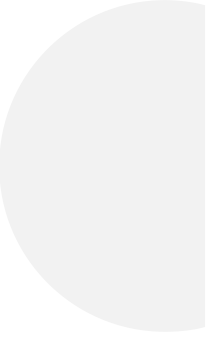




泛仕达机电股份有限公司

Presentation for FT fan used in air purifier





CONTENT

01 Company profile

02 Fan application and requirement

03 FT fan will be used in air purifier

04 Fan comparison

05 Key partner and typical case

Company profile

About us

Core advantage

01

关于我们



Subsidiary and research institute

2+3 ↑



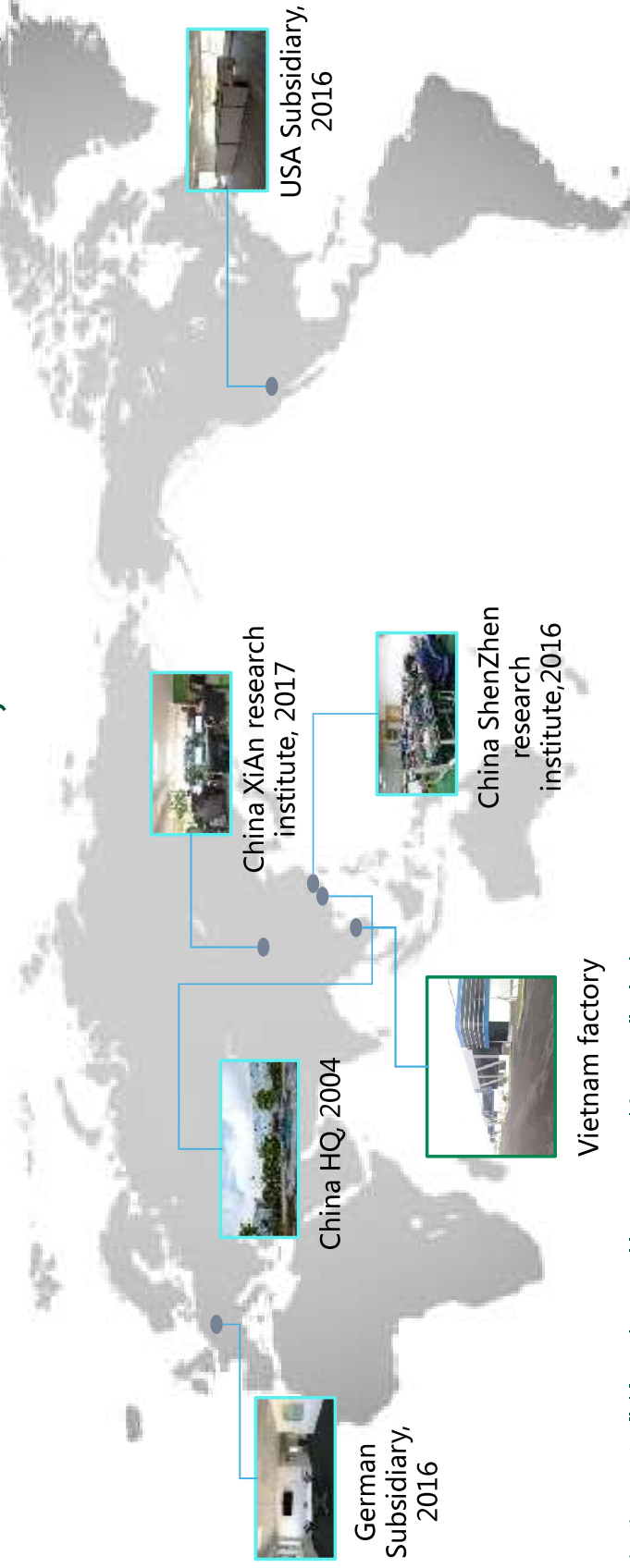
Employee

1,200 人



Products

200+ ↑



To be the most reliable and competitive motor and fan supplier in the world

Core Advantage

- ◆ Professional R&D institute
- ◆ Annual R&D investment rate 6%
- ◆ R&D engineer quantity 200+
- ◆ Cooperation with top

R&D



Reliability

- ◆ Follow system quality standard
- ◆ 100% vibration test
- ◆ 100% balance test
- ◆ 100% safety performance test

domestic University

- ◆ Guangdong TOP500

Production

- ◆ manufacturer
- ◆ 30,000 sq. meter workshop
- ◆ leading automatic production equipment
- ◆ well-skilled employee 800+



Test

- ◆ Air & sound performance test
- ◆ Wind tunnel Lab
- ◆ UL certification Lab
- ◆ Leading motor and fluid simulation

- ◆ Total 153 items in application

- ◆ 64 authorized patents

Patent

- ◆ 91 utility model
- ◆ 7 patent of invention
- ◆ 5 appearance design



Certification

- ◆ all models meet UL standard
- ◆ all models used in EU meet CE
- ◆ CCC、TUV
- ◆ CE-LVD、CE -EMC

- ◆ Approved by ISO9001
- ◆ Approved by ISO14001
- ◆ Approved by IATF16949

Quality system certification

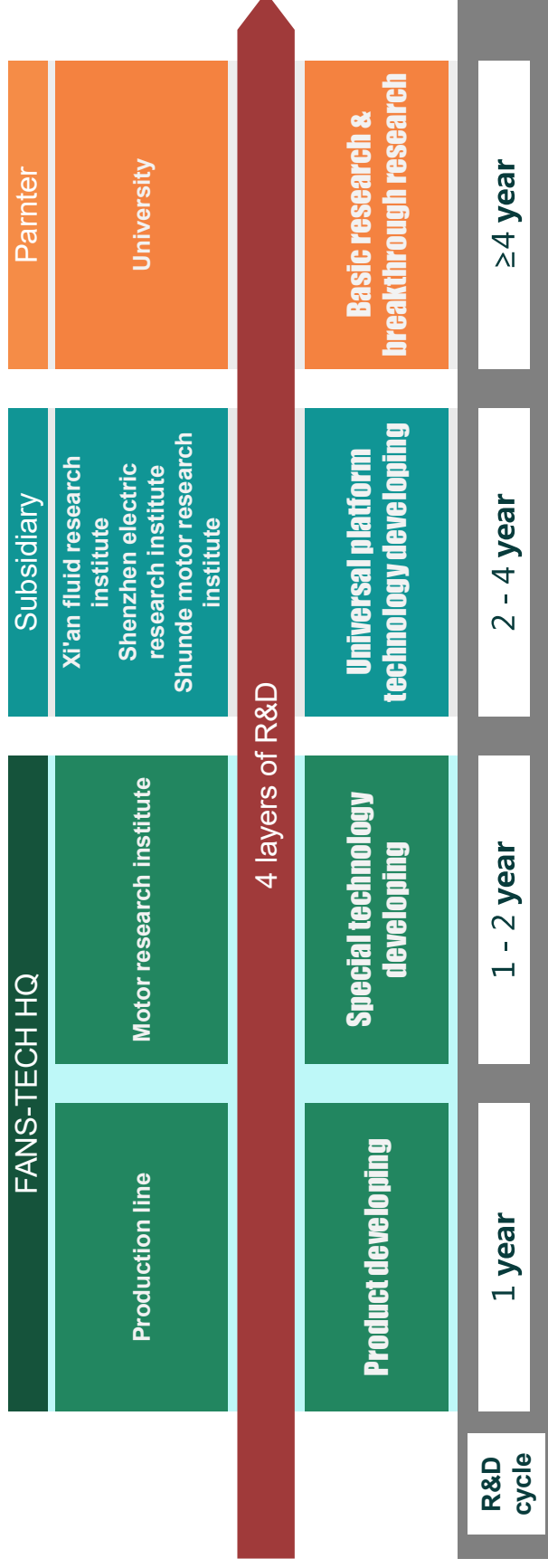


Products

- ◆ Forward curved centrifugal fan AC/DC/EC 102~280mm
- ◆ Backward curved centrifugal fan AC/DC/EC 133~560mm
- ◆ Axial fan AC/DC/EC 167~900mm

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4 layers of R&D



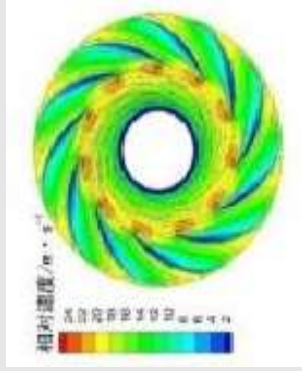
Universities cooperation

Now we are cooperating with Xi'an Jiaotong University, Northwest Polytechnic University, In the later stage, we plan to expand the number of cooperative schools and projects, such as Shanghai Jiao Tong University, Tsinghua University, China Science And Technology University, Zhejiang University, Dalian University of Technology and other universities.



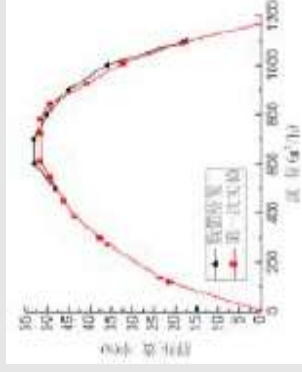
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R&D and design capability



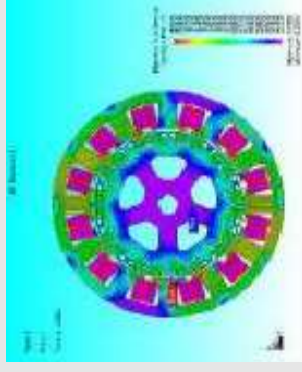
Fluid simulation

The flow loss of the duct was analyzed through CFD flow field model, and the performance of impeller was designed through the analysis of vector/cloud diagram and flow diagram.



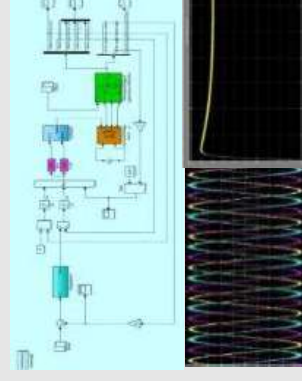
Fan performance simulation

Through CFD simulation to calculate the impeller's air volume, static pressure and input power, the impeller's performance was quickly and effectively evaluated, providing a guiding direction for the fan scheme.



The simulation of magnetic

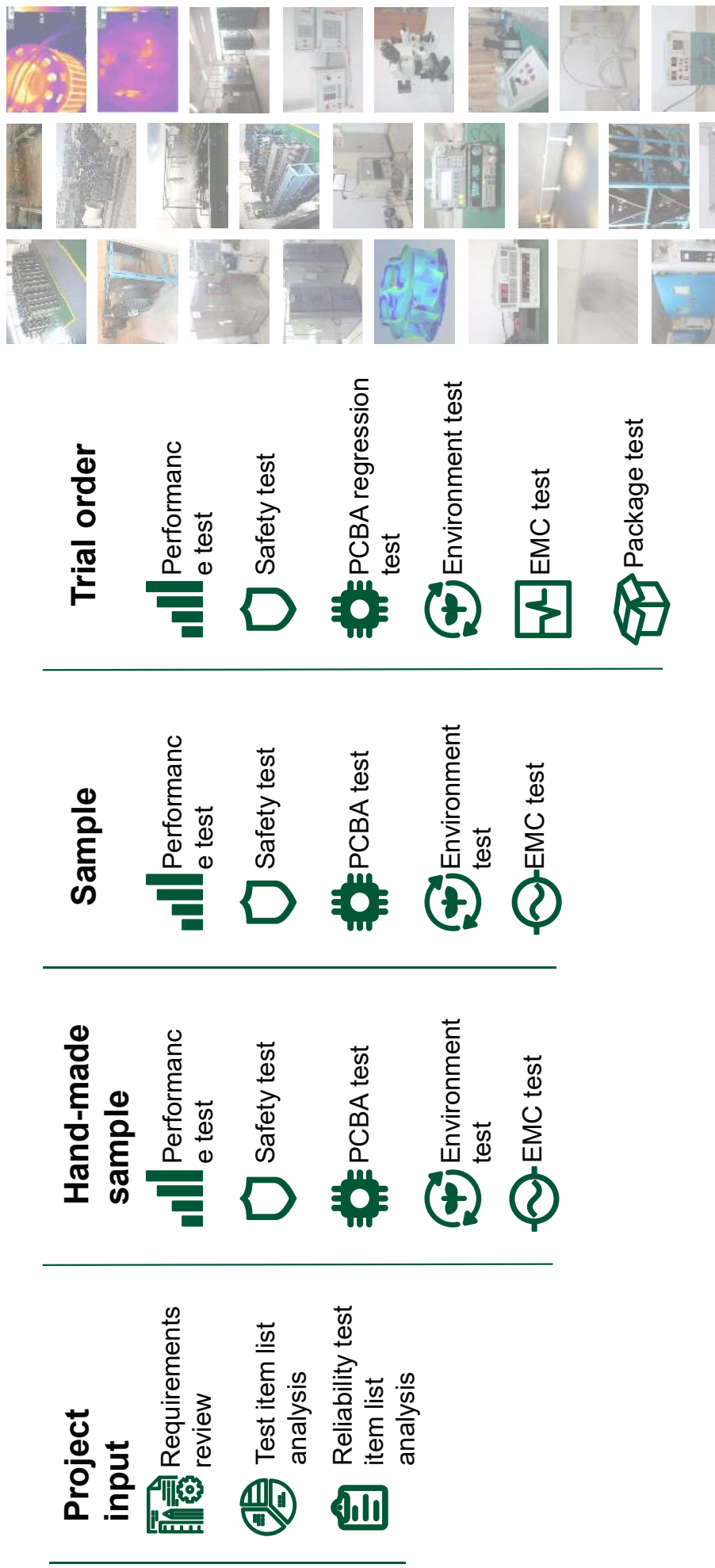
A new type of motor is developed by using digital parameter solid model to simulate the magnetic field of the motor.



Electronic simulation

The steady-state output characteristics of the motor control system are simulated by establishing a mathematical model, and the performance of the system is evaluated by observing the dynamic response characteristics of the system.

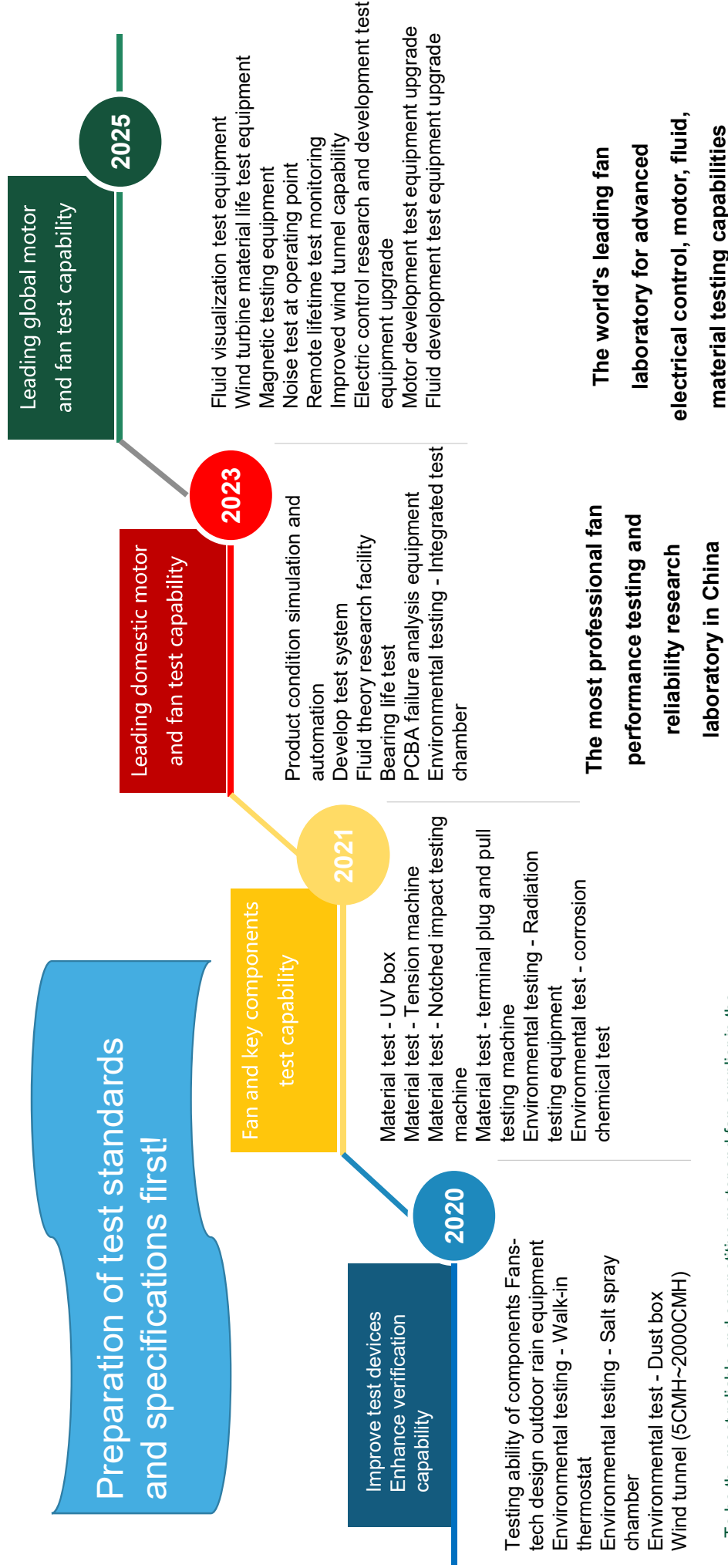
Product reliability management capability



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Future test capacity planning

Preparation of test standards and specifications first!



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02

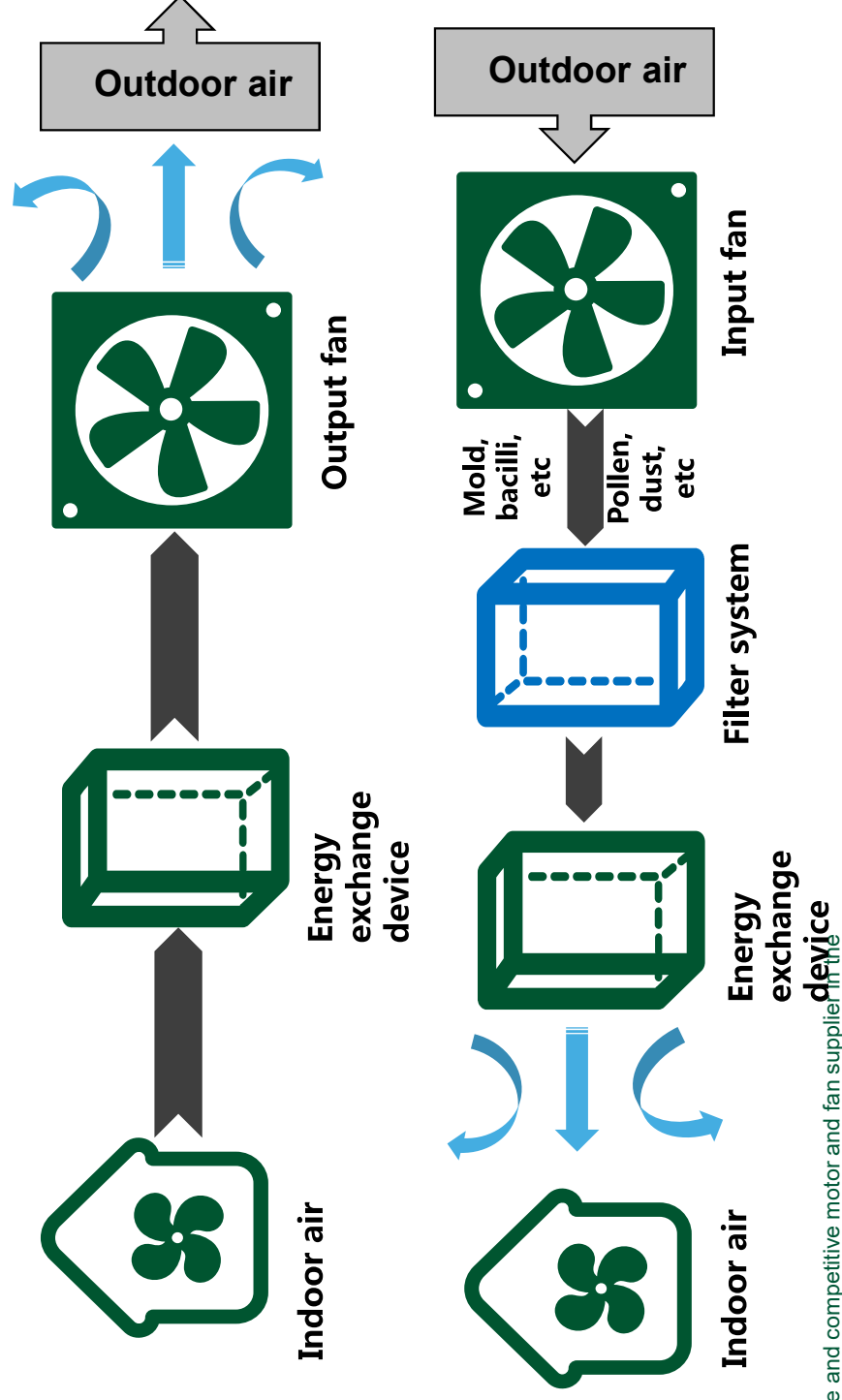
Fan application and requirement

Fan application

Fan requirement

Fan application

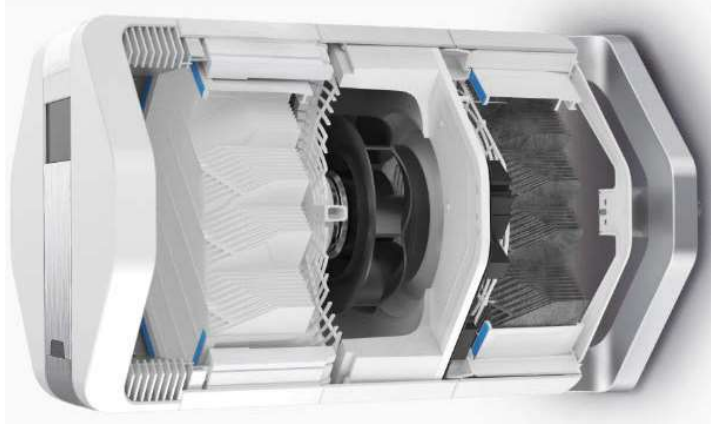
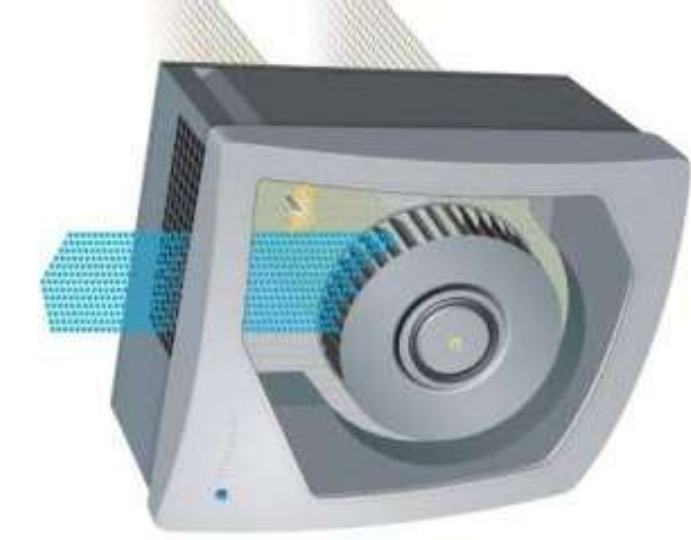
NEW AIR DEVICE



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Fan application

AIR PURIFIER



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Fan requirement

NEW AIR DEVICE

01

Forward curved
centrifugal fan

- EC133-225
- AC102-200

02

Backward
curved
centrifugal fan

- EC133-560
- AC133-190

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Fan requirement

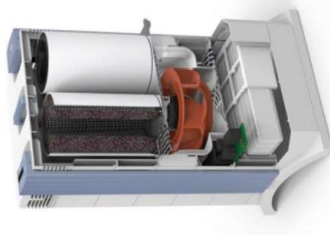
AIR PURIFIER



01

Forward curved
centrifugal fan

- AC102-225
- EC133-225
- DC151/277/283



02

Backward curved
centrifugal fan

- AC190/220/225/250
- EC190
- DC133/140/150/190/220

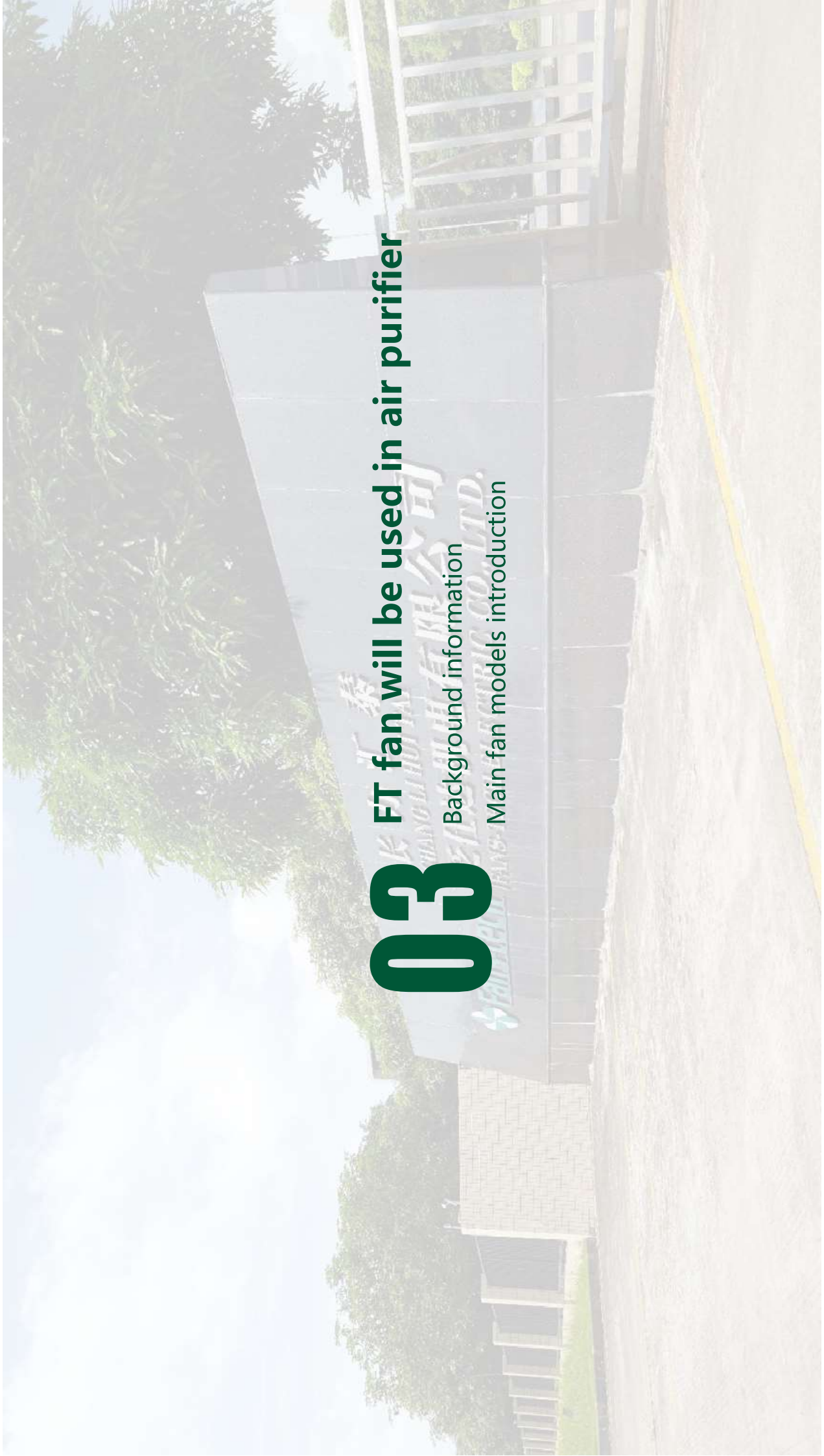
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03

FT fan will be used in air purifier

Background information

Main fan models introduction



Background information

High efficiency

ERP Approved

High protection class

Max IP54

Long lifetime

40000H@40°C (centrifugal fan)

60000H@40°C (axial fan)

EMC certification

CCC Approved

CE Approved

UL Approved



1

Backward curved centrifugal fan series

Impeller diameter
133~560mm



2

Forward curved centrifugal fan series

Impeller diameter
102~280mm



3

Axial fan series

Impeller diameter
167mm~900mm

Main fan models introduction

NEW AIR DEVICE/AIR PURIFIER



Forward curved single inlet centrifugal fan
SH102A1-052-000



Leading design : Forward curved single inlet centrifugal fan
SC140A1-068-005



Leading design : Forward curved single inlet centrifugal fan
SC160A1-068-005



Forward curved dual inlet centrifugal fan AC/EC120
DH120A1-AGT-03
DH120E2-DC0-00



Backward curved centrifugal fan
AC/EC133
SC133A1-AC6-03
SC133E2-AC1-01



Leading design: Backward curved centrifugal fan
AC/EC190
SC190A1-AF5-01
SC190E2-055-A00



Leading design: Backward curved centrifugal fan
AC/EC225
SC225A1-AGT-34
SC225E2-AGT-06

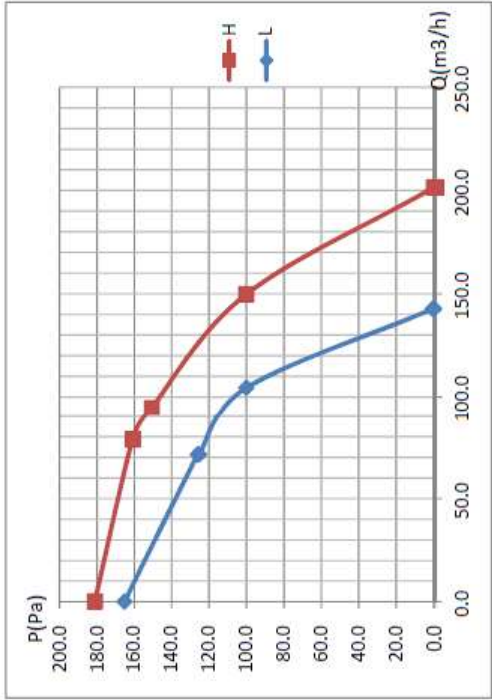


Leading design: Backward curved centrifugal fan AC/EC225
SC225A1-AGT-34
SC225E2-AGT-06

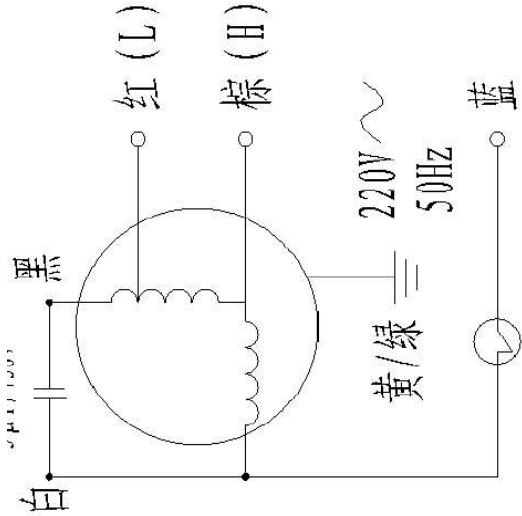


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Main fan models introduction



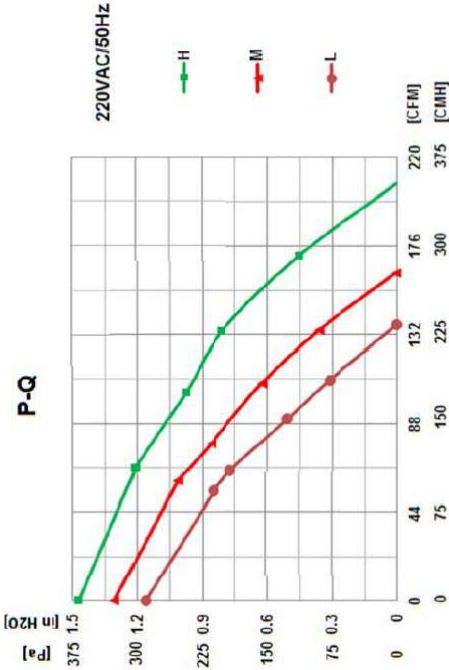
AC102



Model	Motor	Voltage (VAC)	Frequency(HZ)	Speed	Speed (r/min)	Air @0Pa (CMH)	Power(W)	Sound/dB(A)
SH102A1-052-000	AE052A1-00001	220	50	H	2100	200	47	57
		220	50	L	1550	140	26	50

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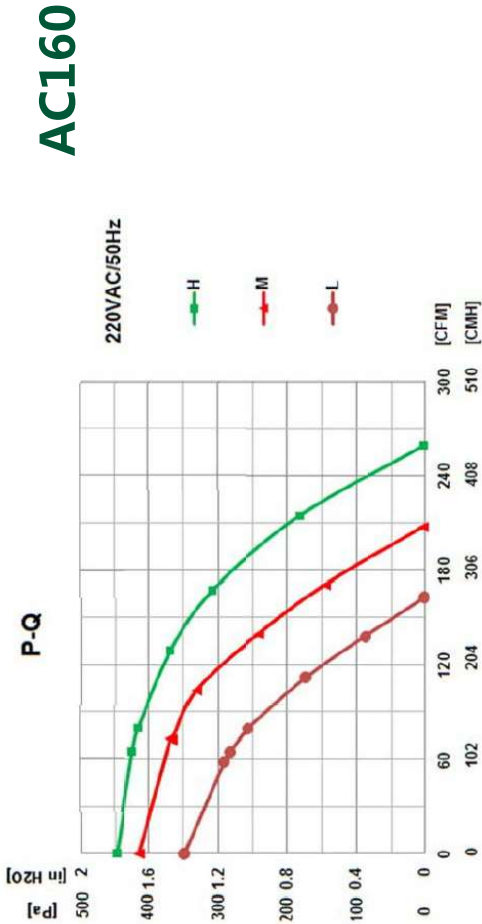
Main fan models introduction



AC140

Model	Motor	oltage (VAC)	Frequency(HZ)	Speed	Speed (r/min)	Air @0Pa (CMH)	Power(W)	Sound/dB(A)
SC140A1-068-005	220	50	H	0.26	2380	350	57	59
	220	50	M	0.23	2050	275	49	56
	220	50	L	0.22	1830	230	46	53

Main fan models introduction



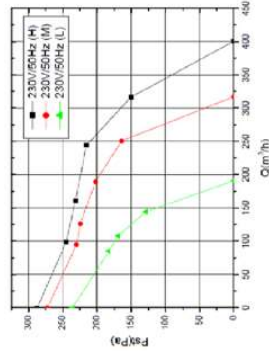
电压 Voltage [VAC]	频率 Frequency [Hz]	电容 Capacitor [μ F/V] ($\pm$ 5%)	档位 Gear	输入电流 Current draw [A] ($\pm$ 10%)	输入功率 Power Input [W] ($\pm$ 10%)	转速 Speed [r/min] ($\pm$ 10%)	噪音 Noise [LpdB(A)] (+3/-7)	绝缘等级 Insulation class
220	50	5/450	H	0.50	99	2200	65	F
			M	0.46	85	1980	62	
			L	0.43	80	1650	57	

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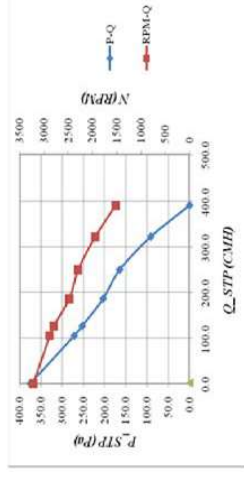
Main fan models introduction



DH120A1-AGT-03



DH120E2-DC0-00



AC/EC120

DH120A1-AGT-03:

Material : SGCC

Motor protection class : IP20

Function : thermal-protection

Insulation class : F

Rotation direction : clock-wise

Certification : CCC

Operation temp. range : -40°C~65°C

DH120E2-DC0-00 :

Material : SGCC

Motor protection class : IP42

Function : thermal-protection、speed feedback、speed control、soft start、locked-rotor protection、current limit protection

Insulation class : F

Certification : CE

Operation temp. range : -40°C~65°C

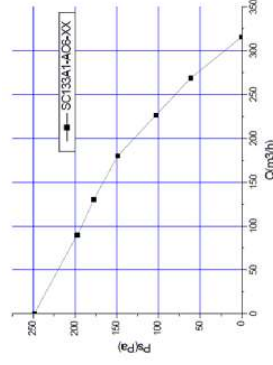
Model	Motor	Voltage	AC/EC/DC	Frequency (HZ)	Air (m³/h)	Speed (rpm)	Power (W)	Current (A)	Sound Lp:dB(A)
DH120A1-AGT-03	AM068A1-AG5-18	230VAC	AC	50	400	1550	112	0.5	64
					320	1220	92	0.43	
					190	760	66	0.3	
DH120E2-DC0-00	DM055E2-DC0-02	24VDC	EC	--	390	1520	52	2.2	61

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Main fan models introduction



SC133A1-AC6-03



SC133A1-AC6-03:

Material : PA66+25%GF

Motor protection class : IP23

Function : thermal-protection

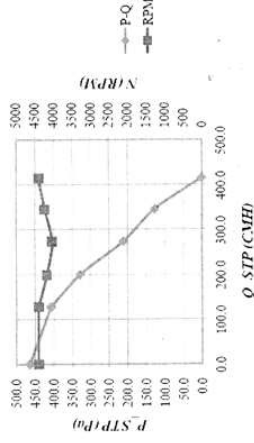
Insulation class : F

Rotation direction : clock-wise

Certification : UL

Operation temp. range : -40°C~65°C

SC133E2-ACT-01



SC133E2-ACT-01 :

Material : PA66+25%GF

Motor protection class : IP42

Function : thermal-protection、 speed feedback、 speed control、 soft start、 locked-rotor protection、 current limit protection

Insulation class : F

Certification : CE

Operation temp. range : -25°C~60°C

Model	Motor	Voltage	AC/EC/DC	Frequency (HZ)	Air (m³/h)	Speed (rpm)	Power (W)	Current (A)	Sound Lp:dB(A)
SC133A1-AC6-03	AM052A1-AC6-05	115VAC	AC	60	320	3150	23	0.21	55
SC133E2-ACT-01	DM055E2ACT-00	115VAC	EC	--	415	4400	45	0.65	63

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Main fan models introduction



SC190A1-AF5-01:

Material : ABS+SGCC, Black

Motor protection class : IP23

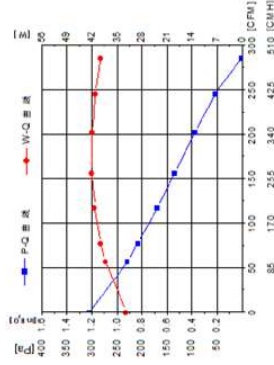
Function : thermal protection

Insulation class : F

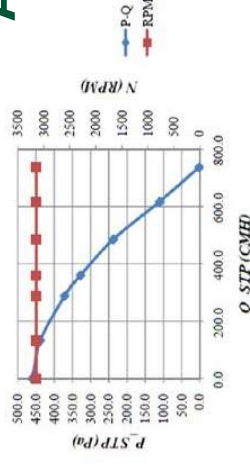
Certification : --

Operation temp. range : -10°C~55°C

SC190A1-AF5-01



SC190E2-055-A00



AC/EC190

SC190E2-055-A00 :

Material : PA66+25%GF

Motor protection class : IP42

Function : speed feedback、 speed control、 soft start、 locked-rotor protection、 over/low voltage protection 、 current limit protection

Insulation class : F

Certification : --

Operation temp. range : -25°C~60°C

Model	Motor	Voltage	AC/EC/DC	Frequency(HZ)	Air (m³/h)	Speed (rpm)	Power (W)	Current (A)	Sound Lp:dB(A)
SC190A1-AF5-01	AM068A1-AF5-84	220	AC	50	480	2250	40	0.19	60
SC190E2-055-A00	DE055E2-A0000	230	EC	50	720	3150	68	0.55	72

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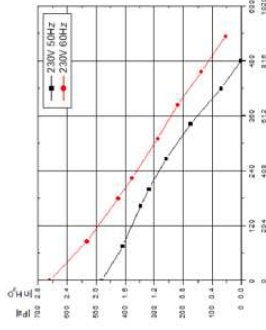
Main fan models introduction



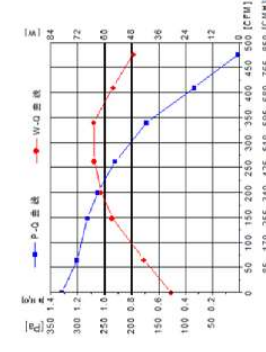
SC225A1-AGT-34:

Material : PA+SGCC, Black
Motor protection class : IP23
Function : thermal protection
Insulation class : F
Certification : CE
Operation temp. range : -40°C~65°C

SC225A1-AGT-34



SC225E2-AGT-06



产品：后向离心AC/EC225

SC225E2-AGT-06 :

Material : PA66+25%GF
Motor protection class : IP42
Function : speed feedback、 speed control、 soft start、
locked-rotor protection、 over/low voltage protection 、
current limit protection
Insulation class : F
Certification : --
Operation temp. range : -25°C~60°C

Model	Motor	Voltage(VAC)	AC/EC/DC	Frequency (HZ)	Air (m³/h)	Speed (rpm)	Power (W)	Current (A)	Sound Lp:dB(A)
SC225A1-AGT-34	AM068A1-AGT-37	230	AC	50	810	2650	105	0.46	65
				60	910	2950	145	0.64	
SC225E2-AGT-06	DM055E2-AGT-20	230	EC	50/60	800	2300	50	0.44	70

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04

Fan comparison

Forward curved 140

Forward curved 160

Backward curved 190

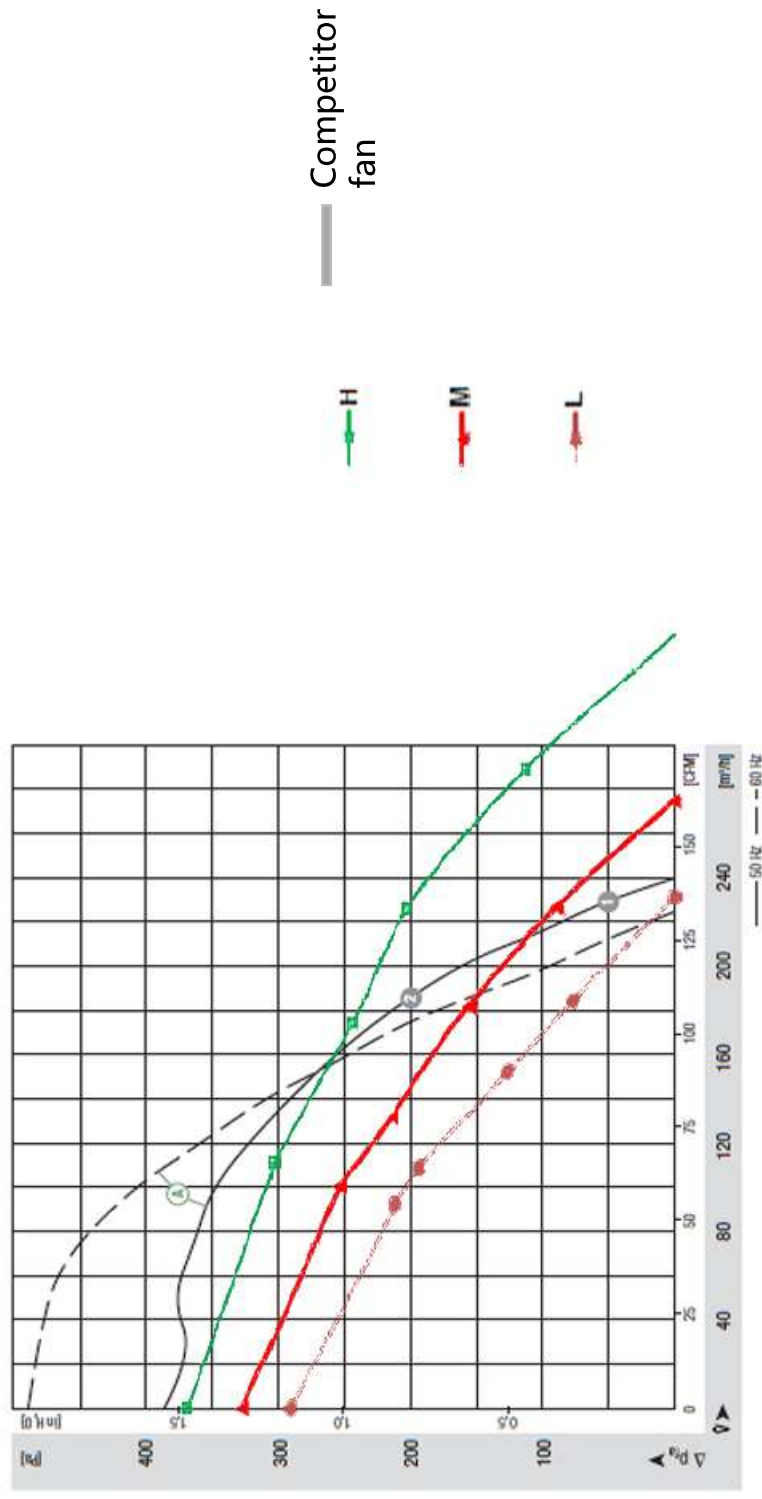
Backward curved 225

Forward curved 140

Model	SC140A1-068-005	Competitor fan 1
Frequency	50Hz	50Hz
Rated voltage (VAC)	220	230
Rated current (A)	0.22/0.23/0.26	0.29
Max power (W)	57	63
Rated speed (R/MIN)	1830/2050/2380	1350
Max operation temperature (°C)	-25	-25
Min operation temperature (°C)	60	45
Max air (CFM)	208	240
Max pressure (Pa)	375	380
Max efficiency (%)	--	--
Sound under Max air Lp[dB]A	59	55

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Forward curved 140



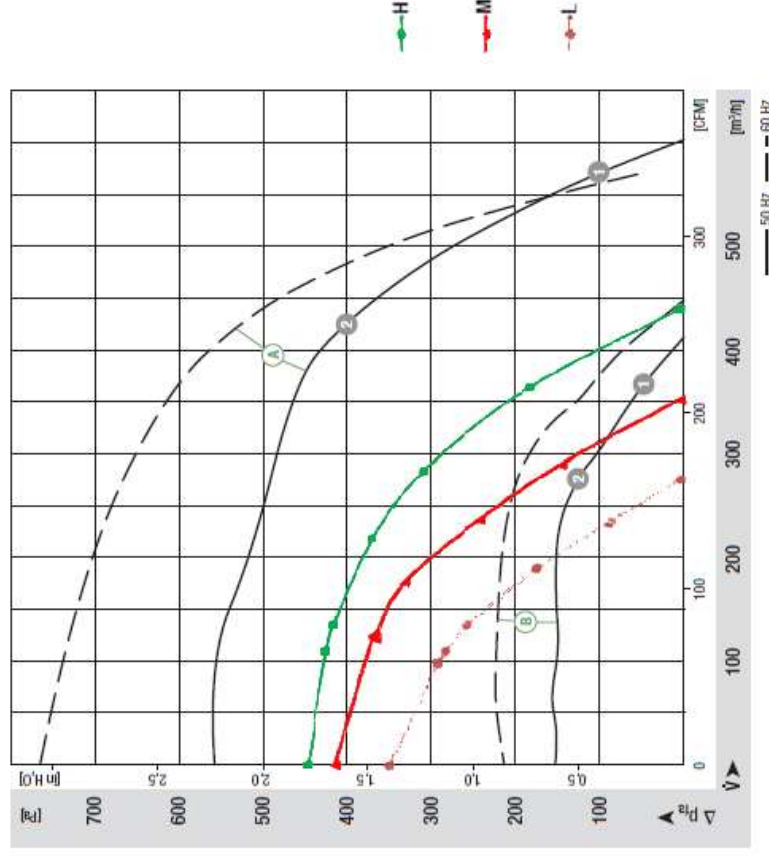
To be the most reliable and
world

Forward curved 160

Model	SC160A1-068-005	Competitor fan 2
Frequency	50Hz	50Hz
Rated voltage (VAC)	220	230
Rated current (A)	0.43/0.46/0.50	0.30
Max power (W)	99	67
Rated speed (R/MIN)	1650/1980/2200	1300
Max operation temperature (°C)	-25	-25
Min operation temperature (°C)	60	65
Max air (CFM)	265	410
Max pressure (Pa)	450	550
Max efficiency (%)	--	--
Sound under Max air Lp[dB]A	65	65

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Forward curved 160



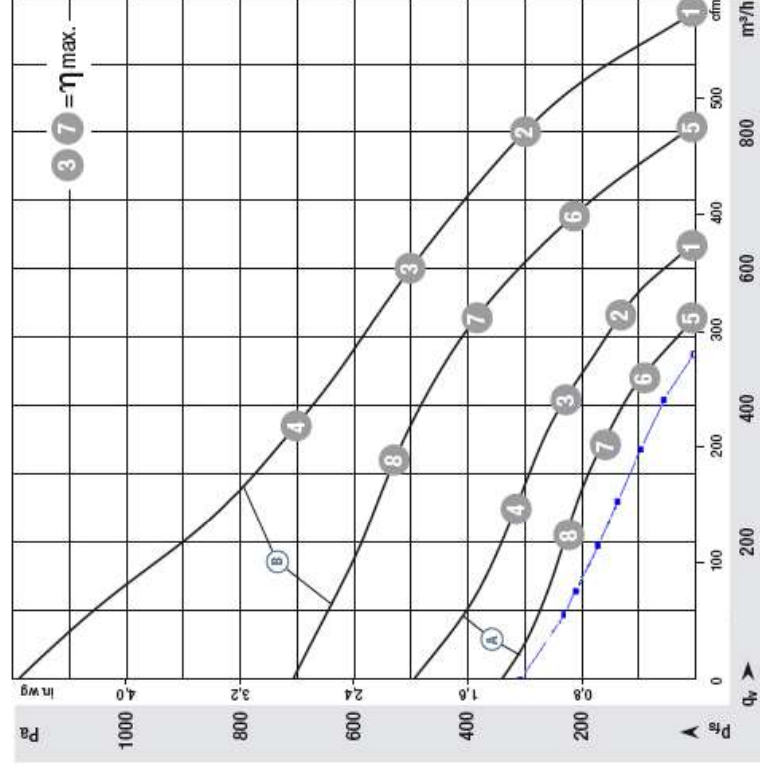
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Backward curved 190

Model	SC190E2-055-A00	Competitor fan 3
Frequency	50Hz	50/60Hz
Rated voltage (VAC)	230	200~240
Rated current (A)	0.55	0.43
Max power (W)	68	169
Rated speed (R/MIN)	3150	2710
Max operation temperature (°C)	-25	-25
Min operation temperature (°C)	60	60
Max air (CFM)	720	980
Max pressure (Pa)	450	1200
Max efficiency (%)	--	--
Sound under Max air Lp[dB]A	72	81

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Backward curved 190



Competitor
fan

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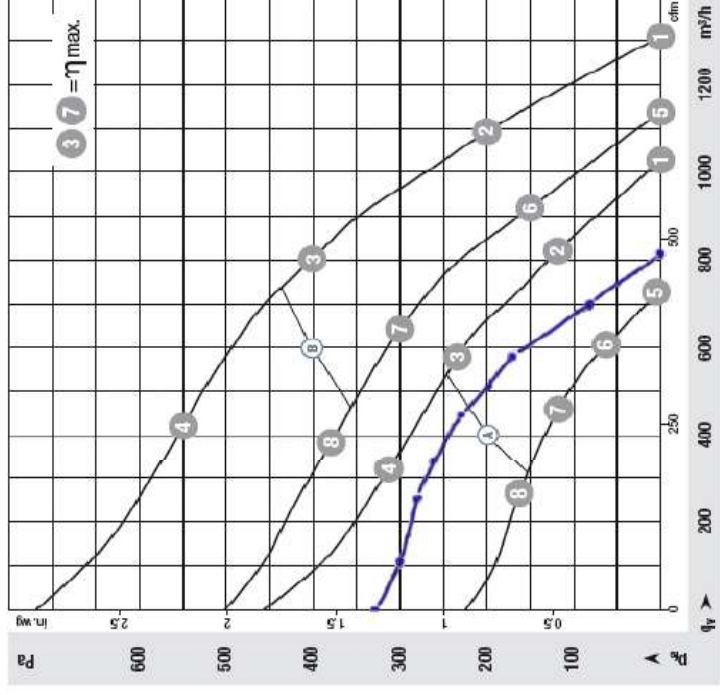
Backward curved 225

Model	SC225E2-AGT-06	Competitor fan 4
Frequency	50/60Hz	50/60Hz
Rated voltage (VAC)	230	200~240
Rated current (A)	0.44	0.7
Max power (W)	50	170
Rated speed (R/MIN)	2300	2860
Max operation temperature (°C)	-25	-25
Min operation temperature (°C)	60	60
Max air (CFM)	475	750
Max pressure (Pa)	330	720
Max efficiency (%)	--	--
Sound under Max air Lp[dB]A	70	78

备注：EC225与竞争对手EBM性能存在一定差距，建议这款产品性能对比不对外展示。

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Backward curved 225



Competitor
fan

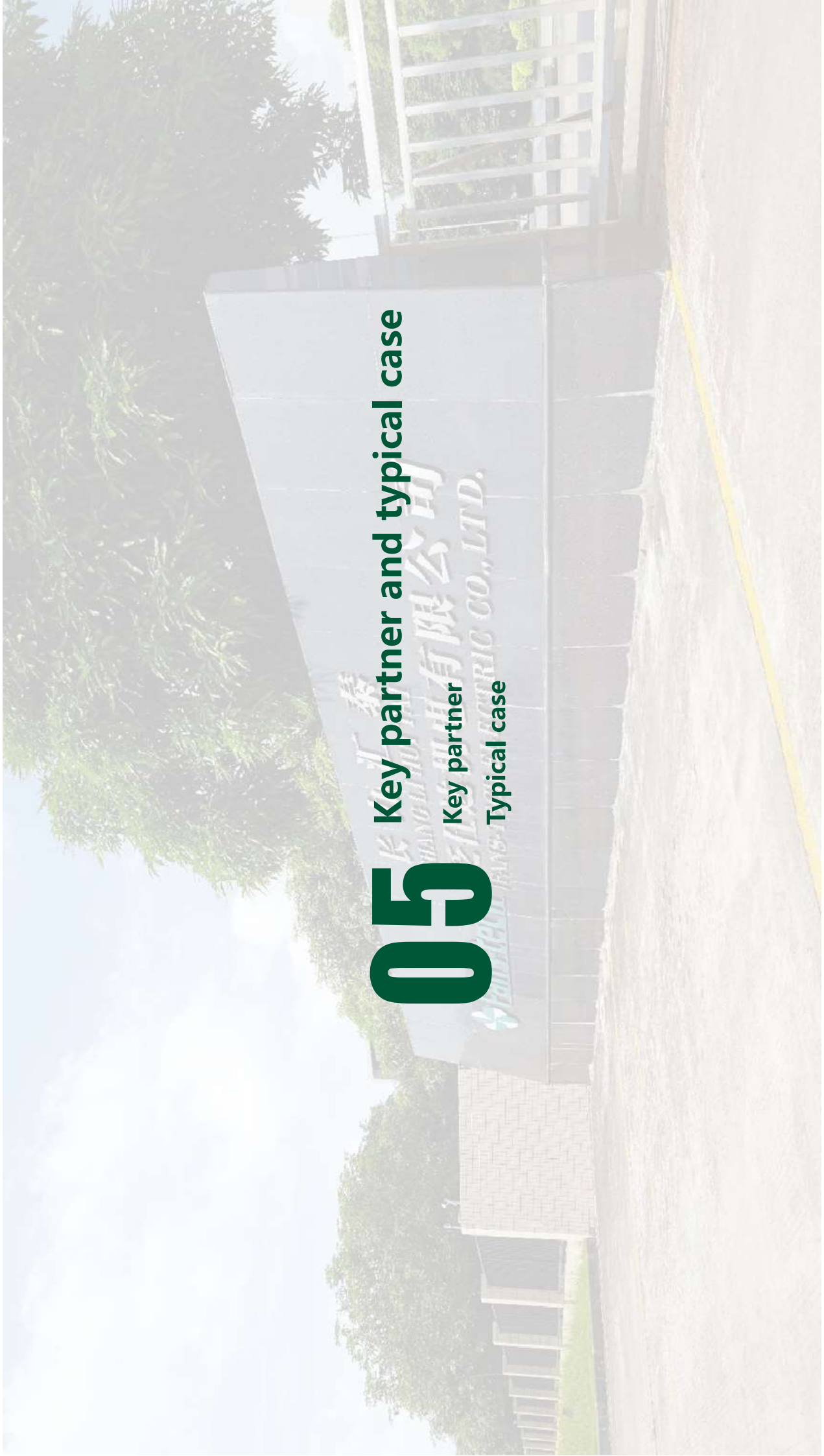
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05

Key partner and typical case

Key partner

Typical case



Key partner



NATHER 兰舍®

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BLLC 东朗

BROAN® 百朗
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a world for your choice

aldes
爱迪士

Blueair

FOTILE 方太®

GROUPE
ATLANTIC

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Typical case

Case 1 : A



Main models :

Forward curved single inlet centrifugal fan AC140/160/180
Forward curved dual inlet centrifugal fan AC133/146
Backward curved centrifugal fan EC310

To be the most reliable and competitive motor and fan supplier in the world

Case 2 : D



Main models :

Forward curved single inlet centrifugal fan AC277
Forward curved dual inlet centrifugal fan AC120/151
Forward curved single inlet centrifugal fan DC277/280
Forward curved dual inlet centrifugal fan DC151
Axial fan AC290
Axial fan DC290



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Thanks

Global leading fan designer and
manufacturer

