

三河市科丰电气有限公司
产品规格书
**Sanhe Cofan Electromotor Co., Ltd Product
Specification**

Part Name: -

设计_____

Designer by:

认可_____

Confirmed by:

审核_____

Auditor:

1. 风机规格 Fan model:

- 1.1 电机型号 Motor Type: YWD92/100-2 (1803A2)
- 1.2 额定电压 Rated voltage: 230V
- 1.3 额定频率 Rated frequency: 50Hz
- 1.4 绝缘等级 Insulation Class: F
- 1.5 运行方式 Mode of operation: 连续工作制 continuous duty
- 1.6 极数 Pole: 2 极 poles
- 1.7 额定电容 Rated capacitor: 8 μ F/450VAC (CBB60, 引线电容, 带 M8 螺杆)
- 1.8 旋转方向 Rotation Direction:
从转子端看, 顺时针方向旋转 CW viewing from rotor side.
- 1.9 输入功率 Input power (200Pa): 315W \pm 12%
- 1.10 额定转速 Rated speed (200Pa): 2030r/min \pm 12%
- 1.11 额定电流 Rated current (200Pa): 1.39 A \pm 12%
- 1.12 温度保护装置 Temperature protection device: F11A 145 $^{\circ}$ C
- 1.13 结构型式 Construction: 外转子 External rotor
- 1.14 防护等级 IP degree: IP44
- 1.15 重量 Weight: 4.7KG
- 1.16 动平衡精度等级 Balancing degree: G2.5
- 1.17 储藏环境温度 Storage ambient temperature: -40 $^{\circ}$ C — +80 $^{\circ}$ C,
相对湿度 relative humidity: 70%, 通风良好 with good ventilation.
- 1.18 使用寿命 Operation life:
正常情况下大于等于 40000 小时 By normal operation, more than 40K hours

2. 电机特性 Motor characteristic

2.1 线圈电阻(环境温度 25 $^{\circ}$ C)

Winding resistance(ambient temperature 25 $^{\circ}$ C)

引出线颜色 Cable color	线圈电阻(欧姆) Winding resistance	容差 Tolerance
黑—兰 Black-Blue	34.5	\pm 10%
兰—棕 Blue—Brown	38.6	\pm 10%

2.2 负载特性 Load characteristic

档 位 Level	电 压 (V) Voltage	频 率 (Hz) Frequency	电 流 (A) Current	输入功率 (W) Power Input
1	230	50	1.39 \pm 12%	315 \pm 12%
	转 速 (r/min) Speed	静 压 (Pa) Static pressure	风 量 (m ³ /h) Air volume	噪 音 dB (A) Noise
	2030 \pm 12%	200	950 \pm 12%	68 \pm 1.5

3. 技术要求 Technical Requirements

3.1 绝缘电阻 Insulation resistance

电机定子绕组在热态或温升试验后,其对机壳绝缘电阻应不低于 $100\text{M}\Omega$,电机湿热试验后,绝缘电阻不低于 $10\text{M}\Omega$ 。

After the motor stator and winding get heated, or after the temperature rise test, its motor housing insulation resistance is not less than $100\text{M}\Omega$. And motor insulation resistance is not less than $10\text{M}\Omega$ after humidity heat test.

3.2 电气强度 Electrical strength

定子绕组与机壳间外加 50Hz 近似正弦波的电压 1500V 持续 1min 或 1800V 持续 1S 无击穿闪烁现象(泄露电流小于 5mA);在潮态时,应经受 1275V,持续 1min 无击穿闪烁现象。

With a force from 50Hz, 1500V voltage similar like sine wave for a duration of 1 minute, or 1800V continuously for a second, stator winding has no disruptive spark (Current leakage less than 5mA); In the humidity environment, the motor can withstand 1275V, and no disruptive spark for a minute.

3.3 匝间绝缘试验 Turn to turn test

电机定子绕组应能承受匝间绝缘耐冲击电压试验而无击穿, 试验电压(峰值)为 1800V。

Motor stator winding can withstand turn-to-turn test and Impact resistance voltage test without breakdown impact. Test voltage(peak value) is 1800V.

3.4 电机在实际冷态和热态稳定后, 施加 90%-110%额定电压, 带实际负载应能正常起动和工作。

After the actual cold and hot state, and motor become stable, under the rated voltage 90-110%, motor is able to start correctly and operate under actual load.

3.5 温升试验 Temperature rise test

在额定电压, 额定频率(环境温度不超过 40°C 、静压不小于 200 的条件下)带实际负载运行, 热稳定后绕组温升(电阻法)不超过 100K。

Under rated voltage, rated frequency(ambient temperature not more than 40°C , static pressure not less than 200 Pa) and with actual load, after heat state, temperature rise less than 100K

3.6 电压波动特性 Voltage fluctuation characteristic

在额定频率下, 当外加电压在额定电压的 $\pm 10\%$ 范围内波动时, 电机仍能正常运转, 无异常。

Under rated frequency, if the voltage fluctuate in the range of $\pm 10\%$, motor is still able to operate correctly.

3.7 噪声 Noise

风机在空载运转时 (0Pa) 距离风机进风口 1 米时测得的 A 计权声功率级的

噪声值为 68dB。

In no-load operation(0Pa), noise level is 68 dB in the distance of 1 meter from fan inlet.

3.8 外观 Aspect

各部位无划伤，脏污，锈斑；接插件牢固，无松脱；线色符合要求，铭牌清晰正确，粘贴牢固，电机转子外壳电泳漆处理

No scratch, dirty spot, rusty spot; Secure connector. Right wire color. Clean and right label, stucked securely. Motor rotor housing is well treated by electrophoresis painting.

4. 使用条件 Operation condition

4.1 环境温度 Ambient temperature: -35°C — $+80^{\circ}\text{C}$

4.2 相对湿度 Relative humidity : Less than 90%

4.3 最低机外静压 Min. static pressure: 200Pa

4.3 使用状态 Application Postion

Horizontal position of built-in motor, cord downward direction

Vertical position of built-in motor, cord upward direction

5.主要零件材料

Main component material

项 目 Item	材 料 Material
硅钢片 Silicon lamination	B50A600
定子座 Stator housing	压铸铝合金 casting aluminium
漆包线 lacquered wire	GP/MR 200 $^{\circ}\text{C}$
轴 Shaft	3Cr13
引出线 Cable	UL1330 22AWG
轴承 Bearing	NMB/NSK 608ZZ、NMB/NSK 6000ZZ (或同等品质的其它品牌 Or other brand with equivalent quality level)

6.未尽事宜依据:

All the other technical items not mentioned are in conformity with:

GB/T 5171-2002
《小功率电动机通用技术条件 General technical requirements for small power motors》

GB /T 12350-2009
《小功率电动机的安全要求 Small power motors safety requirements》

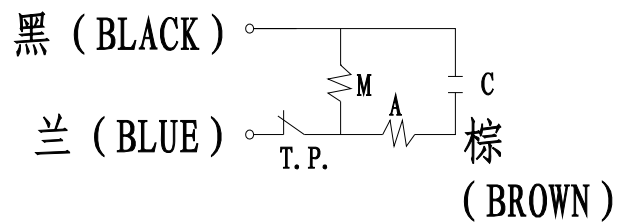
7、构造 Construction

1) 其他外观构造参照附加图面。

Other outer construction please refer to the attached picture:

接线原理图

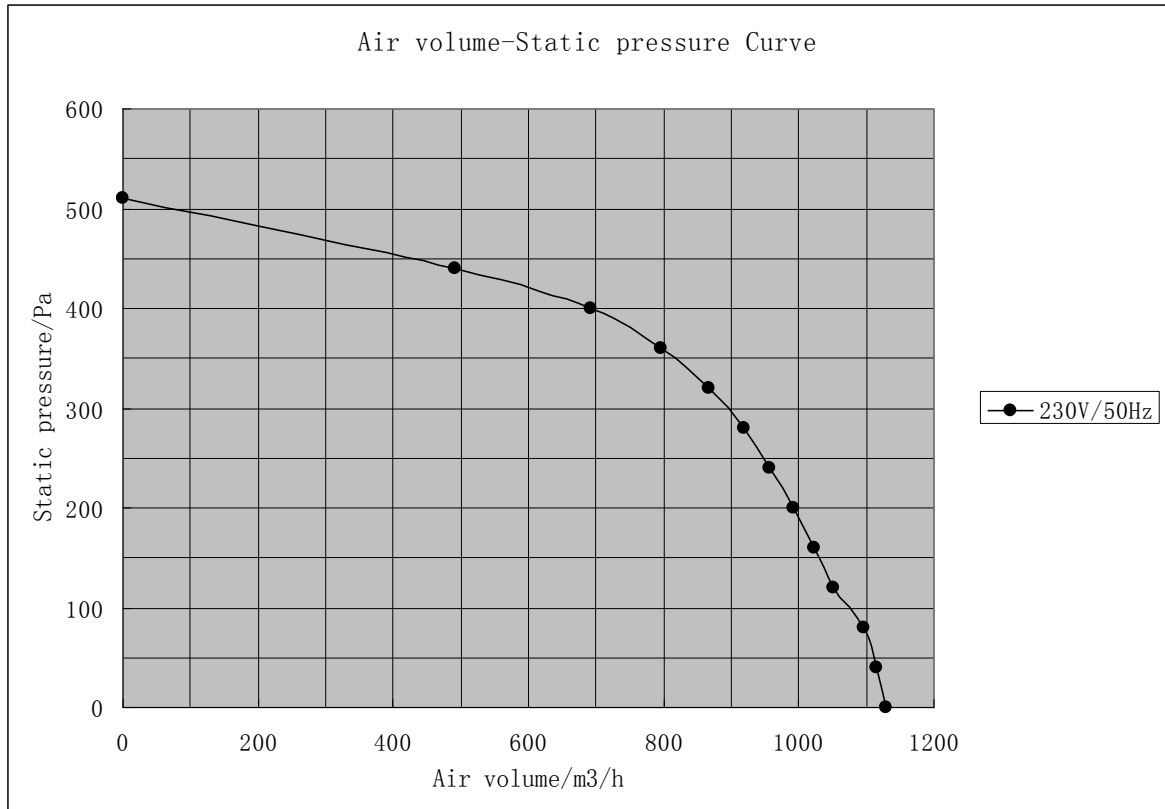
Wiring diagram



风量—静压曲线图

Air volume - Static pressure curve

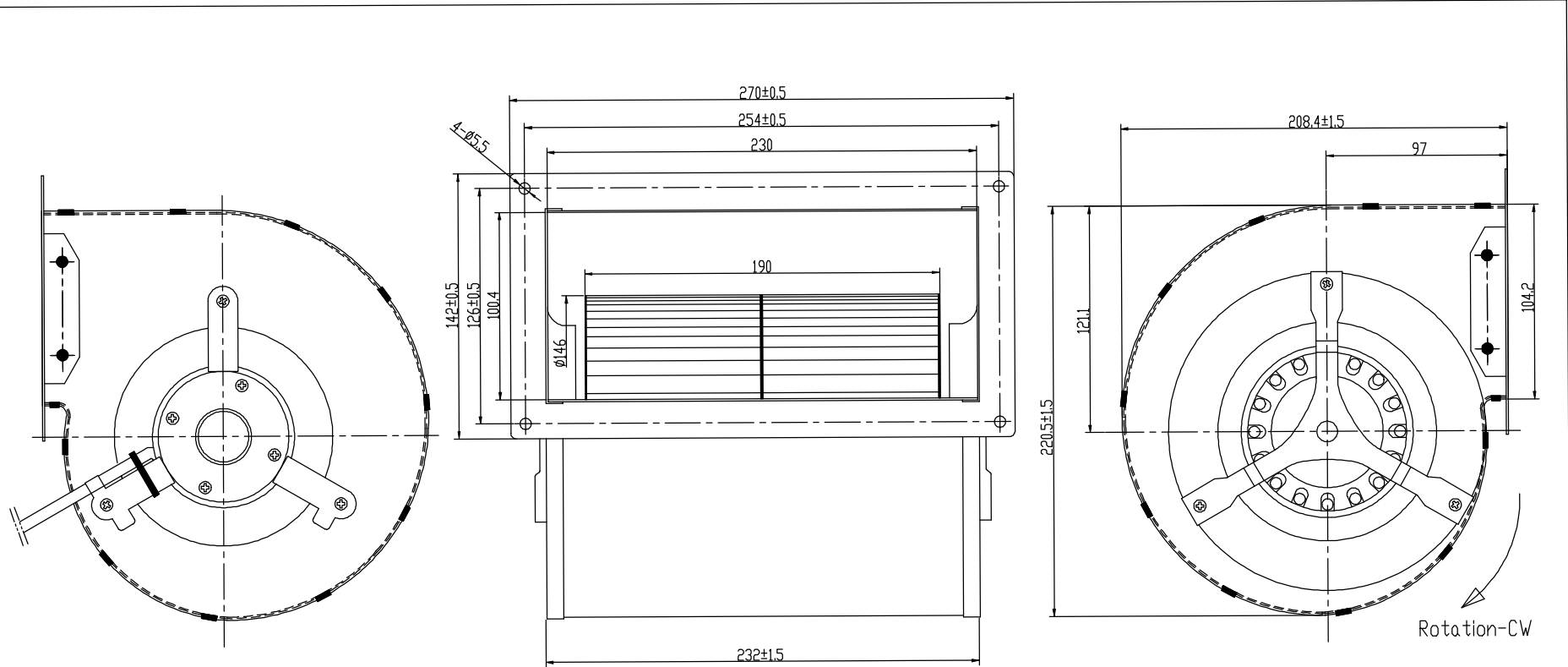
环境温度：18℃ 大气压：1033Hpa
ambient temperature: 18℃
Atmospheric pressure: 1033Hpa



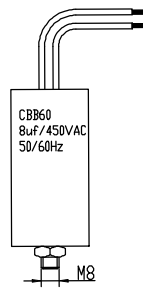
注：本曲线为某台样机实测数据，不作为标准。

风机外形图：见付图

Fan dimensions



Matched capacitor



						常州祥明电机有限公司		
						外形图		
标记	处数	分区	更改文件号	签名	年月日	阶段标记	重量	比例
设计			标准化					1:1
审核						共 张 第 张		FLSWD146/190B-1803A2
工艺			批准					