

COAIRE



OIL-FREE SCREW AIR COMPRESSORS PRODUCT CATALOG





The history of compressors in Korea was established and advanced by Coaire.

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, Coaire launched the upgraded CAS series and developed the 5th-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 25 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, Coaire 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 will continue to be written by Coaire, which is determined to do its best to be a leader in compressor industry throughout the world.

COAIRE



ISO13485/2003



- 2014 ● Acquired ISO 13485 (Quality Management Certificate for the design and manufacture of medical devices)
- 2013 ● Awarded a Certificate of Merit as an Exporting company
- 2012 ● Acquired ISO 8573-1 CLASS 0 for the Scroll Compressor
- 2011 ● Acquired CE-MARK for the Scroll Compressor
- 2006 ● Selected as a Technology Innovation SME (INNO-BIZ Certificate)
- 2005 ● Acquired NT-Mark (Korea Innovation Certificate)
- 2004 ● Local Manufacturing of Oil Free Scroll Compressor
- 2001 ● Acquired Q-Mark
Establishment of an affiliated R&D Center
- 2000 ● Changed Manufacturing Site and Headquarters to a new location
- 1996 ● Acquired ASME N STAMP (Heat Exchangers)
- 1995 ● Acquired ISO 9001
- 1994 ● Acquired American SCREW COMPRESSOR UL, Canadian CSA
- 1986 ● Technical partnership with SRM, Sweden, Launch of Screw Air Compressor
- 1970 ● Launch of Reciprocating Air Compressor
- 1968 ● Establishment of Kyungwon Machinery

OIL-FREE SCREW AIR COMPRESSOR

Coaire's Oil Free Screw Compressor produces ultra-pure compressed air

Coaire's Oil Free Screw compressor adopted GHH Oil Free Airend (Germany) to achieve highest performance. Coaire's Oil Free Screw System guarantees 100% oil free compressed air, high performance, durability, easy maintenance, energy saving and reliable safety.

Compressed Air of Oil Injection 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/m³ 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.
- ※ 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.

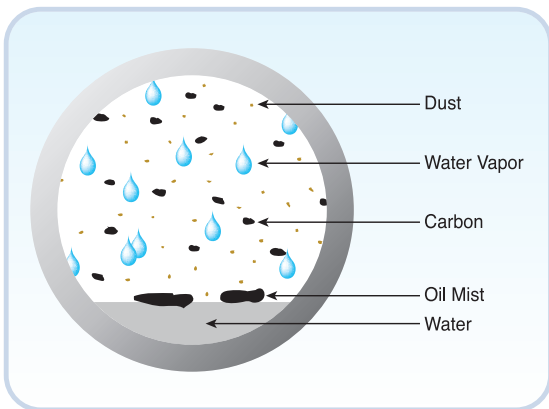
Compressed Air of Coaire's Oil Free Screw Air Compressor

- ⊕ Coaire's Oil Free screw air compressor does not use oil for air compressing, supplies air which does not include any oil particles.
- ⊕ 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 for Compressed Air by Application Industry

Application industry	ISO Class Standard		
	particles	water	oil
Pharmaceuticals, Printing, Publishing, Pressing, Semiconductors	1	1	1
Food & Beverage, Dental	2	3	1
Automatization and Robotronics	3	3	5
Regular use, Plant	4	4	5

● Cross section of A/C pipe



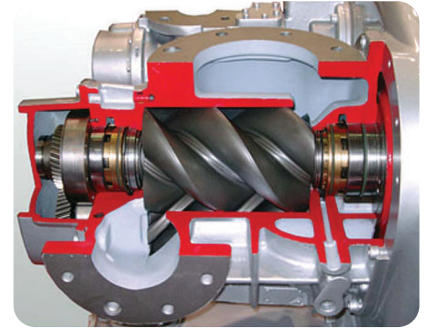
● Quality Standard of Compressed Air (ISO8573-1 CLASS STANDARD)

Quality Classes	SOLIDS Maximum particle size (microns)	MOISTURE Dew Point		OIL Liquid and Gas	
		°C	°F	mg/m ³	ppm _{w/w}
0	as specified	as specified		as specified	
1	0.1	-70	-94	0.01	0.008
2	1	-40	-40	0.1	0.08
3	5	-20	-4	1	0.8
4	15	3	38	5	4
5	40	7	45	-	-
6	-	10	50	-	-

The reason why Coaire's Oil Free Screw Compressor is the best in its class

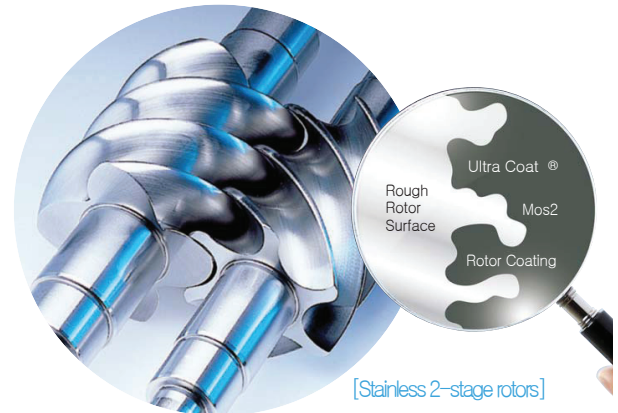
Oil Free Airend with the World's Highest Performance

- 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
- High precision ball gear and timing gear are used for fast-speed rotation and less noise
- Internal oil jacket for cooling efficiency
- Various models and gear ratio are available to satisfy customers' needs.



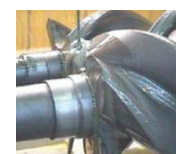
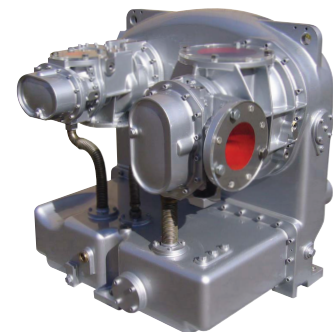
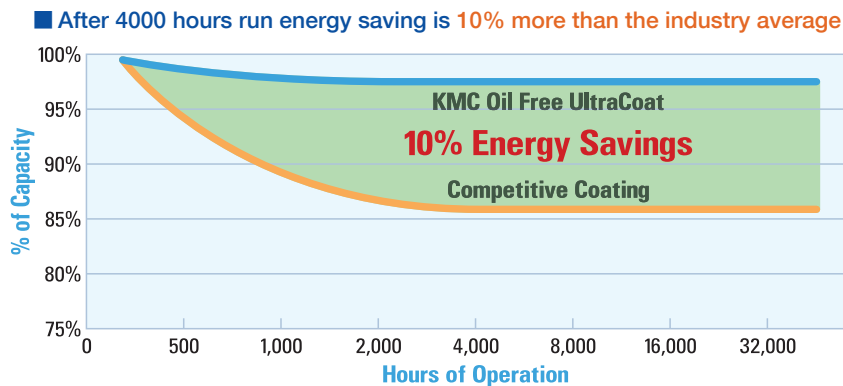
Special Ultra Coating

- Coating material: Molybdenum disulfide (MoS2) + high temperature organic resin + Teflon (clean content) + etc.
- At first test run direct contact space between rotors is being adjusted by itself
- High performance at 572°F



GHH RAND Airend

- Maximum air capacity
- Developed for the first time in the world
- Stainless rotor
- The largest production volume in the world
- Ultra coating

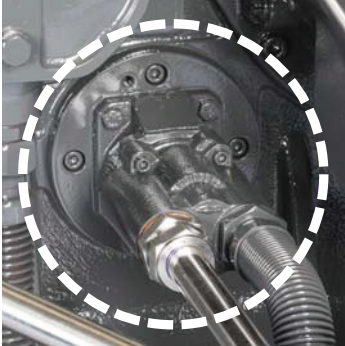


Coaire's Stainless Rotor



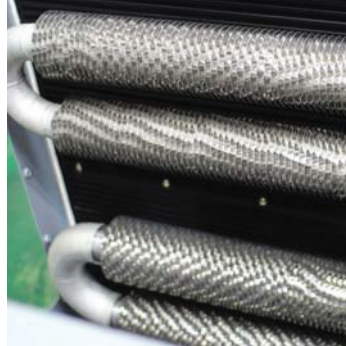
Competitor's Carbon Steel Rotor

Integrated Oil Pump Airend



- Application of gear pump extends the running time

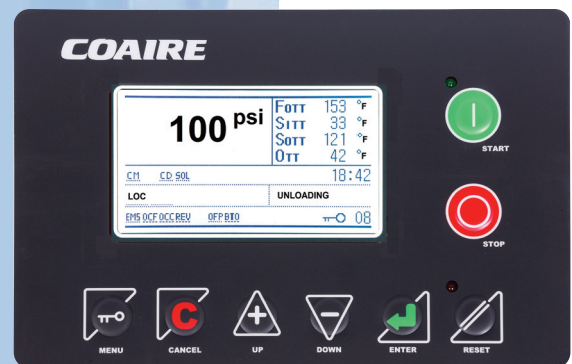
Five High-efficient Coolers



- Inter air cooler
- After air cooler
- Free-intercooler (Stainless Steel)
- Free-after cooler (Stainless Steel)
- Oil cooler



Access easy control system MICOM



- Multilingual Language support (Korean, English, Chinese, Russian, Spanish and Portuguese)
- Concise Menu Function Keys
- Save up to 160 journal entries and operation commands

High quality components, for high quality performance

Three-Stage Condensate Water Removal System



- 1-step, 2-step Aluminum Cyclone Separator
- 2 Electrical drains, one float-type drain

High Functional Breather Filter



- AOS Filter Type Element
- Possible to change to Ejector Type

Stainless Pipes



- Applied on Air/Oil Lines
- Delivers clean air

Perfect Control, Surveillance and Safety

AIR LINE

- 1st stage suction pressure
- 1st stage discharge temperature
- 1st stage discharge pressure
- 1st stage pressure safety valve
- 2nd stage suction temperature
- 2nd stage discharge temperature
- 2nd stage discharge pressure
- 2nd stage pressure safety valve

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 stage electric auto drain
- 2nd stage electric auto drain
- 2nd stage float-type auto drain

ELECTRIC PARTS

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

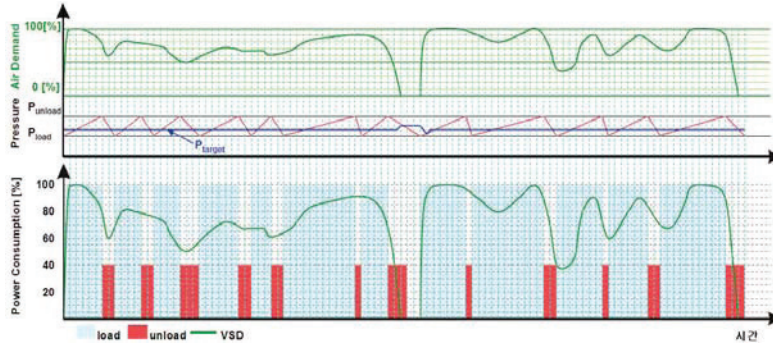


Inverter Type

VSD Drive Case

Application 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



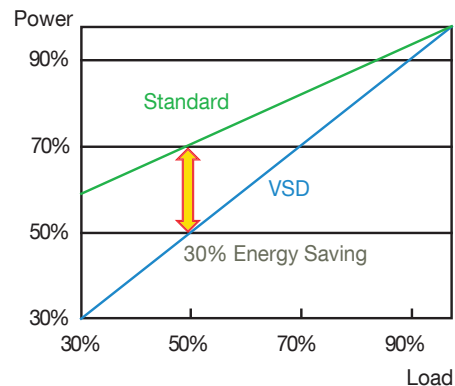
VSD Screw Compressor Applications

- 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 Coaire's VSD screw 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).



Application Industries



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



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



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



- 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,
- Oxygen generating device



- Agricultural
- Preculture
- Cleansing
- Manufacturing

Installation Cases



Food Processing Company



Semiconductors Supplier Company



Pharmaceuticals Company



OIL-FREE SCREW AIR COMPRESSOR

CAF SERIES
(Standard
Air-Cooled)

Specifications CAF SERIES-STANDARD AIR COOLED

Model	Max. Working Pressure	Free Air Delivery	Motor Power	Sound Level	Dimension (L x W x H)	Weight	Discharge Air Outlet
	PSIG	CFM	HP	dB (A)	inch	LBS	inch
CAF075S	100	302	75	76	90.6 x 61.8 x 82.3	5732	2
	120	300					
	135	274					
CAF100S	100	441	100	78	90.6 x 61.8 x 82.3	6173	2
	120	406					
	135	403					
CAF125S	100	530	125	82	106.3 x 65.4 x 92.5	7055	3
	120	528					
	135	455					
CAF150S	100	696	150	83	106.3 x 65.4 x 92.5	7165	3
	120	593					
	135	592					
CAF175S	100	782	175	83	106.3 x 65.4 x 92.5	7275	3
	120	694					
	135	693					
CAF220S	100	923	216	83	106.3 x 65.4 x 92.5	7385	3
	120	834					
	135	833					
CAF250S	100	1187	250	84	130.7 x 84.6 x 94.5	9370	4
	120	1070					
	135	971					
CAF300S	100	1409	300	84	130.7 x 84.6 x 94.5	9700	4
	120	1271					
	135	1183					
CAF350S	100	1592	350	85	130.7 x 84.6 x 94.5	10252	4
	120	1507					
	135	1406					
CAF400S	100	1781	400	85	130.7 x 84.6 x 94.5	10582	4
	120	1608					
	135	1588					

Please contact us for additional technical data or specifications.

Due to ongoing product development, specifications are subject to change without prior notice.

OIL-FREE SCREW AIR COMPRESSOR

CAF SERIES
(Inverter Type)

Specifications

 CAF SERIES - INVERTER TYPE

Model	Max. Working Pressure	Free Air Delivery	Motor Power	Sound Level	Dimension (L x W x H)	Weight	Discharge Air Outlet
	PSIG	CFM	HP	dB (A)	inch	LBS	inch
CAF050V	100	71-198	50	73	74.8 x 46.5 x 77.2	3968	1½
	120	71-184					
	135	71-173					
CAF075V	100	159-302	75	76	90.6 x 61.8 x 82.3	5842	2
	120	159-300					
	135	148-274					
CAF100V	100	247-441	100	78	90.6 x 61.8 x 82.3	6283	2
	120	212-406					
	135	212-403					
CAF125V	100	318-530	125	82	106.3 x 65.4 x 92.5	7275	3
	120	300-528					
	135	290-455					
CAF150V	100	424-696	150	83	106.3 x 65.4 x 92.5	7430	3
	120	388-593					
	135	388-592					
CAF175V	100	494-782	175	83	106.3 x 65.4 x 92.5	7628	3
	120	459-694					
	135	459-693					
CAF220V	100	565-923	216	83	106.3 x 65.4 x 92.5	7716	3
	120	530-834					
	135	530-833					
CAF250V	100	636-1187	250	84	151.6 x 84.6 x 94.5	9767	4
	120	600-1070					
	135	565-971					
CAF300V	100	777-1409	300	84	151.6 x 84.6 x 94.5	10097	4
	120	706-1271					
	135	706-1183					
CAF350V	100	918-1592	350	85	151.6 x 84.6 x 94.5	10670	4
	120	883-1507					
	135	848-1406					
CAF400V	100	1059-1781	400	85	151.6 x 84.6 x 94.5	11045	4
	120	989-1608					
	135	953-1588					

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