

Rule#1 The Customer is always right.
Rule#2 If the Customer is ever wrong, re-read Rule #1



Kyungwon Machinery Co., Ltd.

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KMS-C23-0210L



SCREW

Oil Injected Air Compressor

COAIRE
COMPRESSOR

COAIRE is a brand of Kyungwon compressors.

HISTORY

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

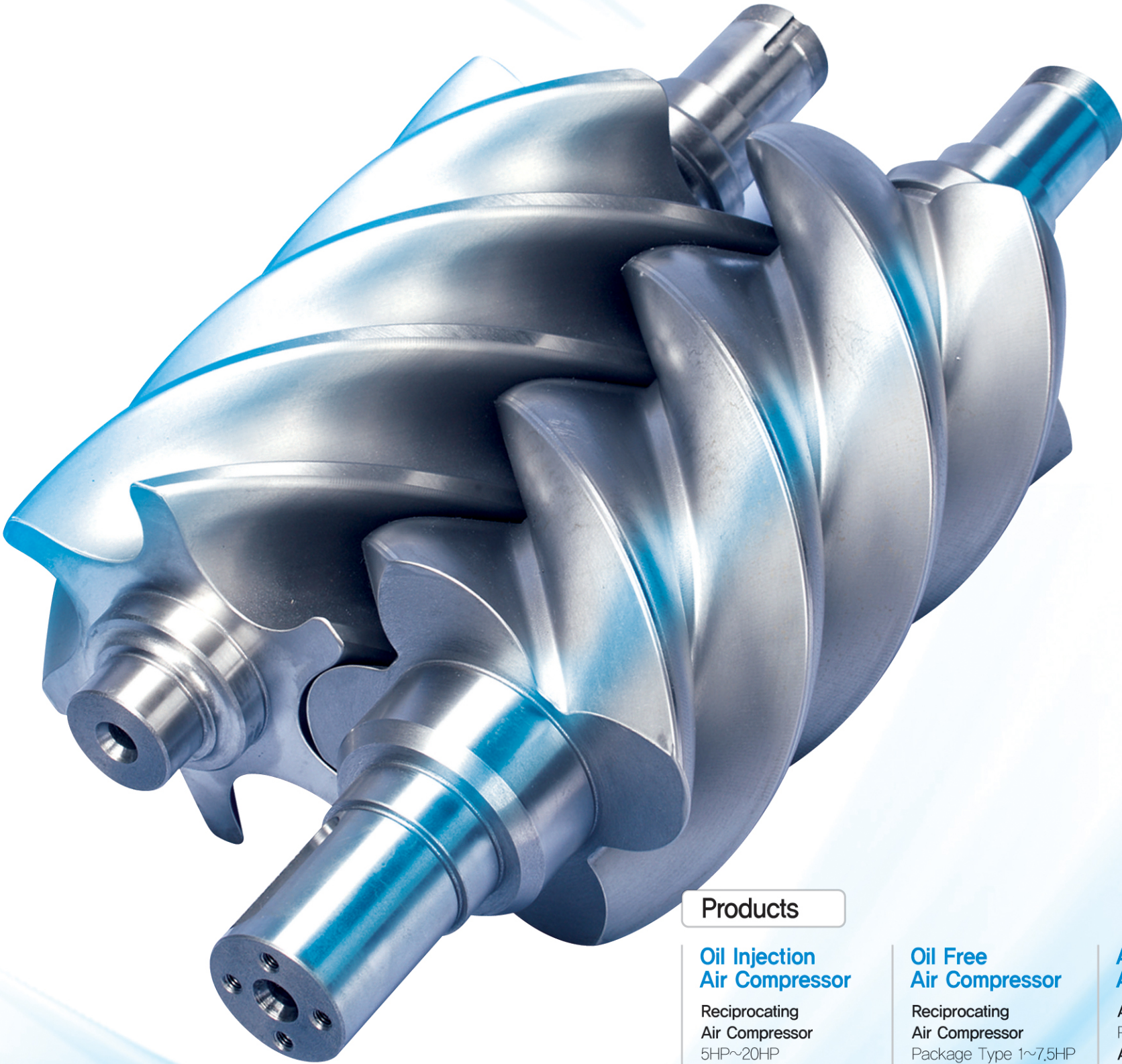
Since the company was established in 1968, it has developed reciprocating type compressors for the first time in Korea. In 1986 the company was also the first in Korea to develop and supply screw compressors after establishing technological ties with Sweden-based SRM, and it developed oil free scroll 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 and developed 5-generation “α” PROFILE AIREND, which makes the company justifiably equal to world-renowned makers.

The company has about 40 official agencies across the country and numerous production sites 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.

As a total air solution producer Kyungwon manufactures such products as oil-free compressors, oil injection reciprocating 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 compressor industry throughout the world.



Products

Oil Injection Air Compressor

- Reciprocating Air Compressor 5HP~20HP
- Screw Air Compressor Belt Type 7.5~20HP
- Direct Type 30~400HP
- All In One 7.5~20HP
- Inverter Type 30~400HP

Oil Free Air Compressor

- Reciprocating Air Compressor Package Type 1~7.5HP
- Bare Type 1~15HP
- Scroll Air Compressor Dental 2~5HP
- All In One 3~15HP
- Standard 3~50HP
- Screw Air Compressor 50~400HP

Air Compressor Accessories

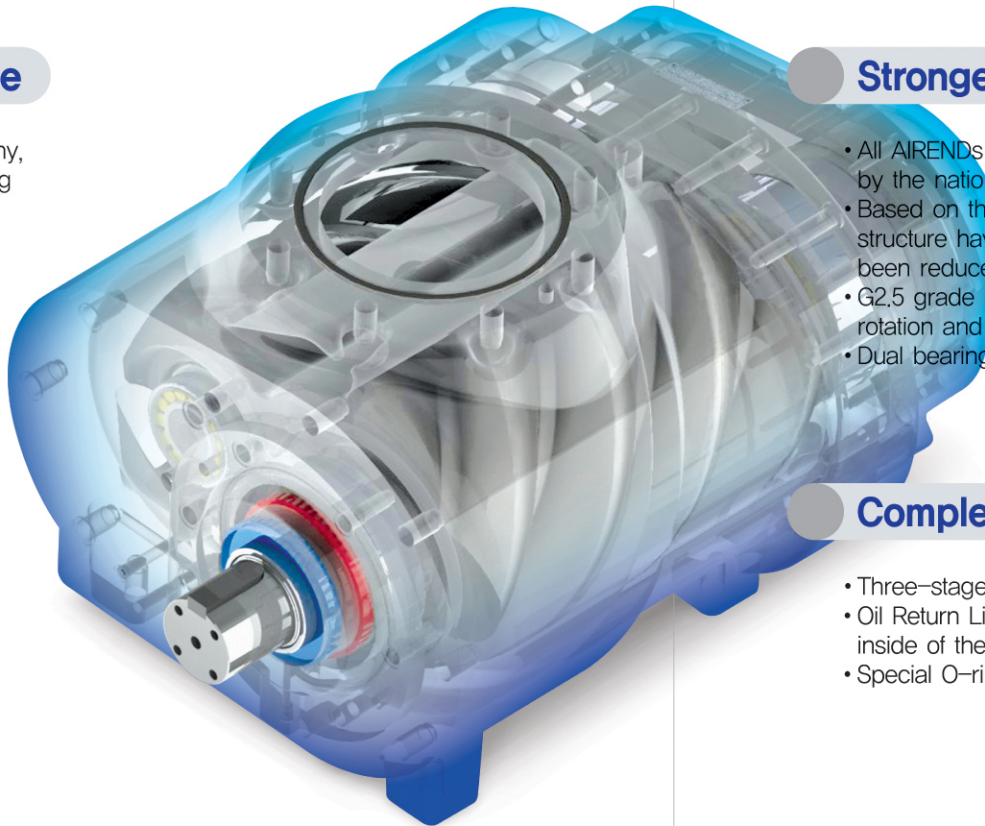
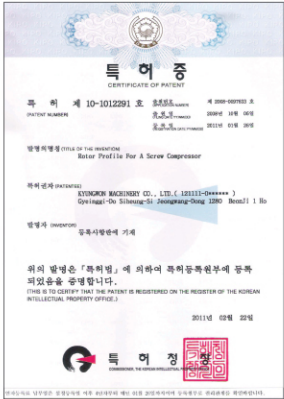
- Air Dryer Refrigerating / Desiccant
- After Cooler
- Air Receiver Tank
- Filter
- Drain Trap
- Oil-water Separator



New Generation **AIREND**
developed by Kyungwon

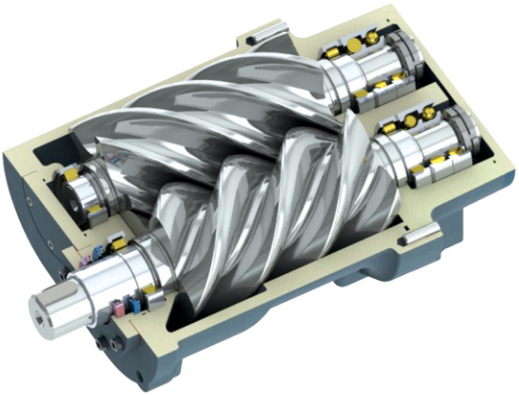
Over 40 years of Accumulated Experience

After finishing technological cooperation with Swedish SRM company, Kyungwon has been focusing on "know-how", constantly improving its technology and developed new " α " profile of screw airend. All AIRENDs of Kyungwon are developed by applying 3D Design Program and tested on the Simulation Program.



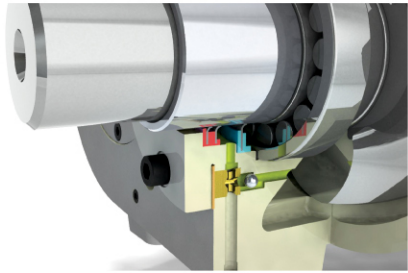
Stronger Durability

- All AIRENDs of Kyungwon are cast from the material that is produced by the nation's best technology, equipment and tooling.
- Based on the stress and structural analysis, material thickness and structure have been improved and vibration and noise level have been reduced.
- G2.5 grade balance control guarantees low vibration even at high speed rotation and extended life time of bearings.
- Dual bearing structure gives sufficient rigidity over an axial load.



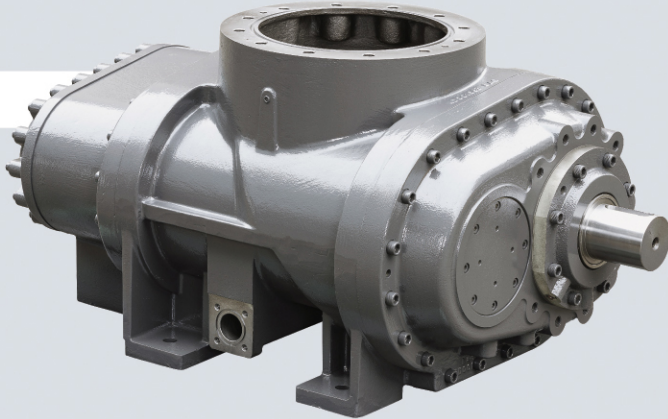
Complete Oil Leak Prevention

- Three-stage Sealing System at the driving shaft prevents oil leakage.
- Oil Return Line between the first and the second seals returns oil to the inside of the AIREND.
- Special O-ring on the seal completely prevents oil leakage.

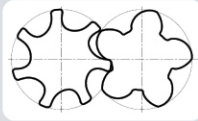


Fifth Generation " α " Profile

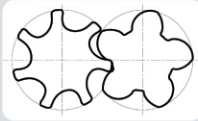
- Reduced the size of Blow Hole and eliminated friction between rotors, thus reducing vibration and noise levels and minimizing power losses.
- Improved precision of the Rotor Manufacturing by adjusting pressure angle of the tooling.
- Narrowed Sealing Line, securing leakage resistance and space efficiency at the same time.
- Thermal efficiency of " α " profile is 9% higher than of a conventional profile airend.



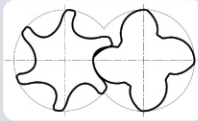
Profile Progress



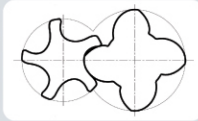
SRM A Profile, 1977



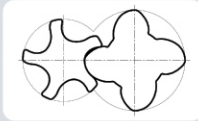
SRM C Profile, 1979



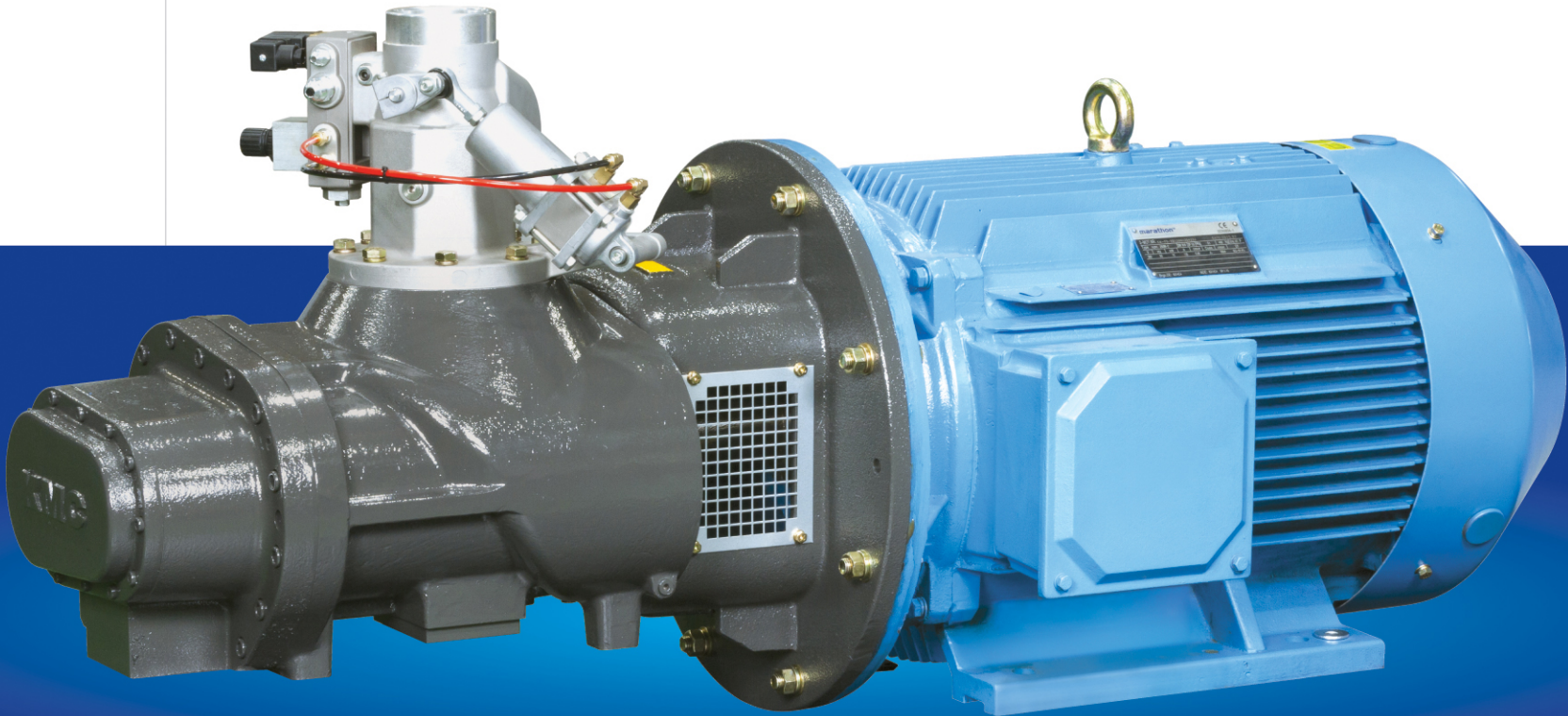
SRM D Profile, 1982



SRM G Profile, 1998



KMC " α " Profile, 2008



'Direct Driven System'

Large AIREND and direct driven structure with high-efficient motor

- All types of Kyungwon's AIRENDS are connected to the motor by direct driven system, (30HP~200HP)
- Direct Driven System increases transfer efficiency by removing transmission loss caused by a belt slip.
- Direct Driven System does not require belt replacement and eliminates noise caused by multiple gears.
- Kyungwon applies only high-efficient certified motors.
- Energy efficiency is achieved by applying high-efficient motor which has passed Omni-Function Test

'Quiet enough to have comfortable conversation'

- The next generation AIREND developed by Kyungwon's technology ensures a silent operation at a high speed.
 - ▶ "α" profile applied.
 - ▶ Casing designed in accordance with the structural analysis.
 - ▶ Improved sliding friction between rotors by high-precision machining process.
- Through simulation of cooling air flow Sirocco Fan and Si-lencer were designed to minimize air friction operation noise.
- Noise caused by transmission of vibration is eliminated by using Stainless Flexible Tube for reel and pipe joints.
- Acoustic noise has been minimized by applying high density sound adsorbing material.
- Venting System minimizes power consumption and noise at no load.



Vibration-less pipe joints



Next generation AIREND



Complete vibration preventing structure



Complete vibration preventing structure

QUIET OPERATION

'Lowest Noise Level'

Left Side	
AS31	65dB(A)
AS51	68dB(A)
AS101	74dB(A)

Front Side	
AS31	63dB(A)
AS51	65dB(A)
AS101	72dB(A)



Rear Side	
AS31	66dB(A)
AS51	67dB(A)
AS101	75dB(A)

Right Side	
AS31	64dB(A)
AS51	66dB(A)
AS101	75dB(A)

※ The values measured in accordance with ISO 2151 (2009-1).

USER FRIENDLY DESIGN

Convenient Use

- Easy operation using key-pad
- Multilingual (English, Korean, Chinese, Russian, Portuguese)
- Pyramid structure of a menu designed for convenient use
- Large LCD panel for a visual monitoring
- Up to 60 journal entries are saved in order to secure stable operation and protect your machine thoroughly



Standard Controller

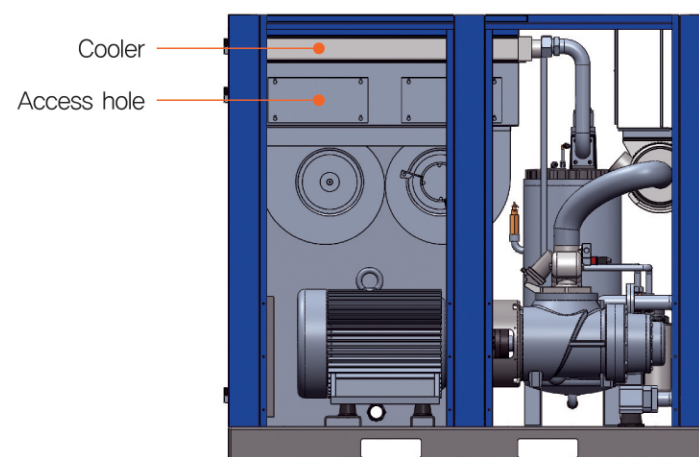
Easy Maintenance

- Easily detachable front door allows replacement of all parts conveniently and minimizes maintenance time.
- Flange connection pipes using high quality O-ring structure reduces maintenance costs.
- 25A oil drain port and 40A oilinput port save time for oil change.
- In order to check maintenance an analogue pressure gauge is attached to the separator tank.



Easy Cooler Cleaning

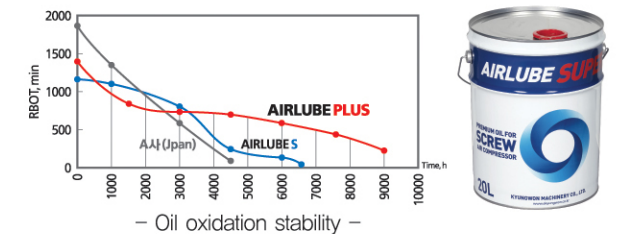
- The cooler can be easily cleaned using an air gun through the inspection hole.



HIGH RELIABILITY

Premium Oil – AIRLUBE SUPER

- AIRLUBE SUPER is Super Premium Oil was developed to be the best performance for screw air compressors in cooperation with the world's leading lubricating oil companies.
- It is developed to be resistant to contamination by cutting oil or other oils
- Excellent thermal stability and high oxidation stability
- It boasts a long lifespan with little sludge in operation.



Use of Best Components

- Components such as Suction Filter, Oil Filter and Oil Separator are made by the world's leading manufacturers.
- Suction Valve, Bypass Valve, MPV, etc. have been tested for performance and durability more than 500,000 times and have guaranteed performance.
- Kyungwon's engineers in collaboration with the world's leading oil companies R&DE teams have developed excellent and durable oil lubrication products.
- Controllers have passed the EMI and EMC testing and have CE Certificate.



Five-step Quality Assurance System

- **3-D Simulation Design** : All Kyungwon's products have been designed based on the technical analysis from the development stage till final testing.
- **Parts ALT Test (Accelerated Life Test)** : All components used in Kyungwon's compressors have been tested for accelerated life test and have guaranteed durability.
- **Performance Test** : Performance tests were conducted based on the ISO and KS Quality Standards.
- **Simulated Test** : Durability tests were conducted in the laboratory where testing conditions were setup for a more severe environment.
- **Field Test** : After completing variety of tests, final approval test was run at the factory sites with the real conditions.



VARIABLE SPEED DRIVE AS V SERIES



‘15% ~ 43% Energy Saving!’

Features & Benefits

- Application of efficient inverters that have passed CE and UL Certification and have various EMC solutions.
- Energy savings of more than 30% can be achieved by Target Pressure settings.
- Compressor speed control according to the loading factor.
- Discharge pressure set free.

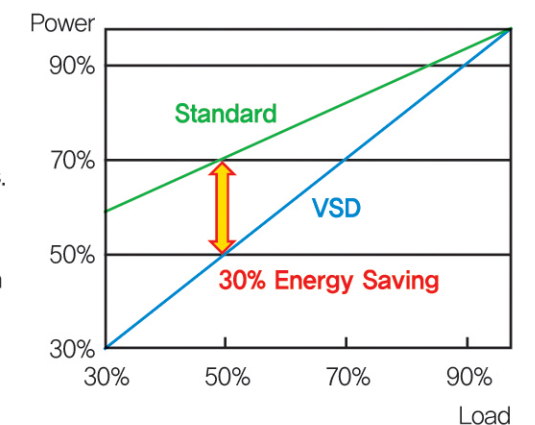
- ❶ Inverter & Control Box ❷ Main Motor
- ❸ Separator Tank ❹ Airend
- ❺ Suction Filter Ass'y ❻ Oil & After Cooler
- ❼ Inverter Controller



※ Possible to operate even when the inverter is out of order. There is an option to set for Back up System

Energy Savings of VSD Screw Compressor

- Reduced power consumption during no-load operation: quick change in rotation speed allows quick and accurate alignment with the system air requirements fluctuations.
- Required compressed air = Produced compressed air
- No unnecessary production of compressed air and no energy loss.
- Energy savings due to Target Pressure settings: static pressure control available in Kyungwon's VSD Screw compressors, allows
- Pressure configuration based on the system requirements and can save 5% of compressor capacity additionally.
- Inverter's Soft Start function prevent power loss from an over shooting and extends motor life time.



VSD Screw Compressor Application

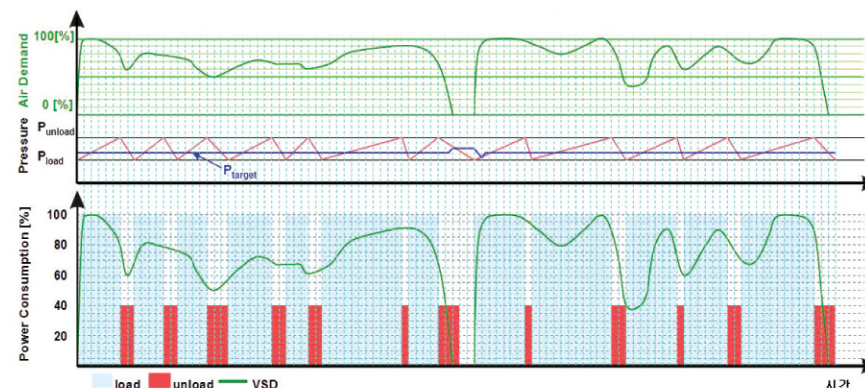
- Systems with large fluctuations in a compressed air requirements
 1. When a production line's system air consumption pattern changes drastically
 2. When day/night shifts require variable air consumption
 3. When monthly/seasonal variation in production requires different air consumption
- Production line with expansion plans
- Equipment which operates multiple compressors simultaneously: Standard screw (Base Load) + VSD Screw (Top load)
- Systems with stable static pressure requirements



VSD Reference

Power Consumption Advantage

- Power Consumption Advantage
Load factor: 76.7%
Total power consumption:
 - Load power: 89.2%
 - No load power: 10.8%
- When applying VSD there will be 10.8% power savings compared to the regular run at the same load factor.
- By setting Target Pressure it is possible to save 5% of compressor's capacity



Inverter Controller

- Motor speed is adjusted according to the compressed air requirements
- Converter and Inverter status will be displayed on the screen
- Noise level approved and tested according to EMC



Best processing equipment and perfect performance verification

Our latest equipment, including assembly lines for screw rotary processing machines and compressors that require high precision, the 3D measuring device, and a dedicated testing laboratory for compressors, has allowed us to significantly increase the reliability of our products.

PRODUCTION



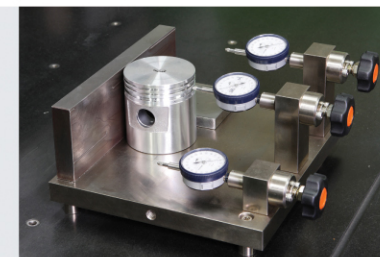
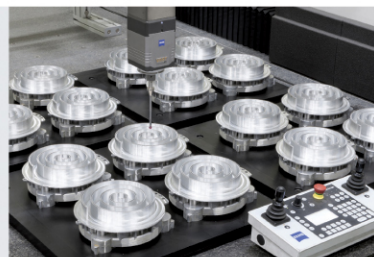
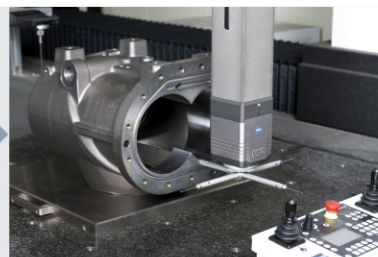
All Airend and Casings of Kyungwon are manufactured and quality controlled in accordance with ISO quality control procedures

For perfect performance verification, Dynamo Test is conducted on about 20 items such as temperature, pressure, air volume, and power.

INSPECTION

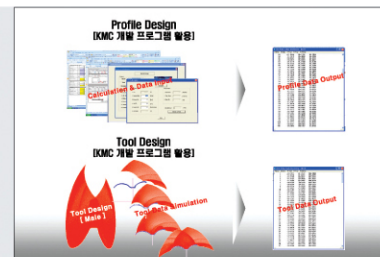
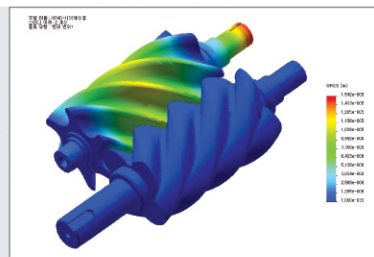
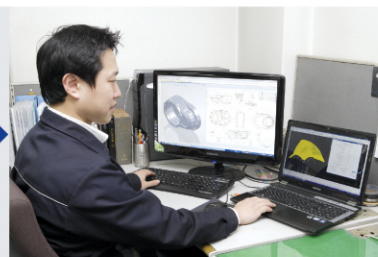


MEASUREMENT



All parts are measured and managed with 3-D Measuring Machine for perfect performance.

R&D CENTER



Milestones

- 2021 - Factory production capacity increased
- 2018 - "CE" Achieved - Of screw class "0" achieved - Rams achieved - ISO 9001:2015 achieved
- 2016 - Registration of safety products for pneumatic compressors for railway vehicles
- 2015 - Awarded for industry minister of representative director
- 2014 - ISO 13485 achieved
- 2013 - High pressure air compressor has been developed for the first time in Korea (Vessel purposes)
- 2012 - Oil-Free scroll air compressor ISO 8573-1 class "0" achieved
- 2011 - Screw profile "α"-profile patent applications - Oil-Free scroll air compressor CE-mark achieved
- 2010 - Screw high pressure compressors developed (20 bar / 2nd stages)
- 2008 - [NEP] achieved for scroll compressor
- 2007 - Oil injection screw air compressor new model - Oil-Free screw air compressor new model
- 2006 - Technology innovative medium business [INNO-BIZ] achieved
- 2005 - Acquired certificate of new technology in Korea (NT)
- 2004 - Oil-Free scroll air compressor (3rd in the world)
- 2001 - Oil injection screw air compressor developed
- 1970 - "Q mark" achieved - R&D center has been established
- ~96 - IR52 Jang young sil award (scroll gas compressor, 2-stage screw gas compressor)
- Screw compressor UL (U.S.), CSA (Canada) achieved - 100 million dollar export award
- Technical partnership with SRM, Sweden - Reciprocating compressor development

VARIOUS MODEL

Various models of Kyungwon products
will satisfy all your requirements.

AS Series



- Capacity : 30~100HP
- Direct Coupled Type
- Standard Full MICOM Controller
- Highly Efficient Motor
- Sirocco Fan
- High-pressure, High-efficient Cooler (Working Press. 16Kgf/cm2G)
- Float Type Level Gauge



- Capacity : 150~250HP
- Direct Coupled Type
- Standard Full MICOM Controller
- Highly Efficient Motor
- High-pressure, High-efficient Cooler (Working Press. 16Kgf/cm2G)
- Float Type Level Gauge
- Option
 - Water Cooling Type
 - Reactor Starter



- Capacity : 300~500HP
- Direct Coupled Type
- Standard Full MICOM Controller
- Highly Efficient Motor
- Dual Tower Separator Tank
- World-renowned Airend
- Option
 - Water Cooling Type
 - Reactor Starter
 - High Voltage
 - Soft Starter

AS V Series (Inverter Type)

- Capacity : 30~200 HP
- CE Certified Inverter
- Direct Coupled Type
- Highly Efficient Motor
- Exclusive Controller for Inverter
- High-pressure, High-efficient Cooler (Working Press. 16Kgf/cm2G)
- Option : 10" Touch Screen Water Cooling Type



AS P Series

- Capacity : 7.5~20HP
- Stainless flexible hose
- High durability combination cooler is designed to withstand up to 15 bar
- High efficient and low noise cooling fan
- Standard Full MICOM Controller



AS A Series (All In One Type)

- Capacity : 7~15HP
- Compact and simplified Structure
- Standard Full MICOM Controller
- Air receiver tank, dryer, filters are built-in



SPECIFICATION

AS Series (Direct Type)

Compressor Type	Max. Working pressure		Capacity m³/min	Motor Power kW	Noise	Dimension (LxWxH)	Weight	Airoutlet
	bar	psig						
AS31	7.0	100	3.46	22	63	1400x830x1350	700	25(1)
	8.5	120	3.41					
	9.5	135	3.1					
AS41	7.0	100	4.8	30	65	1400x830x1350	785	25(1)
	8.5	120	4.5					
	9.5	135	4.2					
AS51	7.0	100	5.9	37	65	1660x1030x1607	1030	40(1½)
	8.5	120	5.8					
	9.5	135	4.4					
AS76	7.0	100	10.4	55	72	2000x1210x1857	1630	50(2)
	8.5	120	8.4					
	9.5	135	8.0					
AS102	7.0	100	12.5	75	75	2000x1210x1857	1650	50(2)
	8.5	120	12.5					
	9.5	135	10.2					
AS120	7.0	100	13.5	75	75	2000x1210x1857	2150	50(2)
	8.5	120	13.4					
	9.5	135	12.1					
AS151	7.0	100	20.7	132	78	2550x1470x2156	2785	65(2½)
	8.5	120	20.3					
	9.5	135	20.1					
AS201	7.0	100	26.5	160	79	2700x1640x2156	2950	80(3)
	8.5	120	24.0					
	9.5	135	22.7					
AS230	7.0	100	24.9	160	79	2900x1640x2156	3870	80(3)
	8.5	120	24.9					
	9.5	135	24.8					
AS251	7.0	100	31.0	200	81	2700x1640x2156	3250	80(3)
	8.5	120	31.0					
	9.5	135	30.9					
AS301	7.0	100	38.9	225	84	4080x1900x2356	6200	100(4)
	8.5	120	35.9					
	9.5	135	32.6					
AS351	7.0	100	42.8	265	87	4080x1900x2356	6350	100(4)
	8.5	120	41.9					
	9.5	135	41.9					
AS401	7.0	100	48.7	300	89	4080x1900x2356	6430	100(4)
	8.5	120	44.2					
	9.5	135	44.1					

No markings: Standard Type W : Water CooledType

* Inquires on specifications for power and pressure not listed above should be directed to Kyungwon or authorized dealer

AS V Series (Inverter Type)

Compressor Type	Max. Working pressure		Capacity m³/min	Motor Power kW	Noise	Dimension (LxWxH)	Weight	Airoutlet
	bar	psig						
AS31V	7.0	100	1.5~3.8	22	63	1500x1030x1350	817	25(1)
	8.5	120	1.4~3.5					
	9.5	135	1.3~3.3					
AS51V	7.0	100	2.3~5.8	37	65	1660x1130x1607	1210	40(1½)
	8.5	120	2.3~5.7					
	9.5	135	2.2~5.6					
AS76V	7.0	100	4.2~10.4	55	72	2000x1210x1857	1861	50(2)
	8.5	120	3.6~8.9					
	9.5	135	3.4~8.5					
AS101V	7.0	100	5.0~12.5	75	75	2000x1210x1857	1910	50(2)
	8.5	120	5.0~12.4					
	9.5	135	4.9~12.3					
AS120V	7.0	100	5.4~13.5	75	75	2000x1210x1857	2150	50(2)
	8.5	120	5.4~13.5					
	9.5	135	4.8~12.1					
AS151V	7.0	100	8.3~20.7	132	78	3090x1470x2156	2650	65(1 1/2)
	8.5	120	8.1~20.3					
	9.5	135	8.0~20.1					
AS201V	7.0	100	9.8~24.5	160	79	3200x1640x2156	3200	80(3)
	8.5	120	9.6~24.0					
	9.0	135	9.4~23.5					
AS230V	7.0	100	9.9~24.9	160	79	2900x1640x2156	3870	80(3)
	8.5	120	9.9~24.9					
	9.5	135	9.9~24.8					

AS P Series (Compact Type)

Compressor Type	Max. Working pressure		Capacity m³/min	Motor Power	Noise	Dimension (LxWxH)	Weight	Airoutlet
	bar	psig						
AS7P	7.0	100	0.8	5.5	56	1030x640x1275	300	20(3/4)
	9.0	128	0.6					
AS10P	7.0	100	1.2	7.5	58	1030x640x1275	310	20(3/4)
	9.0	128	1.0					
AS15P	7.0	100	1.9	11	62	1100x700x1275	380	20(3/4)
	9.0	128	1.6					
AS20P	7.0	100	2.5	15	68	1100x700x1275	380	25(1)
	9.0	128	2.2					

AS A Series (All in one Type)

Compressor Type	Max. Working pressure		Capacity m³/min	Motor Power	Noise	Dimension (LxWxH)	Weight	Airoutlet
	bar	psig						
AS7A	7.0	100	0.8	5.5	57	1841x730x1896	600	20(3/4)
	9.0	128	0.6					
AS10A	7.0	100	1.2	7.5	59	1841x730x1896	615	20(3/4)
	9.0	128	1.0					
AS15A	7.0	100	1.9	11	63	1841x730x1896	655	20(3/4)
	9.0	128	1.6					

TANDEM COMPRESSOR

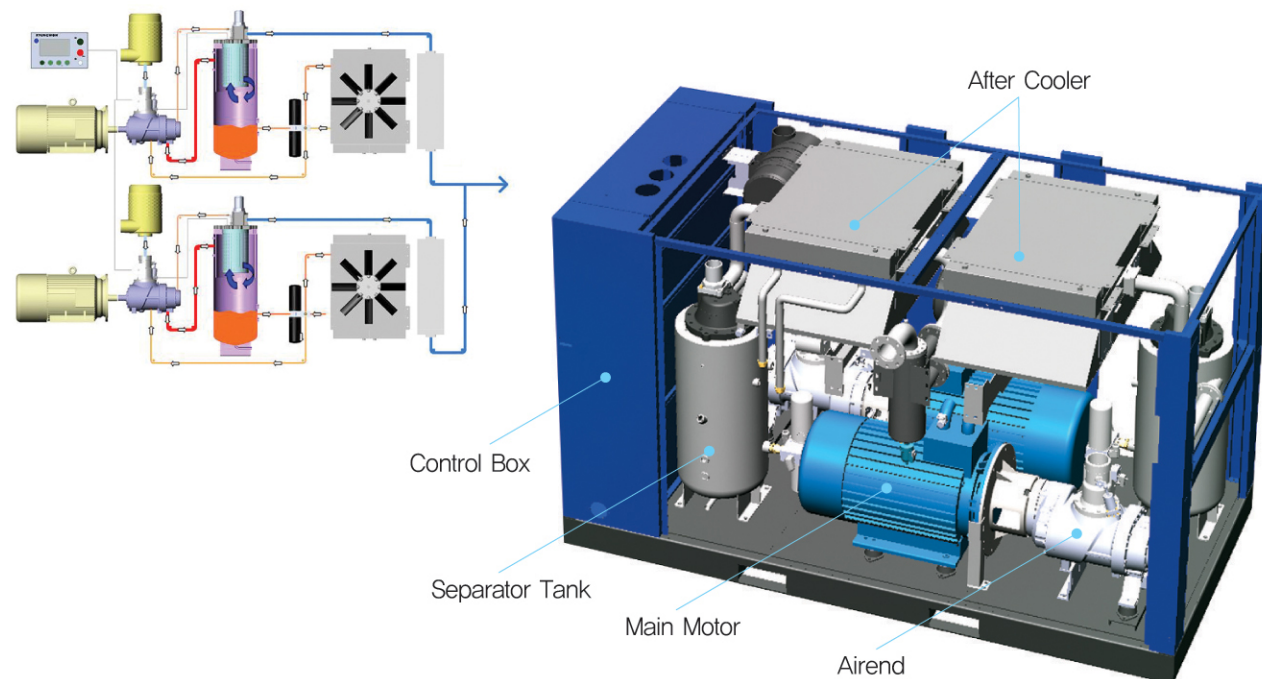
200HP~500HP

Features & Benefits

- Various operation modes according to the air requirements
 - Combined operation of A/B compressors
 - Simultaneous operation of A/B compressors
 - Stand-alone operation of A or B compressor
- Dual Compressor System
 - Individual independent 2 compressor systems
 - Load-balancing feature of 5-levels (0%, 20%, 40%, 70%, 100%) saves energy
 - Sequential loading reduces power consumption
- Oil cooler and After cooler can be easily detached during maintenance
- Compressor is equipped with all necessary and convenient features that are applicable to different operation modes and environmental conditions

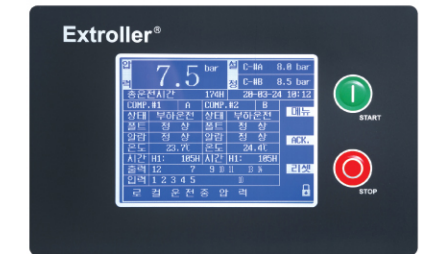


■ Incoming air ■ Air / Oil mixture
■ Outgoing air ■ Oil



User Friendly Design

- 6-inch Touch Screen Controller with the drop-down menu
- Various operation modes can be selected (combined operation, simultaneous operation, stand-alone operation)
- Provides different information (operation status and parts replacement cycle)
- Daily, weekly schedule settings
- Multilanguage support (Korean, Chinese, English, Russian, Portuguese)



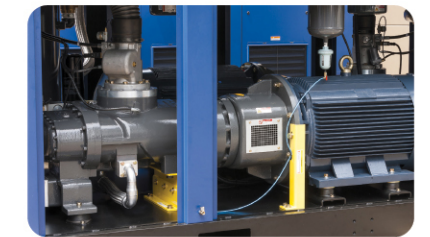
Touch Screen Controller

High Reliability

- High efficient sealing is applied on "∞" profile AIREND
- Bearing double structure guarantees bearing life of 100,000 hour
- Double Lip Seal or Triple Shaft Sealing System completely prevent leakage
- Reduced oil carry over by applying Dual Separation System

Optimul Cooling part

- Suction type Oil cooler is located on the side which is easy to check and clean during maintenance
- High efficient Multi-wing Cooling Fan is applied
- H-class insulation Fan Motor is applied



Specification

Compressor Type	Max. Working pressure		Capacity m³/min	Motor Power	Noise	Dimension (LxWxH)	Weight	Airoutlet
	bar	psig	50HZ	kW	dB(A)	mm	kg	A(B)
AS201K	7	100	25	75x2	80	3090x1400x2000	3322	80(3)
	8,5	120	25				3250	
	9,5	135	20,4					
AS302K	7	100	41,4	132x2	85	3890x1850x2250	6372	100(4)
	8,5	120	40,6					
	9,5	135	40,2					
AS403K	7	100	53,2	160x2	87	3890x1850x2250	6962	100(4)
	8,5	120	48,0					
	9,5	135	45,4					
AS501K	7	100	63,0	200x2	93	4440x2050x2250	7350	125(5)
	8,5	120	61,7					
	9,5	135	58,6					

1. Option : Water Cooled Type
2. Inquires on specifications for power and pressure not listed above should be directed to Kyungwon or authorized dealer