



WHATEVER YOUR PROJECTS ARE, INGERSOLL RAND ENGINEERED SOLUTIONS TEAM CAN ADD VALUE

FIND OUT MORE

Lean on an experienced provider of efficient and safe custom engineered to order solutions.

Welcome to Ingersoll Rand Engineered Solutions

Ingersoll Rand Engineered Solutions is a business line of Ingersoll Rand focused on delivering the most reliable engineered to order solutions in the market.

Our world is constantly changing with new technological advancements, growing customer expectations and ever stricter environmental regulations making the demands of modern engineering projects increasingly rigorous.

Simultaneously, challenges such as price fluctuations, supply chain disruptions and qualified workforce shortages are making it difficult to find a trustworthy provider able to offer real support throughout a project's lifecycle.

Ingersoll Rand Engineered Solutions is fully committed to tackling these challenges and guiding its partners through the quickly evolving and increasingly demanding landscape of today's engineering by offering **customized solutions** defined by **innovation** and the **highest quality** of workmanship.

Our products include **compressors and vacuum pumps** for both air and gas with different technologies and **loading arms**. They enable mission-critical processes in **oil & gas, power generation, environmental, chemical & petrochemical, mining, pulp & paper, general industry** and many other key sectors.

Managing the most complex projects around the world with cutting-edge technology, we are always focused on **making our customers successful**.



1. Emco Wheaton

2. Nash

3. EPS EMEIA

4. Garo

5. Nash India

6. EPS APAC

Our strategic brands are at the heart of Ingersoll Rand Engineered Solutions

An umbrella brand giving its customers the unique opportunity to obtain all they need from a single source, Ingersoll Rand Engineered Solutions has been created by four prestigious leading brands with great reputations – **Emco Wheaton, Nash, Garo** and **Ingersoll Rand Engineered Project Solutions (EPS)** – which together boast of more than 300 years of experience. Ingersoll Rand Engineered Solutions harnesses and makes the most of the combined know-how of these brands.

By offering a **unique multi-brand approach**, we give our customers access to an **extensive and complementary portfolio of products and services**, as well as support them through the **unrivalled engineering capabilities** of four world-class pressure and vacuum solutions providers:



**EMCO
WHEATON**[®]

An Ingersoll Rand Business

Emco Wheaton combines expertise and knowledge, with an innovative attitude and unmatched skills, to produce world leading fluid transfer equipment.

Garo[®]

® An Ingersoll Rand Business

Garo has been a manufacturer of liquid ring compressors since 1947. They are the heart of our custom-designed gas compression systems for the oil & gas, petrochemical and chemical industries.

NASH[®]

An Ingersoll Rand Business

Nash is the inventor and market-leading manufacturer of highly engineered liquid ring vacuum and compressors systems as well as Dry vacuum systems that stand out through their high reliability and low total cost of ownership.

IR Ingersoll Rand[®]

Engineering Project Solutions (EPS) has been supplying engineered compressed air nitrogen and oxygen generation packages globally for the last 60 years.

Our Mission

Our strategic brands are synonymous with reliability. **Ingersoll Rand Engineered Solutions mission is to design, develop and deliver and help to manage complex projects with the most trustworthy engineering solutions** allowing our customers to succeed. We are here to **let our partners depend on us to solve all their project challenges.**

To achieve this, we work hard with all our brands to provide the **right tailor-made solutions that will meet our customers' unique** flow requirements and offer them **full support throughout their project's lifecycle.**

You can trust us to always come up with an **innovative, safe and high-quality product solution** that will be the perfect fit for the exacting requirements of your industrial application. We are here to **make life better for our customers and ensure their complete peace of mind.**



The Ingersoll Rand Engineered Solutions Vision

Drawing on their proven experience and impressive track record of completed projects, our strategic brands have been supplying engineered flow solutions to leading companies around the world for many decades. Now, under the Ingersoll Rand Engineered Solutions umbrella, we are continuing to build our reputation and legacy by providing trustworthy, innovative and safe engineered-to-order solutions assisting you throughout the project lifecycle, from the initial conceptual design to the final installation.

We want to be your first-choice global supplier covering all of your engineering needs with experience and innovation. Making life better and ensuring that your projects have a resounding success.



Industries and Applications

We provide our engineered to order solutions for many key industries and industrial applications.



INDUSTRY	Single Stage Vacuum	Two Stage Vacuum	Liquid Ring Compressors	Dry Vacuum	Land Loading Systems	Marine Loading Systems	Screw Compressors	Centrifugal Compressors	Reciprocating Compressors	Air Dryers	Nitrogen & Oxygen Generation	Blowers Systems
Oil & Gas	●	●	●	●	●	●	●	●	●	●	●	●
Chemical & Petrochemical	●	●	●	●	●	●	●	●	●	●	●	●
Pharmaceutical	●	●	●	●	●		●	●	●	●	●	●
Pulp & Paper	●						●	●	●	●	●	●
Power Generation	●	●	●	●			●	●	●	●	●	●
Environmental/ Wastewater Treatment	●		●				●	●	●	●	●	●
Food & Beverage	●	●	●		●	●						
General Manufacturing	●	●					●	●	●	●	●	●
Mining and Construction	●				●		●	●	●	●	●	●

Nash: Efficient and Reliable Engineered Systems

When it comes to vacuum and compressor technology, each industry and each application have their own specific requirements. Nash, as the inventor of the liquid ring pump technology, offers **unparalleled expertise with regard to designing and manufacturing efficient and reliable engineered systems to meet your unique process needs.**

Each engineered system comes packaged, factory tested and ready for operation. It can be easily integrated with the existing processes and automation systems, which minimizes installation and operating costs.

Nash has the experience and expertise to deliver an engineered system that is designed to meet the rigors of even the most demanding applications.



Highly efficient
operation



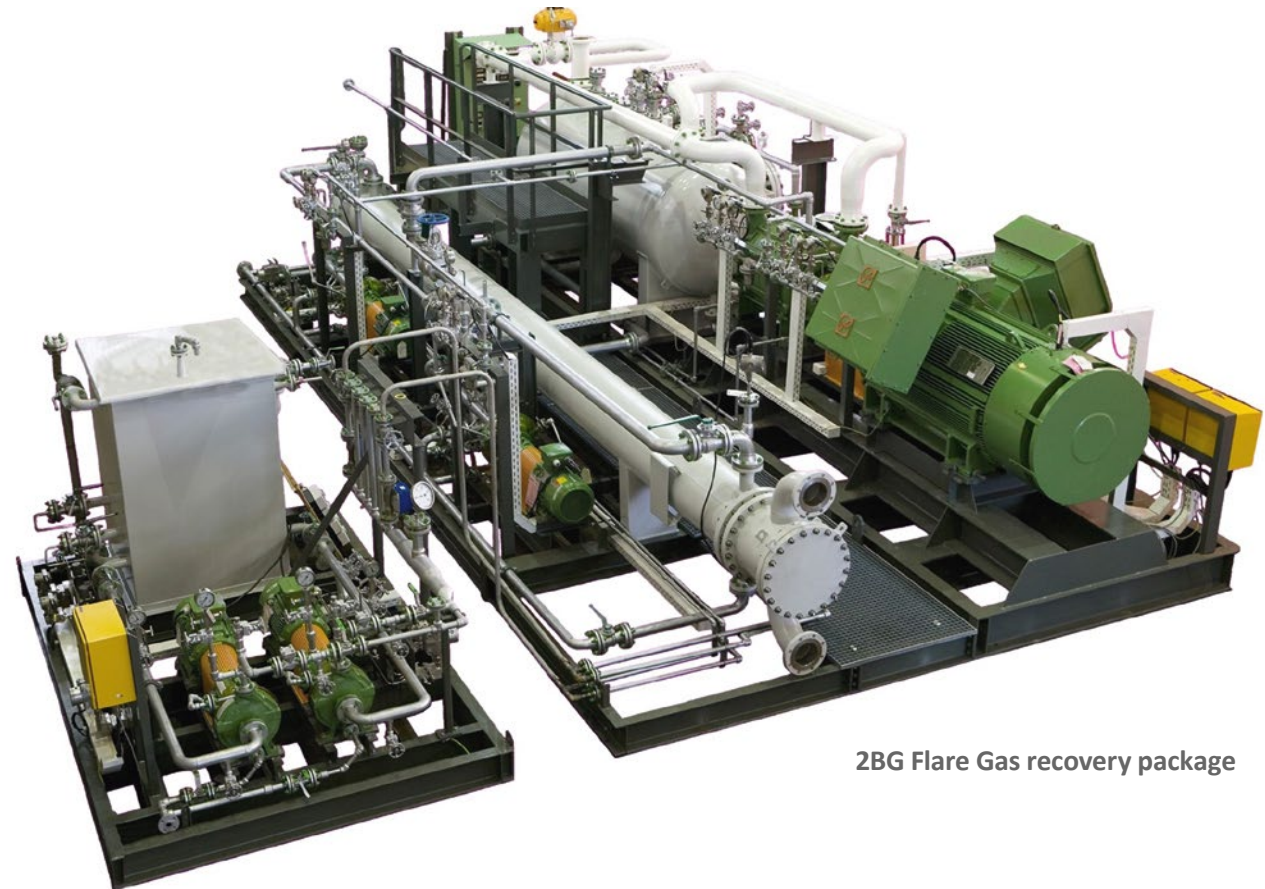
Unrivalled
reliability



Low total cost
of ownership



Easy
maintenance



2BG Flare Gas recovery package

Garó: World-class Compressor Systems

Garó solutions offer a **complete system design and are built around the efficiency of Garó's liquid ring compressors.**

Garó compressor systems **comply with local norms and environmental regulations while reducing costs and minimizing downtime.** Customers around the world rely on Garó's customized packages for a **safe and reliable operation.**

Our key market strengths and advantages include:

- We are a technology leader in flare gas recovery systems (FGRS), vapor recovery units (VRU), vinyl chloride monomer (VCM) recovery and chlorine compression systems.
- We have extensive experience in designing and engineering gas compression packages.
- Our solutions fully comply with API 681, NACE and other standards, as well as with customer requirements.
- We bring all the benefits of liquid ring technology in one engineered to order solution.



Safe and reliable
operation



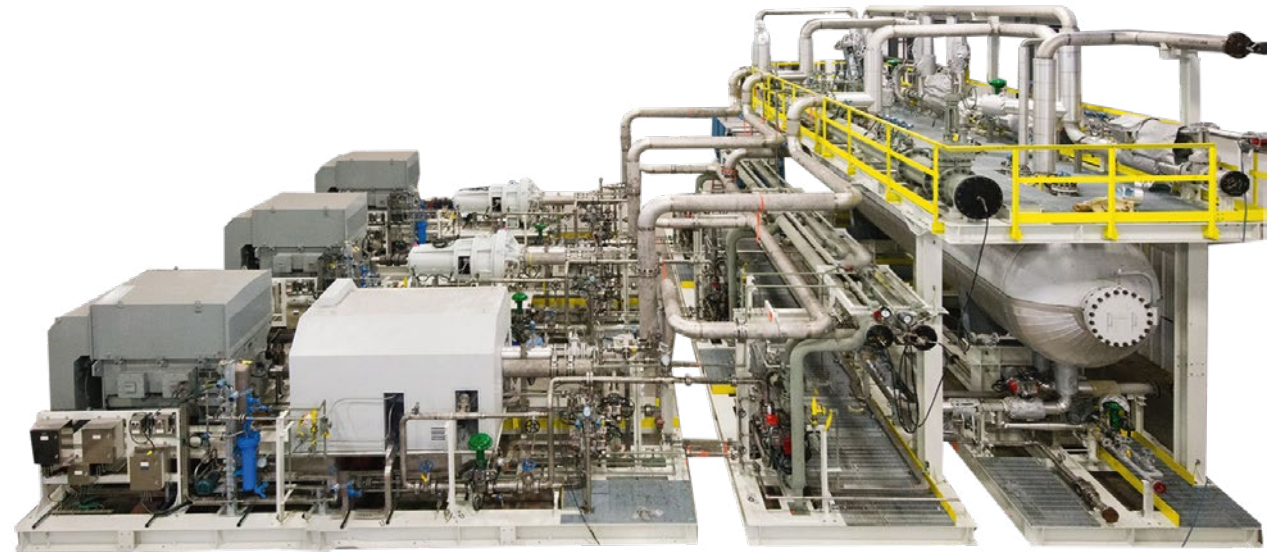
International and
local regulations
and requirements



Easy return
on investment



Minimizing
downtime



Vapor Recovery Package

Emco Wheaton: Safe and Efficient Loading Arms

Emco Wheaton has been the trusted market leader in supplying complex fluid transfer systems for over a century. Manufactured in Kirchhain (Germany), our loading systems are engineered to **safely and efficiently transfer a wide range of liquid and gas products.**

The Emco Wheaton all-inclusive product portfolio comprises both **truck and rail loading systems and marine loading arms.**

Emco Wheaton offers a **comprehensive range of loading arms, entire loading systems and accessories** that are engineered to efficiently load and unload a variety of liquid and gas products onto and from a wide variety of containers, trucks, railcars, barges and ships up to big LNG tankers.

Emco Wheaton designs and manufactures a wide range of **highly engineered marine loading arms** including high-pressure and cryogenic applications.



**Maximum
safety**



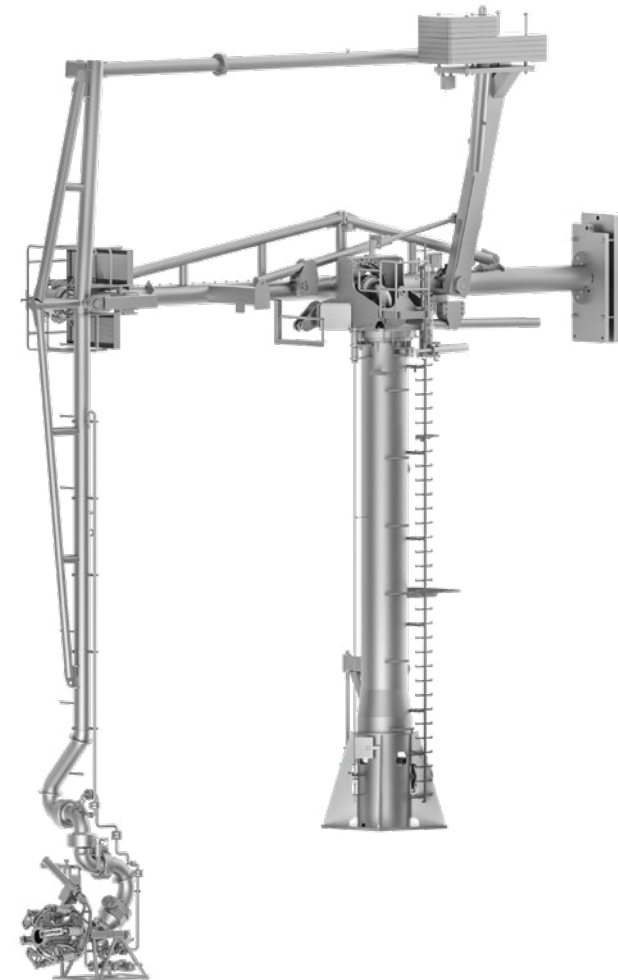
Efficiency



**The ultimate
quality**



**Minimal
maintenance**



Marine Loading Arm

EPS: Engineered Air Systems & Packaged Solutions

Ingersoll Rand Engineering Project Solutions (EPS) manages and implements **engineered to order air packages for complex technical requirement to a wide range of industries.** With our proven experience and unrivalled technical know-how, we provide trustworthy air solutions **engineered to perform and built to provide maximum efficiency, reliability and uptime.**



Operation
in harsh
environments



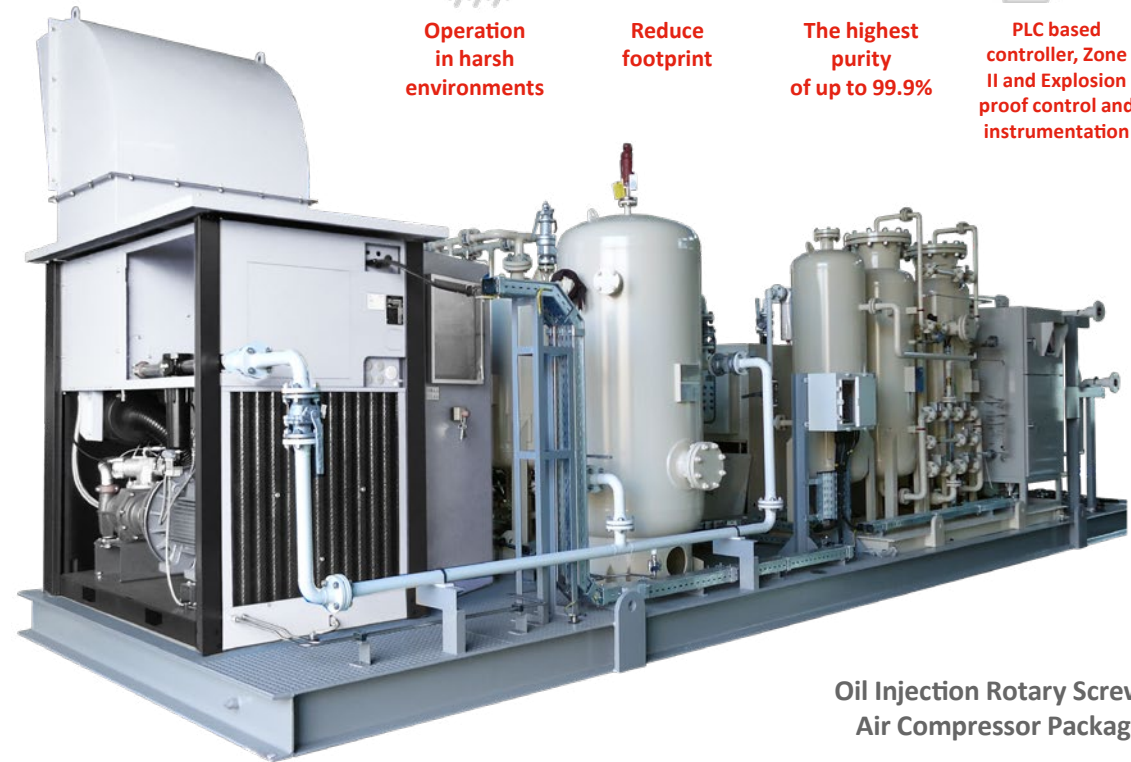
Reduce
footprint



The highest
purity
of up to 99.9%



PLC based
controller, Zone
II and Explosion
proof control and
instrumentation



Oil Injection Rotary Screw
Air Compressor Package

Air Compressor Packages	Air Dryer Packages	Nitrogen & Oxygen Generation Packages	Blower Packages
Our range of highly engineered air compressor packages includes in-demand and varied technologies, including screw lubricated and oil-free, reciprocating and centrifugal.	All standard and fully engineered designs units of refrigerant, adsorption and hybrid air dryers can be fully packaged.	Our custom nitrogen & oxygen generation systems are used in a wide range of industries in the most extreme environmental conditions.	We specialize in highly engineered blowers providing the quality you need and the performance you expect.

Proven Experience - Practice Makes Perfect

The **more than 300 years of combined experience of our strategic brands** help us to fully understand all the needs of complex engineering projects and deal with even the most demanding technical requirements. We are integrating the rich experiences, backgrounds and views of our brands into the culture of the Ingersoll Rand Engineered Solutions umbrella.

Over the years of our brands' existence, we have been developing solutions that still define the systems which we helped to build. **We are a leading expert in the execution of big engineering projects.** With our renowned brands, we have supplied customized flow solutions to many **global leading EPC contractors, OEMs and end-users worldwide.** We have helped private investors including Fortune 500 companies to design, develop and successfully deploy thousands of engineering investments that are fueling their business growth.



Customer Stories



An Ingersoll Rand Business

Nash Delivers Power Megaproject in Record Time Natural Gas Fired Power Plant (Egypt)

- Customer: Leading Power Company
- Products: 12 engineered to order recirculation packages with 24 Nash 2BE1303 single stage liquid ring vacuum pumps
- Application: enable the crucial condenser exhausting process
- Customer Benefits:
 - Strict deadlines compliance
 - Each package was engineered to not only meet the process specifications and performance requirements outlined by the project team but also provided the small footprint required by each plants design



An Ingersoll Rand Business

Maximum Efficiency with Minimum Environmental Impact Refinery (India)

- Customer: Indian Refinery
- Products: Flare Gas Recovery Package, 2 AB 1500
- Application: Flare Gas Recovery
- Customer Benefits:
 - Return on investment after 9 months
 - Demonstrated social and environmental responsibility
 - Easy return on investment
 - Lower emissions



Customer Stories

EMCO WHEATON®

An Ingersoll Rand Business

Emco Wheaton to supply loading equipment for Propane Export Terminal

Propane Export Terminal (Canada)

- Customer: Energy infrastructure company
- Product: E2025 Emco Wheaton boom and bull horn LPG top loading arms.
- Application: loading and unloading propane
- Customer Benefits:
 - Safe, reliable, trouble-free solution
 - Reduced the risk of unplanned downtime and eliminated product loss
 - Help the terminal realize further gains in efficiency and get the most out of their equipment.



IR Ingersoll Rand®

Ingersoll Rand Engineering Project Solutions (EPS) Provides Tailored Air Skids for Combined Cycle Power Plant

- Customer: global leader in power generation
- Product: 4 Oil-free compressors D110-10A / 4 Heatless adsorption dryers A250TXT + pre/post-filters / Air receivers 7000L / 2x11 meters common skid / Interconnection piping / Fully redundant PLC based control system / Electrical cabinet for internal power distribution.
- Application: Instrument and Service Air
- Customer Benefits:
 - Instrument and service air with a reduced/ optimized footprint.
 - A Plug & Play solution: few terminal points to connect at site, facilitating easy installation and start-up.



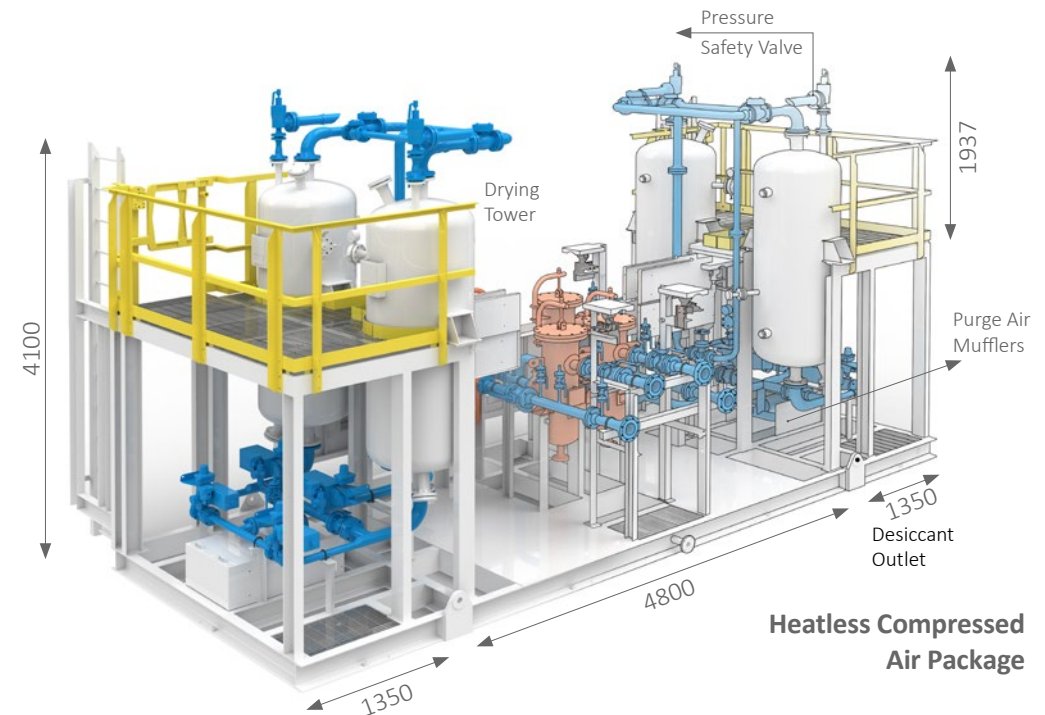
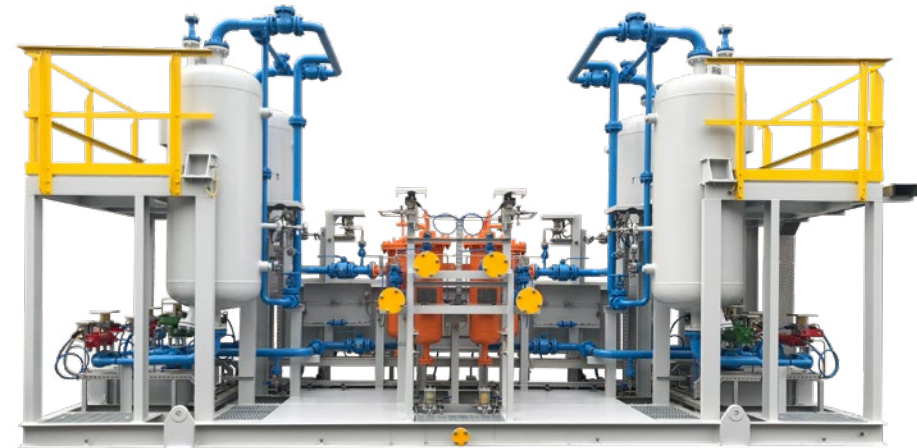
Customized Solutions – From Concept to Factory Floor

At Ingersoll Rand Engineered Solutions we know that each of our customers have their unique necessities.

We are able to take care of your project during each and every of its stages, **from the initial concept design, through the pre-feed, feed, detailed design and procurement phase to construction, commissioning and aftermarket support.**

All the machine packages and solutions that we provide can be **tailored to the most demanding technical specifications** of your application. Ingersoll Rand Engineered Solutions systems 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, ATEX, iECEx, ASME, ANSI and DIN standards,** among others.



Heatless Compressed Air Package

Our Innovative DNA

Innovation is **part of the Ingersoll Rand Engineered Solutions DNA**. For decades our strategic brands have been designing the most efficient solutions for our clients to make their projects a total success.

Solving Challenges with Innovation

At Ingersoll Rand Engineered Solutions we make the most of the exceptional R&D engineering teams from our strategic brands that are dedicated to developing new ideas which increase productivity and help overcome customers' challenges.

We provide **comprehensive innovative solutions that support your project throughout its lifecycle**.



Digitization & Industry 4.0

In the age of Industry 4.0, our world continues to shift toward digitalization. At Ingersoll Rand Engineered Solutions, we know that the digitalization of air systems and transfer solutions can bring tangible benefits for our customers' businesses. This is the reason why our innovation center is working on the development of automated solutions based on digitalization & IoT, including on control panels designed to help customers predict, manage and optimize the performance of our machines.

Improving efficiency through innovation

We continuously work on technological developments that allow us to offer superior efficiency which brings cost savings to our customers and minimizes their ecological footprint. An example of this are Nash's highly valued hybrid vacuum systems. A recent system installation of this kind allowed our customer to reduce their steam consumption by 15%. This improvement was recognized by KKR's Green Solutions Platform.

Application development

We work together with our clients. We investigate and develop the solution that best meets the application's technical requirements. An example of this are Emco Wheaton's land and marine loading arms. Due to the current high demand for hydrogen, our Emco Wheaton R&D department is designing the safest and most reliable hydrogen transfer solution for trucks, railcars and ships.

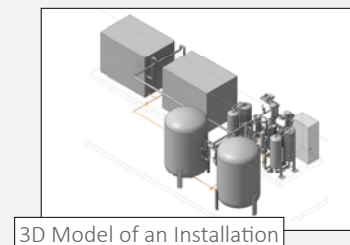
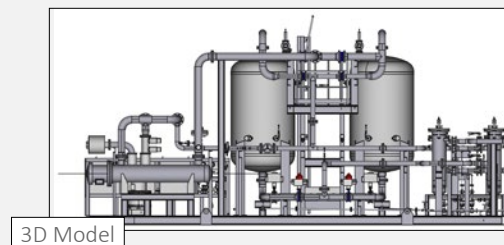
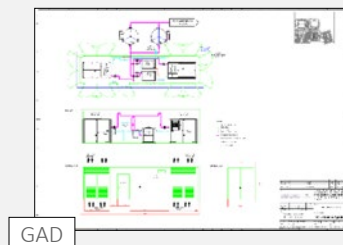
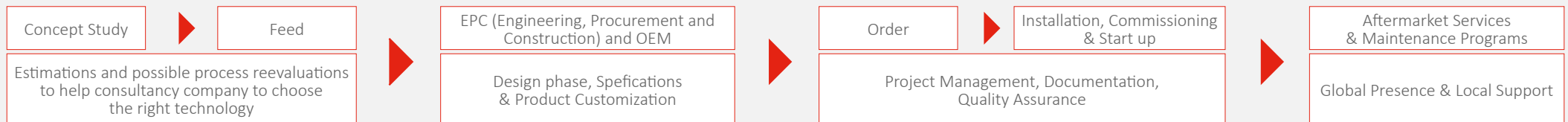
Project Management - The Exceptional Support That You Need

Thanks to our **impressive experience and track record of thousands of completed installations** we know how to help our clients proceed smoothly through the entire process. We are a seasoned team of experts and **we provide full project management support from** conceptual design to construction, commissioning and aftermarket support.

Our expert engineers and project managers **deliver on time and work to exceed technical support expectations.** And they do that during all project phases including **technical & quality management with complete documentation support.**



Ingersoll Rand Engineered Solutions supports you throughout the project lifecycle



Advanced Service

At Ingersoll Rand Engineered Solutions our aftermarket support ensures your process runs as **safely, efficiently** and **successfully** as possible, **safeguarding your investment and giving you peace of mind**. We work to **increase profitability by minimizing downtime with minimal maintenance requirements and maximized equipment lifetime**.

We have a global network of strategically located manufacturing facilities, sales offices and authorized service centers. This allows us to **think globally and act locally**, providing service and support to our customers wherever and whenever they need it. We offer a **comprehensive portfolio of maintenance service packages and programs** that include:



**Inventory checks
and equipment
audits**



**Pre-
commissioning
activities**



**Commissioning
and start-up**



Site trainings



**Genuine
spare parts**



**Preventive and
corrective
maintenance**



**Performance and reliability
upgrades, post-upgrades
of the customer's machines**

We take customer service very seriously and we **have been developing our aftermarket capabilities year on year**. Our customers rely on us day after day to keep their systems running **safely, cost-efficiently and with optimum performance**.

Global Presence

Ingersoll Rand Engineered Solutions has a global presence and a local focus. With **an international team of engineers and commercial experts** as well as **a network of local partners** who support us we are able to deliver our engineered to order solutions and ensure the success of your project practically **in any location around the world.**

How to contact us



VISIT OUR WEBSITES:



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