Rotary Screw
Air Compressor

Rotary Screw Air Compressor

AIRKOM KOMPRESSOREN (HK) CO., LTD.
Room 607, Yen Sheng Centre, 64 Hoi Yuen Road
Kwun Tong, Kowloon, Hong Kong
Tel: (852) 35902592
Fax: (852) 35902594
E-mail: sales@airkom.com.hk
Website: http://www.airkom.com.hk

Bulletin: ENG_10-05_AKSC
Specifications are subject to change without notice.

AIRKOM
KOMPRESSOREN

China Factory

Company Profile

Since the '80s of the last century, our founders have been endeavouring to promote the compressed air technology with meticulous maintenance service for industrial applications in mainland China. Through long years of experience in sales and distribution with highly efficient after-sales service, they have gained trust and support of satisfying clientele in overseas countries and various regions.

Merging avant-garde perspicacity with solid-proven technology, and apprehension of users authentic demand, **Airkom Kompressoren (HK) Co., Limited** fully commit to implement the most advanced Germanic air compressor techniques and professional design concepts to manufacture, research and develop the highest quality rotary-type compressed air units in Dongguan, China.

The manufacture process of each "**Airkom**" unit is in accordance with **ISO1217** & **CE Standards**. To ensure the highest quality and compliance of specifications, all compressor units must go through more than 30 different tests, including test run of full system operation.

Our Principles & Service Commitments:

1. Via close contacts with our customers, to develop and manufacture air compressors that they pragmatically require;
2. To provide the best quality, durable, energy-conserving and safety products and meticulous service to our customers;
3. Rendering products and service that exceeding the expectations of all satisfying customers.

"Integrity, Morality, Service and Never Standstill" being our promises, which indeed lay the ground stone of our Survival and Advancement.

Our Belief:

1. Persistently enhance the compressed air technology for industrial applications;
2. Establish the most professional, rigorous teams of quality management & customer service. Gaining full trust of the customers by offering the best quality products and meticulous service;
3. We appreciate customers as our tutors & dear friends that we heartily behold with deep gratitude;

We have strong confidence that: "Airkom" is your most trustworthy working partner!

Innovative Technology & User-Friendly Design

AIRKOM (TM) KOMPRESSOREN

Easy to Operate and Maintain

Intelligent PLC Control Panel

The simple-to-use automatic electronic control panel continuously monitors and displays overall system performance status with pro-active service indications, alarms for malfunctions and safety shutdowns. Advanced sequence control for multi-units installation and remote control as option.

Modern Concept Suction Control System

The control unit of the suction control valve can automatically adjust from 60-100% according to the system air demand to effectively minimize operating cost.

Safe & Reliable Automatic Control Box

To ensure safe and reliable compressor control solution, we select Siemens main electronic components (contactors, various relays and timers...)for our IP55 Automatic Control Box.

Specially designed multi-stage oil and air separation system

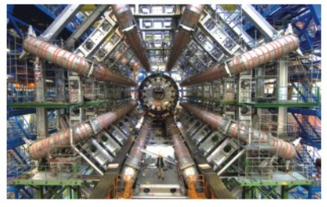
The latest European design multi-stage air/oil separation system to guarantee low residual oil content of less than 1 ppm. This exceeds any international standard of oil injected rotary screw air compressor and is particularly suitable for customers with clean air for applications.

High Efficiency Air Intake Filter System

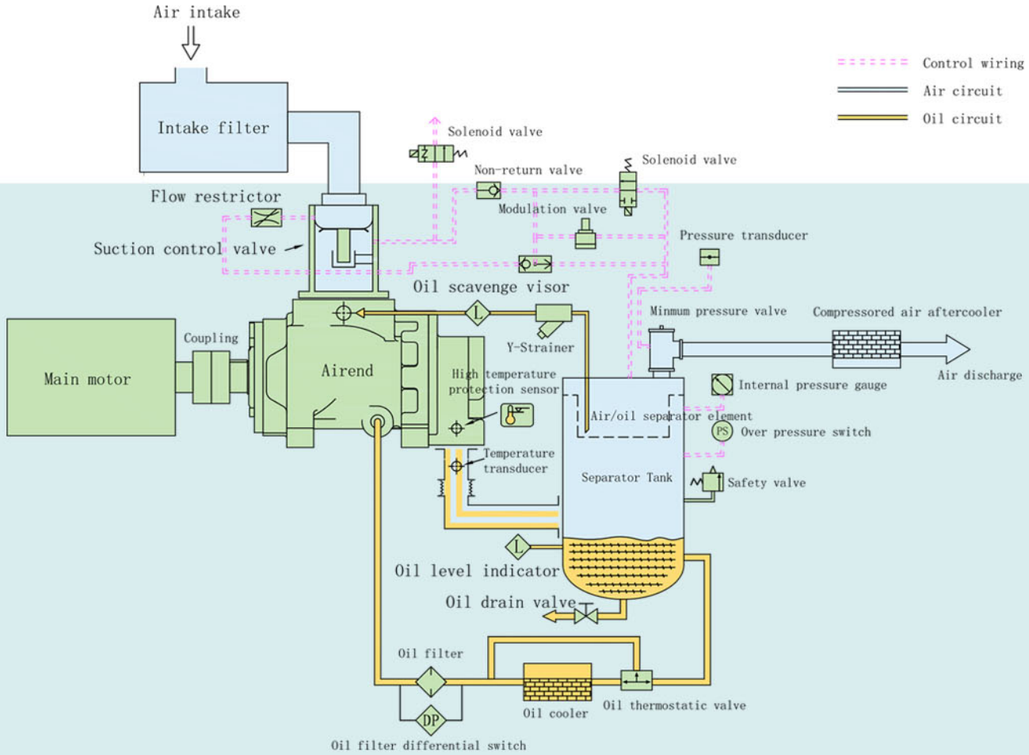
Dust particles from intake cooling air are efficiently removed by large surface area filter element, which also helps to keep low noise level.

Maintenance Free Transmission System

The airend is connected directly to an electric motor through a bell housing and a flexible coupling(with or without step up gear). Direct transmission is one of the important characteristics of our big capacity screw compressor packages as it makes possible the operation of airend to reach the maximum efficiency.



Working Principle



Airkom Compressor

Energy Saving Electric Motor

Main motor complies with CE standard, The specially modified high efficiency electric motor can achieve up to 95.2%, that brings an unprecedented level of energy saving. High quality high speed bearings from 'SKF' are fitted for continuous trouble-free operation.

Modern Concept Suction Control System

Modern concept suction control valve with automatic closure to prevent any oil escape. The control unit can automatically adjust from 60-100% according to the system air demand to effectively minimize operating costs.

Intelligent Electronic Control Panel

Easy to use:

The **Intelligent Electronic Control Panel** is a standard accessory in the "Airkom" Rotary Screw Air Compressor. It's also an advanced accessory in the air compressor field. This micro-processing control system is simple to use. It does not require any tools to uncover the air compressor for data-setting and adjustment. Experienced machine operators can easily learn how to input control settings manoeuvrably by finger touch on the buttons of the Control Panel.

Accurate with Good amount of important Information:
The Intelligent Electronic Control System uses simple & concise word text (not codes) to display data information and controls the operations of the air compressors/compressed air packages. Operators can easily and accurately acquire the operating data of the air compressors/compressed air packages at all times and circumstances including the compressed air pressure and temperature.

Rapid diagnosis on Machine Failure: The Intelligent Electronic Control System continuously monitors the compressed air unit according to the pre-set operating parameter. When the air compressor is running abnormally, the system will automatically give alarm and stop the unit. The Control Panel will display alarm and the cause of machine stopping. It also keeps memory of data at times When the unit is malfunctioning.

Imported Filtering System

1. High efficiency oil and gas separator makes exhaust content lower than 3ppm;

2. High efficiency machine oil filter filters out impurities in the lubricating oil and provide clean oil lubrication for the airend rotor and bearing;

3. High efficiency air filter can filter out dust and impurities contained in the sucked-in air, thus to help protection of the airend rotor and bearing from damage.

State-of-the-art Compressor Airend

Optimal energy efficiency and outstanding reliability is achieved from specially designed 3rd generation non-symmetric robust rotors, superior bearings and oil seal that help the compressor airend to operate with good dynamic balance, low vibration, low rotation speed and low noise level.

High Efficiency After-cooler

The enlarged high efficiency oil and air combination air-cooled aftercooler is specifically designed for South East Asia climate to assure all components work perfectly even under high ambient temperature and humidity in summer season. All design data are referenced at 46°C ambient temperature.

L-COMPACT, LA-LD Series (Small to Medium Capacity Models)

Model			L-compact			LA17A	LA11A	LA15A	LB18A	LB22A	LC30A/W	LC37A/W	LC45A/W	LD55A/W	LD75A/W
			L3	L4	L5										
Capacity FAD / Working pressure		m³/min /bar(g)	0.40/8	0.58/8	0.83/8	1.10/8	1.58/8	2.41/8	3.15/8	3.46/8	5.25/8	6.30/8	7.45/8	9.98/8	12.91/8
			0.37/10	0.49/10	0.71/10	1.02/10	1.37/10	2.20/10	2.84/10	3.04/10	4.51/10	5.77/10	6.61/10	8.40/10	11.34/10
			0.24/13	0.41/13	0.59/13	0.90/13	0.95/13	1.84/13	2.41/13	2.73/13	3.99/13	5.25/13	6.09/13	7.10/13	9.97/13
Cooling method			Air-cooled								Air-cooled and Water-cooled Available				
Drive method			V-belt drive							Direct drive					
Discharge air temp.		℃	Air-cooled version: ≤ Ambient temp. +5~ 10℃ Water-cooled version ≤40 ℃												
Oil capacity		L	5	6	6	7	9	10	11	13	15	22	25	45	50
Noise level		d(A)	68±3				69±3		71±3		72±3			73±3	75±3
Main motor	Power	kw	3	4	5	7.5	11	15	18.5	22	30	37	45	55	75
	Speed	rpm	2940								1450/2940				
	Starting method		Star-Delta Starting												
	Power supply		220V/380V/3000V/6000V 50Hz/60Hz												
Dimensions	L	mm	950			970	1070		1370		1550			1820	
	W	mm	650			680	720		860		960			1300	
	H	mm	1350			970	1050		1160		1330			1650	
Weight		kg	225	230	250	270	390	410	500	610	750	810	1200	1510	1730
Discharge air pipe connection		inch	$\frac{1''}{2}$				$\frac{3''}{4}$		1″		$1\frac{1''}{4}$			2″	
Cooling water pipe connections		inch									1″				

Note: Airkom reserves the right to make changes without prior notice. For further information, please contact the manufacturer or your local sales agent.

LE-LG Series (Big Capacity Models)

Model			LE90A/W	LE110A/W	LE132A/W	LF160A/W	LF185A/W	LF220A/W	LF250A/W	LG315A/W	LG355A/W
Capacity FAD / Working pressure		m³/min /bar(g)	15.10/8	20.50/8	23.60/8	28.37/8	33.73/8	40.56/8	45.10/8	56.80/8	61.80/8
			13.65/10	16.90/10	20.69/10	24.30/10	28.94/10	34.30/10	39.60/10	49.80/10	54.20/10
			11.76/13	14.59/13	17.96/13	22.14/13	26.36/13	30.71/13	36.10/13	43.20/13	48.10/13
Cooling method			Air-cooled and Water-cooled Available								
Drive method			Direct drive								
Discharge air temp.		℃	Air-cooled version: ≤ Ambient temp. +5 ~ 10℃ Water-cooled version ≤40 ℃								
Oil capacity		L	85	90	95	100	105	110	115	130	135
Noise level		d(A)	75±3			78±3					
Main motor	Power	kw	90	110	132	160	185	220	250	315	355
	Speed	rpm	1450/2940								
	Starting method		Star-Delta Starting								
	Power supply		220V/380V/3000V/6000V 50Hz/60Hz								
Dimensions	L	mm	2280	2780		3250		3350		3800	
	W	mm	1410	1410		1910		1800		2100	
	H	mm	2000	2000		1980		2000		2350	
Weight		kg	2450	2600	2800	3800	4050	5150	6030	6800	7200
Discharge air pipe connection		inch	DN80			DN100		DN125		DN150	
Cooling water pipe connections		inch	1″		$1\frac{1''}{2}$			2″		3″	

(1) Unit performance measured according to ISO 1217, Ed. 3, Annex C-1996.
(2) Noise level measured according to Pneurop / Cagi PN8NTC 2 test code; tolerance ±3dB(A)

AIRKOM™ KOMPRESSOREN

10 Reasons for Selecting "AIRKOM" Air Compressors

1. High efficiency air-cooled after-cooler

The high efficiency air-cooled after-coolers are especially designed for Asian regions to operate normally under high ambient temperature (46℃), and reduce gas and pressure leakages. They can also decrease water content from after-cooled compressed air and maintain constant difference (CTD) between exhaust temperature and ambient temperature at about 5-8℃.

2. LE-LG models adopt design of four-level of dual-cooled fan

1)When operating oil temperature is higher than 85℃, the first fan will start up.
2)When operating oil temperature during long time loading is higher than 95℃, the second fan will start up.
3)When operating oil temperature is lower than 85℃, the first fan will stop automatically.
4)Works together with oil temperature control valve to keep oil temperature pressure dew point and ensure no moisture from return oil comes back to airend vessel, of which the purpose is to prevent humidity from entering airend during its long time operation and to diminish bearing loss which may at last cause screw damage.

3. Airend has high load resistant bearing and advanced patented gear design

1)Third generation α-type asymmetric 5:6 patented gear profile.
2)Low tip speed lead design improves capacity and efficiency.
3)The maximum usable pressure is 1.6Mpa.
4)Low tip speed operates normally.

4. Main motor is cooled using T.E.F.C. full sealed fan

The electric motor is highly efficient and energy saving with protection grade of IP55 and insulation Class F. The enhanced size high-load motor bearing is adopting C3 precision bearing imported from Sweden "SKF" whose unique design can therefore maintain coaxiality during long time operation.

5. Specially designed multi-stage oil and air separation system

After our two stages of buffer separation, added separation through oil and gas separator can make residual oil content of air from equipment lower than 1-3ppm, and reduce oil filling frequency and suit users who request-compressed air of certain standard.

6. Electric control box with protection class IP54

Electric components of the IP54 control box such as relay, contactor, phase protection relays, overload relays, and time controller are original products imported from Siemens, which is a renowned first-class electronics and electrical apparatus manufacturer in the world. Thus,we are to provide our customers with high-quality, safe and durable air compressor control solution.

7. Dual oil temperature protection system device in airend

1)Control system will flash light and give an alarm when oil temperature reaches 100℃ during operation.
2)When the oil temperature rises to 105℃ , system will shut down automatically to ensure safety and also record the fault cause and date.

8. Simple installation

Put the equipment in position, connect it to the power supply and exhaust duct; then the equipment can start operating.

9. Low noise operation

Low rotation speed airend and low noise level machine case selected by us to ensure compressor operating quietly with reasonable noise-load ratio.

10. Test

Each set of "AIRKOM" product has to pass over twenty items of complete machine performance and operation tests, to ensure our high quality and reliability.

Airkom Compressor

6 Important Criteria to Help you Saving Costs : Before Selection of Air Compressor

1. Determination of pressure:

1. A higher pressure is in a compressor will cause higher power consumption. Should take notice of the piping size & length as they affect the differential pressure. It is suggested that the minimum pressure should be designed as the service pressure.
2. List out the service pressure of every operating machine. If the required service pressure among different operating units vary too much, should consider to select different model size of air compressors or to equip with booster unit. DON'T REDUCE the designed service pressure to suit selection of air compressor models, otherwise it may increase your long-term electricity costs.

2. Plant Room/Station- An ideal plant room/ station should be:

1. Capacious with good lighting to facilitate operation and maintenance;
2. Of low temperature, little dust, with fresh air and good ventilation. The room temperature should be lower than 40℃.

3. Cooling water and water quality:

1. Cooling by water tower. Cooling water temperature should be low;
2. We should pay attention to the PH value of cooling water, which should be maintained at about PH7.0, to avoid fouling because it will increase cleaning cost.
3. We should pay attention to cooling effect of the cooler. In general, outlet temperature of compressed air should be about 40℃.

4. Selection of machine model:

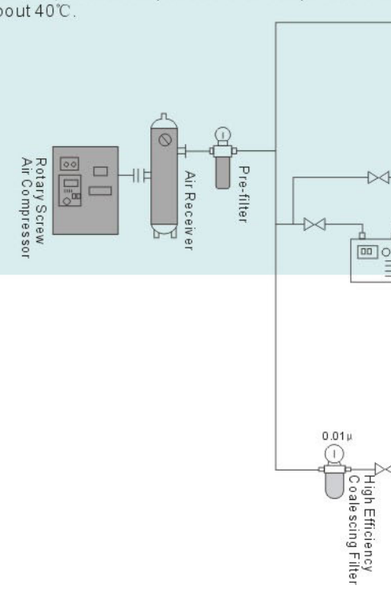
1. Total actual air volume consumption should be properly added to the allowed margin capacity.
2. To save costs on electricity, take notice of the energy consumption ratio.

5. Quality requirement of compressed air:

Compressed air contains high humidity with 100% relative temperature may cause serious damage to precision apparatus, pneumatic tools, pneumatic accessories, valves, instrument, pipeline and so on. As moisture may erode and block apparatus, debase quality of finished product, damage equipment and finally waste plenty of money in repair and maintenance. Therefore it is necessary to assemble the compressed air purification system. Please refer the below diagram for more details.

6. Piping:

Please contact us or our business representative for details and assistance.



Impurities of Compressed Air				Application	
Dust Particle	Water Content	Oil Content	Odour Removal		
3µm	-	-	-	Sand Blasting Cleaning Pressure Forming Forging Foundries	
1µm		0.5ppm	-	Powder Transporting Pneumatic Tools General Plant Air Powder Coating Control Valve	Pressure Dew Point +2℃
0.01µm		0.01ppm		Advanced Machinery Precision Component Drying Electronic Industry Instrumentation Anti-static Powder Coating	
0.01µm		0.003ppm	99.5%	Food Industries Pharmaceutical Manufacturing Stirring Drying Packaging	
0.01µm	Pressure Dew Point -40℃ to -70℃	0.003ppm	99.5%	High End Powder Coating Ultra Drying Breathing Application Printing Industry Precision Instrument Micro Film Industry	

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