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OIL FREE
SCREW AIR COMPRESSOR

COAIRE
COMPRESSOR

The history of compressors in Korea was established and advanced by Kyungwon Co., Ltd.

Since 1968

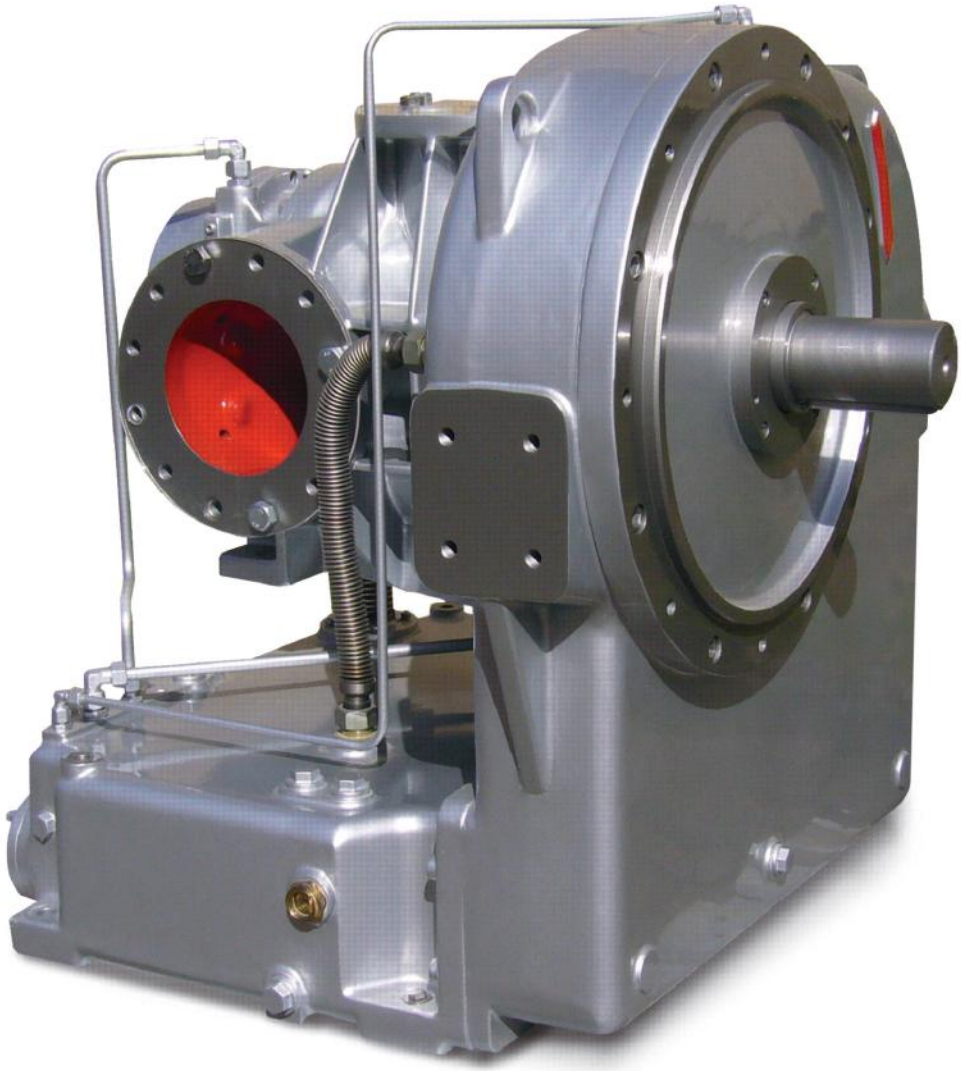
Since the company was established in 1968, it has developed piston type compressors for the first time in Korea. In 1986 the company was also the first in Korea to develop and supply screw compressors after establishing technological ties with Sweden-based SRM, and it developed oil free scroll compressors in 2004 for the third time in the world and for the first time in Korea. To put it simply, the company has created a new history of compressors in Korea.

In 2008, Kyungwon launched the upgraded AS series, which makes the company justifiably equal to world-renowned makers.

The company has about 40 official agencies across the country and numerous production bases and customer centers located in 10 countries around the world in countries such as the US, China, and Thailand, in order to provide its customers with the best possible service.

The total air solution producer manufactures such compressors as oil-free compressors, oil injection piston type compressors, screw compressors, scroll compressors, as well as driers and filters, which will best meet any customer demands.

In the future, the progress of compressors in Korea will continue to be written by Kyungwon, which is determined to do its best to be a leader in compressors throughout the world.



Major Products

Oil Flooded Air Compressor

Reciprocating Air Compressor
Model : 5HP~20HP

Screw Air Compressor
Model : Belt Type 10~30HP
Direct 25~500HP
All In One 10~30HP
Inverter 50~250HP

Oil Free Air Compressor

Reciprocating Air Compressor
Model : Package 1~7.5HP
Bare Type 1~15HP

Scroll Air Compressor
Model : Dental 2~5HP
All In One 3~20HP
Standard 3~50HP

Screw Air Compressor
Model : 75~400HP

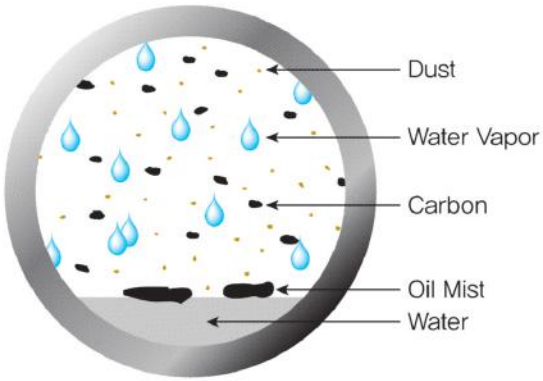
Air Compressor Accessories

Air Dryer
Refrigerating / Desiccant
After Cooler
Air Receiver Tank
Cooling Tower(water cooled)
Filter
Condensate Water Drain
Oil-water Separator

Compressed air & **Oilfree** Scroll

Compressed Air of Oil Free Screw Air Compressor

- The usual air feed contains about 1.8 billion particles of airborne dust, water vapor and oil mist, which are fed into the compression process and are transformed into 2 billion particles of dust and 0.03mg/m^3 of oil vapor in the output air stream, resulting from the heating of supplied grease that produces hydro carbon.
- The oil mist or vapor from the compressed air stream causes the machines being used to malfunction, the coats of paint to become easily separated or cause spin holes. If used in food processing or medical purposes, there is a risk that the harmful matter may be ingested.
- The oil mist problems can increase the expense of water treatment by the oil being included in the condensed water as an output of separation during dryer or filtering process.



Cross section of A/C pipe

※ Oil mist is the most difficult element to separate from the output air stream containing the pollutants such as water vapor and dust. Methods such as cooling or regenerated desiccant dryer or filters are commonly employed to remove the dust and water particles, but the oil mist filter does not offer the complete separation of the vapor, which causes unexpected problems in the secondary process as the mist is sure to pass through and corrupt the filters and dryers. In this respect, the surest way to prevent adverse effect lies in preventing the oil mist from occurring.

Compressed Air of Oil Free Screw Air Compressor

- Kyungwon Oil Free screw air compressor does not use oil for air compressing, supplies air which is not included any oil contain.
- High quality purity air can be produced when the appropriate dryers and filters installed.
- Condensate water from Receiver tank, After cooler, Dryer and Filter which does not contain any oil, so wastewater treatment not needed.

※ Today, the compressed air across the industry is increasing its use dramatically and the quality of compressed air determined by oil, moisture and dust particles became very important

※ Quality Standard of Compressed Air for Each Category of Use

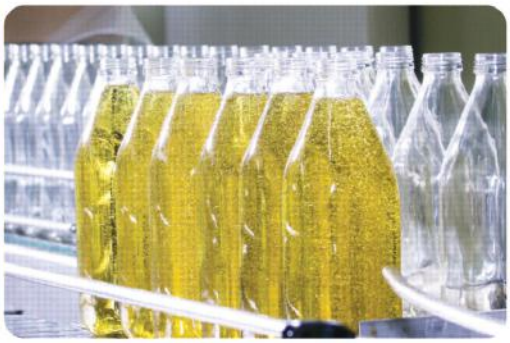
● Quality Standard of Compressed Air for Each Category of Use

Application	Quality Class			Application	Quality Class		
	Dirt	Water	Oil		Dirt	Water	Oil
Photographic	1	1	1	Pneumatic Cylinder	3	3	5
Conveyance of food / Beverages	2	3	1	General Works Air	4	4	5

Application

Food Processing

Packing, Filling, Powder feed, Cleansing, Drying, Agitation, Control-driven, Marking, etc.

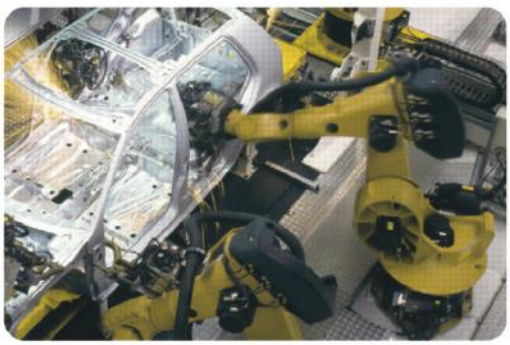


Pharmaceutical

Packing, Filling, Feeding, Manufacturing, Cleansing, Drying, Agitation, etc.

High-precision Semiconductors

Cleanroom Equipment, Cleansing, Cooling, Drying, Post-processing, Manufacturing, Gazogene, etc.



Other Applications

Medical equipment
Medical gas, Air vacuum, Dental

Painting
Precision coating

Plant
Gazogene, Instrument, Filter cleansing

Printing
Precision printing, Binding

Chemical
Chemical product manufacturing

Aquaculture
Dissolution,Oxy gen generating device

Agricultural
Preculture, Cleansing, Manufacturing

Highest Performance

Kyungwon **Oil Free Screw Compressor**

KMC Oil Free Screw?

Kyungwon Oil Free Screw compressor adopted GHH RAND Oil Free Airend, Germany, to make highest performance.

Kyungwon Oil Free Screw System guarantees 100% oil free compressed air, high performance, high reliability, easy maintenance, energy saving and reliable safety.

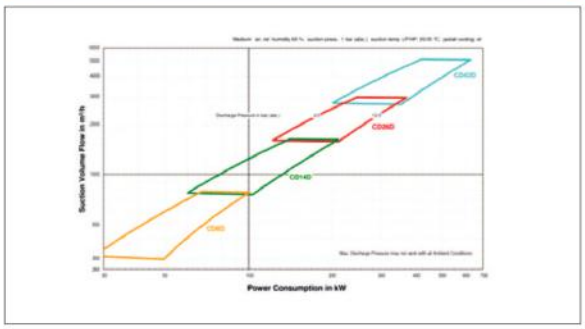
Specification

Highest Performance Airend	• World best GHH Oil Free Airend adopted. • Two stage compressing for high efficiency and performance.
The bestparts,the best system	• Dual stage Stainless Pre-cooler having long-lasting durability adopted. • Stainless steel pipe usage in air and oil piping to remove debris • 3 stage condensate water removal system adopted. • Hydraulic control Intake valve adopted having high reliability. • AOS type Breather filter adopted to minimize oil mist.
Easy Maintenance	• Modular design for easy maintenance • Multi-functional Micom Controller adopted
Energy Saving	• High efficiency electric motor, VSD capable, Oil pump built-in
Safety Features	• twenty more safety device adopted to protect user and unit
Low Vibration, Low Noise	• Low vibration system for cooling part, Split module type noise filtering system applied.

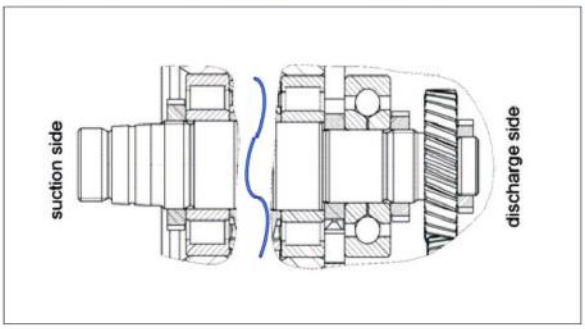
1. Oil Free Airend with World Highest Performance

- Maximum 60,000 hours life time
- Anti-lusting stainless 2 stage rotors
- Ultra coating on rotor and housing for high efficiency and reliable performance in high temperature and high pressure working condition.
- Contactless sealing system adopted to maximize durability and minimize debris caused by direct contact.
- The ideal combination of cylindrical roller bearing and 4 point bearing adopted to maximize performance and durability.
- Internal oil jacket for high cooling efficiency
- Various model and gear ratio available to satisfy customer's needs.

Various AIREND model



Ideal bearing combination



2. Perfect Control, Surveillance and Safety

AIR LINE

1st suction pressure control
2nd suction temperature control
2nd discharge temperature control
2nd discharge pressure control
1st pressure safety valve
2nd pressure safety valve
1st/2nd analogue pressure gauge

OIL LINE

Oil pressure control
Oil temperature control
Oil filter pressure differential switch
3 analogue type oil pressure gauge
Oil relief valve
Bypass valve built in oil filter

CONDENSATE LINE

1st electric auto drain- alarm output
2nd electric auto drain- alarm output
2nd airend mechanical auto drain

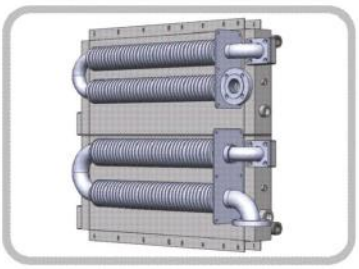
ELECTIC PARTS

Main motor & Fan motor EOCR
Temperature sensor on main motor bearing
Anti-reverse phase relay
Circuit breaker system

3. High performance parts applied for complete system integration

Stainless steel piping

- Stainless steel piping for hot and humid with compressed air to prevent the dirt and corrosion has occurred.
- Graphite metal gasket for hot temperature applied to prevent leakage
- Flexible tube with STS316 material for hot temperature applied to extend life time.
- Stainless piping for oil line and metal sealing applied to extend life time and minimize oil leakage.



Stainless Pre-Cooler

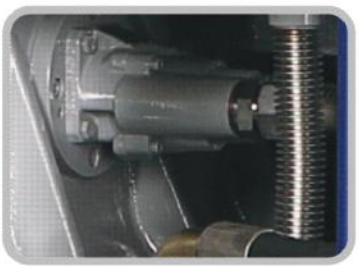
- Stainless Pre-cooler to 1st and 2nd stage discharge applied to maximize cooling effect and durability.

Hydraulic intake valve

- Highly reliable hydraulic intake valve applied to work stable.
- Accurate pressure control is possible even when unloading low pressure.

3 steps condensate removal system

- 3 steps condensate system remove almost vapor before compressed air delivery.
- Cyclone type moisture separator (2 step intake and discharge) adopted
- Float type drain valve adopted in 2nd airend to prevent vapor inflow



Oil Pump

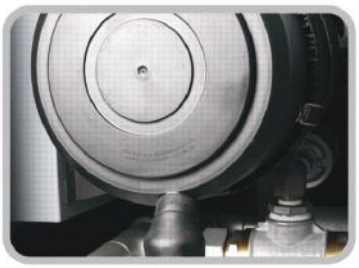
- Airend and oil pump integrated, so no need of additional motor and control system
- Integrated oil pump has high durability and efficient power transmission to optimize energy efficiency.
- Oil accumulator installed to minimize pulsation as well as oil leakage.

Easy maintenance

- Modular design applied for easy maintenance and parts replacement.
- Metal sealing and swivel joint adopted for easy maintenance.

AOS Breather Filter

- Breather filter installed having air oil separator element technology to help filter vapor perfectly.
- Piping of breather filter can be installed outside of unit by condition.



Big capacity suction filter, oil filter

- Suction filter of 99.9% dust removal efficiency has more than 2 times life time.
- Split type silencer adopted to minimize fan noise.
- Split module easily replaced to adjust intake air volume.

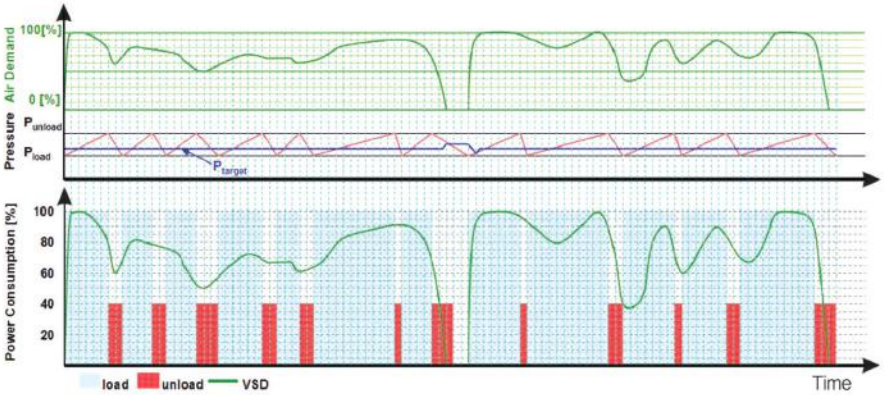
Easy accessible multi micom controller

- Easy operation from a key-pad
- Multilingual (Korean, Chinese, English, Russian, Portuguese) supported to operate from abroad its convenient to use
- Management controller with a pyramid approach is easy to operate for beginners.
- Large LCD Panel for a visual check.
- History up to 160 entries can be monitored to achieve a stable operation, as well as to protect your machine thoroughly.

Inverter Type

VSD Drive Case

- Load factor : 76.7%
- The total power consumption
- Load power : 89.2%
- Quiescent power : 10.8%
- Enter the criteria for applying the same standard VSD 10.8% power savings compared to Setting
- Target Pressure compressor capacity can be reduced to 5% of additional power

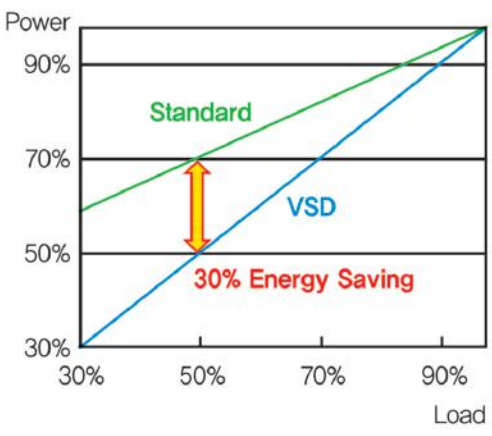


VSD Screw Compressor Applications

- Large changes in a compressed air system requirements
  - ▸When a production line operation system air consumption pattern changes drastically
  - ▸Day / night variation of a production line requirements for air
  - ▸Monthly / seasonal variation in production according to changes in air,
- Equipment production line with expansion plans
- Multiple compressor, which operates a large facility diachronic: Standard Screw (-Base Load) VSD screw (= Top Load)
- Pressure fluctuation system is less precise
- Form of compressed air consumption is constant and static pressure system is required

Energy savings of VSD Screw Compressor

- Reduced power consumed during no-load operation: change in velocity of a free air aligning itself with System requirements for fluctuation respond quickly and accurately
- Required compressed air = unnecessary production of compressed air to prevent energy loss due to Power reduction.
- Target Pressure: Static pressure control available through Kyungwon' sVSDscrew compressors to meet the needs of a System that can be configured so that a minimum pressure of compressor capacity can be reduced up to an additional 5% of power
- (Soft Start) Inverter prevent power loss from an Over Shoot and reduces reduction of a (Motor life).



Specification

AF Series

Various models (standard air cooled, water cooled and inverter type) can be supplied by customer's needs.

Compressor Type	Max. Working pressure		Capacity		Motor Power		Noise	Dimension (LxWxH)	Weight	Airoutlet
	kgf/㎠G	psig	㎥/min	cfm	kW	HP	dB(A)	mm	kg	A(B)
AF75	7.0	100	8.8	311	55	75	76	2300x1570x2090	2600	50(2)
	8.5	120	8.1	286						
	9.5	135	7.9	279						
AF100	7.0	100	12.5	441	75	100	78	2300x1570x2090	2800	50(2)
	8.5	120	11.5	406						
	9.5	135	10.1	357						
AF125	7.0	100	15.5	547	93	125	82	2300x1570x2090	3100	50(2)
	8.5	120	14.1	498						
	9.5	135	13.4	473						
AF150	7.0	100	19.5	689	110	150	83	2700x1650x2350	3250	65(2 1/2)
	8.5	120	16.6	586						
	9.5	135	16.6	586						
AF200	7.0	100	25.9	915	150	200	83	2700x1650x2350	3350	80(3)
	8.5	120	23.4	826						
	9.5	135	23.4	826						
AF250	7.0	100	33.1	1169	190	250	84	3250x2040x2400	4250	80(3)
	8.5	120	29.8	1052						
	9.5	135	27.2	961						
AF300	7.0	100	39.3	1388	220	300	84	3250x2040x2400	4400	100(4)
	8.5	120	35.4	1250						
	9.5	135	33	1165						
AF350	7.0	100	44.4	1568	260	350	87	3250x2040x2400	4650	100(4)
	8.5	120	42	1483						
	9.5	135	39.2	1384						
AF400	7.0	100	49.7	1755	300	400	89	3320x2150x2400	4800	100(4)
	8.5	120	44.8	1582						
	9.5	135	44.3	1564						

Model name index

AF100	W	E	E
Model	Type	Electricity	Pressure

Electricity				
	C	220V / 3PH / 60HZ	L	220V / 3PH / 50HZ
	E	380V / 3PH / 60HZ	M	380V / 3PH / 50HZ
	F	440V / 3PH / 60HZ	P	415V / 3PH / 50HZ
			R	440V / 3PH / 50HZ
Pressure	B	7.0 kgf / ㎠G		
	E	8.5 kgf / ㎠G		
	G	9.5 kgf / ㎠G		

1. Type – no marking : Air cooled, W : Water cooled, V : Inverter Type
2. Other specifications, please contact us.

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