

Air Separation Units

Breaking down air
with absolute precision -
and in total safety

Air Separation Units (ASU) for producing Oxygen, Nitrogen and Argon

SIAD Macchine Impianti supplies Air Separation Units to the highest quality standards for the liquid or gaseous production of industrial gases using the cryogen process with tray or packing technology.

SIAD Macchine Impianti has developed its own design for selecting and sizing the most flexible equipment and technical solutions. Our strong point is our ability to coordinate our client's requirements with the company's long-standing experience, thus enabling us to provide tailor-made designs based on constant follow-up of project development. This is also made possible by our versatile, expert design team and our network of selected collaborators worldwide.

Technical characteristics

Air Separation Units (ASU) with cryogenic technology for producing industrial gases in liquid and gaseous forms.

Services

- Engineering, feasibility studies;
- supervised commissioning;
- erection, start up and performance test;
- remote control.

For information:
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RANGE OF OXYGEN, NITROGEN AND ARGON ASUS

Production and flow rates	- Oxygen from 500 Nm ³ /h to 110,000 Nm ³ /h (17 - 3,800 TPD) - Nitrogen from 1,500 Nm ³ /h to 330,000 Nm ³ /h (45 - 9,900 TPD) - Argon recovery 92%
Purity	- Oxygen 99.95% and beyond - Nitrogen < 1 ppm O ₂ - Argon < 1 ppm O ₂

RANGE OF OXYGEN AND NITROGEN ASUS

Production and flow rates	- Oxygen from 500 Nm ³ /h to 110,000 Nm ³ /h (17 - 3,800 TPD) - Nitrogen from 1,500 Nm ³ /h to 330,000 Nm ³ /h (45 - 9,900 TPD)
Purity	- Oxygen 99.9% and beyond - Nitrogen < 1 ppm O ₂

RANGE OF NITROGEN ASUS

Production and flow rates	- Nitrogen from 350 Nm ³ /h to 50,000 Nm ³ /h (10.5 - 1,500 TPD)
Purity	- up to < 1 ppm O ₂ in Nitrogen

SMART LIQUID PLANT

Production and flow rates	- Liquid Oxygen from 330 Nm ³ /h to 2,500 Nm ³ /h (12 - 90 TPD) - Liquid Nitrogen from 600 Nm ³ /h to 3,000 Nm ³ /h (19 - 98 TPD)
Purity	- Oxygen 99.6% - Nitrogen 99.999%

OXYSTEEL, OXYCEMENT, OXYPAPER

Production and flow rates	- Oxygen from 800 Nm ³ /h to 16,000 Nm ³ /h (27 - 540 TPD) - Nitrogen can be supplied on request
Purity	- 95% for gaseous O ₂ - 99.5% for liquid O ₂ - 99.9% for gaseous N ₂



Courtesy of Premier Cryogenics Limited

Nm³/h = @ 0°C and 1.013 bar(a) / TPD = Tons Per Day

Equipment design features

Air separation method

Plant perform cryogenic air separation, through low temperature distillation. Characteristics of this method:

- high purity products;
- high recovery ratio;
- low power consumption;
- production of products in gaseous and liquid forms;
- simultaneous production of more than one product;
- multi-duty operation.

Materials and components

In plant construction, only high quality and durable materials and components are used. Cryogenic parts and equipment inside distillation columns are isolated with special insulation to minimize heat loss.

Know-how and innovation

SIAD Macchine Impianti uses its own know-how for the innovative cryogenic plant design. Top priorities: research and development, continuous improvement in efficiency and up-dating technology.



Guaranteed continuous supply of Oxygen, Nitrogen and Argon of the highest purity.

Automatic control system

Advanced PLC based automation:

- providing maximum effectiveness of the plant (optimization);
- automatic monitoring of normal operation mode (without operator supervision);
- automatic data logging (archives for diagnostics);
- guarantees safety and reliability of the equipment;
- tele-control of the plants from producer's side.

Easy installation

Plants are shipped in modular section for easy and low cost installation. The equipment is installed as enlarged modules, which are then connected during installation on site with the minimum number of interfaces on pre-fabricated foundations. As a consequence, there is a reduction in the cost of installing and commissioning. An option is available for commissioning test, start-up and performance test, performed on site under the careful supervision and responsibility of SIAD Macchine Impianti's expert site engineers.

Complete compliance with local and or international standards. Tailor-made solutions to meet all production requirements.



APPLICATIONS

The professionalism and know-how of SIAD Macchine Impianti's technical staff is at the disposal of clients every day, in order to respond successfully to their requirements.

The company offers a complete range of plant, satisfying the most sophisticated demands, and continues to develop new and more efficient solutions for the application of technologies involving different industries.

- Cement
- Chemical
- Energy and Power Generation
- Exploration and Production
- Food & Beverage
- Glass
- Industrial Gases Industry
- Metal Production
- Petrochemical
- Pulp and Paper
- Refinery

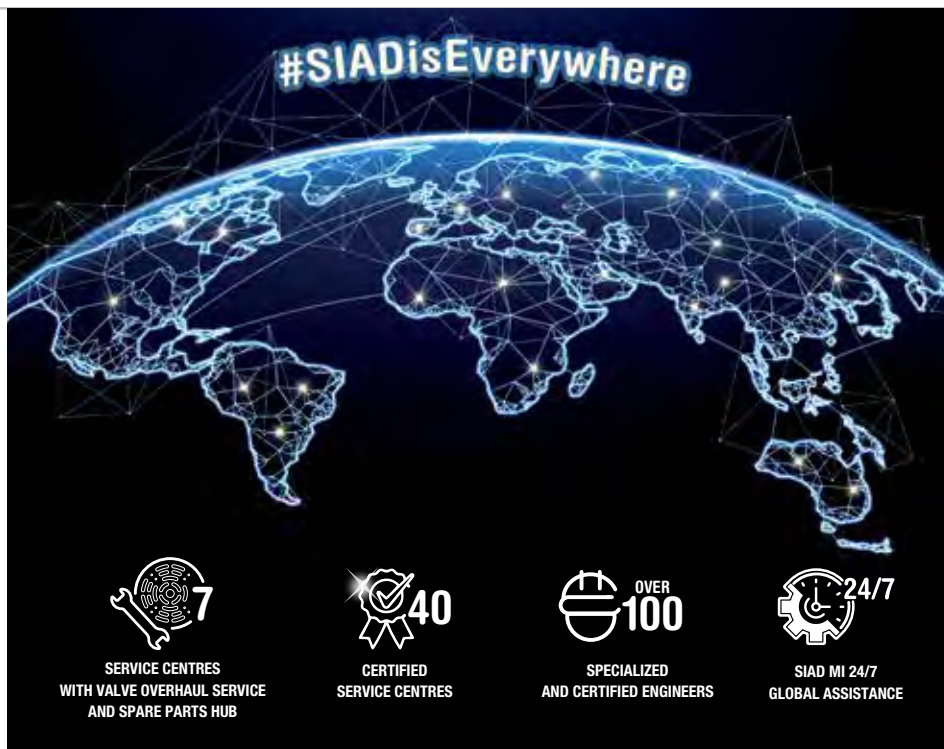
Global technical support services

Close to you,
wherever you are

- ✓ **Global presence**
Thanks to a worldwide network of owned and certified Service Centres, SIAD MI guarantee a rapid intervention to support your compressors and plants across all five continents.
- ✓ **Highly specialized technicians**
More than 100 certified technicians ensure the highest quality service assistance to customers throughout the world.
- ✓ **Constant updating and advanced technology**
SIAD MI technical staff periodically train the Service Centres through dedicated training courses which include the award of specific certifications. Thanks to the latest generation of tools, the Service Centres ensure advanced, timely and efficient assistance.
- ✓ **Continuous assistance**
SIAD MI 24/7 Global Assistance is the service that operates 24 hours a day, every day of the year, dedicated to managing the requests from SIAD MI's customers worldwide.

For information:
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AIR SEPARATION UNITS: SMART AND ALWAYS CONNECTED

As with all SIAD MI compressors and plants, even ASUs, they can be continuously monitored through the SIADMI4U platform.

It is a remote monitoring and diagnostics system that allows you to view, analyze and manage, in real time, through a smartphone or PC, all the operating parameters of a compressor or a plant.

Watch the video on
YouTube



The SIAD Group

Engineering

Industrial Gases



LPG and Natural Gas

Healthcare

Industrial Gases

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