

英制离心风机  
Centrifugal fans DZA

with Inch-dimensions



<sup>®</sup> **ECOFT**  
**ETRI**  
**rosenberg**  
THE AIR MOVEMENT GROUP



### 担保的宗旨

客户负责风机选型、风机的安装和操作。根据有效条款 VII 段和购买条件，提供产品担保，不包括其他要求。

担保不适用于下列情况：

购买者或第三方的不恰当使用，装配或安装错误，正常磨损，违规操作，不正确的维护保养，不适宜的通风介质，错误安装，不适宜的底座，化学及电气的影响超出厂商责任范围。

如果在厂商交货时，产品存在质量问题，客户有权要求更换风机或其他部件。厂商也可以在合理的时间内修好产品，一有问题顾客应尽早通知厂商。

在保修期的维修与更换，可访问我们的网站或直接联系我们的子公司。

### 机械安全的信息

洛森伯格风机是符合EC评议会指令（机械，低电压，电磁兼容性和在ATEX指令下的潜在危险区），这种产品标有CE标签和一个制造商的合格声明。

风机的潜在危险评估和必要的技术安全措施是按照VDMA标准，图表编号24167：风机，安全性要求和相关的欧洲标准。

为满足欧共体的方针要求，在安装过程中使用的操作手册包含了其他的安全方面的考虑。

版本: 11/2009

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### Warranty Guidelines

*The customer is responsible for the project design, selection and operation of the fans. The supplier gives warranty for faulty products, excluding further claims, in accordance with paragraph VII of the valid terms and conditions of business.*

*Warranty will not given in the following instances:*

*Unfitted or inappropriate usage, incorrect mounting or faulty installation by the purchaser or a third party, normal wear and tear, incorrect or negligent handling, improper maintenance, unsuitable operating material, faulty installation, unsuitable ground and chemical, electrochemical or electrical influence - as long as they are not the responsibility of the supplier.*

*If the goods delivered from the manufacturer are faulty, the customer has the right to receive a replacement or replacement of the faulty parts up to the maximum value of the purchase price. The manufacturer also has the right to get the product repaired within a reasonable time period. The manufacturer must be informed immediately in the case of damage.*

*The obligation to replace additional faults is herewith excluded. Our general terms of business are the basis for all further agreements for example: time periods to repair or replace. The general terms of business are available on our website [www.rosenberg.eu](http://www.rosenberg.eu) or direct from one of our sales representatives.*

### Information on Machine Safety

*Rosenberg fans are in conformity with EC council directives (machinery, low voltage, electromagnetic compatibility and in potential hazardous areas with the ATEX directive). The products are marked with a CE label and delivered with a manufacturers declaration respectively a declaration of conformity.*

*The assessment of the potential dangers of the fan and the necessary technical safety measures are in accordance with VDMA standard, sheet number 24167: fans; Safety requirements and relevant harmonized European standards.*

*The operation manual contains additional safety precautions to be considered during installation to fulfil the requirements of the guidelines of the European Community.*

Version: 11/2009

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## 技术细节

带蜗壳双侧进风离心风机。  
蜗壳和叶轮都是镀锌钢材料。  
导风圈和整体电机都是压铸铝做的。

外转子电机在风机的气流方向是对称安装的，电机在特殊形状的橡胶原件的轴上悬浮安装，这种绝缘结构可以保证低噪音和弱震动。

叶轮安装在电机上，然后根据DIN ISO 1940, T1标准一起做动平衡，精度是G2.5。

外转子电机的防护等级达到IP54，如果客户要求，还可以满足IP10，通过调节电压来100%控速，热保护等级是根据DIN VDE 0530 part 1标准达到F等级。

热敏开关作为标准设计从电缆线端引出。  
从电缆引出线方向看，叶轮旋转方向是向左。

## 优点

- 低噪音。
- 电机防护等级IP54，其他等级可以按需求设计。
- 结构紧凑。
- 100%调速。
- 由于用的是封闭式球轴承，免维护。
- 出风口气流对称稳定。
- 设计合理，紧凑。

## 附件

- 出风口法兰（装配好的）
- 接线盒和电容

## Technical details

*Double inlet centrifugal fans in sheet steel housing.  
Housing and impeller made of galvanized sheet steel.  
Inlet ring with integrated motor support made of die cast aluminium.*

*External rotor motor being symmetrically fitted in the airstream of the fan. The motor is suspended on its shaft in specially shaped rubber elements. These isolate structurally-borne noise effectively and guarantee low-vibration operation.*

*The impeller is fixed to the motor and balanced dynamically together according to DIN ISO 1940, T1. Balancing quality G 2.5.*

*The external rotor motor is a closed motor to IP54 rating, on request even in an open IP10 version available and 100 % speed controllable by voltage regulation. Design in heat class F DIN VDE 0530 part 1. Thermal contacts are fitted as standard design and are taken out.*

*Direction of rotation left when looking on cable connection side.*

## Advantages

- *Low noise operation.*
- *Motor in protection type IP54. Other systems of protection on request.*
- *Compact design.*
- *100 % speed controllable.*
- *Free of maintenance due to sealed ball bearings.*
- *Symmetric airvelocity on the air outlet.*
- *Robust design due to on both sides suspended motor.*

## Accessories

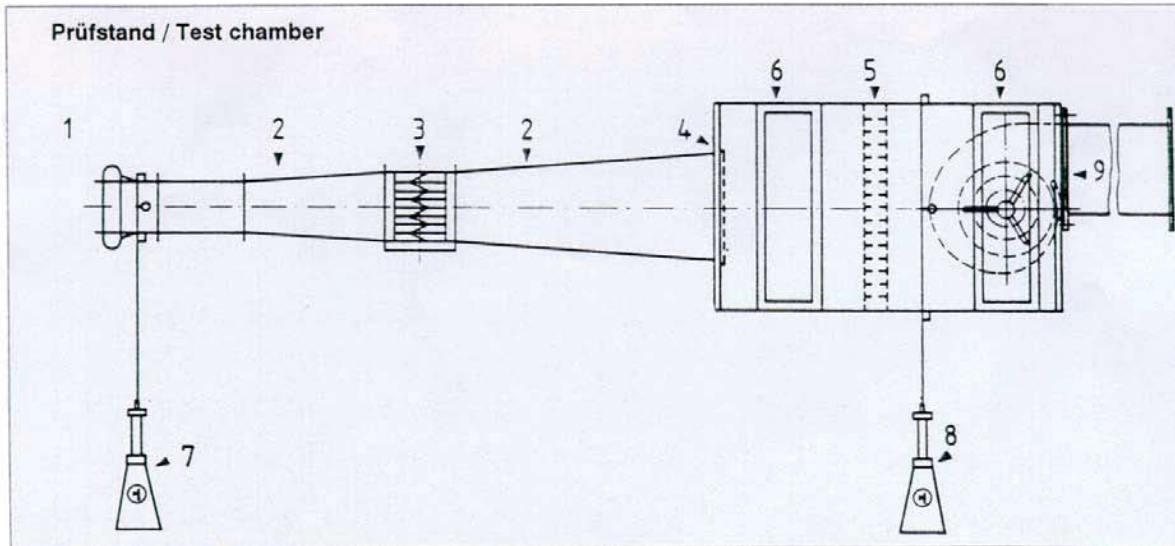
- *Outlet flange (only assembled)*
- *Terminal box and capacitor assembled.*

### 空气特性曲线

空气特性曲线是根据DIN 24163规定，利用如下图所示测试装置并用进风测试法建立的。它们在空气密度为  $1.2 \text{ kg/m}^3$  时有效。特性曲线在安装位置B（自由进风，增加压力侧）获得，其显示进风口压力  $\Delta p_{fa}$  随风量变化的函数关系。

### Air performance curves

The air performance curves have been established using the inlet test method in the test chamber as shown below according to DIN 24163. They are valid for air with a density of  $1.2 \text{ kg/m}^3$ . The performance curves were made in mounting position B (free inlet, pressure side added) and show the total pressure increase, available on inlet side,  $\Delta p_{fa}$  as a function of the volume flow.



- 1 导流口
- 2 过渡段
- 3 带导流板的节流装置
- 4 屏栅
- 5 导流板
- 6 带风门测试室
- 7 导流口压力计（动压）
- 8 压力计(静压)
- 9 待测风机

- 1 Inlet cone
- 2 Transition parts
- 3 Throttling device with straightener
- 4 Screens
- 5 Straightener
- 6 Measuring chamber with shutters
- 7 Inlet cone pressure manometer ( $P_d$ )
- 8 Pressure manometer  $P_{fa}$
- 9 Tested fan

### 密度的影响

所有测试数据是建立在空气密度为  $1.2 \text{ kg/m}^3$ 。对于任何其他条件，您必须根据如下公式来修正压力和轴功率：

### Influence of density

The measured data base on air with a density of  $\rho = 1.2 \text{ kg/m}^3$ . For any other conditions you have to correct the pressure increase and power consumption as follows:

$$p_2 = p_1 \times \frac{\rho_2}{1,2} \quad P_2 = P_1 \times \frac{\rho_2}{1,2}$$

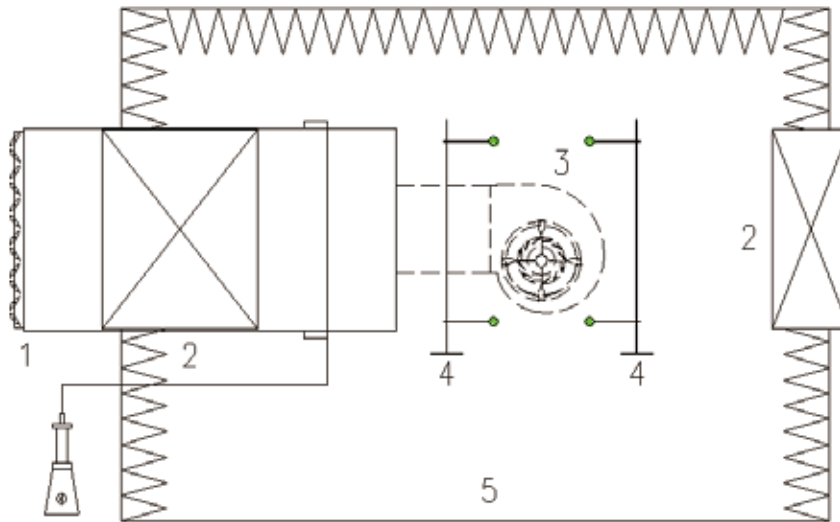
$p_1 / P_1$  = 压力 / 轴功率（查图表所得）  
pressure increase / power consumption out of diagram

$p_2 / P_2$  = 压力 / 轴功率（新密度下的）  
pressure / power consumption with new density

$\rho_2$  = 更改后的密度 / changed density

## 噪音数据

风机的测试和噪音曲线是根据DIN 45635中第38部分的规定，利用包围面方法测试得到的。根据这个测试系统的要求，采集点分布在平面的测试区域内，如下图所示：



- 1 流量控制阀 /shutter door
- 2 消音器 /sound attenuator
- 3 待测风机 / test sample
- 4 测点分布 / measurement arrangement
- 5 单面反射的无反射室/ Room with less reflection with one plane of reflection

## Noise level data

The tests and their performance curves were made according to DIN 45635, part 38, according to the enveloping surface method. According to this measuring system, several measuring points are collected via a quadratic test area. You can see the measurement system in the following picture.

特性图表显示了自由出风处的A声功率级 $L_{WA6}$ ，同时也在DIN 45635中第38部分里显示。

The characteristic diagram shows the A-weighted free outlet sound power level  $L_{WA6}$ , as it is shown in DIN 45635 part 38.

自由进风处的A声功率级 $L_{WA7}$ 可以用如下方法计算得到：

The free inlet sound power level  $L_{WA7}$  can be obtained according to following calculation:

$$L_{WA7} = L_{WA6}$$

对于使用何种噪音防护，八阶声功率级是非常重要的，可以通过减去系数 $L_{Wrel}$ 得到。

For the determination of sound protective arrangements the sound power levels of the octave bands are important. By subtracting the factor  $L_{Wrel}$ :

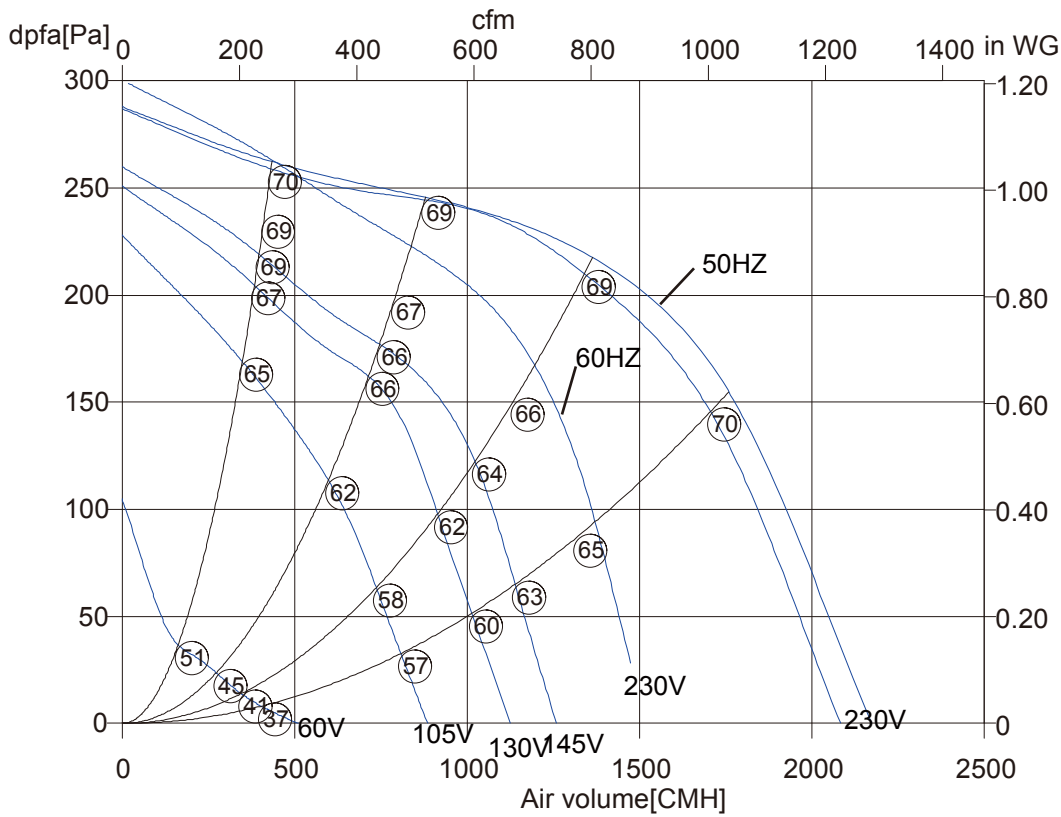
$$L_{Wokt} = L_{WA} - L_{Wrel}$$

系数 $L_{Wrel}$ 是由 $V_{opt}$ 决定的

The factor  $L_{Wrel}$  is determined on  $V_{opt}$ .



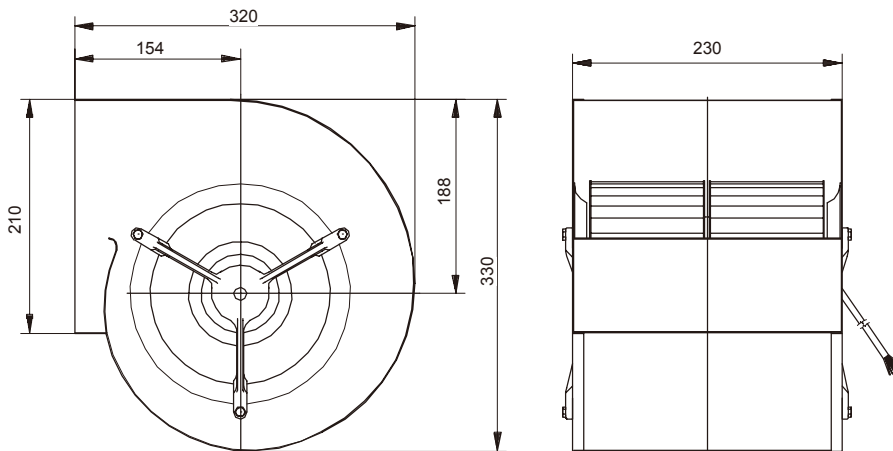
DZAE 7/7-4 CN



DZAE 7/7-4 CN	
Art. No.	
U[V]	230
f[Hz]	50/60
P[kW]	0.48/0.45
I[A]	2.2/1.9
n[1/min]	950/1100
C[μf]	8
tR[°C]	50/40
dpst[Pa]	-
Delta I[%]	-
Ia/In	
IP	54
Weight[kG]	11
Wir. diag.	

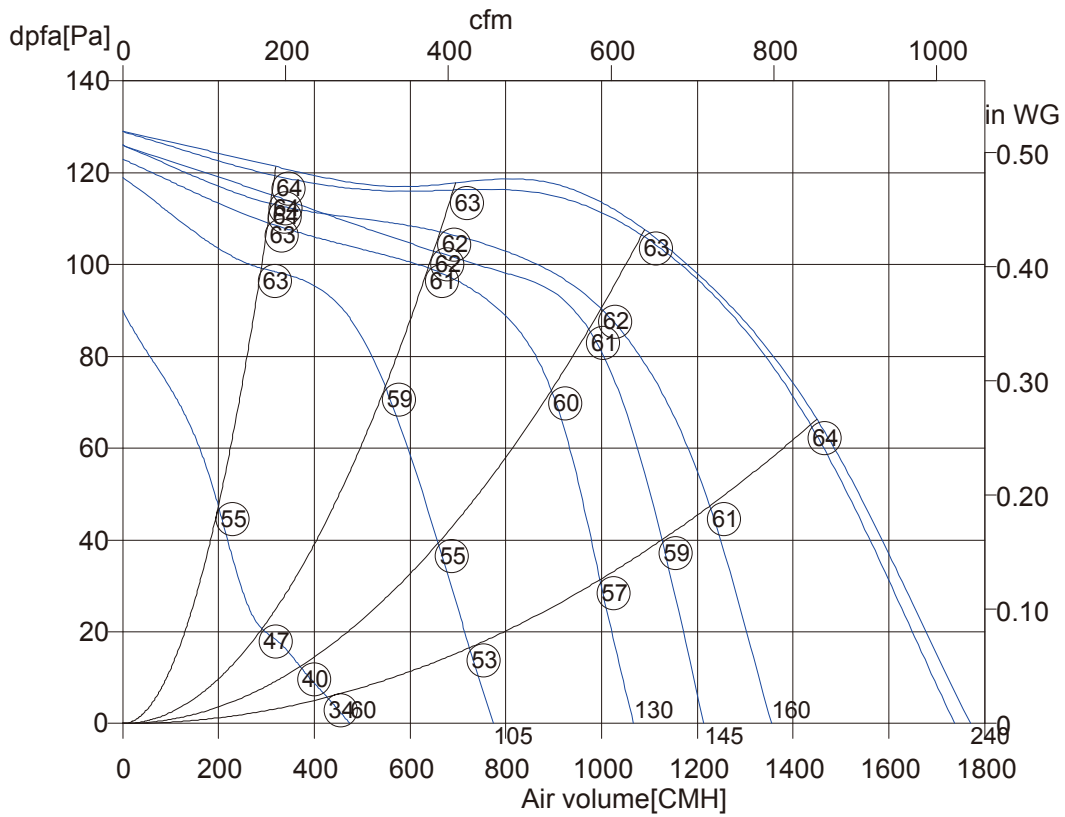
○ Sound power level  
LwA6[dBA]

tR=允许最大环境温度





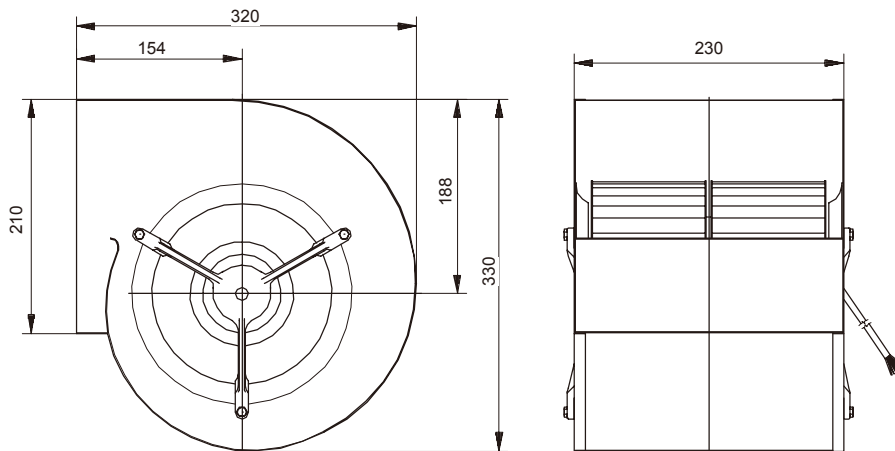
**DZAE 7/7-6 CN**



<b>DZAE 7/7-6 CN</b>	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.24
I[A]	1.2
n[1/min]	855
C[μf]	5
tR[°C]	70
dpst[Pa]	-
Delta I[%]	-
Ia/In	1.8
IP	54
Weight[kG]	11
Wir. diagr.	01.025

○ Sound power level  
○ LwA6[dBA]

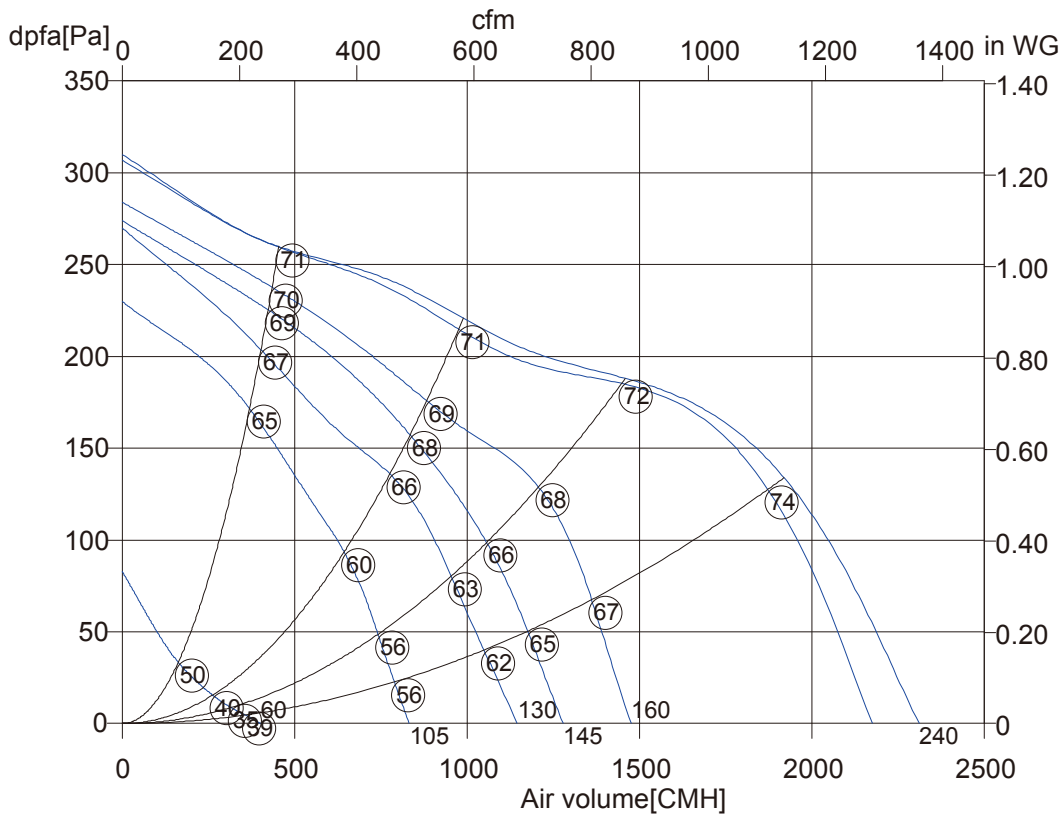
tR=允许最大环境温度







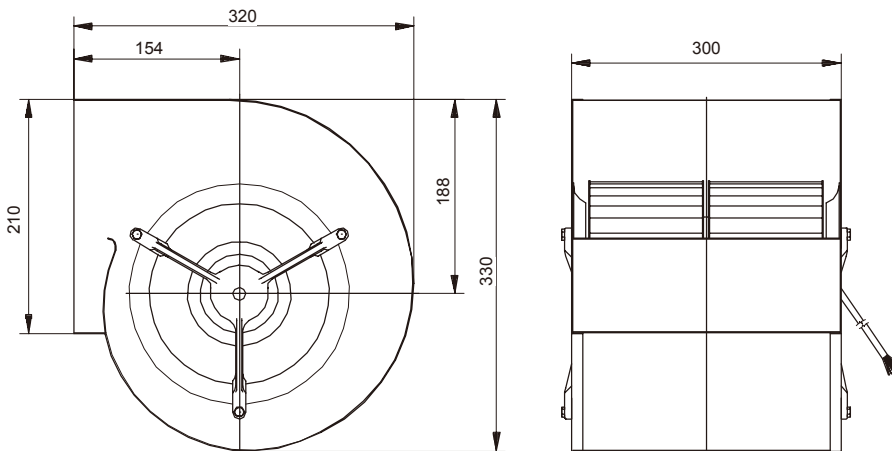
DZAE 7/9-4 CN



DZAE 7/9-4 CN	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.47
I[A]	2.1
n[1/min]	960
C[μf]	8
tR[°C]	8
dpst[Pa]	55
Delta I[%]	-
Ia/In	1.4
IP	54
Weight[kG]	13.5
Wir. diagr.	01.025

○ Sound power level  
LwA6[dBA]

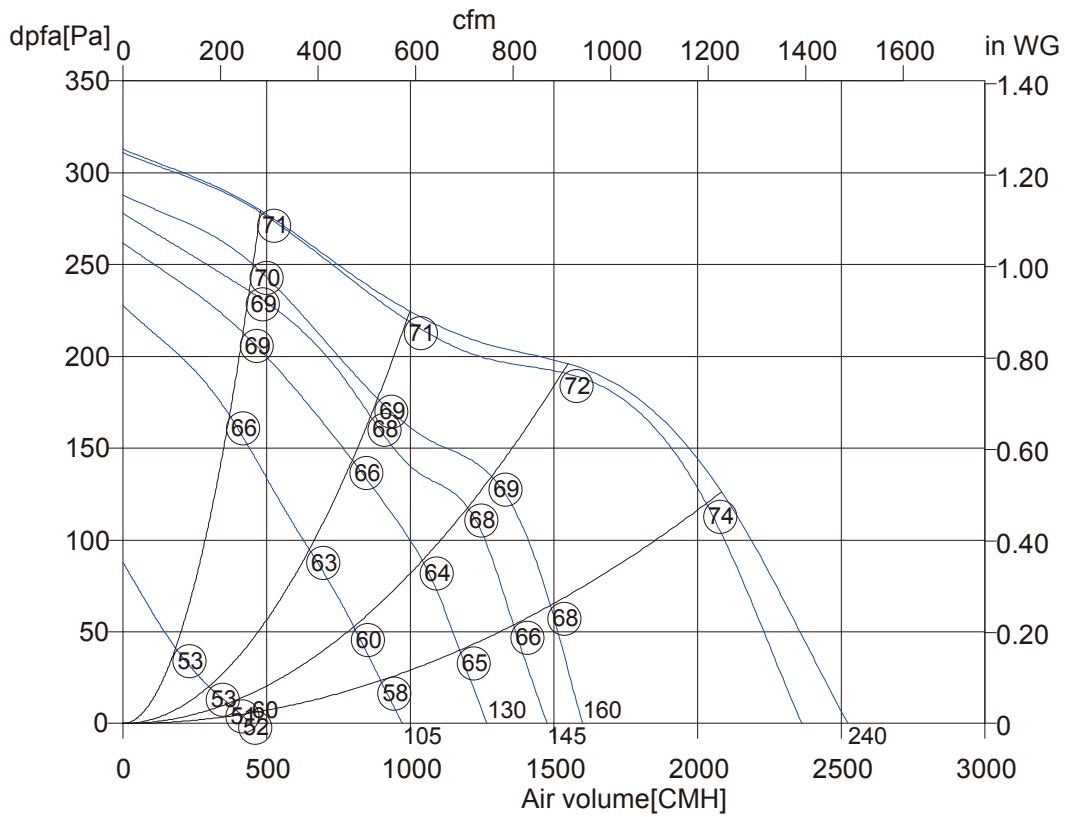
tR=允许最大环境温度







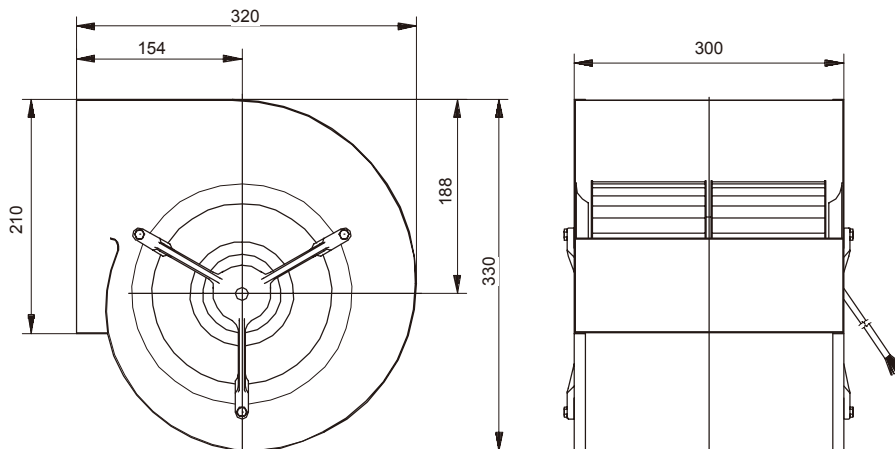
DZAE 7/9-4 K CN



DZAE 7/9-4 K CN	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.51
I[A]	2.3
n[1/min]	965
C[μf]	8
tR[°C]	40
dpst[Pa]	-
Delta I[%]	-
Ia/In	1.4
IP	54
Weight[kG]	11
Wir. diagr.	01.025

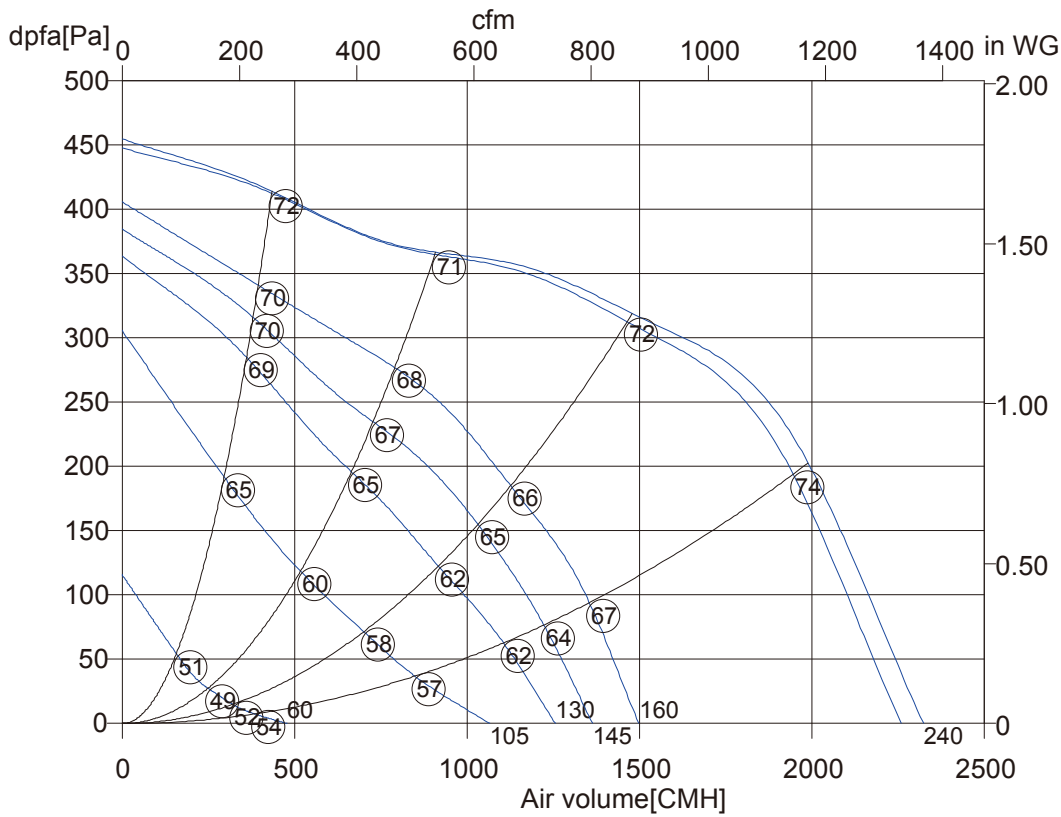
○ Sound power level  
○ LwA6[dBA]

tR=允许最大环境温度





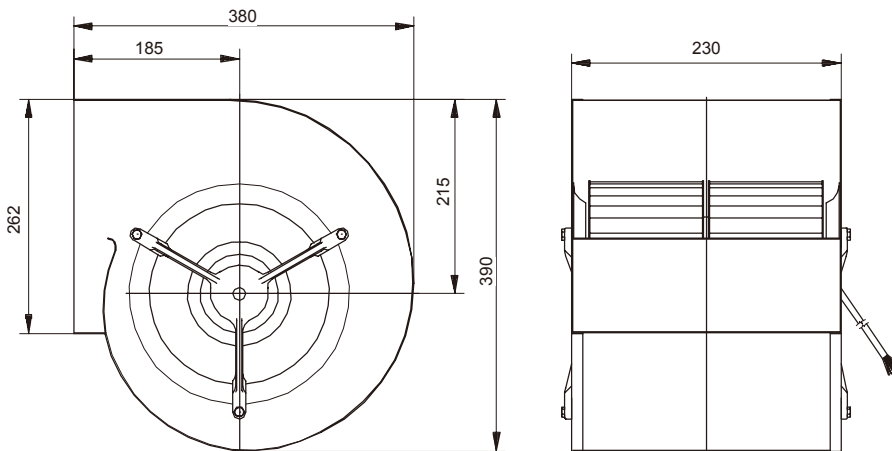
DZAE 9/7-4 CN



DZAE 9/7-4 CN	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.49
I[A]	2.2
n[1/min]	1055
C[μf]	10
tR[°C]	40
dpst[Pa]	220
Delta I[%]	-
Ia/In	1.4
IP	54
Weight[kG]	13.5
Wir. diagr.	01.025

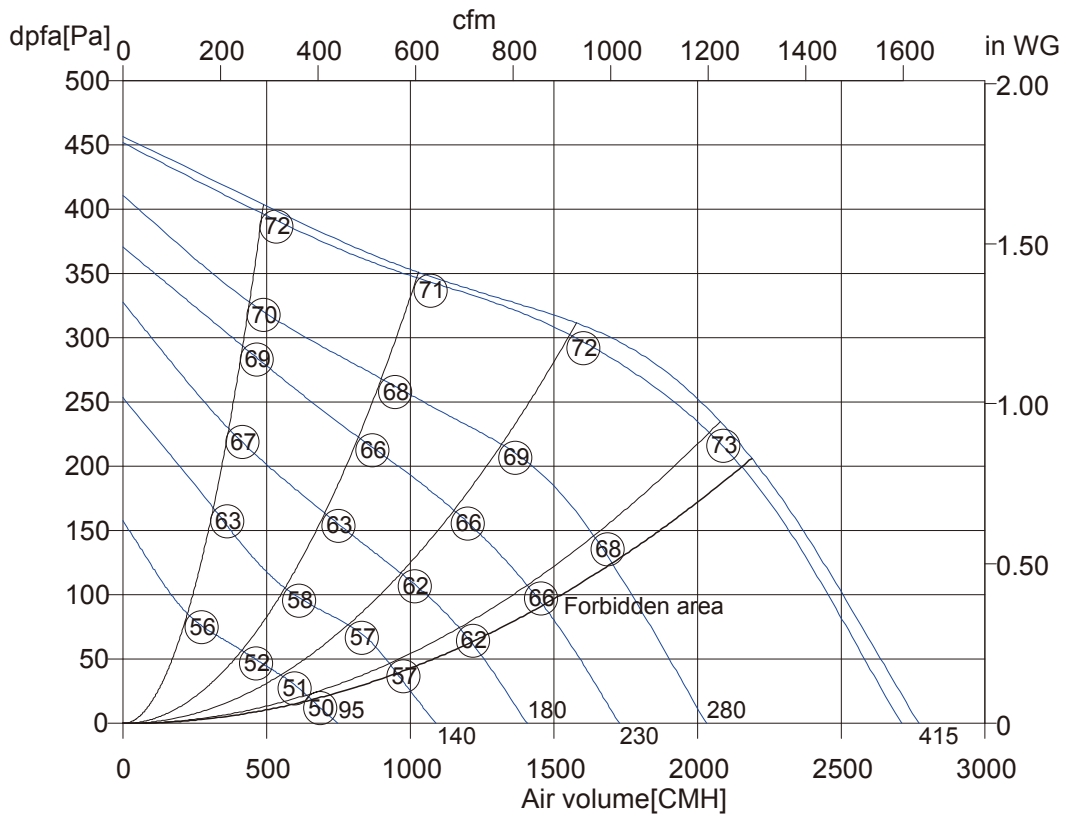
○ Sound power level  
LwA6[dBA]

tR=允许最大环境温度





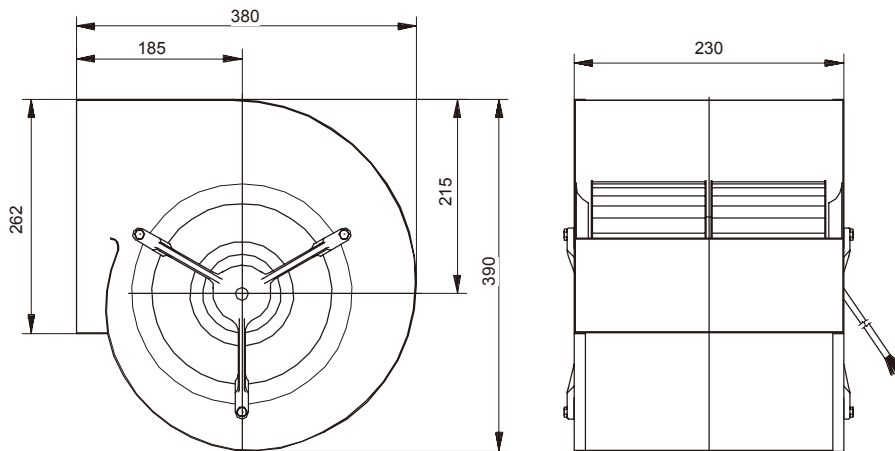
DZAD 9/7-4 CN



DZAD 9/7-4 CN	
Art. No.	
U[V]	400 D
f[Hz]	50
P[kW]	0.55
I[A]	1.1
n[1/min]	1045
C[μf]	-
tR[°C]	40
dpst[Pa]	200
Delta I[%]	-
Ia/In	2.0
IP	54
Weight[kG]	13.5
Wir. diagr.	01.006

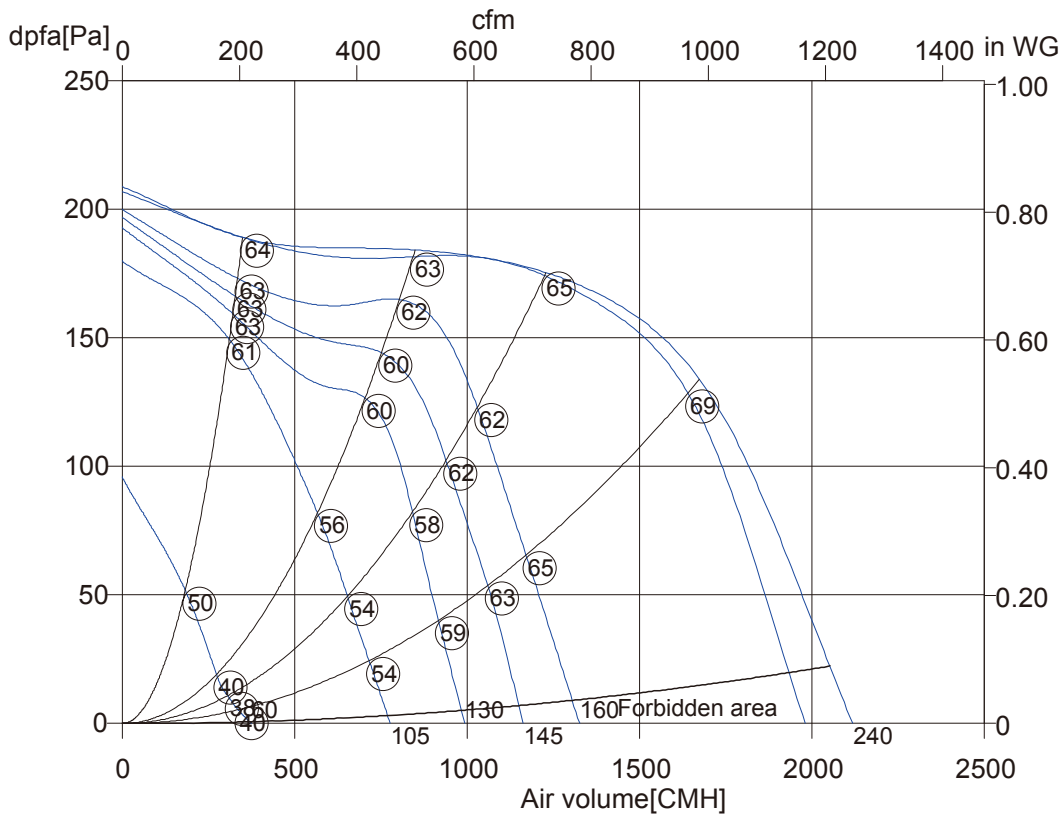
○ Sound power level  
○ LwA6[dBA]

tR=允许最大环境温度





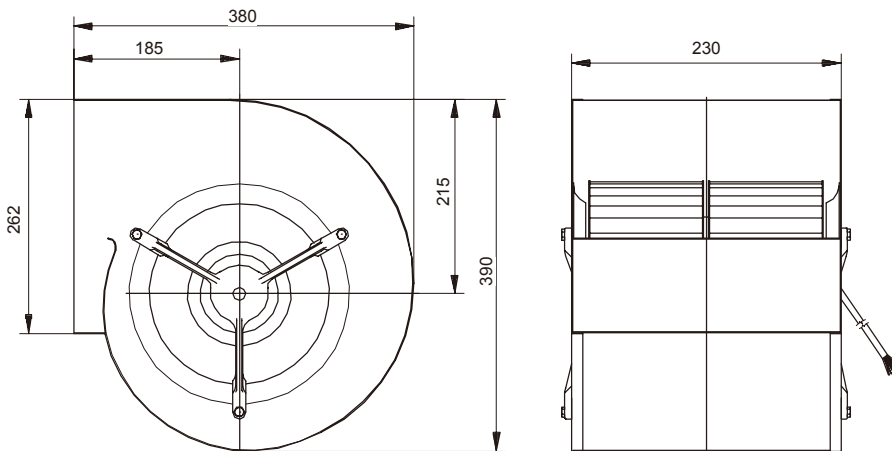
DZAE 9/7-6 CN



DZAE 9/7-6 CN	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.35
I[A]	1.55
n[1/min]	700
C[μf]	6
tR[°C]	40
dpst[Pa]	20
Delta I[%]	-
Ia/In	1.3
IP	54
Weight[kG]	13.5
Wir. diagr.	01.025

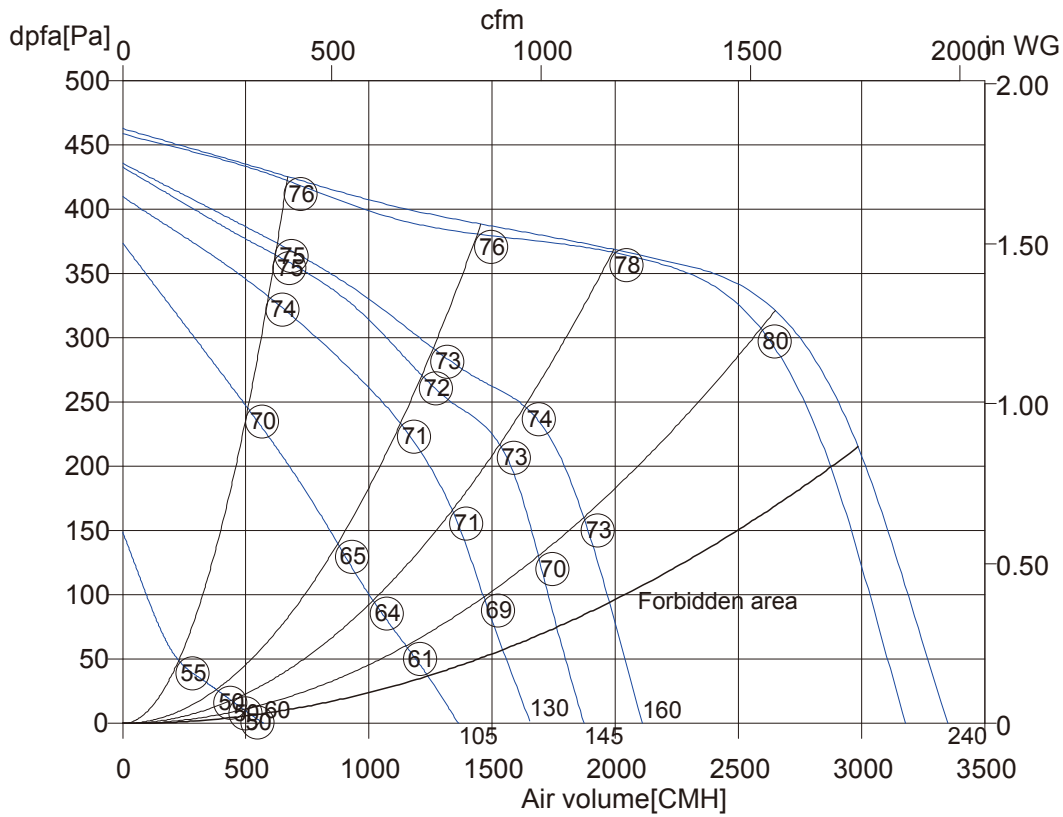
○ Sound power level LwA6[dBA]

tR=允许最大环境温度





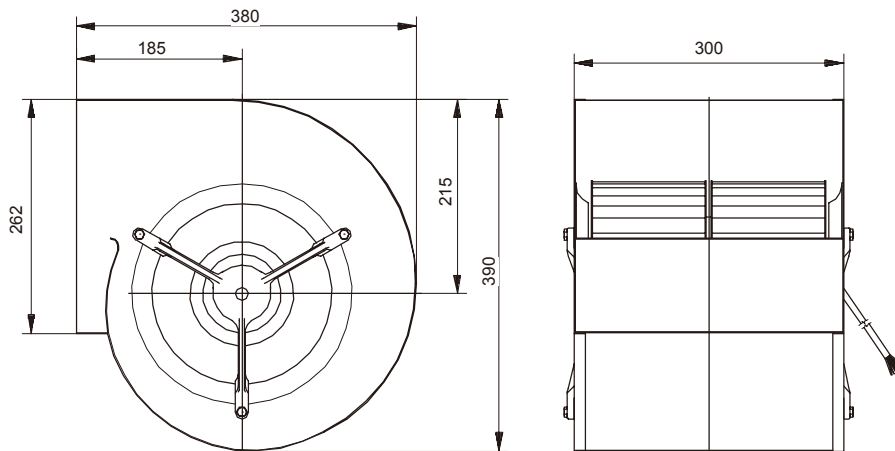
DZAE 9/9-4 CN



DZAE 9/9-4 CN	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.83
I[A]	3.7
n[1/min]	1130
C[μf]	14
tR[°C]	40
dpst[Pa]	200
Delta I[%]	-
Ia/In	1.6
IP	54
Weight[kG]	18
Wir. diagr.	01.025

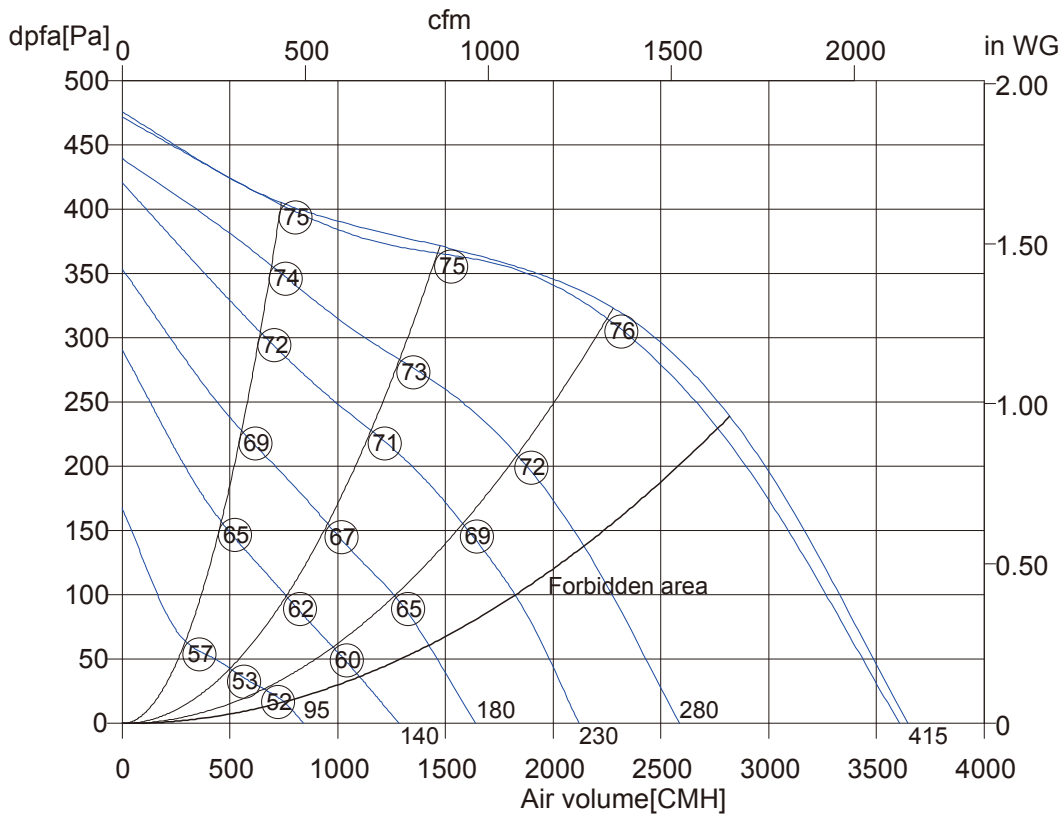
○ Sound power level  
○ LwA6[dBA]

tR=允许最大环境温度



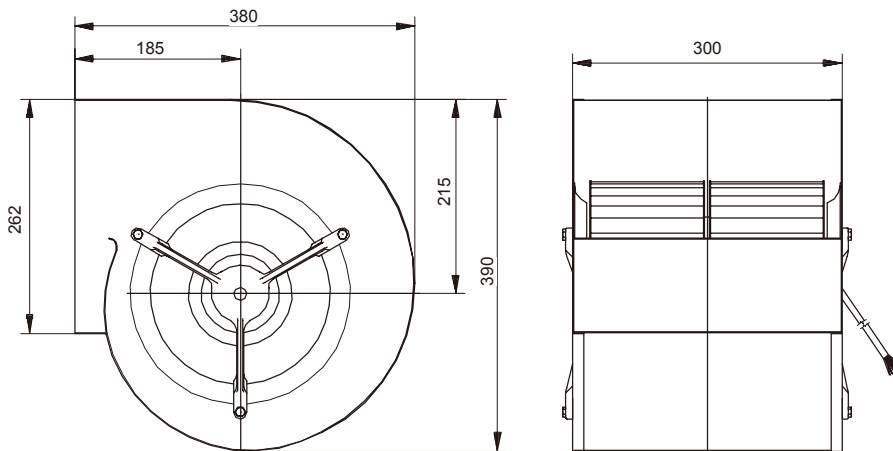


DZAD 9/9-4 CN



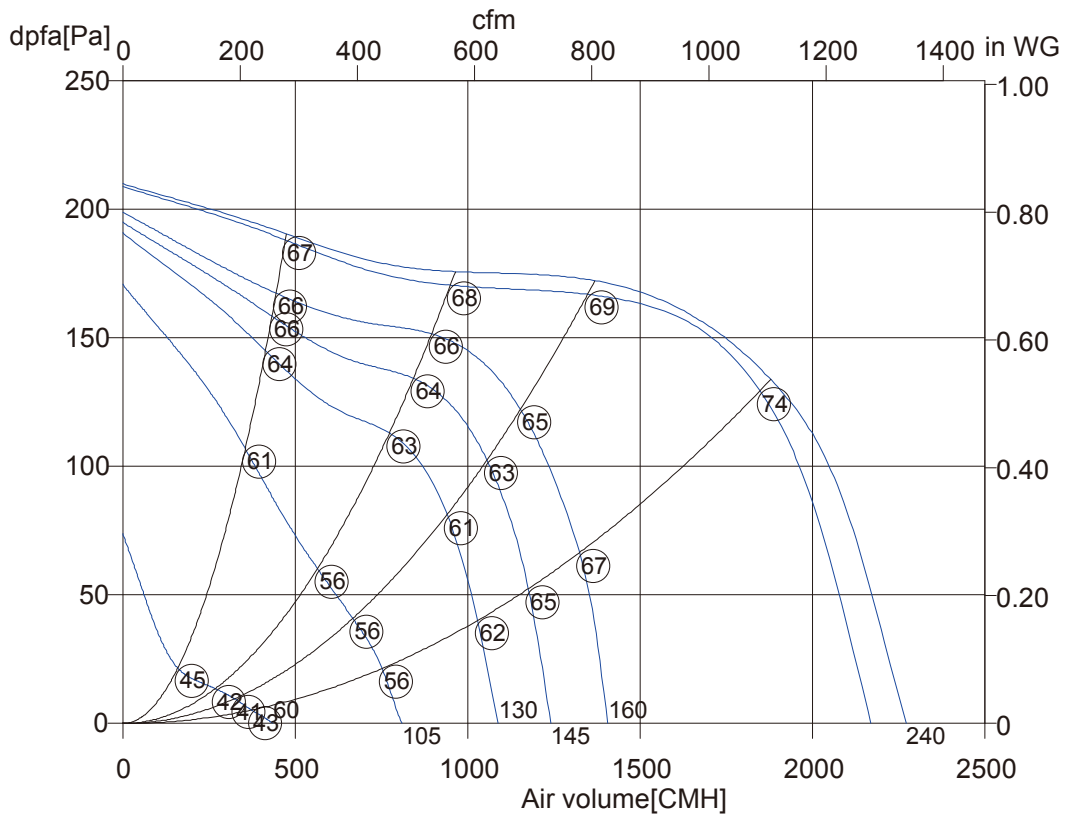
DZAD 9/9-4 CN	
Art. No.	
U[V]	400 D
f[Hz]	50
P[kW]	0.78
I[A]	1.4
n[1/min]	1100
C[μf]	-
tR[°C]	40
dpst[Pa]	230
Delta I[%]	-
Ia/In	2.1
IP	54
Weight[kG]	16
Wir. diagr.	01.006

○ Sound power level  
LwA6[dBA]  
tR=允许最大环境温度





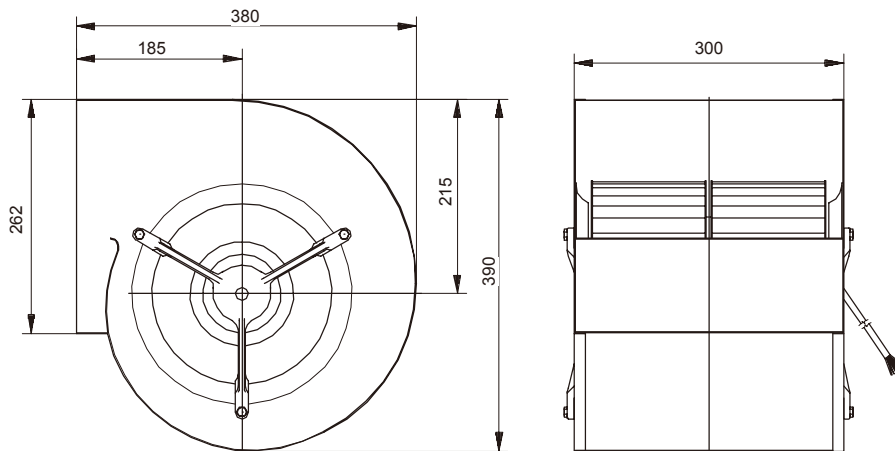
**DZAE 9/9-6 CN**



<b>DZAE 9/9-6 CN</b>	
Art. No.	
U[V]	230
f[Hz]	50
P[kW]	0.37
I[A]	1.65
n[1/min]	650
C[μf]	6
tR[°C]	50
dpst[Pa]	-
Delta I[%]	-
Ia/In	1.2
IP	54
Weight[kG]	11
Wir. diagr.	01.025

○ Sound power level  
○ LwA6[dBA]

tR=允许最大环境温度





您的销售代表 *your sales representative:*