

AS Series Oil-free Scroll Air Compressor



Ingersoll Rand AS Series Oil-free Scroll Air Compressor

Lead to revolution for air compre



SSOR



2.2/3.7/5.5 kW



7.7/11 kW



2.2-11kW models design are based on different combinations of air-ends and motors

Why Oil Free

Eliminate Oil Stain

- Each cubic meters of inlet air, oil-injected system, will carry additional 200 million dust particles and $0.03\text{mg}/\text{m}^3$ oil molecules after compression
- The oil residues in compressed air cannot be removed completely and will remain even with an oil filter installed
- There will be mechanical failure, painting peeling off or perforation due to oil molecules entering into the system; this may even bring harm to human in food and medical industries application



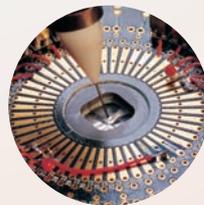
Pipes of oil free system



Pipes of oil-injected system

Industry Requirements

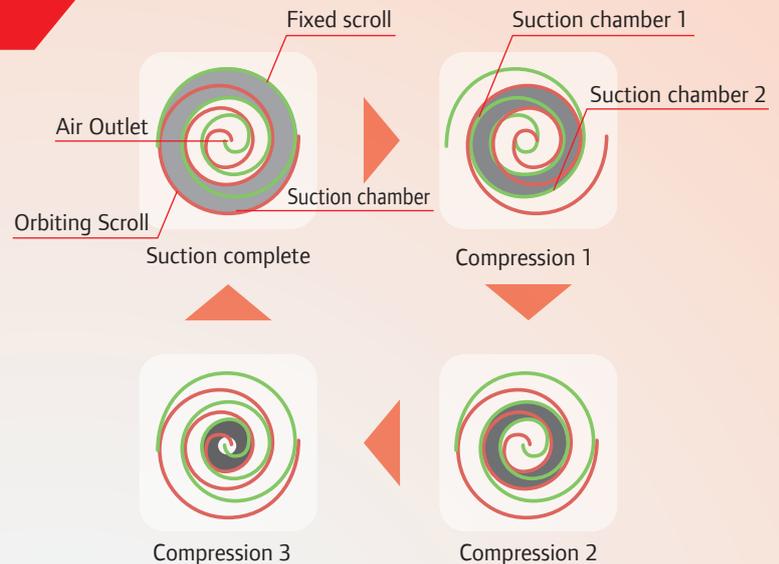
- Oil-free compressors with Class 0 certified are required for many industries, especially for food and medical industries
- There are many industries and applications with strict laws and regulations regarding oil contamination; oil-free air compressor is more and more widely used to prevent severe consequence due to failure of filtering equipment



Why Scroll

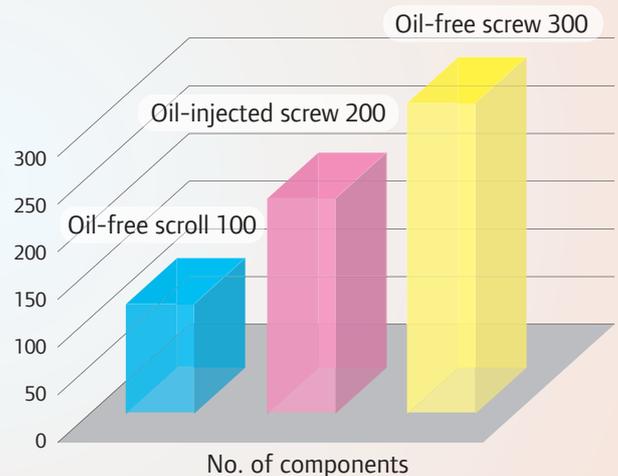
Working Principle

- The orbiting scroll rotated in the sequence as shown in the figure:
 - A. The volume of crescent-shaped compression chamber gradually becomes smaller
 - B. The compressed air is discharged from the air outlet in the middle
- The advanced compression technology ensures continuous and stable suction, compression and discharging process



Structural Composition

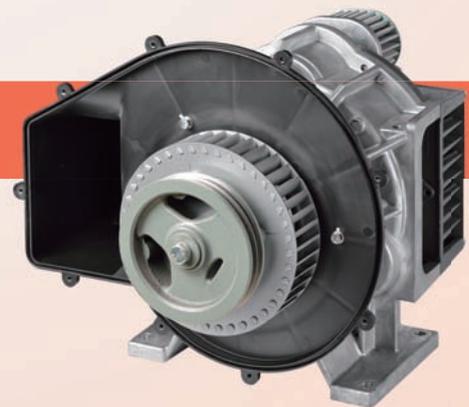
- Compact structure of Oil-Free scroll uses less components and consumables than screw compressor
- Simple structural design and framework significantly reduce the possibility of breakdown due to failure on equipment and component
- Modular design for more compact structure
- Simple structure, easy to mount/dismount, free of maintenance



8

Major Advantages

- Smaller footprint, save more space in compressor room
- Fewer components, higher reliability
- Lower sound level, healthy work environment
- Perfectly applicable to all industries
- Less consumables, longer service life
- No metal friction, less maintenance
- Oil-free compression, no pollution
- Zero emission, green and environmental-friendly



Why AS Series

Excellent Compression Model

- Aluminum shell, light weight
- Built-in centrifugal fan on the air-end ensures sufficient cooling air
- Efficient cooling module control air-end temperature effectively
- 5.5kW Dual-inlet design of air-end makes the compression more stable and efficient

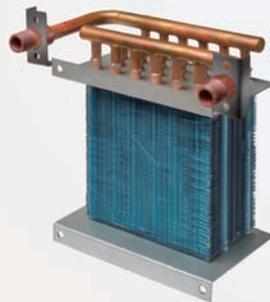


Efficient Cooling Fan



- Small size, large airflow
- 24V DC power, safe and stable
- Aluminum material, light but durable
- Well known brand for quality assurance

Fin-tube Heat Exchanger



- Fin-tube design
- Anti-corrosion copper tube
- Efficient cooling fin module

Intelligent Controller

- Large size with interactive display
- Large navigation button and intuitive navigation control.
- LCD screen with friendly and visual display
- Chinese/English language display
- Fault protection, air-end fault alarm for safe operation of machine
- 3 control modes: local, remote, communication
- Standard RS-485 interface for remote start/stop, detection of working status
- Multi-level control and operation logics
- Multiple air-end backup operation

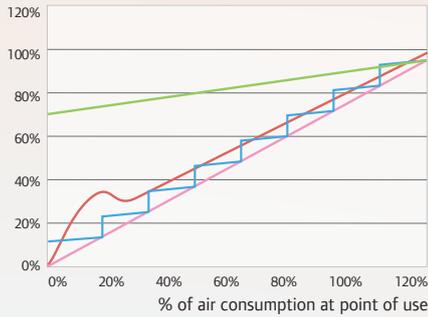


Energy Saving

Multiple Air-end Operation

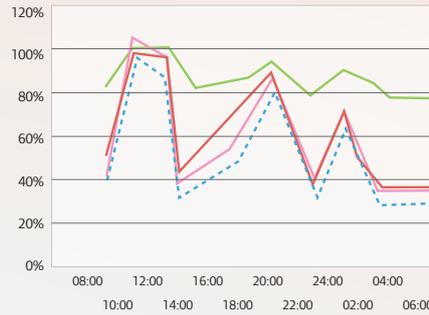
Variable speed control Modulation control
Multi-stage control Ideal curve

% of total power consumption



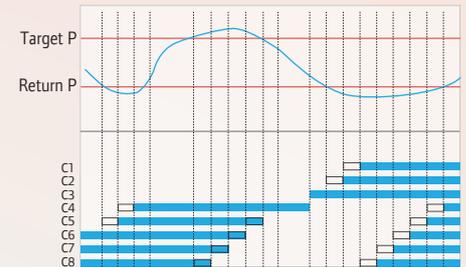
Multi-stage Control

Air consumption Screw compressor (modulation control)
Power consumption of scroll compressor Screw compressor (VFD control)



AS Working Logics

Start delay Stop delay



Certification

100% oil-free compressed air on user side is guaranteed by certification from TUV Rheinland, Class 0 oil-free certification



Nomenclature

AS **M** - **11**

① ② ③

- ① AS oil-free scroll compressor
- ② Rated pressure M:8 barg H:10 barg
- ③ Nominal power (kW)

Parameters and Specifications

Ingersoll Rand AS Series Oil-free Scroll Air Compressor (50HZ)

Model	Max Working Pressure	Nominal Power	Air Flow	Connection Size	Dimension (LxWxH)	Weight	Sound Level
	barg	kW	m ³ /min	BSPT	mm	kg	dB(A)
ASM2	8	2.2	0.24	1/2"	830×740×910	204	58
ASH2	10	2.2	0.21	1/2"	830×740×910	204	58
ASM4	8	3.7	0.40	1/2"	830×740×910	231	58
ASM5	8	5.5	0.60	1/2"	830×740×910	240	59
ASH5	10	5.5	0.53	1/2"	830×740×910	240	59
ASM7	8	7.7	0.84	1"	1445×800×1000	438	62
ASH7	10	7.7	0.74	1"	1445×800×1000	438	62
ASM11	8	11	1.20	1"	1445×800×1000	495	64
ASH11	10	11	1.06	1"	1445×800×1000	495	64

* FAD (Free Air Delivery) is ratings of full package performance in accordance with ISO1217 Annex C.

** Sound level at the work station (±3 dB(A)), determined according to noise test code ISO2151 and noise measurement taken at the duct of inlet and outlet of the standard compressor.



Ingersoll Rand (NYSE:IR) advances the quality of life by creating and sustaining safe, comfortable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; secure homes and commercial properties; and increase industrial productivity and efficiency. We are a \$12 billion global business committed to a world of sustainable progress and enduring results.



Distributed by: