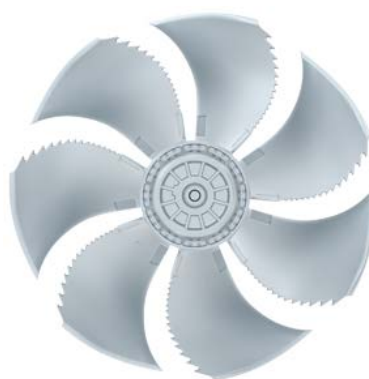


Movement by Perfection



The Royal League in ventilation, control and drive technology



#### Product documentation

Type  
**FN050-VDA.4I.V7P1**

Article number  
**175772**

## Product documentation

Customer

Project  
Station One

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Type  
FN050-VDA.4I.V7P1

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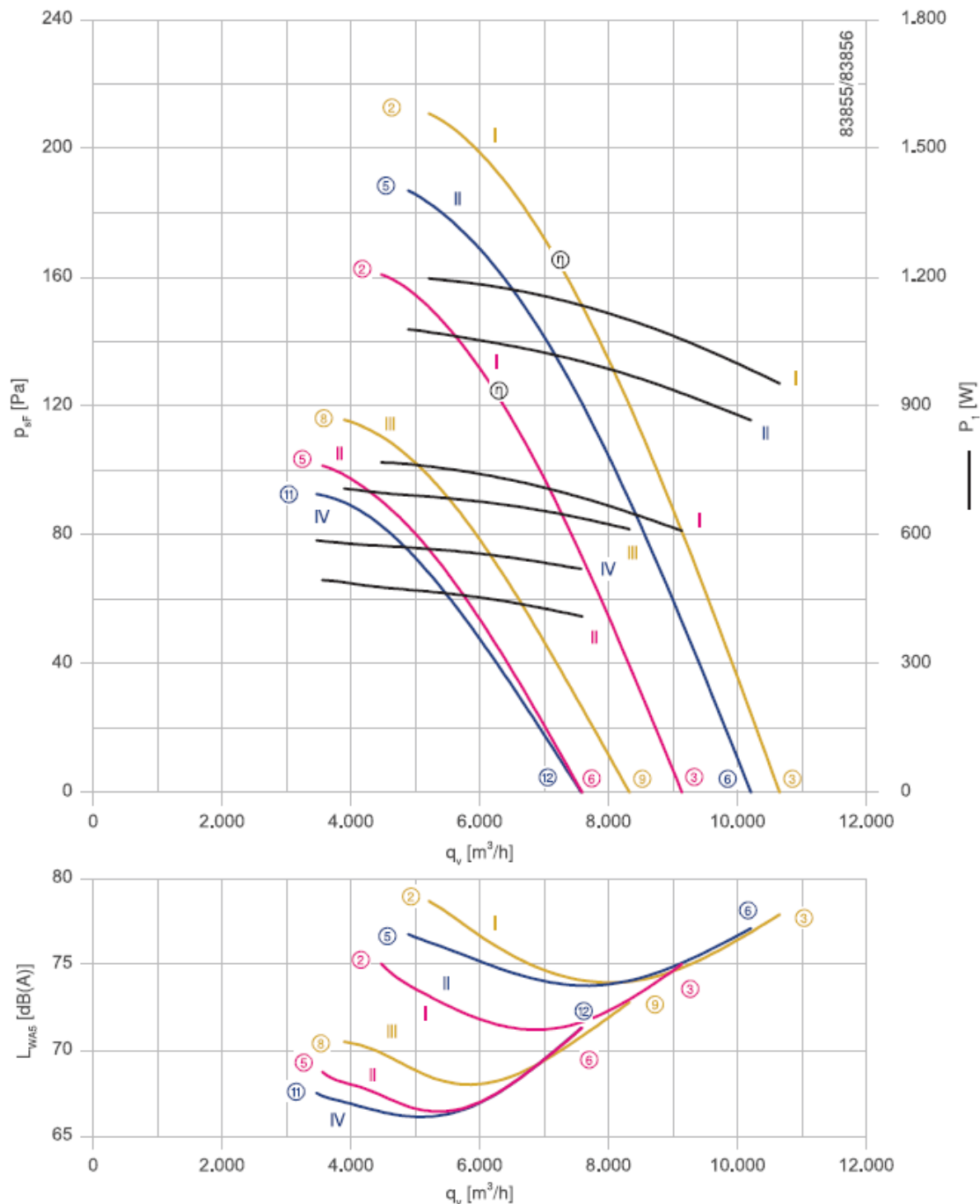
## 1. Product specification

### Technical data

Article number	175772
Type	FN050-VDA.4I.V7P1
Designation	Axial fan with sickle blades
Rated values	3~400V±10% D/Y 50Hz P <sub>1</sub> 0,77/0,49kW 1,70/ 0,84A ΔI=0% 1300/1025/min COSY 0,64 70°C 3~400V±10% D/Y 60Hz P <sub>1</sub> 1,10/0,60kW 1,90/ 1,00A ΔI=0% 1400/ 980/min COSY 0,81 70°C 3~460V±10% D/Y 60Hz P <sub>1</sub> 1,20/0,70kW 2,00/ 1,05A ΔI=0% 1480/1100/min COSY 0,76 70°C
Electrical connection	Supply cable lateral-diagonal 9x 0,5 mm <sup>2</sup> , 105 cm
Min. operating temperature °C	-40***
Cable quality	Li4G4G-J
Type of protection	IP54
Thermal class	THCL155
Connection diagram	1360-108XA
Rating plate	1x fixed
Fitting position	H/Vu
Motor protection	thermal contact
Quality of bearings	ball bearing with long-time lubrication
Material Rotor	Aluminium
Painting rotor	2 coat painted
colour rotor	RAL 9005 (jet black)
Material blades	Aluminium
Painting impeller	2 coat painted
Colour blades	RAL 9005 (jet black)
Special bearing	Ballbearing in special design
Field of application	Conceived for individual application in railways. Bahnbetrieb
Control	--
Weight kg	11,20
ErP Data	Efficiency $\eta_{statA}$ : 33,4 % Efficiency grade: $N_{actual} = 40,7 / N_{target} = 40^*$ *ErP 2015

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

## 2. Characteristic curve



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

### Frequency: 50 Hz

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

**I = 3~400 V D, II = 3~400 V Y**

Operating point		②	③	⑤	⑥
Characteristic curve		I	I	II	II
Connection		Δ	Δ	Y	Y
Voltage	V	400	400	400	400
Input power	W	760	600	480	420
Current	A	1,70	1,55	0,84	0,72
Speed	min <sup>-1</sup>	1290	1340	1030	1130
Suction side sound power level	dB(A)	75	75	69	71

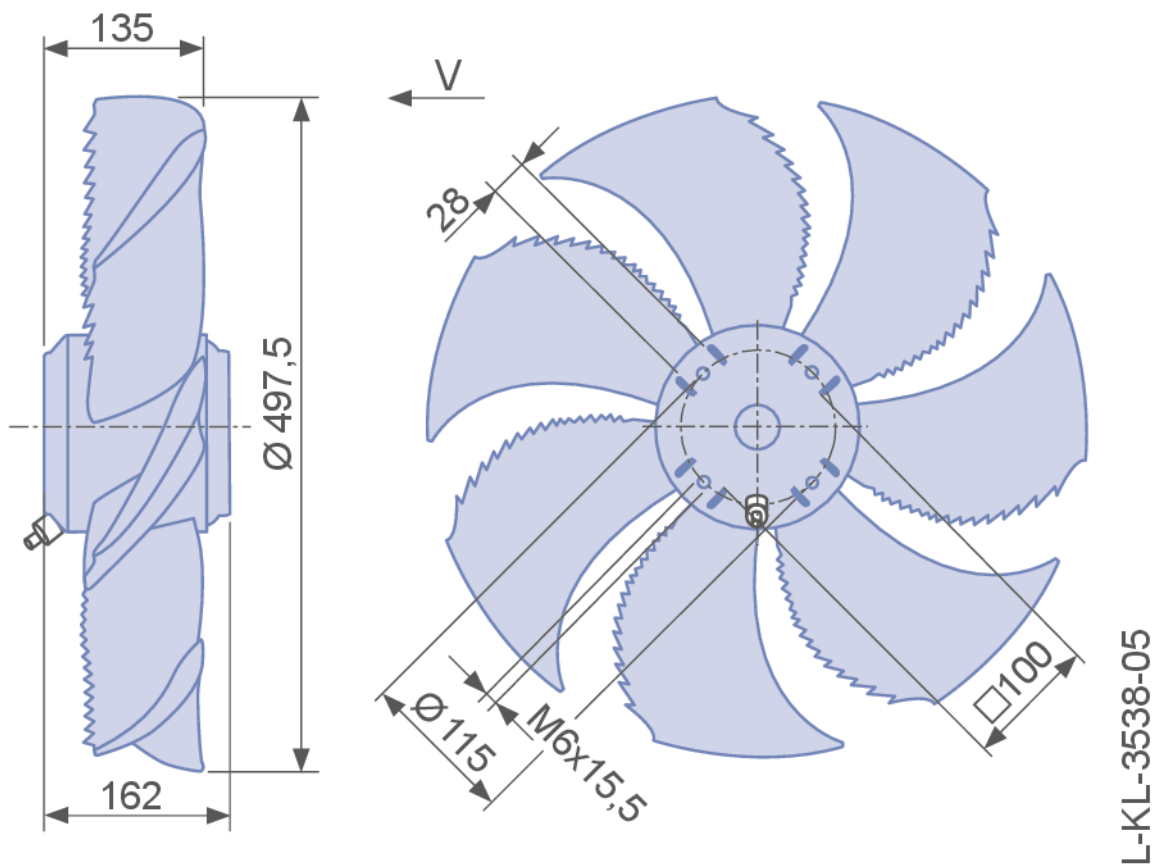
### Frequency: 60 Hz

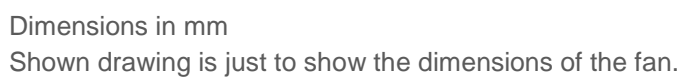
Measured in full nozzle without guard grille in installation type A according to ISO 5801.

**I = 3~460 V D, II = 3~400 V D, III = 3~460 V Y, IV = 3~400 V Y**

Operating point		②	③	⑤	⑥	⑧	⑨	⑪	⑫
Characteristic curve		I	I	II	II	III	III	IV	IV
Connection		Δ	Δ	Δ	Δ	Y	Y	Y	Y
Voltage	V	460	460	400	400	460	460	400	400
Input power	W	1200	960	1100	860	700	620	580	520
Current	A	2,00	1,70	1,90	1,60	1,05	0,90	0,98	0,88
Speed	min <sup>-1</sup>	1480	1570	1400	1500	1100	1230	990	1120
Suction side sound power level	dB(A)	79	78	77	77	71	73	68	71

### 3. Drawing





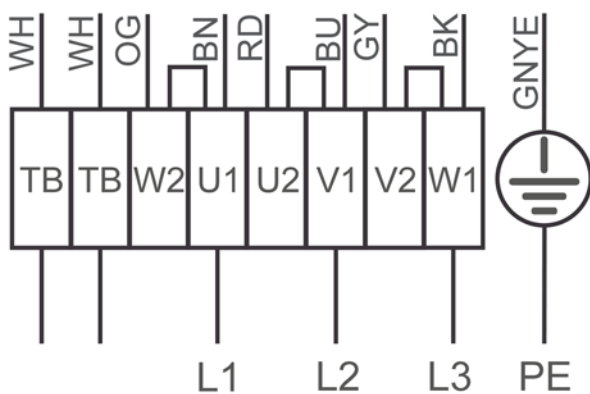
### 4. Connection diagram

#### 1360-108XA

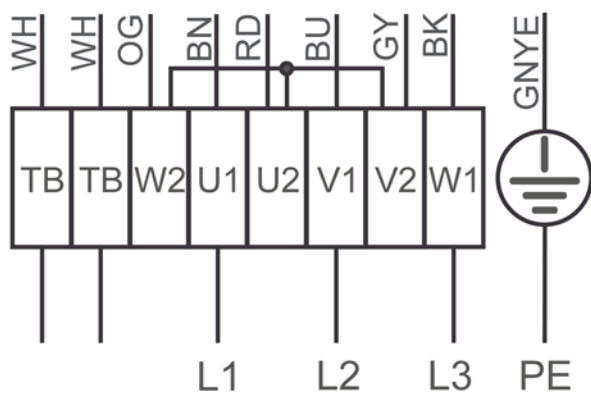
3~ motor, 2 speeds ( $\Delta/Y$  switch over) with thermostatic switch (if built in). Without bridge when using speed change-over switch.

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. General product and handling description

#### **Operating conditions:**

The product is designed for conveying non-aggressive, non-explosive, non-fluid, non-adherent, non-abrasive, dust and article-free gaseous media, air-like mixtures und air.

For AC standard fans: The product only works properly with a suitable frequency converter with integrated all-pole active sine filter. The product can be damaged if it's used without an all-pole sine filter between the motor and the frequency converter. Voltage peaks and voltage fluctuations can destroy the product.

To provide error-free operation and prevent damage to the product, the product may only be operated in the admissible operating area according to the above mentioned data sheets and air performance curves.

The formation of small rusty spots during usage in accordance with the product specification and this general product and handling description can occur and does not affect the functionality of the product.

The product must never be used in obviously damaged condition.

Continuous intentional change of direction of rotation is not allowed.

Reverse current braking is not allowed.

#### **Assembly:**

The assembly has to meet the requirements of the assembly instructions to enable error-free operation.

#### **Commissioning:**

Commissioning should be done by appropriately qualified technical personnel according to the specifications in the operating and assembly instructions.

#### **Documentation:**

In case of defective parts or products or in case of any warranty, it may be necessary to analyse the root cause of the defect.

Therefore, ZIEHL-ABEGG may ask for documentation of proper life-cycle handling according to the instructions and the general product and handling description. ZIEHL-ABEGG may ask for appropriate documentation records in order to assess root cause of the defect.

#### **Maintenance and inspection:**

Any maintenance and inspection should be carried out in accordance with the operating and assembly instructions.

#### **Packaging, storage and transport:**

Packaging, storage and transport should be carried out in accordance with the operating and assembly instructions to avoid product damage.

Condensate formation inside the packaging can lead to formation of rust.

Long-term storage of the product should take place in dry environment. Shocks during storage can lead to product damage. Bearing streams should be avoided.

#### **Spare parts:**

In all warranty cases repairs has to be carried out by ZIEHL-ABEGG. In all other cases spare parts shall meet the specifications of the original installed parts to ensure error-free operation. Use of original ZIEHL-ABEGG spare parts is recommended.

#### **Specific application/Intended purpose:**

Suitability of the product for the specific application is beyond control of ZIEHL-ABEGG. Therefore, customer is necessarily obliged to test and approve the product in the application. ZIEHL-ABEGG will not warrant or guarantee any suitability of the product for customer's specific application or intended purpose.

# The Royal League Die Königsklasse



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

## Intelligent control technology for any application

### ZIEHL-ABEGG system capabilities:

**Everything from a single source – perfectly matched for optimal performance**

Please contact us. We would be pleased to design an individual solution for your requirements.

We would like to welcome you on our worldwide exhibitions. Please find our next exhibitions [here](#).