

WPH 系列屋顶风机

WPH/WGH

屋顶风机系列

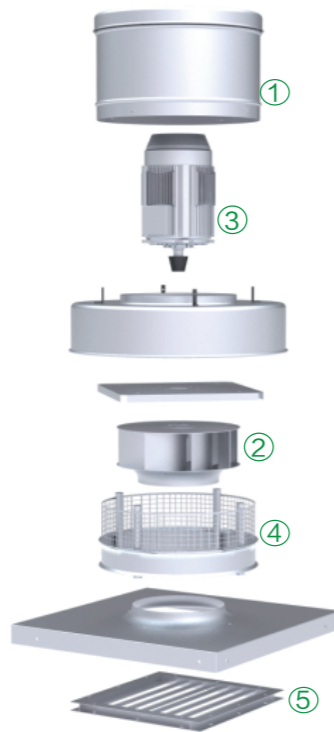
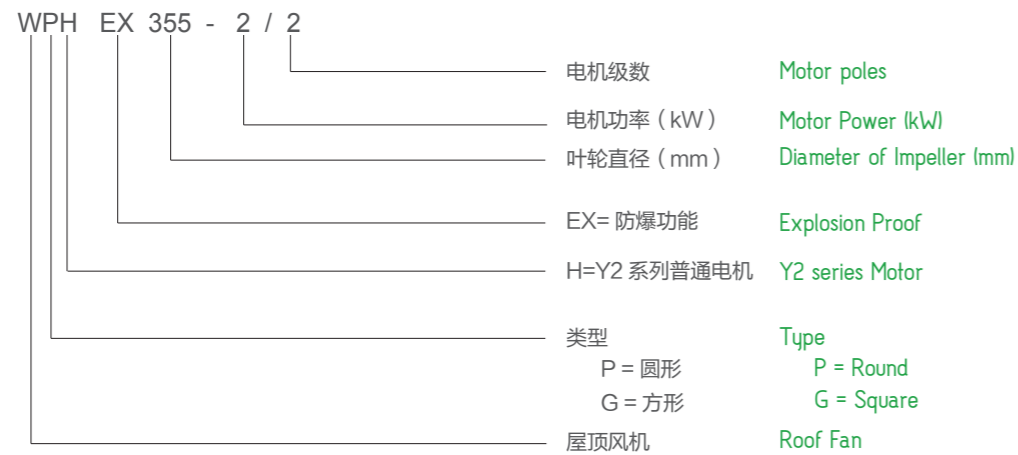
## 概述

屋顶风机按所配风机形式分为离心式和轴流式两大类；离心式屋顶风机是我公司在国内率先采用开发的无蜗壳风机的高效叶轮，配合航空级高强度合金铝材质机壳设计而来。产品结构紧凑、外形美观、气体流动均匀；风机可以安装在各种屋顶，可接圆形或方形法兰或泛水安装。是厂房屋顶排风的首选产品。

## Summary

The roof fan is divided into two types: centrifugal type and axial type; centrifugal roof fan is using the plug fan impeller with high-strength aircraft-grade aluminum alloy casing. Compact structure, beautiful shape, the air flow smooth; fan can be installed in a variety of roofs, which can be accessed round or square flange or flashing installation. These fans are ideal for factory roof discharge.

## 命名方式



## 产品结构

WPH 系列风机主要由机壳、叶轮、电机、防鸟网和挡水板、自垂百叶等构成。

### 1. 机壳

屋顶风机机壳采用航空级高强度合金铝拉伸或折弯而成，有效降低自重。进风口和底板整体拉伸成型，使得整体结构紧凑、外形美观、气体流动均匀，而且完全避免了风机底板的渗水的问题。

## Construction of Product

WPH Series fans mainly consist of the housing, impeller, motor, safty net, eliminator and gravity shutter, since the vertical blinds and other accessories.

### 1. Housing

Roof fan housing uses high-strength aircraft-grade aluminum alloy made of stretching or bending, reduce weight. Inlet and the baseplate are made of stretching forming, for compact structure, beautiful shape, smooth airflow, and completely avoiding the problem of water creep.

### 2. 叶轮

后向铝合金叶轮，采用无叶扩压技术，有效提高风机效率。叶轮轮毂采用锥套锁紧的方式，叶轮和电机采用无间隙配合，最大限度的减少了由于叶轮轮毂和电机轴配合造成的装配误差，避免了平衡的破坏，提升了平衡等级。

### 2. Impeller

Backward aluminum alloy impeller with vaneless diffusion technology, effectively to improve the efficiency of the fan. Impeller hub uses the way of locking sleeve, to make the impeller fitted with the motor gapless, so it can endcapping minimize the assembly error caused by impeller hub fitting with motor shaft, to avoid the destruction of the balance, improve the balance level.

### 3. 电机

WPH、WGH 系列风机标配电机的绝缘等级为 F 级，防护等级为 IP54 连续运转的温度范围为 -20℃ ~ +40℃，其它的运行条件见要求。

### 3. Motor

WPH, WGH series equip standard motor, its insulation class is F, ingress protection IP54, continuous operation temperature ranges from -20 °C to 40 °C, the other operation condition see the requirement.

### 4. 防鸟网和挡水板

WPH 系列风机采用优质不锈钢丝网，C 型挡水铝板防锈耐腐蚀，安全可靠。

### 4. Safty Net and Eliminator

WPH Series fans use high-grade stainless steel wire, C-type eliminator uses antirust corrosion-resistant aluminum, safe and reliable.

### 5. 自垂百叶

优质铝合金材质的百叶装在泛水中，尺寸可根据泛水大小定。有效的防止气流倒灌。  
很多屋顶送风机未设置停机后防止空气倒流的装置，或是屋顶风机停机后阀门不能可靠关闭，对于热压较大的车间其热损失不可低估。大家经常可以看到无逆止装置的屋顶风机和轴流风机，在热压作用下风机高速旋转，这一现象说明热压造成的风速相当大，风筒内的风速可达 2.0 ~ 3.0m/s 以上。风机倒转对电动机启动很不利，可能因启动电流过大而损坏。

### 5. Gravity Shutter

High-grade aluminum alloy louvers mounted on the flashing, the size can be determined according to the size of the flashing. It can effectively prevent air reflux.  
Many roof fans do not set off the device to prevent backflow, or after shutdown, the valve can not be reliably shut down, It is a thermal loss to be reckoned with. We often see the roof fan runs at high speed without backstop device, it turns out that thermal pressure can cause largish speed at 2.0 ~ 3.0 m/s or more. It perhaps causes damage for motor because of excessive starting current caused by inversion.

## 产品特色

### 1. 独立电机腔，超长寿命

驱动机构位于独立的腔体中，与气流中的污染物不接触，适用于空气含挥发性机油、油烟、粉尘、有机溶剂等的排风，产品稳定设计使用寿命十年以上。

### 2. 无坠落设计，提高室内人员设施安全性

即使叶片意外断裂，残片不会掉入室内，无需安装安全防护网。冬季凝露水沿叶片流至风机外，避免滴入室内，适合沿海潮湿地区使用。

### 3. 专利外观设计，实用美观

外形设计流畅，比例均匀，工艺精细。银色金属质感外壳：很容易与各种颜色的建筑外墙协调，增强了建筑的现代感，提高品味。

### 4. 重量轻，特别适合于轻钢结构屋面

外壳和叶轮采用铝合金制造。降低钢结构投资，有效地减轻屋面载荷。

### 5. 专利主动冷却技术

叶轮附属叶片吸入驱动腔内空气造成负压新鲜空气持续补入驱动腔冷却电机和轴承电机和轴承寿命大大延长

### 6. 广泛满足用户需求

防爆排风采用全铝结构，风机达到 Spark A 的防爆等级。消防排烟，适用于沿海、海岛地区盐雾环境。

## Features

1. Independent motor chamber, super long service life

Driving mechanism is located in independent chamber without contacting contamination in airflow

Suitable for exhausting air with volatile engineoil, lampblack,dust, organic solvent and so on.

The expected lifetime is designed to be more than 10 years.

2. Non-drop design, improving the safety for indoor personnel and equipment

Though impellers may rupture accidentally, the debris would not drop indoor. And there is no need to install safety protective net.

In winter, the water may flow along impellers to the outside of fans. In order to avoid the water coming into indoors, the fans are suitable for districts that are coastal and moist.

3. Patent appearance design, functional and beautiful

Beautiful appearance deign, proper proportion, exquisite craft

Silver metal housing for easily coordinating with buildings with all kinds of colors

Improving the sense of modernity and taste.

4. Light weight: especially suitable for lightweight steel construction buildings

Housing and impellers: aluminium alloy

Effectively alleviate the loading and decrease the investment on steel

5. Patent active cooling technique

Affiliated blades of impellers suck in air from driving chamber to cause negative pressure

Fresh air continuously coming into driving chamber cools down motors and bearings.

The lifetime of motors and bearings is prolonged drastically

6. Meet the demand of clients

Anti-explosion ventilators, overall aluminum structure: ventilators reach the Spark A level

Smoke control and extraction fan

Coastal and island districts with fogs

## 亿利达研究院针对WPH所作的实验

### 1. 抗强风

经试验鉴定，在 33.9m/s 风速下（气象行业标准 QX/T51-2007 规定为 12 级台风），WPH 风机能长期耐受且性能稳定。

### 2. 抗暴雨

经试验鉴定，在人工模拟降雨量为 156mm/h( 级别：特大暴雨 )的极端条件下，WPH 风机在开机及关机状态下的防雨性能优异，无渗水或变形现象。

### 3. 耐盐雾腐蚀

根据 GB/T10125-1997 标准（盐雾试验方法），WPH 风机经中性盐雾腐蚀试验后，未出现腐蚀现象，证明 WPH 风机能耐受盐雾腐蚀，适合在沿海、岛屿等环境使用。

### 4. 消防检测

已通过国家消防检验中心认证，在 280℃ 下连续正常工作 30min，达到消防风机的要求。

## 可选配件

### 1. 重力式止回风阀

铝制叶片，多片联动的止回风阀可有效防止室外空气倒灌，并可防止结露。

维修开关( 不适用于防爆场合 )

装在风机内部或屋顶靠近风机的区域，维护风机时可紧急切断电源，确保人身安全。( 不建议用于日常操控风机启停工作 )

### 2. 防火调节阀

平时呈常开状态，空气温度达到 280℃ 时，熔断器动作，阀门自动关闭，同时输出信号反馈到控制系统。除防火功能外，同时具备风量调节的功能。

### 3. 橡胶减震垫( 非消防用 )

置于泛水与泛水帽之间，防水密封，有效减少振动，降低噪音，延长风机寿命。

### 4. 温度控制的自动启停开关

设定温度后，环境温度达到设定值时，实现自动化控制，节省能耗。

## The experiment YILIDA research department has done about WPH

1. Strong wind resistance

According to the experiment, WPH fans can bear 33.9m/s (which QX /T51-2007 defined as 12 typhoon) wind speed and operate stably.

2. Rainstorm resistance

According to the experiment, under the extreme condition of stimulated rainfall volume as 156mm/h, WPH fans work as usual no matter they're turned off or on, and there is no such phenomenon as water seepage or deformation.

3. Salt/fog corrosion resistance

According to GB/T10125-1997 standard, WPH fans show no sign of being corroded after the experiment, which proves that WPH fans can bear salt/fog corrosion and they can be put in use in coastal and island environment.

3. Fire protection test

WPH fans have gained the certification of national fire service inspection center and reached the requirements of working successively 30min during 280℃.

## Available parts

1. Gravity-return valve

According to the experiment, WPH fans can bear 33.9m/s (which QX /T51-2007 defined as 12 typhoon) wind speed and operate stably.

Maintenance switch(not suitable for anti-explosion occasion)

should be put inside the fans or on the roof where near the fans. In order to guarantee safety, the fans can be shut off urgently in case of maintenance.(not available during daily operation)

2. Fire proof regulating valve

Should be turned on all the time. When the temperature reaches 280℃,fuse protector will start operating, and the valve will turn off automatically. At the meantime, there will be signals outputted and transmitted to the control system. Besides the fire proof function, it's also equipped with air regulation function.

3. Rubber blanket(non-fire protection)

Should be put between counter and counter flashing. It has the function of water proof, lower vibration, noise reduction and life extension.

4. I-stop switch of temperature controller

When the temperature is set and the surrounding temperature reaches the designed figure, it can achieve automatic control and save power.

风机性能

1. 屋顶风机的选型计算

你选择屋顶风机时你得关注的四大要点：

- a. 风机型号的选择应该根据厂房实际情况，尽量选取与原窗口尺寸相匹配的风机型号，实现良好的通风换气效果。排风侧尽量不靠近附近建筑物，以防影响附近住户。如从室内带出的空气污染环境，可以在风口安装喷水装置，让附近污染物集中回收，不污染环境。
- b. 风机选型必备要素：风量、风压、功率、转速等。
- c. 风机风量是风速  $c$  与风道截面积  $s$  的乘积。所以风量计算也很简单，直接用公式  $q_v=cs$  便可算出风量。
- d. 车间所需风机数量计算：根据所选房间的换气次数来计算厂房所需总风量，进而计算得风机数量。

计算公式： $N=V \times n/q_v$

- 其中：N-- 风机数量（台），
- $V$ -- 场地体积（ $m^3$ ），
- $n$ -- 换气次数（次/时），
- $q_v$ -- 所选风机型号的单台风量（ $m^3/h$ ）。

2. 风机选型示意图例

型号 Type	WPH710
风量 Volume	$q_v=11000 m^3/h$
静压 Static Pressure	$P_{sf}=550 Pa$
动压 Dynamic Pressure	$P_{df}=24 Pa$
风机转速 Fan Speed	$n=962 r/min$
轴功率 Shaft Power	$P_{sh}=2.93 KW$
A声功率级 A Sound Power Level	$L_{wA}=87 dB(A)$
静压效率 Static Efficiency	$\eta_{sf}=60.3\%$

Performance of fan

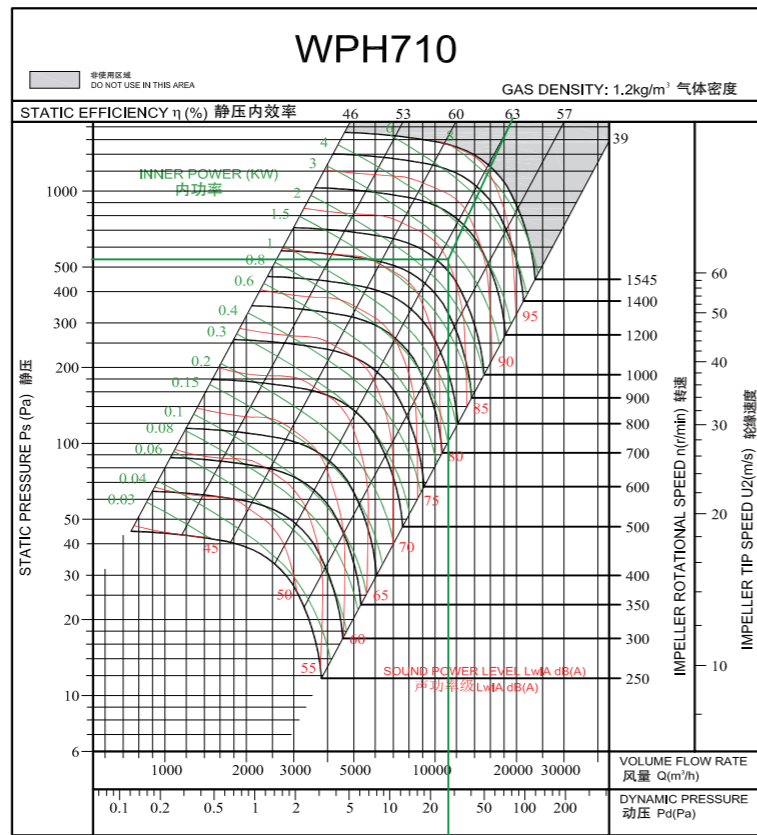
1. Calculation of Selection

When you choose the roof fan you have to concern four main points:

- a. Fan model selection should be based on actual plant conditions. try to select the fan model to match original window size, to achieve good ventilation effect. The outlet should not to close the buildings nearby. to prevent the impact of nearby residents, such as the air out of the indoor, you can install sprinklers in the outlet for absorbing pollutants.
- b. Fan selection essential elements: airflow, air pressure, power, speed and so on.
- c. Fan flow is the result that the velocity  $c$  multiply the duct cross-sectional areas. So the airflow calculation is very simple, directly use of the formula  $q_v = cs$ .
- d. Calculate the number of fans: according to the room ventilation rate to calculate the workshop total air volume, and then calculated the number of fans.

Calculation formula:  $N=V \times n/q_v$   
Among: N--The number of the fans  
 $V$ -- Field area( $m^3$ )  
 $n$ -- Ventilation rate  
 $q_v$ --Airflow( $m^3/h$ )

2. Example Of Cruve Reading



3. 噪声频谱

3. Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值  $\Delta L_{w(A)}$

Relative A sound power level for inlet side  $L_{w(A)}$  at octave centre frequencies  
风机入口侧噪声八倍频谱A声功率级衰减值  $L_{w(A)}$

Relative A sound power level for outlet side  $L_{w(A)}$  at octave centre frequencies  
风机出口侧噪声八倍频谱A声功率级衰减值  $L_{w(A)}=L_{w(A)}+\Delta L_{w(A)}$

Static Efficiency 静压效率 (%)	dB
45	1
52	1
59	2
61	2
55	3
38	3

63	125	250	500	1000	2000	4000	8000	Hz
-18	-11	-7	-8	-7	-8	-10	-16	dB
-21	-11	-6	-8	-7	-8	-10	-15	dB
-18	-12	-7	-8	-6	-7	-9	-14	dB
-16	-12	-8	-9	-6	-7	-9	-14	dB
-15	-13	-9	-9	-6	-7	-8	-13	dB
-17	-15	-10	-10	-6	-7	-7	-12	dB

63	125	250	500	1000	2000	4000	8000	Hz
-26	-10	-9	-5	-4	-10	-16	-25	dB
-25	-11	-9	-5	-5	-10	-16	-25	dB
-25	-13	-8	-5	-5	-9	-15	-24	dB
-26	-20	-10	-6	-5	-6	-11	-21	dB
-28	-21	-12	-7	-5	-5	-10	-21	dB
-31	-21	-12	-8	-6	-4	-11	-22	dB

由选型数据可得：该点的静压效率为 60.3%，入口声功率级为 86dB (A)。通过查阅上表可得该风机工况点入口侧噪声八倍频谱 A 声功率级为：

63	125	250	500	1000	2000	4000	8000	Hz
60	71	73	82	79	79	77	70	dB

同时可得：出口声功率级为 88dB (A)。通过查阅上表可得该风机工况点出口侧噪声八倍频谱 A 声功率级为：

63	125	250	500	1000	2000	4000	8000	Hz
71	79	76	83	80	80	78	71	dB

上述数据为客户选择的风机配消声器所用。

Data from the selection available: the point within the static Pressure efficiency of 60.3%, inlet sound power level of 86dB (A). Available by consulting the table on the entrance side of the fan operating point eight times the noise spectrum of A-weighted sound power level is:

Also available: outlet sound power level of 88dB (A). Available by consulting the table on the outlet side of the fan operating point eight times the noise spectrum of A-weighted sound power level is:

The data for customers to choose the fan with silencer use.

安装与维护

1. 安装基础须高出屋面，表面要求平整，以防渗水漏水，并须预埋好地脚螺栓。
2. 风机底座与基础之间加垫一层 5mm 橡胶板，以减少振动，地脚螺栓应配有弹簧垫圈，防止使用时松动。
3. 调试运转前应详细检查风机各部件，转动叶轮应无呆滞和卡、擦现象。
4. 试运转初，先开动电机检查叶轮旋转方向是否正确（向下看叶轮应逆时针旋）。
5. 试运转时或正常使用中应无异常，电压、电流、振动、噪声均应在正常范围内。
6. 在运转中，碰到下列情况应立即停机，查明原因，待故障排除后方可启动。

- ① 发生强烈振动
- ② 噪声突然加大或发出异常响声
- ③ 电机冒白烟
- ④ 电机、轴承座温升过高。

Installation and Maintenance

1. The installed base should be above the roof, surface should be smooth to prevent seepage leakage, and be a good anchor bolts embedded.
2. Between the fan base and the base layer should be installed 5mm rubber plate to reduce vibration, anchor bolts should be fitted with spring washers to prevent loosening when used.
3. Detailed inspect all components before the fan running, rotating impeller should not be chafed.
4. The beginning of commissioning, first check the impeller rotation direction is correct (looking down the impeller should rotate counter-clockwise ).
5. During the commissioning or normal usage should be no exception, voltage, current, vibration, noise should be within the normal range.
6. In operation, met the following conditions should be immediately shut down, identify the cause, startup until debug.

- ① A strong vibration
- ② An abnormal noise or the sound of a sudden increase
- ③ Motor fume-offs
- ④ Motor bearing temperature rise too high.



- 当风门为电动风门，风机开启时先开风门；关闭时，先关闭风机再关闭风门。
- 开始运转 72 小时及每隔半年应检查风机连接件、紧固件有否松动，调整传动皮带松紧，添加润滑油（脂）。
- 如遇冬季下雪，冰冻日期，必须经常开动，以防大雪堵塞风机出口。
- 长期停机后应按调试方法重新检查后投入正常运行。

## 说明

- 订货时须注明风机型号、转速、风量、风压、出风口方向和旋转方向。
- 在安装前应对风机各部件进行检查，对叶轮、主轴和轴承等主要机件应重点细致检查，如有损伤应修复后再安装使用。
- 检查机壳和其它壳体内部，不应有掉入遗留的工具和杂物。
- 风机正式运转前，需检查电机的转向是否符合风机转向的要求。
- 风管与出风口之间应采用软连接，接头不得拉紧。
- 风机安装后用手或杠杆拨动叶轮，检查是否过紧或碰撞现象，确认无这些现象后方可进行试转。
- 风机配用电机功率是指在特定工况下，风机内功率加上机械损失与电机容量安全系数而言，并非出风口全敞开时所需的功率。为防止电机超功率运行而烧毁，严禁风机出风口或进风口不接管路或未加外界任何阻力进行空运转。
- 风机在无较大腐蚀性气体、不含酸（碱）性和尘粒物质  $<150\text{mg}/\text{m}^3$  的气体、 $-20^\circ\text{C} < \text{温度} < 40^\circ\text{C}$  的气体环境下使用，风机在运输装卸过程中应小心轻放，防止碰撞挤压。

- When the throttle is the electric damper, it should open the throttle first when fan runs; turn off the fan and then shut down the fan.
- Began operation 72 hours and should be checked every six months, to make sure that the fan connectors, fasteners are tight, then adjust the belt tension, append lubrication (grease).
- In case of snowing, freezing date, the fan must often be switched on to prevent heavy snow blocking the fan's outlet.
- It should be re-check after long term shutdown.

## Instructions

- When placing the order, it is necessary to state the type of fan, speed, air volume, air pressure, discharge direction, rotation direction, type of electric motor and its specifications.
- Prior to installation, the fan should be carefully inspected. Special care should be taken in checking the shalf, impeller and bearings. If there is an indication of any damage, the damaged parts should be repaired or repaired before the fan is installed or commissioned.
- The inside of the scroll and casing need to be checked to make sure that there are no foreign objects inside the housing, such as tools or loose parts.
- The rotational directions of the motor and impeller should be checked to ensure that they are in compliance with the specification and purchase orders.
- A flexible connector should be used between the fan out let flange and its mating ductwork. The flex connector should not be over-stretched.
- Following the installation, the impeller should be turned by hand or with the use of a wrench to make sure that it turns freely without colliding with other parts of the fan. Once all this is done, the fan can be commissioned normally.
- The rated motor power as calculated herein might not be sufficient to drive the fan with an unrestricted discharge flow. Operating the fan with an unrestricted discharge outlet will result in flow rate that exceeds the specified fan capabilities. Such operation will quickly burn the motor and damage the fan. Great care must be taken in operating the fan to make sure that the maximum rated flows, as provided on the performance charts in this catalog, are not exceeded.
- The fan is limited for use in areas where air substances are non-corrosive, non-toxics and non-erosive and where dust particles are less than  $150\text{mg}/\text{m}^3$  with a temperature between  $-20^\circ\text{C}$  and  $40^\circ\text{C}$ . Special care should be taken during transportation, load and unload.

## 技术参数 Technical Data

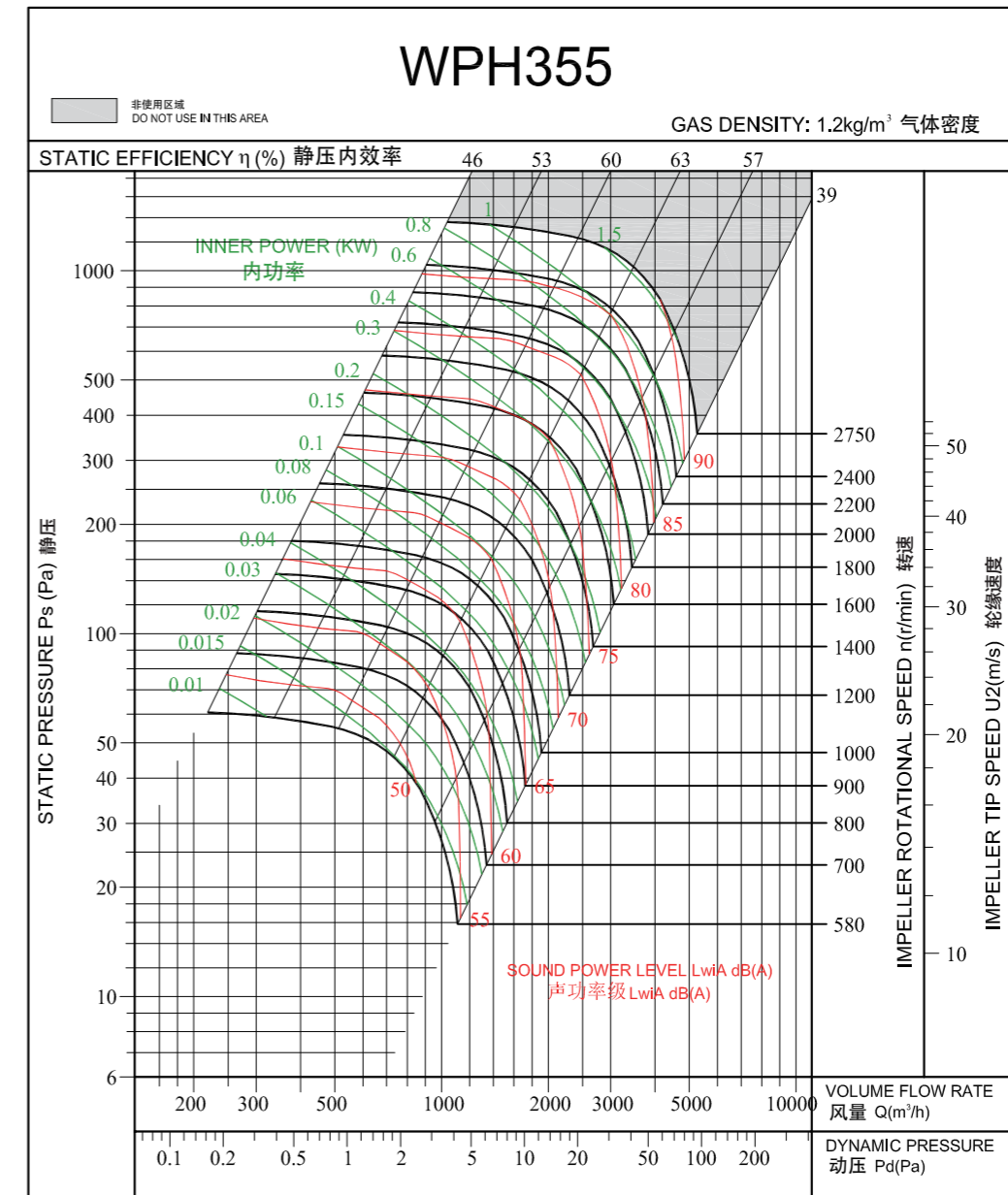
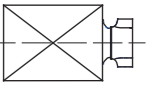
Wheel diameter	叶轮直径	D = 355 mm	Fan weight	风机质量(不含电机)	m = 18 / 20 kg
Moment of inertia	转动惯量	J = 0.102 kg·m <sup>2</sup>	Direct driven	电机直联驱动转速	n = 1400/2800 r/min

## 性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA international Standard 301. Values shown are for inlet L<sub>wA</sub> sound power levels for installation type A: free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>wA</sub>）。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

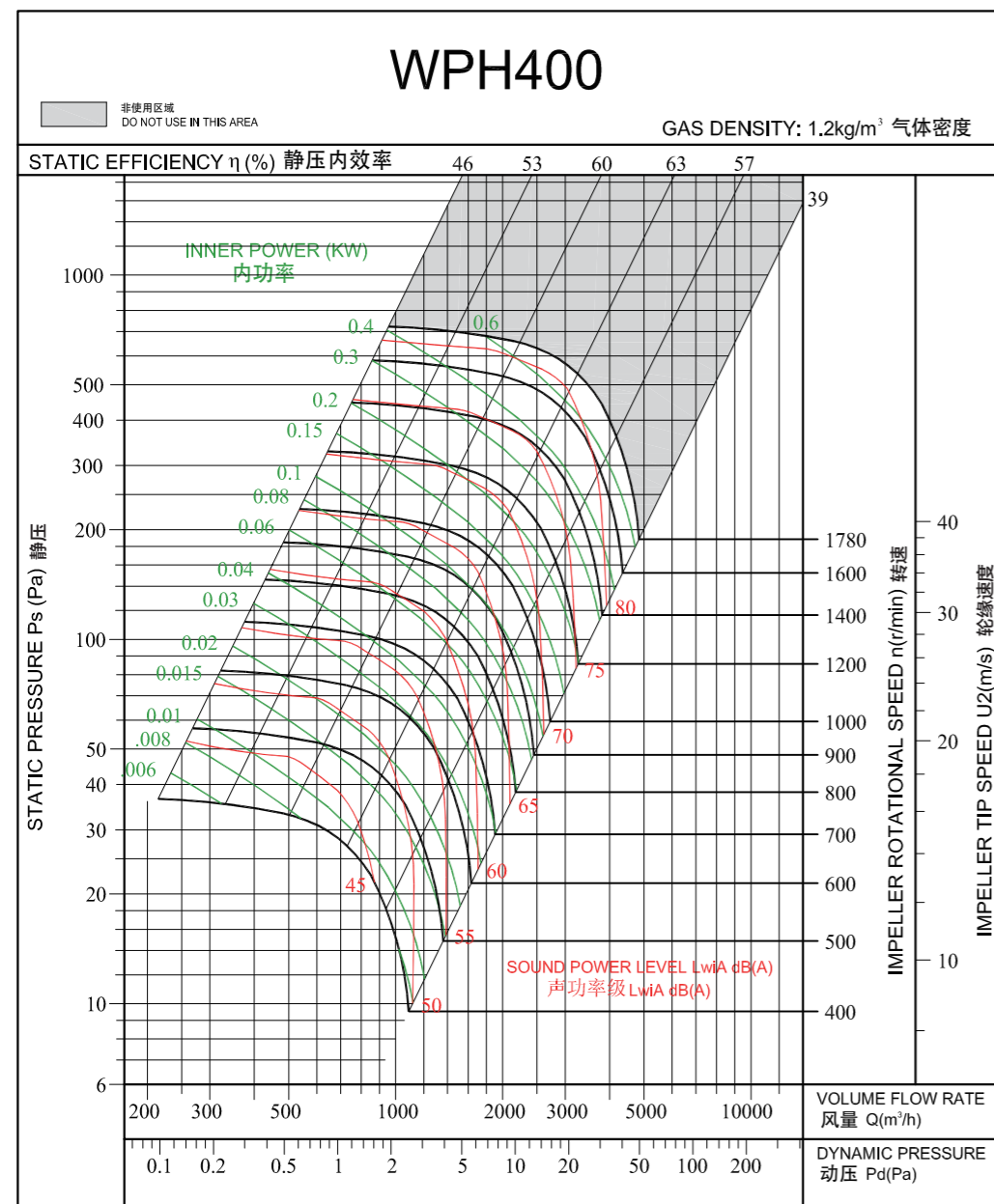
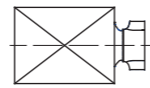
Wheel diameter 叶轮直径	D = 400 mm	Fan weight 风机质量(不含电机)	m = 25 / 25 kg
Moment of inertia 转动惯量	J = 0.162 kg·m <sup>2</sup>	Direct driven 电机直联驱动转速	n = 1400/2800 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA international Standard 301. Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A: free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

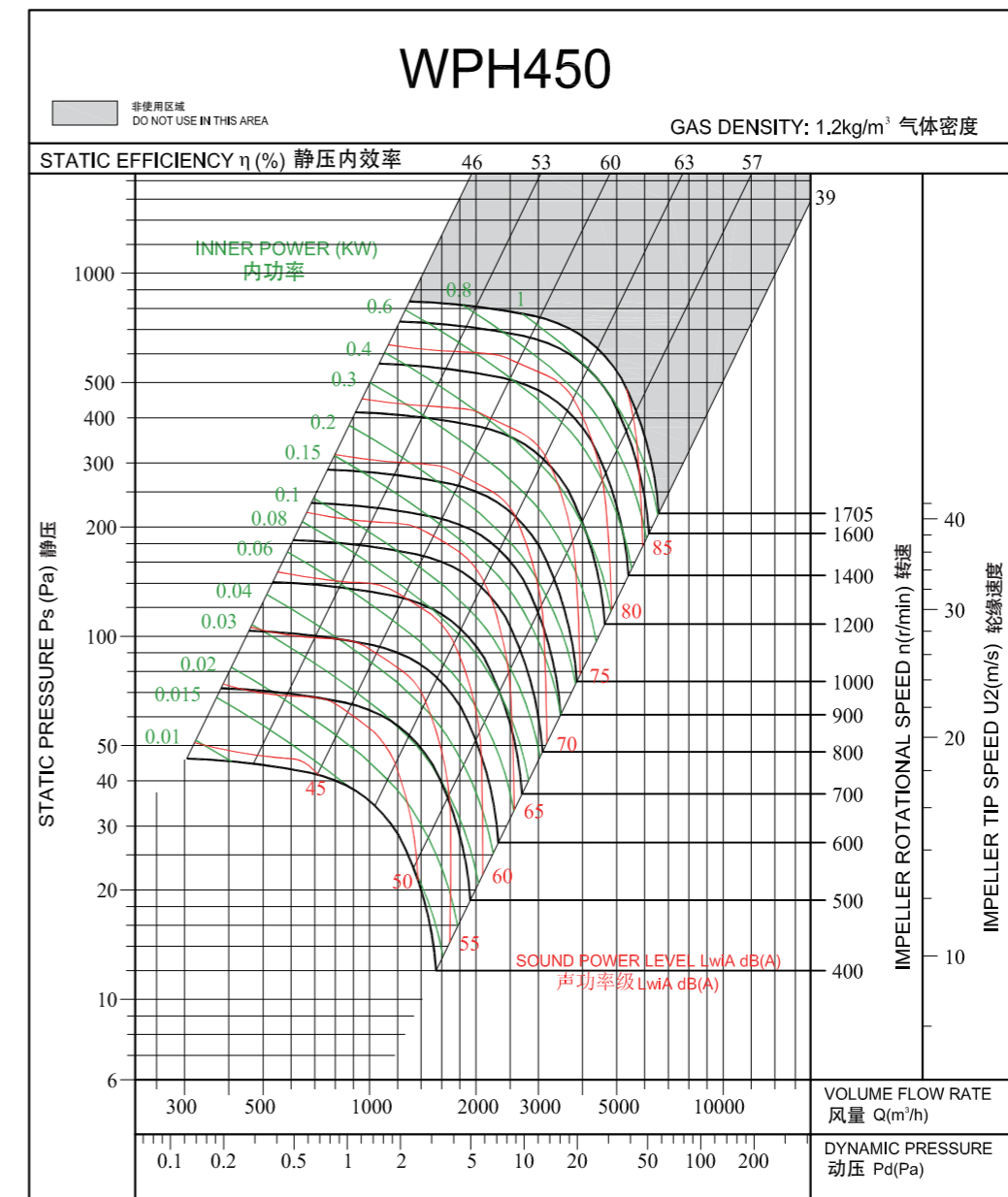
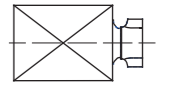
Wheel diameter 叶轮直径	D = 450 mm	Fan weight 风机质量(不含电机)	m = 35 / 37 kg
Moment of inertia 转动惯量	J = 0.26 kg·m <sup>2</sup>	Direct driven 电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA international Standard 301. Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A: free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

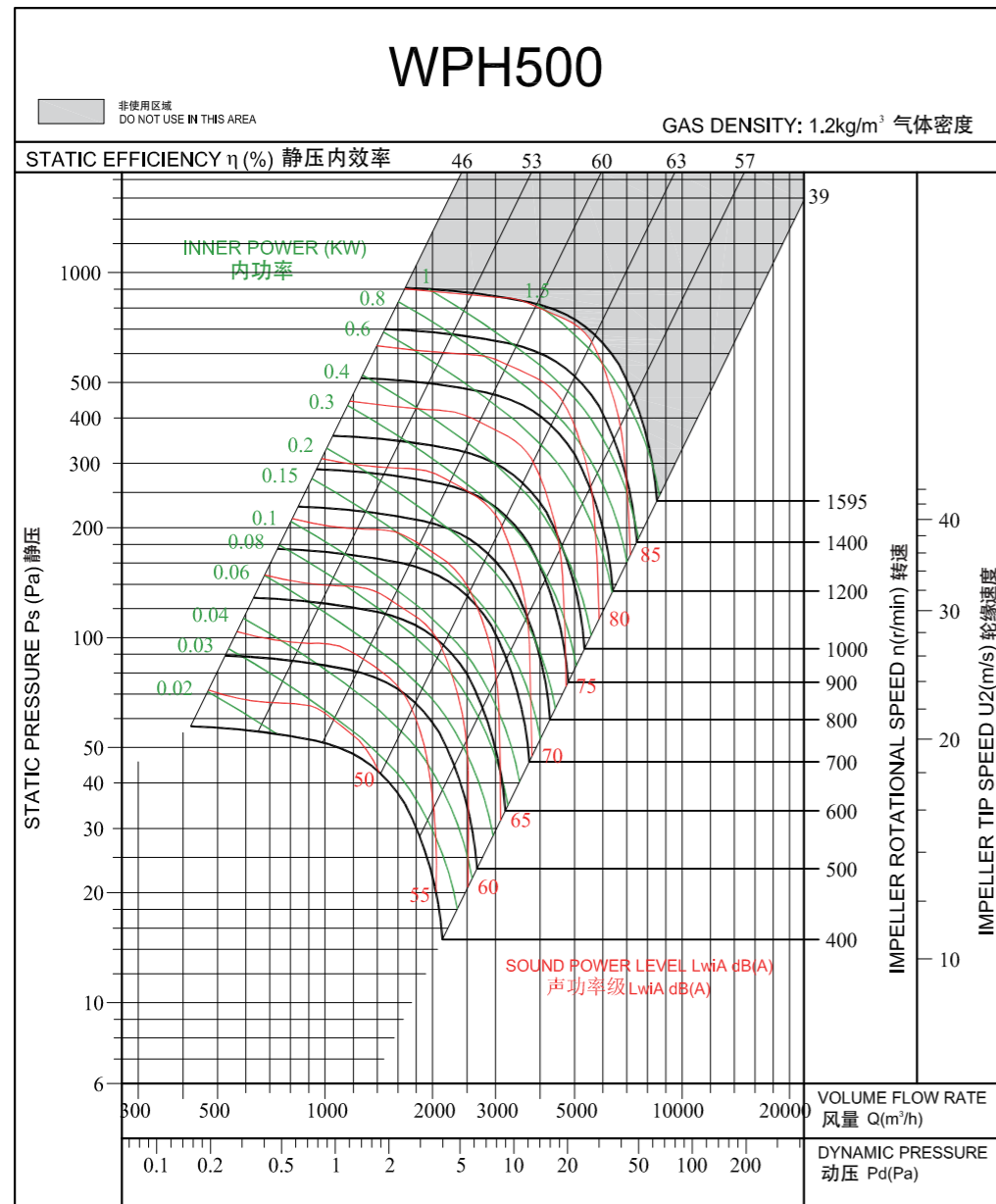
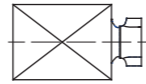
Wheel diameter	叶轮直径	D = 500 mm	Fan weight	风机质量(不含电机)	m = 39 / 40 kg
Moment of inertia	转动惯量	J = 0.45 kg·m <sup>2</sup>	Direct driven	电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装:自由入口,自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A:自由入口,自由出口的声功率级(入口L<sub>w</sub>A)。

Measured in installation C according to AMCA 211:



WPH/WGH

技术参数 Technical Data

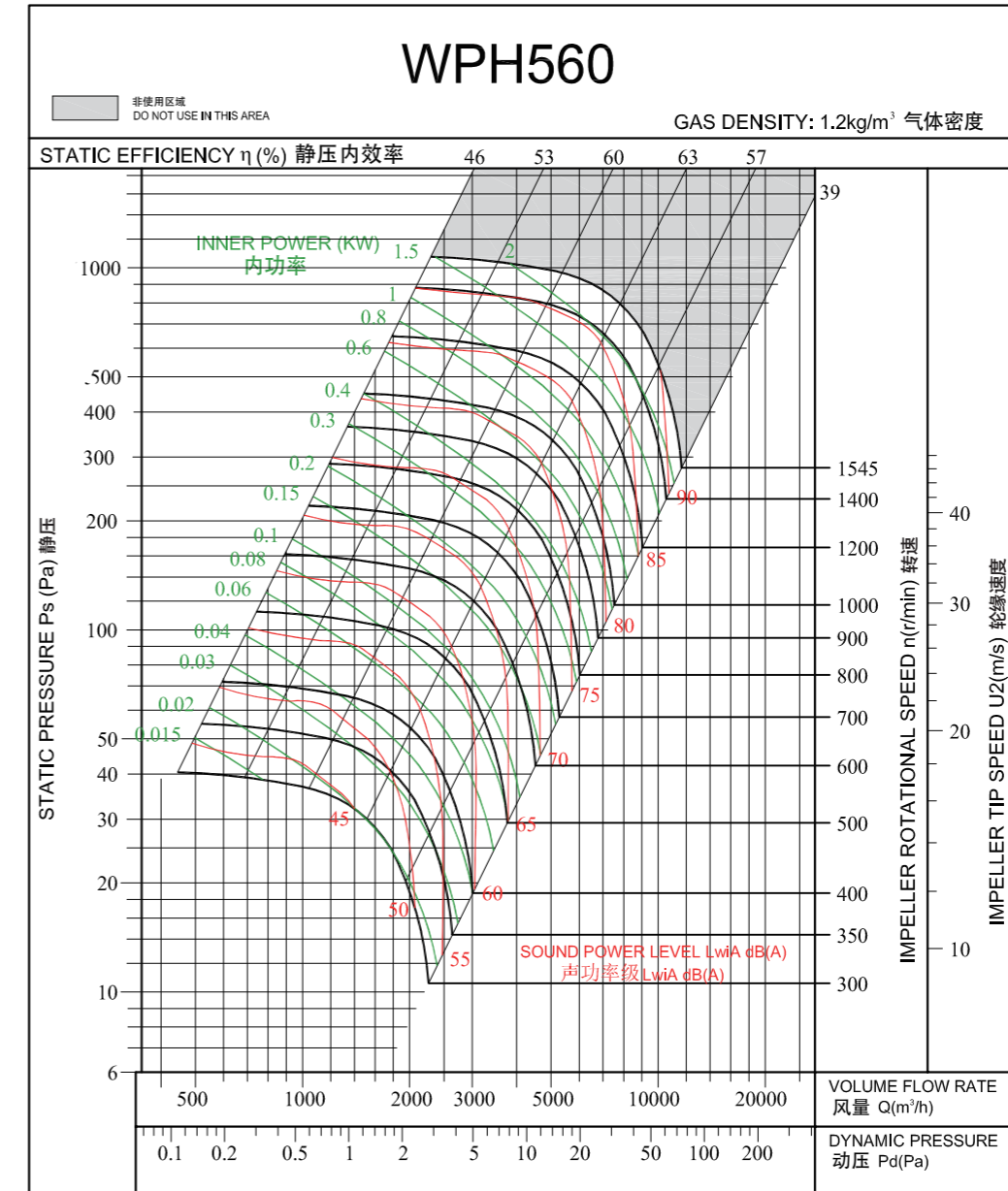
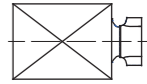
Wheel diameter	叶轮直径	D = 560 mm	Fan weight	风机质量(不含电机)	m = 52 / 67 kg
Moment of inertia	转动惯量	J = 0.74 kg·m <sup>2</sup>	Direct driven	电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装:自由入口,自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A:自由入口,自由出口的声功率级(入口L<sub>w</sub>A)。

Measured in installation C according to AMCA 211:



屋顶风机系列



技术参数 Technical Data

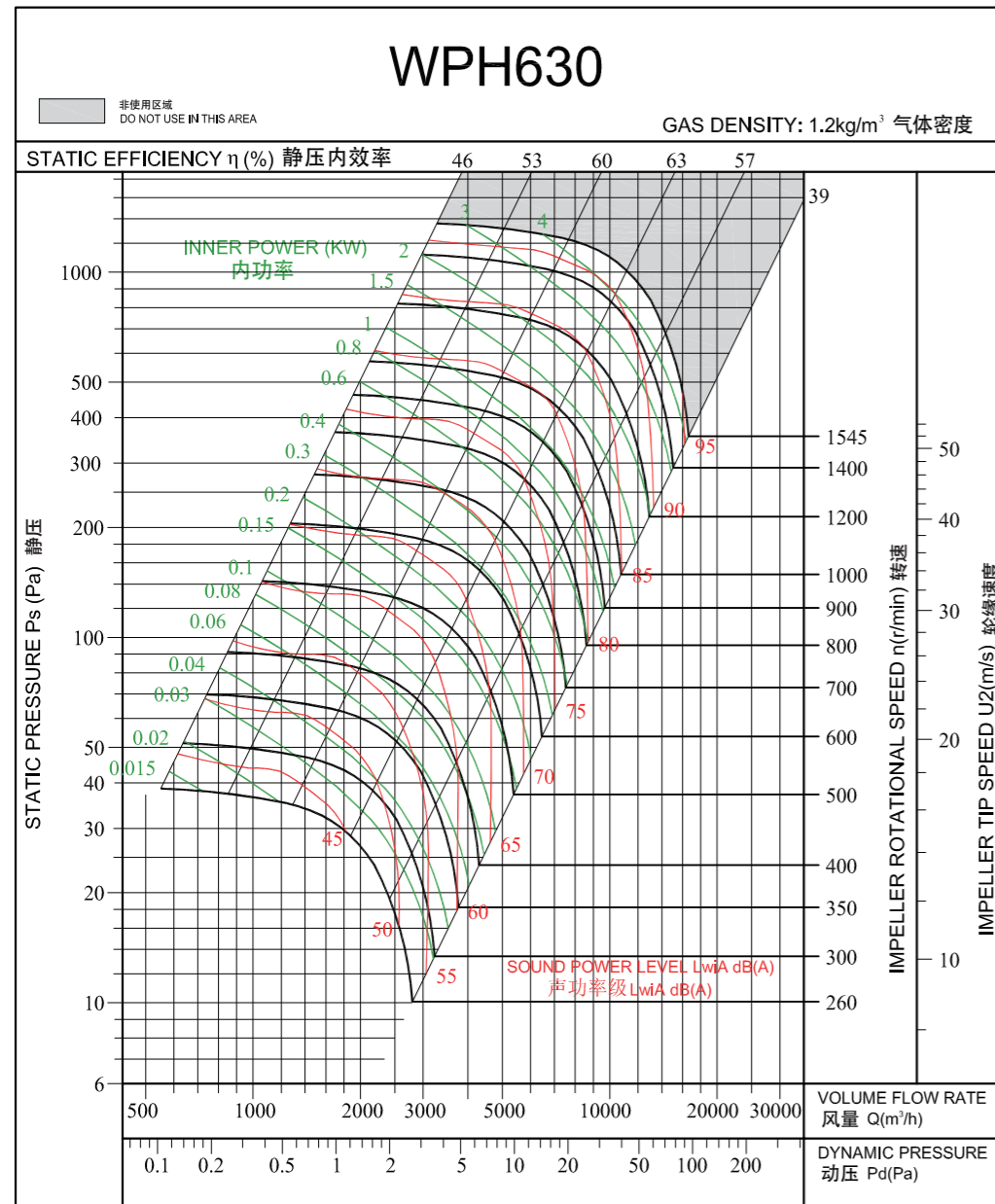
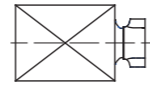
Wheel diameter 叶轮直径	D = 630 mm	Fan weight 风机质量(不含电机)	m = 62 / 73 kg
Moment of inertia 转动惯量	J = 1.2 kg·m <sup>2</sup>	Direct driven 电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

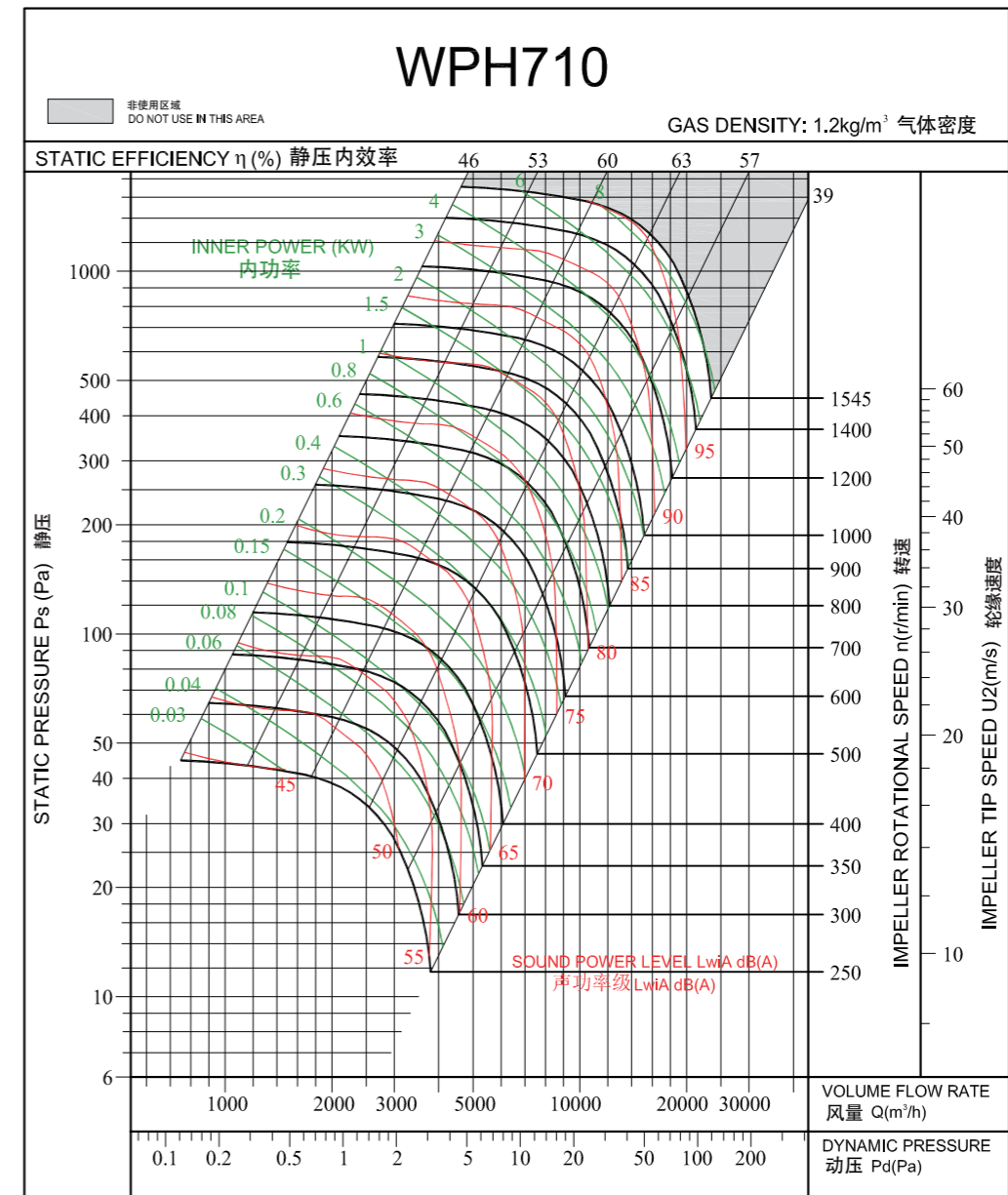
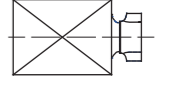
Wheel diameter 叶轮直径	D = 710 mm	Fan weight 风机质量(不含电机)	m = 75 / 102 kg
Moment of inertia 转动惯量	J = 2.43 kg·m <sup>2</sup>	Direct driven 电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:





技术参数 Technical Data

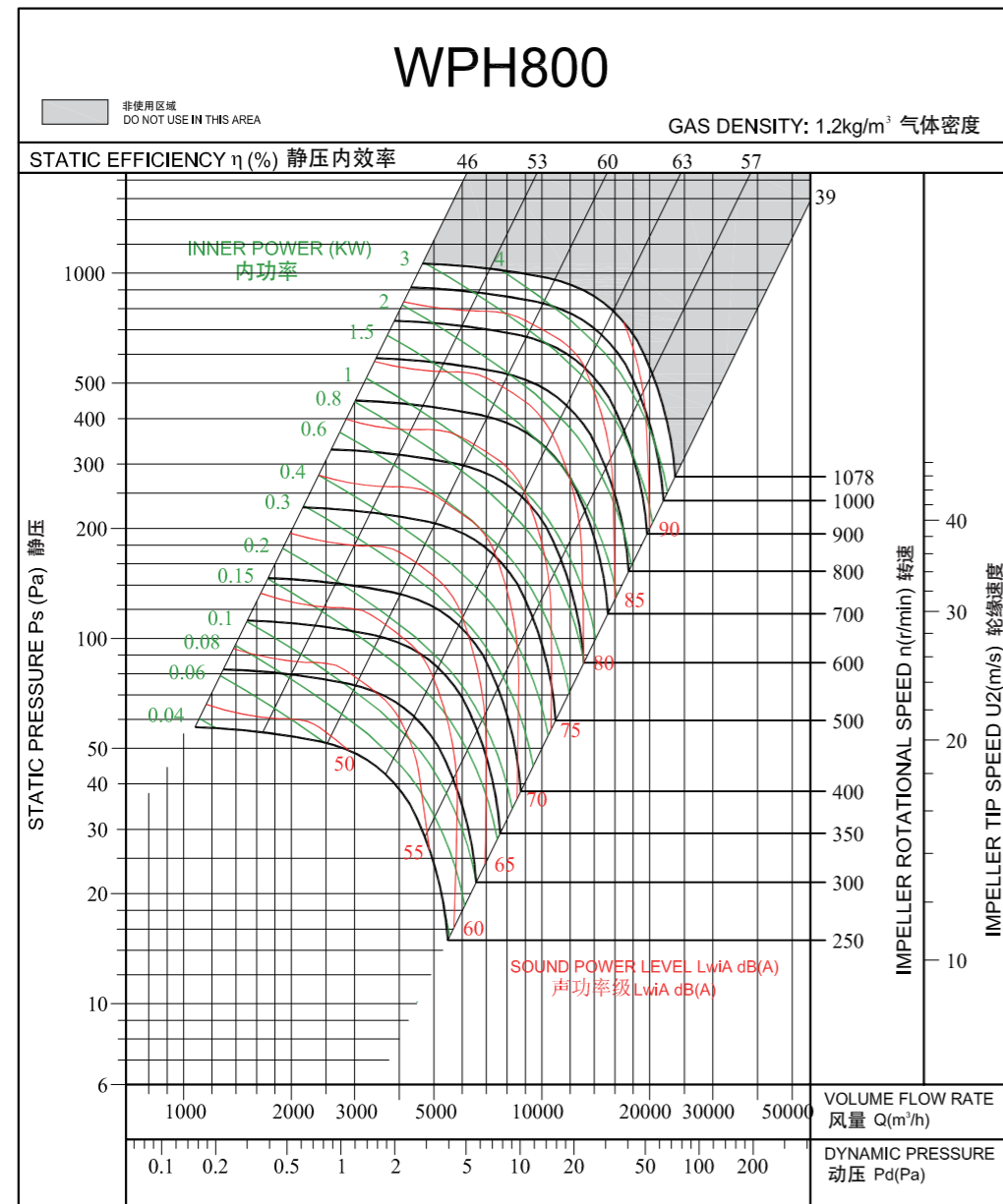
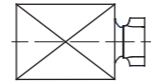
Wheel diameter	叶轮直径	D = 800 mm	Fan weight	风机质量(不含电机)	m = 96 / 153 kg
Moment of inertia	转动惯量	J = 4.88 kg·m <sup>2</sup>	Direct driven	电机直联驱动转速	n = 960/1400 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

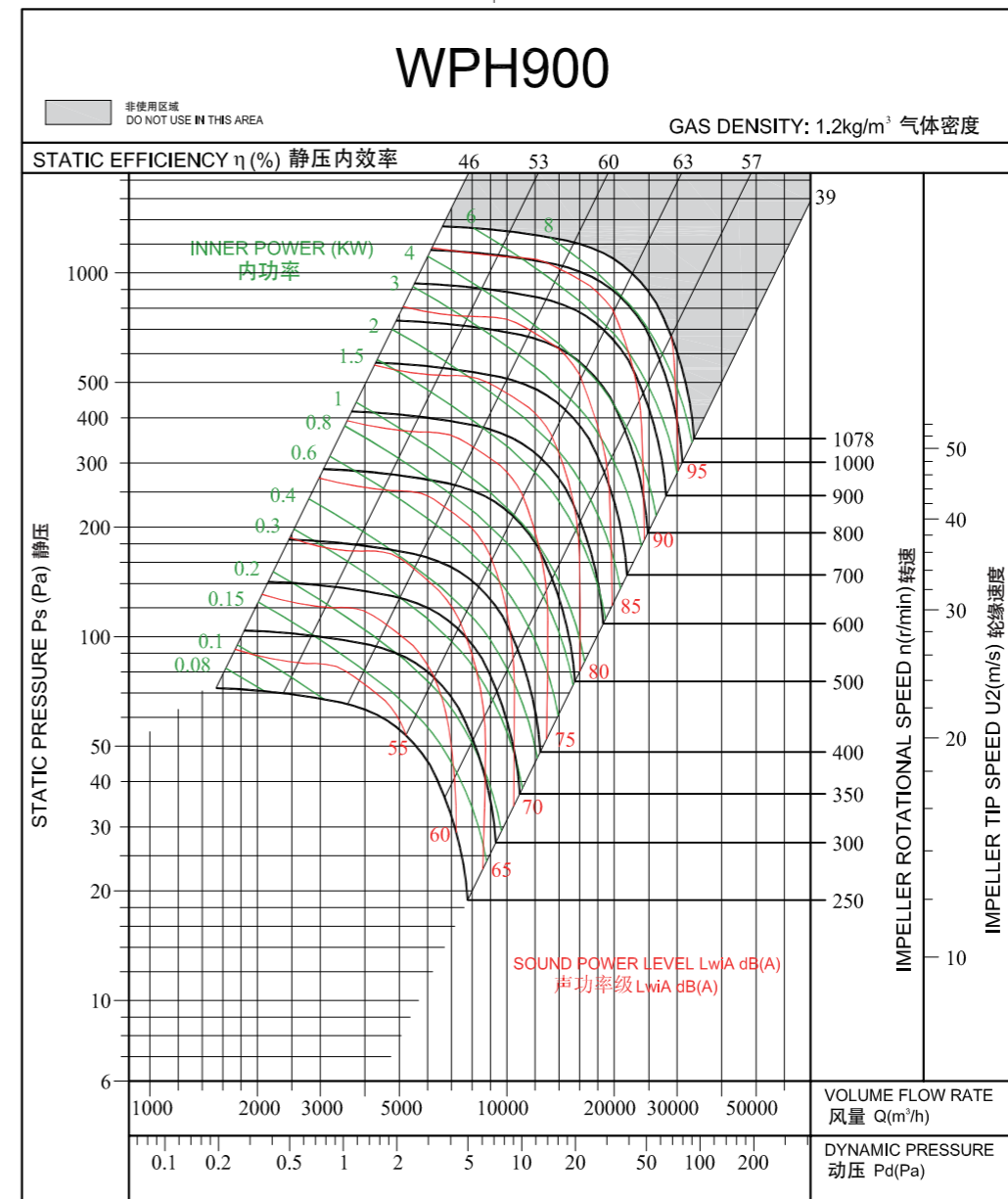
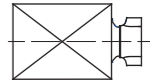
Wheel diameter	叶轮直径	D = 900 mm	Fan weight	风机质量(不含电机)	m = 120 / 193 kg
Moment of inertia	转动惯量	J = 7.32 kg·m <sup>2</sup>	Direct driven	电机直联驱动转速	n = 970 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>w</sub>A sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装：自由入口，自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A：自由入口，自由出口的声功率级（入口L<sub>w</sub>A）。

Measured in installation C according to AMCA 211:



WPH/WGH

屋顶风机系列

技术参数 Technical Data

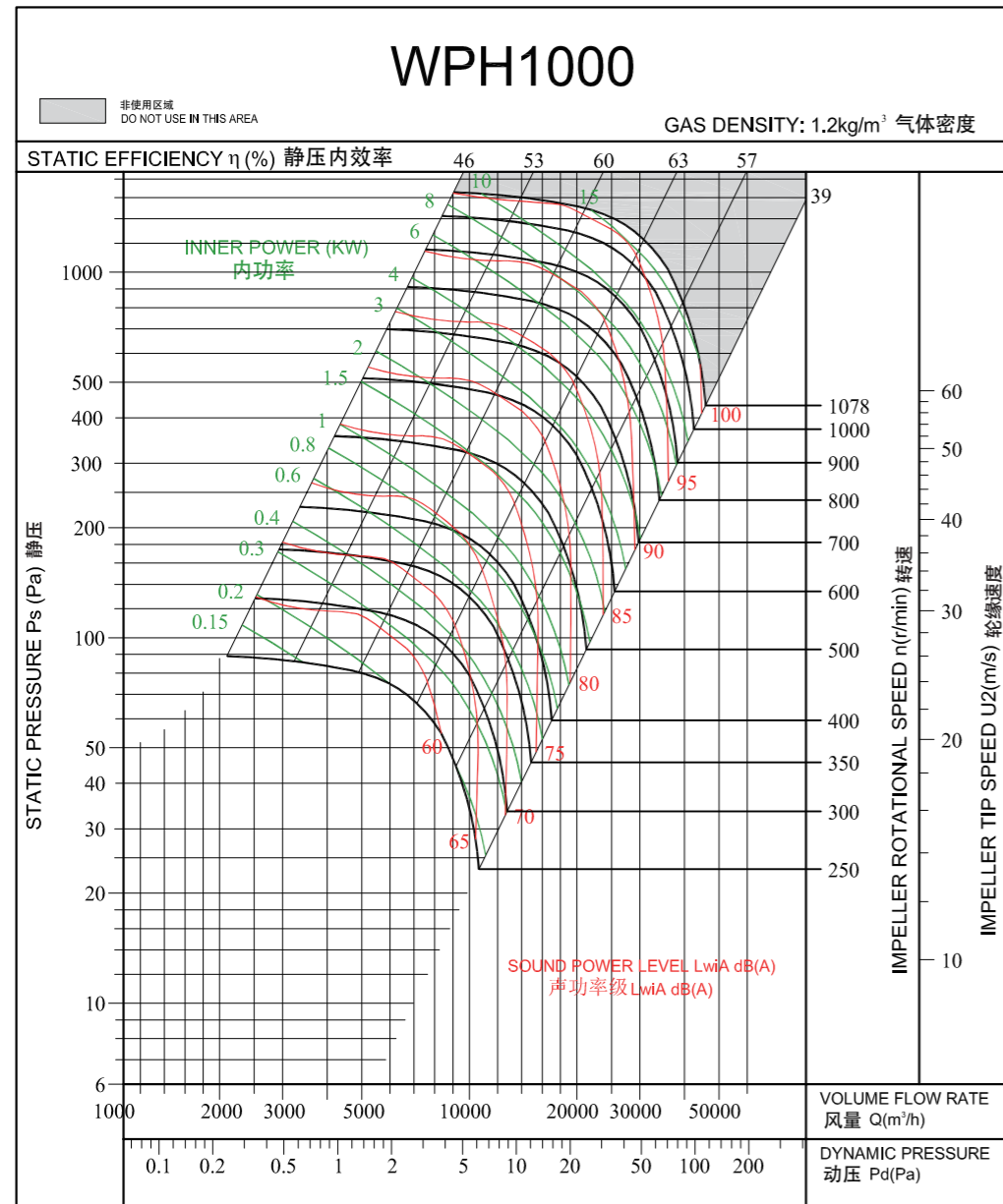
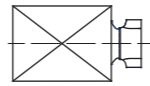
Wheel diameter 叶轮直径	D = 1000 mm	Fan weight 风机质量(不含电机)	m = 146 / 220 kg
Moment of inertia 转动惯量	J = 11.94 kg·m <sup>2</sup>	Direct driven 电机直联驱动转速	n = 980 r/min

性能曲线 Performance Curves

Performance certifies is for installation type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).The A-weighted sound ratings shown have been calculated per AMCA international Standard 301.Values shown are for inlet L<sub>wA</sub> sound power levels for installation type A:free inlet, free outlet.

经认证的性能是A类安装:自由入口,自由出口。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型A:自由入口,自由出口的声功率级(入口L<sub>wA</sub>)。

Measured in installation C according to AMCA 211:



技术参数 Technical Data

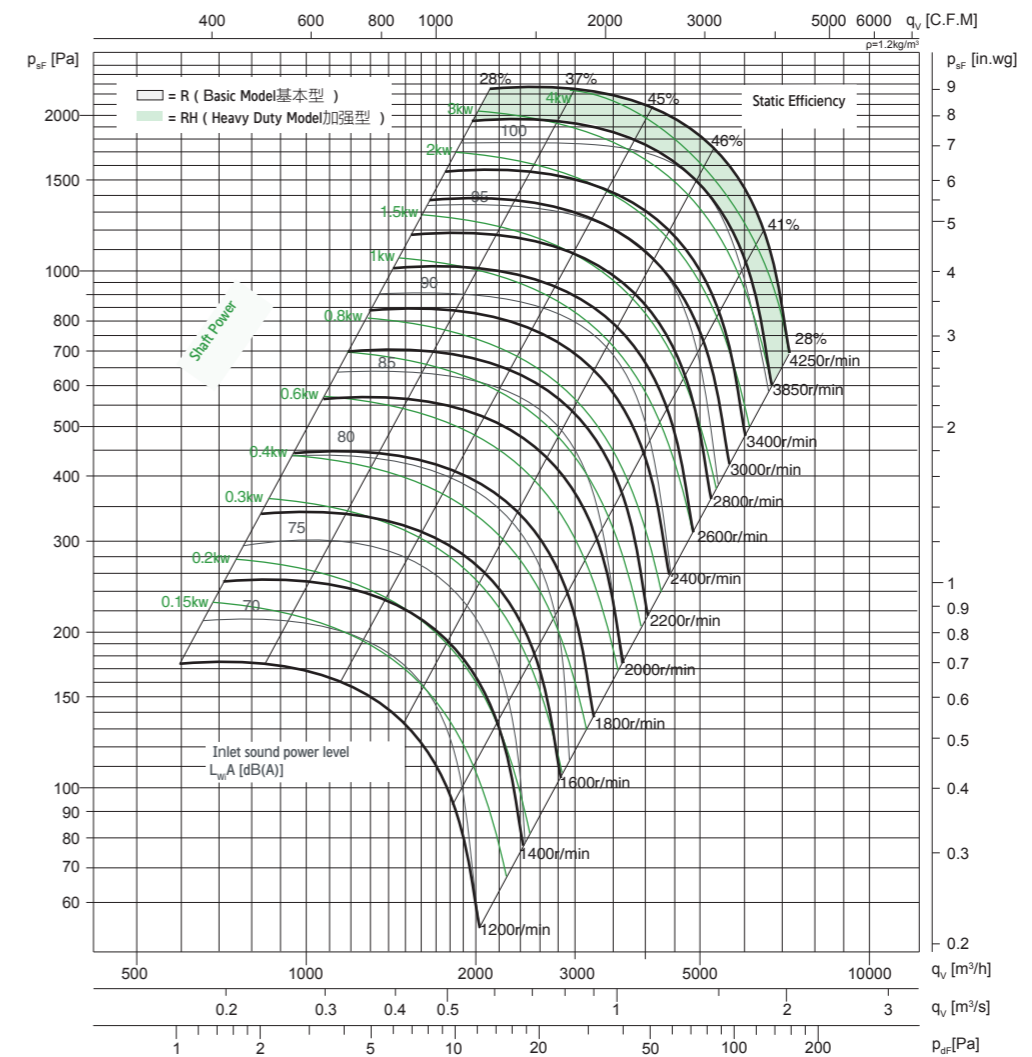
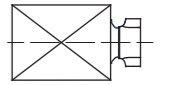
Wheel diameter 叶轮直径	D = 315 mm	Fan weight 风机质量(不含电机)	m = 16 / 13 kg
Moment of inertia 转动惯量	J = 0.530 kg·m <sup>2</sup>	Maximum speed 极限转速	n = 4250 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wO</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经AMCA认证,C类安装:管道入口,自由出口。功率额定值(kW)不包括传输损失,各项性能额定值不包括机壳及其他附件的影响。所示A加权声音性能额定值已按AMCA International标准301计算,该值为安装类型C:管道入口,自由出口的声功率级(出口L<sub>wO</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet 入口和出口侧差值 ΔL<sub>w</sub>(A)

Relative A sound power level for inlet side L<sub>wi</sub>(A) at octave centre frequencies 风机入口侧噪声八倍频谱A声功率级衰减值 L<sub>wi</sub>(A)

Relative A sound power level for outlet side L<sub>wO</sub>(A) at octave centre frequencies 风机出口侧噪声八倍频谱A声功率级衰减值 L<sub>wO</sub>(A)=L<sub>wi</sub>(A)+ΔL<sub>w</sub>(A)

Static Efficiency	dB
28	1
37	1
45	2

63	125	250	500	1000	2000	4000	8000	Hz
-25	-16	-12	-5	-6	-6	-12	-13	dB
-28	-20	-12	-5	-6	-5	-11	-14	dB

63	125	250	500	1000	2000	4000	8000	Hz
-20	-14	-11	-5	-6	-7	-13	-14	dB
-18	-14	-10	-5	-6	-7	-13	-14	dB
-20	-15	-9	-5	-7	-7	-13	-16	dB

技术参数 Technical Data

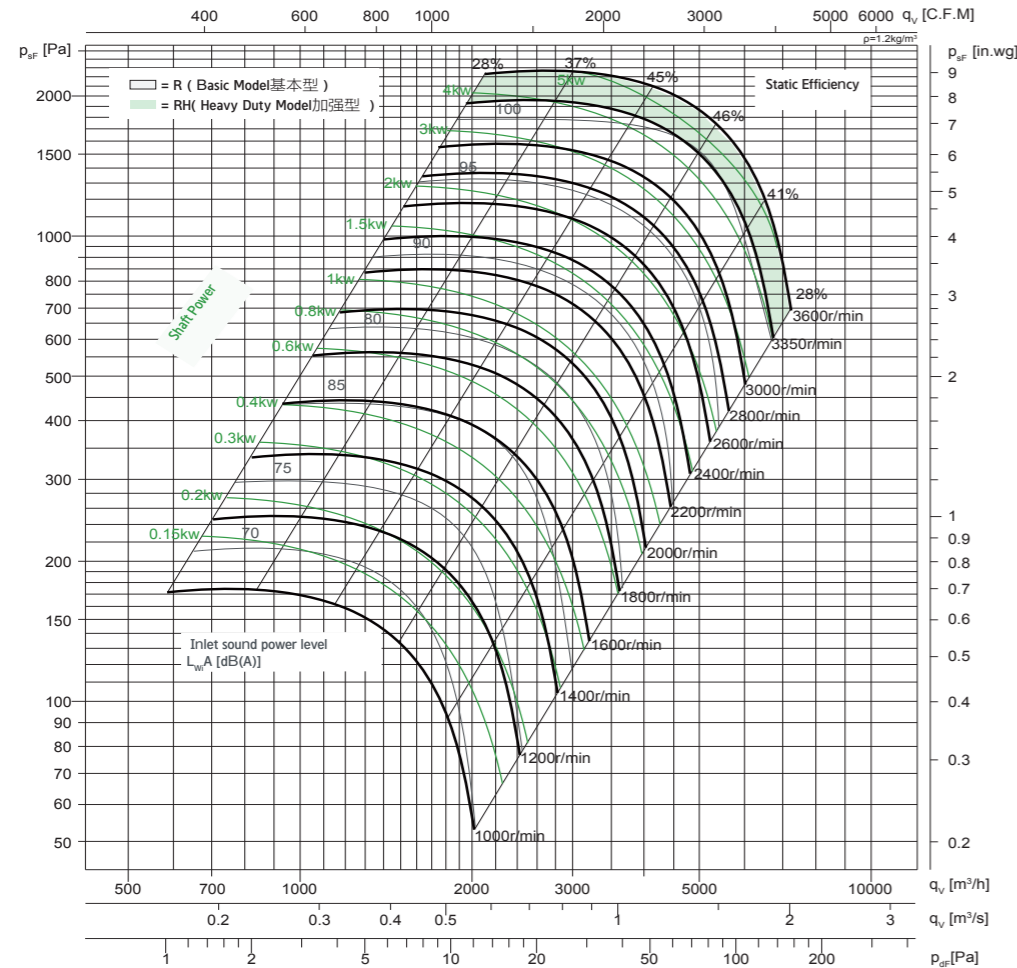
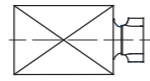
Wheel diameter	叶轮直径	D = 355 mm	Fan weight	风机质量(不含电机)	m = 18 / 20 kg
Moment of inertia	转动惯量	J = 0.102 kg m <sup>2</sup>	Maximum speed	极限转速	n = 3600 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wO</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wO</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w(A)</sub>

Relative A sound power level for inlet side L<sub>wI</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wI</sub>(A)

Relative A sound power level for outlet side L<sub>wO</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wO</sub>(A)  
L<sub>wO</sub>(A)=L<sub>wI</sub>(A)+ΔL<sub>w(A)</sub>

Static Efficiency	dB
28	1
37	1
45	2
46	2
41	3
28	3

63	125	250	500	1000	2000	4000	8000	Hz
-25	-16	-12	-5	-6	-6	-12	-13	dB
-25	-16	-12	-5	-6	-6	-12	-13	dB
-28	-20	-12	-5	-6	-5	-11	-14	dB
-28	-21	-12	-6	-6	-5	-11	-13	dB
-28	-23	-15	-7	-5	-4	-11	-20	dB
-29	-25	-18	-8	-5	-4	-12	-29	dB

63	125	250	500	1000	2000	4000	8000	Hz
-20	-14	-11	-5	-6	-7	-13	-14	dB
-18	-14	-10	-5	-6	-7	-13	-14	dB
-20	-15	-9	-5	-7	-7	-13	-16	dB
-19	-15	-8	-6	-6	-7	-12	-14	dB
-18	-17	-12	-6	-5	-5	-12	-21	dB
-18	-18	-14	-7	-5	-4	-13	-29	dB

技术参数 Technical Data

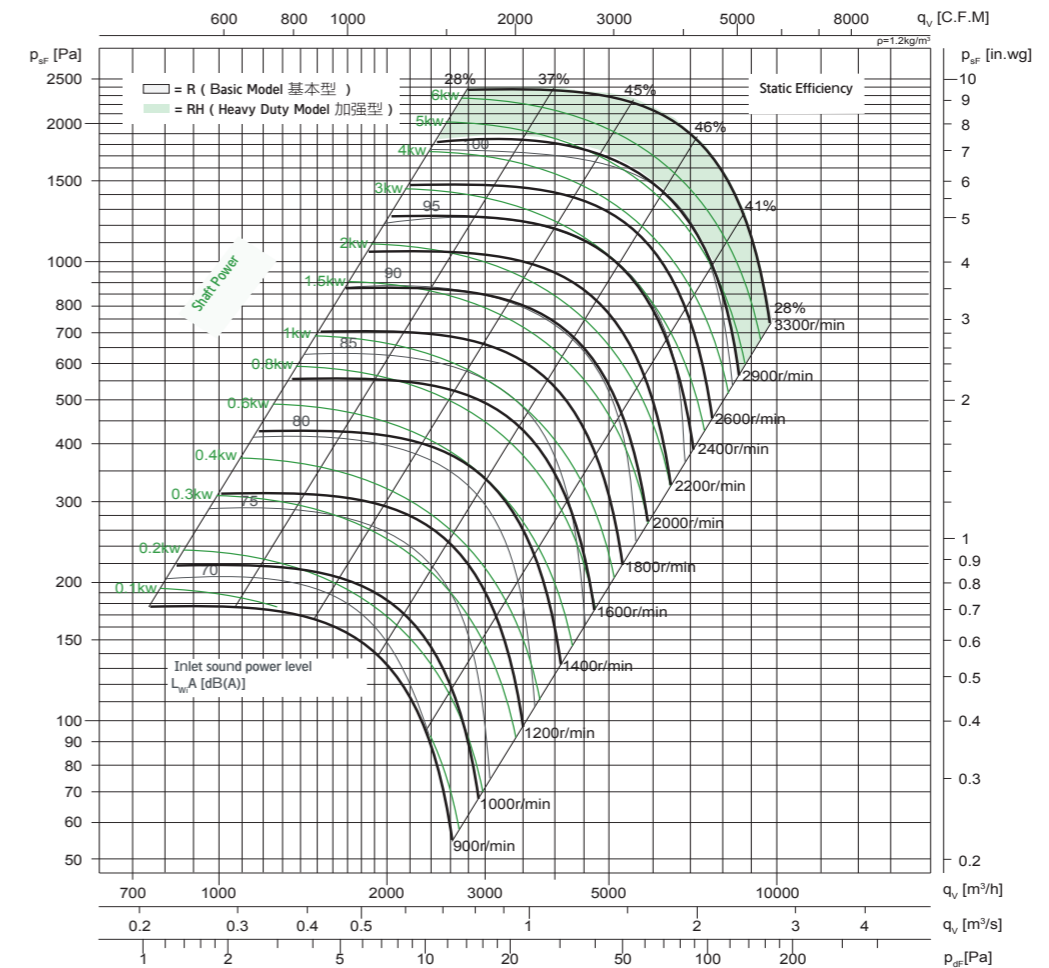
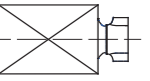
Wheel diameter	叶轮直径	D = 400 mm	Fan weight	风机质量(不含电机)	m = 25 / 25 kg
Moment of inertia	转动惯量	J = 0.162 kg m <sup>2</sup>	Maximum speed	极限转速	n = 3300 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wO</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wO</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w(A)</sub>

Relative A sound power level for inlet side L<sub>wI</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wI</sub>(A)

Relative A sound power level for outlet side L<sub>wO</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wO</sub>(A)  
L<sub>wO</sub>(A)=L<sub>wI</sub>(A)+ΔL<sub>w(A)</sub>

Static Efficiency	dB
28	1
37	1
45	2
46	2
41	3
28	3

63	125	250	500	1000	2000	4000	8000	Hz
-25	-16	-12	-5	-6	-6	-12	-13	dB
-25	-16	-12	-5	-6	-6	-12	-13	dB
-28	-20	-12	-5	-6	-5	-11	-14	dB
-28	-21	-12	-6	-6	-5	-11	-13	dB
-28	-23	-15	-7	-5	-4	-11	-20	dB
-29	-25	-18	-8	-5	-4	-12	-29	dB

63	125	250	500	1000	2000	4000	8000	Hz
-20	-14	-11	-5	-6	-7	-13	-14	dB
-18	-14	-10	-5	-6	-7	-13	-14	dB
-20	-15	-9	-5	-7	-7	-13	-16	dB
-19	-15	-8	-6	-6	-7	-12	-14	dB
-18	-17	-12	-6	-5	-5	-12	-21	dB
-18	-18	-14	-7	-5	-4	-13	-29	dB



技术参数 Technical Data

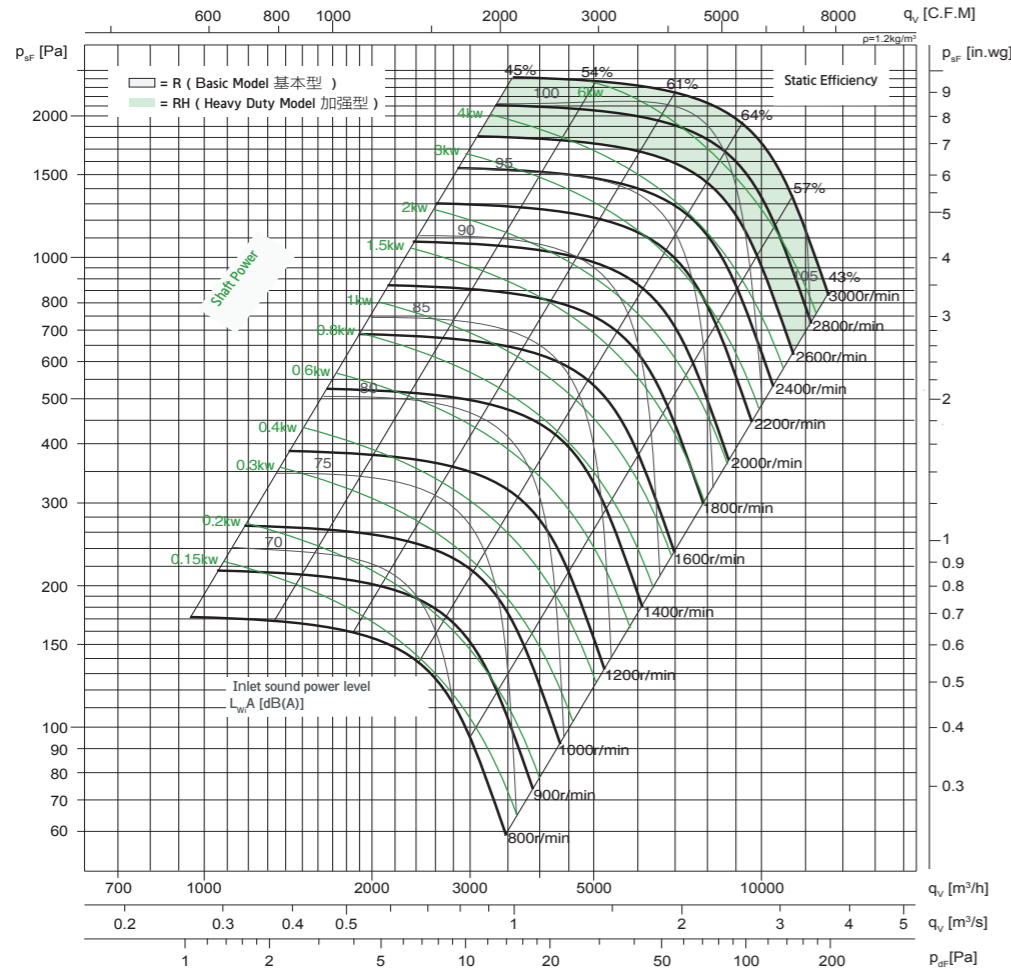
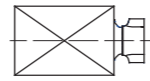
Wheel diameter	叶轮直径	D = 450 mm	Fan weight	风机质量(不含电机)	m = 35 / 37 kg
Moment of inertia	转动惯量	J = 0.26 kg m <sup>2</sup>	Maximum speed	极限转速	n = 3000 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>w0</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声功率性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>w0</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w</sub>(A)

Relative A sound power level for inlet side L<sub>wi</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi</sub>(A)

Relative A sound power level for outlet side L<sub>w0</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>w0</sub>(A)  
L<sub>w0</sub>(A)=L<sub>wi</sub>(A)+ΔL<sub>w</sub>(A)

Static Efficiency	dB
45	1
54	1
61	2
64	2
57	3
43	3

63	125	250	500	1000	2000	4000	8000	Hz
-33	-13	-9	-8	-4	-7	-14	-22	dB
-34	-15	-10	-7	-4	-7	-14	-22	dB
-35	-18	-12	-7	-4	-6	-13	-22	dB
-38	-23	-14	-7	-4	-6	-13	-22	dB
-40	-24	-14	-8	-4	-5	-12	-23	dB
-41	-25	-15	-8	-4	-5	-12	-24	dB

63	125	250	500	1000	2000	4000	8000	Hz
-28	-11	-8	-8	-4	-8	-15	-23	dB
-27	-12	-8	-7	-4	-7	-14	-23	dB
-27	-13	-8	-7	-4	-7	-15	-23	dB
-29	-17	-10	-7	-4	-7	-14	-23	dB
-30	-18	-11	-7	-4	-6	-13	-24	dB
-30	-18	-12	-7	-4	-5	-13	-24	dB

技术参数 Technical Data

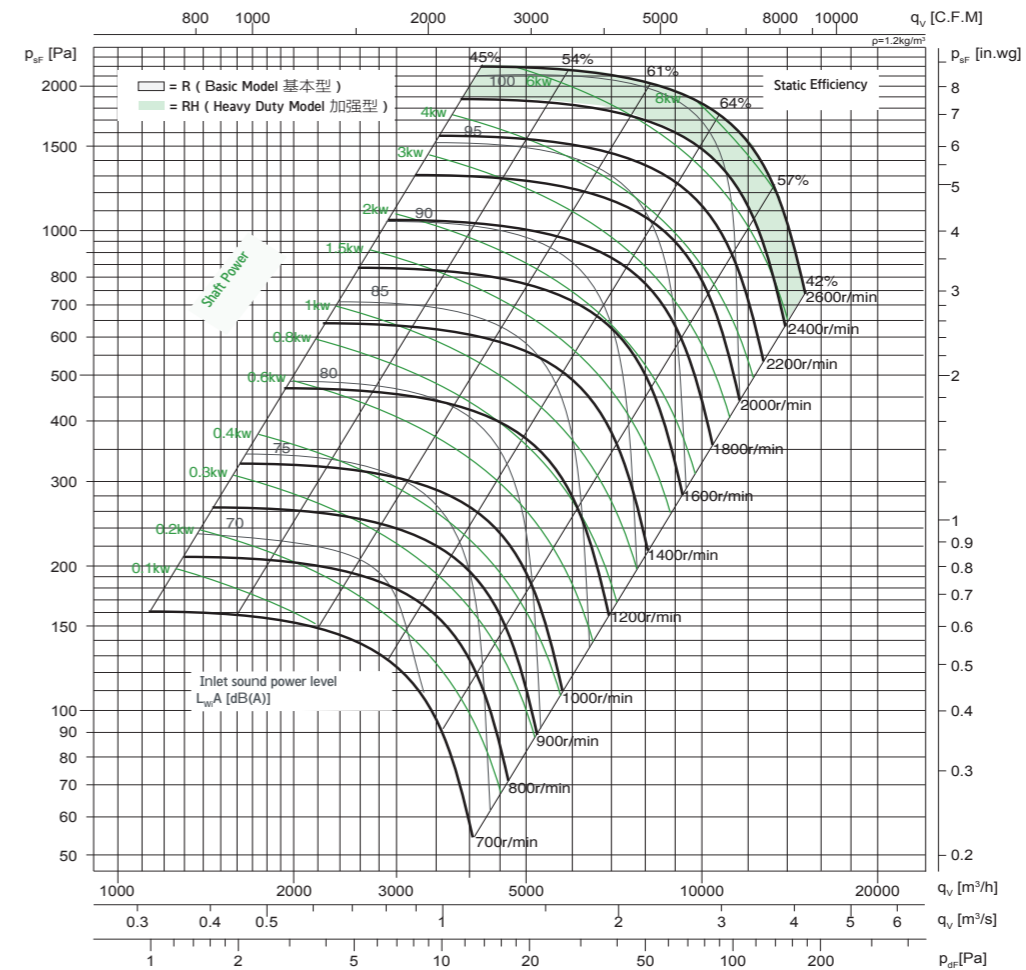
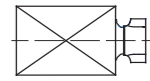
Wheel diameter	叶轮直径	D = 500 mm	Fan weight	风机质量(不含电机)	m = 39 / 40 kg
Moment of inertia	转动惯量	J = 0.45 kg m <sup>2</sup>	Maximum speed	极限转速	n = 2600 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>w0</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声功率性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>w0</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w</sub>(A)

Relative A sound power level for inlet side L<sub>wi</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi</sub>(A)

Relative A sound power level for outlet side L<sub>w0</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>w0</sub>(A)  
L<sub>w0</sub>(A)=L<sub>wi</sub>(A)+ΔL<sub>w</sub>(A)

Static Efficiency	dB
45	1
54	1
61	2
64	2
57	3
42	3

63	125	250	500	1000	2000	4000	8000	Hz
-33	-13	-9	-8	-4	-7	-14	-22	dB
-34	-15	-10	-7	-4	-7	-14	-22	dB
-35	-18	-12	-7	-4	-6	-13	-22	dB
-38	-23	-14	-7	-4	-6	-13	-22	dB
-40	-24	-14	-8	-4	-5	-12	-23	dB
-41	-25	-15	-8	-4	-5	-12	-24	dB

63	125	250	500	1000	2000	4000	8000	Hz
-28	-11	-8	-8	-4	-8	-15	-23	dB
-27	-12	-8	-7	-4	-7	-14	-23	dB
-27	-13	-8	-7	-4	-7	-15	-23	dB
-29	-17	-10	-7	-4	-7	-14	-23	dB
-30	-18	-11	-7	-4	-6	-13	-24	dB
-30	-18	-12	-7	-4	-5	-13	-24	dB

技术参数 Technical Data

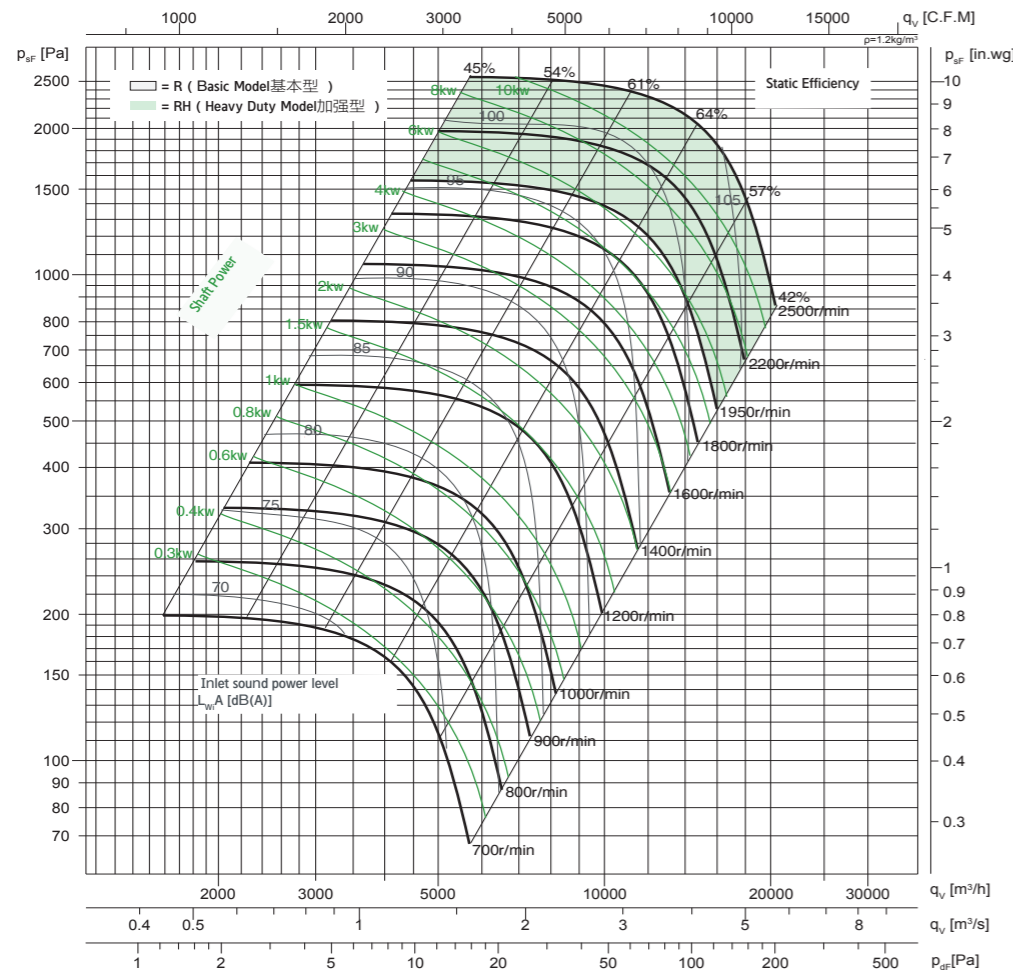
Wheel diameter 叶轮直径	D = 560 mm	Fan weight 风机质量(不含电机)	m = 52 / 67 kg
Moment of inertia 转动惯量	J = 0.74 kg·m <sup>2</sup>	Maximum speed 极限转速	n = 2500 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wo</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wo</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>wo</sub>(A)

Relative A sound power level for inlet side L<sub>wi</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi</sub>(A)

Relative A sound power level for outlet side L<sub>wo</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wo</sub>(A)  
L<sub>wo</sub>(A)=L<sub>wi</sub>(A)+ΔL<sub>wo</sub>(A)

Static Efficiency	dB	63	125	250	500	1000	2000	4000	8000	Hz
45	1	-33	-13	-9	-8	-4	-7	-14	-22	dB
54	1	-34	-15	-10	-7	-4	-7	-14	-22	dB
61	2	-35	-18	-12	-7	-4	-6	-13	-22	dB
64	2	-38	-23	-14	-7	-4	-6	-13	-22	dB
57	3	-40	-24	-14	-8	-4	-5	-12	-23	dB
42	3	-41	-25	-15	-8	-4	-5	-12	-24	dB

技术参数 Technical Data

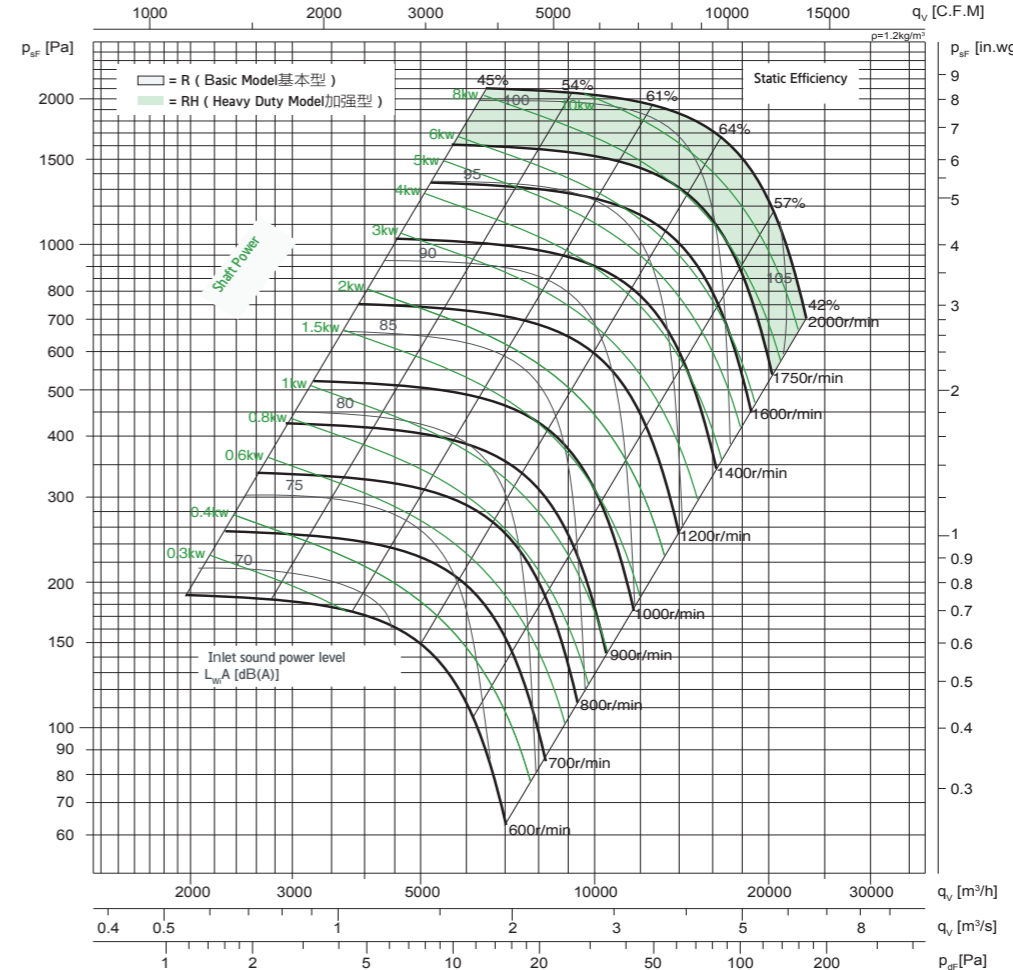
Wheel diameter 叶轮直径	D = 630 mm	Fan weight 风机质量(不含电机)	m = 62 / 73 kg
Moment of inertia 转动惯量	J = 1.2 kg·m <sup>2</sup>	Maximum speed 极限转速	n = 2000 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wo</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wo</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>wo</sub>(A)

Relative A sound power level for inlet side L<sub>wi</sub>(A) at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi</sub>(A)

Relative A sound power level for outlet side L<sub>wo</sub>(A) at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wo</sub>(A)  
L<sub>wo</sub>(A)=L<sub>wi</sub>(A)+ΔL<sub>wo</sub>(A)

Static Efficiency	dB	63	125	250	500	1000	2000	4000	8000	Hz
45	1	-33	-13	-9	-8	-4	-7	-14	-22	dB
54	1	-34	-15	-10	-7	-4	-7	-14	-22	dB
61	2	-35	-18	-12	-7	-4	-6	-13	-22	dB
64	2	-38	-23	-14	-7	-4	-6	-13	-22	dB
57	3	-40	-24	-14	-8	-4	-5	-12	-23	dB
42	3	-41	-25	-15	-8	-4	-5	-12	-24	dB

技术参数 Technical Data

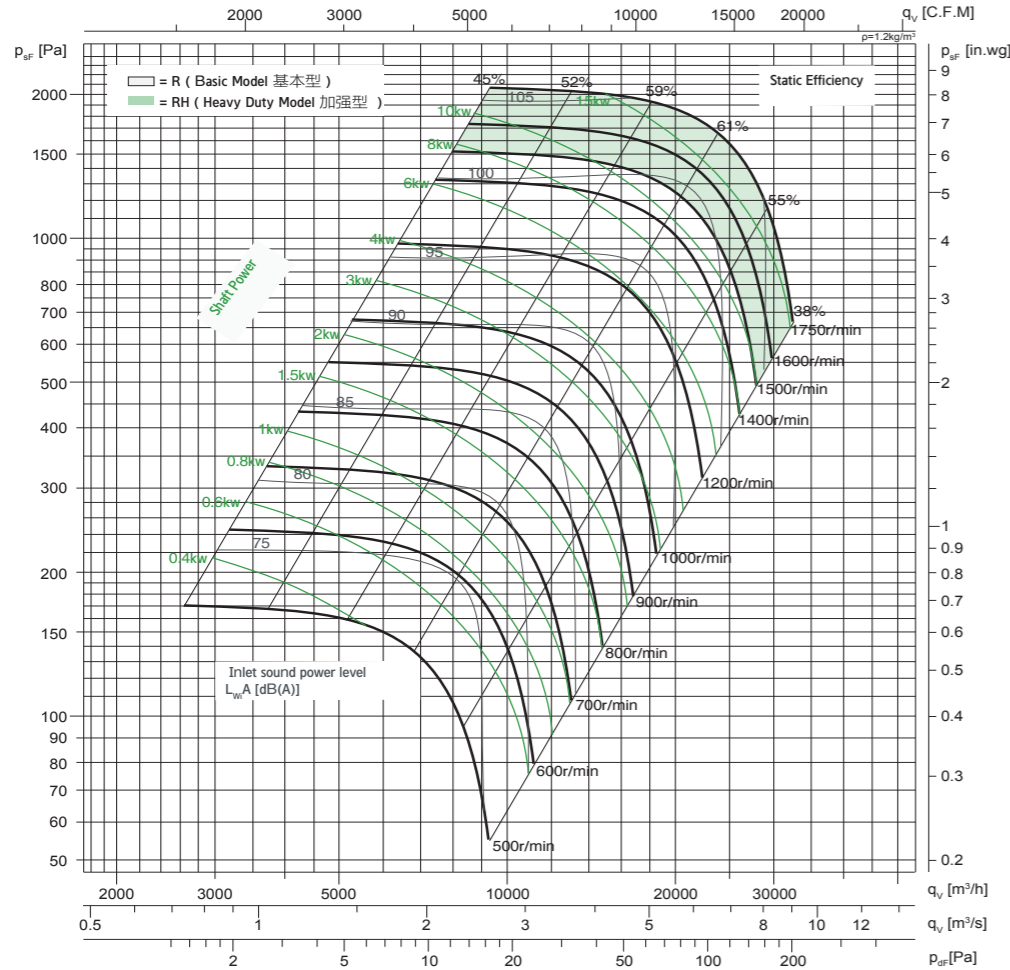
Wheel diameter	叶轮直径	D = 710 mm	Fan weight	风机质量(不含电机)	m = 75 / 102 kg
Moment of inertia	转动惯量	J = 2.43 kg·m <sup>2</sup>	Maximum speed	极限转速	n = 1750 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wO</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声功率性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wO</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet

Relative A sound power level for inlet side L<sub>wI</sub>(A) at octave centre frequencies

Relative A sound power level for outlet side L<sub>wO</sub>(A) at octave centre frequencies

Static Efficiency	dB
45	1
52	1
59	2
61	2
55	3
38	3

63	125	250	500	1000	2000	4000	8000	Hz
-18	-11	-7	-8	-7	-8	-10	-16	dB
-21	-11	-6	-8	-7	-8	-10	-15	dB
-18	-12	-7	-8	-6	-7	-9	-14	dB
-16	-12	-8	-9	-6	-7	-9	-14	dB
-15	-13	-9	-9	-6	-7	-8	-13	dB
-17	-15	-10	-10	-6	-7	-7	-12	dB

63	125	250	500	1000	2000	4000	8000	Hz
-26	-10	-9	-5	-4	-10	-16	-25	dB
-25	-11	-9	-5	-5	-10	-16	-25	dB
-25	-13	-8	-5	-5	-9	-15	-24	dB
-26	-20	-10	-6	-5	-6	-11	-21	dB
-28	-21	-12	-7	-5	-5	-10	-21	dB
-31	-21	-12	-8	-6	-4	-11	-22	dB

技术参数 Technical Data

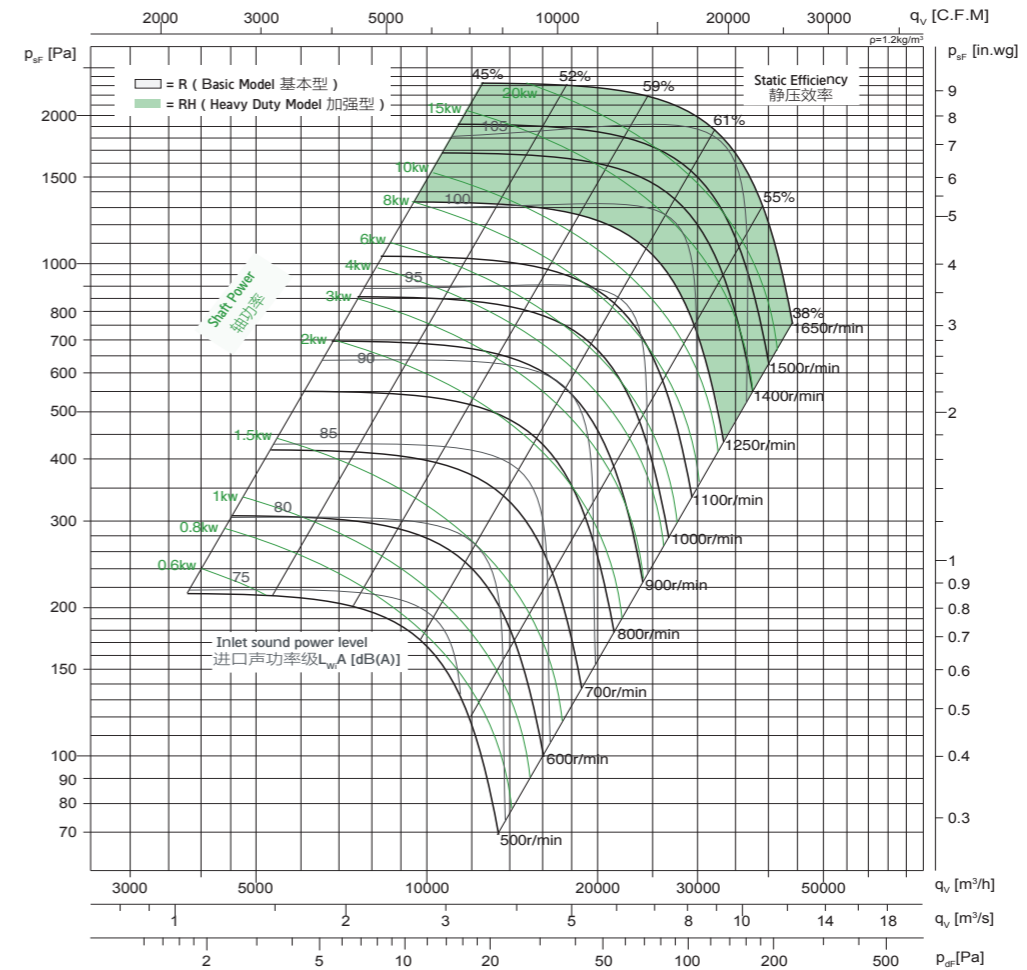
Wheel diameter	叶轮直径	D = 800 mm	Fan weight	风机质量(不含电机)	m = 96 / 153 kg
Moment of inertia	转动惯量	J = 4.88 kg·m <sup>2</sup>	Maximum speed	极限转速	n = 1650 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>wO</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声功率性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>wO</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet

Relative A sound power level for inlet side L<sub>wI</sub>(A) at octave centre frequencies

Relative A sound power level for outlet side L<sub>wO</sub>(A) at octave centre frequencies

Static Efficiency	dB
45	1
52	1
59	2
61	2
55	3
38	3

63	125	250	500	1000	2000	4000	8000	Hz
-18	-11	-7	-8	-7	-8	-10	-16	dB
-21	-11	-6	-8	-7	-8	-10	-15	dB
-18	-12	-7	-8	-6	-7	-9	-14	dB
-16	-12	-8	-9	-6	-7	-9	-14	dB
-15	-13	-9	-9	-6	-7	-8	-13	dB
-17	-15	-10	-10	-6	-7	-7	-12	dB

63	125	250	500	1000	2000	4000	8000	Hz
-26	-10	-9	-5	-4	-10	-16	-25	dB
-25	-11	-9	-5	-5	-10	-16	-25	dB
-25	-13	-8	-5	-5	-9	-15	-24	dB
-26	-20	-10	-6	-5	-6	-11	-21	dB
-28	-21	-12	-7	-5	-5	-10	-21	dB
-31	-21	-12	-8	-6	-4	-11	-22	dB



技术参数 Technical Data

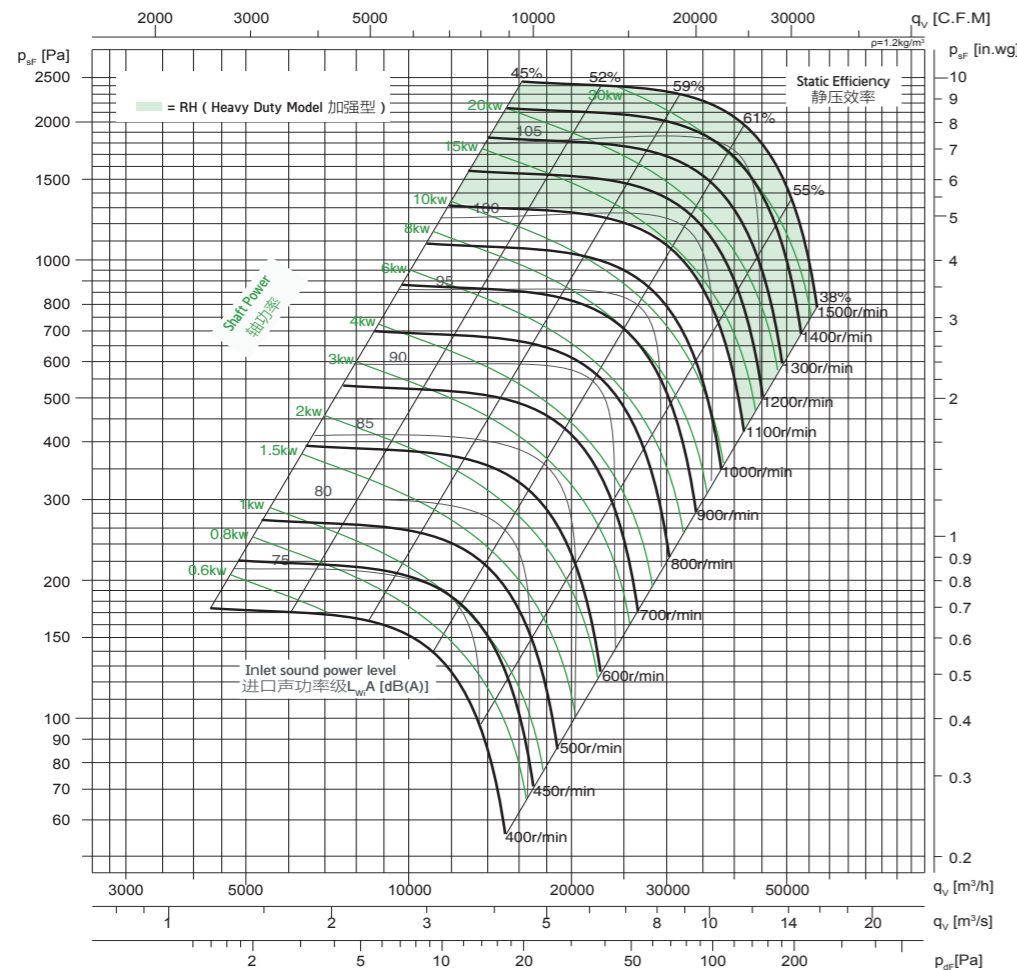
Wheel diameter 叶轮直径	D = 900 mm	Fan weight 风机质量(不含电机)	m = 120 / 193 kg
Moment of inertia 转动惯量	J = 7.32 kg·m <sup>2</sup>	Maximum speed 极限转速	n = 1500 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>w0</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>w0</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w(A)</sub>

Relative A sound power level for inlet side L<sub>wi(A)</sub> at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi(A)</sub>

Relative A sound power level for outlet side L<sub>w0(A)</sub> at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>w0(A)</sub>  
L<sub>w0(A)</sub> = L<sub>wi(A)</sub> + ΔL<sub>w(A)</sub>

Static Efficiency 静压效率 (%)	dB
45	1
52	1
59	2
61	2
55	3
38	3

63	125	250	500	1000	2000	4000	8000	Hz
-18	-11	-7	-8	-7	-8	-10	-16	dB
-21	-11	-6	-8	-7	-8	-10	-15	dB
-18	-12	-7	-8	-6	-7	-9	-14	dB
-16	-12	-8	-9	-6	-7	-9	-14	dB
-15	-13	-9	-9	-6	-7	-8	-13	dB
-17	-15	-10	-10	-6	-7	-7	-12	dB

63	125	250	500	1000	2000	4000	8000	Hz
-26	-10	-9	-5	-4	-10	-16	-25	dB
-25	-11	-9	-5	-5	-10	-16	-25	dB
-25	-13	-8	-5	-5	-9	-15	-24	dB
-26	-20	-10	-6	-5	-6	-11	-21	dB
-28	-21	-12	-7	-5	-5	-10	-21	dB
-31	-21	-12	-8	-6	-4	-11	-22	dB

技术参数 Technical Data

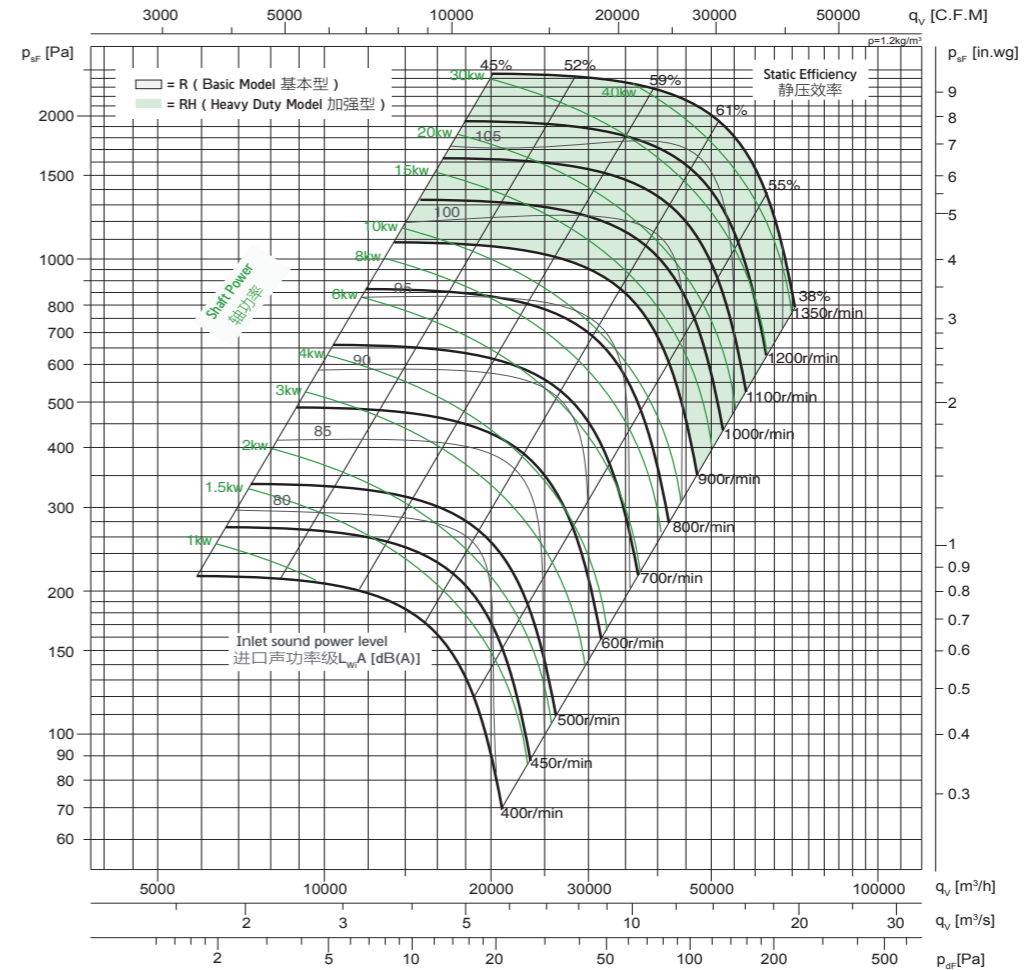
Wheel diameter 叶轮直径	D = 1000 mm	Fan weight 风机质量(不含电机)	m = 146 / 220 kg
Moment of inertia 转动惯量	J = 11.94 kg·m <sup>2</sup>	Maximum speed 极限转速	n = 1350 r/min

性能曲线 Performance Curves

The fan's performance in the roof fan is certified by AMCA for installation type C: ducted inlet, free outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of housing and accessories. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for outlet L<sub>w0</sub>A sound power levels for installation type C: ducted inlet, free outlet.

屋顶风机的内部风机性能经 AMCA 认证, C 类安装: 管道入口, 自由出口。功率额定值(kW)不包括传输损失, 各项性能额定值不包括机壳及其他附件的影响。所示 A 加权声音性能额定值已按 AMCA International 标准 301 计算, 该值为安装类型 C: 管道入口, 自由出口的声功率级(出口 L<sub>w0</sub>A)。

Measured in installation C according to AMCA 211:



噪声频谱 Noise Spectrum

Differential between inlet and outlet  
入口和出口侧差值 ΔL<sub>w(A)</sub>

Relative A sound power level for inlet side L<sub>wi(A)</sub> at octave centre frequencies  
风机入口侧噪声八倍频谱 A 声功率级衰减值 L<sub>wi(A)</sub>

Relative A sound power level for outlet side L<sub>w0(A)</sub> at octave centre frequencies  
风机出口侧噪声八倍频谱 A 声功率级衰减值 L<sub>w0(A)</sub>  
L<sub>w0(A)</sub> = L<sub>wi(A)</sub> + ΔL<sub>w(A)</sub>

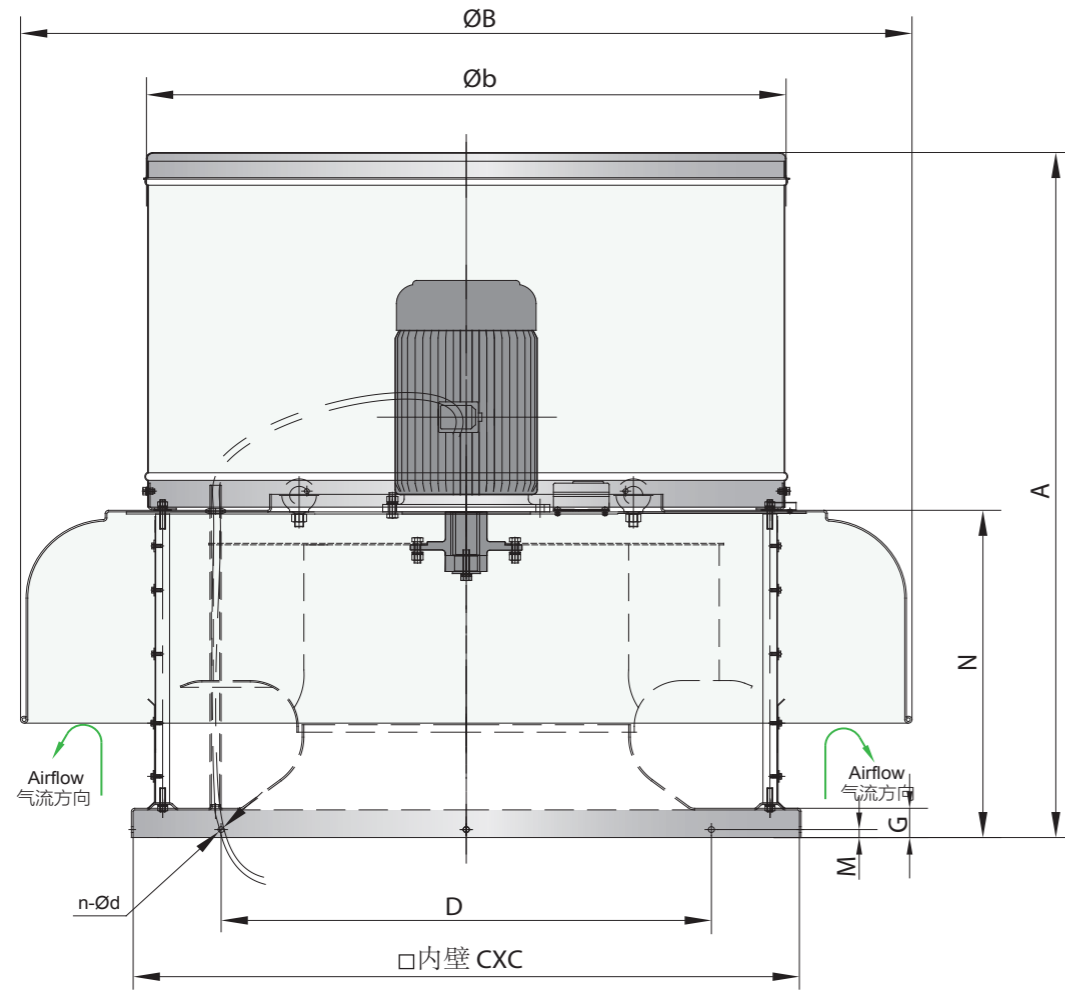
Static Efficiency 静压效率 (%)	dB
45	1
52	1
59	2
61	2
55	3
38	3

63	125	250	500	1000	2000	4000	8000	Hz
-18	-11	-7	-8	-7	-8	-10	-16	dB
-21	-11	-6	-8	-7	-8	-10	-15	dB
-18	-12	-7	-8	-6	-7	-9	-14	dB
-16	-12	-8	-9	-6	-7	-9	-14	dB
-15	-13	-9	-9	-6	-7	-8	-13	dB
-17	-15	-10	-10	-6	-7	-7	-12	dB

63	125	250	500	1000	2000	4000	8000	Hz
-26	-10	-9	-5	-4	-10	-16	-25	dB
-25	-11	-9	-5	-5	-10	-16	-25	dB
-25	-13	-8	-5	-5	-9	-15	-24	dB
-26	-20	-10	-6	-5	-6	-11	-21	dB
-28	-21	-12	-7	-5	-5	-10	-21	dB
-31	-21	-12	-8	-6	-4	-11	-22	dB

WPH系列风机外形尺寸(mm)

WPH Series Fan Overall Dimension

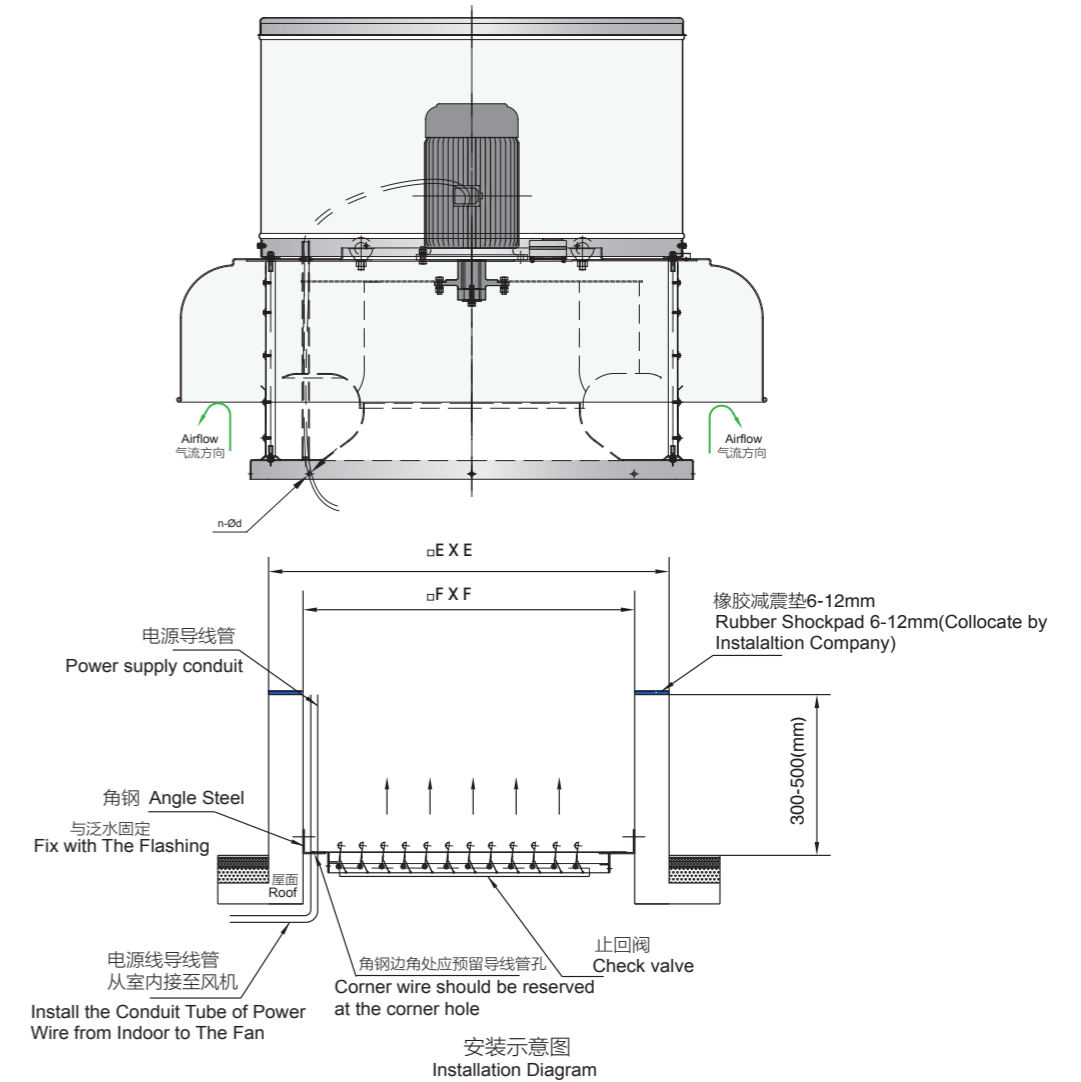


单位: mm

型号	尺寸	A	B	b	C	D	G	M	N	d	n-Ød
WPH 355		649	718	505	540	400	55	15	272	11	8-Ø11
WPH 400		735	848	639	600	400	55	15	308	11	8-Ø11
WPH 450		752	848	639	600	400	55	15	325	11	8-Ø11
WPH 500		877	922	763	750	600	55	15	360	11	8-Ø11
WPH 560		923	922	763	750	600	55	15	406	11	8-Ø11
WPH 630		1027	1098	901	900	720	55	15	445	11	8-Ø11
WPH 710		1070	1098	901	900	720	55	15	488	11	8-Ø11
WPH 800		1227	1420	1148	1000	820	55	15	556	11	12-Ø11
WPH 900		1287	1600	1148	1100	880	55	15	615	11	12-Ø11
WPH 1000		1450	1600	1244	1200	940	55	15	678	11	12-Ø11

WPH混凝土屋面安装示意图

WPH Concrete Roof Installation Diagram



安装示意图  
Installation Diagram

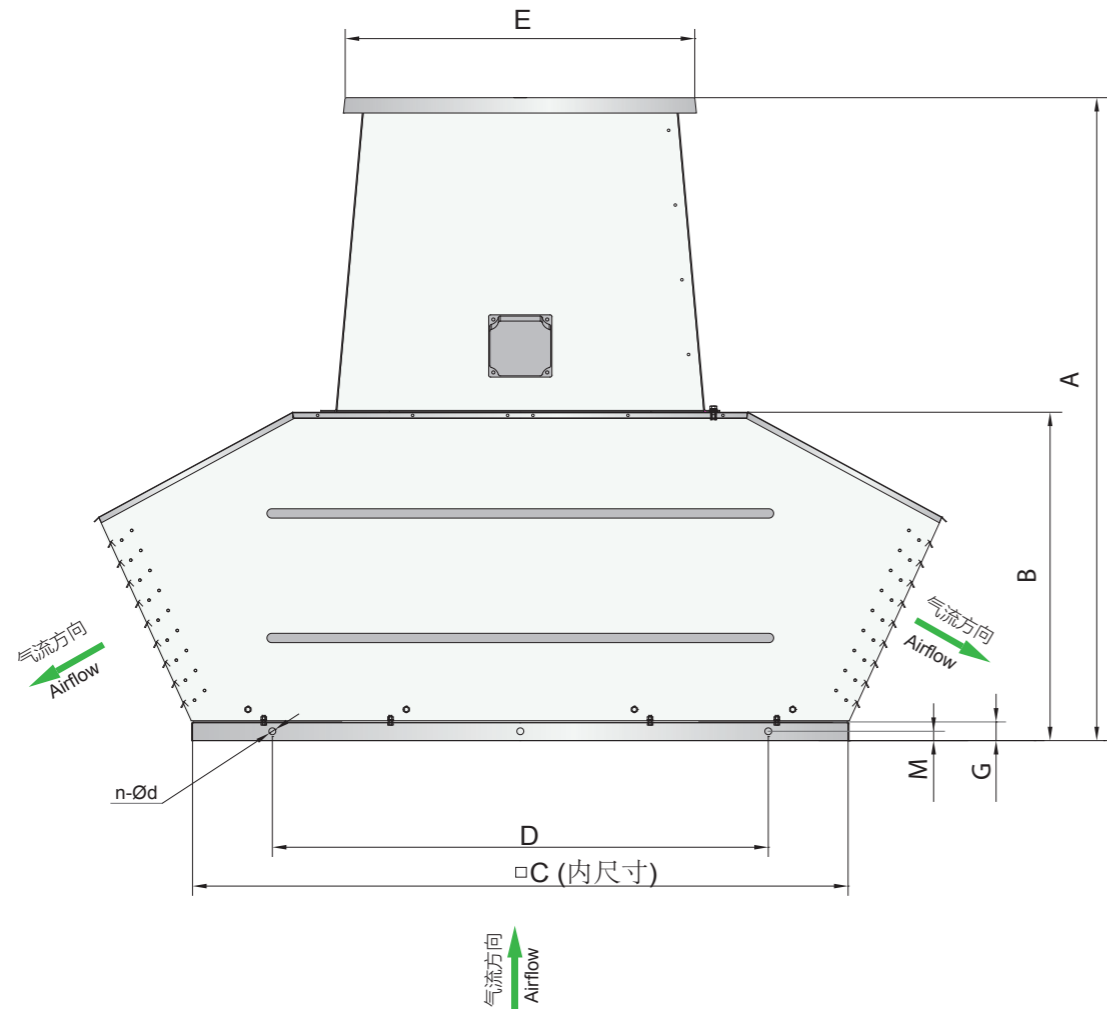
WPH系列屋顶风机泛水尺寸表 (mm)

WPH Installation Measurement Chart

型号	尺寸	E (泛水外沿)	F (泛水内沿)
WPH 355		530	410
WPH 400		590	470
WPH 450		590	470
WPH 500		730	570
WPH 560		730	570
WPH 630		880	720
WPH 710		880	720
WPH 800		980	820
WPH 900		1080	880
WPH 1000		1180	980

WGH系列风机外形尺寸(mm)

WGH Series Fan Overall Dimension



单位: mm

型号	尺寸	A	B	C	D	E	G	M	n-Ød
WGH 315		574	287	435	320	278	50	25	8-Ø9
WGH 355		655	311	595	450	350	50	25	8-Ø9
WGH 400		655	311	595	450	350	50	25	8-Ø9
WGH 450		829	403	665	530	420	50	25	8-Ø9
WGH 500		839	413	665	530	420	60	30	8-Ø9
WGH 560		938	512	939	700	610	60	30	12-Ø9
WGH 630		938	512	939	700	610	60	30	12-Ø9
WGH 710		1062	557	1035	783	552	60	30	12-Ø9
WGH 800		1212	706	1255	1005	720	60	30	12-Ø9
WGH 900		1373	707	1255	1005	691	60	30	12-Ø9



RF-AXA 系列屋顶轴流风机