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XINLEI COMPRESSOR CO.,LTD

201907

## AIR SUSPENSION CENTRIFUGAL BLOWER



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Please contact the sales to obtain more product information and service data. Xinlei holds the final explanation right for this catalogue.





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XINLEI COVERS AN AREA OF 120,000 M<sup>2</sup>

1000 DIFFERENT SPECIFICATIONS

90 PATENTS OBTAINED

1.5 MILLION PRODUCTION CAPACITY PER YEAR

140 PROFESSIONAL AND TECHNICAL PERSONNELS

EXPORTED TO 110 COUNTRIES AND REGIONS ALL OVER THE WORLD



## ABOUT US

Xinlei compressor co., ltd. was founded in Zhejiang, China in 1996. Xinlei is a world class manufacturer of air compressors specializing in the research and development, sales and services of air compressors. The company covers an area of 120,000 square meters and has more than 1,200 employees, which includes 140 professional technical personnels. Xinlei's factory has imported high precision processing equipments from Japan, Europe and the USA combined with advanced robots, modern production line, and ERP management platform to ensure the highest efficiency and quality production. Xinlei fully complies with ISO9001:2015 quality management system and ISO14001:2015 environmental protection system. Other international certifications obtained include the EU CE, American UL, German TUV, ETL, ASME, etc. The annual output of air compressors by Xinlei is 1.5 million units covering more than 1,000 different specifications of air compressor including small reciprocating type, oil-injected screw type, oil-free screw type, new electric vehicle oil-less, air suspension centrifugal blower series. Xinlei is the leader in manufacturing of permanent magnet variable speed and two stage compression permanent magnet variable speed air compressor in the market. Xinlei air compressors are exported to more than 100 different countries around the world.

Xinlei's investment in research and development of air compressors over the years has proven to be successful by obtaining 30 invention patents, 48 utility model patents, 12 appearance design patents. Xinlei will continue to stick to the motto of "innovation reflects values" to achieve mutual benefits with

## CERTIFICATIONS

CE、ITS、ASME、TUV and UL Certifications、WIT Environment Certification and High-Tech Enterprise Certification.



# 研发测试中心

## R&D TEST CENTER



# MANUFACTURING

Xinlei practices strict quality control procedures throughout the entire production process from procuring of raw materials, processing of components, assembly of machine, to testing of machine performance. Equipped with industrial robot machining center to build a refined and advanced production center to ensure the processing accuracy of the machine and other parts.



Industrial Robot  
▲ Machining Center



Clean And Tidy Manu-  
Facturing Environment



MAZAK High preci-  
sion machining center



MAZAK Five-axis  
▲ Machining Center



▼ Testing For The  
Whole Machine



MAZAK Five-axis  
▲ Machining Center



◀ R&D Test Center ▶



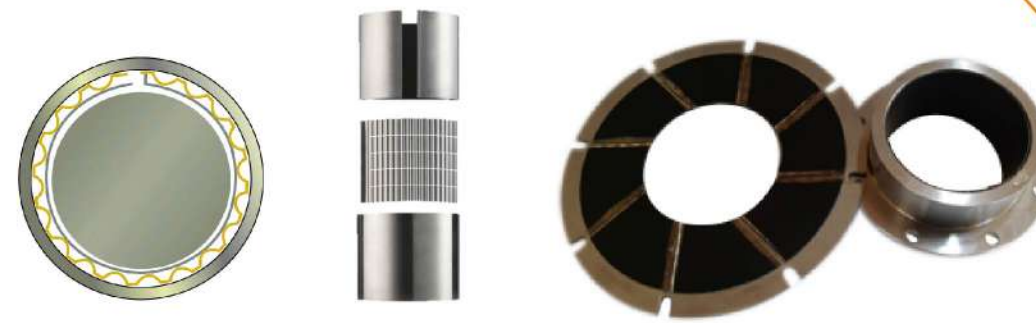
# TECHNOLOGY R&D

Air suspension centrifugal blower is a single-stage centrifugal blower, which does not need gearbox, speed reducer and coupling. It is driven directly by high-speed permanent magnet motor, and adjust the speed of the motor by the frequency converter. The blower impeller is connected directly to the motor, while the shaft is suspended on the active air bearing. Because there is no physical contact and no need for the lubricating oil system, the air suspension centrifugal blower is characterized by high efficiency, energy saving, low noise, reliable operation and no need for maintenance in long-term.

## AIR SUSPENSION BEARING

- Suspending by high speed rotating centrifugal force
- Simple structure, no need for lubricating oil supply and other auxiliary devices
- Non-contacting, no need for maintenance and repairing

- Vibration-free bearing
- Start/stop durability guarantee
- passing 20000 trials on/off test



Radial Bearing

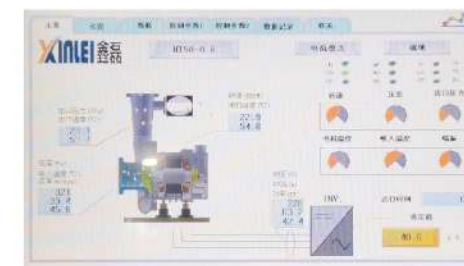
Thrust Bearing



Three-dimensional Impeller



Motor Cooling System



Programmable Logic Controller



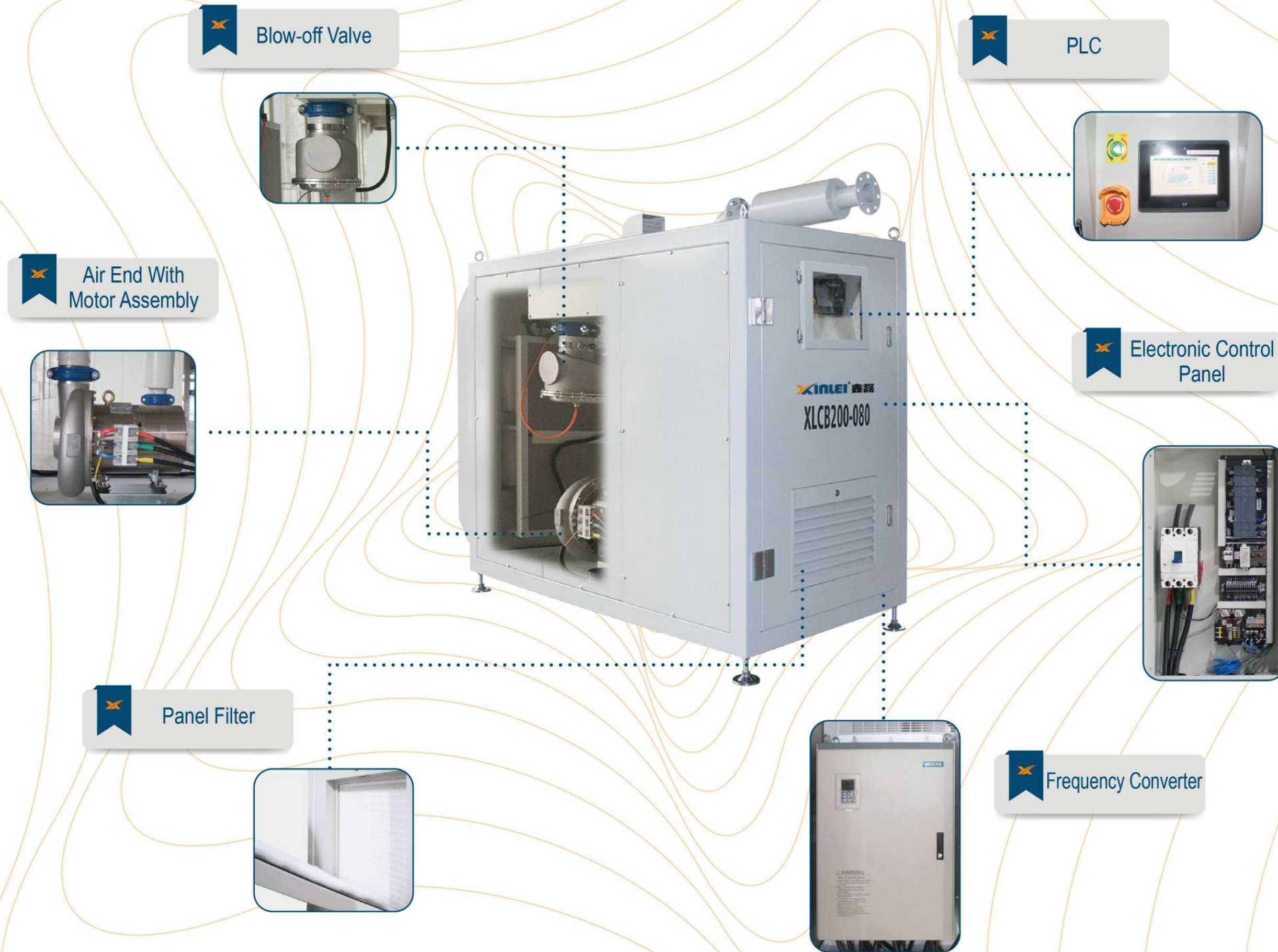
High Speed Motor

- High compression efficiency
- New design in three-dimensional structure
- High anti-surge stability, Strong bearing capacity, 120% overload capacity
- Adopt high strength forging aluminum alloy AL7075, precision manufacturing by five-axis machining center
- Adapt to the poor working environment of high temperature and high pressure
- The surface is treated with anti-oxidation and anti-corrosion

- Adopt the two-stage air cooling and self-cooling type of the latest technology, reasonably and ingeniously set separate air flow passage inside and outside of the main engine to maximize the cooling effect, and ensure the stable and reliable operation of the blower system even in hot summer

- Suitable control module for centrifugal blower
- Equipped with powerful human-computer data exchange channel
- Equipped with communication interface of upper computer
- Anti surge protection to ensure the safety of the equipment
- Multiple operation modes provided

- Adopt high efficiency permanent magnet synchronous motor, Efficiency  $\geq 96\%$
- Compact overall size
- Precise control for the speed
- Direct connection between motor shaft and impeller to ensure the 100% transfer efficiency
- Insulation grade: H Class (heat resistance up to 170°C)
- Number of poles: 2, Suitable for power supply: three-phase 380V/50Hz



# COMPREHENSIVE ADVANTAGES

## HIGH EFFICIENCY

The total efficiency of the system reaches 75%, saving energy greatly  
 Adjustable air volume, adjustment range: 45-100%  
 No vibration during operation  
 Keep noise below 80dBA  
 Automatic operation mode provided

## SIMPLE OPERATION

Button start,easy operation  
 Provides convenient communication interface for remote control  
 Equipped with self trouble diagnosis system, allow users to quickly troubleshoot

## EASY INSTALLATION AND CONVENIENT MAINTENANCE

Electromechanical integration  
 Needn't to be fixed  
 No need for lubricating oil

## GOOD RELIABILITY

Grafting mature air bearing technology of aircraft engine  
 120% impeller rotation speed and strength verification test  
 110% over load test for the motor



# SCOPE OF SUPPLY

## Standard Configuration

- Motor
- Machine casing(with soundproof function)
- Frequency converter
- Local control system
- Blow-off valve/blow-off muttler
- Temperature sensor and pressure sensor
- Inlet filter

## Optional Configuration

- Outlet non-return valve
- Elastic outlet joint
- Manul butterfly valve

## TECHNICAL SPECIFICATION

Model	Type	Power (kW)	Displacement (m³/min)	Working Pressure (mm water column)	Dimensions (mm)	Weight (kg)	Outlet Pipe Diameter
XLCB30	Single Impeller	22	24	4,000	700x1600x1380	470	DN150
			21	6,000		430	
			17	8,000			
			13	10,000			
XLCB50	Single Impeller	37	47	4,000	850x1775x1670	560	DN200
			34	6,000	700x1600x1380	470	DN150
			28	8,000			
			22	10,000			
XLCB75	Single Impeller	55	61	4,000	850x1775x1670	560	DN200
			51	6,000			
			42	8,000			
			34	10,000			
XLCB100	Single Impeller	75	82	4,000	850x1775x1670	560	DN200
			69	6,000		610	
			55	8,000			
			45	10,000			
XLCB125	Single Impeller	90	101	4,000	1000x1975x1877	820	DN300
			86	6,000	850x1775x1670	700	DN200
			71	8,000			
			53	10,000			

Standard conditions:20°C, relative humidity: 65%, standard atmospheric pressure, density:1.2kg/m³.

Model	Type	Power (kW)	Displacement (m³/min)	Working Pressure (mm water column)	Dimensions (mm)	Weight (kg)	Outlet Pipe Diameter
XLCB150	Single Impeller	110	125	4,000	1000x1975x1877	870	DN300
			105	6,000		820	
			84	8,000			
			65	10,000			
XLCB200	Single Impeller	150	165	4,000	1150x1975x1877	910	DN300
			140	6,000	1000x1975x1877	870	
			109	8,000			
			87	10,000			
XLCB250	Single Impeller	185	193	4,000	1300x2350x2100	1600	DN400
			165	6,000	1150x1975x1877	910	DN300
			135	8,000			
			105	10,000			
XLCB300	Double Impellers	220	266	4,000	1750x2350x2100	2150	DN500
			210	6,000	1300x2350x2100	1600	DN400
			164	8,000			
			133	10,000			
XLCB400	Double Impellers	300	331	4,000	1750x2350x2100	2150	DN500
			272	6,000			DN400
			216	8,000			
			172	10,000			

Standard conditions:20°C, relative humidity: 65%, standard atmospheric pressure, density:1.2kg/m³.

# INDUSTRIAL APPLICATION

Air supply to wastewater sewage treatment plant

Power/Granule transport for cement, steel and chemical industry

Air supply/agitation for pharmacy, biological fermentation and aquaculture

Desulfurization and denitrification, electroplating, backwashing, sand blasting, drying



Sewage treatment plant in Gaoyou



Water works in Fuchun River



Agrochemical biology company in Jiangsu



Sewage treatment plant in Jilin



Sewage treatment plant in Hubei



Motor corporation in Beijing



Comparison Between Xinlei Centrifugal Oil Free Blower And Roots Blower



No Need For Lubrication Oil  
Pure and fresh air to the output.



Low Maintenance Cost  
Replace air filter every 3-6 months.



Low Noise  
Keep noise below 80dB to offer a pleasant working environment.



Energy-Saving  
The energy saving rate is more than 30% comparing with roots blower.



### Economic Effects

The energy saving rate is more than 30% comparing with roots blowers. Low maintenance cost, no need for lubricating, equipped with air bearing. Needn't to lay the foundation for a blower room to save the construction cost. The cost will be recovered after 2-3 years.



### Environmental Effects

Reasonable design, sustainable and efficient operation under partial load operation. Diversified operating system, wide range of controlled flow. No need for lubricating oil, pure and fresh air to the output, suitable for all industries.



### Technical Effects

No pollution for the surrounding environment. Low vibration and low noise to offer pleasant working environment. Compact configuration, occupy small area.

