Ingersoll Rand Centrifugal Compressors



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More than air, a history of innovation

For more than 100 years, Ingersoll Rand has inspired progress by driving innovation with revolutionary technology — creating new standards for how the world gets work done. We introduced our first oil-free compressor in 1912, and over the decades we've continued to develop rugged, reliable, industry-leading compressor technologies.



Ingersoll Rand is a technology leader in oil-free compressed air technologies not only because we develop class-leading products, but also because we know our customers' industries, the demands placed on productivity and quality, and then offer highly engineered system solutions that make sense. No matter what your product, process, or location, Ingersoll Rand has the expertise, the oil-free technology, and the unmatched service to meet your needs.



Reliable air for critical applications



Iron and Steel

Few industries pose tougher environmental conditions or place higher demands on compressed air systems. Ingersoll Rand centrifugal compressors are the perfect fit offering rugged reliability even in the harshest environments and applications.

Air Separation

With air separation, electricity costs are clearly a paramount concern. As such, the operational efficiency of an air compressor is critical. Ingersoll Rand multi-stage centrifugal compressors deliver the reliable performance our customers demand.

PET Blow Molding

Ingersoll Rand drives productivity within this industry by delivering advanced technology solutions that provide the lowest lifecycle cost, highest reliability and uptime, and energy efficiency.

There's a lot riding on your compressed air system, namely productivity and profitability. A compromised system — whether caused by inefficiencies, contaminants, or breakdowns — can result in costly downtime, product liability, and even damage to your brand reputation.



Textile 🔺

High-tech air jet looms require super clean, dry, 100% oil-free compressed air, which is why Ingersoll Rand has been a critical supplier to this industry for many years.

Chemical 🔺

Whether manufacturing cleaning solutions, base stock pharmaceuticals, or anything in between, the compressed air quality must be of highest purity to minimize risk of production interruption or higher cost liability.



Utilities 🔺

Compressed air is too important to take chances, so when specifying instrument air for utilities, most engineers request oil-free compressors.

No matter what the industry or critical application, Ingersoll Rand centrifugal compressed air systems set the worldwide standards for reliability, energy efficiency, and air quality, while reducing total lifecycle costs.

Oil-free, risk-free

How pure is your air? One of the keys to ensuring you achieve and maintain acceptable air quality for your critical application is to know industry air quality standards and their allowable levels of contaminants. The lower the particular class rating, the purer the air should be.

ISO 8573.1 Air Quality Classes

	SOLIDS			WATER		OIL & OIL VAPOR	
Quality Class	Max 0.1 – 0.5 micron	number of particles p 0.5 – 1 micron	er m³ 1 – 5 micron	Pressure D °F	ew point ℃	mg/m³	Quality Class
0	As specified by the end-user or manufacturer, and more stringent than Class 1					0	
1	100	1	0	-100	-70	0.01	1
2	100,000	1,000	10	-40	-40	0.1	2
3	—	10,000	500	-4	-20	1	3
4	—	—	1,000	37.4	3	5	4
5	_	_	20,000	44.6	7	—	5
6	_	_	_	50	10	—	6

ISO 8573-1:2001 Class 0 specifies air quality standards for critical manufacturing processes within most industries. It is the most stringent class covering oil contamination in aerosol, vapor, and liquid forms.

If you need guaranteed pure air for your critical application, then you need Ingersoll Rand. Our centrifugal compressors were rigorously tested by TÜV Rheinland[®] — a global leader in independent testing and assessment services — and earned ISO 8573-1:2001 Class 0 certification.





The first and only certified oil-free centrifugal compressor

Engineered excellence. Our oil-free centrifugal compressors are not only the first and only to be certified ISO 8573-1:2001 Class 0, they also offer efficient, economical, and reliable solutions for delivering compressed air. These high-performing, versatile compressors deliver the advantages of a compact design to a broader range of customers and applications.

An Ingersoll Rand centrifugal compressor comes with a capacity advantage of as much as 15% above competitive two-stage, oil-free compressors. This advantage increases to as much as 30% as our capacity remains consistent while other technologies degrade by up to 15%.



Simplicity by design

The easy choice. Our centrifugal compressors are the most efficient and reliable units on the market, and their packaged design makes them easy to install wherever needed. Every component of these compressors is mounted, piped, and wired for convenient, single-point air and electrical connection.



Less is more

Fewer moving parts mean you get a more reliable, safer compressor with less downtime or maintenance. With our multi-stage compressors, you can hit your performance requirements easily and with less wear and tear than with any other compressor on the market. Greater efficiency, reliability, and unique features and controls provide you with an unbeatable combination of energy savings and trouble-free life.

Balanced and stable rotor assemblies

Our impellers feature a vane geometry that allows maximum pressure control over the widest operating range. Each rotor assembly is dynamically balanced between two hydrodynamic bearings to ensure low vibration and peak operating efficiency.

Superior bearings and carbon ring seals

Because our rotors are so stable, we're able to use simple bearings with no moving parts. The rotors never contact the bearings, but rather spin on a film of oil. This permits long intervals between scheduled maintenance checks. Our compressors also feature full-floating, non-contact carbon ring seals to minimize air leakage and prevent oil from migrating up the rotor shaft.

Vertically split casing

Our exclusive vertically split casing permits easy opening for servicing the compressor components, as well as setting running clearances externally, without opening the unit.



A systematic approach to productivity

At Ingersoll Rand, we do more than build products. We bring our customers unmatched experience in designing comprehensive compressed air systems that cover virtually any need.



Compressors Most reliable, efficient

design in the industry



Optimized system efficiency

Cooling systems

Designed to match system requirements

Leasing and financing

Improved cash flow

Project management and installation

Single-source responsibility

Audits

System optimization for best performance







- Costs associated with unstable air pressure and energy inefficiencies
- Costs associated with wear and tear, unscheduled maintenance, and downtime
- Costs associated with compromised air purity (non-Class 0) and reduced productivity

Match your needs with our technology

Low Pressure (5 – 30 psig / 0.35 – 2.1 barg)						
	Flov	N	Р	Power		
Model	cfm	m³/min	hp	kW		
CH4	800 - 1,400	25 – 40	125 – 200	90 – 150		
CH5	1,300 – 3,000	42 - 80	175 – 350	132 – 270		
CH6	3,000 - 6,000	90 – 160	350 – 600	270 – 430		
CX25	3,500 - 5,000	100 – 140	250 – 500	200 – 350		
CX35	4,500 - 6,500	130 – 185	300 - 600	200 – 450		
CX45	9,000 - 16,000	255 – 450	800 – 1,500	600 - 1,100		
CX55	15,000 – 22,000	420 – 620	900 - 2,000	660 – 1,500		
CX65	20,000 - 30,000	570 – 850	1,250 – 2,500	900 – 1,850		
CX75	27,000 - 44,000	760 – 1250	1,750 – 3,600	1,300 – 2,700		

Standard Pressure (50 – 150 psig / 5.5 – 10.3 barg)						
	Flow		Power			
Model	cfm	m³/min	hp	kW		
CV1	800 – 1,500	25 – 40	200 – 350	150 – 270		
C250	1,100 - 1,800	30 – 50	250 - 350	200 – 270		
CV1A	1,800 - 2,450	42 - 80	350 – 500	270 – 350		
CV1B	1,800 – 2,350	42 – 70	350 – 450	270 – 350		
C700	2,000 - 4,100	60 – 115	400 - 900	300 - 660		
C950	4,150 - 6,050	120 – 170	500 - 1,500	350 – 1,100		
3CII	6,000 - 9,000	170 – 255	1,000 – 2,000	750 – 1,500		
C3000	9,000 – 15,000	270 – 450	1,750 – 3,500	1,300 – 2,600		
5CII	12,500 - 30,000	350 - 850	1,750 - 6,000	1,300 – 4,500		

High Pressure (150 – 610 psig / 10.3 – 42.0 barg)						
	Flo	w	Pow	Power		
Model	cfm	m³/min	hp	kW		
2ASB	3,300 - 4,600	90 – 130	1,000 – 1,750	750 – 1,300		
2CII	3,000 - 4,600	90 – 130	880 – 1,750	600 - 1,300		
C750	1,800 – 2,100	50 - 60	700 – 900	530 - 660		
C1050	4,000	115	1,500	1,150		
3C	5,000 – 10,000	170 – 255	1,500 – 3,000	1,100 – 2,250		
4C	9,000 - 15,000	255 – 425	2,500 - 4,500	1,850 – 3,350		

Advanced controls

If you have a multiple-compressor installation, then you probably know that maintaining optimum average system pressure along the entire line can be challenging, inefficient, and costly. This is an easy task when using our energy management through load sharing. You can also include all compressor technologies, dryers, and coolers, and monitor them from anywhere at any time.

Ingersoll Rand advanced air system controllers — when coupled with our extensive system audit services enable you to optimize air system efficiency, deliver consistent flow and pressure, avoid blow-off, and extend the life of system components. Ultimately, you'll reduce energy costs.



Air System Controller (ASC)

The ASC provides a window into the compressor room by making raw data available to plant operators and managers in formats that are easy to understand, plus provide substantial energy savings. The ASC uses machine interface (HMI) software specifically designed by Ingersoll Rand for compressed air systems.

Functions include:

- Total system control over compressors, dryers, cooling towers, pumps, and accessories
- Energy management
- Pressure- and load-sharing
- System benchmarking and data management
- Enhanced communications

Global reach, local service

No matter where your facility is located,

Ingersoll Rand is committed to serving you 24-hours a day, seven days a week. Our worldwide network of certified, factory-trained technicians and engineers are a phone call away — ready to support you with innovative and cost-effective service solutions that will keep you running at peak performance.

AirCare Advantage

We understand that uptime is critical to your operation. That's why we offer AirCare Advantage — a responsive, flexible contract maintenance program custom-designed to provide factory-authorized scheduled maintenance that ensures increased system reliability. AirCare Advantage helps eliminate unscheduled downtime and relieves you of costly investments in monitoring equipment and ongoing training. The program also provides a thorough knowledge of compressor technology.









No matter what, count on Ingersoll Rand

Even if you own an air compressor from another manufacturer, you can count on Ingersoll Rand to keep you up and running without a hitch. No matter what the make or model, Ingersoll Rand builds replacement parts designed to the same specifications and operational efficiencies you'd expect from the original equipment manufacturer.

Whether for parts, preventive maintenance, or timely repairs, who better to maintain your compressed air system than the company who leads the world in building them ... Ingersoll Rand.

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Maximize uptime with Ingersoll Rand parts and service.



Ingersoll Rand Industrial Technologies provides products, services and solutions that enhance our customers' energy efficiency, productivity and operations. Our diverse and innovative products range from complete compressed air systems, tools and pumps to material and fluid handling systems and environmentally friendly microturbines. We also enhance productivity through solutions created by Club Car[®], the global leader in golf and utility vehicles for businesses and individuals.

www.air.ingersollrand.com

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