



# DON'T JUST BUY COMPRESSORS & DRYERS,

# **BUILD SUCCESS**

### **ENGINEERED SYSTEMS AND SERVICES:**

YOUR TRUSTED PARTNER FOR CUSTOM AIR & GAS SOLUTIONS WITH EXPERT SUPPORT FOR PEAK PERFORMANCE GROWTH.



Engineered Systems and Services www.ingersollrand.com/air-compressor-systems

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+300

Experience & History

+80

**Brands** 

+18,000

Global Employees +150

Customer and Services centers

+70

Major manufacturing sites<sup>1</sup>

+5000

Sales, Services, and support employees



<sup>&</sup>lt;sup>1</sup>Site totals represent major manufacturing locations. 2 Map of installed asset base is illustrative only.

**Welcome to Engineered Systems** 

and Services (ESS)

Ingersoll Rand's Engineered Systems and Services (ESS) is dedicated business line to providing market-leading, **custom-engineered solutions.** 

Formed from a merger of five renowned business units - Ingersoll Rand Air & Gas Solutions, Ingersoll Rand Engineering Project Solutions, and K. LUND Offshore, Reavell, Belliss & Morcom, Mako and Blutek S.R.L. - Ingersoll Rand Engineered Systems and Services (ESS) leverages extensive experience to serve Engineering, Procurement, and Construction (EPCs) contractors and other firms in need of specialized engineering Services.

With a portfolio that includes state-of-the-art **air and gas compressors, dryers, nitrogen generators, and gas recovery Systems**, Ingersoll Rand Engineered Systems and Services (ESS) is committed to pioneering innovation and maintaining the highest standards of engineering excellence. We pride ourselves on managing intricate projects across the globe, employing cutting-edge technology to drive the success of our customers.







### **OUR MISSION**

To engineer solutions around to each customer's unique requirements, drawing upon our extensive multi-year expertise, collaborative team strengths, and robust economic growth engine.

### **OUR VISION**

To be recognized as the leading provider of air and gas custom-engineered solutions, where every Customer experiences unparalleled Services, innovation, and expertise makes us the definitive strategic partner for project success.







# What We Do

Ingersoll Rand's Engineered Systems and Services (ESS) is capable of understanding client specific needs and requirements, allowing us to be with you through every step of your project's life-cycle. We can quickly design the most effective customized solution, giving you total peace of mind.



**Market to Order** (MTO)



**Engineer to Order** (ETO)



**Special configuration** and Project Lifecycle **Support (PLS)** 









# **Our Added Values**



**Global Presence** 



**Extensive Experience** 



Turn-key Solutions (PLS)



**Project Management** 



Wide Range of Technologieses



**Quality Certificates** 



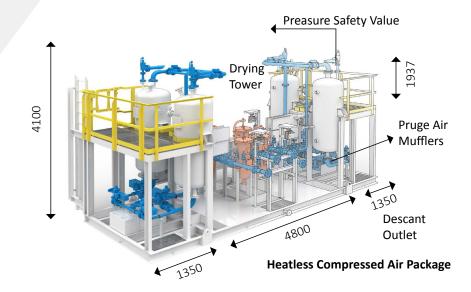


# **Customization - From Concept** to Factory Floor

All the machine packages and solutions that we provide can **be tailored to the most demanding technical** specifications of your application.

Engineered Systems and Services (ESS) are designed to operate in harsh environments and face the most extreme environmental conditions.

Additionally, a wide variety of options can be customized to meet international and local quality requirements. Our solutions can comply with the API, ISO (9001, 14000 and 14001), NORSOK, ATEX, IECEX, Magnet JQS, ASME, ANSI and DIN standards, among others.











# **Our Facilities**





# **Applications & Products**



OIL &	GAS		VER ATION	CHEN & PETROC		CARBON	CAPTURE		NG NATURAL GAS)	HYDR	OGEN		ERAL CTURING
APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS	APPLICATIONS	PRODUCTS
Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors	Instrument Air	Screw Air Compressors
Plant Air	Reciprocating Air Compressors	Plant Air	Reciprocating Air Compressors	Plant Air	Reciprocating Air Compressors	Plant Air	Centrifugal Air Compressors	Plant Air	Reciprocating Air Compressors	Plant Air	<u>Air Dryers</u>	Plant Air	Reciprocating Air Compressors
Emergency compressor	Centrifugal Air Compressors	Fuel Gas Boosting	Centrifugal Air Compressors	Fertilizer Production	Centrifugal Air Compressors	Flue Gas Compressor for CO <sup>2</sup> removal	Centrifugal Gas Compressors	Grid Injection	<u>Air Dryers</u>	Hydrogen Compression	<u>Nitrogen</u> <u>Generation</u>	Blanketing	<u>Air Dryers</u>
Flare Gas Recovery	Centrifugal Gas Compressors	Stroke Pneumatic Valves	Centrifugal Gas Compressors	Carbon Monoxide (CO)	Centrifugal Gas Compressors	Fertilizer, Urea process		Blanketing	<u>Nitrogen</u> <u>Generation</u>	Blanketing	Centrifugal Air Compressors	Heat pump	Centrifugal Air Compressors
Reduce Dew Point in Air	<u>Liquid ring</u> <u>Compressors</u>	Ash conveying	<u>Air Dryers</u>	Syngas	<u>Air Dryers</u>	Carbon Dioxide transport		Purging	Screw Gas Compressors	Purging	Centrifugal Gas Compressors	Steam Compression	Centrifugal Ga Compressors
Natural Gas Gathering	Screw Gas Compressors	Soot blowing	<u>Nitrogen</u> <u>Generation</u>	Process Air	<u>Nitrogen</u> <u>Generation</u>	Refrigeration			Centrifugal Air Compressors	Refrigeration / Liquefaction			
Carbon Capture Utilization & Storage (CCUS)	Air Dryers	Coal conveying		Oxidation Processes					Centrifugal Gas Compressors	Natural Gas Feed			
Enhanced Oil Recovery (EOR)	Nitrogen Generation	Blanketing		Air Separation									
LNG Liquefaction	<u>High</u> <u>Pressure Air</u> <u>Compressors</u>	Purging		Medical Gases Compression									
NGL Fractionaction	Oil-Free Recirpocating Air Compressors			CO <sup>2</sup> Compression									
Boosting	Breathing Air Compressors			Blanketing									
Boil-off gas	Containment fill stations			Purging									
Fuel gas boosting													
Blanketing													
Purging													
PET Bottling								FIND OL	T MORE DET	AILS ABOUT (	OUR PRODUC	CTS &	



Defence





**REQUEST A QUOTE** 

**CLICK ON THE INTERACTIVE TABLE** 

# **Our Products At a Glance**

# AIR COMPRESSORS AIR COMPRESSORS Centrifugal Air Compressors Reciprocating Compressor Centrifugal Air Compressors Compressors Compressors Air Compressors Compressors Compressors Compressors Compressors Compressors Compressors Compressors Containment fill stations











# **Screw Air Compressors**

Our tailored air compressors are ready for operation, flexible, easy to integrate into any process, help minimize operating costs and prepared to face the strictest quality standards. Ingersoll Rand is your single source solution for instrument, plant, bulk and nitrogen generation applications.

### **Technical Data & Benefits**

TECHNICAL DATA*	OIL FLOODED	OIL-FREE
Flow Rate (m³/h FAD)	Up to 4.200	Up to 5.000
Operation Pressure (barg)	8 ~ 15	8 ~ 10
Power (kW)	2 ~ 400	37 ~ 700

<sup>\*</sup> This data can be modified based on customer needs











SIMPLE
"PLUG & PLAY"
INSTALLATION







---- B.4 ----









# **Reciprocating Air Compressors**

Our reciprocating compressor packages are known for their excellent energy efficiency. We have consolidated and at the same time consistently developed this proven technology, maintaining its cutting edge, high-quality, robust construction along and excellent efficiency. The result is an improved Return On Investment (ROI) and shorter payback time.

### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h)	170 to 2.600 CFM			
Operation Pressure (barg)	2- 414			
Power (kW)	45 to 300			

<sup>\*</sup> This data can be modified based on customer needs





















# **Screw Gas Compressors**

Ingersoll Rand's oil-injected rotary screw gas compressors are an ideal solution for those seeking additional options for specific project needs. We are able to serve a vast range of applications in the Oil & Gas, Industrial, Process and many other industries, including ones in corrosive gas environments. Vapor recovery, gas lift, well unloading, and BioGas are just a few suitable applications.

# HIGH RELIABILITY & COST EFFECTIVENESS







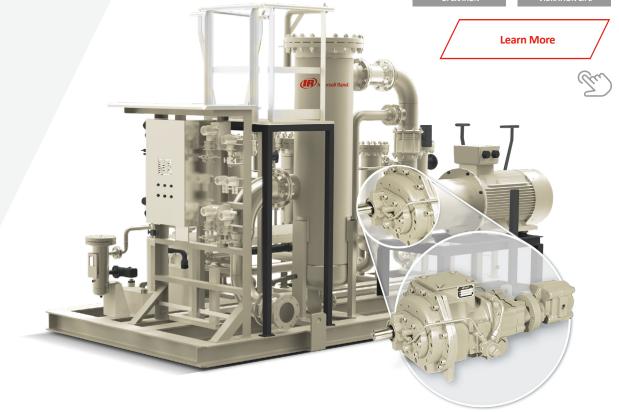
PROVED EFFICIENCY
AND SMOOTH



### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h)	235-18.000			
Operation Pressure (barg)	Up to 34			
Power (kW)	15-600			

<sup>\*</sup> This data can be modified based on customer needs



# **Gas-ends**

Ingersoll Rand rotary screw natural gas compressors can be provided in one-stage and twostage options. They are very cost-effective for handling high volumes of gas in field gathering, vapor recovery, and a wide range of other applications and delivering gas at high pressures.

SINGLE STAGE ROTARY SCREW GAS ENDS

TWO STAGE ROTARY SCREW GAS ENDS















# **Centrifugal Air Compressors**

Ingersoll Rand Centrifugal Air Compressors are custom designed and built for individual customer needs for a variety of applications. These compressors are manufactured with a highly engineered air flow components, designed for easy, low-cost installation and operation.

Integrally geared centrifugal compressor (IGC) technology is well-suited to accommodate multiple-process requirements. Significant savings in floor space, installation time, initial investment and maintenance costs can be realized when combining the duties of multiple compressors in one multi-process IGC.

### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h) 2.549 to 230.000				
Operation Pressure (barg)	up to 82			
Power (kW)	up to 16.400 (22000 hp)			

<sup>\*</sup> This data can be modified based on customer needs





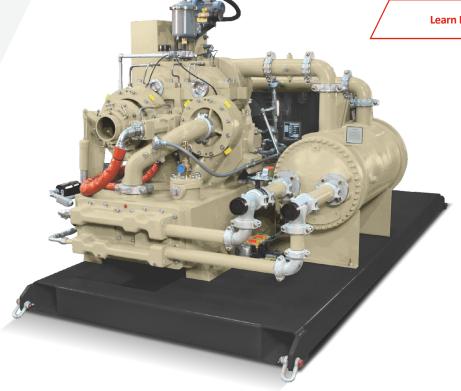


















# **Process Gas Compressors**

MSG ® compressors are efficient, reliable solutions for your gas compression needs. Depend on MSG ® compressors for reliability combined with minimal maintenance to deliver a low total cost of operation and ownership.

The MSG ® centrifugal compressors are great for handling fuel gas, carbon dioxide, carbon monoxide, petrochemicals, mixed refrigerants, landfill gas, and steam.

### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h)	3.400 to 170.000			
Operation Pressure (barg)	up to 82 bar			
Power (kW)	up to 16.400 (22.000 hp)			

<sup>\*</sup> This data can be modified based on customer needs



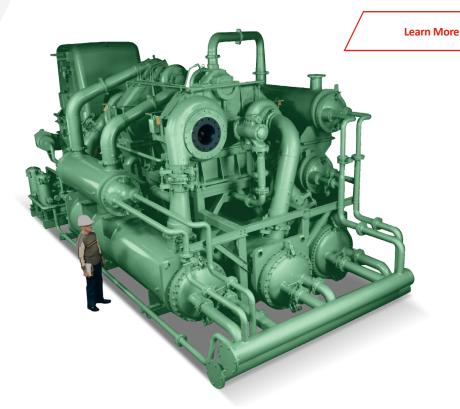














# **Liquid Ring Compressors for Flare Gas**

Flare Gas Recovery Systems (FGRS) are specialized compression packages, which aim to recover and repurpose gasses and emissions, that would normally be burned during the flaring process.

The process involves capturing the gas from the flare knock-out vessel and compressing it using liquid ring compressors. The so-recovered gases can be reused within the facility's fuel gas Systems, as refinery feedstock or for re-injection.

### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h) 50- 39.000				
Operation Pressure (barg)	up to 14			
Power (kW)	up to 1.000			

<sup>\*</sup> This data can be modified based on customer needs





















# **Reciprocating Gas Compressors**

Our multi-stage reciprocating piston compressors are engineered for bespoke applications that require the highest capacities and special features. These configured compressors offer a wide pressure, capacity, and speed range. Tailored for compressing industrial gasses, or for use as boosters, the lubricated design can be either air or water cooled, minimizing space without compromising performance.

### **Technical Data & Benefits**

TECHNICAL DATA*	AIR COOLED	WATER COOLED
Flow Rate (m³/h)	170- 2.600	170- 2.600
Operation Pressure (barg)	2- 414	2- 414
Power (kW)	45- 300	45- 300

<sup>\*</sup> This data can be modified based on customer needs





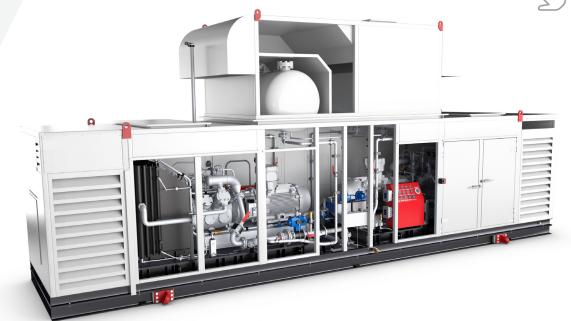














# **Adsorption Air Dryers**

Adsorption compressed air dryers are designed to remove moisture by passing air over a regenerative desiccant material, which attracts and retains water vapour molecules. The term pressure dew point refers to the temperature at which water condensation will occur, a typical pressure dew point specified for an adsorption dryer is-40°C which prevents corrosion.











### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (Nm³/h)	As per requirement			
Dew point (PDP) (°C)	-20 /-70			
Power (kW)	Up to 200 (heated)			

<sup>\*</sup> This data can be modified based on customer needs







# **Refrigerant Air Dryers**

Ingersoll Rand designs and manufactures packages refrigeration Systems with as alternative technical solutions to ensure no more vapor forms in compressed air. This is achieved thanks to the heat exchangers that are used to cool compressed air which will condense the bulk amount of water vapor within the air.











### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h)	4,9 m³/hr- 5.028 m³/hr			
Dew point (PDP)	3			

<sup>\*</sup> This data can be modified based on customer needs













# **Hybrid Air Dryers**

Hybrid compressed air dryers are designed by combining refrigerant and adsorption dryer technology. This unique combination offers higher quality air and lower energy consumption compared to traditional heatless and heat regenerative adsorption dryer technology.

### **Technical Data & Benefits**

TECHNICAL DATA*				
Flow Rate (m³/h)	2.8 cfm – 2.959 cfm			
Operation Pressure (barg)	2.5 to 16			
Power (kW)	up to 325			

<sup>\*</sup> This data can be modified based on customer needs



















# **PSA Nitrogen Generators**

Pressure Swing Adsorption (PSA) is a technology utilized in air separation to enable the creation of a continuous stream of nitrogen by means of air filtration. Ingersoll Rand nitrogen generators use PSA technology to separate nitrogen molecules from other molecules found in compressed air. This modular concept offers greater flexibility.

### **Technical Data & Benefits**

TECHNICAL DATA*	
N <sub>2</sub> Flow Capacity (Nm³/hr)	Max. 400 (module)
N <sub>2</sub> Purity	99-99,99%

<sup>\*</sup> This data can be modified based on customer needs

















# **Membrane Nitrogen Generators**

Membrane Nitrogen Generation Systems consist of fibrous membrane modules arranged in a convenient housing equipped with a control Systems and integral filtration. High quality compressed air can be separated by means of membranes. Dried and cleaned compressed air (<+5°C pdp) that enters these fiber walls is filtered of water vapor, CO2, and oxygen.

### **Technical Data & Benefits**

TECHNICAL DATA*	
N <sub>2</sub> Flow Capacity	Max. 1.000 (module)
N <sub>2</sub> Purity	99,5%

<sup>\*</sup> This data can be modified based on customer needs





















# **Blowers**

We specialize in creating comprehensive blower packages tailored to meet our clients' specific needs. Our designs also integrate a suite of auxiliary equipment like pre-coolers, dryers, filters, receiver tanks, and both closed-loop cooling and chilled water Systems.









### **Learn More**



### **Technical Data & Benefits**

TECHNICAL DATA*		
Flow Rate (m³/h)	up to 15.000	
Operation Pressure (barg)	up to 2.5	
Power (kW)	up to 1.000	

<sup>\*</sup> This data can be modified based on customer needs



# **Oil-Free Reciprocating Air Compressor**

Ingersoll Rand offers a comprehensive range of high-performance reciprocating air compressors, meticulously designed to deliver unparalleled efficiency and reliability. The VH and WH series are engineered to meet the rigorous demands of diverse industries, including manufacturing, food and beverage, and pharmaceuticals. These compressors are renowned for their robust construction, compact design, and low total cost of ownership (TCO). Featuring advanced technologies such as shaftless motors and dynamic balancing, the VH and WH series ensure smooth operation and minimal downtime, making them the optimal choice for businesses seeking dependable and cost-effective compressed air solutions.



	VH Series	WH Series
Motor Type	Shaftless	Shaftless
Capacity Control	0-50-100%	0-50-100%
Service Intervals	8.000 hours	8.000 hours
Design	Plug-and-play, dynamically balanced	Plug-and-play, dynamically balanced
Cooling	Air-cooled	Air-cooled



















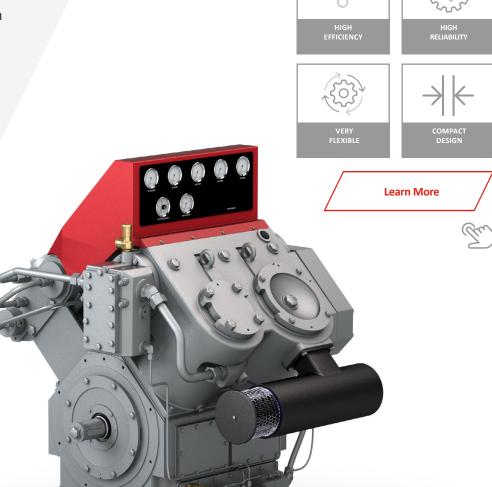
# **High Pressure Air Compressor**

Ingersoll Rand offers a diverse range of high-pressure air and gas compressors, known for their reliability and efficiency. With over a century of expertise, our compressors are utilized in various critical applications worldwide, including laser cutting, CNG refilling, and gas storage. The 5200, 5300, and 5400 ranges are designed to meet the specific needs of different industries, providing flexible and robust solutions. These compressors feature advanced cooling systems, multiple stages, and options for both air and water cooling, ensuring optimal performance and longevity in even the most demanding environments.



AIR COOLED				
Product range	52XX	53XX	54XX	Configured
Pressure range (barg)	10- 40	40- 85	85-414	2- 414
Power range (kW)	4- 75	5.5- 45	7.5- 75	45-300
Capacity (m³/hr)	27- 313	25- 155	24- 170	170- 2600
Lubrication	Pressure	Pressure	Pressure	Pressure
Drive mechanism	Direct or V-belt	Direct or V-belt	Direct or V-belt	Direct or V-belt
Compression	Single acting	Single acting	Single/Double acting	Single/Double acting

WATER COOLED				
Product range	52XX	53XX	54XX	Configured
Pressure range (barg)	10- 40	40- 85	85-414	2-414
Power range (kW)	2.2 - 15	7 - 18.5	2.2 - 18.5	45 - 300
Capacity (m³/hr)	2.85 - 65	28 - 47	8.5 - 43.8	27 - 313
Lubrication	Splash	Pressure	Splash / Pressure	Splash / Pressure
Drive mechanism	Direct or V-belt	Direct or V-belt	Direct or V-belt	Direct or V-belt
Compression	Single acting	Single acting	Single/Double acting	Single/Double acting









# **Breathing Air Compressor**

Ingersoll Rand is a leading provider of high-pressure breathing air compressors, celebrated for their reliability and efficiency. With over a century of industry expertise, Ingersoll Rand has established itself as a trusted name, offering solutions for fire safety, diving, and industrial applications. Our compressors are designed to meet the highest performance and safety standards, ensuring access to clean, breathable air in critical situations. Ingersoll Rand compressors are ideal for a wide range of demanding environments, featuring advanced control systems, ergonomic designs, and robust safety features.









### **Technical Data & Benefits**

	TECHNICAL DATA*
Motor Type	NEMA design ODP 1.15 SF electric motor
Control System	Fully automatic
Design	Compact, ergonomic
Cooling	Water-cooled and air-cooled options
Safety Features	Anti-vibration mounts, auto-drain with muffler/reservoir system









## **Containment Fill Stations**

Ingersoll Rand's containment fill stations are engineered to provide maximum safety and efficiency for filling SCBA and scuba cylinders. These stations are essential for ensuring the safety of divers, firefighters, and industrial workers who rely on high-quality compressed air. Our containment fill stations are designed with enclosed steel chambers and comply with NFPA 1901-2016 standards, offering unparalleled protection during the filling process. With features such as automatic safety interlock mechanisms and ergonomic loading heights, these fill stations are user-friendly and built to withstand the rigors of daily use.

### **Technical Data & Benefits**

TECHNICAL DATA		
Design	Enclosed steel chambers	
Compliance	NFPA 1901-2016 compliant	
Loading Height	Ergonomically designed for ease of use	
Safety Features	Automatic safety interlock mechanism, fill whips with fill adapters	











**Learn More** 



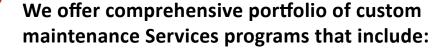






# **Advanced Aftermarket Services & Parts**

We work to increase profitability by minimizing downtime with minimal maintenance requirements and maximized equipment lifetime.





### **PRE-COMMISSIONING** & COMMISSIONING



**Assembly Supervision** 



**Comissioning** 



**Site Training** 

### **SERVICES AGREEMENTS SCOPE**



Preventive Maintenance



**Breakdown** & Repair



**IIoT Ecoplant Field Services** 



Field Services



**Redesigns & Upgrades** 



**Warranty Programs** 



**Inventory & Equipment Audits** 

**Engineered Systems and Services** 

www.ingersollrand.com/air-compressor-systems



**Genuine Spare Parts** 



**Customer Trainings** 













We have a global network of strategically located manufacturing facilities, sales offices and authorized Services centers. This allows us to think globally and act locally, providing Services and support to our customers wherever and whenever they need it. Cutting-edge technology to drive the success of our customers.





## **IIoT Real-time Remote**

Helix™ Connected Platform monitors supply compressed air users with comprehensive machine data in real time, which is required for precise production planning, maximum operational uptime and to protect your investment. Enabling Helix™ monitoring are advanced sensors inside the compressor that send data on a regular basis to our cloud-based platform that you can access anytime.



### **FEATURES**

- Advanced remote analysis
- Real-time knowledge about air Systems
- Evaluates historical data
- Predictive maintenance

### **BENEFITS**



**Maximize uptime** 



**Highest air quality** 



**Cost savings** 



More safety



Maximizes energy efficiency



Works to an open standard - easily support compressed air products from other manufacturers











# **Ecoplant**

EcoPlant™, in collaboration with Ingersoll Rand, is a machine learning compressed air monitoring and control network that optimizes utility operation to achieve peak efficiency of compressed air generation.

**III ECOPLANT** 

EcoPlant™, is a cloud-based SaaS platform that integrates with your compressed air Systems to increase energy efficiency and reduce factory downtime.



### **FEATURES**

- Brand agnostic solution connects to all compressed air technologies
- Machine learning control for energy efficiency and predictive maintenance
- 24/7 continuous monitoring and unlimited data logging
- Manage your air Systems from anywhere in the world

### **BENEFITS**



Positive cash flow on day 1



**Prevent unplanned downtime** 





**Optimized production** changes—dynamic control









# How to contact us



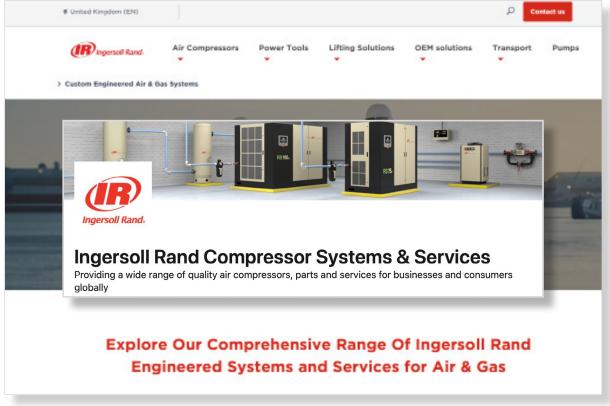




media



Request a Quote



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