WORLD CLASS · SUPER EFFICIENT · RELIABLE · SILENT

J|N|b k|m|l|b

OIL FREE SCREW BLOWER MAGLEV CENTRIFUGAL BLOWER



MEMBER OF CAGI Compressed Air & Gas Institute

MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT IAF

SYSTEM CERTIFICATION ISO 14001 SGS

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KAISHAN

Kaishan Compressor Global

WORLD WIDE SUPPORT

Globally recognized industrial presence

Over the last sixty years, Kaishan has steadily grown to become a significant, diversified engineering company developing high value machinery for industries worldwide. With modern, specialized manufacturing facilities positioned in seven strategic locations, Kaishan's group of thirty-two subsidiary companies produce over 70,000 rotary screw and 250,000 reciprocating compressors annually. Kaishan is the world's third largest manufacturer of compressed air, mining and drilling equipment and supports industries in more than 60 countries including: USA, Australia, Germany, Japan, Korea, Russia, Africa and throughout Latin America.

Vertically integrated global strategy

Kaishan's global strategy of combining skilled engineering with highly efficient manufacturing allows us to provide performance proven, reliable equipment at a significant cost savings to our customers. Additionally, Kaishan's manufacturing processes are 85% vertically integrated insuring full control of the material supply chain. This vertical approach supplies high quality components at a lower cost, and affords Kaishan the ability to respond rapidly to changing market demands.



Practiced environmental sustainability

Integral to the design and manufacture of our products is outstanding energy efficiency. Kaishan's fundamental belief in environmental sustainability drives us to produce products that maximize energy efficiency and help to preserve precious energy resources. Single and two-stage compressors that produce more compressed air per unit of power input as well as expanders that utilize waste energy to produce electricity are just two of the fundamental products in our sustainable approach.

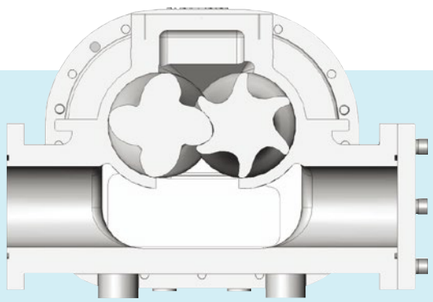
Throughout our manufacturing processes, unused waste materials are recycled at every stage to minimise the use of raw materials. This approach translates to lower initial costs and a smaller environmental footprint that helps us all. Kaishan's committment to environmental responsibility ensures that we will continue to develop technologies and manufacturing solutions that provide industry with machinery of exceptional value - now and well into the future.



OIL FREE SCREW BLOWER

High Efficiency, Low Noise And High Reliability

Kaishan Oil-free Screw Blower, adopts the patented high-efficiency screw rotor profile with the 6-4 / 5-3 mal and female rotors of Air-end, rely on a pair of high-precision synchronous gears for meshing operation.



- In band compression during operation, with high thermal efficiency;
- The power balance is good, and the installation without foundation can be realized;
- The exhaust pressure can reach 1.2bar and the flow rate can reach 130m³/min;
- Less air flow pulsation, greatly reducing noise;
- Integrated control system, unattended and remote control;
- Standard acoustic enclosure and cooling fan.

Classic

- The belt drive unit can be equipped with variable frequency motor and frequency converter;
- The direct connected unit is equipped with permanent magnet variable frequency motor and frequency converter as standard.

High efficiency

The blower adopts Y-4 profile double screw rotor; The Vi design includes multiple pressure ratios. For different discharge pressure applications, heads with different pressure ratios are provided to reach the maximum efficiency. Thus, the blower is more energy-saving and environmental friendly features, and its performance and reliability reach the international advanced level.

Low noise

The intake, exhaust noise reduction technology and fully sealed noise enclosure ensure the noise level meets the national standard, reaching the advanced level in the similar enterprises.

Long Service Life

All SKF high-speed bearings are imported, so the bearing service life is >100,000 hours.

Flexible flow regulation

The frequency converter can make the air volume flexibly adjusted within a certain range, and the operation is more energy-saving and the control mode can be set according to the user's working condition.

Oxygen control

According to the need of oxygen to realize frequency conversion control, adjust the volume.

Advanced Integrated Technology

Reliable and excellent system, easy installation, stable operation.





No Coating for Blower Rotor

During operation, the efficiency will not be reduced and coating will not fall off.

Easy maintenance

Adopt standard motor and standard main engine, flexible connection with belt or direct connection, easy to maintain on site.

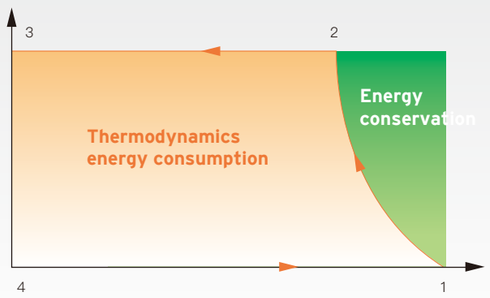
Intelligent control system

- Dedicated microcomputer controller
- With frequency conversion control and interlock control, oxygen control
- High-speed processing system, real-time intelligent protection
- A simple man-machine interface, easy to operation and management
- Supports multiple local and remote communication modes
- Comprehensive unit operation status and historical record query
- Optional materials networking module



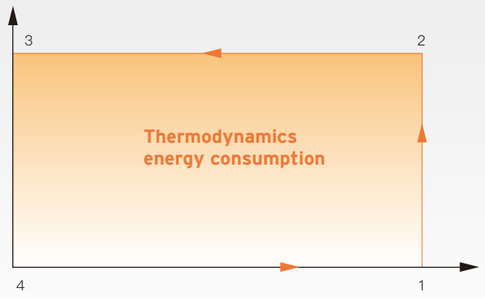
The green part is the energy-saving part of the screw blower.

Screw Blower Pressure/ Volume Diagram

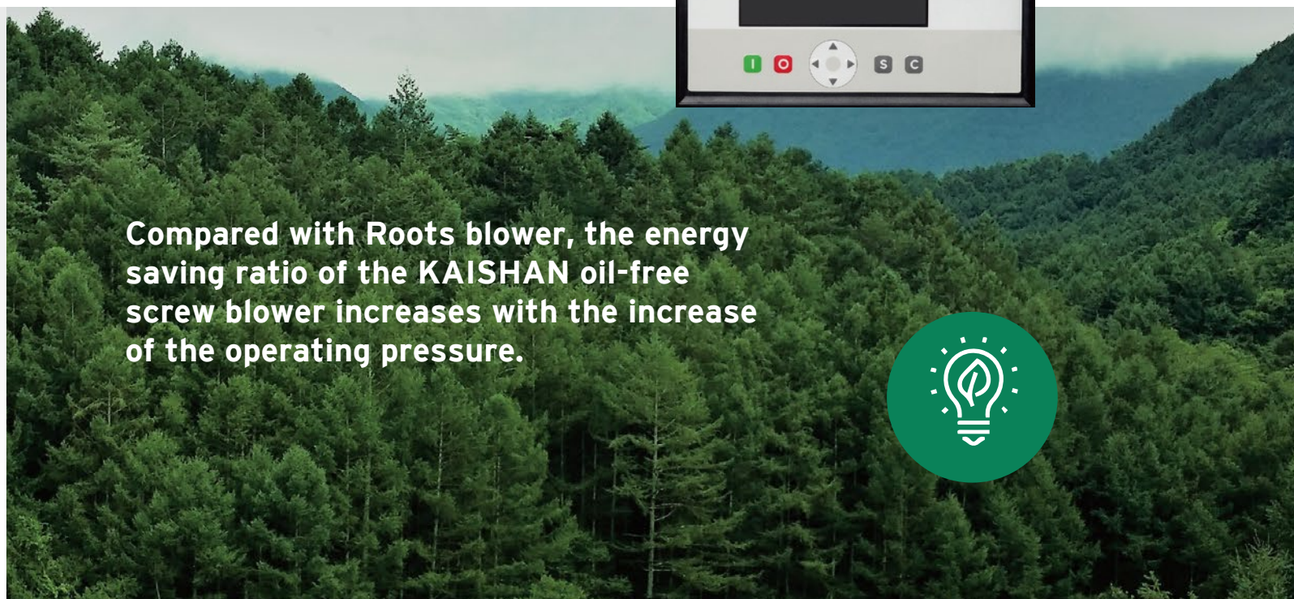


4 → 1 Inhalation
1 → 2 Internal compression. Male and female rotors are intermeshed to reduce the inter tooth space volume and increase the pressure.
2 → 3 Exhaust. The gas is discharged from the pipe

Roots blower Pressure/ Volume Diagram



4 → 1 Inhalation
1 → 2 External compression. The air volume remains unchanged, and gas is compressed externally due to the backpressure effect.
2 → 3 Exhaust. The gas is discharged from the pipe.



MAGLEV CENTRIFUGAL BLOWER

Contactless, friction-free, non-lubricated

Maglev Bearing

Degree-of-freedom (DOF) maglev bearing technology with indigenous IP ensures that the rotor system is magnetically suspended by the live device, featuring no contact, no friction and no need of lubricating oil;

Leveraging balancing technology, the maglev bearing is self-adjustable in response to the change of the main shaft, so as to secure steady rotor operation;







Multiple Protection

Arranged with setpoint protection, the system and bearing will not sustain any damage caused by the sudden outage of power or breakdown.



Three-dimensional Flow Impeller

Under a three-dimensional backward bladed design, the impeller bears a wide range of working conditions with 95% polytropic efficiency. Made from high-strength aluminum alloy, the impeller is lightweight with a low moment of inertia;

To guarantee the lifespan of the impeller, the impeller design entails CAE finite element analysis, along with incoming flaw detection and post-processing 115% overspeed test for securing operation within its lifespan.

Intelligent Control System

Adopting high-frequency conversion control and developed and solid PLC intelligent control, the high-speed centrifugal blower is available for rev regulation as the case may be, in a bid to adjust air quantity and pressure;

The PLC intelligent control system implements remote control of the device and self-protection.



High-speed Permanent Magnet Synchronous Motor

The high-speed permanent magnet synchronous motor is engaged in direct coupling propulsion with the impeller, sparing the gearbox and eliminating transmission loss thoroughly;

Compact and quiet with a rev of 75,000RPM+ and insulation grade H, the motor efficiently saves over 97% of energy.

Cooling System

The blower's motor is equipped with a standalone cooling system;

Cooled by an axial / radial turbo fan at the end of the shaft, the cooling system meets radiating demand of the motor;

The cooling system ensures secure, reliable, stable and continuous blower operation with less maintenance workload and breakdown within conditions of the indoor environment.



Typical application

- **Sewage disposal**

  Provide aeration and oxygen supply

- **Material transportation**

  Use compressed air to transport powder, grain, ect.

- **Paper industry**

  Make the paper coating layer smoother and more uniform

- **Oxidative desulfurization**

  Oxidize SO2 to calcium sulfate (CaSO4) to increase dissolved oxygen.

- **Galvanized**

  Steel dropping air knife

- **Biopharmaceutical (Fermentation) industry**

  Promote the growth aerobic bacteria by absorbing oxygen in the air

- **Water industry**

  Flush dirt with air

- **Textile process**

  Supply Air to DTY machine

- **Fluidization / Homogenization process**

  Make the materials agitated at the inlet and outlet, and distribute more evenly.

JNb SERIES SPECIFICATIONS

Model	Pressure Barg	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
JNb100-XX	Flow(m³/hr)	253	249	248	246	244	243	241	240	239
	Motor power(kW)	5.5	7.5	7.5	7.5	7.5	11	11	11	11
	Flow(m³/hr)	287	283	281	278	276	275	273	272	271
	Motor power(kW)	5.5	7.5	7.5	11	11	11	11	11	15
	Flow(m³/hr)	335	330	328	325	322	321	319	317	316
	Motor power(kW)	7.5	7.5	11	11	11	11	15	15	15
	Flow(m³/hr)	372	366	364	361	358	357	354	352	351
	Motor power(kW)	7.5	7.5	11	11	11	15	15	15	15
	Flow(m³/hr)	410	404	401	398	394	393	390	388	387
	Motor power(kW)	7.5	11	11	11	11	15	15	15	18.5
	Flow(m³/hr)	457	450	447	443	440	438	435	433	431
	Motor power(kW)	7.5	11	11	15	15	15	15	18.5	18.5
	Flow(m³/hr)	514	506	503	498	494	492	489	486	484
	Motor power(kW)	11	11	15	15	15	18.5	18.5	18.5	22
JNb160-XX(D)	Flow(m³/hr)	570	566	565	563	560	559	557	556	555
	Motor power(kW)	11	15	15	15	18.5	18.5	18.5	22	22
	Flow(m³/hr)	664	659	657	655	652	651	649	647	646
	Motor power(kW)	11	15	15	18.5	18.5	22	22	22	30
	Flow(m³/hr)	770	765	762	760	756	755	752	750	749
	Motor power(kW)	15	15	18.5	18.5	22	22	30	30	30
	Flow(m³/hr)	880	874	871	868	864	863	860	857	856
	Motor power(kW)	15	18.5	18.5	22	22	30	30	30	30
	Flow(m³/hr)	1000	992	990	986	981	981	977	974	972
	Motor power(kW)	15	18.5	22	30	30	30	30	37	37
	Flow(m³/hr)	1111	1103	1100	1096	1090	1090	1085	1082	1080
	Motor power(kW)	18.5	22	30	30	30	30	37	37	37
	Flow(m³/hr)	1282	1273	1269	1264	1258	1258	1252	1249	1247
	Motor power(kW)	22	30	30	30	37	37	37	45	45
	Flow(m³/hr)	1456	1446	1442	1436	1429	1428	1423	1418	1416
	Motor power(kW)	22	30	30	37	37	45	45	45	55
JNb200L-XX(D)	Flow(m³/hr)	1226	1220	1214	1206	1199	1191	1182	1173	1163
	Motor power(kW)	22	30	30	30	37	37	45	45	45
	Flow(m³/hr)	1386	1392	1385	1378	1370	1362	1353	1345	1336
	Motor power(kW)	22	30	30	37	37	45	45	45	55
	Flow(m³/hr)	1637.0	1630.7	1623.3	1614.9	1606.5	1597.1	1586.6	1575.0	1616.0
	Motor power(kW)	30	30	37	37	45	45	55	55	55
	Flow(m³/hr)	1868	1861	1853	1845	1836	1827	1818	1808	1798
	Motor power(kW)	30	37	45	45	55	55	55	75	75
	Flow(m³/hr)	2104	2098	2091	2081	2071	2059	2048	2035	2022
	Motor power(kW)	37	45	45	55	55	55	75	75	75
JNb200M-XX(D)	Flow(m³/hr)	2435	2427	2417	2407	2395	2382	2369	2354	2339
	Motor power(kW)	37	45	55	55	75	75	75	75	90
	Flow(m³/hr)	2728	2721	2711	2701	2689	2676	2663	2648	2633
	Motor power(kW)	45	55	55	75	75	75	90	90	90
	Flow(m³/hr)	2923	2915	2905	2895	2882	2869	2855	2840	2825
	Motor power(kW)	45	55	75	75	75	75	90	90	90

Model	Pressure Barg	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2
JNb250L-XX(D)	Flow(m³/hr)	2975	2964	2955	2945	2936	2927	2920	2912	2901
	Motor power(kW)	55	75	75	75	75	90	90	90	110
	Flow(m³/hr)	3418	3407	3398	3388	3379	3371	3362	3355	3347
	Motor power(kW)	75	75	75	90	90	110	110	110	110
JNb250M-XX	Flow(m³/hr)	3927	3915	3905	3896	3887	3880	3871	3864	3856
	Motor power(kW)	75	75	90	90	110	110	110	132	132
	Flow(m³/hr)	4495	4481	4469	4454	4442	4431	4422	4413	4405
	Motor power(kW)	75	90	90	110	110	132	132	132	160
JNb280-XX(D)	Flow(m³/hr)	3710	3679	3635	3630	3625	3610	3595	3590	3585
	Motor power(kW)	75	75	75	90	90	110	110	132	132
	Flow(m³/hr)	4320	4297	4280	4226	4223	4188	4157	4152	4090
	Motor power(kW)	75	90	90	110	110	132	132	160	160
	Flow(m³/hr)	5383	5360	5340	5314	5308	5264	5223	5201	5180
	Motor power(kW)	90	110	110	132	132	160	160	185	185
JNb300-XX(D)	Flow(m³/hr)	5649	5633	5620	5605	5595	5590	5580	5565	5550
	Motor power(kW)	90	110	132	132	160	160	185	185	220
	Flow(m³/hr)	6566	6566	6542	6522	6501	6480	6462	6450	6430
	Motor power(kW)	132	132	160	160	185	185	200	220	250
	Flow(m³/hr)	7895	7879.2	7850.4	7826.4	7801.2	7776	7754.4	7740	7716
	Motor power(kW)	160	160	185	185	200	220	250	250	280

- Model number followed by D means direct connection;
- No "D" means belt drive;
- (D) for optional direct connection or belt;
- Select variable frequency unit to add V after the series GF; For example, the GF200M series has 75KW, and the belt converter is GFV200M-75. Direct frequency converter is GFV200-75D.
- "XX" in the above table represents power.
- The above parameters are reference for selection. If you have other specifications, please consult Kaishan.
- Kaishan reserves the right to modify the product specification data without notice.

KMLB SERIES SPECIFICATIONS

Model	Power kW	Flow m³/min					
Pressure kPa		**40**	**50**	**60**	**70**	**80**	**90**
kmlb 55	55	60	51	44	39	35	32
kmlb 80	80	86	72	62	55	50	45
kmlb 110	110	120	100	87	77	69	63
kmlb 150	150	150	132	110	99	90	84
kmlb 200	200	225	190	162	146	132	120