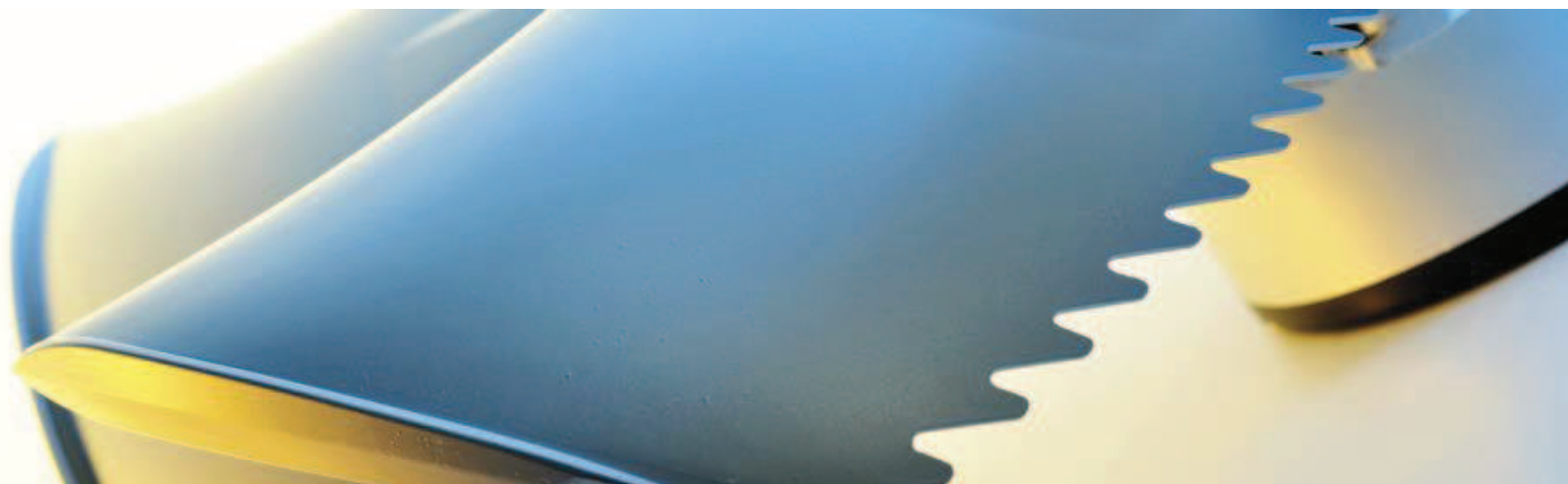


Movement by Perfection



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



Product documentation

Type  
FN040-VDK.0F.V7P2

Article number  
156244

Beijing Hengrui Mechanical and Electrical Equipment Co.,Ltd  
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## 1. Product specification - Technical data

|                            |                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Article number             | 156244                                                                                                                                                                                                                                                                                                                                                                                          |
| Type                       | FN040-VDK.0F.V7P2                                                                                                                                                                                                                                                                                                                                                                               |
| Designation                | Axial fan with sickle blades                                                                                                                                                                                                                                                                                                                                                                    |
| Rated values               | 3~400V $\pm 10\%$ D/Y 50Hz P <sub>1</sub> 260/180W<br>0.50/0.29A $\Delta I=0\%$ 1340/1020/min COSY 0,77 70°C<br>3~400V $\pm 10\%$ D/Y 60Hz P <sub>1</sub> 360/200W<br>0.59/0.32A $\Delta I=0\%$ 1470/940/min COSY 0,88 testPsF<br>max. 95PaPsF max. 95Pa 55°C<br>3~460V $\pm 10\%$ D/Y 60Hz P <sub>1</sub> 390/240W<br>0.58/ 0.34A $\Delta I=5\%$ 1560/1090/min COSY 0,84 PsF<br>max.100Pa 55°C |
| Electrical connection      | Terminal box K05                                                                                                                                                                                                                                                                                                                                                                                |
| ErP Data                   | Efficiency $\eta_{statA}$ : 31.9 %<br>Efficiency grade: $N_{actual} = 42.0 / N_{target} = 40^*$<br>*ErP 2015                                                                                                                                                                                                                                                                                    |
| Type of protection         | IP54                                                                                                                                                                                                                                                                                                                                                                                            |
| Thermal class              | THCL155                                                                                                                                                                                                                                                                                                                                                                                         |
| Mounting type terminal box | Mounted on Stator                                                                                                                                                                                                                                                                                                                                                                               |
| Min. operating temperature | -40°C***                                                                                                                                                                                                                                                                                                                                                                                        |
| Connection diagram         | 1360-108XA                                                                                                                                                                                                                                                                                                                                                                                      |
| Rating plate               | 1x fixed                                                                                                                                                                                                                                                                                                                                                                                        |
| Fitting position           | H/Vu/Vo                                                                                                                                                                                                                                                                                                                                                                                         |
| Motor protection           | thermal contact                                                                                                                                                                                                                                                                                                                                                                                 |
| Impregnation               | Moisture and hot climate protection                                                                                                                                                                                                                                                                                                                                                             |
| Condensation               | Condensation water holes in stator/rotor open                                                                                                                                                                                                                                                                                                                                                   |
| Quality of bearings        | ball bearing with long-time lubrication                                                                                                                                                                                                                                                                                                                                                         |
| Material Rotor             | Aluminium                                                                                                                                                                                                                                                                                                                                                                                       |
| Painting rotor             | Rotor 1 coat paint resistance class 1 (L-TI-0596)                                                                                                                                                                                                                                                                                                                                               |
| colour rotor               | RAL 9005 (jet black)                                                                                                                                                                                                                                                                                                                                                                            |
| painting stator            | Stator 1 coat paint resistance class 1 (L-TI-0596)                                                                                                                                                                                                                                                                                                                                              |
| colour stator              | RAL 9005 (jet black)                                                                                                                                                                                                                                                                                                                                                                            |
| Material blades            | High Performance Composite Material                                                                                                                                                                                                                                                                                                                                                             |
| Colour blades              | black                                                                                                                                                                                                                                                                                                                                                                                           |
| Guard grille type          | ring grill                                                                                                                                                                                                                                                                                                                                                                                      |
| Painting mot.suspensions   | Motor suspension powder-coated resistance class 2 (L-TI-0585)                                                                                                                                                                                                                                                                                                                                   |
| colour suspension          | RAL 9005 (jet black)                                                                                                                                                                                                                                                                                                                                                                            |

\*\*\* Operation mode:

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.

Permissible minimum and maximum ambient temperature for operation:

Please refer to the technical documentation of the product for the minimum and maximum ambient temperature valid for the respective fan. Operation below -25 °C as well as partial load operation for refrigeration applications is only possible with special bearings for refrigeration applications on request. If special bearings for refrigeration applications are installed in the fan, please observe the permissible maximum temperatures in the technical documentation of the product.

## 2. Characteristic Curve

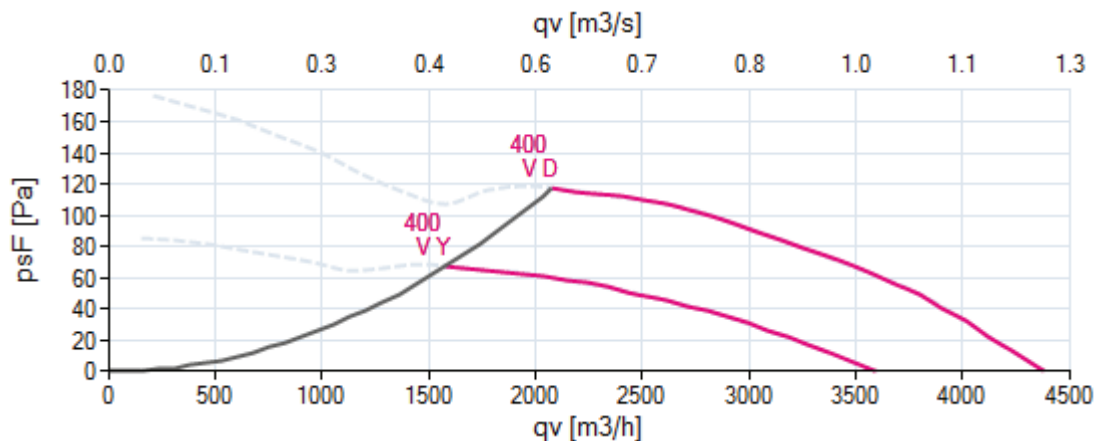
FN040-VDK.0F.V7P2

Measured in full nozzle without guard grille in air flow direction V in installation type A according to ISO5801

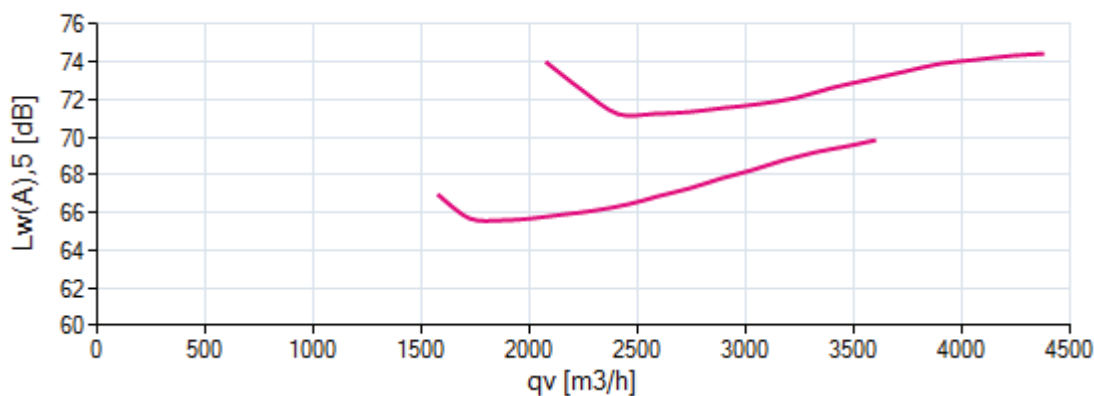
3~ 400V 50Hz D

measurement density 1,16 kg/m<sup>3</sup>

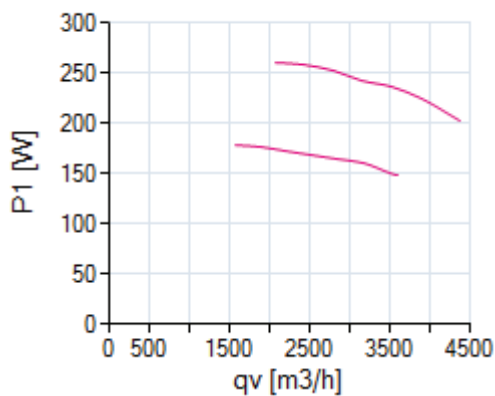
### Air performance



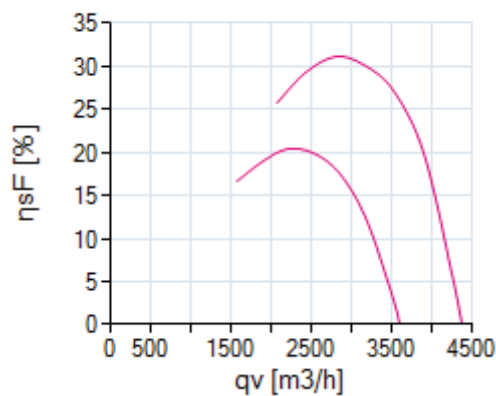
### Acoustics



### Power input



### Efficiency



Please note: It's not allowed to use this fan in the stall area!\*

\*In doubt please ask your responsible ZIEHL-ABEGG sales contact.

[illegible]

## 4. Connection diagram

### wiring diagram: 1360-108XA

3~ motor, 2 speeds ( $\Delta/Y$  switch over) with thermostatic switch (if built in). Without bridge when using speed change-overswitch.

|      |              |
|------|--------------|
| BN   | brown        |
| BU   | blue         |
| BK   | black        |
| RD   | red          |
| GY   | grey         |
| OG   | orange       |
| WH   | white        |
| GNYE | green-yellow |

High speed/D-connection

Low speed/Y-connection

### 5. EU-Declaration of conformity

#### EU declaration of conformity

- Translation -  
(english)

ZA75-GB 1910 Index 015

**Manufacturer:**  
ZIEHL-ABEGG SE  
Heinz-Ziehl-Straße  
74653 Künzelsau  
Germany

The manufacturer is solely responsible for issuance of the declaration of conformity.

#### The products:

- External rotor motor MK..., MW...
- Axial fan DN..., FA..., FB..., FC..., FE..., FF..., FG..., FH..., FL..., FN..., FS..., FT..., FV..., VN..., VR..., ZC..., ZF..., ZG..., ZN...
- Centrifugal fan ER..., GR..., RA..., RD..., RE..., RF..., RG..., RH..., RK..., RM..., RR..., RZ..., WR...
- Cross-flow fan QG..., QK..., QR..., QT...

#### The motor type:

- Asynchronous internal or external rotor motor
- Asynchronous internal or external rotor motor with integrated frequency inverter
- Electronically commutated internal or external rotor motor
- Electronically commutated internal or external rotor motor with integrated EC controller

#### These products comply with the following EU directives:

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- ErP Directive 2009/125/EC, in conjunction with Regulation (EU) no. 327/2011

#### The following harmonised standards have been used:

|                                     |                                       |
|-------------------------------------|---------------------------------------|
| EN 60034-1:2010 + Cor.:2010         | EN 61000-6-3:2007 + A1:2011 + AC:2012 |
| EN 60204-1:2006 + A1:2009 + AC:2010 | EN 61000-6-2:2005 + AC:2005           |
| EN 60529:1991 + A1:2000 + A2:2013   |                                       |

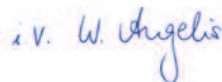
Compliance with the ErP Directive 2009/125/EC does not refer to external rotor motors MK..., MW...

All ErP-relevant information comprises measurements which are determined using a standardised measurement set-up. More details can be obtained from the manufacturer.

Compliance with the EMC Directive 2014/30/EU refers only to those products when they are connected by mounting / operating instructions. If these products are integrated into a system or supplemented with other components (e.g. sensing controls) and operated, the manufacturer or operator is responsible of the overall system for compliance with the EMC Directive 2014/30/EU.

Künzelsau, 05.03.2019  
(location, date of issue)

ZIEHL-ABEGG SE  
Dr. W. Angelis  
Technical Director Air Movement Division  
(name, function)



(Signature)

ZIEHL-ABEGG SE  
Dr. D. Kappel  
Deputy Head of Electrical Systems  
(name, function)



(Signature)

**ZIEHL-ABEGG** 

### EC Declaration of Incorporation

as defined by the EC Machinery Directive 2006/42/EC, Annex II B

The design of the incomplete machine:

- Axial fan FA..., FB..., FC..., FE..., FF..., FG..., FS..., FT..., FH..., FL..., FN..., FV..., DN..., VR..., VN..., ZC..., ZF..., ZG..., ZN...
- Centrifugal fan RA..., RD..., RE..., RF..., RG..., RH..., RK..., RM..., RR..., RZ..., GR..., ER..., WR...
- Cross-flow fan QK..., QR..., QT..., QD..., QG...

Motor type:

- Induction internal or external rotor motor (also with integrated frequency inverter)
- Electronically commutated internal or external rotor motor (also with integrated EC controller)

complies with the requirements in Appendix I, Articles 1.1.2, 1.1.5, 1.4.1, 1.5.1 in EG Machinery Directive 2006/42/EG.

Manufacturer

ZIEHL-ABEGG SE  
Heinz-Ziehl-Strasse  
D-74653 Künzelsau

The following harmonised standards have been used:

|                         |                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| EN 60204-1:2006+A1:2009 | Safety of machinery; electrical equipment of machines; Part 1: General requirements                                                                      |
| EN ISO 12100:2010       | Safety of machinery - General principles for design - Risk assessment and risk reduction                                                                 |
| EN ISO 13857:2008       | Safety of machinery; safety distances to prevent danger zones being reached by the upper limbs                                                           |
| Note:                   | The maintenance of the EN ISO 13857:2008 relates only to the installed accidental contact protection, provided that it is part of the scope of delivery. |

The specific technical documentation in accordance with Appendix VII B has been written and is available in its entirety.

The person authorised for compiling the specific technical documentation is: Dr. W. Angelis, address see above. The specific documentation will be transmitted to the official authorities on justified request. The transmission can be electronic, on data carriers or on paper. All industrial property rights remain with the above-mentioned manufacturer.

**It is prohibited to commission this incomplete machine until it has been secured that the machine into which it was incorporated complies with the stipulations of the EC Machinery Directive.**

Künzelsau, 12.12.2017

Dr. W. Angelis - Technical Director Ventilation Division

*Dr. W. Angelis*

ZAZA87-GB-1750 Index 007

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english

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The Royal League in ventilation, control and drive technology

## Intelligent control technology for any application

**ZIEHL-ABEGG system capabilities:**  
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