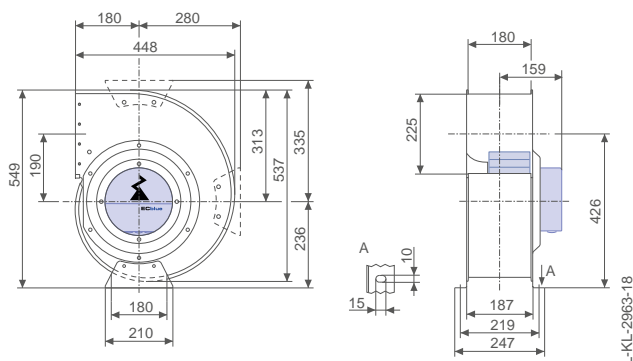


Measured with inlet nozzle, without guard grille according to ISO 5801

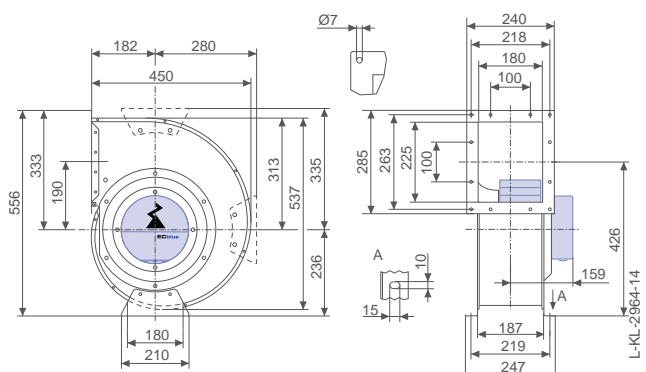
Inlet ring	00412590	Page 291
Connection diagram	1360-384	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H


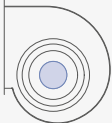



Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG28R-6IK.BD.4R	I	1040	100	①	0.40	90	69	40
		1040		②	2.00	460	76	
		750		③	1.55	350	75	
	II	1040	④	1.50	340	73	60	
		670	⑤	1.05	240	72		
		III	1040	⑥	1.10	250		
	580		⑦	0.68	150	68		
	IV	1040	⑧	0.98	230	71		
		550	⑨	0.58	130	67		
	V	1040	⑩	0.76	170	69		
		480	⑪	0.40	85	64		
	VI	1040	⑫	0.40	85	69		
		330	⑬	0.20	34	55		



Current values determined at 230V

Fan ordering information

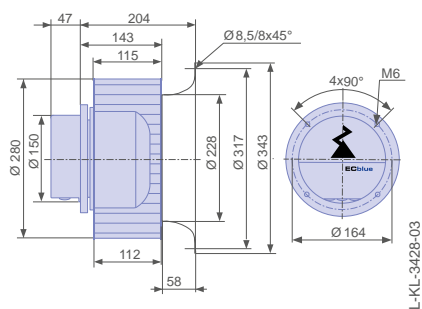
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG28R-6IK.BD.4R	RG28R-6IK.BD.4R	RE28P-6IK.BD.1R
Article no.	115233	115234	115219
Weight kg	16.00	17.00	6.20

* Inlet nozzle not included in the scope of delivery

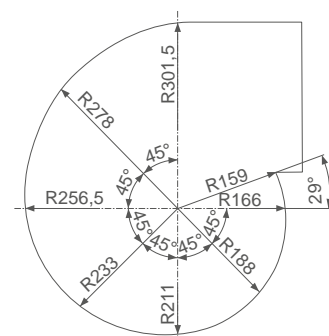
Control technology

Control modules	Operating terminal
 Page 326	 Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for single phase alternating current, 200-277 V

RG28R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.30 kW*
 Rated current I_N : 6.40-4.60 A*
 Rated speed n_N : 1390 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

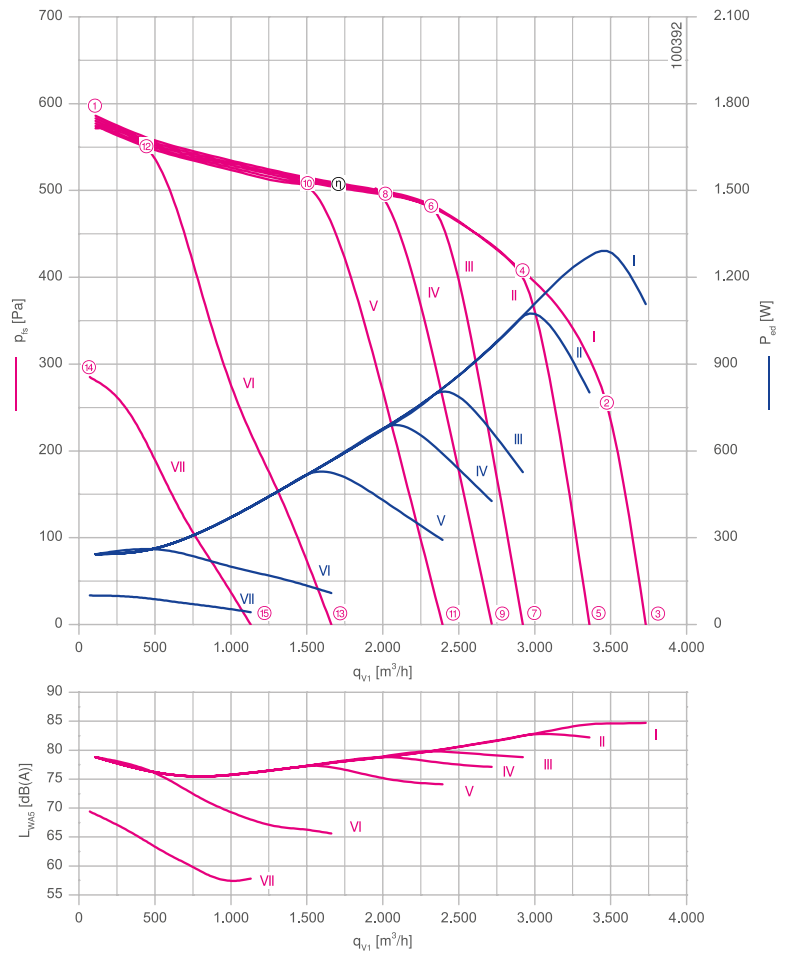
Efficiency η_{statA} : 47.0 %
 Efficiency grade: $N_{actual} = 54.9 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

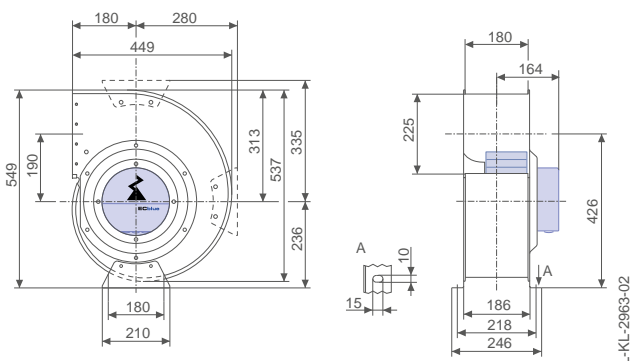


Measured with inlet nozzle, without guard grille according to ISO 5801

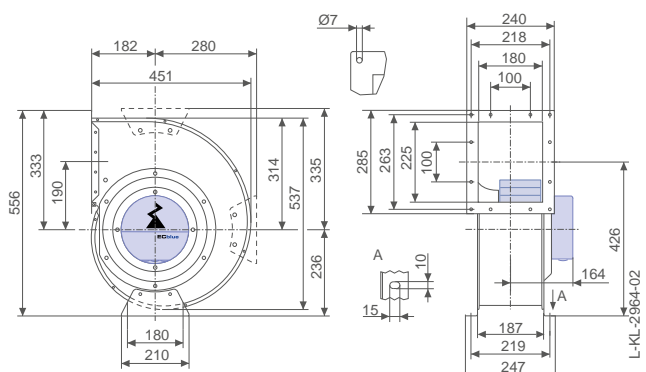
Inlet ring	00411504	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

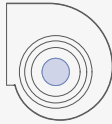




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature	
		n min ⁻¹	%						I A
RG28R-ZIK.DC.4R	I	1450	100	①	1.10	240	79	40	
		1390	100	②	5.60	1300	85		
		1160	100	③	4.80	1100	85		
	II	1450	100	④	4.80	1050	83		60
		1050	80	⑤	3.50	800	82		
		1450	100	⑥	3.50	780	80		
	III	920	60	⑦	2.30	520	79		
		1450	100	⑧	3.00	680	79		
	IV	870	52	⑨	1.95	420	77		
		1450	100	⑩	2.30	520	77		
	V	760	40	⑪	1.35	290	74		
		1450	100	⑫	1.20	260	76		
	VI	540	20	⑬	0.54	110	66		
		1020	70	⑭	0.50	100	69		
	VII	380	10	⑮	0.42	42	58		

Current values determined at 230V

Fan ordering information

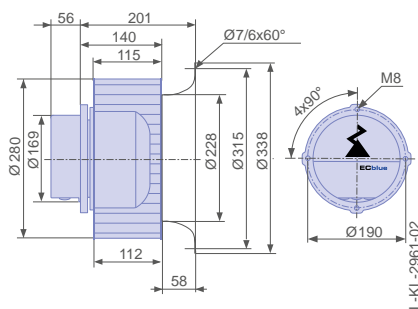
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG28R-ZIK.DC.4R	RG28R-ZIK.DC.4R	RE28P-ZIK.DC.1R
Article no.	114793	114794	114784
Weight kg	18.00	18.00	8.90

* Inlet nozzle not included in the scope of delivery

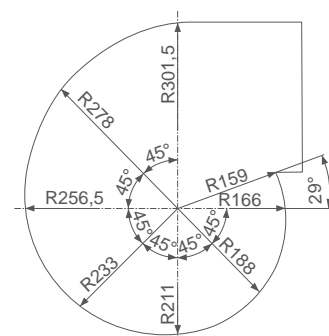
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll

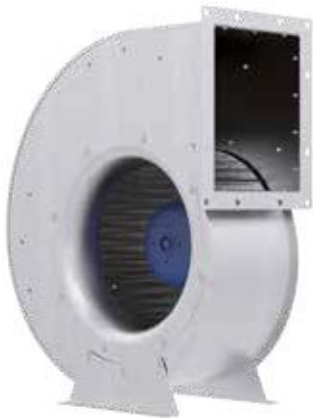


L-KL-3007-02

RG..R-ECblue

for three phase alternating current, 380-480 V

RG28R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.70 kW*
 Rated current I_N : 2.80-2.20 A*
 Rated speed n_N : 1600 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

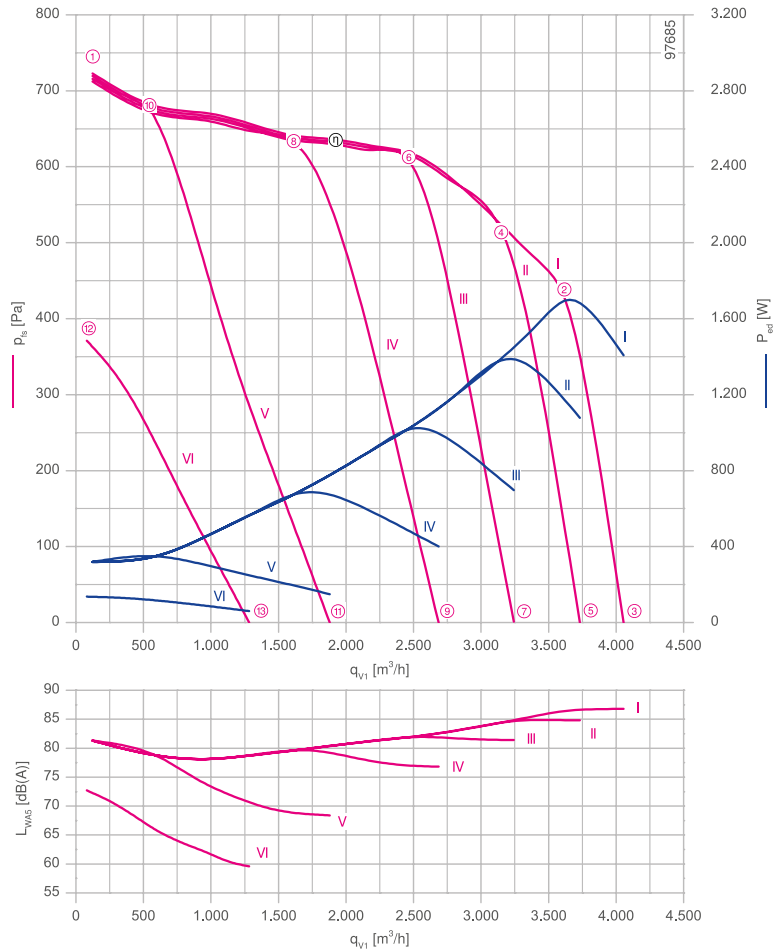
Efficiency η_{statA} : 48.1 %
 Efficiency grade: $N_{actual} = 55.0 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

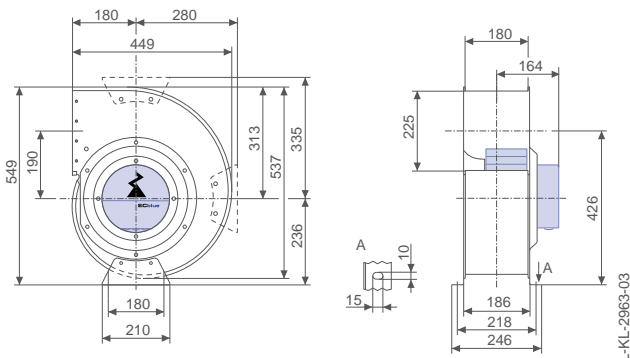


Measured with inlet nozzle, without guard grille according to ISO 5801

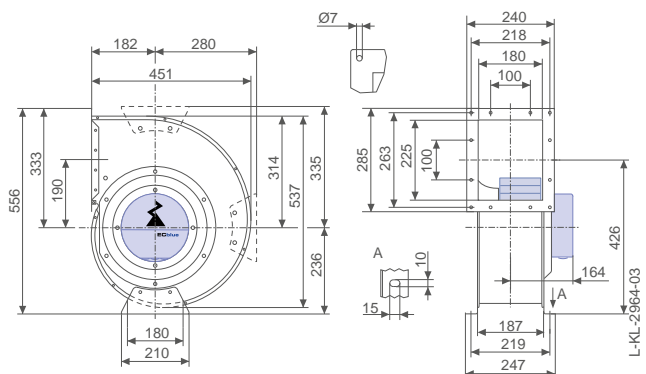
Inlet ring	00411504	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

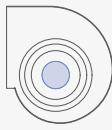




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG28R-ZIK.DC.4R	I	1610	100	①	0.70	320	81	40
		1600	100	②	2.70	1700	87	
		1260	100	③	2.20	1400	87	
	II	1610	100	④	2.20	1400	85	60
		1160	80	⑤	1.75	1100	85	
	III	1610	100	⑥	1.70	1050	82	
		1010	58	⑦	1.20	700	81	
	IV	1610	100	⑧	1.20	700	80	
		840	40	⑨	0.82	400	77	
	V	1610	100	⑩	0.74	350	79	
		600	20	⑪	0.44	150	68	
	VI	1160	70	⑫	0.40	140	73	
		420	10	⑬	0.26	60	60	

Current values determined at 400V

Fan ordering information

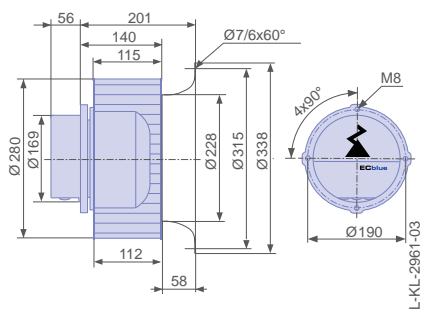
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG28R-ZIK.DC.4R	RG28R-ZIK.DC.4R	RE28P-ZIK.DC.1R
Article no.	114795	114796	114785
Weight kg	18.00	18.00	8.90

* Inlet nozzle not included in the scope of delivery

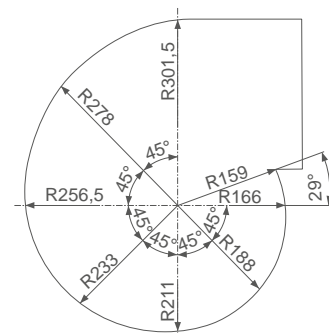
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



L-KL-3007-02

RG..R-ECblue

for three phase alternating current, 380-480 V

RG31R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.80 kW*
 Rated current I_N : 3.00-2.30 A*
 Rated speed n_N : 1610 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

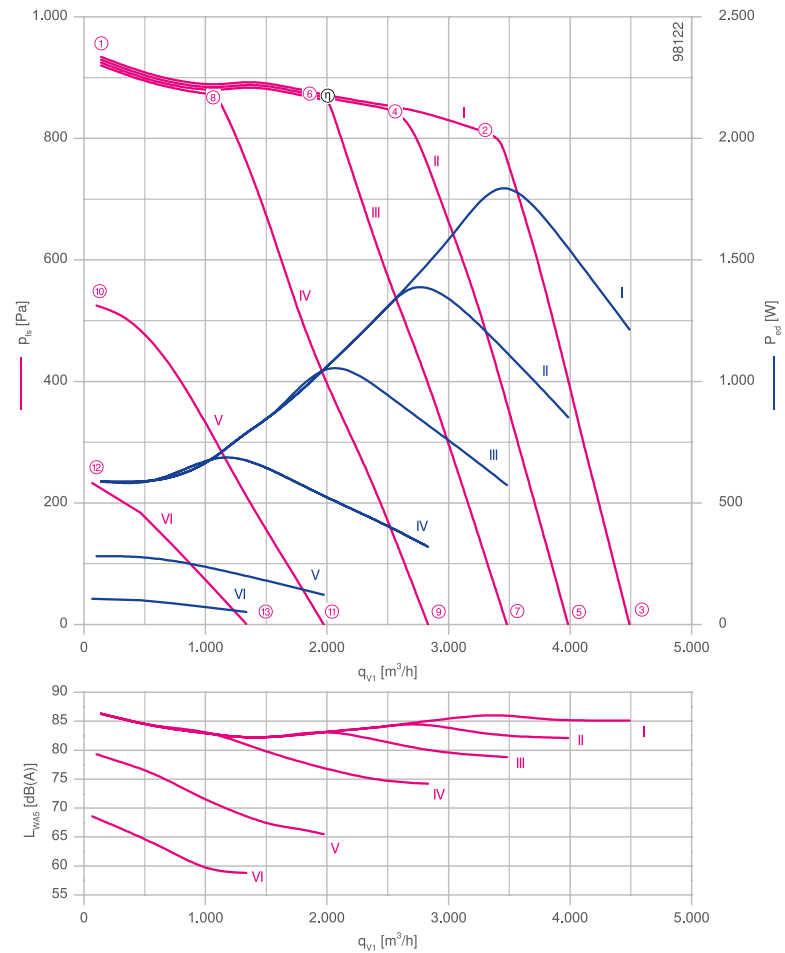
Efficiency η_{statA} : 50.6 %
 Efficiency grade: $N_{actual} = 56.8 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

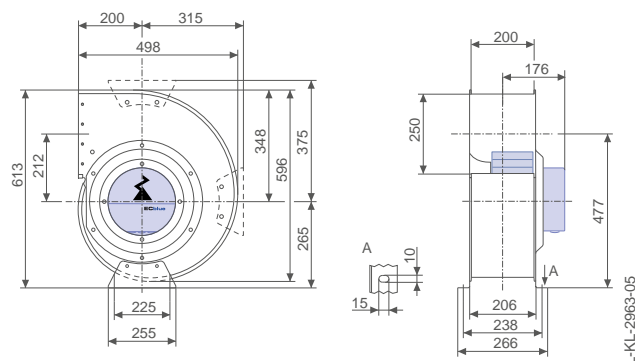


Measured with inlet nozzle, without guard grille according to ISO 5801

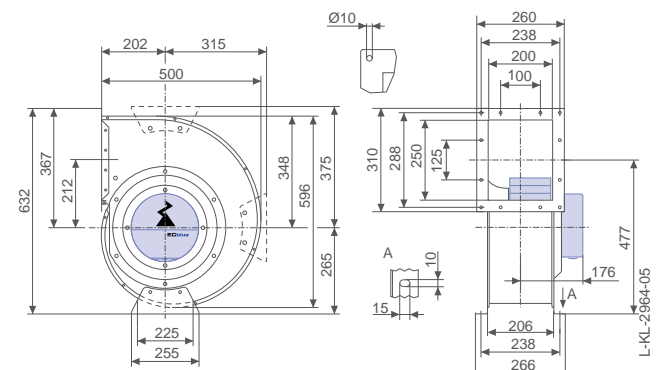
Inlet ring	00411505	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

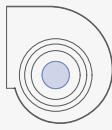




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG31R-ZIK.DG.4R	I	1610	100	①	1.05	580	86	40
		1610	100	②	2.80	1800	86	
		990	100	③	1.90	1200	85	
	II	1610	100	④	2.20	1400	85	60
		890	80	⑤	1.40	860	82	
		1610	100	⑥	1.70	1050	83	
	III	790	60	⑦	1.05	580	79	
		1600	100	⑧	1.20	700	83	
	IV	640	40	⑨	0.70	320	74	
		1220	80	⑩	0.64	280	79	
	V	460	20	⑪	0.37	120	66	
		820	50	⑫	0.34	110	69	
	VI	320	10	⑬	0.24	50	59	

Current values determined at 400V

Fan ordering information

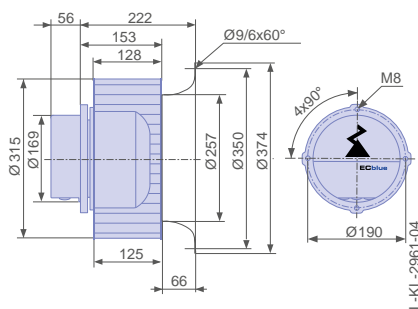
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG31R-ZIK.DG.4R	RG31R-ZIK.DG.4R	RE31P-ZIK.DG.1R
Article no.	114797	114798	114786
Weight kg	22.00	22.00	10.80

* Inlet nozzle not included in the scope of delivery

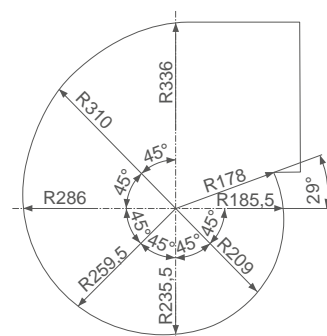
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for three phase alternating current, 380-480 V

RG31R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.60 kW*
 Rated current I_N : 5.80-4.60 A*
 Rated speed n_N : 1850 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

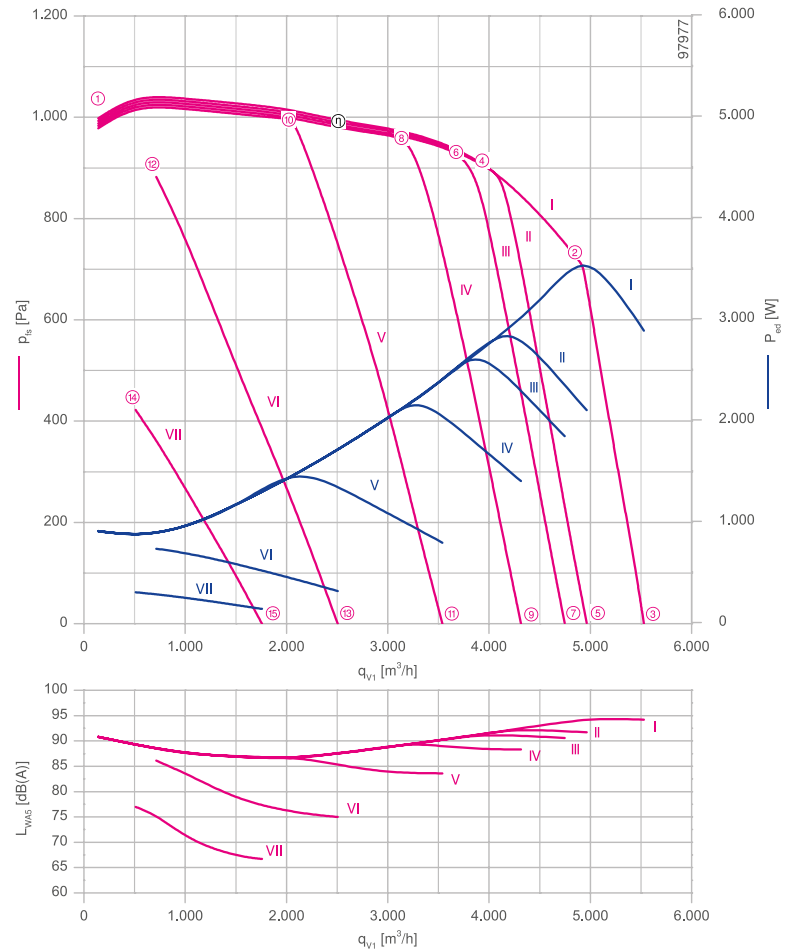
Efficiency η_{statA} : 44.5 %
 Efficiency grade: $N_{actual} = 49.3 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

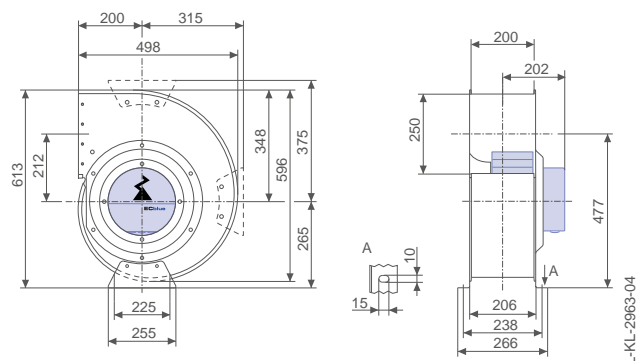


Measured with inlet nozzle, without guard grille according to ISO 5801

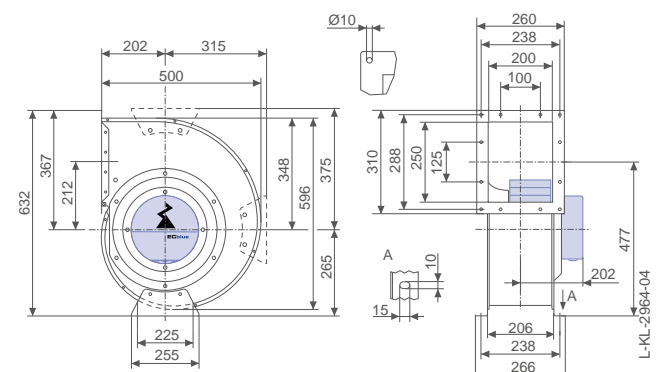
Inlet ring	00411505	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

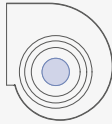




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG31R-ZIK.GG.4R	I	1820	100	①	1.50	900	91	40
		1850	100	②	5.40	3600	94	
		1850	100	③	4.40	2900	94	
	II	1850	100	④	4.40	2900	92	60
		1320	80	⑤	3.20	2100	92	
		1850	100	⑥	4.00	2600	91	
	III	1260	73	⑦	2.80	1850	91	
		1860	100	⑧	3.40	2200	89	
	IV	1160	60	⑨	2.20	1400	88	
		1850	100	⑩	2.30	1450	87	
	V	950	40	⑪	1.35	780	84	
		1710	90	⑫	1.25	720	86	
	VI	680	20	⑬	0.70	310	75	
		1200	60	⑭	0.68	300	77	
	VII	490	10	⑮	0.39	130	67	

Current values determined at 400V

Fan ordering information

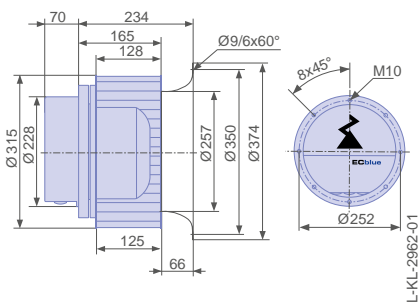
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG31R-ZIK.GG.4R	RG31R-ZIK.GG.4R	RE31P-ZIK.GG.1R
Article no.	114799	114800	114787
Weight kg	29.00	30.00	18.00

* Inlet nozzle not included in the scope of delivery

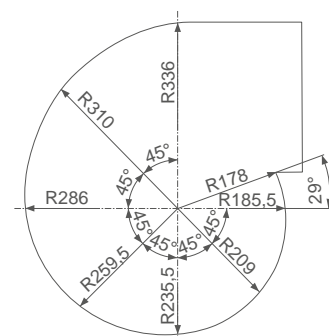
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for three phase alternating current, 380-480 V

RG35R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.80 kW*
 Rated current I_N : 6.00-4.80 A*
 Rated speed n_N : 1500 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

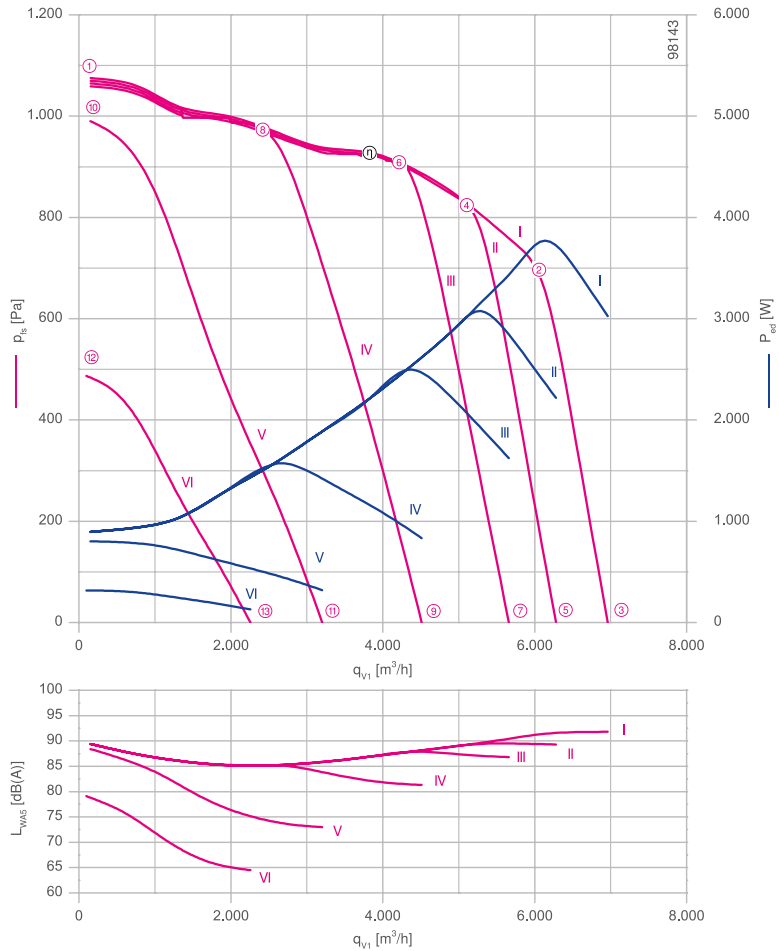
Efficiency η_{statA} : 48.7 %
 Efficiency grade: $N_{actual} = 52.8 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

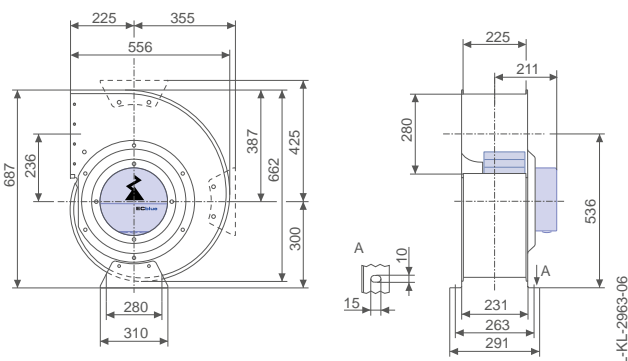


Measured with inlet nozzle, without guard grille according to ISO 5801

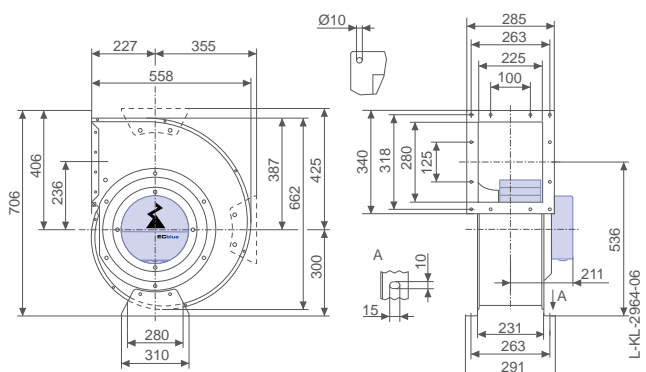
Inlet ring	00411506	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

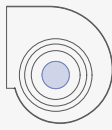




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG35R-ZIK.GG.4R	I	1500	100	①	1.50	900	89	40
		1500	100	②	5.80	3800	91	
		1140	100	③	4.60	3000	92	
	II	1510	100	④	4.80	3100	89	60
		1040	80	⑤	3.40	2200	89	
	III	1510	100	⑥	3.90	2500	88	
		940	64	⑦	2.50	1600	87	
	IV	1510	100	⑧	2.50	1600	85	
		750	40	⑨	1.40	840	81	
	V	1450	100	⑩	1.35	800	88	
		540	20	⑪	0.70	320	73	
	VI	1020	70	⑫	0.72	320	79	
		390	10	⑬	0.42	130	65	

Current values determined at 400V

Fan ordering information

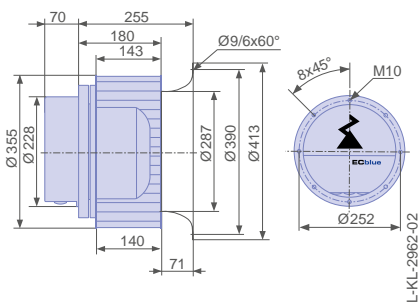
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG35R-ZIK.GG.4R	RG35R-ZIK.GG.4R	RE35P-ZIK.GG.1R
Article no.	114801	114802	114788
Weight kg	32.00	33.00	19.00

* Inlet nozzle not included in the scope of delivery

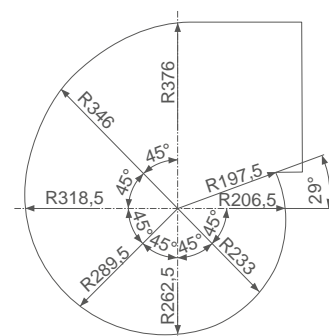
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



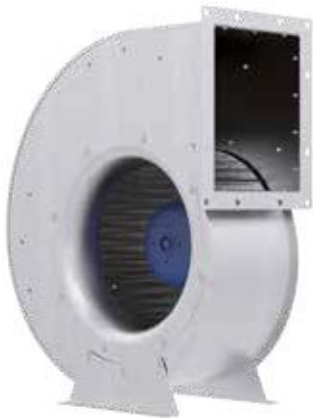
Used scroll



RG..R-ECblue

for three phase alternating current, 380-480 V

RG40R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.70 kW*
 Rated current I_N : 6.00-4.80 A*
 Rated speed n_N : 1260 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

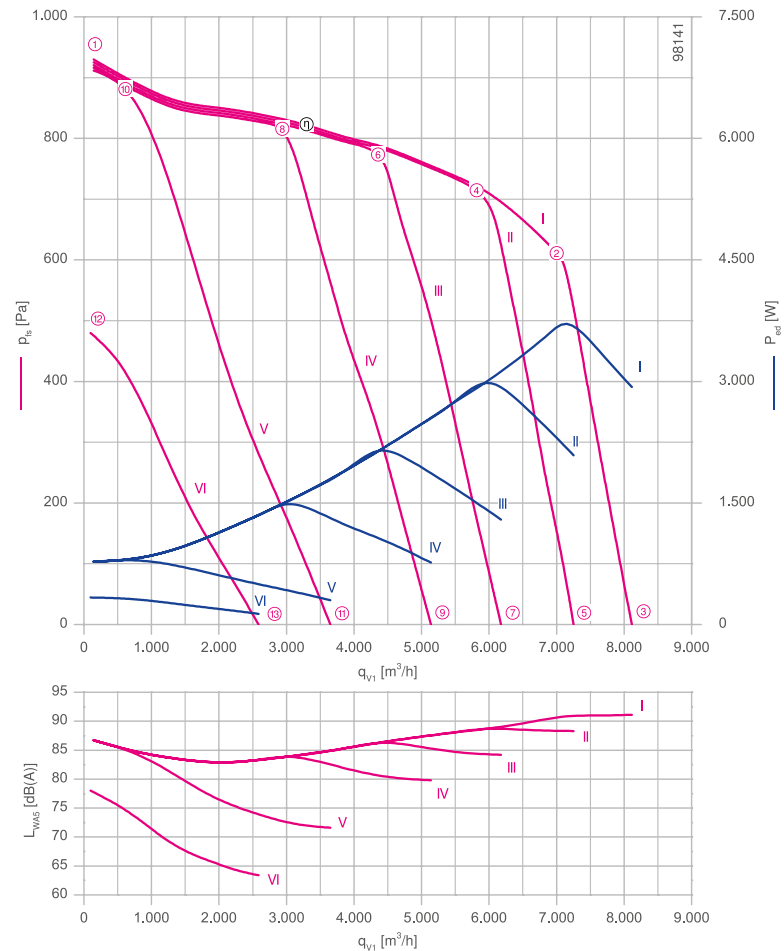
Efficiency η_{statA} : 50.6 %
 Efficiency grade: $N_{actual} = 55.6 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

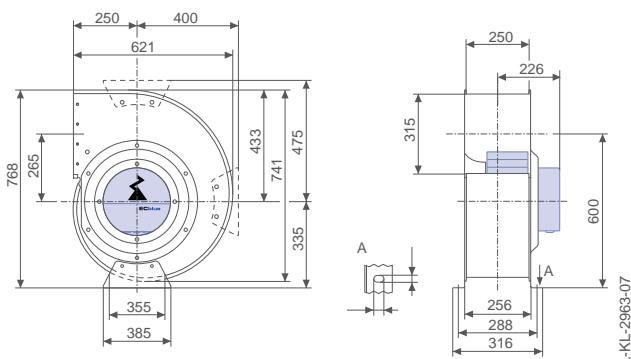
Characteristic curve



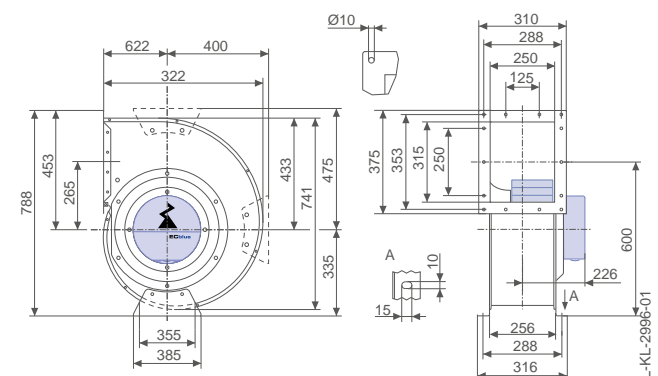
Inlet ring	00411507	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

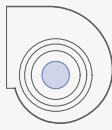




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG40R-ZIK.GL.4R	I	1260	100	①	1.30	780	87	40
		1260	100	②	5.80	3700	91	
		960	100	③	4.40	2900	91	
	II	1260	100	④	4.60	3000	89	60
		860	80	⑤	3.20	2100	88	
		1260	100	⑥	3.30	2200	86	
	III	730	58	⑦	2.00	1300	84	
		1260	100	⑧	2.30	1500	84	
	IV	610	40	⑨	1.30	760	80	
		1260	100	⑩	1.35	800	85	
	V	440	20	⑪	0.68	300	72	
		920	70	⑫	0.74	330	78	
	VI	320	10	⑬	0.42	130	63	

Current values determined at 400V

Fan ordering information

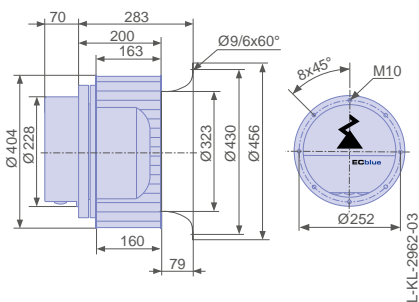
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG40R-ZIK.GL.4R	RG40R-ZIK.GL.4R	RE40P-ZIK.GL.1R
Article no.	114803	114804	114789
Weight kg	41.00	41.70	25.00

* Inlet nozzle not included in the scope of delivery

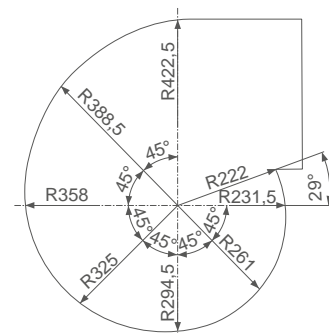
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RG..R-ECblue

for three phase alternating current, 380-480 V

RG45R-ZIK



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 2.90 kW*
 Rated current I_N : 4.60-3.70 A*
 Rated speed n_N : 980 min⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} 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 made of galvanised sheet metal, uncoated
 Conformity: ErP 2015 , CE, UL

ErP-data

Efficiency η_{statA} : 51.3 %
 Efficiency grade: $N_{actual} = 56.6 / N_{target} = 44^{**}$
 EC controller integrated

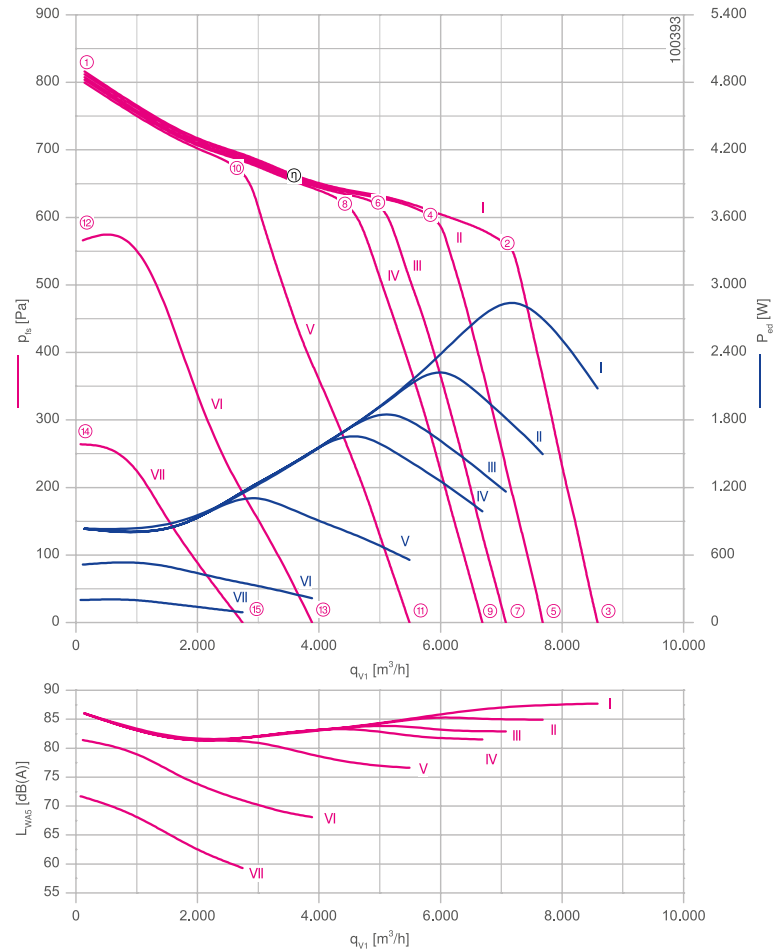
*Rated data

**ErP 2015

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Inlet ring	00411508	Page 291
Connection diagram	1360-403	Page 358
System components		Page 286

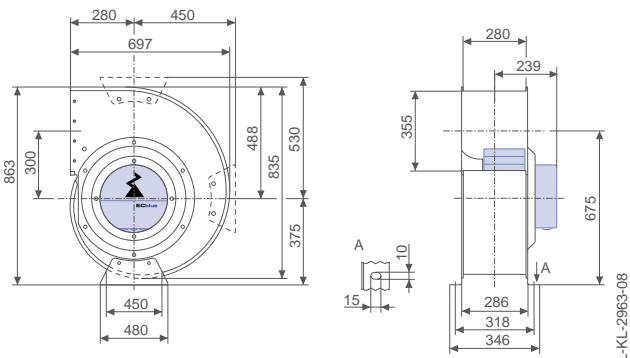
Characteristic curve



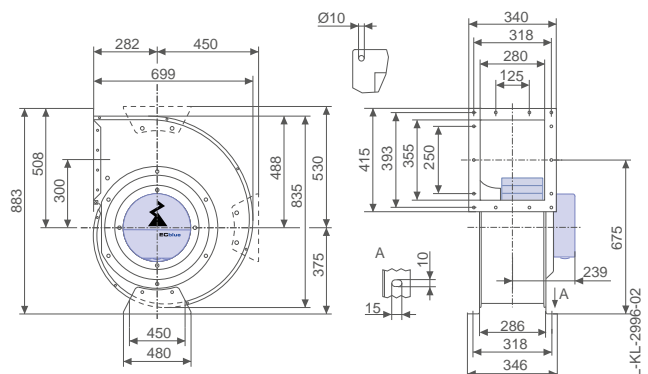
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing, single inlet, without flange, in installation position H



Fan with housing, single inlet, with flange, in installation position H

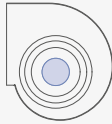




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RG45R-ZIK.GL.4R	I	980	100	①	1.40	840	86	40
		980	100	②	4.40	2900	87	
		680	100	③	3.20	2100	88	
	II	980	100	④	3.50	2300	86	60
		610	80	⑤	2.30	1500	85	
		980	100	⑥	3.00	1950	84	
	III	560	67	⑦	1.85	1150	83	
		980	100	⑧	2.60	1700	84	
	IV	530	60	⑨	1.60	980	82	
		970	100	⑩	1.85	1150	82	
	V	440	40	⑪	1.00	560	77	
		830	80	⑫	0.96	520	81	
	VI	310	20	⑬	0.54	220	68	
		570	60	⑭	0.52	200	72	
	VII	230	10	⑮	0.33	90	59	

Current values determined at 400V

Fan ordering information

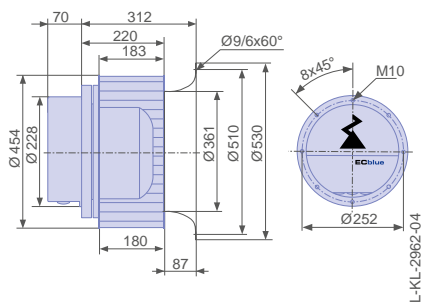
Design	RG (without flange)	RG (with flange)	RE..P*
Installation position	H	H	H/Vu/Vo
			
Type	RG45R-ZIK.GL.4R	RG45R-ZIK.GL.4R	RE45P-ZIK.GL.1R
Article no.	114805	114806	114790
Weight kg	49.00	49.00	27.00

* Inlet nozzle not included in the scope of delivery

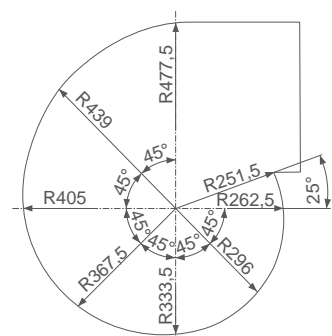
Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Motorised impeller in installation position H/Vu/Vo



Used scroll



RD..R-ECblue

for single phase alternating current, 200-240 V

RD13R-4IP



Description

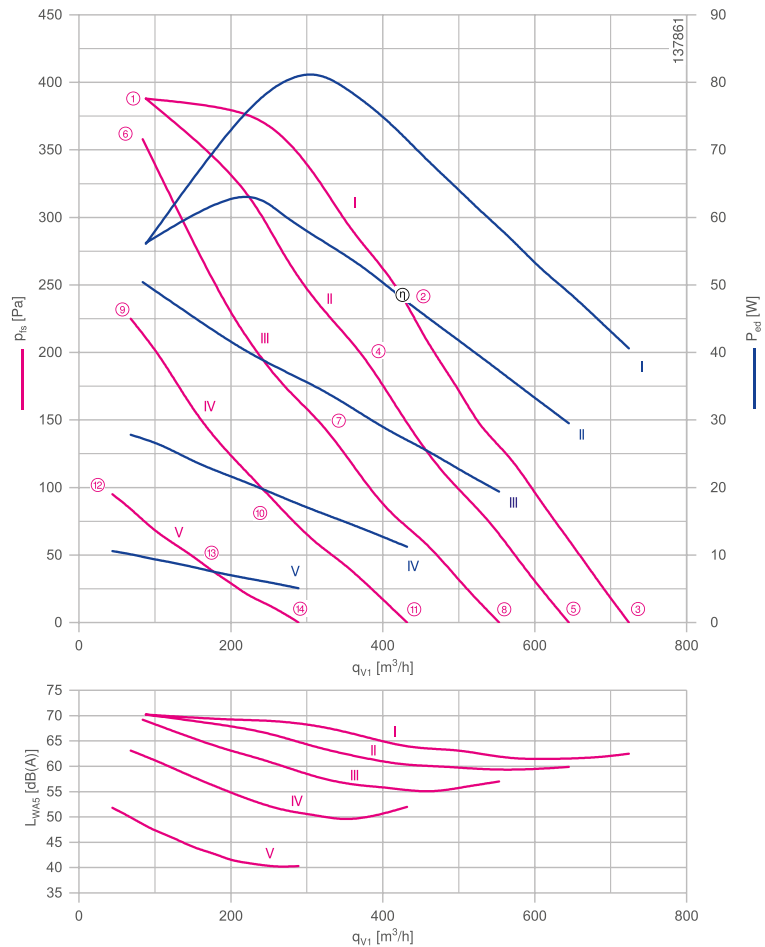
Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 80 W*
 Rated current I_N : 0.84-0.70 A*
 Rated speed n_N : 2530 rpm⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: CE, UL

ErP-data

Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

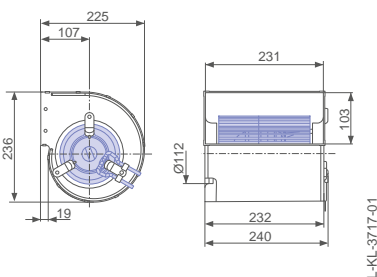


Measured with inlet nozzle, without guard grille according to ISO 5801

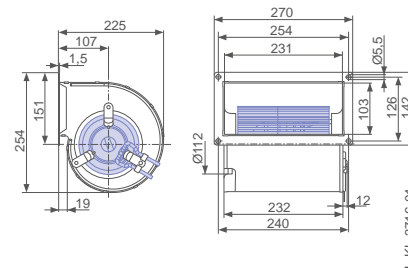
Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H

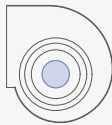



Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RD13R-4IP.Z8.2R	I	2700	①	0.54	55	70
		2130	②	0.66	70	64
		1020	③	0.40	40	63
	II	1940	④	0.52	55	62
		930	⑤	0.31	30	60
		III	2600	⑥	0.50	50
	1680		⑦	0.37	34	58
	800		⑧	0.20	19	57
	IV	2070	⑨	0.30	28	63
		1270	⑩	0.20	18	51
		660	⑪	0.13	11	52
	V	1370	⑫	0.13	11	52
		990	⑬	0.10	8	44
		460	⑭	0.07	5	40

Current values determined at 230V

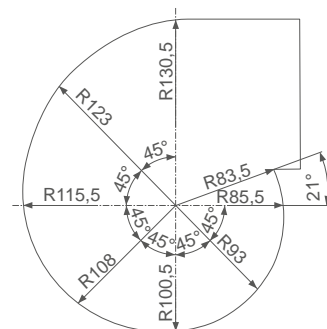
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD13R-4IP.Z8.2R	RD13R-4IP.Z8.2R
Article no.	178235	178234
Weight kg	3.00	3.40
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules
	
Page 326	Page 328

Used scroll



L-KL-3007-21

RD..S-ECblue

for single phase alternating current, 200-240 V

RD133S-4IP

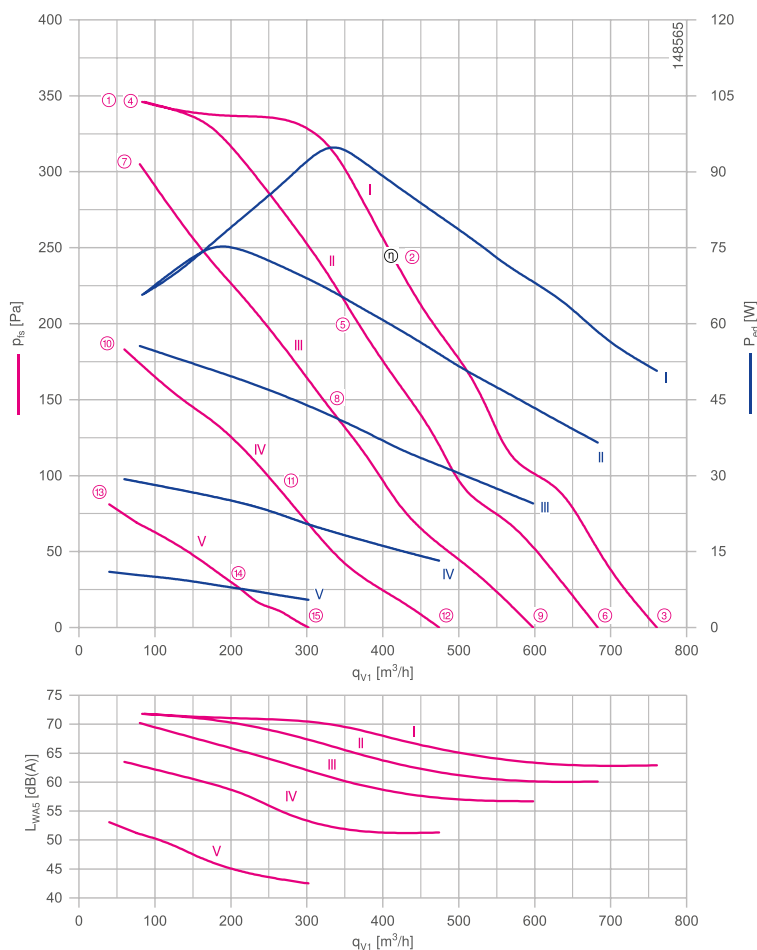


Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 150 W*
 Rated current I_N : 1.70-1.40 A*
 Rated speed n_N : 3400 rpm⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_{ed} < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

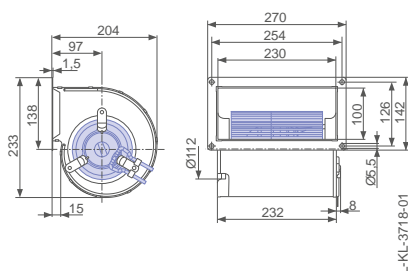


Measured with inlet nozzle, without guard grille according to ISO 5801

Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Fan with housing double inlet, with flange, in installation position H



Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹		I A	P _{ed} W	L _{WA5} dB(A)
RD13S-4IP.Z8.2R	I	2500	①	0.60	65	72
		2210	②	0.76	90	68
		1070	③	0.48	50	63
	II	2500	④	0.60	65	72
		1990	⑤	0.56	65	65
		960	⑥	0.35	36	60
	III	2360	⑦	0.50	55	70
		1700	⑧	0.40	42	61
		850	⑨	0.26	24	57
	IV	1870	⑩	0.30	30	64
		1360	⑪	0.24	22	55
		690	⑫	0.15	13	51
	V	1250	⑬	0.13	11	53
		960	⑭	0.11	9	47
		480	⑮	0.07	6	43

Current values determined at 230V

Fan ordering information

Design RD (with flange)

Installation position H




Type RD13S-4IP.Z8.2R
Article no. 178289

Weight kg 4.00
Inlet nozzle integrated

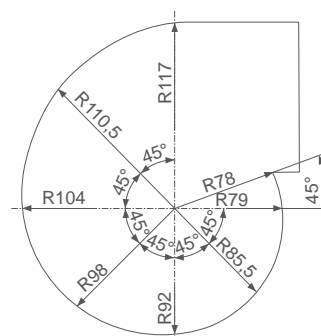
Control technology

Control modules



Page 326

Used scroll



L-KL-2950-28



RD..R-ECblue

for single phase alternating current, 200-240 V

RD15R-4IP



Description

Motor technology: EC
 Rated voltage U_N : 1-200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 150 W*
 Rated current I_N : 1.45-1.25 A*
 Rated speed n_N : 2290 rpm⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with variable cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

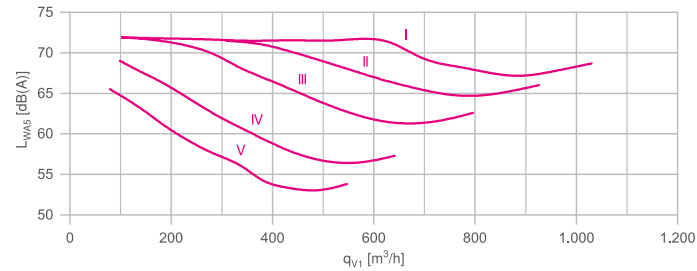
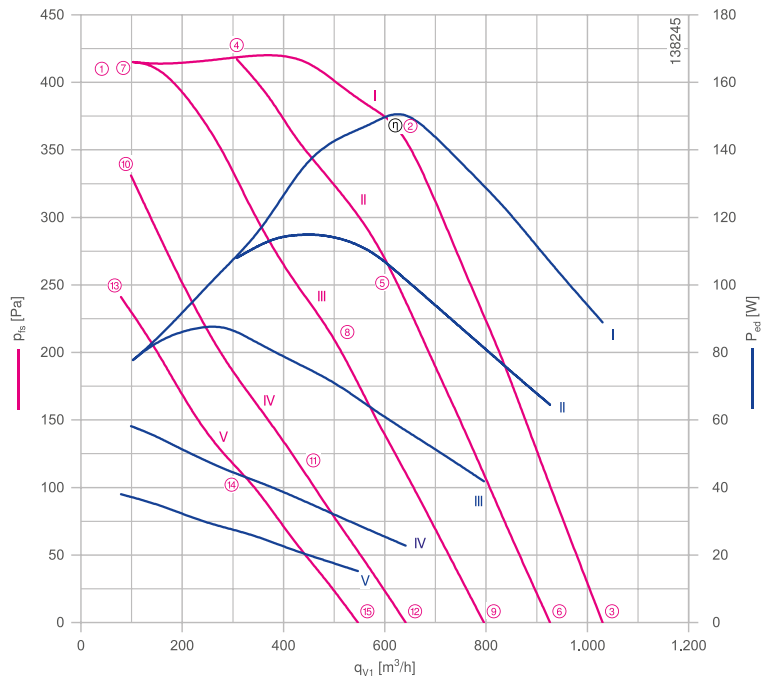
ErP-data

Efficiency η_{statA} : 49.7 %
 Efficiency grade: $N_{actual} = 61.3 / N_{target} = 44$ **
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-404 Page 358
 System components Page 286

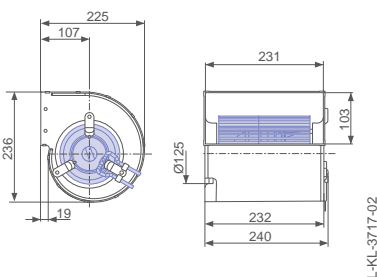
Characteristic curve



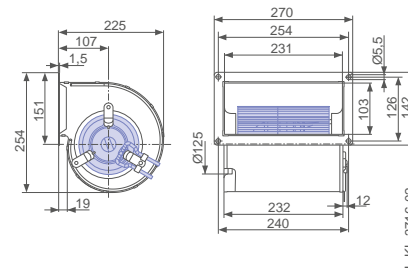
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H



Performance data



Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RD15R-4IP.ZC.2R	I	2500	①	0.72	80	72
		2290	②	1.25	150	72
		1210	③	0.80	90	69
	II	1920	④	0.94	100	67
		1080	⑤	0.60	65	66
	III	1790	⑥	0.70	70	64
		940	⑦	0.44	42	63
	IV	2240	⑧	0.58	60	69
		1370	⑨	0.38	38	58
	V	760	⑩	0.25	22	57
		1920	⑪	0.38	38	66
		1250	⑫	0.27	26	56
			660	⑬	0.17	15

Current values determined at 230V

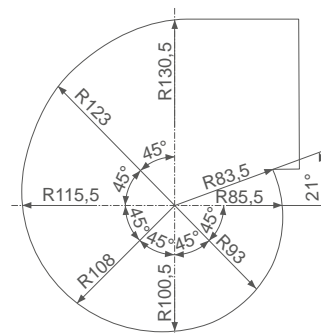
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD15R-4IP.ZC.2R	RD15R-4IP.ZC.2R
Article no.	178250	178249
Weight kg	3.50	3.80
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules
	
Page 326	Page 328

Used scroll



L-KL-3007-20

RD..S-ECblue

for single phase alternating current, 200-240 V

RD16S-4IL

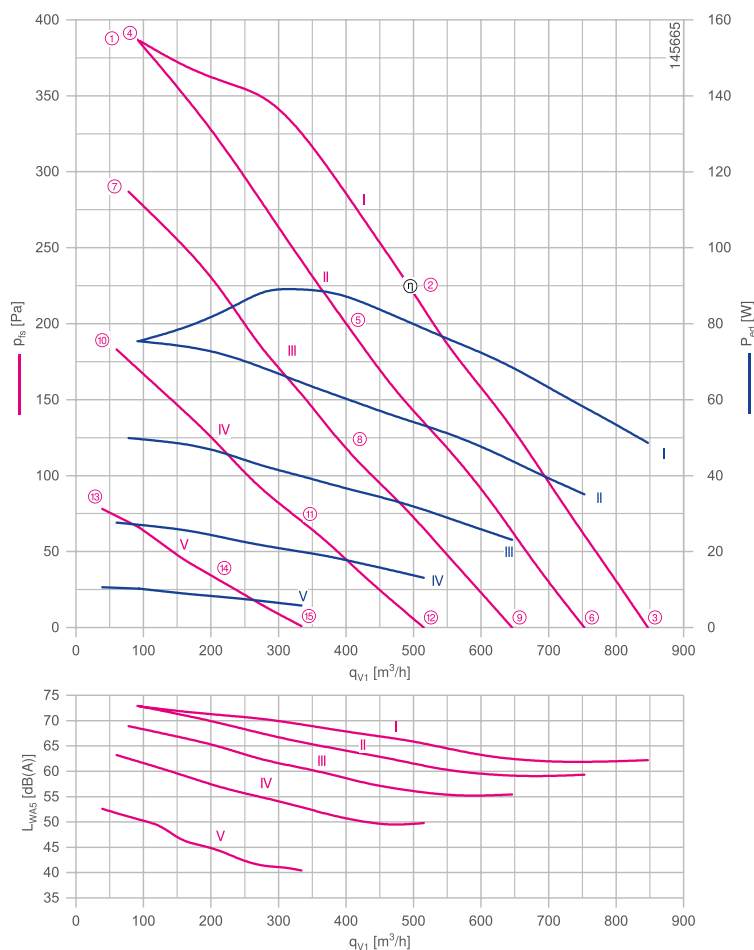


Description

Motor technology: EC
 Rated voltage U_N : 1~200-240 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 90 W*
 Rated current I_N : 0.86-0.72 A*
 Rated speed n_N : 2100 rpm⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -30 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: CE, UL
ErP-data
 Not subject to the regulations of ErP directive ($P_i < 125$ W)
 *Rated data

*** Occasional operation ≤ -20 °C and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation ≤ -20 °C cold design on request.

Characteristic curve

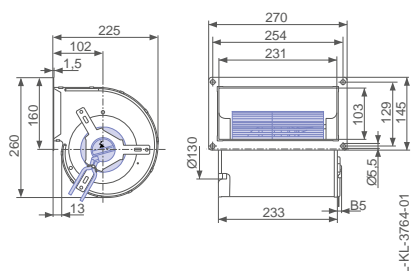


Measured with inlet nozzle, without guard grille according to ISO 5801

Connection diagram 1360-404 Page 358
 System components Page 286

Dimensions mm

Fan with housing double inlet, with flange, in installation position H



Performance data


Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level L_{WA5} dB(A)
		n min ⁻¹		I A	P_{ed} W	
RD16S-4IL.ZC.XR	I	2100	①	0.72	75	73
		1710	②	0.76	80	66
		930	③	0.48	48	62
	II	2100	④	0.72	75	73
		1590	⑤	0.60	60	64
		840	⑥	0.35	36	59
	III	1820	⑦	0.52	50	69
		1410	⑧	0.44	40	61
		720	⑨	0.25	24	55
	IV	1460	⑩	0.30	28	63
		1010	⑪	0.21	20	53
		580	⑫	0.13	13	50
	V	970	⑬	0.12	11	53
		730	⑭	0.10	9	46
		400	⑮	0.07	6	40

Current values determined at 230V

Fan ordering information

Design RD (with flange)

Installation position H




Type RD16S-4IL.ZC.XR
Article no. 179928

Weight kg 5.00
Inlet nozzle integrated

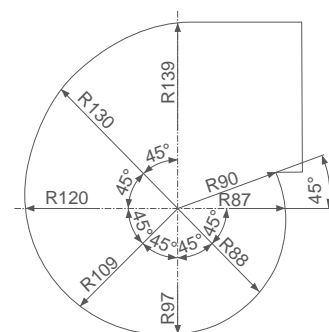
Control technology

Control modules



Page 326

Used scroll



L-KL-2950-27

RD..R-ECblue

for single phase alternating current, 200-277 V

RD25R-6IL



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.48 kW*
 Rated current I_N : 2.40-1.75 A*
 Rated speed n_N : 1210 rpm⁻¹*
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 50 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE

ErP-data

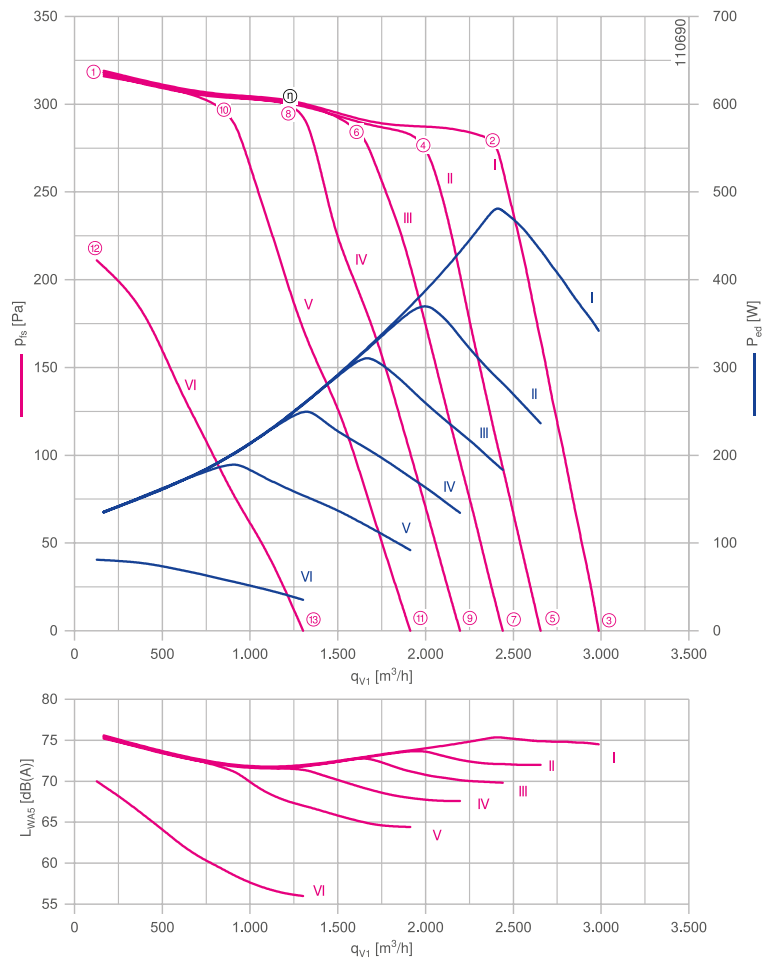
Efficiency η_{statA} : 47.2 %
 Efficiency grade: $N_{actual} = 56.0 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-402 Page 358
 System components Page 286

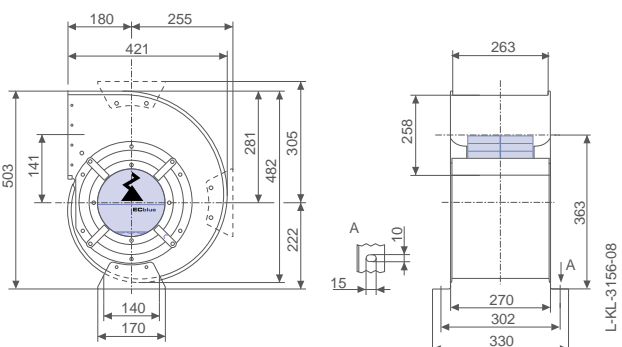
Characteristic curve



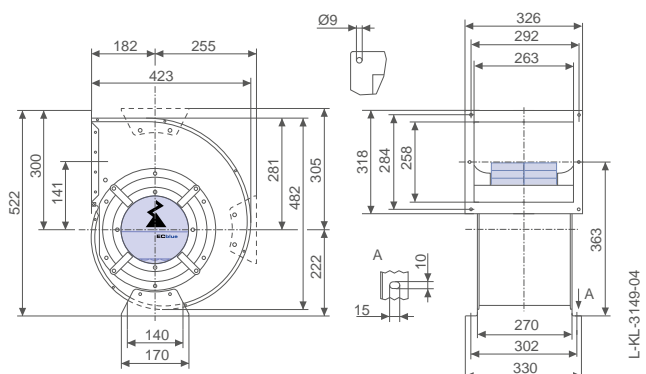
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H

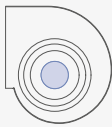
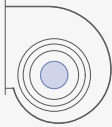


Performance data



Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD25R-6IL.BD.4R	I	1220	100	①	0.60	140	76	50
		1210		②	2.10	480	75	
		790		③	1.50	340	75	
	II	1220	79	④	1.65	380	74	60
		700		⑤	1.05	240	72	
		1210		⑥	1.35	310	73	
	III	650	66	⑦	0.80	180	70	
		1210		⑧	1.10	250	72	
	IV	580	54	⑨	0.60	130	68	
		1210		⑩	0.84	190	72	
	V	510	41	⑪	0.42	90	64	
		990		⑫	0.38	80	70	
	VI	360	20	⑬	0.21	36	56	

Current values determined at 230V

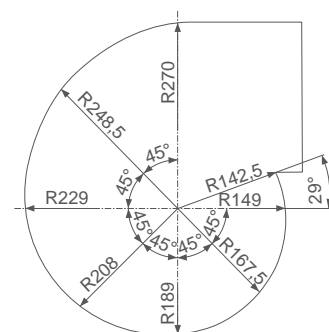
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD25R-6IL.BD.4R	RD25R-6IL.BD.4R
Article no.	115292	115293
Weight kg	16.00	17.00
Inlet nozzle integrated		

Control technology

Control modules	Operating terminal
	
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Used scroll



L-KL-3007-01

RD..R-ECblue

for single phase alternating current, 200-277 V

RD28R-6IL



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 0.48 kW*
 Rated current I_N : 2.50-1.75 A*
 Rated speed n_N : 1050 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 50 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE

ErP-data

Efficiency η_{statA} : 47.4 %
 Efficiency grade: $N_{actual} = 56.6 / N_{target} = 44^{**}$
 EC controller integrated

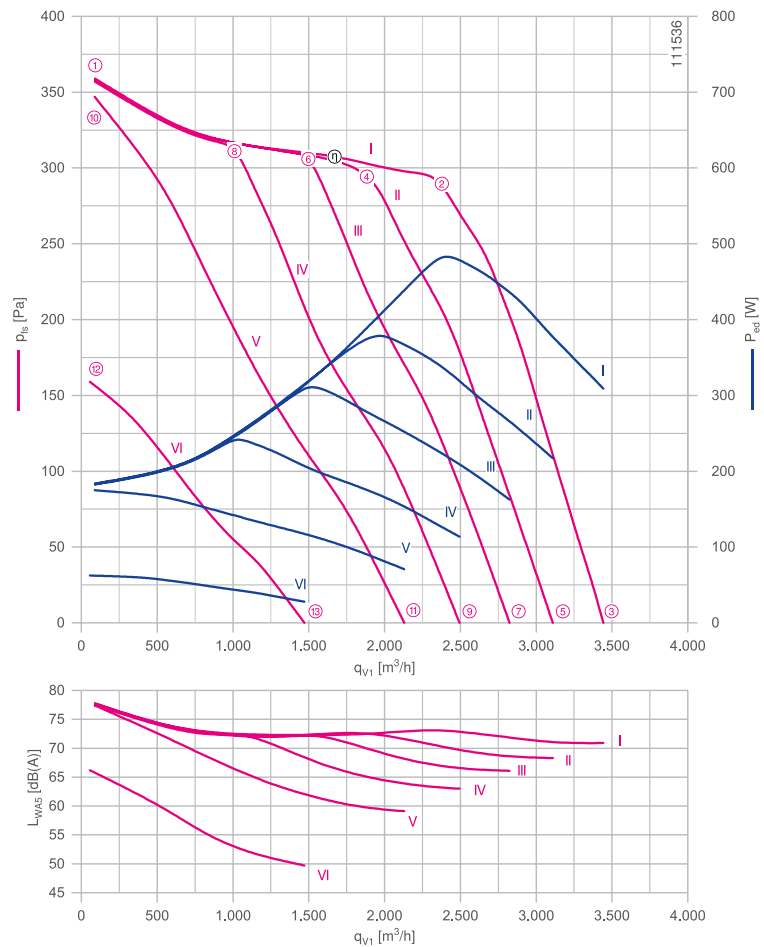
*Rated data

**ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-402 Page 358
 System components Page 286

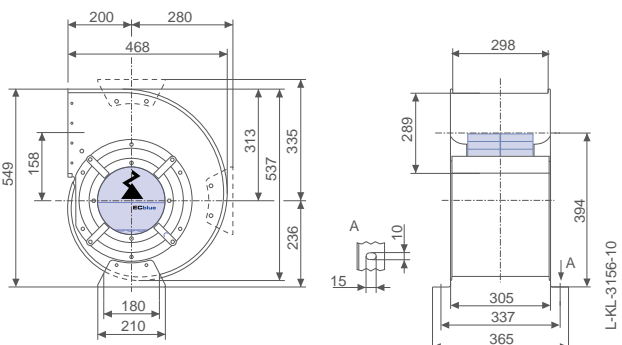
Characteristic curve



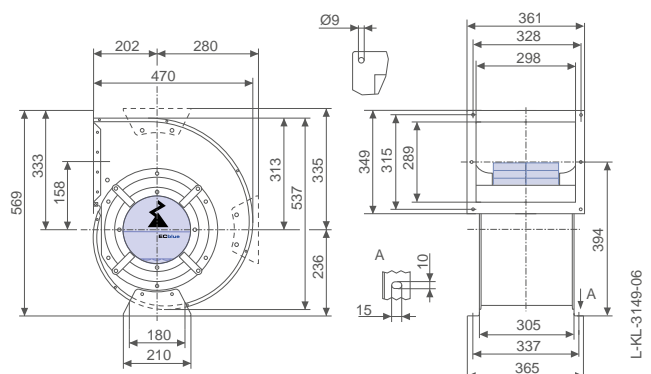
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H

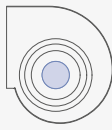



Performance data



Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD28R-6IL.BD.4R	I	1060	100	①	0.80	180	78	50
		1050		②	2.10	480	73	
		570		③	1.35	310	71	
	II	1060	80	④	1.65	390	73	60
		520		⑤	0.94	220	68	
		1060		⑥	1.35	310	72	
	III	470	66	⑦	0.72	160	66	
		1060		⑧	1.05	250	72	
	IV	420	52	⑨	0.52	110	63	
		1060		⑩	0.78	180	77	
	V	360	38	⑪	0.34	70	59	
		710		⑫	0.31	65	66	
	VI	250	20	⑬	0.19	28	50	

Current values determined at 230V

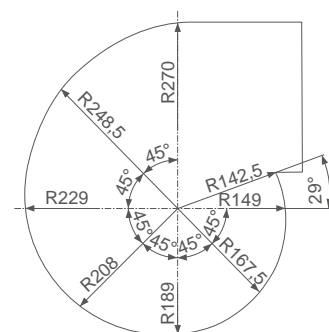
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD28R-6IL.BD.4R	RD28R-6IL.BD.4R
Article no.	115294	115295
Weight kg	20.00	21.00
Inlet nozzle integrated		

Control technology

Control modules	Operating terminal
	
Page 326	Page 328

Used scroll



L-KL-3007-01

RD..R-ECblue

for single phase alternating current, 200-277 V

RD31R-ZIL



Description

Motor technology: EC
 Rated voltage U_N : 1-200-277 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.25 kW*
 Rated current I_N : 6.40-4.60 A*
 Rated speed n_N : 1200 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 50 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

ErP-data

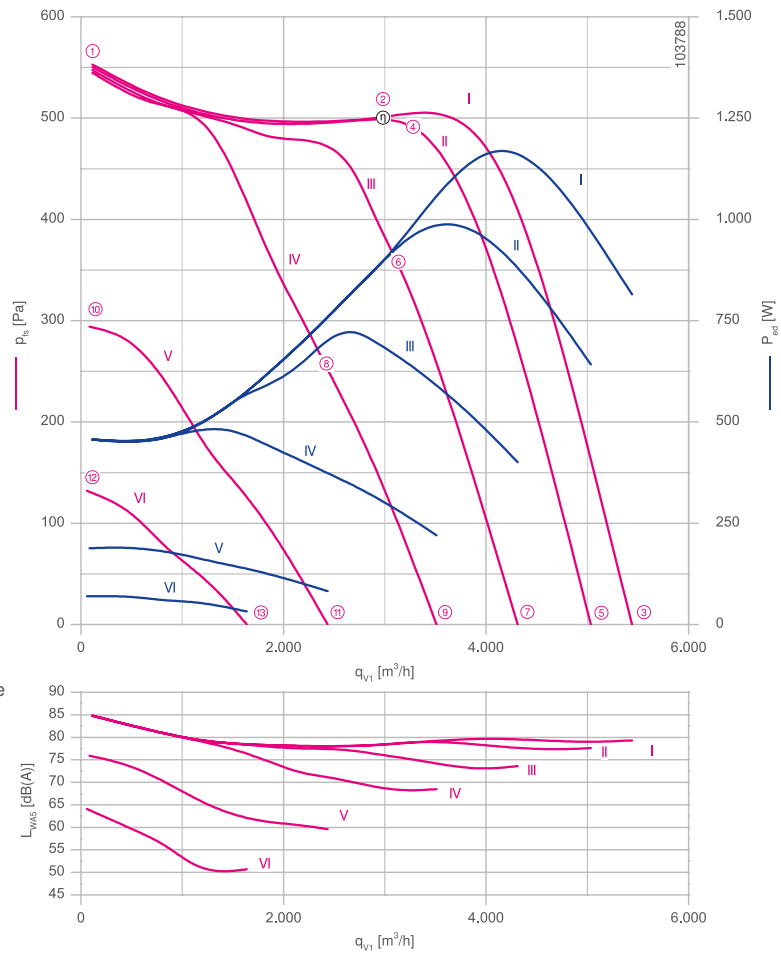
Efficiency η_{statA} : 51.8 %
 Efficiency grade: $N_{actual} = 58.4 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-389 Page 358
 System components Page 286

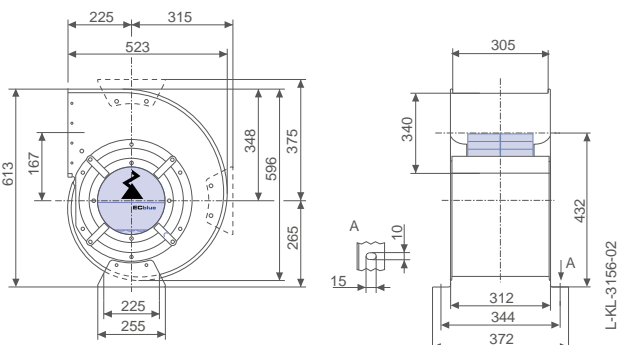
Characteristic curve



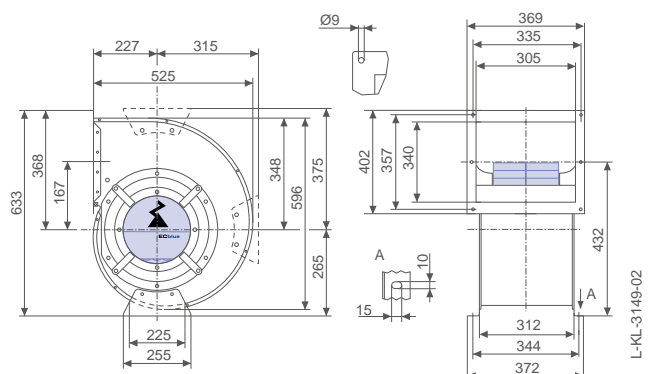
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H

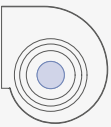
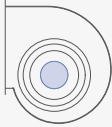


Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD31R-ZIL.DG.4R	I	1200	100	①	2.70	560	79	50
		1200		②	5.60	1250	80	
		720		③	3.70	820	79	
	II	1200	83	④	4.60	1000	79	60
		680		⑤	3.00	640	78	
		1200		⑥	3.30	720	77	
	III	1200	100	⑦	1.90	400	74	
		580		⑧	2.30	480	79	
	IV	1200	100	⑨	1.00	220	69	
		480		⑩	0.86	190	76	
	V	880	70	⑪	0.44	85	60	
		340		⑫	0.38	70	64	
	VI	590	50	⑬	0.38	70	64	
230		⑭		0.38	32	51		

Current values determined at 230V

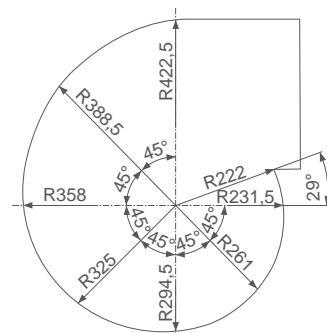
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD31R-ZIL.DG.4R	RD31R-ZIL.DG.4R
Article no.	115066	115065
Weight kg	26.00	27.00
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Used scroll



L-KL-3007-05

RD..R-ECblue

for three phase alternating current, 380-480 V

RD31R-ZIL



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 1.75 kW*
 Rated current I_N : 2.90-2.30 A*
 Rated speed n_N : 1380 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 50 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

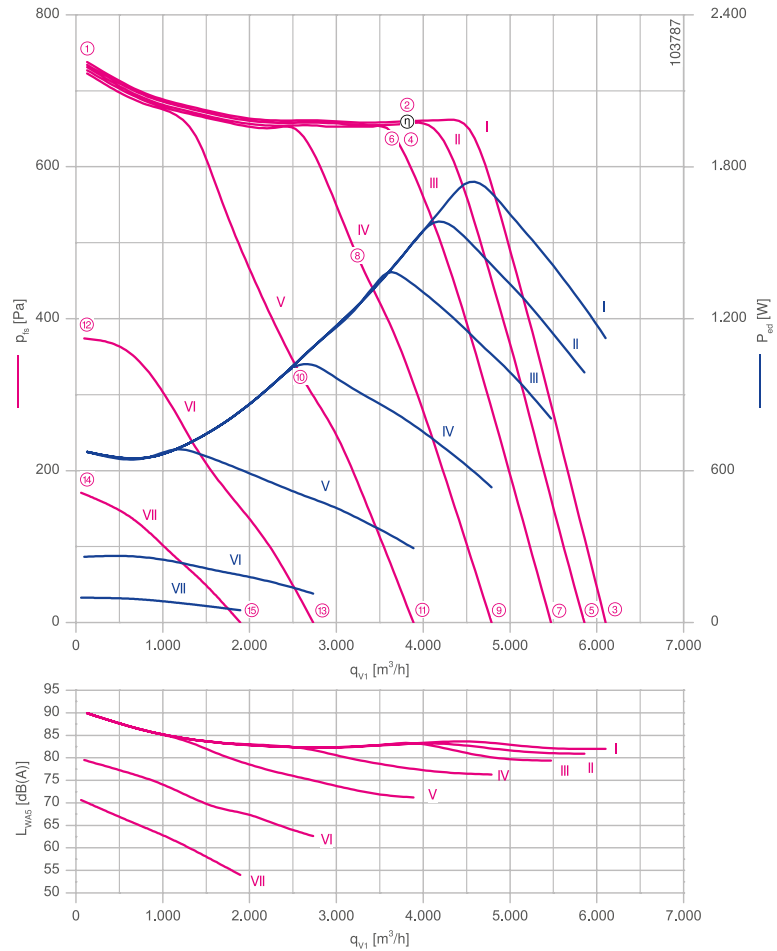
ErP-data

Efficiency η_{statA} : 52.4 %
 Efficiency grade: $N_{actual} = 57.7 / N_{target} = 44^{**}$
 EC controller integrated
 *Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-390 Page 358
 System components Page 286

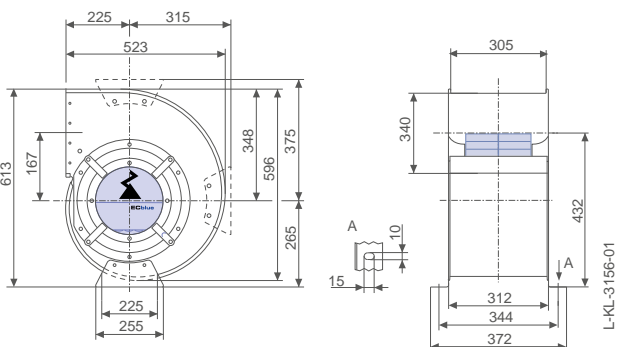
Characteristic curve



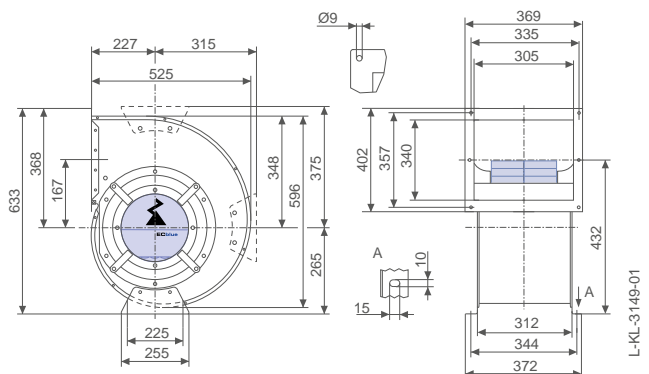
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H




Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD31R-ZIL.DG.4R	I	1380	100	①	1.10	660	86	50
		1380		②	2.70	1750	84	
		800		③	1.80	1100	82	
	II	1380	91	④	2.50	1600	84	60
		780		⑤	1.60	980	81	
	III	1380	100	⑥	2.20	1400	83	
		730		⑦	1.35	800	79	
	IV	1380	100	⑧	1.65	1000	82	
		640		⑨	0.96	540	76	
	V	1380	100	⑩	1.15	680	84	
		520		⑪	0.64	290	71	
	VI	990	70	⑫	0.60	260	80	
		370		⑬	0.37	110	63	
	VII	670	50	⑭	0.34	100	71	
		260		⑮	0.23	48	54	

Current values determined at 400V

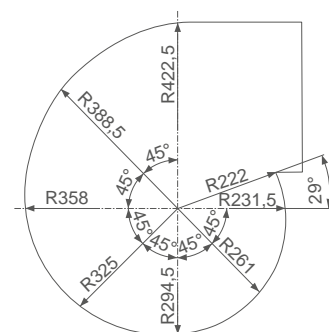
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD31R-ZIL.DG.4R	RD31R-ZIL.DG.4R
Article no.	115068	115067
Weight kg	26.00	27.00
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
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Used scroll



L-KL-3007-05

RD..R-ECblue

for three phase alternating current, 380-480 V

RD40R-ZIL



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 3.70 kW*
 Rated current I_N : 6.00-4.80 A*
 Rated speed n_N : 1260 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 60 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

ErP-data

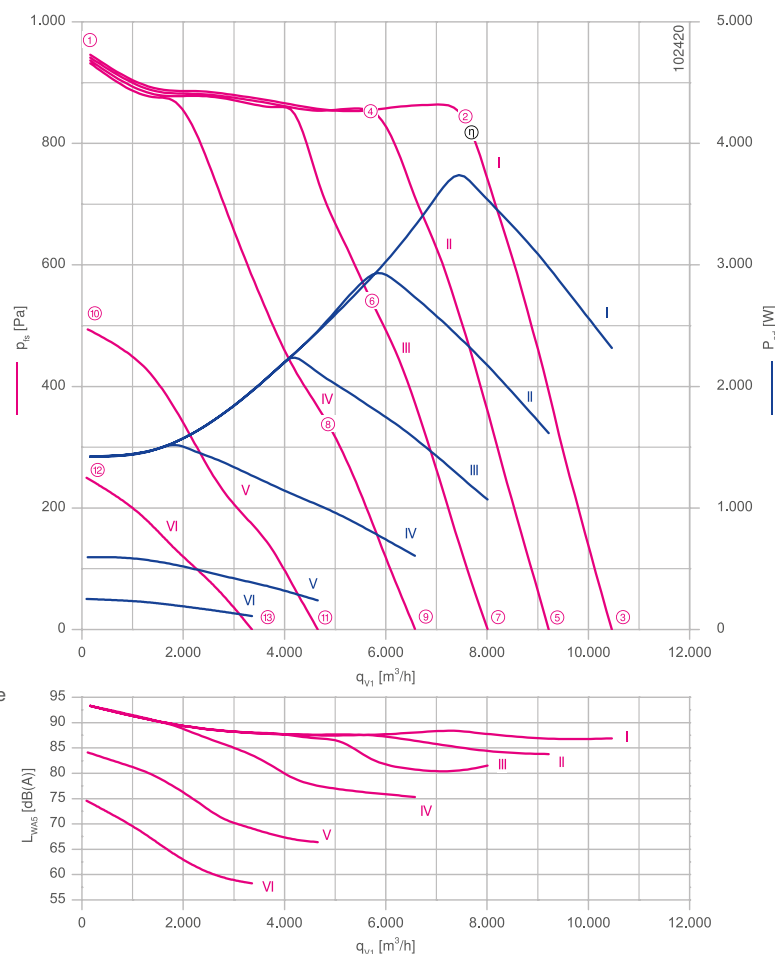
Efficiency η_{statA} : 51.1 %
 Efficiency grade: $N_{actual} = 53.9 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-390 Page 358
 System components Page 286

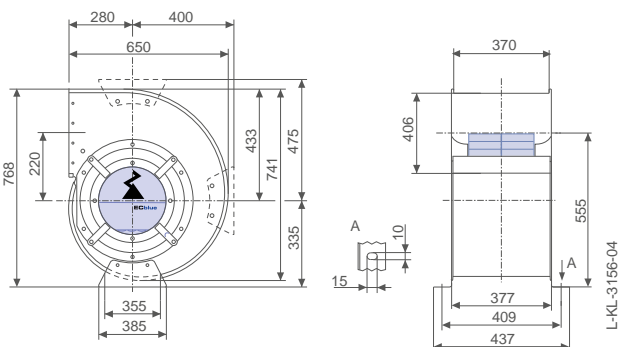
Characteristic curve



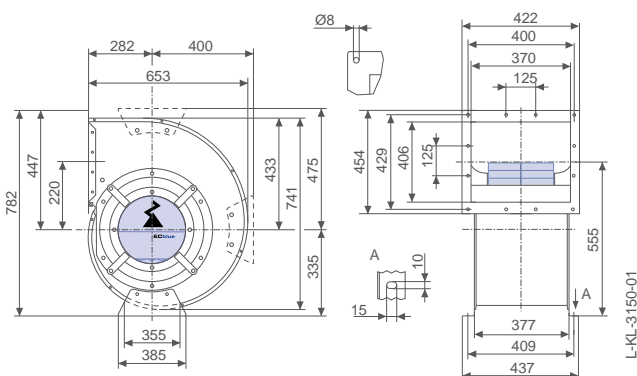
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H



Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level
		n min ⁻¹	%		I A	P _{ed} W	L _{WAS} dB(A)
RD40R-ZIL.GL.4R	I	1260	100	①	2.20	1400	93
		1260		②	5.60	3700	88
		740		③	3.50	2300	87
	II	1260	80	④	4.40	2900	87
		650		⑤	2.50	1600	84
	III	1260	100	⑥	3.40	2200	88
		570	60	⑦	1.70	1050	82
	IV	1260	100	⑧	2.30	1500	90
		470	40	⑨	1.10	600	75
	V	920	70	⑩	1.05	600	84
		340	20	⑪	0.58	240	66
	VI	660	50	⑫	0.60	250	75
		250	10	⑬	0.36	110	58

Current values determined at 400V

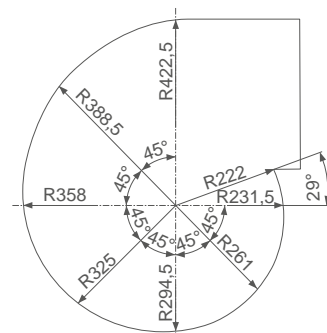
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD40R-ZIL.GL.4R	RD40R-ZIL.GL.4R
Article no.	115070	115069
Weight kg	50.00	51.00
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Used scroll



L-KL-3007-05

RD..R-ECblue

for three phase alternating current, 380-480 V

RD40R-ZIL



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 4.80 kW*
 Rated current I_N : 7.60-6.00 A*
 Rated speed n_N : 1350 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 40 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

ErP-data

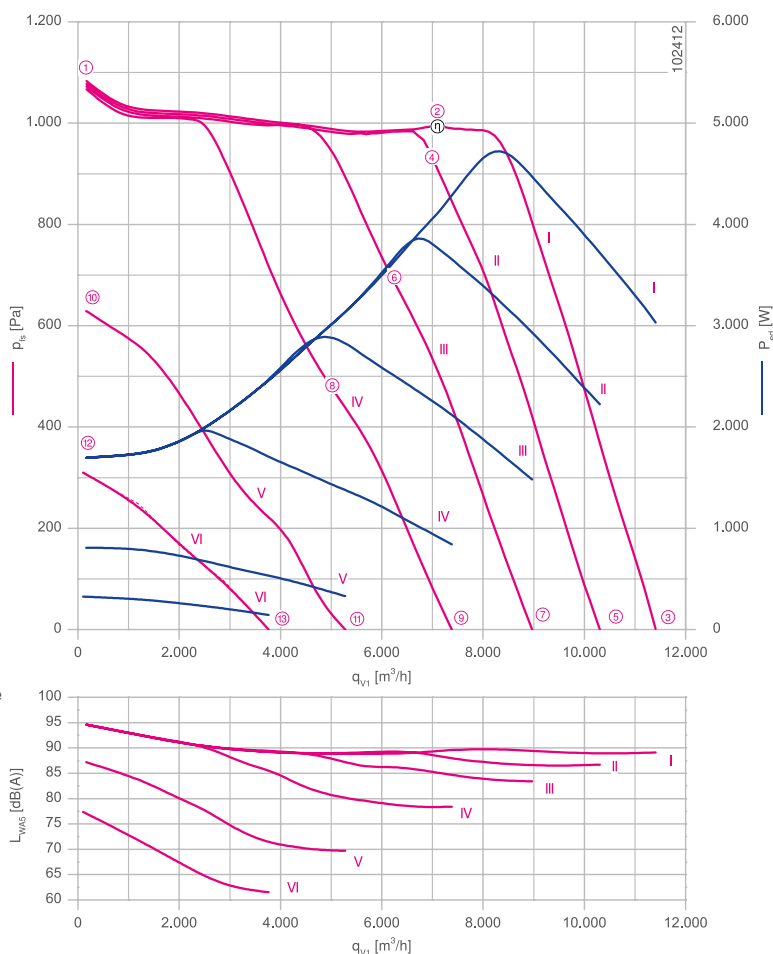
Efficiency η_{statA} : 51.1 %
 Efficiency grade: $N_{actual} = 53.6 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Connection diagram 1360-390 Page 358
 System components Page 286

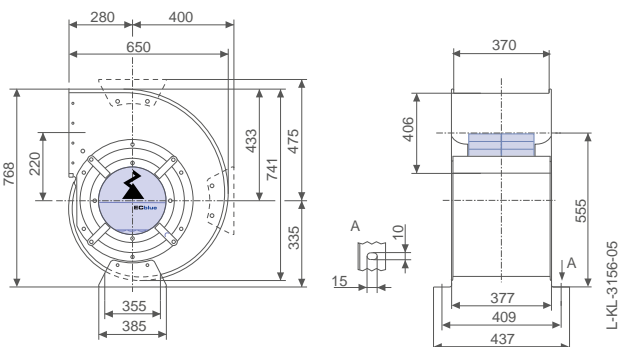
Characteristic curve



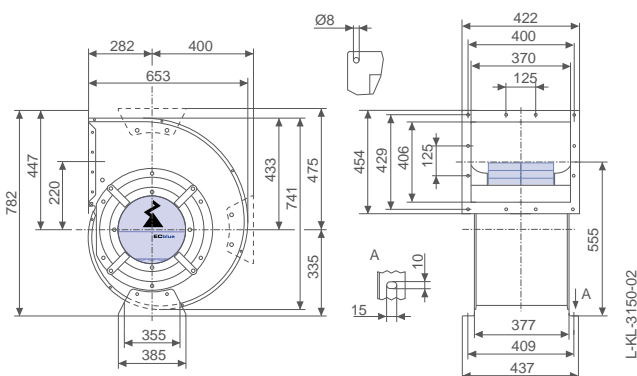
Measured with inlet nozzle, without guard grille according to ISO 5801

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H



Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD40R-ZIL.GL.4R	I	1360	100	①	3.40	2200	90	40
		1360		②	7.40	4800	90	
		800		③	4.60	3000	89	
	II	1360	80	④	6.00	3900	89	60
		720		⑤	3.40	2200	87	
		1360		⑥	4.40	2900	89	
	III	640	60	⑦	2.30	1500	83	
		1360		⑧	3.00	1950	91	
	IV	530	40	⑨	1.40	840	78	
		1040		⑩	1.35	800	87	
	V	380	20	⑪	0.72	330	70	
		740		⑫	0.72	320	77	
	VI	280	10	⑬	0.44	140	62	

Current values determined at 400V

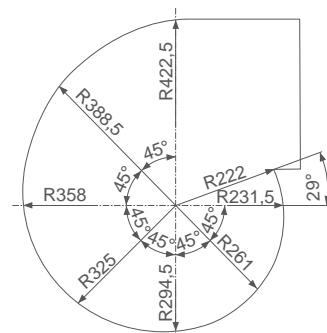
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD40R-ZIL.GL.4R	RD40R-ZIL.GL.4R
Article no.	115072	115071
Weight kg	50.00	51.00
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
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Used scroll



L-KL-3007-05

RD..R-ECblue

for three phase alternating current, 380-480 V

RD45R-ZIL



Description

Motor technology: EC
 Rated voltage U_N : 3-380-480 V*
 Rated frequency f_N : 50/60 Hz*
 Input power P_{ed} : 4.20 kW*
 Rated current I_N : 6.80-5.40 A*
 Rated speed n_N : 1200 rpm^{1*}
 Thermal class: THCL155*
 Min. permitted ambient temperature t_{amb} : -20 °C***
 Max. permitted ambient temperature t_{amb} at n_{max} : 40 °C
 Electrical connection: Integrated controller with attached cable
 Balancing quality: G 6.3
 Degree of protection : IP54
 Motor protection: integrated active temperaturemanagement
 Impeller: Galvanized sheet metal, uncoated
 Conformity: 2015, CE, UL

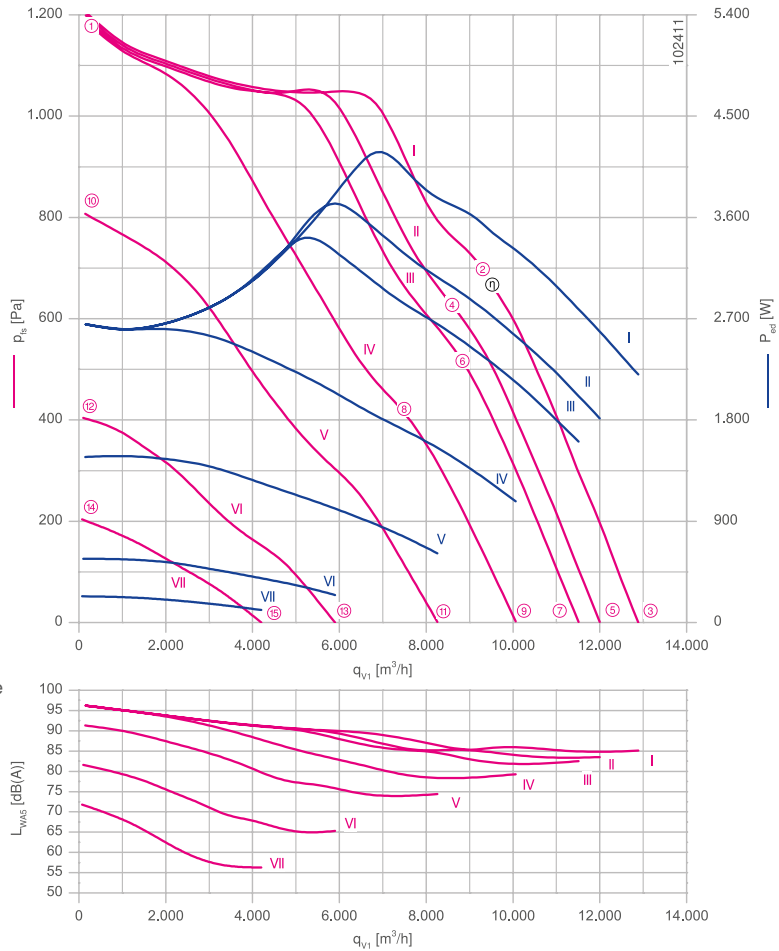
ErP-data

Efficiency η_{statA} : 54.7 %
 Efficiency grade: $N_{actual} = 57.6 / N_{target} = 44^{**}$
 EC controller integrated

*Rated data
 **ErP 2015

*** Occasional operation $\leq -20^\circ\text{C}$ and in consideration of lowest temperature according to product documentation permissible. For cooling applications with continuous operation $\leq -20^\circ\text{C}$ cold design on request.

Characteristic curve

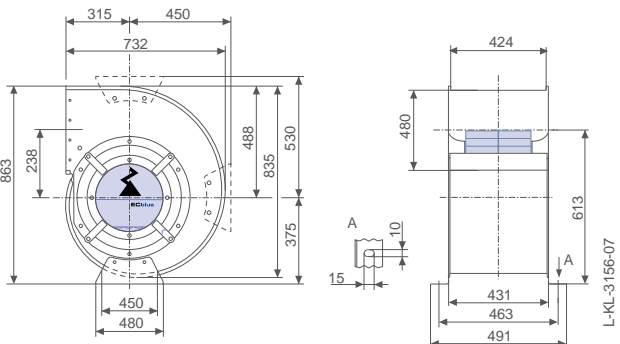


Measured with inlet nozzle, without guard grille according to ISO 5801

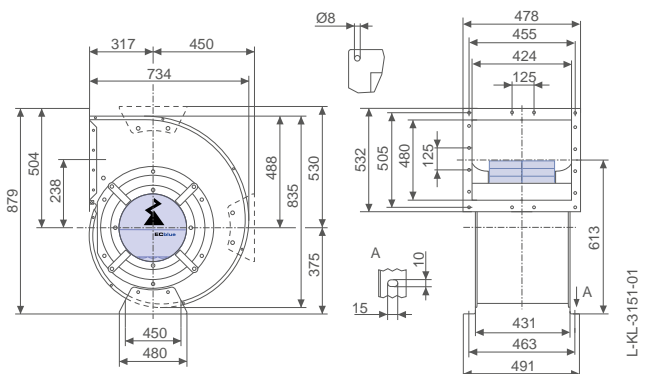
Connection diagram 1360-390 Page 358
 System components Page 286

Dimensions mm

Fan with housing double inlet, without flange, in installation position H



Fan with housing double inlet, with flange, in installation position H



Performance data

Type	Characteristic curve	Speed	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min ⁻¹	%					
RD45R-ZIL.GL.4R	I	1200	100	①	4.00	2700	94	40
		1200		②	6.40	4200	89	
		550		③	3.40	2200	85	
	II	1200	88	④	5.80	3700	90	60
		520		⑤	2.80	1800	84	
		1200		⑥	5.20	3500	90	
	III	500	80	⑦	2.50	1600	83	
		1200		⑧	4.00	2700	96	
	IV	440	60	⑨	1.75	1100	79	
		1200		⑩	2.30	1500	90	
	V	360	40	⑪	1.10	620	74	
		700		⑫	1.05	560	82	
	VI	260	20	⑬	0.60	240	65	
		500		⑭	0.58	230	72	
	VII	190	10	⑮	0.39	110	56	

Current values determined at 400V

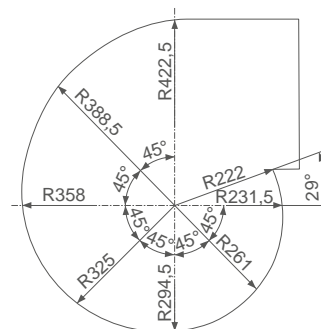
Fan ordering information

Design	RD (without flange)	RD (with flange)
Installation position	H	H
		
Type	RD45R-ZIL.GL.4R	RD45R-ZIL.GL.4R
Article no.	115074	115073
Weight kg	58.00	59.00
Inlet nozzle integrated		

Control technology

Control modules	Sensor control modules	Add-on modules	Operating terminal
			
Page 326	Page 328	Page 332	Page 344

Used scroll



L-KL-3007-05



System components

Product overview

Inlet nozzle	Page 288
Guard grille on suction side	Page 292
Service capacitor	Page 295

Information

ZBluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

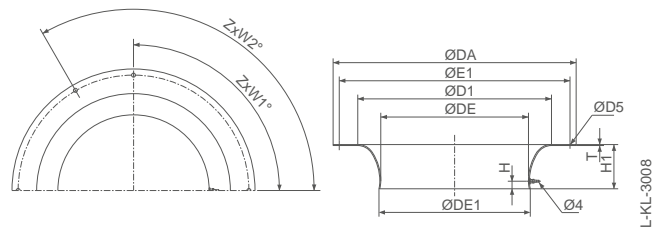
Control
technology

General notes

System components

Inlet nozzle for ZAbluefin and C/Cpro

- Material: Sheet steel, galvanised
- With measuring device for air flow measurement
- Fastening diameter according to DIN EN 12 220



Inlet nozzle with pressure tap

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)	ZxW2° (2)	Weight kg
RH25I	00414630	00414639	277	162.2	165.7	206.4	8.5	257	13.3	39.7	1.5	6x60°	-	0.6
RH28I	00414631	00414640	303	182.1	185.6	231.7	8.5	283	13.4	44.6	1.5	6x60°	-	0.8
RH31I	00414632	00414641	343	205.2	208.8	261.2	8.5	317	13.6	50.2	1.5	4x90°	8x45°	1.0
RH35I	00414633	00414642	378	231.7	235.4	294.9	8.5	352	13.8	56.7	1.5	4x90°	8x45°	1.2
RH40I	00414634	00414643	418	260.4	265.2	331.4	8.5	392	15.0	63.7	2.0	4x90°	8x45°	1.9
RH45I	00414635	00414644	464	293.5	298.4	373.5	8.5	438	16.3	71.9	2.0	4x90°	3x120°	2.3
RH50I	00414636	00414645	514	326.6	331.5	415.6	8.5	488	18.5	79.9	2.0	4x90°	3x120°	2.9
RH56I	00414637	00414646	564	366.3	371.3	466.1	8.5	538	22.8	89.6	2.0	4x90°	8x45°	3.4

(1) fastening inlet nozzle, (2) fastening guard grille

Inlet nozzle with pressure tap

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
RH22C	00401503	00401736	253	135	140	179	8.5	233	12	42	1.5	6x60°	0.6
RH25C	00401504	00401737	277	153	158	202	8.5	257	12	47	1.5	6x60°	0.7
RH28C	00401505	00401738	303	171	176	225	8.5	283	12	52	1.5	6x60°	0.8
RH31C	00411860	00412243	343	193	198	253	8.5	317	12	59	1.5	8x45°	1.1
RH35C	00411861	00412244	378	218	223	286	8.5	352	12	66	1.5	8x45°	1.3
RH40C	00411862	00412245	418	246	252	322	8.5	392	13	74	2.0	8x45°	2.1
RH45C	00411863	00412246	464	278	285	364	8.5	438	14	83	2.0	8x45°	2.5
RH50C	00411864	00412247	514	312	320	410	8.5	488	16	94	2.0	8x45°	3.1
RH56C	00411865	00412248	564	347	355	455	10.5	538	18	104	2.0	8x45°	3.8
RH63C	00411866	00412249	634	389	397	510	10.5	600	20	117	2.0	12x30°	4.7
RH71C	00412791	00412795	704	437	447	573	10.5	670	23	131	2.0	12x30°	5.8
RH80C	00412792	00412796	784	493	504	646	10.5	750	25	148	2.5	12x30°	9.0
RH90C	00412793	00412797	874	555	567	728	10.5	840	29	167	2.5	16x22.5°	11.2
RH10C	00412794	00412798	974	625	637	819	10.5	940	32	187	2.5	16x22.5°	14.0
RH11C	00401306	00401750	1075	694	707	910	10.5	1041	36	208	2.5	16x22.5°	17.0

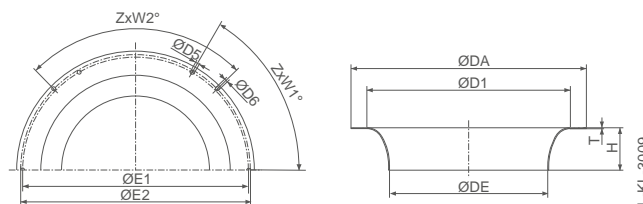
(1) fastening inlet nozzle



System components

Inlet nozzle for Vpro-ECblue and Vpro

- Material: Sheet steel, galvanised



Inlet nozzle

Size	Article no.	DA	DE	D1	D5	D6	E1	E2	H	T	ZxW1°	ZxW2°	Weight kg
		mm	mm	mm	mm	mm	mm	mm	mm	mm	(1)	(2)	
RH19V	00407897	170	125.5	145.5	4.5	-	158	-	14	1.0	4x90°	-	0.1
RH22V (220)	00407898	252	155.0	195.0	5.5	4.3	242	245	21	1.0	6x60°	4x90°	0.3
RH22V (225)	00407899	223	146.4	196.6	4.5	-	210	-	28	1.0	4x90°	-	0.2
RH25V	00407900	255	165.0	221.6	4.5	-	240	-	31	1.0	4x90°	-	0.3
RH28V	00275848	265	180	234.6	7.0	-	250	-	43	1.0	6x60°	-	0.4
RH31V	00335943	300	203	260.6	7.0	-	285	-	54	1.0	6x60°	-	0.5
RH35V	00275850	338	228	292.2	7.0	-	315	-	58	1.0	6x60°	-	0.6
RH40V	00275570	374	257	324.9	9.0	-	350	-	66	1.0	6x60°	-	0.8
RH45V	00275571	413	287	364.0	9.0	-	390	-	71	1.0	6x60°	-	0.9
RH50V	00275572	456	323	410.0	9.0	-	430	-	79	1.0	6x60°	-	1.1
RH56V	00278489	530	361	459.0	9.0	-	510	-	87	1.5	6x60°	-	2.2
RH63V	00279305	745	407	510.3	11.5	-	720	-	95	1.5	12x30°	-	4.6

(1) fastening inlet nozzle, (2) fastening guard grille

Inlet nozzle for ZAvblue with EC055

Inlet nozzle

Size	Article no.	DA	DE	D1	D5	D6	E1	E2	H	T	ZxW1°	ZxW2°	Weight kg
		mm	mm	mm	mm	mm	mm	mm	mm	mm	(1)	(2)	
RH18V..AR	00407897	170	126	146	5,5	4.3	158	-	14	1	4x90°	-	0.1
RH19V..AR	00407897	170	126	146	5,5	4.3	158	-	14	1	4x90°	-	0.1
RH19V..AR*	00375776	190	126	146	5,5	4.3	158	-	14	1	4x90°	-	0.2
RH20V..AR	00407897	170	126	146	5,5	4.3	158	-	14	1	4x90°	-	0.1
RH22V..AR	00412010	230	155	195	5,5	4.3	210	-	21	1	4x90°	-	0.2
RH22V..BR	00407899	223	145	196	5,5	4.3	210	-	28	1	4x90°	-	0.2
RH25V..AR	00407900	255	164	222	5,5	4.3	240	-	31	1	4x90°	-	0.3

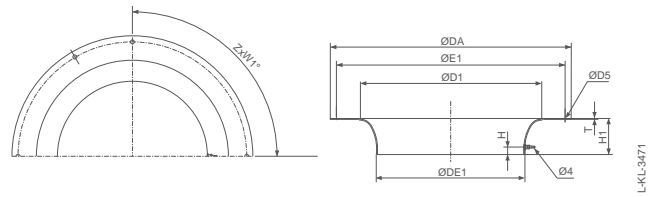
(1) fastening inlet nozzle

*for the use of the RH19V.AR with pressure tapping incl. annular piping (accessory art. 00705277)

System components

Inlet nozzle for ZAvblue

- Material: composite material. black



Inlet nozzle

Size	Article no.	Article no. with measuring device	DA	DE1	D1	D5	E1	H1	H	T	ZxW1°	Weight
			mm	mm	mm	mm	mm	mm	mm	mm	(1)	kg
RH25V	00412364	00412601	303	183.5	224.1	9.0	283	32.3	10.5	2	6x60°	0.1
RH28V	00412366	00412602	343	204.9	250.6	9.0	317	35.3	12.0	2	8x45°	0.2
RH31V	00412368	00412603	378	230.8	282.6	9.0	352	40.3	14.5	2	8x45°	0.2
RH35V	00412370	00412604	418	258.0	316.6	9.0	392	45.3	16.0	2	8x45°	0.2
RH40V	00411684	00411994	464	298.1	362.8	9.0	438	50.7	15.5	4	8x45°	0.5
RH45V	00411686	00411995	514	331.1	406.8	9.0	488	56.6	17.5	4	8x45°	0.7
RH50V	00412014	00412357	564	366.1	448.1	9.0	538	63.1	20.5	4	8x45°	0.8
RH56V	00412015	00412358	634	408.1	499.9	10.5	600	71.6	23.0	4	12x30°	1.0
RH63V	00412371	00412605	704	453.6	556.6	10.5	670	80.7	29.5	4	12x30°	1.2

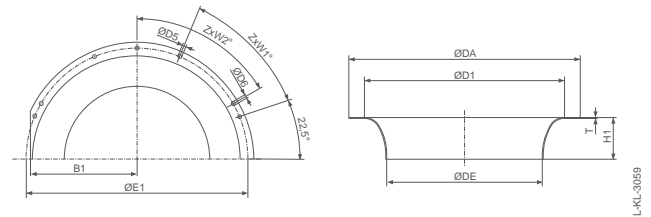
(1) fastening inlet nozzle



System components

Inlet nozzle for R-series

- Material: galvanised sheet steel



L-KL-3059

Inlet nozzle

Size	Article no.	B1 mm	DA mm	DE mm	D1 mm	E1 mm	H1 mm	T mm	ZxW1° (1)	ZxW2° (2)	Weight kg
RG11R	00413145	-	128	88	106	118	13	1	-	4x90°	0.1
RG12R	00413146	-	142	100	116	132	9	1	-	4x90°	0.1
RG13R	00413147	-	150	112	132	142	12	1	3x120°	4x90°	0.1
RG14R	00413148	-	170	125.5	145.5	158	14	1	3x120°	4x90°	0.1
RG15R	00413148	-	170	125.5	145.5	158	14	1	3x120°	4x90°	0.1
RG16R	00413149	-	185	130	154	175	17	1	-	4x90°	0.1
RG18R	00412586	-	232	143	187.8	212	31	1	6x60°	---	0.3
RG20R	00412587	-	253	160	207.2	233	39	1	6x60°	---	0.3
RG22R	00412588	-	277	180	234.6	257	43	1	6x60°	---	0.4
RG25R	00411503	140.0	303	192	268	383	53	1	6x60°	-	0.5
RG28R	00411504	158.4	343	228	292.2	317	58	1	-	8x45°	0.6
RG31R	00411505	174.6	378	257	324.9	352	66	1	-	8x45°	0.8
RG35R	00411506	193.1	418	287	364	392	71	1.5	-	8x45°	0.9
RG40R	00411507	214.3	464	323	410	438	79	1.5	-	8x45°	1.1
RG45R	00411508	237.4	514	361	459	488	87	1.5	-	8x45°	2.0

(1) fastening inlet nozzle, (2) fastening guard grille

Information

ZABluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

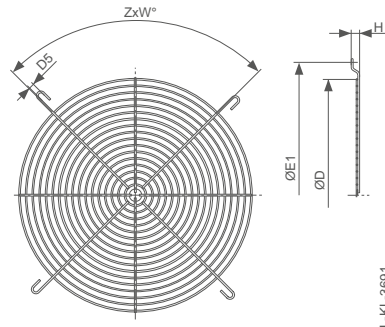
Control
technology

General notes

System components

Suction side guard grille for ZAbuefin and C/Cpro

- Material: Steel, coated, black RAL 9005
- Maximum mesh width ≤ 10 mm



Guard grille on suction side

Size	Article no.	D	E1	D5	H	ZxW° (1)	Weight kg
		mm	mm	mm	mm		
RH/GR25I	00411643	203	257	6,5	8	3x120°	0,2
RH/GR28I	00411570	245	283	6,5	8	3x120°	0,3
RH/GR31I	00411571	266	317	6,5	8	4x90°	0,3
RH/GR35I	00411572	308	352	6,5	8	4x90°	0,4
RH/GR40I	00411573	350	392	6,5	8	4x90°	0,5
RH/GR45I	00411574	392	438	6,5	8	4x90°	0,7
RH/GR50I	00411575	434	488	6,5	8	4x90°	0,8
RH/GR56I	00411644	476	538	6,5	8	4x90°	1,0

(1) fastening guard grille

Guard grille on suction side

Size	Article no.	D	E1	D5	H	ZxW° (1)	Weight kg
		mm	mm	mm	mm		
RH/GR25C	00411643	203	257	6,5	8	3x120°	0,2
RH/GR28C	00411570	245	283	6,5	8	3x120°	0,3
RH/GR31C	00411571	266	317	6,5	8	4x90°	0,3
RH/GR35C	00411572	308	352	6,5	8	4x90°	0,4
RH/GR40C	00411573	350	392	6,5	8	4x90°	0,5
RH/GR45C	00411574	392	438	6,5	8	4x90°	0,7
RH/GR50C	00411575	434	488	6,5	8	4x90°	0,8
RH/GR56C	00411644	476	538	6,5	8	4x90°	1,0
RH/GR63C	00411645	535	600	9,0	12	6x60°	1,4

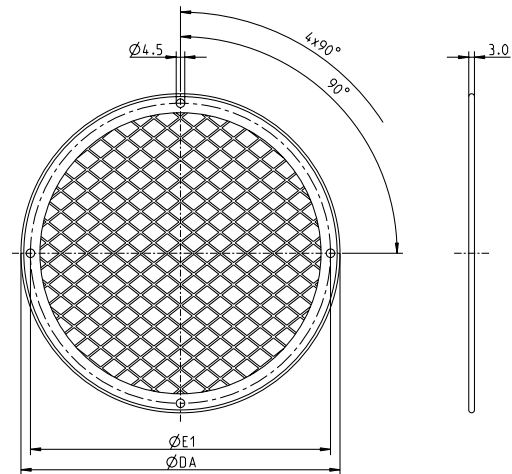
(1) fastening guard grille

System components

Suction side guard grille for Vpro-ECblue and Vpro

- Material: Steel, galvanised
- maximum mesh width < 8 mm

Guard grille on suction side			
Size	Article no.	DA mm	E1 mm
RH19V	00408187	168	158
RH22V (220)	00408188	255	245
RH22V (225)	00408189	220	210
RH25V	00408190	250	240
RH31V (.W_)	00408192	291	281



L-KL-2580

Information

ZAbuefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

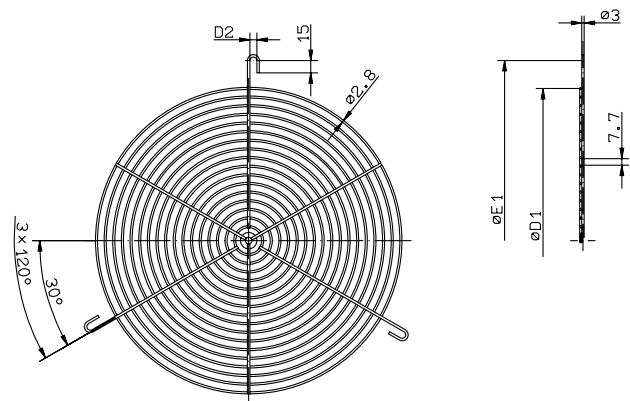
System
components

Control
technology

General notes

- Material: Steel, coated, black
- maximum mesh width < 8 mm

Guard grille on suction side				
Size	Article no.	D1 mm	D2 mm	E1 mm
RH28V	00279178	202	6.5	259
RH31V (.0_)	00279179	223	6.5	286
RH31V (.2_)	00279179	223	6.5	286
RH35V	00279180	265	6.5	322
RH40V	00279181	286	8.5	356
RH45V	00279182	328	8.5	395
RH50V	00279183	370	8.5	438

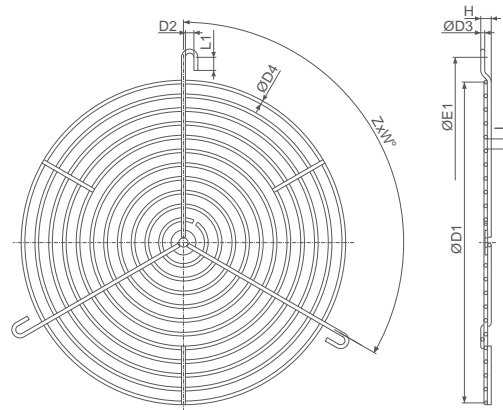


L-KL-1665

System components

Suction side guard grille for R-series, single inlet

- Material: Steel, coated, black RAL 9005
- Maximum mesh width < 8 mm



Guard grille on suction side

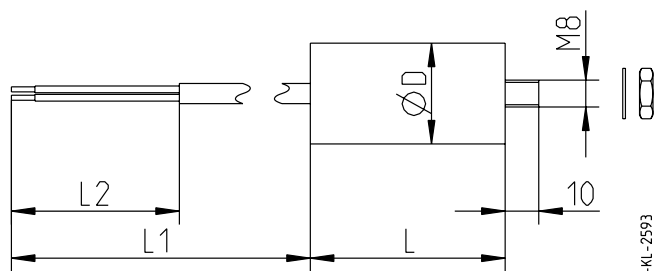
Size	Article no.	D1 mm	D2 mm	D3 mm	D4 mm	E1 mm	H mm	L mm	L1 mm	ZxW° (1)	Number of rings
RG25R	00411570	245	6.5	3	2.8	283	8	7.7	10	3x120°	11
RG28R	00411571	266	6.5	3	2.8	317	8	7.7	10	4x90°	12
RG31R	00411572	308	6.5	3	2.8	352	8	7.7	10	4x90°	14
RG35R	00411573	350	6.5	3	2.8	392	8	7.7	10	4x90°	16
RG40R	00411574	392	6.5	3	2.8	438	8	7.7	10	4x90°	18
RG45R	00411575	434	6.5	3	2.8	488	8	7.7	10	4x90°	20

(1) fastening guard grille



Service capacitor

- Material: plastic housing
- Wiring: AWG18 or AWG20
- Max. Voltage: $U_{max} = 400V$
- Ambient temperature: $-25\text{ }^{\circ}C$ to $+85\text{ }^{\circ}C$



L-KL-2593

Information

ZABluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAVblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

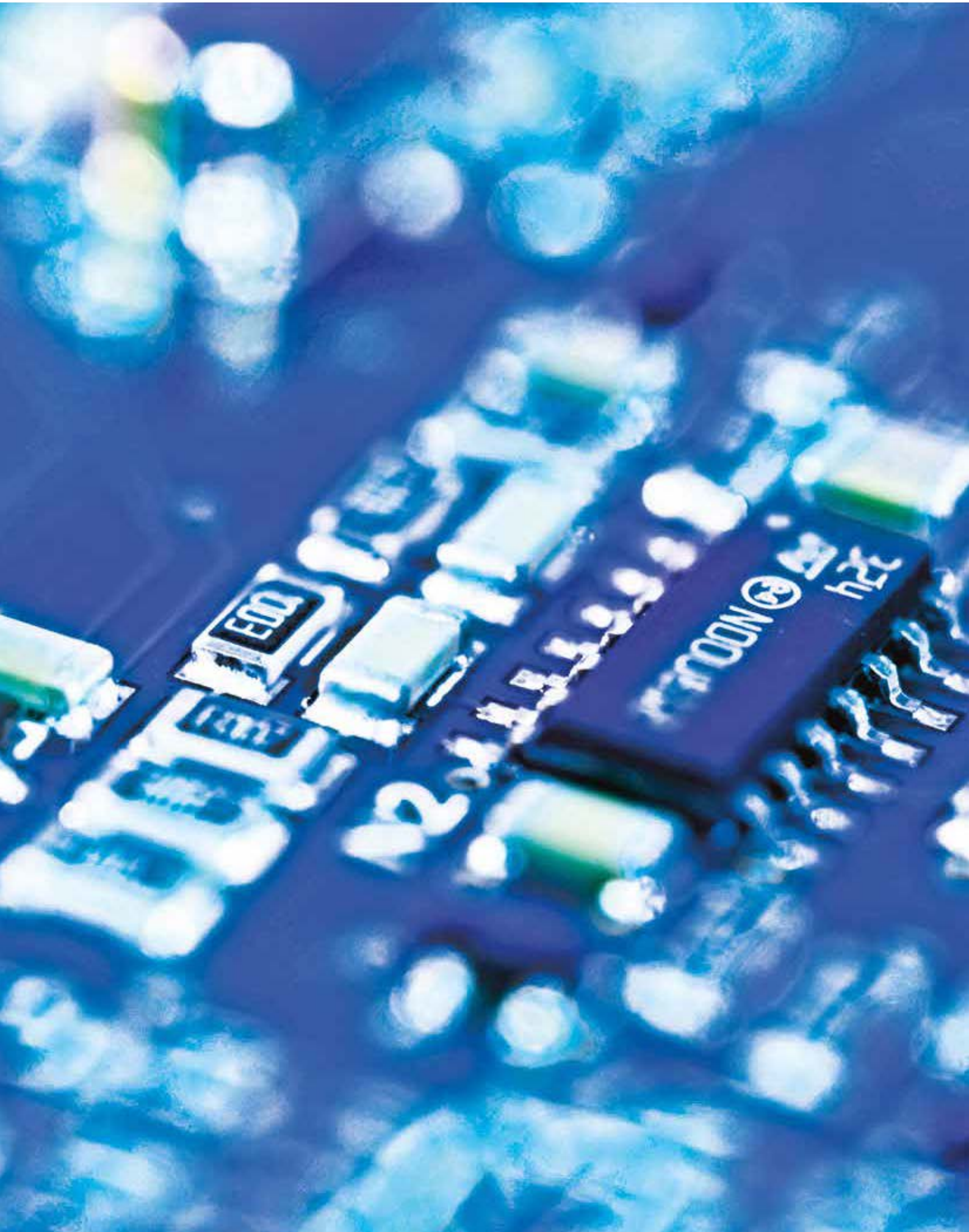
Housing fans

System
components

Control
technology

General notes

Service capacitor					
Capacity μF	Article no.	D mm	L mm	L1 mm	L2 mm
1.0	02006926	26	53	350	50
1.5	02006927	26	53	180	50
2.0	02006930	26	53	350	50
2.5	02006931	26	53	350	50
3.0	02006932	26	53	350	50
3.5	02011670	30	49	210	210
4.0	02006933	30	58	350	50
5.0	02006934	30	58	350	50
6.0	02006935	30	72	350	50
7.0	02006936	30	78	350	50
8.0	02006937	30	98	350	50
10.0	02006938	35	71	350	50
12.0	02006939	35	71	350	50
14.0	02006940	40	68	350	50
16.0	02006941	40	68	350	50
20.0	02006942	40	93	350	50
25.0	02006943	40	92	350	50
30.0	02006944	40	133	350	50
35.0	02006945	40	133	350	50
40.0	02006961	45	119	350	50
50.0	02018401	50	117	250	40



Control technology

Product overview

ZAcode - Products and philosophy	Page 298
Motor protection units	Page 304
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UNIcon control modules	Page 326
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Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAblue-
ECblue

Vpro-ECblue

ZAcube

Housing fans

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General notes



ZACode

The unique fan control philosophy

Market challenge

Manufacturers of products which involve moving air are confronted with a variety of products and technologies.

In addition to fans with asynchronous motors, which are mainly controlled by frequency inverters, the proportion of EC motors (highly efficient motors with permanent magnets and integrated power electronics) is rising.

Solutions are increasingly available involving mounting frequency inverters on internal rotor motors according to the IEC standard.

That is why companies rely on different manufacturers and technologies to cover the power range of smaller than 1 kW to 30 kW.

This involves a great effort in terms of design, documentation and storage of parts as well as employee training.

Interface problems, e.g. the interaction of frequency inverters and fans of different manufacturers, involve effort and expenditure which may delay projects and lead to complaints.

ZIEHL-ABEGG's philosophy

Simple products and solutions.

From the planner via production to installation and maintenance - everyone involved with the system should have an easy time and be able to understand it.

ZIEHL-ABEGG has been busy with this challenge adapting products which cover the decisive power range accordingly. Products have been reduced to the essential, but can be easily expanded to meet requirements at any time.

ZIEHL-ABEGG's products are 100% matched to one another. This means ZIEHL-ABEGG fans and frequency inverters create an energy-saving, quiet and reliably functioning system. The same is true of the combination of control modules with ECblue fans and other products.

At ZIEHL-ABEGG, you have only one contact person for fans, motors and the perfectly matching one-stop control engineering.

This philosophy makes the effort involved easier in terms of planning, production, installation and maintenance.

Covering the big power range from < 1 kW up to 30 kW



ECblue Basic
Power: < 1 kW up to 6 kW



AMblue / PMblue
Power: 2.2 kW up to 22 kW



Frequenzumrichter Fcontrol Basic /
Icontrol Basic
Power: 1.1 kW up to 30 kW



ZAcode - the solution - your advantages

On a cross-product basis - ZAcode encompasses the key technologies on the market

- Axial and centrifugal fans
- EC technology and AC technology
- Integrated electronics and external electronics for speed control
- Communication and control intelligence

Simplicity

- Can be operated and understood by everyone

Uniformity

- Identical connection concept of the various products and technologies
- Identical communication (add-on modules for required bus systems)
- Identical functionality
- Modular expandability, thus providing a cost-effective basis
- Expandable on demand - sustainable
- Available in a wide power range of smaller than 1 kW to 30 kW

Safety and reliability

- courtesy of perfectly matched systems
- courtesy of error prevention during installation, start-up, operation and maintenance

Speed

- Uniformity ensures speed in relation to engineering. Hence, the short time to market in relation to product development. Fast start-up and service.

Cost savings

- Your processes will become more efficient, e.g. with regard to engineering
- Basic equipment of ZIEHL-ABEGG products = Buy basic equipment and pay, buy add-ons if necessary - buy only what you need!

Flexibility

- Modular system, expandable and customisable
- Customisable to current and future bus systems
- Basic expandability

Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAblue-
ECblue

Vpro-ECblue

ZAcube

Housing fans

System
components

Control
technology

General notes

ZAcode

Simple, cross-product, uniform

Fans with ECblue Basic
< 1 kW to approx. 6 kW

Highly efficient external rotor motors with permanent magnets and integrated power electronics



The unique fan co

Same con

L1		N		
L1	L2	L3	K1	

Easily expandable for inte

AM-MODBUS

AM-CAN-OPEN

AM-LON



Fans with asynchronous motors
< 1 kW to approx. 30 kW

Control via mounted Fcontrol Basic or Icontrol Basic frequency inverters



Expandable and combin

AM-PREMIUM

UNIcon control
modules



Control philosophy

Connectivity

E1	D1	GND	10V	24V
----	----	-----	-----	-----

Integration into bus systems

AM-PROFIBUS AM-ETHERCAT and others



Variable control intelligence



PMblue centrifugal fans with mounted PMIcontrol Basic-M

< 2.2 kW to approx. 22 kW

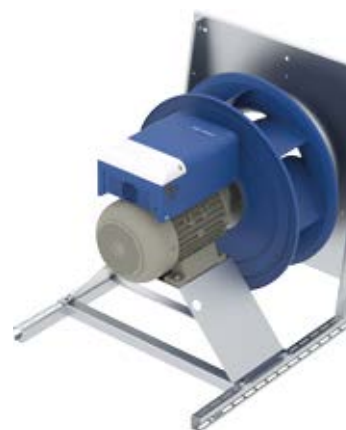
PMblue combines PM motor with permanent magnets and mounted frequency inverter (optionally mountable PMIcontrol)



AMblue centrifugal fans with mounted PMIcontrol Basic-M

< 2.2 kW to 22 kW

AMblue combines AC motor (asynchronous motor) and mounted frequency inverter



Information

ZABluefin-ECblue

Cpro-ECblue

C-ECblue

ZABlue-ECblue

Vpro-ECblue

ZAcube

Housing fans

System components

Control technology

General notes



Products with system competence

ZIEHL-ABEGG is the only fan manufacturer that develops methods to change the speed of fans and produces the control engineering itself.

The result for our customers is perfectly matched products which provide added value in all applications involving moving air.

Together with the fans, perfect system solutions are the result. A major advantage for our customers is the supply of a wide variety of one-stop solutions and technologies. There is a contact person for customers for planning and implementing daily challenges for all products.

A wide range of control engineering products are available to choose from:

Voltage controller



Frequency inverters



Control modules



Motor protection units



Sensors



Options for speed control

Voltage controllers

Voltage controllers have been established for many years. These are available as electronic voltage controllers, so-called phase angle controllers, or as transformer-based controllers.

Typically, voltage variable external rotor motors (asynchronous motors) are controlled using these products.

The advantage of this technology is extremely low investment costs. Electronic voltage controllers are available for rated currents up to 80 A. There are designs for all applications in ventilation technology.

Up till now, transformer-based voltage controllers have been established in simple applications. Integrated 5-step switches are standard and the products control motors and fans without producing electronic running noise.



Electronic voltage controllers and 5-step transformer-based controllers for 1~ and 3~ power supply.



Highly efficient frequency inverters

ZIEHL-ABEGG frequency inverters cover an extremely wide range of applications. To make it very easy for operators, the frequency inverters are equipped so that they can be quickly put into operation and are easy to operate in ventilation system applications. Frequency inverters are available up to an output of approx. 30 kW (rated current 50 – 62 A).

Frequency inverter Fcontrol

The integrated, all-pole sine filter makes the Fcontrol unique among frequency inverters. Comparable to the power supply, the Fcontrol controls motors, fans without increased demands on the winding insulation and motor bearings.

Operation is extremely energy-saving, efficient and without electromagnetic running noise. No shielded motor line is necessary. The cable length is not limited by the Fcontrol. Smooth parallel operation of motors and fans is guaranteed and typical frequency inverter measures are unnecessary.



Fcontrol frequency inverter for 1~ and 3~ power supply. Control of motors and fans (external rotor motors or motors according to the IEC standard).

Highly efficient fan drives ECblue, PMblue and AMblue

ECblue are highly efficient external rotor motors with permanent magnets and integrated power electronics. The result is a highly compact drive system for controlled operation with a variety of fans with different impeller geometries.

PMblue combines PM motor with permanent magnets and PMcontrol / PMIcontrol frequency inverter. The AMblue drive system combines an asynchronous motor with a mounted PMIcontrol Basic-M. ZIEHL-ABEGG offers an enormous range of different fan designs with a variety of motor technologies, thus covering an enormous power range for moving air.



Frequency inverters Icontrol / PMcontrol / PMIcontrol

The Icontrol standard frequency inverters for inexpensive easy control of motors and fans (internal rotor asynchronous motors according to the IEC standard).

PMcontrol are comparable, but these are designed for PM motors and fans with PM motors (PM = internal rotor motors with permanent magnets according to the IEC standard).

PMIcontrol Basic-M can control both motor types, asynchronous motors and PM motors. These are designed as PMIcontrol Basic-M for direct mounting on internal rotor motors according to the IEC standard.

Motor protection devices

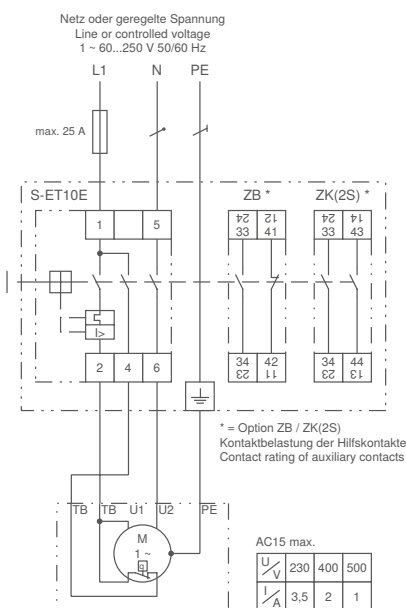
For monitoring thermostats (TB)



Complete motor protection is implemented by connecting the thermostat, which is integrated into the motor, to the motor protection unit. Most ZIEHL-ABEGG external rotor motors are equipped with thermostats (TB) in the winding. These thermostats open during high winding temperatures, facilitating the direct monitoring of the temperature in the motor, thus ensuring the direct protection of the motor. When the thermostat opens, the motor protection unit is triggered and has to be manually reset; this is done to prevent an unwanted reconnection after the motor has cooled off.

Additional functions of the 3~ STDT motor protection units: They have an overcurrent trigger integrated. That means the device acts like a fuse and can be used for "current distribution". The adjustable overcurrent trigger protects the cable leading to the connected motors. Dual terminals located on the input and output sides of the motor protection unit facilitate simple wiring of multiple motors or fans on the output side of a powerful controller.

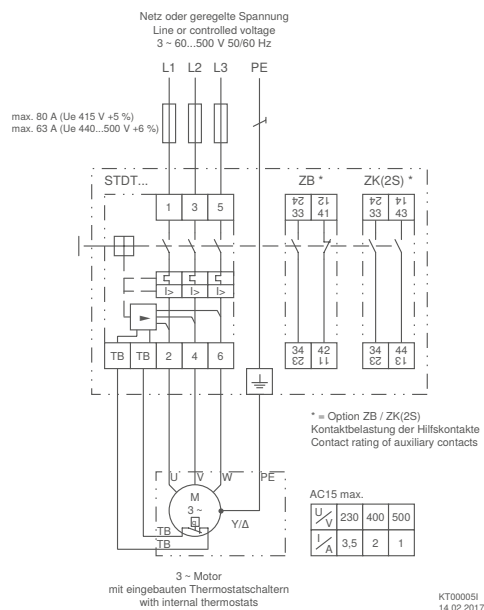
Connection diagram S-ET



- ① Line or controlled voltage
- ② Motor with integrated thermostats
- ③ Contact load of auxiliary contacts

* Option ZB/ZK(2S)

Connection diagram STDT



- ① Line or controlled voltage
- ② Motor with integrated thermostats
- ③ Contact load of auxiliary contacts

* Option ZB/ZK(2S)



Equipment/Characteristics

Complete motor protection

Automatic shut-off when connected thermostat „TB“ opens (direct temperature monitoring in the motor winding).

Integrated button

Switch connected motors on and off manually. Manual reset after motor fault (protection from unwanted restarting)

Optional: operating status contact

Type „ZB“ with one open contact and one close contact
Type „ZK“ with two close contacts

Optional padlock feature

Type „Zrep“ for the IP55 housing version. The motor protection unit can be locked during servicing (max. 3 locks)

Cable protection (only in 3~ STDT devices)

Via integrated overcurrent trigger, which can be adjusted to the cable cross section.

Accessories

Type	Article no.	Weight kg
ZB	382013	0.03
ZK	382022	0.03
Zrep	382025	0.11

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components

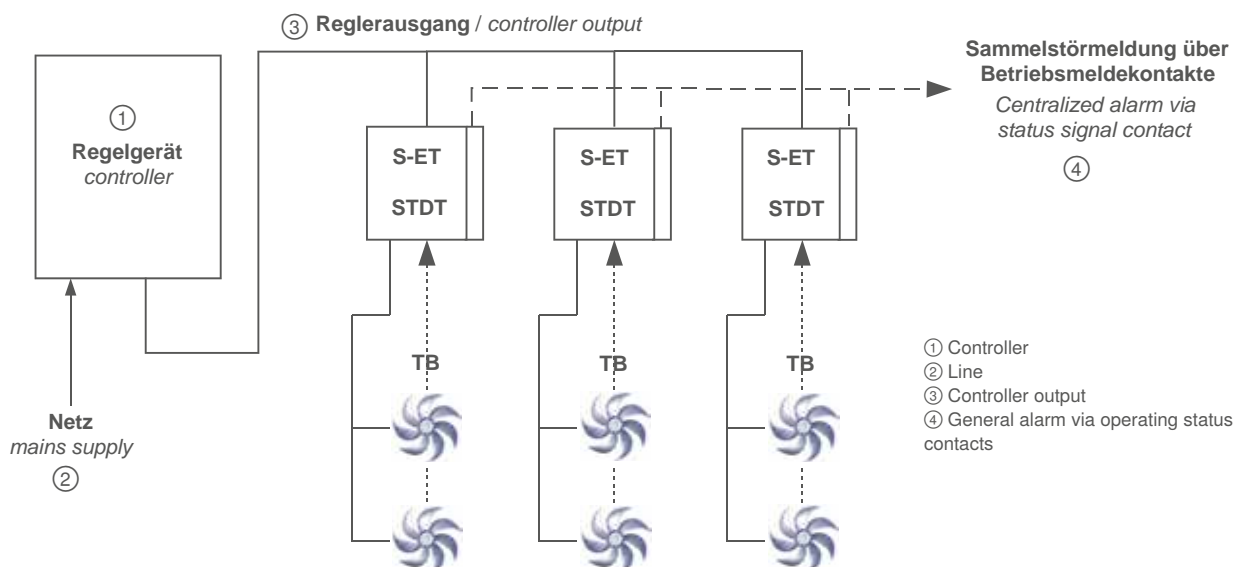
Control
technology

General notes

Motor protection units for monitoring thermostats (TB)										
Line	Installation	Type	Article no.	Rated current	Overcurrent trigger	Minimum ambient temperature	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
				A		°C	°C		kg	mm
1~ 60...250V 50/60Hz	Rail according to EN 60715	S-ET10E	382021	10		-25	55	IP20	0.17	45 x 80 x 85.5
1~ 60...250V 50/60Hz	Wall mounting	S-ET10	382020	10		-25	40	IP55	0.44	80 x 150 x 97.5
3~ 60...500V 50/60Hz	Rail according to EN 60715	STDT16E	382012	16	Overcurrent 10...16 A	-25	55	IP20	0.33	54 x 80 x 85.5
3~ 60...500V 50/60Hz		STDT25E	382015	25	Overcurrent 20...25 A	-25	55		0.50	54 x 80 x 85.5
3~ 60...500V 50/60Hz	Wall mounting	STDT16	382011	16	Overcurrent 10...16 A	-25	40	IP55	0.60	80 x 150 x 97.5
3~ 60...500V 50/60Hz		STDT25	382014	25	Overcurrent 20...25 A	-25	40		0.75	80 x 150 x 97.5

Application example

Motor protection units S-ET or STDT, depending on the line. With S-ET monitoring of individual fans, with STDT monitoring of several fans per motor protection unit possible. Thermostats are wired in series.



Frequency inverters

1~ Fcontrol, universal controller with display and bypass main switch



The Fcontrol frequency inverters provide special advantages. Fcontrols have an all pole effective sine filter integrated which provides sinusoidal output voltage that is comparable with the standard mains. That means the frequency inverter enables reliable, demand-oriented and energy-saving control of asynchronous motors (external rotor motors, IEC standard motors) without having to take measures into consideration required by standard frequency inverters.

The advantages provided by the Fcontrol frequency inverter are:







- Operation without shielded motor feed lines
- The line length is not restricted by Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No risk to motors (they do not have to be frequency inverter compatible) since they are supplied with sinusoidal voltage that corresponds to the line voltage.

The benefits are especially advantageous in plants in which motors or fans are operated in parallel on a frequency inverter. Motors connected in parallel often means long cable lengths which is no problem with the Fcontrol. On top of that, unshielded cables can be used.

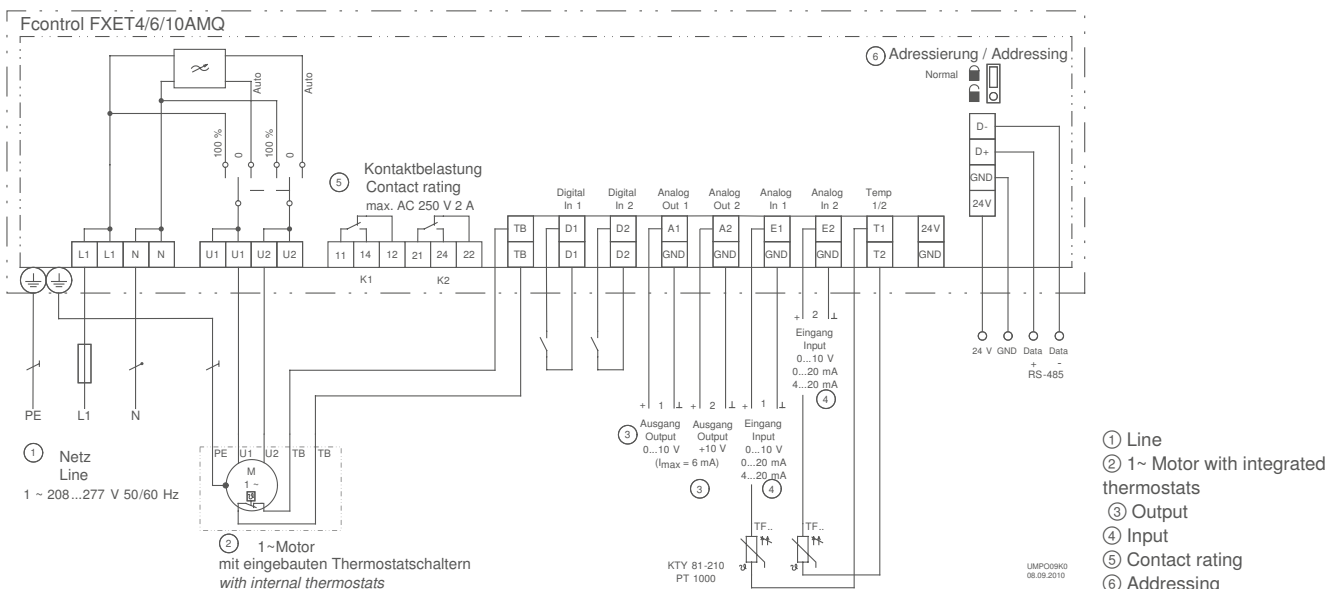
The Fcontrol universal devices are ideal for the following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation tasks, clean room technology.

Fast commissioning for typical applications in the stated sectors by selecting pre-programmed operating modes possible.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Integrated all-pole effective sine filter

Phase to phase and phase to PE conductor. Thus sinusoidal output voltage. Frequency inverter typical measures such as shielded motor cables are not necessary.

Integrated PFC (Power Factor Controller)

Active power factor adaptation for sinusoidal current consumption. Therefore low line feedback.

Integrated main switch with bypass function

Switch positions: Auto (for control mode), 0 and 100 % (100 % means that the integrated device electronics are bypassed, the applied line voltage is switched to the output).

LC multifunction display with clear text display:

Different menu languages are selectable

Simple commissioning by operating modes:

Typical operating modes, e.g. for air conditioning, refrigeration or ventilation technology can be selected.

Simple programmability:

Typical settings can be made easily: e.g. setting of a minimum speed, limitation of the maximum speed, inversions and limits. Setting, e.g. for multistep mode

2 analog inputs for sensors or setting signals:

Analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA
analog input E2: programmable, e.g. comparison with sensor 1, difference to sensor 1, average value formation, setpoint setting, setpoint adaptation (e.g. outside temperature-dependent)

2 digital inputs D1 and D2:

Programmable, e.g. enable, setpoint switchover 1 or 2, switchover control or manual mode, switchover E1 or E2, control function reversal, output limitation, display of external fault, reset, direction of rotation reversal

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

2 digital outputs (relays) K1 and K2:

Setting by operating modes or manually programmable, e.g. operating indication, fault indication, limits, external fault at digital output, activation of external devices, e.g. heating, shutters, group control fans, etc.

Integrated motor protection function:

Connection possibility for thermostats TB

Interface RS485 MODBUS RTU:

Integration into bus system

Set protection / memory for settings:

Activation of set protection against unauthorised access, restoration of made settings

Event memory:

Querying of occurred events, operating times, etc.

Fcontrol, universal controller with display and bypass main switch

1~ 208...277V 50/60Hz

Type	Article no.	Rated voltage V	Rated current A	Rated temperature °C	Max. line fuse A	Max. heat dissipation W	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
FXET4AMQ	308134	230	4	35	16	65	55	IP54	3.40	240 x 284 x 132
FXET6AMQ	308157		6	40	16	103	55		5.70	250 x 302 x 212
FXET10AMQ	308136		10	50	16	187	55		6.80	250 x 302 x 212

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Frequency inverters

1~ Fcontrol, speed controller optional with bypass main switch



The 1~ Fcontrol frequency inverters with all-pole effective sine filter are available in the version as speed controllers. There is an optional version with integrated main switch (Auto – 0 – 100%).

The speed setting can be made by a master control by 0 – 10 V, e.g. by a ZIEHL-ABEGG control module of the UNIcon series. The speed can also be set manually by connecting a potentiometer. Two-stage operation with adjustable speeds is possible optionally. The frequency inverters control asynchronous motors (external rotor motors, IEC standard motors) gently, requirement-based and energy saving.

Advantages achieved by Fcontrol frequency inverters are:

- High energy saving
- Operation without shielded motor cables
- The cable length is not limited by the Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No danger to motors (these must not be suitable for frequency inverters) because they are supplied with sinusoidal voltage according to the mains voltage.

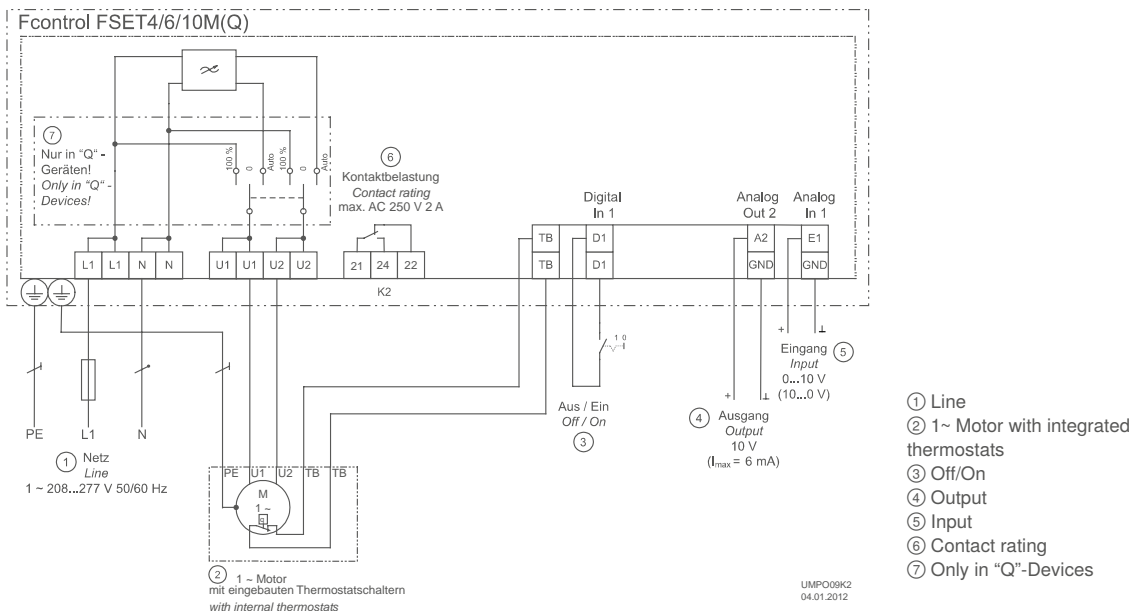
Input for sensors or speed settings through



Setting of the desired speed through device or by external default, e.g. 0...10 V

The 1~ Fcontrol speed controllers are universally suitable for many different applications: E.g. refrigerant technology, air conditioning, agriculture, general ventilation tasks, clean room technology.

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment / Characteristics

Integrated all pole effective sine filter

Phase to phase and phase to grounded conductor thus producing sinusoidal output voltage. Typical measures for frequency inverters such as shielded motor feeder cables are not necessary.

Integrated PFC (Power Factor Controller)

Active power factor adaptation for sinusoidal current consumption, resulting in lower harmonic current emissions.

1 analogue input for speed preset

Input E1 for 0-10 V setpoint signal or 10-0 V depending on device version

1 digital input

Input D1 for enable (standby), for external reset (motor fault)

1 digital output (relay)

Floating change-over contact for error message

Integrated motor protection function

Connection facility for "TB" thermostat

Optional equipment

Devices with integrated bypass main switch

Switch positions:

Auto (for speed control mode), 0 and 100% (100% = the integrated device electronics are bypassed, the applied line voltage is switched to the output)

Fcontrol as speed controller

1~ 208...277V 50/60Hz

Input	Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
			V	A	°C	A	W	°C		kg	mm
0-10 V	FSET4M	308128	230	4	35	16	65	55	IP54	3.20	240 x 284 x 115
	FSET6M	308156		6	40	16	103	55		5.50	250 x 302 x 195.5
	FSET10M	308130		10	50	16	187	55		6.60	250 x 302 x 195.5
	FSET4MQ	308154		4	35	16	65	55		3.30	240 x 284 x 132
	FSET6MQ	308155		6	40	16	103	55		5.60	250 x 302 x 212
	FSET10MQ	308187		10	50	16	187	55		6.70	250 x 302 x 212
10-0 V	FSET4M	308158		4	35	16	65	55		3.20	240 x 284 x 115
	FSET6M	308159		6	40	16	103	55		5.50	250 x 302 x 195.5
	FSET10M	308160		10	50	16	187	55		6.60	250 x 302 x 195.5
	FSET4MQ	308248		4	35	16	65	55		3.30	240 x 284 x 132
	FSET6MQ	308249		6	40	16	103	55		5.60	250 x 302 x 212
	FSET10MQ	308250		10	50	16	187	55		6.70	250 x 302 x 212

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Frequency inverters

3~ Fcontrol, universal controller with display



The Fcontrol frequency inverters provide special advantages. Fcontrols have an all pole effective sine filter integrated which provides sinusoidal output voltage that is comparable with the standard mains. That means the frequency inverter enables reliable, demand-oriented and energy-saving control of asynchronous motors (external rotor motors, IEC standard motors) without having to take measures into consideration required by standard frequency inverters.

The advantages provided by the Fcontrol frequency inverter are:







- Operation without shielded motor feed lines
- The line length is not restricted by Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No risk to motors (they do not have to be frequency inverter compatible) since they are supplied with sinusoidal voltage that corresponds to the line voltage.

The benefits are especially advantageous in plants in which motors or fans are operated in parallel on a frequency inverter. Motors connected in parallel often means long cable lengths which is no problem with the Fcontrol. On top of that, unshielded cables can be used.

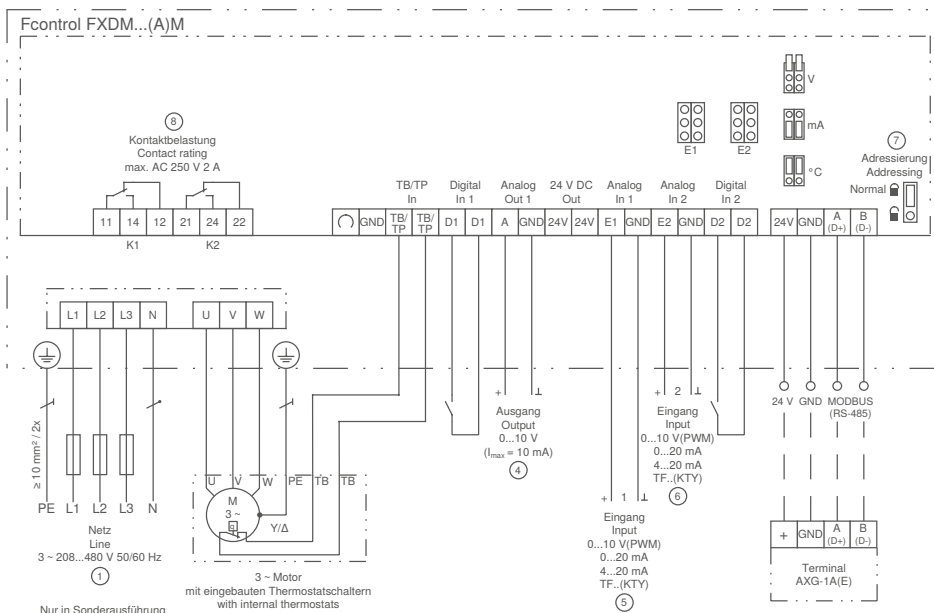
The Fcontrol universal devices are ideal for the following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation tasks, clean room technology.

Fast commissioning for typical applications in the stated sectors by selecting pre-programmed operating modes possible.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



- ① Line
- ② Only in special version suitable for IT system!
- ③ Motor feeder cable
- ④ Output
- ⑤ Input
- ⑥ Addressing
- ⑦ Contact rating



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/Characteristics

Integrated all pole effective sine filter

Phase to phase and phase to grounded conductor which means sinusoidal output voltage. Measures typical for frequency inverters such as shielded motor feed lines are not required.

LC-multifunction display with plain text:

Various menu languages can be selected

Simple commissioning through operating modes:

Typical operating modes, e.g. for air-conditioning, refrigeration or ventilation technology can be selected.

Easy to program:

Typical settings can be made: e.g., default a minimum speed, limit the maximum speed, inverting and limits. Setting, e.g. for 2-stage mode

2 analogue inputs for sensors or setpoint signals:

Analogue input E1 and E2: Setting through operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA
Analogue input E2: programmable, e.g. comparison to Sensor 1, difference to Sensor 1, average calculation, setpoint input, setpoint adjustment (e.g. dependent on outdoor temperature)

Two digital inputs. D2 and D1:

Programmable, e.g. enable, switchover Setpoint 2 or 1 switchover control or manual operation, switchover E2, or E2, reverse control function, limit output, display of external fault, reset, reverse the rotary direction

2, analogue output A1:

Setting through operating modes or manually programmable, e.g., output signal proportional modulation, output signal proportional input signal, invertible, 10 V constant voltage, group control

10 digital outputs (relays) K1 and K2:

Setting through operating modes or manual programming, e.g. operating status, limits, external fault on digital input, enabling external devices, e.g. heating, dampers, group control of fans, etc.

Integrated motor protection function:

Connection facility for PTC thermistors or alternatively thermostats (TB or TP).

Interface RS485 MODBUS RTU:

Integration into bus system

Setting protection / memory for settings:

Enable settings protection from unauthorised access, restore implemented settings

Event memory:

Query events that have occurred, operating times, etc.

Optional equipment

Add-on modules for frequency inverters

- IO add-on module type Z-module, Article No. **380052**
If the integrated inputs and outputs are not sufficient, other inputs and outputs can be created with the Z-Modul-B. These are also programmable:
 - 1 analog input
 - 1 analog output
 - 3 digital inputs
 - 2 digital outputs (relays)
- LON® Add-on module type Z-Modul-L, Article No. **380086**
For integration into a bus system LON® by a two-wire

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General notes

Frequency inverters

3~ Fcontrol, universal device with display

Fcontrol, universal controller with display

3~ 208...480V 50/60Hz

Type	Article no.	Rated voltage V	Rated current A	Rated temperature °C	Max. line fuse A	Max. heat dissipation W	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm	
FXDM2.5AM	308099	400	2.5	40	6	50	55	IP54	3.30	240 x 284 x 115	
FXDM5AM	308138		5	50	10	100	55		7.20	250 x 302 x 195.5	
FXDM8AM	308140		8	50	10	150	55		7.90	250 x 302 x 195.5	
FXDM10AM	308142		10	55	16	210	55		8.20	250 x 302 x 195.5	
FXDM14AM	308144		14	40	16	310	55		8.70	250 x 302 x 195.5	
FXDM18AM	308174		18	40	20	400	55		9.10	250 x 302 x 195.5	
FXDM22AM	308108		22	40	25	520	55		14.50	280 x 355 x 239	
FXDM32AM	308009		32	50	35	700	55		29.60	386 x 525 x 283	
FXDM40AM	308177		40	50	50	790	55		29.60	386 x 525 x 283	
FXDM50AM	308183		50	50	63	910	55		32.80	386 x 525 x 283	
FXDM32AME	308008		32	50	35	700	55		IP20	33.14	343 x 600 x 280
FXDM40AME	308176		40	50	50	790	55			33.10	343 x 600 x 280
FXDM50AME	308182		50	50	63	910	55			36.65	343 x 600 x 280

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Fcontrol, universal controller with display, UL

3~ 208...480V 50/60Hz

Type	Article no.	Rated voltage V	Rated current A	Rated temperature °C	Max. line fuse A	Max. heat dissipation W	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
FXDM32AM	308009-UL	400	32	50	35	700	55	IP54	28.50	386 x 525 x 283
FXDM32AME	308008-UL		32	50	35	700	55	IP20	33.10	343 x 600 x 280

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.



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General notes



Frequency inverters

3~ Fcontrol, universal device with display (2nd edition)



The Fcontrol frequency inverters offer special benefits. Fcontrol have an integrated all-pole active sine filter which ensures a sinusoidal output voltage which is comparable with the normal supply network. This means that the frequency inverters enable reliable, requirement-based, energy-saving control of asynchronous motors (external rotor motors, IEC standard motors) without needing to consider measures that must be observed with standard frequency inverters.

Advantages provided by Fcontrol frequency inverters are:

- Operation without shielded motor cables
- The cable length is not limited by the Fcontrol
- Operation without electromagnetic motor noises (ideal for noise-sensitive areas)
- No danger for motors (these need not be frequency inverter compatible) because they are supplied by sinusoidal voltage according to the line voltage.

Especially in systems in which motors or fans are operated parallel to a frequency inverter, the advantages are particularly valuable. Parallel connected motors often mean long cable lengths, this is no problem with the Fcontrol and unshielded cables can also be used.







The Fcontrol universal devices are especially suitable for the following applications: refrigeration, air-conditioning, agriculture, general airing and venting tasks, clean-room application. For typical applications in the named areas, fast commissioning by selecting pre-programmed operating modes is possible.

Frequency inverters of the 2nd edition enable modern operation by capacitive keys.

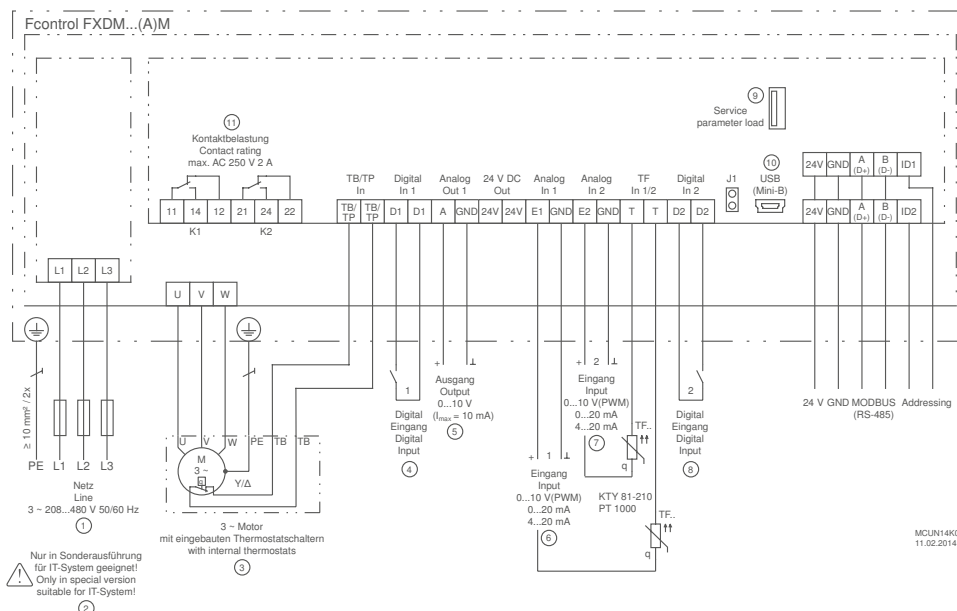
This means that no mechanical key is pressed but the operation is capacitive by touching the key surface. In addition there is a directly selectable On/Off key and two keys the functions of which depend on where you currently are in the menu (softkeys). A commissioning wizard and help texts are available for commissioning.

There is a 2nd control circuit in the device and the possibility of retrofitting a clock module as a timer.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



- ① Mains 3~ 208...480 V 50/60 Hz
- ② Only suitable for IT system in special version!
- ③ 3~ motor with built-in thermostats
- ④ Digital input D1 for potential-free contact
- ⑤ Output 0...10 V (I_{max} = 10 mA)
- ⑥ Input 0...10 V
- ⑦ Input 0...10 V
- ⑧ Digital input D2 for potential-free contact
- ⑨ Parameter interface, only for manufacturer's service purposes!
- ⑩ USB interface for communication
- ⑪ Contact load max. 2A / 250 V AC

Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Integrated all-pole effective sine filter

Phase to phase and phase to PE conductor. Thus sinusoidal output voltage. Frequency inverter typical measures such as shielded motor cables are not necessary.

LC multifunction display with clear text display:

Different menu languages are selectable

Simple commissioning by operating modes:

Typical operating modes, e.g. for air-conditioning, refrigeration or ventilation technology can be selected.

Activation of a 2nd control circuit in the selected operating mode:

By assignment of the sensor function input 2 (E2) for the 2nd control circuit.

Simple programmability:

Typical settings can be made easily: e.g. setting of a minimum speed, limitation of the maximum speed, inversions and limits. Setting, e.g. for 2-step mode

2 analog inputs for sensors or setting signals:

Analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA
Analog input E2: programmable, e.g. comparison with sensor 1, difference to sensor 1, average value formation, setpoint setting, setpoint adaptation (e.g. outside temperature-dependent), activation of 2nd control circuit.

2 digital inputs D1 and D2:

Programmable, e.g. enable, switch over setpoint 1 or 2, switch over control or manual mode, switch over E1 or E2, control function reversal, output limitation, display of external fault, reset, direction of rotation reversal

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, activation as output for 2nd control circuit

2 digital outputs (relays) K1 and K2:

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.

Integrated motor protection function:

Connection possibility of PTC thermistors or alternatively thermostats (TB or TP).

Interface RS485 for MODBUS RTU:

Integration into bus system, addressing of the device manually or automatically possible.

Interface USB:

For software update, communication with PC, etc.

Set protection / memory for settings:

Activation of set protection against unauthorised access, restoration of made settings

Event memory:

Querying of occurred events, operating times etc.

Optional equipment

Add-on modules for frequency inverters

- IO add-on module type Z-module, Article No. **380052**

If the integrated inputs and outputs are not sufficient, other inputs and outputs can be created with the Z-Modul-B. These are also programmable:

- 1 analog input
- 1 analog output
- 3 digital inputs
- 2 digital outputs (relays)

- Clock module Z-Modul-RTC, Article No. **380056**, for retrofitting real-time clock and timer function. The switching clock can be assigned the same functions as the digital inputs (D1 and D2).

Fcontrol, universal controller with display, 2nd edition

3~ 208...480V 50/60Hz

Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
FXDM25AM	308289	400	25	55	35	550	55	IP54	21.50	279 x 405 x 260
FXDM32AM	308283		32	50	35	700	55		23.10	279 x 405 x 260

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Frequency inverters

3~ Fcontrol Basic, modularly extendable speed controllers



The 3~ Fcontrol frequency inverters with integrated all-pole effective sine filter are available in the "Basic" version as speed controllers. The special feature of the Fcontrol Basic without display is the functional extendibility by pluggable add-on modules. This enables integration into different BUS networks. Functional extension as a controller is also possible with add-on modules.

In operation as a speed controller, the speed setting can be made by a master control by 0 – 10 V, e.g. by a ZIEHL-ABEGG control module of the UNIcon product series. The speed can also be set manually by connecting a potentiometer. Two-stage operation with adjustable speeds is also possible optionally.

The frequency inverters control asynchronous motors (external rotor motors, IEC standard motors) gently, requirement-based and energy saving.

Advantages achieved by Fcontrol frequency inverters are:

- High energy saving
- Operation without shielded motor cables
- The cable length is not limited by the Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No danger to motors (these must not be suitable for frequency inverters) because they are supplied with sinusoidal voltage according to the mains voltage.

The 3~ Fcontrol Basic inverters are universally suitable for many different applications: E.g. refrigerant technology, air conditioning, agriculture, general ventilation tasks, clean room technology.

Input for sensors or speed settings through

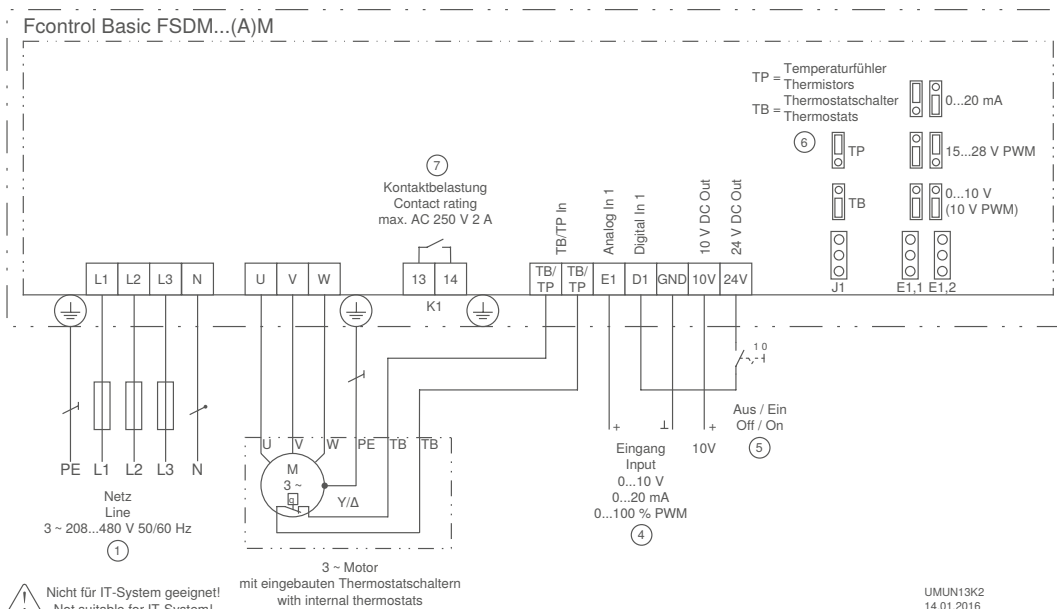


Setting of the desired speed through device or by external default, e.g. 0...10 V



Add-on modules for functional extension

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Integrated all-pole effective sinefilter

Phase to phase and phase to protective earth. Thus sinusoidal output voltage. Frequency inverter typical measures such as shielded motor cables are not necessary.

1 analog input for speed setting:

Analog input E1: Setting by jumper to desired setting signal: 0-10 V, 0-20 mA or PWM

1 digital input:

D1 - 24 V: Enable function On/Off

1 potential-free fault indication contact:

The contact drops out in case of a fault. Max. load 250 V, 2 A.

Integrated motor protection function:

Connection possibility for thermostats "TB" or thermistors "TP".

Optional equipment

Add-on modules for functional extension:

Article No.	Type
349045	AM-MODBUS
349050	AM-MODBUS-W
349077	AM-MODBUS-WB
349046	AM-PREMIUM
349051	AM-PREMIUM-W
349065	AM-AMPsignal
349071	AM-ETHERCAT
349064	AM-CAN-OPEN
349049	AM-LON
349063	AM-PROFIBUS
349072	AM-PROFINET
349084	AM-BACNET

Fcontrol Basic without display										
3~ 208...480V 50/60Hz										
Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
FSDM2.5M	308251	400	2.5	40	6	50	55	IP54	2.70	240 x 284 x 115
FSDM5M	308238		5	55	10	90	55		5.40	250 x 302 x 195.5
FSDM8M	308239		8	40	10	140	55		6.30	250 x 302 x 195.5
FSDM10M	308262		10	55	16	200	55		6.80	250 x 302 x 195.5
FSDM16M	308302		16	40	20	360	55		7.00	250 x 302 x 195.5
FSDM22M	308314		22	40	25	520	55		14.30	280 x 355 x 239
FSDM32M	308316		32	50	35	700	55		29.40	386 x 525 x 283
FSDM40M	308318		40	50	50	790	55		29.40	386 x 525 x 283
FSDM50M	308320		50	50	63	910	55		32.60	386 x 525 x 283

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.



Information
ZAbbluefin-ECblue
Cpro-ECblue
C-ECblue
ZAbblue-ECblue
Vpro-ECblue
ZAcube
Housing fans
System components
Control technology
General notes

Frequency inverters

3~ Fcontrol Basic, Speed controller with display



The 3~ Fcontrol frequency inverters with all-pole effective sine filter are available in the "Basic" version with integrated display as speed controllers.

The speed setting can be made by a master control by 0 – 10 V, e.g. by a ZIEHL-ABEGG control module of the UNIcon product series. The speed can also be set manually by connecting a potentiometer. Two-stage operation with adjustable speeds is also possible optionally.

The frequency inverters control asynchronous motors (external rotor motors, IEC standard motors) gently, requirement-based and energy saving.

Advantages achieved by Fcontrol frequency inverters are:

- High energy saving
- Operation without shielded motor cables
- The cable length is not limited by the Fcontrol
- Operation without electromagnetic motor noises (ideal for noise sensitive areas)
- No danger to motors (these must not be suitable for frequency inverters) because they are supplied with sinusoidal voltage according to the mains voltage.

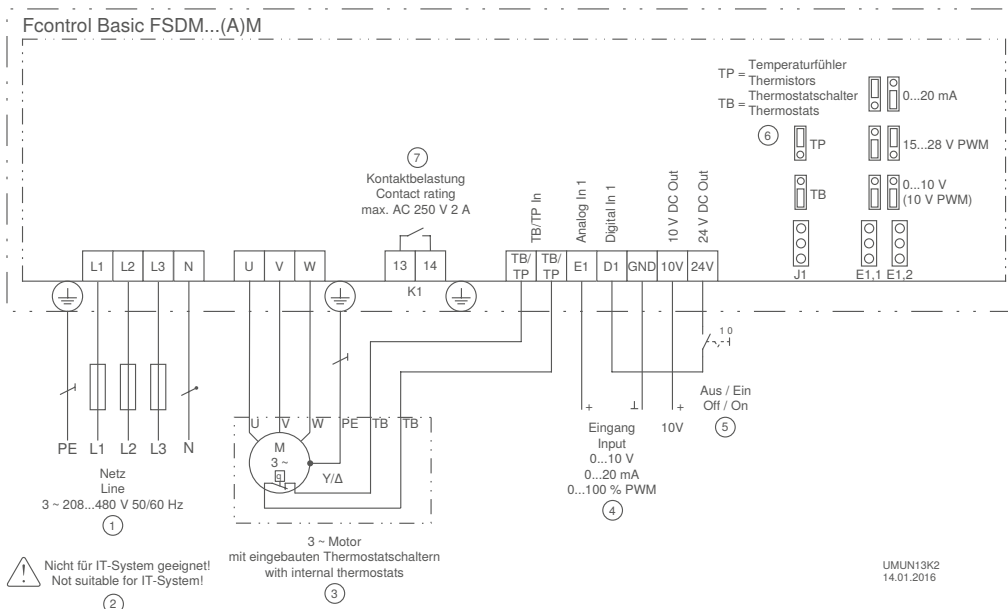
Input for sensors or speed settings through



Setting of the desired speed through device or by external default, e.g. 0...10 V

The 3~ Fcontrol Basic inverters are universally suitable for many different applications: E.g. refrigerant technology, air conditioning, agriculture, general ventilation tasks, clean room technology.

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Integrated all-pole sinefilter

Phase to phase and phase to protective earth. Thus sinusoidal output voltage. Frequency inverter typical measures such as shielded motor cables are not necessary.

LC multi-function display with plain text display:

Setting of desired values: speeds, motor parameters. Display of modulation, operating states etc.

1 analog input for speed setting:

Analog input E1: Setting by jumper to desired setting signal: 0-10 V, 0-20 mA or PWM

1 digital input:

D1 - 24 V: Enable function On/Off

1 potential-free fault indication contact:

The contact drops out in case of a fault. Max. load 250 V, 2 A.

Integrated motor protection function:

Connection possibility for thermostats "TB" or thermistors "TP".

Fcontrol Basic, Speed controller with display										
3~ 208...480V 50/60Hz										
Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
FSDM2.5AM	308252	400	2.5	40	6	50	55	IP54	2.90	240 x 284 x 115
FSDM5AM	308240		5	55	10	90	55		5.60	250 x 302 x 195.5
FSDM8AM	308241		8	40	10	140	55		6.50	250 x 302 x 195.5
FSDM10AM	308260		10	55	16	200	55		7.00	250 x 302 x 195.5
FSDM16AM	308303		16	40	20	360	55		7.20	250 x 302 x 195.5
FSDM22AM	308315		22	40	25	520	55		14.50	280 x 355 x 239
FSDM32AM	308317		32	50	35	700	55		29.60	386 x 525 x 283
FSDM40AM	308319		40	50	50	790	55		29.60	386 x 525 x 283
FSDM50AM	308321		50	50	63	910	55		32.80	386 x 525 x 283

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Electronic voltage controllers

1~ Acontrol, universal controller with display and bypass main switch



Most ZIEHL-ABEGG external rotor motors can be voltage controlled. For simple and cost-effective speed control of these motors and fans, electronic voltage controllers are available.


For the various applications in refrigeration, air-conditioning and general ventilation technology we supply universal controllers from the Acontrol product family.


These universal controllers provide a facility for controlling temperature, pressure (for example, refrigerant pressure in cooling devices), differential pressure in ventilation systems and other physical factors.


These units have a multifunctional display used for programming and to display the measured values. A bypass main switch is integrated which allows bypassing the internal device electronics. In the bypass position the applied mains voltage is switched directly to the output.


The Acontrol universal devices are ideal for the following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation, clean room technology. Quick commissioning is facilitated for typical applications in the stated areas by selecting pre-programmed operating modes.


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
- 

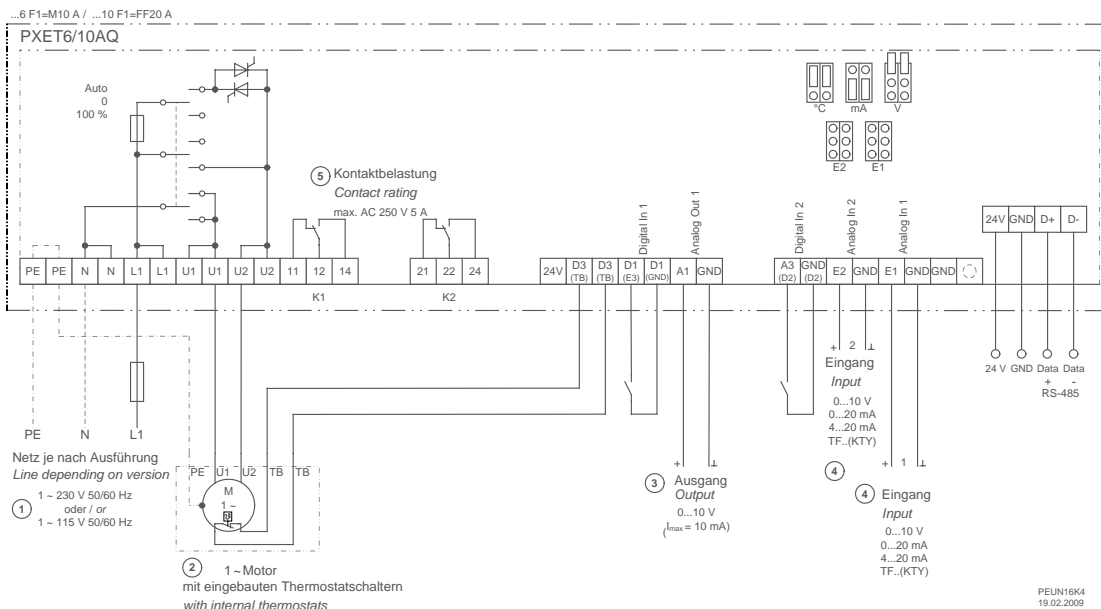
Connection of thermistors, e.g. sensors type TF.. e.g. active sensor type MTG..
- 

Connecting differential pressure sensors (air conditioning), e.g. type MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



- ① Line
- ② 1~ Motor with integrated thermostats
- ③ Output
- ④ Input
- ⑤ Contact load

Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

LC multifunction display with clear text display:

Different menu languages are selectable

Simple commissioning by operating modes:

Typical operating modes e.g. for air-conditioning, refrigeration or ventilation technology can be selected.

Easy programmability:

Typical settings can be made easily: e.g. setting of a minimum speed, limitation of the maximum speed, inversions and limits. Setting, e.g. for 2-step mode

2 analog inputs for sensors or setting signals:

Analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA

Analog input E2: programmable, e.g. comparison with sensor 1, difference to sensor 1, average value formation, setpoint setting, setpoint adaptation (e.g. outside temperature-dependent)

2 digital inputs D1 and D2:

Programmable, e.g. enable, switchover setpoint 1 or 2, switchover control or manual mode, switch over E1 or E2, control function reversal, output limitation, display of external fault, reset

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

2 digital outputs (relays) K1 and K2:

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.

Integrated motor protection function:

Connection possibility for thermostats "TB".

Interface RS485 MODBUS RTU:

Integration into bus system

Set protection:

Activation of set protection against unauthorised access, restoration of made settings

Event memory:

Query of occurred events, operating times etc.

Acontrol, universal controller with display and bypass main switch

1~ 230V 50/60Hz

Type	Article no.	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		A	°C	A	W	°C		kg	mm
PXET6AQ	303610	6	45	10	20	55	IP54	1.40	223 x 200 x 131
PXET10AQ	303611	10	40	16	40	55	IP54	2.40	240 x 284 x 132

Electronic voltage controllers

3~ Ucontrol, universal controller with display









Most ZIEHL-ABEGG external rotor motors are voltage controllable. For simple and cost-effective speed control of these motors or fans, electronic voltage controllers can be supplied.

For the various applications in refrigeration, air-conditioning and general ventilation technology we supply universal devices from the Ucontrol product family.

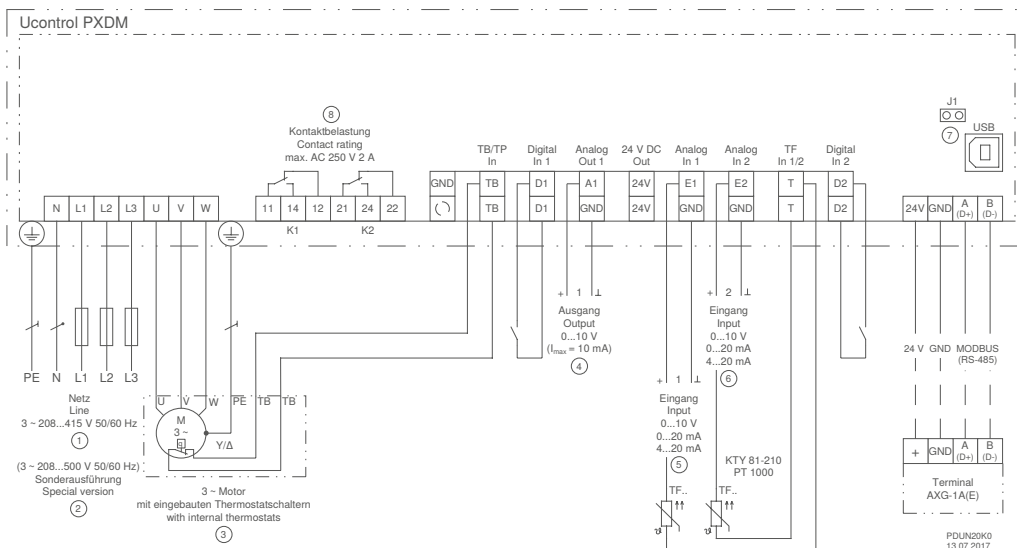
These universal control devices also provide an option to control based on temperature, pressure (for example refrigerant pressure in cooling equipment), differential pressure in ventilation systems, or other physical factors.

The Ucontrol universal devices are ideal for following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation jobs, clean room technology. By selecting pre-programmed operating modes, fast commissioning for typical applications in the stated sectors is possible.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



- ① Line
- ② Special version
- ③ 3~ motor with built-in thermostats
- ④ Output
- ⑤ Input
- ⑥ Jumper for boot loader
- ⑦ Contact load



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

LC multi-function display with plain text display:

Different menu languages can be selected

Simple start-up by operating modes:

Typical operating modes, e.g. for air conditioning, refrigerant or ventilation technology can be selected.

Simple programmability:

Typical settings can be made easily: e.g. minimum speed setting, limitation of the maximum speed, inversions and limits. Setting, e.g. for 2-step mode

2 analog inputs for sensors or setting signals:

analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA

analog input E2: programmable, e.g. comparison with sensor 1, difference to sensor 1, average value formation, setpoint setting, setpoint adaptation (e.g. outdoor temperature-dependent)

2 digital inputs D1 und D2:

Programmable, e.g. enable, switchover setpoint 1 or 2, switchover control or manual mode, switchover E1 or E2, invert control function, output limitation, display of external fault, reset

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

2 digital outputs (relays) K1 and K2:

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.

Integrated motor protection function:

Connection possibility for PTC thermistors or alternatively thermostats (TB or TP).

Interface RS485 MODBUS RTU:

Integration into bus system

Interface USB:

For e.g. software update, communication with PC

Set protection:

Activation set protection against unauthorised access, restoration of made settings

Event memory:

Querying of occurred events, operating times, etc.

Optional equipment

IO add-on module type Z-Modul-B, Article No. **380052** if the integrated inputs and outputs are not sufficient other inputs and outputs can be created with the Z-Modul-B. These are also programmable:

- 1 analog input
- 1 analog output
- 3 digital inputs
- 2 digital outputs (relays)

LON® Add-on module type Z-Modul-L, Article No. **380086**

Information

ZAbluefin-
ECblue

Cpro-
ECblue

C-
ECblue

ZAblue-
ECblue

Vpro-
ECblue

ZAcube

Housing fans

System
components

Control
technology

General notes

Ucontrol, universal controller with display

3~ 208...415V 50/60Hz

Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
PXDM6A	304594	400	6	40	10	30	55	IP54	2.25	240 x 284 x 115
PXDM10A	304595		10	45	16	50	55		2.75	240 x 284 x 115
PXDM12A	304596		12	40	16	75	55		3.65	270 x 323 x 146
PXDM15A	304597		15	40	20	100	55		4.95	270 x 323 x 146
PXDM20A	304598		20	45	25	200	55		5.50	250 x 302 x 195.5
PXDM25A	304599		25	45	35	270	55		11.10	280 x 355 x 239
PXDM35A	304600		35	50	50	440	55		11.15	280 x 355 x 239
PXDM50A	304639		50	40	63	170	55		20.00	386 x 525 x 283
PXDM80A	304640		80	40	100	270	55		21.00	386 x 525 x 283
PXDM25AE	304624		25	50	35	260	55		IP20	7.65
PXDM35AE	304625		35	50	50	430	55	7.75		246 x 362 x 180
PXDM50AE	304649		50	50	63	160	55	13.80		336 x 471 x 220
PXDM80AE	304650		80	50	100	255	55	15.40		336 x 471 x 220

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Ucontrol, universal controller for increased ambient temperature with display

3~ 208...415V 50/60Hz

Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
PXDM6AZ	304607	400	6	50	10	25	55	IP54	2.25	240 x 284 x 115
PXDM10AZ	304608		10	50	16	45	55		2.75	240 x 284 x 115
PXDM12AZ	304609		12	50	16	70	55		3.65	270 x 323 x 146
PXDM15AZ	304610		15	50	20	95	55		4.95	270 x 323 x 146
PXDM20AZ	304611		20	50	25	190	55		5.50	250 x 302 x 195.5
PXDM25AZ	304612		25	50	35	260	55		11.10	280 x 355 x 239
PXDM35AZ	304613		35	55	50	430	55		11.15	280 x 355 x 239
PXDM50AZ	304645		50	50	63	160	55		18.60	386 x 525 x 283
PXDM80AZ	304646		80	50	100	255	55		19.60	386 x 525 x 283

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.



Electronic voltage controllers

3~ Ucontrol, universal controller with display and bypass main switch



Most ZIEHL-ABEGG external rotor motors are voltage controllable. For simple and cost-effective speed control of these motors or fans, electronic voltage controllers can be supplied.

For the various applications in refrigeration, air-conditioning and general ventilation technology we supply universal devices from the Ucontrol product family.

These universal control devices also provide an option to control based on temperature, pressure (for example refrigerant pressure in cooling equipment), differential pressure in ventilation systems, or other physical factors.

The Ucontrol universal devices are ideal for following applications: refrigeration, air conditioning, agriculture, general air supply and ventilation jobs, clean room technology. By selecting pre-programmed operating modes, fast commissioning for typical applications in the stated sectors is possible.

These versions have an additionally integrated bypass main switch. This offers the possibility of bypassing the internal device electronics. In the bypass position, the applied line voltage is switched directly to the output.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Ucontrol, universal controller with display and bypass main switch

3~ 208...415V 50/60Hz

Type	Article no.	Rated voltage	Rated current	Rated temperature	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
		V	A	°C	A	W	°C		kg	mm
PXDM6AQ	304614	400	6	40	10	30	55	IP54	2.55	240 x 284 x 132
PXDM10AQ	304615		10	45	16	50	55		3.05	240 x 284 x 132
PXDM12AQ	304616		12	40	16	75	55		4.00	270 x 323 x 162
PXDM15AQ	304617		15	40	20	100	55		5.30	270 x 323 x 162
PXDM25AQ	304618		25	45	35	270	55		11.40	280 x 355 x 256
PXDM35AQ	304619		35	50	50	440	55		11.45	280 x 355 x 256
PXDM50AQ	304641		50	40	63	170	55		20.70	386 x 525 x 299.5
PXDM80AQ	304642		80	40	100	270	55		22.80	386 x 525 x 299.5

Devices with a rated temperature below 55 °C can be used up to 55 °C with a reduction in performance.

Control modules







UNIcon universal control module (with MODBUS Master function)



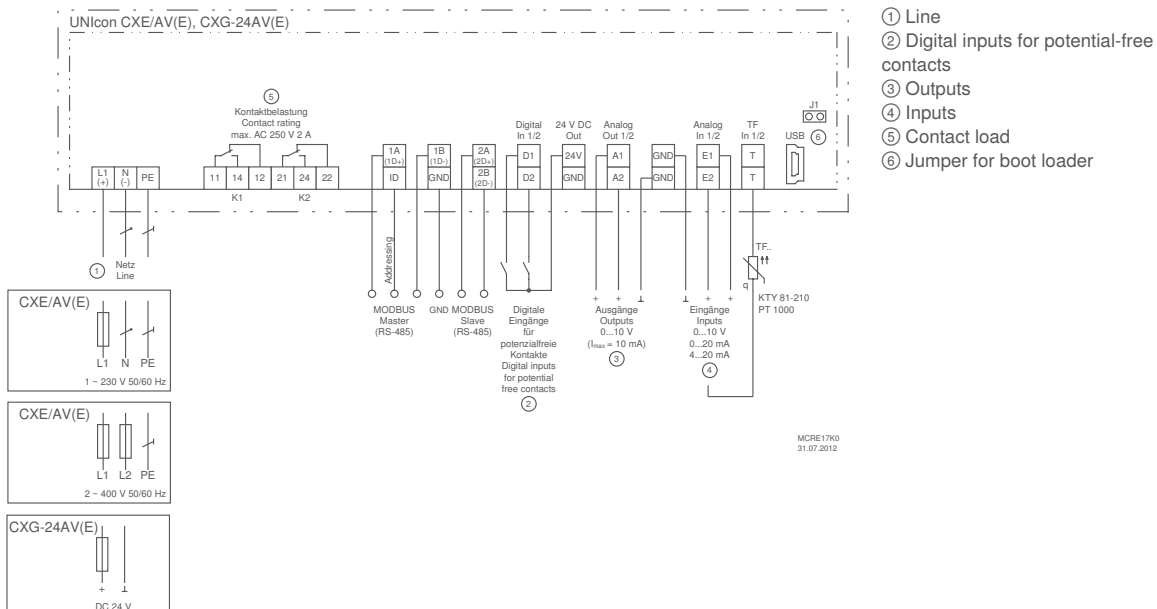
All ZIEHL-ABEGG sensors can be combined with the UNIcon CXE/AV(E) universal control module. The actual value measured at the sensor is compared with the setpoint. This results in the 0-10 V output signal. Two 0-10 V outputs are integrated. These serve to activate EC fans, frequency inverters or other devices. Optionally, connected field devices (frequency inverters/EC fans with plugged MODBUS add-on module) can be activated by the integrated MODBUS-RTU interface (MODBUS Master function). Groups of frequency inverters or ECblue fans can be conveniently addressed quickly and automatically. The device also contains two separate control circuits, a real time clock and timer functions. UNIcon universal control modules are especially suitable for the following applications: Refrigeration, air conditioning, general ventilation tasks, clean room technology. For typical applications in the areas mentioned, fast start-up is possible by selecting pre-programmed operating modes.

We supply special control modules for agriculture.

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 MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Multifunction display with clear text display:

Different menu languages are selectable

Simple commissioning by operating modes:

Typical operating modes, e.g. for air-conditioning, refrigeration or ventilation technology can be selected.

Simple programmability:

e. g. setting of a minimum speed, limitation of the maximum speed, inversions and limits.
Setting, e.g. for 2-step mode

2 analog inputs for sensors or setting signals:

Analog input E1 and E2: Setting by operating modes or manually programmable, e.g. 0-10 V, 0-20 mA, 4-20 mA
Analog input E2: programmable, e.g. comparison with sensor 1, difference to sensor 1, average value formation, setpoint setting, setpoint adaptation (e.g. outside temperature-dependent)

2 digital inputs D1, D2:

Programmable, e.g. enable, switch over setpoint 1 or 2, switch-over control or manual mode, switchover E1 or E2, control function reversal, output limitation, display of external fault

2 analog outputs for controlling external speed controllers, EC fans, other devices:

Analog output A1 and A2: 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

2 digital outputs (relays) K1 and K2:

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, group control fans, etc.

2 interfaces RS485:

a) For connecting ZIEHL-ABEGG field devices with MODBUS RTU interface (e.g. field devices with integrated add-on module "AM-MODBUS"). With the possibility of automatic addressing of these field devices.
b) MODBUS Slave function of the UNIcon, for connection to a master control station (GLT).

Set protection/memory for settings:

Activation of set protection against unauthorised access, restoration of made settings

Event memory:

Query of occurred events, operating times etc.

Integrated real-time clock with timer:

The timer function behaves like a digital input, the desired function can be selected accordingly. Up to four switching times per day can be set for the desired function.

Optional equipment

Z-Modul-B02, article no. 380099, as additional I/O expansion.

- Two additional inputs E3 + E4 (0-10 V), option to program as digital inputs (see inputs D1,D2)
- One additional analog output (0-10 V), adjustable (see output A1, A2)

UNIcon universal control module								
Line	Type	Article no.	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
			A	W	°C		kg	mm
1~ 230V 50/60Hz	CXE/AV	320053	10	10	55	IP54	0.90	223 x 200 x 115
1~ 230V 50/60Hz	CXE/AVE	320056	10	10	55	IP00	0.65	166 x 106 x 55 mm / mounting depth: max. 105
2~ 400V 50/60Hz	CXE/AV	320055	10	10	55	IP54	0.90	223 x 200 x 115

Panel-mounting AVE (when installed IP54)

UNIcon universal control module								
Line voltage	Type	Article no.	Max. line fuse	Max. heat dissipation	Maximum ambient temperature	Protection class	Weight	Dimensions (W x H x D)
			A	W	°C		kg	mm
	CXG-24AV	320057	10	10	55	IP54	0.75	223 x 200 x 115
24VDC	CXG-24AVE	320058	10	10	55	IP00	0.50	166 x 106 x 55 mm / mounting depth: max. 105

Panel-mounting AVE (when installed IP54)

Control modules

UNIcon sensor control module for differential pressure/air flow (2nd edition)



The sensor control module for differential pressure and volume flow measures and indicates the pressure or, optionally, the volume flow in a ventilation system. The calculation of the volume flow is performed by entering the K-factor of the fan inlet ring.

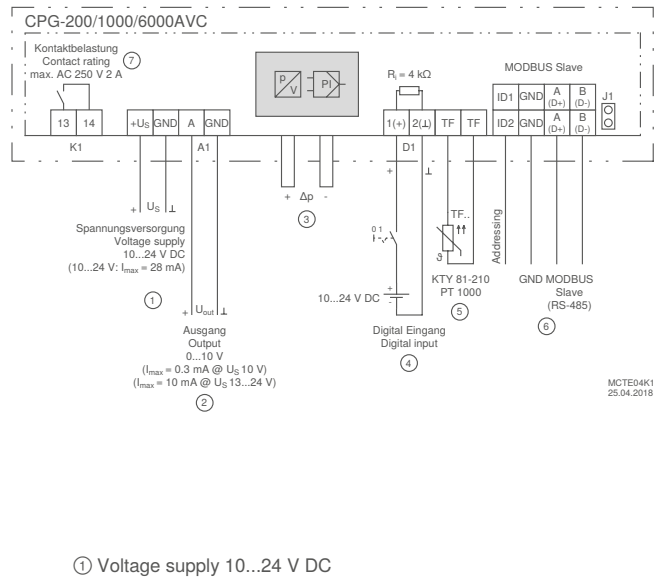
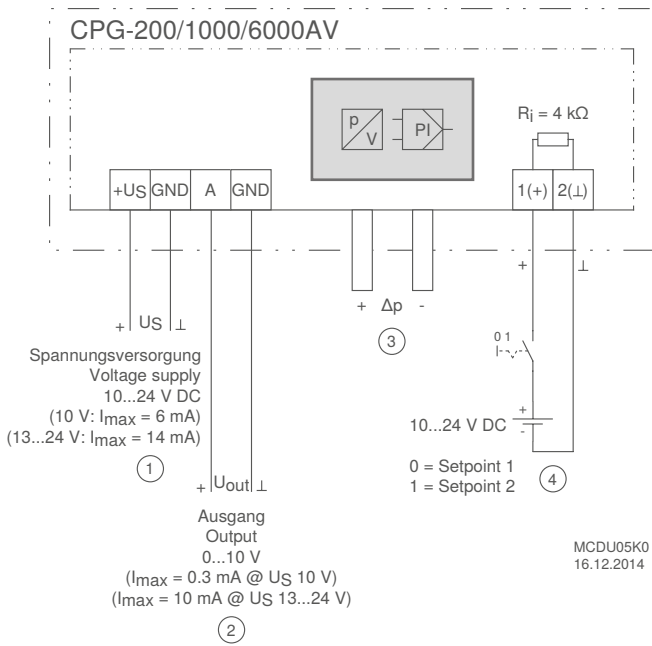
Depending on the desired setpoint and control range, the sensor control module generates 0-10 V to control the EC fan or e.g., a frequency inverter.

The sensor control module is supplied by the fan or frequency inverter which it controls, e.g., with 10-24 V DC. No additional supply voltage is necessary.

Input for sensors or speed settings through

- ΔPa Pressure sensor and control intelligence are combined in one device
- m^3 Air flow sensor (by input of K-factor) and control intelligence are combined in one device

Connection diagram



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Equipment/properties

Integrated display:

For pressure or volumetric air flow display and for programming
It is possible to switch over the display from SI units to Imperial units.

Simple commissioning by operating modes:

Operation as pressure or volumetric air flow sensor
Operation as pressure or volumetric air flow controller

Simple programmability by 3 buttons:

Selection of measuring range, input of setpoints (1/2),
Control range, K-factor for volumetric air flow determination,
minimum or maximum output signal.

Different measuring ranges can be selected depending on the version:

CPG-200AV(C): 0-50 / 100 / 150 / 200 Pa
CPG-1000AV(C): 0-200 / 300 / 500 / 1000 Pa
CPG-6000AV(C): 0-2000 / 3000 / 4000 / 6000 Pa
Maximum air flow measuring range: 65,000 m³/h

Voltage input D1 (digital input):

Version CPG-...AV: switch over setpoint 1 or 2
Extended versions CPG-...AVC:
Enable, display of external fault, switch over setpoint 1 or 2

1 analog output:

for activation of EC fans, frequency inverters, other devices

Additional CPG-...AVC

Digital output K1 in CPG-...AVC:
Operating indication, fault indication, external fault at digital input,
indication of limits.

Real-time clock with timer in CPG-...AVC:
For example automatic setpoint switch over

Possibility to shift the setpoint depending from outdoor temperature
with CPG-...AVC:

In operation as pressure- or volumetric air flow controller the set-
point can be shifted depending from outdoor temperature (to bring
in less air during cold outdoor temperature)

CPG-...AVC with interface RS485 für MODBUS RTU:
Integration into network, manually or automatic addressing possible.

Application/Function

The sensor control module is connected to the ventilation system
via 2 pressure ports (pressure socket + and -).
The differential pressure registered on the ventilation system affects
the sensor on a silicone membrane in the device. The deformation
of the membrane is registered through a measuring element and
transmitted to the integrated electronics. Function: Pressure rise on
+, compared to pressure on - connection.
Optionally, the device can be operated as a pressure sensor, i.e.,
pressure indicator and proportional output signal 0-10 V corre-
sponding to the set measurement range.
Optional operation as a volume flow sensor, i.e. volume flow (by
entering the K-factor of the centrifugal fans) and 0-10 V proportional
output signal corresponding to the set measurement range.
Optional operation as a control module for pressure or volume flow.
The entered setpoint is compared to the actual value; the 0-10
V output signal results from that. That is used to trigger EC fans,
frequency inverters or other devices.

UNICon sensor control module for pressure

DC10...24

Type	Article no.	Minimum ambient temperature °C	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
CPG-200AV	320063	-10	60	IP54	0.23	106.3 x 137 x 56
CPG-1000AV	320064	-10	60	IP54	0.23	106.3 x 137 x 56
CPG-6000AV	320065	-10	60	IP54	0.23	106.3 x 137 x 56
CPG-200AVC	320075	-10	60	IP54	0.25	106.3 x 137 x 56
CPG-1000AVC	320076	-10	60	IP54	0.25	106.3 x 137 x 56
CPG-6000AVC	320077	-10	60	IP54	0.25	106.3 x 137 x 56

Dimensions with cable gland

Control modules

UNICon temperature control module (2nd edition)



The CTG temperature control module can be combined with various temperature sensors.

The actual value measured on the sensor is compared with the setpoint. That produces the 0-10 V output signal. This is used to trigger EC fans, frequency inverters or other devices.

The control module is supplied with 10-24 V DC from the fan or frequency inverter it is triggering. No additional power supply necessary.

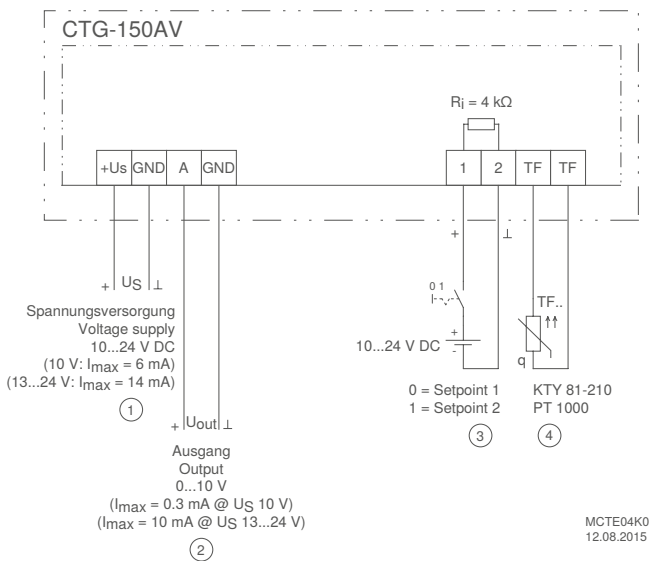
Optionally, the module can also be used as a temperature display. The 0-10 V output signal is then proportional to the set measurement range.

Input for sensors or speed settings through



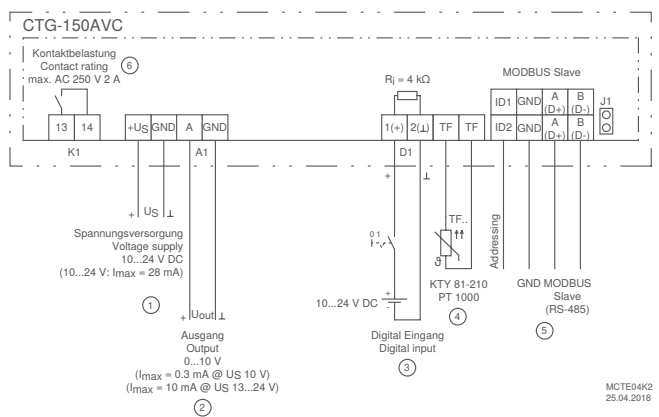
Connection of temperature sensors,
e.g. Type TF.. sensors, device measurement range -50...+150°C

Connection diagram



MCTE04K0
12.08.2015

- ① Input 10...24V DC
- ② Output 0...10 V
- ③ Temperature sensor KTY 81-210 or PT 1000
- ④ Voltage input for switch



MCTE04K2
25.04.2018

- ① Input 10...24 V DC
- ② Output 0...10 V
- ③ Digital input (voltage ON/OFF)
- ④ Temperature sensor KTY 81-210 or PT 1000
- ⑤ MODBUS Slave interface RS-485 (J1 plugged = Bus terminating resistor 150 Ω active)
- ⑥ Contact rating max. AC 250 V 2 A



Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-1 (domestic)

Equipment/Characteristics

Integrated display:

For temperature display and for programming

Simple commissioning of the operating modes:

Operation as temperature sensor or temperature controller

Easy to program using 3 buttons:

Select measurement range, enter setpoint (1/2), control range,
Minimum or maximum output signal

Adjustable measurement range when using as temperature sensor:

-50 °C...+150 °C

Voltage input D1 (digital input)

Versions CTG-150AV: Switchover setpoint 1 or 2

Extended versions: CTG-150AVC:

Enable, display of external fault, switch over setpoint 1 or 2

1 analogue output:

To control EC fans, frequency inverters, other devices

Additional CTG-150AVC:

Digital output K1 in CPG-150AVC:

Operating indication, fault indication, external fault at digital input,
indication of limits two-position controller "heating/cooling"

Real-time clock with timer in CTG-150AVC:

For example automatic setpoint switch over

CTG-150AVC with interface RS485 for MODBUS RTU:

Integration into network, manually or automatic addressing possible

UNIcon temperature control module						
Type	Article no.	Minimum ambient temperature °C	Maximum ambient temperature °C	Protection class	Weight kg	Dimensions (W x H x D) mm
CTG-150AV	320073	-10	60	IP54	0.21	106.3 x 137 x 56
CTG-150AVC	320074	-10	60	IP54	0.22	106.3 x 137 x 56

Dimensions with cable gland

Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAblue-
ECblue

Vpro-ECblue

ZAcube

Housing fans

System
components

Control
technology

General notes

Add-on modules

AM-MODBUS (-W) for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "Icon control 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 operating 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.

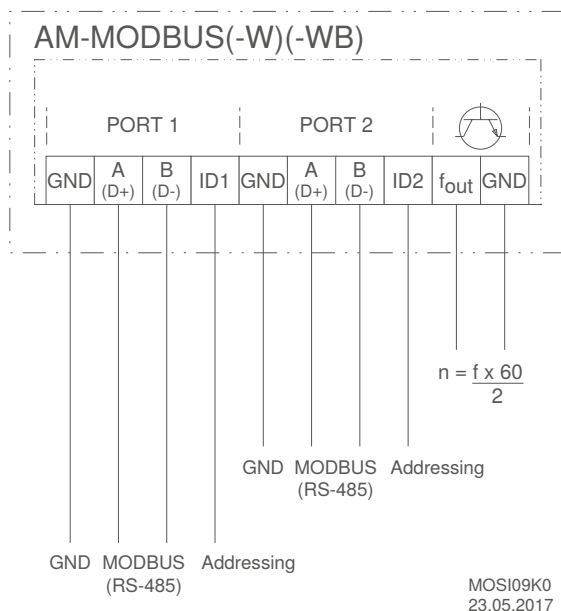
Equipment/properties

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-MODBUS-WB for Basic Frequency inverter and ECblue fans



Pluggable add-on modules for function extensions of the "Icontrol Basic" and "Fcontrol Basic" frequency inverters without an integrated display, as well as ECblue motors and fans. With the AM-MODBUS-WB add-on modules, access to the respective frequency inverter or ECblue fan can take place wirelessly using Bluetooth.

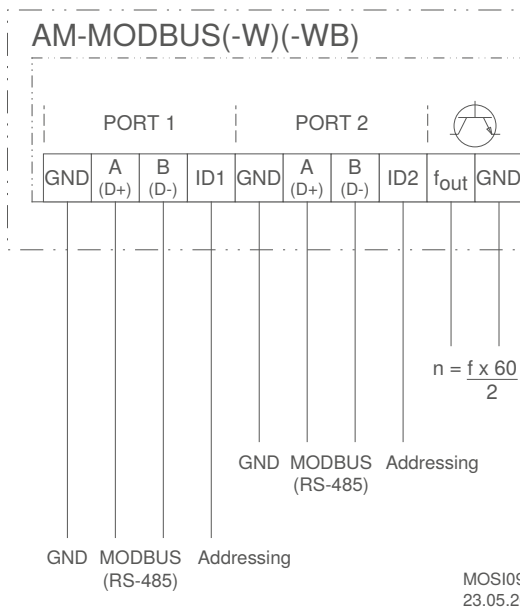
For this purpose, the ZIEHL-ABEGG "ZAsset mobile" app for mobile terminals is available in the Android and IOS Store.

The devices can be integrated into MODBUS networks with the AM-MODBUS-WB add-on modules. Whole groups of frequency inverters or ECblue motors and fans, which are equipped with these AM-MODBUS-WB add-on modules, can be addressed quickly and automatically by means of a ZIEHL-ABEGG UNIcon control module with MODBUS master function. These devices are then controlled conveniently by the UNIcon "master" device.

Add-on module - AM-MODBUS-WB

Type	Article no.	Weight kg
AM-MODBUS-WB	349077	0.04

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 operating 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
- 

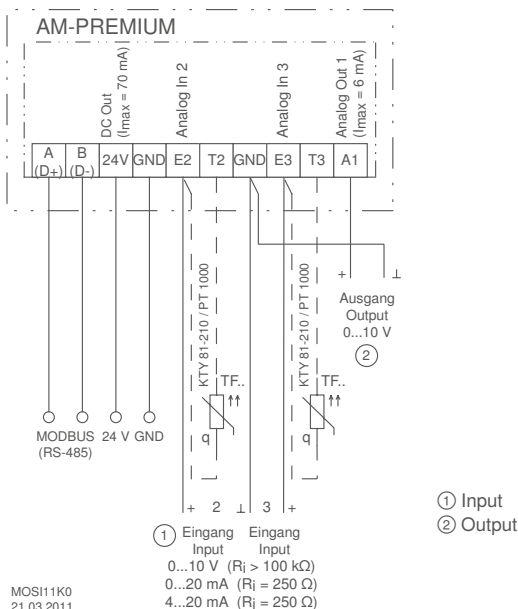
Connection of thermistors, e.g. sensors type TF.. e.g. active sensor type MTG..
- 

Connecting differential pressure sensors (air conditioning), e.g. type MPG.. 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, CO₂, sensor signal 0...10 V / 0...20 mA / 4...20 mA

Connection diagram



MOSI11K0
21.03.2011

Equipment/properties

Simple start-up by operating modes:

When an operating 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

Information

ZAbluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAblue-
ECblue

Vpro-ECblue

ZAcube

Housing fans

System
components

Control
technology

General notes

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

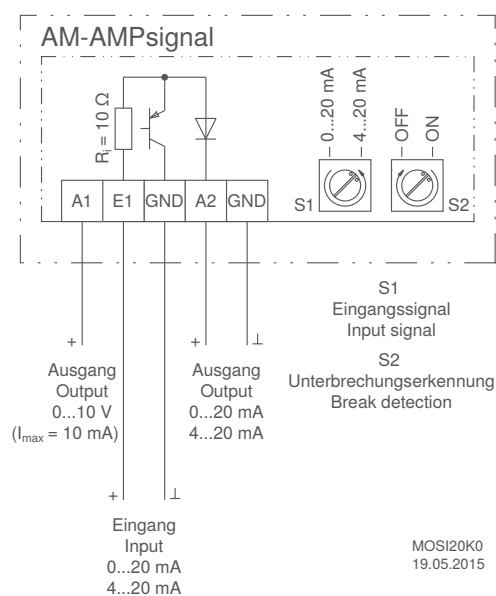
2 integrated rotary switches

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

Connection diagram



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

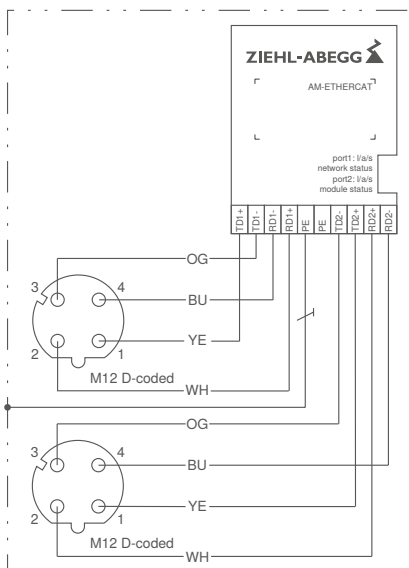
4 integrated LED

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

Connection diagram



KT00048C
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.

CANopen®

CAUS®

Equipment/properties

3 integrated LEDs

For status display and error message.

3 integrated rotary switches

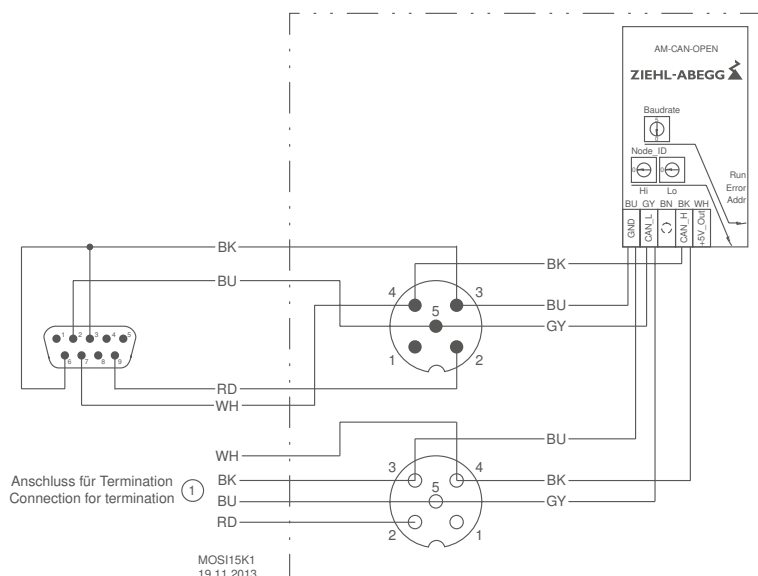
2 rotary switches for manual address setting.

1 rotary switch for setting the baud rate

Add-on module - AM-CAN-OPEN

Type	Article no.	Weight kg
AM-CAN-OPEN	349064	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.

Information

ZAbuefin-
ECblue

Cpro-ECblue

C-ECblue

ZAbuefin-
ECblue

Add-on module - AM-LON

Type	Article no.	Weight kg
AM-LON	349049	0.03

Vpro-ECblue

ZAcube

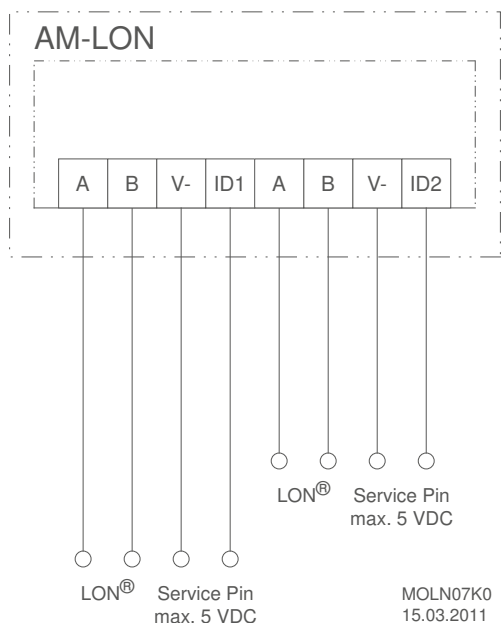
Housing fans

System
components

Control
technology

General notes

Connection diagram



Add-on modules

AM-PROFIBUS for Basic Frequency inverter and ECblue



Pluggable add-on modules for function extension of the "Icontrol 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:

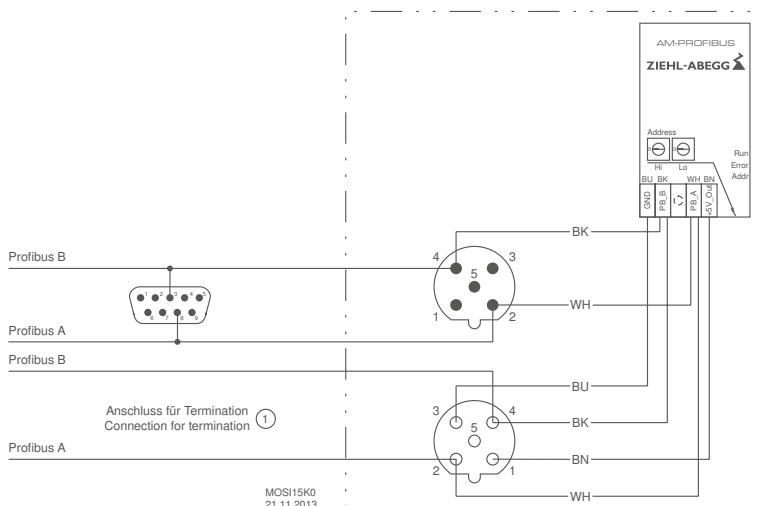
5-pole, M12, wall installation M16, Article No. 00161259

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



Add-on modules

AM-PROFINET for Basic Frequency inverter and ECblue fans



Pluggable add-on modules for function extension of the “Icontrol Basic” and “Fcontrol” and “Fcontrol Basic” without integrated display (also for functional extension of ECblue fans). With the AM-PROFINET add-on modules the frequency inverters or ECblue fans can be integrated into PROFINET networks.

A device master data file (GSD file) is required for integration of the device into the PROFINET network. If there is any doubt about the use or procurement of the GSD file for this add-on module, our Control Engineering Support Department will be very glad to help.

Equipment/properties

4 integrated LED

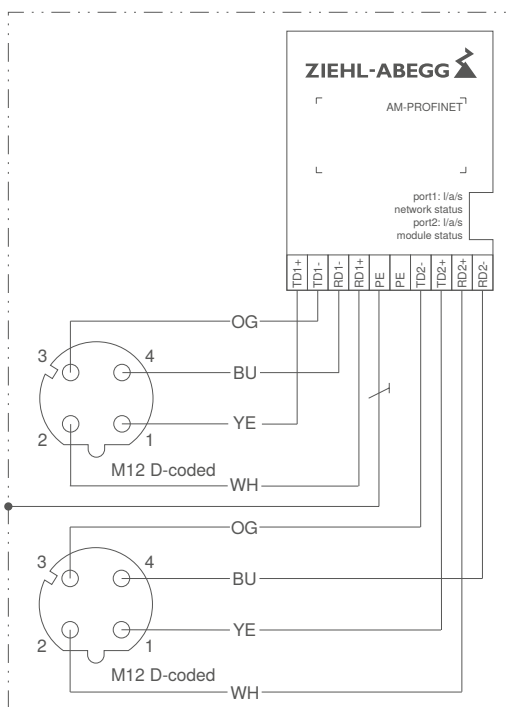
For status display and error message:

Network status, status module, status port 1 / port 2.

Add-on module AM-PROFINET

Type	Article no.	Weight kg
AM-PROFINET	349072	0.03

Connection diagram



KT00048D
09.12.2015

Add-on modules

AM-BACNET for Basic frequency inverters and ECblue fans



Pluggable add-on modules for function extension of the "lcontrol Basic" and "Fcontrol Basic" frequency inverters without integrated display (also for functional extension of ECblue fans). With AM-BACNET add-on modules the frequency inverters or ECblue fans can be integrated into BACNET networks.



Equipment/properties

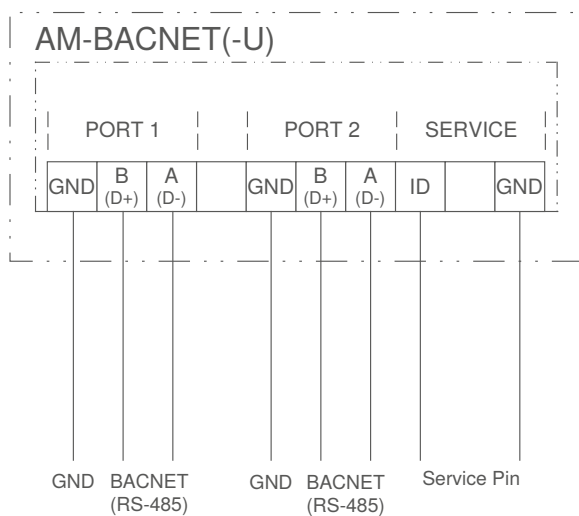
4 integrated LEDs

For status display and error message.

Add-on module AM-BACNET

Type	Article no.	Weight kg
AM-BACNET	349084	0.03

Connection diagram



MOSI24K0
17.10.2018



Information

ZBluefin-
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Cpro-ECblue

C-ECblue

ZAvblue-
ECblue

Vpro-ECblue

ZAcube

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General notes



Display and operating terminal

For frequency inverter without integrated display and ECblue



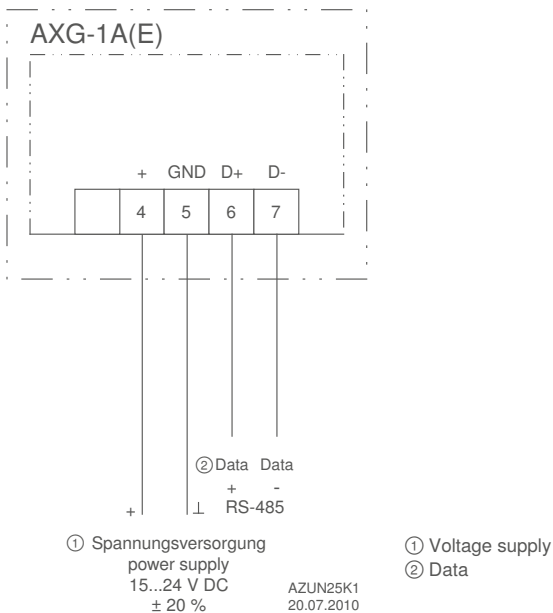
Display and operating terminal for parameterization and operation of the basic frequency inverters "Icontrol Basic" and "Fcontrol Basic" as well as ECblue motors and fans.

The basic frequency inverters without integrated display and ECblue motors have a slot for the AM-PREMIUM add-on modules. By plugging the add-on modules, the AXG-1A(E) operator terminal or the A-G-247NW hand held terminal can be connected.

The display and operator terminal AXG-1A can be installed flexibly in plants or machines in the IP54 housing. Alternatively, a unit for control panel integration is available (AXG-1AE).

The + 24 V voltage supply comes from the frequency inverter, a separate mains supply is not required.

Connection diagram



Technical data

- Voltage supply: 15-24 VDC (I_{max} 24 V: 50 mA / 14 V: 80mA)
- Maximum ambient temperature: + 40 °C

Equipment/properties

LC multi-function display with plain text display:

Different menu languages can be selected. Display of the connected frequency inverter menu.

1 interface RS485:

for connection to an AM-PREMIUM add-on module. Frequency inverters as well as ECblue motors and fans can be parameterized and operated with this.

Display and operating terminals					
24VDC					
Type	Article no.	Mounting type	Protection class	Weight	Dimensions (W x H x D)
				kg	mm
AXG-1A	349034	Wall mounting	IP54	0.60	166 x 160 x 87
AXG-1AE	349008	Panel mounting	IP54	0.55	166 x 106 x 57 mm / mounting depth: max. 75

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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.

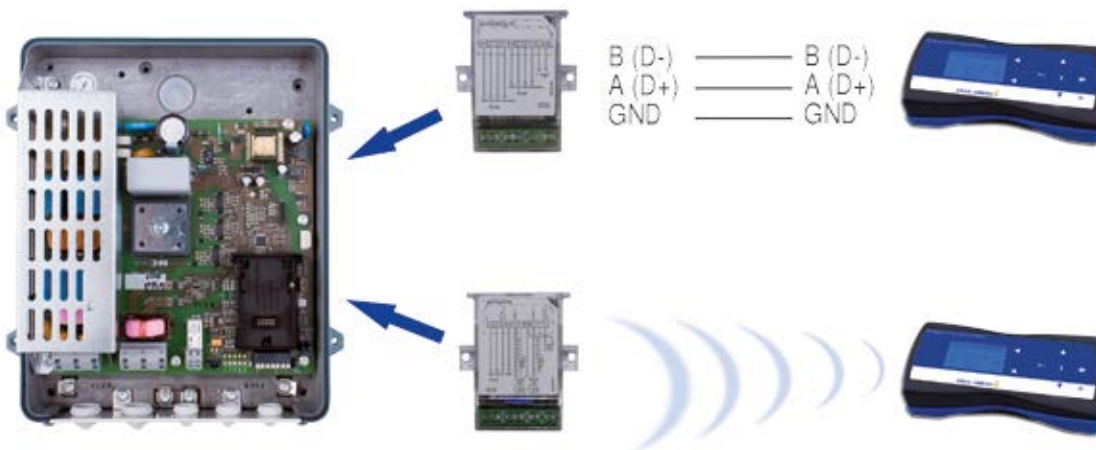
The basic frequency inverters without integrated display and ECblue motors can be extended with AM-MODBUS or AM-PREMIUM add-on modules. The A-G-247NW operating terminal can be connected to this by plugging add-on modules.

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

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Vpro-ECblue

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Potentiometer 5-step



Potentiometer with 5 steps for activating EC fans and controllers. The potentiometer is supplied with a supply voltage of (10 V) from the EC fan or the controller producing a control voltage of 0-10 V depending on the switch position.

The operating status can be displayed via an integrated LED.

Equipment/characteristics:

5-step switch

For setting five output voltages. Factory settable: Step 0/1/2/3/4/5 = 0/2/4/6/8/10 V

Internal potentiometer offset

Control voltage reduction option. The max. control voltage of 10 V is factory set. It can be selected to only move down the control voltage of steps 1 - 4, or to move down step 5, too.

Activation options via LED

Internal activation: LED lights up in position 1 - 5.

External activation: By means of a potential-free contact or via an open collector output, the status of an external device can be displayed via the LED.

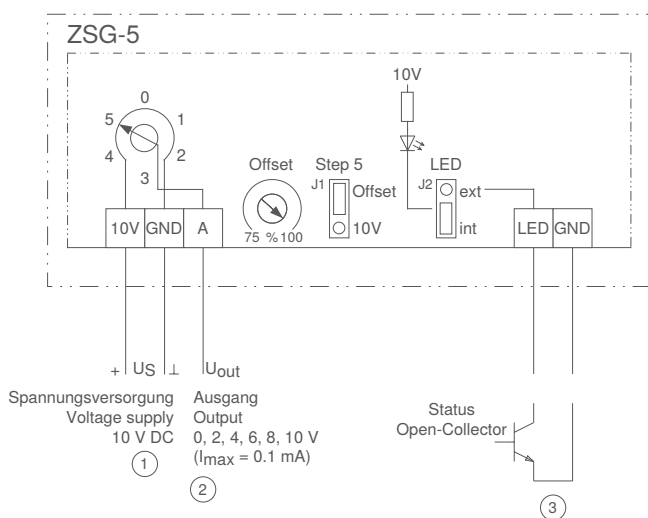
Standard conformity

Interference emission according to EN 61000-6-3 (domestic)
Interference immunity according to EN 61000-6-2 (industrial)

Potentiometers

Type	Article no.	Mounting type	Protection class	Weight kg	Dimensions (W x H x D) mm
ZSG-5	349073	Wall mounting	IP54	0.20	106.3 x 137 x 72.5

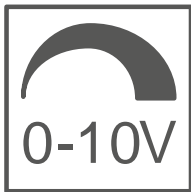
Connection diagram



SGSW04K0
05.02.2016



Potentiometer



Infinitely variable potentiometers for activating EC fans and controllers. The potentiometers are supplied with a supply voltage (10 V) from the EC fan or controller with a control voltage output of 0 - 10 V depending on the rotary knob setting. Alternatively, the control voltage can be preset as a nominal value setting (external setpoint for the control) 0 - 10 V.

Equipment/Characteristics:

Rackmount version:

e.g. for installation in control cabinet doors
Axis length 50 mm, Ø 6 mm
Included front plate: 40 x 40 mm
Included rotary knob

Design version in housing:

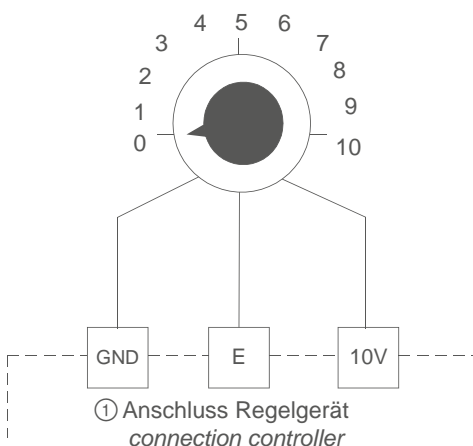
Surface mounting or mounting in existing flush receptacles. Device with additional switch contact.

Simple control via rotary knob

Set the desired resistance

Potentiometers						
Type	Article no.	Mounting type	Setpoint range	Protection class	Weight	Dimensions (W x H x D)
					kg	mm
Potentiometer 1K	00153986	Panel mounting	0...1kOhm	IP00	0.04	Shaft d 6 x 50
Potentiometer 10K	00153989	Panel mounting	0...10kOhm	IP00	0.04	Shaft d 6 x 50
Potentiometer 10K (IP54)	380058	Wall mounting	0...10kOhm	IP54	0.15	82 x 82 x 65

Connections



① Connection control unit



General notes

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Explanation of technical details

Symbols. Units of measure

Symbol	Unit	Description
P_{is}	Pa	Static pressure increase
P_{id}	Pa	Dynamic pressure
q_{V1}	m ³ /h	Air flow
n_N	min-1	Rated speed
P_e	kW	Input power
P_{ed}	kW	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
ΔI	%	Percentage increase of current based on rated current for speed control by voltage reduction
C_{400V}	μ F	Capacity
$t_{amb (min)}$	°C	Minimum permitted ambient temperature
$t_{amb (max)}$	°C	Maximum permitted ambient temperature
L_{WA5}	dB(A)	A-rated suction-side sound power level
η_{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
L_{pA}	dB(A)	A-weighted suction-side or pressure-side acoustic pressure level related to a certain measurement distance
P_{spez}	Wh/1000m ³	Specific power

Conversion factors

Pressure

		SI-unit	Additional units		
		Pa (N/m ²)	mbar	in.wg	psi (lbf./in ²)
SI-unit	Pa (N/m ²)	1	0.01	0.004015	0.000145
Additional units	mbar	100	1	0.401463	0.014504
	in.wg	249.10	2.49	1	0.036127
	psi (lbf./in ²)	6894.76	68.95	27.68	1

Air flow

		SI-unit	Additional units		
		m ³ /s	m ³ /h	l/s	cfm
SI-unit	m ³ /s	1	3600	1000	2118.9
Additional units	m ³ /h	0.000278	1	0.277778	0.588578
	l/s	0.001	3.6	1	2.1189
	cfm	0.000472	1.699011	0.471947	1

Temperature

		°C	°F
SI-unit	°C	1	(°C × 1.8) + 32
Additional units	°F	(°F – 32) / 1.8	1



Dynamic pressure

Calculation of the dynamic pressure:

$$p_{d2} = k_{d2} \cdot q_v^2$$

- p_{d2} Dynamic pressure at fan outlet in Pa
- k_{d2} Constant factor for calculation of the dynamic pressure
- q_v Air flow in m³/h

k-factors for calculation of the dynamic pressure

ZABluefin		Cpro/ZAcube		C		ZAVblue		Vpro	
Size	k_{d2}	Size	k_{d2}	Size	k_{d2}	Size	k_{d2}	Size	k_{d2}
				22C.1R	$1.85 \cdot 10^{-5}$				
25I.CR	$5.59 \cdot 10^{-6}$	25C.CR	$9.66 \cdot 10^{-6}$	25C.1R	$1.14 \cdot 10^{-5}$	25V.VR	$1.29 \cdot 10^{-5}$		
28I.CR	$3.56 \cdot 10^{-6}$	28C.CR	$6.26 \cdot 10^{-6}$	28C.1R	$7.44 \cdot 10^{-6}$	28V.VR	$8.27 \cdot 10^{-6}$	28V.1R	$8.60 \cdot 10^{-6}$
31I.CR	$2.22 \cdot 10^{-6}$	31C.CR	$4.01 \cdot 10^{-6}$	31C.1R	$4.78 \cdot 10^{-6}$	31V.VR	$5.12 \cdot 10^{-6}$	31V.1R	$5.32 \cdot 10^{-6}$
35I.CR	$1.39 \cdot 10^{-6}$	35C.CR	$2.53 \cdot 10^{-6}$	35C.1R	$2.96 \cdot 10^{-6}$	35V.VR	$3.29 \cdot 10^{-6}$	35V.1R	$3.37 \cdot 10^{-6}$
40I.CR	$8.62 \cdot 10^{-7}$	40C.CR	$1.61 \cdot 10^{-6}$	40C.1R	$1.82 \cdot 10^{-6}$	40V.VR	$1.87 \cdot 10^{-6}$	40V.1R	$2.13 \cdot 10^{-6}$
45I.CR	$5.39 \cdot 10^{-7}$	45C.CR	$1.00 \cdot 10^{-6}$	45C.1R	$1.13 \cdot 10^{-6}$	45V.VR	$1.22 \cdot 10^{-6}$	45V.1R	$1.36 \cdot 10^{-6}$
50I.CR	$3.54 \cdot 10^{-7}$	50C.CR	$6.22 \cdot 10^{-7}$	50C.1R	$7.14 \cdot 10^{-7}$	50V.VR	$8.12 \cdot 10^{-7}$	50V.1R	$8.82 \cdot 10^{-7}$
56I.CR	$2.25 \cdot 10^{-7}$	56C.CR	$4.06 \cdot 10^{-7}$	56C.1R	$4.65 \cdot 10^{-7}$	56V.VR	$5.27 \cdot 10^{-7}$	56V.1R	$5.37 \cdot 10^{-7}$
		63C.CR	$2.58 \cdot 10^{-7}$	63C.1R	$2.98 \cdot 10^{-7}$	63V.VR	$3.45 \cdot 10^{-7}$	63V.1R	$3.36 \cdot 10^{-7}$
				71C.1R	$1.86 \cdot 10^{-7}$				
				80C.1R	$1.15 \cdot 10^{-7}$				

Example:

Type RH45C-ZID.GG.CR, article no. 114613

Size	Constant
RH25C.CR	60
RH28C.CR	75
RH31C.CR	95
RH35C.CR	121
RH40C.CR	154
RH45C.CR	197
RH50C.CR	252
RH56C.CR	308
RH63C.CR	381

$p_{d2} = 197 \cdot q_v^2$

Aerodynamics and acoustics

Measurement method

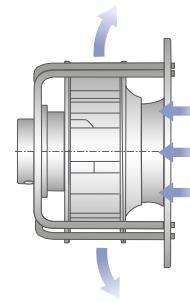
The characteristic curve diagram shows the pressure increase Δp_{is} in Pa as a function of the air flow rate q_{v1} in m^3/h .

Technical conditions of supply

The specified performance data meet the respective requirements for accuracy

- AN2 for impellers without motor
- AN3 for fans with standard motors
- AN2 for impellers with ECblue motors (except EC055)
- AN3 for impellers with EC motor EC055 (see type key)
- AN4 for fans with AC external rotor motors

in line with **ISO 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.



L-KL-3679-1

Fan test bench

The fan characteristic curves are determined on a combined air performance and acoustic test bench.

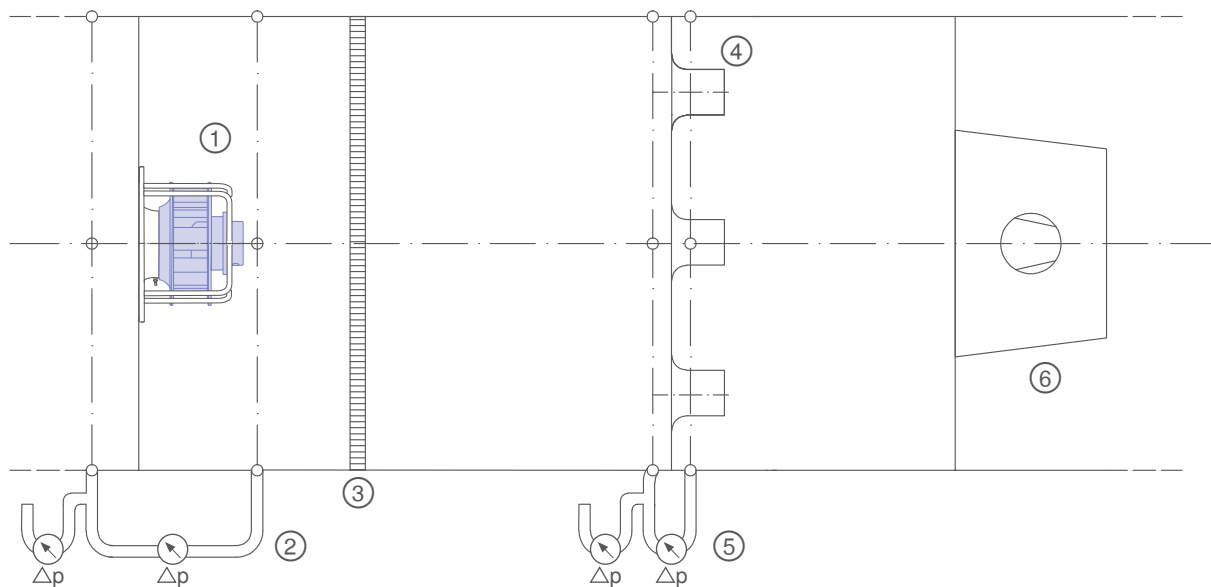
The fan characteristic curves are measured in compliance to **DIN EN ISO 5801**, respectively **AMCA 210-99**. The sound power levels are measured in compliance with **DIN EN ISO 3745** and **ISO 13347-3** using the enveloping surface measuring method.

The figure below shows an example of the measuring setup. The fan intake is installed in the measuring chamber at free inlet 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^3 .



- ① Test fan
- ② p_{is}
- ③ Flow straightener
- ④ Nozzles
- ⑤ Δp Differential pressure
- ⑥ Auxiliary fan



Aerodynamics and acoustics

Noise level data

Unless otherwise indicated, this catalogue specifies the suction 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 suction side sound power level L_W . To do this, the fans are installed with a free inlet (from the measuring chamber) and free exhaust (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 suction side level. The total sound power level is calculated by adding up the power from the sound power levels of both the suction 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 suction side sound power level specified in the catalogue.

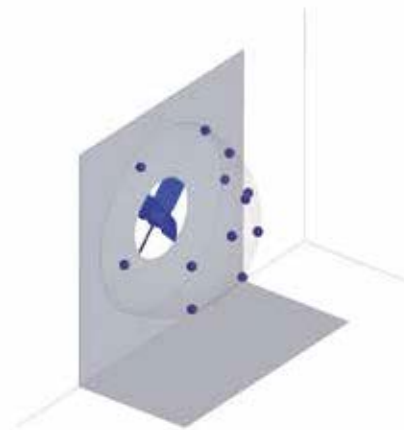


Fig. 1a: Position of microphones



Fig. 1b: Fan test-bench

Aerodynamics and Acoustics

Noise level data

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 axle 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.

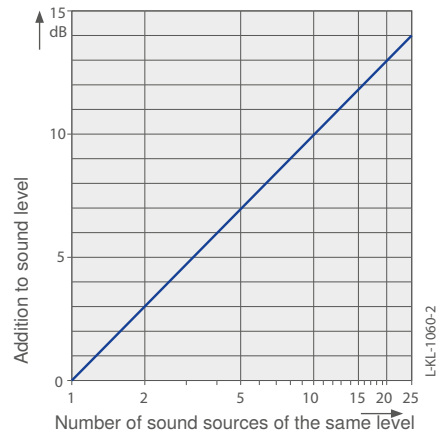


Fig. II: Addition of several sound sources

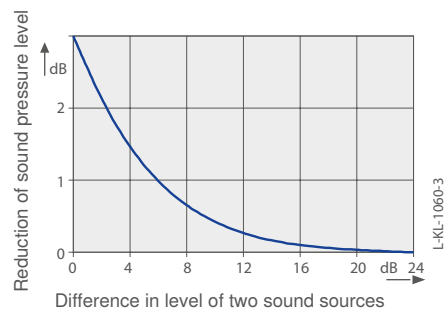


Fig. III: Sound sources of different levels

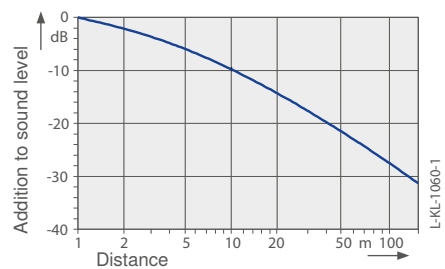


Fig. IV: Reduction of sound pressure level



Electrical connection and motor

Fan drive

The three phase (3~) or single phase (1~) external motor integrated into the fan hub meets the requirements for circulating electric machines set forth in **DIN EN 60 034-1** (VDE 0530 Part 1).

AC technology:

The rated voltage for three phase alternating current motors is 400 V, for single phase alternating current motors it is 230 V.

EC technology:

The centrifugal fans with ECblue technology are powered by a highly efficient EC-motor with integrated commutation technology. Depending on the version, the ECblue motors have a broad voltage range.

1~ 200-240 V, 50/60 Hz

1~ 200-277 V, 50/60 Hz

3~ 380-480 V, 50/60 Hz

Operation on the frequency inverter

ZIEHL-ABEGG centrifugal fans are suitable for operation with frequency inverters, however, the following has to be observed:

All-pole active sinefilters between the inverter and the motor (sinusoidal output voltage! must be installed phase to phase, phase to PE conductor) as supplied by some inverter manufacturers. For more details please request our technical information sheet L-TI-0510.

du/dt filters (also known as motor or attenuation filters) may not be used instead of sinefilters.

When using sinefilters, it may no longer be necessary to use screened motor power cables, metal terminal boxes, or a second earth connection on the motor (please consult your sinefilter supplier).

Electrical connection

Voltage

The three phase or single phase alternating current motors are suitable for $400\text{ V} \pm 10\%$ or $230\text{ V} \pm 10\%$ and for 50/60 Hz. For details please refer to data sheet.

Motor connection

Mains connection via terminal box or outgoing connection cable as shown in dimension drawings. Cable length tolerance $\pm 3\text{ cm}$.

Terminal box

The terminal boxes are made of shock-proof, weather-resistant plastic or die-cast aluminium.

All terminal boxes have two cable inlet openings.

Connecting cables

Heat and UV-resistant, halogen-free hoses, identified by a colour code or connection designations are used.

Temperature resistance -50 to $+150\text{ }^{\circ}\text{C}$.

The connection ends are stripped 10 cm and fitted with wire end sleeves.

Operating capacitor

See chapter System components.

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ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

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Allocation

Allocation of EC connection diagrams			
Motor		Connection diagram	ZAbluefin
Z8	EC055	1360-404 / 1360-407	
ZC	EC055	1360-404 / 1360-407	
0A	EC072	1360-404 / 1360-407	
0F	EC072	1360-404 / 1360-407	
BA	EC090	1360-384	
BD	EC090	1360-384	
DC	EC116	1360-403	AP00001A / AP00001C
DG	EC116	1360-403	AP00001A / AP00001C
GG	EC152	1360-403	AP00001A / AP00001C
GL	EC152	1360-403	AP00001A / AP00001C
GQ	EC152	1360-403	AP00001A / AP00001C

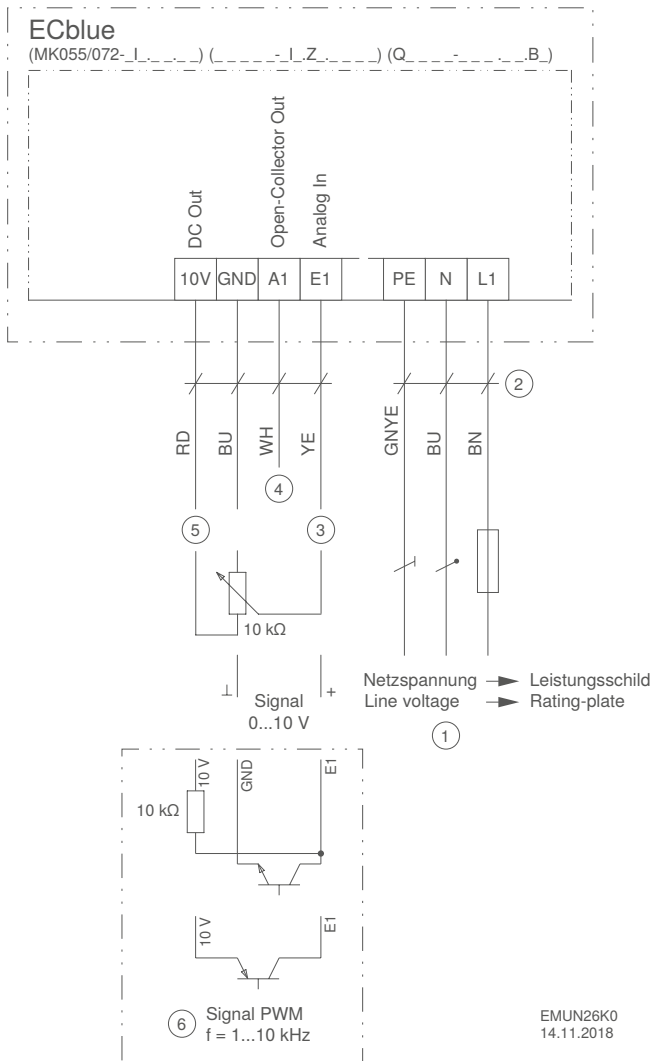
Allocation of AC connection diagrams					
Motor		Type of current	Speed	Special features	Connection diagram
W6	68	1~		with capacitor and thermostat	1360-177X
WA	68	1~		with capacitor and thermostat	
WC	68	1~		with capacitor and thermostat	
WD	68	1~		with capacitor and thermostat	
0C	74	1~	1		1360-104XA
		3~	1		1360-106XA
0F	74	1~	1		1360-104XA
		3~	1		1360-106XA
2A	85	1~	1		1360-104XA
		3~	1		1360-106XA
		3~	2	Δ/Y switchable	1360-108XA
2C	85	1~	1		1360-104XA
		3~	1		1360-106XA
		3~	2	Δ/Y switchable	1360-108XA
2F	85	1~	1		1360-104XA
		3~	1		1360-106XA
4A	106	3~	1		1360-106XA
		3~	2	Δ/Y switchable	1360-108XA
4C	106	1~	1		1360-104XA
		3~	1		1360-106XA
		3~	2	Δ/Y switchable	1360-108XA
4F	106	1~	1		1360-104XA
		3~	1		1360-106XA
		3~	2	Δ/Y switchable	1360-117XA
4I	106	1~	1		1360-104XA
		3~	1		1360-106XA
6F	137	1~	1		1360-104XA
		3~	1		1360-106XA
6K	137	1~	1		1360-104XA
		3~	1		1360-106XA
6N	137	1~	1		1360-104XA
7Q	165	3~	2	Δ/Y switchable	1360-108XA



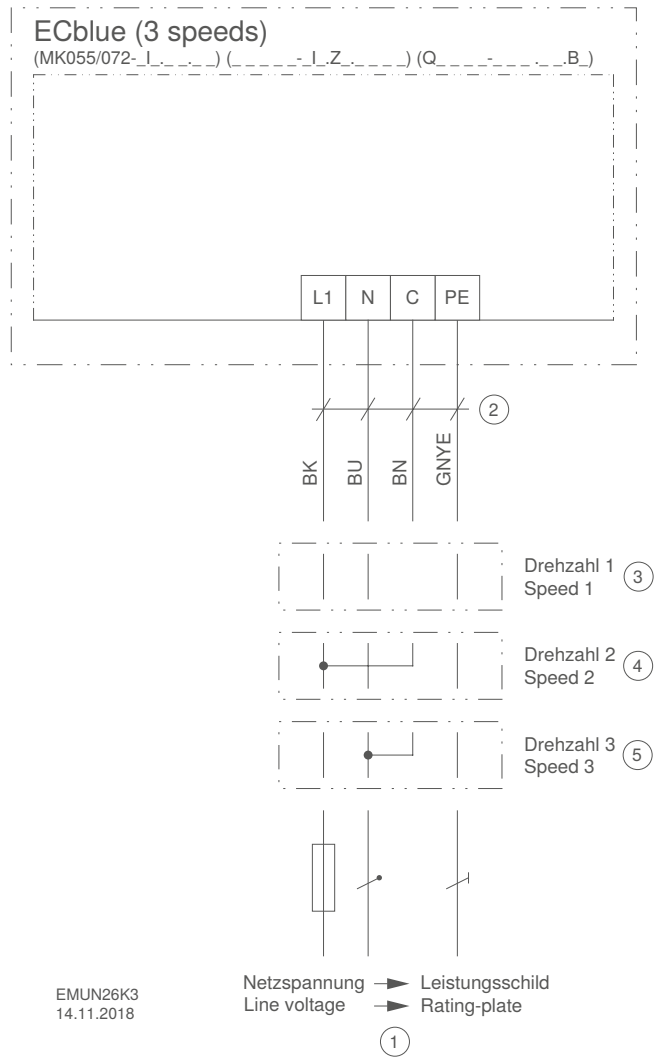
Connection diagrams

1360-404 (EC055 / EC072)

1360-407 (EC055 / EC072)



- ① Mains voltage, see rating plate
- ② Version with connection cables
- ③ Input for speed setting via 0...10 V signal / potentiometer ($R_1 > 150 \text{ k}\Omega$)
- ④ Tachometer output, open collector ($I_{\text{max}} 10\text{mA}$)
- ⑤ Voltage supply 10 V DC ($I_{\text{max}} 10 \text{mA}$)
- ⑥ Speed setting via PWM signal ($f = 1 \dots 10 \text{ kHz}$)

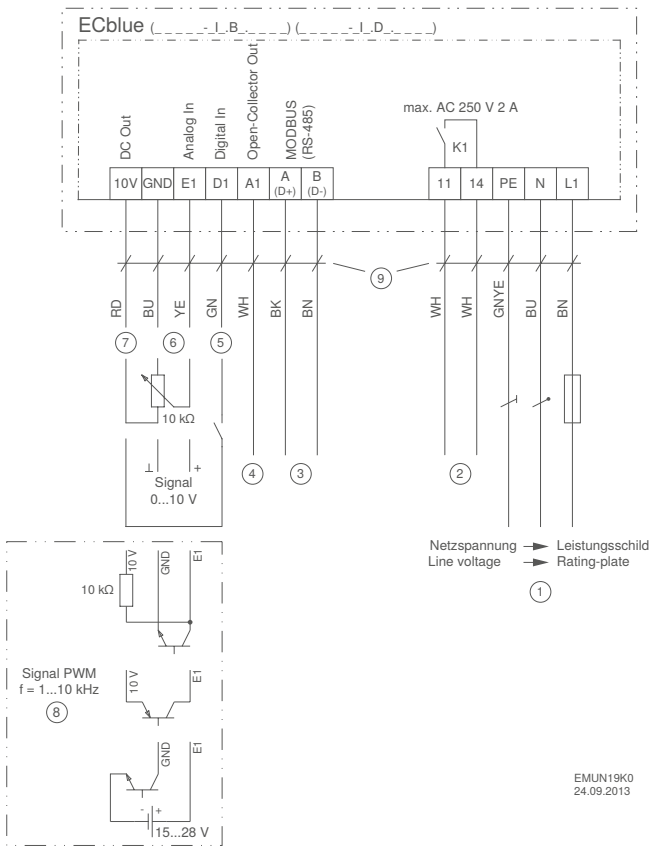


- ① Mains voltage, see rating plate
- ② Version with connected cables
- ③ Speed 1 = brown not connected
- ④ Speed 2 = brown and black connected
- ⑤ Speed 3 = brown and blue connected

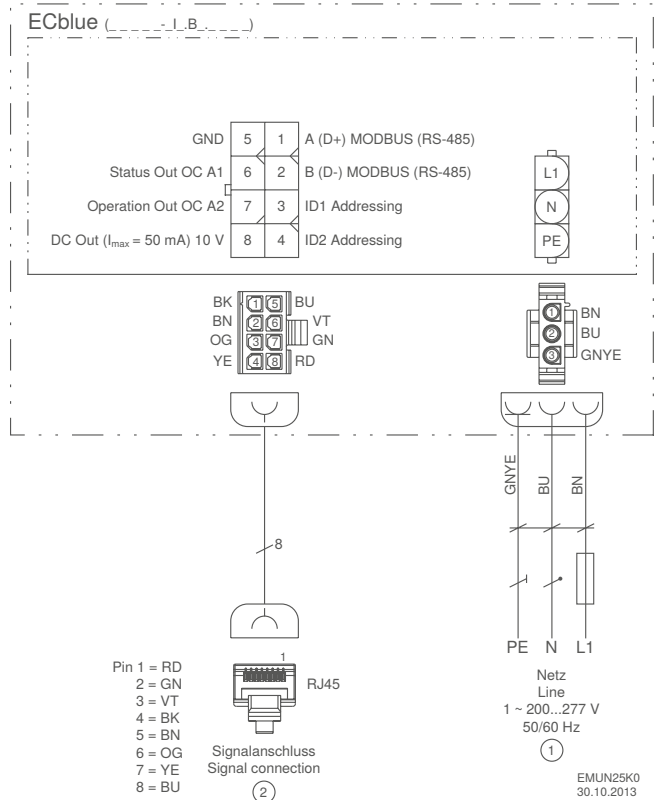
Connection diagrams

1360-384 (EC090 IP54)

(EC090/EC116 IP20)



- 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 ($R_i > 100 \text{ k}\Omega$)
- ⑦ Voltage supply 10 V DC ($I_{\text{max}} 50 \text{ mA}$)
- ⑧ Setting speed by PWM signal ($f = 1 \dots 10 \text{ kHz}$)
- ⑨ Version with connection cables

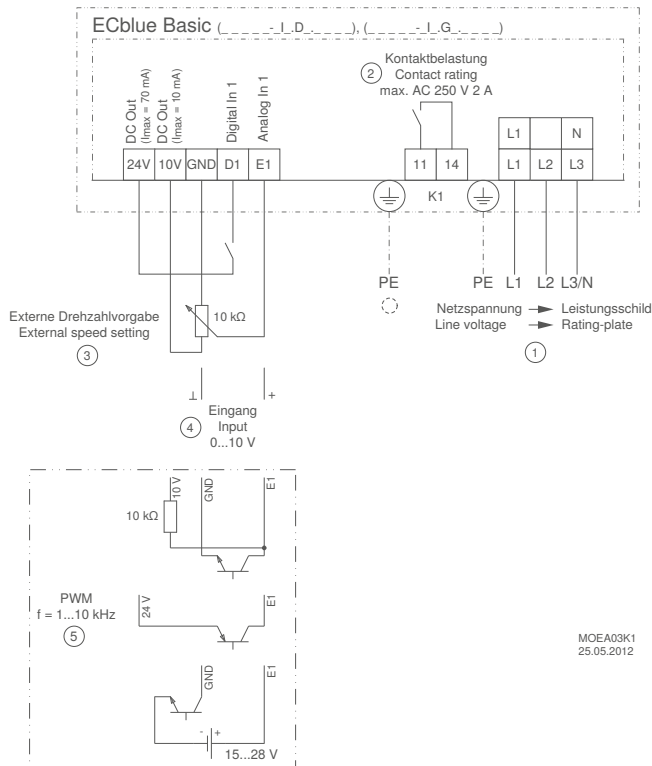


- ① Mains voltage 1~ 200...277 V, 50/60 Hz
- ② Signal connection



Connection diagrams

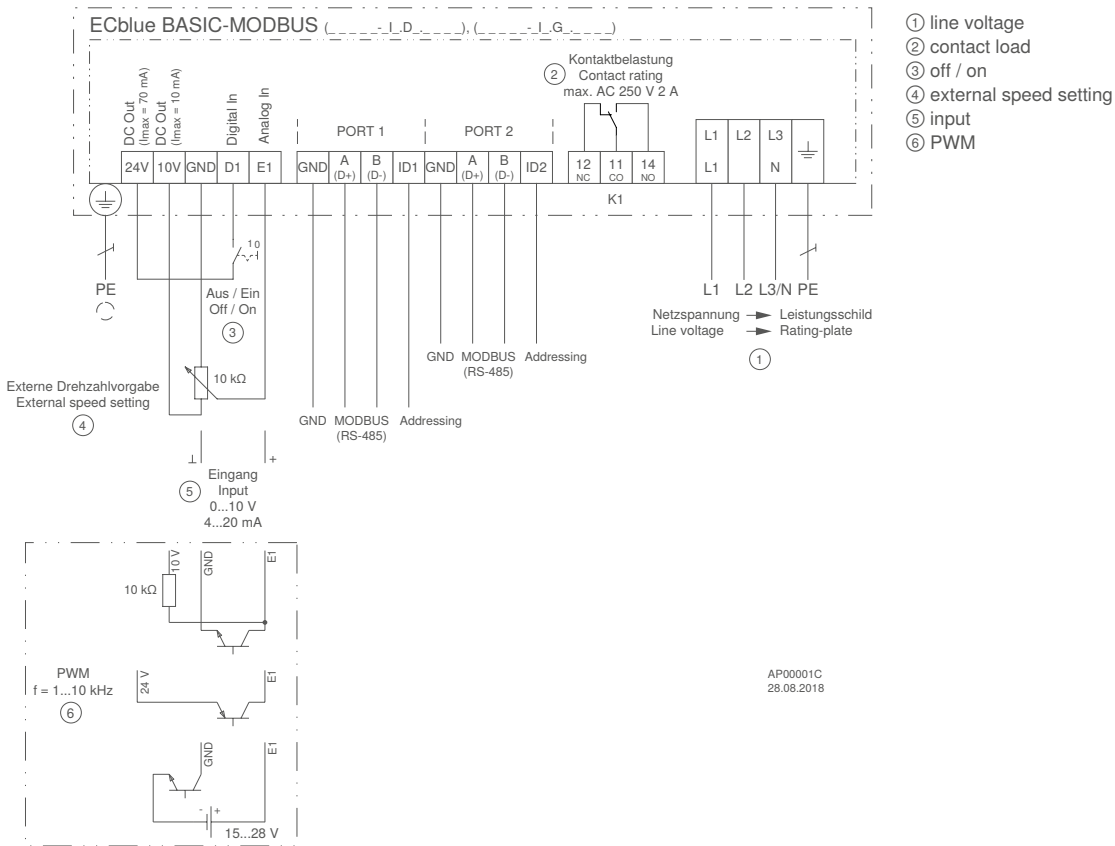
1360-403 (EC116 / EC152)



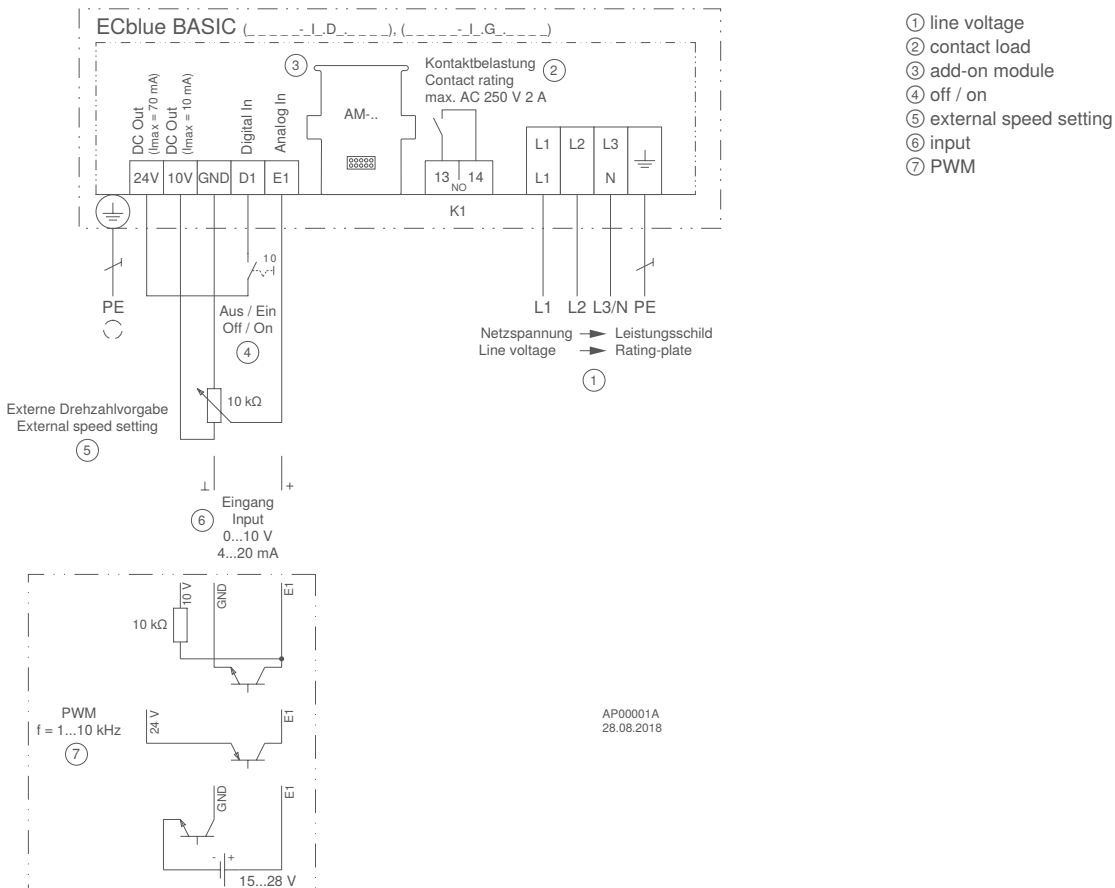
- ① line voltage
- ② contact load
- ③ external speed setting
- ④ input
- ⑤ PWM

Connection diagrams

AP00001C (EC116 / EC152 2nd generation ECblue)



AP00001A (EC116 / EC152 2nd generation ECblue)



Connection diagrams

AC-Technology

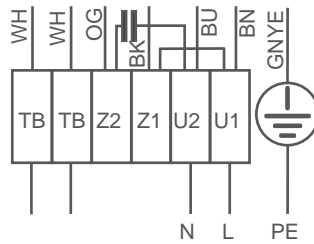
104XA

For 1~-motor with capacitor and thermostatic switch (if built in).

Airflow direction: V

Direction of rotation: clockwise

Please keep the wiring diagram in the terminal box.



Cable colours:

BN brown
BU blue
BK black
OG orange
WH white
GNYE green-yellow

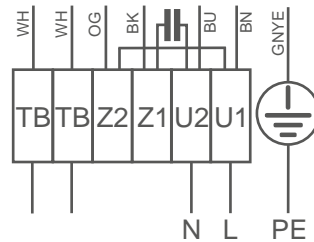
104XB

For 1~-motor with capacitor and thermostatic switch (if built in).

Airflow direction: A

Direction of rotation: counter clockwise

Please keep the wiring diagram in the terminal box.



Cable colours:

BN brown
BU blue
BK black
OG orange
WH white
GNYE green-yellow

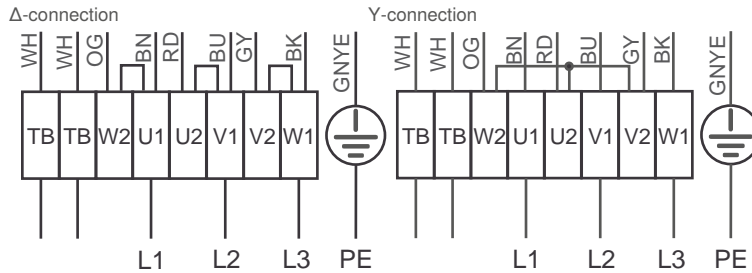
106XA

For 3~-motor with one speed and thermostatic switch (if built in).

Airflow direction: V

Direction of rotation: clockwise

Please keep the wiring diagram in the terminal box.



Cable colours:

BN brown
BU blue
BK black
RD red
GY grey
OG orange
WH white
GNYE green-yellow

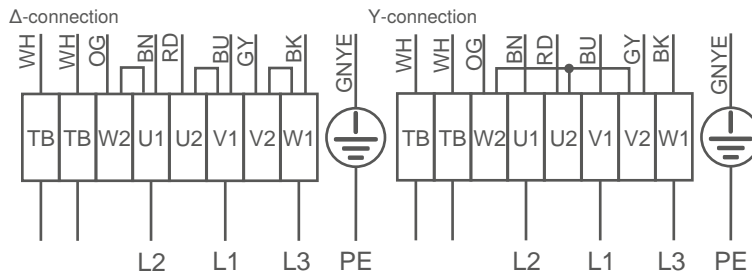
106XB

For 3~-motor with one speed and thermostatic switch (if built in).

Airflow direction: V

Direction of rotation: clockwise

Please keep the wiring diagram in the terminal box.



Cable colours:

BN brown
BU blue
BK black
RD red
GY grey
OG orange
WH white
GNYE green-yellow

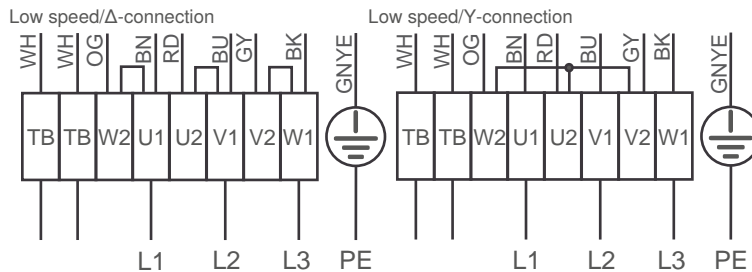
108XA

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: Counter clockwise

Keep wiring diagram in terminal box.



Cable colours:

BN brown
BU blue
BK black
RD red
GY grey
OG orange
WH white
GNYE green-yellow

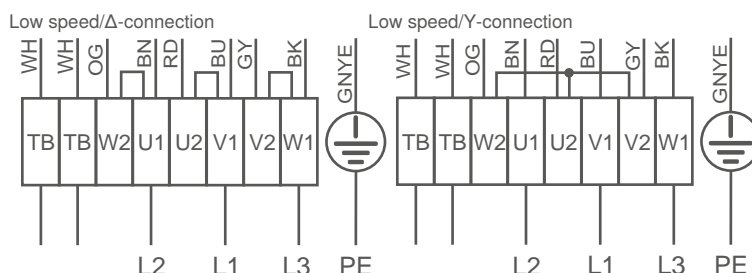
108XB

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

Keep wiring diagram in terminal box.



Cable colours:

BN brown
BU blue
BK black
RD red
GY grey
OG orange
WH white
GNYE green-yellow

Installation and usage information

Measuring device for determining air volume

The active pressure process compares the static pressure before the inlet nozzle with the static pressure in the inlet nozzle 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 air flow as follows:

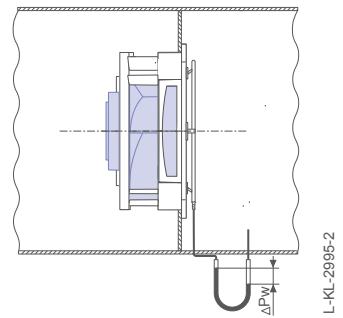
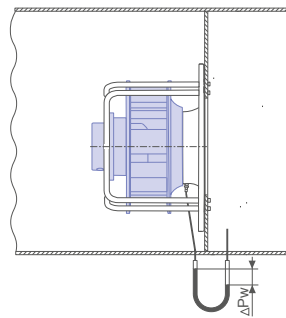
Under normal conditions at 20 °C:

$$q_V = k \cdot \sqrt{\Delta p_w}$$

- q_V Air flow in m³/h
- Δp_w Differential pressure of the static pressures in Pa
- k Coefficient for specific nozzle properties, nozzle factor
- ρ_s Standard air density with 1.2 kg/m³
- ρ Air density at current operating point in kg/m³

Under fluctuating air conditions:

$$q_V = \sqrt{\frac{\rho_{20}}{\rho_{Betr}}} \cdot k_{20} \cdot \sqrt{\Delta p_w}$$



Nozzle coefficients

Size	ZAbbluefin		Cpro		C		ZAvblue	ZAvblue with EC055	ZApilot	Vpro
	Standard k	With guard grille k_g	Standard k	With guard grille k_g	Standard k	With guard grille k_g	Standard k	Standard k	Standard k	Standard k
175								38	38	
190								38	38	
200								38	38	
220								71	71	
225					47	46		75	71	50
250	67	63	60	58	60	58	80	112	90	63
280	85	80	75	72	75	72	95			86
315	106	100	95	91	95	91	120			112
355	140	130	121	116	121	116	150			144
400	180	170	154	148	154	148	200			180
450	220	210	197	189	197	189	240			220
500	280	265	252	242	252	242	320			291
560	355	335	308	295	308	295	400			360
630			381	365	381	365	480			445
710					490	470				
800					620	594				

$\rho = 1.20 \text{ kg/m}^3$

Example:

If an active pressure of 700 Pa is measured for size GR63C, 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 nozzle coefficients (k factors) were determined under laboratory conditions and with an undisturbed supply. If inlet guard grilles are installed (fitted in front of the inlet nozzle), use factor k_g .

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. 9.0 m/s at the place of greatest constriction.

The tolerances cannot be clearly quantified below this minimum air velocity.

This air flow measuring method is only suitable for acceptance measurements on site.

For a more accurate air flow determination in the existing installation setup, a counter calibration of the air flow 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.



Installation and usage information

Measuring device for determining air volume / imperial units

The active pressure process compares the static pressure before the inlet nozzle with the static pressure in the inlet nozzle 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 air flow as follows:

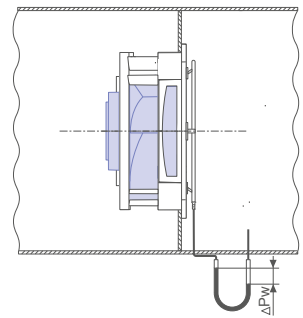
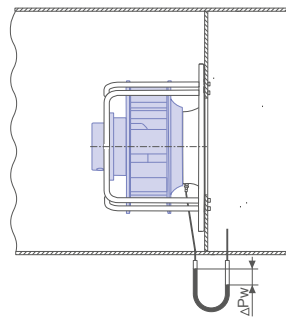
Under normal conditions at 68°F / 20°C:

$$q_v = k \cdot \sqrt{\Delta p_w}$$

- q_v Air flow in CFM
- Δp_w Differential pressure of the static pressures in in.wg
- k Coefficient for specific nozzle properties, nozzle factor
- ρ_s Standard air density with 0.075 lbs/ft³
- ρ Air density at current operating point in lbs/ft³

Under fluctuating air conditions:

$$q_v = k \cdot \sqrt{\rho_s / \rho \cdot \Delta p_w}$$



Nozzle coefficients

Size	ZAbbluefin		Cpro		C		ZAvblue	ZAvblue with EC055	ZApilot	Vpro
	Standard k	With guard grille k_g	Standard k	With guard grille k_g	Standard k	With guard grille k_g	Standard k	Standard k	Standard k	Standard k
175								353	353	
190								353	353	
200								353	353	
220								659	659	
225					436	427		696	659	464
250	622	585	557	538	557	538	743	1040	835	585
280	789	743	696	668	696	668	882			798
315	984	928	882	845	882	845	1114			1040
355	1300	1207	1123	1077	1123	1077	1392			1337
400	1671	1578	1429	1374	1429	1374	1856			1671
450	2042	1949	1829	1754	1829	1754	2228			2042
500	2599	2460	2339	2246	2339	2246	2970			2701
560	3295	3110	2859	2738	2859	2738	3713			3342
630			3537	3388	3537	3388	4455			4131
710					4548	4363				
800					5755	5514				

$\rho = 0.075 \text{ lbs/ft}^3$

Example:

If an active pressure of 2.87 in.wg is measured for size GR63C, the air flow can be calculated as follows, using this simplified formula:

$$q_v = k \cdot \sqrt{\Delta p_w} = 3537 \cdot \sqrt{2.87} = 5992 \text{ CFM}$$

The nozzle coefficients (k factors) were determined under laboratory conditions and with an undisturbed supply. If inlet guard grilles are installed (fitted in front of the inlet nozzle), use factor k_g .

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 air flow 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 air flow measuring method is only suitable for acceptance measurements on site.

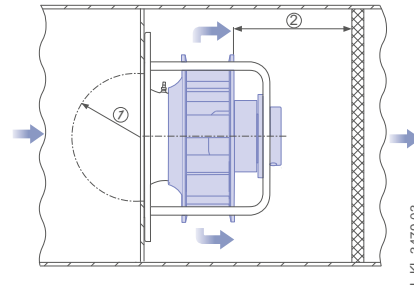
For a more accurate air flow determination in the existing installation setup, a counter calibration of the air flow has to be carried out on site to measure the active pressure. The nozzle factors determined during this process apply exclusively to this installation setup.

Installation and usage information

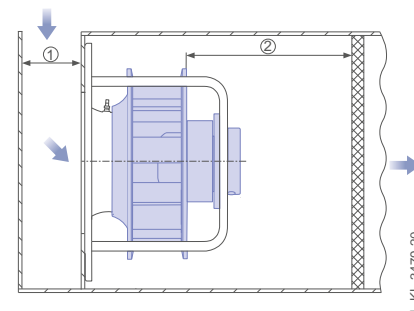
Installation instructions ventilation unit GR

The following installation instructions are based on experience from applications and measurements on our test benches. These are general guidelines, as variations may occur in your device due to differences in its construction. The respective DSA dimension can be found in the chapter "Impellers with hub".

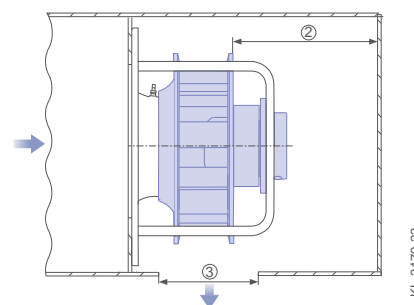
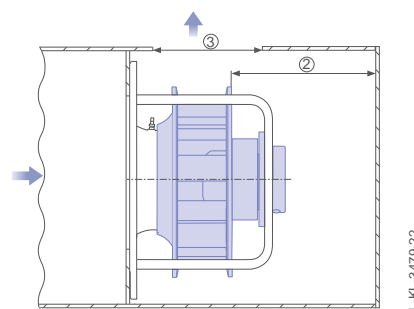
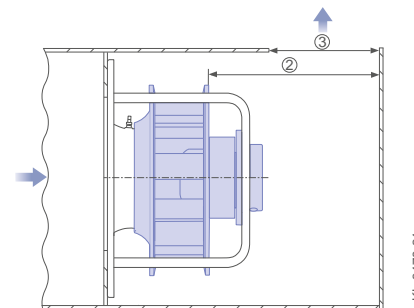
- The performance depends on the distance to components on the intake ① and pressure side ②
- Intake side ① $\geq 0.5 \times \text{DSA}$
- Optimum on pressure side for series ZABluefin ② $\geq 0.8 \times \text{DSA}$, absolute minimum ② $\geq 0.6 \times \text{DSA}$ for other series ② $\geq 1.0 \times \text{DSA}$, absolute minimum ② $\geq 0.7 \times \text{DSA}$ (exception: cooling battery or humidifier after the fan)



- Changes to the flow direction before the fan create significant turbulence in the intake area
- Intake side ① $\geq 1.0 \times \text{DSA}$, with guide blades this can be reduced to ① $0.7 \times \text{DSA}$, otherwise there are increased acoustics and power loss



- The position of the opening can be above or below the fan, size ③ $\geq 0.8 \times \text{DSA}$
- Ideal design if the opening extends over the entire width of the device



Information

ZABluefin-
ECblue

Cpro-ECblue

C-ECblue

ZAvblue

Vpro-ECblue

ZAcube-
Cpro-ECblue

Housing fans

System
components

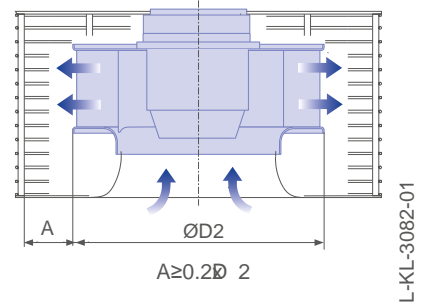
Control
technology

General notes

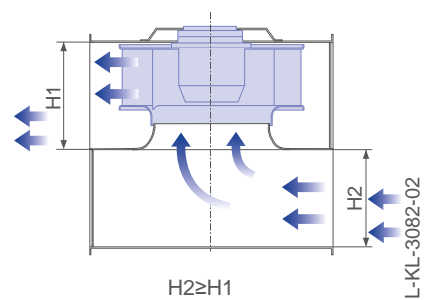
Installation and safety instructions

Installation instructions free-running impeller RH

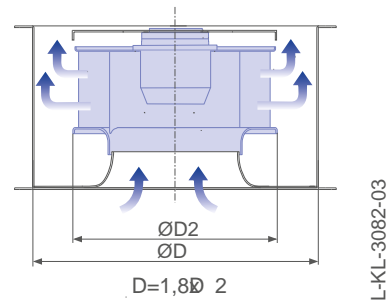
The fans in this catalogue are not ready-for-use products and must only be operated after they have been installed in machines, ventilation technology devices or plants and their safety has been secured through safeguards as per DIN EN 13857 resp. ISO 13852 by the manufacturer of the machine, the ventilation-technology device or the plant.



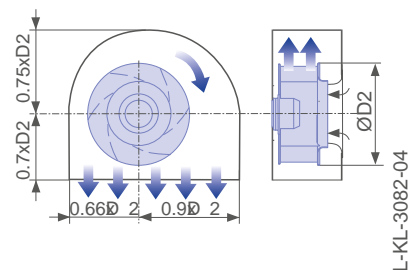
Switch cabinet ventilation



Duct fan



Pipe fan



Centrifugal fan RH with semi-scroll housing

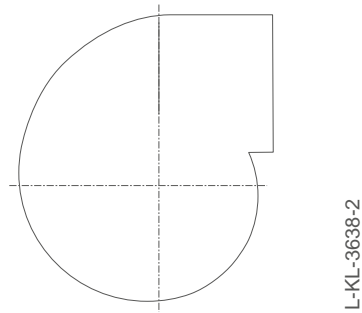


Installation and usage information

Information on EC centrifugal fan with constant air flow

The constant air flow control can only achieve the catalogue specifications if the supply is undisturbed. An irregular or blocked supply (e.g. due to the installation situation in the device) has significant effects on the characteristics and can produce large deviations from the values specified in the catalogue.

Using the motor fan impeller unit without the spiral geometry of ZIEHL-ABEGG can produce significant deviations from the catalogue data.



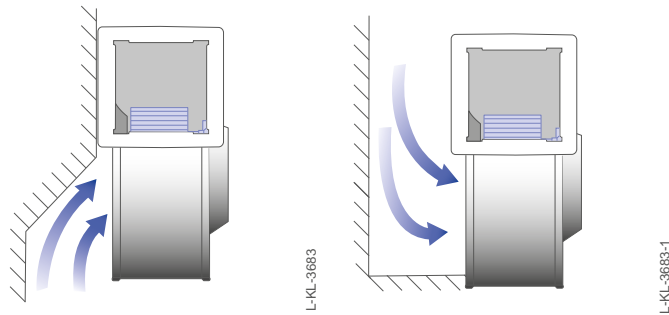
ZIEHL-ABEGG spiral geometry without dimensions - for dimensions, please see product page

Installation information for a constant, unobstructed supply:

- There should be a distance of at least 25% of the impeller diameter between the fan suction area and adjacent add-on parts.
- A homogeneous supply should be implemented.
- In order to achieve a constant supply, suction side resistors (e.g. guard grilles or filters) can be used.

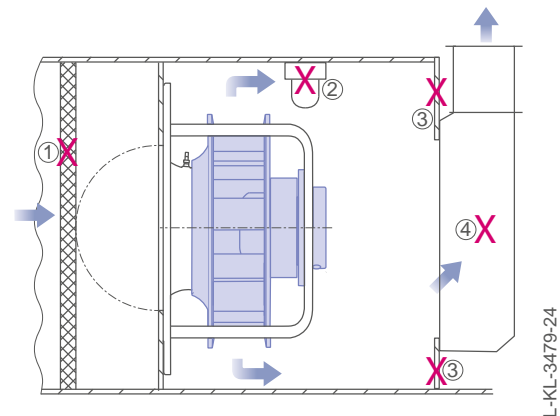
Upon request we offer dimensioned fan variants which are adapted to the customer-specific installation situation.

Examples of irregular and blocked supply:



Possible sources of faults during installation

- 90° change in flow direction and reduction in cross-section ④
- Obstructions on the pressure side (long lamp, fluorescent lamp) ②
- Interference on the intake side (battery too close) ①
- Constriction at outlet ③

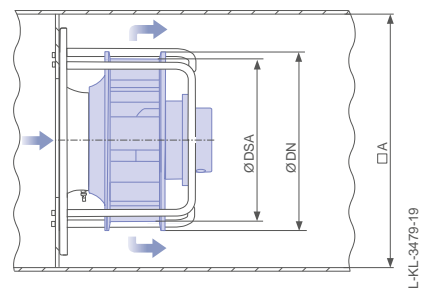
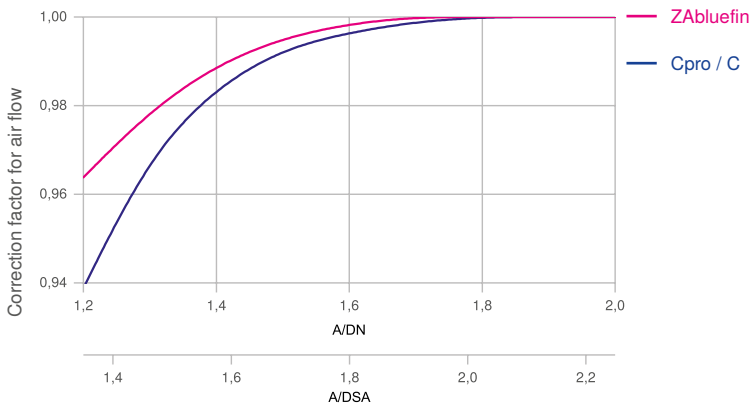


Installation and usage information

Impact of installation in the air handling units

The characteristic curve of the fan and the acoustic power as compared with the characteristic-curve information are influenced by installation of the fan in an air handling unit. Likewise, using a guard grille also influences the characteristic curve and the acoustics. ZIEHL-ABEGG analysed this influence on the behaviour of centrifugal fans in experiments. These influences can be calculated in the FANselect selection program. The diagram is merely intended to display a qualitative tendency of the empirically ascertained correction factors.

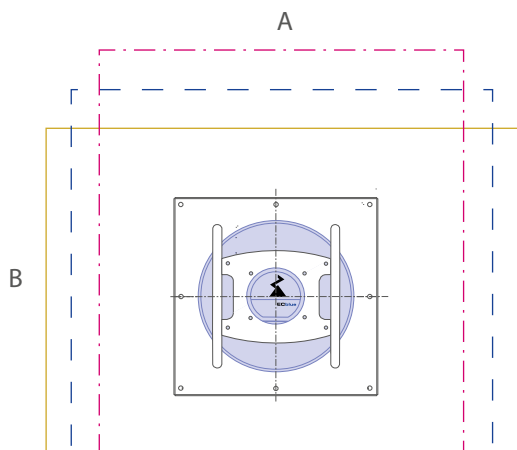
The installation losses when installed in a device housing can largely be ignored if the housing side A has a length of 1.8 x DSA (effective blade diameter).



L-KL-3479-19

Approximate calculation of influence of an air conditioning cabinet

When installed in a rectangular device housing, the ratio of the housing sides can be calculated using the following formula:



$$\frac{A+B}{2} = 1.8 \times \text{DSA}$$

$$\frac{1.8+1.8}{2} = 1.8 \times \text{DSA}$$

$$\frac{2.0+1.6}{2} = 1.8 \times \text{DSA}$$

$$\frac{2.2+1.4}{2} = 1.8 \times \text{DSA}$$

L-KL-3479-18



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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