Ingersoll Rand

Oil-Free Scroll Air Compressor Systems

3-40 hp (2-30 kW)

Class 0
ISO 8573
Oil-Free Air

YOUR TRUSTED PARTNER IN COMPRESSED AIR

Staying ahead of your competition with advanced compressed air systems and services that boost productivity, lower operating expenses and extend equipment life is critical to your success.

No matter the industry or application, you can count on Ingersoll Rand® as a trusted partner for oil-free compressed air technologies and services. By focusing on you and your business, we provide collaborative solutions that make you successful, offering a total systems approach to maximize efficiency and performance.

Take a Systems Approach

Delivering reliable oil-free compressed air to your facility goes well beyond the compressor itself. Optimize total cost of ownership (TCO) with a systems approach that delivers industry leading value through experienced installation and maintenance support, genuine OEM parts, accessories and consumables that extend the life of your system.

Your business will benefit from Ingersoll Rand's partnership. Through our extensive experience and global expertise we help to ensure reliability, lower maintenance costs and ease of serviceability.

Let's Get Started Together

Throughout the entire lifecycle, our systems approach helps you achieve the lowest operating cost.

Ingersoll Rand Contracting Services Video

WHEN HIGH AIR PURITY IS A HIGH PRIORITY

You need a reliable, cost-effective compressed air solution, all backed by a global network of experts. That's what you get with our oil-free scroll air compressors.

For Efficiency and Air Flow

Advanced airend and drive component design provide world-class specific power and best-in-class air flow, resulting in reduced energy use.

For Reliability

Every component in our oil-free compressor system supports maximum reliability for increased productivity, longer equipment life, lower operating costs and higher profitability.

For Lower Cost of Ownership

Higher initial costs for oil-free systems are more than offset by lower operational and maintenance costs over a system's life to maintain the highest air quality.

Class 0
ISO 8573
Oil-Free Air

ISO 8573-1 Air Quality Classes	
Quality Class	Oil & Oil Vapor mg/m^3
0	< 0.01
1	0.01
2	0.1
3	1
4	5

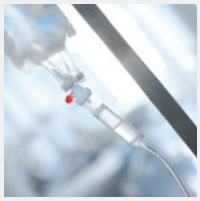
Class 0 is the most stringent air class defined by ISO 8573, part 1. Our W-Series oil-free scroll compressors are Class 0 for no oil content to ensure your air quality exceeds specifications.

Oil-Free Scroll Compressors for Your Application

Ingersoll Rand offers a wide portfolio of reliable oil-free products that will adapt to your industry and application. We will assess and propose the best oil-free solution to increase the productivity of your installation, providing zero risk of contamination of your final product.

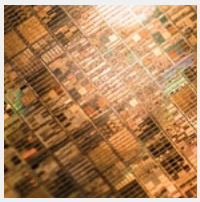

Hospitals, Labs, Universities


Pharmaceutical, Biotech


Medical Devices, Plastics


Canning, Beverages, Brewery


Glass Manufacturing


Electronics, Semiconductor


Food Processing


Electronics Assembly


Textile Industry


Bottling, Distillery


Printing Industry

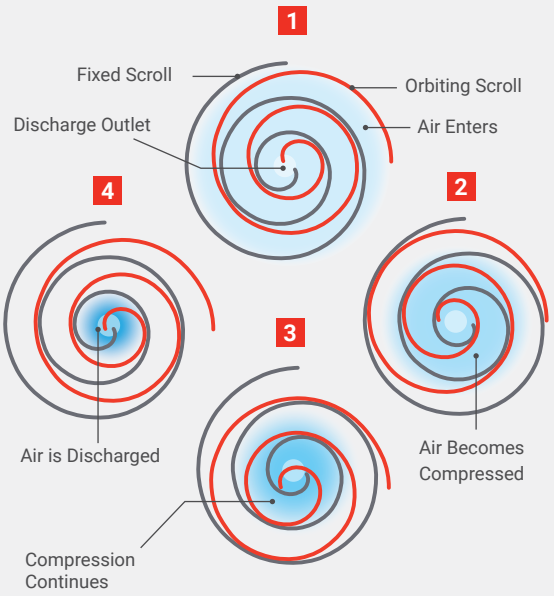

Turf Management

When quiet operation, low maintenance and a small footprint are critical, scroll air compressors are the smart choice. Their compact and innovative design make them ideal for many commercial applications where reliable, oil-free air is required.

How Scroll Compressors Work

Scroll compressors use two interlacing spiral scrolls to pump, compress and pressurize air.

1. One scroll remains in a fixed position, while the other scroll orbits around it without rotating.
2. This motion traps the air in the pockets between the two scrolls, and pushes the air towards the center. As the air moves closer to the center, the pockets become smaller, and the air is compressed.
3. The process constantly repeats to maintain suction.
4. Once the air reaches the center, it is discharged through an outlet.



NO OIL ANYWHERE!
None in the compressor
None in the air
None in the condensate

Scroll Compressor Advantages

Smaller footprint	▶	Takes up less floor space
Fewer components	▶	Higher reliability, longer life, less maintenance
Lower sound level	▶	Healthy work environment
100% oil-free	▶	Can be used in any industry
Use less consumables	▶	Longer service intervals and life
No metal friction	▶	Less maintenance
Zero emissions	▶	Meets goals for sustainability
Fewer moving parts	▶	Lower vibration

100% Oil-Free Air

The simple tip seal design of a scroll compressor ensures no metal-to-metal contact anywhere. Therefore, the technology does not require lubrication, ensuring high-quality, oil-free air.

W-Series Tank-mounted, Unenclosed

W7.5-D

W4-S

W22-H COMPRESSOR

Clean, Quiet and Efficient

Our scroll compressors pack tremendous value into a small, efficient package.

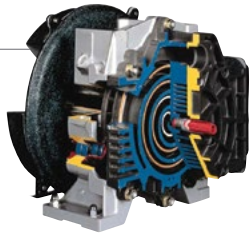
Base-mounted, Quiet-enclosed

WS22T

WS7.5D

W2-S

What Makes Our Oil-Free Scroll Compressors Unique?



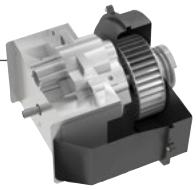
Efficient Design and Control

Our scroll compressors deliver more flow per hp in most cases and reach pressures up to 145 psig in a single stage of compression. We achieve this efficiency through design features such as:

- **Start/stop control** ensures the compressor only delivers what is needed when it is needed
- **Nearly silent operation** using the quietest compression technology
- **Small radius rotation** provides virtually instant pressure when started

Multiplex Design

The ability to multiplex the design for part-load efficiency means you can operate the exact number of compressors to match your demand.



Cool Operation

The integral radial flow fan creates built-in intercooling without the need for additional auxiliary fan help.

Microprocessor Control

Manages discharge pressure to meet your air demand, while measuring key operating parameters to reduce unwanted downtime (enclosed units only).

Air-cooled Aftercooler

Aftercooler is included with each pump in all packages to cool the discharge air. Discharge air temperatures vary with ambient conditions and model.

W/WS Model Specifications

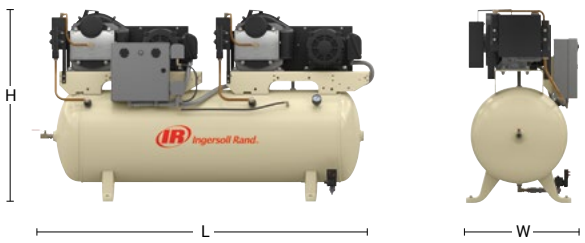
W-Models - 60 Hz

Model	Number of Pumps	Nominal Power hp	Flow @ 100 psig (116 psig max)	Flow @ 145 psig (145 psig max)	Quiet Enclosed Base Mount	Unenclosed Tank-mount					Drain Options		Controller Options	
						30 gal	60 gal	80 gal	120 gal	240 gal	None	Electric	Analog	Digital
W2-S	Simplex	3	8.8	7.1	●	●	-	-	-	-	●	●	●	-
W4-S	Simplex	5	15.2	12.5	●	-	●	●	-	-	●	●	●	-
W5.5-S	Simplex	7.5	23.1	17.0	-	-	-	-	●	-	●	●	●	-
W7.5-S	Simplex	10	31.2	25.0	-	-	-	-	●	-	●	●	●	-
W7.5-D	Duplex	10	30.4	25.0	●	-	-	●	●	-	●	-	-	●
W11-D	Duplex	15	46.2	34.0	-	-	-	-	●	●	●	●	●	-
W11-T	Triplex	15	45.6	37.5	●	-	-	-	-	-	●	-	-	●
W15-D	Duplex	20	62.4	50.0	-	-	-	-	●	●	●	●	●	-
W15-Q	Quadraplex	20	60.8	50.0	●	-	-	-	-	-	●	-	-	●
W22-H	Hexaplex	30	91.2	75.0	●	-	-	-	-	-	●	-	-	●
W30-O	Octoplex	40	121.6	100.0	●	-	-	-	-	-	●	-	-	●

WS-Models - 60 Hz

Model	Number of Pumps	Nominal Power hp	Flow @ max psig 116 psig max	145 psig max	Quiet Enclosed Base Mount	Quiet Enclosed Tank-mount			Drain Options		Controller Options	
						30 gal	80 gal	120 gal	Manual	Electric	Analog	Digital
WS4S	Simplex	5	14.6	12.3	●	●	●	-	●	●	●	●
WS5.5S	Simplex	7.5	21.5	16.1	●	-	●	●	●	●	●	●
WS7.5S	Simplex	10	31.0	25.3	●	-	●	●	●	●	●	●
WS7.5D	Duplex	10	29.2	24.6	●	-	-	-	-	-	-	●
WS11D	Duplex	15	43.0	32.2	●	-	-	-	-	-	-	●
WS15D	Duplex	20	62.0	50.6	●	-	-	-	-	-	-	●
WS11T	Triplex	15	43.8	36.9	●	-	-	-	-	-	-	●
WS17T	Triplex	22.5	64.5	48.3	●	-	-	-	-	-	-	●
WS22T	Triplex	30	93.0	75.9	●	-	-	-	-	-	-	●
WS15Q	Quadraplex	20	58.4	49.2	●	-	-	-	-	-	-	●
WS22Q	Quadraplex	30	86.0	64.4	●	-	-	-	-	-	-	●
WS30Q	Quadraplex	40	124.0	101.0	●	-	-	-	-	-	-	●

Note: Tank mount options include standard, galvanized and vinyl coated steel



Moisture and contamination in compressed air cause significant problems in equipment operation, such as rust, scale and clogged orifices that result in product damage or costly shutdowns. Making our air treatment equipment an integral component of your compressed air system will improve productivity, system efficiency and product or process quality.

Modular Desiccant Dryers

Choose desiccant dryers when very low dew points are necessary for high-quality air and to prevent potential freeze-up.

- Delivers high-quality air, ISO Class 2 or optional Class 1 pressure dew point
- Compact footprint and low noise operation (< 75 dBA), suitable for work environments
- High-strength desiccant and durable components provide extended life
- Low pressure drop design saves energy
- Advanced microprocessor control easy to use and maximizes uptime

Refrigerated Dryers

Cost-effective refrigerated dryers provide clean, dry air for most industrial applications. Cycling dryers maximize energy savings, while non-cycling dryers minimize initial cost.

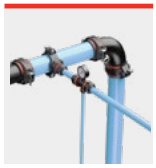
- Dew points as low as 38°F (3°C), meeting Class 4 requirements
- Corrosion-free heat exchanger design for reliable operation
- Intuitive microprocessor control for easy operation
- Compact design for easy serviceability

OEM Parts and Services

Ingersoll Rand is your trusted partner for the long haul. Our services include skilled project management and installation for start-up, system expansion or decommissioning, as well as flexible maintenance programs that meet your specific requirements. And our genuine OEM parts ensure that your compressor is running reliably and efficiently.

Installation

- Project management services



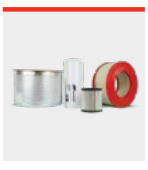
- SimplAir® piping systems

- Air system accessories

Maintenance Programs

- PackageCARE™ full risk transfer
- PlannedCARE™ planned maintenance
- PartsCARE™ parts and assistance

Genuine OEM Parts



- Filters (annually)

- Tip seals and grease (2-4 years*)

- Replacement airends (4-8 Years*)

*Part life depends on application and use—higher pressure designs will require maintenance sooner

About Ingersoll Rand Inc.
Ingersoll Rand Inc. (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is dedicated to helping make life better for our employees, customers and communities. Customers lean on us for our technology-driven excellence in mission-critical flow creation and industrial solutions across 40+ respected brands where our products and services excel in the most complex and harsh conditions. Our employees develop customers for life through their daily commitment to expertise, productivity and efficiency. For more information, visit www.IRCO.com.

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