

**XINLEI  
COMPRESSOR  
CO.,LTD.**

# BLOWER ENERGYSAVING SOLUTIONS

**XINLEI COMPRESSOR CO.,LTD.**

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Xinlei official website    Xinlei Wechat subscription    Xinlei Tik Tok enterprise

202303

- Magnetic Levitation
- Air Suspension
- Permanent Magnet
- Oil-free Screw



**Focus on the customer's challenges and pressures. Provide competitive air energy system solutions and services. Continue to create maximum value for customers.**

Founded in Zhejiang, China in 2006. Xinlei is a high-tech enterprise with independent research and development intellectual property rights covering the whole fluid field such as piston, screw and centrifugal. We focus on aerodynamic full-scenario digital and intelligent solution, strive to be a world-class enterprise with world-class standards, create and share digital and intelligent fluid ecology with global customer partners.

**Transforming Aerodynamics, Achieving Industrial Ideals**



**XINLEI  
COMPRESSOR  
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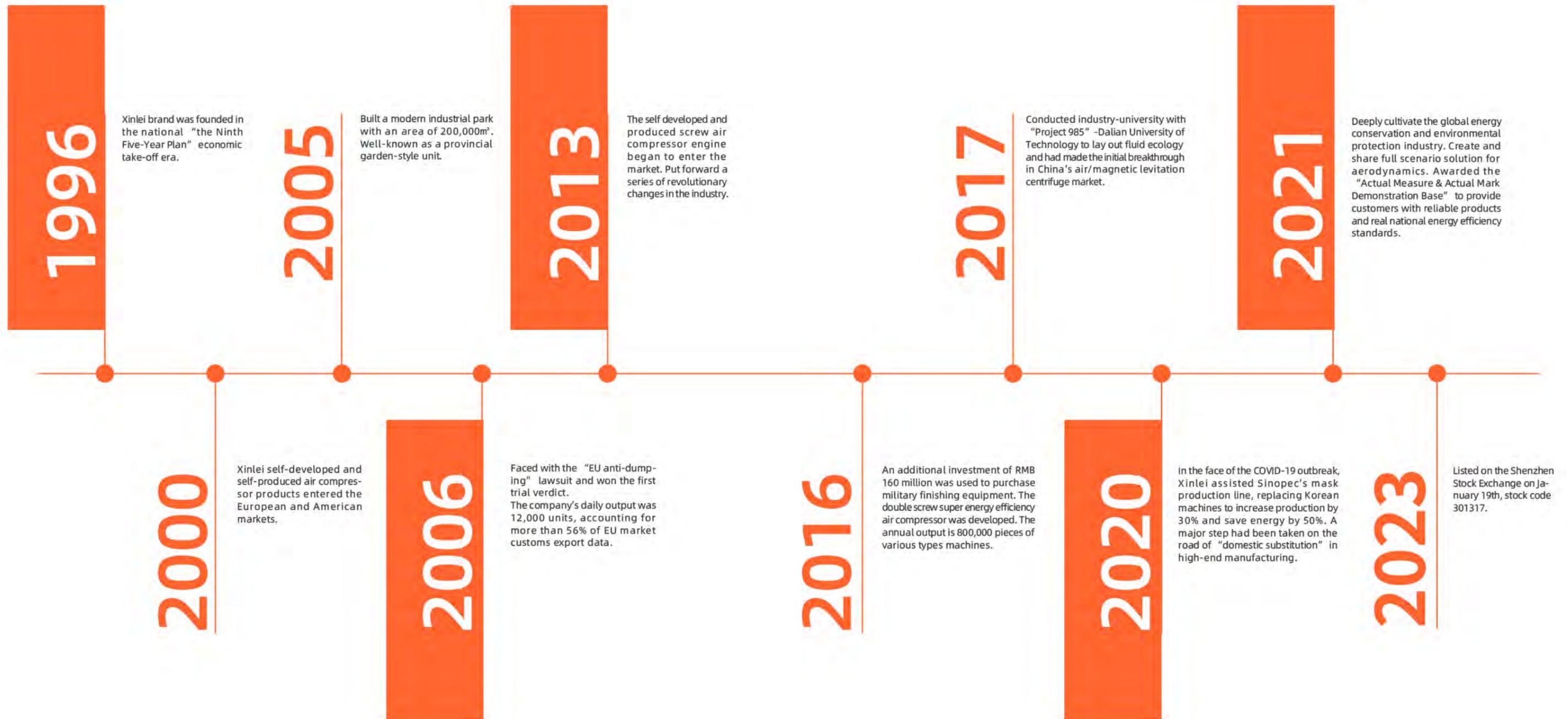
- 110,000+m<sup>2</sup> floor area
- 800,000+ units yearly production
- 100+ sales area
- 270+ patents
- 300+ product specifications
- 260+ high quality precision equipment

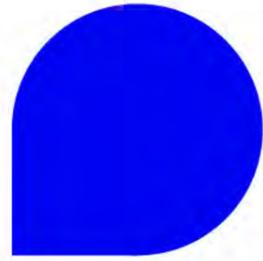
# COMPANY HONOURS

**Draft 2 national standards & 4 industrial standards**

- High-tech enterprise
- National Development and Reform Commission National Key energy-saving and low-carbon technology Promotion Catalogue yearly continuous
- Zhejiang first batch of domestic and foreign trade integration "pacesetter" enterprises
- Ministry of Industry and Information Technology "Energy Efficiency Star" equipment product catalog yearly continuous
- National Torch Program Project Certificate
- Vice president unit of China General Machinery Industry Association
- The sixth council of China Equipment Management Association
- The sixth council of China Equipment Management Association
- Member of China Chamber of Commerce for Import and Export of Mechanical and Electrical Products
- National Energy Efficiency Labeling Testing Laboratory
- Petrochina and Sinopec Engineering Research Association-Air Compressor Technology Center
- Zhejiang Provincial Enterprise Research Institute of Xinlei Fluid Machinery
- Zhejiang export famous brand & "Made in Zhejiang" Standard
- 2020 Excellent supplier in cement industry
- 2021 China's industrial aquatic innovation equipment
- Energy-saving products benefits project high energy efficient positive displacement air compressor promotion enterprise

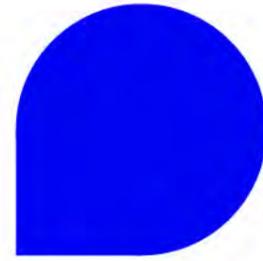
# COMPANY EVENTS AND DEVELOPMENT





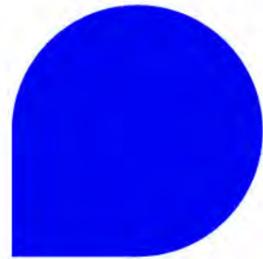
## Zhong Renzhi Chairman

EMBA from Shanghai Jiao Tong University  
Deeply plow in the field of aerodynamics  
Proposed a number of industry breakthrough issues  
Applied for more than 200 patents



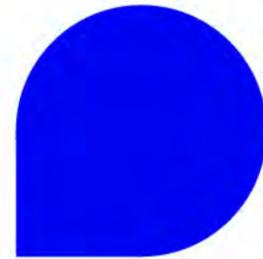
## Yuan Jun CTO

Contract Energy Management Engineer (Senior),  
Engaged in the air compressor industry for nearly  
20 years;  
Mainly waiting for a number of air energy full-scene  
implementation plans, claiming 120+ patents.



## Shen Yiming PD

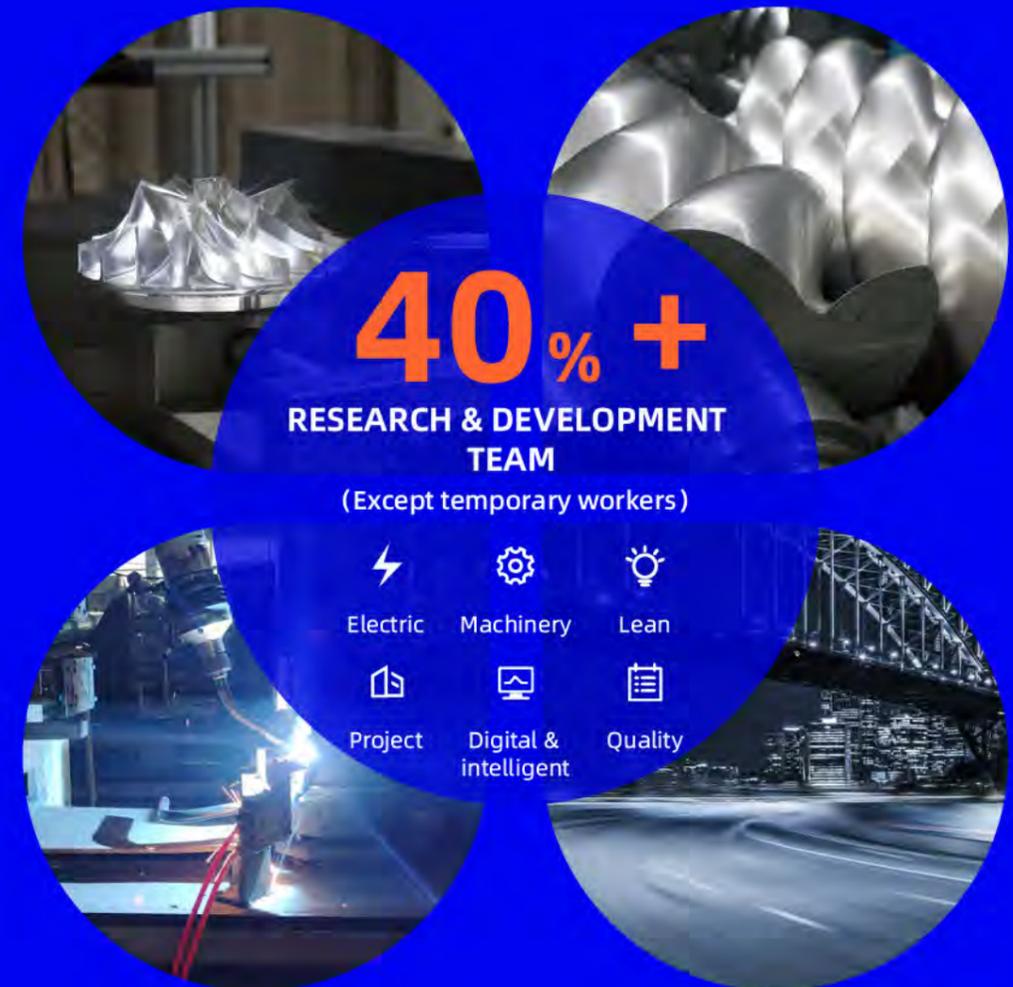
Professor and Doctoral Fellow of Zhejiang University. He  
has long been engaged in teaching and research work in  
magnetic levitation bearings, high-power high-speed  
and ultra-high-speed motors, kWh/hundred kW-class  
high-speed flywheel energy storage systems, etc.  
He has published nearly 300 papers in important  
academic journals and conferences at home and  
abroad, over 230 SCI and EI-indexed papers, and 40  
national invention and utility model patents.



## Ji Tian PD

Dalian Polytechnic University: Doctor of engineer-  
ing, post-doctor, master supervisor. Special pump  
technology. Centrifugal compressor and other turbine  
machinery design and manufacturing technology.  
High speed and heavy duty gear transmission system  
dynamic performance research.

# RESEARCH & DEVELOPMENT TEAM



# PROCESSING STRENGTH

From raw material procurement, spare parts processing, complete machine assembly to performance testing, Xinlei always strict with quality control. The company has the world advanced MAZAK high-precision machining center, KAPP rotor grinder machining center, high-precision ZEISS CMM and robot configuration refinement processing center, to build Xinlei a refinement and advanced production&processing center, to ensure the core components of self-research and production, and the high efficiency collaborative accuracy.

# 260+

high quality precision equipment to guarantee the high quality of products



○ MAZAK high precision machining center



○ KAPP rotor grinder machining center



ZEISS three-coordinate ○ testing center



○ Fine machining center



# CHOICE OF FORTUNE 500 COMPANIES

Open borders, grow together and continue to  
create value for global customers

ASD 爱仕达

湖北新冶钢  
HUBEI XINYEGANG

国机集团  
SINOMACH

BBMG

钱江集团  
QIANJIANG GROUP



宝钢股份



TCC



中国能建  
ENERGY CHINA

国家能源集团  
CHN ENERGY

东方希望  
EAST HOPE

GREE 格力

紫金矿业  
ZIJI MINING



CONCH  
海螺水泥

中国石化  
SINOPEC

Haier

中国建材

CUCC  
中联水泥

包钢集团  
BAOGANG GROUP

中信集团  
CITIC Group

五粮液®

TSINGTAO  
青岛啤酒

MENGNIU  
蒙牛

KISC

粤海水务

XCMG

万年青  
WANNIANQING

晋能控股集团  
JINNENG HOLDING GROUP

SUNNSY  
山水集团  
SUNNSY GROUP



京能集团

# XINLEI AIR ENERGY ALL PERIODS SOLUTION

# TOTAL SOLUTION



## 01

### Pre-sales engineers plan and consult

Customer interview/demand survey

Technical communication and  
product demonstration

## 02

### Project investigation and confirmation

Customized scheme selection/  
project team

Whole process of tracking and  
completion

## 03

### Delivery guarantee

Offline site testing

Focus on actual demand

Flexible reforming scheme

## 04

### After-sales engineers worry-free

24 Hours 400 hotline

Lightweight work order access by Wechat

Full technical Q&A videos

# IOT TECHNOLOGY

Based on the Internet, provide monitoring and digital scientific energy-saving management scheme of blower operation and use.

## PRODUCT FUNCTION

The cloud platform can record and provide the running status, operating parameters, fault alarm and data recording analysis for the blower which has been bound. User can log in to the platform to achieve remote monitoring and energy-saving setting management in real time. At present the IOT cloud platform provides ANDROID, IOS and PC clients. And open the interface to realize the link with ERP and other third-party software to provide more possibilities for users.

## CORE EQUIPMENT

- Blower
- WIFI base station
- Cloud server
- Various smart meters
- Human-computer interaction screen
- Gateway module

## TECHNICAL SCHEMATIC



## DATA COCKPIT INTERFACE



- Visualize equipment running status and view real-time working status
- Real-time monitoring of energy consumption, real-time data collection
- Statistical analysis of gas data to help enterprises make business decisions
- Equipment remote management, intelligent joint control
- Use gas on demand to avoid wasting energy
- Equipment operation daily records, maintenance and daily management are more convenient
- Stable air pressure, scientific energy saving of the whole

# CORE COMPONENTS OF CENTRIFUGAL BLOWER

# INNOVATION



## Magnetic bearing

FE optimizes magnetic design and minimizes eddy currents. High load capacity up to 10 KN radial and 20 KN thrust. No contact. No wear and no lubrication. Rotor unbalance compensation and dynamic support stiffness. Integrated vacuum potting technology. Applying in ophthalmic environments for a semi-permanent life.



## Air suspension bearing

Use high-speed rotating centrifugal force to suspend itself; No vibration in bearings, simple construction, and no need for lubricating oil and auxiliary device. Work as non-contact, no need for maintenance and repair, Start/stop durability guarantee, passes the ON/OFF 20,000 times test.

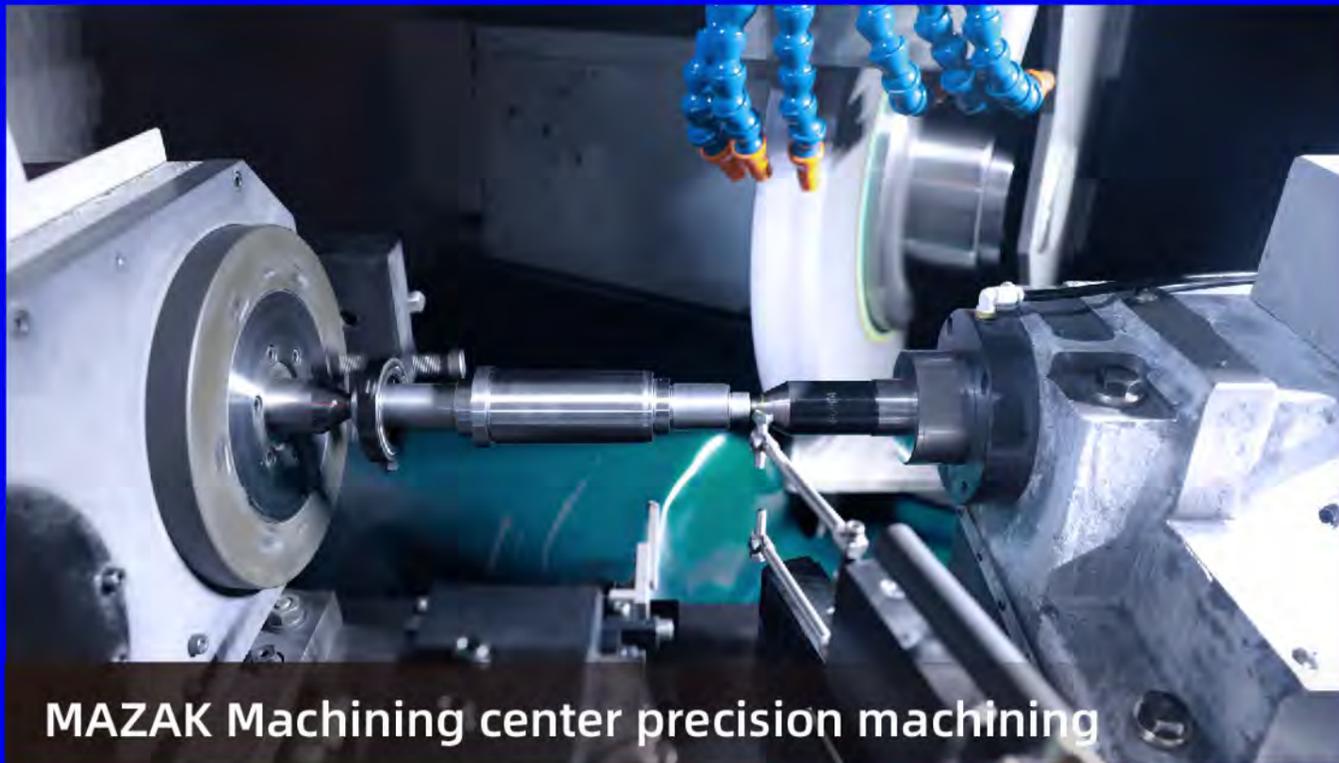


## High speed ceramic ball bearing

High-speed ceramic balls with higher speeds and longer life. Stable and silent operation in high-temperature grease and high-speed conditions. High-temperature sealing material, no grease leakage, to make the whole machine oil-free. Unique contact angle design for stable operation with large axial forces.

## Two core technologies

*Derived from aviation turbine technology*



MAZAK Machining center precision machining

## IMPELLER COMBINED WITH MOTOR DIRECTLY

The Impeller and motor share the same shaft design, with no intermediate transition such as pulley and other connecting parts. No transmission loss, **The power transfer efficiency can reach 100%**



## High-speed permanent magnet motor

Using high-efficiency permanent magnet synchronous motor (PMSM), the efficiency is 96%; The aerodynamic engineering technology, the speed can reach more than 20,000 rpm. The insulation grade is H class (Maximum temperature resistance 180°C).



## Three-dimensional impeller

The high-order modal calculation obtains the optimal solution of the full arc of the full arc of the impeller, avoiding turbulence and reducing over speed blocking; Precision manufacturing of aviation aluminum, strong corrosion resistance; Precision manufactured by 5-axis machining center, the tolerance is kept below 5/1000mm.

# SIX ADVANTAGES



30%

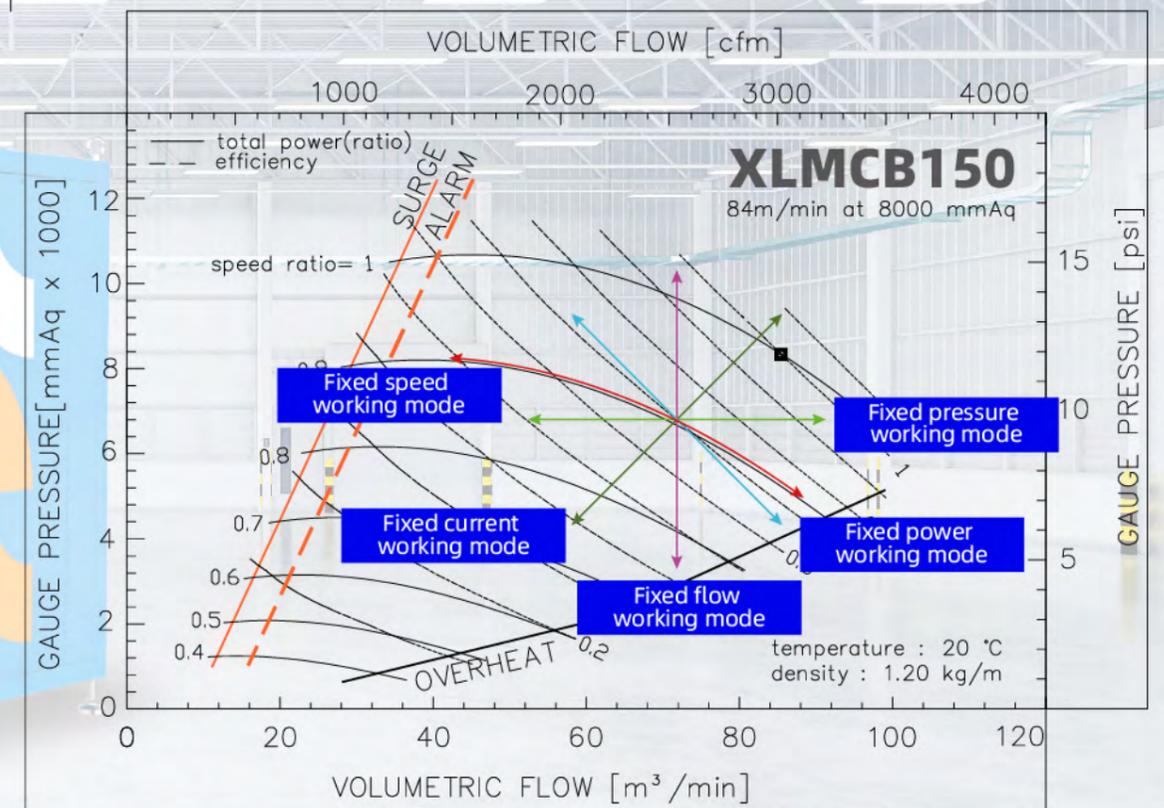
30% energy saving  
than Roots blower

20years

No decline  
in efficiency  
during the life cycle

80dB

Noise below 80dB



Multiple operating modes Take Xinlei XLCB150-060 as an example

**01 High efficiency, energy saving**  
Compared with traditional Roots blower, it can reduce power consumption by more than 30%.

**02 Simple operation, intelligent control**  
Intelligent, user-friendly touch screen, with 5 operating modes and 5 protective functions.

**03 Low noise, no vibration**  
Noise below 80 dB, no vibration, pro-environment, no foundation or anchor bolts required.

**04 No lubrication, maintenance free**  
100% oil-free air-floating bearing system to avoid secondary pollution, no need for regular maintenance and replacement of bearings.

**05 Highly integrated, easy to install**  
The whole machine is highly integrated, small in size, light in weight and easy to install.

**06 Long life, semi-permanent**  
Using air suspension bearing technology, semi-permanent design for more than 20 years, the efficiency does not decline during the life cycle.

# WHOLE STRUCTURE

## MAGNETIC LEVITATION CENTRIFUGAL BLOWER

### The whole machine is highly integrated

Small size, light weight, special structure design, easy installation, portable disassembly and assembly.

### PLC electronic control system

- Adopt international brand PLC. Real-time monitor the system operation data and trajectory;
- Multiple protection and early warning functions.

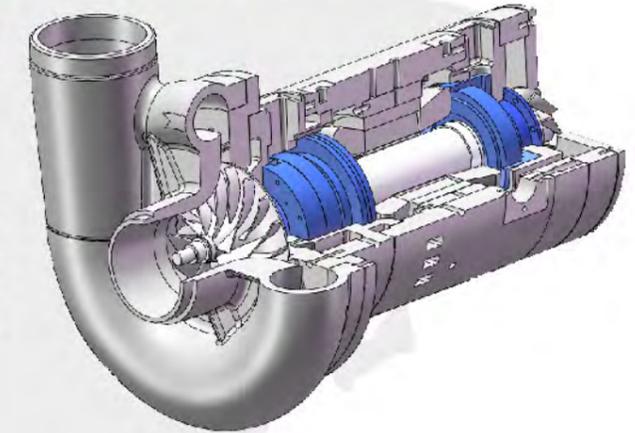


### High efficiency inverter

- Adopt well-known brand inverter. High stability and reliability;
- Provide a minimization algorithm for high speed rotation;
- By adjusting the frequency(HZ) to achieve the high speed rotation function of saving energy.

### Permanent magnet high speed engine

- The PMSM permanent magnet synchronous motor is optimized for high speed rotation. The efficiency can reach more than 97%. The inverter can be used for precise speed control;
- Precision machined ternary flow impeller;
- Five degrees of freedom magnetic bearing;
- Reliable sensor technology ensures the stable operation of the whole blower's magnetic suspension bearing system. Induced current or vortex current. Low noise and high resolution design. Integrated protection shield external magnetic fields.
- Liquid cooling/air cooling mode.



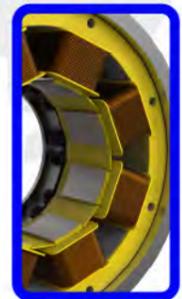
### Magnetic bearing controller

- Full digital controller;
- Superior damping function;
- Multifunctional monitoring capability;
- Efficient service interface.



### Magnetic levitation bearing sensor

- Reliable sensor technology ensures the stable operation of the whole blower's magnetic suspension bearing system.
- Induced current or vortex current.
- One sensor unit(3 displacement, 1 rotation) standby pulse sensor has four induction channels.
- Low noise and high resolution design, integrated protection shield external magnetic fields.



# COMPREHENSIVE ADVANTAGES

## Energy efficient

- 30% energy saving compared with traditional Roots blower

## Efficient Air Energy Management

-PLC control system + touch screen, real-time monitoring system operation  
-Standard Internet of Things, component background service platform, control the operation anytime, anywhere

## Low maintenance cost

-Semi-permanent design under 20 years, no iterative troubles  
-100% oil-free air-floating bearing system to avoid secondary pollution, no need for regular maintenance and replacement of bearings

## Easy to install

- The whole machine is highly integrated, small in size and light in weight  
- No foundation or anchor bolts required

# MAGNETIC LEVITATION CENTRIFUGAL BLOWER

# TURBO BLOWER

- Power:22-750kW
- Pressure:40-120kPa



Low noise no vibration



Energy saving and environmental protection



Intelligent remote control



Convenient disassembly and assembly



# PARAMETER SELECTION

## Technical data sheet XLMCB30-XLMCB400 (40kPa)

Model	XLMCB 30	XLMCB 40	XLMCB 50	XLMCB 60	XLMCB 75	XLMCB 100	XLMCB 125	XLMCB 150	XLMCB 200	XLMCB 250	XLMCB 300	XLMCB 400	
Power	kW	22	30	37	45	55	75	90	110	150	185	220	300
Pressure	kPa	Air flow(m <sup>3</sup> /min):1atm,20°C, Humidity65%											
	40	30	40	50	60	75	100	125	150	200	250	300	400
Size (mm)	L	780	780	950	950	950	1250	1250	1350	1350	1450	1450	1450
	W	1820	1820	1860	1860	1860	1950	1950	2080	2080	2650	2650	2650
	H	1390	1390	1780	1780	1780	2000	2000	2200	2200	2600	2600	2600
Weight	kg	470	470	700	700	1250	1250	1450	1500	1500	2300	2900	2900
Outlet pipe diameter		DN150	DN150	DN200	DN200	DN200	DN300	DN300	DN300	DN400	DN400	DN400	DN400

## Technical data sheet XLMCB30-XLMCB150 (60/80/100/120kPa)

Model	XLMCB 30	XLMCB 40	XLMCB 50	XLMCB 60	XLMCB 75	XLMCB 100	XLMCB 125	XLMCB 150	
Power	kW	22	30	37	45	55	75	90	110
Pressure	kPa	Air flow(m <sup>3</sup> /min):1atm,20°C, Humidity65%							
	60	20	27	34	42	52	69	82	105
	80	17	23	28	34	43	56	71	84
	100	-	-	22	26	35	48	57	73
	120	-	-	-	-	-	39	48	58
Size (mm)	W	780	780	780	950	950	950	1250	1250
	L	1820	1820	1820	1860	1860	1860	1950	1950
	H	1390	1390	1390	1780	1780	1780	2000	2000
Weight	kg	450	450	450	700	700	700	1250	1250
Outlet pipe diameter		DN150	DN150	DN150	DN200	DN200	DN200	DN300	DN300

## Technical data sheet XLMCB200-XLMCB1000(60/80/100/120kPa)

Model	XLMCB 200	XLMCB 250	XLMCB 300	XLMCB 400	XLMCB 500	XLMCB 600	XLMCB 800	XLMCB 1000	
Power	kW	150	185	220	300	375	450	600	750
Pressure	kPa	Air flow(m <sup>3</sup> /min):1atm,20°C, Humidity65%							
	60	140	160	210	272	320	420	545	640
	80	109	135	164	216	270	325	430	540
	100	96	118	145	190	225	270	360	452
	120	78	95	117	156	200	240	318	400
Size (mm)	W	1350	1350	1350	1350	1450	1450	1800	1800
	L	2080	2080	2480	2480	2650	2650	3500	3500
	H	2200	2200	2570	2570	2600	2600	3000	3000
Weight	kg	1500	1500	2300	2300	2900	2900	3500	3500
Outlet pipe diameter		DN300	DN300	DN400	DN400	DN500	DN500	DN600	DN600

# WHOLE STRUCTURE

## AIR SUSPENSION

## CENTRIFUGAL BLOWER

### The whole machine is highly integrated

Small size, light weight, special structure design, easy installation, portable disassembly and assembly.

### PLC electronic control system

- Adopt international brand PLC, real-time monitoring system operation data and trajectory, multiple protection and early warning functions;
- Internet of things database management to set up a background service platform, and modular management of equipment energy efficiency.

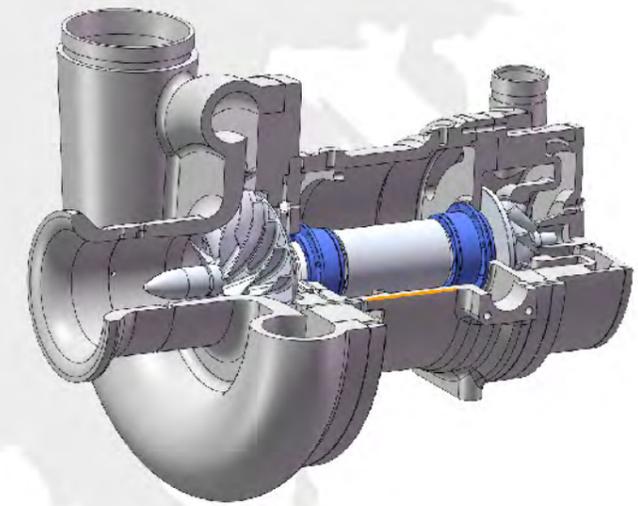


### High efficiency inverter

- Adopt well-known brand inverter, high stability and reliability;
- Provide miniaturization algorithm for high-speed rotation; Adjust the fan air volume through the frequency converter, the adjustable range is 450/o-IQQOfc
- Equipped with a backup capacitor inside, which can quickly and safely make the equipment slow down and stop in the event of a power failure.

### Permanent magnet high-speed host

- The optimized design of PMSM permanent magnet synchronous motor rotates at high speed, the efficiency can reach more than 96%, and accurate speed control can be carried out through the frequency converter;
- Precision machining ternary flow impeller;
- Non-contact air suspension bearing;
- Two-stage air-cooled self-cooling method.



### Intelligent operation panel

- Real-time monitoring of equipment operation on the touch screen;
- Intelligent remote control;
- With anti-surge protection function, it provides a variety of working modes;
- Automatic fault alarm, it is easy to analyze the cause of the fault.



# COMPREHENSIVE ADVANTAGES

## Energy efficient

- 30% energy saving compared with traditional Roots blower

## Efficient Air Energy Management

- PLC control system + touch screen, real-time monitoring system operation  
 - Standard Internet of Things, component background service platform, control the operation anytime, anywhere

## Low maintenance cost

- Semi-permanent design under 20 years, no iterative troubles  
 - 100% oil-free air-floating bearing system to avoid secondary pollution, no need for regular maintenance and replacement of bearings

## Easy to install

- The whole machine is highly integrated, small in size and light in weight  
 - No foundation or anchor bolts required

# Air Suspension Centrifugal Blower

## TURBO BLOWER

- Power:7.5-300kW
- Pressure:40-120kPa



Low noise no vibration



Energy saving and environmental protection



Intelligent remote control



Convenient disassembly and assembly



# PARAMETER SELECTION

Technical data sheet XLCB10-XLCB400(60/80/100/120kPa)

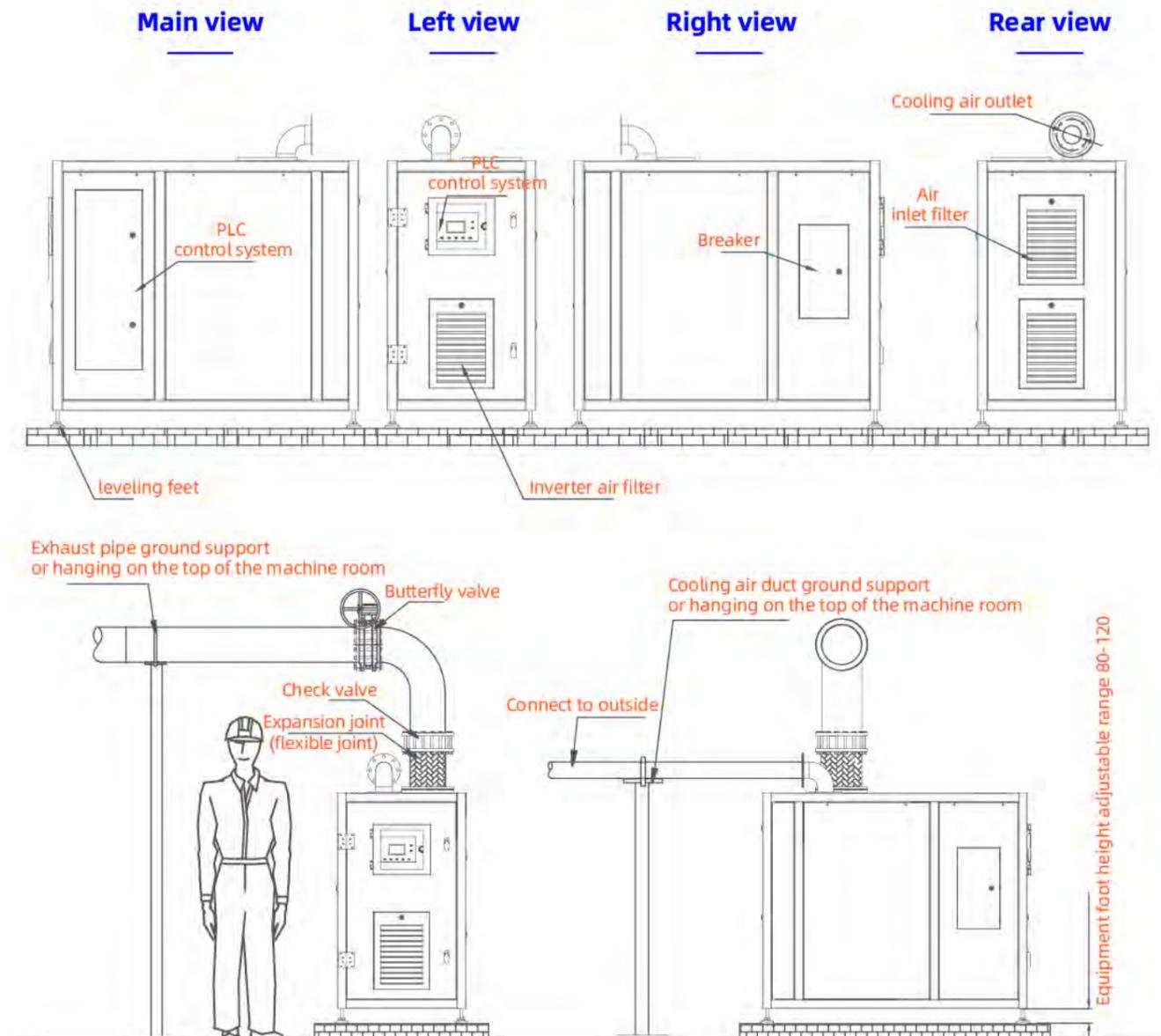
Model	XLCB 10	XLCB 20	XLCB 30	XLCB 40	XLCB 50	XLCB 60	XLCB 75	XLCB 100	XLCB 125	XLCB 150	XLCB 200	XLCB 250	XLCB 300	XLCB 400	
Motor power	kW	7.5	15	22	30	37	45	55	75	90	110	150	185	220	300
Compression level		Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage
Exhaust pressure	kPa	Flow rate(m <sup>3</sup> /min)													
60	6.5	13	20	27	34	42	51	69	82	104	140	158	208	269	
80	—	10	17	23	28	34	42	55	70	83	108	133	162	214	
100	—	—	—	—	22	23	34	45	53	64	86	104	132	170	
120	—	—	—	—	—	—	—	39	47	58	77	—	—	—	
Cooling method		Air cooling													
Driving mode		Integrated direct drive													
LxWxH (mm)	L	660	660	700	700	700	850	850	850	850	1250	1250	1250	1300	1300
	W	1080	1080	1600	1600	1600	1775	1775	1775	1775	1975	1975	1975	2475	2475
	H	910	910	1340	1340	1340	1520	1520	1520	1520	1670	1670	1880	2200	2200
N.W	kg	310	310	430	470	470	620	620	630	650	1150	1150	1350	2150	2200
Outlet pipe diameter		DN65	DN65	DN150	DN150	DN150	DN200	DN200	DN200	DN200	DN300	DN300	DN300	DN400	DN400

# PARAMETER SELECTION

## Technical data sheet XLCB10-XLCB400(40kPa)

Model		XLCB 10	XLCB 20	XLCB 30	XLCB 40	XLCB 50	XLCB 60	XLCB 75	XLCB 100	XLCB 125	XLCB 150	XLCB 200	XLCB 250	XLCB 300	XLCB 400
Motor power	kW	7.5	15	22	30	37	45	55	75	90	110	150	185	220	300
Compression level		Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage	Single stage
Exhaust pressure	kPa	Flow rate(m <sup>3</sup> /min)													
	40	10	20	30	40	50	60	75	100	125	150	200	250	300	400
Cooling method		Air cooling													
Driving mode		Integrated direct drive													
LxWxH (mm)	L	660	660	700	700	850	850	1250	1250	1250	1250	1300	1300	1300	1300
	W	1080	1080	1600	1600	1775	1775	1975	1975	1975	1975	2475	2475	2475	2475
	H	910	910	1340	1340	1520	1520	1670	1670	1880	1880	2200	2200	2200	2200
N.W	kg	310	310	470	470	620	620	1150	1150	1350	1350	2150	2150	2200	2200
Outlet pipe diameter		DN65	DN150	DN150	DN150	DN200	DN200	DN200	DN300	DN300	DN300	DN400	DN400	DN400	DN400

# INSTALLATION DIAGRAM



### The standard configuration

- Centrifugal blower host
- Chassis (considering the sound insulation function)
- Inverter - Inverter
- Local control system
- Vent valve

### Select configuration

- Temperature and Pressure Sensors
- Inlet Filters
- Outlet check valve
- Outlet elastic joint
- Overhaul manual butterfly valve

- Outlet muffler
- Vent muffler

# COMPREHENSIVE ADVANTAGES

## Energy efficient

- 30% energy saving compared with traditional Roots blower

## Efficient Air Energy Management

- PLC control system + touch screen, real-time monitoring system operation  
 - Standard Internet of Things, component background service platform, control the operation anytime, anywhere

## Low maintenance cost

- Semi-permanent design under 20 years, no iterative troubles  
 - 100% oil-free air-floating bearing system to avoid secondary pollution, no need for regular maintenance and replacement of bearings

## Easy to install

- The whole machine is highly integrated, small in size and light in weight  
 - No foundation or anchor bolts required

## Air Suspension Centrifugal Blower

# TURBO BLOWER

- Power: 7.5-37kW
- Pressure: 40-100kPa



Low noise no vibration



Energy saving and environmental protection



Intelligent remote control



Convenient disassembly and assembly



# PARAMETER SELECTION

Model		XLCB10-M	XLCB20-M	XLCB30-M	XLCB40-M	XLCB50-M
Motor power	kW	7.5	15	22	30	37
Exhaust pressure	kPa	Flow rate(m <sup>3</sup> /min)				
		40	60	80	100	
		8.5	15	23	30	40
		6.5	13	20	27	34
		—	10	17	23	28
		—	—	—	—	22
LxWxH (mm)	L	660	660	700	700	700
	W	1020	1020	1160	1160	1160
	H	780	780	860	860	860
N.W	kg	255	255	290	300	320
Outlet pipe diameter		DN65	DN65	DN100	DN100	DN100

# WHOLE STRUCTURE

# WHOLE STRUCTURE

## PM VARIABLE-FREQUENCY CENTRIFUGAL BLOWER

### Highly integrated/Convenient disassembly

Small size, light weight, special structure design, quick disassembly and installation of the whole machine, convenient installation.

### PLC electric control system

- Adopt international brand PLC, real-time monitoring system operation data and track, multiple protection and early warning functions;
- Internet of Things database management, establishment of background service platform, and equipment energy efficiency modular management.

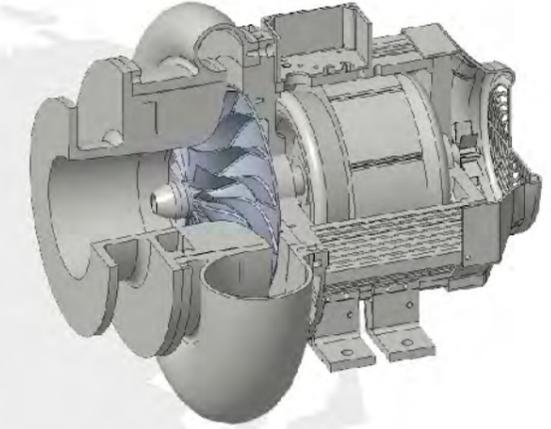


### High efficiency frequency converter

- The frequency converter of famous brand is adopted, with high stability and reliability;
- Provide a minimization algorithm for high-speed rotation;
- High speed rotation function of saving energy by adjusting frequency;
- Built in DC reactor, which can suppress power harmonic, precise operation and soft start.

### Permanent magnet high-speed host

- PMSM permanent magnet synchronous motor is optimized for high-speed rotation, and its efficiency can reach more than 96%. Accurate speed control can be carried out through frequency converter;
- Precision machining three-dimensional flow impeller.



### Intelligent operation panel

- Intelligent operation panel
- Touch screen real-time monitoring equipment operation;
- Intelligent remote control;
- Automatic fault alarm, easy to analyze the cause of fault.



# COMPREHENSIVE ADVANTAGES

## High efficiency and energy saving

-Permanent magnet synchronous high-speed motor+efficient, three dimensional flow impeller  
-40% less energy than traditional fans (vortex, roots, etc.).

## Convenient disassembly

-Special structure design is adopted for quick disassembly and installation of the whole machine,  
-No mechanical maintenance required for normal operation.

## Stable and reliable

-Continuous and stable air flow, no pressure attenuation during long operation,  
-FEA analysis and modal analysis of the whole machine to ensure reliable operation of the product,  
-It can be started and stopped, frequently and has a wide range of variable working conditions.

## Intelligent control

-PLC+remote data monitoring can be used for remote debugging and adjustment of equipment operating conditions

## PM variable-frequency centrifugal blower

# TURBO BLOWER

- Power:4-45kW
- Pressure:10-40kPa



# PARAMETER SELECTION

## Technical Parameters (10~20kpa)

MODEL	XLCS4	XLCS5.5	XLCS7.5	XLCS11	XLCS15	XLCS18.5	XLCS22	XLCS30	XLCS37	XLCS45
POWER(kw)	4	5.5	7.5	11	15	18.5	22	30	37	45
PRESSURE	Flow (m <sup>3</sup> /Min): 1 atm, 20 °C humidity 65%									
10	13.2	15.6	21.3	36.1	47.2	51	55.3	78.4	96.8	118
15	11.8	14.9	20.9	30.5	41.6	45.8	52.5	74.6	92.1	112
20	10.1	13.3	18.1	25.8	38.3	43.3	49.1	70.1	86.6	105
25	6.8	10.7	13.8	20.9	28.5	35.1	41.7	57.1	70.3	88
L (mm)	570	650	650	730	730	730	730	730	865	865
W (mm)	430	430	430	510	510	510	510	560	640	720
H (mm)	630	650	650	750	750	750	750	750	955	1035
WEIGHT(kg)	90	90	136	160	160	180	180	260	260	270
OUTLET SIZE	DN65	DN65	DN65	DN100	DN100	DN125	DN125	DN200	DN200	DN200

## Technical Parameters (30~40kpa)

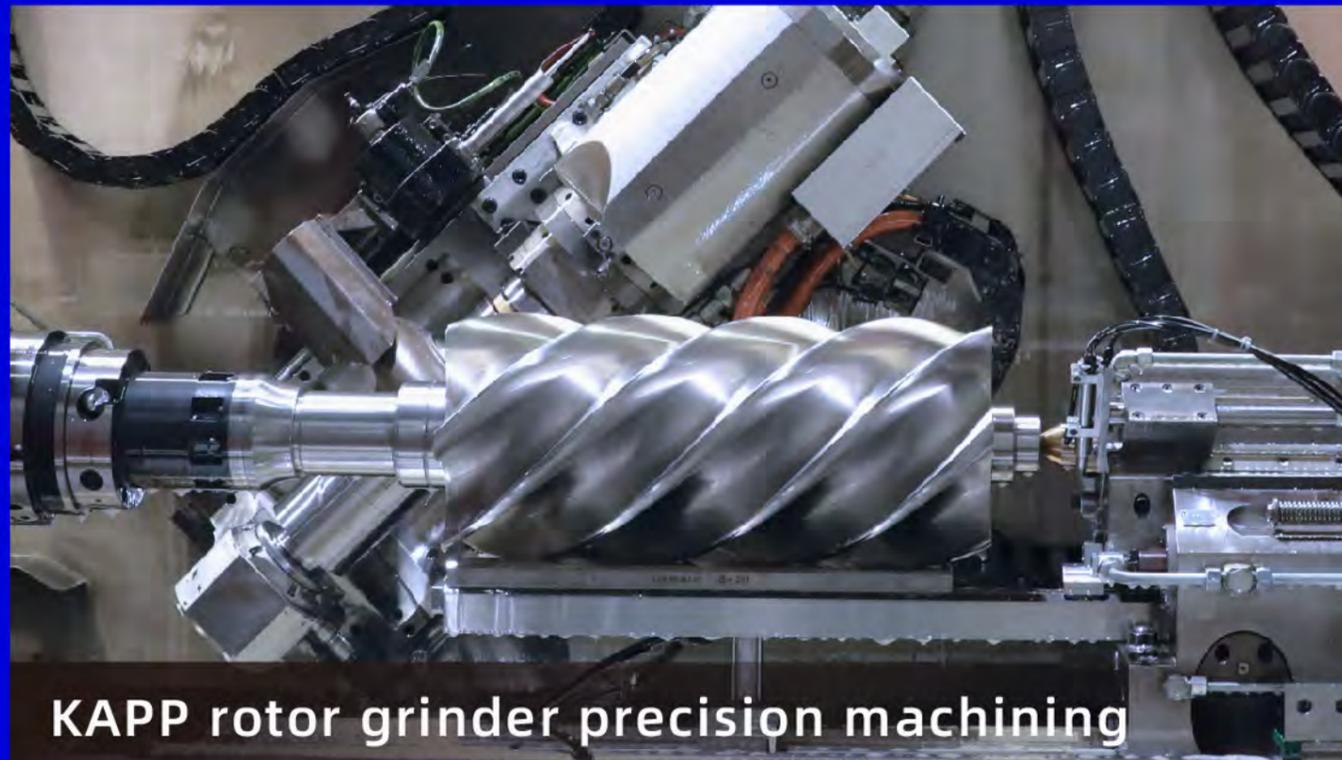
MODEL	XLCS4	XLCS5.5	XLCS7.5	XLCS11	XLCS15	XLCS18.5	XLCS22	XLCS30	XLCS37	XLCS45
POWER(kw)	4	5.5	7.5	11	15	18.5	22	30	37	45
PRESSURE	Flow (m <sup>3</sup> /Min): 1 atm, 20 °C humidity 65%									
30	6.2	8.7	11.9	17.5	23.9	29.5	35	48	59.2	72
35	5.2	7.1	10	14.7	21.3	26.2	30.6	40	49.3	58
40	—	—	—	13	17.7	21.8	26	35.4	43.7	53.1
L (mm)	570	650	650	730	730	730	730	730	865	865
W (mm)	430	430	430	510	510	510	510	560	640	720
H (mm)	630	650	650	750	750	750	750	750	955	1035
weight(kg)	90	90	136	160	160	180	180	260	260	270
OUTLET SIZE	DN65	DN65	DN65	DN100	DN100	DN125	DN125	DN200	DN200	DN200

The core components are  
**85% patented**  
High precision integrated  
coordination



#### 4: 6 Rotary screw rotor profile

Through in-depth analysis of energy saving demand and continuous optimization of product structure, the technical team of Xinlei continuously upgraded the rotor profile with years of technical accumulation. The profile adopts a 4:6 rotating screw rotor, which makes the speed of the male rotor 50% faster than that of the female rotor. The transmission leakage is smaller and the efficiency is higher.



KAPP rotor grinder precision machining

#### Oil free twin-screw host

The oil-free twin-screw host provides **oil-free and dust-free** pure compressed air. Optimized profile design, more efficient. Food grade PTFE (polytetraethylene) coating can reduce air loss and improve efficiency. The air is compressed internally, **saving energy up to 30%**.



#### High efficiency permanent magnet motor

The rotor has no slip, no electric excitation, no fundamental wave iron and copper loss and less heat generation, reducing the loss of stator current and stator resistance. Its efficiency is **5% - 8%** higher than that of asynchronous motor with the same capacity.



#### Nodular cast iron rotor

High strength, high axle load capacity, direct coupling and belt drive. The high-quality Teflon coating technology on the rotor surface makes the rotor gap smaller, improves the volumetric efficiency, protects the rotor, and has a **longer service life**.



INNOVATION

# WHOLE STRUCTURE

# WHOLE STRUCTURE

## OIL FREE SCREW BLOWER

### Highly integrated/portable

Small size, light weight, special structure design, quick disassembly and installation of the whole machine, convenient installation.

### Special silencer

- The noise is as low as 73-85dB (A);
- Precision filter is adopted for intake air, with accuracy up to 15UM and pressure loss  $\leq 500\text{PA}$ .



### High efficiency frequency converter

- The inverter of well-known brand is adopted, with high stability and reliability;
- Back capacitance, protection equipment;
- Soft start, precise operation, high safety performance.

### Efficient host

- Oil free twin-screw host, the compressed air is oil-free;
- 4: 6 Optimized profile design of rotating screw rotor, more efficient;
- Unique split cylinder design;
- Advanced coating, corrosion resistance and long service life;
- The air is compressed internally, saving energy up to 30%.



### Oil system

- Advanced oil system design integrates oil pump, oil cooler and filter;
- Low oil temperature, long service life of bearings and gears.



### Intelligent operation panel

- Touch screen monitoring the real-time equipment operation;
- Intelligent remote control;
- Automatic fault alarm can analyze the cause of fault.



# COMPREHENSIVE ADVANTAGES

## Energy-saving, stable and reliable

- Compared with traditional Roots blower, it can save energy by 15-30%
- Strong adaptability to working conditions, no surge, and flow hardly changes with pressure
- Low pressure pulse, stable exhaust. Pressure rise up to 150Kpa

## Box type integrated design

- No need for embedded foundation, simple installation
- Pipeline sealing design, zero leakage of medium
- Forced circulating lubrication cooling system, more reliable

## Clean, oil-free and lower noise

- Spiral seal+carbon ring seal, realizing zero leakage of medium and ensuring 100% oil-free air
- The aerodynamic noise of the spiral rotor is small. Stable gas output, noise ≤ 80dB

## Simple operation and intelligent control

- Internet of Things remote control, remote debugging and adjustment of equipment operating conditions

## Oil free screw blower

- Power: 7.5-160kW
- Pressure: 0.3-1.5bar

Low volume working condition, performance ceiling

Built for low voltage applications



# TECHNICAL PARAMETER

Host Model	Speed (rpm)	Exhaust pressure (kPa)	30	40	50	60	70	80	90
XLG90V	3000	Air flow (m³/min)	3.6	3.4	3.2	3.0	2.8	2.7	2.5
		Motor power (kW)	5.5	5.5	5.5	5.5	7.5	7.5	7.5
	3500	Air flow (m³/min)	4.4	4.2	4.0	3.9	3.8	3.6	3.4
		Motor power (kW)	5.5	5.5	7.5	7.5	7.5	11.0	11.0
	4000	Air flow (m³/min)	5.3	5.1	5.0	4.8	4.6	4.5	4.3
		Motor power (kW)	5.5	7.5	7.5	7.5	11.0	11.0	11.0
	4500	Air flow (m³/min)	6.2	6.0	5.8	5.7	5.6	5.4	5.3
		Motor power (kW)	5.5	7.5	7.5	11.0	11.0	11.0	11.0
	5000	Air flow (m³/min)	7.1	7.0	6.8	6.6	6.4	6.3	6.1
		Motor power (kW)	7.5	7.5	11.0	11.0	11.0	15.0	15.0
	5500	Air flow (m³/min)	8.3	7.8	7.6	7.5	7.3	7.2	7.0
		Motor power (kW)	7.5	11.0	11.0	11.0	15.0	15.0	15.0
6000	Air flow (m³/min)	8.9	8.7	8.6	8.4	8.3	8.1	8.0	
	Motor power (kW)	11.0	11.0	11.0	15.0	15.0	15.0	15.0	
6500	Air flow (m³/min)	9.8	9.6	9.4	9.2	9.1	9.0	8.8	
	Motor power (kW)	11.0	11.0	15.0	15.0	15.0	15.0	18.5	

Host Model	Speed (rpm)	Exhaust pressure (kPa)	90	100	110	120	130	140	150
XLG90VFL	3000	Air flow (m³/min)	2.6	2.5	2.4	2.3	2.2	2.1	2.0
		Motor power (kW)	7.5	7.5	11	11	11	11	11
	3500	Air flow (m³/min)	3.5	3.4	3.3	3.2	3.1	3.0	2.9
		Motor power (kW)	11.0	11.0	11.0	11.0	11.0	15.0	15.0
	4000	Air flow (m³/min)	4.4	4.3	4.2	4.1	4.0	3.9	3.8
		Motor power (kW)	11.0	11.0	11.0	15.0	15.0	15.0	15.0
	4500	Air flow (m³/min)	5.4	5.3	5.2	5.1	5.0	4.9	4.8
		Motor power (kW)	11.0	11.0	15.0	15.0	15.0	15.0	18.5
	5000	Air flow (m³/min)	6.2	6.1	6.0	5.9	5.8	5.7	5.6
		Motor power (kW)	11.0	15.0	15.0	15.0	15.0	18.5	18.5
	5500	Air flow (m³/min)	7.1	7.0	6.9	6.8	6.7	6.6	6.5
		Motor power (kW)	15.0	15.0	15.0	18.5	18.5	18.5	22.0
6000	Air flow (m³/min)	8.0	7.9	7.8	7.7	7.6	7.5	7.4	
	Motor power (kW)	15.0	15.0	18.5	18.5	22.0	22.0	22.0	
6500	Air flow (m³/min)	8.8	8.7	8.6	8.5	8.4	8.3	8.2	
	Motor power (kW)	15.0	18.5	18.5	22.0	22.0	22.0	22.0	

# TECHNICAL PARAMETER

Host Model	Speed (rpm)	Exhaust pressure (kPa)	30	40	50	60	70	80	90
XLG124V	2000	Air flow (m³/min)	8.9	8.6	8.3	7.9	7.6	7.3	7.0
		Motor power (kW)	7.5	11.0	11.0	11.0	15.0	15.0	15.0
	2500	Air flow (m³/min)	11.8	11.4	11.2	10.6	10.5	10.2	10.1
		Motor power (kW)	11.0	11.0	15.0	15.0	15.0	18.5	18.5
	3000	Air flow (m³/min)	15.0	14.7	14.3	14.0	13.9	13.6	13.3
		Motor power (kW)	11.0	15.0	15.0	18.5	18.5	22.0	22.0
	3500	Air flow (m³/min)	17.9	17.8	17.5	17.2	16.9	16.8	16.5
		Motor power (kW)	15.0	15.0	18.5	22.0	22.0	30.0	30.0
	4000	Air flow (m³/min)	21.0	20.8	20.5	20.3	20.0	19.9	19.6
		Motor power (kW)	15.0	18.5	22.0	22.0	30.0	30.0	30.0
	4500	Air flow (m³/min)	24.1	23.8	23.5	23.2	23.0	22.8	22.6
		Motor power (kW)	18.5	22.0	30.0	30.0	30.0	37.0	37.0
	5000	Air flow (m³/min)	26.9	26.7	26.5	26.1	25.9	25.7	25.5
		Motor power (kW)	22.0	30.0	30.0	30.0	37.0	37.0	45.0
	5500	Air flow (m³/min)	29.7	29.5	29.3	29.2	28.9	28.6	28.3
		Motor power (kW)	30.0	30.0	30.0	37.0	37.0	45.0	45.0

Host Model	Speed (rpm)	Exhaust pressure (kPa)	90	100	110	120	130	140	150
XLG124VFL	2000	Air flow (m³/min)	6.9	6.7	6.5	6.3	6.1	5.9	5.7
		Motor power (kW)	15.0	18.5	18.5	22.0	22.0	22.0	30.0
	2500	Air flow (m³/min)	9.5	9.2	9.0	8.8	8.6	8.3	8.0
		Motor power (kW)	22.0	22.0	22.0	30.0	30.0	30.0	30.0
	3000	Air flow (m³/min)	12.6	12.4	12.2	12.0	11.8	11.5	11.2
		Motor power (kW)	30.0	30.0	30.0	30.0	30.0	37.0	37.0
	3500	Air flow (m³/min)	16.0	15.8	15.6	15.3	15.1	14.8	14.6
		Motor power (kW)	30.0	30.0	37.0	37.0	37.0	45.0	45.0
	4000	Air flow (m³/min)	19.0	18.8	18.6	18.4	18.2	18.0	17.8
		Motor power (kW)	37.0	37.0	37.0	45.0	45.0	45.0	55.0
	4500	Air flow (m³/min)	22.1	21.9	21.7	21.5	21.3	21.1	20.8
		Motor power (kW)	37.0	45.0	45.0	45.0	55.0	55.0	55.0
	5000	Air flow (m³/min)	25.1	24.9	24.7	24.5	24.3	24.1	23.9
		Motor power (kW)	45.0	45.0	55.0	55.0	55.0	55.0	75.0
	5500	Air flow (m³/min)	28.0	27.8	27.6	27.4	27.2	27.0	26.8
		Motor power (kW)	45.0	55.0	55.0	55.0	75.0	75.0	75.0

# TECHNICAL PARAMETER

Host Model	Speed (rpm)	Exhaust pressure (kPa)	30	40	50	60	70	80	90
XLG165V	2000	Air flow (m³/min)	20.6	20.3	20.0	19.7	19.4	18.9	18.5
		Motor power (kW)	18.5	22	22	30	30	37	37
	2200	Air flow (m³/min)	23.8	23.5	23.2	22.8	22.4	22.0	21.5
		Motor power (kW)	18.5	22	30	30	30	37	37
	2500	Air flow (m³/min)	27.9	27.6	27.3	26.9	26.4	25.9	25.5
		Motor power (kW)	22	30	30	37	37	37	45
	2800	Air flow (m³/min)	32.3	32.0	31.7	31.3	30.8	30.3	29.8
		Motor power (kW)	30	30	37	37	45	45	55
	3000	Air flow (m³/min)	34.6	34.3	33.9	33.5	33.0	32.5	32.0
		Motor power (kW)	30	37	37	45	45	55	55
	3200	Air flow (m³/min)	37.4	37.1	36.8	36.5	36.0	35.6	35.1
		Motor power (kW)	30	37	45	45	55	55	55
	3500	Air flow (m³/min)	41.4	41.1	40.8	40.4	40.0	39.4	38.9
		Motor power (kW)	37	37	45	55	55	55	75
	4000	Air flow (m³/min)	47.5	47.2	46.9	46.6	46.0	45.6	45.1
		Motor power (kW)	45	45	55	55	75	75	75
4500	Air flow (m³/min)	54.0	53.7	53.4	53.0	52.5	52.0	51.4	
	Motor power (kW)	45	55	75	75	75	75	90	

Host Model	Speed (rpm)	Exhaust pressure (kPa)	90	100	110	120	130	140	150
XLG165VFL	2000	Air flow (m³/min)	18.1	17.8	17.4	17.0	16.7	16.4	16.2
		Motor power (kW)	37.0	45	45	45	55	55	55
	2200	Air flow (m³/min)	21.0	20.6	20.2	19.8	19.5	19.2	19.0
		Motor power (kW)	45.0	45	45	55	55	55	55
	2500	Air flow (m³/min)	24.8	24.3	24.0	23.5	23.2	22.8	22.7
		Motor power (kW)	45	55	55	55	55	75	75
	2800	Air flow (m³/min)	28.9	28.6	28.2	27.9	27.5	27.1	26.9
		Motor power (kW)	55	55	75	75	75	75	75
	3000	Air flow (m³/min)	31.3	31.1	30.8	30.5	30.0	29.8	29.5
		Motor power (kW)	55	75	75	75	75	75	90
	3200	Air flow (m³/min)	34.2	33.9	33.5	33.2	33.0	32.7	32.3
		Motor power (kW)	75	75	75	75	75	90	90
	3500	Air flow (m³/min)	38.3	38.1	37.7	37.3	37.0	36.6	36.2
		Motor power (kW)	75	75	75	75	90	90	90
	4000	Air flow (m³/min)	44.4	44.1	43.8	43.4	43.2	42.9	42.5
		Motor power (kW)	75	90	90	90	110	110	110
4500	Air flow (m³/min)	50.6	50.3	50.1	49.8	49.4	49.2	48.8	
	Motor power (kW)	90	90	110	110	110	110	132	

# TECHNICAL PARAMETER

Host Model	Speed (rpm)	Exhaust pressure (kPa)	30	40	50	60	70	80	90
XLG203	1800	Air flow (m³/min)	35.3	34.7	34.3	33.6	33.0	32.8	32.0
		Motor power (kW)	30	37	37	45	55	55	55
	2000	Air flow (m³/min)	40.0	39.2	38.3	37.9	37.5	37.0	36.4
		Motor power (kW)	37	37	45	55	55	75	75
	2200	Air flow (m³/min)	45.0	44.3	43.7	43.1	42.6	41.9	41.4
		Motor power (kW)	37	45	55	55	75	75	75
	2400	Air flow (m³/min)	49.5	48.9	48.4	47.8	47.2	47.6	46.9
		Motor power (kW)	45	55	55	75	75	75	90
	2600	Air flow (m³/min)	54.4	53.8	53.2	52.6	52.0	51.8	51.1
		Motor power (kW)	45	55	75	75	75	90	90
	2800	Air flow (m³/min)	59.2	58.6	58.0	57.4	56.7	56.1	55.4
		Motor power (kW)	55	55	75	75	90	90	90
	3000	Air flow (m³/min)	63.5	62.8	62.2	61.7	60.9	60.5	59.9
		Motor power (kW)	55	75	75	90	90	110	110
	3200	Air flow (m³/min)	67.7	67.0	66.3	65.8	65.0	64.7	64.3
		Motor power (kW)	55	75	75	90	90	110	110
	3400	Air flow (m³/min)	72.0	71.2	70.5	69.9	69.5	69.1	68.5
		Motor power (kW)	75	75	90	90	110	110	132
3600	Air flow (m³/min)	76.2	75.4	74.6	74.0	73.9	73.3	72.7	
	Motor power (kW)	75	75	90	110	110	110	132	
3800	Air flow (m³/min)	80.4	79.5	78.8	78.1	78.0	77.6	76.8	
	Motor power (kW)	75	90	90	110	110	132	132	

# TECHNICAL PARAMETER

Host Model	Speed (rpm)	Exhaust pressure (kPa)	90	100	110	120	130	140	150
XLG203FL	1800	Air flow (m³/min)	32.7	32.3	31.9	31.4	31.0	30.6	30.2
		Motor power (kW)	75	75	75	75	75	90	90
	2000	Air flow (m³/min)	37.2	36.8	36.4	35.9	35.5	35.1	34.6
		Motor power (kW)	75	75	75	90	90	90	110
	2200	Air flow (m³/min)	41.9	41.6	41.1	40.7	40.3	39.8	39.4
		Motor power (kW)	75	75	90	90	90	110	110
	2400	Air flow (m³/min)	46.6	46.4	45.9	45.5	45.0	44.5	44.1
		Motor power (kW)	90	90	90	110	110	110	110
	2600	Air flow (m³/min)	51.6	51.1	50.7	50.3	49.8	49.3	48.8
		Motor power (kW)	90	90	110	110	110	132	132
	2800	Air flow (m³/min)	56.6	55.8	55.4	55.0	54.6	54.0	53.4
		Motor power (kW)	110	110	110	110	132	132	132
	3000	Air flow (m³/min)	60.6	60.1	59.5	58.9	58.5	58.1	57.7
		Motor power (kW)	110	110	132	132	132	132	160
	3200	Air flow (m³/min)	64.8	64.2	63.6	63.0	62.5	62.1	61.6
		Motor power (kW)	110	132	132	132	132	160	160
	3400	Air flow (m³/min)	68.9	68.4	67.7	67.0	66.6	66.1	65.6
		Motor power (kW)	132	132	132	160	160	160	160
3600	Air flow (m³/min)	73.2	72.6	71.8	71.1	70.6	70.1	69.6	
	Motor power (kW)	132	132	160	160	160	160	185	
3800	Air flow (m³/min)	77.4	76.7	75.9	75.2	74.7	74.2	73.6	
	Motor power (kW)	132	160	160	160	160	185	185	

# PERFORMANCE COMPARISON

# PERFORMANCE COMPARISON



Permanant magnet variable-frequency centrifugal blower



Air suspension centrifugal blower



Magnetic levitation centrifugal blower



oil-free screw blower



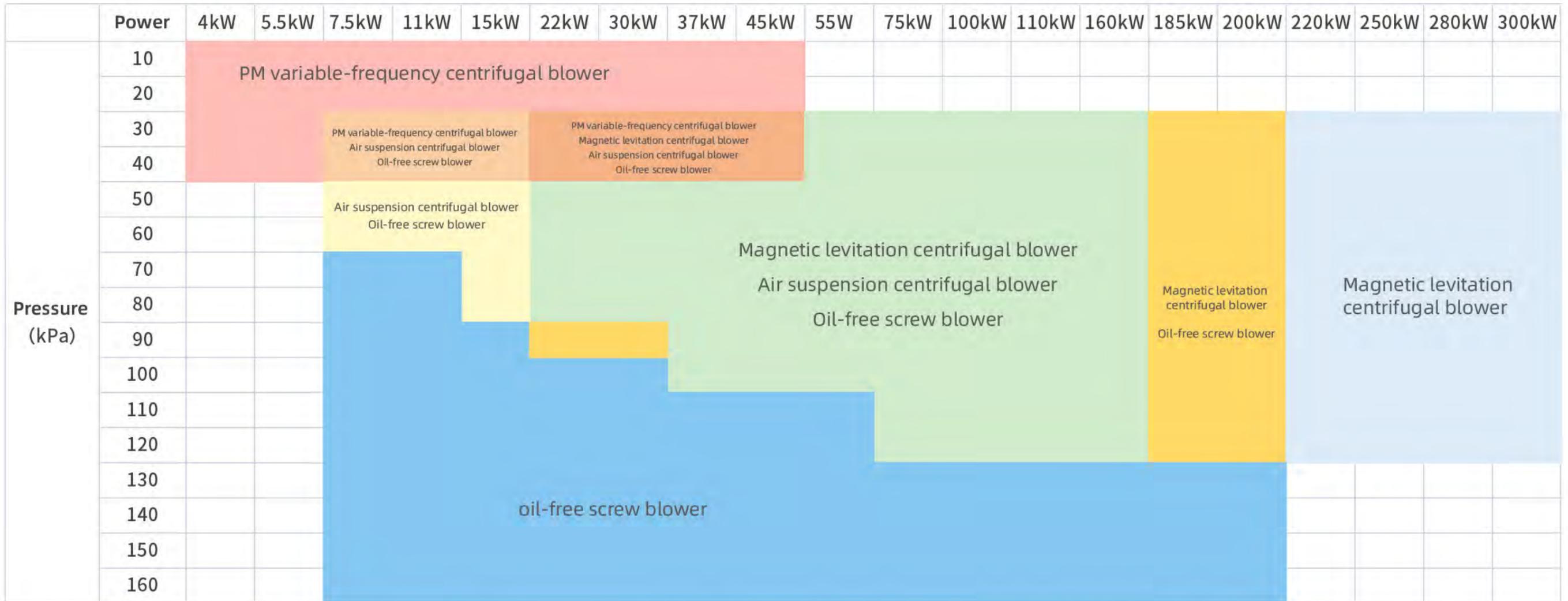
Roots blower

- Compress mode
- Flow regulation range
- Surge
- Bearing type
- Bearing life
- The motor type
- Motor starter
- Noise(dB)
- Vibration
- Lubrication
- Speed
- Working condition adaptability
- Environmental requirements

	Permanant magnet variable-frequency centrifugal blower	Air suspension centrifugal blower	Magnetic levitation centrifugal blower	oil-free screw blower	Roots blower
Compress mode	centrifuge	centrifuge	centrifuge	Volumetric	Volumetric
Flow regulation range	45-100%	45-100%	45-100%	Variable frequency regulation	Unable to adjust
Surge	Yes	Yes	Yes	No	No
Bearing type	Ceramic ball bearing	Air bearing	Magnetic bearing	Antifriction bearing	Antifriction bearing
Bearing life	2 years	20 years	20 years	50000-100000 hours	1~2 years
The motor type	High speed permanent-magnet synchronous motor	High speed permanent-magnet synchronous motor	High speed permanent-magnet synchronous motor	Permanent-magnet synchronous motor or induction motor	Induction motor
Motor starter	Variable frequency start	Variable frequency start	Variable frequency start	Variable frequency start	hard to start
Noise(dB)	70-80dB	70-80dB	70-80dB	≤80dB	>100dB
Vibration	No	NO	No	Low	very badly
Lubrication	100% lubricant-free	100% lubricant-free	100% lubricant-free	Replace the grease or oil periodically	Replace the grease or oil periodically
Speed	≤30000rpm	25000-50000rpm	25000-50000rpm	≤3000rpm	≤3000rpm
Working condition adaptability	Need more ideal and stable working conditions	Need more ideal and stable working conditions	Need more ideal and stable working conditions	For changing working conditions, the performance can remain stable	For changing working conditions, the performance can remain stable
Environmental requirements	High environmental requirements for dust, humidity, etc	High environmental requirements for dust, humidity, etc	High environmental requirements for dust, humidity, etc	In a harsh environment with higher dust and humidity, fault tolerance is higher and more reliable	In a harsh environment with higher dust and humidity, fault tolerance is higher and more reliable

# MODEL SELECTION

# MODEL SELECTION



Note: Magnetic levitation blower, permanent magnet frequency conversion centrifugal blower and screw blower are recommended for frequent start-stop conditions.



## CEMENT INDUSTRY UNLOCK LOW-CARBON ENERGY- SAVING "XIN" GAMEPLAY

📍 Liaoyang, Liaoning



### Project requirements

As a cement manufacturer of TOP 1 in northern China, in a case of Jidong Cement, the kiln head originally used a Roots blower to support combustion, and the "electric tiger" endlessly devoured energy consumption. With the introduction of the "carbon" policy, the export of energy-saving and green power sources has become a new situation in the industry.

### Air Suspension Centrifugal Blower

Annual savings of **201,600 yuan** | Electricity saving rate is **31.82%**

### Solution

In response to customer needs, the technical team specializes in customizing Xinlei air suspension blowers with low energy consumption and low carbon emission, and the energy saving rate exceeds 30%. Quickly deploy and install, save money while using, accelerate green transformation, and increase production with low carbon.

### Solution advantage

- The hidden profit "black hole"** - the energy saving rate is 31.82%, which saves 252,000 kWh of electricity annually and saves 201,600 yuan in electricity bills.
- Green Ambassador** - reduced carbon emissions by 251.24 tons, saved 100.8 tons of standard coal, and planted 14,036 Haloxylon trees.
- Increase production and efficiency** - the efficiency of the motor exceeds 97%, the efficiency of the whole machine exceeds 88%.
- Stable and reliable** - Under the pressure of high temperature and high production capacity, it still maintains a stable and efficient range.
- Costs "manager"** - air bearing design, no wearing parts, no maintenance, saving tens of thousands of maintenance costs per year.
- Extremely fast installation** - The volume is only 2.5m<sup>3</sup>, and the weight is as low as 630kg. It is easy to install, saves labor and space resources.

## CEMENT INDUSTRY ENERGY-SAVING RETROFIT INTEGRATED SOLUTION

📍 Taizhou, Zhejiang



### Project requirements

A giant in the cement industry, the original 75kW power frequency Roots fan declined linearly due to its stability and efficiency, which seriously affected the production capacity. In addition, the high energy consumption of the machine and the reduction of economic benefits, an efficient and energy-saving air energy solution was urgently needed.

### Air Suspension Centrifugal Blower

Annual savings of nearly **110,000 yuan** | energy saving rate is **33%**

### Solution

The technical team went deep into the site, escorted the whole process, provided air energy solutions flexibly, and replaced the original machine with 55kW air float. The efficiency of the motor is over 96%, the efficiency is not attenuated in the life cycle of more than 20 years, and the energy saving rate is over 30%.

### Solution advantage

- Energy saving is more than "100 million" point** - energy saving is as high as 33%, and the annual electricity saving is nearly 110,000.
- The efficiency is high** - the efficiency is stable at a high value, and there is zero attenuation in the 20-year life cycle.
- Intelligent operation and maintenance** - equipped with the Internet of Things, it can be controlled remotely and reduce labor costs.
- No worries about iteration** - efficient operation with a semi-permanent life cycle of more than 20 years.
- A wide range of working conditions** - constant pressure, adjustable air 45%-100%.
- Highly integrated** - integrated design of the whole machine, reducing pressure loss, occupying only 2.5m<sup>3</sup>, saving installation space by more than 40%.
- Saving money** - no consumables, no maintenance, no oil leakage, and saving nearly 30,000 yuan annual maintenance cost.

## SEWAGE INDUSTRY LIFE CYCLE SOLUTIONS

### 📍 Tibetan Plateau



#### Project requirements

The water depth of a sewage treatment tank in Tibet is 5 meters, and the daily distance of the treatment personnel is 15,000 tons. Under the high pressure and strong work on the plateau, the defects of the original multi-stage centrifugal fan and asynchronous motor have become increasingly prominent: they have to be updated and iterated every 2 years, and air leakage is frequent. In addition to increasing unnecessary maintenance costs, iterative machine replacement has seriously affected production efficiency.

#### Air Suspension Centrifugal Blower

Annual savings of **518,400 yuan** | electricity saving rate is **40.4%**

#### Solution

According to customer needs, a 220kW air suspension centrifugal blower was customized to replace the original 2 200kW multi-stage centrifugal blowers. Adopt cutting-edge 100% oil-free air suspension bearing technology, zero contact during operation, maintenance-free, and the efficiency of the whole machine is as high as 88%. The efficiency is continuously optimized, and it solves the pain points of customers.

#### Solution advantage

1. **Energy saving** - the energy saving rate is as high as **40.4%**, and the annual electricity bill is saved by **518,400**.
2. **Improve production efficiency** - the motor efficiency is as high as 96%, and the efficiency is not attenuated during the life cycle.
3. **Improve space utilization** - save more than 50% of space resources and reduce invalid construction and rectification fees.
4. **Reduce ineffective waste** - no lubrication, no maintenance, no need for spare parts and spare parts, reducing the cost of purchasing, in and out of storage, etc.
5. **Cost reduction and efficiency increase** - the whole machine is highly integrated design, with a high environmental fault tolerance rate.
6. **Time-saving and labor-saving** - digital and intelligent system, remote control can be achieved with one touch.
7. **Effectively solve the iterative problem** - air suspension bearing design, semi-permanent for more than 20 years.

## SEWAGE INDUSTRY DIGITAL AND INTELLIGENT AIR ENERGY SOLUTIONS

### 📍 Xingtai, Hebei



#### Project requirements

In the sewage treatment process, oxygen supply and aeration, water mixing, back washing and other links are inseparable from the blower. A customer in Hebei originally had 6 55KW Roots fans. Due to the high failure rate and long maintenance cycle, the production capacity was seriously affected, and the daily output was 25,000 tons. The new fan solution was urgently needed.

#### Air Suspension Centrifugal Blower

Annual savings of nearly **259,200 yuan** | Electricity saving rate is **30%**

#### Solution

The technical team went deep into the customer site and landed the whole process, and flexibly provided a complete set of air suspension centrifugal blowers. It is equipped with aviation aluminum ternary flow impeller, black technology air-floating bearing, high-speed permanent magnet motor, high-efficiency cooling system, etc., to achieve high-efficiency and stable operation of more than 96% in high-temperature corrosion and harsh environments.

#### Solution advantage

1. **Improve production efficiency** - no maintenance is required, stable and efficient operation, and no decline in efficiency during the life cycle.
2. **Energy saving and noise reduction** - The real energy saving is nearly 30%, and the annual power saving is **259,200**.
3. **Efficient and stable** - In the life cycle of more than 20 years, it will operate in the high-efficiency range.
4. **Reduce the failure rate** - air suspension design, non-contact during work, reduce the failure rate.
5. **Intelligent** - standard air energy operation and maintenance platform, remote control, early warning and equipment operation and maintenance data.
6. **Cost saving** - No consumables, no maintenance, no spare spare parts, reducing the cost of spare parts procurement planning, storage and delivery and other links.

## FOOD INDUSTRY SEIZE THE COMMANDING HEIGHTS OF PRESSURE EFFICIENCY

📍 Linyi, Shandong



## PRINTING AND DYEING INDUSTRY INCREASE PRODUCTION AND EFFICIENCY "XIN" POTENTIAL ENERGY

📍 Nanchong, Sichuan



### Project requirements

China's "food capital" - Linyi, Shandong, with an industrial value of nearly 200 billion, the corresponding demand for aeration of food sewage is huge. Under the pressure of high production capacity, in a case of Linyi Foods, the original Roots blower was insufficient aeration and low efficiency. , unable to support production demand. There is an urgent need for air energy solutions that can respond quickly.

### Air Suspension Centrifugal Blower

Annual savings of **109,000 yuan** | Electricity saving rate of **42%**

### Solution

In an emergency, the technical team quickly deployed, professionally customized Xinlei air suspension blower with strong pressure. With the support of core technologies such as high-speed permanent magnet motor, well-known frequency converter, and black technology ternary flow impeller, the source outputs high-efficiency and clean air energy.

### Solution advantage

- 1. Pressure tool** - the exhaust pressure can be as high as **120kPa** to meet the pressure demand.
- 2. The commanding heights of efficiency** - The efficiency of the main engine is as high as 97%, the efficiency of the whole machine exceeds 88%, and the speed is precisely adjusted.
- 3. Energy saving out of the circle** - The energy saving rate is **42%**, and the annual electricity cost is **109,000**.
- 4. The flow rate adjustment range of the flow pool is wide**, and the air volume is 45%-100%, which can meet the needs of different working conditions.
- 5. The Smart Master is equipped with the Internet of Things as standard**, and it can be controlled remotely, which improves efficiency and saves labor.

### Project requirements

An environmental protection industry in Nanchong, Sichuan, covering municipal wastewater, drilling wastewater, gas field wastewater, and other full-link wastewater projects. With the expansion of the industrial chain, the efficiency of the original three Roots fans has declined, and economic benefits have been suppressed. High-efficiency air power sources are urgently needed. In response to the demand for blasting and aeration under high production capacity.

### Air Suspension Centrifugal Blower

Annual saving of **660,000 yuan** | Energy saving rate of nearly **30%**

### Solution

The technical team conducted on-site investigation and flexibly customized 2 Xinlei air suspension blowers. Equipped with black technology air suspension bearings, it operates efficiently without vibration and requires no maintenance; it is linked with a high-performance cooling system to ensure stable and reliable operation during long-term high temperature operation in summer.

### Solution advantage

- 1. Strong environmental compatibility** - the whole machine is integrated, and the installation does not require a seamless connection between indoor and outdoor foundations.
- 2. Cost "manager"** - air suspension bearing design, no maintenance, no wearing parts, no spare parts, reducing the cost of spare parts procurement, in and out of storage, etc.
- 3. High efficiency and energy saving** - save nearly **660,000 yuan** a year.
- 4. High-quality longevity** - more than 20 years of life cycle, no iteration troubles.
- 5. The sound is sweet** - the noise is 80dB to protect the physical and mental health of employees.

## TEXTILE INDUSTRY GREEN ENERGY SAVING TRANSFORMATION SOLUTION

📍 Leshan, Sichuan



## CEMENT INDUSTRY AIR ENERGY SOLUTION

📍 Loudi, Hunan



### Project requirements

Sewage treatment plants have attracted the attention of the environmental industry. Under the background of dual-control upgrade of energy consumption, a sewage treatment plant in Sichuan is facing the window period of green transformation stage. Five aeration Roots blowers occupy a large space resource. They are five "electric tigers" bringing the problems of endless money burning and no energy saving.

### Magnetic Levitation Centrifugal Blower

### Project requirements

The cement industry is one of the high energy consumption industries. The central government has upgraded its management and control. A leading cement enterprise actively responded to the national call for energy conservation, aiming to replace the original 14 high energy consumption Roots blowers.

### Magnetic Levitation Centrifugal Blower

Annual saving of **300,000 yuan** | Energy saving rate of **36.30%**

### Solution

The project engineers provide flexible transformation plans through multi-dimensional investigation and analysis. One Xinlei magnetic levitation blower replaces five Roots blowers. With permanent magnet high speed main engine, the motor efficiency is more than 97%, and the whole blower efficiency is more than 87%. Compared with the traditional blower, it saves more than 30% energy. Increase efficiency and reduce costs at the same time. Accelerate the green transformation.

### Solution advantage

- 1. Invisible profit "Black hole"** - The energy saving exceeds 30%. The daily electricity saving is nearly RMB 1000. The annual electricity saving is nearly RMB 300,000. Therefore, the client won the group's "Golden Bull Award".
- 2. Save thousands of maintenance costs** - 100% oil-free bearing system. **No need for regular maintenance.**
- 3. No worries about iteration** - Magnetic levitation bearing series design. More than 20 years of semi-permanent design. Life cycle efficiency zero decay.
- 4. Save manpower** - Multi-dimensional linkage of mobile phone and computer. **Remote control.**
- 5. Low rectification cost** - The blower is highly integrated design. Seamless Indoor and outdoor iterative connection. Quick installation and deployment. No foundation required.
- 6. Save more than 70% space resources** - Occupy only 8.6m<sup>3</sup> space. The weight is as low as 2,300 kgs. **Noise≤80dB.**

Annual saving of nearly **RMB 1 million** | Energy saving rate of **30%**

### Solution

After investigation and analysis, the project engineer provided a contract energy management plan: 8 Xinlei magnetic levitation centrifugal blowers replace the original 14 Roots blowers. With the support of cutting-edge technologies such as permanent magnet high speed main engine and aviation aluminum ternary flow impeller, the motor efficiency exceeds 97% and the energy saving rate exceeds 30%. Accelerate green transformation while reducing costs and increasing efficiency.

### Solution advantage

- 1. Invisible profit "Black hole"** - The energy saving exceeds 30%. Annual electricity savings of **nearly RMB 1 million.**
- 2. High efficiency and energy saving** - About **2.34 million KWH of electricity** is saved every year. 2,332 tons of carbon emissions are reduced. Which means 120,000 Haloxylon ammodendron trees are planted in the same amount.
- 3. Save thousands of maintenance costs** - **100% oil-free** bearing system. Avoid secondary pollution. No maintenance. No wearing parts.
- 4. Digital intelligence level improvement** - remote control. Save manpower.
- 5. Low rectification cost** - The blower is highly integrated design. Seamless Indoor and outdoor iterative connection.
- 6. Small body but big use--save more than 50% space resources.** Reduce unnecessary construction costs.

## THERMAL POWER INDUSTRY REDEFINE "POWERFUL POWER SOURCE"

📍 Lanzhou, Gansu



## THERMAL POWER INDUSTRY A SOLUTION FOR NOISE REDUCTION AND EFFICIENCY IMPROVEMENT

📍 Zouping, Shandong



### Project requirements

A thermal power industry in Lanzhou, Gansu, contracted the entire area of thermal power. The original 3 blowers leaked oil frequently. The maintenance costed time and aeration efficiency was greatly reduced. The energy consumption class lost. The existing equipment can no longer meet the increasing demand.

### Magnetic Levitation Centrifugal Blower

Annual saving of **405,000 yuan** | Energy saving rate of **32%**

### Solution

The technical team customized Xinlei magnetic levitation blower which can meet the working conditions and save 32% energy. With the support of block technology such as aviation aluminum ternary flow impeller, high speed permanent magnet motor, magnetic bearing, etc., the efficiency and energy consumption problems are solved. Save money while using.

### Solution advantage

- 1. Stay in the center of energy saving** - The energy saving rate is **really up to 32%**. The blowers cost can be returned in a few months by electricity cost saving.
- 2. More than efficient** - The exhaust pressure is as high as 123 kpa, solving the pressure problem.
- 3. Small body but big use** - save **more than 50%** space resources. Reduce unnecessary construction costs.
- 4. Variable master** - The adjustable range of air volume is 45%~110%. It can be suitable for various working conditions.
- 5. Air energy "Stabilizer"** - high stable operation in more than **20 Years** life cycle.
- 6. A sharp tool for production cost optimization** - magnetic bearing design. Maintenance-free. No wearing parts. Zero loss. **Save tens of thousands of production costs.**
- 7. Digital and intelligent "Big Boss"** - intelligent operation and maintenance platform. **Remote control.** Blower warning. Maintenance prompts and other intimate services. Reduce unnecessary labor costs.

### Project requirements

A thermal power enterprise in Shandong, supply the thermal power the the entire area. However, the power of the original Roots blower gradually dropped. The gas supply could not meet the existing working demand. In addition, the noise was too loud, which seriously affected the physical and mental health of workers. High efficiency and low noise air energy new equipment is urgently needed.

### Magnetic Levitation Centrifugal Blower

Annual saving of **RMB 1,1288 million** | Energy saving rate of **34%**

### Solution

The project team made a tailor-made solution-Replace the 450 KW blower with a Xinlei 300 KW magnetic levitation blower. With the support of core technologies such as high precision ternary flow impeller, high efficiency sensor, and high speed permanent magnet motor, etc., a solution integrating low noise, high efficiency and energy saving has been formed.

### Solution advantage

- 1. Quiet working environment** - **Noise≤80dB**. Noise reduction over 30%. Create a comfortable working environment.
- 2. Earn money while saving energy** - Energy saving by nearly 30% compared to traditional blowers. **Annual power saving of nearly 300,000.**
- 3. Money-saving assistant** - No wearing parts. Maintenance-free. No spare parts. Reduce inventory costs. Save money stealthily.
- 4. Super long life** - Cutting-edge magnetic bearing. Semi-permanent life of **more than 20 Years.**
- 5. Smart panel** - Internet of everything. Remote control. Multiple protection and early warning functions. Efficient and safe.
- 6. Efficient operation** - The motor efficiency exceeds 96%. The whole blower efficiency exceeds 87%. And the efficiency runs without attenuation in the life cycle.

## SEWAGE INDUSTRY DIGITAL INTELLIGENT FULL SCENE SOLUTION

📍 Lanzhou, Gansu



### Project requirements

A sewage treatment plant in Honggu District, Gansu, contracted the entire sewage treatment in Haishiwan. The daily treatment scale of up to 30,000 m<sup>3</sup> per day. As the service time of original blower increases, the aeration efficiency decreases and the energy consumption increases gradually. The customer is eager to solve the demand of high energy consumption and week efficiency status.

### Magnetic Levitation Centrifugal Blower

### Solution

Through site investigation and analysis, the Xinlei magnetic levitation blower which can meet the working conditions and save 30%+ energy is customized. Equipped with aviation aluminum ternary flow impeller, magnetic bearing and other black technologies, it can solve air flow and pressure problem easily. At the same time, the efficiency has zero attenuation in the life cycle. The efficiency and energy saving can be achieved with both hands.

### Solution advantage

- 1. More than efficient** - The exhaust pressure is as high as 120 kpa, solving the pressure problem.
- 2. Invisible profit "Black hole"** - The energy saving reaches 30%. **Annual electricity savings of nearly RMB 200,000.**
- 3. Small body but big use** - Occupy only 3.14m<sup>3</sup>. Wight as low as 700 kgs. Save more than 50% space resources. Reduce unnecessary construction costs.
- 4. Sweet sound** - Noise reduction more than 15.7%. **Noise≤80dB.**
- 5. Smart panel** - Internet of everything. Remote control. Reduce manpower by 30%.
- 6. Stability and safety** - Multiple protection and early warning functions. Stable and safe operation.
- 7. High quality and long life** - Cutting-edge magnetic bearing design. No contact and zero loss. **More than 20 Years semi-permanent life cycle.**

## CEMENT INDUSTRY SOLUTIONS

📍 Baoji, Shanxi



### Project requirements

During cement production, blowers consume vast amounts of energy, accounting for more than 50% of the cement industry's electricity consumption. The country's emphasis on energy saving and emission reduction has brought a lot of pressure to cement enterprises with high energy consumption, forcing them to update their cement production equipment and to develop in the direction of energy saving and carbon reduction, environment-friendly protection.

### Oil-free Screw Blower

### Solution

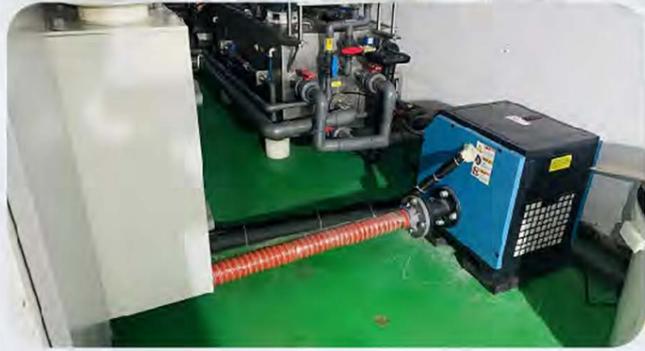
According to customer needs, three 160kW oil-free screw blowers were customized. Strong adaptability to working condition, stable exhaust. Compared with traditional Roots blower, it can save energy by 30%. High workload efficiency continuous optimization, crack customer pain points.

### Solution advantage

- 1. High-efficiency energy saving**-Compared with traditional Roots blower, It can reduce power consumption by 30%.
- 2. Increase production and efficiency**-Oil-free twin-screw host, compressed air is oil-free. Optimized profile design, more high efficiency.
- 3. Improve space utilization**-Save more than 50% space resources, **reduce unnecessary construction costs.**
- 4. Reduce useless waste**-No wearing parts. Maintenance-free. No spare parts. **Reduce procurement, warehousing and other costs.**
- 5. High fault tolerance rate for the environment**-No need to do secondary transformation on site to achieve cost reduction and **efficiency increase.**
- 6. Intelligent operation and maintenance** - standard with IoT, data visualisation, **remote and local joint control.**

## ELECTROPLATING INDUSTRY GREEN ENERGY SAVING TRANSFORMATION SOLUTION

📍 Guangdong, China



## ELECTROPLATING INDUSTRY ENERGY-SAVING SOLUTION

📍 Jiangsu, China



### Project requirements

### PM Variable Frequency CentrifugalBlower

For the pcb/semiconductor industry, the company's production capacity and plating quality determine the market competitiveness of products, while whether the equipment is energy-saving determines how much economic benefits the enterprise can achieve. The original vortex blower of the enterprise is used for horizontal drying. With the growth of the service cycle, the efficiency declines linearly, the energy consumption is high, and the service life is short. The subsequent maintenance costs not only burn money, but also seriously affect the production efficiency.

Annual savings of **237,000 yuan** | Electricity saving rate of **60%**

### Solution

After the actual investigation and analysis by the Xinlei technical team, the scheme was tailored based on various factors: two 7.5kw Xinlei energy-saving fans with XLCS7.5 model were used to replace the original six 4.3kW vortex fans.

### Solution advantage

- 1. Hidden profit "black hole"**: energy saving exceeds 60%, saving nearly 230000 yuan of electricity annually.
- 2. Quiet and noiseless**: 12.5% noise reduction, low vibration of the whole machine, noise  $\leq$  70dB.
- 3. Clean and oil-free**: 100% oil-free design; high-quality clean air is supplied from the source to ensure high-quality plating pieces.
- 4. Stable and reliable**: Under the pressure of high temperature and high productivity, it still maintains a stable and efficient range.
- 6. The cost "manager"**: free of maintenance expenses, reducing costs and increasing efficiency.
- 7. Fast installation**: the whole machine is designed in an integrated way, with a volume of less than 0.2 cubic meters, which can be flexibly integrated into the electroplating line.

### Project requirements

### PM Variable Frequency CentrifugalBlower

Recently, the national dual control policy on energy consumption has been upgraded again, with irregular power rationing. The price of "two high" enterprises has risen, outdated production capacity has been eliminated, and green transformation of enterprises has been accelerated. As an important supporting link in high-end equipment manufacturing, advanced information technology and other fields, the PCB/semiconductor industry is urgent to improve production capacity and reduce emissions.

Annual saving of **100,000 yuan** | Energy saving rate of nearly **60%**

### Solution

The technical team went deep into the customer's site, landed in the whole process, and flexibly provided a complete set of permanent magnet frequency conversion centrifugal blowers. The original vortex pump (5.5kW \* 3 sets, 3kW \* 1 sets) is replaced by our 15kW-25kpa.

### Solution advantage

- 1. Add the production capacity**: the motor efficiency is  $\geq$  96% and the mixing is efficient. At the same time, the air volume can be flexibly adjusted according to the working conditions, with the range of 45% - 100%.
- 2. Subtract the electricity bill**: save up to 60% of the electricity while "making money".
- 3. The oil-free design of the whole machine**: outputs clean and high-quality air from the source to create high-quality products.
- 4. Stronger corrosion resistance**: Parts be specially treated to ensure efficient operation under harsh electroplating environment.
- 5. Intelligent standard**: air energy operation and maintenance platform, remote control, early warning and equipment operation and maintenance data.