

大牧人  
Big Herdsman



## 57高负压拢风筒风机

HNP 57 cone fan

57高负压拢风筒风机用于畜牧舍的环境通风降温，产品采用蝴蝶叶片的密闭结构，通过电动阀控制蝴蝶叶片的开启与关闭；直驱传动结构效率高，筒片采用卡扣式插片结构，组装便捷；风机运行安全可靠，可强力促进空气流动，达到通风降温效果。

HNP 57 cone fan fan is used to ventilate and cool the livestock house. The closed structure of two front doors (butterfly blades) is adopted for the fan, which can be opened and closed under the action of electric valve. The direct drive transmission structure has a high efficiency. The cone sheet is of the buckle connection structure, which is convenient to assemble. The fan is usually fixed at the wall opening, and operates safely and reliably, which can strongly promote the air flow and ventilate and cool the space.

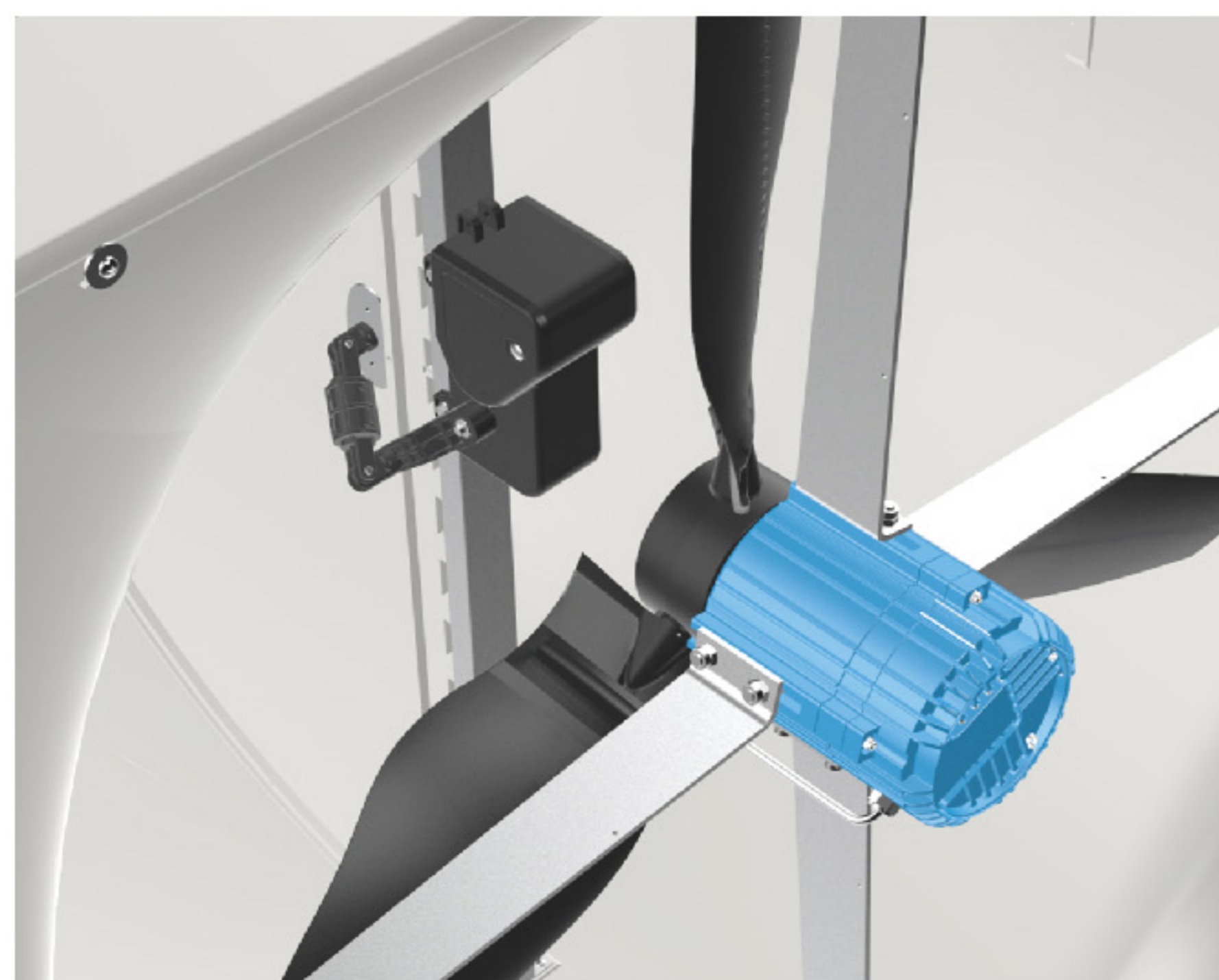
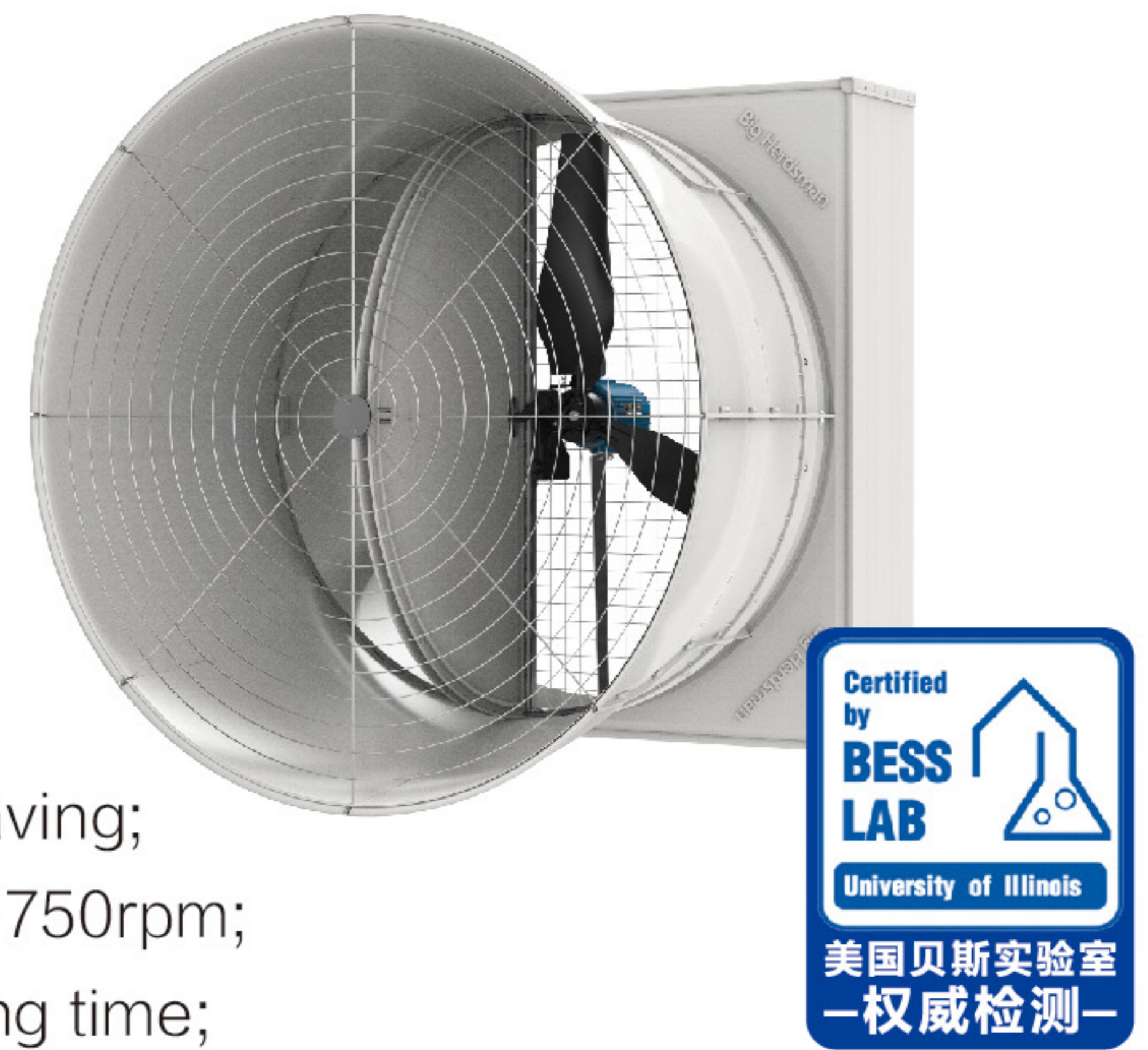
大牧人机械(胶州)有限公司  
BIG HERDSMAN MACHINERY(JIAOZHOU) CO.,LTD

让养殖变得简单/可靠/环保/高效  
—Simple/Reliable/Green/Efficient—



# 57高负压拢风筒风机HNP 57 cone fan

- 电机：永磁电机效率91%以上，高效节能；
- 调速：无极调速，调速范围215rpm-750rpm；
- 耐压：电机可在340V-460V电压范围内长期运转；
- 蝴蝶：蝴蝶片配合风机的开启和关闭，防回风且密封性好；
- 扇叶：采用尼龙玻纤增强材质，耐冲击强度高；
- 外壳：全塑材质，耐腐蚀，无锈蚀，耐候抗老化；
- 传动：直驱传动效率高，无需皮带张紧维护等日常维护工作；
- Motor: permanent magnet motor efficiency 91%, high efficiency and energy saving;
- Speed regulation: stepless speed regulation, speed regulation range 215rpm-750rpm;
- Voltage resistance: the motor can operate in the range of 340V-460V for a long time;
- Butterfly plate : butterfly blade fits with fan opening and closing, anti-return air and good sealing;
- Fan blade: nylon glass fiber reinforced material, high impact strength;
- Shell: full plastic material, corrosion resistance, no rust, weather resistance and aging resistance;
- Drive: high efficiency of direct drive, without belt tensioning maintenance and other daily maintenance work;



University of Illinois Department of Agricultural and Biological Engineering  
Bioenvironmental and Structural Systems Lab  
Final Report

Project Number: 26442  
Test Date: November 30, 2020

Fan: Model: 87-25PC01  
Blade dia.: 57"  
C-Flange dia.: 57.7"

Motor: Make: -  
Model: 160PM3020-41  
HP: 2.2 kW  
CPK: 750  
Volts: 340-480  
Amps: 5.2  
Hz: 50/60  
Phase: 3  
Shaft: 1.5" x 0.75" x 2.3" concentric  
Clearance: 0.4"

Shutter: Butterfly damper  
Material: plastic  
# Doors: 2  
# Columns: -  
Door length: -  
Location: exhaust  
Guards: -  
Description: wire  
Spacing: 1.5" x 0.75" x 2.3" concentric  
Location: intake/exhaust

Discharge Cone:  
Depth: 50.3"  
Minor dia.: 50"  
Major dia.: 62"

Notes: 0 - 10 VDC speed control signal  
Mechanically operated butterfly damper: 220 VAC

Test Conditions:  
T(air): 57° Barometric pressure: racecourse 22.27  
T(dry): 73° Barometric pressure: racecourse 22.14 (In. Hg)

Static Pressure (in H <sub>2</sub> O)	Airflow (cfm)	SI Units				SI Units				
		rpm	Volts	Amps	Watts	Pressure (Pa)	Airflow (m <sup>3</sup> /hr)	Power (W)	Efficiency (%)	
<b>750 rpm, 0.10 VDC</b>										
0.00	36900	749	380.2	2.71	1970	23.7	0	67600	40.3	26
0.05	38100	749	378.2	2.82	1932	21.1	12	64700	35.9	28
0.10	36300	720	378.8	3.12	1805	18.8	25	61000	31.9	31
0.15	34700	749	378.8	3.25	2008	17.3	37	58900	29.3	34
0.20	32900	749	377.8	3.45	2107	16.8	50	56700	26.4	38
0.25	30700	720	378.0	3.56	2133	14.1	62	52100	23.9	42
0.30	28500	749	378.9	3.59	2223	12.9	75	48600	21.9	46
0.35	26300	720	378.8	3.87	2289	11.4	87	44800	19.4	52
0.40	22200	749	380.1	3.94	2200	10.0	100	37600	17	56
<b>750 rpm, 0.81 VDC</b>										
0.00	30300	720	378.8	2.40	1550	25.1	0	60000	42.8	23
0.05	37000	731	378.8	2.72	1583	22.0	12	62900	37.3	27
0.10	35200	720	378.2	2.97	1770	19.8	25	59900	33.7	30
0.15	31900	720	378.4	3.26	1894	17.2	37	55900	30.1	33
0.20	31800	733	378.8	3.15	1998	18.0	50	53700	27.3	37
0.25	29500	733	378.7	3.30	2236	14.8	62	50200	24.7	41
0.30	27900	720	378.0	3.36	2304	13.0	75	48000	22.1	45
<b>700 rpm, 0.55 VDC</b>										
0.00	37100	720	380.8	2.24	1397	26.8	0	63200	45.8	22
0.05	35900	720	380.1	2.40	1491	23.8	12	60400	40.5	25
0.10	33600	720	378.9	2.50	1560	21.1	25	57200	35.9	28
0.15	31900	720	380.7	2.72	1691	18.7	37	52900	31.7	32
0.20	29500	720	378.8	2.94	1765	16.7	50	48000	28.4	36
0.25	27100	720	378.8	2.86	1836	15.0	62	44100	25.9	39
0.30	24400	720	375.4	2.97	1838	13.3	75	41400	22.6	44
<b>670 rpm, 0.14 VDC</b>										
0.00	30300	659	380.3	1.90	1212	28.1	0	60000	49.5	20
0.05	33700	659	380.5	2.29	1297	26.0	12	57200	44.1	23
0.10	31400	657	380.7	2.97	1438	22.3	25	53400	37.9	26
0.15	29000	657	380.5	2.88	1490	18.8	37	50100	33.9	29
0.20	27100	655	378.7	2.48	1536	17.6	50	45800	29.9	33
0.25	24900	655	378.1	2.56	1591	15.5	62	41900	26.3	36
0.30	20900	657	378.1	2.55	1577	13.2	75	35300	22.4	40
<b>610 rpm, 0.41 VDC</b>										
0.00	32200	610	378.3	1.51	902	34.8	0	54700	58.7	17
0.05	30200	610	378.4	1.94	1018	28.7	12	51400	50.4	20
0.10	27900	610	378.8	1.77	1038	26.3	25	47900	43	23
0.15	25400	610	378.8	1.87	1137	21.8	37	43100	37.2	27
0.20	22900	609	380.2	1.93	1191	19.0	50	38400	32.2	31
0.25	21000	609	380.2	1.93	1196	14.9	62	30300	28.4	36
0.30	18700	610	378.8	1.79	1136	10.8	75	18900	17.9	36
<b>550 rpm, 0.88 VDC</b>										
0.00	29500	552	378.4	1.14	698	41.8	0	40300	70.7	14
0.05	26900	551	378.8	1.28	778	34.2	12	45200	58.1	17
0.10	24000	551	378.9	1.36	840	28.6	25	40900	49.6	21
0.15	21100	552	380.1	1.42	882	24.1	37	35100	41	24
0.20	17200	551	380.1	1.43	879	16.6	50	26200	33.3	30
0.25	9900	550	378.8	1.35	823	12.0	62	16700	20.3	48

- ★75pa高负压下，风量可达48600m<sup>3</sup>/h
- ★100pa高负压下，风量可达37700m<sup>3</sup>/h
- ★Under 75PA high negative pressure, air volume can reach 48600m<sup>3</sup>/h
- ★Under 100Pa high negative pressure, air volume can reach 37700m<sup>3</sup>/h

## 产品参数Product parameters

名称 Name	风量 m <sup>3</sup> /h Air volume m <sup>3</sup> /h							
	0pa	12pa	25pa	37pa	50pa	62pa	75pa	100pa
57高负压拢风筒风机 (2.2kw) HNP 57 cone fan	67600	64700	61400	58900	55700	52100	48600	37700

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