

Movement by Perfection

# Fans





for railroad engineering  
01/2017 edition

**Addendum**  
09/2018

The Royal League in ventilation, control and drive technology



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# Technical description

## MAXventowlet

### Product specification for railroad engineering

Medium pressure axial fan with extremely low noise emissions, high efficiency, and more power due to high performance internal rotor motor.

Factory adjusted pitch angle and various number of blades to precisely meet customer's operating point.

Seven available sizes 315, 350, 400, 450, 500, 560 and 630 mm. Flow rates up to 31,000 m<sup>3</sup>/h and static pressures up to 1,500 Pa. Motors are available in 2- or 4-pole and 2/4-pole configurations in 50 Hz or 60 Hz versions

### Features and special features

- Housing with motor, impeller and nozzle as ready-to-install unit
- Low operating costs due to optimum efficiency with minimal noise as a result of the bionic wing design
- Adaptation for tight spaces or special dimensions
- High power density due to internal rotor motor
- High durability with low vibration due to dynamic balancing on 2 levels
- Plug and play solutions

### Motor concepts

#### Internal rotor motors

- AC technology
- Electrical design according to DIN EN 60034-1 or EN 60349-2 (railway auxiliary motor).

### Customer-specific design

- Degree of protections
- Insulation classes
- Temperature application ranges
- Voltage and frequency ranges
- Corrosion prevention

### Application examples

- Traction motor cooling
- Braking resistor cooling
- Transformer and oil cooling



# Technical description

## FE2owlet

### Product specification for railroad engineering

Profiled, sickle-shaped blades based on bionic insights. Available sizes 300 - 800 mm, air flows up to 30,000 m<sup>3</sup>/h and static pressure increase up to 400 Pa.

### Properties and special features

- Low operating costs due to optimum efficiency with minimum noise levels
- High flexibility due to 100% speed controllable air flow rate
- Very smooth running and long service life due to dynamic balancing in two levels
- Compact dimensions for every installation situation
- Numerous approvals (incl. VDE, UL, CCC, EAC, CE)
- Fire safety in accordance with DIN EN 45545

### Motor concepts

#### External rotor motors

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

### Application examples

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



# Technical description

## FE2owlet with ZAPLUS

### Product specification for railroad engineering

Optimised full nozzle with guide vane, motor suspension and short diffusor. Profiled, sickle-shaped blades based on bionic insights. Available sizes 450 - 630 mm, volume flow rates up to 23,000 m<sup>3</sup>/h and static pressure increase up to 480 Pa.

### Properties and special features

- Intelligent ventilation system with built-in efficiency guarantee
- Lowest operating costs due to optimum efficiency with minimum noise levels due to bionic blade design and aerodynamically optimised ZAPLUS nozzle
- High level of flexibility due to 100% speed controllable volume flow rate
- High corrosion protection with corrosion-free nozzle made of high performance composite material
- Very smooth running and long service life due to dynamic balancing in two levels
- Minimal handling effort as no packaging needed
- Numerous approvals (incl. VDE, UL, CCC, EAC, CE)
- Fire safety in accordance with DIN EN 45545

### Motor concepts

#### External rotor motors

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

### Application examples

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



# Technical description

## ZArail in semi-spiral housing

cp. edition 01/2017 catalogue chapter „ZArail“

### Product specification

Backward curved centrifugal impeller made of powder coated sheet metal. Semi-spiral housing made of galvanized or powder coated sheet metal.

Five sizes available 315, 355, 400, 450 and 500 mm. Air flow rates up to 18.000 m<sup>3</sup>/h and static pressures up to 4.000 Pa.

Motors are available in 2 or 4 pole and 2/4 pole configurations in 50 Hz or 60 Hz versions.

### Characteristics and features

Housing with motor, impeller, and nozzle as ready-to-install unit. Flanges and fixing points of the housing can be adapted to the required installation situation.

Adaptation for tight spaces or special dimensions.

Fully balanced fan, allowed vibration severity less than 2.8 mm/s according to ISO 14694.

Vibration resistant and self-supporting unit.

High power density due to internal rotor motor.

Plug and play solutions



### Motor concepts

Internal rotor motor

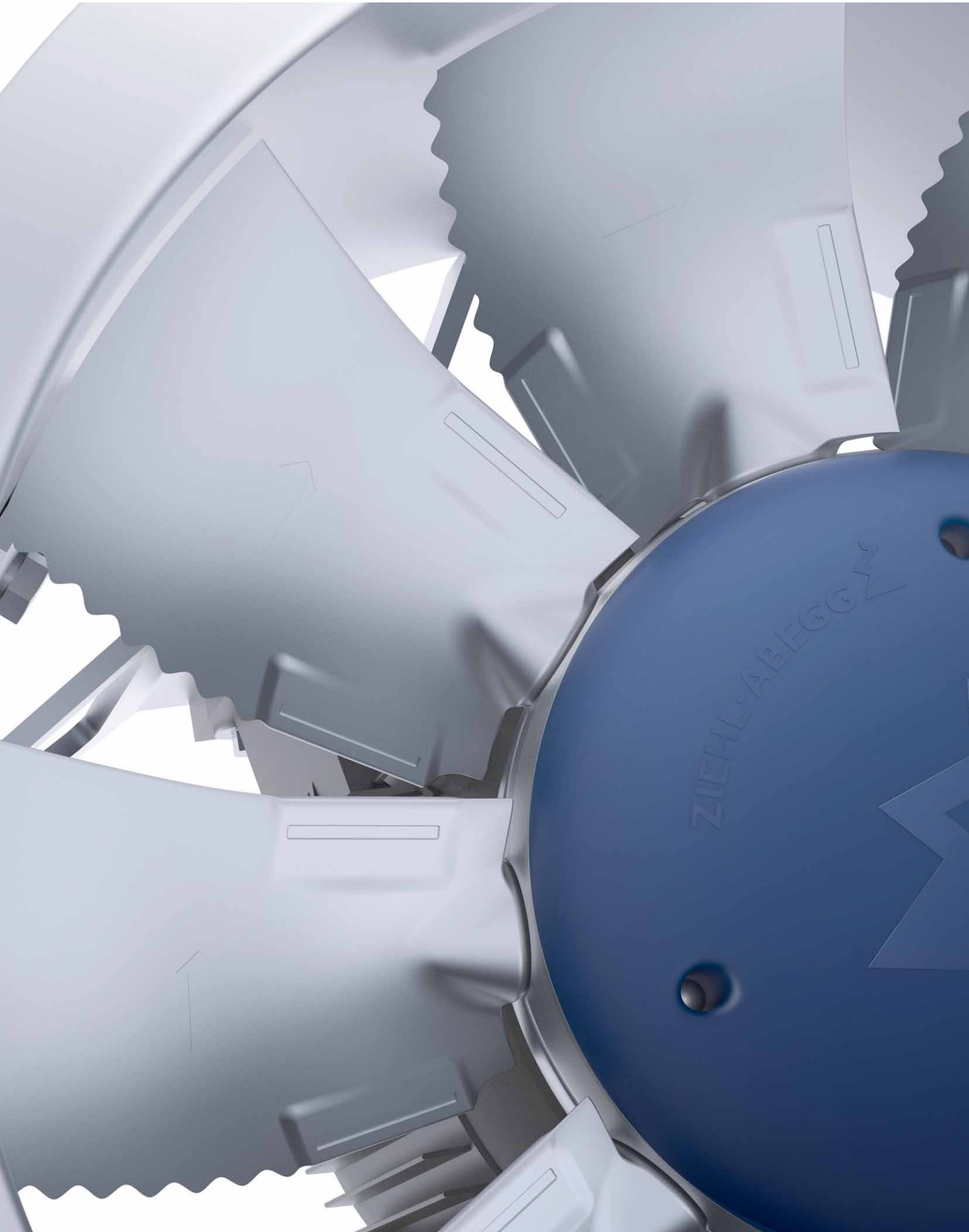
- AC technology
- Electrical design according to DIN EN 60034-1 or EN 60349-2 (railway auxiliary motor)

### Customer-specific design

- Degree of protections
- Insulation classes
- Temperature application ranges
- Voltage and frequency ranges
- Corrosion preve

### Application examples

- Traction motor cooling
- Braking resistor cooling
- Transformer and Oil cooling





# MAXventowlet

## Product overview

Size 315 / 350 Page 10

Size 400 / 450 Page 12

Size 500 / 560 Page 14

Size 630 Page 16



# MAXventowlet

for three phase alternating-current, 2- and 4-pole

DN31/DN35



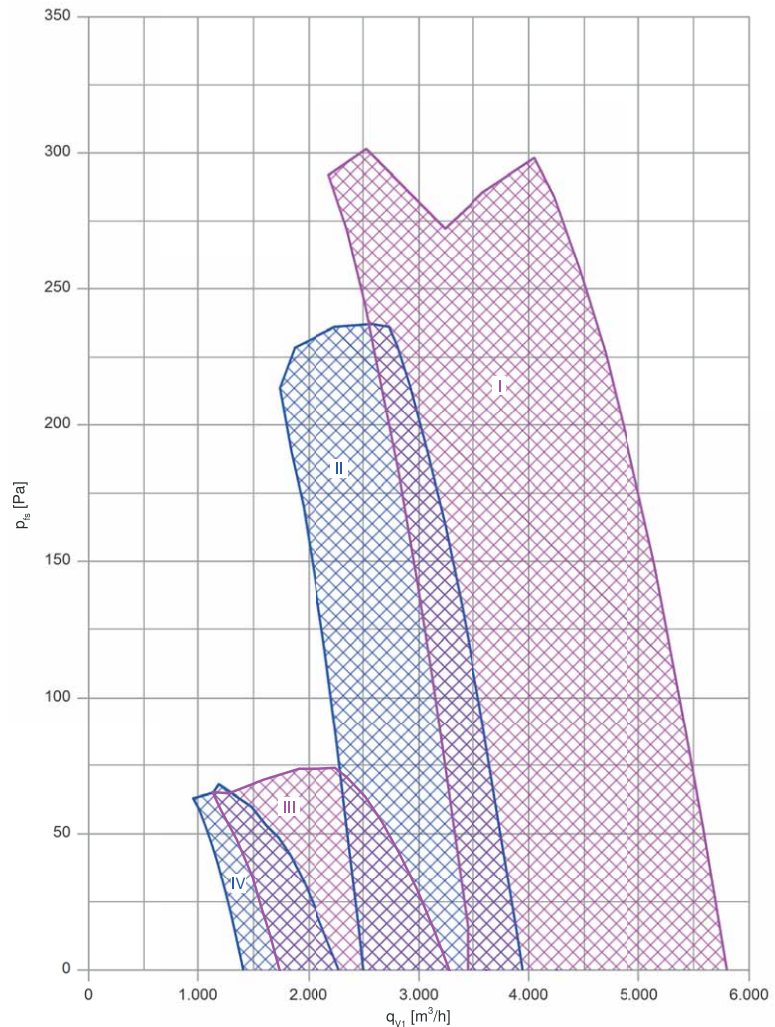
## Description 50 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 400 V  
Rated frequency  $f_N$ : 50 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55

## Description 60 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 460 V  
Rated frequency  $f_N$ : 60 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

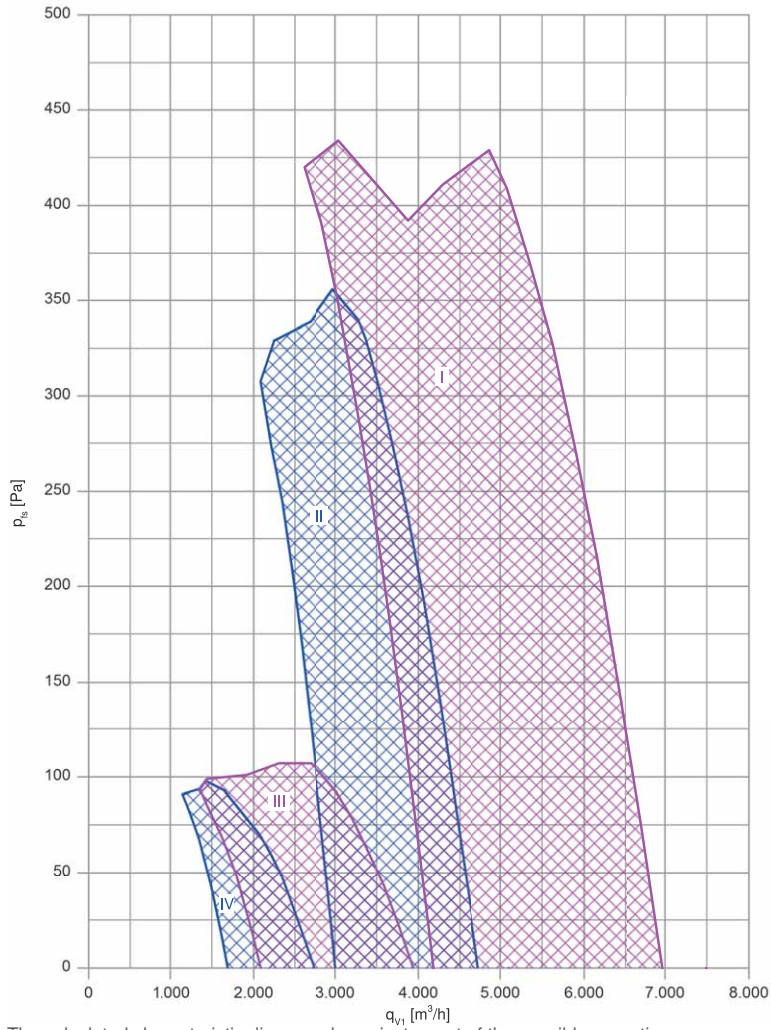
## Technical data

Characteristic diagram	Type	Blade setting angle* min. - max. degree	Motor size* min. - max.	Number of blades
I	DN35_-2_K	11 - 29	71 ... 90	7
II	DN31_-2_K	11 - 19	71 ... 80	7
III	DN35_-4_K	11 - 34	63 ... 71	7
IV	DN31_-4_K	14 - 34	63	7

\*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

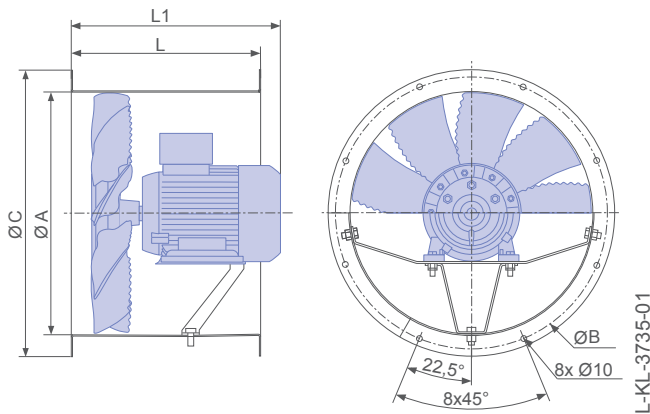


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	Ø A mm	Ø B mm	Ø C mm	L mm	L1* mm
DN35_-2_K	355	395	425	260	345
DN31_-2_K	315	355	372	260	303
DN35_-4_K	355	395	425	260	257
DN31_-4_K	315	355	372	260	249

\*Motor size depends on blade setting angle, number of blades and number of poles.

# MAXventowlet

for three phase alternating-current, 2- and 4-pole

DN40/DN45



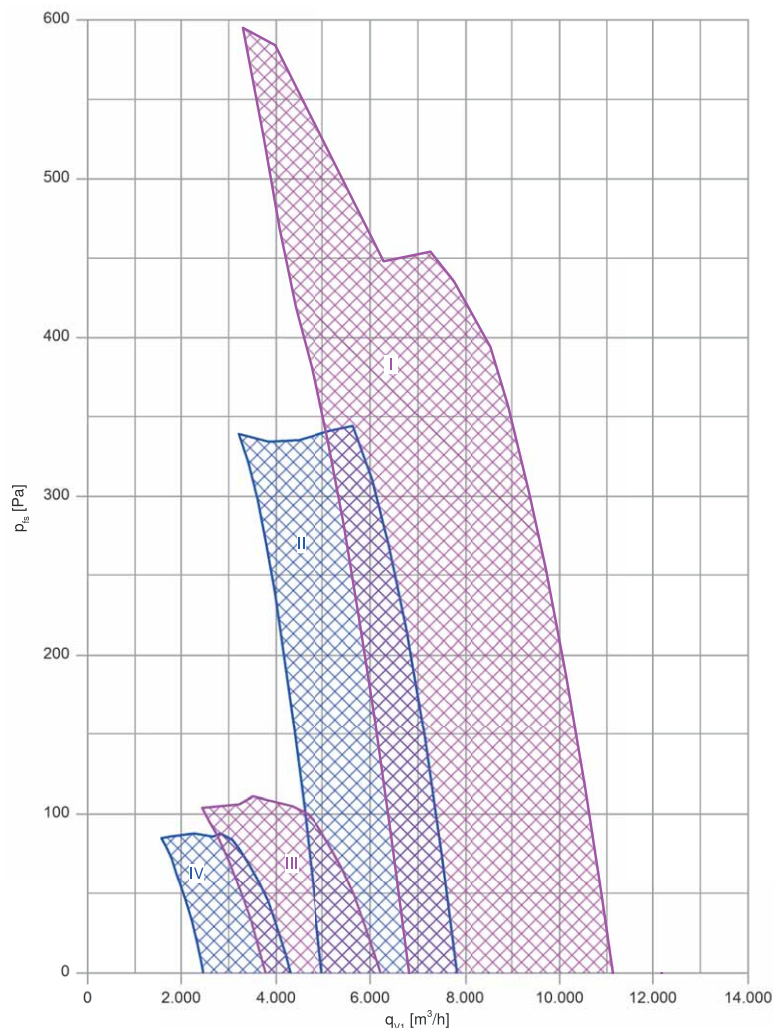
## Description 50 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 400 V  
Rated frequency  $f_N$ : 50 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of Blades: 9

## Description 60 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 460 V  
Rated frequency  $f_N$ : 60 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of blades: 9

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

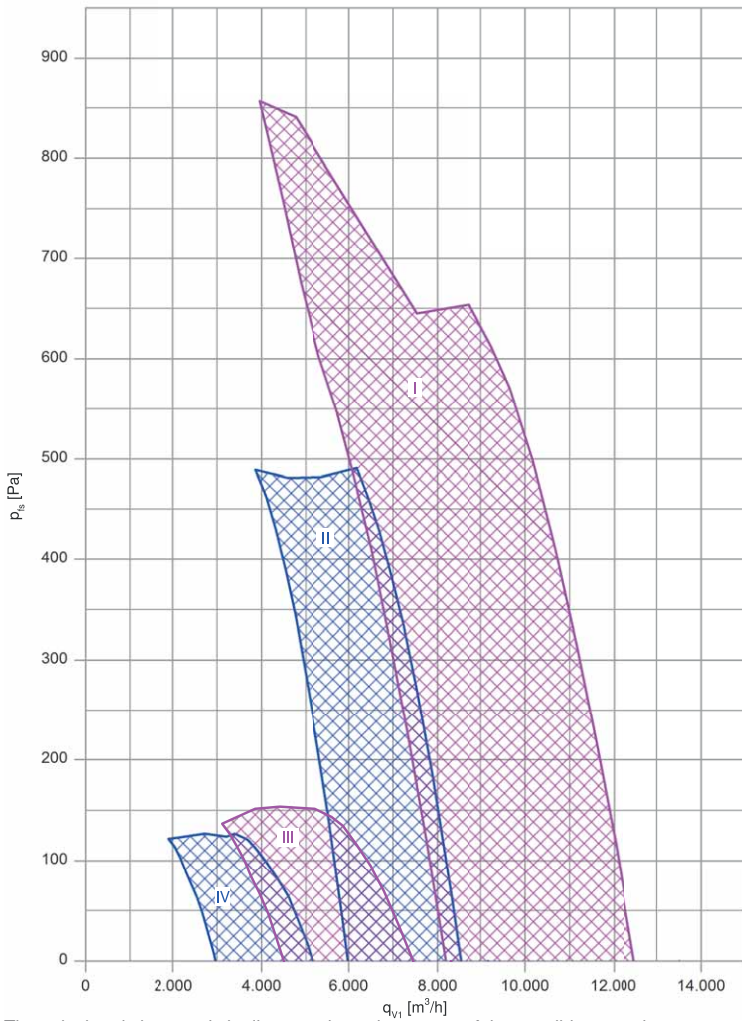
## Technical data

Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN45_-2_K	11 - 29	90 ... 112	3; 6; 9
II	DN40_-2_K	11 - 29	80 ... 100	3; 6; 9
III	DN45_-4_K	14 - 34	63 ... 90	3; 6; 9
IV	DN40_-4_K	11 - 34	63 ... 80	3; 6; 9

\*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

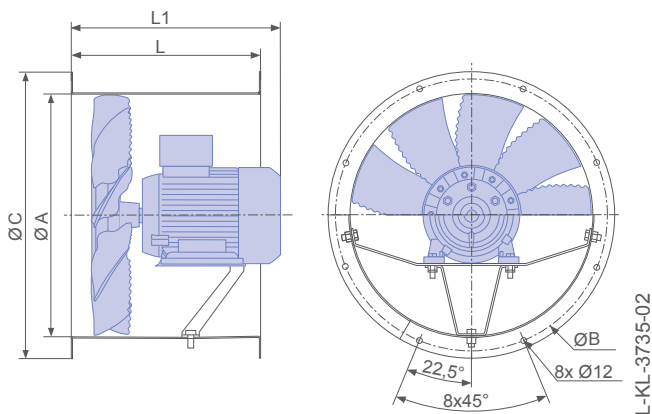


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	Ø A mm	Ø B mm	Ø C mm	L** mm	L1* max. mm
DN45_-2_K	450	500	530	320	410
DN40_-2_K	400	450	470	320	398
DN45_-4_K	450	500	530	260	370
DN40_-4_K	400	450	470	260	329

\* Motor size depends on blade setting angle, number of blades and number of poles.

\*\* Length of casing depends on motor size.

# MAXventowlet

for three phase alternating-current, 2- and 4-pole

DN50/DN56



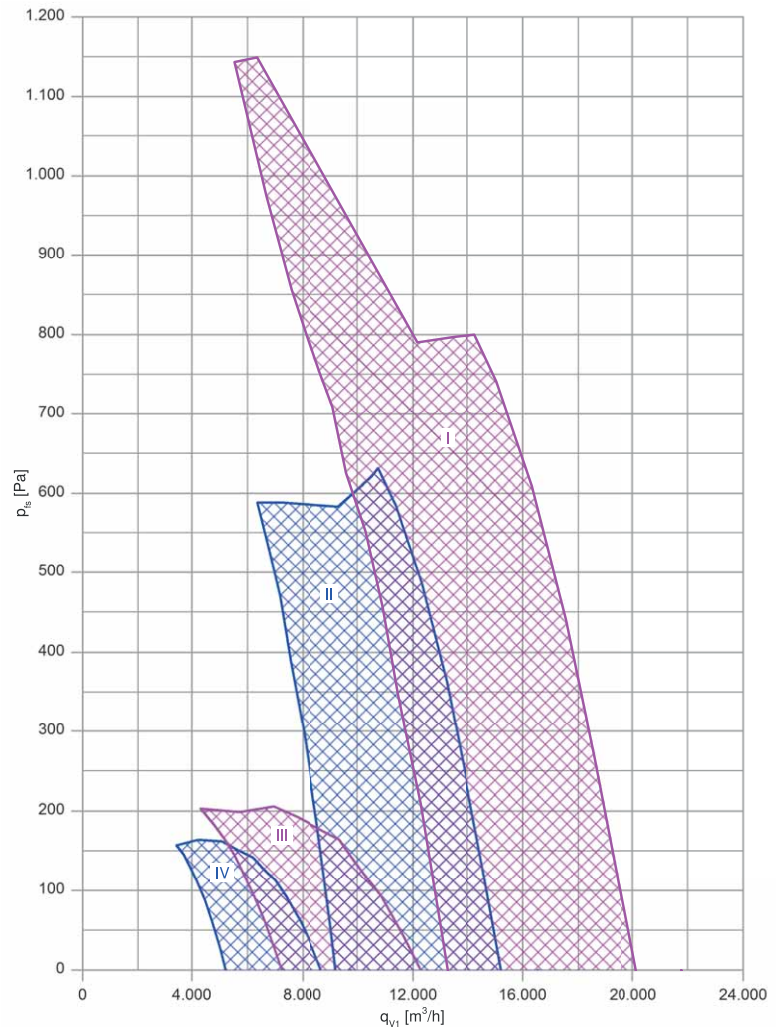
## Description 50 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 400 V  
Rated frequency  $f_N$ : 50 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of Blades: 9

## Description 60 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 460 V  
Rated frequency  $f_N$ : 60 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of blades: 9

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

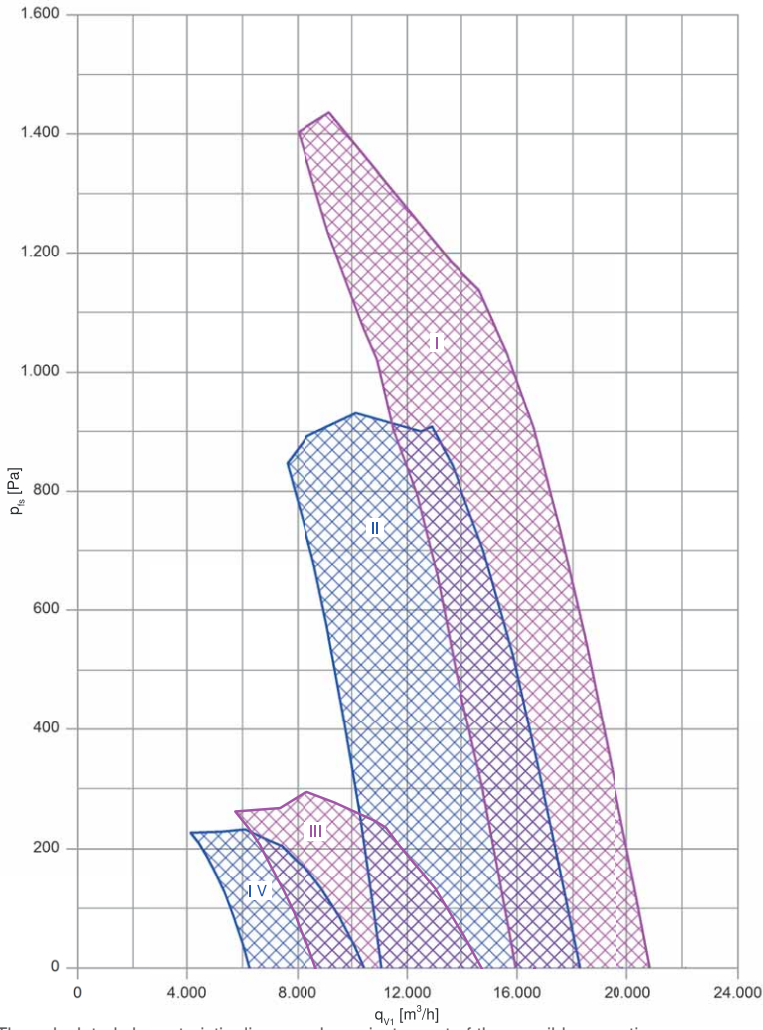
## Technical data

Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN50_-2_K	11 - 29	90 ... 132	3; 6; 9
II	DN56_-2_K	11 - 24	100 ... 132	3; 6; 9
III	DN50_-4_K	14 - 34	71 ... 100	3; 6; 9
IV	DN56_-4_K	14 - 34	80 ... 100	3; 6; 9

\*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.

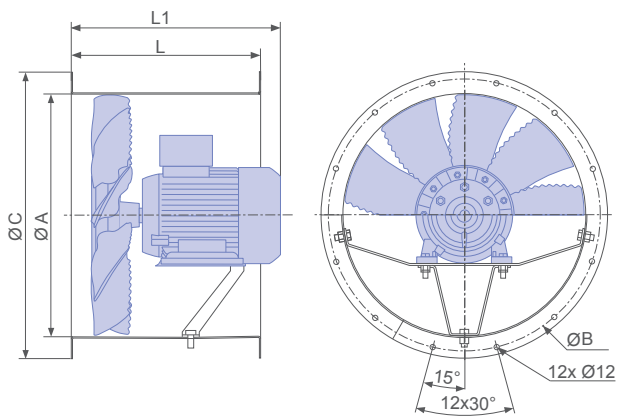


Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

Dimensions mm



Type	Ø A mm	Ø B mm	Ø C mm	L** mm	L1*max. mm
DN56_-2_K	560	620	650	360	511
DN50_-2_K	500	560	590	360	511
DN56_-4_K	560	620	650	360	404
DN50_-4_K	500	560	590	360	404

\* Motor size depends on blade setting angle, number of blades and number of poles.

\*\* Length of casing depends on motor size.

# MAXventowlet

for three phase alternating-current, 2- and 4-pole

DN63



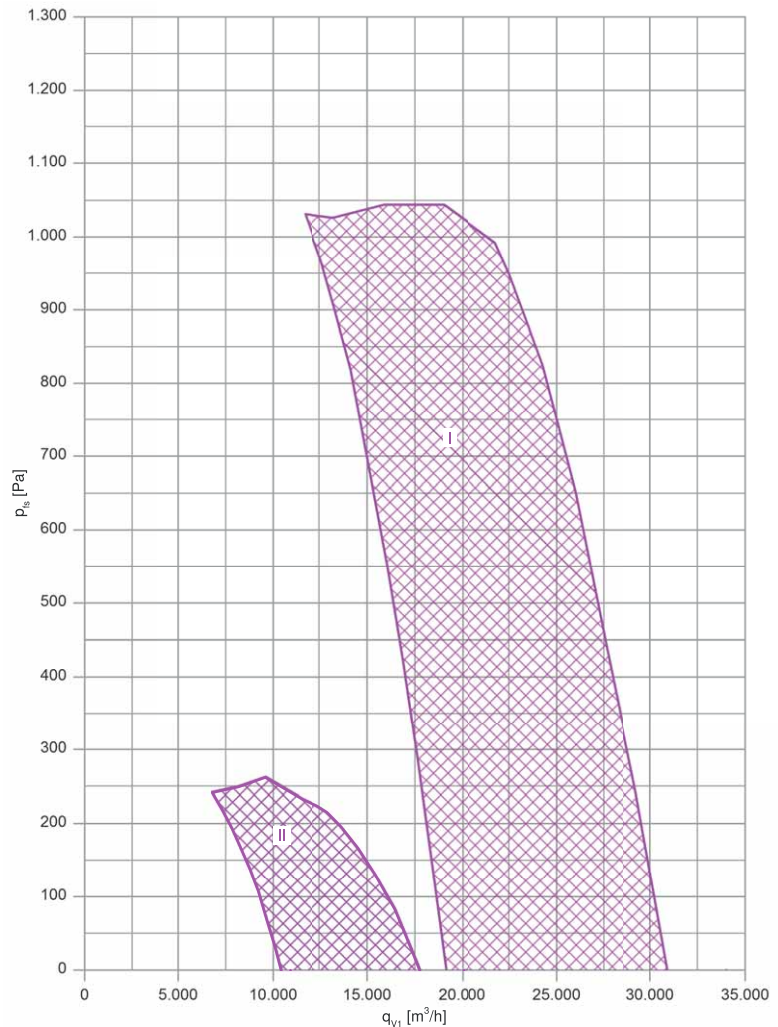
## Description 50 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 400 V  
Rated frequency  $f_N$ : 50 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of Blades: 9

## Description 60 Hz

Motor technology: AC  
Rated voltage  $U_N$ : 3~ 460 V  
Rated frequency  $f_N$ : 60 Hz  
Min. permitted ambient temperature  $t_{amb(min)}$ : -30 °C  
Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
Degree of protection: IP55  
Number of blades: 9

Characteristic curves 50Hz



The calculated characteristic diagram shows just a part of the possible operating ranges.  
For a detailed configuration of your project please contact ZIEHL-ABEGG.

## Technical data

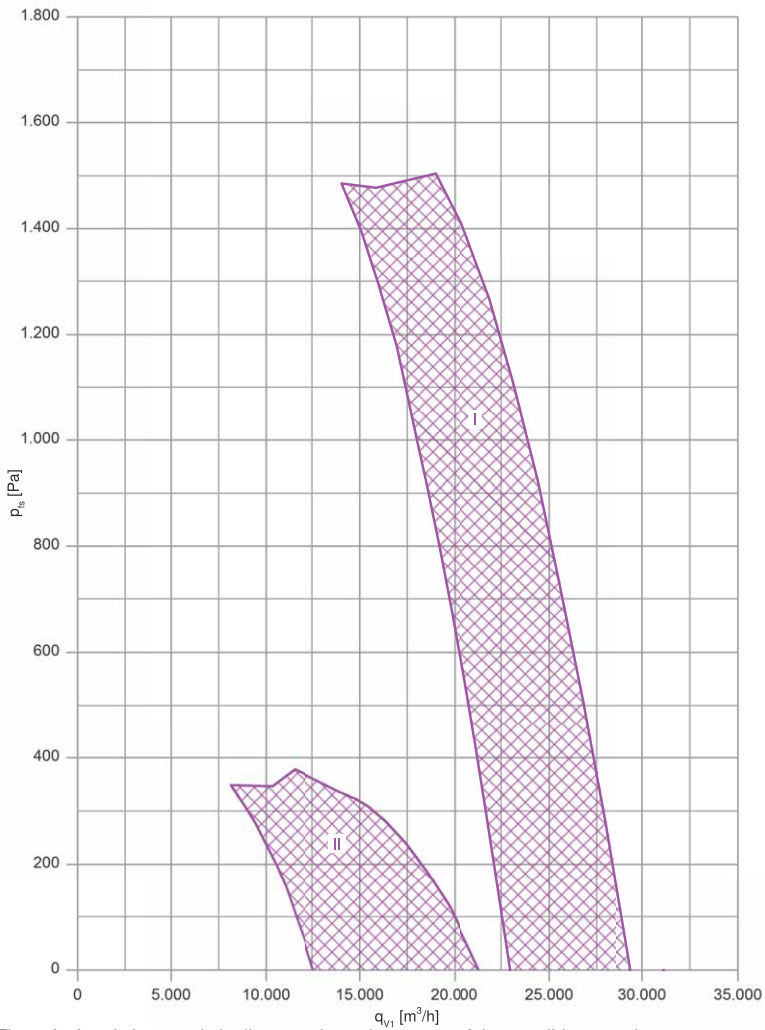
Characteristic diagram	Type	Blade setting angle* min. - max. degree °	Motor size* min. - max.	Number of blades
I	DN63_-2_K	11 - 29	132 ... 160	3; 6; 9
II	DN63_-4_K	14 - 34	100 ... 132	3; 6; 9

\*The smallest and the largest motor, as well as the smallest and the largest blade angle are shown.



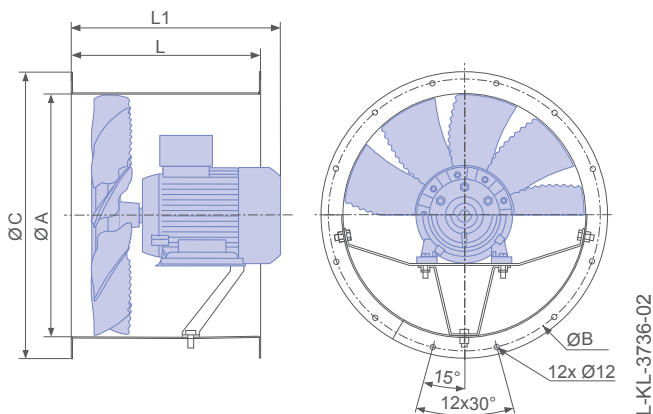


### Characteristic curves 60Hz



The calculated characteristic diagram shows just a part of the possible operating ranges. For a detailed configuration of your project please contact ZIEHL-ABEGG.

### Dimensions mm



Type	$\varnothing A$ mm	$\varnothing B$ mm	$\varnothing C$ mm	$L^{**}$ mm	$L1^{*max.}$ mm
DN63_-2_K	630	690	720	410	600
DN63_-4_K	630	690	720	335	470

\* Motor size depends on blade setting angle, number of blades and number of poles.

\*\* Length of casing depends on motor size.



# FE2owlet-ECblue

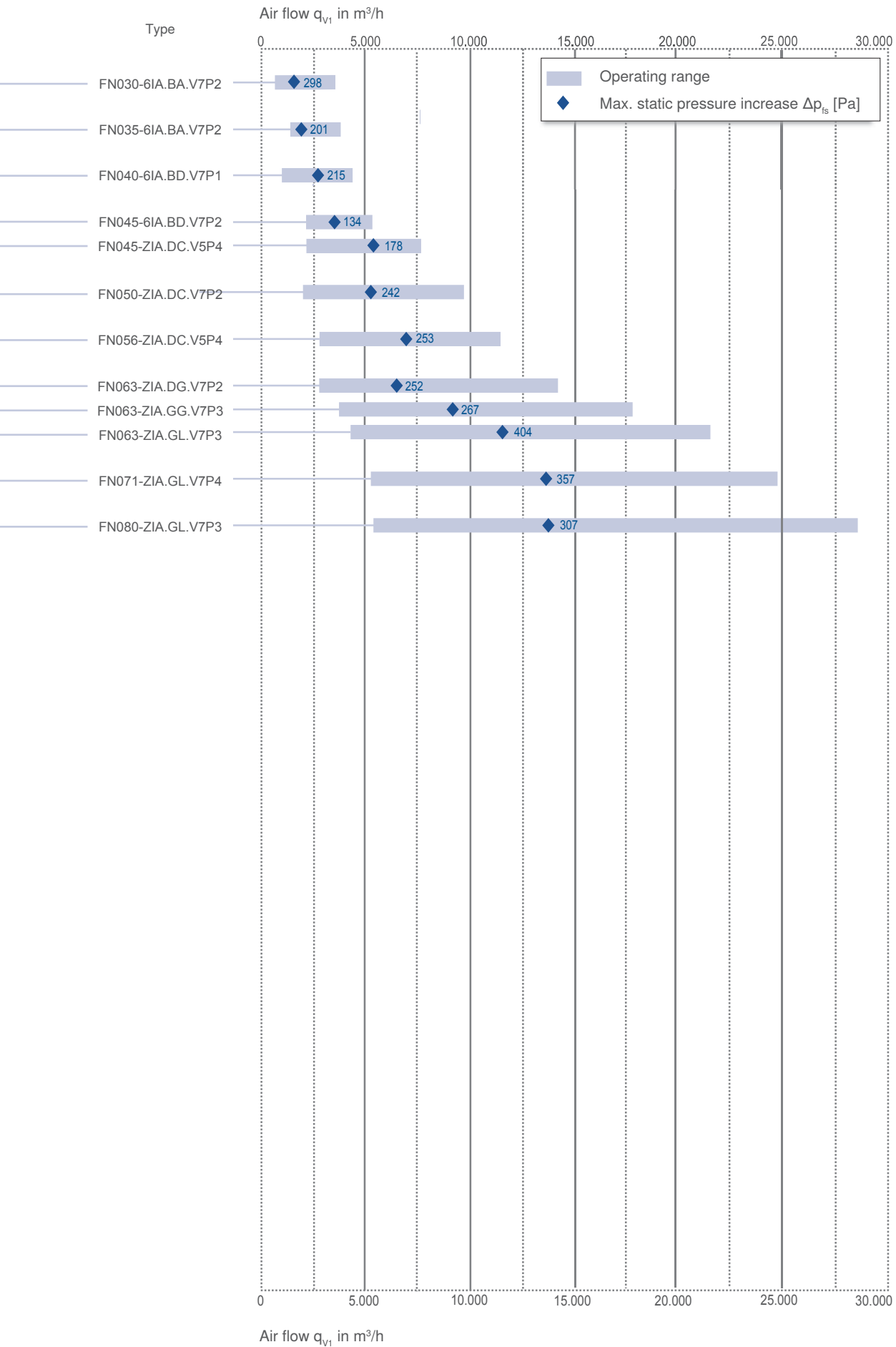
## EC-Technology

### Product overview

Quick selection	Page 20
Size 300	Page 22
Size 350	Page 24
Size 400	Page 26
Size 450	Page 28
Size 500	Page 32
Size 560	Page 34
Size 630	Page 36
Size 710	Page 42
Size 800	Page 44

Size	Voltage	Type	Air flow direction	Page
300	110V DC	FN030-6IA.BA.V7P2	← - V	22
350	110V DC	FN035-6IA.BA.V7P2	← - V	24
400	110V DC	FN040-6IA.BD.V7P1	← - V	26
450	110V DC	FN045-6IA.BD.V7P2	← - V	28
	3~380-480V	FN045-ZIA.DC.V5P4	← - V	30
500	3~380-480V	FN050-ZIA.DC.V7P2	← - V	32
560	3~380-480V	FN056-ZIA.DC.V5P4	← - V	34
630	3~380-480 V	FN063-ZIA.DG.V7P2	← - V	36
		FN063-ZIA.GG.V7P3	← - V	38
		FN063-ZIA.GL.V7P3	← - V	40
710	3~380-480V	FN071-ZIA.GL.V7P4	← - V	42
800	3~380-480V	FN080-ZIA.GL.V7P3	← - V	44





# FE2owlet-ECblue

for direct current, 110 V

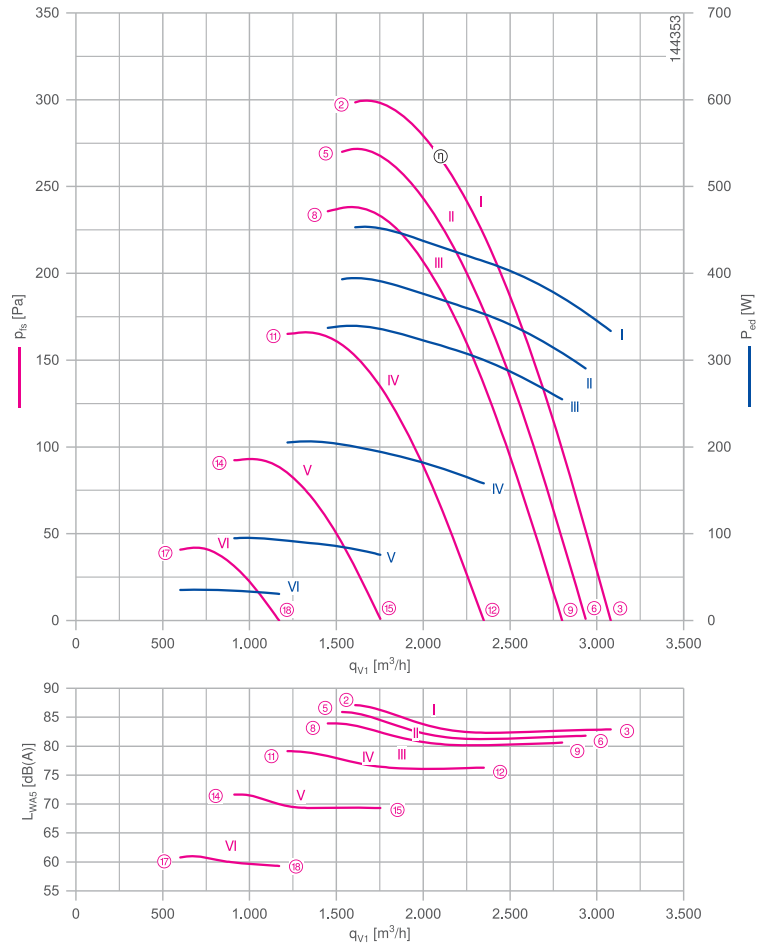
FNO30



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC 110 V\***  
 Input power  $P_{ed}$ : **460 W\***  
 Rated current  $I_N$ : **4.20 A\***  
 Rated speed  $n_N$ : **2750 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{amb(max)}$ : **50 °C**  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

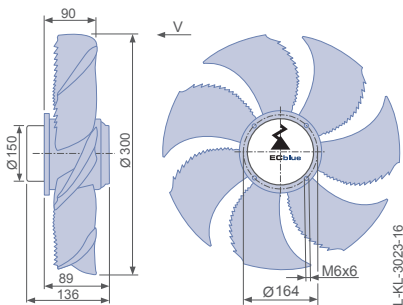
Connection diagram

1360-384

## Dimensions mm



Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
FN030-6I_BA_7P2	I	<b>2750*</b>	②	<b>4.20*</b>	460	87	50
		2750	③	3.00	330	83	
	II	2620	⑤	3.60	390	86	60
			⑥	2.60	290	82	
	III	2500	⑧	3.10	340	84	70
			⑨	2.30	250	81	
	IV	2100	⑪	1.85	210	79	
			⑫	1.45	160	76	
	V	1570	⑭	0.86	95	71	
			⑮	0.68	75	69	
	VI	1050	⑰	0.32	36	61	
			⑱	0.28	30	59	

\*rated data

### Fan ordering information

← Air flow direction V

Design A

Installation position H/Vu/Vo



**Type** FN030-6IA.BA.V7P2  
**Article no.** 178861

Weight kg 5.92

### Control technology

Operating terminal



# FE2owlet-ECblue

for direct current, 110 V

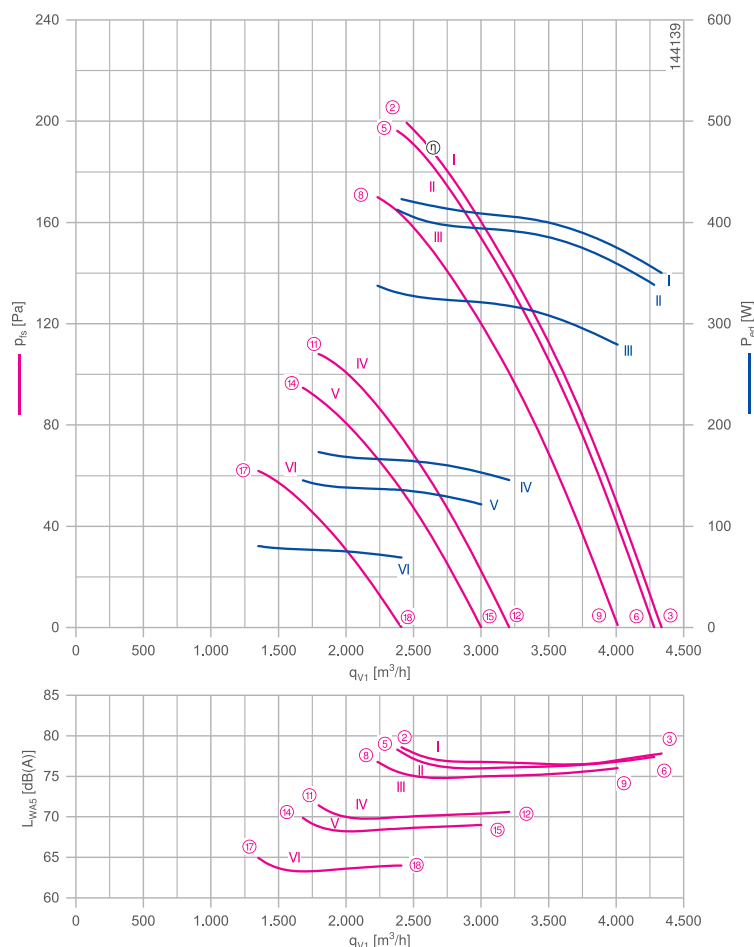
FN035



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC 110 V\***  
 Input power  $P_{ed}$ : **420 W\***  
 Rated current  $I_N$ : **3.80 A\***  
 Rated speed  $n_N$ : **1920 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{amb(max)}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

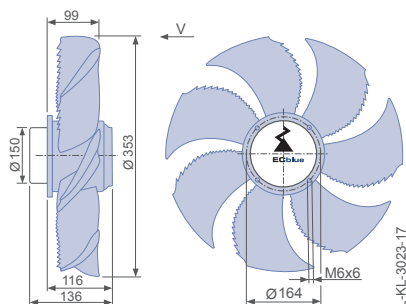
Connection diagram

1360-384

## Dimensions mm



Design A - without suspension





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
FN035-6I_BA_7P2	I	1920*	②	3.80*	420	79	40
		1920	③	3.20	350	78	
	II	1900	⑤	3.70	420	78	50
			⑥	3.10	340	77	
	III	1780	⑧	3.10	340	77	60
			⑨	2.50	280	76	
	IV	1420	⑪	1.55	170	71	
			⑫	1.30	150	71	
	V	1330	⑭	1.30	150	70	70
			⑮	1.10	120	69	
	VI	1070	⑰	0.72	80	65	
			⑱	0.62	70	64	

\*rated data

### Fan ordering information

← Air flow direction V

Design A

Installation position H/Vu/Vo




Type **FN035-6IA.BA.V7P2**  
Article no. **178862**

Weight kg 6.05

### Control technology

Operating terminal



# FE2owlet-ECblue

for direct current, 110 V

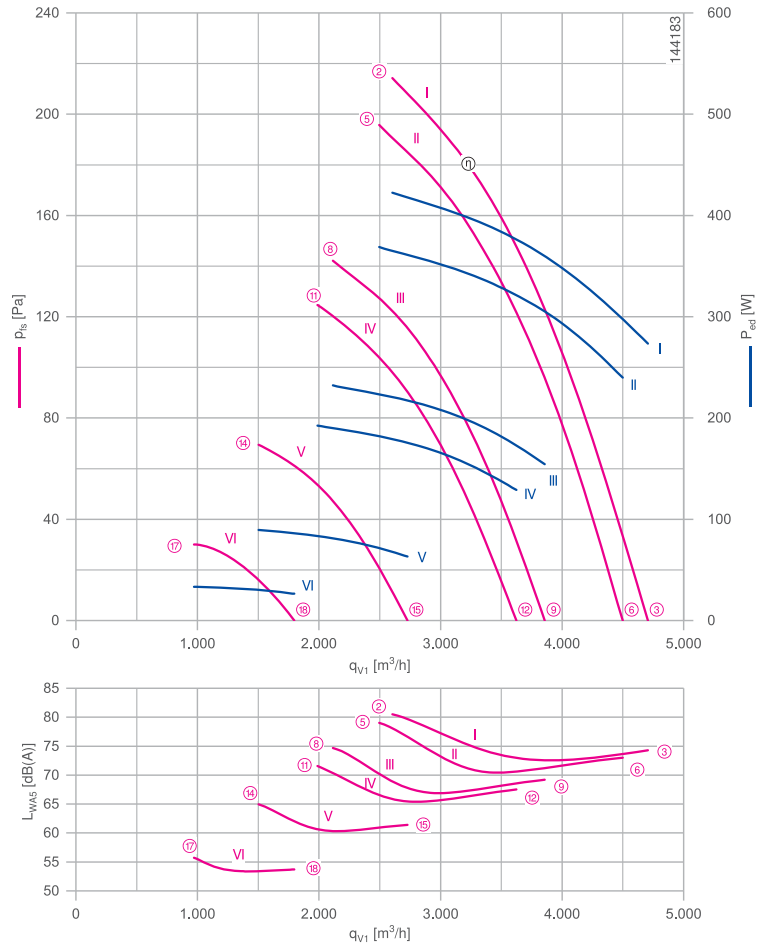
FNO40



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC 110 V\***  
 Input power  $P_{ed}$ : **440 W\***  
 Rated current  $I_N$ : **3.90 A\***  
 Rated speed  $n_N$ : **1790 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{amb(max)}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

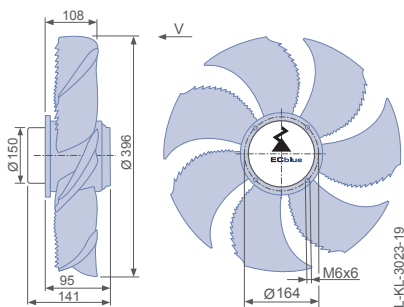
Connection diagram

1360-384

## Dimensions mm



Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		$n$ $\text{min}^{-1}$		$I$ A	$P_{\text{ed}}$ W	$L_{\text{WAS}}$ dB(A)	$t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
FN040-6I_BD_7P1	I	<b>1790*</b>	②	<b>3.80*</b>	420	81	50
		1790	③	2.50	270	74	
	II	1710	⑤	3.40	370	79	60
			⑥	2.20	240	73	
	III	1450	⑧	2.10	230	75	70
			⑨	1.40	150	69	
	IV	1370	⑪	1.75	190	72	
			⑫	1.15	130	68	
	V	1030	⑭	0.82	90	65	
			⑮	0.58	65	61	
	VI	680	⑰	0.30	34	56	
			⑱	0.24	26	54	

\*rated data

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo



**Type** FN040-6IA.BD.V7P1  
**Article no.** 178863

Weight kg 6.16

### Control technology

Operating terminal



# FE2owlet-ECblue

for direct current, 110 V

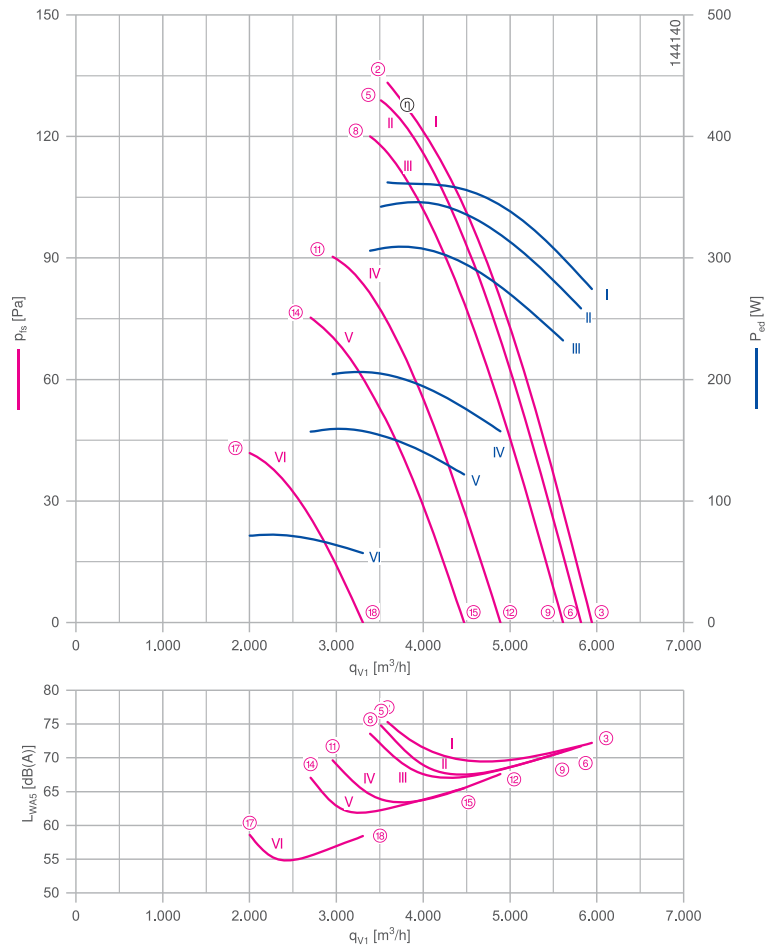
FNO45



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC 110 V\***  
 Input power  $P_{ed}$ : **360 W\***  
 Rated current  $I_N$ : **3.30 A\***  
 Rated speed  $n_N$ : **1430 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{amb(max)}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

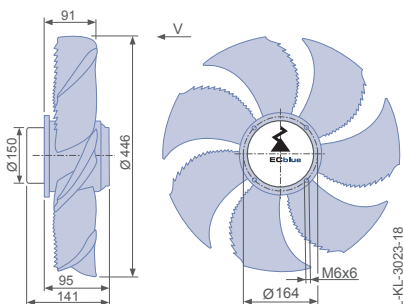
Connection diagram

1360-384

## Dimensions mm



Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
FN045-6I_BD_7P2	I	<b>1430*</b>	②	<b>3.30*</b>	360	76	40
		1430	③	2.50	270	72	
	II	1400	⑤	3.10	340	75	50
			⑥	2.30	260	72	
	III	1350	⑧	2.80	310	74	60
			⑨	2.10	230	71	
	IV	1180	⑪	1.85	200	70	70
			⑫	1.45	160	68	
	V	1080	⑭	1.45	160	67	
			⑮	1.10	120	66	
	VI	810	⑰	0.64	70	59	
			⑱	0.52	55	58	

\*rated data

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo



**Type** FN045-6IA.BD.V7P2  
**Article no.** 178864

Weight kg 6.17

### Control technology

Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

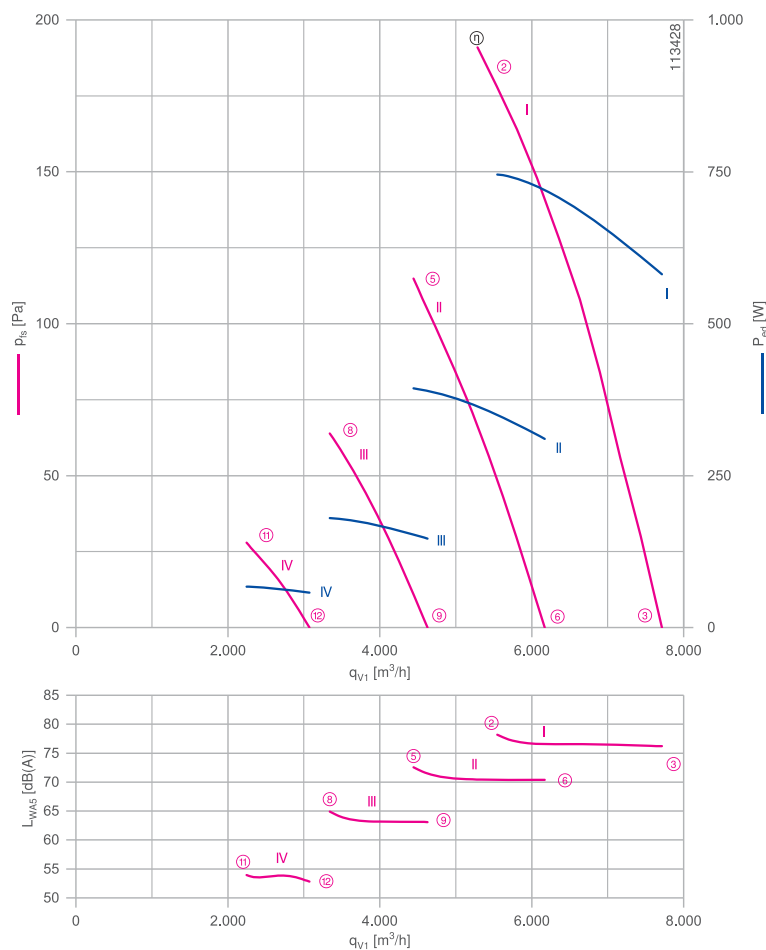
FNO45



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 0.74 kW\*  
 Rated current  $I_N$ : 1.35- 1.10 A\*  
 Rated speed  $n_N$ : 1650 min<sup>-1</sup>\*  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 5  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

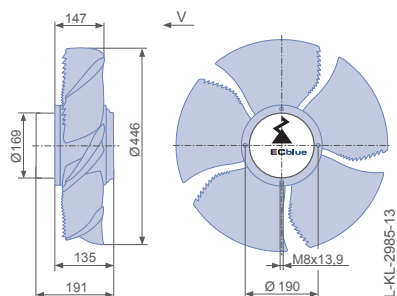
Connection diagram

1360-403

## Dimensions mm



Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)
FN045-ZI_DC_5P4	I	1650	②	1.30	740	78
			③	1.05	580	76
	II	1320	⑤	0.84	390	72
			⑥	0.74	310	70
	III	990	⑧	0.54	180	65
			⑨	0.46	150	63
	IV	660	⑪	0.34	65	54
			⑫	0.32	60	53

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN045-ZIA.DC.V5P4  
**Article no.** 178865

Weight kg 9.40

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

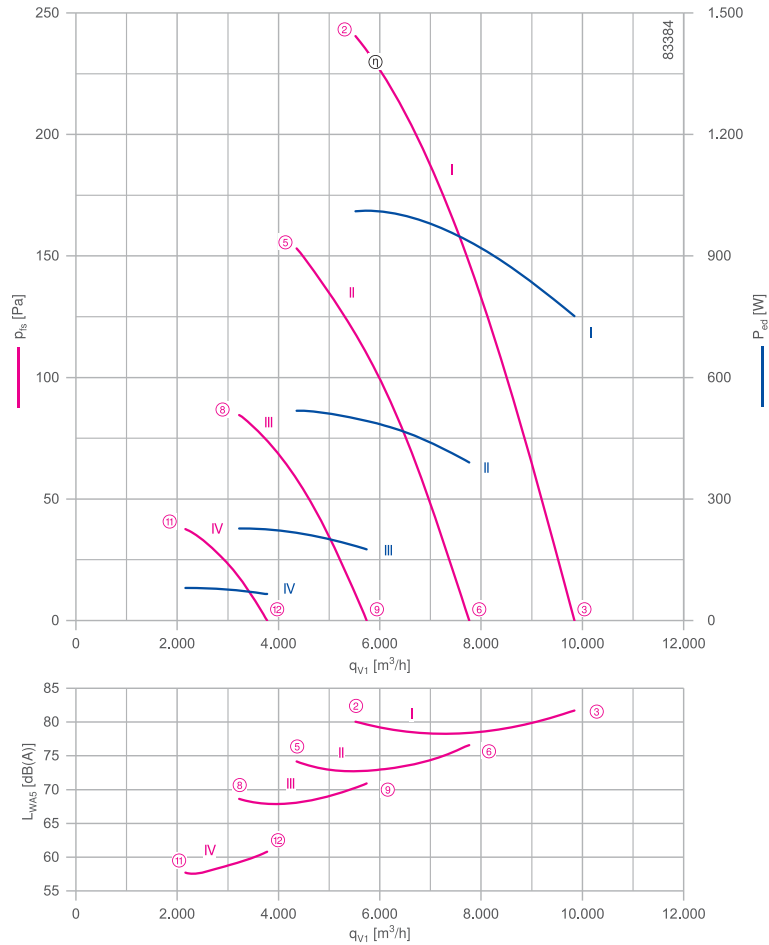
FN050



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3~ 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 1.00 kW\*  
 Rated current  $I_N$ : 1.70- 1.35 A\*  
 Rated speed  $n_N$ : 1550 min<sup>-1</sup>\*  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

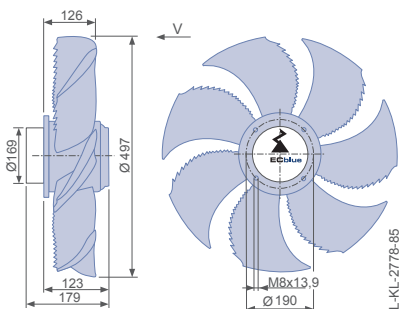
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design A - without suspension





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)	
FN050-ZI_DC_V7P2	I	1550	②	1.60	1000	80	
			③	1.25	760	82	
			④	0.92	520	74	
	II	1240	⑤	0.76	390	77	
			⑥	0.54	230	69	
			⑦	0.46	180	71	
	III	930	⑧	0.29	80	58	
			⑨	0.26	65	61	
			⑩				
	IV	620	⑪				
			⑫				

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN050-ZIA.DC.V7P2  
**Article no.** 178866

Weight kg 9.60

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

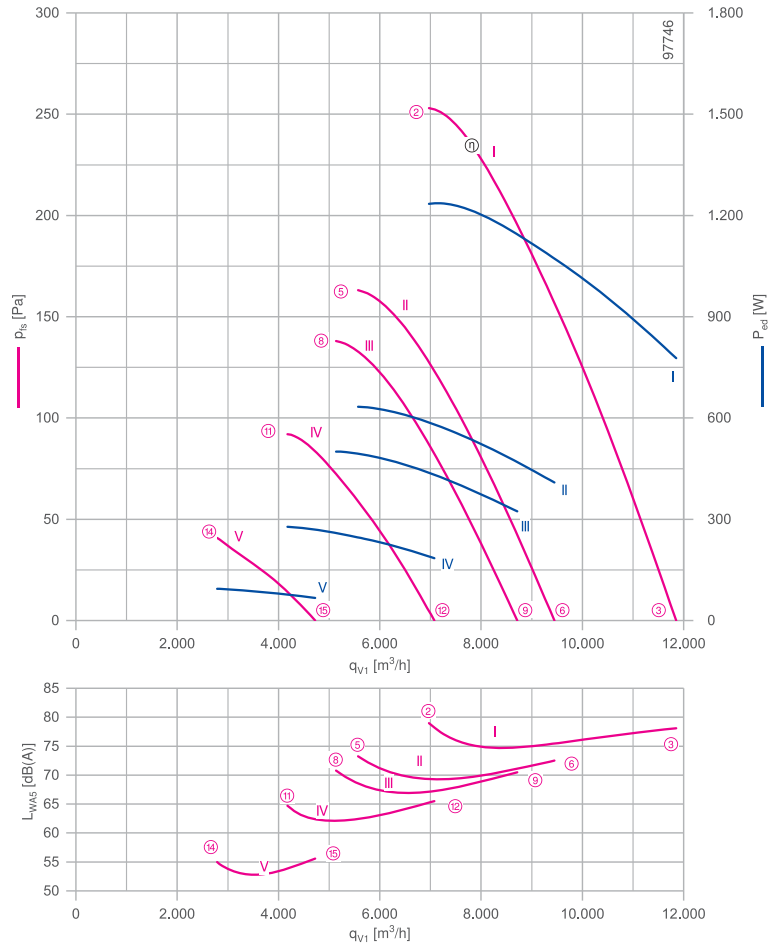
FN056



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 1.25 kW\*  
 Rated current  $I_N$ : 2.10- 1.65 A\*  
 Rated speed  $n_N$ : 1450 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 5  
 Degree of protection : IP54  
 Motor protection : Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

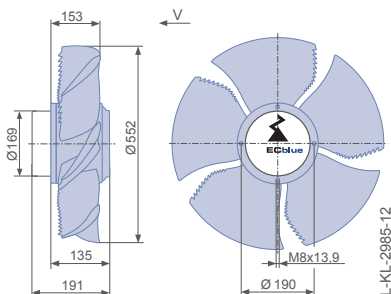
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)
FN056-ZI_DC_5P4	I	1450	②	1.95	1250	79
			③	1.30	780	78
	II	1160	⑤	1.10	640	73
			⑥	0.80	400	73
	III	1070	⑧	0.94	500	71
			⑨	0.72	320	71
	IV	870	⑪	0.64	280	65
			⑫	0.50	180	66
	V	580	⑭	0.32	95	55
			⑮	0.26	65	56

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN056-ZIA.DC.V5P4  
**Article no.** 178867

Weight kg 10.00

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

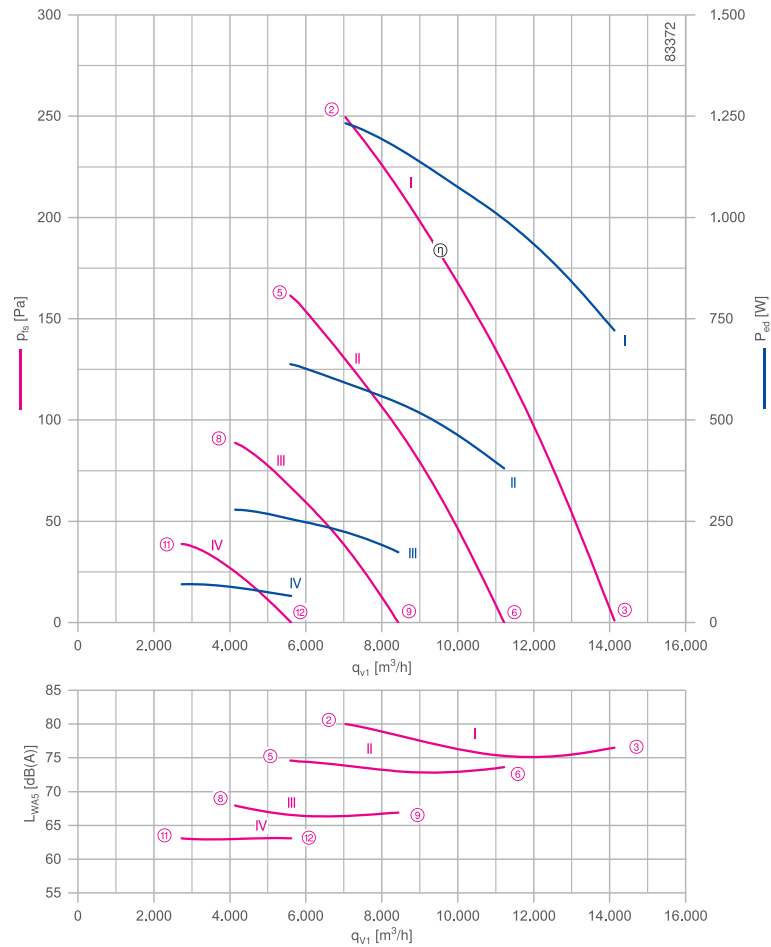
FN063



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3~ 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 1.25 kW\*  
 Rated current  $I_N$ : 2.00- 1.60 A\*  
 Rated speed  $n_N$ : 1200 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

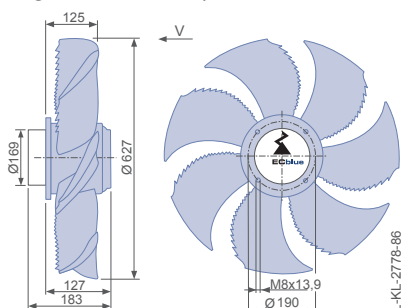
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)
FN063-ZI_DG_7P2	I	1200	②	1.90	1250	81
			③	1.20	720	77
	II	960	⑤	1.05	580	78
			⑥	0.74	380	74
	III	720	⑧	0.60	270	69
			⑨	0.44	170	67
	IV	480	⑪	0.29	95	63
			⑫	0.25	65	63


Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN063-ZIA.DG.V7P2  
**Article no.** 178868

Weight kg 11.50

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

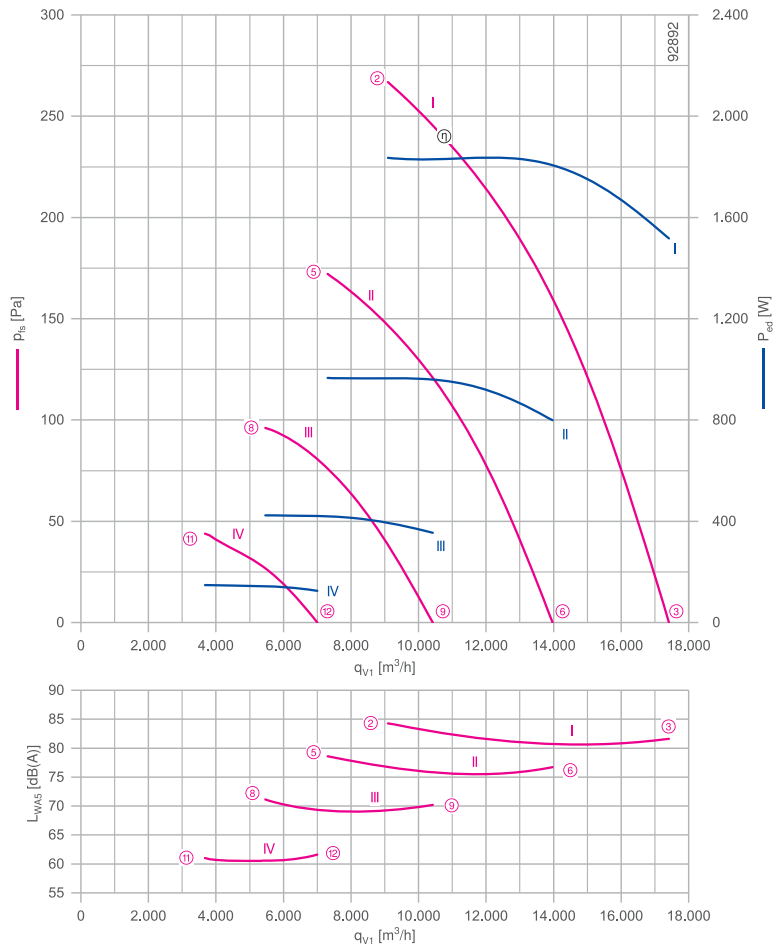
FN063



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 1.85 kW\*  
 Rated current  $I_N$ : 3.10- 2.50 A\*  
 Rated speed  $n_N$ : 1270 min<sup>-1</sup>\*  
 Thermal class: **THCL155**\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 65 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, jet black  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

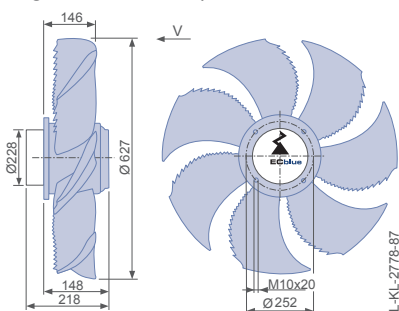
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)	
FN063-ZI_GG_7P3	I	1270	②	3.00	1850	84	
			③	2.50	1500	82	
			④	1.70	960	79	
	II	1020	⑤	1.45	800	77	
			⑥	0.84	420	71	
			⑦	0.72	360	70	
	III	760	⑧	0.36	150	61	
			⑨	0.32	130	62	
			⑩				
	IV	510	⑪				
			⑫				
			⑬				

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN063-ZIA.GG.V7P3  
**Article no.** 178869

Weight kg 24.40

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

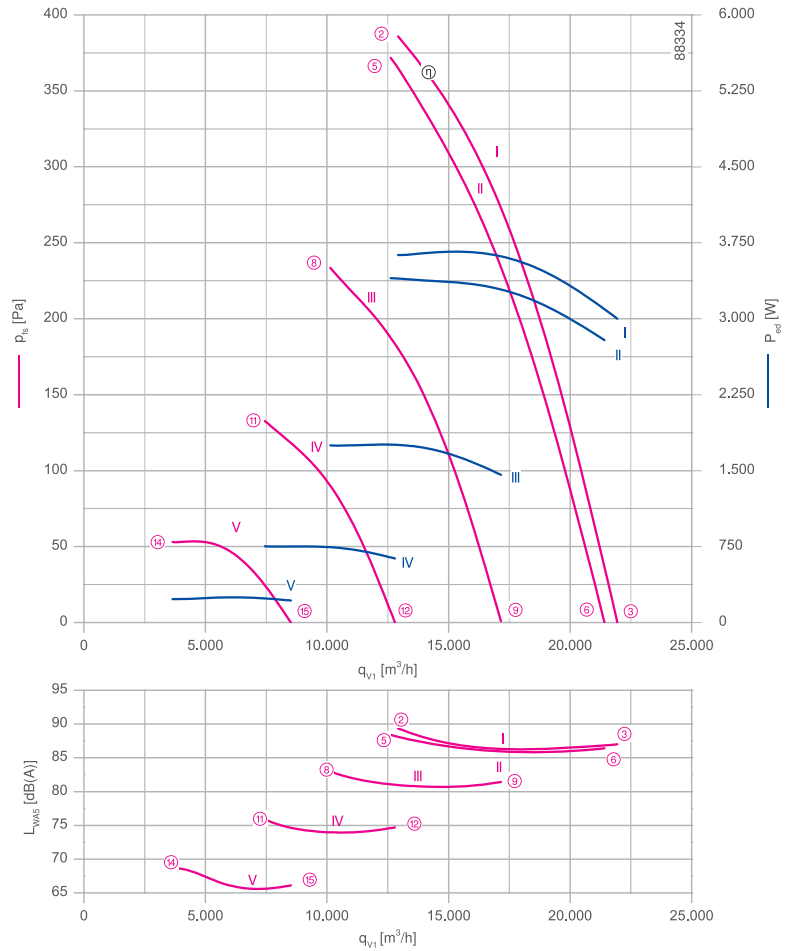
FN063



## 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  $I_N$ : 5.90- 4.70 A\*  
 Rated speed  $n_N$ : 1600 min<sup>-1</sup>\*  
 Thermal class: **THCL155**\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 55 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, jet black  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

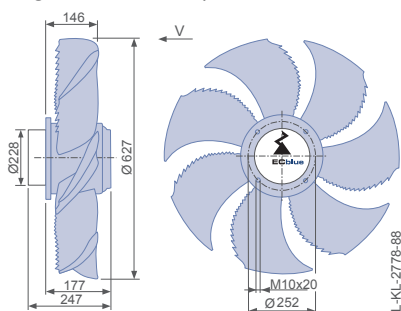
Connection diagram

1360-403

## Dimensions mm



Design A - without suspension





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
FN063-ZL_GL_7P3	I	1600	②	5.60	3600	91	55
			③	4.60	3000	87	
	II	1560	⑤	5.20	3400	90	60
			⑥	4.20	2800	86	
	III	1250	⑧	2.70	1750	85	
			⑨	2.30	1450	81	
	IV	930	⑪	1.25	740	77	
			⑫	1.10	640	75	
	V	620	⑭	0.60	250	67	
			⑮	0.54	220	66	

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN063-ZIA.GL.V7P3  
**Article no.** 178870

Weight kg 28.80

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

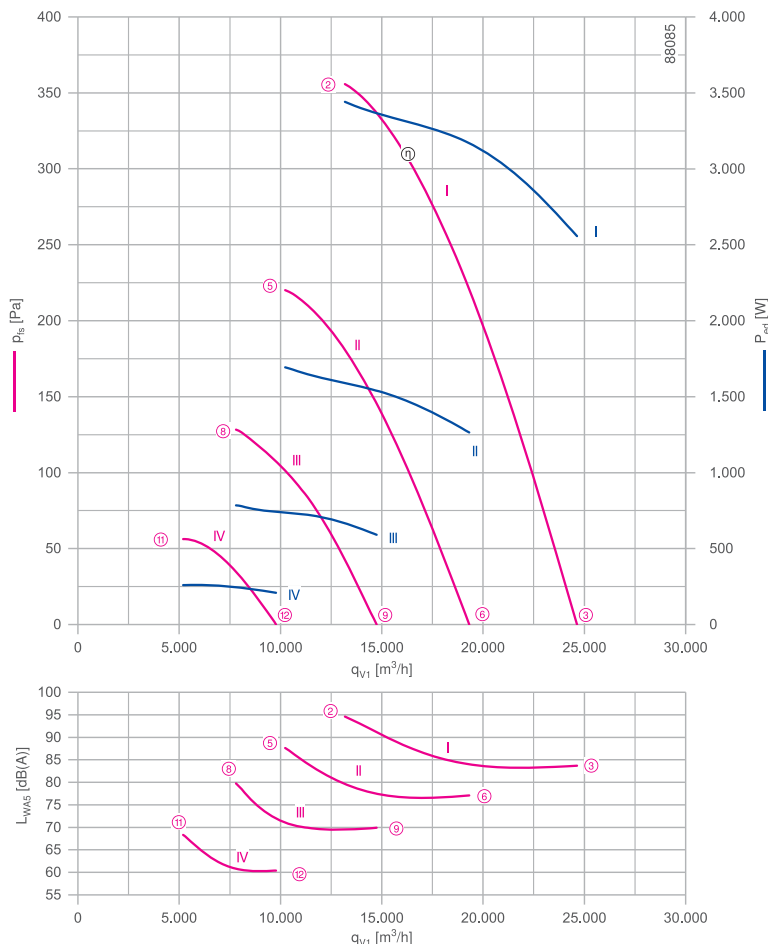
FNO71



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 3.50 kW\*  
 Rated current  $I_N$ : 5.40- 4.30 A\*  
 Rated speed  $n_N$ : 1400 min<sup>-1</sup>\*  
 Thermal class: **THCL155**\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, jet black  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

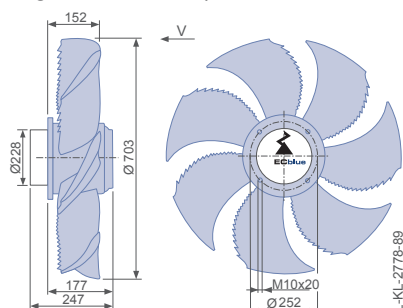
Connection diagram

1360-403

## Dimensions mm



Design A - without suspension



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)
FN071-ZI_GL_7P4	I	1400	②	5.20	3500	95
			③	3.90	2600	84
	II	1100	⑤	2.60	1700	88
			⑥	1.95	1250	77
	III	840	⑧	1.30	780	80
			⑨	1.00	600	70
	IV	560	⑪	0.60	260	69
			⑫	0.50	210	60

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

Installation position H/Vu/Vo




**Type** FN071-ZIA.GL.V7P4  
**Article no.** 178871

Weight kg 27.40

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue

for three phase alternating current, 380-480 V

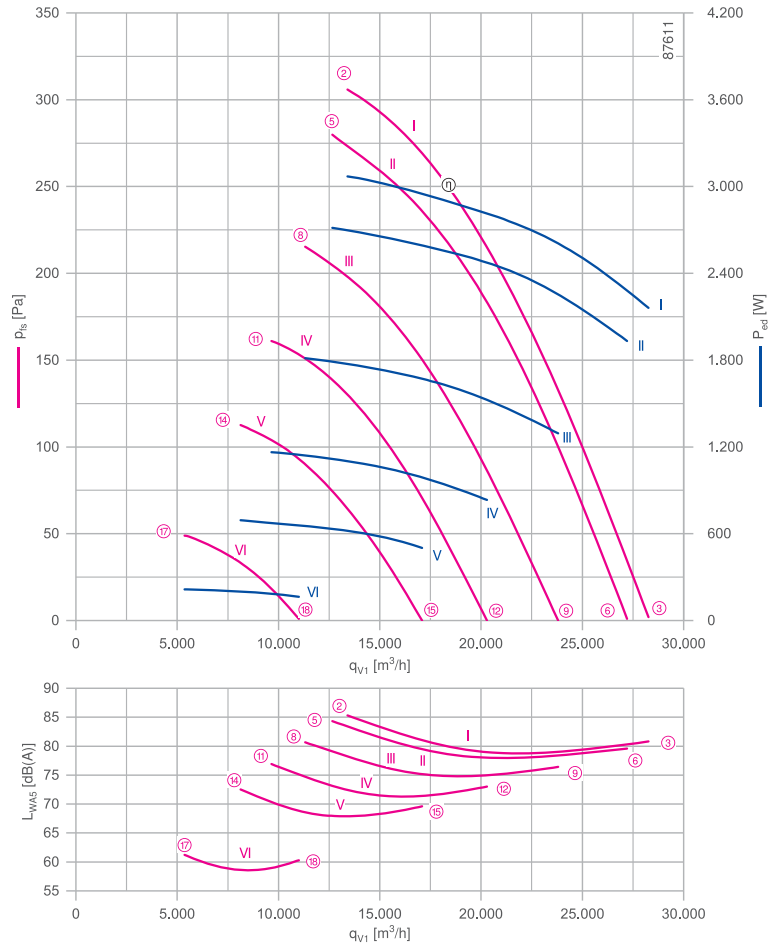
FN080



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 3.10 kW\*  
 Rated current  $I_N$ : 4.80- 3.80 A\*  
 Rated speed  $n_N$ : 1100 min<sup>-1</sup>\*  
 Thermal class: **THCL155**\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 55 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, jet black  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



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

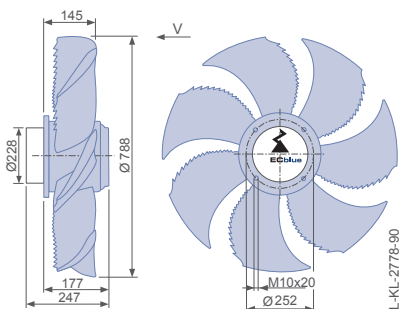
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design A - without suspension



### Performance data

Type	Characteristic curve	Speed $n$ $\text{min}^{-1}$	Operating point	Current $I$ A	Input power $P_{\text{ed}}$ W	Suction side sound power level $L_{\text{WAS}}$ dB(A)	Maximum ambient temperature $t_{\text{amb (max.)}}$ $^{\circ}\text{C}$
FN080-ZL_GL_7P3	I	1100	②	4.60	3100	86	55
			③	3.30	2200	81	
	II	1060	⑤	4.20	2700	84	60
			⑥	2.90	1950	80	
	III	930	⑧	2.80	1800	81	
			⑨	2.00	1300	76	
	IV	800	⑪	1.80	1150	77	
			⑫	1.35	840	73	
	V	670	⑭	1.15	680	73	
			⑮	0.90	500	70	
	VI	440	⑰	0.52	220	61	
			⑱	0.44	160	60	

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design A

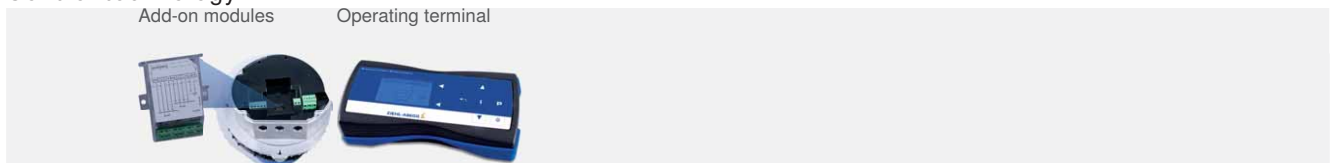
Installation position H/Vu/Vo



**Type** FN080-ZIA.GL.V7P3  
**Article no.** 178872

Weight kg 30.70

### Control technology








# FE2owlet-ECblue with ZAplus

## EC-Technology

### Product overview

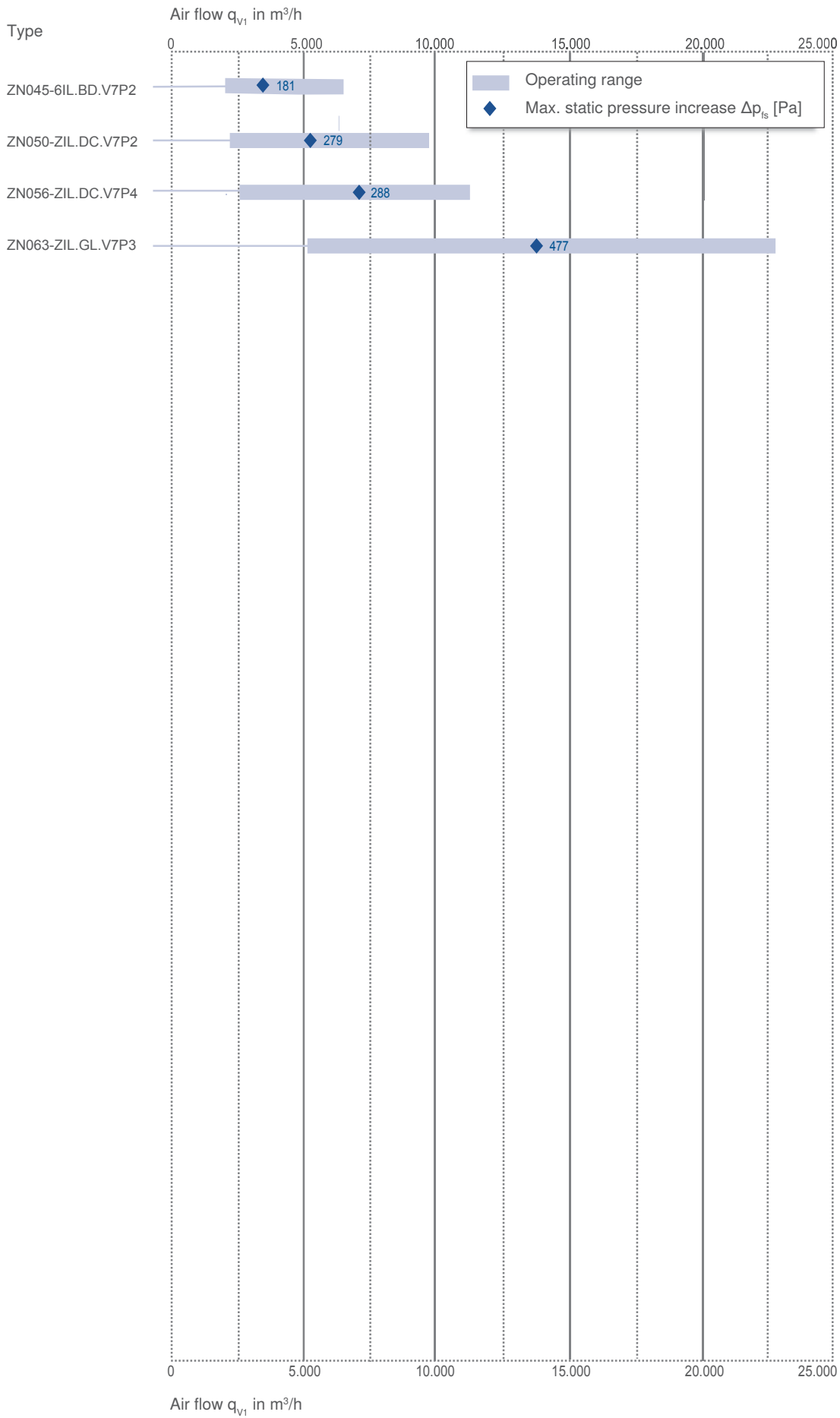
Quick selection	Page 48
Size 450	Page 50
Size 500	Page 52
Size 560	Page 54
Size 630	Page 56



Size	Voltage	Type	Air flow direction	Page
450	110V DC	ZN045-6IL.BD.V7P2	 V	50
500	3~ 380-480V	ZN050-ZIL.DC.V7P2	 V	52
560	3~ 380-480V	ZN056-ZIL.DC.V7P4	 V	54
630	3~ 380-480V	ZN063-ZIL.GL.V7P3	 V	56







# FE2owlet-ECblue with ZPlus

for direct current, 110 V

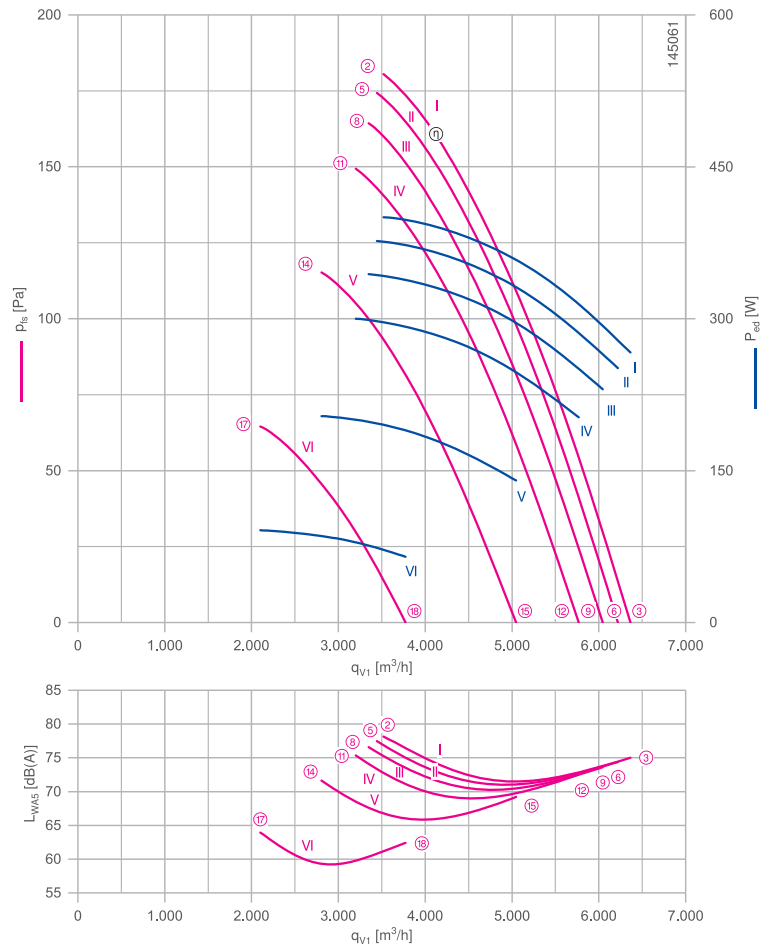
ZN045



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : **DC 110 V\***  
 Rated frequency  $f_N$ : **50/60 Hz\***  
 Input power  $P_{ed}$ : **400 W\***  
 Rated current  $I_N$ : **3.60 A\***  
 Rated speed  $n_N$ : **1460 min<sup>-1</sup>\***  
 Thermal class: **THCL155\***  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-35 °C\*\*\***  
 Max. permitted ambient temperature  $t_{amb(max)}$ : **40 °C**  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

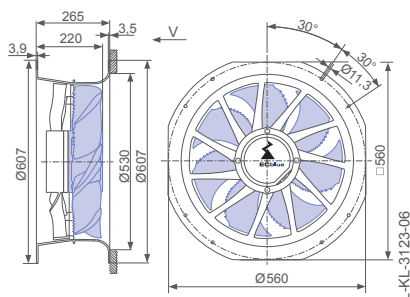
Connection diagram

1360-384

## Dimensions mm



Design L - ZPlus Ontop without guard grille



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		$n$ $\text{min}^{-1}$		$I$ A	$P_{\text{ed}}$ W	$L_{\text{WAS}}$ dB(A)	$t_{\text{amb (max.)}}$ °C
ZN045-6L_BD.V7P2	I	<b>1460*</b>	②	<b>3.60*</b>	400	78	40
		1460	③	2.40	270	75	
	II	1430	⑤	3.40	380	78	50
			⑥	2.30	250	74	
	III	1390	⑧	3.10	340	77	60
			⑨	2.10	230	74	
	IV	1330	⑪	2.70	300	76	70
			⑫	1.85	200	73	
	V	1170	⑭	1.85	200	72	
			⑮	1.25	140	69	
	VI	880	⑰	0.82	90	64	
			⑱	0.58	65	62	

\*rated data

### Fan ordering information

**Air flow direction V**

Design L (without guard grille)  
Ontop

Installation position H/Vu/Vo




**Type** ZN045-6L.BD.V7P2  
**Article no.** 179754

Weight kg 9.20

### Control technology

Operating terminal



# FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

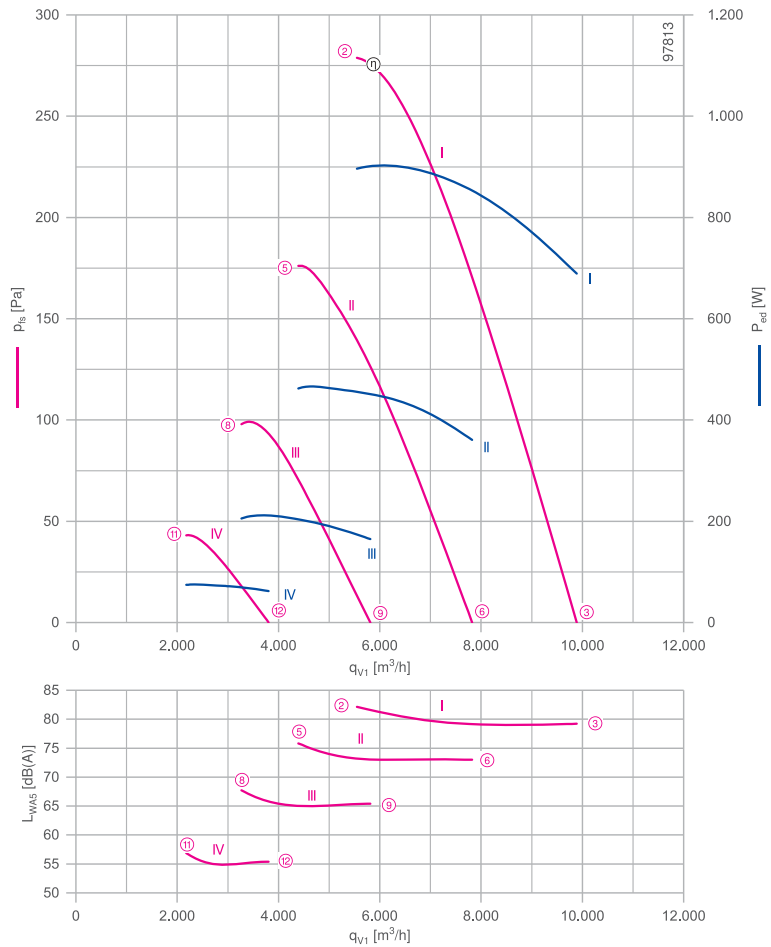
ZN050



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 0.90 kW\*  
 Rated current  $I_N$ : 1.55- 1.25 A\*  
 Rated speed  $n_N$ : 1550 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

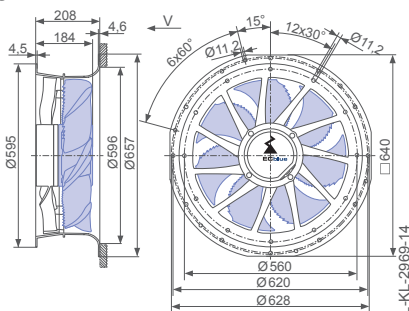
Connection diagram

1360-403

## Dimensions mm



Design L - ZPlus Ontop without guard grille



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WA5</sub> dB(A)
ZN050-ZL_DC.V7P2	I	1550	②	1.45	900	82
			③	1.20	680	79
	II	1240	⑤	0.90	460	76
			⑥	0.76	360	73
	III	930	⑧	0.54	210	68
			⑨	0.46	160	65
	IV	620	⑪	0.29	75	57
			⑫	0.26	60	55

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design L (without guard grille)  
Ontop

Installation position H/Vu/Vo




**Type** ZN050-ZIL.DC.V7P2  
**Article no.** 179755

Weight kg 13.90

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

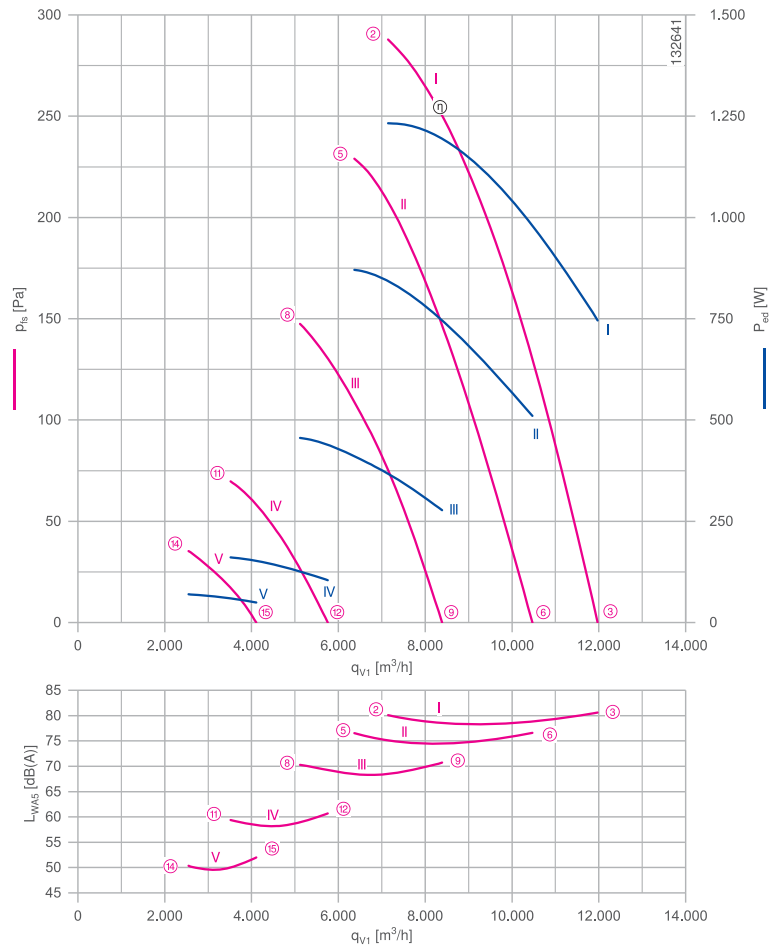
ZN056



## Description

Motor technology: EC  
 Rated voltage  $U_N$ : 3- 380-480 V\*  
 Rated frequency  $f_N$ : 50/60 Hz\*  
 Input power  $P_{ed}$ : 1.25 kW\*  
 Rated current  $I_N$ : 2.00- 1.60 A\*  
 Rated speed  $n_N$ : 1440 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 50 °C  
 Electrical connection: Integrated controller  
 Number of blades: 5  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: High Performance Composite Material, uncoated, black  
 Rotor: Steel, 2 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

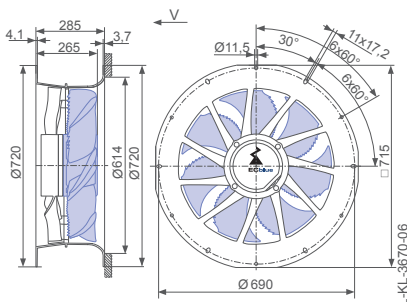
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design L - ZPlus Ontop without guard grille



### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
ZN056-ZL_DC.V5P4	I	1450	②	1.95	1250	80	50
			③	1.25	740	81	
			⑤	1.45	880	76	
	II	1270	⑥	0.96	520	77	60
			⑧	0.88	460	70	
	III	1020	⑨	0.64	280	71	70
			⑪	0.46	160	59	
	IV	700	⑫	0.34	100	61	70
			⑭	0.27	70	51	
	V	500	⑮	0.23	50	52	

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design L (without guard grille)  
Ontop

Installation position H/Vu/Vo




**Type** ZN056-ZIL.DC.V5P4  
**Article no.** 179756

Weight kg 16.70

### Control technology

Add-on modules      Operating terminal



# FE2owlet-ECblue with ZPlus

for three phase alternating current, 380-480 V

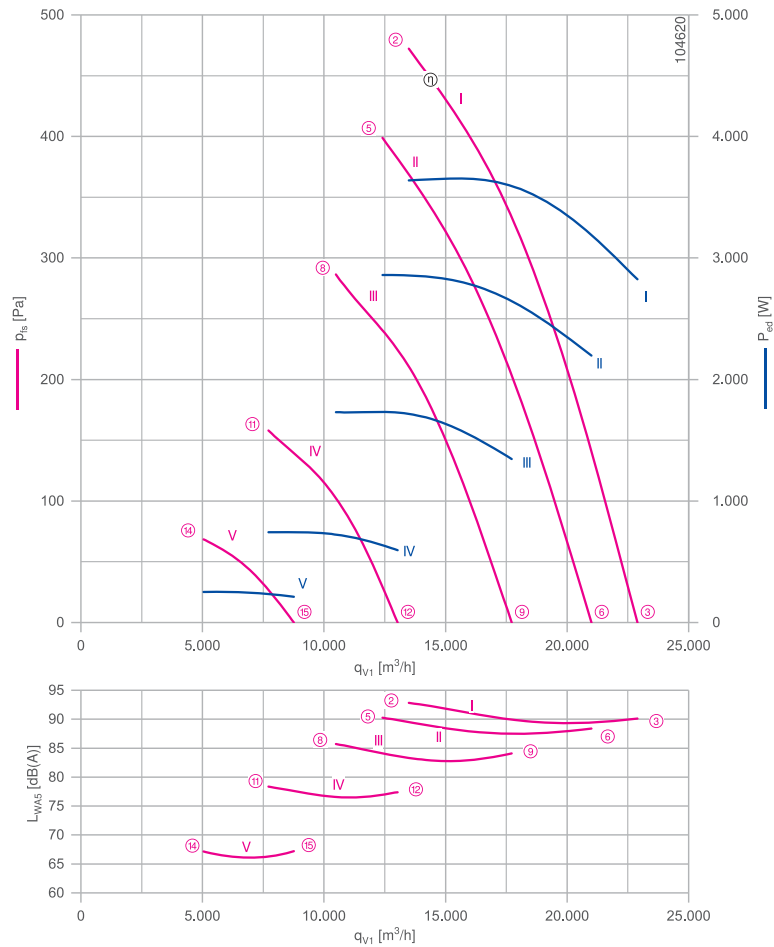
ZN063



## 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- 4.70 A\*  
 Rated speed  $n_N$ : 1600 min<sup>-1</sup>\*  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -35 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 55 °C  
 Electrical connection: Integrated controller  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: Integrated active temperature management  
 Blades: Aluminium, powder-coated, jet black  
 Rotor: Aluminium, 1 coat paint, ultramarine blue  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

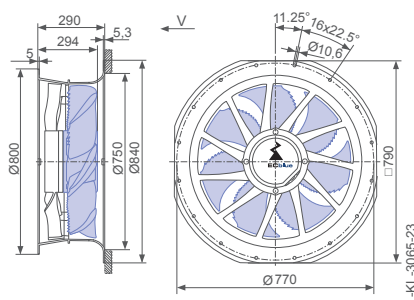
Connection diagram

1360-403

## Dimensions mm

Air flow direction V

Design L - ZPlus Ontop without guard grille





### Performance data

Type	Characteristic curve	Speed	Operating point	Current	Input power	Suction side sound power level	Maximum ambient temperature
		n min <sup>-1</sup>		I A	P <sub>ed</sub> W	L <sub>WAS</sub> dB(A)	
ZN063-ZL_GL.V7P3	I	1600	②	5.60	3600	93	55
			③	4.40	2800	90	
	II	1480	⑤	4.40	2900	90	60
			⑥	3.40	2200	88	
	III	1250	⑧	2.70	1700	86	
			⑨	2.10	1350	84	
	IV	930	⑪	1.25	740	78	
			⑫	1.05	600	77	
	V	620	⑭	0.58	250	67	
			⑮	0.52	210	67	

Current values determined at 400V

### Fan ordering information

**Air flow direction V**

Design L (without guard grille)  
Ontop

Installation position H/Vu/Vo




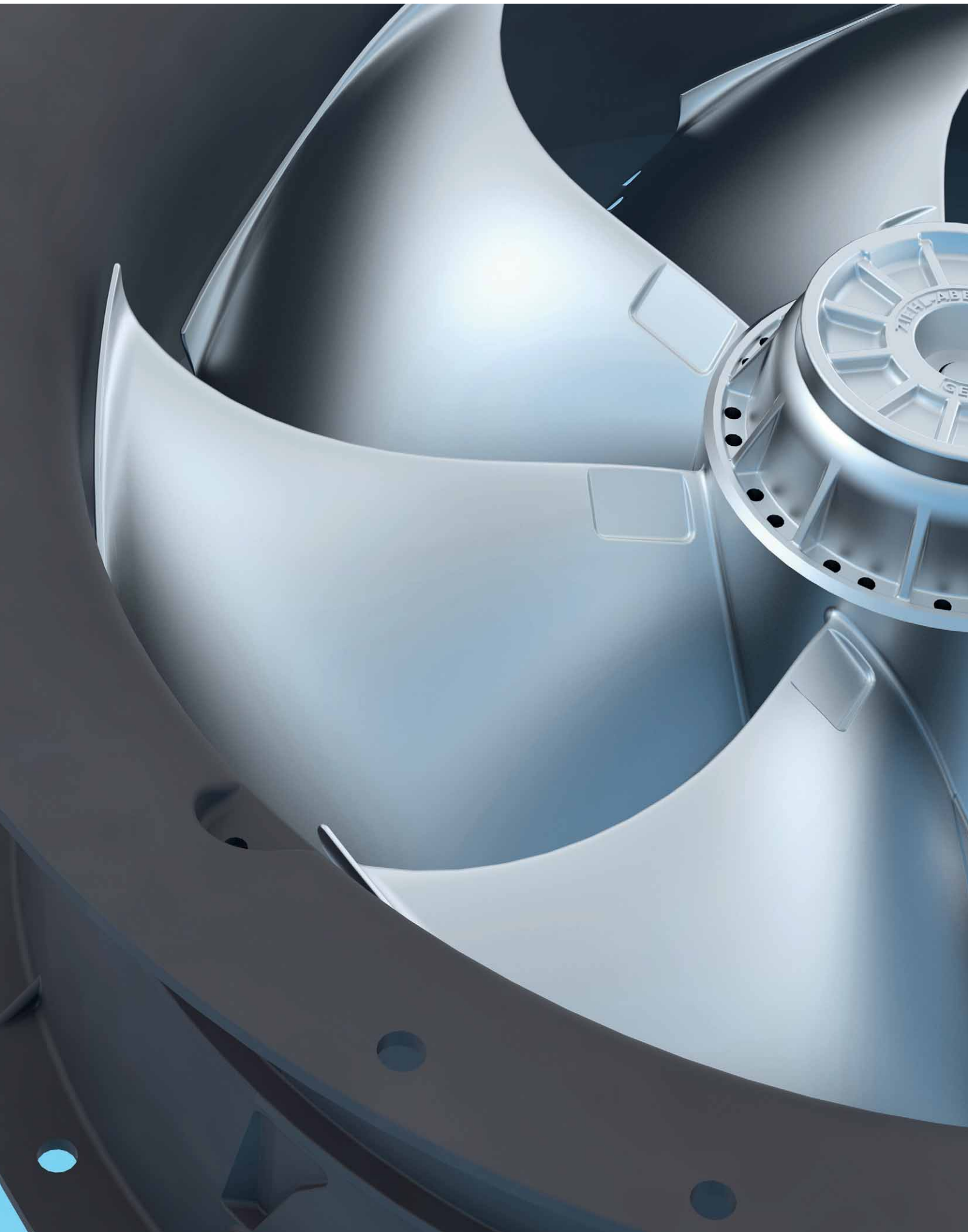
**Type** ZN063-ZIL.GL.V7P3  
**Article no.** 179757

Weight kg 37.42

### Control technology

Add-on modules      Operating terminal





# FE2owlet with ZAplus

## AC-Technology

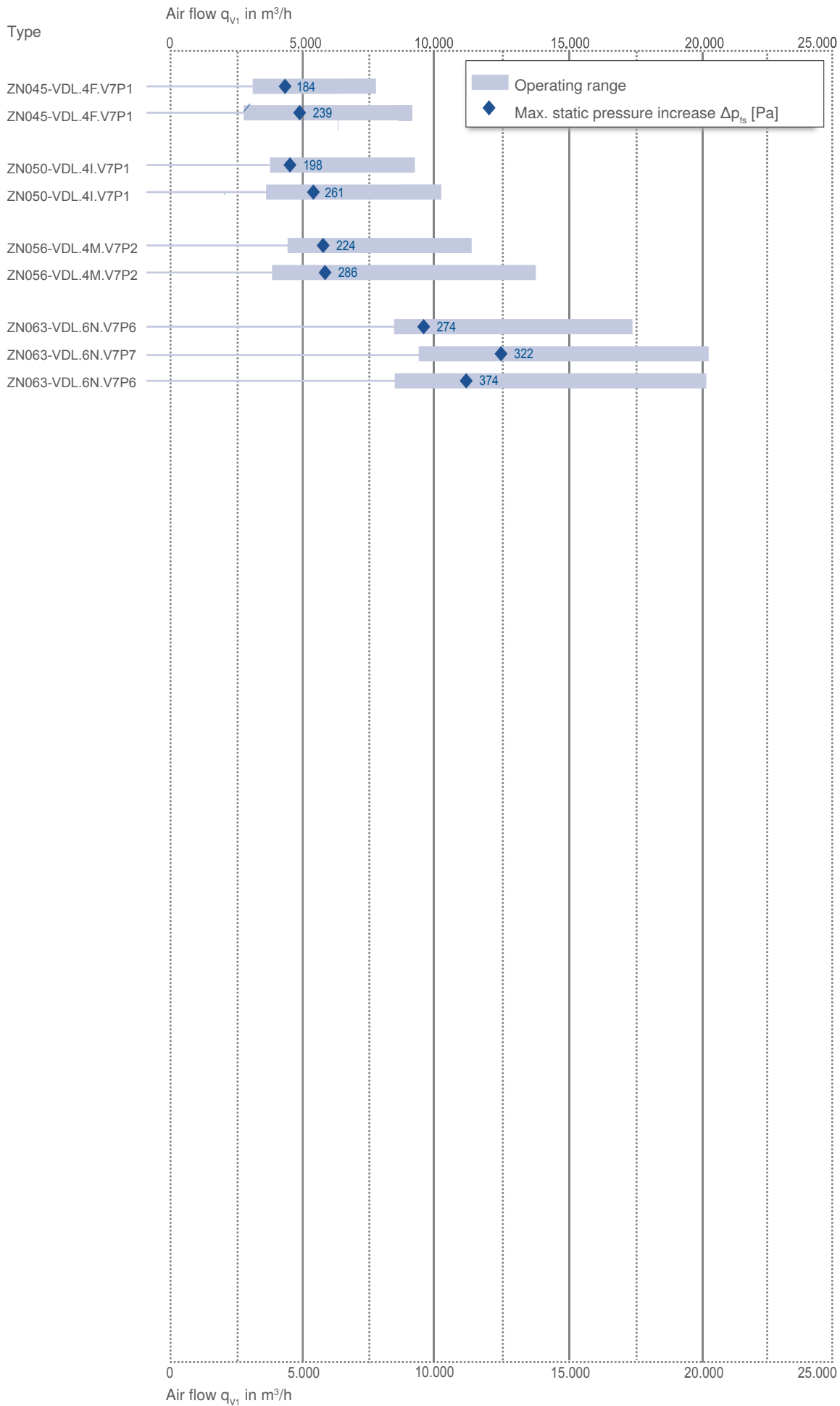
### Product overview

Quick selection	Page 60
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Size 560	Page 66
Size 630	Page 68



Size	Frequency	Voltage	Number of poles	Type	Air flow direction	Page
450	50 Hz	3~ 400V	4-4	ZN045-VDL.4F.V7P1	← V	62
	60 Hz	3~ 400/460V		ZN045-VDL.4F.V7P1	← V	62
500	50 Hz	3~ 400V	4-4	ZN050-VDL.4I.V7P1	← V	64
	60 Hz	3~ 400/460V		ZN050-VDL.4I.V7P1	← V	64
560	50 Hz	3~ 400V	4-4	ZN056-VDL.4M.V7P2	← V	66
	60 Hz	3~ 400/460V		ZN056-VDL.4M.V7P2	← V	66
630	50 Hz	3~ 400V	4-4	ZN063-VDL.6N.V7P6	← V	68
	60 Hz	3~400/460V		ZN063-VDL.6N.V7P7	← V	70
				ZN063-VDL.6N.V7P6	← V	68





# FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

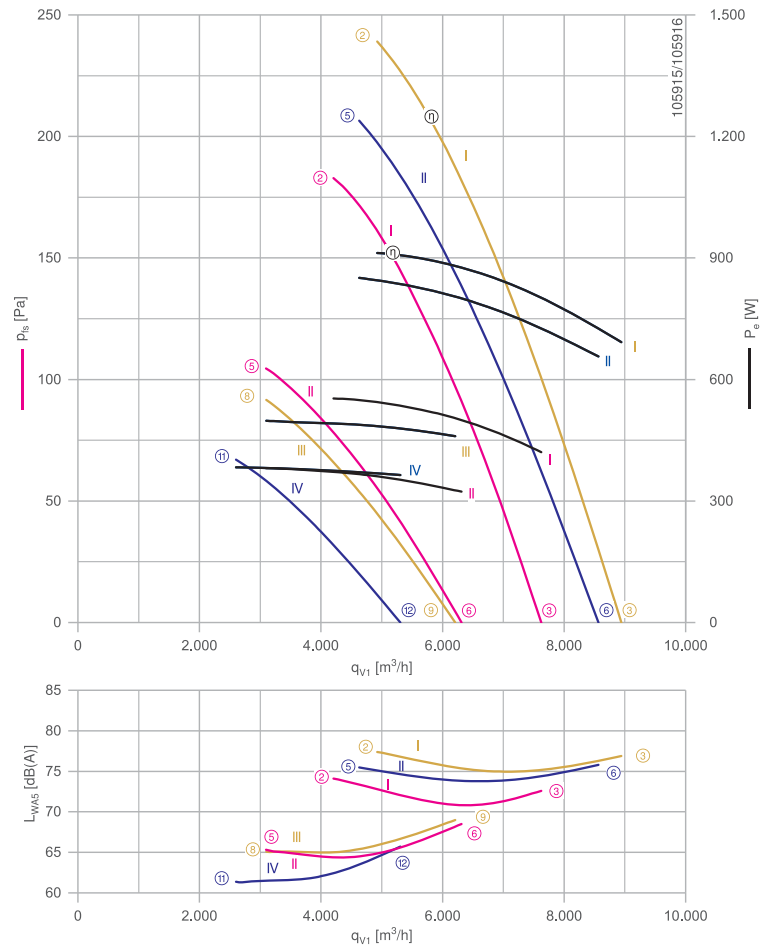
ZNO45-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \* Rated  
 frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 560/380 W | 840/380 W | 920/500 W\*  
 Rated current  $I_N$ :  
 1.10/0.68 A | 1.50/0.76 A | 1.45/0.82 A\*  
 Rated speed  $n_N$ :  
 1350/1020 min<sup>-1</sup> | 1450/820 min<sup>-1</sup> | 1560/960 min<sup>-1</sup>\*  
 Starting current  $I_a$ : 4.00/1.20 A | 3.60/1.00 A | 4.20/1.20 A  
 Current increase  $\Delta I$ : 10 % | 0 % | 5 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ :  
 70 °C | 50 °C | 50 °C  
 Electrical connection: Terminal box  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -40 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

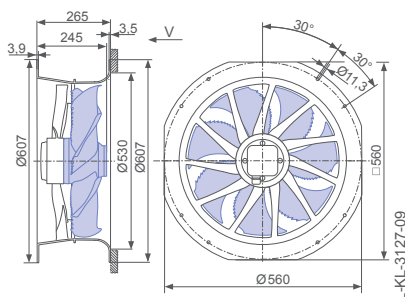
Connection diagram

1360-108XA

## Dimensions mm

Air flow direction V

Design L - ZPlus Ontop without guard grille



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)	
			U V	f Hz		I A	$P_o$ W	n min <sup>-1</sup>		
ZN045-VD_4F.V7P1	Δ	I	400*	50	②	1.10*	560*	1350*	74	
			400			③	0.92	420	1400	73
			400*			⑤	0.68*	380*	1010*	66
	Y	II	400		⑥	0.58	320	1160	69	
			460*		60	②	1.45*	920*	1550*	77
						③	1.15	700	1640	77
	II	400*	⑤	1.50*	840*	1440*	76			
		400	⑥	1.15	660	1570	76			
	Y	III	460*	⑧	0.82*	500*	960*	65		
			460	⑨	0.74	460	1140	69		
			400*	⑪	0.74*	380*	820*	62		
	400	⑫	0.70	360	970	66				

\*rated data

Fan ordering information

**Air flow direction V**

Design L (without guard grille)  
Ontop

Installation position H/Vu



**Type** ZN045-VDL.4F.V7P1  
**Article no.** 179979

Weight kg 13.40

# FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

ZN050-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 0.74/0.46 kW | 1.00/0.56 kW | 1.15/0.66 kW\*  
 Rated current  $I_N$ :  
 1.60/0.80 A | 1.85/0.94 A | 1.90/0.99 A\*  
 Rated speed  $n_N$ :  
 1290/1020 min<sup>-1</sup> | 1390/980 min<sup>-1</sup> | 1480/1090 min<sup>-1</sup>\*  
 Starting current  $I_a$ : 5.50/1.70 A | 5.00/1.60 A | 6.00/1.80 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Terminal box  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

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

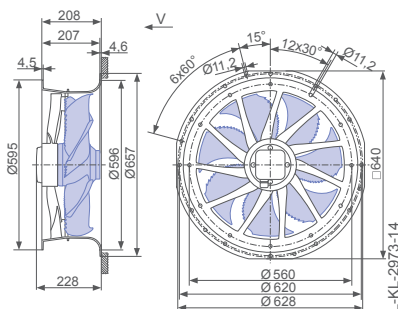
Connection diagram

1360-108XA

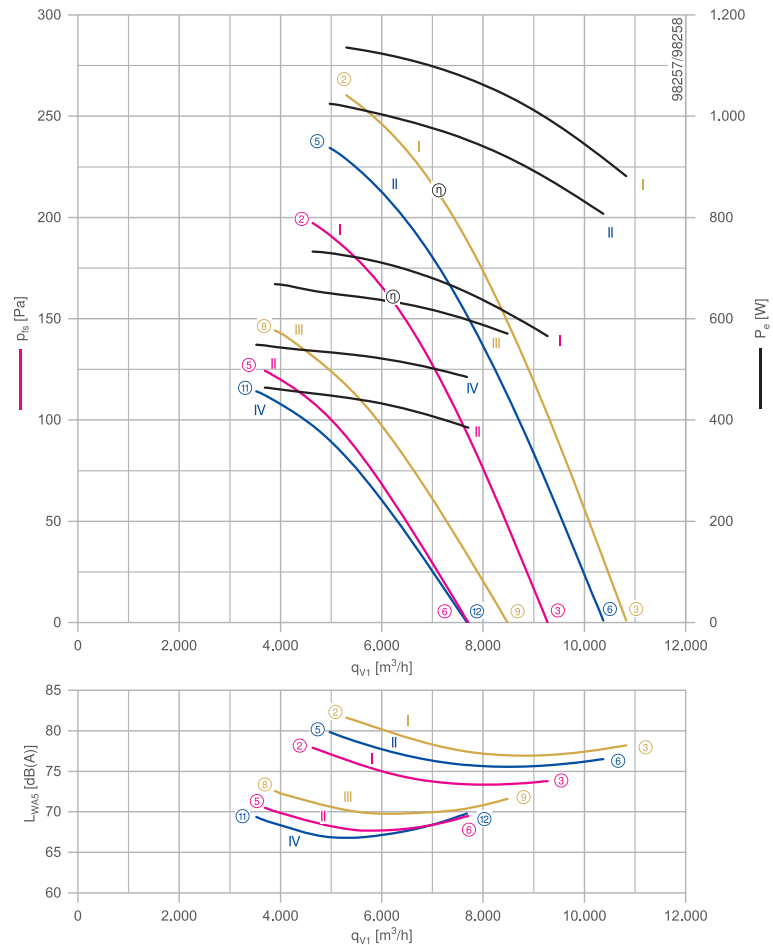
## Dimensions mm

← Air flow direction V

Design L - ZPlus Ontop without guard grille



## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801





Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_o$ W	n min <sup>-1</sup>		
ZN050-VD_4I.V7P1	Δ	I	400*	50	②	1.60*	740*	1290*	78	
			400			③	1.45	560	1340	74
	Y	II	400*		⑤	0.80*	460*	1020*	71	
			400			⑥	0.68	380	1120	70
	Δ	I	460*		60	②	1.90*	1150*	1470*	82
			460				③	1.60	880	1560
		II	400*	⑤		1.85*	1000*	1390*	80	
			400			⑥	1.55	800	1500	77
	Y	III	460*	⑧	0.98*	660*	1090*	73		
			460		⑨	0.86	580	1240	72	
	IV	IV	400*	⑪	0.94*	540*	980*	70		
			400		⑫	0.84	480	1120	70	

\*rated data

Fan ordering information

← Air flow direction V

Design	L (without guard grille) Ontop
Installation position	H/Vu
	
<b>Type</b>	<b>ZN050-VDL.4I.V7P1</b>
<b>Article no.</b>	<b>179980</b>
Weight kg	15.80

# FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

ZN056-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 1.10/0.62 kW | 1.45/0.62 kW | 1.70/0.80 kW\*  
 Rated current  $I_N$ :  
 2.30/1.20 A | 2.90/1.25 A | 2.90/1.40 A\*  
 Rated speed  $n_N$ :  
 1310/940  $\text{min}^{-1}$  | 1340/830  $\text{min}^{-1}$  | 1470/950  $\text{min}^{-1}$ \*  
 Starting current  $I_s$ : 6.50/1.90 A | 5.50/1.60 A | 7.00/1.90 A  
 Current increase  $\Delta I$ : 0 % | 0 % | 0 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{\text{amb(min)}}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{\text{amb(max)}}$ :  
 70 °C | 40 °C | 40 °C  
 Electrical connection: Terminal box  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

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

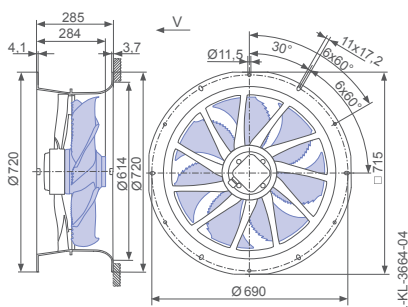
Connection diagram

1360-108XA

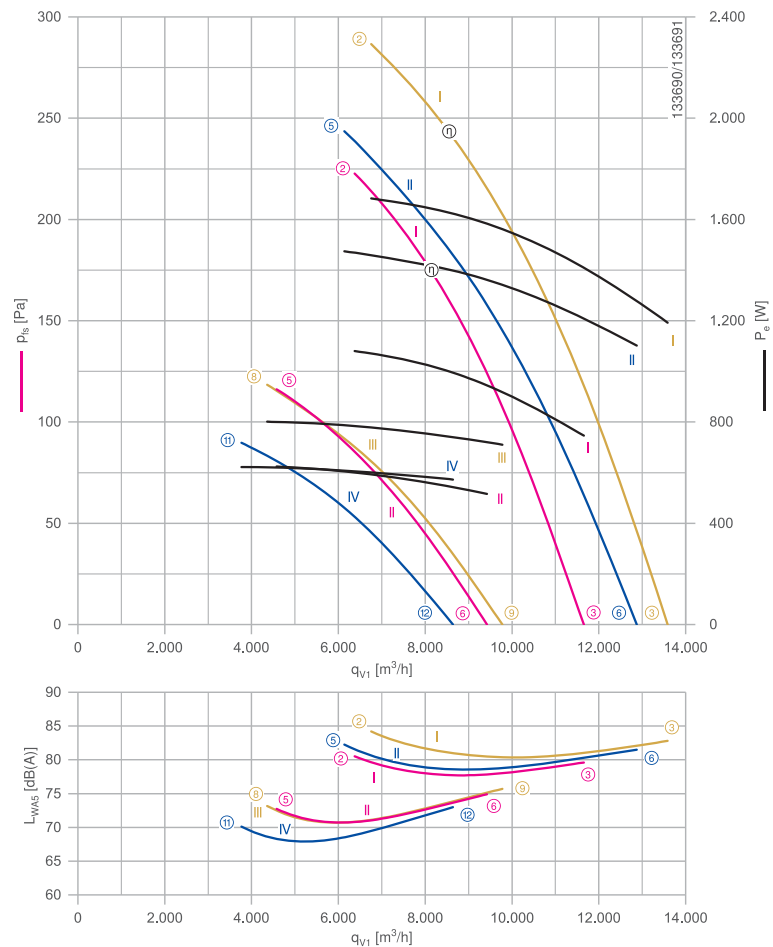
## Dimensions mm

← Air flow direction V

Design L - ZPlus Ontop without guard grille



## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)	
			U V	f Hz		I A	$P_e$ W	n min <sup>-1</sup>		
ZN056-VD_4M.V7P2	Δ	I	400*	50	②	2.30*	1100*	1310*	81	
			400			③	1.90	740	1380	80
	Y	II	400*		⑤	1.20*	620*	940*	73	
			400		⑥	1.00	520	1130	75	
	Δ	I	460*		60	②	2.90*	1700*	1460*	84
			460				③	2.20	1200	1610
		II	400*	⑤		2.90*	1450*	1340*	82	
			400	⑥		2.20	1100	1530	82	
	Y	III	460*	⑧	1.40*	800*	950*	73		
			460		⑨	1.20	720	1160	76	
	IV	IV	400*	⑩	1.25*	620*	820*	70		
			400		⑫	1.15	580	1030	73	

\*rated data

Fan ordering information

← Air flow direction V

Design	L (without guard grille) Ontop
Installation position	H/Vu
	
<b>Type</b>	<b>ZN056-VDL.4M.V7P2</b>
<b>Article no.</b>	<b>179981</b>
Weight kg	19.00

# FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

ZN063-VD



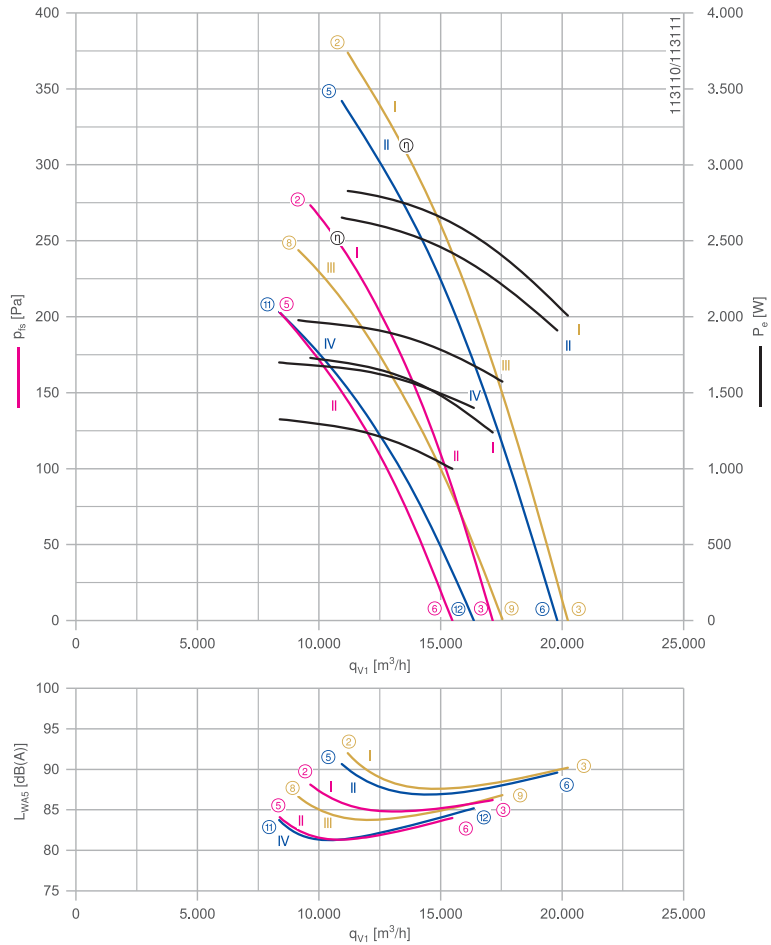
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~400 V ( $\Delta/Y$ ) | 3~400 V ( $\Delta/Y$ ) | 3~460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 1.75/1.35 kW | 2.70/1.70 kW | 2.80/2.00 kW\*  
 Rated current  $I_N$ :  
 3.70/2.20 A | 4.60/2.90 A | 4.60/2.90 A\*  
 Rated speed  $n_N$ :  
 1400/1210 min<sup>-1</sup> | 1590/1220 min<sup>-1</sup> | 1640/1330 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 20.00/6.50 A | 19.00/6.00 A | 22.00/7.00 A  
 Current increase  $\Delta I$ : 5 % | 10 % | 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ :  
 70 °C | 65 °C | 65 °C  
 Electrical connection: Terminal box  
 Number of blades: 7  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Blades: Aluminium, 2 coat paint, jet black  
 Rotor: Aluminium, 2 coat paint, jet black  
 Conformity: CE

\* Rated data

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

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

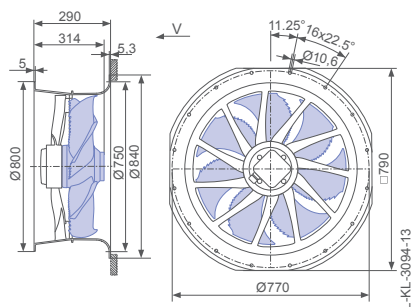
Connection diagram

1360-108XA

## Dimensions mm

Air flow direction V

Design L - ZPlus Ontop without guard grille



Performance data

Type	Connection	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WAS}$ dB(A)	
			U V	f Hz		I A	$P_o$ W	n min <sup>-1</sup>		
ZN063-VD_6N.V7P6	Δ	I	400*	50	②	3.70*	1750*	1400*	88	
			400			③	3.10	1250		1440
	Y	II	400*		⑤	2.20*	1300*	1210*	84	
			400			⑥	1.75	1000		1300
	Δ	I	460*		60	②	4.60*	2800*	1640*	92
			460				③	3.60	2000	
		II	400*	⑤		4.60*	2700*	1590*	91	
			400			⑥	3.50	1900		1660
	Y	III	460*	⑧		2.90*	2000*	1330*	87	
			460			⑨	2.30	1550		1470
	IV	IV	400*	⑪		2.90*	1700*	1220*	84	
			400			⑫	2.40	1400		1380

\*rated data

Fan ordering information

← Air flow direction V

Design	L (without guard grille) Ontop
Installation position	H/Vu
	
<b>Type</b>	<b>ZN063-VDL.6N.V7P6</b>
<b>Article no.</b>	<b>179982</b>
Weight kg	32.00

# FE2owlet with ZPlus

for three phase alternating current, 4-4 pole

ZN063-VD



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
**3~ 400 V ( $\Delta/Y$ )\***  
 Rated frequency  $f_N$ : **50 Hz\***  
 Input power  $P_e$ :  
**2.70/1.75 kW\***  
 Rated current  $I_N$ :  
**5.00/2.90 A\***  
 Rated speed  $n_N$ :  
**1330/1040 min<sup>-1</sup>\***  
 Starting current  $I_A$ : **19.00/6.00 A**  
 Current increase  $\Delta I$ : **5 %**  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : **-40 °C\*\*\* Max.**  
 permitted ambient temperature  $t_{amb(max)}$ :  
**60 °C**

Electrical connection: Terminal box

Number of blades: 7

Degree of protection : IP54

Motor protection: thermal contact

Blades: Aluminium, 2 coat paint, jet black

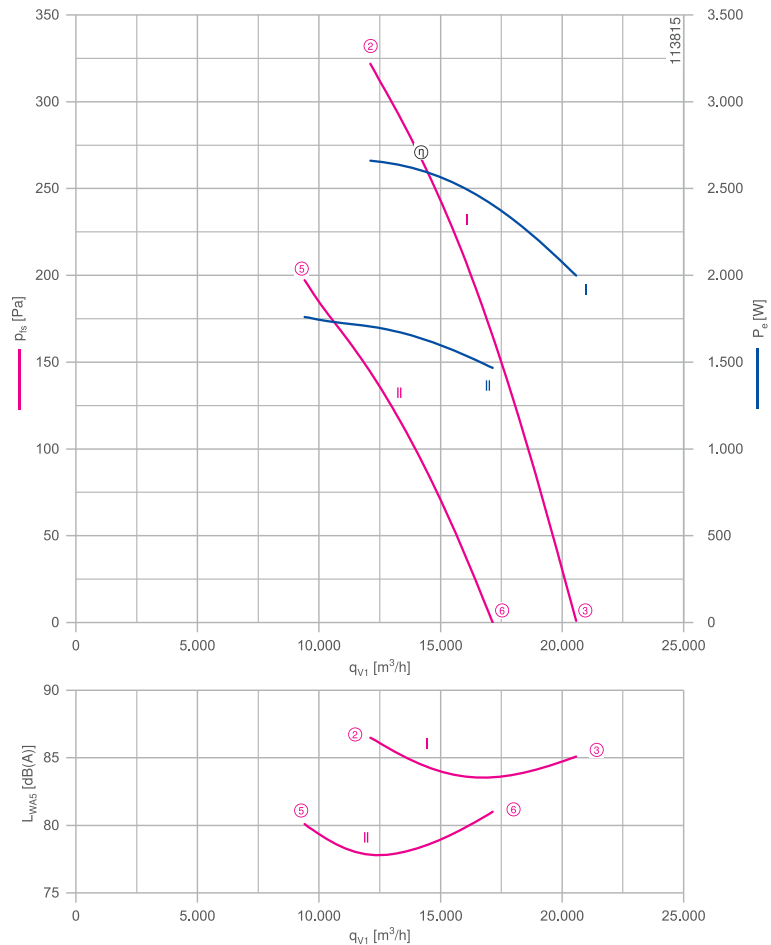
Rotor: Aluminium, 2 coat paint, jet black

Conformity: CE

\* Rated data

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

## Characteristic curve



Measured in ZPlus without guard grille in installation type A according to ISO 5801

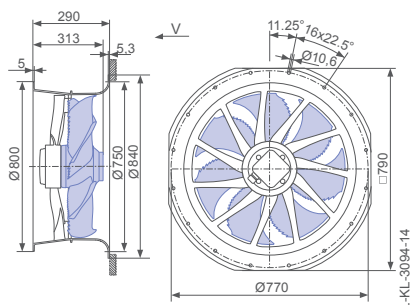
Connection diagram

1360-108XA

## Dimensions mm

← Air flow direction V

Design L - ZPlus Ontop without guard grille



### Performance data

Type	Connection	Characteristic curve	Voltage U V	Operating point	Current I A	Input power P <sub>o</sub> W	Speed n min <sup>-1</sup>	Suction side sound power level L <sub>WA5</sub> dB(A)
ZN063-VD_6N.V7P7	Δ	I	400*	②	5.00*	2700*	1330*	87
			400	③	4.00	2000	1380	85
	Y	II	400*	⑤	2.90*	1750*	1040*	80
			400	⑥	2.50	1450	1150	81

\*rated data

### Fan ordering information

← Air flow direction V

Design	L (without guard grille) Ontop
Installation position	H/Vu
	
<b>Type</b>	<b>ZN063-VDL.6N.V7P7</b>
<b>Article no.</b>	<b>179983</b>
Weight kg	35.00





# Cpro

## AC-Technology

### Product overview

Quick selection Page 74

Size 250 Page 76

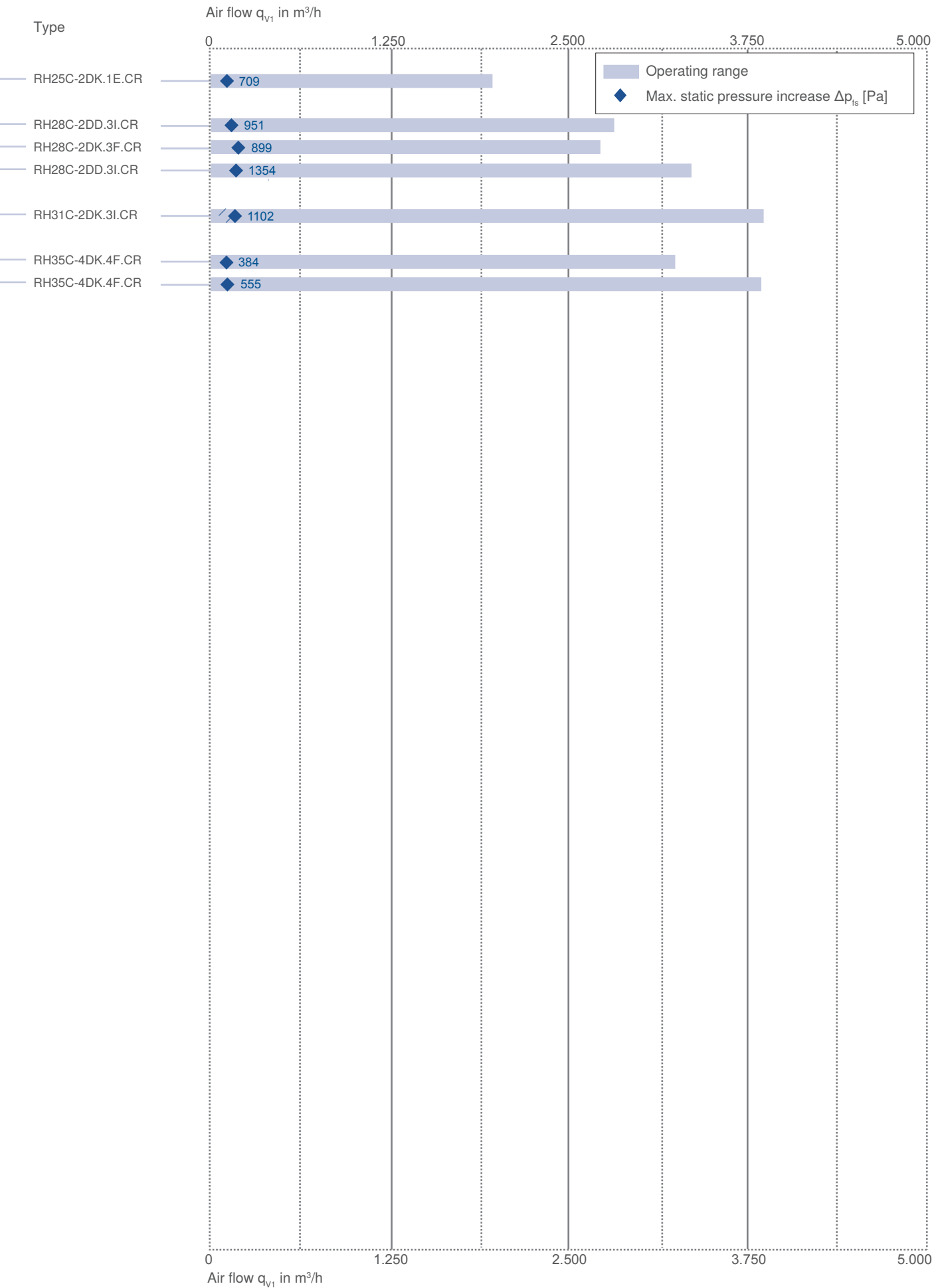
Size 280 Page 78

Size 315 Page 82

Size 355 Page 84

Size	Frequency	Voltage	Number of poles	Type	Impeller position	Page
250	50Hz	3~400V	2	RH25C-2DK.1E.CR	K	76
280	50 Hz	3~ 400V	2	RH28C-2DD.3I.CR	D	78
	60 Hz	3~ 400/460V	2	RH28C-2DK.3F.CR	K	80
				RH28C-2DD.3I.CR	D	78
315	50 Hz	3~ 400V	2	RH31C-2DK.3I.CR	K	82
355	50 Hz	3~ 400V	4	RH35C-4DK.4F.CR	K	84
	60 Hz	3~ 400/460V	4	RH35C-4DK.4F.CR	K	84





# Cpro

for three phase alternating current, 2 pole

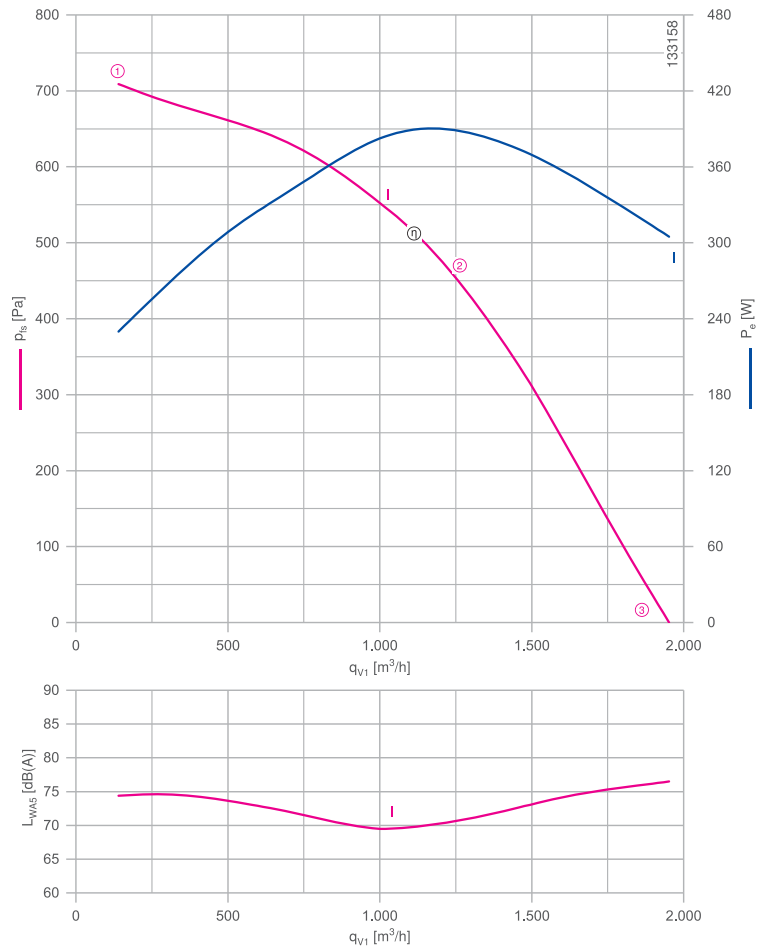
RH25C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_e$ : 390 W\*  
 Rated current  $I_N$ : 1.10/0.64 A\*  
 Rated speed  $n_N$ : 2620 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 4.00/2.20 A  
 Current increase  $\Delta I$ : 10 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 65 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54Z  
 Motor protection: thermal contact  
 Impeller : Impeller made of ZAmid, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

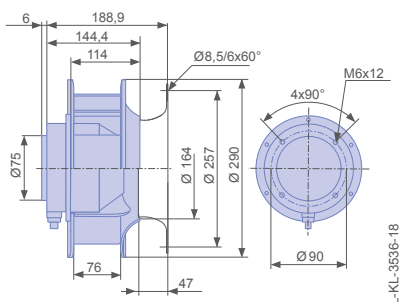


Measured with inlet nozzle, without guard grille according to ISO 5801  
 Not voltage controllable fan.

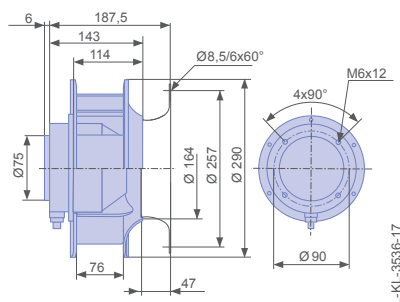
Inlet ring	00401777	RAL 7032 (pebble grey)
Inlet ring	00400803	unpainted
Connection diagram	1360-106XA	

## Dimensions mm

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



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





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_e$ W	n min <sup>-1</sup>	
RH25C-2DK.1E.CR	I	400	①	0.44	230	2800	74
		400*	②	0.64*	390*	2620*	70
		400	③	0.54	300	2730	77

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH25C-2DK.1E.CR</b>	<b>RH25C-2DK.1E.CR</b>
<b>Article no.</b>	<b>175806</b>	<b>175805</b>
Weight kg	4.00	4.00
* Inlet nozzle not included in the scope of delivery		

# Cpro

for three phase alternating current, 2 pole

RH28C-2D



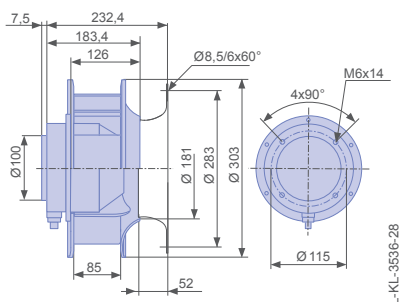
## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 0.68 kW | 1.05 kW | 1.10 kW\*  
 Rated current  $I_N$ :  
 2.20/1.30 A | 2.90/1.70 A | 2.90/1.65 A\*  
 Rated speed  $n_N$ :  
 2810 min<sup>-1</sup> | 3190 min<sup>-1</sup> | 3300 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 13.00/7.50 A | 12.00/7.00 A | 14.00/8.00 A  
 Current increase  $\Delta I$ : 20 % | 20 % | 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ :  
 70 °C | 65 °C | 65 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : Impeller made of ZAmid, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

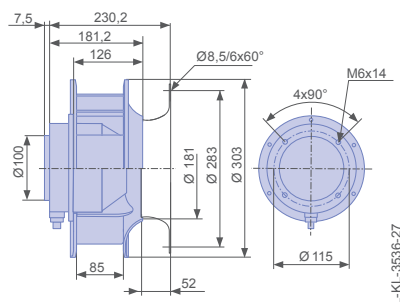
Inlet ring	00401778	RAL 7032 (pebble grey)
Inlet ring	00400804	unpainted
Connection diagram	1360-106XA	

## Dimensions mm

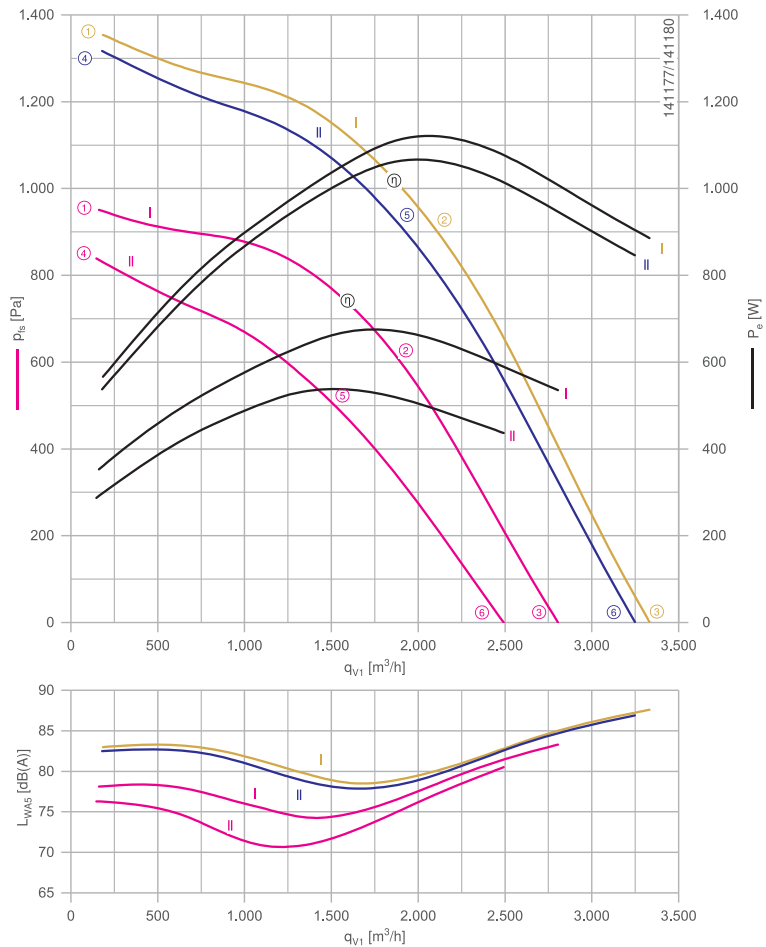
Free-running motorized impeller RH  
in installation position H/Vu



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



## Characteristic curve



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





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_o$ W	n min <sup>-1</sup>	
RH28C-2DD.3I.CR	I	400	50	①	0.98	350	2910	78
		400*	50	②	1.30*	680*	2810*	76
		400	50	③	1.15	540	2860	83
	II	230	50	④	0.82	290	2740	76
		230	50	⑤	1.45	540	2430	72
		230	50	⑥	1.20	440	2570	81
	I	460	60	①	1.05	560	3480	83
		460*	60	②	1.65*	1100*	3300*	80
		460	60	③	1.35	880	3380	88
	II	400	60	④	0.98	540	3430	83
		400*	60	⑤	1.70*	1050*	3190*	78
		400	60	⑥	1.40	840	3300	87

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH28C-2DD.3I.CR</b>	<b>RH28C-2DD.3I.CR</b>
<b>Article no.</b>	<b>175808</b>	<b>175807</b>
Weight kg	10.00	10.00
* Inlet nozzle not included in the scope of delivery		

# Cpro

for three phase alternating current, 2 pole

RH28C-2D



## Description

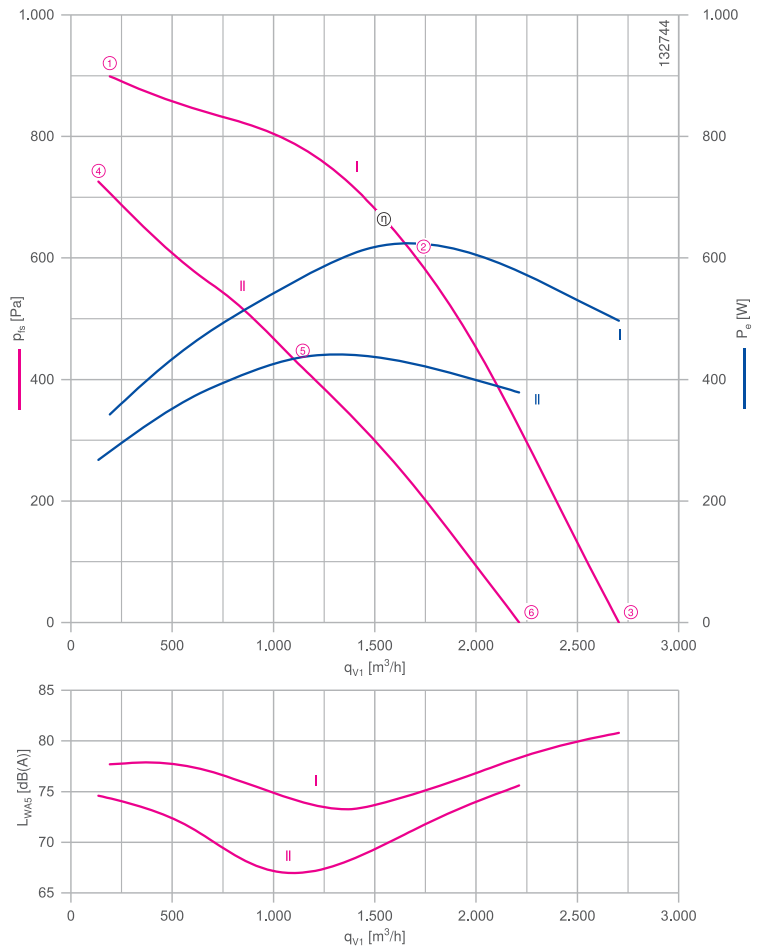
Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_e$ : 0.62 kW\*  
 Rated current  $I_N$ : 1.80/1.05 A\*  
 Rated speed  $n_N$ : 2700 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 7.50/4.40 A  
 Current increase  $\Delta I$ : 15 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C

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

\* Rated data

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

## Characteristic curve

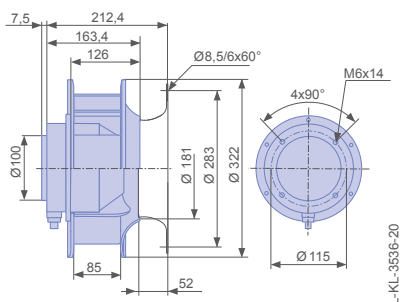


Measured with inlet nozzle, without guard grille according to ISO 5801

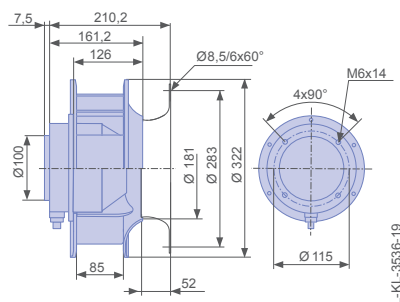
Inlet ring	00401778	RAL 7032 (pebble grey)
Inlet ring	00400804	unpainted
Connection diagram	1360-106X	

## Dimensions mm

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



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



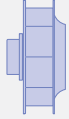
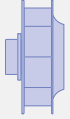


### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_e$ W	n min <sup>-1</sup>	
RH28C-2DK.3F.CR	I	400	①	0.74	340	2850	78
		400*	②	1.05*	620*	2700*	75
		400	③	0.92	500	2770	81
	II	230	④	0.74	270	2570	75
		230	⑤	1.20	440	2100	67
		230	⑥	1.05	380	2300	76

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH28C-2DK.3F.CR</b>	<b>RH28C-2DK.3F.CR</b>
<b>Article no.</b>	<b>175811</b>	<b>175810</b>
Weight kg	10.00	10.00
* Inlet nozzle not included in the scope of delivery		

# Cpro

for three phase alternating current, 2 pole

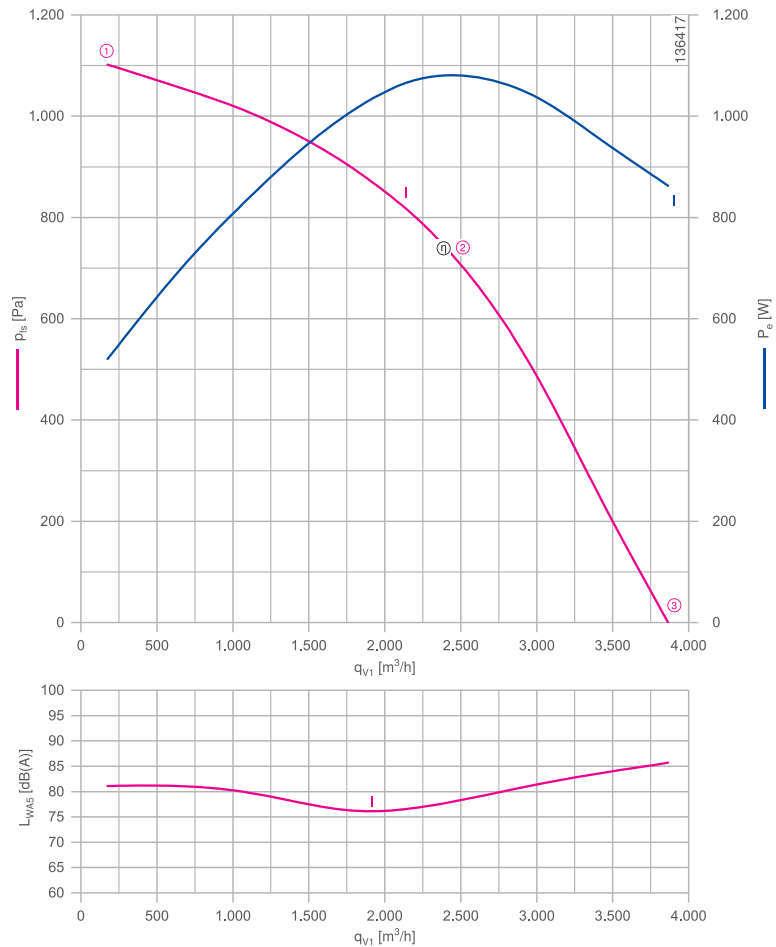
RH31C-2D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ : 3~ 230/400 V ( $\Delta/Y$ )\*  
 Rated frequency  $f_N$ : 50 Hz\*  
 Input power  $P_e$ : 1.05 kW\*  
 Rated current  $I_N$ : 3.10/1.80 A\*  
 Rated speed  $n_N$ : 2670 min<sup>-1</sup>\*  
 Starting current  $I_A$ : 13.00/7.50 A  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ : 60 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : Impeller made of ZAmid, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE  
 \* Rated data  
 \*\*\* Continuous operation with occasional starts (S1) according to DIN EN 60034-1:2011-02. Occasional starting between -35 °C and -25 °C is permissible. Continuous operation below -25 °C only with special bearings for refrigeration applications on request.

## Characteristic curve

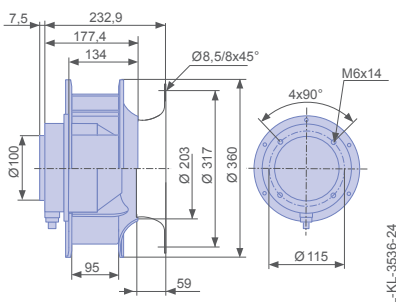


Measured with inlet nozzle, without guard grille according to ISO 5801  
 Not voltage controllable fan.

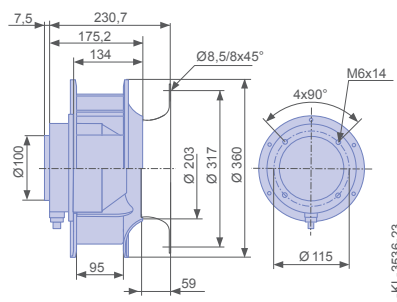
Inlet ring	00411853	RAL 7032 (pebble grey)
Inlet ring	00411846	unpainted
Connection diagram	1360-106XA	

## Dimensions mm

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



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





### Performance data

Type	Characteristic curve	Voltage	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V		I A	$P_e$ W	n min <sup>-1</sup>	
RH31C-2DK.3I.CR	I	400	①	1.10	520	2860	81
		400*	②	1.80*	1100*	2660*	78
		400	③	1.50	860	2750	86

\*rated data

### Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH31C-2DK.3I.CR</b>	<b>RH31C-2DK.3I.CR</b>
<b>Article no.</b>	<b>175815</b>	<b>175814</b>
Weight kg	11.00	11.00
* Inlet nozzle not included in the scope of delivery		

# Cpro

for three phase alternating current, 4 pole

RH35C-4D



## Description

Motor technology: AC  
 Rated voltage  $U_N$ :  
 3~ 230/400 V ( $\Delta/Y$ ) | 3~230/400 V ( $\Delta/Y$ ) | 3~265/460 V ( $\Delta/Y$ ) \*  
 Rated frequency  $f_N$ : 50 Hz | 60 Hz | 60 Hz\*  
 Input power  $P_e$ :  
 330 W | 0.50 kW | 520 W\*  
 Rated current  $I_N$ :  
 1.50/0.88 A | 1.55/0.90 A | 1.60/0.94 A\*  
 Rated speed  $n_N$ :  
 1430 min<sup>-1</sup> | 1670 min<sup>-1</sup> | 1700 min<sup>-1</sup>\*  
 Starting current  $I_s$ : 8.00/4.60 A | 7.00/4.00 A | 8.50/4.80 A  
 Current increase  $\Delta I$ : 0 % | 15 % | 20 %  
 Thermal class: THCL155\*  
 Min. permitted ambient temperature  $t_{amb(min)}$ : -40 °C\*\*\*  
 Max. permitted ambient temperature  $t_{amb(max)}$ :  
 70 °C | 70 °C | 70 °C  
 Electrical connection: Supply cable side, 105cm  
 Degree of protection : IP54  
 Motor protection: thermal contact  
 Impeller : Impeller made of ZAmid, unpainted  
 Motor: Aluminium, 1 coat paint, pebble grey  
 Conformity: CE

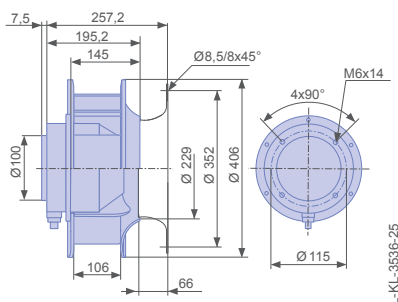
\* Rated data

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

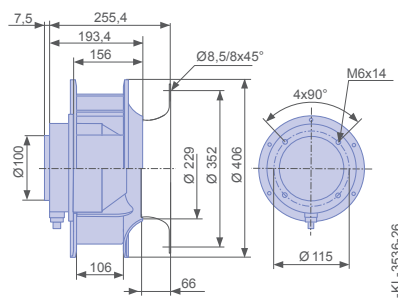
Inlet ring	00411854	RAL 7032 (pebble grey)
Inlet ring	00411847	unpainted
Connection diagram	1360-106XA	

## Dimensions mm

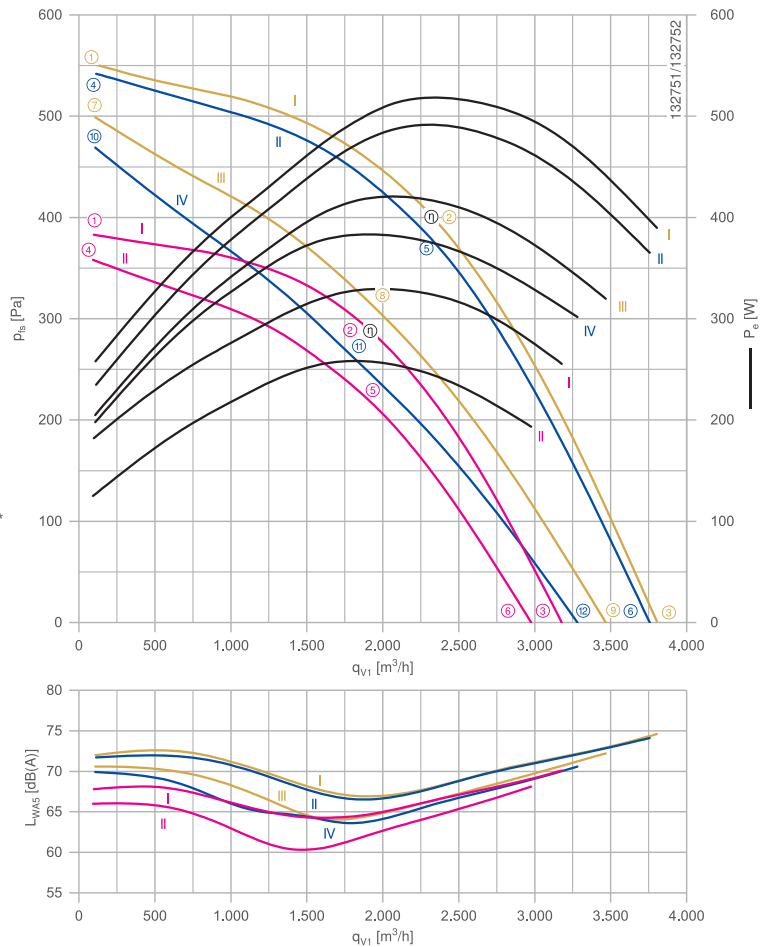
Free-running motorized impeller RH  
in installation position H/Vu



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



## Characteristic curve



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





Performance data

Type	Characteristic curve	Voltage	Frequency	Operating point	Current	Input power	Speed	Suction side sound power level $L_{WA5}$ dB(A)
		U V	f Hz		I A	$P_o$ W	n min <sup>-1</sup>	
RH35C-4DK.4F.CR	I	400	50	①	0.80	180	1470	68
		400*		②	0.88*	330*	1430*	65
		400		③	0.84	260	1450	70
	II	230		④	0.44	130	1420	66
		230		⑤	0.74	260	1310	62
		230		⑥	0.58	190	1360	68
	I	460	60	①	0.74	260	1760	72
		460*		②	0.92*	520*	1700*	68
		460		③	0.82	390	1730	75
	II	400		④	0.60	230	1750	72
		400*		⑤	0.88*	500*	1670*	68
		400		⑥	0.74	370	1710	74
	III	265		⑦	0.54	210	1680	71
		265		⑧	1.05	420	1480	65
		265		⑨	0.80	320	1580	72
	IV	230		⑩	0.58	200	1630	70
		230		⑪	1.10	380	1360	64
		230		⑫	0.86	300	1500	71

\*rated data

Fan ordering information

Design	RH*	RH*
Installation position	H/Vu	H/Vo
		
<b>Type</b>	<b>RH35C-4DK.4F.CR</b>	<b>RH35C-4DK.4F.CR</b>
<b>Article no.</b>	<b>175816</b>	<b>175817</b>
Weight kg	9.00	9.00
* Inlet nozzle not included in the scope of delivery		



## 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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