



Pioneering Technology, Efficient Energy

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General Catalogue



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About HATCO

HATCO is a Technology-Based industrial company recognized as one of the leading market players in the field of industrial air & gas plants, process gas compression Systems, hydrogen purification plants, instrument air production and distribution packages, and integrated engineering solutions for various strategic industries.

With three decades of sustained industrial activity, the company has established a strong and credible position within Iran's strategic sectors, particularly in oil, gas, petrochemical, steel, mining, and energy infrastructure projects. Supported by advanced engineering capability, extensive project experience, and a highly specialized technical structure, HATCO has evolved into a trusted industrial partner for complex and large-scale developments requiring precision, reliability, and long-term operational performance.

Today, HATCO with nearly 3 decades of experience has successfully performed more than 2000 projects in the fields of compressed air & gas as well as industrial gas plants. The scale, diversity, and technical complexity of these projects have positioned the company among the recognized market leaders in industrial gas generation systems, cryogenic technologies, hydrogen purification solutions, and industrial air & gas compressor packages within the region. The company's growing project portfolio and long-standing presence across critical industrial sectors reflect both the confidence of its clients and the consistency of its engineering and execution standards.

Since its establishment, HATCO has pursued a structured and engineering-driven approach toward industrial development. The company's operational framework encompasses the complete EPC lifecycle, including conceptual studies, process engineering, detailed design, procurement, manufacturing, construction, installation, commissioning, technical inspection, operational training, and after-sales support services. This fully integrated execution model enables HATCO to deliver unified project solutions while maintaining strict control over quality, technical coordination, operational efficiency, and project timelines.

HATCO specializes in the design & engineering, manufacturing, and implementation of both air separation unit technologies by cryogenic (ASU) and pressure swing adsorption (PSA), hydrogen Purification, process gas compression packages, instrument air packages, cold box systems, cryogenic storage solutions, ambient vaporizers, and related industrial infrastructure. The company is recognized as one of the few domestic and technology-base industrial organizations possessing the technical capability and manufacturing expertise required to execute highly specialized cryogenic systems and industrial air & gas projects with world class standards.



Today, HATCO is actively managing and executing 27 major projects in strategic industries.

A defining characteristic of HATCO is its ability to combine technical depth with practical industrial understanding.

The company does not merely supply equipment; rather, it develops integrated process-oriented solutions designed around operational reliability, lifecycle performance, energy optimization, maintainability, and process continuity. Each project is approached through comprehensive engineering analysis and a detailed understanding of the client's operational environment, ensuring that delivered systems provide measurable long-term value beyond initial project completion.

Over the years, HATCO has played an important role in numerous national-scale industrial developments and critical infrastructure projects. The company has successfully contributed to major refinery, petrochemical, Steel & Mineral Plants and industrial facilities through the supply and execution of nitrogen generation systems, oxygen plants, hydrogen purification units, compression plants, flare gas recovery systems, instrument air solutions, and specialized process equipment. Participation in strategic projects associated with organizations such as Isfahan Refinery, Tehran Refinery, Shiraz Refinery, Zagros Petrochemical, Apadana Petrochemical, Marun Petrochemical, Bidboland Gas Refinery, and several major refining and petrochemical projects developments industrial developments reflects the company's established credibility and execution capability within highly demanding industrial environments.

HATCO's continued growth has been strongly connected to its commitment to strengthening domestic engineering capability and expanding the localization of advanced industrial technologies.

Through sustained investment in technical expertise, manufacturing infrastructure, engineering development, and multidisciplinary



This commitment to localized capability development has enabled HATCO to establish itself not only as a reliable contractor and manufacturer, but also as a significant contributor to the advancement of national industrial capacity and technological self-reliance. The company's project execution philosophy is founded on precision, accountability, systematic management, and operational discipline. As a project-oriented manufacturer, HATCO places strong emphasis on integrated planning, process control, risk management, resource optimization, and transparent coordination across all execution stages. This structured methodology allows the company to maintain consistency in quality and performance while effectively managing technically complex projects under demanding operational conditions.

In parallel with its engineering and execution activities, HATCO maintains a strong organizational commitment to quality assurance, occupational safety, environmental responsibility, and sustainable industrial practices. The company has implemented internationally recognized management systems, including ISO 9001:2015 for Quality Management, ISO 14001:2015 for Environmental Management, ISO 45001:2018 for Occupational Health and Safety Management, and ISO 21502:2020 for Project Management. These certifications reinforce HATCO's commitment to disciplined execution, continuous performance improvement, operational safety, and alignment with global industrial standards.

Safety and environmental stewardship remain integral components of the company's operational culture. HATCO recognizes that sustainable industrial development requires a balanced approach that integrates technical performance with environmental responsibility and workforce protection. Accordingly, HSE principles are embedded throughout engineering, manufacturing, construction, commissioning, and operational activities in order to minimize risk exposure, improve workplace safety, and reduce environmental impact across project lifecycles.

HATCO's organizational culture is built upon professionalism, collaboration, responsibility, transparency, and merit-based growth. The company believes that sustainable industrial success is achieved through technical competence, ethical conduct, disciplined teamwork, and long-term professional relationships. These values shape the company's internal culture while also strengthening its relationships with clients, industrial partners, consultants, suppliers, and stakeholders.

The company's multidisciplinary engineering teams possess extensive expertise across process engineering, mechanical systems, instrumentation, project management, commissioning, operations, and industrial maintenance. Supported by practical project experience and a strong technical foundation, HATCO is capable of delivering highly customized industrial solutions tailored to the operational, technical, and strategic requirements of each client.



In the field of industrial compressor systems, HATCO has established a particularly strong position through the supply and execution of centrifugal compressors, reciprocating compressors, oil-free screw and oil-injected screw compressor packages for both air and process gas applications. Combined with the company's expertise in cryogenic systems, aluminum plate-fin heat exchangers, cold boxes, industrial gas storage systems, and gas generation technologies, these capabilities enable HATCO to provide complete and integrated process infrastructure solutions for a wide range of industrial facilities. One of the company's most significant strengths lies in its ability to maintain execution flexibility while preserving engineering consistency and operational quality. Industrial projects frequently involve evolving technical requirements, coordination challenges, and complex site conditions. HATCO's technical structure and project management approach allow the company to respond effectively to these dynamics while maintaining project integrity, execution discipline, and operational reliability.

As industries continue moving toward higher efficiency standards, integrated process systems, optimized resource utilization, and lower environmental impact, HATCO remains focused on strengthening its position as a leading industrial solutions provider within the regional market. The company continuously works toward expanding its engineering capabilities, manufacturing capacity, technical expertise, and operational excellence in order to meet the growing demands of modern industrial infrastructure and advanced process industries.

Today, HATCO represents more than an equipment supplier or industrial contractor. The company stands as a long-term engineering partner and market-leading industrial organization committed to delivering dependable solutions, supporting strategic infrastructure development, advancing industrial capability, and creating sustainable value for clients and stakeholders alike. Through engineering precision, execution discipline, technical expertise, and a forward-looking industrial vision, HATCO continues to contribute to the future of industrial development across the region.

At HATCO, our principles are not declarative statements; they are embedded within our operating model and reflected in the way we design, deliver, and continuously improve industrial solutions. They define a structured mindset that connects engineering excellence with long-term industrial value creation.

Responsibility is embedded into our decision-making framework. We operate with clear ownership of outcomes, ensuring that every commitment is traceable to accountable actions, defined processes, and measurable performance. This accountability-driven approach ensures alignment between intent and execution.

We prioritize solutions that translate technical advancement into measurable operational improvement. In this context, engineering development is evaluated not by complexity, but by its ability to enhance efficiency, reliability, and system performance in real-world conditions.





With more than 20,000 m² manufacturing infrastructures, We view technical knowledge as the fundamental enabler of sustainable industrial progress. Technical depth, continuous learning, and the disciplined integration of expertise into practical application form the basis of our engineering approach. In this sense, technical knowledge is not treated as an asset to be stored, but as a capability to be continuously developed and operationalized.

Quality is regarded as a structural requirement for trust. It is not an output metric, but a governing discipline that shapes every phase of execution from concept development and engineering design to delivery and commissioning. Consistency, precision, and reliability define the standard by which we measure ourselves.

Sustainability is integrated as a core design parameter rather than an external consideration. We recognize that long-term industrial competitiveness depends on the responsible use of resources, system efficiency, and alignment with environmental constraints. Accordingly, sustainability is embedded across engineering and operational decision layers.

Collaboration is treated as an enabling system for complexity management. We rely on structured coordination, cross-functional integration, and knowledge sharing to ensure that multidisciplinary challenges are addressed with coherence and efficiency. This collaborative framework strengthens both execution speed and solution quality.

People represent the primary source of capability within the organization. While technology provides tools and systems, it is human expertise that defines direction, judgment, and adaptability. We therefore focus on developing competencies, reinforcing professional standards, and enabling continuous capability growth.

Commitment is expressed through disciplined execution. Every engagement is supported by defined scope, structured planning, and controlled delivery mechanisms. This ensures that commitments are not only made, but systematically fulfilled under predictable performance conditions.

Ultimately, HATCO is focused on building repeatable, scalable, and transferable industrial capabilities. Our objective extends beyond individual project success toward the establishment of standardized methodologies and resilient systems that enable sustained performance across diverse operational environments.

Why HATCO: Your Trusted Partner

HATCO stands out with turnkey EPC execution and industry-leading reliability as a Technology-base company. From day one, we serve as your single point of contact - overseeing every phase from detailed design to final commissioning. Our engineers and project managers apply proven processes in accordance with international QA/QC requirements so that even most complex projects deliver on promise. We combine global best practices with local expertise. and support. With near 30 years of experience and a portfolio of reference projects, HATCO brings the credibility of a major firm but with personalized service and responsiveness.

- Turnkey delivery: Single-vendor oversight (engineering, procurement, construction, commissioning) streamlines communication and risk, keeping projects on schedule.
- Deep expertise: Cross-disciplinary teams with more than 100 engineers blend knowledge of compressors, gas systems, and process plants for optimized solutions.
- Quality and safety: Certified integrated management system (ISO 9001, ISO 45001, ISO 14001, HSE-MS, and ISO 21502) and other applicable international standards (e.g. API, CAGI, IEC, ANSI) and rigorous testing deliver reliable performance and compliance.
- Local manufacturing: In-house fabrication (large machining, welding, assembly) cuts lead times and ensures strict quality control.
- Performance focus: Proven designs minimize downtime and contamination risk in critical applications.
- Customer-centric: High-touch service and global support network ensure timely maintenance, upgrades and spare parts when you need them.

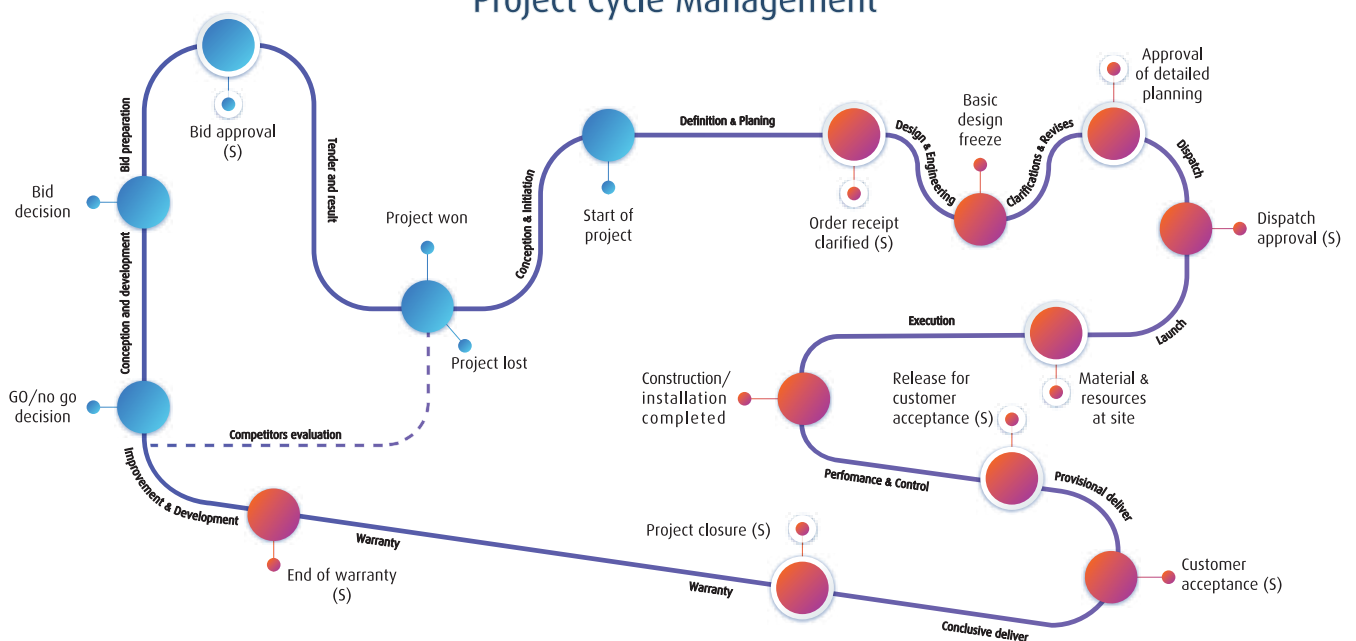


HATCO Capabilities: End-to-End Project Delivery

HATCO's capabilities cover the full project lifecycle, delivering value at every stage. We offer comprehensive services—from feasibility studies and detailed engineering to procurement, fabrication, installation, and commissioning. Our global supply chain and partnerships with leading OEMs ensure access to high-quality components. In-house facilities accommodate large-scale fabrications and system integration under one roof. We employ advanced planning and strong project management to synchronize all activities. Throughout construction and commissioning, strict inspections and Factory Acceptance Tests guarantee systems meet specifications.

- **Full-spectrum services:** Engineering, design, procurement, fabrication and field installation, commissioning, supervision, all managed internally. This integrated approach reduces complexity and handoff delays.
- **Proven management:** Multi-disciplinary teams coordinate contractors and vendors as a single EPC contractor, streamlining communication and keeping projects on track.
- **Advanced fabrication:** State-of-the-art shop floor (machining centers, welding lines, assembly areas) for pressure vessels, skids, and piping.
- **Quality assurance:** Understanding all customer requirements and full commitment to quality principles drives us to ensure that all control and testing are performed and documented in accordance with internal quality controls and third-party inspection certificates to ensure the precision operation of each equipment and system integrity. Factory acceptance tests verify product performance before shipment, just as site acceptance tests (e.g. pre-commissioning and commissioning processes) validate them on the site.
- **Supply chain & logistics:** Global procurement network with stringent vendor audits ensures reliability. Modular skid designs allow faster offshore or remote location installation.

Project Cycle Management



After-Sales Services: Support & Spare Parts

HATCO's commitment extends beyond delivery. Our after-sales program offers tiered service agreements to keep your systems running at peak performance. Customers can choose from standard maintenance contracts up to premium plans with 7/24 emergency support. Typical SLAs include guaranteed response times and regular preventive maintenance visits. We maintain a global logistics network and original-equipment spare parts warehouses to ensure rapid parts availability. In fact, we offer delivery of critical spares for decades after installation. Online support (remote diagnostics, helpdesk) and field service engineers are available to troubleshoot issues quickly. Additional offerings include training for customer operators and periodic system health checks. This comprehensive support program minimizes downtime and protects your investment over the long term.

- Preventive maintenance: Customized plans with fixed intervals, including inspections, replacements, and performance tuning to extend equipment life.
- Spare parts policy: Stock of common and long-lead items at regional hubs; original parts guaranteed for decades to come. We expedite urgent parts (typically delivered within days) to minimize downtime.
- Technical support: 24/7 helpdesk with remote diagnostic tools; expert field teams available globally.
- Training & upgrades: On-site training for customer personnel; retrofit/upgrade kits offered to improve efficiency (e.g. upgraded control units, seals).

Beyond maintenance and spare parts, HATCO partners with customers throughout the entire lifecycle of their assets, ensuring reliable operation under the most demanding industrial conditions. By combining engineering expertise with proactive service planning, predictive maintenance strategies, and continuous technical consultation, we help optimize equipment performance while reducing lifecycle costs and unplanned shutdowns. Our specialists continuously evaluate system condition, recommend performance improvements, and support customers in adapting their facilities to evolving operational requirements. As technologies advance, HATCO also provides modernization and upgrade solutions that enhance efficiency, improve reliability, and extend equipment service life without compromising operational continuity. Through long-term collaboration, responsive support, and a commitment to technical excellence, we ensure that every HATCO solution continues to deliver safe, efficient, and sustainable performance for decades to come.



Sustainability & ESG: Responsible Innovation

HATCO is committed to sustainable development and measurable ESG performance. Our sustainability strategy includes setting clear targets and KPIs for emissions, energy, and resource use, aligned with global best practices. For example, we are targeting a 25% reduction in Scope 1 and 2 CO₂ intensity by 2030 (vs. 2025 baseline) via energy-efficient designs and renewable energy adoption, measured through annual GHG inventories. We aim for a 15% improvement in energy efficiency by 2030, audited under an ISO 50001 energy management system. In line with industry leadership, we track metrics such as “customer avoided emissions” – similar to Siemens reporting ~694 million tons avoided in 2025 through eco-friendly products. HATCO also emphasizes responsible sourcing, waste reduction, and social governance (safety training, diversity programs). Our customers benefit from our eco-designed solutions (e.g. high-efficiency compressors, heat-recovery options) that contribute to their own sustainability goals.

- Emissions targets: KPI 1: Reduce CO₂ intensity by 25% by 2030 (2025 baseline), with annual tracking via verified carbon accounting. Method: Annual GHG inventory (e.g. ISO 14064).

- Energy efficiency: KPI 2: Improve energy use per production unit by 15 % by 2030. efficiency projects can cut industrial emissions by ~20 %. Method: Implement ISO 50001 energy programs and regular efficiency audits.

- Renewables & resources: KPI 3: Source ≥ 40 % of electricity from renewables by 2030; reduce water use by 20 % by 2030.

Method: Metering of energy mix and water consumption, reported to stakeholders.

- Product Eco-Design: We incorporate low-emission refrigerants and high-efficiency motors as standard. Over two-thirds of product portfolio follows robust eco-design (benchmark: Siemens reports 67 % coverage).

Sustainability at HATCO is embedded in our engineering philosophy and operational strategy, driving continuous improvement across the entire value chain — from concept development and equipment design to manufacturing, commissioning, and lifecycle support. By applying energy-efficient technologies, digital monitoring capabilities, and advanced engineering methodologies, we enable industries to achieve higher performance while reducing environmental impact.



HATCO Portfolio



Advanced Industrial Gas, Compression,
and Cryogenic Solutions



HATCO's product portfolio is designed to address the core requirements of modern process industries, where efficiency, reliability, and operational continuity are critical performance drivers. The range covers integrated systems for air separation, hydrogen purification, air and gas compression, purification, and cryogenic handling. Each product category is engineered to meet stringent industrial standards, ensuring stable operation under demanding process conditions while supporting long-term energy efficiency and lifecycle optimization. The portfolio reflects a systems-oriented approach in which each unit can operate independently or as part of a fully integrated industrial gas infrastructure.





Air Separation Units (ASU) Cryogenic Technology

Air Separation Units based on cryogenic technology represent one of the most efficient and scalable methods for producing high-purity industrial gases such as oxygen, nitrogen and argon. ASUs utilize deep cooling and fractional distillation of atmospheric air under controlled thermodynamic conditions.



HATCO's ASU solutions are engineered for high recovery rates, energy-optimized operation, and stable long-term performance, making them suitable for various industrial applications including metallurgy, petrochemical complexes, Refining, petrochemical, medical, food industry and process industries.





ColdBox Assembly

Coldbox systems are the core cryogenic assemblies used in air separation and gas liquefaction processes.

They house heat exchangers, rectification columns, piping and controlling components, and insulation systems within a thermally controlled environment. HATCO-designed ColdBoxes focus on minimizing thermal losses, maximizing process efficiency, and ensuring mechanical stability under extreme temperature conditions.



Mini & Micro LNG Plants & Regasification Units

Integrated liquefaction facilities engineered to convert natural gas into LNG for efficient storage, transportation, and distribution. These solutions enable flexible energy deployment while maximizing resource utilization and operational efficiency.





Hydrogen Purification Package PSA/TPSA Technologies

Hydrogen production units based on Pressure Swing Adsorption (PSA) technology enable efficient separation and purification of hydrogen from hydrocarbon feed gas mixtures. This process relies on selective adsorption under pressure variations to achieve high-purity hydrogen output. HATCO's PSA systems are designed for high recovery efficiency, operational stability, and integration with upstream reforming or industrial gas networks, supporting hydrogen applications in refining, chemical processing, and energy systems.





Nitrogen Generation Package PSA / VPSA Technologies

HATCO's nitrogen generation solutions are engineered for flexible purity control, low energy consumption, and continuous industrial operation across multiple sectors.

Nitrogen generation systems using PSA and Vacuum Pressure Swing Adsorption (VPSA) technologies provide on-site production of high-purity nitrogen. These systems eliminate the need for external nitrogen supply chains, reducing operational costs and improving reliability.





Nitrogen Generation Package Membrane Technology

Membrane-based nitrogen generation systems utilize selective gas permeation to separate nitrogen from compressed air. This technology offers compact design, fast start-up, and low maintenance requirements. HATCO's membrane systems are optimized for applications requiring moderate purity levels, high operational flexibility, and space-efficient installation.





Compressed Air Dryers

Compressed air dryers are essential for removing moisture from compressed air systems to prevent corrosion, freezing, and process contamination. These systems operate through of the adsorption-based drying or refrigeration mechanisms. HATCO's dryer solutions are engineered for low pressure drop, high dew point stability, and continuous operational reliability in industrial environments.



Centrifugal Process Gas Compressors



Centrifugal process gas compressors are engineered for handling a wide range of industrial gases under high flow and medium-to-high pressure conditions.

These systems are designed to ensure gas integrity, thermal stability, and mechanical reliability during continuous operation. HATCO's solutions focus on minimizing vibration, maximizing aerodynamic efficiency, and ensuring safe operation in critical process environments up to volume flow 600,000 m³/hr and discharge pressure 1,000 bar such as refineries, gas processing facilities and petrochemical plants.



Centrifugal Air Compressors



Centrifugal air compressors are designed for continuous high-capacity air delivery in large industrial systems.

These machines operate through dynamic compression using high-speed impellers, enabling oil-free, stable, and efficient air supply. HATCO's centrifugal compressor systems are optimized for energy efficiency, reduced mechanical losses, and operational reliability under varying load conditions, up to flow capacity 230,000 m³/hr and discharge pressure 60 bar making them ideal for integration with ASU systems and large-scale process plants.





Screw Process Gas Compressors

Screw compressors for process gases are positive displacement systems designed for stable and continuous gas compression in medium-capacity applications. Their robust rotor design ensures consistent flow delivery even under fluctuating process conditions. HATCO's screw compressor systems are developed to handle chemically diverse gases with high reliability, offering strong resistance to operational wear and ensuring long service life in industrial environments up to flow capacity 230 m³/min and discharge pressure 10 bar.





Oil-Free Screw Air Compressors

Oil-free screw air compressors are critical for applications requiring contaminant-free compressed air, such as oil, gas & petrochemicals pharmaceuticals, electronics, and food-grade industries.

These systems eliminate oil contact within the compression chamber, ensuring absolute air purity up to flow capacity 86 m³/min and discharge pressure 10 bar. HATCO's oil-free solutions are engineered with precision rotor alignment and advanced sealing technologies to deliver high efficiency, low maintenance requirements, and compliance with strict air quality standards.





Oil-Injected Screw Air Compressors

Oil-injected screw compressors provide a highly efficient and cost-effective solution for general industrial air compression needs. The injected oil acts as a cooling and sealing medium, improving compression efficiency and reducing mechanical wear. HATCO's systems are optimized for energy efficiency, durability, and stable performance under continuous industrial operation up to flow capacity 72 m³/min and discharge pressure 13 bar, making them suitable for a wide range of manufacturing and utility applications.





Reciprocating Process Gas & Air Compressors

Reciprocating process gas and air compressors are designed for high-pressure applications requiring precise control and intermittent or continuous operation and also utilized in critical process industries. These systems capable of compressing a wide range of industrial gases with high reliability and safety standards use piston-driven compression to achieve high discharge pressures with strong operational flexibility. HATCO's reciprocating compressor solutions are engineered for mechanical robustness, pressure stability, and adaptability up to 6,000 kW and 1,000 bar along with the emphasize on sealing integrity, thermal management, and operational stability, ensuring safe performance in chemically sensitive and high-pressure demanding environments.





Cryogenic Storage Tanks

Cryogenic storage tanks are doubled wall vessels designed to store gases in liquid form at extremely low temperatures. These systems incorporate advanced insulation technologies to minimize boil-off losses and maintain product stability. HATCO's storage solutions ensure high structural integrity, safety compliance, and long-term thermal efficiency for industrial gas storage applications.





Ambient Vaporizer

Vaporizers are used to convert liquefied gases such as oxygen, nitrogen, or LNG into gaseous form for industrial use. These systems operate through controlled heat exchange with ambient air or external heat sources. HATCO's vaporizer solutions are designed for high thermal efficiency, safe phase transition, and stable gas delivery under variable environmental conditions.





Pressure Vessels & Absorber

Pressure vessels are engineered containers designed to safely store and process gases and liquids under internal pressure from lower to highest levels. These equipment shall be fabricated in compliance with international design codes and highest safety standards. HATCO's pressure vessel solutions emphasize structural reliability, corrosion resistance, and long-term operational safety in demanding industrial environments.

Engineered pressure vessels designed to store compressed air and some industrial gases (such as N_2 gas). While seemingly simple, these equipment has relatively diverse and effective applications in the production and distribution of compressed air plants, from acting as a cooling coil at the outlet of air compressors to stabilizing and absorbing pressure fluctuations within the system, thereby improving process reliability, operational flexibility and the efficiency of the related package.





Air & Gas Receivers

Engineered pressure vessels designed to store compressed air and some industrial gases (such as N_2 gas). While seemingly simple, these equipment has relatively diverse and effective applications in the production and distribution of compressed air plants, from acting as a cooling coil at the outlet of air compressors to stabilizing and absorbing pressure fluctuations within the system, thereby improving process reliability, operational flexibility and the efficiency of the related package.



Balance of Plant (BoP)

Integrated Infrastructure for Safe, Reliable, and Efficient Plant Operation

Balance of Plant (BoP) comprises the complete range of auxiliary systems, utility facilities, and supporting infrastructure required to enable the safe, reliable, and continuous operation of an industrial process plant. While the core process units perform the primary production function, BoP systems provide the essential services that sustain process integrity, operational stability, equipment reliability, and plant availability throughout the entire operating lifecycle.

A comprehensive Balance of Plant configuration integrates utility generation and distribution, electrical power systems, instrumentation and automation, process and utility piping, mechanical auxiliaries, civil and structural facilities, as well as all interconnecting services into a unified operational infrastructure. The seamless interaction of these systems ensures that process equipment operates within its design parameters while maintaining high levels of safety, efficiency, and operational flexibility.



The scope of Balance of Plant typically includes:

- Electrical power distribution and motor control systems
- Instrumentation, control Systems, DCS and communication networks
- Process, utility, and service piping systems
- Cable routing, pipe racks, and structural support systems
- Cooling water, chilled water, and closed-loop utility systems
- Firewater, firefighting, drainage, vent, and relief systems
- HVAC systems for industrial and critical facilities
- Purification equipment and distribution systems

As an integrated engineering discipline, Balance of Plant plays a critical role in maximizing operational reliability, process safety, maintainability, energy efficiency, and lifecycle performance. A well-engineered BoP minimizes operational constraints, improves equipment accessibility, simplifies maintenance activities, and provides the flexibility required for future plant expansion and modernization.

Filtration systems are designed to remove particulates, oil aerosols, and contaminants from gas and air streams. These systems ensure process integrity, equipment protection, and compliance with industrial purity standards. HATCO's filtration solutions are developed for high efficiency, low maintenance, and compatibility with a wide range of industrial gas systems.

Balance of Plant (BoP): Instrumentation & Control Systems

Advanced automation and process control solutions that provide real-time monitoring, precise operational management, and enhanced plant safety. These systems enable optimized performance and greater process reliability.

HATCO's product portfolio represents a comprehensive and integrated approach to industrial gas, compression, and cryogenic technologies. By combining advanced engineering design with system-level optimization, the portfolio enables reliable performance across a wide range of industrial applications. Each product category is developed with a focus on efficiency, safety, and long-term operational stability, supporting customers in achieving sustainable and high-performance industrial operations.



Balance of Plant (BoP): Piping & Steel Structures

Comprehensive piping systems and structural steel solutions designed to support industrial facilities under demanding operating conditions. These components ensure safe process flow, mechanical integrity, and long-term operational durability.



Projects & Industrial References

Over the course of **29 years** of continuous industrial activity, HATCO has successfully participated in and delivered a wide range of strategic industrial projects across national and large-scale infrastructure sectors. Throughout these years, the company has developed an extensive project portfolio covering both standardized industrial packages and highly customized engineering solutions tailored to the specific operational requirements of each client and facility.

HATCO's projects are primarily categorized into two major industrial divisions: Advanced compressor systems and industrial gas generation units. In the compressor sector, the company possesses extensive experience in the engineering, manufacturing, supply, and commissioning of Centrifugal Compressors, Oil-Free and Oil-Injected Screw Compressors, Reciprocating Compressors, Process Gas Compressors, Nitrogen Blowers, and specialized Air Booster systems designed for demanding industrial applications. In parallel, HATCO has established a strong market position in the field of industrial gas generation technologies through the execution of Cryogenic Air Separation Units (ASU) and PSA gas generation systems for the production of oxygen, nitrogen, argon, hydrogen, and other process gases required by strategic industries.

Over the years, HATCO has contributed to numerous nationally significant and high-impact industrial developments, particularly within the oil, gas, petrochemical, refinery, and energy sectors. The company has successfully participated in major projects associated with Zagros Petrochemical, Apadana Petrochemical, Marun Petrochemical, Isfahan Refinery, Tehran Refinery, Shiraz Refinery, Bidboland Gas Refinery, Persian Gulf industrial developments, and several other critical infrastructure facilities throughout the country. These projects demonstrate not only the company's engineering capability and execution capacity, but also its ability to deliver reliable and technically advanced industrial solutions within highly demanding operational environments.

HATCO's project execution approach is based on integrated engineering, disciplined project management, technical precision, and operational reliability. From conceptual design and process engineering to manufacturing, installation, commissioning, and operational support, every project is executed through a structured EPC-oriented framework aligned with international industrial standards and project management practices. This integrated methodology enables the company to maintain consistent quality, execution efficiency, process safety, and long-term operational performance across all stages of project delivery.

The diversity of HATCO's project references reflects the company's multidisciplinary engineering expertise and its capability to respond effectively to a broad range of industrial process requirements.

Whether supplying utility systems for refineries, industrial gas infrastructure for petrochemical complexes, process compressor systems for gas facilities, or specialized cryogenic technologies for strategic industrial plants, HATCO continuously focuses on delivering solutions that combine technical reliability, operational efficiency, and sustainable industrial value.

The following section presents selected references from HATCO's industrial project portfolio, representing a portion of the company's extensive experience in executing strategic industrial projects across the region.

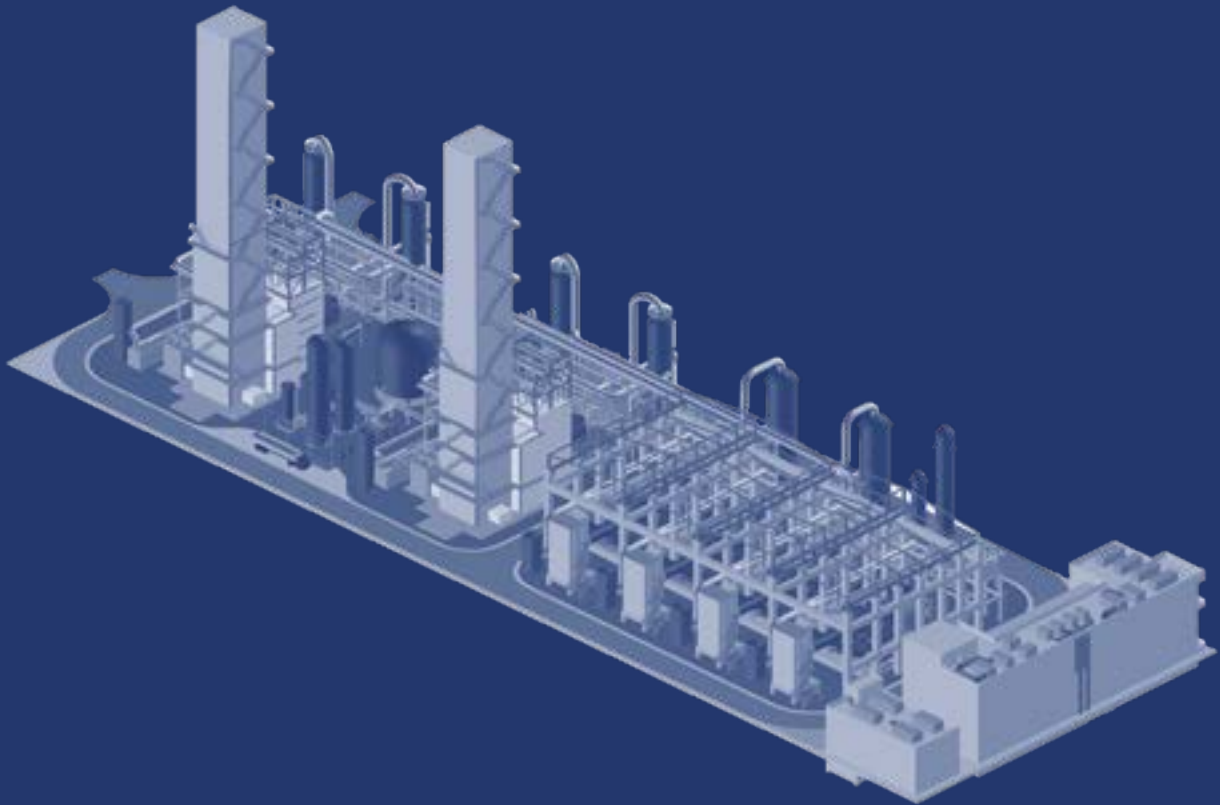
Zagros Petrochemical Oxygen, Nitrogen & Argon ASU Package

The Zagros Petrochemical project is one of HATCO's new strategic references in the methanol industry, in which an Air Separation Unit (ASU) package for the production of oxygen, nitrogen, and argon is being designed and supplied to support the process gas requirements of the Zagros Petrochemical Complex.



The project commenced in 2023 and plays a significant role in ensuring utility supply stability, enhancing operational safety, and improving process reliability across the plant's production units.

The project represents a major step in strengthening HATCO's position in large-scale cryogenic air separation systems and complex industrial gas infrastructure projects.



This unit is recognized as the largest air separation unit under execution in the Middle East region, with a production capacity of 176,000Nm³/h of oxygen, along with nitrogen and argon production streams.

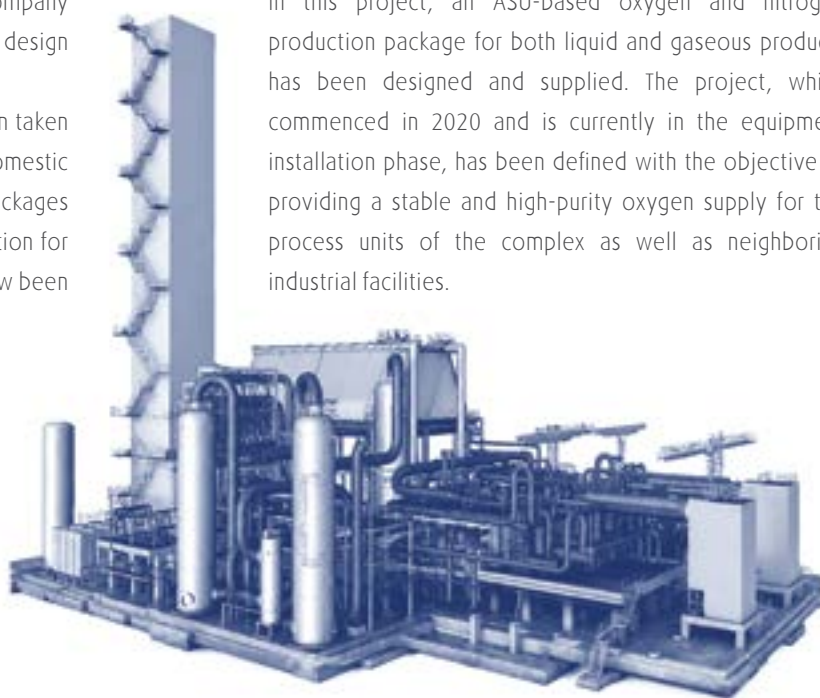
Apadana Persian Gulf Petrochemical ASU Oxygen & Nitrogen Package

Apadana Persian Gulf Petrochemical Project is recognized as the largest methanol production complex in Iran, in which HATCO is responsible for the design and supply of the oxygen package for the plant.

This project has positioned HATCO as a company with strong engineering management and design capabilities.

In addition, highly effective steps have been taken toward the localization and domestic manufacturing of oxygen production packages within HATCO, to the extent that the foundation for the full localization of such packages has now been established within the company.

In this project, an ASU-based oxygen and nitrogen production package for both liquid and gaseous products has been designed and supplied. The project, which commenced in 2020 and is currently in the equipment installation phase, has been defined with the objective of providing a stable and high-purity oxygen supply for the process units of the complex as well as neighboring industrial facilities.



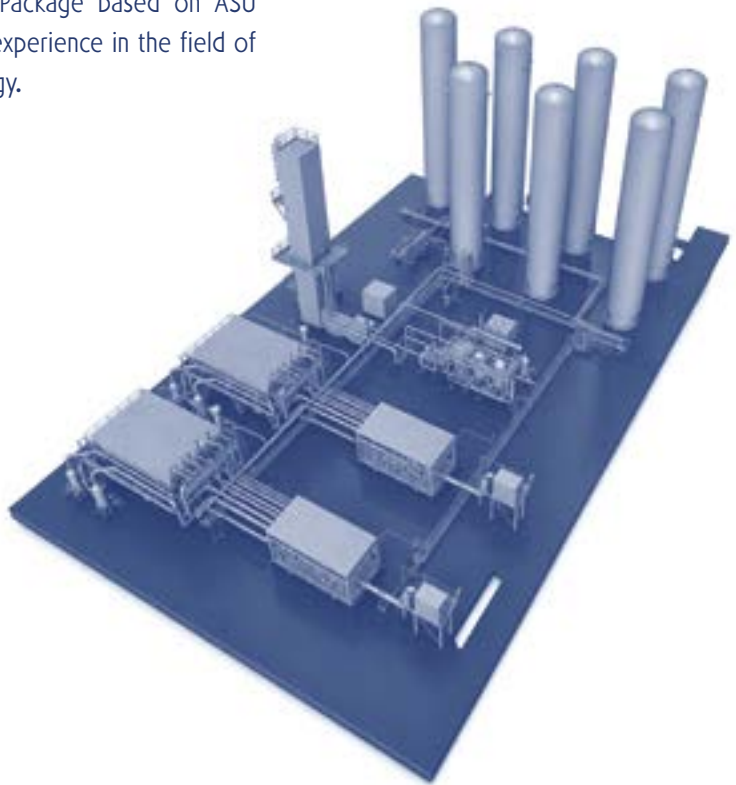
The project plays a key role in ensuring the stable oxygen supply of the methanol plant and supporting the production and export of the final products of the complex. with the capacity of 76,000Nm³/h oxygen production along with nitrogen.

Esfahan Refinery Development Project Nitrogen Package

One of the projects executed by HATCO within the Esfahan Refinery Development Project was the Nitrogen Production Package based on ASU technology. This project represents HATCO's second experience in the field of nitrogen production packages based on ASU technology.

The contract for this project was concluded in 2019 between HATCO and Nargan Company.

In addition to the compressors and coldbox, the remaining main and auxiliary equipment were supplied by domestic manufacturers, and the localization of the package was carried out by HATCO.



The installation of the project equipment was completed in 2024, and the plant was ultimately commissioned and put into operation entirely through localization efforts and by the specialists of HATCO in the winter of 2025.

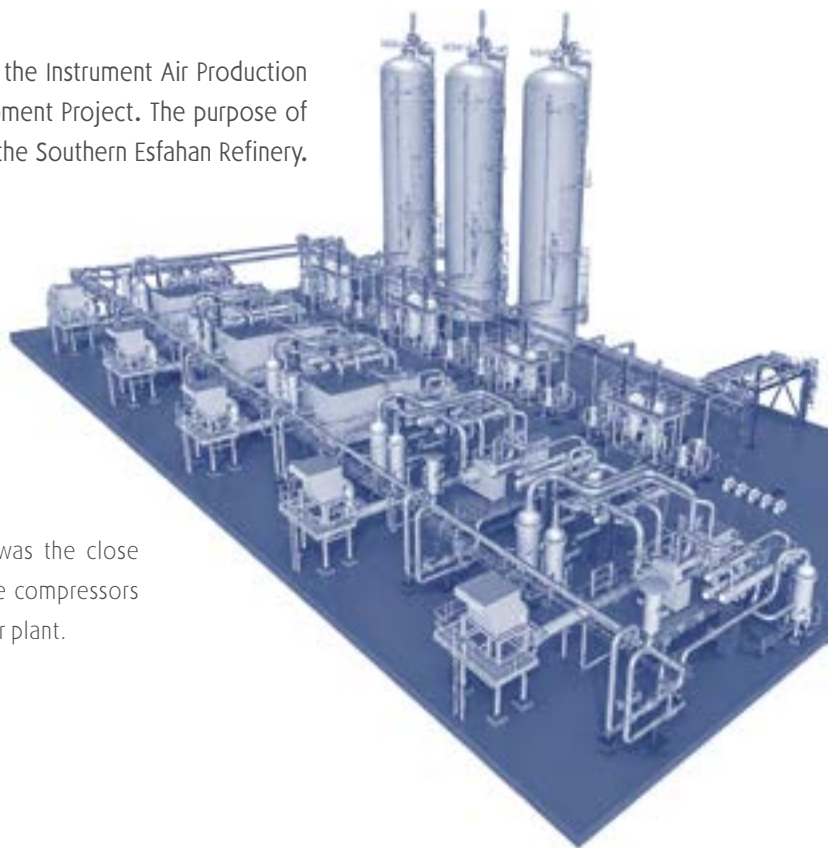
Esfahan Refinery Development Project Instrument Air Package

One of the first major projects undertaken by HATCO was the Instrument Air Production and Air Storage Package for the Esfahan Refinery Development Project. The purpose of this project was to supply instrument air and utility air for the Southern Esfahan Refinery.

The mentioned project consisted of five centrifugal compressors, four sets of instrument air dryers, and three high-pressure air storage vessels.

The contract for this project was concluded in 2017 between HATCO and Neyr Perse Company (in partnership with MAPNA Group). At present, the project has been successfully commissioned and delivered.

One of the major achievements of HATCO in this project was the close cooperation and collaboration with Siemens in supplying the compressors and ultimately commissioning and delivering the instrument air plant.



The experience gained from this collaboration with Siemens resulted in the localization, engineering, design, and complete manufacturing of centrifugal compressors by HATCO, making the company the first Iranian company possessing the technical know-how in this field.

Esfahan Oil Refinery Hydrogen PSA Package

This project is one of HATCO's specialized references and includes the design and supply of a hydrogen production package to support refinery process units.

In the Esfahan Refinery project, a hydrogen production package based on Pressure Swing Adsorption (PSA) technology was supplied and commissioned.



The objective of this project was to ensure a stable supply of hydrogen required for refinery process units and to enhance operational reliability during plant operation. The PSA package separates hydrogen from the feed gas stream and continuously produces hydrogen with the required purity, which is then delivered to the consumption network. The system is equipped with an integrated control and instrumentation unit, enabling monitoring and control of operational conditions. The control system ensures safe and stable operation of the package through monitoring of key process parameters and implementation of control and protection logics. The implementation of this project has resulted in improved operational stability, reduced dependence on external hydrogen sources, and enhanced process safety at Esfahan Refinery.

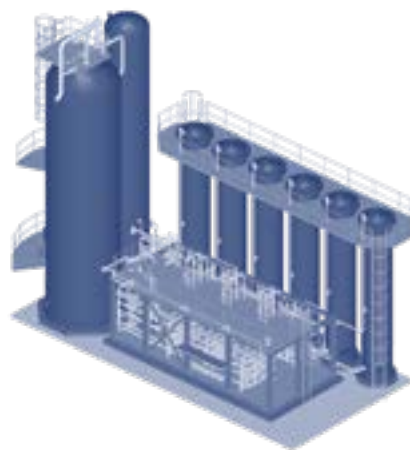


The experience gained from this collaboration with Siemens resulted in the localization, engineering, design, and complete manufacturing of centrifugal compressors by HATCO, making the company the first Iranian company possessing the technical know-how in this field.



Shiraz Oil Refinery Hydrogen Package

The feedstock of Shiraz Oil Refinery consists of heavy crude oil from the Gachsaran Oil Field, crude oil from the Sarvestan Oil Field, and gas condensates from the Dalan Gas Field. The refinery's main products include gasoline, kerosene, gas oil, fuel oil, liquefied petroleum gas (LPG), bitumen, sulfur, and solvents, with a total annual production capacity of approximately 3 million tons.



In this project, HATCO, in cooperation with Shiraz Oil Refining Company (SORC), aims to implement a new Diesel Hydro Treating Unit (DHT) with a capacity of 26,000 barrels per day, along with all required process units, including the Sulfur Recovery Complex (SRC) and Hydrogen Production Unit (HPU), as well as the associated off-site and utility facilities at SORC. The project is being executed in accordance with local and international environmental standards in order to reduce the sulfur content of diesel products and achieve Euro 5 specifications.

Honeywell UOP has been selected as the licensor for the DHT unit.

The Shiraz Oil Refinery project is considered one of HATCO's specialized projects in the field of process utilities, in which a hydrogen production package has been designed and supplied to support refinery process units.

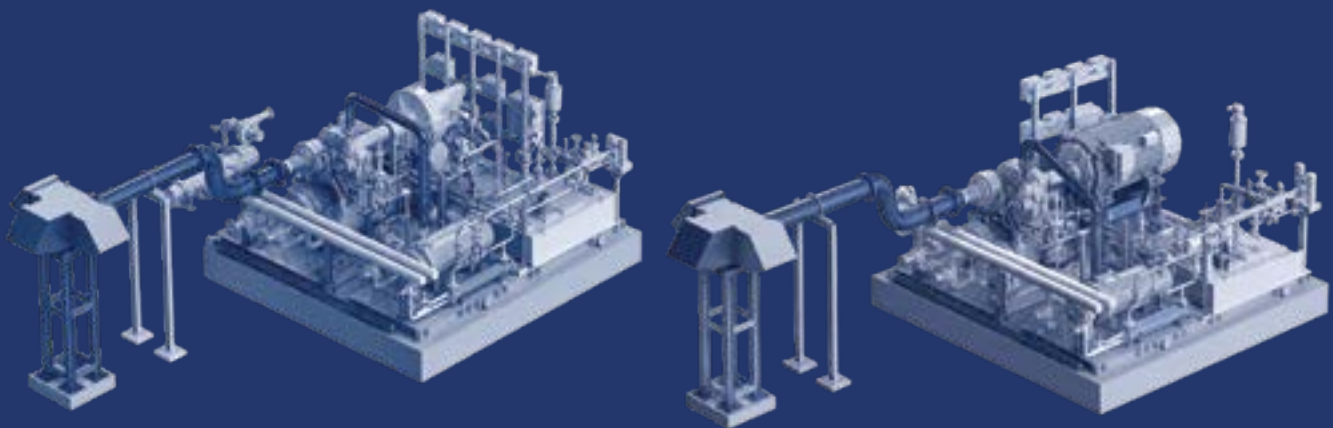
This project has been underway since 2021 under the ownership of Shiraz Oil Refining Company and is currently in the execution phase.

Shiraz Refinery Centrifugal Compressor Package

The Shiraz Refinery project is considered one of HATCO's flagship projects in the field of oil refining, in which HATCO has been responsible for the design, supply, installation, and commissioning of two centrifugal air compressor packages driven by steam turbine and electric motor drivers.

In this project, HATCO, in cooperation with Shiraz Oil Refining Company (SORC), aims to implement a new Diesel Hydro Treating Unit (DHT) with a capacity of 26,000 barrels per day, along with all required process units, including the Sulfur Recovery Complex (SRC) and Hydrogen Production Unit (HPU), as well as the associated off-site and utility facilities at SORC in accordance with local and international environmental standards in order to reduce the sulfur content of diesel products and achieve Euro 5 specifications.

This project commenced in 2021 under the ownership of Shiraz Oil Refining Company and in cooperation with Oil Design and Construction Company (ODCC). The air compressor package with electric motor driver has been successfully commissioned, while the second package, which includes a steam turbine driver, is currently in the final stages of commissioning.

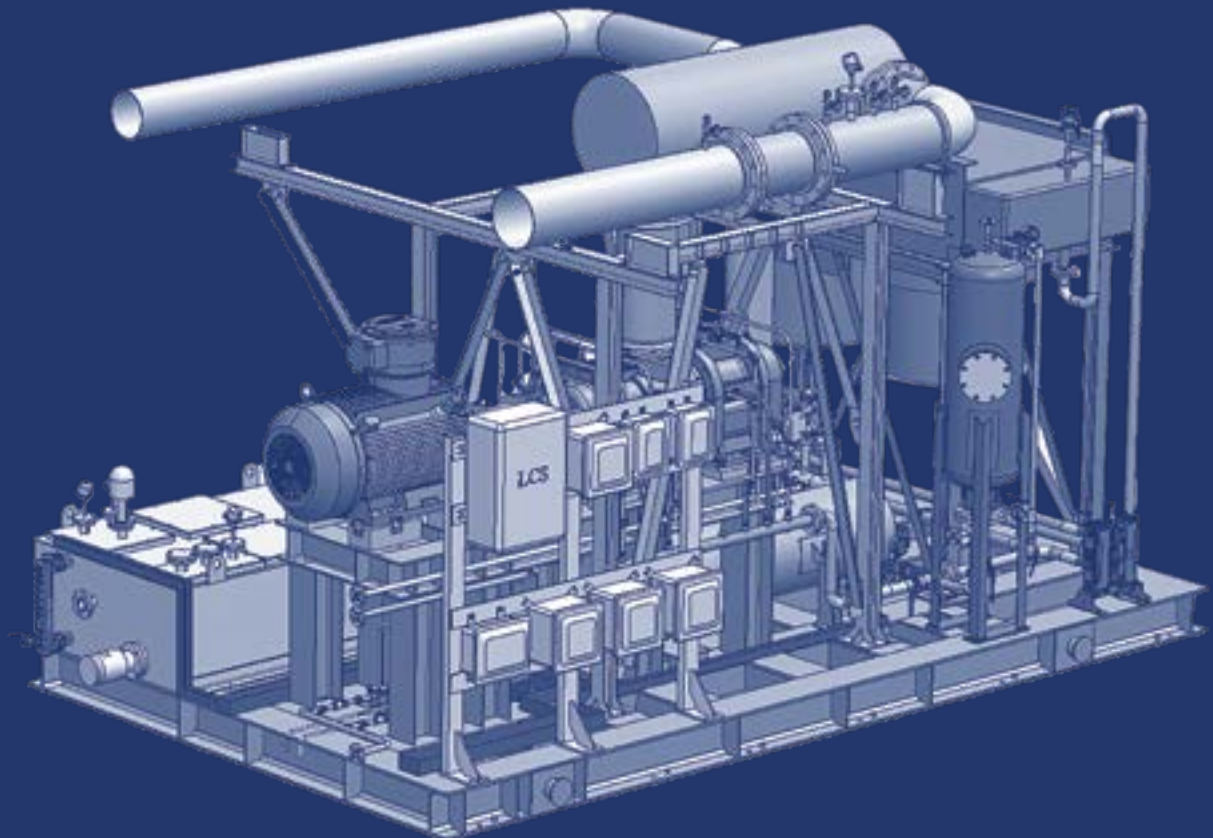


Marun

Replacement of Old Ingersoll Rand Compressors and Electric Drivers in Ahwaz-Marun Gas Compression Stations

The Marun associated gas gathering project represents one of HATCO's most significant achievements in the field of industrial gas compression systems. The project scope encompassed the engineering, manufacturing, testing, and commissioning of advanced Dry Oil-Free Screw Gas Compressor Packages designed and supplied in full compliance with API 619 requirements.

Drawing on its extensive engineering expertise and utilizing high-quality internationally sourced components and equipment, HATCO successfully delivered the compressor packages despite complex procurement conditions and international supply-chain constraints. Throughout the project, stringent quality assurance procedures, specialized inspections, and comprehensive Factory Acceptance Tests (FAT) were carried out to verify full compliance with the project's technical specifications, performance requirements, and reliability standards.



The Marun flare gas recovery Project demonstrates HATCO's capabilities in executing complex industrial projects, integrating sophisticated process equipment, and delivering comprehensive lifecycle services, including commissioning, operator training, technical assistance, and after-sales support. The successful completion of this project further reinforces HATCO's position as a reliable engineering partner and a trusted supplier of rotating equipment and process solutions for the oil, gas, and petrochemical industries.

It also reflects the company's commitment to technical excellence, project execution efficiency, and the delivery of reliable, high-performance solutions that support the long-term operational success of strategic industrial facilities across the region.



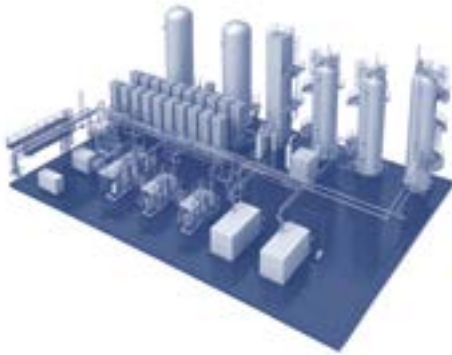
Adish Southern Air & Nitrogen Package

The contract related to the Air Package and Nitrogen Package project for the Adish Southern Gas Condensate Refinery was concluded in 2019 between HATCO and Adish Southern Gas Condensate Refinery.

This project consists of two sections: the Instrument Air Package and the Nitrogen Production Package based on ASU technology.

In this project, HATCO had the honor of cooperating with the first private gas condensate refinery complex within the Siraf/Tombak Gas Condensate Development Project.

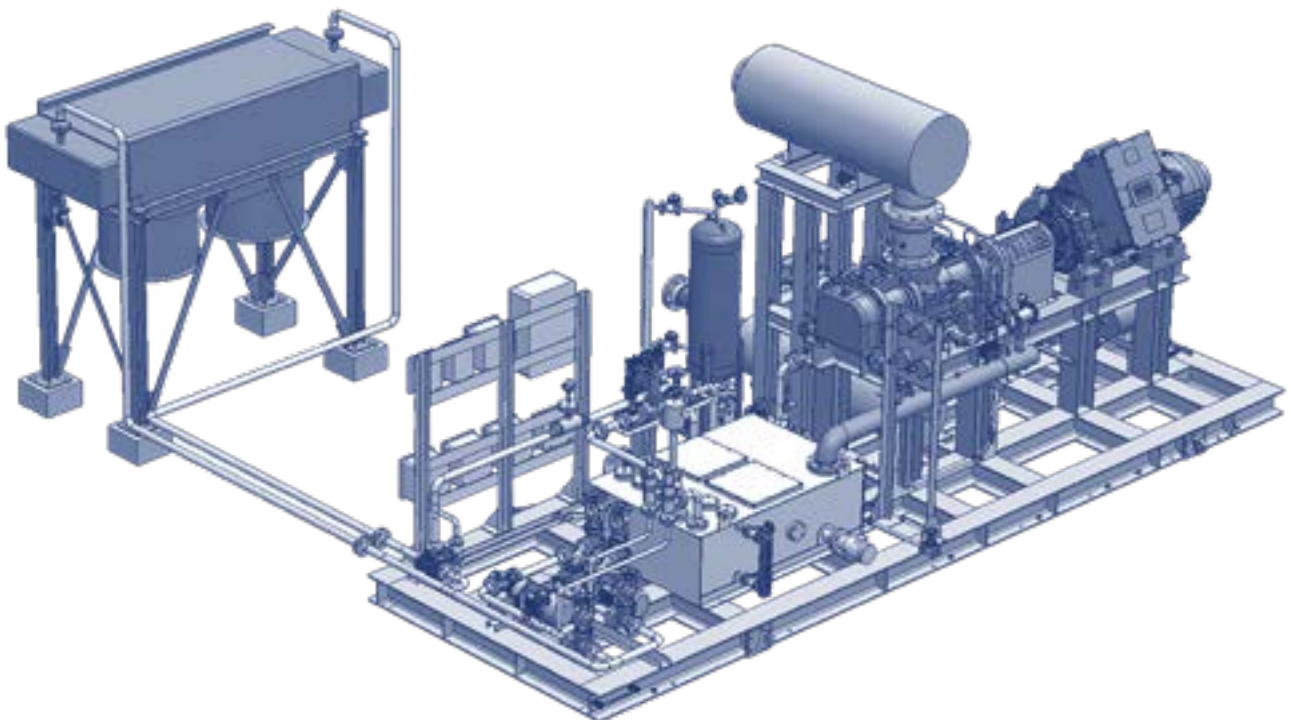
One of the key design features of this unit is its ability to produce approximately %60 liquid nitrogen relative to its nitrogen gas output.



Aghajari-02 & Pazanan-01 Compressor Station

Gathering the flared gas streams for Persian Gulf Bid Boland Gas Refinery

Engineered for demanding process applications, this advanced dry oil free screw compressor unit is fully tailor-made in compliance with API 619 to suit specific operating conditions, site requirements, and user-defined configurations—delivering a reliable solution precisely aligned with production needs. The compressor incorporates built-in synchronous timing gears and is driven by a flameproof asynchronous motor through a flexible laminated coupling. This advanced configuration maintains precise synchronization between the male and female rotors, preventing physical contact and ensuring dependable oil-free operation. Designed as a fully integrated skid-mounted package, the unit primarily includes the compressor body, coupling, gearbox, flameproof asynchronous motor, lubricating oil system, cooling system, and instrumentation system. The package features a single-level arrangement and is specifically designed for installation within explosion-proof areas, supporting safe, efficient, and reliable operation in challenging industrial environments.



Tehran Oil Refinery Hydrogen PSA Package

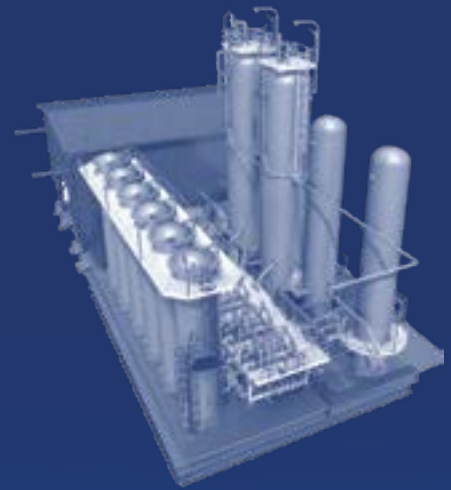
This project is one of HATCO's specialized projects and includes the design and supply of a hydrogen production package to support refinery process units.

The project commenced in 2021 for Petro-Refining Tehran Company and is currently under execution. In the Tehran Refinery project, a hydrogen production package based on PSA technology has been supplied along with a Tail Gas compressor unit.

The objective of this project was to optimize the utilization of existing gas streams and to supply the required hydrogen for refinery process units. The Tail Gas Compressor Package is provided to recover the tail gas generated by the PSA (Pressure Swing Adsorption) unit. The package compresses the low-pressure off-gas from the PSA adsorbers to the required delivery pressure for subsequent use within the plant, primarily as fuel gas or other utility services.

The PSA package separates hydrogen from other gas components and continuously produces hydrogen with 99.99% purity, which is then delivered to the consumption network. The system is equipped with an integrated control and instrumentation system, enabling monitoring, control, and automated operation of the equipment.

The implementation of this project has resulted in improved operational efficiency, reduced resource losses, enhanced process safety, and increased operational stability at Tehran Refinery.

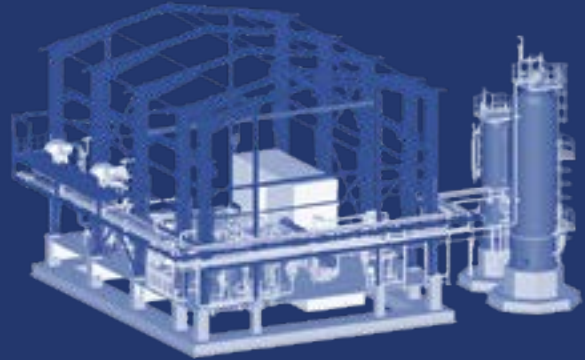


Tehran Refinery Air Compressor Package

The industrial air compressor package supply project for Tehran Refinery is one of HATCO's important references in the country's oil refining industry.

The project, commissioned by Petro-Refining Tehran Company, commenced in 2021 and is currently under execution. Its objective is to ensure a stable supply of compressed air required for the refinery's process units and instrument air systems.

This project represents another example of HATCO's capability in delivering reliable utility packages for critical refinery infrastructure, supporting continuous and safe plant operation.

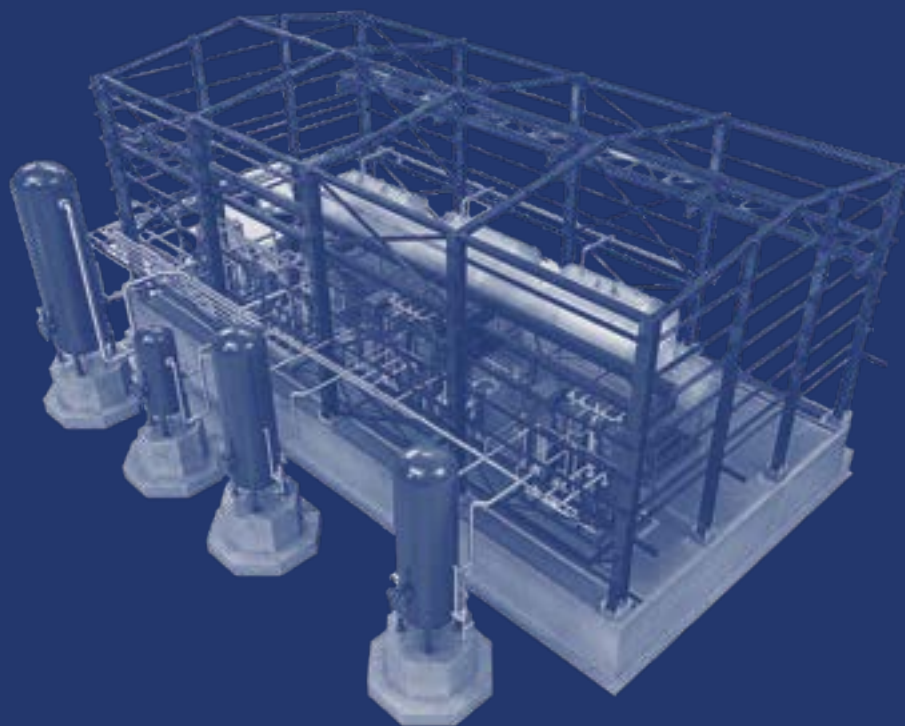


Dehloran Gas Compression Station Nitrogen PSA Package

The execution phase of this project commenced in 2022, during which HATCO was responsible for the supply, installation, and commissioning of a nitrogen generation package based on PSA technology, along with three air compressor units.

This system was implemented with the objective of ensuring a stable supply of nitrogen required for the process and reducing dependence on external sources. The air compressors are responsible for supplying the compressed air required for the PSA system, enabling continuous production of nitrogen with the required purity level.

The system is equipped with an integrated control and instrumentation unit, including PLC systems, monitoring equipment, pressure sensors, temperature sensors, and nitrogen purity analyzers. This setup enables automatic operation, real-time condition monitoring, and safety alarm transmission.



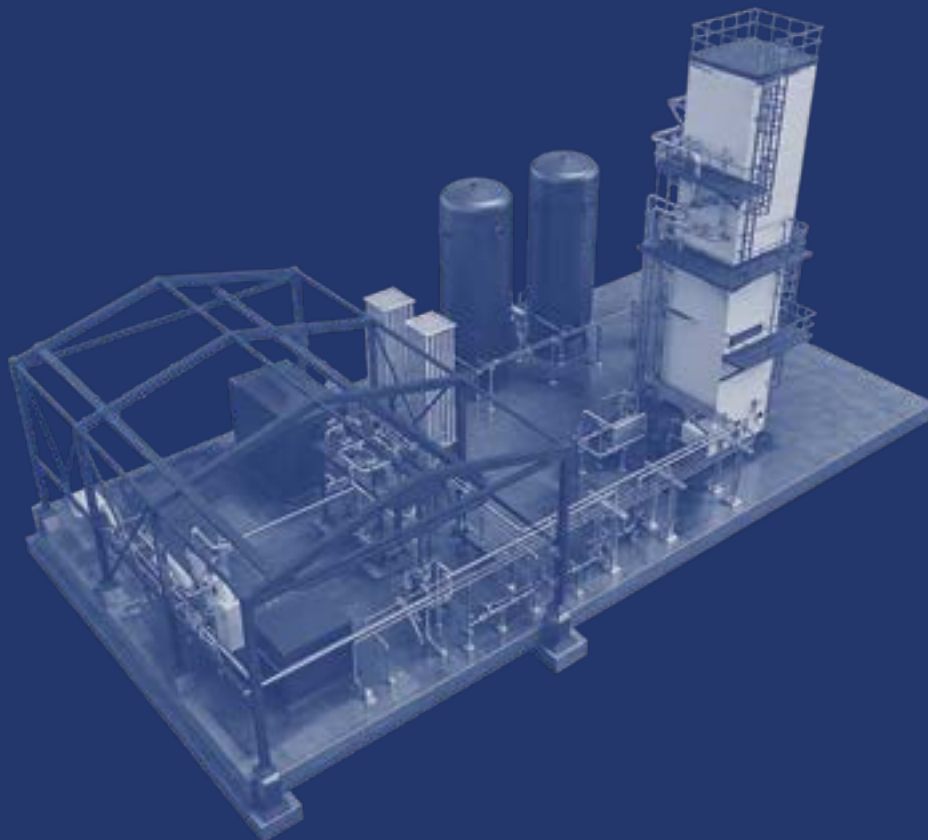
The implementation of this project has resulted in improved equipment reliability, enhanced operational efficiency, reduced operational costs, and increased safety levels at the Dehloran gas compression station.

Dehdasht Petrochemical Nitrogen Package (ASU)

This project is one of HATCO's flagship industrial references and is being executed in the city of Dehdasht for Dehdasht Petrochemical Company, in cooperation with Persian Gulf Holding and Petropars Group.

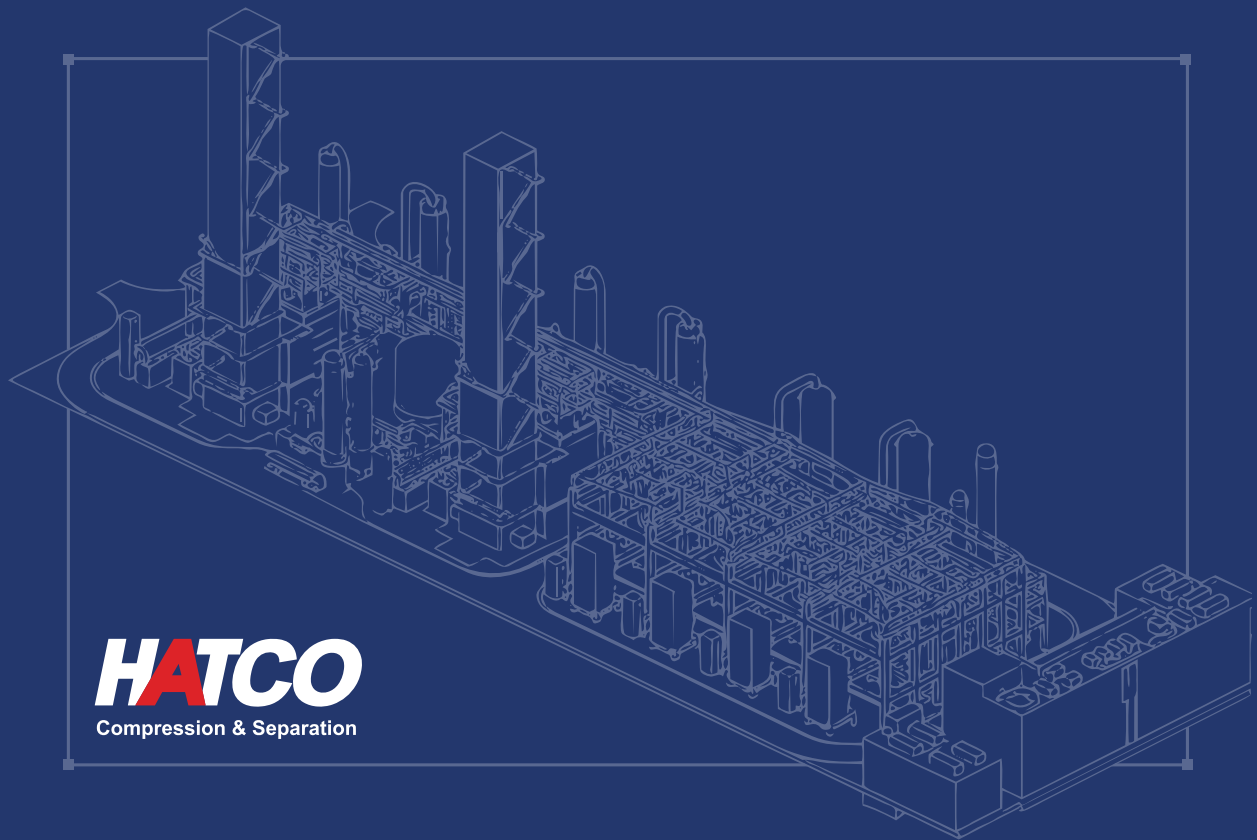
This project demonstrates HATCO's capability in the design and execution of specialized industrial systems, particularly in the field of cold box fabrication for industrial gases, and represents one of the company's key national-level industrial experiences.

The project is considered an important reference reflecting HATCO's technical depth and execution capability in complex industrial gas generation systems.



HATCO's involvement in this project began in 2023, with a focus on the design and manufacturing of a nitrogen generation package based on ASU technology.





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