



离心风机系列

Centrifugal Fans Series

S Y T

企业简介

浙江亿利达风机股份有限公司成立于1994年,是国内规模最大的空调风机、工程风机生产企业之一,公司总部位于浙江台州,总占地面积148000平方米,总资产3亿余元。旗下设有广东亿利达风机有限公司与宁波丰源工贸有限公司,并与德国华德公司合资成立了台州华德通风机有限公司。

1998年亿利达在行业内率先通过ISO9001质量管理体系认证;2001年成为美国AMCA协会会员,按美国AMCA标准要求建立了风机综合性能试验室;2005年通过ISO14001环境体系认证;“亿利达”连续多次被评为浙江省著名商标、浙江省名牌产品。

公司开发生产的离心风机、轴流风机、箱式风机、屋顶风机、管道风机等系列产品,经权威机构检测和广大客户使用,性能达到国内领先水平,是行业的主导产品,多项产品列为国家重点新产品、国家级火炬计划项目、通过AMCA产品认证。产品广泛应用于通风系统、制冷空调等行业。

公司以“致力风机产业发展、开发节能环保产品、树立行业精品典范、打造国际知名品牌”为企业使命,拥有完善的服务体系及良好的信誉,为顾客提供最具性价比的产品和服务,努力打造具有国际竞争力的知名品牌。

亿利达以先进的管理理念以及完善的质量保证体系为基础,不断吸收和引进具有先进水平的高新技术,积极推进产品的持续改进和技术创新,确保每一个生产环节都得到严格的控制,使亿利达始终趋于行业领先地位。

Introduction Of Enterprise

Zhejiang Yilida Ventilator Co., Ltd. established in 1994 is one of the largest A/C ventilator and industry ventilator manufacturers in China. Its headquarter locates in Taizhou, Zhejiang, with a total 148,000 square meters and more than 3 hundred million RMB of total assets. It has two subsidiaries: GuangDong Yilida Ventilator Co., Ltd. and Ningbo FengYuan Industrial Trade Co., Ltd. Moreover, the company and WOLTER have set up a new joint venture company, Taizhou Wolter Ventilation Co., Ltd.

Zhejiang Yilida Ventilator Co., Ltd. passed ISO9001 quality system certification in 1998, and is the first company in the industry to get such a certificate; it became a member of AMCA International in 2001, and established a ventilator laboratory for comprehensive performance according to AMCA International; and it was awarded ISO14001 environment system certificate in 2005. “YILIDA” is awarded Zhejiang Province’s famous trademark and the products are recognized as Zhejiang Province well-known brands in consecutive years.

The line of products, including centrifugal fans, axial fans, cabinet fans, roof fans and duct fans etc. are tested by such authority inspection institutions and validated by most customers. Consequently, they are proved to be at the advanced level in China and stand on the outstanding position in this industry. Most of the products are enlisted into national key new products and Nation Torch project, and licensed to bear the AMCA seal. The products are widely used in Refrigeration Air Conditioning, ventilation system and other various industries.

Zhejiang Yilida Ventilator Co., Ltd’s mission statement: “Dedicate to the development of ventilator industry; develop the energy-saving, environmental products; set up the model of industry; and create a world-known brand”. Yilida will provide customers the most reliable products with very competitive price and high efficient service to build well-known brand in international Competition.

On the basis of the advanced management idea and perfect quality system, Yilida constantly absorbs and adapts the new advanced technology; actively promote the products, precisely control the quality in each of working process, as a result, to keep it standing on the leading position in the industry.

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Wind Follow Me

风 动 由 我

SYT 系列离心式空调风机 CENTRIFUGAL VENTILATORS

概述

SYT系列前向多翼离心式空调风机采用国际同类产品先进技术自行开发设计，通过了AMCA国际认证并取得AMCA印章。该样本中列出的12种规格风机，流量范围从1000m³/h-30000m³/h。具有结构紧凑、效率高、噪声低等特点，是各类柜式中央空调机组、管道式机组及其他暖通、空调、净化、通风设备理想的配套产品。

Outline

The SYT Series of centrifugal air conditioning ventilators was developed by using international advanced technologies. They are licensed to bear the AMCA Seal. The SYT series includes 12 models as described in this brochure. The volume flow ranges of the SYT Series varies from 1000 cubic meters per hour to 30000 cubic meters per hour. Some of the features and characteristics of these ventilators are: forward impeller blading, a wide range of applications, high efficiency, low noise, and low power consumption. These ventilators are ideal for use in central air conditioning systems, heating and ventilating air conditioning systems, and in purifiers. They are also suitable for use in a number of other ventilator applications.



浙江亿利达风机股份有限公司特此证明，此处所示SYT系列离心风机获得了加盖AMCA印章的授权。所示额定值系根据AMCA出版物211和AMCA出版物311所进行测试和程序确定，并符合AMCA认证额定值计划的要求。

这里描述的所有离心风机都已经取得了AMCA印章，他们的认证数据见第08到19页。

Zhejiang Yilida Ventilator Co., LTD. certifies that the SYT Centrifugal Ventilators shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

All of the Centrifugal Ventilators described herein are licensed to bear the AMCA Seal, and their certified ratings are shown on pages 08 through 19.

命名方式

SYT系列离心式风机命名方式由风机系列代号、叶轮名义直径、叶轮名义宽度、结构形式组成。

SYT 7 - 7 L



Designation of Products

The nomenclature of SYT series is composed of nominal diameter of imper and width of impeller.

产品型式

1. 旋向

SYT 系列前向离心风机可分为左旋(LG)和右旋(RD) 两种旋转方式，从风机皮带轮一端正视,叶轮顺时针旋转的称为右旋风机，逆时针旋转的称为左旋风机。

2. 出风口方向

SYT 系列风机可按图 1 所示制成 0°、90°、180°、270°四种出风方向。

Type of Product

1. Direction of Rotation

SYT Series ventilator can be divided into two direction of rotations, left-hand rotation (LG) and right hand rotation (RD); Viewing from end of motor outlet line, if the impeller rotates clockwise, it is called right hand ventilator; If the impeller rotates anticlockwise, it is called left hand ventilator.

2. Direction of Air Outlet

According to Fig 1, SYT Series ventilator can be made in four air-outlet directions: 0°, 90°, 180°, and 270°.

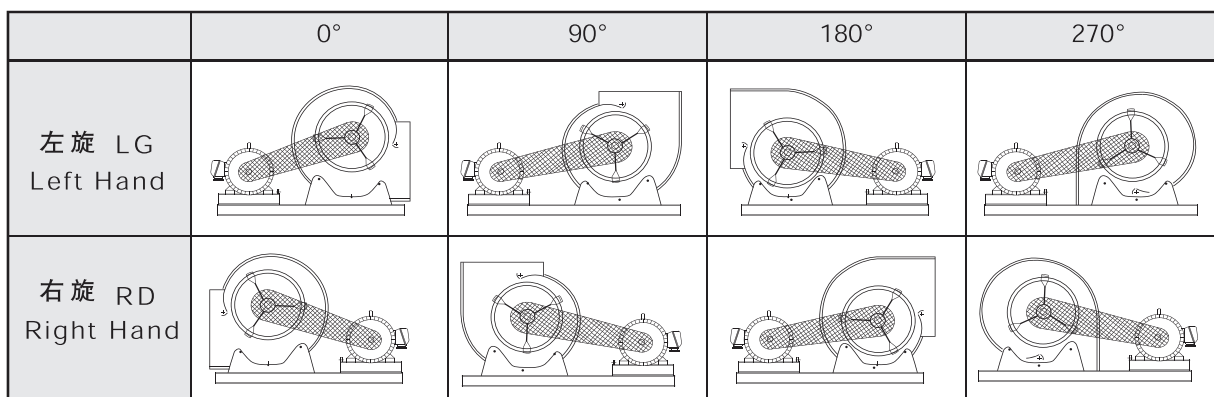


图 1 (Fig1)

3. 结构形式

SYT 系列风机可按图2所示制成L型、R型、L2型、R2型。

3. Type of structure

According to Fig 2, SYT series ventilators can be divided into Category L .Category R .Category L2 and Category R2 .

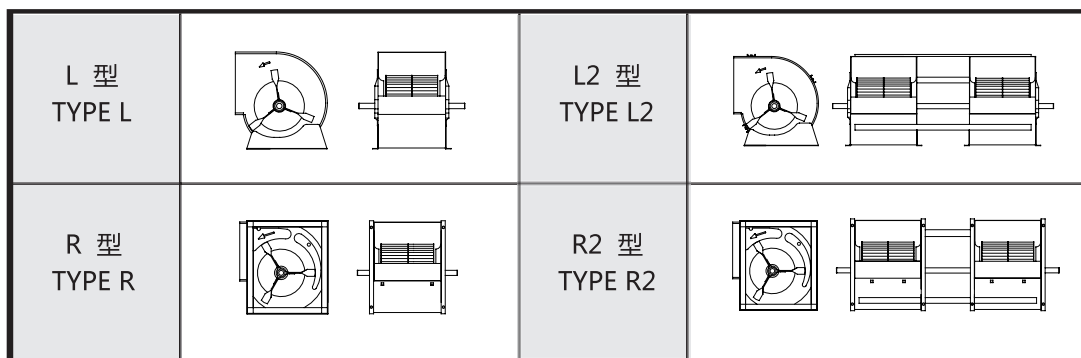


图2 (Fig2)

产品结构

SYT系列离心系列风机主要由机壳、叶轮、框、架、轴承、轴、出口法兰构成。

1. 机壳

机壳采用热镀锌钢板制造，侧板具有符合空气动力的外形，进风口整体拉伸成型，蜗板采用点焊或咬口的方式与侧板连成一体。

2. 叶轮

前向多翼叶轮采用优质热镀锌钢板制成，叶片设计成符合空气动力的特定形状，使得效率最高、噪声最低。叶片用铆爪固定在中盘及端圈上，在最大功率连续运转时，叶轮将具备足够的刚度。叶轮出厂前按高于国家标准的内控动平衡等级全检合格。

3. 框架

R型风机框架采用热镀锌钢板剪切、折弯制成，TOX连接保证了所需的尺寸精度和应有的刚度。

4. 轴承

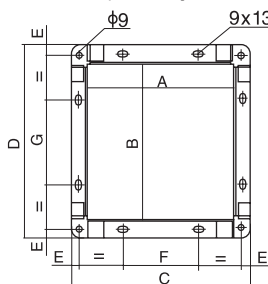
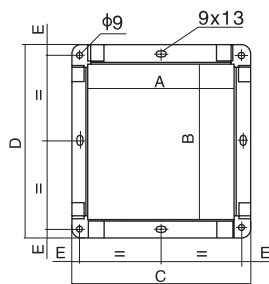
SYT系列风机均采用优质滚珠轴承，并根据噪声最低来选择，该轴承已预先加润滑油并自动对中；轴承安装在轴承支架上，并设有防振垫圈。

5. 轴

风机轴采用40Cr或45#钢经粗加工、调质处理及磨削加工制成，严格控制轴径尺寸公差及形位公差，每根轴均经过涂覆防锈处理。

6. 出风口法兰

出风口法兰采用热镀锌钢板制成，出风口法兰与蜗壳的连接采用TOX免焊工艺，外观精美，并具有足够的刚度与强度。



型号Typ	7-7	8-8	9-7	9-9	10-8	10-10	12-9	12-12	15-11	15-15	18-13	18-18
A	259	287	232	298	265	331	309	395	373	471	430	557
B	228	256	262	262	289	289	341	341	404	404	478	478
C	299	327	272	338	321	387	365	451	429	527	486	613
D	268	296	302	302	345	345	397	397	460	460	534	534
E	10	10	10	10	13	13	13	13	13	13	13	13
F	\	\	\	\	\	\	125	150	145	180	160	200
G	\	\	\	\	\	\	140	140	160	160	180	180

Construction of Product

SYT series ventilators are mainly consisted of scroll, impeller, frame bearing, shaft, outlet flange.

1). Scroll

The scroll is made of hot galvanizing steel sheet. Its side plate has an outline complying with aerodynamics. The scroll plate fixed to the side plates by means of "electric spot welding".

2. Impeller

For wards curved radial impellers the impeller is made of high grade hot galvanizing steel sheet and is designed to a special configuration according to aerodynamics to make the efficiency highest and the noise lowest. The impeller is fixed on the middle disk plate and on the end ring with riveting grippers. The impeller has enough rigidity during continuous rotation with maximum power. all impellers have passed all-round dynamic balance test according to the Company Standard which is higher level than National Standard.

3. Frame

The frames for type R ventilators are made of galvanized steel angle iron bars. The cutting and bending of the frame parts, as well as the TOX connections, are formed with the use of molds to assure their high accuracy and the rigidity of the frames.

4. Bearings

Ball bearings are used in all of the SYT Series ventilators. They are high quality bearings and they are selected to minimize the ventilator noise levels. The bearings are prelubricated, sealed, and self-centering the bearings are mounted using vibration resistant washers. Type k ventilators bearings are supplied with lubrication fittings.

5. Shaft

The shafts are made of 40 Cr or C45 carbon steel bars. The shafts are rough machined and then stress relieved before final machining. The shaft diameters are machined to very accurate tolerance levels and they are fully checked to assure precision fits. They are coated after assembly in order to provide corrosion resistance.

6. Outlet Flange

The outlet flange is made of galvanized steel. The connections of the flange components to each other and to the scroll are made using a TOX non-welding process. This maintains a good flange appearance while also providing sufficient strength and rigidity.



风机性能

1. 该样本中风机性能均指在标准状态下的性能，即风机进气状态为：

进气压力 $P_a = 101.325\text{KPa}$
 进气温度 $t = 20\text{ }^{\circ}\text{C}$
 进气气体密度 $\rho = 1.2\text{Kg/m}^3$

若用户实际使用的气体进气状态或使用的风机转速改变时则可按下列关系式换算：

$$\frac{Q_0^*}{Q_0} = \frac{n^*}{n}$$

$$\frac{P_0^*}{P_0} = \frac{n^2}{n^2} \cdot \frac{\rho^*}{\rho} \quad \frac{P_0^*}{P_0} = \frac{n^2}{n^2} \cdot \frac{P_a^*}{P_a} \cdot \frac{273+t}{273+t^*}$$

$$\frac{N_{in_0}^*}{N_{in_0}} = \frac{n^3}{n^3} \cdot \frac{\rho^*}{\rho} \quad \frac{N_{in_0}^*}{N_{in_0}} = \frac{n^3}{n^3} \cdot \frac{P_a^*}{P_a} \cdot \frac{273+t}{273+t^*}$$

上述式中

- 流量 $Q_0(\text{m}^3/\text{h})$ 、全压 $P_0(\text{Pa})$ 、转速 $n(\text{r}/\text{min})$ 、内功率 $N_{in_0}(\text{Kw})$ 由性能曲线上查得。
- 右上角加符号“*”的则为用户实际使用气体进气状态下所需的性能参数。
- 上式中略去了相对湿度的差别。

2. 性能曲线图上的功率 N_{in_0} 是指风机的内功率。

- 风机轴功率： $N_s = N_{in_0}/\eta_m$
 式中： N_s —风机轴功率
 η_m —风机机械效率
 风机机械效率的取值方法可参照表1。

Performance of Ventilator

1. The ventilator performance in this catalogue denotes the performance in standard conditions. It denotes air inlet conditions of ventilator as follows:

Air inlet pressure $P_a = 101.325\text{KPa}$
 Air temperature $t = 20\text{ }^{\circ}\text{C}$
 Inlet gas density $\rho = 1.2\text{Kg/m}^3$

If the practical air inlet conditions of constomer or the speed of the operating ventilator changes, the conversion can be carried out according to the following expression:

$$\frac{Q_0^*}{Q_0} = \frac{n^*}{n}$$

$$\frac{P_0^*}{P_0} = \frac{n^2}{n^2} \cdot \frac{\rho^*}{\rho} \quad \frac{P_0^*}{P_0} = \frac{n^2}{n^2} \cdot \frac{P_a^*}{P_a} \cdot \frac{273+t}{273+t^*}$$

$$\frac{N_{in_0}^*}{N_{in_0}} = \frac{n^3}{n^3} \cdot \frac{\rho^*}{\rho} \quad \frac{N_{in_0}^*}{N_{in_0}} = \frac{n^3}{n^3} \cdot \frac{P_a^*}{P_a} \cdot \frac{273+t}{273+t^*}$$

where:

- Volume $Q_0(\text{m}^3/\text{h})$, total pressure $P_0(\text{Pa})$, speed $n(\text{r}/\text{min})$ can be obtained from Performance chart.
- Asterisk (*) on the upper right corner denotes the performance parameter needed by the customers in practical gas inlet conditions.
- The difference in relative humidity is omitted from the above-mentioned formulas.

2. The power (N_{in_0}) on the performance chart the internal power of the ventilator.

- Shaft power of ventilator: $N_s = N_{in_0}/\eta_m$
 where: N_s —Shaft power of ventilator
 η_m —Mechanical efficiency of ventilator
 The value of mechanical efficiency of ventilator can be obtained from Table 1.

风机传动方式Way of ventilator driving	η_m
电机直联传动electric motor directiy driven	1
联轴器直联传动Coupling directly driven	0.98
三角皮带传动V-belt driven	0.95

表1 (Table1)

(2) 配套电机的功率: $N = N_s \cdot K$
 式中: N —配套电机的功率
 K —电机容量安全系数

电机容量安全系数的取值方法可参照表2。

(2) The rated power of the drive motor equals the total required shaft input power multiplied by the safety factor:

$$N = N_s \cdot K$$

where: N = rated power of drive motor
 K = required safety factor

The required safety factor is provided in Table 2.

电机功率Power of electric motor(Kw)	K值Value k
$\leq 2.2\text{Kw}$	1.2
$\leq 11\text{Kw}$	1.15
$> 11\text{Kw}$	1.1

表2 (Table2)

3. 噪声：噪声等级显示在每个性能表上。
Lw_{iA}为总声功率级的A计权声级。计算所得的总声功率级用表3中倍频谱的A计权衰减值换算至A声功率级。

3. Noise: The noise levels shown on each performance chart, Lw_{iA}, refer to the overall sound power "A-Weighted" levels. The computed sound power levels were converted into A-Weighted levels using adjustments to the octave band spectrum as follows:

中心频率 Center Frequency Hz	63	125	250	500	1000	2000	4000	8000
调整为A-Weighted Adjustment dB(A)	-25.5	-12.5	-8.5	-3	0	+1	+1	-1

表3 (Table3)

总声压级L_piA能利用总声能等级按如下公式计算：
无边界状态：L_piA = Lw_{iA} - (20 log₁₀ d) - 11
室内状态：L_piA = Lw_{iA} - (20 log₁₀ d) - 7
式中：d = 离风机距离(m)

The overall sound pressure levels, L_piA, can be computed from the overall sound power levels as follows:
Free Field Conditions: L_piA = Lw_{iA} - (20 log₁₀ d) - 11
Room Conditions: L_piA = Lw_{iA} - (20 log₁₀ d) - 7
Where: d = distance from fan in meters.

皮带传动安装

1. 拆除风机轴端的保护并检查有无缺口和毛刺。
2. 检查风机和电机轴之间的平行度。
3. 中心距应控制在 $0.7(d_1+d_2) < a < 2(d_1+d_2)$ ，后倾风机皮带速度应控制在25~35m/s。
4. 将皮带轮套在轴上滑进去，不要敲击，以免损伤轴承。
5. 用一根直尺把风机和电机上的带轮对齐并紧固，如图3。
6. 把皮带套进皮带轮，不要撬、挤压，以免损伤皮带。
7. 调整张紧度直至皮带看起来松紧适度。风机运行几分钟后，再调整皮带至合适的张紧度。
8. 关掉风机，移动电机座以调整张紧度。当风机工作时，皮带紧的一边应是一个皮带轮连成的一直线，松的一边有轻微弧形。

V-BELT DRIVE INSTALLATION

1. Remove the protective coating from the ends of the fan shaft and assure that the shaft ends are free of nicks and burrs.
2. Check fan and motor shafts for parallel and angular alignment.
3. The center distance must be controlled as $0.7(d_1+d_2) < a < 2(d_1+d_2)$; the belt speed of the fan should be more than 25 m/s, but less than 35 m/s, ($25 < v < 35$ m/s).
4. Slide sheaves on to the shafts - do not drive the sheaves on to the shafts as this may result in bearing damage.
5. Align fan and motor sheaves with a straight-edge or string, and tighten, as shown in Fig3.
6. Place belts over the sheaves. Do not pry or force the belts as this could result in damage to the cords within the belts.
7. Adjust the belt tension until the belts appear snug. Run the unit for a few minutes and allow the belts to set properly.
8. Switch off the fan, adjust the belt tension by moving the motor base. When in operation, the tight side of the belts should be in a straight line from sheave to sheave and there should be a slight bow on the slack side.

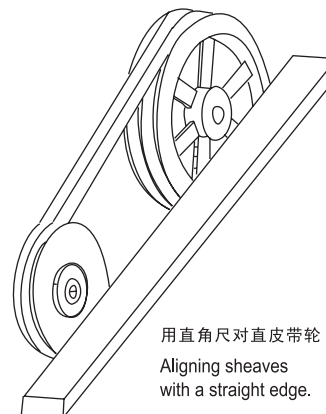
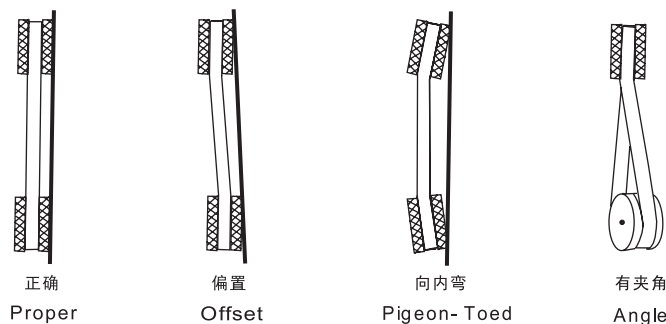


图3 (Fig3)



皮带松紧度

合适的皮带松紧度对使用寿命来说很重要太紧会给皮带和轴承带来额外的负载，降低它们的使用寿命，太松会出现皮带打滑现象而产生热能并降低使用寿命。

皮带松紧度量具可用来判断皮带是否松紧合适。量具本身带有一个尺表，根据皮带轮中心距和皮带横截面确定皮带张紧力的大小，如图4和表3。

如没有皮带张紧度量具，应调节皮带松紧至风机启动时皮带不发出尖叫声为止，如发出短促的叫声是允许的。

拉紧皮带后、开动风机之前，重新检查皮带轮的对齐情况，如有必要则重新调整对齐。新皮带在开始使用时可能有点拉伸，则应在运行几天后重新检查皮带张紧度。

与中心距有关的皮带张紧度指示
Belt tension indicator applied to mid centre distance.

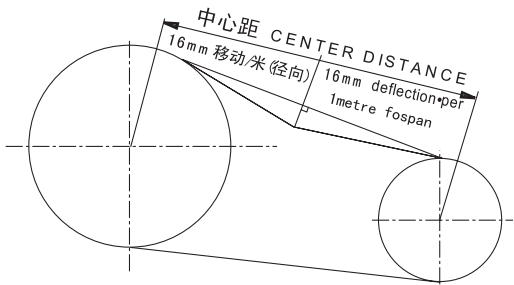


图4 (Fig4)

轴承润滑

风机使用带座轴承，可通过加油嘴注入润滑油。润滑油有效期取决于油脂类型、轴承的转速和工作温度。判断是否加油的最好办法是当加新油时观察清除下来的旧油脂，如果清除下来的油脂看起来还是新的，可延长换油脂的间隔，如果清除下来的油脂比新的黑得多表明油脂已氧化，应缩短换油脂的间隔。

说明

1) . 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以及电机型号规格。若需配套皮带、皮带轮、电机、安装底座等配件及它特殊要求可在订货时提出。

Belt tension

A proper level of belt tension is required in order to obtain a satisfactory belt life. If the belt tension level is too high, then excessive loads will be imposed on the belts and the bearings, and this will reduce the lives of both of these components. If the belt tension level is too low, then the belt will slip. Belt slippage generates a large amount of heat, and this heat will drastically reduce the life of a belt. Belt-tensioning gauges can be used to determine whether the belts are tensioned properly. A chart is normally supplied with the gauge which indicates the ranges of forces required to deflect the belts by a given amount to obtain the proper belt tension level. The required forces are based upon the center distance of the sheaves and the belt cross-section. The belts are properly tensioned when the forces required to deflect the belt are within the specified range, see Fig 4 and Table 3.

If a belt-tensioning gauge is not available, then the belt should be tightened just enough so that the belt does not squeal when the ventilator is started. A very short period of noise during the starting of a ventilator is allowable, but a squeal lasting several seconds or longer is not acceptable. After tensioning the belts and before starting the ventilator, check to make sure that the sheaves are properly aligned. Realign the sheaves if necessary. Note that new belts may stretch a little during initial use, so the belt tension level should be checked after a few days of operation.

皮带截面 Belt Section	使皮带向下移动16mm径向距离1米所需的力 Force required to deflect belt 16mm per metre of span		
	张紧力 (小皮带轮直径) Sma Pulley Diameter (mm)	牛顿	千克力 Kilogram force (Kgf)
SPZ	56-95	13-20	1.3-2.0
	100-140	20-25	2.0-2.5
SPA	80-132	25-35	2.5-3.6
	140-200	35-45	3.6-4.6
SPB	112-224	45-65	4.6-6.6
	236-315	65-85	6.6-8.7
SPC	224-335	85-115	8.7-11.7
	375-560	115-150	11.7-15.3
A	80-140	10-15	1.1-1.5
B	125-200	20-30	2.0-3.1

表3 (Table3)

Bearing Lubrication

The ventilator bearings are filled with lubricant when they come from the factory, so the bearings do not require any additional grease to be supplied before starting the ventilator.

The ventilator that are equipped with pillow block bearings are provided with lubrication fittings, and these fittings allow for additional lubrication to be supplied to the bearings at regular intervals. The allowable period of time between lubrication of these bearings depends upon the operating speeds and temperatures of the bearing as well as on the type of grease used. The best way to determine the required frequency of lubrication is to inspect the condition of the grease that is discharged from the seals when new grease is added. If the discharged grease looks similar to the new grease, then a longer period of time between lubrications is possible. If the discharged grease is much darker than the new grease, then this indicates that the grease is being oxidized and more frequent lubrications of the bearings are required.

Instructions

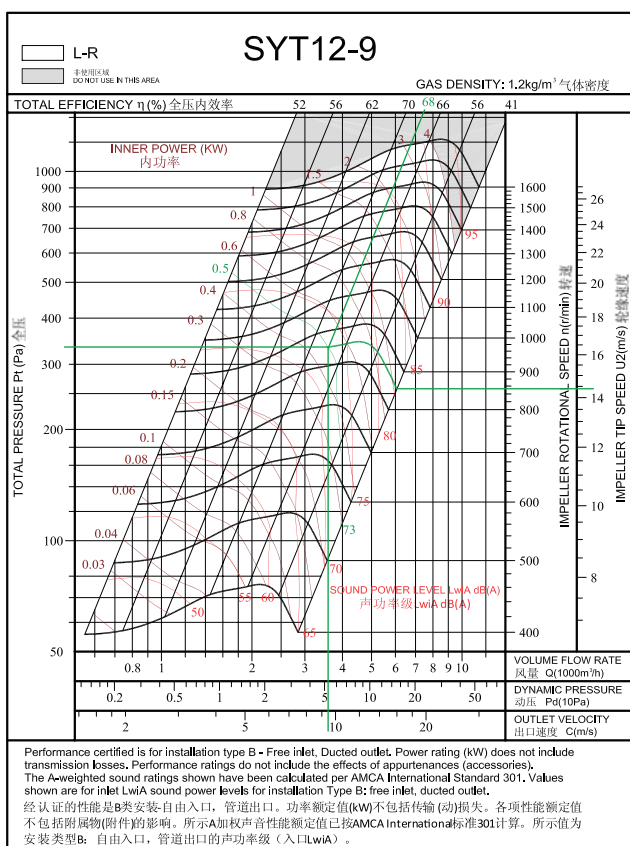
1) . During ordering it is necessary to state the type of ventilator, speed, air volume, air pressure, direction of air outlet, rotating direction, type of electric motor and its specifications.

- 2) . 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, 若有损伤应修复后再安装使用。
- 3) . 检查机壳和其它壳体内部, 不应有掉入、遗留的工具和杂物。
- 4) . 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。
- 5) . 风管与出风口之间应采用软连接, 接头不得拉紧。
- 6) . 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, 确认无这些现象时方可进行试转。
- 7) . 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转而烧毁, 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。
- 8) . 风机在无较大腐蚀性气体、不含酸(碱)性和尘粒物质小于150mg/m³的气体、温度小于85℃大于-20℃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。

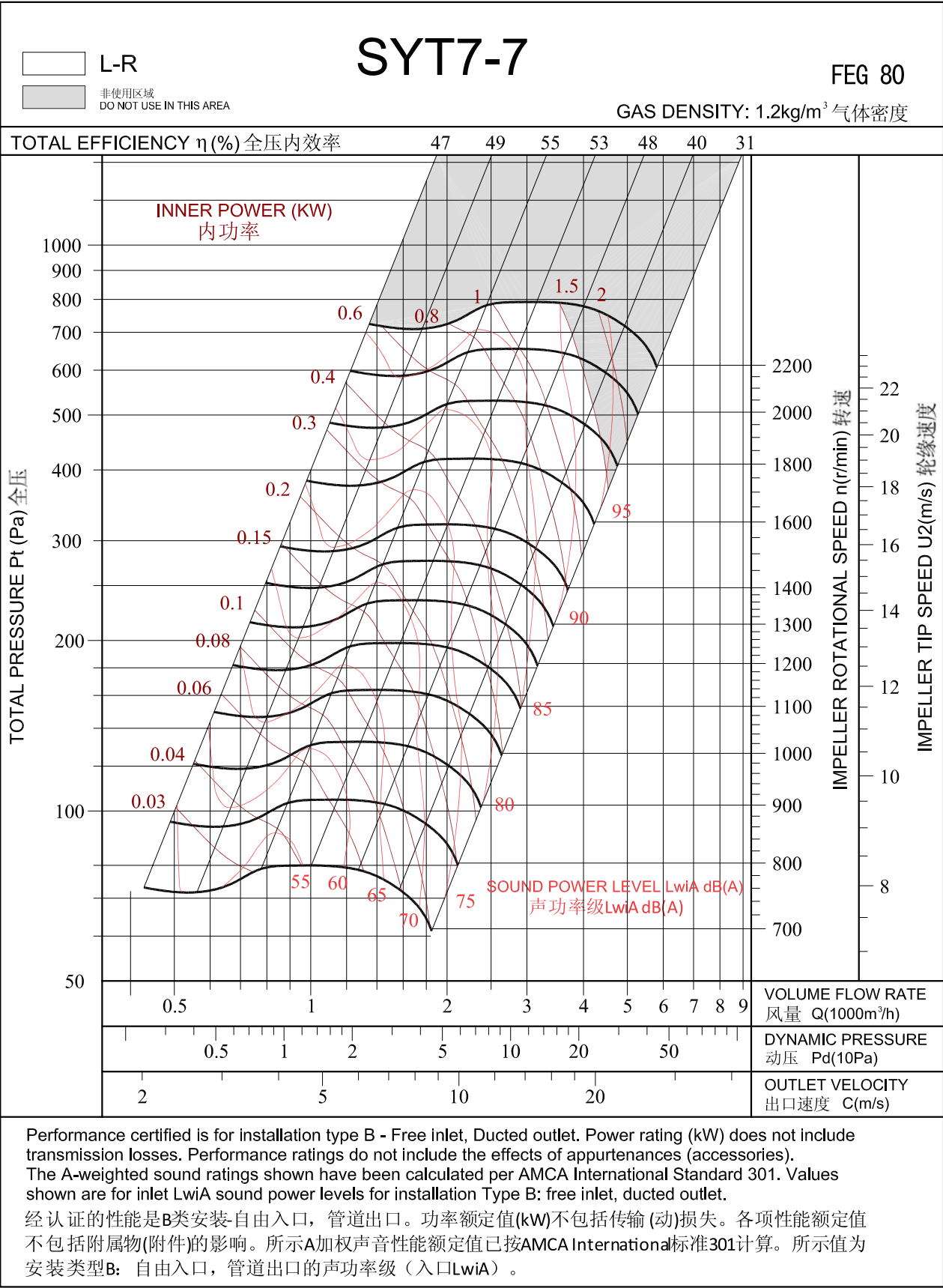
- 2) Prior to installation, the ventilator should be carefully inspected. Special care should be taken in checking the shaft, impeller and bearings. If there is an indication of any damage, then the damaged parts should be repaired or replaced before the ventilator is installed or operated.
- 3) The inside of the scroll and casing need to be checked to make sure that there are no foreign objects contained therein, such as tools or loose parts.
- 4) The rotational directions of the motor and impeller should be checked to assure that they are consistent with each other.
- 5) A flexible connector should be used between the ventilator outlet flange and its mating pipe. The bolts used to fasten the outlet flange to the pipe should not be over-tightened.
- 6) Following the installation, the impeller should be turned by hand or with the use of a wrench to make sure that it turns freely. Once this is verified, the ventilator can be operated normally.
- 7) The rated motor power as calculated herein is not sufficient to drive the ventilator with an unrestricted discharge flow path. Operating the ventilator with an unrestricted discharge flow path will result in flow rates that exceed the ventilator flow rate capabilities, and such operation will quickly burn out the motor. So care must be taken in operating the ventilators to make sure that the maximum rated flows, as provided on the performance charts in this brochure, are not exceeded.
- 8) This fan is restricted for use in areas where air substances are non-corrosive and non-toxics non-alkaline or where dust partides<150mg/m³, -20℃ < temperature < 85℃. If special conditions during transportaion, load and unload, it is strictly prohibited to Shock the ventilators.

示意图例

Example Of Cruve Reading



风量	
Volume	V= 3600m ³ /h
全压	
Total Pressure	Pt=330 Pa
动压	
Dynamic Pressure	Pd=53Pa
出口速度	
Outlet Velocity	C= 9.4 m/s
转速	
Speed	n= 855 r/min
轮缘速度	
Impeller Tip Speed	U ₂ = 14.3 m/s
内功率	
Inner Power	Nino=0.5 kW
声功率级	
Sound Power Level	Lwi A= 73 dB(A)
全压内效率	
Total Pressure Efficiency	η = 68 %



TOTAL EFFICIENCY η (%) 全压内效率

47 49 55 53 48 40 31

INNER POWER (KW)
内功率

1000
900
800
700
600
500
400
300
200
100
50

0.6
0.8
1
1.5
2
0.4
0.3
0.2
0.15
0.1
0.08
0.06
0.04
0.03
55 60 65 70 75

SOUND POWER LEVEL Lw(A) dB(A)
声功率级Lw(A) dB(A)

TOTAL PRESSURE Pt (Pa) 全压

2200
2000
1800
1600
1400
1300
1200
1100
1000
900
800
700

IMPELLER ROTATIONAL SPEED n(r/min) 转速

22
20
18
16
14
12
10
8

IMPELLER TIP SPEED U2(m/s) 轮缘速度

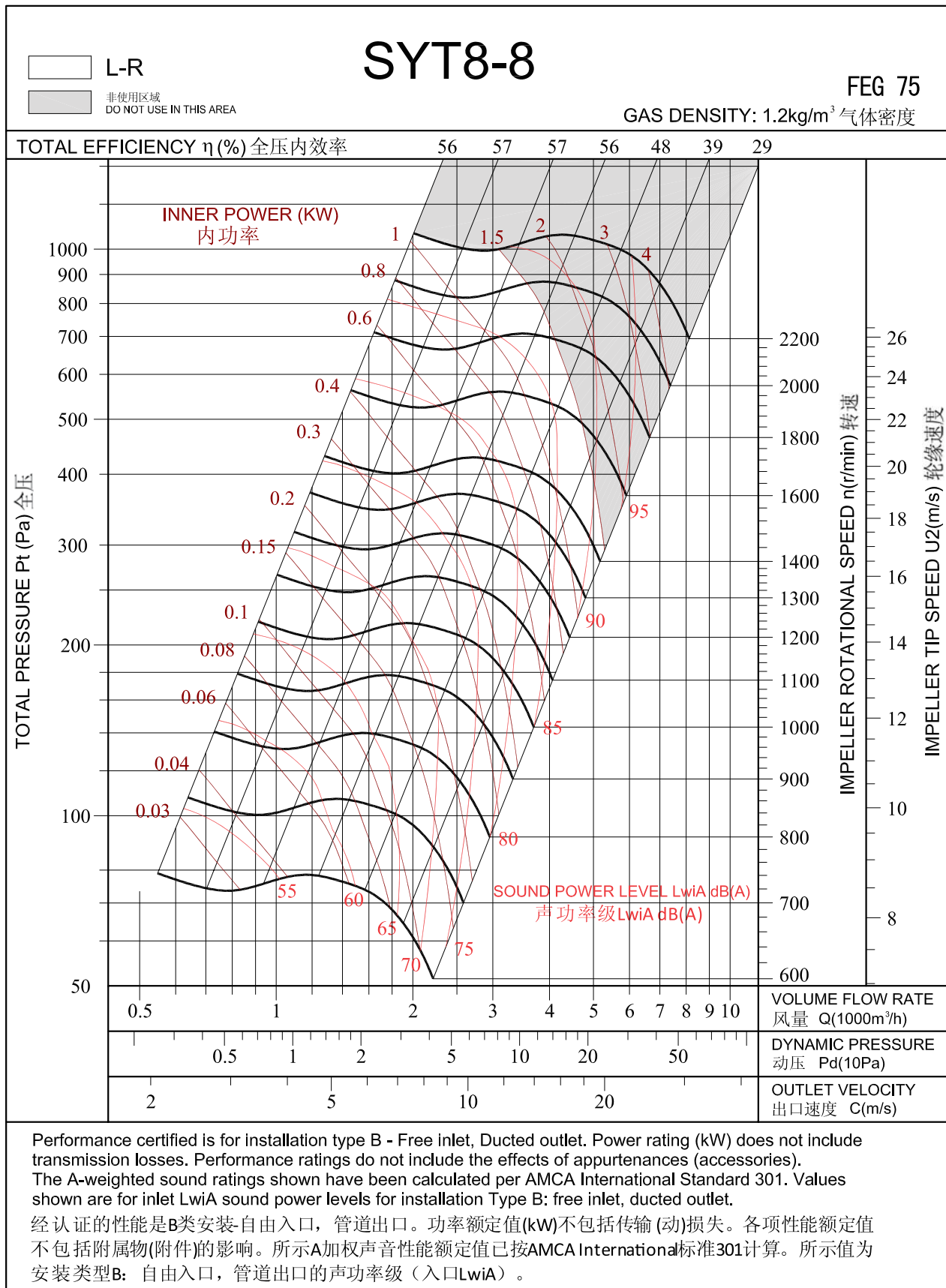
VOLUME FLOW RATE
风量 Q(1000m³/h)

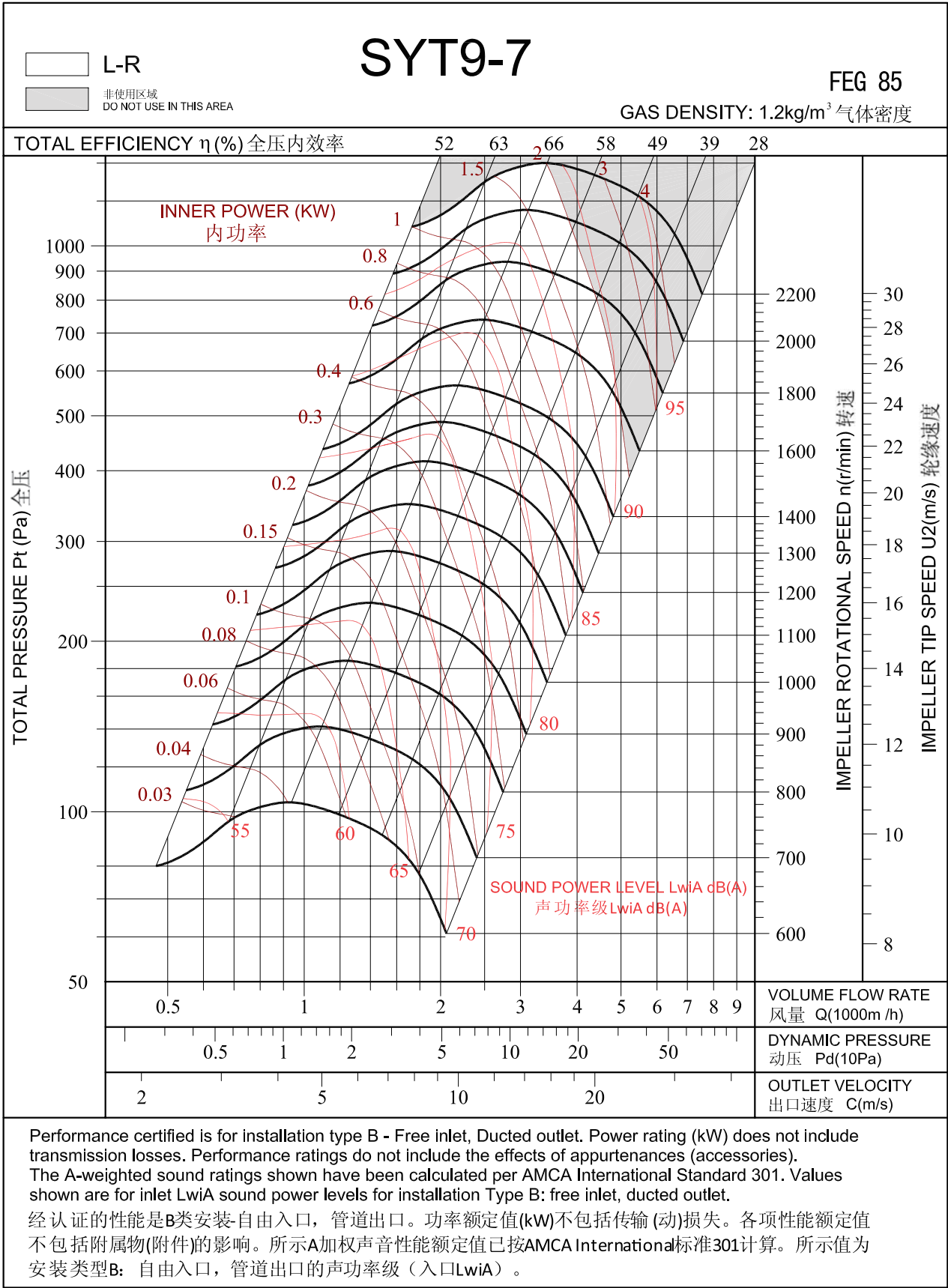
DYNAMIC PRESSURE
动压 Pd(10Pa)

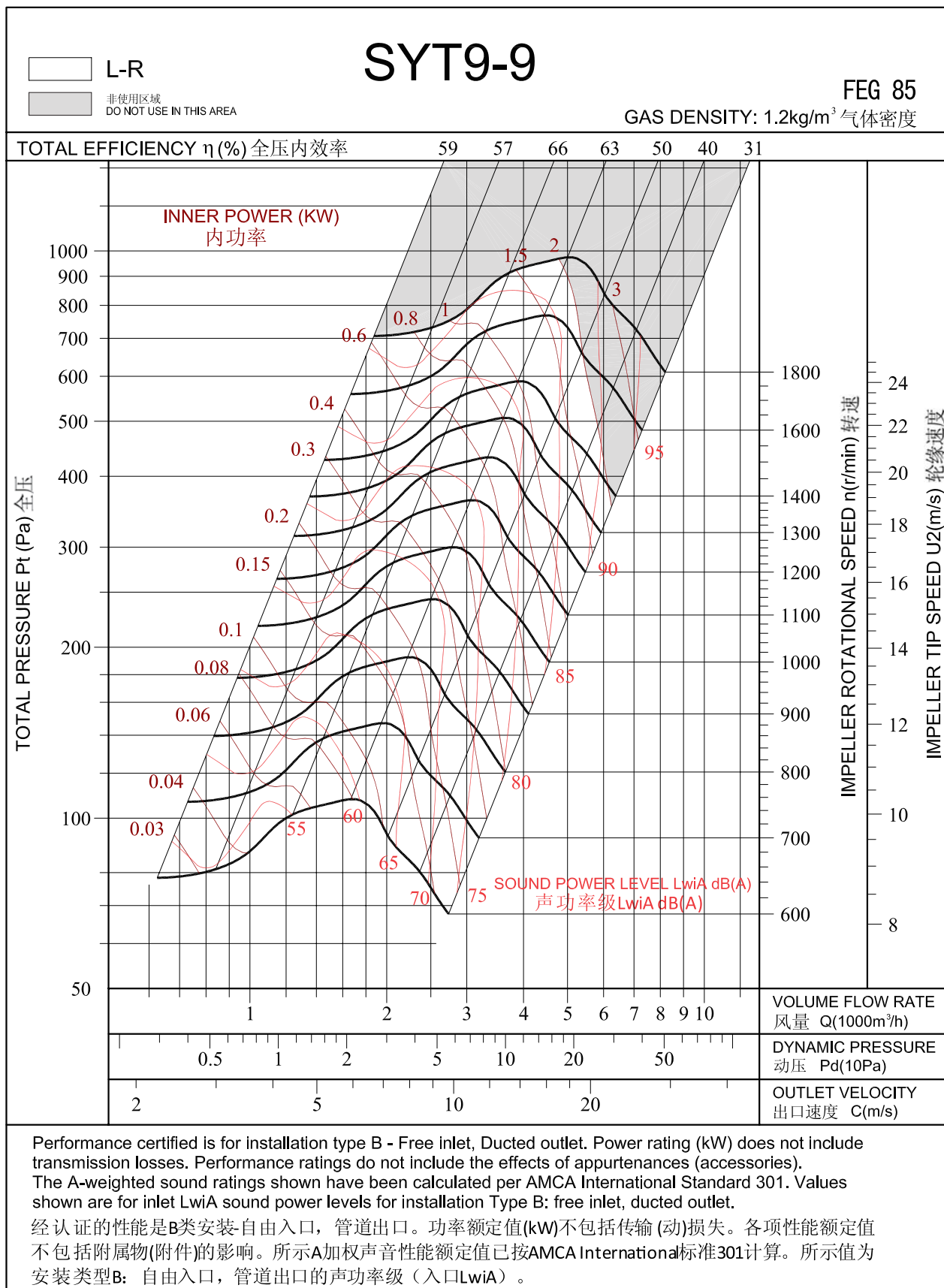
OUTLET VELOCITY
出口速度 C(m/s)

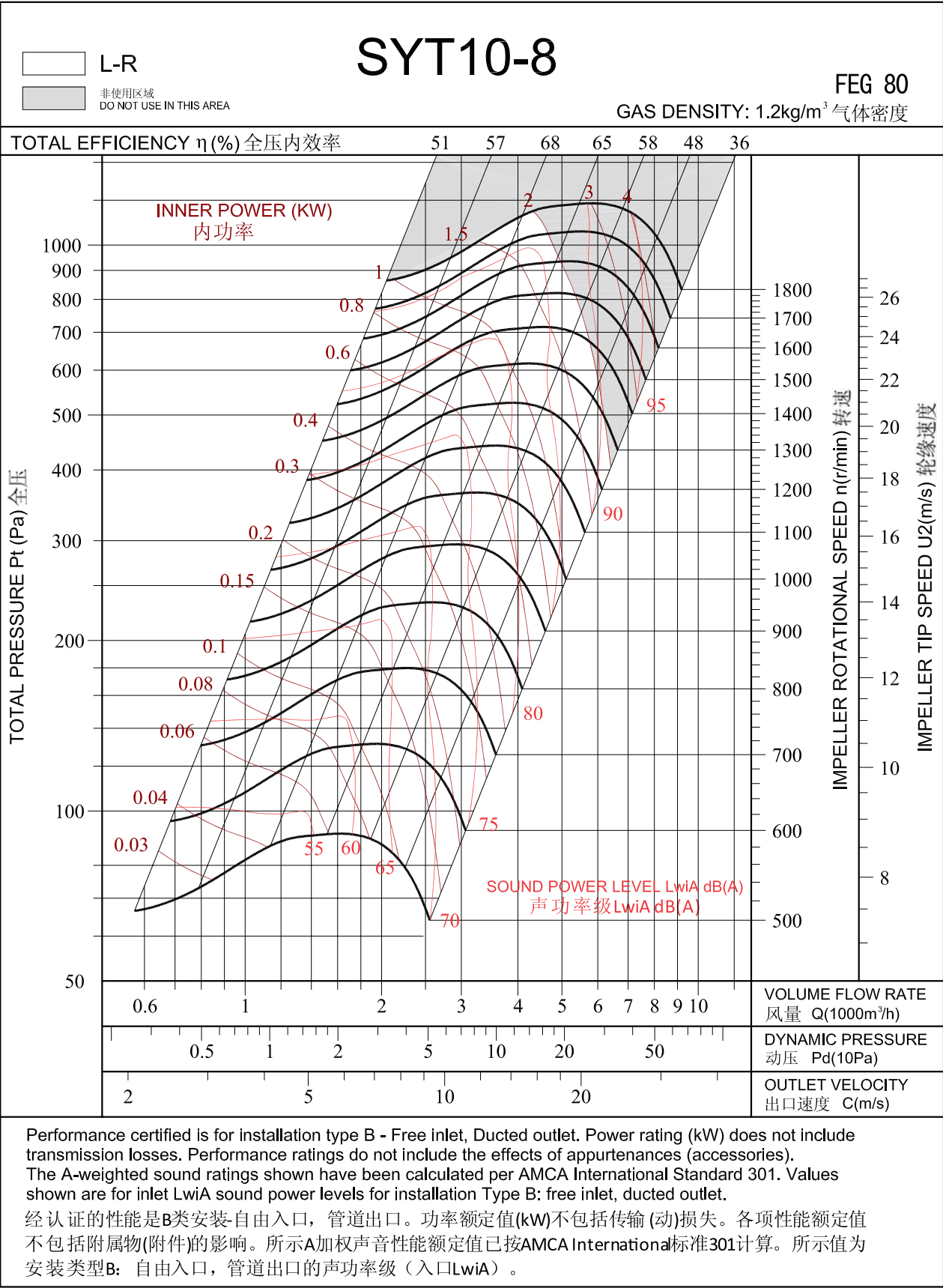
Performance certified is for installation type B - Free inlet, Ducted outlet. Power rating (kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lw(A) sound power levels for installation Type B: free inlet, ducted outlet.

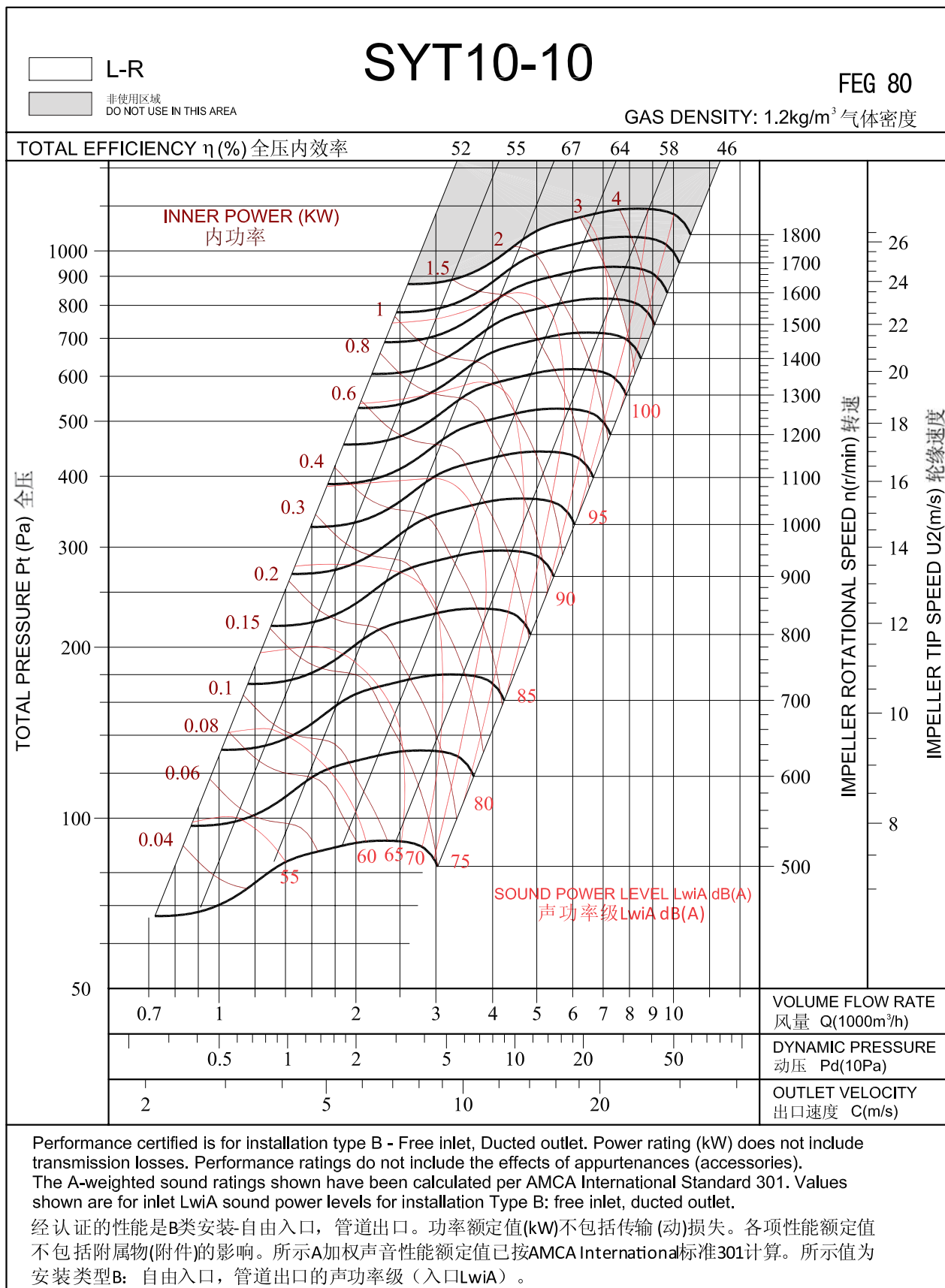
经认证的性能是B类安装-自由入口，管道出口。功率额定值(kW)不包括传输(动)损失。各项性能额定值不包括附属物(附件)的影响。所示A加权声音性能额定值已按AMCA International标准301计算。所示值为安装类型B: 自由入口，管道出口的声功率级（入口Lw(A)）。

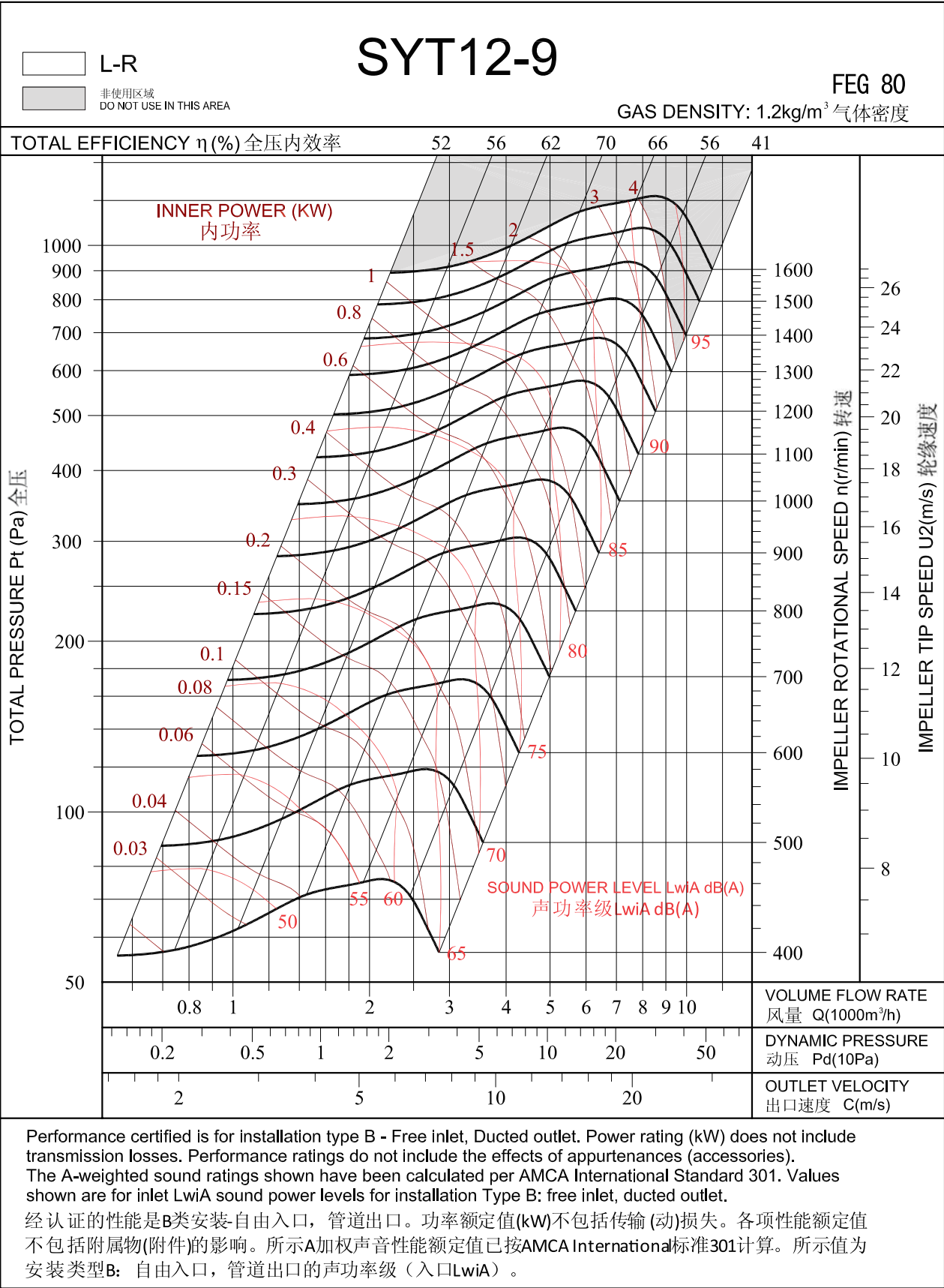


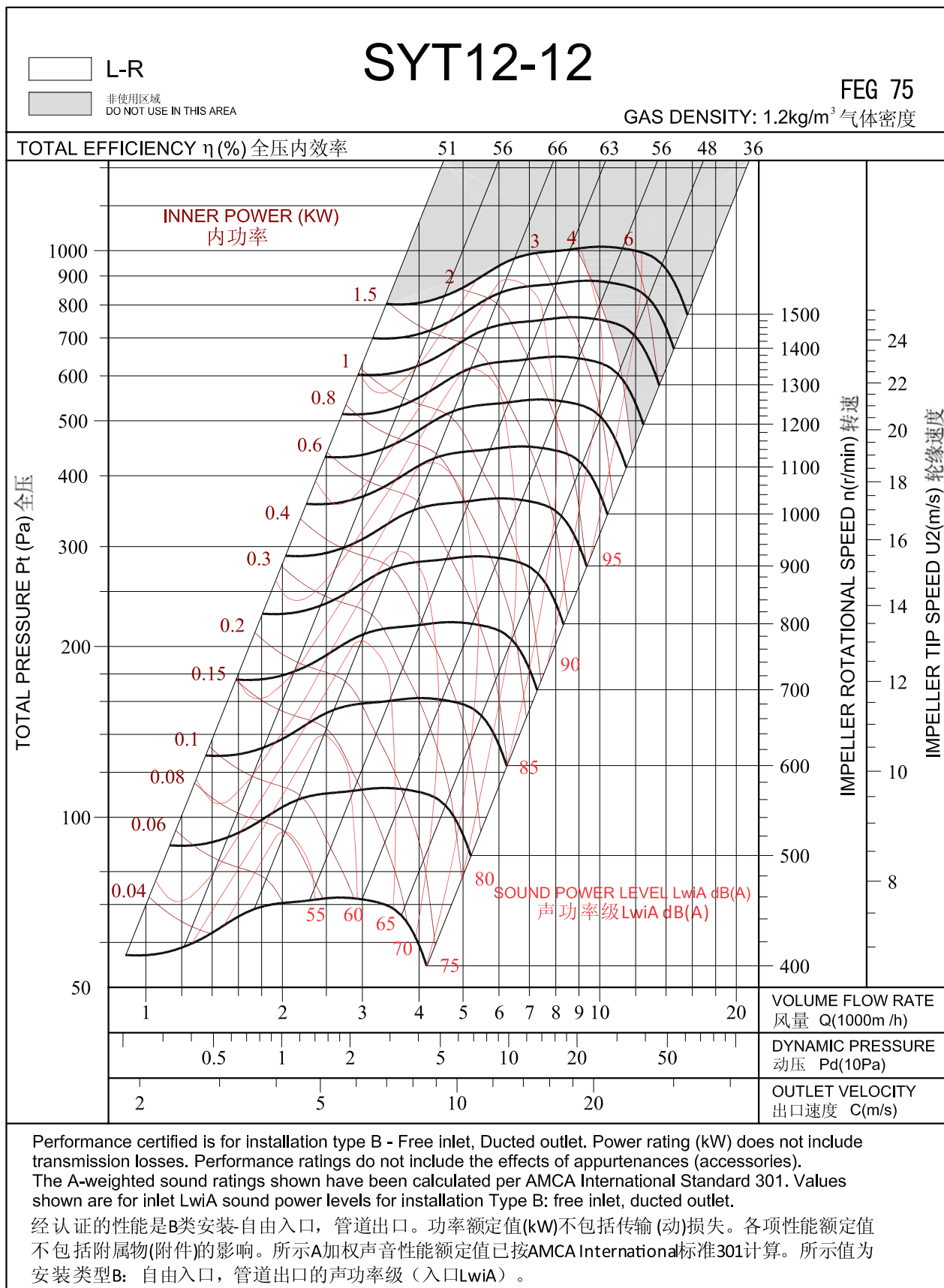


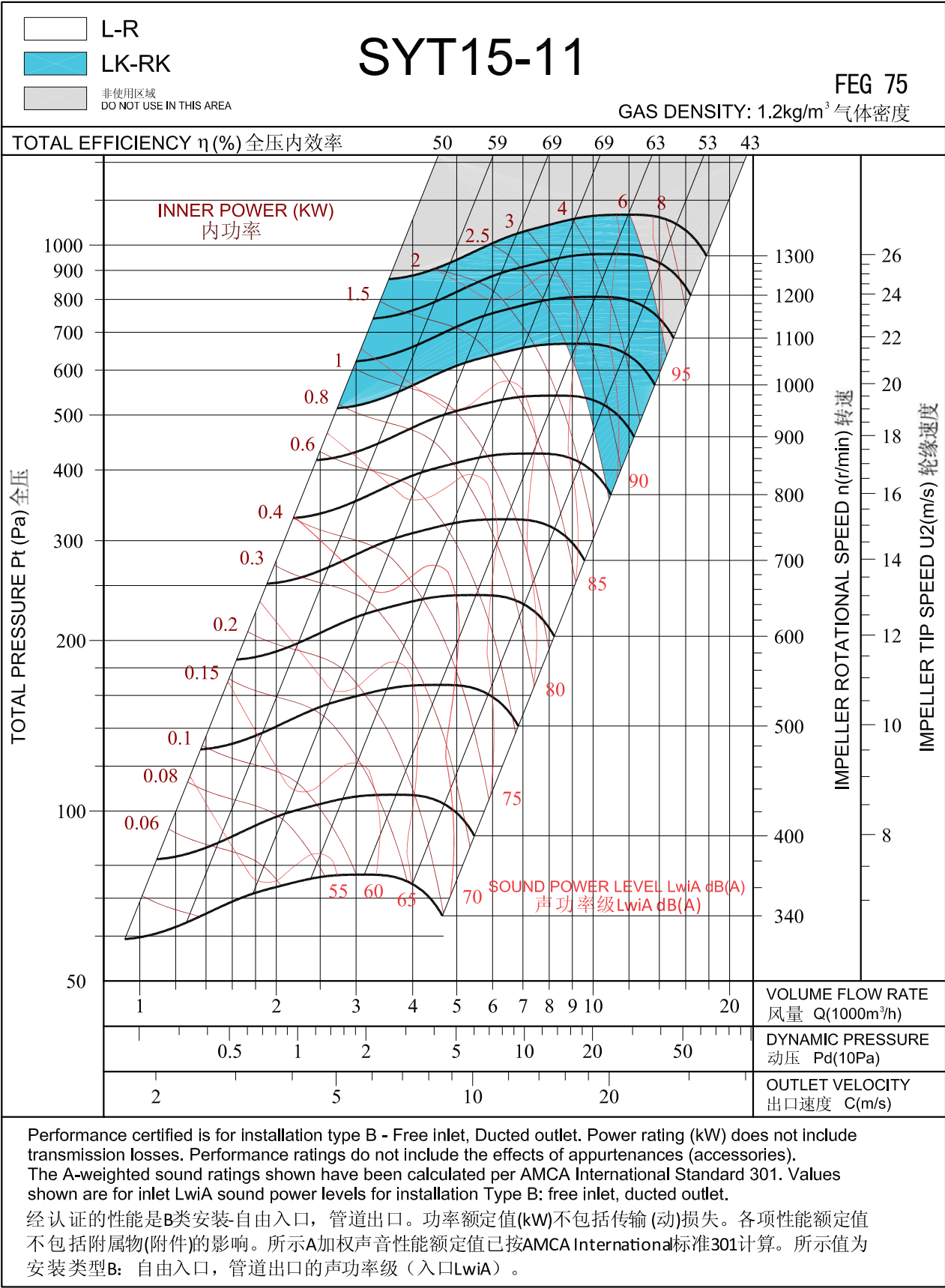


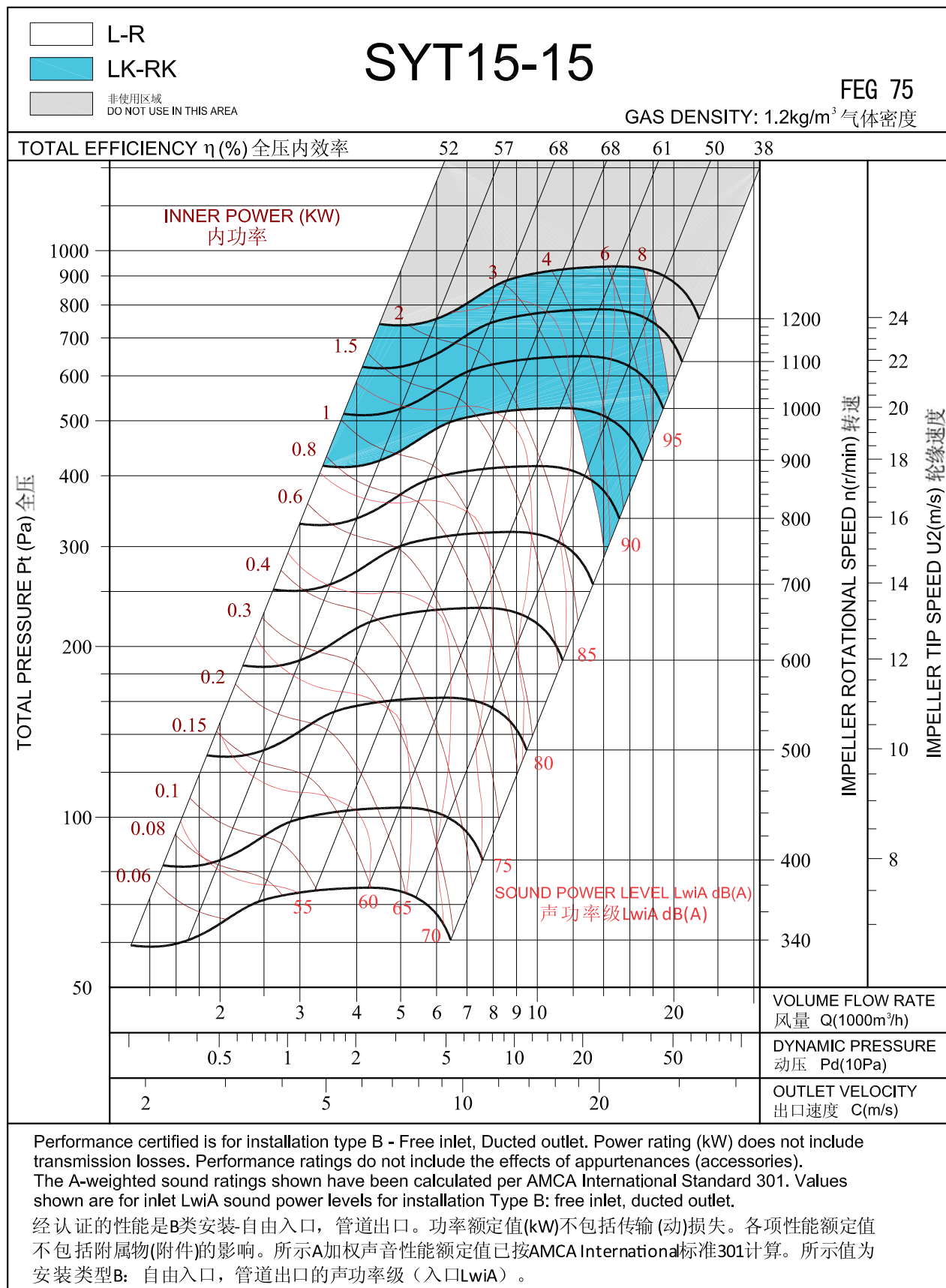


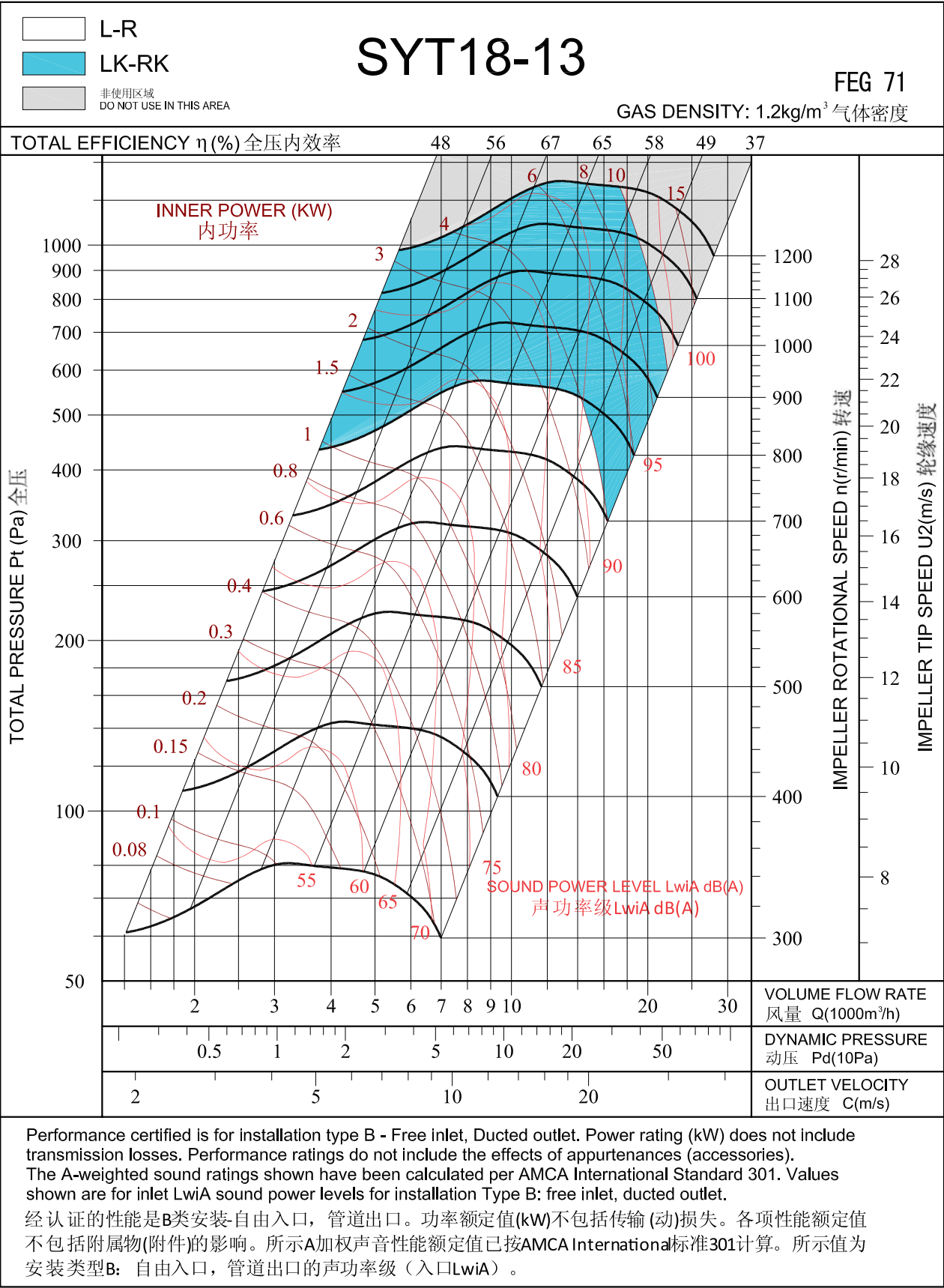


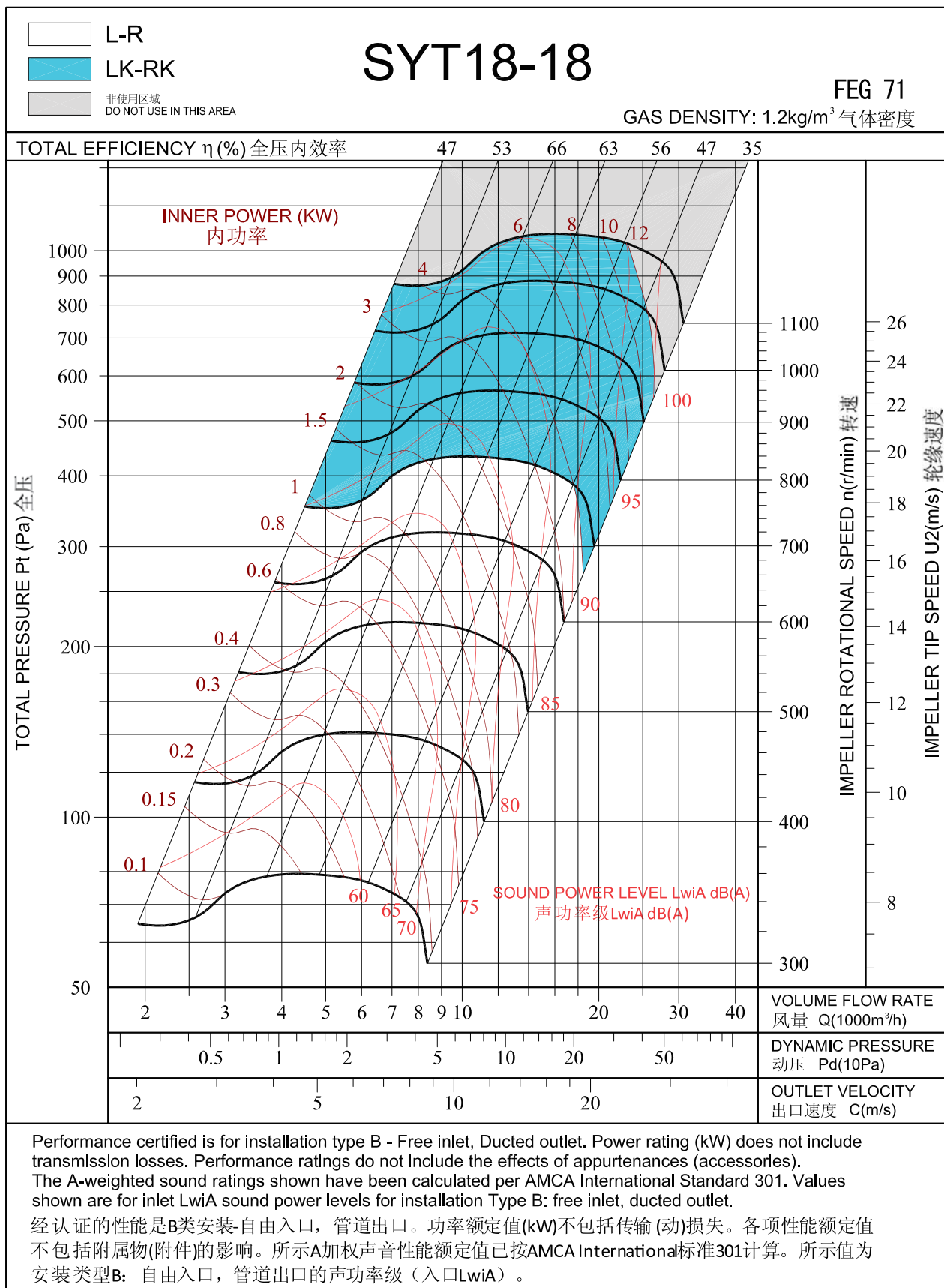






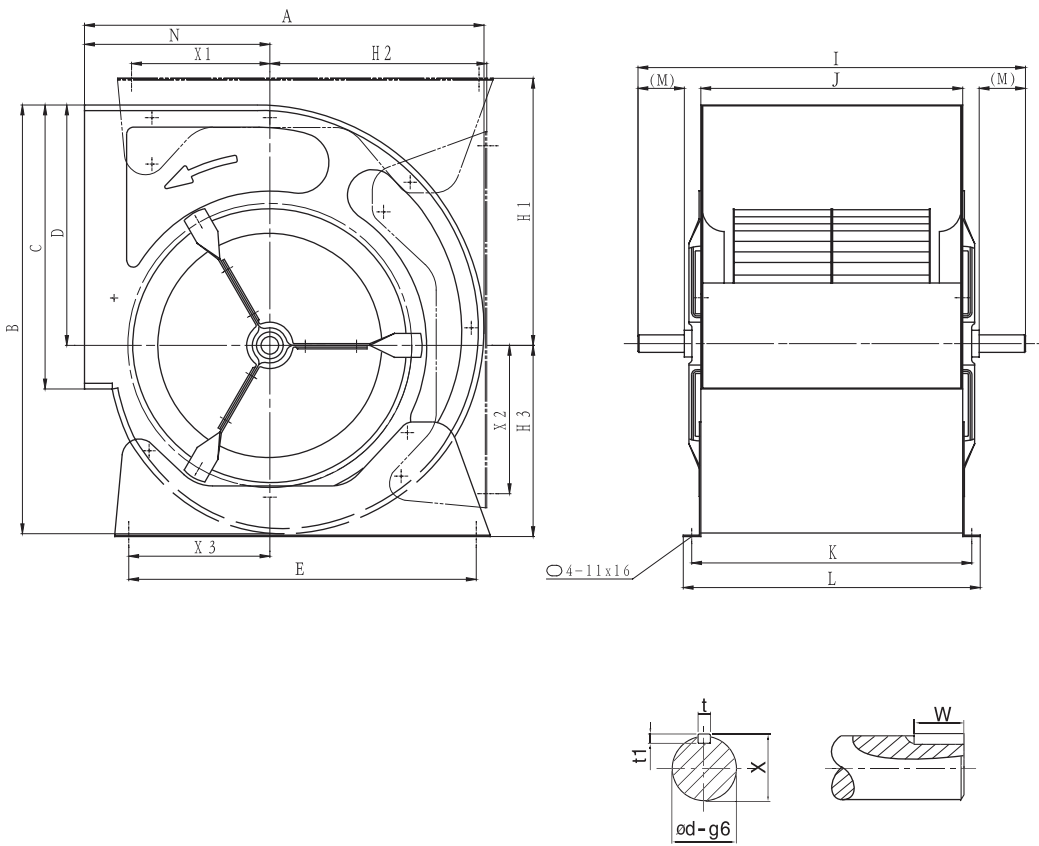






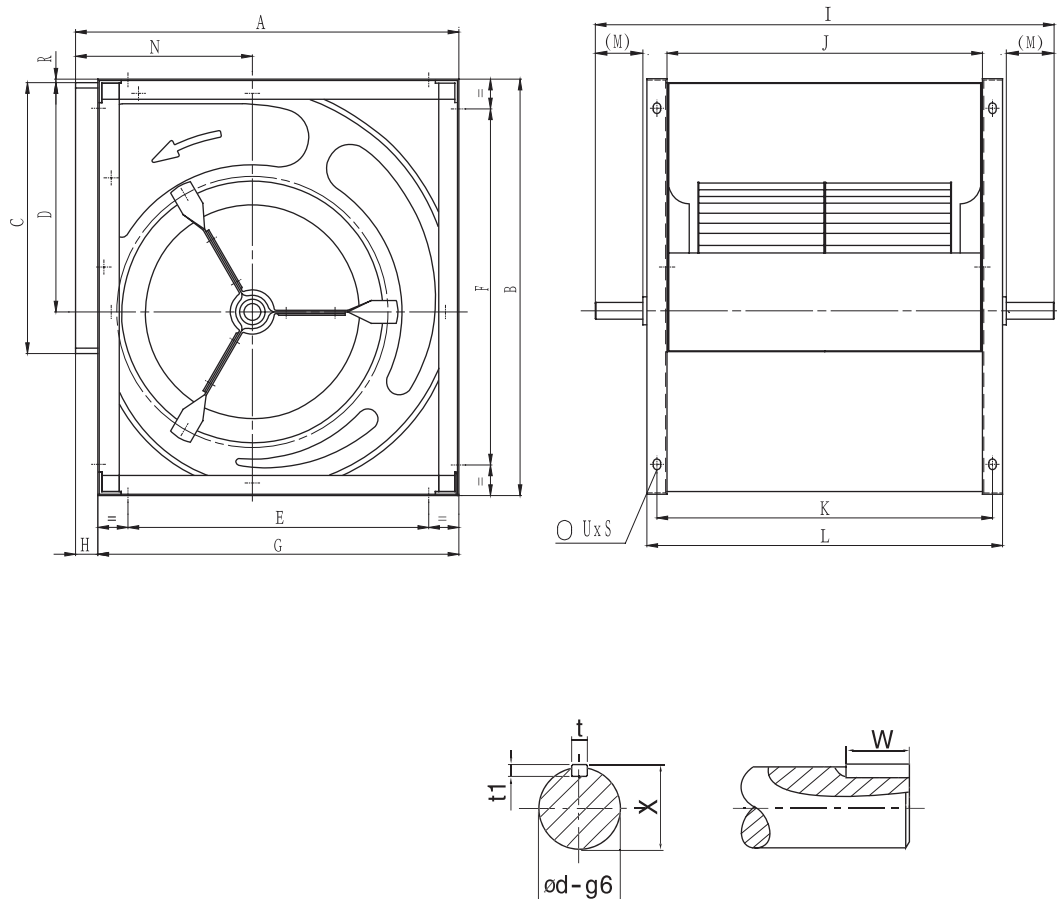


SYT-L(LK)



Model	A	B	C	D	E	I	J	K	L	M	N	X	t	t1	W	d	H1	H	H3	X	X2	X3
7-7L	312	328	228	192	180	370	259	279	299	32	152	22.5	6	6	30	20	224	164	164	90	90	90
8-8L	346	365	256	216	224	420	287	312	337	43	164	22.5	6	6	40	20	245	184	181	112	112	112
9-7L	380	387	262	215	300	370	232	258	282	45	185	22.5	6	6	30	20	253	199	177	119	124	123
9-9L	380	387	262	215	300	450	298	324	348	51	185	22.5	6	6	30	20	253	199	177	119	124	123
10-8L	425	443	289	249	340	410	265	291	315	48	203	28	8	7	40	25	287	227	198	136	132	135
10-10L	425	443	289	249	340	490	331	357	381	56	203	28	8	7	50	25	287	227	198	136	132	135
12-9L	492	521	341	294	408	465	309	335	359	54	230	28	8	7	40	25	332	266	232	161	153	161
12-12L	492	521	341	294	408	565	395	421	445	61	230	28	8	7	60	25	332	266	232	161	153	161
15-11L	569	609	404	342	495	550	373	399	423	66	264	28	8	7	50	25	380	309	272	197	211	201
15-11LK	569	609	404	342	495	570	373	399	423	71	264	33	8	7	40	30	380	309	272	197	211	201
15-15L	569	609	404	342	495	650	471	497	521	66	264	28	8	7	60	25	380	309	272	197	211	201
15-15LK	569	609	404	342	495	675	471	497	521	75	264	33	8	7	65	30	380	309	272	197	211	201
18-13L	684	739	478	415	606	610	430	456	480	68	314	28	8	7	65	25	457	376	340	262	283	275
18-13LK	684	739	478	415	606	610	430	456	480	62	314	38	10	8	60	35	457	376	340	262	283	275
18-18L	684	739	478	415	606	740	557	583	607	68	314	28	8	7	65	25	457	376	340	262	283	275
18-18LK	684	739	478	415	606	790	557	583	607	87	314	38	10	8	70	35	457	376	340	262	283	275

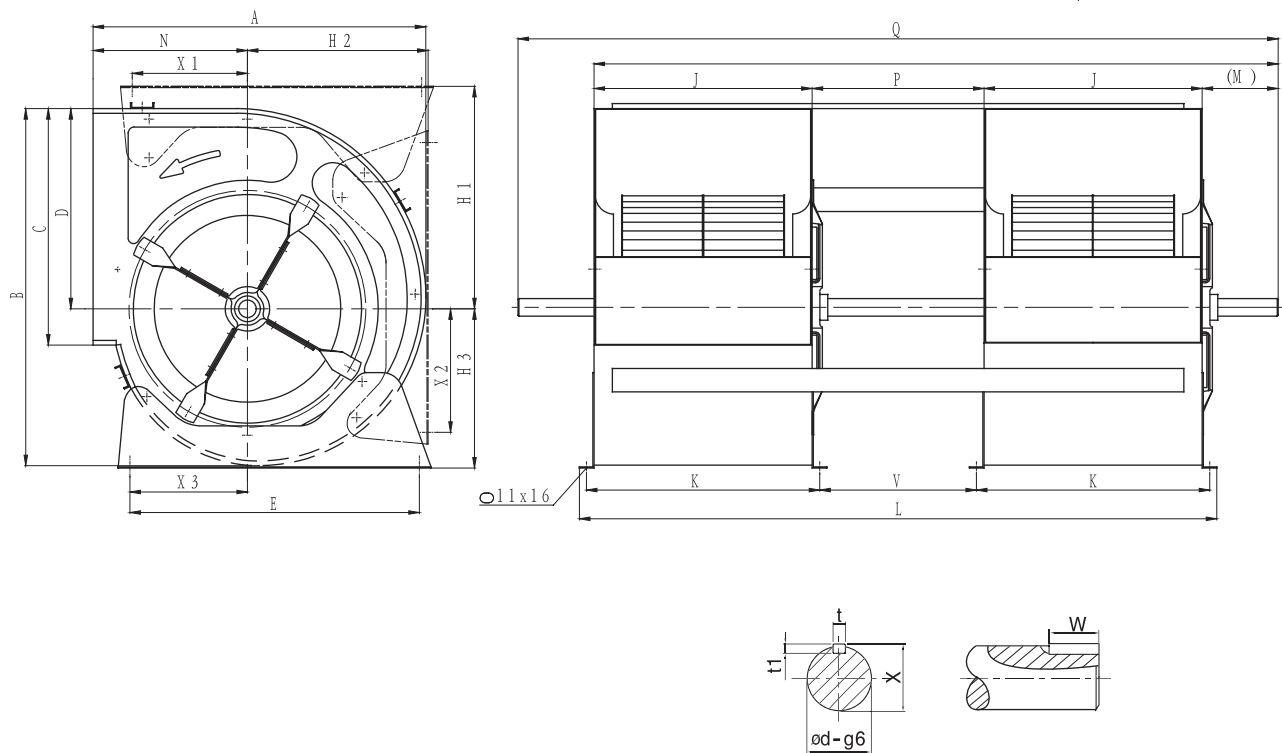
SYT-R(RK)



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	R	t	t1	W	X	d	UxS
7-7R	323	336	228	192	180	180	294	29	425	259	279	299	59	152	6	6	6	40	22.5	20	9x12
8-8R	343	370	256	216	224	224	306	37	460	287	312	337	63	164	3	6	6	50	22.5	20	9x12
9-7R	385	399	262	215	274	324	349	36	390	232	254	272	54	185	6	6	6	40	22.5	20	9x12
9-9R	385	399	262	215	274	324	349	36	460	298	320	338	57	185	6	6	6	50	22.5	20	9x12
10-8R	431	455	289	249	330	390	395	36	425	265	287	305	56	203	6	8	7	40	28	25	11x16
10-10R	431	455	289	249	330	390	395	36	490	331	353	371	56	203	6	8	7	50	28	25	11x16
12-9R	494	527	341	294	371	443	458	36	490	309	339	369	67	230	3	8	7	50	28	25	11x16
12-12R	494	527	341	294	371	443	458	36	600	395	425	455	79	230	3	8	7	40	28	25	11x16
15-11R	572	621	404	342	449	531	539	33	585	373	403	433	82	264	6	8	7	50	28	25	11x16
15-11RK	572	621	404	342	449	531	539	33	625	373	403	433	99	264	6	8	7	40	33	30	11x16
15-15R	572	621	404	342	449	531	539	33	685	471	501	531	83	264	4	8	7	65	28	25	11x16
15-15RK	572	621	404	342	449	531	539	33	725	471	501	531	100	264	4	8	7	65	33	30	11x16
18-13R	690	751	478	415	544	641	654	36	665	430	470	510	96	314	6	8	7	65	28	25	11x16
18-13RK	690	751	478	415	544	641	654	36	665	430	470	510	90	314	6	10	8	55	38	35	11x16
18-18R	690	751	478	415	544	641	654	36	790	557	597	637	93	314	6	8	7	65	28	25	11x16
18-18RK	690	751	478	415	544	641	654	36	790	557	597	637	87	314	6	10	8	70	38	35	11x16



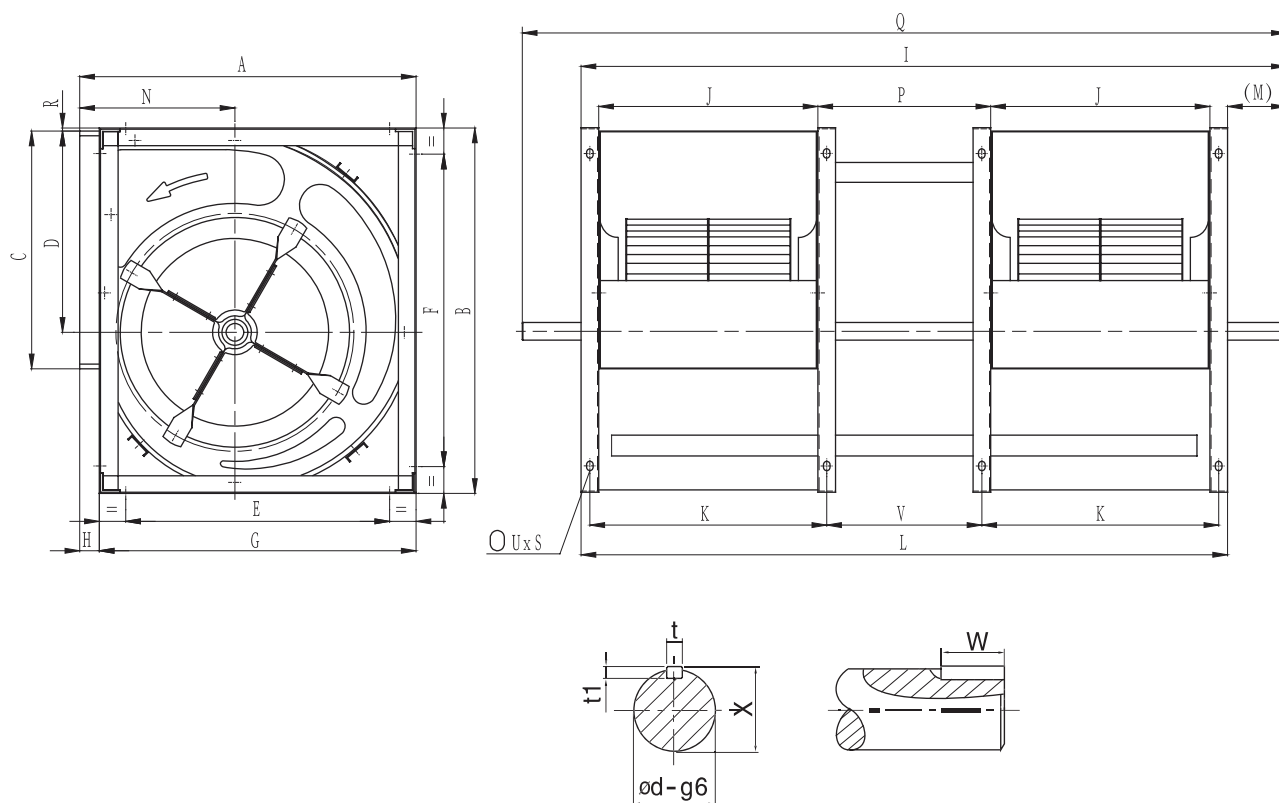
SYT-L2



Model	A	B	C	D	E	I	J	K	L	M	N	P	Q	V	X	t	t1	W	d	H1	H	H3	X	X2	X3
7-7L2	312	328	228	192	180	-	259	279	742	80	152	184	862	164	22.5	6	6	50	20	224	164	164	90	90	90
8-8L2	346	365	256	216	224	-	287	312	838	80	164	214	978	189	22.5	6	6	50	20	245	184	181	112	112	112
9-7L2	380	387	262	215	300	-	232	258	698	90	185	184	828	158	22.5	6	6	60	20	253	199	177	119	124	123
9-9L2	380	387	262	215	300	-	298	324	890	90	185	244	1020	218	28	8	7	60	25	253	199	177	119	124	123
10-8L2	425	443	289	249	340	-	265	291	794	80	203	214	924	188	28	8	7	60	25	287	227	198	136	132	135
10-10L2	425	443	289	249	340	-	331	357	976	80	203	264	1106	238	28	8	7	60	25	287	227	198	136	132	135
12-9L2	492	521	341	294	408	-	309	335	912	110	230	244	1082	218	28	8	7	60	25	332	266	232	161	153	161
12-12L2	492	521	341	294	408	1224	395	421	1164	110	230	324	-	298	33	8	7	90	30	332	266	232	161	153	161
15-11L2	569	609	404	342	495	1170	373	399	1090	130	264	294	-	268	33	8	7	90	30	380	309	272	197	211	201
15-15L2	569	609	404	342	495	1456	471	497	1376	130	264	384	-	358	33	8	7	90	30	380	309	272	197	211	201
18-13L2	684	739	478	415	606	1343	430	456	1253	140	314	343	-	319	38	10	8	90	35	457	376	340	262	283	275
18-18L2	684	739	478	415	606	1702	557	583	1622	130	314	458	-	434	38	10	8	90	35	457	376	340	262	283	275

注：SYT7-7至SYT12-9系列风机为双出轴
SYT12-12至SYT18-18系列风机为单出轴

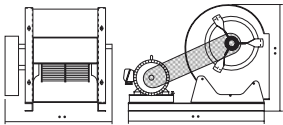
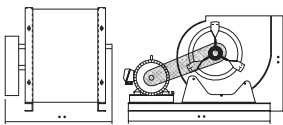
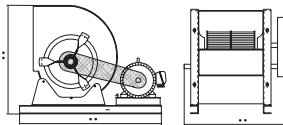
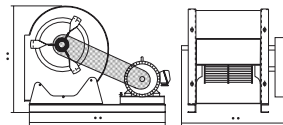
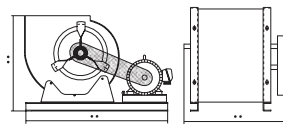
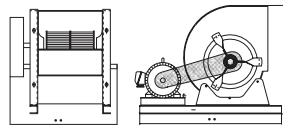
SYT-R2



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	V	R	t	t1	W	X	d	UxS
7-7R2	323	336	228	192	180	180	294	29	-	259	279	688	70	152	184	828	162	6	6	6	60	22.5	20	9x12
8-8R2	343	370	256	216	224	224	306	37	-	287	312	838	70	164	214	978	189	3	6	6	50	22.5	20	9x12
9-7R2	385	399	262	215	274	324	349	36	-	232	254	688	70	185	184	828	162	6	6	6	60	22.5	20	9x12
9-9R2	385	399	262	215	274	324	349	36	-	298	320	880	70	185	244	1020	222	6	8	7	60	28	25	9x12
10-8R2	431	455	289	249	330	390	395	36	-	265	287	784	70	203	214	924	192	7	8	7	60	28	25	11x16
10-10R2	431	455	289	249	330	390	395	36	-	331	353	966	70	203	264	1106	242	6	8	7	60	28	25	11x16
12-9R2	494	527	341	294	371	443	458	36	-	309	339	918	80	230	244	1082	214	3	8	7	60	28	25	11x16
12-12R2	494	527	341	294	371	443	458	36	1274	395	425	1174	100	230	324	-	294	3	8	7	90	33	30	11x16
15-11R2	572	621	404	342	449	531	539	33	1200	373	403	1100	100	264	294	-	264	4	8	7	90	33	30	11x16
15-15R2	572	621	404	342	449	531	539	33	1486	471	501	1382	100	264	384	-	354	4	8	7	90	33	30	11x16
18-13R2	690	751	478	415	544	641	654	36	1383	430	470	1283	100	314	343	-	303	6	10	8	90	38	35	11x16
18-18R2	690	751	478	415	544	641	654	36	1752	557	597	1652	100	314	458	-	418	6	10	8	90	38	35	11x16

注：SYT7-7至SYT12-9系列风机为双出轴
SYT12-12至SYT18-18系列风机为单出轴

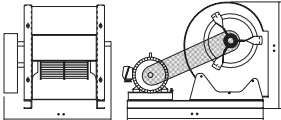
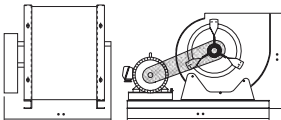
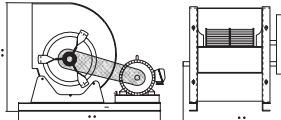
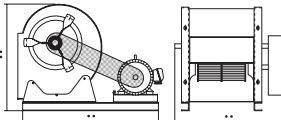
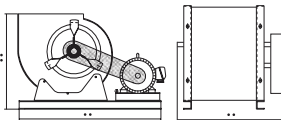
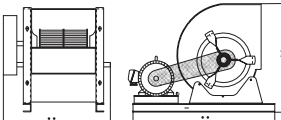
SYT-L(LK)

		0°				90°				180°			
													
													
型号 Model	电机 机座型号 Motor FrameSize	L	A	B	C	L	A	B	C	L	A	B	C
7-7	63	374	600	400	400	339	620	400	356	359	600	400	396
	71	379	620	400	400	365	660	400	356	365	620	400	396
	80	402	660	400	400	390	700	400	356	390	660	400	396
	90	463	740	400	400	414	740	400	356	454	740	400	396
8-8	63	388	620	450	433	355	660	450	368	370	620	450	437
	71	412	660	450	433	342	660	450	368	396	660	450	437
	80	434	700	450	433	367	700	450	368	420	700	450	437
	90	456	740	450	433	430	780	450	368	444	740	450	437
9-7	71	432	700	400	464	388	700	400	424	414	700	400	434
	80	455	740	400	464	412	740	400	424	439	740	400	434
	90	476	780	400	464	435	780	400	424	462	780	400	434
	100	498	820	400	464	458	820	400	424	486	820	400	434
	112	517	860	400	464	538	920	400	424	508	860	400	434
9-9	71	432	700	439	464	388	700	439	424	414	700	439	434
	80	455	740	439	464	412	740	439	424	439	740	439	434
	90	476	780	439	464	435	780	439	424	462	780	439	434
	100	498	820	439	464	458	820	439	424	486	820	439	434
	112	517	860	439	464	538	920	439	424	508	860	439	434
10-8	71	465	740	465	521	440	780	465	470	439	740	465	487
	80	487	780	465	521	464	820	465	470	464	780	465	487
	90	507	820	465	521	486	860	465	470	487	820	465	487
	100	528	860	465	521	469	860	465	470	510	860	465	487
	112	565	920	465	521	548	960	465	470	551	920	465	487
10-10	80	487	780	490	521	464	820	490	470	464	780	490	487
	90	507	820	490	521	486	860	490	470	487	820	490	487
	100	528	860	490	521	469	860	490	470	510	860	490	487
	112	565	920	490	521	548	960	490	470	551	920	490	487

注: L=风机与电机之间的中心距

L=Center distance between fan and motor pulley

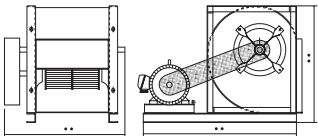
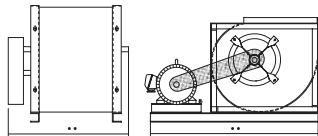
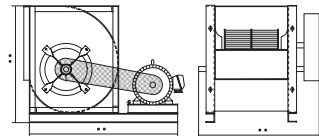
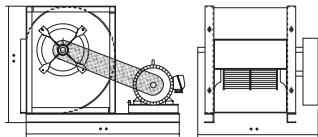
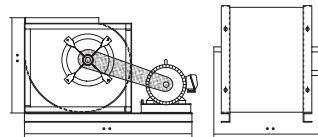
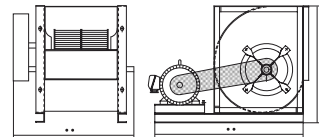
SYT-L(LK)

		0°				90°				180°			
左旋LG													
右旋RD													
型号 Model	电机 机座型号 Motor Frame Size	L	A	B	C	L	A	B	C	L	A	B	C
12-9	80	552	860	494	599	469	860	494	536	522	860	494	566
	90	591	920	494	599	509	920	494	536	564	920	494	566
	100	592	940	494	599	531	960	494	536	568	940	494	566
	112	614	895	494	599	570	1020	494	536	592	985	494	566
	132	691	1100	494	599	655	1140	494	536	675	1100	494	566
12-12	80	552	860	580	599	469	860	580	536	522	860	580	566
	90	591	920	580	599	509	920	580	536	564	920	580	566
	100	592	940	580	599	531	960	580	536	568	940	580	566
	112	648	1020	580	599	570	1020	580	536	627	1020	580	566
	132	691	1100	580	599	655	1140	580	536	675	1100	580	566
15-11	80	596	920	582	687	533	960	582	613	557	920	582	654
	90	633	980	582	687	572	1020	582	613	598	980	582	654
	100	652	1020	582	687	593	1060	582	613	620	1020	582	654
	112	668	1060	582	687	611	1100	582	613	639	1060	582	654
	132	748	1180	582	687	674	1200	582	613	725	1180	582	654
15-15	80	596	920	680	687	533	960	680	613	557	920	680	654
	90	633	980	680	687	572	1020	680	613	598	980	680	654
	100	652	1020	680	687	593	1060	680	613	620	1020	680	654
	112	668	1060	680	687	611	1100	680	613	639	1060	680	654
	132	748	1180	680	687	674	1200	680	613	725	1180	680	654
18-13	90	729	1100	640	821	639	1140	640	730	684	1100	640	795
	100	747	1140	640	821	659	1180	640	730	705	1140	640	795
	112	762	1180	640	821	704	1250	640	730	723	1180	640	795
	132	838	1300	640	821	765	1350	640	730	806	1300	640	795
	160	884	1400	640	821	814	1450	640	730	858	1400	640	795
18-18	90	729	1100	770	821	639	1140	770	730	684	1100	770	795
	100	747	1140	770	821	659	1180	770	730	705	1140	770	795
	112	762	1180	770	821	704	1250	770	730	723	1180	770	795
	132	791	1250	770	821	765	1350	770	730	757	1250	770	795
	160	884	1400	770	821	814	1450	770	730	858	1400	770	795

注：L=风机与电机之间的中心距

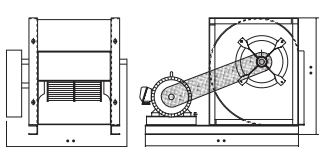
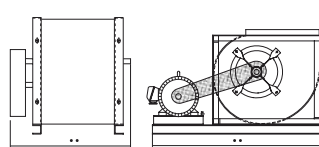
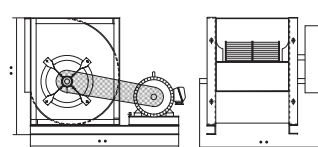
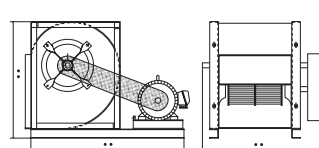
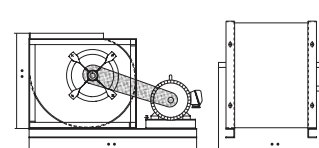
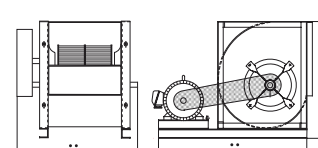
L=Center distance between fan and motor pulley

SYT-R(RK)

		0°				90°				180°			
左旋LG													
右旋RD													
型号 Model	电机 机座型号 Motor FrameSize	L	A	B	C	L	A	B	C	L	A	B	C
7-7	63	366	600	398	376	334	620	398	363	355	600	398	376
	71	372	620	398	376	361	660	398	363	402	660	398	376
	80	396	660	398	376	385	700	398	363	428	700	398	376
	90	458	740	398	376	409	740	398	363	453	740	398	376
8-8	63	381	620	484	410	352	660	484	383	364	620	484	410
	71	405	660	484	410	378	700	484	383	391	660	484	410
	80	428	700	484	410	402	740	484	383	417	700	484	410
	90	450	740	484	410	426	780	484	383	441	740	484	410
9-7	71	423	700	418	439	382	700	418	425	414	700	418	439
	80	447	740	418	439	406	740	418	425	439	740	418	439
	90	469	780	418	439	429	780	418	425	462	780	418	439
	100	492	820	418	439	452	820	418	425	486	820	418	439
	112	512	860	418	439	532	920	418	425	508	860	418	439
9-9	71	423	700	490	439	382	700	490	425	414	700	490	439
	80	447	740	490	439	406	740	490	425	439	740	490	439
	90	469	780	490	439	429	780	490	425	462	780	490	439
	100	492	820	490	439	452	820	490	425	486	820	490	439
	112	512	860	490	439	532	920	490	425	508	860	490	439
10-8	71	454	740	455	495	435	780	455	471	440	740	455	495
	80	477	780	455	495	458	820	455	471	464	780	455	495
	90	498	820	455	495	480	860	455	471	487	820	455	495
	100	520	860	455	495	522	920	455	471	511	860	455	495
	112	559	920	455	495	542	960	455	471	551	920	455	495
10-10	80	477	780	520	495	458	820	520	471	464	780	520	495
	90	498	820	520	495	480	860	520	471	487	820	520	495
	100	520	860	520	495	522	860	520	471	511	860	520	495
	112	559	920	520	495	542	960	520	471	551	920	520	495

注：L=风机 电机之间的中心距
L=Center distance between fan and motor pulley

SYT-R(RK)

		0°				90°				180°			
左旋LG													
右旋RD													
型号 Model	电机 机座型号 Motor FrameSize	L	A	B	C	L	A	B	C	L	A	B	C
12-9	80	566	860	525	573	521	920	525	537	549	860	525	573
	90	606	920	525	573	504	920	525	537	591	920	525	573
	100	608	940	525	573	545	980	525	537	614	940	525	573
	112	632	895	525	573	564	1020	525	537	654	1020	525	573
	132	711	1100	525	573	649	1140	525	537	702	1100	525	573
12-12	80	566	860	615	573	521	920	615	537	549	860	615	573
	90	606	920	615	573	504	920	615	537	591	920	615	573
	100	608	940	615	573	545	980	615	537	594	940	615	573
	112	666	1020	615	573	564	1020	615	537	654	1020	615	573
	132	711	1100	615	573	649	1140	615	537	702	1100	615	573
15-11	80	582	920	615	661	546	980	615	615	577	940	615	661
	90	621	980	615	661	567	1020	615	615	598	980	615	661
	100	641	1020	615	661	587	1060	615	615	620	1020	615	661
	112	658	1060	615	661	605	1100	615	615	640	1060	615	661
	132	739	1180	615	661	669	1200	615	615	725	1180	615	661
15-15	80	582	920	715	661	546	980	715	615	577	940	715	661
	90	621	980	715	661	567	1020	715	615	598	980	715	661
	100	641	1020	715	661	587	1060	715	615	620	1020	715	661
	112	658	1060	715	661	605	1100	715	615	640	1060	715	661
	132	739	1180	715	661	669	1200	715	615	725	1180	715	661
18-13	90	713	1100	696	791	634	1140	696	730	681	1100	696	791
	100	732	1140	696	791	672	1200	696	730	702	1140	696	791
	112	748	1180	696	791	698	1250	696	730	740	1200	696	791
	132	826	1300	696	791	759	1350	696	730	804	1300	696	791
	160	874	1400	696	791	808	1450	696	730	856	1400	696	791
18-18	90	713	1100	820	791	634	1140	820	730	681	1100	820	791
	100	732	1140	820	791	672	1200	820	730	702	1140	820	791
	112	748	1180	820	791	698	1250	820	730	740	1200	820	791
	132	799	1250	820	791	759	1350	820	730	804	1300	820	791
	160	874	1400	820	791	808	1450	820	730	856	1400	820	791

注：L=风机与电机之间的中心距
L=Center distance between fan and motor pulley



SYT系列风机运行极限

SYT Series Ventilator Operational Limits

			7-7	8-8	9-7	9-9	10-8	10-10	12-9	12-12	15-11	15-15	18-13	18-18
极限吸收功率 Max. absorbed power	L-R	Kw	1	1.5	2	2	2	3	4	4	2.5	3	4	4
	LK-RK	Kw	/	/	/	/	/	/	/	/	6	8	10	12
	L2-R2	Kw	2	3	4	4	4	6	8	8	12	16	20	24
极限转速 Max. R.P.M	L-R	rpm	2200	2200	2200	1800	1800	1800	1600	1500	1000	900	800	700
	LK-RK	rpm	/	/	/	/	/	/	/	/	1300	1200	1200	1100
	L2-R2	rpm	2200	2200	2200	1800	1800	1800	1600	1500	1300	1200	1200	1100
极限温度 (最低-20℃) Air Temperature Limits (Min-20℃)	L-R	Max.℃	85	85	85	85	85	85	85	85	85	85	85	85
	L2-R2	Max.℃	85	85	85	85	85	85	85	85	85	85	85	85
轴承额定动载荷 Bearing Dynamic Load	L-R	N	12800	12800	12800	12800	14000	14000	14000	14000	14000	14000	14000	14000
	LK-RK	N	/	/	/	/	/	/	/	/	19500	19500	25700	25700
	L2-R2	N	12800	12800	12800	12800	14000	14000	14000	19500	19500	19500	25700	25700
风机重量 Fan weight	L	Kg	6	7	8	9.5	10	11	15.2	18.2	21.2	24.7	32.4	39.6
	R	Kg	8.5	9.5	10.2	11.4	12.3	13.2	19.1	22	25.1	29.4	39.6	45.5
	LK	Kg	/	/	/	/	/	/	/	/	24.5	28.2	38.6	45.8
	RK	Kg	/	/	/	/	/	/	/	/	28.5	32.8	45.8	51.7
	L2	Kg	14	15.6	17.9	21.7	22.2	25.3	33.9	40.6	47.6	54.3	69.3	84.6
	R2	Kg	20	24	25.8	29.7	29.7	34.1	50	56	63	74.8	100.1	116.3

本样本中所述的风机特性，如尺寸、性能参数等，本公司保留更改的权利，恕不另行通知，如有不明之处，请来电询问。
The datas such as performance, dimension and etc. in this catalogue is subject to change without notice, Please contact with the manufacture for further information.

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Reference: SYT-CY-2012, June 2012